Spanish Fork Santaquin Pipeline Santaquin Reach VOLUME 1

DIVISION 00 through DIVISION 01



CENTRAL UTAH WATER CONSERVANCY DISTRICT

(801) 226-7100 October 2023

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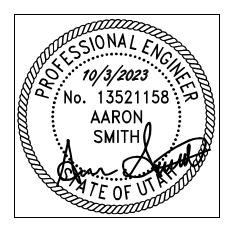
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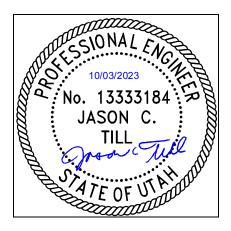
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Aaron Smith, P.E.

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Jason C. Till, P.E.

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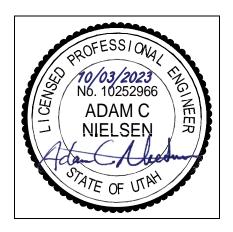
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Toby Bryan Palin, P.E.

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PART 1 PROCUREMENT REQUIREMENTS

SECTION 00 11 13 ADVERTISEMENT FOR BIDS

NOTICE INVITING BIDS: Sealed Bids will be received electronically through the website indicated below for Obtaining Bidding Documents until the date and time indicated below, for furnishing materials, and labor and performing all Work for construction of the Project indicated below. Award, if made, will be within sixty (60) days after the opening of Bids.

PROJECT TITLE: Spanish Fork Santaquin Pipeline – Santaquin Reach

DATE: November 7, 2023 TIME: 2:00 PM MST

PREQUALIFICATION: CONTRACTOR PREQUALIFICATION <u>IS</u> REQUIRED BY OWNER and only prequalified Bidders will be allowed to submit a sealed Bid. Prequalification has been completed. The following general contractors were prequalified to Bid on all reaches of the Spanish Fork Santaquin Pipeline: 1) Ames Construction, 2) Condie Construction, 3) COP Construction, 4) S J Louis Construction, 5) Sundt Construction, 6) VanCon Construction, 7) Whitaker Construction, and 8) W.W. Clyde & Co. The Owner is prequalifying tunnel subcontractors. A list of prequalified tunnel subcontractors will be provided to the Bidders at the Prebid Conference. Bidders may only use a tunnel subcontractor on the tunnel subcontractor prequalified list.

DESCRIPTION OF WORK: The Work consists of furnishing and installing approximately 23,048 feet of 60-inch diameter steel pipeline with welded joints, mortar lining, tape and mortar coating, appurtenant structures, trenchless crossings, turnout structures, grading, surface restoration, and other Work. The Work also includes three 78-84-inch tunnels under 1) Interstate 15, 2) Highway 6 and 3) the Union Pacific Railroad.

SITE OF WORK: The Work is primarily within Santaquin City and Utah County in an alignment parallel to the Union Pacific Railroad corridor. Additionally, water delivery turnouts will be constructed along an existing 60-inch pipeline within Mapleton, Salem, and Payson.

COMPLETION OF WORK: The Work shall be completed in accordance with the dates and times indicated in the Section 00 52 13, Agreement Form.

OBTAINING BIDDING DOCUMENTS: Bidding Documents will be available on or after October 3, 2023, and may be examined at the following location:

https://cuwcd.projectmates.com

Spanish Fork Santaquin Pipeline – Santaquin Reach.

The documents may be downloaded for a fee. The District will not provide any paper copies of the Bidding Documents.

BIDS TO REMAIN OPEN: Bidder shall guarantee Total Bid Price for a period of sixty (60) calendar days from date of Bid opening.

PREBID SITE VISIT AND PREBID CONFERENCE: A mandatory Prebid Conference and Site visit for prequalified general contractors will begin at 9:00 a.m. on October 5, 2023, at the CUWCD main office, 1426 East 750 North, Suite 400, Orem, Utah 84097. After the Prebid Conference a Site tour will be conducted that will last until noon or later. The purpose of the Prebid Conference and Site Visit is to address questions and clarify the intent of Drawings and Specifications.

OWNER'S RIGHT RESERVED: Central Utah Water Conservancy District reserves the right to reject any or all Bids, to waive any formality, or technicality in a Bid, and to make Award to the lowest responsive, responsible Bidder if deemed in the best interests of the Owner, or the public good; or as being nonresponsive to the requirements set forth in the Specifications, or on the grounds that a prospective Contractor is not qualified. Any Bid received from a Bidder who is not prequalified or received after the closing time for receipt of Bids will be returned unopened.

TENTATIVE BIDDING SCHEDULE: The following is a preliminary schedule and is subject to change:

	Date
Bid Documents Available for Download on Project Website	Tuesday, October 3, 2023
Prebid Conference and Site Visit	9:00 AM Thursday, October 5, 2023
Bid Opening	2:00 PM Tuesday November 7, 2023,
Board of Trustees Approve Award	Wednesday, November 15, 2023
DOI Concurrence to Award	Thursday, November 16, 2023
Notice to Proceed – Materials and Site Investigation	TBD
Preconstruction Meeting	TBD
Notice to Proceed – Field Construction	TBD
Construction Complete	May 20, 2026

END OF SECTION

SECTION 00 21 13 INSTRUCTIONS TO BIDDERS

1. BID REQUIREMENTS

- 1.1. Only prequalified Bidders will be allowed to submit Bids. Bids to receive consideration shall be made in accordance with the following instructions:
 - 1.1.1. Before submitting a Bid, prequalified Bidders shall carefully examine the Plans, read the Specifications and the forms of the Contract Documents, visit the Site of the Work, fully inform themselves as to all existing conditions and limitations, and shall include sums in the Bid covering the cost of each item included in the Contract.
 - 1.1.2. Bids shall be submitted to the QuestCDN website using the Bid Form on the website and shown for informational purposes in Section 00 41 13, Bid Form.
 - 1.1.3. Bids shall not contain any recapitulation of the Work to be done. Alternative Bids will not be considered unless called for. No oral, telegraphic, telephonic, or modified Bids will be considered.
 - 1.1.4. Contractors bidding on the Project will be required to obtain and submit a "Data Universal Number System" D-U-N-S® Number that is issued by Dun and Bradstreet (D&B). The D-U-N-S® Number is a D&B copyrighted, proprietary means of identifying business entities on a location-specific basis.
 - 1.1.5. Contractors submitting Bids on this Project will be required to certify that neither the Bidder nor any of its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in any program or project which is 100 percent or partially funded with federal funds.
 - 1.1.6. The Project is a Federally Funded project, and as such is subject to Federal wage and hour requirements, rules and regulations promulgated under authority of Executive Order No. 11246, and other applicable Federal laws and regulations. Prevailing rate of wages, as determined by the Secretary of Labor in accordance with the Davis-Bacon Act, shall be paid for each craft or type of workman needed to complete the Work.
 - 1.1.7. Bids shall be delivered in accordance with Section 00 11 13, Advertisement for Bids. Bids shall be delivered by the time and in the manner stipulated in Section 00 11 13, Advertisements for Bids. It is the SOLE responsibility of the Bidder to see that the Bid is received in proper time. No Bids will be received after the scheduled closing time for receipt of Bids.

2. BID SECURITY

2.1. Each Bid shall be accompanied by an electronic Bid bond (acceptable to the Owner), in the amount equal to at least 10 percent of the Lump Sum Bid amount, payable without condition to the Owner as a guarantee that the Bidder, if awarded the Contract, will promptly execute such Contract in accordance with the Bid and in manner and form required by the Contract Documents, and will furnish good and sufficient bond for the faithful performance of the same. Bid securities of the three lowest bidders will be retained until the Contract is signed and satisfactory bonds furnished, or other disposition made thereof. The Bid securities of all Bidders except the three lowest will be promptly returned after the canvass of Bids.

3. WITHDRAWAL OF BID

3.1. Any Bidder may withdraw their Bid at any time prior to the scheduled closing time for receipt of Bids on the QuestCDN website.

4. CONTRACT AND BONDS

- 4.1. Successful Bidder will be required to execute the Contract within the time period indicated in Section 00 51 00, Notice of Award. Successful Bidder, simultaneously with the execution of the Contract, will be required to furnish a Payment Bond in an amount equal to 100 percent of the Contract price and a faithful Performance Bond in an amount equal to 100 percent of the Contract price. Said Bonds shall be secured from a surety company which is on the U.S. Department of Treasury's most current list (Circular 570), is authorized to transact business in Utah, and is satisfactory to the Owner.
- 4.2. Agreement Form, which successful Bidder as Contractor will be required to furnish is included in the Contract Documents in Section 00 52 13, Agreement Form, and should be carefully examined by the Bidder. The Agreement and the Bonds will be executed in two original counterparts.
- 4.3. Within 72 hours of being notified of a successful bid, the Successful Bidder shall submit to the Owner the preliminary Schedule of Values. Within 30 days from the date of Notice to Proceed, the Successful Bidder shall submit the Final Schedule of Values.

5. INTERPRETATION OF PLANS AND DOCUMENTS

5.1. If any Bidder contemplating submitting a Bid for the proposed Contract is in doubt as to the true meaning of any part of the Plans, Specifications, or other proposed Contract documents, or finds discrepancies in or omissions from the Plans or Specifications, the Bidder may submit to the Owner a written request for an interpretation or correction thereof. Person submitting the request will be responsible for its prompt delivery. Any interpretation or correction of the proposed documents will be made only by Addendum duly issued and a copy of

such Addendum will be mailed or delivered to each person receiving a set of such documents. The Owner will not be responsible for any other explanations or interpretations of the proposed documents.

6. **ADDFNDA**

6.1. Any Addenda issued during the time of bidding, forming a part of the documents issued to the Bidder for the preparation of the Bid, shall be duly acknowledged and included in the Bid and shall be made a part of the Contract. Failure to acknowledge each addendum issued may cause rejection of the Bid.

7. AWARD OR REJECTION OF BIDS

- 7.1. The Contract will be awarded to the lowest responsive, responsible bidder complying with these instructions and with the Notice Inviting Bids. The Owner, however, reserves the right to accept or reject any or all bids if it may deem it best for the public good, and to waive any informality in the bids received. The award, if made, will be within 60 days after the opening of Bids.
- 7.2. Only prequalified Bidders may submit bids. No Bid for the Work will be accepted from a contractor who does not hold a valid, active, Utah Contractor's license in good standing applicable to the type of work bid upon at the time of opening Bids.
- 7.3. The Owner reserves the right to reject Bids for any reason.

8. BIDDERS INTERESTED IN MORE THAN ONE BID

8.1. No person, firm, or corporation shall be allowed to make, file, or to be interested in more than one Bid for the same work unless alternate or optional Bids are called for. A person, firm or corporation who has submitted a sub-bid to a bidder, or who has quoted prices on materials to a bidder, is not thereby disqualified from submitting a sub-bid or quoting prices to other Bidders.

9. ASSIGNMENT OF CONTRACT

9.1. No assignment by the Contractor of any contract to be entered into thereunder, or any part thereof, or of funds to be received thereunder by the Contractor, will be recognized by the Owner unless such assignment has had prior approval of the Owner and the Surety has been given due notice of such assignment in writing and has consented thereto in writing.

10. SPECIAL NOTICE

10.1. Bidders are required to inform themselves fully of the conditions relating to the construction and labor under which the Work will be or is now being performed, and the Contractor must employ, as far as possible, such methods

and means in carrying out the Work as will not cause any interruption or interference to any other contractor.

11. SPECIAL ENVIRONMENTAL CONCERNS

11.1. Special care shall be given for work in environmentally sensitive areas, including work in close proximity to streams and springs. Environmental restrictions and special procedures are covered in detail within the Specifications.

12. PREBID CONFERENCE

- 12.1. A <u>mandatory</u> prebid Site visit will be held on <u>October 5, 2023</u>, to field review the proposed construction area, and will include a question and answer period. This <u>mandatory</u> prebid conference will start at 9:00 AM at Central Utah Water Conservancy District, 1426 East 750 North, Suite 400, Orem, Utah 84097. Purpose of this conference is to address questions and clarify the intent of the Plans and Specifications. Only those Bidders who have been prequalified and have attended the pre-bid conference will be allowed to submit Bids.
- 12.2. Owner shall not be held responsible for any oral instructions. Any changes to the Contract Documents will be issued in the form of an Addendum. Any prequalified Bidder not attending this conference will not be allowed to submit a Bid on this Project.

13. PERMITS

13.1. Contractor shall obtain all necessary permits for the construction of the Project in accordance with the General Conditions. Bidder shall contact relevant permitting agencies and comply with their permit and bonding requirements.

14. PARTNERING

- 14.1. The Owner intends to encourage the formation of a partnering relationship among the Owner, Contractor and subcontractors, Design Engineer, and stakeholders. This partnering relationship will be structured to draw on the strengths of each organization to identify and achieve reciprocal goals. The objective is effective and efficient contract performance in order to achieve completion in a safe manner, within budget, on schedule, and in accordance with plans and specifications. All costs associated with each party's participation in the partnering relationship shall be borne exclusively by the party incurring the cost and no change in contract price or other claim against the Owner shall be made to recover these expenses.
- 14.2. Partnering may include a workshop up to 1-day in length, held at the beginning of the project for the purpose of establishing a partnering charter and a communication framework. Bidder, by submission of this Bid, indicates its willingness and intent to enter voluntarily into a partnering relationship with

the Owner, to support the partnering effort and to Work in an open and amicable environment throughout the project with the Owner.

15. INSTRUCTIONS FOR PREPARING BID

- 15.1. Payment for all work performed under this Contract will be on a lump sum basis, unless otherwise indicated in Section 00 11 13, Advertisement for Bids. Payment for the lump sum price, as stated in the Contractor's Bid, for the completed work will be compensation in full for the furnishing of all overhead, labor, materials, devices, equipment, and appurtenances included in the Work as are necessary to complete the total work under this Contract in a good, neat, and satisfactory manner as indicated on the Plans, as described in the Specifications, and as otherwise implied or required to fulfill the objective of the Work. Each item, fixture, piece of equipment, work, as indicated on the Plans, or specified anywhere in these Documents, shall be completed with all necessary connections and appurtenances for the satisfactory use and operation of said item, and the total system or systems.
- 15.2. Any and all patents and license fees for the right to use equipment or processes included in this Contract shall be included in the lump sum bid price. Submit to the Owner an itemized list of all such fees, indicating the amount of each and to whom paid.
- 15.3. Cost of painting, testing, and other incidental operations, profit, and overhead cost, including the cost of supervision, temporary field offices, move-in, move-out, insurance, taxes, equipment not a permanent part of the Job, and other incidental items, shall be included in the lump sum bid price.
- 15.4. The "Lump Sum Bid Price in Words" and "Lump Sum Bid Price in Figures" must be filled out by the Bidder. In case of any discrepancy between the "Lump Sum Bid Price in Figures", and the "Lump Sum Bid Price in Words", as written or corrected, the "Lump Sum Bid Price in Words" will be presumed to be correct unless obviously in error, and will be considered as the Contractor's correct and intended bid.
- 15.5. Whenever materials or equipment are specified or described in the Contract Documents by using the name of a particular Supplier and the name is followed by the words "or equal", the Bidder may write the name of a substitute Supplier (which the Bidder considers as an "or equal" in the Equipment/Material Supplier List in the Bid Forms. The alternate material or equipment proposed to be furnished by the Bidder shall conform to the specific requirements of the bid item, and any one of the specified manufacturers' items shall serve as the standard of quality. The Bid shall reflect the cost of the specified Supplier. The substitute Suppliers will only be considered after award of the Contract. If the equipment proposed to be furnished by the Bidder from an alternate manufacturer does not and/or cannot be made, in the opinion of the Owner, to conform to the requirements of these Specifications, then the Bidder shall

furnish the equipment of a manufacturer that does meet these requirements at no extra cost to the Owner.

- 15.6. The Owner may require additional detailed information regarding the equipment which the Bidder proposes for certain bid items. If this additional information is requested from the Bidder, it shall be furnished in complete detail after the Award of the Contract. The information must be in sufficient detail so that the Owner can evaluate the Bidder's Bid on the items.
- 15.7. All specific requirements of the Specifications shall be adhered to, and all necessary modifications shall be made in the article specified by trade name, type, or model of manufacturer's equipment to make it conform to all specific requirements of the Specifications.
- 15.8. If certain designated manufacturer's, or alternate manufacturer's items require changes in the Work and materials, then the price stated in the Bid for the item shall include all changes in work and materials that are affected, including but not limited to as electrical equipment, electrical wiring, piping, and valves.
- 15.9. Bids shall not contain any recapitulation of the Work to be done. Alternative Bid items will not be considered unless called for. No oral or telephonic modifications of Bids will be considered.
- 15.10. If Bid is made by an individual, it shall be signed and include the full name and address of the individual.
- 15.11. If the Bid is made by a copartnership firm, it shall be signed by a member of the copartnership and shall include the copartnership name and address. It shall also include the name address of each member of the copartnership.
- 15.12. If the Bid is made by a corporation, the name of the corporation shall be signed by its duly authorized officer or officers.
- 15.13. If the Bid is made by a joint venture, a signed and executed copy of the joint venture agreement shall be attached with the Bid and shall include the names and addresses of each party to the joint venture and their duly authorized officers executing the joint venture agreement.

16. ESCROW BID DOCUMENTS

16.1. Scope:

16.1.1. The three lowest bidders shall submit within the specified time one copy of all documentary information generated in preparation of Bid prices for this Project. This material is hereinafter referred to as Escrow Bid Documents (EBDs). The Escrow Bid Documents of the successful bidder will be held in escrow for the duration of the Contract.

- 16.1.2. The successful Bidder agrees, as a condition of award of the Contract, that the EBDs constitute the only complete documentary information used in preparation of the Bid. No other Bid preparation information shall be considered in resolving disputes.
- 16.1.3. Nothing in the EBDs shall change or modify the terms or conditions of the Contract.

16.2. Ownership:

- 16.2.1. The EBDs are and shall always remain the property of the Contractor subject only to joint review by the Owner and the Contractor, except as provided herein.
- 16.2.2. The Owner stipulates and expressly acknowledges that the EBDs, as defined herein, constitute trade secrets. This acknowledgment is based on the Owner's express understanding that the information contained in the EBDs is not known outside the Contractor's business, is known only to a limited extent and only by a limited number of employees of the Contractor, is safeguarded while in the Contractor's possession, and is extremely valuable to competitors by virtue of it reflecting the Contractor's contemplated techniques of construction.
- 16.2.3. The Owner acknowledges that the EBDs and the information contained therein made available to the Owner only because such action is an express prerequisite to award of the Contract. The Owner acknowledges that the EBDs include a compilation of information used in the Contractor's business, intended to give the Contractor an opportunity to obtain an advantage over competitors who do not know of or use the contents of the documentation. The Owner agrees to safeguard the EBDs and all information contained therein to the fullest extent permitted by law.
- 16.3. Purpose: EBDs will be used to assist in the negotiation of price adjustments and variations and in the settlement of disputes, claims and other controversies. They will not be used for pre-award evaluation of the Contractor's anticipated methods of construction or to assess the Contractor's qualifications for performing the Work.

16.4. Format and Contents:

16.4.1. Bidders may submit EBDs in their usual cost estimating format. It is not intended that extra work be expended in preparing the Bid but that the EBDs will be adequate to enable complete and proper understanding and proper interpretation for their intended use. The EBDs shall be in the English language only.

- 16.4.2. The EBDs shall clearly itemize the estimated costs of performing the Work. Items should be separated into sub-items as required to present a complete and detailed cost estimate and allow a detailed cost review. The EBDs shall include all quantity take-offs, crew, equipment, calculations of rates of production and progress, copies of quotations from subcontractors and suppliers, and memoranda, narratives, consultants reports, add/deduct sheets and all other information used by the Contractor to arrive at the prices contained in the bid. Estimated costs should be broken down into the contractor's usual estimate categories such as direct labor, repair labor, equipment operation, equipment ownership, expendable materials, permanent materials and subcontract costs as appropriate. Plant and equipment and indirect costs should be detailed in the Contractor's usual format. The Contractor's allocation of plant and equipment, indirect costs, contingencies, mark-up and other items to each bid item shall be clearly indicated.
- 16.4.3. The EBDs shall clearly show in calculations, text, or both, the relationship between baseline indications presented in the Contract Documents and assumptions that form the basis for the Contractor's means, methods, equipment selection, rates of production, and costs.
- 16.4.4. All costs shall be identified. For Bid items where the extended amount is less than \$10,000 estimated unit costs are acceptable without a detailed cost estimate, providing that labor, equipment, materials and subcontracts, as applicable, are included and provided that indirect costs, contingencies, and mark-up, as applicable, are allocated.
- 16.4.5. Bid Documents provided by the Owner should not be included in the EBDs unless needed to comply with the above requirements.

16.5. Submittal:

- 16.5.1. The EBDs shall be submitted by the three lowest Bidders in a sealed container within 96 hours after the time of receipt of Bids. The container shall be clearly marked on the outside with the Bidder's name, date of submittal, project name, Contract No., and the words "Escrow Bid Documents".
- 16.5.2. The EBDs shall be accompanied by the "Bid Documentation Certification", signed by an individual authorized by the bidder to execute the Bid, stating that the material in the Escrow Bid Documentation constitutes all the documentary information used in the preparation of the Bid and that he or she has personally examined the contents of the EBDs container and has found that the documents in the container are complete.

"Escrow Bid Document Certification"

THE UNDERSIGNED HEREBY CERTIFIES THAT THE BID DOCUMENTATION CONTAINED HEREIN CONSTITUTES ALL THE INFORMATION USED IN PREPARATION OF THE BID AND THAT I HAVE PERSONALLY EXAMINED THESE CONTENTS AND HAVE FOUND THAT THIS BID DOCUMENTATION IS COMPLETE.

SIGNATURE:		
NAME:		
	(Print)	
TITLE:		
FIRM:		
DATE:		

- 16.5.3. Prior to award of the Contract, the EBDs of the apparent successful bidder will be examined, organized and inventoried by representatives of the Owner, together with members of the Contractor's staff who are knowledgeable in how the Bid was prepared. This examination is to verify that the EBDs are authentic, legible, and complete. It will not include review of and will not constitute approval of proposed construction methods, estimating assumptions, or interpretations of the Contract Documents. Examination will not alter any condition(s) or term(s) of the Contract.
- 16.5.4. If all documentation required in the "Format and Contents" has not been included in the original submittal, additional documentation shall be submitted, at the Owner's discretion, prior to award of the Contract. The detailed breakdown of estimated costs shall be reconciled and revised, if appropriate, by agreement between the Contractor and the Owner before making the award.
- 16.5.5. If the Contract is not awarded to the apparent successful bidder, the EBDs of the next Bidder to be considered for award shall be processed, as described above.
- 16.5.6. Timely submission of the complete EBDs is an essential element of the Bidder's responsibility and a prerequisite to Contract award. Failure to provide the necessary EBDs within the specified time frame will be sufficient cause for the Owner to reject the Bid.
- 16.5.7. If the Bidder's proposal is based on subcontracting any part of the Work, each subcontractor whose total subcontract price exceeds 5 percent of the total contract price proposed by the Bidder, shall provide separate

EBDs to be included with those of the Bidder. These documents will be opened and examined in the same manner and at the same time as the examination described above for the apparent successful Bidder.

- 16.5.8. If the Contractor wishes to subcontract any portion of the Work after award, the Owner retains the right to require the Contractor to submit EBDs from the subcontractor before the subcontract is approved.
- 16.5.9. EBDs submitted by unsuccessful Bidders will be returned unopened, unless opened as provided for above, following award of the Contract.
- 16.6. Storage: The EBDs will be placed in escrow prior to award of the Contract, for the life of the Contract, in a mutually agreeable institution. The cost of storage will be borne by the Owner.

16.7. Examination:

- 16.7.1. The EBDs shall be examined by both the Owner and the Contractor, at any time deemed necessary by either the Owner or the Contractor or Dispute Review Board, to assist in the negotiation of price adjustments and change orders, or the settlement of disputes.
- 16.7.2. Examination of the EBDs is subject to the following conditions:
 - 16.7.2.1. As trade secrets, the EBDs are proprietary and confidential as described above.
 - 16.7.2.2. The Owner and the Contractor shall each designate, in writing to the other party and a minimum of 10 days prior to examination, representatives who are authorized to examine the EBDs. With the consent of both the Owner and the Contractor, members of the Disputes Review Board may examine the EBDs if required to assist in the resolution of a dispute. No other person shall have access to the EBDs.
 - 16.7.2.3. Access to the EBDs will take place only in the presence of duly designated representatives of both the Owner and the Contractor.

16.8. Final Disposition:

16.8.1. The EBDs will be returned to the Contractor at such time as the Contract has been completed and final settlement has been achieved.

FND OF SECTION

SECTION 00 41 13 BID FORM

Bidder will complete Bid Form and upload to the Projectmates website and submit as their Bid.

BID RECIPIENT

- 1.1. To: Central Utah Water Conservancy District.
- 1.2. Date: November 7, 2023.
- 1.3. Project: Spanish Fork Santaquin Pipeline Santaquin Reach.
- 1.4. Contract No: C-2023-1.

CONTRACT EXECUTION AND BONDS

- 2.1. 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.
- 2.2. Bidder accepts all of the terms and conditions of the Contract Documents, including without limitation those in Section 00 21 13, Instructions to Bidders, dealing with the disposition of the Bid Security.
- 2.3. This Bid will remain open for the period stated in Section 00 11 13, Advertisement for Bids, unless otherwise required by law. Bidder will enter into an Agreement within the time and in the manner required in Section 00 21 13, Instructions to Bidders, and will furnish the insurance certificates, Payment Bond, and Performance Bond required by the Contract Documents.
- 3. CONTRACT TIMES, COMPLETION MILESTONES, AND LIQUIDATED DAMAGES
 - 3.1. To all the foregoing, and including all Bid Forms contained in this Bid, Bidder further agrees to complete the Work required under the Contract Documents within the Contract Times and the Work milestones stipulated in the Contract Documents, and to accept in full payment therefore the Contract Price based on the Lump Sum Bid Price(s) named in this Bid.
 - 3.2. Work completion dates and liquidated damages for exceeding these dates are listed in the supplements to this Bid Form.

4. BIDDER'S REPRESENTATION

- 4.1. In submitting this Bid, Bidder represents that:
 - 4.1.1. 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.
 - 4.1.2. Bidder has examined and carefully studied the Bidding Documents, the other related data identified in the Bidding Documents, and the Addenda, receipt of which is hereby acknowledged. Failure to acknowledge addenda shall render the bid nonresponsive and shall be cause for its rejection.
 - 4.1.3. Bidder has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 - 4.1.4. Bidder is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress, and performance of the Work.
 - 4.1.5. Bidder has obtained and carefully studied (or accepts the consequences for not doing so) all additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents to be employed by Bidder, and safety precautions and programs incident thereto.
 - 4.1.6. Bidder does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) Bid and within the times and in accordance with the other terms and conditions of the Bidding Documents.
 - 4.1.7. Bidder is aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

- 4.1.8. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, and data with the Bidding Documents.
- 4.1.9. Bidder has provided written notice to the Owner of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by the Owner is acceptable to Bidder.
- 4.1.10. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.
- 4.1.11. Bidder will submit written evidence of its authority to do business in the state where the Project is located not later than the date of its execution of the Agreement.
- 4.1.12. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation.
- 4.1.13. Bidder has not directly or indirectly included or solicited any other Bidder to submit a false or sham Bid.
- 4.1.14. Bidder has not solicited or induced any individual or entity to refrain from bidding; and Bidder has not sought collusion to obtain for itself any advantage over any other Bidder or over the Owner.
- 4.1.15. Bidder understands and agrees that the Owner reserves the right to reject any and all Bids and to waive any informalities in the Bidding.
- 4.1.16. Bidder agrees that this Bid shall be good and may not be withdrawn for a period of 60 calendar days after the scheduled closing time for receiving Bids.
- 4.1.17. Bidder is responsible for the quantity takeoffs from which the Bid is based from the information in the Contract Documents.
- 4.1.18. Bidder has examined the Agreement Form attached hereto, and the Specifications, and proposes and agrees that if his Bid as submitted, and as more fully described in the attached sheets, be accepted, the Bidder will contract in the form so attached to furnish the items and perform work called for in accordance with the provisions of said Agreement Form and the Specifications and to deliver the same within the time stipulated therein.

4.1.19. Bidder will accept in full payment, therefore, the prices named in this Bid.

5. SALES AND USE TAX

5.1. The Bidder agrees to pay all Federal, State, and local sales and use taxes for the Work contemplated herein.

6. SUBCONTRACTOR WORK

- 6.1. The Bidder shall perform at least 50 percent of the total project Work with the Bidder's own forces. Failure to comply with this requirement will render the Bid nonresponsive and may cause its rejection.
- 6.2. The Bidder shall list as part of the Bid the name and the location of the place of business of each Subcontractor who will perform Work or labor or render service to the Bidder in or about the construction of the Work or improvement, in an amount in excess of 2 percent of the Prime Contractor's total Bid. A sample table of Subcontractors is shown below. The Bidder shall also list the portion of the Work which will be done by each Subcontractor under this Contract. The Bidder shall list only one Subcontractor for each portion as is defined by the Bidder in its Bid. Failure to comply with this requirement will render the Bid nonresponsive and may cause its rejection. The Bidder shall also list the name and location of the place of business of each supplier to be used to complete the work. A sample table of suppliers is shown below. Use of the listed supplier will be contingent on an approved submittal. Rejected equipment or supplies can be provided by an alternate vendor assuming an approved submittal is produced. Failure to comply with this requirement may render the Bid nonresponsive and may cause its rejection.

7. BASIS OF LUMP SUM BID

- 7.1. Award of the Contract will be based upon the total bid price for the Contract. The Bid Schedule consists of lump sum bid amounts. The Total Lump Sum Bid Price is the sum of these figures plus any increased amount the Contractor determines necessary to complete the entire project based on the Work shown in the Contract Documents that may not be included as an individual Bid item in the Schedule of Bid Items.
- 7.2. Bid Schedule A includes the prices which will be incorporated into the Agreement by reference. Bid Schedule B, when included, includes Owner-Selected Options which may be incorporated into the Agreement at the Owner's option. Bid Schedule C includes unit price bids for changes in the work that may be incorporated into the Agreement at the Owner's option. Bidders must bid on all schedules included in the Bid Form. The determination of the low Bidder will be based on Bid Schedule A.

8.	PROPOSAL	ADJUS ⁻	TMFNT

8.1. The proposed adjustment allows the Bidder to adjust their Bid prior to Bid opening without the need to adjust individual bid item amounts. The sum of the extended total shall be increased (or decreased) by this Proposal Adjustment amount. Indicate decrease in parenthesis (______). For payment purposes, this correction amount will be applied proportionally to all items in the Bid Schedule.

9. SEGREGATED FACILITIES

9.1. For a Bid to be considered responsive, Bidder shall sign and submit with the Bid the Certification of Nonsegregated Facilities included as a supplement to this specification.

10. AFFIRMATIVE ACTION

- 10.1. For a Bid to be considered responsive, Bidder shall sign and submit with the Bid the Certification of Affirmative Action included as a supplement to this specification.
- 10.2. Bidders who will sublet work under this Contract shall include the following affirmative action information in the Certification of Affirmative Action with the Bid proposal:
 - 10.2.1. Procedures which have been adopted to identify and contact disadvantaged business enterprises.
 - 10.2.2. Responses of DBE firms to solicitations.
 - 10.2.3. Anticipated awards to DBE.

11. WITNESS

the Contract Documents,
the undersigned
a corporation organized under the laws of the State of
a partnership consisting of
or an individual trading as
of the City of, hereby proposes and agrees to
furnish any and all materials, labor, construction equipment, services,
transportation and other items as required for performing all the work for the
construction described in the Contract Documents and to construct the same and

In compliance with Section 00 21 13, Instruction to Bidders, and all conditions of

SPANISH FORK SANTAQUIN PIPELINE - SANTAQUIN REACH

install the material therein for the Owner in a good and workmanlike and substantial manner acceptable to the Owner and strictly pursuant to and in conformity with the Specifications and Drawings prepared by the Engineer, and with such modifications of the same and other documents that may be made by the Owner as provided herein.

The undersigned hereby declares, as Bidder, that the only persons or parties interested in this Bid as principals are those named herein; that no elected official or employee of the Owner is in any manner interested directly or indirectly in this Bid or in the profits to be derived from the Contract proposed to be taken, other than as permitted by law; that this Bid is made without any connection with any other person or persons making a separate Bid for the same purpose; that the Bid is in all respects fair and without collusion or fraud.

By signing this Bid, the Bidder certifies that neither the Bidder nor any of its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in any program or project which is 100 percent or partially funded with federal funds.

	Respectfully submitted,	
		Bidder
(Corporate Seal) If Bid is by corporation	Ву	
		Title
Witness: if Bidder is an individual	Bidder's post office address:	

Name a	nd Title	Address
	Phone:	
<u>SEAL</u>		

12. SUPPLEMENTS

- 12.1. The supplements listed below, following "End of Section," are part of the Specification.
 - 1. Project Milestones and Liquidated Damages.
 - 2. Bid Schedule A Basis of Award (to be completed by Bidder).
 - 3. Addenda to the Bidding Documents (to be completed and acknowledged by Bidder).
 - 4. List of Subcontractors (to be completed by Bidder).
 - 5. List of Suppliers (to be completed by Bidder).
 - 6. Nonsegregated Facilities Certification (to be completed by Bidder).
 - 7. Affirmative Action Certification (to be completed by Bidder).

Project Milestones and Liquidated Damages				
Item No.	Description	Project Milestone Date	Liquidated Damages for Failure to Achieve Project Milestone	
1	Santaquin Spanish Fork Pipeline Operational	March 15, 2026	\$15,000/day	
2	Final Completion	May 20, 2026	\$5,000/day	
3				
4				
5				
6				
7				

Bid Schedule A Basis of Award					
Bid Item	Description	Quantity Unit	Amount		
A1	Bidder's Insurance and Mobilization, Demobilization, & Administration	1 LS			
A2	60-Inch Pipe, appurtenances, surface restoration, and required connections from STA 714+00 to STA 949+00	1 LS			
A3	Interstate 15 Tunneled Crossing	1 LS			
A4	Highway 6 Tunneled Crossing	1 LS			
A 5	Railroad Tunneled Crossing	1 LS			
A6	Mapleton High Pressure Turnout	1 LS			
A7	Salem East Turnout	1 LS			
A8	Salem Woodland Hills Turnout	1 LS			
A9	Salem 250 West Blowoff	1 LS			
A10	Payson East Turnout and Isolation Valve Vault	1 LS			
A11	Payson Main Street Turnout	1 LS			
A12	Payson South Turnout	1 LS			
A13	Santaquin North Turnout	1 LS			
A14	Pigging Connection Vault	1 LS			
A15	Santaquin South Turnout/Pigging Structure	1 LS			
A16	Salem Power Relocation at Woodland Hills Turnout	1 LS	\$100,000		
	Total Bid Schedule A =	\$			
	Proposal Adjustment =	\$			
	Total Adjusted Bid Schedule A \$				

Bidder agrees to accept as full payment for work proposed with the Bidding Documents based upon the undersigned's own estimate of quantities and cost including sales, consumer, use, other taxes, and overhead and profit, the following amount for Bid Schedule A for the Contract:

Written Value:	Dollars and
	Cents
Numerical Value: \$	

Addenda to the Bidding Documents				
Addendum No.	Bidder Addendum Date Acknowledgmer			

	List of Subcontractors						
Work to be Performed	Subcontractor License Number	Percent of Total Bid	Subcontractor's Name and Address				

Lis	t of Supplier Percent of Total	5		
Material to be Supplied	Bid	Supplier's Name and Address		

NONSEGREGATED FACILITIES CERTIFICATION

Bidder certifies that facilities under control of the Bidder which are provided to employees and in which employees perform services will be maintained in a nonsegregated manner as indicated in Section 00 73 01, Additional Supplementary Conditions of the Construction Contract for Federally Funded Projects.

Bidder further certifies that subcontractors will be required to comply with requirements for maintaining nonsegregated facilities and Bidder will obtain certification from proposed subcontractor prior to award of subcontracts exceeding \$10,000 which are not exempt from the provisions.

Signature

Date

Name and Title of Signer

Typed Name and Title

AFFIRMATIVE ACTION CERTIFICATION

Bidder certifies that Bidder has read and understands the Affirmative Action requirements for the Project. Bidder further certifies that in the solicitation of subcontractors and suppliers under this Contract, prior to Bidding or entering into any commitments for subcontracting or for purchase of supplies and materials or for leasing equipment, Bidder has made timely contact with potential Disadvantaged Business Enterprises (DBE) to affirmatively solicit their interest, capability, and prices and has documented the results of such solicitation.

Bidder hereby informs th	ne Owner (Check only one):	
☐ Bidder does not in	ntend to sublet a portion of the co	ontract work.
affirmative action and perform on su	sublet a portion of the contract of the allow disadvantaged busines abcontracts. Contacts made with med under this contract and the	s enterprises to compete for potential DBE firms regarding
Name	Result of Contact	Award (Yes or No)
Note: Attach additional s documentation.	sheet(s) if needed with subcontra	actor results and
Company (Bidder) Name	}	
Authorized Representati	ve (Name and Title)	
Signature		Date

PART 2 CONTRACTING REQUIREMENTS

SECTION 00 51 00 NOTICE OF AWARD

To:	
Project:	Contract:
The Owner has considered the Bid submit described Project in response to the Adver Advertisement for Bids) and Section 00 21	
Bidder is hereby notified that their Bid ha	as been accepted for items in the amount of
Bidder is required to execute the Contract Performance Bond, Payment Bond, and ce days from date of this Notice.	
time indicated in this Notice, Owner will bout of the Owner's acceptance of Bidder's	d to furnish said Bonds within the allotted be entitled to consider Bidder's rights arising Bid as abandoned and as a forfeiture of to such other rights as may be granted by
Bidder is required to return and acknowle Owner.	edged copy of this Notice of Award to the
Dated this day of	
	Central Utah Water Conservancy District
	Owner
ACKNOWLEDGMENT OF NOTICE	By CUWCD Project Manager
Receipt of the above Notice of Award is hereby acknowledged	Title:
this the day of, 20	
By:	
Title:	

SECTION 00 52 13 AGREEMENT FORM

THIS AGREEMENT is between <u>CEI</u>	NTRAL UTAH WATER CONSERVANCY
DISTRICT (hereinafter called Owner) and	
	(hereinafter called Contractor).

Owner and Contractor, in consideration of the mutual covenants hereinafter set forth, agree as follows:

- 1. WORK.
 - 1.1. Contractor shall complete the Work as specified or indicated under the Bid Schedule(s) of the Owner's Contract Documents entitled Spanish Fork Santaquin Pipeline Santaquin Reach.
 - 1.2. The Work is generally described as follows:
 - 1.2.1. Schedule A: All Contract Work.
 - 1.2.2. Schedule B: Not Used.
 - 1.2.3. Schedule C: Not Used.
- LOCATION AND COORDINATION.
 - 2.1. See Drawings for location. See Section 01 31 13, Project Coordination.
- CONTRACT TIME.
 - 3.1. Contract Time:
 - 3.1.1. The following conditions regarding Contract Times are a part of this Agreement:
 - 3.1.1.1. Notice to Proceed (Material Procurement and Site Investigation). The Notice to Proceed for procurement of materials and site investigations will be issued shortly after Award of the Contract. Notice to Proceed (Material Procurement and Site Investigation) includes all materials and work (such as coordination, permits, submittals, potholing, surveying, etc.) except for field construction.
 - 3.1.1.2. Notice to Proceed (Field Construction). Notice to Proceed (Field Construction) includes all work required to complete the

Contract not covered by the Notice to Proceed (Material Procurement and Site Investigation).

3.1.1.3. Completion Dates. The Work shall be completed no later than the dates listed in Specification Section 00 41 13, Bid Form.

4. LIQUIDATED DAMAGES.

4.1. Liquidated Damages:

- 4.1.1. Owner and Contractor recognize that time is of the essence for the performance of Contractor's obligations pursuant to this Agreement, that Work under other contracts is dependent on timely and satisfactory completion of the Work, and that the Owner will suffer financial loss if the Work is not completed within the times specified in the Contract Documents (included in bid form, and Article 3 herein, plus any extensions thereof allowed in accordance with the General Conditions of the Contract). They also recognize that losses incurred by the Owner for delay would be extremely difficult or impossible to calculate or ascertain. The Owner and Contractor recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty) Contractor shall pay Owner the amounts as indicated in the Bid Form for each Day that expires after the time specified for each milestone.
- 4.1.2. When Contractor is in default for nonperformance within the stipulated Contract Times including any intermediate Milestone Dates listed in the Bid Form, Owner shall notify Contractor in writing within thirty (30) Days after the Contract Times or intermediate Milestone Date, and deduct the liquidated damages in the amount stated in the Bid Form of the Contract Document from any monies due Contractor. The deductions of liquidated damages shall be in addition to any retainage withheld and shall be non-reimbursable.

CONTRACT PRICE.

5.1. 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.

6. PAYMENT PROCEDURES.

6.1. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions and Specification Section 01 29 00, Payment Procedures. Applications for Payment will be processed by Owner as provided in the General Conditions.

PROGRESS PAYMENTS; RETAINAGE

- 7.1. Progress payments and retainage shall be as stipulated in Section 00 73 00, Supplementary Conditions.
- CONTRACT DOCUMENTS.
 - 8.1. The Contract Documents which comprise the entire agreement between Owner and Contractor concerning the Work consist of this Agreement (pages 1 to 5, inclusive) and the following attachments to this Agreement:
 - 8.1.1. Volumes 1 and 2:
 - 8.1.1.1. Notice Inviting Bids.
 - 8.1.1.2. Instructions to Bidders
 - 8.1.1.3. Bid Form, with all accompanying Supplements.
 - 8.1.1.4. Statement of Qualifications.
 - 8.1.1.5. Performance Bond.
 - 8.1.1.6. Payment Bond.
 - 8.1.1.7. General Conditions.
 - 8.1.1.8. Supplementary General Conditions.
 - 8.1.1.9. Easement Agreements if Owner has obtained easements for this Project: Note that except for payment for these easements, Owner has fulfilled none of the requirements in these easement agreements. The Contractor agrees to fulfill and complete ALL conditions in these easement agreements. A summary of these agreements is listed in Section 01 11 00, Summary of Work.
 - 8.1.1.10. Technical Specifications, consisting of all specifications listed in the Table of Contents and/or included in Volume 1.
 - 8.1.2. Volume 3: Drawings, consisting of all sheets listed in the Drawing List.
 - 8.1.3. Bid and Construction Period Documents:
 - 8.1.3.1. Addenda which may be issued during the Bidding Period.
 - 8.1.3.2. Change Orders which may be delivered or issued after Effective Date of the Agreement and are not attached hereto.

8.2. There are no Contract Documents other than those listed in this Article 7. The Contract Documents may only be amended by Change Order as provided in the General Conditions.

ANTI-ISRAEL BOYCOTT ACT COMPLIANCE

9.1. In accordance with Section 63G-27-101, Utah Code Ann., by signing this Agreement the Contractor hereby certifies that it is not currently engaged in a boycott of the State of Israel, or companies or individuals doing business in or with the State of Israel, or companies authorized by, licensed by, or organized under the laws of the State of Israel to do business, and that it agrees not to engage in a boycott of the State of Israel for the duration of this Agreement. Contractor understands that this provision does not apply to it if its contract has a value less than \$100,000, or if Contractor has fewer than 10 full-time employees.

10. ASSIGNMENT

- 10.1. 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.
- 10.2. 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 C executed the day and year first written by	ontractor have caused this Agreement to be pelow.
Owner	-
	[CORPORATE SEAL]
Ву	
Date	.
Address for giving notices	
	-
(If Owner is a public body, attach eviden documents authorizing execution of Agree	ce of authority to sign and resolution or other eement.)
Contractor	-
	[CORPORATE SEAL]
Ву	<u>.</u>
Date	.
Address for giving notices	
	-
License No	.
Agent for service of process:	<u>.</u>
(If Contractor is a corporation, attach ev	idence of authority to sign.)

AGREEMENT CERTIFICATE

(if Corporation)

STATE OF)) 66	
COUNTY OF)) SS:	
I HEREBY CERTIF	Y that a meeting of the Board of Director	rs of the
a corporation existing unde	er the laws of the State of	, held on
	, the following resolution was duly	passed and adopted:
"RESOLVED, that _		as
		President of the
Corporation, be and is here	eby authorized to execute the Agreement	dated
his execution thereof, attes	h Water Conservancy District and this co ted by the Secretary of the Corporation, a Ill be the official act and deed of this Corp	and with the
I further certify that said re	esolution is now in full force and effect.	
IN WITNESS WHE	REOF, I have hereunto set my hand and	affixed the official
seal of the corporation this	, day of	
	•	Secretary
(SEAL)		

AGREEMENT CERTIFICATE

(if Partnership)

STATE OF)	\
COUNTY OF)) SS:
I HEREBY CERTIFY	that a meeting of the Partners of the
a partnership existing under	the laws of the State of
held on	, the following resolution was duly passed and adopted
"RESOLVED, that	, as
	of the Partnership
be and is hereby authorized t	o execute the Agreement dated
to the Central Utah Water Co execution	onservancy District and this partnership and that his
thereof, attested by the	
shall be the	shall be the official act and deed of this Partnership.
I further certify that said res	olution is now in full force and effect.
IN WITNESS WHERE	EOF, I have hereunto set my hand and affixed the official
seal of the corporation this	, day of
(SEAL)	Partner

AGREEMENT CERTIFICATE

(if Joint Venture)

STATE OF) COUNTY OF)		,		
)		
I HEF	REBY CERTIFY t	hat a meeting	of the Principals of tl	ne
			e State of	, held or
, 20		, the follow	ing resolution was du	ıly passed and adopted
"RES	OLVED, that			, as
				of the Joint Venture
				, 20
to the Centra execution	ıl Utah Water Cor	nservancy Dist	trict and this joint ve	nture and that his
thereof, attes	sted by the	shall be the	e official act and deec	of this Joint Venture.
I further cert	ify that said reso	lution is now i	n full force and effect	
IN W	ITNESS WHERE	OF, I have her	eunto set my hand aı	nd affixed the official
seal of the co	rporation this	, day of _		
				Managing Partner
(SEAL)				

SECTION 00 55 01 NOTICE TO PROCEED— MATERIAL PROCUREMENT AND SITE INVESTIGATION

To:	Date:
Project: Spanish Fork Santaquin Pipelir	ne – Santaquin Reach
Contractor is hereby notified to commen	nce with procurement of materials and Site ay be required by the Contract Documents in
	Central Utah Water Conservancy District Owner
ACKNOWLEDGMENT OF NOTICE	By:
	Mark Breitenbach
	Title:
Receipt of the above Notice to Proceed is	s hereby acknowledged
Ву	
this the day of	
Ву	
Title	
END (OF SECTION

SECTION 00 55 02 NOTICE TO PROCEED— FIELD CONSTRUCTION

To:	Date:
	Santaquin Reach
Contractor is hereby notified to commence f with the Agreement dated, on c Work by May 20, 2026.	
	Central Utah Water Conservancy District Owner
ACKNOWLEDGMENT OF NOTICE	By: Mark Breitenbach
	Title:
Receipt of the above Notice to Proceed is her	reby acknowledged
Ву	
this the day of	
Ву	
Title	

SPANISH FORK SANTAQUIN PIPELINE - SANTAQUIN REACH

SECTION 00 61 13.13 PERFORMANCE BOND

BOND NO
KNOW ALL PERSONS BY THESE PRESENT,
That as Contractor
and as Surety,
are held firmly bound unto the Central Utah Water Conservancy District 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.
WHEREAS, said Contractor has been awarded and is about to enter into the annexed contract with said Owner to perform all work required under the bidding schedule(s):
of the Owner's Specifications entitled:
Project: Spanish Fork Santaquin Pipeline – Santaquin Reach
Perform all the requirements of said contract required to be performed on his part, at the times and in the manner specified therein, then this obligation shall be null and void, otherwise it shall remain in force and effect.
PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions of Title 14, Chapter 1, Utah Code Annotated, as amended, and all liabilities on this bond shall be determined in accordance with said provisions to the extent as if it were copied at length herein.
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, shall not in any way release said Contractor or said Surety, and

notice of such alterations or extensions of the contract is hereby waived by said Surety.

SIGNED AND SEALED, this _____ day of _____ (SEAL) (Contractor) (Surety) By: _____(Signature) (Signature) Attorney-In-Fact

(SEAL AND NOTARIAL ACKNOWLEDGMENT OF SURETY)

SPANISH FORK SANTAQUIN PIPELINE - SANTAQUIN REACH

IMPORTANT: Surety companies executing bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the Project is located.

END OF SECTION

SPANISH FORK SANTAQUIN PIPELINE - SANTAQUIN REACH

SECTION 00 61 13.16 PAYMENT BOND

Project: Spanish Fork Santaquin Pipeline – Santaquin Reach

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, a reasonable attorney's fee, to be fixed by the court. This bond shall insure to the benefit of any persons, companies, or corporations entitled to file claims under applicable State law.

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, 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 release either said Contractor or said Surety and notice of such alterations or extensions of the contract is hereby waived by said Surety.

PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions of Title 14, Chapter 1, Utah Code Annotated, as amended, and all liabilities on this bond shall be determined in accordance with said provisions to the same extent as if it were copied at length herein.

(SEAL AND NOTARIAL ACKNOWLEDGMENT OF SURETY)

SPANISH FORK SANTAQUIN PIPELINE - SANTAQUIN REACH

IMPORTANT Surety companies executing bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the project is located.

END OF SECTION

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 Defined Terms

- A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
 - Addenda—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 - Agreement—The written instrument, executed by Owner and Contractor, that sets forth
 the Contract Price and Contract Times, identifies the parties and the Engineer, and
 designates the specific items that are Contract Documents.
 - 3. Application for Payment—The document prepared by Contractor, in a form acceptable to Engineer, to request progress or final payments, and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 - 4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 - 5. Bidder—An individual or entity that submits a Bid to Owner.
 - 6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.
 - 7. *Bidding Requirements*—The Advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.
 - 8. Change Order—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.
 - 9. Change Proposal—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.

10. Claim

a. A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; contesting an initial decision by Engineer concerning the

- requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.
- b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.
- c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.
- d. A demand for money or services by a third party is not a Claim.
- 11. Constituent of Concern—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
- 12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.
- 13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
- 14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.
- 15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
- 16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
- 17. Cost of the Work—See Paragraph 13.01 for definition.
- 18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
- 19. Effective Date of the Contract—The date, indicated in the Agreement, on which the Contract becomes effective.
- 20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.
- 21. Electronic Means—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the

recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

- 22. Engineer—The individual or entity named as such in the Agreement.
- 23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
- 24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.
 - a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.
 - b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.
 - c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.
- 25. Laws and Regulations; Laws or Regulations—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
- 26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
- 27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.
- 28. Notice of Award—The written notice by Owner to a Bidder of Owner's acceptance of the Bid
- 29. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
- 30. Owner—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
- 31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.
- 32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.

- 33. Resident Project Representative—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.
- 34. Samples—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
- 35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer's review of the submittals.
- 36. Schedule of Values—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.
- 37. Shop Drawings—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.
- 38. Site—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.
- 39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
- 40. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
- 41. Submittal—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers' instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.
- 42. Substantial Completion—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion of such Work.

- 43. Successful Bidder—The Bidder to which the Owner makes an award of contract.
- 44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
- 45. Supplier—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.

46. Technical Data

- a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.
- b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.
- c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.
- 47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.
- 48. *Unit Price Work*—Work to be paid for on the basis of unit prices.
- 49. Work—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.
- 50. Work Change Directive—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

1.02 *Terminology*

- A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. Intent of Certain Terms or Adjectives: The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. Day: The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective*: The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - 1. does not conform to the Contract Documents;
 - 2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - 3. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or Paragraph 15.04).

E. Furnish, Install, Perform, Provide

- The word "furnish," when used in connection with services, materials, or equipment, means to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
- 2. The word "install," when used in connection with services, materials, or equipment, means to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
- 3. The words "perform" or "provide," when used in connection with services, materials, or equipment, means to furnish and install said services, materials, or equipment complete and ready for intended use.
- 4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words "furnish," "install," "perform," or "provide," then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

- F. Contract Price or Contract Times: References to a change in "Contract Price or Contract Times" or "Contract Times or Contract Price" or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term "or both" is not expressed.
- G. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2—PRELIMINARY MATTERS

- 2.01 Delivery of Performance and Payment Bonds; Evidence of Insurance
 - A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).
 - B. Evidence of Contractor's Insurance: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.
 - C. Evidence of Owner's Insurance: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 Copies of Documents

- A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.
- B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 Before Starting Construction

- A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for timely review:
 - a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
 - 2. a preliminary Schedule of Submittals; and
 - 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work

into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 Preconstruction Conference; Designation of Authorized Representatives

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work, and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other Submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 Acceptance of Schedules

- A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will be made to Contractor until acceptable schedules are submitted to Engineer.
 - The Progress Schedule will be acceptable to Engineer if it provides an orderly progression
 of the Work to completion within the Contract Times. Such acceptance will not impose
 on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or
 progress of the Work, nor interfere with or relieve Contractor from Contractor's full
 responsibility therefor.
 - 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
 - Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.
 - 4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

2.06 Electronic Transmittals

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.
- B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 Intent

- A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.
- F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.
- G. Nothing in the Contract Documents creates:
 - 1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or
 - 2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

3.02 Reference Standards

- A. Standards Specifications, Codes, Laws and Regulations
 - Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, means the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
 - 2. No provision of any such standard specification, manual, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner or Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility

inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 Reporting and Resolving Discrepancies

A. Reporting Discrepancies

- 1. Contractor's Verification of Figures and Field Measurements: Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
- 2. Contractor's Review of Contract Documents: If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
- 3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. Resolving Discrepancies

- Except as may be otherwise specifically stated in the Contract Documents, the provisions
 of the part of the Contract Documents prepared by or for Engineer take precedence in
 resolving any conflict, error, ambiguity, or discrepancy between such provisions of the
 Contract Documents and:
 - a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 Requirements of the Contract Documents

A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.

- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 Reuse of Documents

- A. Contractor and its Subcontractors and Suppliers shall not:
 - have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media versions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or
 - have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein precludes Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

- 4.01 Commencement of Contract Times; Notice to Proceed
 - A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.

4.02 Starting the Work

A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work may be done at the Site prior to such date.

4.03 Reference Points

A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the

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

4.04 Progress Schedule

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.
- B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 Delays in Contractor's Progress

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
 - 1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
 - 2. Abnormal weather conditions;
 - 3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and
 - 4. Acts of war or terrorism.

- D. Contractor's entitlement to an adjustment of Contract Times or Contract Price is limited as follows:
 - 1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.
 - Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.
 - 3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.
- E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:
 - 1. The circumstances that form the basis for the requested adjustment;
 - 2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;
 - 3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;
 - 4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and
 - 5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.

Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.

- F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.
- G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

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

5.01 Availability of Lands

A. Owner shall furnish the Site. Owner shall notify Contractor in writing of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.

- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 Use of Site and Other Areas

A. Limitation on Use of Site and Other Areas

- 1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
- 2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.
- B. Removal of Debris During Performance of the Work: During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.
- C. Cleaning: Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment

- and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.
- D. Loading of Structures: Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 Subsurface and Physical Conditions

- A. Reports and Drawings: The Supplementary Conditions identify:
 - 1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;
 - Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and
 - 3. Technical Data contained in such reports and drawings.
- B. *Underground Facilities*: Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.
- C. Reliance by Contractor on Technical Data: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.
- D. Limitations of Other Data and Documents: Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:
 - the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;
 - 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;
 - 3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or
 - 4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 Differing Subsurface or Physical Conditions

- A. *Notice by Contractor*: If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:
 - 1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;
 - 2. is of such a nature as to require a change in the Drawings or Specifications;
 - 3. differs materially from that shown or indicated in the Contract Documents; or
 - 4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

- B. Engineer's Review: After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. Owner's Statement to Contractor Regarding Site Condition: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. Early Resumption of Work: If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- E. Possible Price and Times Adjustments
 - Contractor shall be entitled to an equitable adjustment in Contract Price or Contract
 Times, to the extent that the existence of a differing subsurface or physical condition, or
 any related delay, disruption, or interference, causes an increase or decrease in

Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
- b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,
- c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.
- 2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
 - a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;
 - b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
 - c. Contractor failed to give the written notice required by Paragraph 5.04.A.
- 3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
- 4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.
- F. Underground Facilities; Hazardous Environmental Conditions: Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

5.05 Underground Facilities

- A. Contractor's Responsibilities: Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:
 - 1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
 - complying with applicable state and local utility damage prevention Laws and Regulations;

- 3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;
- 4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
- 5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. Notice by Contractor: If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing regarding such Underground Facility.
- C. *Engineer's Review*: Engineer will:
 - 1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;
 - identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;
 - obtain any pertinent cost or schedule information from Contractor; determine the extent,
 if any, to which a change is required in the Drawings or Specifications to reflect and
 document the consequences of the existence or location of the Underground Facility; and
 - 4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.
 - During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
- D. Owner's Statement to Contractor Regarding Underground Facility: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
- E. Early Resumption of Work: If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- F. Possible Price and Times Adjustments
 - 1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown

or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
- b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and
- c. Contractor gave the notice required in Paragraph 5.05.B.
- If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
- 3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.
- 4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

5.06 Hazardous Environmental Conditions at Site

- A. Reports and Drawings: The Supplementary Conditions identify:
 - 1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;
 - 2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
 - 3. Technical Data contained in such reports and drawings.
- B. Reliance by Contractor on Technical Data Authorized: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:
 - 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures

- of construction to be employed by Contractor, and safety precautions and programs incident thereto;
- 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
- 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.
- D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.
- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
- G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.
- H. If, after receipt of such written notice, Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special

- conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.
- . To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6—BONDS AND INSURANCE

- 6.01 Performance, Payment, and Other Bonds
 - A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract.
 - B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.
 - C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or

Regulations, and must be issued and signed by a surety named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

- D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.
- E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.
- F. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner's termination rights under Article 16.
- G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.
- H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

6.02 Insurance—General Provisions

- A. Owner and Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. Alternative forms of insurance coverage, including but not limited to self-insurance and "Occupational Accident and Excess Employer's Indemnity Policies," are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.
- D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by

- Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.
- E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.
- F. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner's option, may purchase and maintain Owner's own liability insurance. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.

H. Contractor shall require:

- 1. Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and
- 2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.
- If either party does not purchase or maintain the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
- J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.
- K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.

- L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.
- M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.
- N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

6.03 Contractor's Insurance

- A. *Required Insurance*: Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.
- B. *General Provisions*: The policies of insurance required by this Paragraph 6.03 as supplemented must:
 - 1. include at least the specific coverages required;
 - 2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;
 - remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;
 - 4. apply with respect to the performance of the Work, whether such performance is by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable; and
 - 5. include all necessary endorsements to support the stated requirements.
- C. Additional Insureds: The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:
 - 1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;
 - 2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;
 - 3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);

- 4. not seek contribution from insurance maintained by the additional insured; and
- 5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

6.04 Builder's Risk and Other Property Insurance

- A. Builder's Risk: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.
- B. Property Insurance for Facilities of Owner Where Work Will Occur: Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.
- C. Property Insurance for Substantially Complete Facilities: Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.
- D. Partial Occupancy or Use by Owner: If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide advance notice of such occupancy or use to the builder's risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.
- E. Insurance of Other Property; Additional Insurance: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

6.05 Property Losses; Subrogation

A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against

Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.

- 1. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils, risks, or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.
- 2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.
 - Owner waives all rights against Contractor, Subcontractors, and Engineer, and the
 officers, directors, members, partners, employees, agents, consultants and
 subcontractors of each and any of them, for all losses and damages caused by, arising out
 of, or resulting from fire or any of the perils, risks, or causes of loss covered by such
 policies.
- C. The waivers in this Paragraph 6.05 include the waiver of rights due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other insured peril, risk, or cause of loss.
- D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

6.06 Receipt and Application of Property Insurance Proceeds

- A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.
- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.01 Contractor's Means and Methods of Construction

- A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
- B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at Contractor's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor's determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

7.02 Supervision and Superintendence

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.03 Labor; Working Hours

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall maintain good discipline and order at the Site.

- B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions.
- C. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.04 Services, Materials, and Equipment

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.
- B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment must be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.05 *"Or Equals"*

- A. Contractor's Request; Governing Criteria: Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.
 - 1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that the proposed item:
 - 1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

- 2) will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
- 3) has a proven record of performance and availability of responsive service; and
- 4) is not objectionable to Owner.
- b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:
 - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor's Expense*: Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. Engineer's Evaluation and Determination: Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal," which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.
- D. Effect of Engineer's Determination: Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.
- E. Treatment as a Substitution Request: If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

7.06 Substitutes

- A. Contractor's Request; Governing Criteria: Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.
 - Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.
 - 2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.

- 3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:
 - a. will certify that the proposed substitute item will:
 - 1) perform adequately the functions and achieve the results called for by the general design;
 - 2) be similar in substance to the item specified; and
 - 3) be suited to the same use as the item specified.

b. will state:

- 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;
- 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and
- 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
- c. will identify:
 - 1) all variations of the proposed substitute item from the item specified; and
 - 2) available engineering, sales, maintenance, repair, and replacement services.
- d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. Engineer's Evaluation and Determination: Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.
- C. *Special Guarantee*: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- D. Reimbursement of Engineer's Cost: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

- E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
- F. Effect of Engineer's Determination: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

7.07 Concerning Subcontractors and Suppliers

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.
- B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.
- E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.
- F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.

- H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.
- J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.
- K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.
- L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.
- M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

7.08 Patent Fees and Royalties

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If an invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or 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 such rights will be disclosed in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.
- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

7.09 Permits

A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits, licenses, and certificates of occupancy. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

7.10 *Taxes*

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

7.11 Laws and Regulations

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It is not Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.
- C. Owner or Contractor may give written notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.12 Record Documents

A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

7.13 Safety and Protection

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.
- B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.
- C. 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 the Site or who may be affected by the Work;
 - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- E. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection.
- F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
- G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.
- H. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.

- I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).
- J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 Hazard Communication Programs

A. Contractor shall be responsible for coordinating any exchange of safety data sheets (formerly known as material safety data sheets) or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 *Emergencies*

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

7.16 Submittals

- A. Shop Drawing and Sample Requirements
 - 1. Before submitting a Shop Drawing or Sample, Contractor shall:
 - a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determine and verify:
 - 1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;
 - 2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;
 - c. confirm that the Submittal is complete with respect to all related data included in the Submittal.
 - Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.

- 3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.
- B. Submittal Procedures for Shop Drawings and Samples: Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.

1. Shop Drawings

- a. Contractor shall submit the number of copies required in the Specifications.
- b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide, and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.C.

2. Samples

- a. Contractor shall submit the number of Samples required in the Specifications.
- b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.
- 3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. Engineer's Review of Shop Drawings and Samples

- Engineer will provide timely review of Shop Drawings and Samples in accordance with the
 accepted Schedule of Submittals. Engineer's review and approval will be only to
 determine if the items covered by the Submittals will, after installation or incorporation
 in the Work, comply with the requirements of the Contract Documents, and be
 compatible with the design concept of the completed Project as a functioning whole as
 indicated by the Contract Documents.
- 2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.
- 3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
- 4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will

- document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.
- 5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.
- 6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
- 7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.
- 8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.

D. Resubmittal Procedures for Shop Drawings and Samples

- 1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous Submittals.
- 2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.
- 3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

E. Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs

- 1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:
 - a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.
 - b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.
 - c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.

- d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.
- 2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03. 2.04, and 2.05.
- F. Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

7.17 Contractor's General Warranty and Guarantee

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor's warranty and guarantee.
- B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:
 - 1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and
 - 2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.
- C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 - 1. abuse, or improper modification, maintenance, or operation, by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 - 2. normal wear and tear under normal usage.
- D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:
 - 1. Observations by Engineer;
 - 2. Recommendation by Engineer or payment by Owner of any progress or final payment;
 - 3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 - 4. Use or occupancy of the Work or any part thereof by Owner;
 - 5. Any review and approval of a Shop Drawing or Sample submittal;
 - 6. The issuance of a notice of acceptability by Engineer;
 - 7. The end of the correction period established in Paragraph 15.08;
 - 8. Any inspection, test, or approval by others; or

- 9. Any correction of defective Work by Owner.
- E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 Indemnification

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from losses, damages, costs, and judgments (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A will not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

7.19 Delegation of Professional Design Services

- A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.
- B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.
- C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.

- D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.
- E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:
 - 1. Checking for conformance with the requirements of this Paragraph 7.19;
 - 2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and
 - 3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.
- F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.
- G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

ARTICLE 8—OTHER WORK AT THE SITE

8.01 Other Work

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.
- D. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.

- E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.
- F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

8.02 Coordination

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:
 - 1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
 - 2. An itemization of the specific matters to be covered by such authority and responsibility;
 - 3. The extent of such authority and responsibilities.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 Legal Relationships

A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.
 - 1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.
 - 2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.
- C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9—OWNER'S RESPONSIBILITIES

- 9.01 *Communications to Contractor*
 - A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.
- 9.02 Replacement of Engineer
 - A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents will be that of the former Engineer.
- 9.03 Furnish Data
 - A. Owner shall promptly furnish the data required of Owner under the Contract Documents.
- 9.04 Pay When Due
 - A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

- 9.05 Lands and Easements; Reports, Tests, and Drawings
 - A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.
 - B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
 - C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 *Insurance*

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

9.07 Change Orders

A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 Inspections, Tests, and Approvals

A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 Limitations on Owner's Responsibilities

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

9.10 Undisclosed Hazardous Environmental Condition

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 Evidence of Financial Arrangements

A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract (including obligations under proposed changes in the Work).

9.12 Safety Programs

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
- B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.01 Owner's Representative

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

10.02 Visits to Site

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.07. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 Resident Project Representative

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.
- B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

10.04 Engineer's Authority

- A. Engineer has the authority to reject Work in accordance with Article 14.
- B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.
- C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.
- D. Engineer's authority as to changes in the Work is set forth in Article 11.

E. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.05 Determinations for Unit Price Work

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.06 Decisions on Requirements of Contract Documents and Acceptability of Work

A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.07 Limitations on Engineer's Authority and Responsibilities

- A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.
- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

10.08 Compliance with Safety Program

A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs of which Engineer has been informed.

ARTICLE 11—CHANGES TO THE CONTRACT

11.01 Amending and Supplementing the Contract

- A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
- B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.
- C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

11.02 Change Orders

- A. Owner and Contractor shall execute appropriate Change Orders covering:
 - Changes in Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
 - 2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
 - 3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and
 - 4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.
- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

11.03 Work Change Directives

A. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.

- B. If Owner has issued a Work Change Directive and:
 - 1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.
 - Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.

11.04 Field Orders

- A. Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.
- B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.05 Owner-Authorized Changes in the Work

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.
- B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.
- C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.06 Unauthorized Changes in the Work

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

11.07 Change of Contract Price

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:

- 1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);
- Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or
- 3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).
- C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit will be determined as follows:
 - 1. A mutually acceptable fixed fee; or
 - 2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;
 - b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 percent;
 - c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;
 - d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
 - e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and
 - f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

11.08 Change of Contract Times

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.
- B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

11.09 Change Proposals

A. Purpose and Content: Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.

B. Change Proposal Procedures

- 1. *Submittal*: Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.
- 2. Supporting Data: The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.
 - a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.
 - b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

- 3. Engineer's Initial Review: Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.
- 4. Engineer's Full Review and Action on the Change Proposal: Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change

Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

- 5. *Binding Decision*: Engineer's decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- C. Resolution of Certain Change Proposals: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.
- D. *Post-Completion*: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

11.10 Notification to Surety

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

ARTICLE 12—CLAIMS

12.01 *Claims*

- A. *Claims Process*: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:
 - 1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
 - 2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;
 - 3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and
 - 4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.
- B. Submittal of Claim: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge

- and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.
- C. Review and Resolution: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.

D. Mediation

- At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.
- 2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.
- 3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. Denial of Claim: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.
- G. Final and Binding Results: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 Cost of the Work

- A. Purposes for Determination of Cost of the Work: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
 - 1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or

- 2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.
- B. Costs Included: Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will include only the following items:
 - 1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will be included in the above to the extent authorized by Owner.
 - 2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will accrue to Owner, and Contractor shall make provisions so that they may be obtained.
 - 3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, which will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
 - 4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed or retained for services specifically related to the Work.
 - 5. Other costs consisting of the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, which are

consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.

c. Construction Equipment Rental

- 1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.
- 2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.
- 3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.
- d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
- e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
- f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of builder's risk or other property insurance established in accordance with Paragraph 6.04), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.

- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.
- C. Costs Excluded: The term Cost of the Work does not include any of the following items:
 - 1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
 - 2. The cost of purchasing, renting, or furnishing small tools and hand tools.
 - 3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
 - 4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
 - 5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
 - 6. Expenses incurred in preparing and advancing Claims.
 - 7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. Contractor's Fee

- 1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:
 - a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.
 - b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:
 - 1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.
 - 2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.
- 2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change

Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

E. Documentation and Audit: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

13.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. Cash Allowances: Contractor agrees that:
 - the cash allowances include the cost to Contractor (less any applicable trade discounts)
 of materials and equipment required by the allowances to be delivered at the Site, and
 all applicable taxes; and
 - Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment for any of the foregoing will be valid.
- C. *Owner's Contingency Allowance*: Contractor agrees that an Owner's contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor for Work covered by allowances, and the Contract Price will be correspondingly adjusted.

13.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision

thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.

E. Adjustments in Unit Price

- 1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:
 - a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
 - b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.
- 2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.
- 3. Adjusted unit prices will apply to all units of that item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

14.01 Access to Work

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply with such procedures and programs as applicable.

14.02 Tests, Inspections, and Approvals

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
 - 1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
 - 2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
 - 3. by manufacturers of equipment furnished under the Contract Documents;
 - 4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
 - 5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 Defective Work

- A. Contractor's Obligation: It is Contractor's obligation to assure that the Work is not defective.
- B. *Engineer's Authority*: Engineer has the authority to determine whether Work is defective, and to reject defective Work.
- C. *Notice of Defects*: Prompt written notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.
- D. Correction, or Removal and Replacement: Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.
- E. *Preservation of Warranties*: When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.
- F. Costs and Damages: In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs,

losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 Acceptance of Defective Work

A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 Uncovering Work

- A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.
- B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.
- C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.
 - 1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.
 - 2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 Owner May Stop the Work

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work,

or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work will not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 Owner May Correct Defective Work

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace defective Work as required by Engineer, then Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

ARTICLE 15—PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 Progress Payments

A. Basis for Progress Payments: The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.

B. Applications for Payments

- At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.
- 2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation

establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

- Beginning with the second Application for Payment, each Application must include an
 affidavit of Contractor stating that all previous progress payments received by Contractor
 have been applied to discharge Contractor's legitimate obligations associated with prior
 Applications for Payment.
- 4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. Review of Applications

- Engineer will, within 10 days after receipt of each Application for Payment, including each
 resubmittal, either indicate in writing a recommendation of payment and present the
 Application to Owner, or return the Application to Contractor indicating in writing
 Engineer's reasons for refusing to recommend payment. In the latter case, Contractor
 may make the necessary corrections and resubmit the Application.
- 2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
- 3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

- 4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work;
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;
 - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
- 5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
- 6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
 - Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. Payment Becomes Due

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

E. Reductions in Payment by Owner

- In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
 - a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

- b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
- c. Contractor has failed to provide and maintain required bonds or insurance;
- d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
- e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
- f. The Work is defective, requiring correction or replacement;
- g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
- h. The Contract Price has been reduced by Change Orders;
- An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;
- j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
- k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens; or
- I. Other items entitle Owner to a set-off against the amount recommended.
- 2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.
- 3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

15.02 Contractor's Warranty of Title

A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

15.03 Substantial Completion

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time

- submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.
- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.
- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 Partial Use or Occupancy

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without

significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

- At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.
- At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
- 3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
- 4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

15.05 Final Inspection

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

15.06 Final Payment

A. Application for Payment

- After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.
- 2. The final Application for Payment must be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents;
 - b. consent of the surety, if any, to final payment;
 - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.

- d. a list of all duly pending Change Proposals and Claims; and
- e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
- 3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.
- B. Engineer's Review of Final Application and Recommendation of Payment: If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.
- C. Notice of Acceptability: In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.
- D. Completion of Work: The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.
- E. Final Payment Becomes Due: Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner's receipt of the final Application for Payment from Engineer.

15.07 Waiver of Claims

A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim,

- appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.
- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

15.08 Correction Period

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. correct the defective repairs to the Site or such adjacent areas;
 - 2. correct such defective Work;
 - 3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.
- B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.
- C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.
- D. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

16.01 Owner May Suspend Work

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times directly attributable to any such suspension. Any Change Proposal seeking such adjustments must be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 Owner May Terminate for Cause

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
 - Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule);
 - 2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
 - 3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
 - 4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 10 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:
 - 1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and
 - 2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects,

attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

- F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 Owner May Terminate for Convenience

- A. Upon 7 days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
 - 3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

16.04 Contractor May Stop Work or Terminate

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days' written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The

provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17—FINAL RESOLUTION OF DISPUTES

17.01 Methods and Procedures

- A. *Disputes Subject to Final Resolution*: The following disputed matters are subject to final resolution under the provisions of this article:
 - 1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and
 - 2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.
- B. *Final Resolution of Disputes*: For any dispute subject to resolution under this article, Owner or Contractor may:
 - 1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;
 - 2. agree with the other party to submit the dispute to another dispute resolution process; or
 - 3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18—MISCELLANEOUS

18.01 Giving Notice

- A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:
 - 1. in person, by a commercial courier service or otherwise, to the recipient's place of business;
 - 2. by registered or certified mail, postage prepaid, to the recipient's place of business; or
 - 3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

18.02 Computation of Times

A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

18.03 Cumulative Remedies

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 Limitation of Damages

A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 No Waiver

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

18.06 Survival of Obligations

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

18.07 Controlling Law

A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 Assignment of Contract

A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party to this Contract of any rights under or interests in the Contract will be binding on the other party without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract.

18.09 Successors and Assigns

A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

18.10 Headings

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

SECTION 00 73 00 SUPPLEMENTARY CONDITIONS

These Supplementary Conditions amend or supplement Specification Section 00 72 00, General Conditions. The General Conditions remain in full force and effect, except as amended.

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

- 1.01 Defined Terms
- SC-1.01.A Additional Defined Terms Add the following words and terms to those listed in Article GC-1.01 Defined Terms:
 - 1. Design Engineer Engineer of Record for the Work, listed as: CH2M HILL Engineers, Inc.
 - 2. Reference Data
 - a. Those items identified as such in the Supplementary Conditions which are made available to the Contractor by the Owner.
 - b. Reference Data is not part of the Contract Documents.
 - c. The following items shall be considered Reference Data unless otherwise identified as Technical Data or Contract Documents.
 - 1) Geotechnical Reports.
 - 2) Boring logs.
 - 3) Reports and data with respect to existing subsurface conditions at or adjacent to the Site.
 - 4) Reports and data with respect to existing physical conditions at or adjacent to the Site.
 - 5) Information and data regarding the presence or location of Underground Facilities not otherwise shown on the Drawings.
 - 6) Information contained in reports identified in the Supplementary Conditions as including Technical Data which is not expressly identified as Technical Data itself.
 - 3. *United States Bureau of Reclamation (USBR)* An agency within the United States Department of the Interior.

- 4. *United States Fish and Wildlife Service (USFWS*) An agency within the United States Department of the Interior.
- 5. *Utah Department of Transportation (UDOT)* The highway department of the State of Utah.
- SC-1.01.B Revision of Defined Terms Replace the following words and terms listed in Article GC-1.01 Defined Terms in their entirety:
 - Engineer Owner as Engineer, is Central Utah Water Conservancy District (CUWCD), or CUWCD acting in its capacity as facility steward, where the facility is owned by the United States of America.
 - 2. Technical Data Those items expressly identified as such in the Supplementary Conditions. Technical Data is not part of the Contract Documents.

1.02 *Terminology*

- SC-1.02 Additional Terminology Add the following words and terms to those listed in Article GC-1.02 Terminology:
 - 1. Acceptance Testing Testing determined and accomplished to verify final product complies with the Contract Documents.
 - 2. Backfill Material placed in an excavated space to fill such space.
 - 3. Base Course The upper course of the granular base of a pavement structure, immediately below the pavement or the lower course of an asphalt concrete pavement structure.
 - 4. Control Testing (or Quality Control Testing) Testing done by the Contractor to control Contractor's procedures and materials as necessary to assure work is ready for acceptance testing.
 - 5. *Culvert* Any structure not classified as a bridge, which provides an opening under or adjacent to a roadway.
 - 6. Emergency Unforeseen occurrences and combinations of circumstances involving the public welfare, or the protection of work already done under the contract Documents, or which endanger life or property and call for immediate action or remedy.
 - 7. *Major Item* Any item of work and/or materials having an original contract value which exceeds ten percent of the amount of the original Contract.
 - 8. *Materials* Includes in addition to material incorporated in the Project, equipment and other material consumed in the performance of the Work.

- 9. Pavement Any surfacing of streets, alleys, sidewalks, courts, driveways, etc., consisting of mineral aggregate bound into a rigid or semi-rigid mass by a suitable binder such as, but not limited to, portland cement or asphalt cement.
- 10. Pavement Structure The combination of subbase, base course, and surface course placed on a subgrade to support the traffic load and distribute it to the roadbed.
- 11. *Plans* The Drawings or reproductions thereof pertaining to details of the Work and which are made a part of the Contract Documents.
- 12. Profile Grade The trace of a vertical plane intersecting the top surface of the proposed wearing surface, usually along the longitudinal centerline of the roadbed; invert or flowline of a pipe; or similar trace. Profile grade means either elevation or gradient of such trace according to the context.
- 13. *Subbase* The lower course of the base of a roadway or other pavement structure, immediately above the subgrade.
- 14. Subgrade The supporting earth base on which the pavement or other structures and their special courses rest.
- 15. *Superintendent* The Contractor's authorized representative in responsible charge of the Work.
- 16. *Surface Course* The finish or wearing course of an asphalt concrete pavement structure.
- 17. *Traveled Way* The portion of the roadway for the movement of vehicles, exclusive of shoulders.
- 18. *Utility* Pipeline, conduits, ducts, transmission lines, overhead or underground wires, railroads, storm drains, sanitary sewers, irrigation facilities, street lighting, traffic signals, fire alarm systems, and appurtenances of public utilities and those of private industry, businesses, or individuals solely for their own use or use of their customers which are operated or maintained in, on, under, over or across public right-of-way or public or private easement.
- 19. Working Day A calendar day, exclusive of Saturdays, Sundays, and recognized legal holidays, on which weather and other conditions not under the control of the Contractor will permit construction operations to proceed for the major part of the day with the normal working force engaged in performing the controlling item or items of work which would be in progress at that time.

ARTICLE 2—PRELIMINARY MATTERS

- 2.01 Delivery of Performance and Payment Bonds; Evidence of Insurance
- SC-2.01 Delete Paragraphs 2.01.C. in its entirety.
- 2.02 Copies of Documents
- SC-2.02 Delete Paragraph 2.02.A in its entirety and insert the following new paragraph in its place:
 - A. Owner shall furnish to Contractor up to ten (10) printed copies of conformed Contract Documents incorporating and integrating all Addenda and any amendments negotiated prior to the Effective Date of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). The ten (10) sets of printed documents will include eight (8) sets of half size drawings and two (2) sets of full-size drawings. Additional printed copies of the conformed Contract Documents will be furnished upon request at the cost of reproduction.
- 2.03 Before Starting Construction
- SC-2.03 Revise Paragraph 2.03.A to indicate that Preliminary Schedule of values shall be submitted within 3 days after the Effective Date of the Contract.
- 2.05 Acceptance of Schedules
- SC-2.05 Delete Paragraph 2.05.A in its entirety and insert the following new paragraph in its place:
 - A. No progress payment will be made to Contractor until acceptable schedules required by the Contract Documents are submitted to the Owner.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

- 3.06 Contract Document Order of Precedence
- SC-3.06 Add the following paragraph immediately after Paragraph 3.05 of the General Conditions:
- 3.06 Contract Document Order of Precedence
 - A. In the event of there being a conflict between one document included in the Contract Documents and any other element, the document highest in precedence shall control and supersede the document with lower

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precedence. The order of precedence of the Contract Documents is as follows:

- 1. The Agreement.
- 2. Procurement Requirements (Specifications Division 00).
- 3. Supplementary Conditions.
- 4. General Conditions.
- 5. General Requirements (Specifications Division 01).
- 6. Technical Specifications (Division 02 through Division 49).
- 7. Drawings.
- 8. Supplementary Documents: These include, but are not limited to, city and local agency standards, specifications, drawings, codes, permits and other requirements which govern the construction within the area where Work is to be performed.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

- 4.01 Commencement of Contract Times; Notice to Proceed
- SC-4.01 Delete Paragraph 4.01.A in its entirety and insert the following new paragraph in its place:
 - A. The Contract Times will commence on the day indicated in the Notice to Proceed. Where multiple Notices to Proceed are issued, such as for material procurement or site investigation ahead of field construction, the Contract Times will commence to run on the date of the initial Notice to Proceed.
- 4.02 Starting the Work
- SC-4.02 Delete Paragraph 4.02.A in its entirety and insert the following new paragraph in its place:
 - A. Contractor shall start to perform the Work on the date indicated in the Notice to Proceed. No Work shall be done at the Site prior to this date.

- 4.05 Delays in Contractor's Progress
- SC-4.05 Amend Paragraph 4.05.C by adding the following subparagraphs:
 - 5. Weather-Related Delays:
 - a. If "abnormal weather conditions" as set forth in Paragraph 4.05.C.2 of the General Conditions are the basis for a request for an equitable adjustment in the Contract Times, such request must be documented by data substantiating each of the following: 1) that weather conditions were abnormal for the period of time in which the delay occurred, 2) that such weather conditions could not have been reasonably anticipated, and 3) that such weather conditions had an adverse effect on the Work as scheduled.
 - b. Weather conditions during the winter and at other times at the Project Site can be severe. Winter conditions commonly include high winds, deep snow, and extreme cold. Summer conditions will include periods of very hot, dry weather with occasional thunderstorms. In addition, the water level in ditches, canals, ravines, streams, and groundwater in the Project Site will fluctuate in response to rain fall and snow melt. The Contractor shall be responsible for determining when weather conditions preclude safe working conditions, impede satisfactory work progress, or impact specified work quality. If the Contractor chooses to temporarily shut down work activities due to weather conditions, such shut down shall be at no expense to the Owner and will not automatically extend the Contract Times.
 - c. Weather conditions that have occurred within the 10 years prior to the contract award will be used as a basis for conditions that should be anticipated by the Contractor.

ARTICLE 5—SITE, SUBSURFACE AND PHYSICAL CONDITIONS, HAZARDOUS ENVIRONMENTAL CONDITIONS

- 5.02 Use of Site and Other Areas
- SC-5.02 Add the following new paragraphs immediately after Paragraph 5.02.A.2:
 - 3. The Contractor shall not allow hunting or camping by employees, subcontractors, suppliers or other intruders in the vicinity of the construction work upon any of the landowner's properties through which the project easement pass.
 - 4. Contractor shall preserve the existing lands and conduct operations to prevent unnecessary destruction, scarring, or defacing of the land surface in the vicinity of the Work. Areas where construction activities or construction access will not be permitted will be shown on the Drawings or otherwise

- marked in the field by the Owner. These areas shall be identified with orange temporary fencing installed by the Contractor.
- 5. Remove only trees marked for removal by the Owner. If limbs or branches of trees are broken in completing the Work, Contractor shall trim the broken limbs or branches with a clean cut and paint the cut with a tree-pruning compound as directed by the Owner.
- 6. Movement of crews and equipment within the rights-of-way and other approved routes provided for access to the Work shall be performed in a manner to minimize damage to river and riparian areas, wetlands, wildlife habitat, or property. When no longer required for construction, temporary access roads shall be restored to original or acceptable contours, restored to final conditions, and made impassable to vehicular traffic.
- 7. The construction right-of-way shall be restricted by construction limits or easements shown on the Drawings. The Contractor shall fence off right-of-way using temporary plastic fencing and keep personnel and equipment out of restricted areas.
- 8. Owner may assess the Contractor liquidated damages in the amount of \$5,000 for each occurrence when Contractor's equipment or personnel goes beyond the Work limits without prior authorization from Owner.
- 9. Upon completion of the Work, and following removal of construction facilities and required cleanup, land used for construction purposes and not required for the completed installation shall be scarified and regraded, so that all surfaces blend with the natural terrain and are left in a condition that will facilitate revegetation, provide for proper drainage, and prevent erosion, as approved by the Owner.
- 10. Protect fences of private property owners. Where work is required to pass through fields where animals are being pastured or kept, Contractor shall construct temporary fencing and gates at the points of entrance and exit to each property to ensure that animals will not escape or be injured during construction.
- 11. Protect construction and open trenches in such a manner as to ensure that livestock will not be injured as a result of the Work.
- 12. The Contractor shall be liable for any damage, including crop damage, due to irrigation facilities damaged by Contractor operations and shall repair such damaged facilities to an "equal or better" than original condition.
- 13. Contractor shall protect and preserve objects of archaeological, anthropological, paleontological or historic interest in accordance with State and Federal laws.

- 14. Notify Owner and stop work in the immediate vicinity if any evidence of historical, archaeological, anthropological, or paleontological materials are discovered during the Work. Work in the immediate vicinity shall be halted until a qualified archaeologist makes a determination of significance or as otherwise directed by the Owner.
- 15. Any areas that will be disturbed as a result of construction activities, including access roads, construction staging areas, fill disposal sites, must have a cultural clearance completed at least forty-five (45) days prior to disturbance. The cultural clearance shall be completed in coordination with the State Historic Preservation Office (SHPO).
- 5.03 Subsurface and Physical Conditions
- SC-5.03 Delete Paragraph 5.03 in its entirety and insert the following in its place:
- 5.03 Subsurface and Physical Conditions
 - A. Reports and Drawings: The Supplementary Conditions identify:
 - 1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data, and the specific portions of such reports which constitute the Technical Data.
 - 2. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Reference Data.
 - B. Representation of Subsurface and Physical Conditions in the Contract Documents:
 - 1. Representation of subsurface conditions in the Contract Documents represent subsurface or otherwise hidden conditions as they are supposed or believed to be by the Owner and Engineer, but is not intended or to be inferred that the conditions shown constitute a representation that such conditions are actually existent.
 - 2. Except as otherwise expressly provided in the Contract Documents, the Owner and Engineer shall not be liable for any loss sustained by the Contractor as a result of any variance between conditions represented in the Contract Documents and the actual conditions revealed during the progress of the Work.
 - C. Reliance by Contractor on Technical Data: Contractor may rely upon the accuracy of the Technical Data expressly identified as such in the Supplementary Conditions, but such reports which contain Technical Data are not Contract Documents.

- D. Reliance by Contractor on Reference Data:
 - 1. Reference Data is provided for the Contractor's reference only. The Owner and Engineer do not guarantee the accuracy of the information contained therein.
 - 2. It shall be the responsibility of the Contractor to satisfy themselves as to the accuracy of the information provided as Reference Data, including but not limited to the following:
 - a. Soil type.
 - b. Location and type of bedrock.
 - c. Quantity of soil or rock excavation.
 - d. Elevation of groundwater.
 - e. Rate of ingress of groundwater into excavations.
- E. Limitations of Other Data and Documents: Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractor's with respect to:
 - The completeness of such reports and drawings for Contractor's purposes, including but not limited to any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions programs incident thereto:
 - 2. Contractor's interpretation of or conclusion drawn from Technical Data or Reference Data or any other such data, interpretations, opinions, or information.
- F. The following table lists the reports and drawings that contain Technical Data, and specifically identifies the Technical Data contained within the report or drawing upon which Contractor may rely:

Title of Report or Drawing	Date of Report or Drawing	Technical Data
Geotechnical Data Report, Spanish Fork Santaquin Pipeline Project, Santaquin Reach by RB&G Engineering, Inc.	October 2023	Geotechnical Data Report

Title of Report or Drawing	Date of Report or Drawing	Technical Data
Geotechnical Data Report, Spanish Fork Santaquin Pipeline Project, Santaquin Reach by RB&G Engineering, Inc.	April 2018	Geotechnical Data Report
Water level monitoring data, RB&G	Drawing G-12	Monthly groundwater levels by test hole

G. The following table lists the reports and drawings which include Reference Data:

Title of Report or Drawing	Date of Report or Drawing	Description of Information Provided
Santaquin Reach – Horrocks Engineers Potholes:	Drawing G-12	Utility pothole data

- H. Owner will make arrangements for Contractor to examine copies of reports and drawings identified as Technical Data or Reference Data that were not otherwise included with the Bidding Documents. Such documents will be made available for review during Owner's regular business hours.
- 5.04 Differing Subsurface or Physical Conditions
- SC-5.04 Delete Paragraph 5.04.A in its entirety and insert the following in its place:
 - A. *Notice by Contractor*: If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:
 - 1. is of such nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;
 - 2. is of such nature as to require a change in the Drawings or Specifications;
 - 3. differs materially from that shown or indicated in the Contract Documents: or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall promptly after becoming aware thereof notify Owner and Engineer in writing about such condition. Contractor shall continue performing portions of the Work to the extent practicable and in coordination with the Engineer's Review.

- 5.05 Underground Facilities
- SC-5.05.A Add the following new paragraph immediately after Paragraph 5.05.A.5:
 - 6. the relocation of Underground Facilities at the Site as shown or indicated in the Contract Documents or as otherwise required to complete the Work.
- SC-5.05.B Delete paragraph 5.05.B in its entirety.
- SC-5.05.C Delete paragraph 5.05.C in its entirety.
- SC-5.05.D Delete paragraph 5.05.D in its entirety.
- SC-5.05.E Delete paragraph 5.05.E in its entirety.
- SC-5.05.F Delete paragraph 5.05.F in its entirety.
- 5.06 Hazardous Environmental Conditions at Site
- SC-5.06 Add the following new paragraphs immediately after Paragraph 5.06.A.3:
 - 4. The following table lists the reports and drawings known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and the Technical Data (if any) upon which Contractor may rely:

Title of Report or Drawing	Date of Report or Drawing	Technical Data

ARTICLE 6—BONDS AND INSURANCE

- 6.01 Performance, Payment, and Other Bonds
- SC-6.01.A Delete Paragraph 6.01.A in its entirety and insert the following paragraph in its place:
 - A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect for the duration of the correction period as specified in Paragraph 15.08, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract.
- SC-6.01.B Add the following paragraphs immediately after Paragraph 6.01.B:
 - 1. After Substantial Completion, Contractor shall furnish a warranty bond issued in the form of EJCDC® C-612, Warranty Bond (2018). The warranty bond must be in a bond amount of 50 percent of the final Contract Price. The warranty bond must remain in effect for the duration of the correction period specified in Paragraph 15.08. Contractor shall deliver the fully executed warranty bond to Owner prior to or with the final application for payment, and in any event no later than 11 months after Substantial Completion.
 - 2. The warranty bond must be issued by the same surety that issues the performance bond required under Paragraph 6.01.A of the General Conditions.
- 6.03 Contractor's Insurance
- SC-6.03.A Supplement Paragraph 6.03 with the following provisions after Paragraph 6.03.B.5:
 - 6. Blanket additional insured endorsements which require a written contract or agreement between the additional insured and the named insured, such as CG 20 33 endorsements, are not permitted.

- SC-6.03.B Supplement Paragraph 6.03 with the following provisions after Paragraph 6.03.C:
 - D. Other Additional Insureds: As a supplement to the provisions of Paragraph 6.03.C of the General Conditions, the commercial general liability, automobile liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies must include as additional insureds (in addition to Owner and Design Engineer) the following:
 - 1. Mapleton City.
 - 2. Payson City.
 - 3. Salem City.
 - 4. Santaquin City.
 - 5. Strawberry Highline Canal Company.
 - 6. United States Bureau of Reclamation (USBR).
 - 7. United States Department of the Interior (DOI).
 - 8. Utah County (County).
 - 9. Design Engineer(s), including Subconsultants.
 - 10. Summit Creek Irrigation and Canal Company.
 - 11. DR Horton.
 - 12. Kurt and Janie Christensen.
 - E. Workers' Compensation and Employer's Liability: Contractor shall purchase and maintain workers' compensation and employer's liability insurance, including, as applicable, United States Longshoreman and Harbor Workers' Compensation Act, Jones Act, stop-gap employer's liability coverage for monopolistic states, and foreign voluntary workers' compensation (from available sources, notwithstanding the jurisdictional requirement of Paragraph 6.02.B of the General Conditions).

Workers' Compensation and Related Policies	Policy Limits of Not Less Than	
Workers' Compensation		
State	Statutory	
Applicable Federal (e.g., Longshoreman's)	Statutory	

Workers' Compensation and Related Policies	Policy Limits of Not Less Than
Foreign voluntary workers' compensation (employer's responsibility coverage), if applicable	Statutory
Employer's Liability	
Each accident	\$1,000,000
Each employee	\$1,000,000
Policy limit	\$2,000,000

- F. Commercial General Liability Claims Covered: Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against claims for:
 - damages because of bodily injury, including occupational sickness or disease, mental anguish, or death of any person other than Contractor's employees,
 - 2. personal injury and advertising injury,
 - 3. damage because of physical damage to or destruction of tangible property, including the loss of use of such property,
 - 4. bodily injury or property damage arising out of completed operations,
 - 5. the Contractor's indemnity obligations under the Contract
- G. Commercial General Liability (CGL)—Form and Content: Contractor's commercial liability policy must be written on a 1996 (or later) Insurance Services Organization, Inc. (ISO) commercial general liability form (occurrence form) and include the following coverages and endorsements:
 - 1. Products and completed operations coverage.
 - Such insurance must be maintained for 5 years after final payment, and during this period includes the Additional Insureds as additional insureds under this coverage on a primary and noncontributing basis.
 - b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or

- elsewhere in the Contract) evidence of continuation of such insurance at final payment and 5 years thereafter.
- c. Provides that any general aggregate limit applies separately to the Work on a "per Project" basis, using the "Designated Construction Project(s) General Aggregate Limit.
- 2. Blanket contractual liability coverage, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
- 3. Severability of interests and no insured-versus-insured or cross-liability exclusions.
- 4. Underground, explosion, and collapse coverage.
- 5. Personal injury coverage.
- 6. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements via an ISO 20 10 11 85 endorsement if available and otherwise via one or more endorsements that provide coverage no less than that provided by ISO forms CG 20 10 07 04 and CG 20 37 07 04. If Contractor demonstrates to Owner that the specified ISO endorsements are not commercially available, then Contractor may satisfy this requirement by providing equivalent endorsements.
- 7. For design professional additional insureds, ISO Endorsement CG 20 32 07 04 "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.
- H. *Commercial General Liability—Excluded Content:* The commercial general liability insurance policy, including its coverages, endorsements, and incorporated provisions, must not include any of the following:
 - 1. Any modification of the standard definition of "insured contract" (except to delete the railroad protective liability exclusion if Contractor is required to indemnify a railroad or others with respect to Work within 50 feet of railroad property).
 - 2. Any exclusion of claims by one insured against another insured, if the exclusion or restriction is based solely on the fact that the claimant is an insured, and there would otherwise be coverage for the claim.
 - 3. Any exclusion for claims for property damage to the Contractor's Work arising out of the products-completed operations hazard where the damaged Work or the Work out of which the damage arises was performed by a Subcontractor.

- 4. Any exclusion for claims for bodily injury other than to employees of the insured.
- 5. Any exclusion for claims for indemnity under Contract arising out of injury to employees of the insured.
- 6. Any exclusion for claims or loss excluded under a prior work endorsement or similar exclusionary language.
- 7. Any exclusion for claims or loss due to physical damage under a prior injury endorsement or similar exclusionary language.
- 8. Any exclusion for claims related to residential, multi-family, or other habitational projects, if the Work is to be performed on such a project.
- 9. Any exclusion for claims related to roofing, if the Work involves roofing.
- 10. Any exclusion for claims related to exterior insulation finish systems (EIFS), synthetic stucco or similar exterior coatings or surfaces, if the Work involves such coatings or surfaces.
- 11. Any exclusion for claims related to earth subsidence or movement, where the Work involves such hazards.
- 12. Any exclusion for claims related to explosion, collapse, or underground hazards, where the Work involves such hazards.
- 13. Any exclusion for water intrusion or water damage.
- 14. Any provisions resulting in the erosion of insurance limits by defense costs other than those already incorporated in ISO form CG 00 01.
- 15. Any exclusion for the insured's vicarious liability, strict liability, or statutory liability (other than worker's compensation).
- 16. Any limitation or exclusion based on the nature of Contractor's work.
- 17. Any professional liability exclusion broader in effect than the most recent edition of ISO form CG 22 79.
- 1. Commercial General Liability—Minimum Policy Limits:

Commercial General Liability	Policy Limits of Not Less Than
General Aggregate	\$2,000,000
Products—Completed Operations Aggregate	\$2,000,000

Commercial General Liability	Policy Limits of Not Less Than
Personal and Advertising Injury	\$1,000,000
Bodily Injury and Property Damage—Each Occurrence	\$1,000,000

J. Automobile Liability. Contractor shall purchase and maintain automobile liability insurance for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle, along with any other statutorily required automobile coverage. Contractor shall cause the Additional Insures to be included as additional insureds under this policy. This policy must not contain any exclusion or limitation with respect to loading or unloading of a covered vehicle. The automobile liability policy must be written on an occurrence basis.

Automobile Liability	Policy Limits of Not Less Than
Combined Single Limit	
Combined Single Limit (Bodily Injury and Property Damage)	\$1,000,000

- K. Umbrella or Commercial Excess Liability: Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the Paragraphs above. The coverage afforded must be at least as broad as that of each and every one of the underlying policies and must:
 - 1. Be maintained for a period of three years after the Work is completed and include the Additional Insureds as additional insureds;
 - 2. Be primary to and not seek contribution from any other insurance maintained by any Additional Insureds;
 - 3. Provide for "vertical exhaustion" not subject to any "other insurance" provision under Contractor's policies (so this coverage applies as soon as Contractor's underlying primary and subsequent excess policies have been exhausted, and regardless of whether any other primary policies that may provide coverage have been exhausted);
 - 4. Include waiver of subrogation in favor of the Additional Insureds;

5. Not require the exhaustion of the underlying limits only through the actual payment by the underlying insurers.

Excess or Umbrella Liability	Policy Limits of Not Less Than
Each Occurrence	\$5,000,000
General Annual Aggregate	\$5,000,000

- L. Using Umbrella or Excess Liability Insurance to Meet CGL and Other Policy Limit Requirements: Contractor may meet the policy limits specified for employer's liability, commercial general liability, and automobile liability through the primary policies alone, or through combinations of the primary insurance policy's policy limits and partial attribution of the policy limits of an umbrella or excess liability policy that is at least as broad in coverage as that of the underlying policy, as specified herein. If such umbrella or excess liability policy was required under this Contract, at a specified minimum policy limit, such umbrella or excess policy must retain a minimum limit of 5,000,000 after accounting for partial attribution of its limits to underlying policies, as allowed above.
- Contractor's Pollution Liability Insurance: If Contractor's or its M. subcontractor's work includes Environmental Services, including coverage sufficient to cover any claims arising from the Contractor's construction activities and operations if the Work involves trenching, excavating, grading, abatement, or use of chemicals, and shall extend to transportation, mold, and non-owned Disposal Sites. If claims made, the retroactive date must be outlined on the certificate of insurance and prior to the actual start of work. Deductibles should be clearly stated and not to exceed \$25,000. "Environmental Services" means any contact with a Hazardous Material, including abatement, removal, remediation, transporting, or disposal of a Hazardous Material or working in areas where contact with such Hazardous Materials may take place. "Hazardous Material" means asbestos, asbestos containing material, lead (including lead-based paint), PCB, silica, silica dust, molds and microbial matter, any other chemical, material, or substance subject to regulation as a hazardous material, hazardous substance, toxic substance, or otherwise, under applicable federal, state, or local law; and any other chemical, material, or substance that may have adverse effects on human health or the environment.

Contractor's Pollution Liability	Policy Limits of Not Less Than
Each Occurrence/Claim	\$1,000,000
General Aggregate	\$1,000,000

N. Contractor's Professional Liability Insurance: If Contractor or any subcontractor of any tier is providing any professional services, including but not limited to, design, architecture, engineering, testing, surveying, or design/build services on the Project, Contractor shall provide Professional Liability insurance. If coverage is issued on a claims-made form, such coverage shall apply with a retroactive date to reflect the date in which professional services commenced under this Contract or else include an Extended Reporting Period for the equivalent number of years. Contractor agrees to continue to procure and maintain professional liability insurance coverage meeting these requirements for a period of five years after the Project completion. If Contractor's Work includes environmental, engineering, or consulting services involving Hazardous Materials, coverage shall not exclude such services.

Contractor's Professional Liability	Policy Limits of Not Less Than
Each Claim	\$2,000,000
Annual Aggregate	\$2,000,000

O. Railroad Protective Liability Insurance: Prior to commencing any Work within 50 feet of railroad-owned and controlled property, Contractor shall (1) endorse its commercial general liability policy with ISO CG 24 17, removing the contractual liability exclusion for work within 50 feet of a railroad, (2) purchase and maintain railroad protective liability insurance meeting the following requirements, (3) furnish a copy of the endorsement to Owner, and (4) submit a copy of the railroad protective policy and other railroad-required documentation to the railroad, and notify Owner of such submittal.

Railroad Protective Liability Insurance	Policy Limits of Not Less Than
Each Claim	\$2,000,000
Aggregate	\$2,000,000

P. Unmanned Aerial Vehicle Liability Insurance: If Contractor uses unmanned aerial vehicles (UAV—commonly referred to as drones) at the Site or in support of any aspect of the Work, Contractor shall obtain UAV liability insurance in the amounts stated; name Owner, Design Engineer, and all individuals and entities identified in the Supplementary Conditions as additional insureds; and provide a certificate to Owner confirming Contractor's compliance with this requirement. Such insurance will provide

coverage for property damage, bodily injury or death, and invasion of privacy.

Unmanned Aerial Vehicle Liability Insurance	Policy Limits of Not Less Than
Each Claim	\$1,000,000
General Aggregate	\$1,000,000

- 6.04 Builder's Risk and Other Property Insurance
- SC-6.04 Add the following new paragraph immediately after Paragraph 6.04.E:
 - F. Builder's Risk Requirements: The builder's risk insurance must:
 - 1. Be written on a builder's risk "all risk" policy form that at a minimum includes insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment stored and in transit, and must not exclude the coverage of the following risks: fire; windstorm; hail; flood; earthquake, volcanic activity, and other earth movement; lightning; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; collapse; explosion; debris removal; demolition occasioned by enforcement of Laws and Regulations; and water damage (other than that caused by flood).
 - a. Such policy will include an exception that results in coverage for ensuing losses from physical damage or loss with respect to any defective workmanship, methods, design, or materials exclusions.
 - b. If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake, volcanic activity, and other earth movement; or flood, are not commercially available under builder's risk policies, by endorsement or otherwise, such insurance will be provided through other insurance policies acceptable to Owner and Contractor.
 - 2. Cover, as insured property, at least the following: (a) the Work and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Work, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent constructed Work but which are intended to provide

working access to the Site, or to the Work under construction, or which are intended to provide temporary support for the Work under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures.

- 3. Cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of contractors, engineers, and architects).
- 4. Extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier).
- 5. Extend to cover damage or loss to insured property while in transit.
- 6. Allow for the waiver of the insurer's subrogation rights, as set forth in this Contract.
- 7. Allow for partial occupancy or use by Owner by endorsement, and without cancellation or lapse of coverage.
- 8. Include performance/hot testing and start-up, if applicable.
- 9. Be maintained in effect until the Work is complete, as set forth in Paragraph 15.06.D of the General Conditions, or until written confirmation of Owner's procurement of property insurance following Substantial Completion, whichever occurs first.
- 10. Include as named insureds the Owner, Contractor, Subcontractors (of every tier), and any other individuals or entities required by this Contract to be insured under such builder's risk policy. For purposes of Paragraphs 6.04, 6.05, and 6.06 of the General Conditions, and this and all other corresponding Supplementary Conditions, the parties required to be insured will be referred to collectively as "insureds." In addition to Owner, Contractor, and Subcontractors of every tier, include as insureds the following:
 - a. Mapleton City.
 - b. Payson City.
 - c. Salem City.
 - d. Santaguin City.
 - e. Strawberry Highline Canal Company.

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- f. United States Bureau of Reclamation (USBR).
- g. United States Department of the Interior (DOI).
- h. Utah County (County).
- 11. Include, in addition to the Contract Price amount, the value of the following equipment and materials to be installed by the Contractor but furnished by the Owner or third parties.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

- 7.03 Labor; Working Hours
- SC-7.03.A Delete Paragraph 7.03.C in its entirety and insert the following paragraph in its place.
 - C. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld, and with written consent from the local jurisdiction (where required).

SC-7.03.B Add the following new paragraphs immediately after Paragraph 7.03.C:

- D. Contractor shall provide all materials, including earthwork materials, to complete the Work. Sufficient earthwork materials may not be available on the Site to complete the Work. Processed or unprocessed earthwork materials generated onsite that comply with specifications, submittals, samples, sources, etc., may be used in the Work.
- E. Unless otherwise restricted by local laws or ordinances, or as otherwise approved in writing by the Owner, regular working hours are defined as between sunrise and sunset each day as determined for the Salt Lake International Airport. However, during the period from December 15 to April 15, regular hours shall extend from 1/2 hour before sunrise to 1/2 hour after sunset, with sunrise and sunset being as determined for the Salt Lake International Airport.

7.05 "Or Equals"

- SC-7.05 Delete Paragraph 7.05.D in its entirety and insert the following new paragraph in its place.
 - D. Effect of Engineer's Determination: Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Contract Price shall reflect the cost of the specified item without any "or equals" or substitutions. The Engineer's denial of an "or-equal" request will be final and binding and may not be reversed through an appeal under any provision of the Contract.

7.06 Substitutes

- SC-7.06.F Add the following new paragraph immediately after Paragraph 7.06.F:
 - G. Requests for substitution of materials or equipment specifically designated in the Contract Documents will not be considered until after award of the Contract.

7.12 Record Documents

SC-7.12.A Append the following sentence to the end of Paragraph 7.12.A of the General Conditions:

Contract Documents, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings may be stored electronically on a web-Based Construction Document Management program in lieu of maintaining these documents on site.

- SC-7.12.B Add the following new paragraphs immediately after Paragraph 7.12.A of the General Conditions:
 - B. Submit survey information as noted in Paragraph D, including x, y, and z coordinates using Project survey control as described in the Contract Documents, with a point description and a point number related to the station. Provide coordinates at:
 - 1. Top center of all main pipe joints and horizontal and vertical angles.
 - 2. Top center of all appurtenance pipe joints and horizontal and vertical angles.
 - 3. Corrosion test station, anodes, and any gauge connections to main pipe.
 - 4. Top of fiber optic box corners and top center of conduits (100-foot maximum spacing and at major direction changes.)

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- 5. Top of vault corners, concrete encasement corners, and center of vault and buried access manways.
- 6. Top center of all exposed utilities (5-foot maximum spacing) and valves.
- 7. Invert of pipes at connections to flow structures.
- 8. All new, replaced, or repaired curb and gutters (top back of curb) and sidewalk.
- 9. Piping outside of structures.
- 10. Features including light poles, fence corners, etc.
- 11. All new construction not already specified.
- C. Contractor shall use the Utah Department of Transportation Survey Data Recorder Codes, or Contractor shall submit a list of survey codes to the Owner for approval. Where applicable, provide utility type, size, and material descriptors. In addition to Project control coordinates, submit accompanying WGS84 (decimal degrees) latitude and longitude coordinates.
- D. Submit all survey data with Contractor's monthly pay request to the Owner to verify it is adequately done and for record purposes. Data shall be submitted in MS Excel format. Requests for Payment will not be approved unless accompanied by complete and accurate survey data.

7.13 Safety and Protection

- SC-7.13 Delete Paragraph 7.13.G in its entirety and insert the following new paragraph in its place:
 - G. The Utah Occupational Safety and Health Act and the conditions set forth in the Occupational Safety & Health Standards (OSHA) shall constitute the outline for the Safety program to be adhered to during the course of the Project. A copy of these publications shall be available at the jobsite for reference. If a discrepancy in, or between, any standards is found, the more stringent requirement, or interpretation, shall prevail. Additionally, onsite and offsite construction activities, and operation and maintenance activities shall conform to the standard in the current USBR Safety and Health Standards Manual, available at the following Web site: https://usbr.gov/safety/rshs/index.html

7.16 Submittals

- SC-7.16.A Delete Paragraphs 7.16.D.2 and 7.16.D.3 in their entirety and insert the following new paragraphs in their place:
 - 2. Contractor shall furnish required Shop Drawings and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two resubmittals. Contractor shall be responsible for Owner's costs for reviewing third or subsequent review of Shop Drawing or Sample submittals. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.
 - If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Owner's costs for review time.
 Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.
- SC-7.16.B Delete Paragraphs 7.16.E.1.b in its entirety and insert the following new paragraph in its place:
 - b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of Accepted or Not Accepted. Lack of response from the Engineer within the time established is not an indication of acceptance.
- 7.20 Control of Lines and Grades
- SC-7.20 Add the following new paragraphs immediately after Paragraph 7.19 of the General Conditions:
- 7.20 Control of Lines and Grades
 - A. Work performed under this Contract shall be built in accordance with the lines and grades as indicated in the Contract Documents. Distances and measurements except elevations and structural dimensions are given and made on horizontal planes. Note that distances for pipelines and roads are grid distances (not ground distances).
 - B. For pipelines, Owner will provide benchmarks at approximately 1-mile intervals along the pipeline corridor, from which the Contractor may perform the construction survey work. To be sure of the accuracy of the control of the Work, the Contractor shall complete closed survey loops on at least three of the Owner provided benchmarks prior to constructing each pipeline segment and structure.
 - C. Owner will provide reference points as indicated in Article 4 of the General Conditions. Contractor shall perform construction staking for the Contract work. The surveyor performing the onsite staking (Crew Chief) shall have a

minimum of 5 years in responsible charge of construction surveys for construction similar in nature to that required for this Contract and shall work under the supervision of a professional land surveyor licensed in the State of Utah. All related construction survey work submitted by the Contractor shall be stamped by the professional land surveyor overseeing the Work.

- D. A resume detailing the experience of both the licensed land surveyor and the crew chief shall be submitted to and approved by the Owner prior to the surveyor performing work on the project.
- E. Contractor shall provide staking along construction limits at each point of intersection or change in direction of the construction limits and at a minimum 100-foot intervals. Line and grade stakes for pipelines and roads shall be set at 50-foot spacing with an offset that is mutually agreeable with the Contractor and Owner.
- F. Centerline staking for pipelines and roads shall be provided at 100-foot intervals and referenced for clearing and grubbing operation. After the clearing and grubbing operation, one set of stakes shall be provided at 100-foot intervals for subgrade of the pipeline. Stake the bottom of the trench for each pipe joint.
- G. Structures shall be staked with primary offsets for reference of major control of each structure. Perform construction surveys to document progress payments for quantity evaluation. Set any additional stakes as may be required for performance of the Work.
- H. If control points or stakes are damaged or destroyed, Contractor shall replace them at no cost to the Owner.

ARTICLE 8—OTHER WORK AT THE SITE

- 8.02 Coordination
- SC-8.02 Add the following new Paragraph 8.02.C immediately after Paragraph 8.02.B:
 - C. Owner does not intend to contract with others for the performance of other work at or adjacent to the Site.

ARTICLE 9—OWNER'S RESPONSIBILITIES

No Supplementary Conditions in this Article.

ARTICLE 10—FNGINFFR'S STATUS DURING CONSTRUCTION

- 10.03 Resident Project Representative
- SC-10.03 Delete Paragraph 10.03 in its entirety and replace with the following:
- 10.03 Resident Project Representative
 - Owner will furnish a Resident Project Representative to represent Owner Α. at the Site and assist Owner in observing the progress and quality of the Work. The authority and responsibilities of Resident Project Representative include the following:
 - 1. Act on behalf of the Owner in rendering decisions regarding acceptance, approval, rejection, and interpretation where required in Specifications Division 02 through Division 49.
 - Determine the Engineer's required involvement in determining 2. acceptance, rejection, and interpretation of the Work, including the authority to act in place of the Engineer where the Contract Drawings call for decisions to be made by the Engineer, except where the applicable code requires such decisions to be made by the Design Engineer.
 - Reject work, including the authority assigned to Engineer in Article 14.
 - Direct changes in the Work, including the authority assigned to 4. Engineer in Article 11.
 - 5. Make determinations for unit price work, including determination of actual quantities and classifications of Unit Price Work performed by Contractor, including the role and responsibilities assigned to Engineer in Paragraph 13.03.

- 6. Render decisions on requirements of the Contract Documents and Acceptability of Work, including the authority assigned to the Engineer in Paragraph 10.06.
- 7. Conferences and Meetings: Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings, and as appropriate prepare and circulate copies of minutes thereof.
- 8. Safety Compliance: Comply with Site safety programs, and if required to do so by such safety programs, receive safety training specifically related to RPR's own personal safety while at the Site.

9. Liaison:

- a. Serve as Owner and Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.
- b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's onsite operations.
- c. Assist in obtaining from Owner additional details or information, when required for Contractor's proper execution of the Work.
- d. Where the Contract Documents direct the Contractor to submit information to the Engineer, this information should instead be given to the RPR who will act as liaison with the Engineer.

10. Review of Work: Defective Work:

- a. Conduct onsite observations of the Work to determine if the Work is in general proceeding in accordance with the Contract Documents.
- b. Observe whether any Work in place appears to be defective.
- c. Observe whether any Work in place should be uncovered for observation, or requires special testing, inspection or approval.

11. Inspections and Tests:

 a. Observe Contractor-arranged inspections and material and performance testing required by Contract, Laws and Regulations, including but not limited to those performed by public or other agencies having jurisdiction over the Work.

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- b. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Work.
- 12. Payment Requests: Review Applications for Payment with Contractor.
- 13. Completion:
 - a. Prepare punch list of items to be completed or corrected.
 - b. Observe whether items on the final punch list have been completed or corrected.

B. The RPR will not:

- 1. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.
- 2. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction.
- 3. Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
- 4. Have authority to authorize any deviation from the Contract Documents impacting Contract Cost or Contract Time.
- 10.06 Decisions on Requirements of Contract Documents and Acceptability of Work.
- SC-10.06 Delete Paragraph 10.06.A in its entirety and replace with the following:
 - A. Engineer will render decisions regarding the requirement of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will act in good faith.

ARTICLE 11—CHANGES TO THE CONTRACT

- 11.01 Amending and Supplementing the Contract.
- SC-11.01 Add the following paragraph immediately after Paragraph 11.01.C of the General Conditions:
 - D. Owner shall have the right to add or delete Unit Price Work at the Unit Prices set forth in the Contractor's Detailed Schedule of Values."

ARTICLE 12—CLAIMS

No Supplementary Conditions in this Article.

ARTICLE 13—COST OF WORK; ALLOWANCES, UNIT PRICE WORK

- 13.01 *Cost of the Work*
- SC-13.01.B Supplement Paragraph 13.01.B.5.c.2) by adding the following sentence:

The equipment rental rate book that governs the included costs for the rental of machinery and equipment owned by Contractor (or a related entity) under the Cost of the Work provisions of this Contract is the most current edition of *Rental Rate Blue Book for Construction Equipment*, as adjusted to the regional area of the Project.

- SC-13.01.C Supplement Paragraph 13.01.C.2 by adding the following definition of small tools and hand tools:
 - a. For purposes of this paragraph, "small tools and hand tools" means any tool or equipment whose current price if it were purchased new at retail would be less than \$250.
- SC-13.01.F Add the following new Paragraph 13.01.F immediately after Paragraph 13.01.E:
 - F. Project-Specific-Indirect Costs:
 - 1. For costs incurred under Paragraph 11.07.B.3, the cost of project-specific-indirect-costs shall be 8 percent of the sum of direct work costs.
 - 2. Direct work costs are those costs identified in Paragraph 13.01.B which are not otherwise identified as project-specific-indirect costs.
 - 3. Project-specific-indirect costs shall include the following:
 - a. Work elements included in Paragraphs 13.01.B.4, 13.01.B.5.a, 13.01.B.5.b, 13.01.B.5.g, 13.01.B.5.h, and 13.01.B.5.i.

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- b. Superintendents
- c. Project Managers
- d. Project Engineers
- e. Safety managers and resources
- f. Traffic control

13.03 Unit Price Work

SC-13.03 Delete Paragraph 13.03.E in its entirety and insert the following in its place:

- E. Adjustments in Unit Price:
 - 1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:
 - a. The extended price of a particular item of Unit Price Work amounts to 5 percent or more of the Contract Price (based on estimated quantities at the time of Contract formation) and the variation in the quantity of that particular item of Unit Price Work actually furnished or performed by Contractor differs by more than 20 percent from the estimated quantity of such item indicated in the Agreement; and
 - b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.
 - 2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.
 - 3. Adjusted unit prices will apply to all units of that item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

ARTICLE 15—PAYMENTS TO CONTRACTOR, SET OFFS; COMPLETION; CORRECTION PERIOD

- 15.01 Progress Payments
- SC-15.01.B Delete paragraph 15.01.B.1 in its entirety and insert the following paragraph in its place.
 - By the 10th of the following month, Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.
- SC-15.01.B Delete paragraph 15.01.B.4 in its entirety and insert the following paragraph in its place:
 - 4. The amount of retainage with respect to progress payments will be 5 percent of the Total Contract Price.
- SC-15.01.D Delete Paragraph 15.01.D.1 in its entirety and insert the following paragraph in its place:
 - 1. 30 days after approval of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.
- SC-15.01.F Add the following new Paragraph 15.01.F immediately after Paragraph 15.01.E:
 - F. For contracts in which the Contract Price is based on the Cost of Work, if Owner determines that progress payments made to date substantially exceed the actual progress of the Work (as measured by reference to the Schedule of Values), or present a potential conflict with the Contract Price, then Owner may require that Contractor prepare and submit a plan for the remaining anticipated Applications for Payment that will bring payments and progress into closer alignment and take into account the Contract Price (if any), through reductions in billings, increases in retainage, or other equitable measures. Owner will review the plan, discuss any necessary modifications, and implement the plan as modified for all remaining Applications for Payment.

15.03 Substantial Completion

SC-15.03 Add the following new subparagraph to Paragraph 15.03.B:

1. If some or all of the Work has been determined not to be at a point of Substantial Completion and will require re-inspection or re-testing by Engineer, the cost of such re-inspection or re-testing, including the cost of time, travel and living expenses, will be paid by Contractor to Owner. If Contractor does not pay, or the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under this Article 15.

15.08 Correction Period

SC-15.08 Add the following new Paragraph 15.08.G:

G. The correction period specified as one year after the date of Substantial Completion in Paragraph 15.08.A of the General Conditions is hereby revised to be 5 years after Substantial Completion.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

No Supplementary Conditions in this Article.

ARTICLE 17—FINAL RESOLUTIONS OF DISPUTES

17.02 Arbitration

SC-17.02 Add the following new paragraphs immediately after Paragraph 17.01.

17.02 Arbitration

- A. All matters subject to final resolution under this Article will be settled by arbitration administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules (subject to the conditions and limitations of this Paragraph SC-17.02). Any controversy or claim in the amount of \$100,000 or less will be settled in accordance with the American Arbitration Association's supplemental rules for Fixed Time and Cost Construction Arbitration. This agreement to arbitrate will be specifically enforceable under the prevailing law of any court having jurisdiction.
- B. The demand for arbitration will be filed in writing with the other party to the Contract and with the selected arbitration administrator, and a copy will be sent to the Engineer for information. The demand for arbitration will be made within the specific time required in Article 17, or if no specified time is applicable within a reasonable time after the matter in question has arisen, and in no event will any such demand be made after

- the date when institution of legal or equitable proceedings based on such matter in question would be barred by the applicable statute of limitations.
- C. The arbitrator(s) must be licensed engineers, contractors, attorneys, or construction managers. Hearings will take place pursuant to the standard procedures of the Construction Arbitration Rules that contemplate inperson hearings. The arbitrators will have no authority to award punitive or other damages not measured by the prevailing party's actual damages, except as may be required by statute or the Contract. Any award in an arbitration initiated under this clause will be limited to monetary damages and include no injunction or direction to any party other than the direction to pay a monetary amount.
- D. The Arbitrators will have the authority to allocate the costs of the arbitration process among the parties but will only have the authority to allocate attorneys' fees if a specific Law or Regulation or this Contract permits them to do so.
- E. The award of the arbitrators must be accompanied by a reasoned written opinion and a concise breakdown of the award. The written opinion will cite the Contract provisions deemed applicable and relied on in making the award.
- F. The parties agree that failure or refusal of a party to pay its required share of the deposits for arbitrator compensation or administrative charges will constitute a waiver by that party to present evidence or cross-examine witness. In such event, the other party shall be required to present evidence and legal argument as the arbitrator(s) may require for the making of an award. Such waiver will not allow for a default judgment against the non-paying party in the absence of evidence presented as provided for above.
- G. No arbitration arising out of or relating to the Contract will include by consolidation, joinder, or in any other manner any other individual or entity (including Engineer, and Engineer's consultants and the officers, directors, partners, agents, employees or consultants of any of them) who is not a party to this Contract unless:
 - The inclusion of such other individual or entity will allow complete relief to be afforded among those who are already parties to the arbitration;
 - 2. Such other individual or entity is substantially involved in a question of law or fact which is common to those who are already parties to the arbitration, and which will arise in such proceedings;

- Such other individual or entity is subject to arbitration under a 3. contract with either Owner or Contractor, or consents to being joined in the arbitration: and
- The consolidation or joinder is in compliance with the arbitration 4. administrator's procedural rules.
- Н. The award will be final. Judgment may be entered upon it in any court having jurisdiction thereof, and it will not be subject to modification or appeal, subject to provisions of the Laws and Regulations relating to vacating or modifying an arbitral award.
- Ι. Except as may be required by Laws or Regulations, neither party nor an arbitrator may disclose the existence, content, or results of any arbitration hereunder without the prior written consent of both parties, with the exception of any disclosure required by Laws and Regulations or the Contract. To the extent any disclosure is allowed pursuant to the exception, the disclosure must be strictly and narrowly limited to maintain confidentiality to the extent possible.

17.03 Attorneys' Fees

A. For any matter subject to final resolution under this Article, the prevailing party shall be entitled to an award of its attorneys' fees incurred in the final resolution proceedings, in an equitable amount to be determined in the discretion of the court, arbitrator, arbitration panel, or other arbiter of the matter subject to final resolution, taking into account the parties' initial demand or defense positions in comparison with the final result.

ARTICLE 18—MISCELLANEOUS

No Supplementary Conditions in this Article.

END OF SECTION

ADDITIONAL SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT FOR FEDERALLY FUNDED PROJECTS

These Supplementary Conditions amend or supplement Specification 00 72 00, General Conditions, and Specification 00 73 00, Supplementary Conditions. The General Conditions remain in full force and effect except as amended.

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 Defined Terms

- ASC-1.01 Additional Defined Terms Add the following words and terms to those listed in Article GC-1.01 Defined Terms:
 - 1. Affirmative Action Action taken to eliminate discrimination and its effects, to ensure nondiscriminatory results and practices in the future, and to involve Disadvantaged Business Enterprises fully in subcontracts.
 - Disadvantaged Person A person who is a citizen or lawful permanent resident of the United States and who qualifies as socially or economically disadvantaged as defined in Title 13 Part 124 of the Code of Federal Regulations.
 - 3. Disadvantaged Business Enterprise (DBE) A small business concern, as defined by the U.S. Small Business Administration (SBA) and illustrated in the SBA Table of Small Business Size Standards matched to North American Industry Classification System Codes.
 - 4. DBA Owned and Controlled Business A business which is at least 51 percent owned by one or more disadvantaged persons or, in the case of a publicly owned business, at least 51 percent of the stock of which is owned by one or more disadvantaged persons and whose management and daily business operations are controlled by one or more such individuals. The disadvantaged owners shall enjoy the customary incidents of ownership and shall share in the risks and profits commensurate with their ownership interests, as demonstrated by an examination of the substance rather than form of arrangements.

ARTICLE 2—PRELIMINARY MATTERS

No Supplementary Conditions in this Article.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

No Supplementary Conditions in this Article.

ARTICLE 5—SITE, SUBSURFACE AND PHYSICAL CONDITIONS, HAZARDOUS ENVIRONMENTAL CONDITIONS

No Supplementary Conditions in this Article.

ARTICLE 6—BONDS AND INSURANCE

No Supplementary Conditions in this Article.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.11 Laws and Regulations

- ASC-7.11 Add the following paragraphs immediately after Paragraph 7.11.C of the General Conditions:
 - A. No person shall be employed upon or in connection with the Project who is not legally permitted to work on projects which are federally funded. Nothing herein shall be construed to prevent the working of prisoners by the State or by any County or municipality thereof on street or roadwork or other public work.

7.13 Safety and Protection

- ASC-7.13 Delete Paragraph 7.13.G as modified by the Supplementary Conditions in its entirety and insert the following new paragraph in its place:
 - G. The Utah Occupational Safety and Health Act and the conditions set forth in the Occupational Safety & Health Standards (OSHA) shall constitute the outline for the Safety program to be adhered to during the course of the project. A copy of these publications shall be available at the jobsite for reference. Additionally, onsite and offsite construction activities, and operation and maintenance activities shall conform to the standards in the current USBR Safety and Health Standards Manual found at the following web site: https://www.usbr.gov/safety/rshs/index.html. If a discrepancy in, or between, any standards is found, the more stringent requirement, or interpretation, shall prevail.

ARTICLE 8—ACT ON BEHALF OTHER WORK AT THE SITE

ARTICLE 9—OWNER'S RESPONSIBILITIES

9.11 Evidence of Financial Arrangements

ASC-9.11 Add the following new paragraphs immediately after Paragraph 19.11.A of the General Conditions.

B. Funds Available:

- Federal funds required for the payment of this contract shall be furnished by the United States Government upon appropriation by the United States Congress in accordance with the provisions of the Contract between the United States of America acting through the U.S. Department of the Interior and the Central Utah Water Conservancy District for advancement funds to construct the Project.
 - a. Funding and payment to the Contractor are subject to said Contract. In said Contract, "Contracting Officer" is the U.S. Department of the Interior and "Contractor" is the Central Utah Water Conservancy District.
- 2. Funds available for payment to the Contractor are currently on hand or will be available from the current federal fiscal year budget.
- 3. The construction funding for the Project will be made available through a Contract between the United States of America and the Central Utah Water Conservancy District pursuant to the act of June 17, 1902 (32 Stat. 388), and acts amendatory thereof or supplementary thereto, particularly the Drainage and Minor Construction Act of June 13, 1956, (70 Stat. 274), the Central Utah Completion Act of October 30, 1992 (PL 102.575)

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

No Supplementary Conditions in this Article.

ARTICLE 11—CHANGES TO THE CONTRACT

No Supplementary Conditions in this Article.

ARTICLE 12—CLAIMS

ARTICLE 13—COST OF WORK; ALLOWANCES, UNIT PRICE WORK

13.04 *Wages*

ASC-13.04 Add the following new paragraphs immediately after Paragraph 13.03 of the General Conditions:

13.04 *Wages*

- A. The general prevailing rate wages as determined by the Secretary of Labor in accordance with Davis-Bacon Act, shall be paid for each craft of type of workman needed to perform the Work. The current wage finding, of the Secretary of Labor is included in and made a part of the Specification as Exhibit A to this section.
- B. In the event that the wage determination decision of the Secretary of Labor, which is attached hereto and made a part hereof, has been superseded by any subsequent wage determination decisions published up to and including 10 days prior to bid opening, the most recent applicable wage decision shall be incorporated by reference, and the successful bidder agrees to be bound by it, regardless of what is contained in the Specifications.
- C. Any use of labor brokers to obtain construction services shall not preclude the need to pay those workers the full wage and benefit rates required by law.
- D. The Contractor, and each subcontractor, shall keep records showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed in connection with the work. The payroll records shall be certified and be available for inspection at all reasonable hours at the principal office of the Contractor.
- E. Contractor shall comply with requirements of Sections 1777.5, 1777.6, and 1777.7 of the Labor Code in the employment of Apprentices.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

No Supplementary Conditions in this Article.

ARTICLE 15—PAYMENTS TO CONTRACTOR, SET OFFS; COMPLETIONS; CORRECTION PERIOD

No Supplementary Conditions in this Article.

ADDITIONAL SUPPLEMENTARY PW\DEN003\695835\DES\SR\W7Y29003
CONDITIONS FEDERALLY FUNDED PROJECTS OCTOBER 2023
FUNDED PROJECTS ©COPYRIGHT 2023 CUWCD
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ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

No Supplementary Conditions in this Article.

ARTICLE 17—FINAL RESOLUTIONS OF DISPUTES

No Supplementary Conditions in this Article.

ARTICLE 18—MISCELLANEOUS

- 18.11 Equal Employment Opportunity
- ASC-18.11 Add the following new paragraph immediately after Paragraph 18.10 of the General Conditions:
- 18.11 Equal Employment Opportunity
 - A. Pursuant to Executive Order 11246 as amended, on Equal Employment Opportunity, any Contractor or subcontractor who signs a Contract in excess of the minimums established by the funding agency on a Federally assisted construction project is required to take affirmative action toward equal employment opportunity. The Affirmative Action Requirements are included herein in the Bid Form and are made a part of this Contract.
- 18.12 Nonsegregated Facilities
- ASC-18.12 Add the following new paragraph immediately after Paragraph 18.11, added to the General Conditions in Paragraph ASC-18.11.
- 18.12 Nonsegregated Facilities
 - A. Notice to Prospective Federally-Assisted Construction Contractors:
 - 1. A Certification of Nonsegregated Facilities, as required by the May 9, 1967 Order (32 F.R. 7439, May 19, 1967) on Elimination of Segregated Facilities, by the Secretary of Labor, must be submitted prior to the award of a Federally-assisted construction contract exceeding \$10,000 which is not exempt from the provisions of the Article 18.11 Equal Opportunity Employment.
 - 2. Contractors receiving Federally-assisted construction contract awards exceeding \$10,000, which are not exempt from provisions of Article 18.11 Equal Opportunity Employment, will be required to provide for the forwarding of the following notice to prospective subcontractors for supply and construction contracts where the subcontracts exceed \$10,000 and are not exempt from the provisions Article 18.11 Equal Opportunity Employment.

- B. Notice to Prospective Subcontractors of Requirement for Certification of Nonsegregated Facilities:
 - 1. A Certification of Nonsegregated Facilities, as required by the May 9, 1967 Order (32 F.R. 7439, May 19, 1967) on Elimination of Segregated Facilities, by the Secretary of Labor, must be submitted prior to the award of a subcontract exceeding \$10,000 which is not exempt from the provisions of the Article 18.11 Equal Opportunity Employment.
 - 2. Contractors receiving subcontract awards exceeding \$10,000, which are not exempt from provisions of Article 18.11 Equal Opportunity Employment, will be required to provide for the forwarding of the following notice to prospective subcontractors for supply and construction contracts where the subcontracts exceed \$10,000 and are not exempt from the provisions Article 18.11 Equal Opportunity Employment.

18.13 Affirmative Action Requirements

ASC-18.13 Add the following new paragraph immediately after Paragraph 18.12, added to the General Conditions in Paragraph ASC-18.12.

18.13 Affirmative Action Requirements

- A. General Contractor and subcontractors shall comply with requirements of Executive Order 11246 Equal Employment Opportunity.
- B. *Policy Statement* It is the policy of the Owner that DBE shall have the opportunity to participate in the performance of contracts and subcontracts under this Contract.
- C. Contractor Obligations Contractor shall take all necessary and reasonable actions to provide opportunities to DBE to participate in the performance of contracts and subcontracts under this Contract.

END OF SECTION

EXHIBIT A—WAGE RATES

"General Decision Number: UT20230093 08/11/2023

Superseded General Decision Number: UT20220093

State: Utah

Construction Type: Heavy HEAVY CONSTRUCTION PROJECTS

County: Utah County in Utah.

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

IIf the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:

- . Executive Order 14026 generally applies to the contract.
- The contractor must pay all covered workers at least \$16.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2023.

If the contract was awarded on . Executive Order 13658 or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:

- generally applies to the contract.
- The contractor must pay all covered workers at least \$12.15 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2023.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at http://www.dol.gov/whd/govcontracts.

Modification Number

Publication Date

0 1 01/06/2023 08/11/2023

^{*} ELEC0354-005 06/01/2023

	Rates	Fringes
ELECTRICIAN		
ENGI0003-034 07/01/2020		
	Rates	Fringes
POWER EQUIPMENT OPERATOR (Mechanic)		16.09
LAB00295-002 07/01/2019		
	Rates	Fringes
TRAFFIC CONTROL (Flagger)		9.78
SUUT2018-004 05/07/2020		
	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER.	\$ 19.69	1.17
LABORER: Common or General	\$ 17.65	8.59
LABORER: Pipelayer	\$ 18.57	3.50
OPERATOR: Backhoe/Excavator/Trackhoe	\$ 23.47	11.24
OPERATOR: Bobcat/Skid Steer/Skid Loader	\$ 25.29	0.00
OPERATOR: Loader	\$ 28.16	11.90
TRUCK DRIVER: Dump Truck		11.41

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at

https://www.dol.gov/agencies/whd/government-contracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after

award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage

determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

- Has there been an initial decision in the matter? This can be:
- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations Wage and Hour Division U.S. Department of Labor 200 Constitution Avenue, N.W. Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator U.S. Department of Labor 200 Constitution Avenue, N.W. Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board U.S. Department of Labor 200 Constitution Avenue, N.W. Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISIO"

"General Decision Number: UT20230109 06/30/2023

State: Utah

Construction Type: Highway

County: Utah County in Utah.

HIGHWAY CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

If the contract is entered linto on or after January 30, 2022, or the contract is renewed or extended (e.g., an 🛊 The contractor must pay option is exercised) on or after January 30, 2022:

- ♠ Executive Order 14026 generally applies to the contract.
- all covered workers at least \$16.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2023.

If the contract was awarded on ♠ Executive Order 13658 or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:

- generally applies to the contract.
- ♦ The contractor must pay all | covered workers at least \$12.15 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours performing on that contract in 2023.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at http://www.dol.gov/whd/govcontracts.

Modification Number Publication Date 06/30/2023

CARP0801-003 07/01/2022

Rates

Fringes

CARPENTER (Excludes Form Work)...\$ 28.89 15.92

	Rates	Fringes
POWER EQUIPMENT OPERATOR Grader/Blade Oiler	.\$ 31.99	17.64 17.64
SUUT2019-021 04/03/2023		
	Rates	Fringes
CARPENTER (Form Work Only)	.\$ 22.59	5.41
CEMENT MASON/CONCRETE FINISHER	.\$ 20.59	2.41
ELECTRICIAN, Includes Low Voltage Wiring	.\$ 27.45	2.30
FENCE ERECTOR	.\$ 15.16 **	2.53
HIGHWAY/PARKING LOT STRIPING: Painter	.\$ 17.78	2.53
INSTALLER - GUARDRAIL	.\$ 14.80 **	2.66
INSTALLER - SIGN	.\$ 14.76 **	2.53
IRONWORKER, REINFORCING	.\$ 26.61	13.76
LABORER: Asphalt, Includes Raker, Shoveler, Spreader and Distributor	.\$ 24.09	5.66
LABORER: Common or General	.\$ 20.15	7.28
LABORER: Landscape	.\$ 15.40 **	2.53
LABORER: Mason Tender - Cement/Concrete	.\$ 13.46 **	2.64
LABORER: Pipelayer	.\$ 17.23	2.79
OPERATOR: Backhoe/Excavator/Trackhoe	.\$ 22.23	5.64
OPERATOR: Bobcat/Skid Steer/Skid Loader	.\$ 23.97	10.06
OPERATOR: Broom/Sweeper	.\$ 22.54	10.36
OPERATOR: Concrete Finishing Machine	.\$ 20.03	6.55
OPERATOR: Crane	.\$ 30.66	10.61
OPERATOR: Drill	.\$ 27.44	15.65
OPERATOR: Loader	.\$ 24.85	12.74
OPERATOR: Mechanic	.\$ 27.17	13.86
OPERATOR: Milling Machine	.\$ 25.37	15.65

OPERATOR: Pav			
Aggregate, and	Concrete)\$	26.91	12.75
OPERATOR: Rol	ler\$	24.58	13.62
OPERATOR: Scr	eed\$	24.16	12.16
OPERATOR: Pave			
Grinder	\$	27.95	7.05
TRAFFIC CONTRO	L: Flagger\$	12.58 **	1.75
TRAFFIC CONTRO Laborer-Cones/	_,		
Barricades/Bar		20 50	9 65
Secter/Mover/S	weeper\$	20.59	8.65
TRUCK DRIVER:	Dump Truck\$	24.41	12.16
TRUCK DRIVER:	Oil		
Distributor Tr	uck\$	26.17	11.27
TRUCK DRIVER:	Vactor\$	23.40	0.00
	Water Truck\$		11.75

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

^{**} Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$16.20) or 13658 (\$12.15). Please see the Note at the top of the wage determination for more information.

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

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WAGE DETERMINATION APPEALS PROCESS

- 1.) Has there been an initial decision in the matter? This can be:
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- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

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2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

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The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board U.S. Department of Labor 200 Constitution Avenue, N.W. Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISIO"

PART 3 SPECIFICATIONS

SECTION 01 11 00 SUMMARY OF WORK

PART 1 GENERAL

1.01 WORK COVERED BY CONTRACT DOCUMENTS

- A. The completed Work will provide Owner with the following:
 - 1. Approximately 23,048 feet of 60-inch diameter steel pipeline with welded joints, mortar lining, tape and mortar coating, fiber optics and cathodic systems, 4 air valve or manway vaults, an inline isolation valve vault, turnout isolation valve vault, paving, curb and gutter, trail and other surface restoration and improvements.
 - 2. 11 turnout facilities including associated piping, site development, and utility connections.
 - 3. Fulfillment of easement agreement requirements included in the supplements to this section.
 - 4. Other Work presented in the Contract Documents.
- B. The Work is divided into schedules as described in Section 00 41 13, Bid Form.
- C. Alternates: Only those alternates that were selected by the Owner, as evidenced in the Agreement, are made a part of this Contract.
- PART 2 PRODUCTS (NOT USED)
- PART 3 EXECUTION

3.01 SUPPLEMENTS

- A. The following are easement agreements referenced in the Agreement which contain requirements which must be fulfilled by the Contractor.
 - 1. Right-of-Entry.
 - 2. Agreements.

END OF SECTION

RIGHT-OF-ENTRY SANTAQUIN REACH PIPELINE

Date	Landowner	Purpose	Remarks
	Sorenson Brothers	Staging area for	
	Orchard, LLC	tunnel and	
		material disposal	
	Fred H. C.		
	Openshaw and		
	Patricia Openshaw		
	Family Trust		
	Santaquin City	Work area for	
		pipeline	
	Christensen	Work area near	
		Woodland Hills	
		Drive turnout	
_	DR Horton	Work area near	
		Salem East	
		Turnout	
	Payson City	Work area for drain	
		outlet to Dry Creek	

SPANISH FORK SANTAQUIN PIPELINE – SANTAQUIN REACH

AGREEMENTS SANTAQUIN REACH PIPELINE

Date	Organization	Purpose	Remarks
	Strawberry High	Project Use	Agreement for use
	Line Canal	Agreement	of High Line Canal
	Company		Company land
			owned by USA at
			two canal crossings
	Union Pacific	Railroad crossing	
	Railroad	and insurance	
	Utah Division or	Stream alteration	
	Water Rights	permits for Dry	
		Creek and Summit	
		Creek	

Contract No. <u>23-LA-40-0200</u> Parcel Nos. <u>SFS-136(P)</u>, <u>SFS-137(P)</u> <u>SFS-136(T)</u>, <u>SFS-137(T)</u>

UNITED STATES DEPARTMENT OF THE INTERIOR

UTAH LAKE DRAINAGE BASIN WATER DELIVER SYSTEM

SPANISH FORK SANTAQUIN PIPELINE - SANTAQUIN REACH

CENTRAL UTAH PROJECT COMPLETION ACT

CONTRACT AND GRANT OF EASEMENT

THIS CONTRACT AND GRANT OF EASEMENT, is made this _____day of ______, 2023, pursuant to the Act of Congress of June 17, 1902 (32 Stat. 388), and acts amendatory thereof or supplementary thereto, all of which acts are commonly known and referred to as Reclamation Laws, particularly the Colorado River Storage Project Act, Act of April 11, 1956 (70 Stat. 110, et seq.), as amended; and the Reclamation Projects Authorization and Adjustment Act of 1992 (P.L. 102-575), as amended, between the UNITED STATES OF AMERICA and its assigns, hereinafter referred to as the United States, and SORENSON BROTHERS ORCHARDS, LLC, A UTAH LIMITED LIABILITY COMPANY hereinafter referred to as the Grantor,

WITNESSETH, That for and in consideration of the mutual agreements herein contained, the parties hereto do covenant and agree as follows:

1. The Grantor, by this Contract and Grant of Easement, hereby conveys and warrants to the United States of America and its assigns, free of lien or encumbrance, except as otherwise provided herein, the following described interests in real property situated in the County of Utah, State of Utah, to-wit:

Four parcels of land situated within Section Thirty-One (31), Township Nine (9) South, Range Two (2) East, Salt Lake Base and Meridian, containing 1.27 acre of Perpetual Easement and 0.70 acre of Temporary Easement, more or less, and more particularly described as follows:

Two Perpetual Easements to construct, reconstruct, operate and maintain and replace underground water pipeline or pipelines and appurtenant structures, on, over, under, or across the following-described land:

Parcel SFS-136(P) PERPETUAL EASEMENT

Commencing at the Northwest Corner of Section 31, Township 9 South, Range 2 East, Salt Lake Base & Meridian, thence South 136.96 feet; thence East 839.53 feet to a point on the westerly boundary of that certain real property as described in Entry 130428:2004 as recorded by the Utah County Recorder, the True Point of Beginning; thence North 70.30 feet to a point on the Union Pacific Railroad boundary; thence along said Railroad boundary 92.03 feet along the arc of a 1005.67 foot radius curve to the left, chord bears North 41°19'36" East 92.00 feet; thence leaving said Railroad boundary East 120.86 feet; thence South 04°12'51" West 35.36 feet; thence North 89°43'00" East 70.00 feet to a point in the boundary of Interstate 15; thence South 04°12'51" West 15.12 feet; thence West 163.50 feet; thence 123.00 feet along the arc of a 1055.67 foot radius curve to the right, chord bears South 43°21'30" West 122.93 feet, to the point of beginning.

Said Parcel SFS-136(P) contains an area of 0.27 acres, more or less.

Parcel SFS-137(P) PERPETUAL EASEMENT

Commencing at the Northwest Corner of Section 31, Township 9 South, Range 2 East, Salt Lake Base & Meridian, thence South 136.96 feet; thence East 839.53 feet to a point on the easterly boundary of that certain real property as described in Entry 130428:2004 as recorded by the Utah County Recorder, the True Point of Beginning; thence 80.80 feet along the arc of a 1055.67 foot radius curve to the right, chord bears South 48°53'20" West 80.78 feet; thence South 88°23'44" West 41.21 feet; thence South 01°36'16" East 29.87 feet; thence 749.58 feet along the arc of a 1055.67 foot radius curve to the right, chord bears South 74°11'09" West 733.93 feet; thence North 00°31'03" West 50.20 feet to a point on the Union Pacific Railroad boundary; thence along said Railroad boundary 892.19 feet along the arc of a 1005.67 foot radius curve to the left, chord bears North 69°21'49" East 863.22 feet; thence South 70.30 feet to the point of beginning.

Said Parcel SFS-137(P) contains an area of 1.00 acres, more or less.

Also:

Two Temporary Easements for construction purposes during construction of the pipeline and appurtenant structures, on over, and across the following described land:

Parcel SFS-136(T) TEMPORARY EASEMENT

Commencing at the Northwest Corner of Section 31, Township 9 South, Range 2 East, Salt Lake Base & Meridian, thence South 136.96 feet; thence East 839.53 feet to the True Point of Beginning; thence 123.00 feet along the arc of a 1055.67 foot radius curve to the left, chord bears North 43°21'30" East 122.93 feet; thence East 163.50 feet; thence South 04°12'51" West 30.08 feet; thence West 147.42 feet; thence 140.38 feet along the arc of a 1085.67 foot radius curve to the right, chord bears South 44°27'59" West 140.28 feet; thence North 40.73 feet to the point of beginning.

Said Parcel SFS-136(T) contains an area of 0.20 acre, more or less.

Parcel SFS-137(T) TEMPORARY EASEMENT

Commencing at the Northwest Corner of Section 31, Township 9 South, Range 2 East, Salt Lake Base & Meridian, thence South 233.78 feet; thence East 720.56 feet to the True Point of Beginning; thence South 01°27'36" East 35.77 feet; thence 726.04 feet along the arc of a 1085.67 foot radius curve to the right, chord bears South 75°13'45" West 712.59 feet; thence North 00°31'03" West 30.11 feet; thence 727.75 feet along the arc of a 1055.67 foot radius curve to the left, chord bears North 74°46'41" East 713.43 feet to the point of beginning.

Said Parcel SFS-137(T) contains an area of 0.50 acre, more or less.

- 1a. The Grantor warrants that Grantor is the owner of the real property whereon the above-described easement lies.
- 1b. The Grantor, for itself, its successors and assigns, agrees that, within the perpetual easement area described herein, it shall not: (i) erect, construct, or permit to be constructed, any permanent building, structure, or improvement of any kind (except as may be defined hereinafter), nor shall Grantor construct or permit others to construct or install any fences, hard surfaced areas, or other permanent or temporary obstructions or improvements within the boundaries of the easement area that might interfere with the United States ability to gain access to the easement for operation, maintenance, repair, and replacement purposes. Any such obstruction installed or permitted to be constructed, installed, or maintained within the boundaries of the easement area shall be removed at Grantor's sole expense; (ii) plant any tree or shrubs on any portion of the easement, nor dig or drill any holes or wells, nor increase or decrease the ground elevations existing at the time this document is executed, on all or any portion of the easement; (iii) remove materials from the area without the approval of the United States, its agents or assigns.
- 1c. In the event that Grantor, its heirs, successors, or assigns, places or permits to be placed, any encroachment on any portion of the easement, the United States shall have the right to remove the encroachment after five (5) days written notice to Grantor, and Grantor, its heirs, or successors, or assigns, agrees to pay all costs incurred by the United States in removing the encroachment. All costs shall earn interest at the rates set by Utah law for interest on judgments until Grantor has reimbursed the United States for the cost of removal of any such encroachment. Any damage to the United States' property or appurtenant structures caused by the Grantor's use or encroachment of the easement shall be repaired at the sole cost and expense of the Grantor.
- ld. The Grantor, for itself, its successors and assigns, understands and agrees that any alteration, modification, change, or placement of improvements, by Grantor or any third party, within the above-described easement area, subsequent to the date of execution of this Contract and Grant of Easement, shall be made at Grantor's own risk, and Grantor hereby releases the United States from liability for any and all loss or damage of every description or kind whatsoever which is caused by or as a direct result of such alteration, modification, change, or placement of improvements within said area; provided, however, that nothing in this Article shall be construed as releasing the United States from liability for its own negligence or the negligence of its employees, agents or contractors. The United States' liability is governed by the provisions of the

Federal Tort Claims Act, Act of June 25, 1948, 62 Stat. 982 (28 U.S.C. §1346(b), 2671 et seq.) or other applicable law.

- le. The rights to be granted to the United States, as described in Article 1 hereof, shall be free from lien or encumbrance except: (i) coal, oil, gas, and other mineral rights reserved to or outstanding in Grantor and/or in third parties if not administratively objectionable; (ii) rights-of-way for roads, railroads, telephone lines, transmission lines, ditches, conduits, or pipelines, on, over, under, or across said lands if not administratively objectionable; and (iii) court liens, judgments or financial encumbrances, such as Deeds of Trust, where (a) obtaining a release of the interest to be acquired by the United States requires payment of an administrative fee to the lienholder that is deemed prohibitively expensive by the acquiring agency and the reviewing attorney, and (b) a property is not encumbered in excess of fifty percent of its reasonable value and the purchase price being paid by the United States does not exceed twenty percent of the value of the tract, as value is estimated by the acquiring agency or by the local tax assessor.
- 1f. The Temporary Easement herein granted shall terminate thirty (30) months from the date of this contract or at the end of construction, whichever comes first. No continuing access is allowed on the Temporary Easement area described herein once construction is completed or the Temporary Easement expires without the express written consent of the Grantor.
- lg. The construction contractor shall restore or repair with material of like kind and equal quality, any fence, grass, soil, shrubbery, trees, bushes, flowers, other vegetation, sprinkler system, irrigation system, gravel, concrete, asphalt, or utilities damaged or displaced during construction.
- 1h. The United States may, in its sole discretion, erect, maintain, or use gates in all fences which now cross or later may cross any portion of the easement(s) to enable the United States to take equipment along the easement(s) to perform required maintenance and repair. Grantor may lock any such gate to prohibit the public from unlawful access to the easement area, but Grantor shall provide the United States a key to any such lock at Grantor's expense.
- 1i. The United States shall also be entitled to trim, cut, or clear away trees, brush, or other vegetation or flora from time to time as the United States determines in its sole discretion without additional compensation.
- 2. The acquiring federal agency is the U.S. Department of the Interior represented by the officer executing this contract, his duly appointed successor, or his duly authorized representative.
- 3. The United States shall purchase said easement on the terms herein expressed, and on execution and delivery of this Contract and Grant of Easement, and approval by the proper officials of the United States, it shall cause to be paid to the Grantor as full purchase price the sum of SEVENTY-TWO THOUSAND SEVEN HUNDRED DOLLARS (\$72,700.00).
- 4. Abstracts or certificates of title or title insurance will be procured by the United States at its expense unless otherwise provided in this Contract and Grant of Easement. The expense of recording this Contract and Grant of Easement shall be borne by the United States.

The United States shall reimburse the Grantor in an amount deemed by the United States to be fair and reasonable for the following expenses incurred by the Grantor:

- (a) Recording fees, transfer taxes and similar expenses incidental to granting the easement described herein to the United States.
- (b) Penalty cost for prepayment of any pre-existing recorded mortgage entered into in good faith encumbering said real property.
- (c) The pro rata portion of real property taxes paid which are allocable to a period subsequent to the date of vesting title in the United States, or the effective date of possession of such real property by the United States, whichever is earlier.

The Grantor agrees to furnish the United States evidence that these items of expenses have been billed to and paid by Grantor and further agrees that the United States alone shall determine the fairness and reasonableness of the expenses to be paid.

- 5. In the event that liens or encumbrances other than those expressly provided herein do exist, the United States may, at its option, remove any and all such outstanding liens and encumbrances by reserving from the purchase price herein set forth the necessary amount and discharge same with the money so reserved, but this provision shall not be construed to authorize the incurrence of any lien or encumbrance as against this Contract and Grant of Easement, nor as an assumption of any lien or encumbrance by the United States.
- 6. It is agreed that, at its election, the United States may draw its check in payment for granting the above-described easement to the order of the title contractor or closing agent, and the Grantor hereby authorizes the said contractor or agent to cash the check and make disbursements out of the proceeds to satisfy and pay any taxes, assessments, and encumbrances which are a lien against the real estate; to pay any State and local recording or transfer taxes where required, and any other expenses incident to the closing of title which are properly chargeable to the Grantor; and to remit the balance of the proceeds to Grantor; together with an itemized statement of the payments made on Grantor's behalf.
- 7. This Contract and Grant of Easement shall inure to the benefit of and be binding on the heirs, executors, administrators and assigns of the Grantor, and the assigns of the United States.
- 8. After execution of this contract by the United States, the proper officers, agents, and assigns of the United States shall, at all times, have unrestricted access to said easement for any purpose including the construction, reconstruction, operation, or maintenance of the Spanish Fork Santaquin Pipeline Santaquin Reach, free of any claim for damage or compensation on the part of the Grantor, except as otherwise provided for in this contract.
- 9. If the Secretary of the Interior determines that the title to the easement should be acquired by the United States by judicial procedures, either to procure a safe title or to obtain title more quickly, then the award to be made for the interest acquired in said lands in said proceedings shall be the same amount as the purchase price herein provided.

- 10. Nothing herein shall be deemed to increase the liability of the United States beyond the provisions of the Federal Tort Claims Act, Act of June 25, 1948, 62 Stat. 982 (28 U.S.C. §1346(b), 2671 et seq.) or other applicable law.
- 11. No Member of or Delegate to Congress or Resident Commissioner shall be admitted to any share or part of this Contract and Grant of Easement, or to any benefit that may arise therefrom, but this restriction shall not be construed to extend to this contract if made with a corporation or company for its general benefit.
 - 12. Time is of the essence in the performance of this Contract and Grant of Easement.
- 13. The terms of this Contract and Grant of Easement will survive the grant provided for herein.

IN WITNESS WHEREOF, the parties hereto have signed their names the day and year first above written.

Reviewed for legal sufficiency:	THE UNITED STATES OF AMERICA
U.S. Department of the Interior Office of the Regional Solicitor	U.S. Department of the Interior
ACKNOWLEDGME	ENT OF THE UNITED STATES
State of)) ss. County of)	
County of)	
kn Project Completion Act Office, United Sta	, 2023, personally appeared before me town to me to be the Program Director, Central Utah ates Department of the Interior, the signer of the above that he/she executed the same on behalf of the United
IN WITNESS WHEREOF, I have day and year first above written.	hereunto set my hand and affixed my official seal the
(SEAL)	Notary Public in and for the State of Residing at

SORENSON BROTHERS ORCHARDS, LLC, A UTAH LIMITED LIABILITY **COMPANY**

Paul R. Sorenson, Manager, Grantor

Steven L. Sorenson, Manager, Grantor

ACKNOWLEDGMENT

(Sorenson Brothers Orchards, LLC, a Utah Limited Liability Company) (Paul R. Sorenson)

State of UTAH County of UTAH

On this a day of September in the year 2023, personally appeared before me Paul R. Sorenson, whose identity is personally known to me or proven on the basis of satisfactory evidence and who by me duly sworn/affirmed, did say that he is the manager of Sorenson Brothers Orchards, LLC, a Utah Limited Liability Company (LLC) and that said document was signed by him in behalf of said LLC by Authority of its Bylaws, or Resolution of its Board of Directors, and said Paul R. Sorenson acknowledged to me that said LLC executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

(SEAL)

BRUCE H WHITING tary Public - State of Utal Comm. No. 715477 ommission Expires on

Notary Public in and for the State of UTDIA

Residing at OREM, UTA My Commission Expires: 11

ACKNOWLEDGMENT

(Sorenson Brothers Orchards, LLC, a Utah Limited Liability Company)
(Steven L. Sorenson)

State of)
) ss
County of)

On this day of September in the year 2023, personally appeared before me Steven L. Sorenson, whose identity is personally known to me or proven on the basis of satisfactory evidence and who by me duly sworn/affirmed, did say that he is the manager of Sorenson Brothers Orchards, LLC, a Utah Limited Liability Company (LLC) and that said document was signed by him in behalf of said LLC by Authority of its Bylaws, or Resolution of its Board of Directors, and said Steven L. Sorenson acknowledged to me that said LLC executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

BRUCE H WHITING Notary Public - State of Utah

Comm. No. 715477 Commission Expires on Notary Public in and for the

State of VTAH

Residing at OREM, UTAH

My Commission Expires: 1

ACKNOWLEDGMENT

(Sorenson Brothers Orchards, LLC, a Utah Limited Liability Company) (Lowell F. Sorenson)

State of Wtah)
County of W25hington

On this 2 day of Scot, in the year 2023, personally appeared before me Lowell F. Sorenson, whose identity is personally known to me or proven on the basis of satisfactory evidence and who by me duly sworn/affirmed, did say that he is the manager of Sorenson Brothers Orchards, LLC, a Utah Limited Liability Company (LLC) and that said document was signed by him in behalf of said LLC by Authority of its Bylaws, or Resolution of its Board of Directors, and said Lowell F. Sorenson acknowledged to me that said LLC executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

(SEAL)

JOCELYN WATERS Notary Public - State of Utah Comm. No. 729667 ommission Expires on

Notary Public in and for the
State of Wah wishington
Residing at Utah; wishington
My Commission Expires: 2/24/27

Central Utah Project Completion Act Utah Lake Drainage Basin Water Delivery System Santaquin Reach Pipeline Utah County, Utah

Construction Right-of -Entry and Lease of Land

Fred H. C. Openshaw and Patricia Openshaw as Trustees of the Fred H. C. Openshaw and Patricia Openshaw Family Trust dated June 14, 2002, and any amendments thereto of Utah County, State of Utah ("Permitter") do hereby grant to the Central Utah Water Conservancy District and Department of Interior, their representatives and construction contractor (collectively "Permittee") permission to temporarily enter upon the following described real property ("Property"):

An existing agricultural sump pond with an area of 0.70 acre as shown stippled on Exhibit A attached hereto located on Assessor Parcel 29:037:0049 in Section 35, Township 9 South, Range 1 East, Salt Lake Base and Meridian generally described as the East 100 feet of the South 300 feet of said Parcel 29:037:0049 but adjusted as necessary to allow removal of all volunteer non-orchard vegetation around the sump.

The Permitter desires to have the existing agricultural water sump cleared of vegetation, filled and leveled to restore the sump area to usable area for other purposes. The Permittee desires to secure a staging area for its construction contractor to construct a water pipeline within a 50-foot-wide federal perpetual easement recently acquired across the Property and across adjacent properties. Filling the sump area would also provide the Permittee additional benefits to reduce the construction cost of its contractor to haul excess pipeline excavation material a farther distance and provide opportunity to raise the grade of the planned waterline which would otherwise need to pass under the water sump requiring deeper excavation for the pipeline for a considerable distance or require partial filling of the water sump.

This right-of-entry ("ROE") is for the purpose of providing a staging area within the sump area owned by the Permitter for the Permittee's construction contractor during the construction of the 60-inch diameter Santaquin Reach. This ROE shall be in effect upon execution thereof and shall remain in effect for 30 months or until the completion of construction of the Spanish Fork Santaquin Pipeline, whichever occurs first.

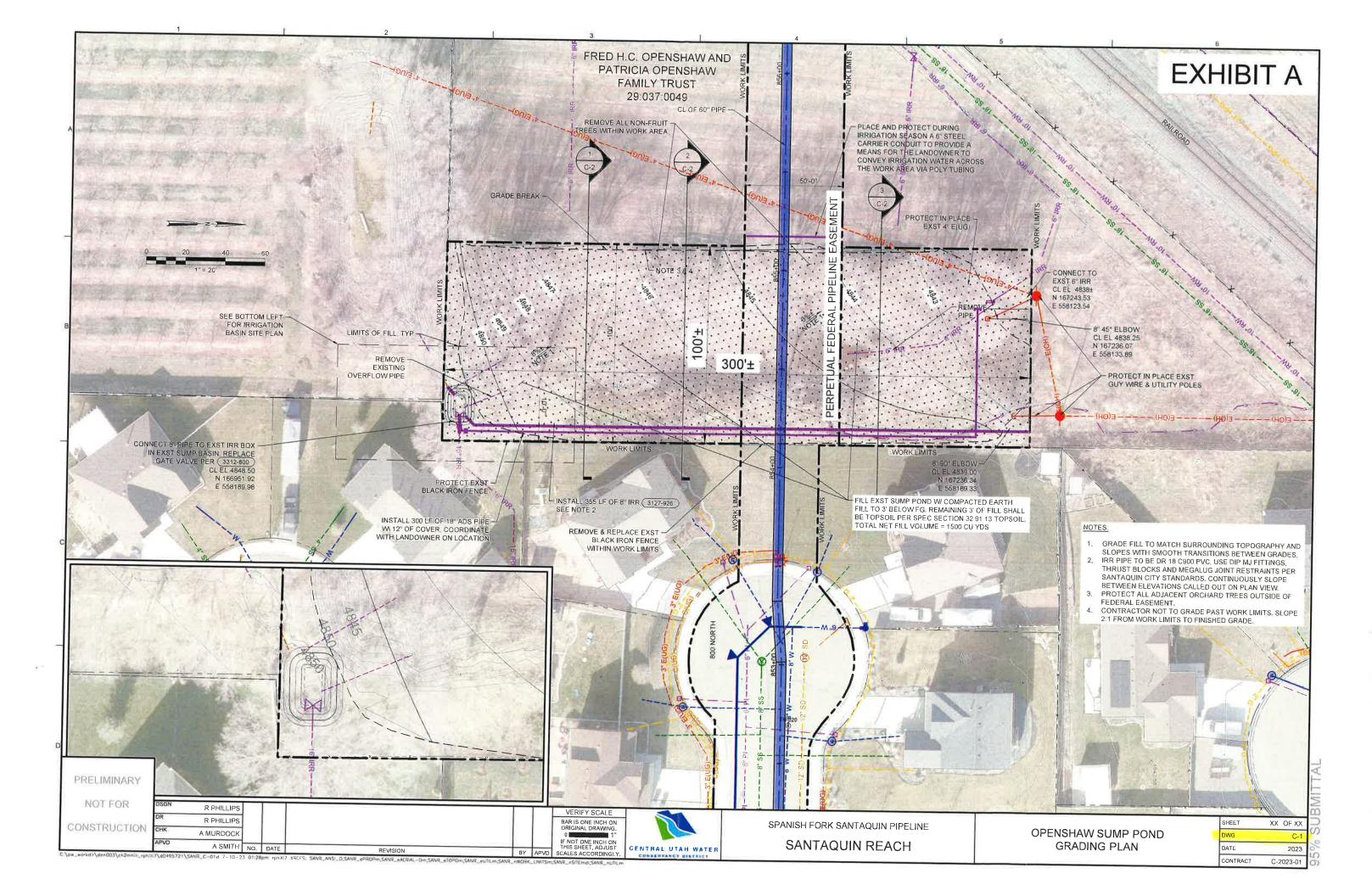
The Permittee agrees to:

- 1. Require the Permittee's construction contractor to clear and grub the water sump area of brush, trees, roots and other organic material.
- 2. Require the Permittee's construction contractor to fill and compact to 90 percent the water sump area below 3 feet of final grade with 6-inch minus earthen material and restore uncompacted native topsoil for the remaining

- 3 feet to the final grade shown on Construction Drawing C-1 (Exhibit B A attached hereto).
- 3. Require the Permittee's construction contractor to install an 8-inch PVC water line to convey irrigation water from the existing water company delivery outlet at the southeast corner of the Property to the location of the existing sump pump at the northwest corner of the sump and maintain the ability of the Permitter to continue to receive irrigation water at the southeast corner of the Property and convey it to Permitter's existing 6-inch water line during each irrigation season.
- 4. Require the Permitter's construction contractor to install an 18-inch ADS drainage pipe with 1-foot minimum cover as shown in Exhibit B to convey overflow water from a neighboring sump across the sump area to be filled. Permittee's construction contractor will coordinate location of drainage pipe with the Permitter.
- 5. Require the Permittee's construction contractor to maintain the ability for the Permitter to convey irrigation water across the construction work area during the irrigation season.
- 6. Require the Permittee's construction contractor to protect the underground power cable crossing the staging area that provides electrical service to the sump pump motor of the adjacent landowner to the south.
- 7. Require the Permittee's construction contractor to either reseed all disturbed areas with an IFA irrigated pasture mix seed or other reasonable seed mix or leave the surface unseeded at the option of the Permitter.

The compensation under this ROE is in the form of the value of earthen material and work provided to fill the water sump area and restore the Property to usable area for other purposes. This earthen material and work provided shall be considered just compensation to Permitter and that no additional monetary compensation for this ROE is necessary.

IN WITNESS THEREOF, we have set	our hands this// day of 2023.
Fred H. C. Openshaw, Trustee	ACCEPTED: Central Utah Water Conservancy District
Patricia Openshaw, Trustee	By and Date: 7/11/2023
7/11/23 Date	



Central Utah Project Completion Act Utah Lake Drainage Basin Water Delivery System Santaquin Reach Pipeline Utah County, Utah

Construction Right-of –Entry

Santaquin City, ("Permitter") does hereby grant to the Central Utah Water Conservancy District and Department of Interior, their representatives and construction contractors (collectively "Permittees") permission to temporarily enter upon the following described real property ("Property"):

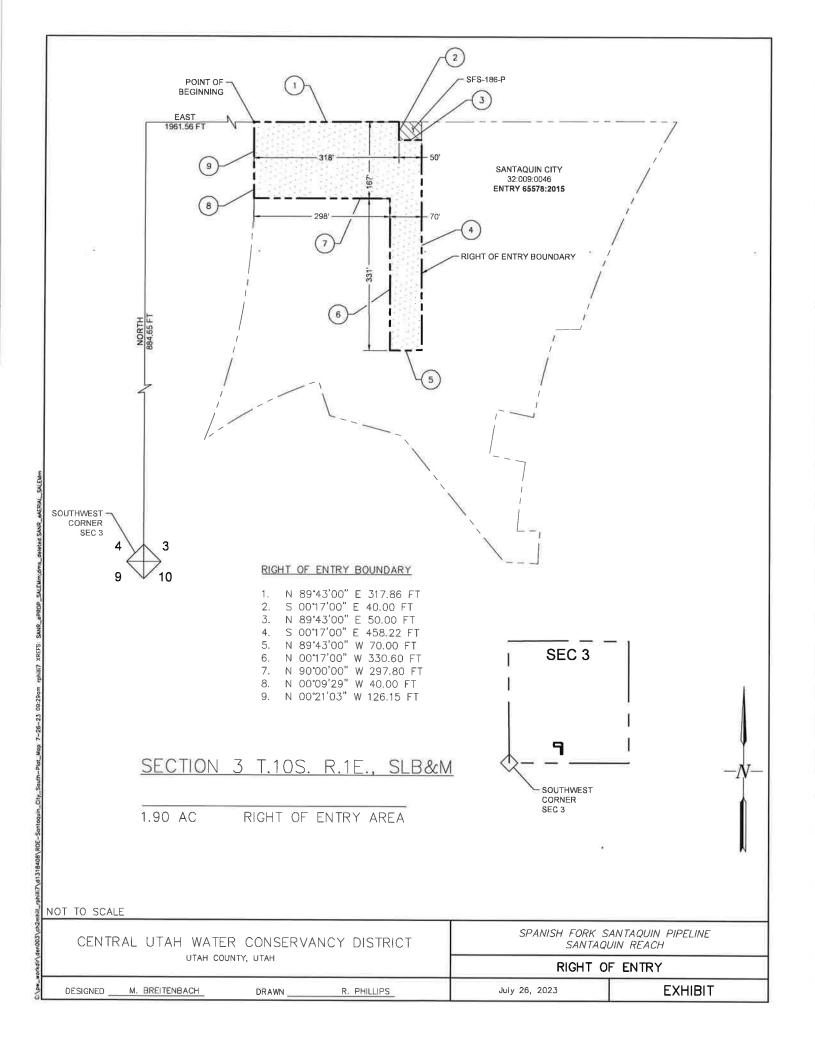
An area of 1.90 acres of vacant land as shown on Exhibit A and Exhibit B attached hereto located on Assessor Parcel 32:009:0046 in Section 3, Township 10 South, Range 1 East, Salt Lake Base and Meridian.

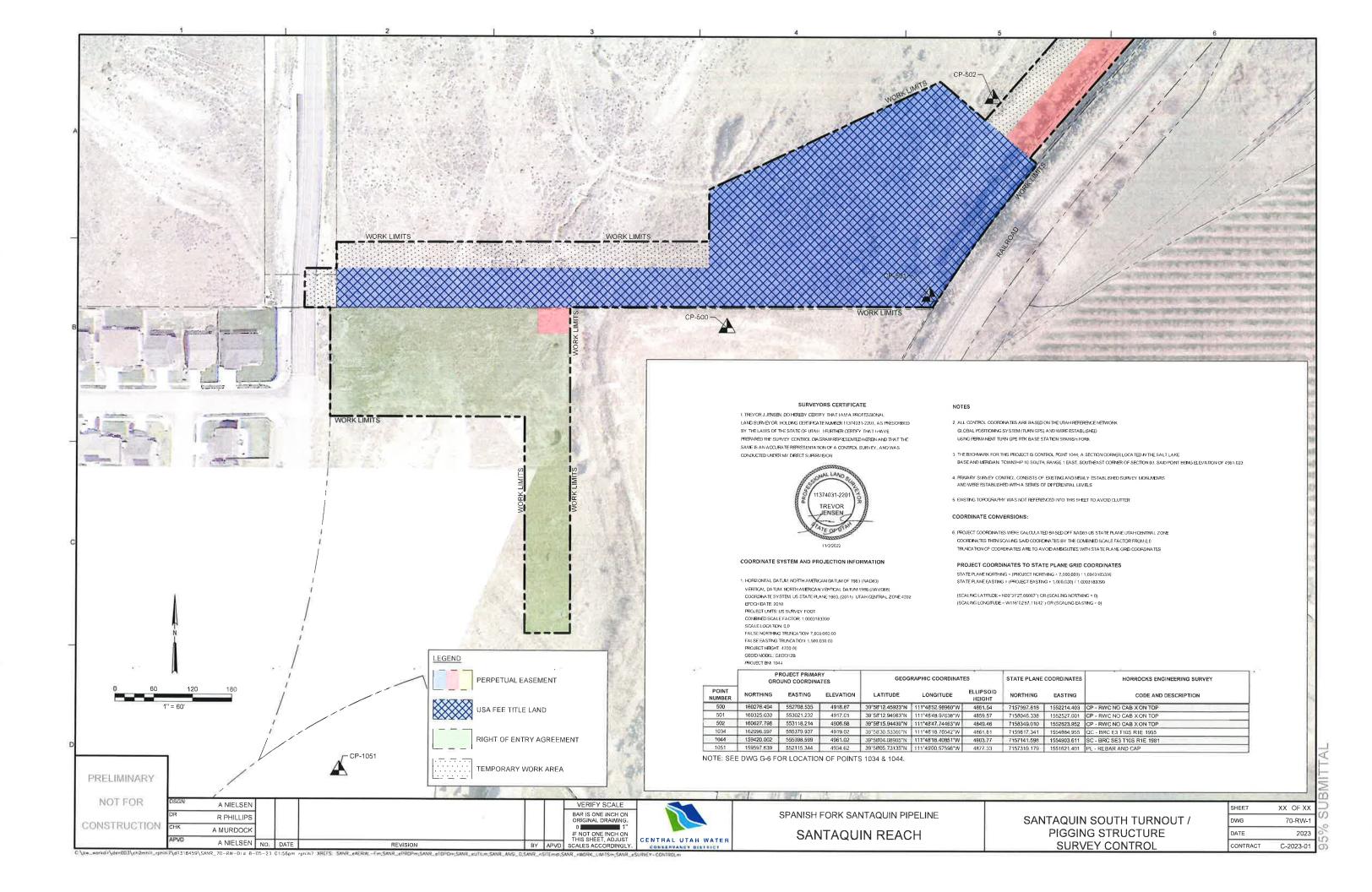
This right-of-entry ("Agreement") is for the purpose of providing temporary construction work area and access from Summit Ridge Parkway to install approximately 450 feet of 42-inch water delivery pipeline conveying water to Permitter for secondary system use. Permittee is constructing the Santaquin Reach Pipeline to convey and deliver secondary system water to cities and towns in South Utah County. The terminus of the Santaquin Reach Pipeline is planned to be constructed approximately 450 feet north of the Permitter's secondary system main pipeline, the planned connection point in Permittee's Definite Plan Report. Rather than granting a perpetual easement to the USA for the 42-inch pipeline that would permanently encumber Permitter's land, Permitter's staff have proposed for the Permitter to grant temporary construction right-of-entry for installation of the pipeline and transfer of ownership of the 450 feet of pipeline installed to the Permitter upon installation completion.

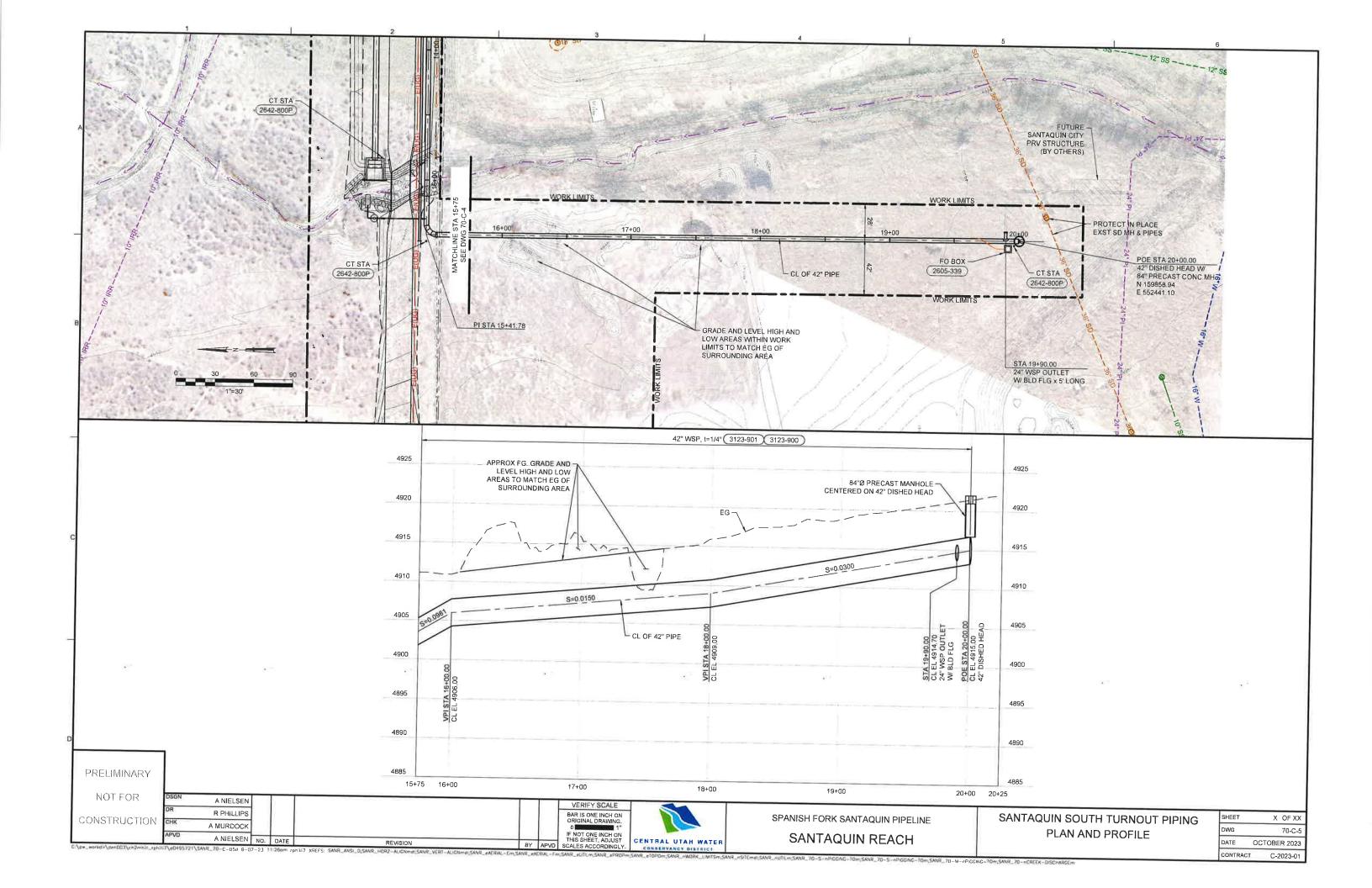
The Permittees agree to:

- 1. Install approximately 450 feet of 42-inch welded steel pipe ½ inch thick capable of conveying water to Permitter at the full pressure head of the Santaquin Reach Pipeline in accordance with design drawing 70-C-5 attached as Exhibit C fulfilling the requirements of water delivery location in the Definite Plan Report of the Permittees.
- 2. Require the construction contractor to reseed all disturbed areas on the Property with either FA non-irrigated pasture mix seed or UDOT highway seed mixture at the choice of the Permitter.
- 3. Transfer ownership of the 450 feet of 42-inch pipeline to the Permitter with the same 5-year warranty as the Santaquin Reach Pipeline.
- 4. Allow Permitter to drain the 42-inch pipeline at the same location as Permitter's Santaquin Reach Pipeline turnout drain.

The Permitter agrees to:	
Accept ownership and of inch welded steel pipeling	peration and maintenance of the 450 feet of 42- ne upon completion.
IN WITNESS THEREOF, we have set	our hands this day of 2023.
Santaquin City	
	ACCEPTED:
	Central Utah Water Conservancy District
	By and Date:







Central Utah Project Completion Act Utah Lake Drainage Basin Water Delivery System Salem Reach 1 Utah County, Utah

Right-of -Entry Permit

Kurt Christensen and Janie Christensen, husband and wife as joint tenants of Utah County, State of Utah (Permitter) do hereby grant to the Central Utah Water Conservancy District and Department of Interior, their representatives and construction contractor (Permittee) permission to temporarily enter upon the following described property:

A portion of Permitter's property located within the approximate northern 300 feet of Assessor Parcel 30:039:0286 located along the western side of Woodland Hills Drive in Section 12, Township 9 South, Ranch 2 East, Salt Lake Base and Meridian as shown cross-hatched in green (0.06 acre) and salmon (0.49 acre) colors on the attached Exhibit A for a combined total of 0.55 acre.

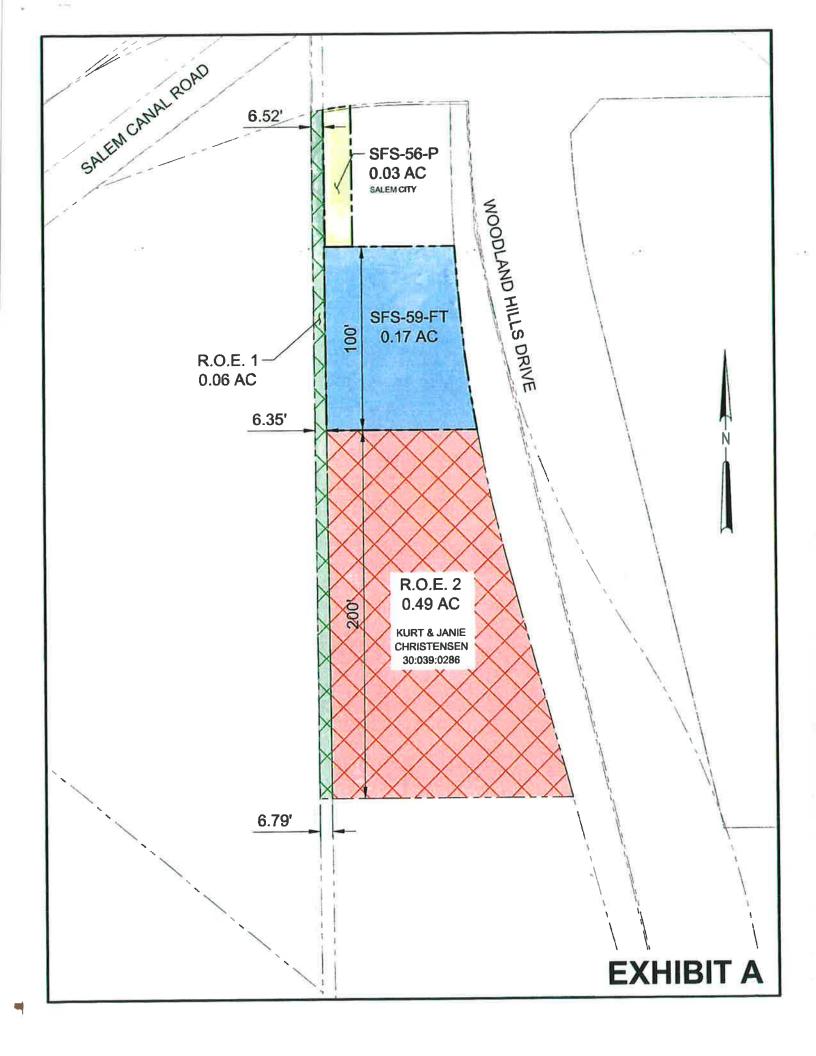
This right-of-entry is for the purpose of providing sufficient staging area for a contractor to construct a water delivery turnout for Salem City on an adjacent 0.17-acre area (shown in blue on Exhibit A as USA Parcel, SFS-59-FT) that is planned to be acquired by the USA. This agreement shall be in effect upon execution thereof and shall remain in effect until completion of the construction work for the water delivery turnout or until 2 years from the date of this Right-of-Entry, whichever occurs first.

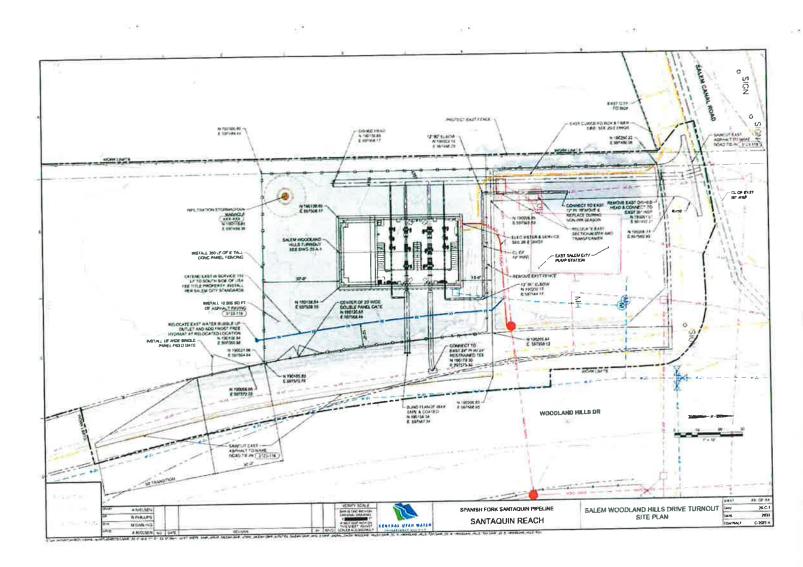
The Permittee agrees to:

- 1. Provide temporary fencing as necessary to allow use of the remaining property for livestock during the Right-of-Entry period.
- 2. Protect a livestock water hydrant during construction and provide a means to continue to water livestock during construction, if present, unless other arrangements are made under separate agreement with the construction constructor to eliminate livestock during the Right-of-Entry period.
- 3. Not allow the construction contractor to store or dispose of any excavated or graded soil or organic material on Permitter's property unless contractor has made a separate agreement with the Permitter.
- 4. Require its construction contractor to name the Permitter as an "additional insured" on the construction liability insurance certificate during the period construction work may occur on the Permitter's property.
- 5. Pay the Permitter \$500 to revegetate the area disturbed following construction.
- 6. Pay the Permitter the sum of for the two-year temporary use of the 0.55-acre area described herein.

7. The compensation under this Right-of-Entry is in addition to the compensation the landowner shall receive from the USA for Parcel SFS-59-FT.

IN WITNESS THEREOF, we have set our	hands this 2 day of May 20 23
VITTI	
Jul I puslance	ACCEPTED:
Kurt Christensen	Central Utah Water Conservancy District
\cap	•
Jamie (Jame lander	5-2-23
Janle Christensen	By and Date:





Central Utah Project Completion Act Utah Lake Drainage Basin Water Delivery System Santaquin Reach Pipeline Utah County, Utah

Construction Right-of –Entry

Payson City, ("Permitter") does hereby grant to the Central Utah Water Conservancy District and Department of Interior, their representatives and construction contractors (collectively "Permittees") permission to temporarily enter upon the following described real property ("Property"):

An area of 0.02 acre of vacant land along Dry Creek as shown on Exhibit A and Exhibit B attached hereto located on Assessor Parcel 49:403:0054 in Section 20, Township 9 South, Range 2 East, Salt Lake Base and Meridian.

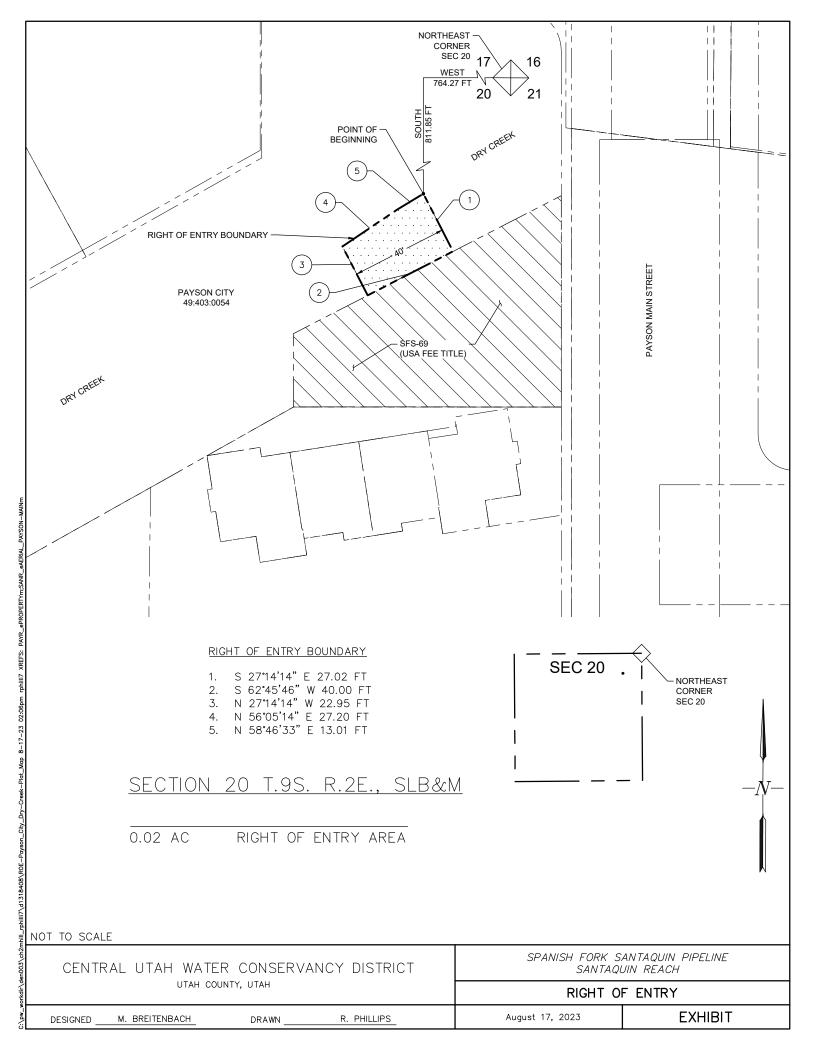
This right-of-entry ("Agreement") is for the purpose of providing temporary construction work area as shown on attached drawing 45-RW-1 to install a drainage discharge outlet to Dry Creek primarily to drain Permitter's secondary system pipeline in the fall and also to drain the water delivery turnout pipes on the adjacent USA land.

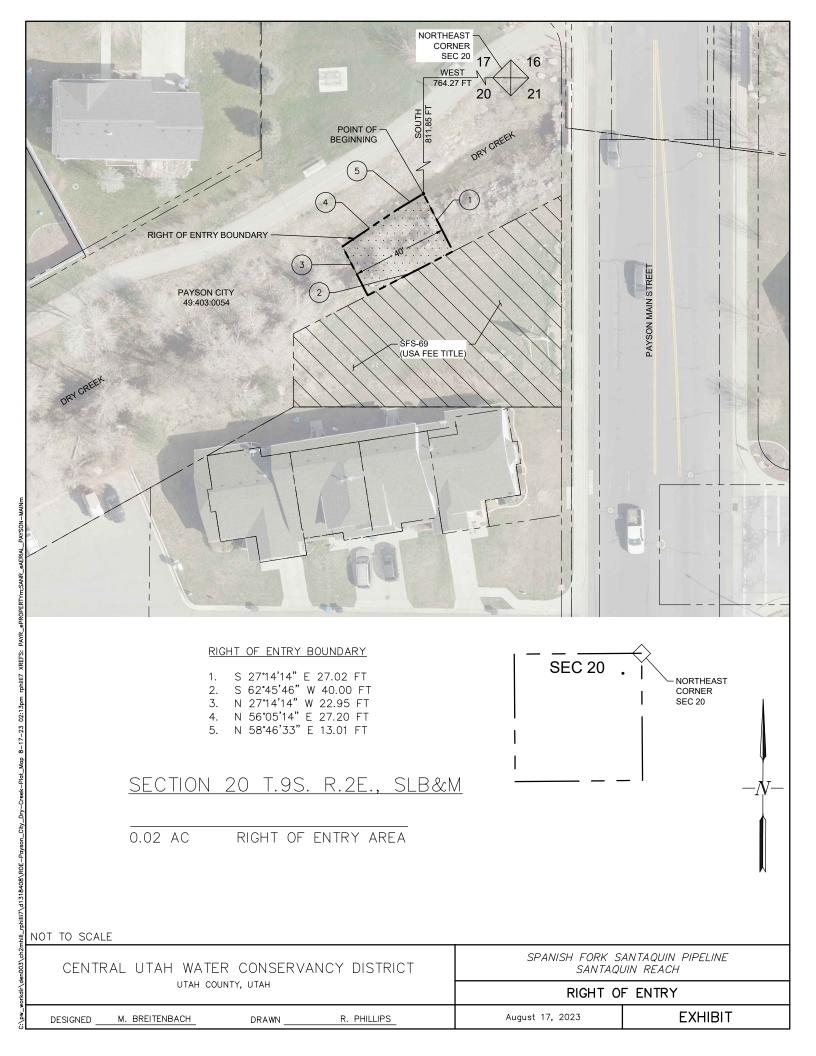
The Permittees agree to:

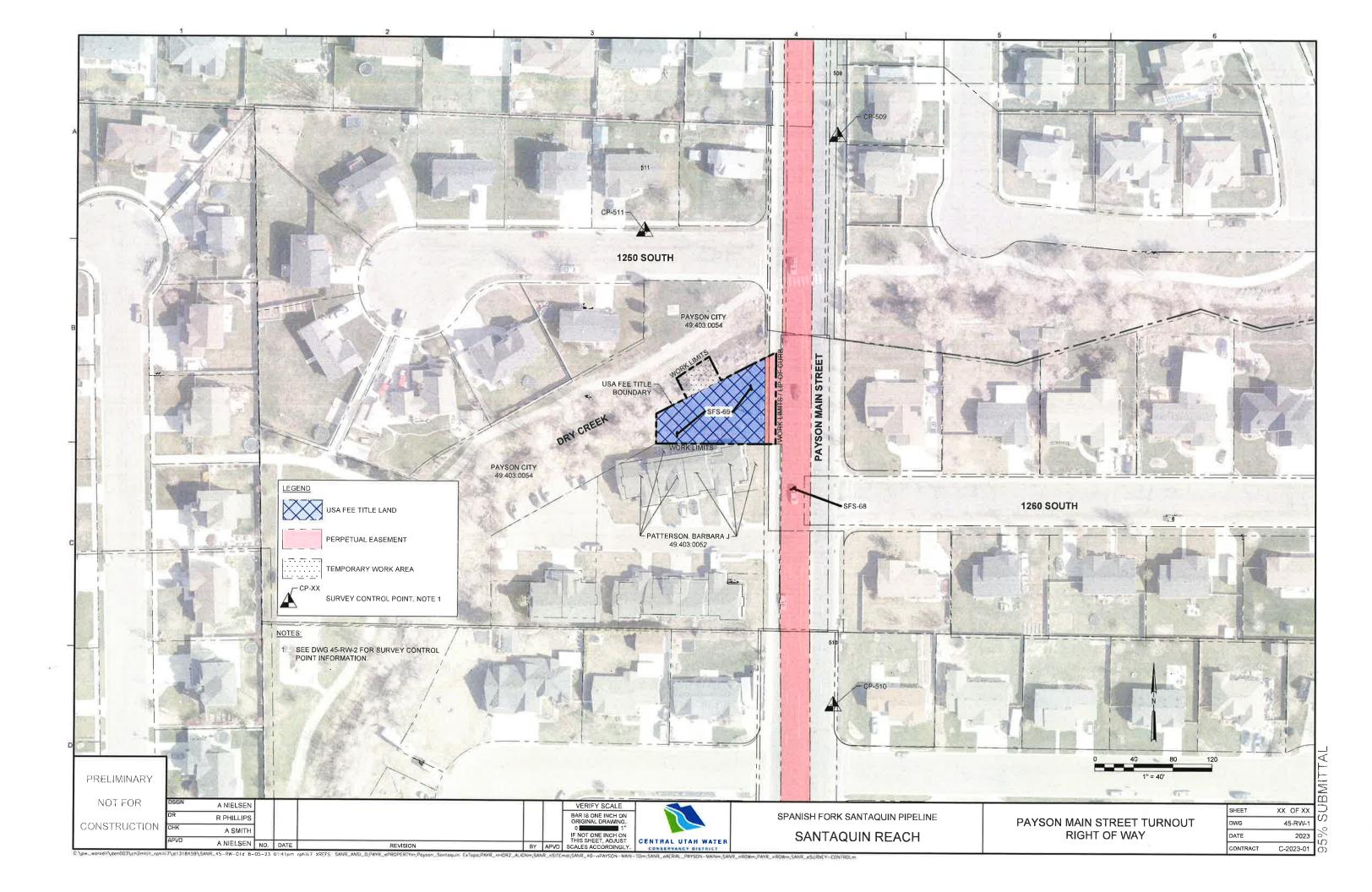
- 1. Install a discharge outlet with rip-rap protection as shown on attached drawing 45-C-1.
- 2. Obtain a Stream Alteration Permit from the Stream Alteration Permits Office of the Utah Division of Water Rights.
- 3. Comply with any requirements of the Stream Alteration Permit including land restoration and reseeding requirements.
- 4. Allow and coordinate with Permitter to drain the secondary water delivery system of the Permitter as needed.

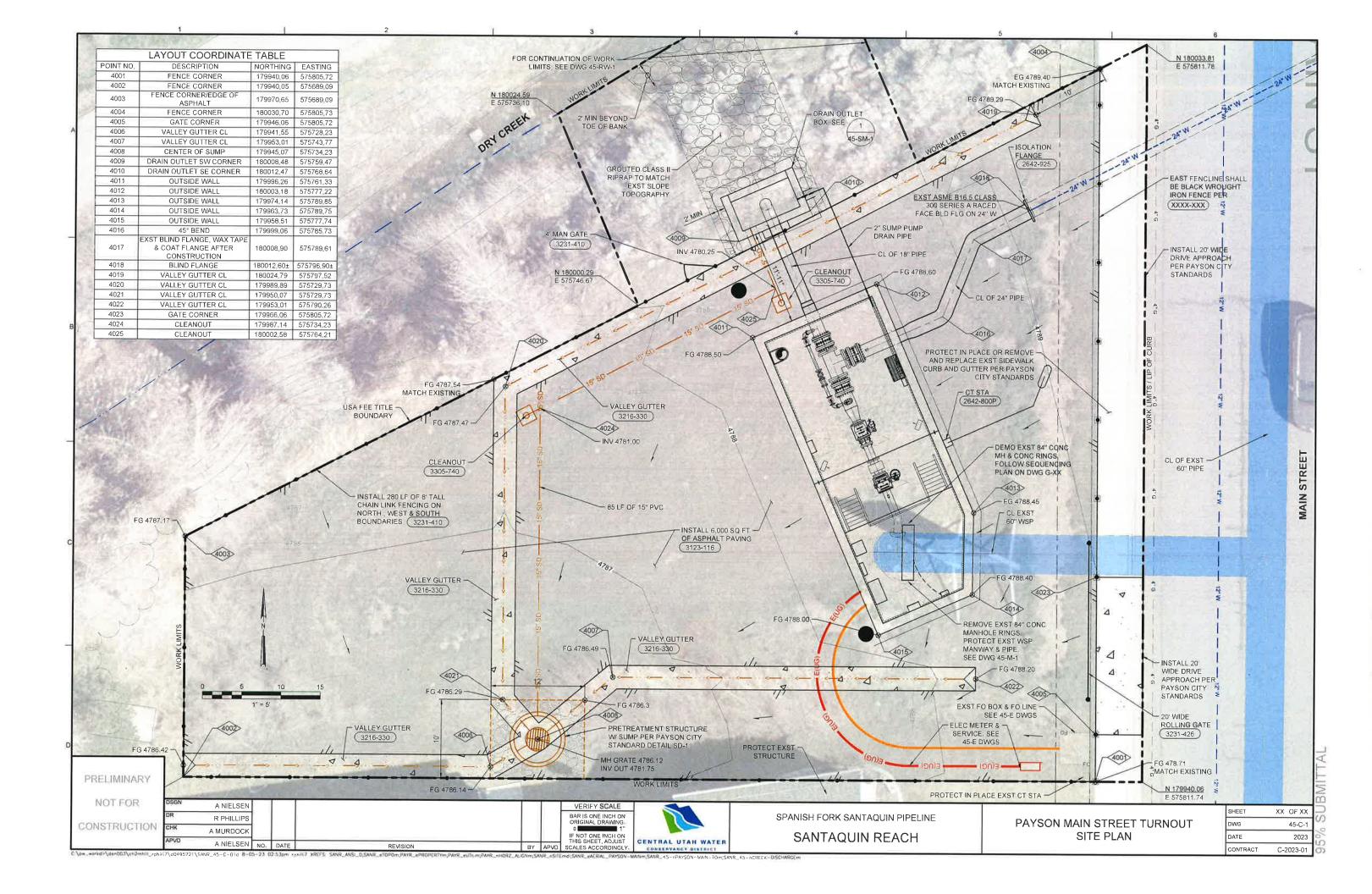
The Permitter agrees to:

	1. Accept ownership a upon completion.	and operation and maintenance of the outlet structure
IN WITN	ESS THEREOF, we ha	ve set our hands this day of 2023.
Payson Cit	ty	ACCEPTED: Central Utah Water Conservancy District
		By and Date:









Contract No.:	
---------------	--

PROJECT USE AGREEMENT

THIS PROJECT USE AGREEMENT, made this ______day of _______, 2023, pursuant to the Act of Congress of June 17, 1902 (32 Stat. 388), and acts amendatory thereof or supplementary thereto, all of which acts are commonly known and referred to as Reclamation Laws, including the Reclamation Project Authorization and Adjustment Act of 1992 (PL 102-575, Central Utah Project Completion Act or CUPCA), is among the United States of America, Department of the Interior, CUPCA Office ("CUPCA Office"); the Bureau of Reclamation ("Reclamation"); the Central Utah Water Conservancy District ("District"); and the High Line Canal Company ("Company").

WITNESSETH THAT:

WHEREAS, pursuant to federal law and contract with Reclamation (Contract No. 32, dated April 7, 1916), the Company operates and maintains a water conveyance system known as the Strawberry High Line Canal ("Canal"), a federal facility located within United States of America, Bureau of Reclamation fee title land ("United States' land") in Section 36, Township 9 South, Range 1 East, SLB&M, near Santaquin, Utah; and

WHEREAS, the Company operates and maintains the Canal as an earthen unlined canal in said Section 36; and

WHEREAS, The United States of America, which acquiring federal agency is the CUPCA Office, is acquiring easements (Easement) for the Pipeline; and

WHEREAS, pursuant to Central Utah Project Completion Act and contract with the CUPCA Office (Contract No. 04-WC-40-190, dated March 15, 2004), the District is constructing a federally owned water pipeline consisting of an approximately 16.5-milelong 60-inch welded steel water conveyance pipeline, fiber optic cable, water delivery turnouts and pipeline appurtenances known as the Spanish Fork Santaquin Pipeline; and

WHEREAS, the Santaquin Reach Pipeline ("Pipeline") is an approximate 4.3-milelong segment of the overall Spanish Fork Santaquin Pipeline that will begin near the intersection of State Route 198 and 12800 South, then follow generally along the south

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and easterly boundary of the Union Pacific Railroad to the southwest side of Santaquin City near the north side of the Summit Ridge development; and

WHEREAS, the Pipeline will cross the Canal easterly of Center Street, Santaquin and include a water delivery turnout to Santaquin City; and

WHEREAS, the Canal was acquired by the United States in fee title and is managed by the Company on behalf of United States; and

WHEREAS, Reclamation with the Company's concurrence is willing to grant the District and its representatives permission to encroach on the United States' land for a work area for the federal Pipeline installation, including the construction of a 60-inch water pipeline and water delivery turnout, and for long-term operation and maintenance, and further is willing to grant the District permission to remove and restore the Canal at the Pipeline crossing at approximate Canal Station ______ in accordance with the design drawings attached hereto as Exhibit A ("Drawings"), which Exhibit A is attached hereto and incorporated herein by reference;

NOW, THEREFORE, Reclamation hereby grants to the District and its representatives, construction work area access and the right to construct and maintain certain uses as described herein, only to the extent and for the purposes set forth below:

- 1. <u>Design and Construction of Federal Facilities.</u> The District shall construct the Pipeline which crosses the Canal at approximate Station ______ (Pipeline Station 803+60) and a water delivery turnout to Santaquin City. The Pipeline shall have a minimum of 8 feet of clearance with the invert flow line of the Canal. All construction work shall be in accordance with the Drawings. The construction work shall be confined to the areas shown on Drawing RW-4 of Exhibit A and further described in Exhibit B attached hereto as Parcel SFS-150.
- 2. Access. The District shall have no right to make any other alterations or changes to the Canal or to otherwise use Reclamation lands without first receiving Reclamation's and the Company's written approval; EXCEPTING the District and its representatives shall have unrestricted access within 50 feet either side of the Pipeline crossing the Canal through the United States' land and shall have unrestricted access to the water delivery turnout site from a USA easement connecting to Ginger Gold Road. The District's perpetual access shall not interfere with the Company's water deliveries through the Canal nor its access along the Canal for Operation, Maintenance and Replacement.

- 3. <u>Construction Work Area</u>. Construction access within the United States' land shown in Exhibit B is allowed for the Pipeline construction however the District shall not interfere with irrigation flows in the Canal from April 5 to October 15 in any year. Any additional temporary work area requested by the construction contractor shall be by separate written agreement between the construction contractor and the Company.
- 4. <u>Crossings of Other Company Facilities.</u> The Pipeline will cross active and abandoned lateral facilities of the Company at other locations. Reclamation has obtained and recorded federal perpetual easements from each of the landowners at the crossings. Conversion of open lateral canals to pressurized pipeline laterals by Company has resulted in abandoned concrete canals at three of these crossing locations. Company hereby consents to the crossing of Company's lateral distribution facilities by the Pipeline in the manner listed following:
 - a. Crossing of 12-inch pipeline lateral and crossing of abandoned concrete canal along east side of 4380 West along west side of land owned by Saunders Livestock Corporation (Approximate Pipeline Station 730+00). District shall construct the Pipeline to cross under the 12-inch lateral pipeline of Company and maintain water service during irrigation season. Company grants permission to District's construction contractor to enter upon Company's easement to remove approximately 300 feet of abandoned concrete ditch and level the ground. Removal of the concrete ditch and leveling of the ground has been requested by Greg Saunders on behalf of the landowner. (Drawing No. PP-82 in attached Exhibit A)
 - b. Crossing of 8-inch pipeline lateral crossing 4380 West serving Kenyon and Irene Farley property (Approximate Pipeline Station 730+45). District shall construct Pipeline to cross under the 8-inch lateral pipeline of Company and shall maintain water service during irrigation season. (Drawing No. PP-82 in attached Exhibit A)
 - c. Crossing of abandoned concrete canal along the east side of Interstate 15 on land owned by Feild Ranch LLC (Approximate Pipeline Station 743+70). Company grants permission to District to remove abandoned concrete or dirt ditch within Pipeline work area without replacement. (Drawing No. PP-83 in attached Exhibit A)
 - d. Crossing of abandoned concrete canal along east side of 4800 West on land owned by Sorenson Brothers Orchards LLC (Approximate Pipeline Station 758+10). Company grants permission to District to allow its construction contractor to remove the concrete canal within the Pipeline work area for the entire duration of the construction period and replace

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the concrete canal at the end of construction in the event there may be use of the canal, if any, in the future. (Drawing No. PP-85 in attached Exhibit A)

- e. Crossing of group of multiple buried pipeline laterals on the west side of 5200 West on land owned by Judy Hiatt and Randy Hiatt as successor trustees of the Melinda Audrey Hiatt Family Trust (Approximate Pipeline Station 785+90). District shall construct the Pipeline to pass under the Company pipelines that have been potholed without water service interference. (Drawing No. PP-88 in attached Exhibit A)
- f. Crossing of 6-inch buried pipeline on north side of High Line Canal on property owned by Traci Ann Ferguson (Approximate Pipeline Station 802+85). District shall construct the Pipeline to pass under the Company pipeline without water service interference. (Drawing No. PP-90 in attached Exhibit A)
- 5. <u>Maintenance of Facilities.</u> The District shall require a 5-year construction warranty from its construction contractor for all work performed under this Agreement. The District shall be solely responsible for the maintenance of the Pipeline.
- 6. <u>Hold Harmless Indemnification</u>. In consideration of Reclamation and the Company's agreeing to the encroachment upon their Canal, the District agrees to indemnify and hold Reclamation and the Company and their agents, employees, officers, directors and assigns harmless from all claims whatsoever for personal injuries or damages to property, when such injuries or damages directly or indirectly arise out of the District's engineering, design and construction of the Pipeline. The District's obligation to indemnify Reclamation and the Company excludes all claims whatsoever for personal injuries or damages to property, when such injuries or damages directly or indirectly arise out of the Company's operation, maintenance, repair and replacement of the Canal.
- 7. <u>No Assignment</u>. This Agreement shall not be assigned or transferred by the District without the prior written consent of Reclamation.

8. <u>Construction Conditions</u>

(a) The District shall notify Reclamation and the Company 24 hours prior to beginning construction on the Canal and shall make renotification of re-commencement of work following any cessation of work for more than 14 days.

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- (b) The District shall install the Pipeline compact all backfill in accordance with standard engineering specifications using flowable fill around the Pipeline and cohesive soils to 95 percent maximum density specified by ASTM Part 19, D-698, method A; (2) non-cohesive soils to 70 percent relative density specified by ANSI/ASTM Part 19, d-2049, par. 7.1.2, wet method.
- (c) All construction within the canal prism shall occur during the non-irrigation season of October 16, 2024 through April 4, 2025 or the following non-irrigation season of October 16, 2025 through April 4, 2026. The District shall not interfere with the delivery of irrigation water by the Company.
- (d) The District shall preserve existing vegetation on all slope areas inside the general temporary work area limits and outside the canal zone to the fullest extent possible. All disturbed areas shall be smoothed and reseeded with a wheatgrass seed mixture consistent with existing vegetative cover. Within the canal property, no trees or other deeprooted vegetation will be replaced.

9. <u>Miscellaneous</u>

- (a) Governing Law. This Agreement shall be enforced by and governed pursuant to the Act of Congress of June 17, 1902 (32 Stat. 388), and acts amendatory thereof or supplementary thereto, all of which acts are commonly known and referred to as Reclamation Laws and under the laws of the State of Utah as applicable.
- (b) Right and Title. Reclamation and the Company make no warranties or representations regarding title to the United States' land upon which the Canal is located. Instead, they merely define the conditions under which the encroachment will be permitted by Reclamation and the Company.
- (c) <u>Notices</u>. Any required notices, with the exception of 24-hour notice, shall be deemed given by placing the same in the United States Mail, postage prepaid, to the following addresses:

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If to Company: Strawberry High Line Canal Company

ATTN: President 1608 American Way Payson, UT 84651

If to District: Central Utah Water Conservancy District

ATTN: General Manager

1426 East 750 North, Suite 400

Orem, UT 84097

If to Reclamation: Bureau of Reclamation

Area Manager

302 E Lakeview Parkway

Provo, UT 84606

24-hr Notice to Company to: Jay Staheli (801) 362-2276

Email: jstaheli@shlcc.com

- (d) <u>Counterparts</u>. This Agreement may be executed in counterparts, each of which when so executed and delivered shall be an original, all of which together shall constitute the same instrument.
- (e) <u>Exhibits</u>. The Exhibits attached are a part of this Agreement as if fully set forth herein.
- (f) <u>Headings</u>. The headings in this Agreement are for reference only and shall not affect the interpretation of this Agreement.
- 10. <u>Severability.</u> Each provision of this Agreement shall be interpreted in such a manner as to be valid under applicable law, but if any provision of this Agreement shall be deemed or determined by competent authority to be invalid or prohibited hereunder, such provision shall be ineffective and void only to the extent of such invalidity or prohibition, but shall not be deemed ineffective or invalid as to the remainder of such provision or any other remaining provisions, or of the Agreement as a whole.
- 11. <u>Discovery of Cultural Resources.</u> The District shall immediately provide an oral notification to Reclamation's authorized official of the discovery of any and all antiquities or other objects of archaeological, cultural, historic, or scientific interest on the United States' land. The District shall follow up with a written report of their finding(s) to Reclamation's authorized official within 48 hours. Objects under consideration include,

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but are not limited to, historic or prehistoric ruins, human remains, funerary objects, and artifacts discovered as a result of activities under this Agreement. The District shall immediately cease the activity in the area of the discovery, make a reasonable effort to protect such discovery, and wait for written approval from the authorized official before resuming the activity. Protective and mitigative measures specified by Reclamation's authorized official shall be the responsibility of the District.

IN WITNESS WHEREOF, the parties execute this Agreement.

Bureau of Reclamation	Department of Interior, CUPCA Office		
By:	By:		
Kent Kofford	Reed R. Murray		
Area Manager	Program Director		
Central Utah Water Conservancy District	High Line Canal Company		
By:	By:		
Gene Shawcroft	Mark DeHart		
General Manager	President		

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ACKNOWLEDGMENT OF THE BUREAU OF RECLAMATION

State of					
County of	Utah) ss.)			
before me _ the Provo Ai the United S acknowledge	rea Offi States Ded to m	ice, Bureau of F Department of	, known to me Reclamation, Int Interior, the sign Ited the same on	e to be the erior Region 7- ner of the abov	, personally appeared o - Upper Colorado Basin ve instrument, who duly United States of America
(NOTAR)	Y SEAL))			
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State of	Utah)	HE DEPARTMEN	IT OF INTERIOR	R-CUPCA OFFICE
County of	Utah				
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•	•		— No	otary Public	

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ACKNOWLEDGMENT OF CENTRAL UTAH WATER CONSERVANCY DISTRICT

State of	Utah)		
C) ss.		
County of	Utah)		
On th	nis	day of	, 20, p	personally appeared
before me _		, knov	vn to me to be the	of
who duly ac	knowle	_	(District), the signer of the ecuted the same on behalf	
(NOTAR	Y SEAL)			
			Notary Public	
	<u>AC</u>	KNOWLEDGMENT OF	HIGH LINE CANAL COMPA	<u>NY</u>
State of	Utah)) ss.		
County of		•		
On th	nis	day of	, 20, ŗ	personally appeared
High Line C acknowledg	Canal Co	ompany (Company), th	vn to me to be the ne signer of the above ins the same on behalf of Co	strument, who duly
(NOTAR	Y SEAL)			

	Contract No
Notary Public	<u> </u>

Exhibit "A"

CONSTRUCTION DRAWINGS

Drawings G-8, G-9, RW-1, RW-2, RW-3, RW-4, PP-80 through PP-90, C-3, 60-RW-1, 60-C-1, 60-S-1, 60-M-1, 60-M-2, 60-E-1, 60-E-2, 60-E-3 and 60-N-1.

Exhibit "B"

PARCEL SFS 150

- 1) Exhibit B 1 of 3, Parcel SFS 150 legal description
- 2) Exhibit B 2 of 3, Parcel SFS 150 plat map
- 3) Exhibit B 3 of 3, Parcel SFS 150 plat map on aerial background



State of Utah

DEPARTMENT OF NATURAL RESOURCES

JOEL FERRY Executive Director

Division of Water Rights

TERESA WILHELMSEN

State Engineer/Division Director

ORDER OF THE STATE ENGINEER

FOR STREAM ALTERATION APPLICATION NUMBER 23-51-19SA IN THE NAME OF THE CENTRAL UTAH WATER CONSERVANCY DISTRICT FOR ALTERATION TO DRY CREEK IN UTAH COUNTY, UTAH

Stream Alteration Application No. 23-51-19SA, submitted in the name of the Central Utah Water Conservancy District, applicant, in order to construct a new outfall structure with riprap placement associated with Dry Creek, a natural stream located in Utah County, Utah, is hereby APPROVED, contingent upon the conditions outlined in this ORDER. This approval also constitutes compliance with Section 404 (e) of the Clean Water Act (33 USC 1344) pursuant to Programmatic General Permit 10 issued to the State of Utah by the U.S. Army Corps of Engineers on February 22, 2021, and is subject to all conditions therein. Full text of Programmatic General Permit 10 can be found at the following link:

https://www.waterrights.utah.gov/strmalt/whitepapers/20210222 PGP10.pdf. The applicant is hereby authorized to conduct the work detailed in the application and supporting documentation, as described in this ORDER. Any modification or addition to the work may require additional authorization and/or application resubmittal.

- 1. The expiration date of this **ORDER** is **September 19, 2025**. Work affecting the bed and/or banks of the stream may not be conducted after this date. Extension of the ORDER is subject to review by the Division. A request for extension must be submitted in writing to the Division and include an explanation for project delay.
- 2. A copy of this **ORDER** must be kept onsite at any time the work authorized under this order is in progress.
- 3. Best Management Practices should be implemented and maintained during any streamside or instream work to minimize sedimentation, temporary erosion of stream banks, and needless damage or alteration to the streambed.
- 4. Work must be accomplished during a period of low flow. Sediment introduced into stream flows during construction must be controlled to prevent increases in turbidity downstream. If necessary, flows must be diverted away from the construction area through use of a nonerodible cofferdam or other means of bypass.
- 5. Impacts to the stream channel and surrounding environment must be minimized. Vegetation should not be destroyed, but if some disturbance is necessary, then revegetating with native species will be required, especially in the case of woody shrubs. The channel contours and configuration must not be changed except in the case of bank contouring for stabilization purposes.

- 6. Fill materials should be free of fines, waste, pollutants, and noxious weeds/seeds.
- 7. Equipment should work from the top of the bank or from the channel to minimize disturbance to the riparian area and to protect the banks. Heavy equipment should avoid crossing and/or disturbing wetlands.
- 8. Equipment must be properly cleaned off-site prior to construction. If necessary during and/or after construction, fueling and cleaning of equipment must occur well away from any stream channels.
- 9. Excavated material and construction debris may not be wasted in any stream channel or placed in flowing waters, this will include material such as grease, oil, joint coating, or any other possible pollutant. Excess materials must be wasted at an upland site well away from any channel. Construction materials, bedding material, excavated material, etc. may not be stockpiled in riparian or channel areas.
- 10. Within 30 days after the completion of this project, the attached compliance certification form must be completed and returned to the U.S. Army Corps of Engineers. Failure to return this compliance certification form would invalidate U.S. Army Corps of Engineers Programmatic General Permit 10, thereby placing the applicant in violation of Section 404 of the Clean Water Act. Form can be found at: https://www.waterrights.utah.gov/strmalt/ComplianceCertification.pdf

The statutory process and criteria for evaluation of this application are described at Utah Code Ann. § 73-3-29 and Administrative Rule R655-13. The State Engineer has determined that this application does meet the necessary legal criteria for approval based upon the following Findings of Fact and reasoning set forth in the Discussion.

FINDINGS OF FACT

- 1. The application was received by the Division of Water Rights ("Division") on August 22, 2023, and made available for comment on the Division's webpage, provided to pertinent governmental agencies, and to other entities as warranted, for a period of 20 calendar days, said period concluding prior to September 11, 2023.
- 2. The application contains the following information:
 - The stated description of the proposed project is: To construct a new outfall structure with riprap placement associated with Dry Creek in Utah County.
 - The stated purpose of the proposed project is: To facilitate the ULS Bonneville Unit of CUPCA.
- 3. The following comments or objections on the proposed project were received from:
 - Hollis Jencks U.S. Army Corps of Engineers
 - Tracie Harrison Utah Division of Emergency Management

The comments or objections received are summarized as follows:

- The U.S. Army Corps of Engineers has reviewed the application and determined that the proposed project meets the terms and conditions of Programmatic General Permit 10.
- Applicant will need to verify if they will be required to get a floodplain development permit from the local Floodplain Administrator (FPA) in the community they are doing the work in. The applicant needs to make sure they are in compliance with the National Flood Insurance Program (NFIP) and the local floodplain regulations by contacting the communities FPA. Even state and federal agencies need to obtain the local floodplain development permits as per the federal regulations 44CFR 60.3. This may include obtaining a Letter of Map Change (LOMC) from FEMA as well as any other federal or local permits required to develop in Special Flood Hazard Areas (SFHA). The community FPA should know what is required in these areas. If there is a question as to what is needed, individuals can call or e-mail my office (385-499-2077, tjharrison@utah.gov).

DISCUSSION

- 1. Based on a review of the Division's water rights records and/or a review of the application by personnel of the Division's regional office, it is the opinion of the State Engineer that the project will not impair vested water rights.
- 2. It is the opinion of the State Engineer that the project will not unreasonably or unnecessarily affect recreational use or the natural stream environment.
- 3. It is the opinion of the State Engineer that the project will not unreasonably or unnecessarily endanger aquatic wildlife.
- 4. It is the opinion of the State Engineer that the project will not unreasonably or unnecessarily diminish the natural channel's ability to conduct high flows.
- 5. Other comments or concerns submitted by interested persons or parties are not believed to be within the purview of the State Engineer in evaluating an Application to Alter a Natural Stream.

Documents associated with this **ORDER** and the submitted application are included in the stream alteration file and available for viewing on the Division of Water Rights website.

This **ORDER** does not authorize trespass, easements, rights-of-way, or any other access and land use permits. It is the responsibility of the applicant to obtain any such authorizations as may be necessary for this proposal. It is recommended that the applicant coordinate with potentially impacted landowners prior to initiating stream alteration activities.

Page 4 23-51-19SA September 19, 2023

This **ORDER** is subject to the provisions of UTAH ADMIN. CODE R. 655-6-17 of the Division of Water Rights and to UTAH CODE ANN. §§ 63G-4-302 and 73-3-14, which provide for persons or parties with legal standing to file either a Request for Reconsideration with the State Engineer or an appeal with the appropriate District Court. A Request for Reconsideration must be filed with the State Engineer within 20 days of the date of this **ORDER**. However, a Request for Reconsideration is not a prerequisite to filing a court appeal. A court appeal must be filed within 30 days after the date of this **ORDER**, or if a Request for Reconsideration has been filed, within 30 days after the date the Request for Reconsideration is denied. A Request for Reconsideration is considered denied when no action is taken within 20 days after the Request is filed.

Your contact with the Division is Chuck Williamson, who can be reached at telephone number 801-538-7404.

Dated this 19th day of September, 2023.

Everett W. Taylor, P.E. Assistant State Engineer

Enclosure

Mailed a copy of the foregoing Order this 19th day of September, 2023, to:

CENTRAL UTAH WATER CONSERVANCY DISTRICT CHRIS ELISON 1426 EAST 750 NORTH, SUITE 400 OREM, UT 84097

Hollis Jencks - U.S. Army Corps of Engineers, hollis.g.jencks@usace.army.mil

Chase McDonald - Regional Engineer, chasemcdonald@utah.gov

Nolan Hahn - EPA, Hahn.Nolan@epa.gov

Mark Farmer - Division of Wildlife Resources, markfarmer@utah.gov

Tracie J. Harrison - Division of Emergency Management, tjharrison@utah.gov

Chris Elison, chrise@cuwcd.gov

By:

Tiffany Gonzales

Executive Secretary

SECTION 01 24 13 VALUE ENGINEERING

PART 1 GENERAL

1.01 SUMMARY

- A. This section applies to cost reduction proposals, hereinafter referred to as Value Engineering Cost Proposal (VECP), initiated and developed by Contractor to change requirements of the Contract for sole purpose of reducing total cost of construction. It is the intent that the VECP Construction Savings Amount, as defined herein, will be shared between Contractor and Owner.
- B. VECP proposal shall be identified as such at the time of submission to Owner
- C. VECP, if adopted, shall result in a savings to Owner by providing a decrease in cost for performing the Work without impairing any of the essential functions and characteristics such as service life, reliability, economy of operation, ease of maintenance, desired appearance, and safety features.
- D. VECP shall not be based solely upon a change in specified quantities.
- E. Contractor may withdraw the whole or part of a submitted VECP prior to acceptance by Owner.

1.02 SUBCONTRACT FLOW DOWN

A. Contractor shall include these VECP provisions in subcontracts of \$50,000 or greater. VECP provisions may be included in subcontracts of lesser value. Subcontracts shall state that benefits accruing to Contractor as a result of an accepted VECP initiated by a Subcontractor shall be shared by Contractor and Subcontractor, in a manner specified in the subcontract. Concurrent contract savings on other Owner contracts where Subcontractor is participating are not allowed.

1.03 DEFINITIONS

- A. Collateral Savings: Measurable net reductions in Owner's costs of operation that result from VECP including maintenance, logistics and Owner-furnished equipment.
- B. Concurrent Savings: Savings from other Owner contracts where Contractor is participating.

- C. Contractor Costs: Reasonable costs incurred by Contractor in preparing VECP and making the change, such as cancellation or restocking charges.
- D. Future Contract Savings: Reductions in cost of performance of future contracts for essentially the same item resulting from VECP submitted by Contractor.
- E. Gross Savings Amount: The gross savings amount to Contract, before deductions of Owner and Contractor Costs.
- F. Owner Costs: Reasonable costs, including associated engineering costs, incurred by Owner for evaluating and implementing VECP, such as redesign, testing, and effect on other contracts, including right of way acquisition costs.
- G. VECP Construction Savings Amount: Net amount of Contract Price reduction to be realized by implementation of VECP; the Gross Savings Amount less Owner and Contractor Costs.

1.04 PREPROPOSAL SCREENING

- A. Upon request of Contractor, and with approval of Owner, a preproposal screening meeting may be scheduled for Contractor to present anticipated proposal.
- B. Engineer and Owner will render a preliminary opinion as to relative merits of proposal during meeting. Contractor is not to assume acceptance of VECP based on Engineer or Owner concurrence with merits of preliminary proposal.
- C. If proposal is found to have merit, Engineer will confirm minimum technical content requirements to be submitted by Contractor with the intent to minimize proposal resubmittals.
- D. Any VECP received which has not been introduced in a preproposal screening may be rejected without review.

1.05 VECP PROPOSAL SUBMITTAL

- A. VECP shall not be submitted if Gross Savings Amount will total less than \$10,000.
- B. Contractor shall prepare and submit electronic copy of the VECP to Owner.

- C. Include, as a minimum, the following information with each VECP:
 - 1. Description of the difference between existing Contract requirement and VECP.
 - 2. Comparative advantages and disadvantages between Contract requirement and VECP.
 - 3. Itemization of requirements of Contract which must be changed if VECP is adopted, and a recommendation as to how to make such change (such as, Drawing numbers and Specifications).
 - 4. Justification for change in function or characteristic of each affected item and effect of change on performance of end item.
 - 5. Detailed cost estimate, with itemized breakdown containing quantities and unit prices for both original design and proposed change. Cost estimate shall include Contractor Costs, including amounts attributable to subcontracts. Basis for estimate shall also be included.
 - 6. Prediction of effects VECP would have on Owner Costs, such as additional engineering costs, Owner-furnished equipment costs, costs of related items, and costs of maintenance and operation.
 - 7. Statement of time by which a Change Order adopting VECP must be issued, to obtain maximum cost reduction.
 - 8. Proposed revisions to construction schedule, if any.
- D. Owner has right to reject, without review, any VECP that does not contain herein required documentation.

1.06 CONSTRUCTION SAVINGS SHARING

- A. If VECP is accepted, resulting deductive Change Order to Contract will be in an amount equal to 50 percent of VECP Construction Savings Amount, determined as follows, V = G-(C+O), where:
 - G = Gross Savings Amount;
 - C = Contractor Costs:
 - O = Owner Costs;
 - V = VECP Construction Savings Amount.

1.07 EXECUTABLE VECP

- A. VECP may be accepted, in whole or in part, by the Owner's award of a modification to this Contract.
- B. The Owner may accept the VECP, even though an agreement on price reduction has not been reached, by issuing the Contractor a notice to proceed with the change.

- C. If the VECP is accepted, a deductive Change Order will be prepared, in accordance with this section and "change" clause of these Contract Documents, adjusting Contract Price and other affected provisions.
- D. Unless and until a VECP Change Order is executed by both parties, Contractor shall remain obligated to perform in accordance with terms of the Contract.
- E. Acceptance of VECP and performance of the Work thereunder shall not extend Contract Times, unless specifically provided for in the Change Order authorizing VECP.
- F. Contractor is not entitled to share in concurrent, collateral, or future contract savings.
- G. Owner may accept, in whole or in part, submitted VECP. Owner may modify a VECP, with concurrence of Contractor, to make it acceptable.
- H. Neither Owner nor Engineer shall be liable for delays in acting upon, or for failure to act upon, a submitted VECP.
- I. Decisions of Owner as to acceptance of VECP under these Contract Documents shall be final and shall not be subject to the "Claims" clause of Contract or otherwise subject to litigation.
- J. Contractor may restrict Owner's right to use any portion of a VECP or its supporting data, submitted pursuant to this section, in accordance with the terms of the following if it is noted on such.
 - 1. These data are furnished pursuant to a value engineering change proposal and shall not be disclosed to an entity other than Owner and Engineer, or to be duplicated, used, or disclosed, in whole or in part, for any purpose other than to evaluate a value engineering change proposal. This restriction does not limit Owner's right to use information contained in these data if it is or has been obtained from another source or is otherwise available without limitations. If such a proposal is accepted by Owner by issuance of a Change Order, Owner shall have the right to duplicate, use and disclose any data pertinent to the proposal as accepted, in any manner and for any purpose whatsoever.
- K. In the event of acceptance of VECP, Contractor hereby grants to Owner all rights to use, duplicate or disclose in whole or part, in any manner and for purpose whatsoever, and to have or permit others to do so, any data reasonably necessary to fully utilize such proposal.

SPANISH FORK SANTAQUIN PIPELINE - SANTAQUIN REACH

1.08 NONEXECUTABLE VECP

- A. If VECP is not accepted, Engineer will notify Contractor in writing, explaining reasons. Contractor's costs of development of VECP are nonrecoverable in such an event.
- B. In the event Contractor withdraws from VECP that has been previously agreed upon by all parties, Engineer's costs for evaluating VECP will be deducted from Contract Price via a Change Order.
- PART 2 PRODUCTS (NOT USED)
- PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01 26 00 CONTRACT MODIFICATION PROCEDURES

PART 1 GENERAL

1.01 PROPOSAL REQUESTS

- A. Owner may, in anticipation of ordering an addition, deletion, or revision to the Work, request Contractor to prepare a detailed proposal of cost and times to perform contemplated change.
- B. Proposal request will include reference number for tracking purposes and detailed description of and reason for proposed change, and such additional information as appropriate and as may be required for Contractor to accurately estimate cost and time impact on Project.
- C. Proposal request is for information only; Contractor is neither authorized to execute proposed change nor to stop Work in progress as result of such request.
- D. Contractor's written proposal shall be transmitted to Owner promptly, but not later than 14 days after Contractor's receipt of Owner's written request. Proposal shall remain firm for a maximum period of 45 days after receipt.
- E. Owner's request for proposal or Contractor's failure to submit such proposal within the required time period will not justify a Claim for an adjustment in Contract Price or Contract Times (or Milestones).

1.02 CLAIMS

A. Include, at a minimum:

- 1. Specific references including (i) Drawing numbers, (ii) Specification section and article/paragraph number, and (iii) Submittal type, Submittal number, date reviewed, Engineer's comment, as applicable, with appropriate attachments.
- 2. Stipulated facts and pertinent documents, including photographs and statements.
- 3. Interpretations relied upon.
- 4. Description of (i) nature and extent of Claim, (ii) who or what caused the situation, (iii) impact to the Work and work of others, and (iv) discussion of claimant's justification for requesting a change to price or times or both.
- 5. Estimated adjustment in price claimant believes it is entitled to with full documentation and justification.

- 6. Requested Change in Contract Times: Include at least (i) Progress Schedule documentation showing logic diagram for request, (ii) documentation that float times available for Work have been used, and (iii) revised activity logic with durations including subnetwork logic revisions, duration changes, and other interrelated schedule impacts, as appropriate.
- 7. Documentation as may be necessary as set forth below for Work Change Directive, and as Engineer may otherwise require.

1.03 WORK CHANGE DIRECTIVES

A. Procedures:

- 1. Upon receipt of Work Change Directive from Owner, the Contractor shall complete the Work indicated.
- 2. Upon completion of Work covered by the Work Change Directive or when final Contract Times and Contract Price are determined, Contractor shall submit documentation for inclusion in a Change Order.
- 3. Contractor's documentation shall include but not be limited to:
 - a. Appropriately detailed records of Work performed to enable determination of value of the Work.
 - b. Full information required to substantiate resulting change in Contract Times and Contract Price for Work. On request of Engineer, provide additional data necessary to support documentation.
 - c. Support data for Work performed on a unit price or Cost of the Work basis with additional information such as:
 - 1) Dates Work was performed, and by whom.
 - 2) Time records, wage rates paid, and equipment rental rates
 - 3) Invoices and receipts for materials, equipment, and subcontracts, all similarly documented.
- B. Effective Date of Work Change Directive: Date of signature by Owner, unless otherwise indicated thereon.

1.04 CHANGE ORDERS

A. Procedure:

- 1. Engineer will prepare proposed Change Order and transmit such with Engineer's written recommendation and request to Contractor for signature.
- 2. Contractor shall, upon receipt, either: (i) promptly sign and return to Engineer for Owner's signature, or (ii) return unsigned with written justification for not executing Change Order.

- 3. Engineer will, upon receipt of Contractor signed Change Order, promptly forward Engineer's written recommendation and partially executed copy for Owner's signature, or if Contractor fails to execute the Change Order, Engineer will promptly so notify Owner and transmit Contractor's justification to Owner.
- 4. Upon receipt of Contractor-executed Change Order, Owner will promptly either:
 - a. Execute Change Order; or
 - b. Return to Engineer unsigned with written justification for not executing Change Order.
- 5. Upon receipt of Owner-executed Change Order, Engineer will transmit fully executed copy to Contractor, or if Owner fails to execute the Change Order, Engineer will promptly so notify Contractor and transmit Owner's justification to Contractor.
- 6. Upon receipt of Owner-executed Change Order, Contractor shall:
 - a. Perform Work covered by Change Order.
 - b. Revise Schedule of Values to adjust Contract Price and submit with next Application for Payment.
 - c. Revise Progress Schedule to reflect changes in Contract Times, if any, and to adjust times for other items of Work affected by change.
 - d. Enter changes in Project record documents after completion of change related Work.
- B. In signing a Change Order, Owner and Contractor acknowledge and agree that:
 - 1. Stipulated compensation (Contract Price or Contract Times, or both) set forth includes payment for (i) the Cost of the Work covered by the Change Order, (ii) Contractor's fee for overhead and profit, (iii) interruption of Progress Schedule, (iv) delay and impact, including cumulative impact, on other Work under the Contract Documents, and (v) extended overheads.
 - 2. Change Order constitutes full mutual accord and satisfaction for the change to the Work.
 - 3. Unless otherwise stated in the Change Order, all requirements of the original Contract Documents apply to the Work covered by the Change Order.

1.05 COST OF THE WORK (FORCE ACCOUNT)

- A. Force Account Work: Force account work includes work completed in accordance with Paragraph 11.07.B.3 of the General Conditions, which is work not otherwise covered by unit prices or an agreed upon lump sum.
- B. The cost of force account work shall be determined in accordance with Paragraph 13.01 of the General Conditions.

- C. The Contractor's Fee for force account work shall be determined in accordance with Paragraph 11.07.C of the General Conditions.
- D. In determining the supplemental costs allowed in Paragraph 13.01.B.5 of the General Conditions for rental equipment and machinery, the following will apply.
 - 1. Rental of construction equipment and machinery and the parts thereof having a replacement value in excess of \$1,000, whether owned by Contractor or rented or leased from others, shall meet the following requirements:
 - a. Full rental costs for leased equipment shall not exceed rates listed in the rental rate book indicated in the Supplementary Conditions, as adjusted to the regional area of the Project.
 - b. Owned equipment costs shall not exceed the single shift rates established in the Cost Reference Guide (CRG) published by Equipment Watch. The most recent published edition in effect at commencement of actual equipment use shall be used.
 - c. Rates shall apply to equipment in good working condition. Equipment not in good condition, or larger than required, may be rejected by Engineer or accepted at reduced rates.
 - d. Leased Equipment:
 - For equipment leased or rented in arm's length transactions from outside vendors, maximum rates shall be determined by the following actual usage/Payment Category:
 - a) Less than 8 hours: Hourly rate.
 - b) 8 or more hours but less than 7 days: Daily rate.
 - c) 7 or more days but less than 30 days: Weekly rate.
 - d) 30 days or more: Monthly rate.
 - e. Arm's length rental and lease transactions are those in which the firm involved in the rental or lease of equipment is not associated with, owned by, have common management, directorship, facilities and/or stockholders with the firm renting the equipment.
 - f. Financial arrangements associated with rental and lease transactions that provide Contractor remuneration or discounts not visible to the Owner must be disclosed and integrated with charged rates.
 - g. Leased Equipment in Use: Actual equipment use time documented by Engineer shall be the basis that equipment was on and utilized at the Project Site. In addition to the leasing rate above, equipment operational costs shall be paid at the estimated hourly operating cost rate set forth in the Rental Rate Blue Book if not already included in the lease rate. Hours of operation shall be based upon actual equipment usage to the nearest quarter hour, as recorded by Engineer.

- h. Leased Equipment, When Idle (Standby): Idle or standby equipment is equipment onsite or in transit to and from the Work Site and necessary to perform the Work under the modification, but not in actual use. Idle equipment time, as documented by Engineer, shall be paid at the leasing rate determined above, excluding operational costs.
- i. Owned and Other Equipment in Use: Equipment rates for owned equipment or equipment provided in other than arm's length transaction shall not exceed the single shift total hourly costs rate developed in accordance with the CRG and as modified herein for multiple shifts. This total hourly rate will be paid for each hour the equipment actually performs work. Hours of operation shall be based upon actual equipment usage as recorded by Engineer. This rate shall represent payment in full for Contractor's direct costs.
- j. Owned and Other Equipment, When Idle (Standby):
 Equipment necessary to be onsite to perform the Work on single shift operations, but not utilized, shall be paid for at the ownership hourly expense rate developed in accordance with the CRG, provided its presence and necessity onsite has been documented by Engineer. Payment for idle time of portions of a normal workday, in conjunction with original contract Work, will not be allowed. In no event shall idle time claimed in a day for a particular piece of equipment exceed the normal Work or shift schedule established for the Project. It is agreed that this rate shall represent payment in full for Contractor's direct costs. When Engineer determines that the equipment is not needed to continuously remain at the Work Site, payment will be limited to actual hours in use.
- k. Owned and Other Equipment, Multiple Shifts: For multiple shift operations, the CRG single shift total hourly costs rate shall apply to the operating equipment during the first shift. For subsequent shifts, up to two in a 24-hour day, operating rate shall be the sum of the total hourly CRG operating cost and 60 percent of the CRG ownership and overhaul expense. Payment for idle or standby time for second and third shifts shall be 20 percent of the CRG ownership and overhaul expense.
- I. When necessary to obtain owned equipment from sources beyond the Project limits, the actual cost to transfer equipment to the Site and return it to its original location will be allowed as an additional item of expense. Move-in and move-out allowances will not be made for equipment brought to the Project if the equipment is also used on original Contract or related Work.
- m. If the move-out destination is not to the original location, payment for move-out will not exceed payment for move-in.

- n. If move is made by common carrier, the allowance will be the amount paid for the freight. If equipment is hauled with Contractor's own forces, rental will be allowed for the hauling unit plus the hauling unit operator's wage. If equipment is transferred under its own power, the rental will be 75 percent of the appropriate total hourly costs for the equipment, without attachments, plus the equipment operator's wage.
- o. Charges for time utilized in servicing equipment to ready it for use prior to moving and similar charges will not be allowed.
- p. When a breakdown occurs on any piece of owned equipment, payment shall cease for that equipment and any other owned equipment idled by the breakdown.
- q. If any part of the Work is shut down by Owner, standby time will be paid during nonoperating hours if diversion of equipment to other Work is not practicable. Engineer reserves the right to cease standby time payment when an extended shutdown is anticipated.
- r. If a rate has not been established in the CRG for owned equipment, Contractor may:
 - If approved by Engineer, use the rate of the most similar model found, considering such characteristics as manufacturer, capacity, horsepower, age, and fuel type, or
 - 2) Request Equipment Watch to furnish a written response for a rate on the equipment, which shall be presented to Engineer for approval; or
 - 3) Request Engineer to establish a rate.
- s. Obtain Equipment Watch publications from the following:
 - 1) Equipment Watch; 1735 Technology Drive, Suite 410; San Jose, CA 95110-1313; Telephone: (800) 669-3282; Fax: (408) 467-6795; www.equipmentwatch.com.

E. Project-Specific-Indirect Costs:

- 1. Project-specific-indirect costs are defined as costs for Project Work elements which are not directly attributable to the force account work. These costs include but not limited to project office, safety resources, testing services, traffic control, superintendent, project engineer and project manager.
- 2. For the purpose of determining the cost of the Work for force account work, project-specific-indirect costs shall be determined as a percentage of the direct costs as indicated in Paragraph 13.01.F of the General Conditions.

SPANISH FORK SANTAQUIN PIPELINE - SANTAQUIN REACH

1.06 FIELD ORDER

- A. Engineer will issue Field Orders to Contractor in accordance with the General Conditions.
- B. Effective date of the Field Order shall be the date of signature by Engineer, unless otherwise indicated thereon.
- C. Contractor shall acknowledge receipt of Field Order.
- D. Field Orders will be incorporated into subsequent Change Orders, as a no-cost change to the Contract.
- PART 2 PRODUCTS (NOT USED)
- PART 3 EXECUTION

3.01 DOCUMENTATION

- A. Force Account:
 - 1. The Contractor's and Owner's representatives shall compare the records of the work performed as ordered on a force account basis at the end of each day on which such work is performed.
 - 2. Copies of daily work records shall be made on suitable forms provided for this purpose and signed by both the Owner and Contractor's representatives.
 - 3. Claims for work done on a force account basis shall be certified and submitted to the Owner by the Contractor. Such statements shall be filed with the Owner not later than the fifth (5th) day of the month following that in which the work is performed.

END OF SECTION

SECTION 01 29 00 PAYMENT PROCEDURES

PART 1 GENERAL

1.01 SUBMITTALS

A. Informational Submittals:

- 1. Schedule of Values: Submit in accordance with the General Conditions, including preliminary and detailed schedules. Submit on the Contractor's Standard Form unless indicated otherwise.
- 2. Schedule of Estimated Progress Payments:
 - a. Initial submittal shall correspond with initially accepted Schedule of Values.
 - b. Submit adjustment thereto with Application for Payment.
- 3. Application for Payment.
- 4. Final Application for Payment.

1.02 CASH ALLOWANCES

- A. Contractor shall consult with Engineer in selection of products or services. Obtain proposals from Suppliers and installers and offer recommendations.
- B. Submit, with application for payment, invoice showing date of purchase, from whom the purchase was made, the date of delivery of the product or service, and the price, including delivery to the Site and applicable taxes.

1.03 SCHEDULE OF VALUES

- A. Prepare a separate Schedule of Values for each schedule of the Work under the Agreement.
- B. Upon request of Engineer, provide documentation to support the accuracy of the Schedule of Values.
- C. Unit Price Work: Reflect unit price quantity and price breakdown from conformed Bid Form.

D. Lump Sum Work:

- 1. Reflect specified allowances and alternates, as applicable.
- 2. List bonds and insurance premiums, mobilization, demobilization, preliminary and detailed progress schedule preparation, equipment testing, facility startup, and contract closeout separately.
 - a. Mobilization includes, at minimum, items identified in Section 01 50 00, Temporary Facilities and Controls.
 - b. Include item(s) for monthly progress schedule update.
- 3. Develop in coordination with the Critical Path Method (CPM) Schedule.
- 4. Incorporate into CPM cost loading function.
- 5. Consult with Engineer and provide a breakdown of costs acceptable to the Engineer.
- E. An unbalanced or front-end loaded schedule will not be acceptable.
- F. Summation of the complete Schedule of Values representing all the Work shall equal the Contract Price.
- G. Submit Schedule of Values in format approved by the Owner and Engineer.

1.04 SCHEDULE OF ESTIMATED PROGRESS PAYMENTS

- A. Show estimated payment requests throughout Contract Times aggregating initial Contract Price.
- B. Base estimated progress payments on initially acceptable progress schedule. Adjust to reflect subsequent adjustments in progress schedule and Contract Price as reflected by modifications to the Contract Documents.

1.05 APPLICATION FOR PAYMENT

- A. Transmittal Summary Form: Attach one Summary Form with each detailed Application for Payment for each schedule and include Request for Payment of Materials and Equipment on Hand as applicable. Execute certification by authorized officer of Contractor.
- B. Use detailed Application for Payment Form acceptable to the Owner, unless otherwise indicated.
- C. Provide separate form for each schedule as applicable.
- D. Include accepted Schedule of Values for each schedule or portion of lump sum Work and the unit price breakdown for the Work to be paid on a unit priced basis.

E. Include separate line item for each Change Order executed prior to date of submission. Provide further breakdown of such as requested by Engineer.

F. Preparation:

- 1. Round values to nearest dollar.
- 2. Submit Application for Payment, including a Transmittal Summary Form and detailed Application for Payment Form(s) for each schedule as applicable, a listing of materials on hand for each schedule as applicable, and such supporting data as may be requested by Engineer.

1.06 MEASUREMENT—GENERAL

- A. Weighing, measuring, and metering devices used to measure quantity of materials for Work shall be suitable for purpose intended and conform to tolerances and specifications as specified in National Institute of Standards and Technology, Handbook 44.
- B. Whenever pay quantities of material are determined by weight, weigh material on scales furnished by Contractor and certified accurate by state agency responsible. Provide weight or load slip to Owner's representative at point of delivery of material.
- C. If material is shipped by rail, car weights will be accepted provided that actual weight of material only will be paid for and not minimum car weight used for assessing freight tariff, and provided further that car weights will not be acceptable for material to be passed through mixing plants.
- D. Vehicles used to haul material being paid for by weight shall be weighed empty daily and at such additional times as required by Engineer. Each vehicle shall bear a plainly legible identification mark.
- E. Haul materials that are specified for measurement by the cubic yard measured in the vehicle in transport vehicles of such type and size that actual contents may be readily and accurately determined. Unless all vehicles are of uniform capacity, each vehicle must bear a plainly legible identification mark indicating its water level capacity. Load vehicles to at least their water level capacity. Loads hauled in vehicles not meeting above requirements or loads of a quantity less than the capacity of the vehicle, measured after being leveled off as above provided, will be subject to rejection, and no compensation will be allowed for such material.
- F. Quantities Based on Profile Elevations: Quantities will be based on ground profiles shown. Field surveys will not be made to confirm accuracy of elevations shown unless approved by the Owner.

- G. Where measurement of quantities depends on elevation of existing ground, elevations obtained during construction will be compared with those shown on Drawings. Variations of 1 foot or less will be ignored, and profiles shown on Drawings will be used for determining quantities.
- H. Units of measure shown on Bid Form shall be as follows, unless specified otherwise.

Item	Method of Measurement
AC	Acre—Field Measure by Engineer
CY	Cubic Yard—Field Measure by Engineer within limits specified or shown
CY-VM	Cubic Yard—Measured in Vehicle by Volume
EA	Each—Field Count by Engineer
GAL	Gallon—Field Measure by Engineer
HR	Hour
LB	Pound(s)—Weight Measure by Scale
LF	Linear Foot—Field Measure by Engineer
SF	Square Foot
SY	Square Yard
TON	Ton—Weight Measure by Scale (2,000 pounds)

1.07 PAYMENT

- A. Payment for all Lump Sum Work shown or specified in Contract Documents is included in the Contract Price. Payment will be based on a percentage complete basis for each line item of the accepted Schedule of Values.
- B. Payment for Lump Sum Work covers all Work specified or shown within the limits or Specification sections for the Work indicated in the applicable schedules of the Bid Form.
- C. Payment for unit price items covers all the labor, materials, and services necessary to furnish and install the applicable items indicated in the schedules of the Bid Form.
- D. The Description of lump sum and unit price items in the following tables are presented to indicate major categories of Work for purposes of comparative Bid analyses and payment breakdown for monthly progress payments. Bid items are not intended to exclusive descriptions of work

categories and Contractor shall determine and include in its pricing all materials, labor, and equipment necessary to complete each pay item as shown and specified.

		SCHEDULE A				
No.	Item	Description				
A1	Bidder's Insurance and Mobilization, Demobilization and Administration	Includes all Bidder's insurance required by the Contract Documents. Includes the obtaining of all permits, bonds, moving on the Site of all equipment; furnishing and erecting temporary construction facilities; demobilization of facilities and equipment; and administration as required for the properformance and completion of the Work. 0.5 percent retainage of the total contract value to be held until all punchlist items are completed.				
A2	60-Inch Pipe, appurtenances, Surface Restoration, and required connections from POB STA +/- 714+04.37 to POE STA944+51.73	Payment will be made on the basis of the Contractor's lump sum Bid for furnishing and installing the pipe, fittings, and appurtenances between the stations shown and within the work limits provided. Includes tunneled crossings of Interstate 15, Highway 6, and railroad fittings. The lump sum price includes site condition and construction progress surveys; traffic control; trench excavation; dewatering; furnishing and installing the pipe, connections to air and vacuum valves, blowoffs; shoring and bracing; access manways; air valve structures. Includes pipe zone and backfill materials, cleaning and testing; and all other work to furnish and install a complete system and to restore the Site between the stations shown.				
A3	Interstate 15 Tunneled Crossing, Excluding 60-inch Pipeline	Payment will be made on the basis of the Contractor's lump sum Bid for furnishing and installing the tunneled crossing of Interstate 15. Includes installation of steel casing or liner plate, casing spacers as required, surface and subsurface monitoring, and receiving and launching shafts.				
A4	Highway 6 Tunneled Crossing, Excluding 60-inch Pipeline	Payment will be made on the basis of the Contractor's lump sum Bid for furnishing and installing the tunneled crossing of Highway 6. Includes installation of steel casing or liner plate, casing spacers as required, surface and subsurface monitoring, and receiving and launching shafts.				
A 5	Railroad Tunneled Crossing, Excluding 60-inch Pipeline	Payment will be made on the basis of the Contractor's lump sum Bid for furnishing and installing the tunneled crossing of the railroad. Includes installation of steel casing, casing spacers, surface and subsurface monitoring, and receiving and launching shafts.				

		SCHEDULE A			
No.	Item	Description			
A6	Mapleton High Pressure Turnout	Payment will be made on the basis of the Contractor's lump sum Bid for furnishing and installing the Mapleton High Pressure Turnout in its entirety including but not limited to the vault structure, turnout piping from the 60-inch welded steel pipe to the POE, site civil improvements, and cathodic protection. The lump sum price includes the vault structure; piping; valves; unit heaters; sump pumps; electrical; instrumentation and controls and all other work to furnish and install the complete Mapleton High Pressure Turnout.			
A7	Salem East Turnout	Payment will be made on the basis of the Contractor's lump sum Bid for furnishing and installing the Salem East Turnout in its entirety including but not limited to the vault structure, turnout piping from the 60-inch welded steel pipe to the POE, site civil improvements, and cathodic protection. The lump sum price includes the vault structure; piping; valves; unit heaters; sump pumps; electrical; instrumentation and controls and all other work to furnish and install the complete Salem East Turnout.			
A8	Salem Woodland Hills Turnout	Payment will be made on the basis of the Contractor's lump sum Bid for furnishing and installing the Salem Woodland Hills Turnout in its entirety including but not limited to the vault structure, turnout piping from the 60-inch welded steel pipe to the POE, site civil improvements, and cathodic protection. The lump sum price includes the vault structure; piping; valves; unit heaters; sump pumps; electrical; instrumentation and controls and all other work to furnish and install the complete Salem Woodland Hills Turnout.			
А9	Salem 250 West Blowoff	Payment will be made on the basis of the Contractor's lump sum Bid for furnishing and installing the Salem 250 West Blowoff in its entirety including but not limited to the vault structure, turnout piping from the 60-inch welded steel pipe to the POE, site civil improvements, and cathodic protection. The lump sum price includes the vault structure; piping; valves; unit heaters; sump pumps; electrical; instrumentation and controls and all other work to furnish and install the complete Salem 250 West Blowoff.			

		SCHEDULE A
No.	Item	Description
A10	Payson East Turnout and Isolation Valve Vault	Payment will be made on the basis of the Contractor's lump sum Bid for furnishing and installing the Payson East Turnout and Isolation Valve Vault in its entirety including but not limited to the vault structure, turnout piping from the 60-inch welded steel pipe to the POE, site civil improvements, and cathodic protection. The lump sum price includes the vault structure; piping; valves; unit heaters; sump pumps; electrical; instrumentation and controls and all other work to furnish and install the complete Payson East Turnout and Isolation Valve Vault.
A11	Payson Main Street Turnout	Payment will be made on the basis of the Contractor's lump sum Bid for furnishing and installing the Payson Main Street Turnout and Isolation Valve Vault in its entirety including but not limited to the vault structure, turnout piping from the 60-inch welded steel pipe to the POE, site civil improvements, and cathodic protection. The lump sum price includes the vault structure; piping; valves; unit heaters; sump pumps; electrical; instrumentation and controls and all other work to furnish and install the complete Payson Main Street Turnout.
A12	Payson South Turnout	Payment will be made on the basis of the Contractor's lump sum Bid for furnishing and installing the Payson South Turnout and Isolation Valve Vault in its entirety including but not limited to the vault structure, turnout piping from the 60-inch welded steel pipe to the POE, site civil improvements, and cathodic protection. The lump sum price includes the vault structure; piping; valves; unit heaters; sump pumps; electrical; instrumentation and controls and all other work to furnish and install the complete Payson South Turnout.
A13	Santaquin North Turnout	Payment will be made on the basis of the Contractor's lump sum Bid for furnishing and installing the Santaquin North Turnout and Isolation Valve Vault in its entirety including but not limited to the vault structure, turnout piping from the 60-inch welded steel pipe to the POE, site civil improvements, and cathodic protection. The lump sum price includes the vault structure; piping; valves; unit heaters; sump pumps; electrical; instrumentation and controls and all other work to furnish and install the complete Santaquin North Turnout.

		SCHEDULE A
No.	Item	Description
A14	Pigging Connection Vault	Payment will be made on the basis of the Contractor's lump sum Bid for furnishing and installing the Summit Creek Isolation Valve Vault in its entirety including but not limited to the vault structure, turnout piping from the 60-inch welded steel pipe to the POE, site civil improvements, and cathodic protection. The lump sum price includes the vault structure; piping; valves; unit heaters; sump pumps; electrical; instrumentation and controls and all other work to furnish and install the complete Summit Creek Isolation Valve Vault.
A15	Santaquin South Turnout/Pigging Structure	Payment will be made on the basis of the Contractor's lump sum Bid for furnishing and installing the Santaquin South Turnout/Pigging Structure in its entirety including but not limited to the vault structure, turnout piping from the 60-inch welded steel pipe to the POE, site civil improvements, and cathodic protection. The lump sum price includes the vault structure; piping; valves; unit heaters; sump pumps; electrical; instrumentation and controls and all other work to furnish and install the complete Santaquin South Turnout/Pigging Structure.
A16	Salem Power Relocation at Woodland Hills Turnout	Payment will be made on the basis of the relocation of the Salem Power relocation at Woodland Hills Turnout. Salem Power to perform the Work and reimbursable to the Contractor. Payment to be made on actual cost of Work. Contract modification will be made if actual cost exceeds amount identified in Section 00 41 13, Bid Form. Contractor to coordinate with Salem Power to perform the Work.

1.08 NONPAYMENT FOR REJECTED OR UNUSED PRODUCTS

- A. Payment will not be made for following:
 - 1. Loading, hauling, and disposing of rejected material.
 - 2. Quantities of material wasted or disposed of in manner not called for under Contract Documents.
 - 3. Rejected loads of material, including material rejected after it has been placed by reason of failure of Contractor to conform to provisions of Contract Documents.
 - 4. Material not unloaded from transporting vehicle.
 - 5. Defective Work not accepted by Owner.
 - 6. Material remaining on hand after completion of Work.

1.09 PARTIAL PAYMENT FOR STORED MATERIALS AND EQUIPMENT

- A. Partial Payment: No partial payments will be made for materials and equipment delivered or stored unless Shop Drawings and preliminary operation and maintenance data is acceptable to Engineer.
- B. Final Payment: Will be made only for products incorporated in Work; remaining products, for which partial payments have been made, shall revert to Contractor unless otherwise agreed, and partial payments made for those items will be deducted from final payment.

1.10 PARTIAL PAYMENT FOR UNDELIVERED, PROJECT-SPECIFIC MANUFACTURED OR FABRICATED EQUIPMENT

- A. Notwithstanding above provisions, partial payments for undelivered (not yet delivered to Site or not stored in the vicinity of Site) products specifically manufactured for this Project, excluding off the shelf or catalog items, will be made for products listed as applicable items in the Supplement at the end of this section, when all of the following conditions exist:
 - 1. Partial payment request is supported by written acknowledgment from Suppliers that invoice requirements have been met.
 - 2. Equipment is adequately insured, maintained, stored, and protected by appropriate security measures.
 - 3. Each equipment item is clearly marked and segregated from other items to permit inventory and accountability.
 - 4. Authorization has been provided for access to storage Site for Engineer and Owner.
 - 5. Equipment meets applicable Specifications of these Contract Documents.
- B. Applicable Items: See Supplement at the end of this section if applicable. If no supplement is provided, there are no applicable items for this Project.
- C. Payment of 15 percent of manufacturer's quoted price for undelivered, Project-specific manufactured equipment will be made following Shop Drawing approval. Thereafter, monthly payments will be made based on progress of fabrication as determined by Engineer, but in no case will total of payments prior to delivery exceed 75 percent of manufacturer's quoted price.
- D. Failure of Contractor to continue compliance with above requirements shall give cause for Owner to withhold payments made for such equipment from future partial payments.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01 31 13 PROJECT COORDINATION

PART 1 GENERAL

1.01 SUBMITTALS

A. Informational:

- 1. Submit documentation of Contractors' verbal or written agreements with landowners, developers, irrigators, and other public or private entities of work performed (or to be performed) for use of facilities or lands, and coordination with affected entities.
- 2. Photographs:
 - a. Digital Images: Submit one copy USB flash drive or other electronic submittal acceptable to the Owner, containing images within 5 days of being taken.
- 3. Video Recordings: Submit within 5 days of being taken.

1.02 RELATED WORK AT SITE

A. General:

- 1. Other work that is either directly or indirectly related to scheduled performance of the Work under these Contract Documents, listed henceforth, is anticipated to be performed at Site by others.
 - a. Santaquin City will be widening Main Street from approximately 200 East to approximately 600 West during the construction period. Significant delays and closures of Main Street will be in progress during the work period.
 - b. The property primarily owned by Santaquin Development (Approximate Station 824+30 to Station 833+00) will be converted from vacant land to a completed street with asphalt, curb and gutter, and asphalt trail likely during 2024 or later. Contractor shall coordinate work sequencing with the landowner/developer.
 - c. Edge Homes will be constructing a new Salem City street connection to US 89 Highway adjacent to the Mapleton High Pressure Turnout. Edge Homes will be installing utilities, a trail, a street during construction that may overlap the work area within Highway 89. In addition, Edge Homes may install a secondary system pipeline at the turnout prior to the turnout construction.
 - d. Salem City will be constructing a pressure reducing valve station, modifying electrical facilities and constructing secondary system pipelines concurrently at the Woodland Hills Drive turnout.

- e. Payson City will be constructing a pressure reducing valve station and connections to its secondary system at the Payson East Turnout site during the construction work period.
- f. Payson Power will be constructing new electrical transmission facilities along SR 198 and Spring Lake Road near the Payson South turnout site.
- g. SESD will be constructing power line extensions near Summit Ridge Parkway and along the access road to be built from Summit Ridge Parkway to the pigging structure location.
- h. Summit Creek Irrigation and Canal Company will be constructing or replacing an irrigation company water pipeline on the east side of the railroad south of 140000 South and will be performing earthwork modifications on the Summit Creek Irrigation and Canal Company land west and south of the railroad tunnel location during the construction period.
- 2. Coordinate the Work of these Contract Documents with work of others as specified in General Conditions.
- 3. APCO Inc to perform all system integration and programming. Coordinate directly with APCO.
 - a. Contact: Cameron Price (Phone: (801) 989-1168, Email: Cameron.price@apco-inc.com)
- 4. Include sequencing constraints specified herein as a part of Progress Schedule.

1.03 UTILITY NOTIFICATION AND COORDINATION

A. Coordinate the Work with various utilities within Project limits. Notify applicable utilities prior to commencing Work, if damage occurs, or if conflicts or emergencies arise during the Work.

1.04 PROJECT MILESTONES

- A. General: Include the Milestones specified herein as a part of the Progress Schedule required under Section 01 32 00, Construction Progress Documentation.
- B. Project Milestones:
 - 1. Generally described in the Bid Form. Following is a detailed description of each:
 - a. Santaquin Spanish Fork Pipeline Operational.
 - b. Final Completion as defined in the General Conditions.

1.05 WORK SEQUENCING/CONSTRAINTS

- A. Include the following work sequences in the Progress Schedule:
 - 1. The Strawberry High Line Canal and all lateral canals or pipelines of the Strawberry High Line Canal Company shall have uninterrupted water service maintained between the dates of April 5 to October 31 each year. The Strawberry High Line Canal Company facilities cross by the Project are listed in the Project Use Agreement included with Section 01 11 00, Summary of Work, of the specifications.
 - 2. The Summit Creek Irrigation and Canal Company pipelines and water service facilities shall have uninterrupted water service maintained between the dates of April 1 to October 31 each year. The sump of Openshaw to be filled near Station 855+00 and the adjoining sump of Fowers Fruit Farm receive water from Summit Creek Irrigation and Canal Company. The irrigation replacement facilities to be constructed when the Openshaw sump is filled must be operational within the period April 1 to October 31.
 - 3. The Spanish Fork Santaquin Pipeline will be in operation from April 15 to October 15 each year. The construction contractor shall schedule work to tie into the Spanish Fork Santaquin Pipeline only during the period of November 1 to March 31 of any given year.
 - 4. Land clearing and grubbing, removal, and trimming of trees and brush may occur after September 1 and shall be completed by January 31 (in any year). Any clearing, grubbing, or removal and trimming of trees and brush prior to September 1 and after January 31 will require the Contractor to arrange and pay CUWCD for a qualified biologist to conduct nesting surveys, prior to construction activities, to verify that no migratory birds are nesting in the vegetation to be removed. These surveys would be conducted in consultation with U.S. Fish and Wildlife Service and the Contractor should allow 30 days for the survey process and be bound to any restrictions on construction resulting from the survey.
 - 5. Temporary easements obtained for the construction work that are shown on the RW drawings will expire prior to the work completion date. The work limits shown on the construction drawings shall reduce in size and exclude the temporary easement areas upon expiration unless the construction contractor provides signed agreements with each landowner to extend the temporary easements at the request and sole cost of the construction contractor. Complete all work and land restoration and reseeding within the temporary easement areas by March 15, 2026 except for those areas where temporary easements expire prior to March 15, 2026 which are listed following:
 - a. SFS 59 Christensen expires October 27, 2025.
 - b. SFS 130 Saunders Livestock expires February 22, 2026.

- c. SFS 132 Field Ranch expires December 7, 2025.
- d. SFS 149 Ferguson expires February 22, 2026.
- e. SFS 154 Santaquin City expires November 10, 2025.
- f. SFS 158 Wright expires November 30, 2025.
- g. SFS 159 Degraw expires November 30, 2025.
- h. SFS 171 PTM expires February 22, 2026.
- i. SFS 180 Kay expires February 23, 2026.
- 6. Entry onto the Sorenson property, SFS 136 and SFS 137, is restricted prior to April 1, 2024 due to vehicles and equipment parked within the work area near Station 751+00. The Right-of-Entry with the landowner allows the landowner to move/salvage/abandon the listed items within the work area anytime prior to April 1, 2024. The Contractor is not allowed to move or remove any improvements within the work area prior to announcement by the landowner that landowner has completed improvement salvage/relocation. Complete all work on the Sorenson property within the Right-of-Entry area (shown in green on Drawing RW-2) no later than April 1, 2026.
- 7. The Contractor is not allowed to cross the railroad during the construction period without a written permit from the railroad and shall post signs prohibiting all construction workers, subcontractors and material suppliers from using the private railroad crossings at Stations 770+25, 779+85, and 787+60. Contractor shall maintain access across the railroad and work area at these railroad crossings for the orchard owner and the orchard operations.
- 8. The temporary work area on SFS 171 between Lark Road and the north side of Highway 6 (tunnel crossing location) is restricted in late September and early October for the staging of orchard fruit harvest. Coordinate with Mountain Valley Farms for orchard harvesting operations on this leased ground.
- 9. The alfalfa fields on the Kay property south of Highway 6 and north of 14000 South are used for cattle grazing after the last hay cutting in the fall through the month of November. Temporary livestock fencing of the work area is required.
- 10. Vehicles and equipment greater than four axles are prohibited on Summit Ridge Parkway between Highway 6 and access road to the blowoff structure. All prohibited vehicles larger in size must travel from the Interstate 15 interchange south of Santaquin along Summit Ridge Parkway from the south.

- 11. Special Provisions for Orchard Areas are describe in the following:
 - a. The Santaquin Reach Pipeline will pass through the following orchard areas which are listed in Table 1:

Table 1 - Orchards Within Work Area

Orchard Owner	Beginning Station	End Station	Fruit	Variety
Wall Brothers Real Estate Limited Partnership	761+40	765+35	Cherry	Tart
Wall Brothers Real Estate Limited Partnership	765+35	767+75	Apple	Granny Smith
Wall Brothers Real Estate Limited Partnership	767+75	773+25	Cherry	Tart
Wall Brothers Real Estate Limited Partnership	773+40	776+70	Apple	Granny Smith
Farley Asset Protection Trust	776+70	785+30	Cherry	Tart
Fred H. C. Openshaw and Patricia Openshaw Family Trust	885+00	858+80	Peaches	Unknown
Fowers Fruit Ranch, LC	859+00	860+50	Cherry	Tart
Mountain Valley Fruit, Inc	861+30	872+50	Cherry	Tart
Mountain Valley Fruit, Inc	873+50	886+50	Apple	Red Delicious
Mountain Valley Fruit, Inc	886+80	889+80	Apple	Honey Crisp

- b. Construction work within orchard areas is not allowed during the period of blossom setting through fruit harvesting as listed below:
 - 1) No construction activities except surveying may be performed during the period of April 1 to August 15 each year within cherry orchards.

- 2) No construction activities except surveying may be performed during the period of April 1 to September 30 each year within peach orchards.
- 3) No construction activities except surveying may be performed during the period of April 1 to October 31 each year within apple orchards.
- 4) Any variation to the restrictions listed in items 1 through 3 above are not allowed unless a written agreement of consent is provided by the Contractor from the orchard owner.
- The District has compensated each orchard owner for the loss C. of fruit trees located within the federal easement/work area within each orchard, which fruit trees shall be removed by the construction contractor. The Contractor shall comply with limitations on the period of tree removal due to bird nesting included in Section 01 51 00, Permits and Regulatory Requirements, of the Specifications. Table 2 shows the number of trees within each orchard for which the landowners have received compensation for tree loss. The value of trees by orchard is based on many factors including the age and average condition of the trees and marketing factors. The Contractor shall install construction fencing along work area limits shown on Drawings to limit construction activities to the work area. Penalties will be assessed for trespass outside the work area that is not approved in writing by the District and/or property owner. The Contractor shall trim all fruit tree branches overhanging the work area limits under the oversight of an arborist and according to the limb treatment procedures shown in Section 01 51 00, Permits and Regulatory Requirements, of the Specifications. Trees near but outside the work area limits may be removed by the Contractor in lieu of branch trimming only with the written permission of the orchard owner.

Table 2 - Orchard Trees within Work Area

Orchard Owner	Fruit	Variety	Number of Trees Paid
Wall Brothers Real Estate Limited Partnership	Cherry	Tart	55
Wall Brothers Real Estate Limited Partnership	Apple	Granny Smith	55
Wall Brothers Real Estate Limited Partnership	Cherry	Tart	57

Orchard Owner	Fruit	Variety	Number of Trees Paid
Wall Brothers Real Estate Limited Partnership	Apple	Granny Smith	26
Farley Asset Protection Trust	Cherry	Tart	89
Fred H. C. Openshaw and Patricia Openshaw Family Trust	Peaches	Unknown	170
Fowers Fruit Ranch, LC	Cherry	Tart	24 in ROW plus 8 in impact zone for total of 32 trees
Mountain Valley Fruit, Inc	Cherry	Tart	136
Mountain Valley Fruit, Inc	Apple	Red Delicious	357
Mountain Valley Fruit, Inc	Apple	Honey Crisp	87

d. The Contractor's bid shall include the cost of potential impact to orchard trees in close proximity to the work area that may be damaged as a result of construction activities within the work area which could include compaction of the soil over shallow tree roots extending into the work area and tree limbs crossing the work area limits. The cost to include in the Contractor's bid is listed in Table 3 and is associated with an orchard "impact zone" based on the estimated number of Cherry trees within 10 feet of the work area, the number of apple trees within 7 feet of the work area and the number of peach trees within 5 feet of the work area limits. Table 3 includes the cost per tree potentially impacted.

Table 3 – Orchard Trees within Impact Zone Adjacent to Work Area

Orchard Owner	Fruit	Number of Trees	Price Per Tree	Subtotal
Wall Brothers Real Estate Limited Partnership	Cherry	17	739	\$12,563

Orchard Owner	Fruit	Fruit Number of Trees		Subtotal
Wall Brothers Real Estate Limited Partnership	Granny Smith Apple	13	811	\$10,543
Wall Brothers Real Estate Limited Partnership	Cherry	23	739	\$16,997
Wall Brothers Real Estate Limited Partnership	chers Smith Apple ited		811	\$14,598
Farley Asset Protection Trust	Cherry	14	1187	\$16,618
Fred H. C. Openshaw and Patricia Openshaw Family Trust	Peaches	Paid in Table 1 tally associated with irrigation system relocation corridor.	1581	\$0
Fowers Fruit Ranch, LC	Cherry	Paid for 8 trees in impact zone in Table 1.	1145	\$0
Mountain Valley Fruit, Inc	Cherry	59	\$2,700	\$159,300
Mountain Valley Fruit, Inc	Red Delicious Apple	59	\$500	\$29,500
Mountain Valley Fruit, Inc	Honey Crisp Apple	48	\$1,900	\$91,200
Total				\$351,319

- At least 30 days prior to orchard tree removal, the Contractor e. shall stake the work area limits. Any stakes the Contractor places within orchards prior to tree removal shall be placed in line with tree rows so landowners can move equipment within tree rows without damaging the stakes. The Contractor shall schedule a meeting within 30 days with the orchard owner and District to site visit each orchard to photograph and/or video each orchard tree row to count and mark 1) the number of trees within the work area that are required to be removed and 2) the number of trees within the impact zone by species listed above. The construction contractor and orchard owner or orchard owner representative shall determine which trees in the impact zone may be removed by the construction contractor in lieu of branch overhang trimming or due to near certain damage to the tree trunks from incidental equipment swing during construction. The Contractor shall record the number of trees by row which are 1) within the work area, 2) outside the work limits but within the impact zone as defined above and 3) the number of trees in the impact zone for which the orchard owner gives the Contractor consent to the remove. The trees to be removed shall be marked in the presence of the orchard owner, construction contractor and the District in a mutually agreeable manner. The Contractor shall provide the District a tally list of trees to be removed by row that has been signed by the orchard owner. The tally list shall note any dead or non-commercially productive trees located within each row. The number of trees that may be removed by the construction contractor shall not exceed the number of trees for which the landowner has received compensation being the sum of the number of trees listed in Table 2 and Table 3 above. Any stakes the Contractor places within orchards prior to tree removal shall be placed in line with tree rows so landowners can move equipment within tree rows without damaging the stakes.
- f. In the event that the tally list of trees within the work area and within the impact zone results in less trees than the number of trees listed in Table 2 and Table 3 above for each orchard, the Contractor shall receive no reduction in the amount the Contractor included within his bid for the amounts in Table 3. In the event the tally list of trees is greater than the sum of Table 2 and Table 3, the Contractor shall pay the orchard owner the amount of additional tree lost cost at the unit price per tree per tree species listed in Table 3 and receive a contract price increase adjustment. The Contractor shall restore the ground surface if trees are removed within the impact zone to the same condition as the

- area restored within the work zone with the same surface reseeding mixture.
- g. The construction contractor shall remove only 1) those orchard trees located within the federal easement work area shown on the Contract Drawings and 2) only those additional trees adjacent to the work area for which the Contractor has signed authorization from the landowner to remove. In no circumstance shall a Contractor remove any part of a tree outside or not overhanging the work area without permission from the landowner. Any agreement with the landowner for use of additional land for temporary work area shall be submitted prior to use and shall have cultural clearance as required in the Specifications.

1.06 FACILITY OPERATIONS

- A. Continuous operation of Owner's facilities is of critical importance. Schedule and conduct activities to enable existing facilities to operate continuously, unless otherwise specified.
- B. Perform Work continuously during critical connections and changeovers, and as required to prevent interruption of Owner's operations.
- C. When necessary, plan, design, and provide various temporary services, utilities, connections, temporary piping and heating, access, and similar items to maintain continuous operations of Owner's facility.
- D. Do not close lines, open or close valves, or take other action which would affect the operation of existing systems, except as specifically required by the Contract Documents and after authorization by Owner and Engineer. Such authorization will be considered within 48 hours after receipt of Contractor's written request.
- E. Do not proceed with Work affecting a facility's operation without obtaining Owner's and Engineer's advance approval of the need for and duration of such Work.
- F. Relocation of Existing Facilities:
 - 1. During construction, it is expected that minor relocations of Work will be necessary.
 - 2. Provide complete relocation of existing structures and Underground Facilities, including piping, utilities, equipment, structures, electrical conduit wiring, electrical duct bank, and other necessary items.
 - 3. Use only new materials for relocated facility. Match materials of existing facility, unless otherwise shown or specified.
 - 4. Perform relocations to minimize downtime of existing facilities.

5. Install new portions of existing facilities in their relocated position prior to removal of existing facilities, unless otherwise accepted by Engineer.

1.07 ADJACENT FACILITIES AND PROPERTIES

A. Examination:

- 1. After Effective Date of the Agreement and before Work at Site is started, Contractor, Engineer, and affected property owners and utility owners shall make a thorough examination of pre-existing conditions including existing buildings, structures, and other improvements in vicinity of Work, as applicable, which could be damaged by construction operations.
- 2. Periodic reexamination shall be jointly performed to include, but not limited to, cracks in structures, settlement, leakage, and similar conditions.

B. Documentation:

- 1. Record and submit documentation of observations made on examination inspections in accordance with Article Construction Photographs and Article Audio-Video Recordings.
- 2. Upon receipt, Owner will review, sign, and return one record copy of documentation to Contractor to be kept on file in field office.
- 3. Such documentation shall be used as indisputable evidence in ascertaining whether and to what extent damage occurred as a result of Contractor's operations, and is for the protection of adjacent property owners, Contractor, and Owner.

1.08 CONSTRUCTION PHOTOGRAPHS

A. General:

- 1. Photographically document all phases of the Project including preconstruction, construction progress, and post-construction.
- 2. Owner shall have right to select subject matter and vantage point from which photographs are to be taken.
- 3. Digital Images:
 - a. No post-session electronic editing of images is allowed without approval from the Owner.
 - b. Stored image shall be actual image as captured without cropping or other edits.
 - c. Minimum Resolution: 1832 by 3264 pixels and 24-bit, millions of color so that viewed resolution is high quality. The production of higher resolution images is encouraged.

B. Preconstruction and Post-Construction:

- 1. After Effective Date of the Agreement and before Work at Site is started, and again upon issuance of Substantial Completion, take sufficient photographs to document the Site and perimeter of the Site.
- 2. Emphasis shall be directed to structures both inside and outside the Site.
- C. Construction Progress Photos: Photographically demonstrate progress of construction, showing every aspect of Site and adjacent properties as well as interior and exterior of new or impacted structures.

D. Documentation:

- 1. Digital Images:
 - a. Electronic file shall have date taken embedded into image.
 - b. Archive using a commercially available photo management system that provides listing of photographs including date, keyword description, and direction of photograph.

1.09 AUDIO-VIDEO RECORDINGS

- A. Prior to beginning the Work onsite or of an area of the Work, and again within 10 days following date of Substantial Completion, videograph Site and property adjacent to Site.
- B. In the case of preconstruction recording, no work shall begin in the area prior to Engineer's review and approval of content and quality of video for that area.
- C. Emphasis shall be directed to physical condition of existing vegetation, structures, and pavements within work limits and areas adjacent to and within the right-of-way or easement, and on Contractor storage and staging areas.
- D. Engineer shall have right to select subject matter and vantage point from which videos are to be taken.
- E. Video Format and Quality:
 - 1. Digital format, with sound.
 - 2. Video:
 - a. Produce bright, sharp, and clear images with accurate colors, free of distortion and other forms of picture imperfections.
 - b. Electronically, and accurately display the month, day, year, and time of day of the recording.

3. Audio:

- a. Audio documentation shall be done clearly, precisely, and at a moderate pace.
- b. Indicate date, project name, and a brief description of the location of recording, including:
 - 1) Facility name.
 - 2) Street names or easements.
 - 3) Addresses of private property.
 - 4) Direction of coverage, including engineering stationing, if applicable.

F. Documentation:

1. Project Video Log: Maintain an ongoing log that incorporates above noted label information for videos on Project.

1.10 REFERENCE POINTS AND SURVEYS

- A. Owner's Responsibilities: As indicated in the General Conditions.
- B. Location and elevation of benchmarks are shown on Drawings.
- C. Contractor's Responsibilities:
 - 1. Provide additional survey and layout required to layout the Work.
 - 2. Check and establish exact location of existing facilities prior to construction of new facilities and any connections thereto.
 - 3. In event of discrepancy in data or staking provided by Owner, request clarification before proceeding with Work.
 - 4. Retain professional land surveyor or civil engineer registered in state of Project who shall perform or supervise engineering surveying necessary for additional construction staking and layout.
 - 5. Maintain complete accurate log of survey work as it progresses as a Record Document.
 - 6. On request of Engineer, submit documentation.
 - 7. Provide competent employee(s), tools, stakes, and other equipment and materials as Engineer may require to:
 - a. Establish control points, lines, and easement boundaries.
 - b. Check layout, survey, and measurement work performed by others.
 - c. Measure quantities for payment purposes.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

FND OF SECTION

SECTION 01 31 19 PROJECT MEETINGS

PART 1 GENERAL

1.01 GENERAL

- A. Contractor shall provide and schedule physical arrangements for meetings throughout progress of the Work.
- B. Contractor shall coordinate and share responsibilities with Owner for the following:
 - 1. Schedule meetings.
 - 2. Prepare meeting agenda with regular participant input.
 - 3. Distribute notice of each meeting.
 - 4. Preside at meetings.
 - 5. Record minutes to include significant proceedings and decisions.
 - 6. Distribute meeting minutes within 5 days after each meeting to participants and parties affected by meeting decisions.

1.02 PRECONSTRUCTION CONFERENCE

- A. Contractor shall be prepared to discuss the following subjects, as a minimum:
 - 1. Required schedules.
 - 2. Status of Bonds and insurance.
 - 3. Seguencing of critical path work items.
 - 4. Progress payment procedures.
 - 5. Project changes and clarification procedures.
 - 6. Use of Site, access, office and storage areas, security and temporary facilities.
 - 7. Major product delivery and priorities.
 - 8. Contractor's safety plan and representative.
 - 9. Subcontractors.

B. Attendees will include:

- 1. Owner's representatives.
- 2. Contractor's office representative.
- 3. Contractor's resident superintendent.
- 4. Contractor's quality control representative.
- 5. Subcontractors' representatives whom Contractor may desire or Owner may request to attend.
- 6. Engineer's representatives.
- 7. Others as appropriate.

1.03 PARTNERING WORKSHOP

A. As set forth in Section 00 21 13, Instructions to Bidders.

1.04 PRELIMINARY SCHEDULES REVIEW MEETING

A. As set forth in General Conditions and Section 01 32 00, Construction Progress Documentation.

1.05 PROGRESS MEETINGS

A. Owner will schedule regular progress meetings at Site or electronically, conducted weekly, unless otherwise indicated by the Owner, to review the Work progress, Progress Schedule, Schedule of Submittals, Application for Payment, contract modifications, and other matters needing discussion and resolution.

B. Attendees will include:

- 1. Owner's representative(s), as appropriate.
- 2. Contractor, Subcontractors, and Suppliers, as appropriate.
- 3. Engineer's representative(s).
- 4. Others as appropriate.

1.06 QUALITY CONTROL MEETINGS

- A. In accordance with Section 01 45 16.13, Contractor Quality Control.
- B. Attendees will include:
 - 1. Owner's representative(s), as appropriate.
 - 2. Contractor.
 - 3. Contractor's designated quality control representative.
 - 4. Subcontractors and Suppliers, as necessary.
 - 5. Engineer's representatives.

1.07 PROCESS INSTRUMENTATION AND CONTROL SYSTEMS (PICS) COORDINATION MEETINGS

- A. Owner will schedule meetings at Site or electronically, conducted monthly, unless otherwise indicated, to review specific requirements of PICS work.
- B. Attendees will include:
 - 1. Owner's representative(s), as appropriate.
 - 2. Contractor.

- 3. PICS Subcontractor/Installer.
- 4. Engineer's representatives.

1.08 PREINSTALLATION MEETINGS

- A. When required in individual specification sections, convene at Site prior to commencing the Work of that section.
- B. Require attendance of entities directly affecting, or affected by, the Work of that section.
- C. Notify Owner 7 days in advance of meeting date.
- D. Provide suggested agenda to Owner to include reviewing conditions of installation, preparation and installation or application procedures, and coordination with related Work and work of others.

1.09 FACILITY STARTUP MEETINGS

- A. Schedule and attend a minimum of two facility startup meetings. The first of such meetings shall be held prior to submitting Facility Startup Plan, as specified in Section 01 91 14, Equipment Testing and Facility Startup, and shall include preliminary discussions regarding such plan.
- B. Agenda items shall include, but not be limited to, content of Facility Startup Plan, coordination needed between various parties in attendance, and potential problems associated with startup.
- C. Attendees will include:
 - 1. Contractor.
 - 2. Contractor's designated quality control representative.
 - 3. Subcontractors and equipment manufacturer's representatives whom Contractor deems to be directly involved in facility startup.
 - 4. Owner's representative(s), as appropriate.
 - 5. Owner's operations personnel.
 - 6. Others as required by Contract Documents or as deemed necessary by Contractor or Owner.

1.10 OTHER MEETINGS

A. In accordance with Contract Documents and as may be required by the Owner.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01 31 40 PUBLIC INFORMATION PROGRAM

PART 1 GENERAL

1.01 WORK INCLUDED

- A. Keep the general public informed and educated about all aspects of the Project, public involvement, community relations, information dissemination, reporting construction progress, answering questions from the general public and being sensitive to the general public's concerns during construction.
- B. Coordinate Public Information Program with other specified Work, including but not limited to, the coordination of work, construction schedule, and traffic control requirements.
- C. The primary objectives of the Public Information Program are to maintain a high level of communication with public prior to and throughout construction. This Project may be disruptive to many and it is important that the Project gain and maintain public support throughout construction. Public support will best be achieved if the public is informed in a timely manner; if they have the opportunity to be listened to, and they receive responses to questions and concerns; if they know where to look, or whom to call, for information; and if they receive frequent information updates.
- D. During the construction period, the Work may impact several locations simultaneously. In some areas, specific restrictions will limit when and how long construction can occur. Paving may occur only during certain times of the year. Keeping these guidelines in mind, there must be a coordinated communication effort between team members and the public.

1.02 PUBLIC INFORMATION GOALS

- A. Focus on achieving these Public Information Goals throughout the Project:
 - 1. Communicate with affected publics in a way that helps them cope with construction and that leads to positive associations.
 - 2. Build a positive reputation for Central Utah Water Conservancy District (Owner), Department of the Interior (DOI), Bureau of Reclamation (Reclamation), Utah Department of Transportation (UDOT), county, and cities where Work is located, by being responsive to the public's concerns and needs during construction.

1.03 COMMUNICATIONS STRATEGIES

- A. Communications strategies that will be implemented on the Project include:
 - 1. Direct Communications: Communications with those most affected will be proactive. Active listening to issues and concerns and problem solving will be employed with the publics throughout the Project.
 - 2. Coordination with Partners: Routine coordination with the communications staff from the Partners will be established to keep them informed with current information prior to other publics receiving the information.
 - 3. Feedback: Affected publics will be given questionnaires to monitor communication efforts and improve tactics.

1.04 DEFINITIONS

- A. Partners:
 - 1. Owner.
 - 2. DOI.
 - USBR.
 - 4. UDOT.
 - 5. Utah County.
 - 6. Santaquin City.
 - 7. Mapleton City.
 - 8. Salem City.
 - 9. Payson City.
- B. Public Information Manager (PIM): A professional provided by the Contractor and approved by the Owner, responsible for managing public information activities for the Project as outlined herein.
- C. Publics:
 - 1. Publics are defined as individuals, groups, organizations, and businesses that will either be affected by the Project or have an interest in the Project. The Publics identified for the Project are:
 - a. Adjacent property owners.
 - b. Neighbors.
 - c. Businesses.
 - d. Motorists.
 - e. Partners.
 - f. Special Interest Groups.
 - g. Elected officials from nonpartner entities.
 - h. Utilities.

- i. Schools affected by construction.
- i. News media.
- k. Parks and Recreation Departments from affected county and cities.

1.05 PUBLIC INFORMATION ROLES

- A. The Owner provides oversight and management of all communication activities. The Owner's Governmental Affairs Director manages all media relations associated with Owner's projects and serves as the media spokesperson. The Director of Communications is Rick Maloy, ((801) 529-7850, rick@cuwcd.gov), or his successor.
- B. Unless directed otherwise, the Contractor shall provide a full-time experienced public information professional with experience in large infrastructure projects requiring one-on-one contact with the public. This person provides day-to-day communication activities specific to the Project.

1.06 STAFF REQUIREMENTS

- A. Public Information Manager (PIM):
 - 1. Provide a PIM responsible for managing all public information activities for the duration of the Project. This person is required to have a bachelor's degree in communications, public relations, or marketing plus 2 years of related experience in public relations or other equivalent experience. The PIM acts as a facilitator to resolve problems and is an advocate for the community. Experience must include providing the public with information on public works projects. The PIM is to be one of the Contractor's key personnel and is to be available at all times during construction activities. Public information duties for the Project are to take precedence over other assigned duties. The PIM is to have access to all Project details which may be relevant to the public, public agencies, emergency services providers, businesses, and other affected publics. The PIM's responsibilities include:
 - a. Be available by telephone hotline, with a minimum of a 30-minute response time on every working day and available upon the Owner's request at other than normal working hours.
 - b. Maintain daily communications with the Engineer and attend weekly construction coordination meetings.
 - c. Provide information about Project activities and schedules to affected property owners and residents, local neighborhoods associations, local city offices, local transit authorities, all affected utility companies, all affected public safety agencies, local schools, trucking and carrier associations, mail and delivery services.

- d. Attend meetings as required by the Owner's Governmental Affairs Director to provide Project updates and answer questions.
- e. Respond to questions concerning Project activities and schedules, assist in organizing, participate in, and document meetings held with affected individuals, and in coordination with the Engineer maintain ongoing communications with businesses directly impacted by construction.
- f. Provide a weekly summary of activities and meeting minutes to the Owner's Governmental Affairs Director, Engineer, and to public information staff at affected agencies (such as, UDOT, county and cities).
- g. One week before each construction activity begins, prepare and distribute information to all publics affected by the relevant Work, in a flier format, or through documented personal contact.
- h. Maintain a database of all public contacts. Include names, addresses, phone numbers, e-mails, date/time of contact, date/time of responses, issues or concerns and subsequent responses or actions taken during construction.
- i. Follow up all inquiries and complaints with either a return phone call or a meeting, as warranted.
- j. Provide updates to the Engineer and Owner's Governmental Affairs Director on Project activities that affect public outreach, including the description of the Work to be done, work locations, traffic restrictions, traffic detours, work times, days of week, and work dates.
- k. Provide all traffic and construction related notifications to affected agencies (such as, UDOT, county and cities) public information staff.
- I. Provide weekly construction schedule updates to the Owner's Governmental Affairs Director.
- m. Monitor the placement of all Project public information related signage to comply with guidelines established by the Owner's Governmental Affairs Director.
- n. Distribute the Owner's questionnaires to property owners and residents within the Project area or along the Project corridor, at public meetings and to public agencies and schools. Submit questionnaires to Owner's Governmental Affairs Director for joint review on a quarterly basis. Following review, adapt activities as needed for the following quarter.
- o. Provide information and routine updates to schools affected by the Project about bus and walking routes and biking and pedestrian safety. Provide construction safety information to all schools along the Project corridor or affected by construction.

1.07 PUBLIC NOTIFICATION PROCESS

- A. General construction notification must be made by the Contractor to property owners, residents, and other impacted publics about construction Work in the timeframe identified in Table 1. The notification process is further defined as follows:
 - 1. The construction partnering workshop at the beginning of the Project will review the minimum advance notification that is required prior to any disruptive Work performed.
 - 2. Notifications will be required for road closures and detours, access issues for homeowners, utility disruptions, tree removals, paving, and excessive noise during construction, and other items defined in the Preconstruction Conference.
 - 3. Advanced notification is required for extended construction hours.
 - 4. Affected public agencies (such as, UDOT, county, and cities) public information staff will be included in all notifications.
- B. Advance notification by PIM shall utilize the following methods:
 - 1. City Public Information: Phone, email, and meetings.
 - 2. Residents: In person and/or flyers and meetings.
 - 3. Schools: In person and/or flyer, fax, emails, and meetings.
 - 4. Businesses: In person and/or flyer, fax, emails, and meetings.
 - 5. Transportation Related Agencies (such as, UDOT, county, cities, and other affected transportation agencies): Phone, fax, mail and delivery services.

	Table 1 Advance Notification Minimum Requirements							
Type	Advance Notice	Signage	City Public Information	Residents	Schools, Fire & Police	Businesses	Transportation Related	
Construction Schedule	Weekly	N/A	Weekly or Daily	Weekly	Weekly	Weekly	Weekly	
Street Closure or Highway Lane Restrictions	2 weeks	VMS* 2 weeks	2 weeks	2 weeks see **	2 weeks	2 weeks see **	2 weeks	
Utility Disruption	3 weeks	N/A	3 weeks	3 weeks	N/A	3 weeks.	48 hrs	
Excessive Noise	72 hrs.	N/A	72 hrs.	72 hrs.	72 hrs.	72 hrs.	72 hrs.	
Extended Work Schedule	48 hrs.	VMS* 48 hrs.	48 hrs.	48 hrs.	48 hrs.	48 hrs.	48 hrs.	

	Table 1 Advance Notification Minimum Requirements							
Type	Advance Notice	Signage	City Public Information	Residents	Schools, Fire & Police	Businesses	Transportation Related	
Work Affecting Private Property	1 week	N/A	1 week	1 week	1 week	1 week	1 week	
Access Denied to Private Property	None Allowed	None Allowed	None Allowed	None Allowed	None Allowed	None Allowed	None Allowed	
Access Denied to Private Road	None Allowed	None Allowed	None Allowed	None Allowed	None Allowed	None Allowed	None Allowed	

^{*} VMS is a variable message sign.

C. Coordination with any UTA Bus Routes: PIM shall notify UTA and coordinate access and/or temporary relocations of bus stops during construction. Bus routes, schedules, and maps can be found at www.rideuta.com.

1.08 PUBLIC INFORMATION MATERIALS

- A. The Contractor will develop and distribute public information materials that have been approved by the Owner's Governmental Affairs Director. These materials include:
 - 1. Preconstruction Project information materials that will include a Project map, construction information, contact information for the PIM and affected agencies (such as, UDOT, county, and cities), related local public information, and a hotline resource such as a magnet or PIM business card with the hotline number.
 - 2. All notification flyers and door hangers.

1.09 PROJECT HOTLINE

- A. The Contractor will include a Public Hotline number on all Project signage, and with all printed materials distributed for the Project.
- B. The PIM shall be available to answer this Public Hotline at all times that construction activities are taking place onsite, and during all working hours Monday through Friday.
- C. The Project Hotline shall only be used for communications directly related to Public Involvement for the Project.

^{**} Notify residents and businesses for paving.

1.10 PROJECT WEBSITE

- A. The Contractor shall develop and maintain a Project website. Contractor shall update at least weekly all relevant information on this website. Contractor shall work with the Owner to determine material and information to be included on the website but at a minimum the website shall include:
 - 1. Project name.
 - 2. Project Owner's Name and Contact information for Owner's Governmental Affairs Director.
 - 3. Contractor's Name.
 - 4. Contact information for PIM.
 - 5. Overall Description of the Project and affected Project Area.
 - 6. Overall Project Schedule.
 - 7. Identification of Areas that are currently impacted by construction.
 - 8. Relevant Traffic Control and/or Detour Plans.
 - 9. Public Notices.
 - 10. Other useful public information.

1.11 PIM EVALUATION PROCESS

- A. The Owner's Governmental Affairs Director will monitor all activities associated with the role of the PIM. This will involve a quarterly evaluation of public information activities performed.
- B. Performance will be evaluated based upon the following tasks:
 - 1. Coordinate, notify and facilitate monthly meetings with representatives from cities and neighborhoods for Project updates and to answer questions.
 - 2. Establish daily contact with Engineer for updates on construction activities.
 - 3. Coordinate small group meetings with affected neighborhoods to address concerns and questions. The need for these meetings will be determined at the weekly communication meetings with Project team.
 - 4. Manage and respond to the hotline and respond to calls during working hours.
 - 5. Contact with residents and businesses in the Project area or along the Project corridor to provide construction information and updates.
 - 6. Provide advance notification block-by-block within given timeframe. (Refer to Table 1).
 - 7. Provide weekly construction schedule updates.
 - 8. Monitor the placement of all construction signage to comply with jurisdictional agency requirements or guidelines established by the Engineer.

- 9. Implement and manage contact tracking system for issues and resolution during the construction process, including hotline calls. Provide weekly summary to the Owner's Governmental Affairs Director.
- 10. Provide weekly construction schedule information to cities, transportation entities, emergency services, and postal service.
- 11. Provide information and routine updates to affected schools about bus and walking routes and pedestrian and biking safety along construction routes.
- 12. Attend weekly meetings with the Project Traffic Control Supervisor and obtain updates to traffic control status.
- 13. Attend weekly communications meetings with partners.
- 14. Support Owner and county public information staff as needed with information for neighborhood meetings.
- 15. Provide a written weekly summary of all activities to the Engineer.
- 16. Submit public questionnaires. Following review, adapt activities as needed.
- PART 2 PRODUCTS (NOT USED)
- PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01 32 00 CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 GENERAL

1.01 SUBMITTALS

A. Informational Submittals:

- 1. Preliminary Progress Schedule: Submit in accordance with the General Conditions.
- 2. Detailed Progress Schedule:
 - a. Submit at least 10 days before submission of the first Application for Payment in accordance with the General Conditions.
 - b. Submit an updated Progress Schedule at each update, in accordance with Article Detailed Progress Schedule.
- 3. Submit with Each Progress Schedule Submission:
 - a. Contractor's certification that Progress Schedule submission is actual schedule being used for execution of the Work.
 - b. Electronic file compatible with computer software approved by Engineer.
 - c. Narrative Progress Report.
 - d. Progress Quantity Chart(s) as necessary.
- 4. Prior to final payment, submit a final updated Progress Schedule.

1.02 PRELIMINARY PROGRESS SCHEDULE

- A. In addition to basic requirements outlined in General Conditions, show a detailed schedule, beginning with Notice to Proceed, for minimum duration of 90 days, and a summary of balance of Project through Final Completion.
- B. Show activities including, but not limited to the following:
 - 1. Notice to Proceed.
 - 2. Permits.
 - 3. Submittals, with review time. Contractor may use Schedule of Submittals specified in Section 01 33 00, Submittal Procedures.
 - 4. Early procurement activities for long lead equipment and materials.
 - 5. Initial Site work.
 - 6. Earthwork.
 - 7. Specified Work sequences and construction constraints.
 - 8. Contract Milestone and Completion Dates.
 - 9. Owner-furnished products delivery dates or ranges of dates.
 - 10. Major structural, mechanical, equipment, electrical, architectural, and instrumentation and control Work.

- 11. System startup summary.
- 12. Project close-out summary.
- 13. Demobilization summary.
- C. Update Preliminary Progress Schedule monthly as part of progress payment process. Failure to do so may result in the Owner withholding all or part of the monthly progress payment until the Preliminary Progress Schedule is updated in a manner acceptable to Engineer.
- D. Format: In accordance with Article Progress Schedule—Critical Path Network, or as otherwise approved by the Owner.

1.03 DETAILED PROGRESS SCHEDULE

- A. In addition to requirements of General Conditions, submit Detailed Progress Schedule beginning with Notice to Proceed and continuing through Final Completion.
- B. Show the duration and sequences of activities required for complete performance of the Work reflecting means and methods chosen by Contractor.
- C. When accepted by Engineer, Detailed Progress Schedule will replace Preliminary Progress Schedule and become Baseline Schedule. Subsequent revisions will be considered as Updated Progress Schedules.
- D. Format: In accordance with Article Progress Schedule—Critical Path Network, or as otherwise approved by the Owner.
- E. Update monthly or as otherwise requested by the Owner to reflect actual progress and occurrences to date, including weather delays.

1.04 PROGRESS SCHEDULE—CRITICAL PATH NETWORK

A. General: Comprehensive computer-generated schedule using CPM, generally as outlined in Associated General Contractors of America (AGC) 580, "Construction Project Planning and Scheduling Guidelines." If a conflict occurs between the AGC publication and this Specification, this Specification shall govern.

B. Contents:

- 1. Schedule shall begin with the date of Notice to Proceed and conclude with the date of Final Completion.
- 2. Identify Work calendar basis using days as a unit of measure.
- 3. Show complete interdependence and sequence of construction and Project-related activities reasonably required to complete the Work.

- 4. Identify the Work of separate stages and other logically grouped activities, and clearly identify critical path of activities.
- 5. Reflect sequences of the Work, restraints, delivery windows, review times, Contract Times and Project Milestones set forth in the Agreement and Section 01 31 13, Project Coordination.
- 6. Include as applicable, at a minimum:
 - a. Obtaining permits, submittals for early product procurement, and long lead time items.
 - b. Mobilization and other preliminary activities.
 - c. Initial Site work.
 - d. Specified Work sequences, constraints, and Milestones, including Substantial Completion date(s) Subcontract Work.
 - e. Major equipment design, fabrication, factory testing, and delivery dates.
 - f. Delivery dates for Owner-furnished products, as specified in Section 01 11 00, Summary of Work.
 - g. Sitework.
 - h. Concrete Work.
 - i. Structural steel Work.
 - j. Architectural features Work.
 - k. Conveying systems Work.
 - I. Equipment Work.
 - m. Mechanical Work.
 - n. Electrical Work.
 - o. Instrumentation and control Work.
 - p. Interfaces with Owner-furnished equipment.
 - g. Other important Work for each major facility.
 - r. Equipment and system startup and test activities.
 - s. Project closeout and cleanup.
 - t. Demobilization.
- 7. No activity duration, exclusive of those for Submittals review and product fabrication/delivery, shall be less than 1 day nor more than 30 days, unless otherwise approved.
- 8. Activity duration for Submittal review shall not be less than review time specified unless clearly identified and prior written acceptance has been obtained from Engineer.

C. Network Graphical Display:

- 1. Plot or print on paper not greater than 30 inches by 42 inches or smaller than 22 inches by 34 inches, unless otherwise approved.
- 2. Title Block: Show name of Project, Owner, date submitted, revision or update number, and the name of the scheduler. Updated schedules shall indicate data date.
- 3. Identify horizontally across top of schedule the time frame by year, month, and day.

- 4. Identify each activity with a unique number and a brief description of the Work associated with that activity.
- 5. Indicate the critical path.
- 6. Show, at a minimum, the controlling relationships between activities.
- 7. Plot activities on a time-scaled basis, with the length of each activity proportional to the current estimate of the duration.
- 8. Plot activities on an early start basis unless otherwise requested by Engineer.
- 9. Provide a legend to describe standard and special symbols used.

D. Schedule Report:

- 1. On 8-1/2-inch by 11-inch white paper, unless otherwise approved.
- 2. List information for each activity in tabular format, including at a minimum:
 - a. Activity Identification Number.
 - b. Activity Description.
 - c. Original Duration.
 - d. Remaining Duration.
 - e. Early Start Date (Actual start on Updated Progress Schedules).
 - f. Early Finish Date (Actual finish on Updated Progress Schedules).
 - g. Late Start Date.
 - h. Late Finish Date.
 - i. Total Float.

1.05 PROGRESS OF THE WORK

- A. Updated Progress Schedule shall reflect:
 - 1. Progress of Work to within 5 working days prior to submission.
 - 2. Approved changes in Work scope and activities modified since submission.
 - 3. Delays in Submittals or resubmittals, deliveries, or Work.
 - 4. Adjusted or modified sequences of Work.
 - 5. Other identifiable changes.
 - 6. Revised projections of progress and completion.
 - 7. Report of changed logic.
- B. Produce detailed subschedules during Project, upon request of Owner or Engineer, to further define critical portions of the Work such as facility shutdowns.

- C. If an activity is not completed by its latest scheduled completion date and this failure is anticipated to extend Contract Times (or Milestones), submit, within 7 days of such failure, a written statement as to how nonperformance will be corrected to return Project to acceptable current Progress Schedule. Actions by Contractor to complete the Work within Contract Times (or Milestones) will not be justification for adjustment to Contract Price or Contract Times.
- D. Owner may order Contractor to increase plant, equipment, labor force, or working hours if Contractor fails to:
 - 1. Complete a Milestone activity by its completion date.
 - 2. Satisfactorily execute Work as necessary to prevent delay to overall completion of Project, at no additional cost to Owner.

1.06 NARRATIVE PROGRESS REPORT

A. Format:

- 1. Organize same as Progress Schedule.
- 2. Identify, on a cover letter, reporting period, date submitted, and name of author of report.

B. Contents:

- 1. Number of days worked over the period, work force on hand, construction equipment on hand (including utility vehicles such as pickup trucks, maintenance vehicles, stake trucks).
- 2. General progress of Work, including a listing of activities started and completed over the reporting period, mobilization/demobilization of subcontractors, and major milestones achieved.
- 3. Contractor's plan for management of Site (for example, lay down and staging areas, construction traffic), use of construction equipment, buildup of trade labor, and identification of potential Contract changes.
- 4. Identification of new activities and sequences as a result of executed Contract changes.
- 5. Documentation of weather conditions over the reporting period, and any resulting impacts to the Work.
- 6. Description of actual or potential delays, including related causes, and the steps taken or anticipated to mitigate their impact.
- 7. Changes to activity logic.
- 8. Changes to the critical path.
- 9. Identification of, and accompanying reason for, any activities added or deleted since the last report.
- 10. Steps taken to recover the schedule from Contractor-caused delays.

1.07 SCHEDULE ACCEPTANCE

- A. Engineer's acceptance will demonstrate agreement that:
 - 1. Proposed schedule is accepted with respect to:
 - a. Contract Times, including Final Completion and all intermediate Milestones, are within the specified times.
 - b. Specified Work sequences and constraints are shown as specified.
 - c. Specified Owner-furnished Equipment or Material arrival dates, or range of dates, are included.
 - d. Access restrictions are accurately reflected.
 - e. Startup and testing times are as specified.
 - f. Submittal review times are as specified.
 - g. Startup testing duration is as specified and timing is acceptable.
 - 2. In all other respects, Engineer's acceptance of Contractor's schedule indicates that, in Engineer's judgment, schedule represents reasonable plan for constructing Project in accordance with the Contract Documents. Engineer's review will not make any change in Contract requirements. Lack of comment on any aspect of schedule that is not in accordance with the Contract Documents will not thereby indicate acceptance of that change, unless Contractor has explicitly called the nonconformance to Engineer's attention in submittal. Schedule remains Contractor's responsibility and Contractor retains responsibility for performing all activities, for activity durations, and for activity sequences required to construct Project in accordance with the Contract Documents.
- B. Unacceptable Preliminary Progress Schedule:
 - 1. Make requested corrections; resubmit within 10 days.
 - 2. Until acceptable to Engineer as Baseline Progress Schedule, continue review and revision process, including updating schedule on a monthly basis to reflect actual progress and occurrences to date.
- C. Unacceptable Detailed Progress Schedule:
 - 1. Make requested corrections; resubmit within 10 days.
 - 2. Until acceptable to Engineer as Baseline Progress Schedule, continue review and revision process.

D. Narrative Report: All changes to activity duration and sequences, including addition or deletion of activities subsequent to Engineer's acceptance of Baseline Progress Schedule, shall be delineated in Narrative Report current with proposed Updated Progress Schedule.

1.08 ADJUSTMENT OF CONTRACT TIMES

- A. Reference General Conditions and Section 01 26 00, Contract Modification Procedures.
- B. Evaluation and reconciliation of Adjustments of Contract Times shall be based on the Updated Progress Schedule at the time of proposed adjustment or claimed delay.
- C. Claims Based on Contract Times:
 - 1. Where Engineer has not yet rendered formal decision on Contractor's Claim for adjustment of Contract Times, and parties are unable to agree as to amount of adjustment to be reflected in Progress Schedule, reflect an interim adjustment in the Progress Schedule as acceptable to Engineer.
 - 2. It is understood and agreed that such interim acceptance will not be binding on either Contractor or Owner, and will be made only for the purpose of continuing to schedule Work until such time as formal decision has been rendered as to an adjustment, if any, of the Contract Times.
 - 3. Revise Progress Schedule prepared thereafter in accordance with Engineer's formal decision.

D. Schedule Contingency:

- 1. Contingency, when used in the context of the Progress Schedule, is time between Contractor's proposed Completion Time and Contract Completion Time.
- 2. Contingency included in Progress Schedule is a Project resource available to both Contractor and Owner to meet Contract Milestones and Contract Times. Use of Schedule contingency shall be shared to the proportionate benefit of both parties.
- 3. Use of schedule contingency suppression techniques such as preferential sequencing and extended activity times is prohibited.
- 4. Pursuant to Contingency sharing provisions of this Specification, no time extensions will be granted, nor will delay damages be paid until a delay occurs satisfies the following:
 - a. Consumes all available contingency time, and
 - b. Extends Work beyond the Contract Completion date.

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PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01 33 00 SUBMITTAL PROCEDURES

PART 1 GENERAL

1.01 DEFINITIONS

- A. Action Submittal: Written and graphic information submitted by Contractor that requires Engineer's approval.
- B. Deferred Submittal: Information submitted by Contractor in accordance with the applicable building code as indicated in the General Structural Notes on Drawings, for portions of design that are to be submitted for approval prior to installation of that portion of the Work, along with Engineer's review documentation that submittal has been found to be in general conformance with Project's design.
- C. Informational Submittal: Information submitted by Contractor that requires Engineer's review and determination that submitted information is in accordance with the Conditions of the Contract.

1.02 PROCEDURES

- A. Direct submittals to the Owner through a web-based construction management program as directed by the Owner.
- B. Electronic Submittals: Submittals shall, unless specifically accepted, be made in electronic format.
 - 1. Each submittal shall be an electronic file in Adobe Acrobat Portable Document Format (PDF). Use the latest version available at time of execution of the Agreement.
 - 2. Electronic files that contain more than 10 pages in PDF format shall contain internal bookmarking from an index page to major sections of the document.
 - 3. PDF files shall be set to open "Bookmarks and Page" view.
 - 4. Add general information to each PDF file, including title, subject, author, and keywords.
 - 5. PDF files shall be set up to print legibly at 8.5-inch by 11-inch, 11-inch by 17-inch, or 22-inch by 34-inch. No other paper sizes will be accepted.
 - 6. Submit new electronic files for each resubmittal.
 - 7. Provide Engineer and Owner with authorization to reproduce and distribute each file as many times as necessary for Project documentation.
 - 8. Detailed procedures for handling electronic submittals will be discussed at the preconstruction conference.

C. Transmittal of Submittal:

- 1. Contractor shall review each submittal and check for compliance with Contract Documents.
- 2. Identify each submittal with the following:
 - a. Numbering and Tracking System:
 - 1) According to the prescribed Electronic Project/Document Management System.
 - 2) Where an Electronic Document Management System is not used:
 - a) Sequentially number each submittal.
 - b) Resubmission of submittal shall have original number with sequential alphabetic suffix.
 - b. Specification section and paragraph to which submittal applies.
 - c. Date of transmittal.
 - d. Names of Contractor, Subcontractor or Supplier, and manufacturer as appropriate.
 - e. Priority of submittal (High, Medium, Low).
- 3. Identify and describe each deviation or variation from Contract Documents.

D. Format:

- 1. Do not base Shop Drawings on reproductions of Contract Documents.
- 2. Package submittal information by individual specification section. Do not combine different specification sections together in submittal package, unless otherwise directed in Specification.
- 3. Present in a clear and thorough manner and in sufficient detail to show kind, size, arrangement, and function of components, materials, and devices, and compliance with Contract Documents.
- E. Timeliness: Schedule and submit in accordance Schedule of Submittals and requirements of individual specification sections.

F. Processing Time:

- 1. Time for review shall commence on Engineer's receipt of submittal.
- 2. Engineer will act upon Contractor's submittal and transmit response to Contractor not later than 30 days after receipt, unless otherwise specified.
- 3. Resubmittals will be subject to same review time.
- 4. No adjustment of Contract Times or Price will be allowed as a result of delays in progress of Work caused by rejection and subsequent resubmittals.
- G. Resubmittals: Clearly identify each correction or change made.

H. Incomplete Submittals:

- 1. Engineer will return entire submittal for Contractor's revision if preliminary review deems it incomplete.
- 2. Except where an Electronic Project/Document Management System is required, when any of the following are missing, submittal will be deemed incomplete:
 - a. Contractor's review stamp; completed and signed.
 - b. Transmittal of Contractor's Submittal; completed and signed.
 - c. Insufficient number of copies.
- I. Submittals not required by Contract Documents will not be reviewed and will be returned stamped "Not Subject to Review."

1.03 ACTION SUBMITTALS

- A. Prepare and submit Action Submittals required by individual specification sections.
- B. Shop Drawings:
 - 1. Identify and Indicate:
 - Applicable Contract Drawing and Detail number, products, units and assemblies, and system or equipment identification or tag numbers.
 - b. Equipment and Component Title: Identical to title shown on Drawings.
 - Critical field dimensions and relationships to other critical features of Work. Note dimensions established by field measurement.
 - d. Project-specific information drawn accurately to scale.
 - 2. Manufacturer's standard schematic drawings and diagrams as follows:
 - a. Modify to delete information that is not applicable to the Work.
 - b. Supplement standard information to provide information specifically applicable to the Work.
 - 3. Product Data: Provide as specified in individual specifications.
 - 4. Deferred Submittal: See Drawings for list of deferred submittals.
 - a. Contractor-design drawings and product data related to permanent construction.
 - 1) Written and graphic information.
 - 2) Drawings.
 - 3) Cut sheets.
 - 4) Data sheets.
 - 5) Action item submittals requested in individual specification section.

5. Foreign Manufacturers: When proposed, include names and addresses of at least two companies that maintain technical service representatives close to Project.

C. Samples:

- 1. Number: Two, unless otherwise specified in individual specifications.
- 2. Documentation: Physical samples shall be accompanied by a submittal transmittal letter and related pertinent and required information, or an entry made into the applicable Electronic Data Management System in use.
- 3. Preparation: Mount, display, or package Samples in manner specified to facilitate review of quality. Attach label on unexposed side that includes the following:
 - a. Manufacturer name.
 - b. Model number.
 - c. Material.
 - d. Sample source.
- 4. Manufacturer's Color Chart: Units or sections of units showing full range of colors, textures, and patterns available.
- 5. Full-size Samples:
 - a. Size as indicated in individual specification section.
 - b. Prepared from same materials to be used for the Work.
 - c. Cured and finished in manner specified.
 - d. Physically identical with product proposed for use.

D. Action Submittal Dispositions:

- 1. Engineer will review, comment, indicate decision action, and distribute as noted:
 - a. No Exceptions Taken:
 - 1) Contractor may incorporate product(s) or implement Work covered by submittal.
 - 2) Distribution: Electronic.
 - b. Make Corrections Noted:
 - Contractor may incorporate product(s) or implement Work covered by submittal, in accordance with Engineer's notations.
 - 2) Distribution: Electronic.
 - c. Revise and Resubmit:
 - 1) Contractor may not incorporate product(s) or implement Work covered by submittal.
 - 2) Distribution: Electronic.

d. Rejected:

- 1) Contractor may not incorporate product(s) or implement Work covered by submittal. Submit new submittal.
- 2) Distribution: Electronic.

1.04 INFORMATIONAL SUBMITTALS

A. General:

- 1. Refer to individual specification sections for specific submittal requirements.
- 2. Engineer will review each submittal. If submittal meets conditions of the Contract, Engineer will forward copy to appropriate parties. If Engineer determines submittal does not meet conditions of the Contract and is therefore considered unacceptable, Engineer will reject submittal with comments and will require a corrected resubmittal.

B. Certificates:

- 1. General:
 - a. Provide notarized statement that includes signature of entity responsible for preparing certification.
 - b. Signed by officer or other individual authorized to sign documents on behalf of that entity.
- 2. Welding: In accordance with individual specification sections.
- 3. Installer: Prepare written statements on manufacturer's letterhead certifying installer complies with requirements as specified in individual specification section.
- 4. Material Test: Prepared by qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements.
- 5. Certificates of Successful Testing or Inspection: Submit when testing or inspection is required by Laws and Regulations or governing agency or specified in individual specification sections.
- 6. Manufacturer's Certificate of Compliance: In accordance with Section 01 61 00, Common Product Requirements.
- 7. Manufacturer's Certificate of Proper Installation: In accordance with Section 01 43 33, Manufacturers' Field Services.
- C. Construction Photographs in accordance with Section 01 31 13, Project Coordination, and as may otherwise be required in Contract Documents.
- D. Closeout Submittals: In accordance with Section 01 77 00, Closeout Procedures.

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- E. Contractor-design Data (related to temporary construction):
 - 1. Written and graphic information.
 - 2. List of assumptions.
 - 3. List of performance and design criteria.
 - 4. Summary of loads or load diagram, if applicable.
 - 5. Calculations.
 - 6. List of applicable codes and regulations.
 - 7. Name and version of software.
 - 8. Information requested in individual specification section.
 - 9. Drawings and calculations stamped by a registered professional engineer if required by the individual specification or otherwise required by applicable codes and regulations.
- F. Deferred Submittals: See Drawings for list of deferred submittals.
 - 1. Contractor-design data related to permanent construction:
 - a. List of assumptions.
 - b. List of performance and design criteria.
 - c. Summary of loads or load diagram, if applicable.
 - d. Calculations.
 - e. List of applicable codes and regulations.
 - f. Name and version of design software.
 - g. Factory test results.
 - h. Informational submittals requested in individual specification section.
 - Drawings and calculations stamped by a registered professional engineer if required by the individual specification or otherwise required by applicable codes and regulations.
- G. Manufacturer's Instructions: Written or published information that documents manufacturer's recommendations, guidelines, and procedures in accordance with individual specification section.
- H. Operation and Maintenance Data: As required in Section 01 78 23, Operation and Maintenance Data.
- I. Payment:
 - 1. Application for Payment: In accordance with Section 01 29 00, Payment Procedures.
 - 2. Schedule of Values: In accordance with Section 01 29 00, Payment Procedures.
 - 3. Schedule of Estimated Progress Payments: In accordance with Section 01 29 00, Payment Procedures.

J. Quality Control Documentation: As required in Section 01 45 16.13, Contractor Quality Control.

K. Schedules:

- 1. Schedule of Submittals: Prepare separately or in combination with Progress Schedule as specified in Section 01 32 00, Construction Progress Documentation.
 - a. Show for each, at a minimum, the following:
 - 1) Specification section number.
 - 2) Identification by numbering and tracking system as specified under Paragraph Transmittal of Submittal.
 - 3) Estimated date of submission to Engineer, including reviewing and processing time.
 - b. On a monthly basis, submit updated Schedule of Submittals to Engineer if changes have occurred or resubmittals are required.
- 2. Progress Schedules: In accordance with Section 01 32 00, Construction Progress Documentation.
- L. Special Guarantee: Supplier's written guarantee as required in individual specification sections.
- M. Statement of Qualification: Evidence of qualification, certification, or registration as required in Contract Documents to verify qualifications of professional land surveyor, engineer, materials testing laboratory, specialty Subcontractor, trade, Specialist, consultant, installer, and other professionals.
- N. Submittals Required by Laws and Regulations, and Governing Agencies:
 - 1. Promptly submit promptly notifications, reports, certifications, payrolls, and otherwise as may be required, directly to the applicable federal, state, or local governing agency or their representative.
 - 2. Transmit to Engineer for Owner's records one copy of correspondence and transmittals (to include enclosures and attachments) between Contractor and governing agency.
- O. Test, Evaluation, and Inspection Reports:
 - 1. General: Shall contain signature of person responsible for test or report.
 - 2. Factory:
 - a. Identification of product and specification section, type of inspection or test with referenced standard or code.
 - b. Date of test, Project title and number, and name and signature of authorized person.

- c. Test results.
- d. If test or inspection deems material or equipment not in compliance with Contract Documents, identify corrective action necessary to bring into compliance.
- e. Provide interpretation of test results, when requested by Engineer.
- f. Other items as identified in individual specification sections.
- 3. Field:
 - a. As a minimum, include the following:
 - 1) Project title and number.
 - 2) Date and time.
 - 3) Record of temperature and weather conditions.
 - 4) Identification of product and specification section.
 - 5) Type and location of test, Sample, or inspection, including referenced standard or code.
 - 6) Date issued, testing laboratory name, address, and telephone number, and name and signature of laboratory inspector.
 - 7) Test results:
 - If test or inspection deems material or equipment not in compliance with Contract Documents, identify corrective action necessary to bring into compliance.
 - b) Provide interpretation of test results, when requested by Engineer.
 - 8) Other items as identified in individual specification sections.
- P. Testing and Startup Data: In accordance with Section 01 91 14, Equipment Testing and Facility Startup.
- Q. Training Data: In accordance with Section 01 43 33, Manufacturers' Field Services.
- PART 2 PRODUCTS (NOT USED)
- PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01 42 13 ABBREVIATIONS AND ACRONYMS

PART 1 GENERAL

- 1.01 REFERENCE TO STANDARDS AND SPECIFICATIONS OF TECHNICAL SOCIETIES
 - A. Reference to standards and specifications of technical societies and reporting and resolving discrepancies associated therewith shall be as provided in Article 3 of the General Conditions, and as may otherwise be required herein and in the individual specification sections.
 - B. Work specified by reference to published standard or specification of government agency, technical association, trade association, professional society or institute, testing agency, or other organization shall meet requirements or surpass minimum standards of quality for materials and workmanship established by designated standard or specification.
 - C. Where so specified, products or workmanship shall also meet or exceed additional prescriptive or performance requirements included within Contract Documents to establish a higher or more stringent standard of quality than required by referenced standard.
 - D. Where two or more standards are specified to establish quality, product and workmanship shall meet or exceed requirements of most stringent.
 - E. Where both a standard and a brand name are specified for a product in Contract Documents, proprietary product named shall meet or exceed requirements of specified reference standard.
 - F. Copies of standards and specifications of technical societies:
 - 1. Copies of applicable referenced standards have not been bound in these Contract Documents.
 - 2. Where copies of standards are needed by Contractor, obtain a copy or copies directly from publication source and maintain in an orderly manner at the Site as Work Site records, available to Contractor's personnel, Subcontractors, Owner, and Engineer.

1.02 ABBREVIATIONS

A. Abbreviations for trade organizations and government agencies: Following is a list of construction industry organizations and government agencies to which references may be made in the Contract Documents, with abbreviations used.

1.	AA	Aluminum Association
2.	AABC	Associated Air Balance Council
3.	AAMA	American Architectural Manufacturers
		Association
4.	AASHTO	American Association of State Highway and
		Transportation Officials
5.	ABMA	American Bearing Manufacturers'
-		Association
6.	ACI	American Concrete Institute
7.	AEIC	Association of Edison Illuminating
		Companies
8.	AGA	American Gas Association
9.	AGMA	American Gear Manufacturers' Association
10.	Al	Asphalt Institute
11.	AISC	American Institute of Steel Construction
12.	AISI	American Iron and Steel Institute
	AITC	American Institute of Timber Construction
14.	ALS	American Lumber Standards
	AMCA	Air Movement and Control Association
	ANSI	American National Standards Institute
	APA	APA – The Engineered Wood Association
	API	American Petroleum Institute
	APWA	American Public Works Association
20.	AHRI	Air-Conditioning, Heating, and Refrigeration
		Institute
21.	ASA	Acoustical Society of America
22.	ASABE	American Society of Agricultural and
		Biological Engineers
23.	ASCE	American Society of Civil Engineers
24.	ASHRAE	American Society of Heating, Refrigerating
		and Air-Conditioning Engineers, Inc.
25.	ASME	American Society of Mechanical Engineers
26.	ASNT	American Society for Nondestructive Testing
27.	ASSE	American Society of Sanitary Engineering
28.	ASTM	ASTM International
29.	AWI	Architectural Woodwork Institute
30.	AWPA	American Wood Preservers' Association
31.	AWPI	American Wood Preservers' Institute
32.	AWS	American Welding Society
33.	AWWA	American Water Works Association

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34.	BHMA	Builders Hardware Manufacturers'
		Association
35.	CBM	Certified Ballast Manufacturer
36.	CDA	Copper Development Association
37.	CGA	Compressed Gas Association
38.	CISPI	Cast Iron Soil Pipe Institute
39.	CMAA	Crane Manufacturers' Association of America
40.	CRSI	Concrete Reinforcing Steel Institute
41.	CS	Commercial Standard
42.	CSA	Canadian Standards Association
43.	CSI	Construction Specifications Institute
44.	DIN	Deutsches Institut für Normung e.V.
45.	DIPRA	Ductile Iron Pipe Research Association
	EIA	Electronic Industries Alliance
47.	EJCDC	Engineers Joint Contract Documents'
		Committee
48.	ETL	Electrical Test Laboratories
	FAA	Federal Aviation Administration
	FCC	Federal Communications Commission
	FDA	Food and Drug Administration
	FEMA	Federal Emergency Management Agency
	FIPS	Federal Information Processing Standards
	FM	FM Global
	Fed. Spec.	Federal Specifications (FAA Specifications)
56.	FS	Federal Specifications and Standards
	0.4	(Technical Specifications)
	GANIA	Gypsum Association
	GANA	Glass Association of North America
59.	HI HMI	Hydraulic Institute
	IBC	Hoist Manufacturers' Institute
	ICBO	International Building Code International Conference of Building Officials
63.	ICC	International Code Council
64.	ICEA	Insulated Cable Engineers' Association
65.	IFC	International Fire Code
66.	IEEE	Institute of Electrical and Electronics
00.		mistrate of Erectifical and Erectification
		Engineers Inc
67.	IFSNA	Engineers, Inc. Illuminating Engineering Society of North
67.	IESNA	Illuminating Engineering Society of North
		Illuminating Engineering Society of North America
67. 68. 69.	IESNA IFI IGMA	Illuminating Engineering Society of North America Industrial Fasteners Institute
68.	IFI	Illuminating Engineering Society of North America
68. 69.	IFI IGMA	Illuminating Engineering Society of North America Industrial Fasteners Institute Insulating Glass Manufacturer's Alliance
68. 69. 70.	IFI IGMA IMC	Illuminating Engineering Society of North America Industrial Fasteners Institute Insulating Glass Manufacturer's Alliance International Mechanical Code
68. 69. 70.	IFI IGMA IMC	Illuminating Engineering Society of North America Industrial Fasteners Institute Insulating Glass Manufacturer's Alliance International Mechanical Code Association of the Nonwoven Fabrics
68. 69. 70. 71.	IFI IGMA IMC INDA	Illuminating Engineering Society of North America Industrial Fasteners Institute Insulating Glass Manufacturer's Alliance International Mechanical Code Association of the Nonwoven Fabrics Industry

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74.	ISO	International Organization for
		Standardization
75.	ITL	Independent Testing Laboratory
76.	JIC	Joint Industry Conferences of Hydraulic
		Manufacturers
77.	MIA	Marble Institute of America
78.	MIL	Military Specifications
79.	MMA	Monorail Manufacturers' Association
80.	MSS	Manufacturer's Standardization Society
81.	NAAMM	National Association of Architectural Metal
•		Manufacturers
82.	NACE	NACE International
83.	NBGQA	National Building Granite Quarries
05.	11000/1	Association
84.	NEBB	National Environmental Balancing Bureau
85.	NEC	National Electrical Code
86.	NECA	National Electrical Contractor's Association
87.	NEMA	National Electrical Manufacturers'
07.	NEIVIA	Association
88.	NESC	National Electrical Safety Code
oo. 89.	NETA	3
90.		InterNational Electrical Testing Association National Fire Protection Association
	NFPA	
91.	NHLA	National Hardwood Lumber Association
92.	NICET	National Institute for Certification in
02	NICT	Engineering Technologies
93.	NIST	National Institute of Standards and
0.4	NIDOA	Technology
94.	NRCA	National Roofing Contractors Association
95.	NRTL	Nationally Recognized Testing Laboratories
96.	NSF	NSF International
97.	NSPE	National Society of Professional Engineers
98.	NTMA	National Terrazzo and Mosaic Association
99.	NWWDA	National Wood Window and Door Association
100.	OSHA	Occupational Safety and Health Act (both
		Federal and State)
101.		Precast/Prestressed Concrete Institute
102.		Porcelain Enamel Institute
103.		Plastic Pipe Institute
104.	PS	Product Standards Section-U.S. Department
		of Commerce
	RMA	Rubber Manufacturers' Association
106.	RUS	Rural Utilities Service
107.	SAE	SAE International
108.	SDI	Steel Deck Institute
109.	SDI	Steel Door Institute
110.	SJI	Steel Joist Institute

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111. SMACNA	Sheet Metal and Air Conditioning
	Contractors National Association
112. SPI	Society of the Plastics Industry
113. SSPC	The Society for Protective Coatings
114. STI/SPFA	Steel Tank Institute/Steel Plate Fabricators
	Association
115. SWI	Steel Window Institute
116. TEMA	Tubular Exchanger Manufacturers'
	Association
117. TCA	Tile Council of North America
118. TIA	Telecommunications Industry Association
119. UBC	Uniform Building Code
120. UFC	Uniform Fire Code
121. UL	formerly Underwriters Laboratories Inc.
122. UMC	Uniform Mechanical Code
123. USBR	U.S. Bureau of Reclamation
124. WCLIB	West Coast Lumber Inspection Bureau
125. WI	Wood Institute
126. WWPA	Western Wood Products Association

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01 43 33 MANUFACTURERS' FIELD SERVICES

PART 1 GENERAL

1.01 DEFINITIONS

A. Person-Day: One person for 8 hours within regular Contractor working hours.

1.02 SUBMITTALS

A. Informational Submittals:

- 1. Training Schedule: Submit, in accordance with requirements of this Specification, not less than 21 days prior to start of equipment installation and revise as necessary for acceptance.
- 2. Lesson Plan: Submit, in accordance with requirements of this Specification, proposed lesson plan not less than 21 days prior to scheduled training and revise as necessary for acceptance.

1.03 QUALIFICATION OF MANUFACTURER'S REPRESENTATIVE

- A. Authorized representative of the manufacturer, factory trained, and experienced in the technical applications, installation, operation, and maintenance of respective equipment, subsystem, or system, with full authority by the equipment manufacturer to issue the certifications required of the manufacturer. Additional qualifications may be specified in the individual specification section.
- B. Representative subject to acceptance by Owner. No substitute representatives will be allowed unless prior written approval by such has been given.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 FULFILLMENT OF SPECIFIED MINIMUM SERVICES

- A. Furnish manufacturers' services, when required by an individual specification section, to meet the requirements of this section.
- B. Where time is necessary in excess of that stated in the Specifications for manufacturers' services, or when a minimum time is not specified, time required to perform specified services shall be considered incidental.

- C. Schedule manufacturer' services to avoid conflict with other onsite testing or other manufacturers' onsite services.
- D. Determine, before scheduling services, that conditions necessary to allow successful testing have been met.
- E. Only those days of service approved by Engineer will be credited to fulfill specified minimum services.
- F. When specified in individual specification sections, manufacturer's onsite services shall include:
 - Assistance during product (system, subsystem, or component) installation to include observation, guidance, instruction of Contractor's assembly, erection, installation or application procedures.
 - 2. Inspection, checking, and adjustment as required for product (system, subsystem, or component) to function as warranted by manufacturer and necessary to furnish Manufacturer's Certificate of Proper Installation.
 - 3. Providing, on a daily basis, copies of manufacturers' representatives field notes and data.
 - 4. Revisiting the Site as required to correct problems and until installation and operation are acceptable to Engineer.
 - 5. Resolution of assembly or installation problems attributable to or associated with respective manufacturer's products and systems.
 - 6. Assistance during functional and performance testing, and facility startup and evaluation.
 - 7. Training of Owner's personnel in the operation and maintenance of respective product as required.

3.02 MANUFACTURER'S CERTIFICATE OF PROPER INSTALLATION

- A. When so specified, a Manufacturer's Certificate of Proper Installation form, a copy of which is attached to this section, shall be completed and signed by equipment manufacturer's representative.
- B. Such form shall certify signing party is a duly authorized representative of manufacturer, is empowered by manufacturer to inspect, approve, and operate their equipment and is authorized to make recommendations required to ensure equipment is complete and operational.

3.03 TRAINING

A. General:

- 1. Furnish manufacturers' representatives for detailed classroom and hands-on training to Owner's personnel on operation and maintenance of specified product (system, subsystem, component) and as may be required in applicable Specifications.
- 2. Furnish trained, articulate personnel to coordinate and expedite training, to be present during training coordination meetings with Owner, and familiar with operation and maintenance manual information specified in Section 01 78 23, Operation and Maintenance Data.
- 3. Manufacturer's representative shall be familiar with facility operation and maintenance requirements as well as with specified equipment.
- 4. Furnish complete training materials, to include operation and maintenance data, to be retained by each trainee.

B. Training Schedule:

- 1. List specified equipment and systems that require training services and show:
 - a. Respective manufacturer.
 - b. Estimated dates for installation completion.
 - c. Estimated training dates.
- 2. Allow for multiple sessions when several shifts are involved.
- 3. Adjust schedule to ensure training of appropriate personnel as deemed necessary by Owner, and to allow full participation by manufacturers' representatives. Adjust schedule for interruptions in operability of equipment.
- 4. Coordinate with Progress Schedule.

C. Lesson Plan:

- 1. When manufacturer or vendor training of Owner personnel is specified, prepare a lesson plan for each required course containing the following minimum information:
 - a. Title and objectives.
 - b. Recommended attendees (such as, managers, engineers, operators, maintenance).
 - c. Course description, outline of course content, and estimated class duration.
 - d. Format (such as, lecture, self-study, demonstration, hands-on).
 - e. Instruction materials and equipment requirements.
 - f. Resumes of instructors providing training.

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- D. Prestartup Training:
 - 1. Coordinate training sessions with Owner's operating personnel and manufacturers' representatives.
 - 2. Complete at least 14 days prior to beginning of facility startup.
- E. Post-startup Training: If required in Specifications, furnish and coordinate training of Owner's operating personnel by respective manufacturer's representatives.

3.04 SUPPLEMENT

- A. The supplement listed below, following "End of Section," is part of this specification.
 - 1. Manufacturer's Certificate of Proper Installation.

END OF SECTION

MANUFACTURER'S CERTIFICATE OF PROPER INSTALLATION

OWNER	EQPT SERIAL NO:			
EQPT TAG NO:	EQPT/SYSTEM:			
PROJECT NO: SPEC. SECTION:				
I hereby certify that the above-reference	ced equipment/system has been:			
(Check Applicable)				
☐ Installed in accordance with Ma	anufacturer's recommendations.			
☐ Inspected, checked, and adjuste	ed.			
Serviced with proper initial lubricants.				
☐ Electrical and mechanical connections meet quality and safety standard				
☐ All applicable safety equipment has been properly installed.				
☐ Functional tests.				
	ested, and meets or exceeds specified complete system of one manufacturer)			
Note: Attach any performance test	documentation from manufacturer.			
Comments:				
authorized representative of the manu inspect, approve, and operate their equ recommendations required to ensure e	quipment furnished by the manufacturer is ay be otherwise indicated herein. I further			
Date:	, 20			
Manufacturer:				
By Manufacturer's Authorized Represe				
	(Authorized Signature)			

SECTION 01 45 16.13 CONTRACTOR QUALITY CONTROL

PART 1 GENERAL

1.01 REFERENCES

- A. The following is a list of standards which may be referenced in this section:
 - 1. ASTM International (ASTM):
 - D3740, Evaluation of Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.
 - b. E329, Use in the Evaluation of Testing and Inspection Agencies as Used in Construction.

1.02 DEFINITIONS

A. Contractor Quality Control (CQC): The means by which Contractor ensures that the Work, to include Work performed by subcontractors and suppliers, complies with the requirements of the Contract.

1.03 SUBMITTALS

- A. Informational Submittals:
 - 1. CQC Plan: Submit, not later than 30 days after receipt of Notice to Proceed.
 - 2. CQC Report: Submit weekly or as otherwise required by Owner.
 - 3. Failed Tests: Report failed tests to Owner immediately.

1.04 OWNER'S QUALITY ASSURANCE

- A. All Work is subject to Owner's quality assurance inspection and testing at all locations and at all reasonable times before acceptance to ensure strict compliance with the terms of the Contract Documents.
- B. Owner's quality assurance inspections and tests are for the sole benefit of Owner and do not:
 - 1. Relieve Contractor of responsibility for providing adequate quality control measures;
 - 2. Relieve Contractor of responsibility for damage to or loss of the material before acceptance;

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- 3. Constitute or imply acceptance; or
- 4. Affect the continuing rights of Owner after acceptance of the completed Work.
- C. The presence or absence of a quality assurance inspector does not relieve Contractor from any Contract requirement.
- D. Promptly furnish all facilities, labor, and material reasonably needed for performing such safe and convenient inspections and tests as may be required by Engineer.
- E. Owner may charge Contractor for any additional cost of inspection or test when Work is not ready at the time specified by Contractor for inspection or test, or when prior rejection makes re-inspection or retest necessary. Quality assurance inspections and tests will be performed in a manner that will not unnecessarily delay the Work.

PART 2 PRODUCTS (NOT USED)

PART 3 FXFCUTION

3.01 GENERAL

- A. Maintain an adequate inspection system and perform such inspections as will ensure that the Work conforms to the Contract Documents.
- B. Maintain complete inspection records and make them available at all times to Owner and Engineer.
- C. The quality control system shall consist of plans, procedures, and organization necessary to produce an end product that complies with the Contract Documents. The system shall cover all construction and demolition operations, both onsite and offsite, including Work by subcontractors, fabricators, suppliers and purchasing agents, and shall be keyed to the proposed construction sequence.

3.02 COORDINATION MEETING.

- A. After the Preconstruction Conference, but before start of construction, and prior to acceptance of the CQC Plan, schedule a meeting with Engineer and Owner to discuss the quality control system.
- B. Develop a mutual understanding of the system details, including the forms for recording the CQC operations, control activities, testing, administration of the system for both onsite and offsite Work, and the interrelationship of Contractor's management and control with the Owner's Quality Assurance.

C. There may be occasions when subsequent conferences may be called by either party to reconfirm mutual understandings and/or address deficiencies in the CQC system or procedures that may require corrective action by Contractor.

3.03 QUALITY CONTROL ORGANIZATION

A. CQC System Manager:

- 1. Designate an individual within Contractor's organization who will be responsible for overall management of CQC and have the authority to act in CQC matters for the Contractor.
- 2. CQC System Manager may perform other duties on the Project.
- CQC System Manager shall be an experienced construction person, with a minimum of 3 years construction experience on similar type Work.
- 4. CQC System Manager shall report to the Contractor's project manager or someone higher in the organization. Project manager in this context shall mean the individual with responsibility for the overall quality and production management of the Project.
- 5. CQC System Manager shall be onsite during construction; periods of absence may not exceed 2 weeks at any one time.
- 6. Identify an alternate for CQC System Manager to serve with full authority during the System Manager's absence. The requirements for the alternate will be the same as for designated CQC System Manager.

B. CQC Staff:

- 1. Designate a CQC staff, available at the Site at all times during progress, with complete authority to take any action necessary to ensure compliance with the Contract. CQC staff members shall be subject to acceptance by Engineer.
- 2. CQC staff shall take direction from CQC System Manager in matters pertaining to QC.
- 3. CQC staff must be of sufficient size to ensure adequate QC coverage of Work phases, work shifts, and work crews involved in the construction. These personnel may perform other duties, but must be fully qualified by experience and technical training to perform their assigned QC responsibilities and must be allowed sufficient time to carry out these responsibilities.
- 4. The actual strength of the CQC staff may vary during any specific work period to cover the needs of the Project. Add additional staff when necessary for a proper CQC organization.
- C. Organizational Changes: Obtain Engineer's acceptance before replacing any member of the CQC staff. Requests for changes shall include name, qualifications, duties, and responsibilities of the proposed replacement.

3.04 QUALITY CONTROL PHASING

- A. CQC shall include at least three phases of control to be conducted by CQC System Manager for all definable features of Work, as follows:
 - 1. Preparatory Phase:
 - a. Notify Owner at least 48 hours in advance of beginning any of the required action of the preparatory phase.
 - b. This phase shall include a meeting conducted by the CQC System Manager and attended by the superintendent, other CQC personnel (as applicable), and the foreman responsible for the definable feature. The CQC System Manager shall instruct applicable CQC staff as to the acceptable level of workmanship required in order to meet Contract requirements.
 - c. Document the results of the preparatory phase meeting by separate minutes prepared by the CQC System Manager and attached to the QC report.
 - d. Perform prior to beginning Work on each definable feature of Work:
 - 1) Review applicable Contract Specifications.
 - 2) Review applicable Contract Drawings.
 - 3) Verify that all materials and/or equipment have been tested, submitted, and approved.
 - 4) Verify that provisions have been made to provide required control inspection and testing.
 - 5) Examine the Work area to verify that all required preliminary Work has been completed and is in compliance with the Contract.
 - 6) Perform a physical examination of required materials, equipment, and sample Work to verify that they are on hand, conform to approved Shop Drawing or submitted data, and are properly stored.
 - 7) Review the appropriate activity hazard analysis to verify safety requirements are met.
 - 8) Review procedures for constructing the Work, including repetitive deficiencies.
 - 9) Document construction tolerances and workmanship standards for that phase of the Work.
 - 10) Check to verify that the plan for the Work to be performed, if so required, has been accepted by Engineer.

2. Initial Phase:

- a. Accomplish at the beginning of a definable feature of Work:
 - 1) Notify Owner at least 48 hours in advance of beginning the initial phase.
 - 2) Perform prior to beginning Work on each definable feature of Work:
 - a) Review minutes of the preparatory meeting.
 - b) Check preliminary Work to verify compliance with Contract requirements.
 - c) Verify required control inspection and testing.
 - d) Establish level of workmanship and verify that it meets minimum acceptable workmanship standards. Comparison with sample panels is appropriate.
 - e) Resolve all differences.
 - f) Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.
 - 3) Separate minutes of this phase shall be prepared by the CQC System Manager and attached to the QC report. Exact location of initial phase shall be indicated for future reference and comparison with follow-up phases.
 - 4) The initial phase should be repeated for each new crew to work onsite, or any time acceptable specified quality standards are not being met.

3. Follow-up Phase:

- a. Perform daily checks to verify continuing compliance with Contract requirements, including control testing, until completion of the particular feature of Work.
- b. Daily checks shall be made a matter of record in the CQC documentation and shall document specific results of inspections for all features of Work for the day or shift.
- c. Conduct final follow-up checks and correct all deficiencies prior to the start of additional features of Work that will be affected by the deficient Work. Constructing upon or concealing nonconforming Work will not be allowed.
- 4. Additional Preparatory and Initial Phases: Additional preparatory and initial phases may be conducted on the same definable features of Work as determined by Owner if the quality of ongoing Work is unacceptable; or if there are changes in the applicable QC staff or in the onsite production supervision or work crew; or if work on a definable feature is resumed after a substantial period of inactivity, or if other problems develop.

3.05 CONTRACTOR QUALITY CONTROL PLAN

A. General:

- 1. Plan shall identify personnel, procedures, control, instructions, test, records, and forms to be used.
- 2. An interim plan for the first 30 days of operation will be considered.
- 3. Construction will be permitted to begin only after acceptance of the CQC Plan or acceptance of an interim plan applicable to the particular feature of Work to be started.
- 4. Work outside of the features of Work included in an accepted interim plan will not be permitted to begin until acceptance of a CQC Plan or another interim plan containing the additional features of Work to be started.

B. Content:

- 1. Plan shall cover the intended CQC organization for the entire Contract and shall include the following, as a minimum:
 - a. Organization: Description of the quality control organization, including a chart showing lines of authority and acknowledgment that the CQC staff will implement the three-phase control system (see Paragraph Quality Control Phasing) for all aspects of the Work specified.
 - b. CQC Staff: The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a QC function.
 - c. Letters of Authority: A copy of a letter to the CQC System Manager signed by an authorized official of the firm, describing the responsibilities and delegating sufficient authorities to adequately perform the functions of the CQC System Manager, including authority to stop Work which is not in compliance with the Contract. The CQC System Manager shall issue letters of direction to all other various quality control representatives outlining duties, authorities and responsibilities. Copies of these letters will also be furnished to Owner.
 - d. Submittals: Procedures for scheduling, reviewing, certifying, and managing submittals, including those of subcontractors, offsite fabricators, suppliers and purchasing agents.
 - e. Testing: Control, verification and acceptance testing procedures for each specific test to include the test name, frequency, specification paragraph containing the test requirements, the personnel and laboratory responsible for each type of test, and an estimate of the number of tests required.

- f. Procedures for tracking preparatory, initial, and follow-up control phases and control, verification, and acceptance tests, including documentation.
- g. Procedures for tracking deficiencies from identification through acceptable corrective action. These procedures will establish verification that identified deficiencies have been corrected.
- h. Reporting procedures, including proposed reporting formats; include a copy of the CQC report form.
- C. Acceptance of Plans: Acceptance of the Contractor's basic and addendum CQC plans is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance during the construction. Owner reserves the right to require Contractor to make changes in the CQC plan and operations including removal of personnel, as necessary, to obtain the quality specified.
- D. Notification of Changes: After acceptance of the CQC plan, Contractor shall notify Engineer, in writing, a minimum of 7 calendar days prior to any proposed change. Proposed changes are subject to acceptance by Engineer.

3.06 CONTRACTOR QUALITY CONTROL REPORT

- A. As a minimum, prepare a CQC report for every 7 calendar days. Account for all days throughout the life of the Contract. Reports shall be signed and dated by CQC System Manager. Include copies of test reports and copies of reports prepared by QC staff.
- B. Maintain current records of quality control operations, activities, and tests performed, including the Work of subcontractors and suppliers.
- C. Records shall be on an acceptable form and shall be a complete description of inspections, the results of inspections, daily activities, tests, and other items, including, as applicable, but not limited to the following:
 - 1. Contractor/subcontractor and their areas of responsibility.
 - 2. Operating plant/equipment with hours worked, idle, or down for repair.
 - 3. Work performed today, giving location, description, and by whom. When a network schedule is used, identify each phase of Work performed each day by activity number.
 - 4. Test and/or control activities performed with results and references to specifications/plan requirements. The control phase should be identified (Preparatory, Initial, Follow-up). List deficiencies noted along with corrective action.
 - 5. Material received with statement as to its acceptability and storage.

- 6. Identify submittals reviewed, with Contract reference, by whom, and action taken.
- 7. Offsite surveillance activities, including actions taken.
- 8. Job safety evaluations stating what was checked, results, and instructions or corrective actions.
- 9. List instructions given/received and conflicts on Drawings and/or Specifications.
- 10. Contractor's verification statement.
- 11. Indicate a description of trades working on the Project; the number of personnel working; weather conditions encountered; and any delays encountered.
- 12. These records shall cover both conforming and deficient features and shall include a statement that equipment and materials incorporated in file work and workmanship comply with the Contract.

3.07 SUBMITTAL QUALITY CONTROL

- A. Submittals shall be as specified in Section 01 33 00, Submittal Procedures. The CQC organization shall be responsible for certifying that all submittals are in compliance with the Contract requirements.
- B. Forms used for test reports shall be approved by the Owner.

3.08 TESTING QUALITY CONTROL

- A. Testing Procedure:
 - 1. Perform tests specified or required to verify that control measures are adequate to provide a product which conforms to Contract requirements. Procure services of a licensed testing laboratory. Perform the following activities and record the following data:
 - a. Verify testing procedures comply with contract requirements.
 - b. Verify facilities and testing equipment are available and comply with testing standards.
 - c. Check test instrument calibration data against certified standards.
 - d. Verify recording forms and test identification control number system, including all of the test documentation requirements, have been prepared.
 - e. Documentation:
 - 1) Record results of all tests taken, both passing and failing, on the CQC report for the date taken.
 - 2) Include specification paragraph reference, location where tests were taken, and the sequential control number identifying the test.

- 3) Actual test reports may be submitted later, if approved by Engineer, with a reference to the test number and date taken.
- 4) Provide directly to Engineer an information copy of tests performed by an offsite or commercial test facility. Test results shall be signed by an engineer registered in the state where the tests are performed.
- 5) Failure to submit timely test reports, as stated, may result in nonpayment for related Work performed and disapproval of the test facility for this Contract.
- B. Testing Laboratories: Laboratory facilities, including personnel and equipment, utilized for testing soils, concrete, asphalt and steel shall meet criteria detailed in ASTM D3740 and ASTM E329, and be accredited by the American Association of Laboratory Accreditation (AALA), National Institute of Standards and Technology (NIST), National Voluntary Laboratory Accreditation Program (NVLAP), the American Association of State Highway and Transportation Officials (AASHTO), or other approved national accreditation authority. Personnel performing concrete testing shall be certified by the American Concrete Institute (ACI).

3.09 COMPLETION INSPECTION

A. CQC System Manager shall conduct an inspection of the Work at the completion of all Work or any milestone established by a completion time stated in the Contract.

B. Punchlist:

- 1. CQC System Manager shall develop a punchlist of items which do not conform to the Contract requirements.
- 2. Include punchlist in the CQC report, indicating the estimated date by which the deficiencies will be corrected.
- 3. CQC System Manager or staff shall make a second inspection to ascertain that all deficiencies have been corrected and so notify the Owner.
- 4. These inspections and any deficiency corrections required will be accomplished within the time stated for completion of the entire Work or any particular increment thereof if the Project is divided into increments by separate completion dates.

END OF SECTION

SECTION 01 45 33 SPECIAL INSPECTION, OBSERVATION, AND TESTING

PART 1 GENERAL

1.01 SUMMARY

A. This section covers requirements for Special Inspection, Observation, and Testing required in accordance with Chapter 17 of the 2018 IBC and is in addition to requirements included in Statement of Special Inspections shown on Drawings.

1.02 REFERENCES

- A. The following is a list of standards which may be referenced in this section:
 - 1. American Society of Civil Engineers (ASCE): 7, Minimum Design Loads for Buildings and Other Structures.
 - 2. International Code Council (ICC):
 - a. International Building Code (IBC).
 - b. Evaluation Service (ICC-ES) Reports and Legacy Reports.

1.03 DEFINITIONS

- A. Agencies and Personnel:
 - 1. Approved Agency: An established and recognized agency regularly engaged in conducting tests or furnishing inspection services when such agency has been approved by the Owner or Owner's Representative.
 - 2. Registered Design Professional in Responsible Charge: An individual who is registered or licensed to practice their respective design profession as defined by statutory requirements of professional registration laws of state or jurisdiction in which Project is to be constructed.
 - 3. Special Inspector: Qualified person employed by Owner or Owner's Registered Design Professional who will demonstrate competence to provide inspection services of a particular type of construction or operation requiring Special Inspection.

B. Nonstructural Components:

- 1. Architectural Component Supports: Structural members or assemblies of members which transmit loads and forces from architectural systems or components to structure, including braces, frames, struts, and attachments.
- 2. Electrical Component Supports: Structural members or assemblies which transmit loads and forces from electrical equipment to structure, including braces, frames, legs, pedestals, and tethers, as well as elements forged or cast as part of component for anchorage.
- 3. Mechanical and Plumbing Component Supports: Structural members or assemblies which transmit loads and forces from mechanical or plumbing equipment to structure, including braces, frames, skirts, legs, saddles, pedestals, snubbers, and tethers, as well as elements forged or cast as part of component for anchorage.

C. Special Inspection:

- 1. Special Inspection: Inspection required of materials, installation, fabrication, erection, or placement of components and connections requiring special expertise to ensure compliance with approved Contract Documents and referenced standards.
- 2. Special Inspection, Continuous: Full-time observation of work requiring Special Inspection by an approved Special Inspector who is present in area where the Work is being performed.
- 3. Special Inspection, Periodic: Part-time or intermittent observation of the Work requiring Special Inspection by an approved Special Inspector who is present in area where the Work has been or is being performed, and at completion of the Work.
- D. Statement of Special Inspections: Detailed written procedure contained on Drawings establishing systems and components subject to Special Inspection, Observation, and Testing during construction, type and frequency of testing, extent and duration of Special Inspection, and reports to be completed and distributed by Special Inspector.

F. Structural Observation:

- 1. Does not include or waive responsibility for required Special Inspection or inspections by building official.
- 2. Requirements are indicated on Statement of Special Inspections provided on Drawings.
- 3. Structural Observation: Visual observation of structural system(s) by a registered design professional for general conformance to Contract Documents.

F. Structural Systems and Components:

- 1. Diaphragm: Component of structural lateral load resisting system consisting of roof, floor, or other membrane or bracing system acting to transfer lateral forces to vertical resisting elements of structure.
- Drag Strut or Collector: Component of structural lateral load resisting system consisting of diaphragm or shear wall element that collects and transfers diaphragm shear forces to vertical forceresisting elements or distributes forces within diaphragm or shear wall.
- 3. Seismic-Force-Resisting System: That part of structural lateral load resisting system that has been considered in the design to provide required resistance to seismic forces identified on Drawings.
- 4. Shear Wall: Component of structural lateral load resisting system consisting of a wall designed to resist lateral forces parallel to plane of the wall. Unless noted otherwise on Drawings, load-bearing walls with direct in-plane connections to roof and floors shall be considered to be shear walls.
- 5. Wind Force Resisting System: That part of the structural system that has been considered in the design to provide required resistance to wind forces identified on Drawings.

1.04 SUBMITTALS

A. Informational Submittals:

- Contractor's Statement of Responsibility: Form shall be completed by entity responsible for construction of main seismic-force-resisting system, and seismic-resisting component listed in Statement of Special Inspections. Refer to Article Supplements located at end of section.
- 2. Fabricator's Certificate of Compliance: Form shall be completed by entity responsible for shop fabrication of structural load-bearing members and assemblies. Refer to Article Supplements located at end of section.

1.05 STATEMENT OF SPECIAL INSPECTIONS REQUIREMENTS

A. Designated Systems for Inspection:

- 1. Seismic-force-resisting systems designated under IBC Section 1705 and subject to Special Inspection under Section 1705. See Drawings for basic lateral load resisting systems for each structure and other designated seismic systems.
- 2. Wind-force-resisting systems designated under IBC Section 1705: None required.

- 3. Architectural, Plumbing, Mechanical, and Electrical Components subject to Special Inspection under IBC Section 1705.12.5 and Section 1705.12.6 for Seismic Resistance: As listed in Section 01 45 36, Equipment Seismic Certification. Together with the additional components listed below:
 - a. None required.
- B. Statement of Special Inspections:
 - 1. As included on Drawings and in support of building permit application, Project-specific requirements were prepared by Registered Design Professional in Responsible Charge. The following identifies elements of inspection, observation, and testing program to be followed in construction of the Work:
 - a. Designated seismic systems and main seismic force-resisting systems and components that are subject to Special Inspection and Structural Observation for lateral load resistance.
 - b. Special Inspection and testing required by IBC Section 1705 and other applicable sections and referenced standards therein.
 - c. Type and frequency of Special Inspection required.
 - d. Type and frequency of testing required.
 - e. Required frequency and distribution of testing and Special Inspection reports to be distributed by Special Inspector to Engineer, Contractor, building official, and Owner.
 - f. Structural Observations to be Performed: Required frequency and distribution of Structural Observation reports by registered design professional to Contractor, building official, and Owner.
- C. Owner will employ the Special Inspectors and Testing services.
- D. Code required Special Inspection with associated testing and Structural Observation, as provided in Statement of Special Inspections on Drawings and further provided in this section, is for benefit of Owner and does not:
 - 1. Relieve Contractor of responsibility for providing adequate quality control measures.
 - 2. Relieve Contractor of responsibility for damage to or loss of material before acceptance.
 - 3. Constitute or imply acceptance.
 - 4. Affect continuing rights of Owner after acceptance of completed Work.
- E. The presence or absence of code required Special Inspector and Professional Observer does not relieve Contractor from Contract requirements.

- F. Contractor is responsible for additional costs associated with Special Inspection and Testing and Observation when Work is not ready at time identified by Contractor and Special Inspectors and Structural Observer are onsite, but not able to provide contracted services.
- G. Contractor is responsible for associated costs for additional Special Inspection and Testing and Observation by Special Inspectors and Structural Observers required because of rejection of materials of in place Work that cannot be made compliant to Contract Document without additional inspections and observation and testing.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 GENERAL

- A. Requirements of the Statement of Special Inspections are provided by the Owner. All other testing and inspections, unless noted otherwise, are provided by Contractor.
- B. Provide access to shop or Site for Special Inspection and Testing and Structural Observation requirements.
- C. Notify Engineer in advance of required Special Inspection and Structural Observation no later than 48 hours prior to date of Special Inspection and Structural Observation.
- D. Provide access for Special Inspector to construction documents.
- E. Retain special inspection records on-site to be readily available for review.
- F. Cooperate with Special Inspector and provide safe access to the Work to be inspected.
- G. Submit Fabricator's Certificates of Compliance for approved fabricators.
- H. Provide reasonable auxiliary services as requested by the Special Inspector. Auxiliary services required include, but not limited to:
 - 1. Providing access to the Work and furnishing incidental labor and facilities necessary to facilitate inspections and tests to assist the Special Inspector in performing test/inspections.
 - 2. Providing storage space for the Special Inspector's exclusive use, such as for storing and curing concrete test samples and delivery of samples to testing laboratories.
 - 3. Providing the Special Inspector with access to all approved submittals.

- 4. Providing security and protection of samples and test equipment at the Project Site.
- 5. Provide samples of materials to be tested in required quantities.
- I. When required by Registered Design Professional in Responsible Charge, provide access for plumbing, mechanical and electrical component inspections for those items requiring certification.
- J. Materials and systems shall be inspected during placement where Continuous Special Inspection is required.
- K. Where Periodic Special Inspection is indicated in the Statement of Special Inspections:
 - 1. Schedule inspections for either during or at completion of their placement or a combination or both.
 - 2. Schedule periodically inspected Work (either inspected during or after its placement) so that corrections can be completed and reinspected before Work is inaccessible.
 - 3. Sampling a portion of the Work is not allowed. Schedules shall provide for inspection of all Work requiring periodic inspection.

3.02 SUPPLEMENTS

- A. The supplements listed below, following "End of Section," are a part of this specification:
 - 1. Contractor's Statement of Responsibility.
 - 2. Fabricator's Certificate of Compliance.

END OF SECTION

CONTRACTOR'S STATEMENT OF RESPONSIBILITY

(Project)		
(Name of Contracting Company)		
(Business Address)		
() (Telephone)	() (Fax)	

- I, (We) hereby certify that I am (we are) aware of the Special Inspection and Testing and Structural Observation and component certification requirements contained in Contract Documents for this Project for seismic force-resisting systems, and for components including architectural, mechanical, and electrical components, as listed in Statement of Special Inspections on Drawings and Section 01 45 36, Equipment Seismic Certification, and that:
- I, (We) are aware of the systems and the requirements of the special inspection and acknowledge our responsibility in the implementation of the Statement of Special Inspections for the construction of the following systems:

Facility	Lateral Force-Resisting System
Area 20	Special Reinforced Masonry Shear Walls
Area 70	Special Reinforced Concrete Shear Walls

2. (We) are responsible for construction of the following components:

Facility	Components
Area 20	Concrete, Masonry, Structural Steel, Seismic Force Resisting System
Area 70	Concrete, Seismic Force Resisting System
All other areas	Concrete

- 3. Control of this Work will be exercised to obtain conformance with Contract Documents approved by building official.
- 4. Procedures within the Contractor's organization to be used for exercising control of the Work, method and frequency of reporting, and distribution of reports required under Statement of Special Inspections for Project are attached to this statement.
- 5. I, (We) will provide 48-hour notification to Engineer and approved inspection agency as required for structural tests and Special Inspection for Project.
- 6. The following person is hereby identified as exercising control over requirements of this section for the Work designated above:

Name:
Qualifications:
(Print name and official title of person signing this form)
Signed by:
Date:
Project Name:

FABRICATOR'S CERTIFICATE OF COMPLIANCE

Each approved fabricator that is exempt from Special Inspection of shop fabrication and implementation procedures per Section 1704.2.5 of 2018 IBC must submit Fabricator's Certificate of Compliance at the completion of fabrication.

(Project)
(Fabricator's Name)
(Business Address)
(Certification or Approval Agency)
(Certification Number)
(Date of Last Audit or Approval)
Description of structural members and assemblies that have been fabricated:
I hereby certify that items described above were fabricated in strict accordance with approved construction documents.
(Name and Title) type or print
(Signature and Date)
Attach copies of fabricator's certification or building code evaluation service report and

fabricator's quality control manual.

SECTION 01 45 36 EQUIPMENT SEISMIC CERTIFICATION

PART 1 GENERAL

1.01 SUMMARY

A. This section covers the code required seismic certification of mechanical and electrical equipment in accordance with 2018 IBC, Chapter 17.

1.02 REFERENCES

- A. The following is a list of standards which may be referenced in this section:
 - 1. American Society of Civil Engineers (ASCE): 7, Minimum Design Loads for Buildings and Other Structures.
 - 2. Institute of Electrical and Electronics Engineers, Inc. (IEEE):
 - a. 344, Recommended Practice for Seismic Qualification of Class 1E Equipment for Nuclear Power Generating Stations.
 - 693, Recommended Practice for Seismic Design of Substations.
 - 3. International Code Council (ICC):
 - a. Evaluation Service (ICC-ES) Reports and Legacy Reports.
 - b. International Building Code (IBC).
 - 4. National Fire Protection Association (NFPA): 13, Standard for Installation of Sprinkler Systems.

1.03 DEFINITIONS

- A. Agencies and Personnel:
 - 1. Approved Agency: An established and recognized agency regularly engaged in conducting tests or furnishing inspection services, when such agency has been approved.
- B. Component Supports:
 - 1. Electrical: Structural members or assemblies which transmit loads and forces from electrical equipment to the structure, including braces, frames, legs, pedestals, and tethers, as well as elements forged or cast as part of component for anchorage.
 - 2. Mechanical: Structural members or assemblies which transmit loads and forces from mechanical equipment to the structure, including braces, frames, skirts, legs, saddles, pedestals, snubbers, and tethers, as well as elements forged or cast as part of component for anchorage.

1.04 SUBMITTALS

- A. Informational Submittals:
 - 1. Seismic Qualification of Mechanical and Electrical Equipment Certification of Compliance: Submit for mechanical and electrical components having a component importance factor of 1.5 as designated herein. Submit for other components having component importance factor of 1.0 where test results are submitted as an alternate to required calculations under 13.2.5 of ASCE 7-16. Refer to Article Supplement located at end of section.
 - 2. If required by Engineer, submit documentation of testing results or analytical data.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 MECHANICAL AND ELECTRICAL COMPONENT CERTIFICATION

A. Provide certificate of compliance for mechanical and electrical component testing and certification on form located at end of section. Provide certificates for equipment and components listed in the following table:

Mechanical and Electrical Components Requiring Certification of Compliance for Seismic Testing or Analysis under IBC Section 1705.13.2					
Component Component to Importance Remain Facility Component Factor, Ip Operable?					
Area 20 Generator		1.5	Yes		
Area 70 Generator 1.5 Yes					

B. Certify mechanical and electrical components listed in table above on basis of tests on a shaking table, by three-dimensional shock tests, by an analytical method using dynamic characteristics, and forces as provided in Section 01 88 15, Anchorage and Bracing, experience data demonstrating acceptable seismic performance, or by more rigorous analysis. Submitted testing and experience data shall meet requirements of ASCE 7-16 Section 13.2.5 and Section 13.2.6, respectively.

- C. Component and attachment testing and certification shall be in accordance with applicable provisions of IBC Section 1705.13.2. Seismic testing and certification are in addition to functional and performance testing required for new equipment for field quality control or start-up testing as indicated in technical specification.
- D. Where equipment is required to remain operable following the design earthquake ground motion, active parts or energized components shall be certified on basis of approved shake table testing or experience only unless demonstrably similar to other equipment so qualified.
- E. Components with hazardous contents shall be certified to contain materials under the design earthquake.

3.02 SUPPLEMENT

- A. The supplement listed below, following "End of Section," is a part of this specification:
 - 1. Seismic Qualification of Mechanical and Electrical Equipment Certificate of Compliance.

END OF SECTION

SEISMIC QUALIFICATION OF MECHANICAL AND ELECTRICAL EQUIPMENT CERTIFICATE OF COMPLIANCE

(Component under Certification)	(Name of Manufacturer)		
(Tag Number or Equipment ID)	(Business Address)		
(Drawing/Detail Number)	() (Telephone)		
This is to certify that above-referer requirements of Section 1705.13.2 equipment. Basis of qualification is	of 2018 IBC for seismic qualification of		
(Check Applicable)			
☐ Shake-table Test			
☐ Three-dimensional Shoc	k Test		
☐ Analytical Method			
☐ Experience Data			
	A 13 and force and displacement requirements 2 of ASCE 7-16 for fire protection sprinkler		
Other			
under acceptance criteria of:			
•	nce Criteria for Seismic Qualification by astructural Components and Systems		
☐ IEEE 693, IEEE Recomm Substations	mended Practice for Seismic Design of		
	mended Standard Practice for Seismic quipment for Nuclear Power Generating		
☐ ASCE 7-16 Chapter 13 fo	or analytical methods		
Other			

for the following earthquake hazard rating:

IEEE Seismic Qualification Level:
Mapped MCE, 5 Percent Damped, Short Period Spectral Response Acceleration, Ss:
Design, 5 Percent Damped, Short Period Spectral Response Acceleration, S _{DS} :
Component Importance Factor, I _p :
Component Response Modification Factor, R _p :
Height of Point of Attachment as Factor of Average Roof Height, z/h:
This certification covers both the integrity of the equipment and anchorage of equipment. Required mounting and anchorage details are shown on attached Seismic Outline Drawing for the most seismically vulnerable component covered by this certification.
Manufacturer's Representative Signature:
Address:
Date:

SECTION 01 50 00 TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 REFERENCES

- A. The following is a list of standards which may be referenced in this section:
 - 1. American Association of Nurserymen (AAN): American Standards for Nursery Stock.
 - 2. Federal Emergency Management Agency (FEMA).
 - 3. National Fire Prevention Association (NFPA): 241, Standard for Safeguarding Construction, Alteration, and Demolition Operations.
 - 4. Telecommunications Industry Association (TIA); Electronic Industries Alliance (EIA): 568B, Commercial Building Telecommunications Cabling Standard.
 - 5. U.S. Department of Agriculture (USDA): Urban Hydrology for Small Watersheds.
 - 6. U.S. Weather Bureau: Rainfall-Frequency Atlas of the U.S. for Durations from 30 Minutes to 24 Hours and Return Periods from 1 Year to 100 Years.

1.02 SUBMITTALS

A. Informational Submittals:

- 1. Copies of permits and approvals for construction as required by Laws and Regulations and governing agencies.
- 2. Temporary Utility Submittals:
 - a. Electric power supply and distribution plans.
 - b. Water supply and distribution plans.
 - c. Dewatering systems to be used.
 - d. Sanitary.
- 3. Temporary Construction Submittals:
 - a. Access Routes and Access Roads: Routes, cross-sections, and drainage facilities.
 - b. Parking area plans.
 - c. Contractor's field office, storage yard, and storage building plans, including gravel surfaced area.
 - d. Fencing and protective barrier locations and details.
 - e. Engineer's field office plans.
 - f. Staging area location plan.

- g. Traffic and Pedestrian Control and Routing Plans: As specified in Section 01 55 26, Traffic Control.
- h. Plan for maintenance of existing facilities, utilities, and infrastructure.
- 4. Permits and Regulatory Requirements: Obtain and submit copies of Permits and other regulatory requirements per Section 01 51 00, Permits and Regulatory Requirements.

1.03 MOBILIZATION

- A. Mobilization includes, but is not limited to, these principal items:
 - 1. Obtaining required permits.
 - 2. Moving Contractor's field office and equipment required for first month operations onto Site.
 - 3. Installing temporary construction power, wiring, and lighting facilities.
 - 4. Providing onsite Internet service and telephones.
 - Providing onsite sanitary facilities and potable water facilities as specified and as required by Laws and Regulations, and governing agencies.
 - 6. Arranging for and erection of Contractor's work and storage yard.
 - 7. Posting OSHA required notices and establishing safety programs and procedures.
 - 8. Having Contractor's superintendent at Site full time.
 - 9. Providing Engineer's facilities.
- B. Use area designated for Contractor's temporary facilities as shown on Drawings. If areas for Contractor's temporary facilities are not shown on Drawings, provide lands and access to lands for temporary facilities for use by Contractor for duration of Project.

1.04 PROTECTION OF WORK AND PROPERTY

- A. Comply with Owner's safety rules while on Owner's property.
- B. Keep Owner informed of serious onsite accidents and related claims.
- C. Use of Explosives: No blasting or use of explosives will be allowed onsite.

1.05 VEHICULAR TRAFFIC

A. Comply with traffic control requirements as specified in Section 01 55 26, Traffic Control.

PART 2 PRODUCTS

2.01 PROJECT OFFICE

A. Maintain within the Project Site, at a location agreeable to the Owner, a suitable Contractor Project Office in which to keep Record Copies of Contract Documents, project progress records, etc. Make all such records accessible to Owner and Engineer during normal working hours.

2.02 PROJECT CONFERENCE ROOM

A. Contractor shall provide onsite (in Contractor Office or Engineer Office) a conference room for weekly meetings with a large conference table and folding chairs to seat 18 people.

2.03 ENGINEER'S FIELD OFFICES

- A. Furnish equipment specified for exclusive use of Engineer and its' representatives.
- B. Ownership of equipment furnished under this article will remain, unless otherwise specified, that of Contractor.
- C. Equipment furnished shall be new or like new in appearance and function.
- D. Minimum Features:
 - 1. 110-volt lighting and wall plugs.
 - 2. Fluorescent ceiling lights.
 - 3. Electric heating and self-contained air conditioning unit, properly sized for Project locale and conditions. Provide ample electric power to operate installed systems.
 - 4. Covered entrances with railed stairways, and landings, and exterior lighting at entrances.
 - 5. Exterior Door(s):
 - a. Number: One.
 - b. Type: Solid core.
 - c. Lock(s): Cylindrical
 - 6. Number of Windows: Two.
 - 7. Minimum Interior Height: 8 feet.
- E. Trailer Type Mobile Structure: One.
- F. Floor Space: Minimum 400 square feet.
- G. All-metal frame; all-metal exterior, sides, and roof; and insulated double walls, floor, and roof.

- H. Security guard screens on windows.
- I. Toilet and wash basin in separate compartment with hot and cold water and drains.
- J. Number of Private Offices: Two, 10 feet by 10 feet.
- K. Blinds or drapes on windows.
- L. Work Surface: One, 30 inches by 8 feet at desk height of 29 inches from floor.
- M. Office Equipment—General:
 - 1. Bottled Water Service: One.
 - 2. Paper Cup Dispenser with Cups: One.
 - 3. Paper Towel Dispenser with Towels: One.
 - 4. Desk: One, steel, 30 inches by 60 inches with desk surface located 29 inches from floor.
 - 5. Desk Chair: One, with the following characteristics:
 - a. Five castor base.
 - b. Adjustable height.
 - c. Swivels.
 - d. Locking back.
 - e. Adjustable seat back for height and angle.
 - f. Adjustable arms.
 - 6. Folding Table: One, 36 inches by 72 inches.
 - 7. Steel Folding Chairs: Two.
 - 8. Drafting Table: One, 3 feet by 6 feet.
 - 9. Drafting Stool: One.
 - 10. Four-Drawer Steel File with Lock: One.
 - 11. Drawing Rack with Drawing Hangers: One
 - 12. Bookcase: Two, 36 inches wide by 48 inches high.
 - 13. Wastepaper Basket: Three
 - 14. Blue Recycling Basket: Two.
 - 15. Clothes Rack: One.
 - 16. First-Aid Kit: One.
 - 17. Tri-Class (ABC), Dry Chemical Fire Extinguisher, 10-Pound: One.
 - 18. Telephone: Incoming/outgoing lines, Touch-Tone, with conference speaker, and 12-foot coiled handset cord.
 - 19. One high speed (200 Mbps down/upload or faster) internet access including hard wire Ethernet cable and DSL or cable modem including at least five static IP addresses (not internal addresses).

2.04 PROJECT SIGN

A. Refer to Project Sign Detail on Drawings. Provide and maintain one, 8-foot-wide by 4-foot-high sign constructed of 3/4-inch exterior high density overlaid plywood. Sign shall bear name of Project, Owner, Contractor, and other participating agencies. Lettering shall be black applied on white background. Painting shall consist of one coat of Glidden Primer No. 1951 followed by two coats of Glidden No. 1900 or one coat of Sherwin-Williams B-46 Series Primer followed by two coats of Sherwin-Williams B-46 Series Hi-Level Gloss Paint, or equivalent. The left border shall be determined using the longest line centered on the sign providing equal borders.

PART 3 EXECUTION

3.01 ENGINEER'S FIELD OFFICE

- A. Make available for Engineer's use prior to start of the Work at Site and to remain on Site for minimum of 30 days after final acceptance of the Work.
- B. Locate where directed by Engineer; level, block, tie down, skirt, provide stairways, and relocate when necessary and approved. Construct on proper foundations, and provide proper surface drainage and connections for utility services.
- C. Provide minimum 100 square feet of gravel or crushed rock base, minimum depth of 4 inches, at each entrance.
- D. Raise grade under field office, as necessary, to elevation adequate to avoid flooding.
- E. Provide sanitary facilities in compliance with state and local health authorities.
- F. Exterior Door Keys: Furnish two set(s) of keys.
- G. Telephone:
 - 1. Provide number of incoming lines equal to that specified for telephone type.
 - 2. Provide appropriate jacks; locate as directed by Engineer.
 - 3. Provide wiring necessary for complete telephone system.
- H. Computer: Provide required connecting cables and plugs.

I. Telecommunications:

- 1. Provide DSL or cable Internet connection with minimum of five live portable computer (PC) ports.
- 2. Provide appropriate jacks, wiring, and equipment required for a complete telecommunications system.
- 3. Arrange and provide for telecommunication service for use during construction. Pay costs of installation, maintenance, and monthly service of internet connection.
- J. Multifunction Printer/Copier: Replenish as needed copy paper and toner.
- K. Maintain in good repair and appearance, and provide weekly cleaning service and replenishment, as required, of paper towels, paper cups, hand soap, toilet paper, first-aid kit supplies, and bottled water.

3.02 TEMPORARY UTILITIES

- A. Power: No electric power is available at Site. Make arrangements to obtain and pay for electrical power used until final payment and acceptance by Owner, unless otherwise recommended by Engineer at Substantial Completion.
- B. Lighting: Provide temporary lighting to meet applicable safety requirements to allow erection, application, or installation of materials and equipment, and observation or inspection of the Work.
- C. Heating, Cooling, and Ventilating:
 - 1. Provide as required to maintain adequate environmental conditions to facilitate progress of the Work, to meet specified minimum conditions for installation of materials, and to protect materials, equipment, and finishes from damage because of temperature or humidity.
 - 2. Provide adequate forced air ventilation of enclosed areas to cure installed materials, to dispense humidity, and to prevent hazardous accumulations of dust, fumes, vapors, or gases.
 - 3. Pay costs of installation, maintenance, operation, removal, and fuel consumed.
 - 4. Provide portable unit heaters, complete with controls, oil- or gasfired, and suitably vented to outside as required for protection of health and property.
 - 5. If permanent natural gas piping is used for temporary heating units, do not modify or reroute gas piping without approval of utility company. Provide separate gas metering as required by utility.

- D. Water: No construction or potable water is available at Site. Make arrangements for and bear costs of providing water required for construction purposes and for drinking by construction personnel during construction.
- E. Sanitary and Personnel Facilities: Provide and maintain facilities for Contractor's employees, Subcontractors, and other onsite employers' employees. Service, clean, and maintain facilities and enclosures.

F. Telephone Service:

- 1. Contractor: Arrange and provide onsite telephone service for use during construction. Pay costs of installation and monthly bills.
- G. Fire Protection: Furnish and maintain on Site adequate firefighting equipment capable of extinguishing incipient fires. Comply with applicable parts of NFPA 241.

3.03 PROTECTION OF WORK AND PROPERTY

A. General:

- 1. Perform Work within right-of-way and easements in a systematic manner that minimizes inconvenience to property owners and the public.
- 2. No residence or business shall be cut off from vehicular traffic for a period exceeding 10 minutes, unless special arrangements have been made.
- 3. Schedule the Work so construction will not interfere with irrigation of cultivated lands or pasturelands. Construction may proceed during irrigation season, provided Contractor constructs temporary irrigation ditches, turnouts, and miscellaneous structures acceptable to property owners.
- 4. Provide continuous access for livestock through farm areas. Do not cut off ready access to portions of farmlands in which livestock are pastured. Maintain existing fences required to restrain livestock. Keep gates closed and secure.
- 5. Maintain in continuous service existing oil and gas pipelines, underground power, telephone or communication cable, water mains, irrigation lines, sewers, poles and overhead power, and other utilities encountered along line of the Work, unless other arrangements satisfactory to owners of said utilities have been made.
- 6. Where completion of the Work requires temporary or permanent removal or relocation of existing utility, coordinate activities with owner of said utility and perform work to their satisfaction.

- 7. Protect, shore, brace, support, and maintain underground pipes, conduits, drains, and other underground utility construction uncovered or otherwise affected by construction operations.
- 8. Keep fire hydrants and water control valves free from obstruction and available for use at all times.
- 9. In areas where Contractor's operations are adjacent to or near a utility, such as gas, telephone, television, electric power, water, sewer, or irrigation system, and such operations may cause damage or inconvenience, suspend operations until arrangements necessary for protection have been made by Contractor.
- 10. Notify property owners and utility offices that may be affected by construction operation at least 2 days in advance: Before exposing a utility, obtain utility owner's permission. Should service of utility be interrupted due to Contractor's operation, notify proper authority immediately. Cooperate with said authority in restoring service as promptly as possible and bear costs incurred.
- 11. Do not impair operation of existing sewer system. Prevent construction material, pavement, concrete, earth, volatile and corrosive wastes, and other debris from entering sewers, pump stations, or other sewer structures.
- 12. Maintain original Site drainage wherever possible.

B. Site Security:

- 1. Erect a temporary security fence. Maintain fence throughout construction period. Obtain Engineer's written permission before removal of temporary security fencing.
- 2. Provide and maintain additional temporary security fences as necessary to protect the Work and Contractor-furnished products not yet installed.

C. Barricades and Lights:

- 1. Provide as required by approved traffic control plans and in sufficient quantity to safeguard public and the Work.
- 2. Provide as necessary to prevent unauthorized entry to construction areas and affected roads, streets, and alleyways, inside and outside of fenced area, and as required to ensure public safety and the safety of Contractor's employees, other employer's employees, and others who may be affected by the Work.
- 3. Provide to protect existing facilities and adjacent properties from potential damage.
- 4. Locate to enable access by facility operators and property owners.
- 5. Protect streets, roads, highways, and other public thoroughfares that are closed to traffic by effective barricades with acceptable warning signs.

- 6. Locate barricades at the nearest intersecting public thoroughfare on each side of blocked section.
- 7. Illuminate barricades and obstructions with warning lights from sunset to sunrise.

D. Trees and Plantings:

- 1. Protect from damage and preserve trees, shrubs, and other plants outside limits of the Work and within limits of the Work, which are designated on Drawings to remain undisturbed.
 - a. Where practical, tunnel beneath trees when on or near line of trench.
 - b. Employ hand excavation as necessary to prevent tree injury.
 - c. Do not stockpile materials or permit traffic within drip lines of trees.
 - d. Provide and maintain temporary barricades around trees.
 - e. Water vegetation as necessary to maintain health.
 - f. Cover temporarily exposed roots with wet burlap, and keep burlap moist until soil is replaced around roots.
 - g. No trees, except those specifically shown on Drawings to be removed, shall be removed without written approval of Engineer.
 - h. Dispose of removed trees in a legal manner off the Site.
- 2. Balling and burlapping of trees indicated for replacement shall conform to recommended specifications set forth in the American Standards for Nursery Stock, published by American Association of Nurserymen. Balls shall be firm and intact and made-balls will not be accepted. Handle ball and burlap trees by ball and not by top.
- 3. In event of damage to bark, trunks, limbs, or roots of plants that are not designated for removal, treat damage by corrective pruning, bark tracing, application of a heavy coating of tree paint, and other accepted horticultural and tree surgery practices.
- 4. Replace each plant that dies as a result of construction activities.

E. Existing Structures:

- 1. Where Contractor contemplates removal of small structures such as mailboxes, signposts, and culverts that interfere with Contractor's operations, obtain approval of property owner and Engineer.
- 2. Move mailboxes to temporary locations accessible to postal service.
- 3. Replace items removed in their original location and a condition equal to or better than original.
- F. Finished Construction: Protect finished floors and concrete floors exposed as well as those covered with composition tile or other applied surfacing.
- G. Waterways: Keep ditches, culverts, and natural drainages continuously free of construction materials and debris.

H. Dewatering: Construct, maintain, and operate cofferdams, channels, flume drains, sumps, pumps, or other temporary diversion and protection works. Furnish materials required, install, maintain, and operate necessary pumping and other equipment for the environmentally safe removal and disposal of water from the various parts of the Work. Maintain foundations and parts of the Work free from water.

I. Archaeological Finds:

- 1. General: Should finds of an archaeological or paleontological nature be made within Site limits, immediately notify Owner and Engineer and proceed in accordance with General Conditions. Continue the Work in other areas without interruption. Provide the necessary equipment and labor to support the Owner with the Protection and Removal of these finds.
- 2. Owner may order the Work stopped in other areas if, in Owner's opinion, find is more extensive than may appear from uncovered material.
- 3. Protection of Finds:
 - a. Cover, fence, or otherwise protect finds until notice to resume the Work is given.
 - b. Cover finds with plastic film held in place by earth, rocks, or other weights placed outside the find. Should additional backfilling be necessary for safety or to prevent caving, place backfill material loosely over plastic film.
 - c. Sheet or shore as necessary to protect excavations underway. Place temporary fence to prevent unauthorized access.
 - d. Dewater finds made below water table as necessary to protect construction Work underway. Divert groundwater or surface runoff away from find by ditching or other acceptable means.
- 4. Removal of Finds:
 - a. Finds are property of Owner. Do not remove or disturb finds without Owner's written authorization.
 - b. Should Owner elect to have a find removed, provide equipment, labor, and material to permit safe removal of find without damage. Provide transportation for delivery to individuals, institutions, or other places as Owner may find desirable, expedient, or required by law.
- J. Endangered and Threatened Species:
 - 1. Take precautions necessary and prudent to protect native endangered and threatened flora and fauna.
 - 2. Notify Engineer of construction activities that might threaten endangered and threatened species or their habitats.

- 3. Engineer will mark areas known as habitats of endangered and threatened species prior to commencement of onsite activities.
- 4. Additional areas will be marked by Engineer as other habitats of endangered and threatened species become known during construction.

3.04 TEMPORARY CONTROLS

A. Air Pollution Control:

- 1. Minimize air pollution from construction operations.
- 2. Burning of waste materials, rubbish, or other debris will not be permitted on or adjacent to Site.
- 3. Conduct operations of dumping rock and of carrying rock away in trucks to cause a minimum of dust. Give unpaved streets, roads, detours, or haul roads used in construction area a dust-preventive treatment or periodically water to prevent dust. Strictly adhere to applicable environmental regulations for dust prevention.
- 4. Provide and maintain temporary dust-tight partitions, bulkheads, or other protective devices during construction to permit normal operation of existing facilities. Construct partitions of plywood, insulating board, plastic sheets, or similar material. Construct partitions in such a manner that dust and dirt from demolition and cutting will not enter other parts of existing building or facilities. Remove temporary partitions as soon as need no longer exists.

B. Noise Control:

- 1. Provide acoustical barriers so noise emanating from tools or equipment will not exceed legal noise levels per local city or jurisdictional agency ordinances.
- 2. Noise Control Plan: Propose plan to mitigate construction noise and to comply with noise control ordinances, including method of construction, equipment to be used, and acoustical treatments.

C. Water Pollution Control:

- 1. Divert sanitary sewage and nonstorm waste flow interfering with construction and requiring diversion to sanitary sewers. Do not cause or permit action to occur which would cause an overflow to existing waterway.
- 2. Prior to commencing excavation and construction, obtain Engineer's agreement with detailed plans showing procedures intended to handle and dispose of sewage, groundwater, and dewatering pump discharges.

- 3. Comply with Section 01 51 00, Permits and Regulatory Requirements, for stormwater flow and surface runoff.
- 4. Do not dispose of volatile wastes such as mineral spirits, oil, chemicals, or paint thinner in storm or sanitary drains. Disposal of wastes into streams or waterways is prohibited. Provide acceptable containers for collection and disposal of waste materials, debris, and rubbish.
- D. Erosion, Sediment, and Flood Control: Provide, maintain, and operate temporary facilities as required per Section 01 51 00, Permits and Regulatory Requirements, to control erosion and sediment releases, and to protect the Work and existing facilities from flooding during construction period.

3.05 STORAGE YARDS AND BUILDINGS

- A. Coordinate requirements with Section 01 61 00, Common Product Requirements.
- B. Temporary Storage Yards: Construct temporary storage yards for storage of products that are not subject to damage by weather conditions.
- C. Temporary Storage Buildings:
 - 1. Provide environmental control systems that meet recommendations of manufacturers of equipment and materials stored.
 - 2. Arrange or partition to provide security of contents and ready access for inspection and inventory.
 - 3. Store combustible materials (paints, solvents, fuels) in a well-ventilated and remote building meeting safety standards.

3.06 ACCESS ROADS AND DETOURS

- A. Comply with requirements of Section 01 55 26, Traffic Control
- B. Maintain drainage ways. Install and maintain culverts to allow water to flow beneath access roads. Provide corrosion-resistant culvert pipe of adequate strength to resist construction loads.
- C. Provide gravel, crushed rock, or other stabilization material to permit access by all motor vehicles at all times.
- D. Maintain road grade and crown to eliminate potholes, rutting, and other irregularities that restrict access.
- E. Upon completion of construction, restore ground surface disturbed by temporary access road construction to original grade. Replace damaged or broken culverts with new culvert pipe of same diameter and material.

3.07 PARKING AREAS

- A. Control vehicular parking to preclude interference with public traffic or parking, access by emergency vehicles, Owner's operations, or construction operations.
- B. Provide parking facilities for personnel working on Project. No employee or equipment parking will be permitted on Owner's existing paved areas.

3.08 VEHICULAR TRAFFIC

- A. Comply with requirements of Section 01 55 26, Traffic Control.
- B. Comply with Laws and Regulations regarding closing or restricting use of public streets or highways. No public or private road shall be closed, except by written permission of proper authority. Ensure the least possible obstruction to traffic and normal commercial pursuits.
- C. Coordinate traffic routing with that of others working in same or adjacent areas.

3.09 CLEANING DURING CONSTRUCTION

- A. In accordance with General Conditions, as may be specified in other Specification sections, and as required herein.
- B. Wet down exterior surfaces prior to sweeping to prevent blowing of dust and debris. At least weekly, sweep floors (basins, tunnels, platforms, walkways, roof surfaces), and pick up and dispose of debris.
- C. Provide approved containers for collection and disposal of waste materials, debris, and rubbish. At least weekly, dispose of such waste materials, debris, and rubbish offsite.
- D. At least weekly, brush sweep entry drive, roadways, and other streets and walkways affected by the Work and where adjacent to the Work.

END OF SECTION

SECTION 01 50 60 UTILITIES SURVEYING AND COORDINATION

PART 1 GENERAL

1.01 SUBMITTALS

- A. Submit the following:
 - 1. Monthly updates of as-builts file and utility/facility locations.
 - 2. Plan for utilities support approved by each utility.
 - 3. Plan for required relocations.
 - 4. Plan for preconstruction potholing and utility locating.
 - 5. Plan to Keep Utilities Operational: Water high-lining and other utilities.
 - 6. Surveys of facilities to be removed and restored.

1.02 AS-BUILT SURVEY FILE WITH UTILITIES

- A. Survey, and submit monthly updates of, all facilities in project work areas as shown in "Existing Conditions and As-Built Survey Points Collection Example Sheet" in Supplement at the end of this section, and as follows:
 - 1. Perform surveys daily and collect all survey points required for monthly as-built submittals. Do not bury work until all survey points required are collected.
 - 2. Perform all survey work supervised by a Utah Licensed Surveyor (LS).
 - 3. Submit monthly updates of an AutoCAD-compatible survey file with all existing facilities exposed to-date in excavations, and all as-built locations of newly-built facilities installed to-date.
 - 4. Submit each point with a point number related to Station, a description (use UDOT Data Recorder Codes in Supplement), and x, y, z coordinates on project survey control.
- B. Submit as-built survey points for all new CUWCD/Owner facilities at:
 - 1. Top center of main pipe at joints, and at horizontal and vertical angles.
 - 2. Top center of appurtenance pipe joints, horizontal and vertical angles.
 - 3. Corrosion test stations, test station conduits and wires, anodes, and where each cathodic wire connects to each pipe.
 - 4. Top corners of pull boxes (FO, electrical, other). Top center of conduits (FO, electrical, other) at 100-foot spacing and at all conduit direction changes.

- 5. Top corners of vaults and concrete encasements, and top center of vaults and of center of buried (flanged) access manways.
- 6. Piping outside of structures.
- 7. Features including light poles, fences corners, etc.
- 8. All new construction not already specified.
- C. Submit survey points at 5-foot maximum spacing (greater spacing if allowed by utility owner) for all non-CUWCD utilities/facilities exposed in CUWCD Project excavations at:
 - 1. Top center of each utility (label existing, new, relocated, or replaced) and its valves and junctions, at each angle point, where it enters and exists excavation, and crosses a CUWCD pipe. For sewers and storm drains: survey inverts at all junctions and manholes.
 - 2. New and replaced curb (top back of curb) and sidewalk built in Project. Site features, utility poles, fence corners, etc.
 - 3. All new construction not already specified.
- D. Use UDOT Survey Data Recorder Codes (in Supplement after section) or use a list of survey codes acceptable to Engineer and Owner. Use descriptors for utility type, size, and material, and if existing, new, relocated, or replaced. Submit project control coordinates and WGS84 (decimal degree) latitude and longitude coordinates. Submit with each monthly pay application, a complete project survey data file in MS Excel file in PNEZD format with all survey points updated monthly.
- E. Monthly payment requests may not be processed unless monthly, complete, updated survey and as-built files are provided.

1.03 REQUIRED UTILITY INVESTIGATION AND COORDINATION

- A. Existing utilities as indicated on Drawings are approximate and based on the best information available. Pothole table on Drawings indicates those utilities located exactly. Field verify the exact locations of each facility or utility whether shown on Drawings or located by "Blue staking," Telephone (800) 662-4111.
- B. Before construction, expose and survey underground utilities and facilities which might interfere with the Work. In areas requiring relocations, do field investigation to verify utility existence, exact location, orientation, and size. Coordinate and relocate utilities where Drawings require such to do the Work.
- C. Take the lead role, and proactively coordinate all required utilities work with other contractors, utility owners, homes, businesses and land owners. Contact, schedule, and establish utility shut down times. Coordinate and resolve utility relocations/replacements well before construction to prevent schedule delays. Notify Engineer weekly of

- utilities issues, agreements, and resolutions. Submit the agreement and resolution documentation to the Engineer.
- D. Notify utility owner when Work is in progress near their facilities. Resolve utility and structure crossing and clearance issues with each utility. Arrange with each utility for emergency repair of utilities, including services, that may be damaged by the Work. No extra compensation will be made for repair of individual service lines damaged by Contractor operations.

1.04 MAINTAINING OPERATIONAL EXISTING UTILITIES

A. Keep all existing facilities operational through construction. Keep irrigation facilities operational during irrigation season. To perform Work, as required and scheduled, submit, install, and maintain high-line water mains and other temporary utilities to maintain utility service equal to existing. Resolve with affected utilities how to provide temporary service and submit resolution to Engineer.

1.05 THRUST RESTRAINT FOR UTILITIES NEAR EXCAVATIONS

A. Special shoring and bracing may be required to prevent pressurized and non-pressurized water, irrigation, sewer, high pressure gas, drains, thrust blocks, and other sensitive utilities from collapsing into, or flooding excavations. Provide designs (Utah PE signed and stamped) and construct sheeting and shoring to keep utilities from shifting, leaking, collapsing, or failing.

1.06 HIGH VOLTAGE UTILITIES PRECAUTIONS

A. Work near existing electrical high voltage (EHV) lines may cause induced voltage, fault current, or arcing hazards to personnel and equipment operators. Submit plan to educate workers, visitors, and provide safety near EHV lines.

1.07 STORM DRAIN SEDIMENT CONTROL

A. See storm drain sediment control requirements in Section 01 51 00, Permits and Regulatory Requirements, and storm drain inspections/photos in Section 01 31 13, Project Coordination. Protect storm drains from construction sediments and debris. Obtain drain owner approval before discharging sediment laden water into system. Remove immediately from storm drains any sediments and debris due to the Work.

1.08 RESTORE FACILITIES DISTURBED

A. Protect in place or remove and replace existing facilities not designated for removal (i.e., utilities, ditches, survey points, markers, paving, drives, curbs, walks, signing, striping, fences, mailboxes, etc.). Before construction, video, and survey such, then remove and restore each to existing condition or better.

1.09 SUPPORT OF UTILITIES AND FACILITIES

A. Place slide rail and other shoring to support trench and utilities as excavated. Prepare a support plan and obtain approval of it from each utility company, detailing intended support method for each utility. Plan shall detail supporting utilities during trenching, pipe lay and backfilling. Repair and replace utilities and other facilities damaged by construction.

1.10 UTILITY RELOCATIONS SHOWN ON DRAWINGS

A. Utilities Designated for Relocation: Perform all relocation Work so utility does not conflict in space or schedule with the Work and complies with and satisfies all utility owner requirements. Initiate and maintain early, proactive coordination with utility owner. Clarify costs. Fully account for and schedule adequate time for utilities to perform their own design and construction.

1.11 UTILITIES NOT SHOWN ON DRAWINGS

- A. If investigations find utilities not shown on Drawings or if a utility is not near where shown on Drawings, and is in conflict with the Work, notify Engineer. Owner will pay for Work needed to raise, lower, or relocate a utility not shown on Drawings (see General Conditions, Force Account). Where practical, verify if a duct or cable may be raised or lowered by freeing slack, or if the new pipe may be raised or lowered to avoid conflicting utility. If a utility relocation is required, coordinate the Work to be done by utility owner and Contractor, as required by utility owner, and per their standards.
- B. Service Laterals: Service lines are not generally shown on Drawings. Assume each potentially occupied structure (home, business, or building lot) across Project trench from an existing utility main, has a buried service crossing the trench for that utility (i.e., water, irrigation sewer, electric, gas, cable, telecom, etc.), unless noted otherwise. Locate and protect individual service lines, or if damaged by Work operations, repair and replace to standards and satisfaction of utility owner. Where grade changes, adjust utility service surface features (valves caps, water meter covers, etc.) to match final grade.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

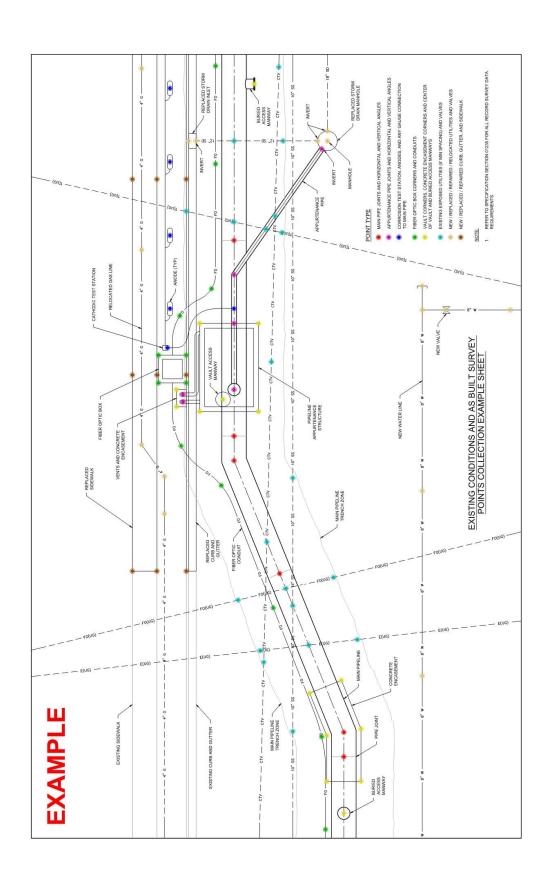
3.01 POTHOLING FOR PIPELINE CONSTRUCTION

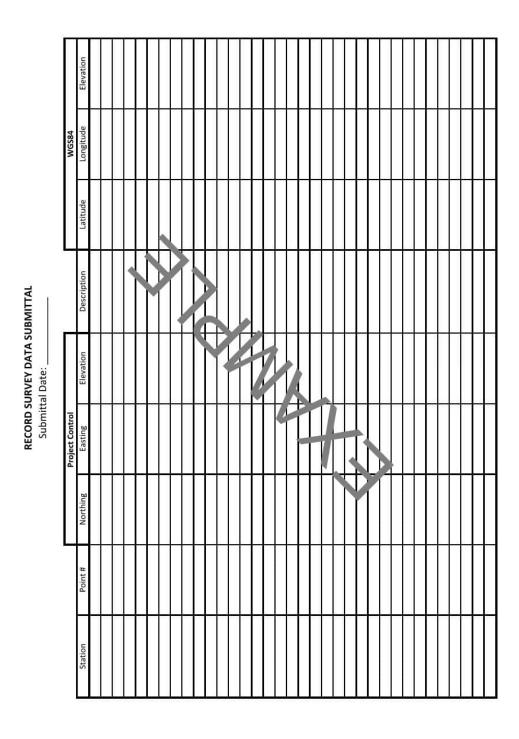
A. Pothole and locate utilities that could affect the horizontal and vertical alignment of CUWCD pipelines at least 60 days before pipeline installation.

3.02 SUPPLEMENTS

- A. The supplements listed below, following "End of Section," are part of this specification.
 - Existing Conditions and As-Built Survey Points Collection Example Sheet
 - 2. Record Survey Data Submittal Example Sheet.
 - 3. UDOT ETS Survey Data Recorder Codes.

END OF SECTION





Survey Data Recorder Codes





SPANISH FORK SANTAOUIN PIPELINE - SANTAOUIN REACH

ATMS		CABLE TV		
1 CLUSTER OF 4 CONDUITS	CCI	CABLE TV LINE		CTL
2 CLUSTERS OF 4 CONDUITS	CCII	CABLE TV PED		CTP
2" CONDUIT	CTWO	BURIED CABLE TV		BCTV
3 CLUSTERS OF 4 CONDUITS	CCIII	CABLE TV BOX		СТВ
3" CONDUIT	CTHR			
4 CLUSTERS OF 4 CONDUITS	CCIV			
4" CONDUIT	CFR	CONTROL CODES		
6" CONDUIT	CSIX		1000	
8" CONDUIT	CET			
A PULL BOX	APB	BEGIN FIGURE		BF
A PULLBOX SPLICEPOINT	ASP	CLOSE FIGURE		CLOSE
B PULL BOX	BPB	POINT OF CURVATURE		PC
B PULLBOX SPLICEPOINT	BSP	POINT OF CONVATORE		PT
CLOSE CIRCUIT TV CABINET	CCTV	DO NOT CONTOUR		DNC
CC TV/TRFC MONITORING CABINET	CCTMC	RECTANGLE		RECT
FULL CABINET	CCFC	CLOSE RECTANGLE		CLRECT
	CPB			JPT
C PULL BOX		JOIN POINT		
C PULL BOX SPLICEPOINT	CSP	JOIN NEAREST CODE		JNC
D PULL BOX	DPB	NON TANGENT CURVE		NT
D PULL BOX SPLICEPOINT	DSP	DISTANCE		DIST
RAMP METER CONTROL CABINET	RMC	TEMPLATE		TMPL
TRFC MONITORING STATION CBNT	TMS			
VMS CABINET VAULT PULL BOX	VMS VPB			
VMS CABINET VAULT PULL BOX				
VMS CABINET VAULT PULL BOX				
VMS CABINET VAULT PULL BOX	С	ELECTRICAL	BEL	
VMS CABINET VAULT PULL BOX	VPB C CF	ELECTRICAL BURIED ELECTRICAL LINE ELECTRIC JUNCTION BOX	EJB	
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VMS CABINET VAULT PULL BOX CURB & GUTTER CURB & GUTTER CURB & GUTTER FLOW LINE GUTTER FROG GUTTER WATERWAY LIP OF CURB CURB AND GUTTER TOP BACK CURB AND GUTTER LIP OF GUTTER CURB MEDIAN RAISED CURB TRAFFIC ISLAND DRAINAGE DI WITH TRASHRACK DROP INLET STORM DRAIN CHECK DAM DIVERSION BOX CATCH BASIN	C CF CFL GFR GWW LOC TBC CG LG CM CTI	BURIED ELECTRICAL LINE ELECTRIC JUNCTION BOX ELECTRIC POWER POLE ELECTRIC TRANSFORMER LIGHT POLE OVERHEAD POWER LINE OVERHEAD WIRE POLE FOLE GUY WIRE ANCHOR POLE GUY WIRE POWER POLE STREET LIGHT JUNCTION BOX STREET LIGHT OUTDOOR DECORATIVE LIGHT FENCE FENCE FENCE FENCE CHAIN LINK FENCE FIELD FENCE FIELD FENCE RAIL	EJB EPP ET LP OPL OHW POLE GWA GW EPPS EJBS ODL F FCL FD FF FR	
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VMS CABINET VAULT PULL BOX	C CF CFL GFR GWW LOC TBC CG LG CM CTI	BURIED ELECTRICAL LINE ELECTRIC JUNCTION BOX ELECTRIC POWER POLE ELECTRIC TRANSFORMER LIGHT POLE OVERHEAD POWER LINE OVERHEAD WIRE POLE GUY WIRE ANCHOR POLE GUY WIRE ANCHOR POUE GUY WIRE POWER POLE STREET LIGHT JUNCTION BOX STREET LIGHT OUTDOOR DECORATIVE LIGHT FENCE FENCE FENCE FENCE FENCE CHAIN LINK FENCE DECORATIVE FENCE FIELD FENCE RAIL FENCE WIRE FENCE WIRE FENCE WIRE	EJB EPP ET LP OPL OHW POLE GWA GW EPPS EJBS ODL F FCL FD FF FR FWR FW	
VMS CABINET VAULT PULL BOX CURB & GUTTER CURB & GUTTER CURB FACE CURB & GUTTER FLOW LINE GUTTER FROG GUTTER WATERWAY LIP OF CURB CURB AND GUTTER TOP BACK CURB AND GUTTER LIP OF GUTTER CURB MEDIAN RAISED CURB TRAFFIC ISLAND DRAINAGE DI WITH TRASHRACK DROP INLET STORM DRAIN CHECK DAM DIVERSION BOX CATCH BASIN	C CF CFL GFR GWW LOC TBC CG LG CM CTI	BURIED ELECTRICAL LINE ELECTRIC JUNCTION BOX ELECTRIC POWER POLE ELECTRIC TRANSFORMER LIGHT POLE OVERHEAD POWER LINE OVERHEAD WIRE POLE GUY WIRE ANCHOR FORCE TREET LIGHT JUNCTION BOX STREET LIGHT OUTDOOR DECORATIVE LIGHT FENCE FENCE FENCE FENCE FENCE FENCE FENCE CHAIN LINK FENCE FIELD FENCE FRAIL FENCE WIRE	EJB EPP ET LP OPL OHW POLE GWA GW EPPS EJBS ODL F FCL FD FF FR FWR	
VMS CABINET VAULT PULL BOX CURB & GUTTER CURB & GUTTER CURB FACE CURB & GUTTER FLOW LINE GUTTER FROG GUTTER WATERWAY LIP OF CURB CURB AND GUTTER TOP BACK CURB AND GUTTER LIP OF GUTTER CURB MEDIAN RAISED CURB TRAFFIC ISLAND DRAINAGE DI WITH TRASHRACK DROP INLET STORM DRAIN CHECK DAM DIVERSION BOX CATCH BASIN	C CF CFL GFR GWW LOC TBC CG LG CM CTI	BURIED ELECTRICAL LINE ELECTRIC JUNCTION BOX ELECTRIC POWER POLE ELECTRIC TRANSFORMER LIGHT POLE OVERHEAD POWER LINE OVERHEAD WIRE POLE FOLE GUY WIRE ANCHOR POLE GUY WIRE ANCHOR POLE STREET LIGHT JUNCTION BOX STREET LIGHT OUTDOOR DECORATIVE LIGHT FENCE FENCE FENCE FENCE FENCE CHAIN LINK FENCE DECORATIVE FENCE FIELD FENCE RAIL FENCE WIRE FENCE WIRE FENCE WOOD FENCE WOOD FENCE WOOD FENCE WOOD FENCE WOOD	EJB EPP ET LP OPL OHW POLE GWA GW EPPS EJBS ODL F FCL FD FF FR FWR FWR FWP	

SPANISH FORK SANTAQUIN PIPELINE - SANTAQUIN REACH

GAS		MANHOLES	
GAS METER	GM	MANHOLE	М
GAS VALVE	GV	SANITARY SEWER MANHOLE	MS
BURIED GAS LINE	BGL	STORM SEWER MANHOLE	MSS
		TELEPHONE MANHOLE	MT
		WATER MANHOLE	MW
IRRIGATION		GAS MANHOLE	MG
		ELECTRICAL MANHOLE	ME
		UNKNOWN MANHOLE	MU
WELL	WELL		
SPRINKLER VALVE	SV		
SPRINKLER	SPK	PIPE	
IUNCTION BOX IRRIGATION	JBI		
WATER PUMP	WP		
SCREW GATE	HSG	CORRUGATED METAL PIPE	CMP
WIER GATE	HWG	PLASTIC PIPE	PPL
HAND SLIDE GATE	HHG	SANITARY SEWER PIPE	PSS
CHANNEL CHANGE	HCC	REINFORCED CONCRETE PIPE	RCP
CHANNEL	HCHNL	STEEL PIPE	SP
		ARCH PIPE	PA
		CONCRETE CULVERT PIPE	CCP
		IRRIGATION PIPE	IRP
		CORRUGATED PLASTIC PIPE	CPP
RAILROAD		ROAD PAINT	
RAILROAD	RRX		cw
RAILROAD RAILROAD CROSSING	RRX RRG	ROAD PAINT	cw cws
RAILROAD RAILROAD CROSSING RAILROAD GATE		ROAD PAINTCROSSWALK	
RAILROAD RAILROAD CROSSING RAILROAD GATE RAILROAD SIGNAL	RRG	ROAD PAINT	cws
RAILROAD RAILROAD CROSSING RAILROAD GATE RAILROAD SIGNAL RAILROAD SIGNAL CTRL CABINET	RRG RRS	CROSSWALK CROSSWALK SCHOOL DOUBLE YELLOW	CWS DY
RAILROAD RAILROAD CROSSING RAILROAD GATE RAILROAD SIGNAL RAILROAD SIGNAL CTRL CABINET RAILROAD SWITCH	RRG RRS RRCB	ROAD PAINT CROSSWALK CROSSWALK SCHOOL DOUBLE YELLOW SINGLE WHITE DOTTED	CWS DY SWD
RAILROAD RAILROAD CROSSING RAILROAD GATE RAILROAD SIGNAL RAILROAD SIGNAL CTRL CABINET RAILROAD SWITCH TOP OF RAIL	RRG RRS RRCB RRW	ROAD PAINT CROSSWALK CROSSWALK SCHOOL DOUBLE YELLOW SINGLE WHITE DOTTED SINGLE WHITE LINE	CWS DY SWD SWL
RAILROAD RAILROAD CROSSING RAILROAD GATE RAILROAD SIGNAL RAILROAD SIGNAL CTRL CABINET RAILROAD SWITCH TOP OF RAIL RAILROAD TRACKS	RRG RRS RRCB RRW RTR	ROAD PAINT CROSSWALK CROSSWALK SCHOOL DOUBLE YELLOW SINGLE WHITE DOTTED SINGLE WHITE LINE SINGLE YELLOW LINE SINGLE WHITE SKIP SINGLE WHITE SKIP	CWS DY SWD SWL SYL SWS SYS
RAILROAD RAILROAD CROSSING RAILROAD GATE RAILROAD SIGNAL RAILROAD SIGNAL CTRL CABINET RAILROAD SWITCH TOP OF RAIL RAILROAD TRACKS	RRG RRS RRCB RRW RTR RRT	ROAD PAINT CROSSWALK CROSSWALK SCHOOL DOUBLE YELLOW SINGLE WHITE DOTTED SINGLE WHITE LINE SINGLE YELLOW LINE SINGLE WHITE SKIP	CWS DY SWD SWL SYL SWS SYS SB
RAILROAD RAILROAD CROSSING RAILROAD GATE RAILROAD SIGNAL RAILROAD SIGNAL CTRL CABINET RAILROAD SWITCH TOP OF RAIL RAILROAD TRACKS RAILROAD MISC	RRG RRS RRCB RRW RTR RRT	CROSSWALK CROSSWALK SCHOOL DOUBLE YELLOW SINGLE WHITE DOTTED SINGLE WHITE LINE SINGLE YELLOW LINE SINGLE WHITE SKIP SINGLE YELLOW SKIP STOP BAR TURN ARROW	CWS DY SWD SWL SYL SWS SYS SB TA
RAILROAD RAILROAD CROSSING RAILROAD GATE RAILROAD SIGNAL RAILROAD SIGNAL CTRL CABINET RAILROAD SWITCH TOP OF RAIL RAILROAD TRACKS RAILROAD MISC	RRG RRS RRCB RRW RTR RRT	CROSSWALK CROSSWALK SCHOOL DOUBLE YELLOW SINGLE WHITE DOTTED SINGLE WHITE LINE SINGLE YELLOW LINE SINGLE WHITE SKIP SINGLE WHITE SKIP SINGLE WHITE SKIP SINGLE WHITE SKIP STOP BAR TURN ARROW TURN ARROW	CWS DY SWD SWL SYL SWS SYS SB TA LTA
RAILROAD RAILROAD CROSSING RAILROAD GATE RAILROAD SIGNAL RAILROAD SIGNAL CTRL CABINET RAILROAD SWITCH TOP OF RAIL RAILROAD TRACKS RAILROAD MISC	RRG RRS RRCB RRW RTR RRT	ROAD PAINT CROSSWALK CROSSWALK SCHOOL DOUBLE YELLOW SINGLE WHITE DOTTED SINGLE WHITE LINE SINGLE YELLOW LINE SINGLE YELLOW LINE SINGLE YELLOW SKIP STOP BAR TURN ARROW TURN ARROW LEFT TURN ARROW LIGHT	CWS DY SWD SWL SYL SWS SYS SB TA LTA RTA
RAILROAD RAILROAD CROSSING RAILROAD GATE RAILROAD SIGNAL RAILROAD SIGNAL CTRL CABINET RAILROAD SWITCH TOP OF RAIL RAILROAD TRACKS RAILROAD MISC ROAD	RRG RRS RRCB RRW RTR RRT RRM	ROAD PAINT CROSSWALK CROSSWALK SCHOOL DOUBLE YELLOW SINGLE WHITE DOTTED SINGLE WHITE LINE SINGLE YELLOW LINE SINGLE WHITE SKIP SINGLE WHITE SKIP SINGLE YELLOW SKIP STOP BAR TURN ARROW TURN ARROW TURN ARROW LEFT TURN ARROW RIGHT YELLOW PERMISSIVE LEFT	CWS DY SWD SWL SYL SWS SYS SB TA LTA RTA
RAILROAD RAILROAD CROSSING RAILROAD GATE RAILROAD SIGNAL RAILROAD SIGNAL CTRL CABINET RAILROAD SWITCH TOP OF RAIL RAILROAD TRACKS RAILROAD MISC ROAD	RRG RRS RRCB RRW RTR RRT RRM	CROSSWALK CROSSWALK SCHOOL DOUBLE YELLOW SINGLE WHITE DOTTED SINGLE WHITE LINE SINGLE YELLOW LINE SINGLE WHITE SKIP SINGLE YELLOW SKIP STOP BAR TURN ARROW TURN ARROW LEFT TURN ARROW RIGHT YELLOW PERMISSIVE LEFT YELLOW PERMISSIVE RIGHT	CWS DY SWD SWL SYL SWS SYS SB TA LTA RTA YPL YPR
RAILROAD RAILROAD CROSSING RAILROAD GATE RAILROAD SIGNAL RAILROAD SIGNAL CTRL CABINET RAILROAD SWITCH TOP OF RAIL RAILROAD TRACKS RAILROAD MISC ROAD DELINEATOR DRIVEWAY	RRG RRS RRCB RRW RTR RRT RRM	CROSSWALK CROSSWALK SCHOOL DOUBLE YELLOW SINGLE WHITE DOTTED SINGLE WHITE LINE SINGLE YELLOW LINE SINGLE YELLOW SKIP STOP BAR TURN ARROW TURN ARROW TURN ARROW RIGHT YELLOW PERMISSIVE LEFT YELLOW PERMISSIVE RIGHT YELLOW BROKEN	CWS DY SWD SWL SYL SWS SYS SB TA LTA RTA YPL YPR YB
RAILROAD RAILROAD CROSSING RAILROAD GATE RAILROAD SIGNAL RAILROAD SIGNAL CTRL CABINET RAILROAD SWITCH TOP OF RAIL RAILROAD TRACKS RAILROAD MISC ROAD DELINEATOR DRIVEWAY EDGE OF ASPHALT	RRG RRS RRCB RRW RTR RRT RRM DEL DRV EA	CROSSWALK CROSSWALK SCHOOL DOUBLE YELLOW SINGLE WHITE DOTTED SINGLE WHITE LINE SINGLE YELLOW LINE SINGLE WHITE SKIP SINGLE YELLOW SKIP STOP BAR TURN ARROW TURN ARROW TURN ARROW RIGHT YELLOW PERMISSIVE LEFT YELLOW PERMISSIVE RIGHT YELLOW BROKEN PAINT MESSAGE	CWS DY SWD SWL SYL SWS SYS SB TA LTA RTA YPL YPR YB PM
RAILROAD RAILROAD CROSSING RAILROAD GATE RAILROAD SIGNAL RAILROAD SIGNAL CTRL CABINET RAILROAD SWITCH TOP OF RAIL RAILROAD TRACKS RAILROAD MISC ROAD DELINEATOR DRIVEWAY EDGE OF ASPHALT EDGE OF CONCRETE	RRG RRS RRCB RRW RTR RRT RRM DEL DRV EA EC	CROSSWALK CROSSWALK SCHOOL DOUBLE YELLOW SINGLE WHITE DOTTED SINGLE WHITE LINE SINGLE YELLOW LINE SINGLE YELLOW LINE SINGLE YELLOW SKIP STOP BAR TURN ARROW TURN ARROW TURN ARROW LEFT TURN ARROW LIGHT YELLOW PERMISSIVE LEFT YELLOW PERMISSIVE RIGHT YELLOW BROKEN PAINT MESSAGE PED CROSSING BAR	CWS DY SWD SWL SYL SWS SYS SB TA RTA YPL YPR YB PM PCB
RAILROAD RAILROAD CROSSING RAILROAD GATE RAILROAD SIGNAL RAILROAD SIGNAL CTRL CABINET RAILROAD SWITCH TOP OF RAIL RAILROAD TRACKS RAILROAD MISC ROAD DELINEATOR DRIVEWAY EDGE OF ASPHALT EDGE OF CONCRETE EDGE OF CONCRETE	RRG RRS RRCB RRW RTR RRT RRT DEL DRV EA EC ED	CROSSWALK CROSSWALK SCHOOL DOUBLE YELLOW SINGLE WHITE DOTTED SINGLE WHITE LINE SINGLE YELLOW LINE SINGLE YELLOW LINE SINGLE YELLOW SKIP STOP BAR TURN ARROW TURN ARROW TURN ARROW LEFT TURN ARROW RIGHT YELLOW PERMISSIVE LEFT YELLOW PERMISSIVE RIGHT YELLOW BROKEN PAINT MESSAGE PED CROSSING BAR STRIPE DBL YLW PERM	CWS DY SWD SWL SYL SWS SYS SB TA LTA RTA YPL YPR YB PM PCB DYP
RAILROAD RAILROAD CROSSING RAILROAD GATE RAILROAD SIGNAL RAILROAD SIGNAL CTRL CABINET RAILROAD SWITCH TOP OF RAIL RAILROAD TRACKS RAILROAD MISC	RRG RRS RRCB RRW RTR RRT RRT RRM DEL DRV EA EC ED EG	CROSSWALK CROSSWALK SCHOOL DOUBLE YELLOW SINGLE WHITE DOTTED SINGLE WHITE LINE SINGLE YELLOW LINE SINGLE YELLOW LINE SINGLE YELLOW SKIP STOP BAR TURN ARROW TURN ARROW LEFT TURN ARROW LIEFT TURN ARROW RIGHT YELLOW PERMISSIVE LEFT YELLOW PERMISSIVE RIGHT YELLOW BROKEN PAINT MESSAGE PED CROSSING BAR STRIPE DBL YLW PERM 8" WHITE PAINT LINE	CWS DY SWD SWL SYL SYLS SYS SB TA LTA RTA RTA PPL YPR YB PM PCB DYP EPL
RAILROAD RAILROAD CROSSING RAILROAD GATE RAILROAD SIGNAL RAILROAD SIGNAL CTRL CABINET RAILROAD SWITCH TOP OF RAIL RAILROAD TRACKS RAILROAD MISC BELINEATOR DELINEATOR DRIVEWAY EDGE OF ASPHALT EDGE OF GRAVEL GUARD RAIL GUARD RAIL RAILROAD RAIL RAILROAD TRACKS ROAD	RRG RRS RRCB RRW RTR RRT RRT RRM DEL DRV EA EC ED EG GR	CROSSWALK CROSSWALK SCHOOL DOUBLE YELLOW SINGLE WHITE DOTTED SINGLE WHITE LINE SINGLE YELLOW LINE SINGLE YELLOW KIP SINGLE YELLOW SKIP STOP BAR TURN ARROW TURN ARROW TURN ARROW RIGHT YELLOW PERMISSIVE LEFT YELLOW PERMISSIVE RIGHT YELLOW BROKEN PAINT MESSAGE PED CROSSING BAR STRIPE DBL YLW PERM 8" WHITE PAINT LINE CATTLE GUARD	CWS DY SWD SWL SYL SWS SYS SB TA LTA RTA YPL YPR YB PM PCB DYP EPL PCG
RAILROAD RAILROAD CROSSING RAILROAD GATE RAILROAD SIGNAL RAILROAD SIGNAL CTRL CABINET RAILROAD SWITCH TOP OF RAIL RAILROAD TRACKS RAILROAD MISC BELINEATOR DELINEATOR DRIVEWAY EDGE OF ASPHALT EDGE OF CONCRETE EDGE OF GRAVEL GUARD RAIL ASPHALT DRIVEWAY	RRG RRS RRCB RRW RTR RRT RRM DEL DRV EA EC ED EG GR AD	CROSSWALK CROSSWALK SCHOOL DOUBLE YELLOW SINGLE WHITE DOTTED SINGLE WHITE LINE SINGLE YELLOW LINE SINGLE YELLOW LINE SINGLE YELLOW SKIP STOP BAR TURN ARROW TURN ARROW LEFT TURN ARROW LIEFT TURN ARROW RIGHT YELLOW PERMISSIVE LEFT YELLOW PERMISSIVE RIGHT YELLOW BROKEN PAINT MESSAGE PED CROSSING BAR STRIPE DBL YLW PERM 8" WHITE PAINT LINE	CWS DY SWD SWL SYL SYLS SYS SB TA LTA RTA RTA PPL YPR YB PM PCB DYP EPL
RAILROAD RAILROAD CROSSING RAILROAD GATE RAILROAD SIGNAL RAILROAD SIGNAL CTRL CABINET RAILROAD SWITCH TOP OF RAIL RAILROAD TRACKS RAILROAD MISC ROAD DELINEATOR DRIVEWAY EDGE OF ASPHALT EDGE OF CONCRETE EDGE OF GRAVEL GUARD RAIL ASPHALT DRIVEWAY CENTER LINE	RRG RRS RRCB RRW RTR RRT RRM DEL DRV EA EC ED EG GR AD RCL	CROSSWALK CROSSWALK SCHOOL DOUBLE YELLOW SINGLE WHITE DOTTED SINGLE WHITE LINE SINGLE YELLOW LINE SINGLE YELLOW KIP SINGLE YELLOW SKIP STOP BAR TURN ARROW TURN ARROW TURN ARROW RIGHT YELLOW PERMISSIVE LEFT YELLOW PERMISSIVE RIGHT YELLOW BROKEN PAINT MESSAGE PED CROSSING BAR STRIPE DBL YLW PERM 8" WHITE PAINT LINE CATTLE GUARD	CWS DY SWD SWL SYL SWS SYS SB TA LTA RTA YPL YPR YB PM PCB DYP EPL PCG
RAILROAD RAILROAD CROSSING RAILROAD GATE RAILROAD SIGNAL RAILROAD SIGNAL CTRL CABINET RAILROAD SWITCH TOP OF RAIL RAILROAD TRACKS RAILROAD MISC BELINEATOR DELINEATOR DRIVEWAY EDGE OF ASPHALT EDGE OF CONCRETE EDGE OF GRAVEL GUARD RAIL GUARD RAIL ASPHALT DRIVEWAY CENTER LINE CONCRETE EDGONCRETE	RRG RRS RRCB RRW RTR RRT RRT RRM DEL DRV EA EC ED EG GR AD RCL CD	CROSSWALK CROSSWALK SCHOOL DOUBLE YELLOW SINGLE WHITE DOTTED SINGLE WHITE LINE SINGLE YELLOW LINE SINGLE YELLOW KIP SINGLE YELLOW SKIP STOP BAR TURN ARROW TURN ARROW TURN ARROW RIGHT YELLOW PERMISSIVE LEFT YELLOW PERMISSIVE RIGHT YELLOW BROKEN PAINT MESSAGE PED CROSSING BAR STRIPE DBL YLW PERM 8" WHITE PAINT LINE CATTLE GUARD	CWS DY SWD SWL SYL SWS SYS SB TA LTA RTA YPL YPR YB PM PCB DYP EPL PCG
RAILROAD RAILROAD CROSSING RAILROAD GATE RAILROAD SIGNAL RAILROAD SIGNAL CTRL CABINET RAILROAD SWITCH TOP OF RAIL RAILROAD TRACKS RAILROAD MISC BUTTON CONTROL CONTROL ROAD DELINEATOR DRIVEWAY EDGE OF ASPHALT EDGE OF CONCRETE EDGE OF GRAVEL GUARD RAIL ASPHALT DRIVEWAY CENTER LINE CONCRETE ENIVEWAY GRAVEL DRIVEWAY GRAVEL DRIVEWAY	RRG RRS RRCB RRW RTR RRT RRM DEL DRV EA EC ED EG GR AD RCL CD GD	CROSSWALK CROSSWALK SCHOOL DOUBLE YELLOW SINGLE WHITE DOTTED SINGLE WHITE LINE SINGLE YELLOW LINE SINGLE YELLOW KIP SINGLE YELLOW SKIP STOP BAR TURN ARROW TURN ARROW TURN ARROW RIGHT YELLOW PERMISSIVE LEFT YELLOW PERMISSIVE RIGHT YELLOW BROKEN PAINT MESSAGE PED CROSSING BAR STRIPE DBL YLW PERM 8" WHITE PAINT LINE CATTLE GUARD	CWS DY SWD SWL SYL SWS SYS SB TA LTA RTA YPL YPR YB PM PCB DYP EPL PCG
RAILROAD RAILROAD CROSSING RAILROAD GATE RAILROAD SIGNAL RAILROAD SIGNAL CTRL CABINET RAILROAD SWITCH TOP OF RAIL RAILROAD TRACKS RAILROAD MISC BUTTON BUTTO	RRG RRS RRCB RRW RTR RRT RRT RRM DEL DRV EA EC ED EG GR AD RCL CD GD EO	CROSSWALK CROSSWALK SCHOOL DOUBLE YELLOW SINGLE WHITE DOTTED SINGLE WHITE LINE SINGLE YELLOW LINE SINGLE YELLOW KIP SINGLE YELLOW SKIP STOP BAR TURN ARROW TURN ARROW TURN ARROW RIGHT YELLOW PERMISSIVE LEFT YELLOW PERMISSIVE RIGHT YELLOW BROKEN PAINT MESSAGE PED CROSSING BAR STRIPE DBL YLW PERM 8" WHITE PAINT LINE CATTLE GUARD	CWS DY SWD SWL SYL SWS SYS SB TA LTA RTA YPL YPR YB PM PCB DYP EPL PCG
RAILROAD RAILROAD CROSSING RAILROAD GATE RAILROAD SIGNAL RAILROAD SIGNAL CTRL CABINET RAILROAD SIGNAL CTRL CABINET RAILROAD TRACKS RAILROAD MISC ROAD DELINEATOR DRIVEWAY EDGE OF ASPHALT EDGE OF GRAVEL GUARD RAIL ASPHALT DRIVEWAY CENTER LINE CONCRETE DRIVEWAY EDGE OF OIL EDGE OF ROAD	RRG RRS RRCB RRW RTR RRT RRM DEL DRV EA EC ED EG GR AD RCL CD ED EO EO EO	CROSSWALK CROSSWALK SCHOOL DOUBLE YELLOW SINGLE WHITE DOTTED SINGLE WHITE LINE SINGLE YELLOW LINE SINGLE YELLOW KIP SINGLE YELLOW SKIP STOP BAR TURN ARROW TURN ARROW TURN ARROW RIGHT YELLOW PERMISSIVE LEFT YELLOW PERMISSIVE RIGHT YELLOW BROKEN PAINT MESSAGE PED CROSSING BAR STRIPE DBL YLW PERM 8" WHITE PAINT LINE CATTLE GUARD	CWS DY SWD SWL SYL SWS SYS SB TA LTA RTA YPL YPR YB PM PCB DYP EPL PCG
RAILROAD RAILROAD CROSSING RAILROAD GATE RAILROAD SIGNAL RAILROAD SIGNAL RAILROAD SWITCH TOP OF RAIL RAILROAD TRACKS RAILROAD MISC ROAD DELINEATOR DRIVEWAY EDGE OF ASPHALT EDGE OF CONCRETE EDGE OF GRAVEL GUARD RAIL ASPHALT DRIVEWAY CENTER LINE CONCRETE DRIVEWAY GRAVEL DRIVEWAY GRAVEL DRIVEWAY GRAVEL DRIVEWAY GRAVEL DRIVEWAY EDGE OF OIL EDGE OF ROAD REFERENCE MARKER	RRG RRS RRCB RRW RTR RRT RRM DEL DRV EA EC ED EG GR AD RCL CD GD EC	CROSSWALK CROSSWALK SCHOOL DOUBLE YELLOW SINGLE WHITE DOTTED SINGLE WHITE LINE SINGLE YELLOW LINE SINGLE YELLOW KIP SINGLE YELLOW SKIP STOP BAR TURN ARROW TURN ARROW TURN ARROW RIGHT YELLOW PERMISSIVE LEFT YELLOW PERMISSIVE RIGHT YELLOW BROKEN PAINT MESSAGE PED CROSSING BAR STRIPE DBL YLW PERM 8" WHITE PAINT LINE CATTLE GUARD	CWS DY SWD SWL SYL SWS SYS SB TA LTA RTA YPL YPR YB PM PCB DYP EPL PCG
RAILROAD RAILROAD CROSSING RAILROAD GATE RAILROAD SIGNAL RAILROAD SIGNAL RAILROAD SIGNAL CTRL CABINET RAILROAD SWITCH TOP OF RAIL RAILROAD TRACKS RAILROAD MISC DELINEATOR DRIVEWAY EDGE OF ASPHALT EDGE OF CONCRETE EDGE OF GRAVEL GUARD RAIL ASPHALT DRIVEWAY CENTER LINE CONCRETE DRIVEWAY GRAVEL DRIVEWAY EDGE OF OIL EDGE OF ROAD REFERENCE MARKER EDGE OF GRASS	RRG RRS RRCB RRW RTR RRT RRT RRM DEL DRV EA EC ED EG GR AD RCL CD GD EO ER RFM EOG	CROSSWALK CROSSWALK SCHOOL DOUBLE YELLOW SINGLE WHITE DOTTED SINGLE WHITE LINE SINGLE YELLOW LINE SINGLE YELLOW KIP SINGLE YELLOW SKIP STOP BAR TURN ARROW TURN ARROW TURN ARROW RIGHT YELLOW PERMISSIVE LEFT YELLOW PERMISSIVE RIGHT YELLOW BROKEN PAINT MESSAGE PED CROSSING BAR STRIPE DBL YLW PERM 8" WHITE PAINT LINE CATTLE GUARD	CWS DY SWD SWL SYL SWS SYS SB TA LTA RTA YPL YPR YB PM PCB DYP EPL PCG
RAILROAD RAILROAD CROSSING RAILROAD GATE RAILROAD SIGNAL RAILROAD SIGNAL CTRL CABINET RAILROAD SWITCH TOP OF RAIL RAILROAD TRACKS RAILROAD MISC	RRG RRS RRCB RRW RTR RRT RRM DEL DRV EA EC ED EG GR AD RCL CD GD EC	CROSSWALK CROSSWALK SCHOOL DOUBLE YELLOW SINGLE WHITE DOTTED SINGLE WHITE LINE SINGLE YELLOW LINE SINGLE YELLOW KIP SINGLE YELLOW SKIP STOP BAR TURN ARROW TURN ARROW TURN ARROW RIGHT YELLOW PERMISSIVE LEFT YELLOW PERMISSIVE RIGHT YELLOW BROKEN PAINT MESSAGE PED CROSSING BAR STRIPE DBL YLW PERM 8" WHITE PAINT LINE CATTLE GUARD	CWS DY SWD SWL SYL SWS SYS SB TA LTA RTA YPL YPR YB PM PCB DYP EPL PCG

SPANISH FORK SANTAQUIN PIPELINE - SANTAQUIN REACH

SIGNALS		SURVEY	<u> </u>	
SIGNAL CONTROLLER	TSC	BENCH MARK		BM
SIGNAL	TRS	BRASS CAP		BRO
SIGNAL POLE	TSP	CENTER LINE		CL
SIGNAL CTRL POWER SOURCE	TSCB	CONTROL POINT		CP
SIGNAL JUNC BOX	TSJ	MONUMENT		MO
LOOP	SL	NAIL		NA
		PROPERTY LINE/CORNER		PL
		PROPERTY LINE PLUG		PLU
SIGNS		QUARTER CORNER		QC
		REBAR		RB
		REBAR W/CAP		RW
BUS SIGN	BUS	RIGHT OF WAY MARKER		RM
BUSINESS SIGN	BS	SECTION CORNER		SC
COMMERCIAL ADVERTISEMENT SIGN	SCA	STAKE		STK
GAS SIGN	SNG	BOUNDARY LINE		BL
NO PARKING SIGN	SNP	EASEMENT LINE		EL
PEDESTRIAN CROSSING SIGN	SPC	MONUMENT (SL)		MC
RAILROAD CROSSING SIGN	SRR	TURNING POINT		TRI
SIGN	S	CONTROL LINE		CCI
SPEED LIMIT SIGN	SSL			
STOP SIGN	SS			
STREET SIGN	SST	TELEPHONE		
TRAFFIC SIGN	ST			
TRAFFIC ISLAND SIGN	STI			
WRONG WAY SIGN	SWW	BURIED TELEPHONE CABI	.E	BC
ONE POST SIGN	SOP	TELEPHONE BOOTH		TB
TWO POST SIGN	STP	TELEPHONE PEDESTAL		TP
THREE POST SIGN	STHP	TELEPHONE BOX		
THREE POST SIGN MILE MARKER SIGN	STHP MM	TELEPHONE BOX		
THREE POST SIGN MILE MARKER SIGN DOUBLE DOWN SIGN	STHP MM	TELEPHONE BOX FIBER OPTIC CABLE TOP OF DITCH	TD	
THREE POST SIGN MILE MARKER SIGN DOUBLE DOWN SIGN	STHP MM	TELEPHONE BOX FIBER OPTIC CABLE TOP OF DITCH DITCH CONCRETE LINED	DCL	TBX FOO
THREE POST SIGN MILE MARKER SIGN DOUBLE DOWN SIGN	STHP MM	TELEPHONE BOX FIBER OPTIC CABLE TOP OF DITCH DITCH CONCRETE LINED DITCH ROCK LINED	DCL RLD	
THREE POST SIGN MILE MARKER SIGN DOUBLE DOWN SIGN	STHP MM	TELEPHONE BOX FIBER OPTIC CABLE TOP OF DITCH DITCH CONCRETE LINED	DCL	
THREE POST SIGN MILE MARKER SIGN DOUBLE DOWN SIGN TOPOGRAPHIC BREAKLINE BOULDER	STHP MM SDD BKL BDR	TELEPHONE BOX FIBER OPTIC CABLE TOP OF DITCH DITCH CONCRETE LINED DITCH ROCK LINED INVERT ELEVATION SHRUBS CONCRETE BARRIER	DCL RLD INV SHR CB	
THREE POST SIGN MILE MARKER SIGN DOUBLE DOWN SIGN TOPOGRAPHIC BREAKLINE BOULDER BOX CULVERT	STHP MM SDD BKL BDR BCU	TELEPHONE BOX FIBER OPTIC CABLE TOP OF DITCH DITCH CONCRETE LINED DITCH ROCK LINED INVERT ELEVATION SHRUBS CONCRETE BARRIER CATTLE GUARD	DCL RLD INV SHR CB CTG	
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SECTION 01 51 00 PERMITS AND REGULATORY REQUIREMENTS

PART 1 GENERAL

1.01 DESCRIPTION

A. This section lists the known required permits, known requirements of these permits, and regulatory requirements for the Work. The Contractor should note that the list is not necessarily complete and additional permits may be required to execute the Work and Contractor is responsible for obtaining all required permits. Comply with the conditions and requirements of each permit and the agency issuing each permit. Comply with all conditions and requirements of each permit and the agency issuing each permit.

1.02 GENERAL

- A. During the Bid period, the Contractor shall review all permits and the requirements of all permits and shall structure the Bid to meet the requirements of the listed permits. Include in the Bid the cost of obtaining all necessary permits, including application fees, bonds, and other costs, and the costs of complying with the conditions of all permits, including the conditions of permits obtained by the Owner. Any permit fees listed in this section are estimates and for Contractor's information only. The Contractor shall verify and pay all fees associated with permits.
- B. Obtain all permits required for the execution of the Work that have not been obtained by Owner, as indicated in this section. Submit copies of all Contractor-obtained permits to the Engineer and keep a copy of each onsite. Comply with the conditions of all Owner- and Contractor-obtained permits.
- C. Completeness of the list of Contractor-obtained permits is not guaranteed. The absence of information does not relieve the Contractor of responsibility for determining and verifying the extent of permits required, of obtaining such permits, and complying with the conditions of each permit.

1.03 SUMMARY OF PERMITS OBTAINED BY OWNER

A. Owner has obtained, or will obtain, the following permits for this Project. Copies of these permits and their requirements are available for review at Owner's office. No additional compensation or Contract Extensions shall be granted to Contractor because of delays by Owner to obtain any permit, unless the Contractor is unable to proceed and complete the Work because of such delays as demonstrated by the Contractor's approved

Project schedule. See Section 01 31 13, Project Coordination, for other agency and contact information.

- 1. Utah Department of Transportation, Statewide Utility License: Allows placement of CUWCD utilities in UDOT rights-of-way.
- 2. Utility Easements: Owner to obtain all applicable permanent utility easements as indicated on Drawings.
- 3. Stream alteration permit for Dry Creek.
- 4. Railroad crossing permit.

1.04 SUMMARY OF PERMITS TO BE OBTAINED BY CONTRACTOR

- A. The following permits shall be obtained by Contractor. Completeness of this list is not guaranteed. Contractor is required to obtain all necessary permits. See Section 01 31 13, Project Coordination, for other agency and contact information.
 - 1. Utah Department of Transportation, Construction Encroachment Permit:
 - a. For Work in a Utah Department of Transportation Region (UDOT) III roadway: A Right-of-way Encroachment Permit(s) is/are required which covers construction within a UDOT right-of-way. Multiple permits may be required depending on the work to be completed. In addition to cost to obtain each UDOT permit (and a bond for permit), Contractor will also be required to pay for UDOT inspection fees and have a separate bond with UDOT.
 - b. Contact: UDOT Right-of-Way Encroachment Permits.
 658 North 1500 West, Orem, Utah 84057
 Region III permits officer name, number and email are found at:

https://www.udot.utah.gov/connect/business/permits/

- 2. Utah Department of Public Safety, Utah Highway Patrol, Transportation Permit: Covers transportation overloads on access road and routes.
- 3. County Permits:
 - a. For Work in Utah County (outside city boundaries), a Utah County Road Cut, Construction and Building Permit is required.
 - b. Contact Person (in 2020): Glen Tanner.
 Address: 2855 South State St, Provo, Utah 84606
 Direct phone: (801) 851-8602; General (801) 851-8600
 Email (in 2020): glent@utahcounty.gov
- 4. City Permits:
 - a. Each city requires one or more permits for Work within the boundaries of their city. They may include an excavation permit, encroachment (or road) permit, and/or a traffic permit.

Contact each city and verify each permit, conditions, and bonding requirements. Cities that require permits include:

- Mapleton City: All Work included within Mapleton City Limits.
 - a) Contact: Rob Hunter.
 - b) Telephone: (801) 489-6523.
- 2) Payson City: All Work included within Payson City limits.
 - a) Contact: Travis Jockumsen.
 - b) Telephone: (801) 465-5235.
- 3) Santaquin City: All Work included within Santaquin City limits.
 - a) Contact: Norm Beagley.
 - b) Telephone: (801) 754-3211.
- 4) Salem City: All Work included within Salem City limits.
 - a) Contact: Bruce Ward.
 - b) Telephone: (801) 423-2770.
- 5. Utah Division of Water Quality (UDWQ); Utah Dept. of Environmental Quality (UDEQ), Division of Water Quality (DWQ) Permits (see Paragraph Compliance with Laws and Regulations):
 - a. UPDES General Permit for Construction Dewatering and Hydrotesting:
 - 1) Covers discharge waters from chlorinated hydrostatic test water after construction.
 - 2) Contact: Kim Shelley, telephone: (801) 536-4385.
 - 3) NOTE: Submit Notice of Chlorinated Water Discharge 30 days before discharge of de-chlorinated test water.
 - b. UPDES Construction Storm Water Permit and Fugitive Dust Control Plan Permit: Covers storm water discharges and fugitive dust control plan associated with construction activities. Contractor shall develop and comply with the storm water and fugitive dust control plan as required by the UDEQ.
 - c. Contact: Harry Campbell, telephone: (801) 538-6923. E-mail: hcampbell@utah.gov.
 - d. Information for UDEQ Permits:
 - 1) Submit a Notice of Intent to comply with Federal Clean Water Act, Section 402, UPDES General Permit, during the construction of the Project. Complete Project-specific permit applications and other requirements specified by UDWQ and obtain Project-specific UPDES permits. UDWQ indicates a Project-specific UPDES storm water permit may now be obtained via their internet website, and a Project-specific UPDES dewatering/ hydrostatic testing permit must be obtained through their office. No construction may be performed until the Project-specific UPDES permits are obtained. Abide by conditions and standards required by the UPDES General Permits and

- any UPDES Project-specific permits during all construction.
- 2) Prepare a Stormwater Pollution Prevention Plan (SWPPP) as required by the permit and submit to, and obtain, UDEQ approval before commencing earth disturbing activities. Comply with all terms and conditions to obtain and maintain this general permit. Submit Notice of Termination after construction and conditions of permit are completed.
- e. Provide all monitoring and water treatment, as necessary, to achieve compliance with applicable Water Quality Standards. Provide the record keeping required by the general permit associated with construction activity.

1.05 COMPLIANCE WITH ENVIRONMENTAL REGULATIONS

- A. Comply with applicable environmental regulations as part of a ground disturbing activity not previously evaluated in the Project environmental document such as wasting Project-generated material, excavating borrow material, locating equipment, storage areas, office sites, utility lines, or holding ponds.
 - 1. Comply with the Endangered Species Act.
 - 2. Comply with regulations governing Waters of the United States (including wetlands and special aquatic sites) and Waters of the State of Utah.
 - 3. For water bodies and wetlands, the Contractor is required to comply with, if needed, the Utah State Stream Alteration Program, Section 10 of the Rivers and Harbors Act, Section 404 of the Clean Water Act.
 - 4. Comply with the National Flood Insurance Program's floodplain management regulations if the activity is in a Special Flood Hazard Area.
 - 5. Comply with National (NPDES) and Utah (UPDES) Pollutant Discharge Elimination System regulations.
 - 6. Comply with the National cultural resource preservation laws (National Historic Preservation Act, American Antiquities Act, Archaeological Resources Protection Act, Native American Graves Protection and Repatriation Act), and the Utah Historical Preservation Act.
 - 7. Comply with the Migratory Bird Treaty Act.

1.06 COMPLIANCE WITH LAWS AND REGULATIONS

- A. Comply with applicable federal and state laws, orders, and regulations concerning the control and abatement of water pollution including the following:
 - 1. UPDES Permit: Discharge of wastewater or other pollutants, as a result of construction activities, into navigable waters in Utah, requires a 402 or UPDES permit defined under Section 402 of the Clean Water Act, Public Law 92-500, as amended by Public Law 95-217.
 - The UPDES permit process is administered by the State of Utah, Utah Department of Environmental Quality (UDWQ), Division of Water Quality, 195 North 1950 West, Salt Lake City, Utah 84116, (801) 536-4300. Submit a Notice of Intent to comply with the Federal Clean Water Act, Section 402 UPDES General Permit during the construction of the Project. Complete all UDWQ Project-specific permit applications and other requirements and obtain any Project-specific UPDES permits. The UDWQ has indicated that it may take about 1 month to process a Project-specific UPDES permit. No construction dewatering may be performed until the Project-specific UPDES permit is obtained. The Contractor shall abide by the conditions and standards required by the UPDES General Permit and any UPDES Project-specific permit during all phases of construction.
 - Prepare a Storm Water Pollution Prevention Plan (SWPPP) as required by the permit. Comply with all terms and conditions to obtain and maintain this general permit. Provide all monitoring and water treatment, as necessary, to achieve compliance with applicable Water Quality Standards, and shall provide the record keeping required by the general permit associated with construction activity.
- B. Turbidity and pH Control: Turbid wastewater resulting from earth processing, excavation, dewatering, and other construction activities shall be treated prior to discharge into any watercourse by means acceptable to UDWQ.
 - 1. Construction Activities:
 - a. Excavation and other construction activities shall be conducted in a manner to prevent muddy water and sediment from passing into any watercourse by the construction of intercepting ditches, barriers, settling ponds, or other approved means.
 - b. Provide sumps, pumps, and associated facilities, as described in Water Quality Management Plan.

- c. Mechanized equipment shall not operate in flowing water except as necessary to construct crossings or to perform the construction. Any equipment entering a stream or other water body requires prior approval by Engineer.
- d. The Contractor's methods of dewatering and stockpiling earth shall include preventive measures to control silting and erosion and to intercept any runoff originating in construction areas.

2. Construction Wastewater:

- a. Construction wastewater includes any water resulting from materials processing, placement of concrete, dewatering, excavations, drainage at the excavated material disposal and storage sites, drainage water from constructing water control equipment, and waste sludge.
- Wastewater from the cleaning of heavy equipment used in construction and other construction operations shall be properly treated prior to the discharge into any receiving waters.
- c. Construction wastewater shall not be discharge into any receiving waters without proper treatment.
- d. Treatment methods must be approved by UDWQ and shall be fully described in the Contractor's Water Quality Management Plan.
- e. All discharges shall be in compliance with the Federal Clean Water Act, Section 402 UPDES General Permit.
- f. Dewatering Flows:
 - 1) Treatment of dewatering flows may require settling ponds to sufficiently remove sufficient TSS (total suspended solids) in order to comply with UPDES permit before release into a watercourse or land drain ditch.
 - 2) If dewatering flows are small enough that they can seep into the ground (without damaging adjacent farming and properties) or evaporate, then no further treatment is necessary.
 - 3) Pond dikes shall be of impervious materials with adequate freeboard to prevent accidental discharges.
 - 4) The location, size, and method of construction of ponds shall be submitted to the UDWQ as part of the Water Quality Management Plan.
 - 5) Construction of the ponds shall not commence until receipt of approval from UDWQ and delivery of the UDWQ-approved plan to the Engineer.
 - 6) Contractor dewatering flows discharged into receiving waters shall have TSS (total suspended solids) within the State allowed limits (such as, UDWQ General Permit No. UTG070000).

- C. All chemicals (such as. flocculants) used for treating construction wastewater that will be discharged to streams and lakes, must be EPA approved for use in potable water. Also, the types and amounts of chemicals used in any approved method for the control of turbidity or pH shall not cause the effluent to be toxic or in any way harmful to terrestrial wildlife or aquatic life. Skim and properly dispose of any oil or other petroleum product on any settling pond when an oil film on the surface of any pond covers more than one-third of the surface area of the pond. When sludge or settled materials in ponds accumulate so as to impair the effectiveness of the facilities, the materials shall be removed and transported to a waste disposal area. Satisfactorily operate any wastewater treatment facilities such that they provide effluent that meets required UPDES permit limitations.
- D. Spill Prevention Control and Countermeasure (SPCC) Plan. Where the location of a construction site is such that oil from an accidental spillage could reasonably be expected to enter into or upon the navigable waters of the United States or adjoining shorelines and the aggregate storage of oil above ground at the site is over 1,320 gallons or a single container has a capacity in excess of 660 gallons, or the aggregate storage of oil underground is in excess of 42,000 gallons, prepare and implement a SPCC plan in accordance with 40 CFR, part 112, as required by Public Law 92-500 as amended. The SPCC Plan shall include as a minimum the following:
 - 1. Agency Notification Requirements. A listing of persons and/or offices to be notified immediately following an oil spill together with the appropriate telephone numbers. The following agencies and/or individuals shall be included in that list:
 - a. Utah Department of Environmental Quality
 Division of Environmental Response & Remediation
 195 N 1950 W; SLC, UT 84114. (801) 536-4100.
 24-hour Emergency Phone: (801) 536-4123.
 - Environmental Protection Agency, Region 8
 Attn: Water Management Division; 80C-EISC
 1595 Wynkoop St.; Denver, CO 80202-1129
 24-hour Emergency Phone: (800) 424-8802
 **Failure to notify EPA of an accidental spill within 24 hours of its occurrence may result in the levying of a fine against the responsible party.
 - U.S. Fish and Wildlife Service:
 2369 West Orton Circle, Suite 50; West Valley City, UT 84119
 phone (801) 975-3330; fax (801) 975-3331
 After hours contact National Response Center: (800) 424-8802.
 - 2. Spill Prevention Measures shall include the following:
 - a. A Site plan indicating oil fuel storage areas, refueling areas, and other areas where oil and other petroleum products would

be used or handled. The Site plan will also show the distance to all watercourses (perennial or intermittent) or other bodies of water where oil could be directly or indirectly spilled, and oil and fuel storage areas and refueling areas shall not be located within the 200-foot buffer zone of any live or dry watercourse. No onsite storage of petroleum products (gasoline, oils, hydraulic fluid, lubricants, etc.) shall be stored within the area of construction or materials marshaling areas. Use a vehicle designed for refueling and lubricating construction equipment. During refueling, lubricating, and other maintenance, construction vehicles and equipment shall be moved at least 200 feet from the edge of any live or dry watercourse.

- b. Plan shall include appropriate containment structures to prevent oil or other petroleum products from reaching any watercourse. At a minimum, the preventive system shall include:
 - 1) No oil and oil storage areas and areas for refueling equipment will be located in construction and materials storage areas.
 - 2) Refueling and lubricating of equipment will be performed by a vehicle designed for this activity.
- c. The plan shall include a complete discussion of conformance with the following guidelines:
 - Jobsite drainage system shall flow into ponds, lagoons, or other catchment basins that are not subject to periodic flooding and engineered to prevent oil from reaching any watercourse or adjacent shorelines in the event of equipment failures or human error.
 - 2) All oil or fuel leaks from equipment shall be promptly cleaned up.
- d. Contingency and Countermeasures. In the event of an oil spill into a watercourse, other body of water, or adjacent shorelines of watercourses, contingency and countermeasures shall include as a minimum the following:
 - A commitment of manpower, materials, and equipment to expeditiously control the spill and remove spilled oil or fuel:
 - 2) A commitment to place all available manpower, materials, and equipment into immediate use to cleanup and restore the affected watercourses and their adjoining shorelines:
 - 3) A sampling monitoring program to document the effectiveness of the spill cleanup program. Proper sampling equipment, sampling procedures, and name of certified laboratory analyzing the samples shall be included.

- e. Sanitation and Potable Water Requirements. Provide portable toilets for workers. No discharge of human waste is allowed. No potable water is available.
 - 1) Prepare a Pollution Prevention Plan as required by the permit. Comply with all terms and conditions to obtain and maintain this general permit;
 - 2) Provide all monitoring and water treatment, if necessary, to achieve compliance with applicable Water Quality Standards. Provide the record keeping required by the general permit associated with construction activity.
- E. Water Quality Management Plan: Prepare a Water Quality Management Plan which shall include, but not be limited to, the following:
 - 1. Identification of a Pollution Control and Water Quality Coordinator responsible for implementing the control measures in the management plan.
 - 2. Treatment of Nonpoint Discharges:
 - a. A list of materials, machinery, and manpower available for erosion control. Erosion control materials may include bales of straw, dikes, riprap, gabions, culverts, pipe, sandbags, gravel, plastic, and flexible down drains. Quantities of material and equipment shall be included.
 - b. Site-Specific Control Plan For:
 - 1) Contractor's camps, yards, and all work areas;
 - 2) Equipment washing areas;
 - 3) Fueling areas;
 - 4) Excavated material storage areas and waste disposal areas.
 - c. Methods for Diversion and Care of Waterway During Construction:
 - 1) Projected schedule for all work in waterways.
 - 2) Identification and location of waterway diversion structures such as cofferdams and dikes;
 - 3) Sources of materials for waterway diversion structures.
 - 3. Treatment of Point Discharges:
 - a. Methods for treatment of water used and/or encountered during construction.
 - b. Proposed plan for water treatment facilities including:
 - 1) Location, capacity, size, and method of constructing ponds and water conveying system;
 - 2) Complete design and construction details of the water treatment plant, if proposed;
 - 3) Arrangement for the turbidity and pH control structures;

- 4) Method for conveying untreated water to the control structures or treatment plant and water from these facilities to the authorized discharge point;
- 5) Method of storing and disposing of sludge, settling pond residue, or backwater residue accumulation;
- 6) Description of chemicals to be used in the water treatment facilities:
- 7) Methods of handling and disposing of oil and other petroleum products, chemicals, and similar industrial wastes collected within the treatment facility;
- 8) Other salient features.
- 4. Monitoring Program. A complete description of a daily and weekly water quality monitoring program developed to meet the UPDES permit requirements. The program shall follow the outline and requirements in Subparagraph Water Quality Sampling and Testing.
- Submittal of Plan:
 - a. Within 30 calendar days after award of contract, submit, for Owner review and acceptance, a Water Quality Management Plan.
 - b. Approval of Contractor's plan shall not relieve the Contractor of responsibility for designing, constructing, operating, and maintaining a turbidity and pH control plan in a safe and systematic manner and for repairing at his expense any damage to or failure of the turbidity and pH control structure and equipment caused by floods or storm runoff. Obtain Utah State Division of Health approval prior to installing any sanitary or industrial pollution control facilities, including the turbidity control facilities.
 - c. Submit Plans for Approval to:
 - Utah Division of Health
 288 North 1460 West
 P.O. Box 144870
 Salt Lake City, Utah 84114-4870.
 - d. A copy of the approval shall be sent to the Engineer.
- 6. Water Quality Sampling and Testing:
 - a. Water quality sampling and testing shall be accomplished, as necessary to maintain proper control of TSS, turbidity, oil and grease, pH, temperature, and oil sheen in all construction wastewater discharge operations and ensure compliance with the UPDES permit.
 - b. The sampling and testing of water shall be accomplished according to standard procedures described in the latest edition of the EPA publication "Methods for Chemical Analysis of Water and Wastes."

- c. As a minimum, the program shall consist of measuring the pH, turbidity, and water temperature of the effluent from the water treatment facilities weekly.
- d. All water sampling data shall include the date, time of day, name of person(s) taking the sample, and recording measurements.
 - 1) Submit to Engineer copies of each test submitted to UDWR.
 - 2) Submit to Engineer copies of results of all laboratory analysis for oil and grease.
 - 3) Submit to Engineer a copy of the Contractor's Quarterly Discharge Monitoring Report submitted to the Utah Division of Environmental Health as a required by the 402 Permit (at the same time it is sent to State).
- e. Maintain access to all water quality monitoring sites.
 Sampling, testing, and monitoring of stream water by the
 Owner shall in no way relieve the Contractor of the
 responsibility for doing such monitoring as is necessary for
 controlling of his operations to prevent violation of water
 quality standards.

1.07 EROSION AND SEDIMENT CONTROL PLAN

- A. Prepare, submit, and comply with Erosion and Sediment Control Plan. Comply with federal, state, and local laws, rules and regulations, including UPDES and this Contract requirements. Local government permits may be more stringent than this Specification. In the event of a conflict, the more stringent requirements shall apply. The Federal Endangered Species Act may be most stringent if construction runoff enters waters inhabited by protected species.
- B. Design, furnish, install, maintain, and remove all temporary erosion and sedimentation controls for clearing, grubbing, stripping, stockpiling, staging, excavation, trenching, filling, backfilling, access roads, hauling, compacting, grading, paving, surface restoration, revegetation, and other Work. All erosion and sediment control measures are subject to review by Engineer.
- C. In excavation, fill, and grading operations care shall be taken to disturb the pre-existing drainage pattern as little as possible. Particular care shall be taken not to direct drainage water onto private property or into streets or drainage ways inadequate for the increased flow.
- D. Erosion and Sediment Control Plan:
 - 1. Submit name and qualifications for Erosion and Sediment Control Coordinator (Coordinator). Coordinator is responsible for managing

and implementing Erosion and Sediment Control Plan, including but not limited to:

- a. Update Plan to reflect current field conditions.
- b. Install and maintain erosion and sediment control facilities.
- c. Train field staff on Plan requirements, and each person's duties, including:
 - 1) Stormwater control sites and how to maintain.
 - 2) Procedures to comply with pollution prevention requirements.
 - 3) Procedures to conduct inspections, record findings, and take corrective action.
- d. Inspect all areas disturbed by construction including:
 - 1) Onsite erosion and sediment control BMPs.
 - 2) Stormwater discharge points.
 - 3) Temporarily stabilized inactive sites.
 - 4) As directed by Engineer.
- e. After construction, remove all temporary erosion and sediment control facilities. Verify revegetation, surface restoration, and permanent erosion control are working. See Section 32 93 00, Revegetation and Surface Restoration.
- 2. Submit Contractor Erosion and Sediment Control Plan. As a part of Stormwater Pollution Prevention Plan (SWPPP), detail the Erosion and Sediment Control Plan. Typical required elements include:
 - a. General Site Description: Area disturbed, soil types and their erosion potential, fill materials to be used, sequence and schedule of major construction events.
 - b. Site Map: Areas to be disturbed, topography, drainages, drainage patterns, springs, wetlands, staging and stockpile areas, vegetative plans, erosion and sediment control measure points, water quality monitoring points, downstream receiving pipes, channels, and water bodies.
 - c. BMPs and Procedures for Erosion Prevention, Runoff Control and Sediment Control including:
 - 1) Construction entrances/exits and parking areas.
 - 2) Unpaved site roads such as haul roads.
 - 3) Moving or hauling saturated soils.
 - 4) Water washed from concrete trucks.
 - 5) Correctly installed erosion and sediment control.
 - 6) Prompt maintenance and repair of BMPs.
 - 7) How to minimize disturbed areas during Project.
 - 8) Vegetative practices (seeding, mulching, buffer strips, preservation of existing vegetation).
 - 9) Preventing erosion of exposed areas.
 - 10) Diverting flows from exposed slopes.
 - 11) Limiting runoff from exposed areas.
 - 12) Limiting sediment movement on and offsite.
 - 13) Plans for flooding and wet periods.

- 14) Sensitive areas such as wetlands.
- 15) Offsite material source and waste areas.
- 16) Dust and material stockpiles.
- 17) Emergency materials stockpiled onsite.
- 18) Storing flows and filtering sediment.
- d. Submit Plan and schedule, signed by Coordinator and certs.
- e. Do not begin any Site activities affecting erosion or sediment until Plan and implementation schedule are accepted by Engineer.
- f. Keep accepted Plan with updated changes onsite.
- g. Update Plan and schedule as needed for unexpected storm or other events to ensure sediment-laden water don't leave Site. Add Plan changes no later than 24 hours after implementation.
- h. Provide appropriate measures including, but not limited to: dams, diversions, ditches, berms, culverts, detention/settling basins, energy dissipaters, other surface water controls, underground water controls, silt fences, covering or protecting slopes until permanent erosion control measures are working.
- i. Engineer may require additional temporary control measures if it appears pollution or erosion may result from weather, nature of materials, or Work progress.

1.08 PRESERVATION OF CULTURAL RESOURCES

- A. Immediately notify the Engineer if any evidence of historical, prehistorical, or archaeological materials are discovered during the course of the Contract. Unless otherwise directed by the Engineer, all work in the immediate vicinity of the discovery will be halted until a qualified archaeologist makes a determination of significance.
- B. Federal legislation provides for the protection, preservation, and collection of scientific, prehistoric, historic, and archaeological data, including relics and specimens, which might otherwise be lost due to alteration of the terrain as a result of any federal construction project.
- C. Should the Contractor, or any of the Contractor's employees, or parties operating or associated with the Contractor, in the performance of this Contract discover evidence of possible scientific, historical, prehistoric, or archaeological data, immediately cease work at that location and notify the Engineer, giving the location and nature of the findings. Forward written confirmation to the Engineer within 24 hours. Exercise care so as not to disturb or damage artifacts or fossils uncovered during excavation operations, and shall provide such cooperation and assistance as may be necessary to preserve the findings for removal or other disposition by the government.

- D. Any person who, without permission, injures, destroys, excavates, appropriates, or removes any historical or prehistoric artifact, object of antiquity, or archeological resource on the public lands of the United States is subject to arrest and penalty of law.
- E. Where appropriate by reason of discovery, the Engineer may order changes in the time of performance or changes in the Work, or both. If such changes are ordered, an equitable adjustment will be made in the Contract in accordance with the applicable clauses of the Contract.
- F. Any access roads, construction staging areas, fill disposal sites or other areas that will be impacted as a result of construction activities must have a cultural clearance done at least 45 days prior to disturbance. Cultural clearances must be done in advance to allow for records search, site survey/inventory, coordination with the State Historic Preservation Office (SHPO), and the SHPO's response of concurrence or nonconcurrence with findings.

1.09 HANDLING OF HAZARDOUS MATERIALS

- A. Should the Contractor find it necessary to generate, store, transport, or dispose of hazardous wastes, he shall abide by conditions contained in the Utah Hazardous Waste Management Regulations. The Contractor can call (801) 538-6170 in Salt Lake City, Utah, for additional information. Hazardous materials such as explosives, solvents, gasoline, diesel and lubricants shall be stored in safe areas away from sensitive plant communities and fish and wildlife habitats.
- B. If the Engineer determines that hazardous waste exists and that conditions exist which the Contractor could not discover through the investigations required by the preceding paragraph, the Engineer shall notify the Contractor and the Contractor may request a change order in accordance with the Contract Documents. Nothing in this section shall relieve the Contractor of the obligation to pay all fees and costs associates with removal and cleanup of any hazardous waste used at, or brought to, the jobsite by the Contractor. Nor shall this section relieve the Contractor of responsibility for the Site conditions discoverable by any investigations required by the preceding paragraph.
- C. In the event that a dispute arises between the Engineer and the Contractor involving hazardous waste and whether Site conditions differ materially from those the Contractor could or should have discovered by the investigations required by the Contract, the Contractor shall not be excused from the scheduled completion date provided in the Contract Documents and shall proceed with all work in the manner and in the time required by the Contract Documents.

1.10 USE OF HERBICIDES AND PESTICIDES

- A. Pesticides including insecticides, fungicides, rodenticides, piscicides, avicides, surface disinfectants, animal repellents, and insect repellents are not allowed, except as follows. Insect repellents for individual personal use by Contractor's personnel and other project personnel are permitted. See Section 32 94 00, Invasive Weed Control, for required herbicide work. Other herbicides are not allowed.
- B. Where herbicides and pesticides must be used, submit written plan for such use for Engineer approval. Use only herbicides and pesticides registered with the Environmental Protection Agency.

1.11 PROTECTION OF EXISTING LANDSCAPE AND WILDLIFE

- A. The Contractor shall not allow any hunting or camping by employees, subcontractors, suppliers, or other intruders in the vicinity of the construction work upon any of the landowner's properties through which the Project easements pass.
- B. Preserve the existing lands and conduct operations to prevent unnecessary destruction, scarring, or defacing of the land surface in the vicinity of the Work. Areas where construction activities or construction access will not be permitted will be marked in the field by the District, and these areas shall be identified with orange temporary fencing installed by the Contractor.
- All orchard trees shall be marked for removal in the presence of the Owner and Landowner. Refer to Section 01 31 13, Project Coordination. Only remove other trees/bushes that are not noted on Drawings to be protected or are landscape trees/bushes unless marked by the Construction Manager. The Construction Manager will field mark any additional trees that can be removed. If any limbs or branches of trees are broken during contract performance, or by operation of equipment, or by workmen, trim these limbs or branches with a clean cut and paint the cut with a tree-pruning compound as directed or approved by a licensed arborist. Movement of crews and equipment within the rights-of-way and other approved routes provided for access to the work shall be performed in a manner to minimize damage to river and riparian areas, wetlands, wildlife habitat, or property. When no longer required for construction, temporary access roads shall be restored as prescribed in the Specifications to original or acceptable contours, restored to final conditions, and made impassable to vehicular traffic.
- D. The Contractor shall minimize disturbances or impacts to wildlife and their habitat that my exist within the Project construction limits.

- E. No raptor nest sites have been identified in the Project area. However, if a raptor nest site is found to be an active nest site in the year of construction, the Construction Manager will direct the Contractor to restrict construction activities within 0.6 mile of the nest during nesting season. Construction camps, processing facilities, and equipment yards shall not be located within 1 mile of the nest site. Nesting season varies from bird to bird. Exact restrictions will be determined by Utah Division of Wildlife Resources.
- F. Large trees and snags should be unharmed to the extent practicable during construction. Trees and snags with cavities are particularly important for wildlife
- G. Brush and tree removal, trimming of trees and brush may occur after September 1 and shall be completed by January 31 (in any year). Any brush and tree removal and trimming of trees and brush prior to September 1 and after January 31 will require the Contractor to arrange and pay CUWCD for a qualified biologist to conduct nesting surveys, prior to construction activities, to verify that no migratory birds are nesting in the vegetation to be removed. These surveys would be conducted in consultation with U.S. Fish and Wildlife Service and the Contractor should allow 30 days for the survey process.

1.12 DUST CONTROL

- A. During the performance of work required by these specifications or any operations appurtenant thereto, and whether on rights-of-way provided or elsewhere, comply with applicable federal, state, and local laws and regulations, regarding the prevention, control, and abatement of dust pollution. Should a conflict exist in the requirements for dust abatement, the most stringent requirement shall apply. The Contractor is responsible for all damages resulting from dust originating from Contractor operations under these specifications. Strictly attend to all dust control requirements within 500 feet of residences and buildings.
- B. Provide all labor, equipment, and materials, and shall use efficient methods wherever and whenever required to prevent dust nuisance or damage to persons, property, or activities, including, but not limited to, forest terrain, wildlife habitats, recreational activities, traffic, and similar conditions. Perform dust control on weekends. Methods of mixing, handling, and storing cement, pozzolan and concrete aggregate shall include means of eliminating atmospheric discharges of dust.
- C. The Construction Manager has authority to stop any construction activity contributing to dust levels which are excessive or in violation of federal, state, or local laws. All expenses resulting from such a work stoppage is the responsibility of the Contractor.

1.13 ABATEMENT OF AIR POLLUTION

- A. Comply with applicable federal, state, and local laws and regulations, and with the requirements of this paragraph concerning the prevention and control of air pollution. Should a conflict exist in the requirements for abatement of air pollution, the most stringent requirement shall apply. The Contractor shall utilize such methods and devices as are reasonably available to prevent, control, and otherwise minimize atmospheric emissions or discharges of air contaminants.
- B. Equipment and vehicles that show excessive emissions of exhaust gases, as determined by the Construction Manager, shall not be operated until corrective repairs or adjustments are made to reduce emissions to acceptable levels.

1.14 NOISE LEVELS IN THE CONSTRUCTION AREA

- A. Comply with applicable federal, state, and local laws, orders, and regulations concerning the prevention, control, and abatement of excessive noise. The Contractor will monitor construction noise levels and will take corrective action if noise levels are greater than 85 dBA within the construction area.
- B. The Contractor shall comply with noise exposure and hearing conservation standards and practices contained in the USBR safety and health standards manual (USBR 2014) to protect workers and the public from potential harmful noise. Mufflers on construction equipment shall be checked regularly to minimize noise.

1.15 WETLANDS AND RIPARIAN AREAS

- A. The Contractor will be required to prepare a pipeline construction plan for approval by the District before starting any pipeline construction that may affect wetlands and riparian vegetation adjacent to roadways. The plan will document methods to protect wetlands and riparian vegetation from construction impacts.
- B. Where impacts on wetlands cannot be avoided, they will be minimized to the extent possible. Heavy equipment in wetland areas will be operated on temporary earth fills placed on geotextile mats (or other appropriate measures) to minimize soil disturbance. Construction barriers will be installed to prevent unnecessary damage to adjacent wetlands.
- C. Materials excavated from the pipeline trench will be placed on the adjacent roadway or in other upland areas. No excavated material will be placed in any wetlands. Where not practical to avoid wetland impacts, wetland soils will be removed, segregated and stockpiled in upland areas. Wetland topsoil will be replaced in the top of 6 inches to 12 inches of the

- pipeline trench, and the disturbed area will be graded to match previous contour elevations and revegetated with a mixture of adapted wetland plant species.
- D. Construction of pipeline trenches will incorporate erosion control SOPs to avoid or minimize adverse ground and surface water quality impacts.
- E. Pipelines will be installed during construction measures such as cutoff walls if a bedding material is used that could otherwise cause wetlands to be drained.
- F. Power poles and electrical distribution line access roads will not be located or constructed on wetlands or riparian corridors.

1.16 SUBMITTALS

- A. Water Quality Management Plan. Plan shall address all Project-specific issues, including, but not limited to the following:
 - 1. UPDES Project-Specific Permit Compliance.
 - 2. Turbidity and pH Control.
 - 3. Spill Prevention and Countermeasures Plan.
 - 4. Water pollution control and water quality monitoring and reporting.
 - 5. Water control including storm (SWPPP) and non-storm (such as, construction) water discharges, and surface water control and groundwater removal (dewatering).
- B. Erosion and Sediment Control Plan. Plans shall address all Project-specific issues, including but not limited to the following:
 - Appropriate control measures for each area to be disturbed: staging areas, stockpile and spoils areas, pipeline work areas, road and haul areas, and structure and grading sites, water courses, drainages and springs, and groundwater influenced areas in site and downstream, etc.
 - 2. Inspecting, repairing, maintaining and removing control measures.
- C. Samples and Manufacturers data for each material, product and equipment to be used in Water Quality Management Plan and Erosion and Control Plan. Samples and Manufacturers data are required to show that each material, product and equipment to be used will perform the function for which it is proposed in Plan.

1.17 CONTRACTOR RESPONSIBILITY FOR WORK PLANS

A. Engineer review and acceptance of each Contractor plan does not relieve Contractor of full responsibility for each plan and its consequences, including any adverse impacts to existing and new lands, features,

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facilities and functions. Repair, restore and make whole all things adversely impacted by Contractor plans, their performance, and/or incomplete performance.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01 55 26 TRAFFIC CONTROL

PART 1 GENERAL

1.01 GENERAL

- A. See Project-Specific Traffic Control Requirements in the Supplement at end of this section.
- B. Obtain and pay for all required city, county, and state permits from each jurisdictional agency responsible for street where Work will be done. Comply with all permit conditions and all requirements of permitting agencies.
- C. Submit, integrate agency input, and implement Traffic Control Plan in accord with jurisdictional agency responsible for road/street where it will be used.
- D. For UDOT highways and streets, comply with latest edition of UDOT Standard Specification Section 01554 Traffic Control.

1.02 DEFINITIONS

- A. Jurisdictional Agency: A city, county, UDOT, or other agency responsible for the roadway where the Traffic Control Plan applies.
- B. Maintenance of Traffic (MOT) is a UDOT term for Traffic Control. They define it as: "The work necessary to advise the public of changes to normal traffic flow, and to indicate planned detours and alternate routes to closed roads. Use solely as advisory information to the public."
- C. Traffic Control Plan (Plan): Contractor's stamped and signed traffic control plan (and updates) as accepted by jurisdictional agency responsible for the roadways to which the Plan pertains.
- D. Traffic Control Supervisor (TC Supervisor): A Professional Traffic Operation Engineer (PTOE) or ATSSA certified Work Site Traffic Control Supervisor stamping Traffic Control Plan with PTOE registration, ATSSA certification, or UDOT certification number; and is qualified and responsible for designing, implementing and maintaining Contractor Traffic Control Plan.
- E. UDOT: Utah Department of Transportation.

1.03 REFERENCES

- A. The following is a list of standards which may be referenced in this section:
 - 1. AASHTO Roadside Design Guide, Current Edition.
 - 2. American National Standards Institute (ANSI).
 - 3. Americans with Disabilities Act.
 - 4. ATSSA: American Traffic Safety Services Association. Quality Standards for Work Zone Traffic Control Devices.
 - 5. Federal Highway Administration. Standard Highway Signs.
 - 6. Manual on Uniform Traffic Control Devices (MUTCD), Latest Edition.
 - 7. NCHRP Report 350, Recommended Procedures for the Safety Performance Evaluation of Highway Features.
 - 8. International Safety Equipment Association (ISEA).
 - 9. Utah Department of Transportation (UDOT): Standard Specifications and Standard Drawings.

1.04 SUBMITTALS

- A. Names and qualifications of Traffic Control Supervisor and backup 7 days before preconstruction conference.
- B. Traffic Control Plan. Initial Plan (entire Work) at preconstruction conference. Final Plan (agency approved) for each Work phase.
- C. City and county paved (non-UDOT) roads Contractor-proposes for trucks to access the Work.
- D. Map of Contractor proposed access route not on city, county or UDOT roads.
- E. Submit copies of permits, licenses, and approvals for construction as required by Laws and Regulations and governing agencies.
- F. Traffic Control Inspection Forms.

1.05 TRAFFIC CONTROL PLAN

- A. Traffic Control Plan Includes:
 - 1. Jurisdictional agency permits, conditions of such permits, and all relevant Work required by such permits.

- 2. Traffic Control Drawings for each reach, or phase, of the Work.
 - a. Show and describe locations of trenches, work zones, stored pipe and materials, truck access points, shared and unshared lanes, barrier rails, traffic barrels/cones, detours, signs, message boards.
 - Show work sequencing, time for each Work phase, and how to provide for safe traffic (includes pedestrian, bicycle, and vehicular traffic) in each roadway, including both neighborhood and notifications and street traffic control notifications.
 - c. Show and describe information regarding coordination of signal operations if traffic control plan impacts existing signals. Contractor shall coordinate signal operation with local city, county, and UDOT.
 - d. Show maximum time delays, sign postings for lane and road closures, and detour route maps and signs to give clear guidance.
 - e. Show details and timing to install, maintain, and remove temporary traffic control, trench plating, paving, walls, barriers, guardrails, striping, signing, flag persons and controls, and other work to provide safe access to public and for construction Work. Address covering of traffic control/detour signs when not in use.
- 3. A map showing proposed truck routes on non-UDOT paved streets that will be used to access the Work, and agreements with jurisdictional agencies to bond, inspect and repair any truck traffic damage to streets.
- B. Submit initial Traffic Control Plan in preconstruction conference.
- C. At least 60 days before start of Work in each reach of the Work, meet with jurisdictional agency and Engineer and present draft Traffic Control Plan. Integrate review comments, obtain jurisdictional agency Plan approval. Sign, stamp and submit signed, stamped Plan to jurisdictional agency and Engineer. Plan shall comply with Laws and Regulations, local requirements, and latest version of MUTCD.
- D. Do not begin Work on any reach until jurisdictional agency approves the Traffic Control Plan for that reach. Failure to submit Plan, or to address review comments acceptably to Engineer and jurisdictional agency, within specified time does not justify Work delay. Any days lost due to improper traffic control will be charged against the allowable working days.
- E. Changes to Plan are made only by written approval of jurisdictional agency and Engineer. Secure approvals early to not delay Work.

- F. Simultaneous road closures require added message boards at each end of closure, and written approval from jurisdictional agency and Engineer.

 Allow at least 14 days for review and 14 more days to notify residents.
- G. Any Traffic Control Plans in the Contract Documents are guidelines only and shall not be used in lieu of more detailed Contractor-prepared plans.

1.06 TRUCK ACCESS ROUTES

- A. Submit and obtain Jurisdictional Agency and Engineer acceptance of routes and maintenance conditions for all proposed truck access routes through Santaquin City streets.
- B. Keep trucks larger than a welding truck (such as, over two axles or over six wheels) on accepted truck access routes between Work limits and UDOT highways. Trucks accessing or leaving the Work limits on streets other than approved truck access routes may be fined \$100 per incident by Engineer or by City (officials, staff, or police), who will immediately notify Contractor of the violating truck license plate number. Fines will be withheld from Contractor payments.

1.07 GENERAL

- A. Use only roads allowed in Traffic Control Plan and local agency permit.
- B. The Contractor is fully responsible for work area safety. Provide barriers and signs to keep traffic and public out of Work areas during working hours and locked fences to keep public out of Work areas during nonworking hours.
- C. Furnish, install, construct, maintain, and remove detours, road closures, signs, barricades, concrete barriers, safety fences and gates, flag men, radios, flares, miscellaneous traffic devices, drainage facilities, paving, retaining structures, guardrails, concrete barriers, and other items and services as are necessary to adequately safeguard the public from hazard and inconvenience. All such shall comply with the ordinances, directives, and regulations of jurisdictional agency for roads in which the Work (and routing) is done.
- D. Implement and maintain Traffic Control Plan and with devices in good repair and working order. Replace lost or damaged devices regardless of why they are lost or damaged. If flagmen or radio controllers are a part of Plan (as may occur during working hours), maintain them until Plan indicates they are no longer needed (as may occur after working hours).
- E. Before the Work, notify Engineer and jurisdictional agency of expected Work start and end date, and name and phone of responsible person to call (at any hour) if a condition requires immediate correction.

- F. If Engineer finds Work improperly barricaded or delineated and Contractor is unavailable or unresponsive to a request for improvement, Engineer will furnish and set up barricades, delineators and devices as required by MUTCD and deduct the cost for such from Contractor payments.
- G. Do not delay traffic longer than 15 minutes during any phase of construction or longer than the delay time indicated in the Supplement following this Specification. A delay is defined as the total length of time any vehicle is stopped or detained within the Project limits by the Contractor. Engineer will document delay times and review them with Contractor.
- H. Night work is not allowed, unless approved in writing by jurisdictional agencies.
- I. Within Santaquin City, either 5200 W or 5600 W must remain accessible at all times. A maximum 10-day closure period, from 6:00 p.m. Friday through the following week and ending on Monday morning at 6:00 a.m., is allowed for each road crossing.
- J. A maximum 3-week closure period is allowed at the Lark Road crossing.
- K. Santaquin Orchard Days celebration is typically held the first week of August. Coordinate with Santaquin City to confirm dates and avoid impacts to the parade and other celebration events.

1.08 PERMITS TO BE OBTAINED BY CONTRACTOR

A. Construction and traffic control related permits shall be obtained by Contractor as indicated in Section 01 51 00, Permits and Regulatory Requirements. Completeness of this list is not guaranteed. Contractor is required to obtain all necessary permits for the Work.

1.09 TRAFFIC CONTROL SUPERVISOR

- A. Traffic Control Supervisor shall be the following:
 - 1. Be responsible for designing, initiating, installing, and maintaining all traffic control Work as shown on approved Traffic Control Plans, and as specified in MUTCD and these Specifications.
 - 2. Be a Contractor employee assigned full time to the Project when Work is occurring on public roadways and work exclusively on traffic control.
 - 3. Be available for Engineer and jurisdictional agency to contact 24 hours a day for the life of Contract with an acceptable backup if unavailable.

- 4. Be certified as a Work Site Traffic Control Supervisor by ATSSA with at least 1 year of experience directly related to Work site traffic control in a supervisory capacity (or equal). Backup shall be equally qualified.
- 5. Be capable of being onsite within 45 minutes of notification.
- B. Traffic Control Supervisor shall do the following:
 - 1. Make at least four inspections of all traffic control devices each day at these times: Before beginning work; at mid-shift; half an hour after the shift ends; and once during the nonworking hours.
 - 2. Make a daily record of traffic control activities using form approved by Engineer. Submit completed forms within 24 hours (each day).
 - 3. Develop daily the messages for message boards, program and locate boards, and verify staff have field located boards properly.
 - 4. Oversee daily the security of message boards: lock programming consoles, remove tires, lock tires to message boards, chain message boards to fixed items and other measures to prevent theft.
 - 5. Oversee flagging operations. For lane or road closures, prepare handouts showing schedules and map of Work locations. Keep handouts updated. Furnish copies to flaggers to give to drivers approaching closure barricades and drivers waiting to drive through single-lane zones.
 - 6. Oversee proper functioning of radios and distribution to flaggers.
 - 7. Oversee sign covering and uncovering. Each evening before crews leave see that all signs not required are covered and all signs required are uncovered. Each morning before start of Work, see that all signs not required are covered and all signs required are uncovered.
 - 8. Oversee that materials and equipment stored in road rights-of-way comply with Contract requirements.
 - 9. Verify property owner notifications are made per Contract requirements.

1.10 FLAGGER

- A. Flaggers must have a current flagging certificate and must present proof of the following certifications upon request.
 - 1. Acceptable flagging certification.
 - 2. UDOT Contractor Certification (Utah Valley University).
 - 3. American Traffic Safety Services Association (ATSSA).
- B. During detour duration, cover all signs not in accordance with the traffic control plan. Relocate existing signs to provide visibility from all relocated traffic lanes.

1.11 LAND OWNER AND BUSINESS ACCESS

- A. Maintain access for land owners and business whose access to their lands and businesses is through the Work area. Maintain satisfactory means of entry and exit for persons residing or having occasion to transact business along the route of the Work.
- B. Do not block access to private driveways for a period exceeding 24 hours unless Contractor notifies Owner, Engineer, and jurisdictional agency, and arranges with land owners blocked, and pays for alternative lodgings and related services at no cost to affected land owners.
- C. When a driveway access must be denied due to Work, notify each land owner (and responsible resident) of such closure at least 7 days in advance. Notify in writing each resident of estimated closure time, duration of the work, and of Contractor provided temporary parking location within 500 feet of closed driveway. Provide temporary parking for up to three vehicles for each private driveway closed during the closure period. Copy Engineer on each notification.
- D. Perform and maintain snow removal for any roads occupied by construction Work. Remove snow within 24 hours of a snow storm event or by 8:00 a.m. the next morning, whichever is sooner.
- E. Maintain access to at least one entrance to the parking lot of the church located at approximately 850 N 350 W at all times.
- F. 350 W traffic may be limited to local traffic only. Access to 350 W from either Royal Land Drive or 300 W must be maintained at all times.

PART 2 PRODUCTS

2.01 TRAFFIC CONTROL DEVICES AND SIGNS

- A. Construction signing, striping, barricades, and other traffic control devices used for handling traffic shall conform to the latest edition of the Federal Highway Administration "Manual on Uniform Traffic Control Devices for Streets and Highways" (MUTCD), latest version.
- B. Signs shall be reflectorized when they are used during hours of darkness. Provide cones, pylons, barricades, or posts used in the diversion of traffic with flashers or other illumination if in place during hours of darkness.
- C. Maintain a 24-hour emergency service to remove, install, relocate, and maintain warning devices and furnish to the authority having jurisdiction names and phone numbers of three persons responsible for this emergency service. In the event these persons do not promptly respond or the authority having jurisdiction deems it necessary to call out other

SPANISH FORK SANTAQUIN PIPELINE - SANTAQUIN REACH

forces to accomplish emergency service, the cost of such emergency service will be deducted from Contractor payments.

PART 3 EXECUTION (NOT USED)

END OF SECTION

SECTION 01 61 00 COMMON PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 DEFINITIONS

A. Products:

- New items for incorporation in the Work, whether purchased by Contractor or Owner for the Project, or taken from previously purchased stock, and may also include existing materials or components required for reuse.
- 2. Includes the terms material, equipment, machinery, components, subsystem, system, hardware, software, and terms of similar intent and is not intended to change meaning of such other terms used in Contract Documents, as those terms are self-explanatory and have well recognized meanings in construction industry.
- 3. Items identified by manufacturer's product name, including make or model designation, indicated in manufacturer's published product literature, that is current as of the date of the Contract Documents.

1.02 DESIGN REQUIREMENTS

A. Where Contractor design is specified, design of installation, systems, equipment, and components, including supports and anchorage, shall be in accordance with design criteria indicated on the General Structural Notes on the Drawings and applicable codes.

1.03 ENVIRONMENTAL REQUIREMENTS

- A. Altitude: Provide materials and equipment suitable for installation and operation under rated conditions at elevations as shown on Drawings.
- B. Provide equipment and devices installed outdoors or in unheated enclosures capable of continuous operation within an ambient temperature range of minus 20 degrees F to 120 degrees F.

1.04 PREPARATION FOR SHIPMENT

A. When practical, factory assemble products. Mark or tag separate parts and assemblies to facilitate field assembly. Cover machined and unpainted parts that may be damaged by the elements with strippable protective coating.

- B. Package products to facilitate handling and protect from damage during shipping, handling, and storage. Mark or tag outside of each package or crate to indicate its purchase order number, bill of lading number, contents by name, name of Project and Contractor, equipment number, and approximate weight. Include complete packing list and bill of materials with each shipment.
- C. Extra Materials, Special Tools, Test Equipment, and Expendables:
 - 1. Furnish as required by individual Specifications.
 - 2. Schedule:
 - a. Ensure that shipment and delivery occurs concurrent with shipment of associated equipment.
 - b. Transfer to Owner shall occur immediately subsequent to Contractor's acceptance of equipment from Supplier.
 - 3. Packaging and Shipment:
 - a. Package and ship extra materials and special tools to avoid damage during long term storage in original cartons insofar as possible, or in appropriately sized, hinged-cover, wood, plastic, or metal box.
 - b. Prominently displayed on each package, the following:
 - Manufacturer's part nomenclature and number, consistent with Operation and Maintenance Manual identification system.
 - 2) Applicable equipment description.
 - 3) Quantity of parts in package.
 - 4) Equipment manufacturer.
 - 4. Replace extra materials and special tools found to be damaged or otherwise inoperable at time of transfer to Owner.
 - 5. Deliver to location as directed by the Owner.
 - 6. Provide advance notice to Owner and Engineer of arrival for transfer of materials.
 - 7. Replace items found to be damaged or otherwise inoperable at time of transfer to Owner.
- D. Request a minimum 7-day advance notice of shipment from manufacturer. Upon receipt of manufacturer's advance notice of shipment, promptly notify Engineer of anticipated date and place of equipment arrival.
- E. Factory Test Results: Reviewed and accepted by Engineer before product shipment as required in individual Specification sections.

1.05 DELIVERY AND INSPECTION

- A. Deliver products in accordance with accepted current Progress Schedule and coordinate to avoid conflict with the Work and conditions at Site. Deliver anchor bolts and templates sufficiently early to permit setting prior to placement of structural concrete.
- B. Deliver products in undamaged condition, in manufacturer's original container or packaging, with identifying labels intact and legible. Include on label, date of manufacture and shelf life, where applicable.
- C. Unload products in accordance with manufacturer's instructions for unloading or as specified. Record receipt of products at Site. Promptly inspect for completeness and evidence of damage during shipment.
- D. Remove damaged products from Site and expedite delivery of identical new undamaged products, and remedy incomplete or lost products to provide that specified, so as not to delay progress of the Work.

1.06 HANDLING, STORAGE, AND PROTECTION

- A. Handle and store products in accordance with manufacturer's written instructions and in a manner to prevent damage. Store in approved storage yards or sheds provided in accordance with Section 01 50 00, Temporary Facilities and Controls. Provide manufacturer's recommended maintenance during storage, installation, and until products are accepted for use by Owner.
- B. Manufacturer's instructions for material requiring special handling, storage, or protection shall be provided prior to delivery of material.
- C. Arrange storage in a manner to provide easy access for inspection. Make periodic inspections of stored products to ensure that products are maintained under specified conditions, and free from damage or deterioration. Keep running account of products in storage to facilitate inspection and to estimate progress payments for products delivered, but not installed in the Work.
- D. Store electrical, instrumentation, and control products, and equipment with bearings in weather-tight structures maintained above 60 degrees F. Protect electrical, instrumentation, and control products, and insulate against moisture, water, and dust damage. Connect and operate continuously space heaters furnished in electrical equipment.

- E. Store fabricated products above ground on blocking or skids and prevent soiling or staining. Store loose granular materials in well-drained area on solid surface to prevent mixing with foreign matter. Cover products that are subject to deterioration with impervious sheet coverings; provide adequate ventilation to avoid condensation.
- F. Store finished products that are ready for installation in dry and well-ventilated areas. Do not subject to extreme changes in temperature or humidity.
- G. After installation, provide coverings to protect products from damage due to traffic and construction operations. Remove coverings when no longer needed
- Hazardous Materials: Prevent contamination of personnel, storage area, and Site. Meet requirements of product specification, codes, and manufacturer's instructions.

PART 2 PRODUCTS

2.01 GENERAL

- A. Provide manufacturer's standard materials suitable for service conditions, unless otherwise specified in the individual specifications.
- B. Where product specifications include a named manufacturer, with or without model number, and also include performance requirements, named manufacturer's products must meet the performance specifications.
- C. Like items of products furnished and installed in the Work shall be end products of one manufacturer and of the same series or family of models to achieve standardization for appearance, operation and maintenance, spare parts and replacement, manufacturer's services, and implement same or similar process instrumentation and control functions in same or similar manner.
- D. Do not use materials and equipment removed from existing premises, except as specifically permitted by Contract Documents.
- E. Provide interchangeable components of the same manufacturer, for similar components, unless otherwise specified.
- F. Equipment, Components, Systems, and Subsystems: Design and manufacture with due regard for health and safety of operation, maintenance, and accessibility, durability of parts, and shall comply with applicable OSHA, state, and local health and safety regulations.

- G. Regulatory Requirement: Coating materials shall meet federal, state, and local requirements limiting the emission of volatile organic compounds and for worker exposure.
- H. Safety Guards: Provide for all belt or chain drives, fan blades, couplings, or other moving or rotary parts. Cover rotating part on all sides. Design for easy installation and removal. Use 16-gauge or heavier; galvanized steel, aluminum coated steel, or galvanized or aluminum coated 1/2-inch mesh expanded steel. Provide galvanized steel accessories and supports, including bolts. For outdoors application, prevent entrance of rain and dripping water.
- I. Authority Having Jurisdiction (AHJ):
 - 1. Provide the Work in accordance with NFPA 70, National Electrical Code (NEC). Where required by the AHJ, material and equipment shall be labeled or listed by a nationally recognized testing laboratory or other organization acceptable to the AHJ in order to provide a basis for approval under NEC.
 - 2. Materials and equipment manufactured within the scope of standards published by UL shall conform to those standards and shall have an applied UL listing mark.
- J. Equipment Finish:
 - 1. Provide manufacturer's standard finish and color, except where specific color is indicated.
 - 2. If manufacturer has no standard color, provide equipment with gray finish as approved by Engineer.
- K. Special Tools and Accessories: Furnish to Owner, upon acceptance of equipment, all accessories required to place each item of equipment in full operation. These accessory items include, but are not limited to, adequate oil and grease (as required for first lubrication of equipment after field testing), light bulbs, fuses, hydrant wrenches, valve keys, handwheels, chain operators, special tools, and other spare parts as required for maintenance.
- L. Lubricant: Provide initial lubricant recommended by equipment manufacturer in sufficient quantity to fill lubricant reservoirs and to replace consumption during testing, startup, and operation until final acceptance by Owner.

- M. Components and Materials in Contact with Water for Human Consumption: Comply with the requirements of the Safe Drinking Water Act and other applicable federal, state, and local requirements. Provide certification by manufacturer or an accredited certification organization recognized by the Authority Having Jurisdiction that components and materials comply with the maximum lead content standard in accordance with NSE/ANSI 61 and NSE/ANSI 372.
 - 1. Use or reuse of components and materials without a traceable certification is prohibited.

2.02 FABRICATION AND MANUFACTURE

A. General:

- 1. Manufacture parts to U.S.A. standard sizes and gauges.
- 2. Two or more items of the same type shall be identical, by the same manufacturer, and interchangeable.
- 3. Design structural members for anticipated shock and vibratory loads.
- 4. Use 1/4-inch minimum thickness for steel that will be submerged, wholly or partially, during normal operation.
- 5. Modify standard products as necessary to meet performance Specifications.

B. Lubrication System:

- 1. Require no more than weekly attention during continuous operation.
- 2. Convenient and accessible; oil drains with bronze or stainless steel valves and fill-plugs easily accessible from the normal operating area or platform. Locate drains to allow convenient collection of oil during oil changes without removing equipment from its installed position.
- 3. Provide constant-level oilers or oil level indicators for oil lubrication systems.
- 4. For grease type bearings, which are not easily accessible, provide and install stainless steel tubing; protect and extend tubing to convenient location with suitable grease fitting.

2.03 SOURCE QUALITY CONTROL

A. Where Specifications call for factory testing to be witnessed by Engineer, notify Engineer not less than 14 days prior to scheduled test date, unless otherwise specified.

- B. Calibration Instruments: Bear the seal of a reputable laboratory certifying instrument has been calibrated within the previous 12 months to a standard endorsed by the National Institute of Standards and Technology (NIST).
- C. Factory Tests: Perform in accordance with accepted test procedures and document successful completion.

PART 3 EXECUTION

3.01 INSPECTION

A. Inspect materials and equipment for signs of pitting, rust decay, or other deleterious effects of storage. Do not install material or equipment showing such effects. Remove damaged material or equipment from the Site and expedite delivery of identical new material or equipment. Delays to the Work resulting from material or equipment damage that necessitates procurement of new products will be considered delays within Contractor's control.

3.02 MANUFACTURER'S CERTIFICATE OF COMPLIANCE

- A. When so specified, a Manufacturer's Certificate of Compliance, a copy of which is attached to this section, shall be completed in full, signed by entity supplying the product, material, or service, and submitted prior to shipment of product or material or execution of the services.
- B. Engineer may permit use of certain materials or assemblies prior to sampling and testing if accompanied by accepted certification of compliance.
- C. Such form shall certify proposed product, material, or service complies with that specified. Attach supporting reference data, affidavits, and certifications as appropriate.
- D. May reflect recent or previous test results on material or product, if acceptable to Engineer.

3.03 INSTALLATION

- A. Equipment Drawings show general locations of equipment, devices, and raceway, unless specifically dimensioned.
- B. No shimming between machined surfaces is allowed.
- C. Install the Work in accordance with NECA Standard of Installation, unless otherwise specified.

- D. Repaint painted surfaces that are damaged prior to equipment acceptance.
- E. Do not cut or notch any structural member or building surface without specific approval of Engineer.
- F. Handle, install, connect, clean, condition, and adjust products in accordance with manufacturer's instructions, and as may be specified. Retain a copy of manufacturers' instruction at Site, available for review at all times.
- G. For material and equipment specifically indicated or specified to be reused in the Work:
 - 1. Use special care in removal, handling, storage, and reinstallation to assure proper function in the completed Work.
 - 2. Arrange for transportation, storage, and handling of products that require offsite storage, restoration, or renovation. Include costs for such Work in the Contract Price.

3.04 FIFLD FINISHING

A. In accordance with Section 09 90 00, Painting and Coating, and individual specification sections.

3.05 ADJUSTMENT AND CLEANING

A. Perform required adjustments, tests, operation checks, and other startup activities.

3.06 LUBRICANTS

A. Fill lubricant reservoirs and replace consumption during testing, startup, and operation prior to acceptance of equipment by Owner.

3.07 SUPPLEMENT

- A. The supplement listed below, following "End of Section," is part of this specification.
 - 1. Manufacturer's Certificate of Compliance.

END OF SECTION

MANUFACTURER'S CERTIFICATE OF COMPLIANCE

OWNER:	PRODUCT, MATERIAL, OR SERVICE
PROJECT NAME:	SUBMITTED:
PROJECT NO:	
Comments:	
Comments.	
the Contract for the named Project wi requirements. I further certify that th	nced product, material, or service called for by II be furnished in accordance with all applicable be product, material, or service are of the quality with the Contract requirements, and are in the
Date of Execution:	, 20
Manufacturer:	
Manufacturer's Authorized Represent	ative (print):
(Autho	prized Signature)

SECTION 01 77 00 CLOSEOUT PROCEDURES

PART 1 GENERAL

1.01 SUBMITTALS

A. Informational Submittals:

- 1. Submit prior to application for final payment.
 - a. Record Documents: As required in General Conditions.
 - b. Approved Shop Drawings and Samples: As required in the General Conditions.
 - c. Special bonds, Special Guarantees, and Service Agreements.
 - d. Consent of Surety to Final Payment: As required in General Conditions.
 - e. Releases or Waivers of Liens and Claims: As required in General Conditions.
 - f. Releases from Agreements.
 - g. Final Application for Payment: Submit in accordance with procedures and requirements stated in Section 01 29 00, Payment Procedures.
 - h. Extra Materials: As required by individual specification sections.

1.02 RECORD DOCUMENTS

A. Quality Assurance:

- 1. Furnish qualified and experienced person, whose duty and responsibility shall be to maintain record documents.
- 2. Accuracy of Records:
 - a. Coordinate changes within record documents, making legible and accurate entries on each sheet of Drawings and other documents where such entry is required to show change.
 - b. Purpose of Project record documents is to document factual information regarding aspects of the Work, both concealed and visible, to enable future modification of the Work to proceed without lengthy and expensive Site measurement, investigation, and examination.

- 3. Make entries within 24 hours after receipt of information that a change in the Work has occurred.
- 4. Prior to submitting each request for progress payment, request Engineer's review and approval of current status of record documents. Failure to properly maintain, update, and submit record documents may result in a deferral by Engineer to recommend whole or any part of Contractor's Application for Payment, either partial or final.

1.03 RELEASES FROM AGREEMENTS

- A. Furnish Owner written releases from property owners or public agencies where side agreements or special easements have been made, or where Contractor's operations have not been kept within the Owner's construction right-of-way.
- B. In the event Contractor is unable to secure written releases:
 - 1. Inform Owner of the reasons.
 - 2. Owner or its representatives will examine the Site, and Owner will direct Contractor to complete the Work that may be necessary to satisfy terms of the side agreement or special easement.
 - 3. Should Contractor refuse to perform this Work, Owner reserves right to have it done by separate contract and deduct cost of same from Contract Price, or require Contractor to furnish a satisfactory bond in a sum to cover legal Claims for damages.
 - 4. When Owner is satisfied that the Work has been completed in agreement with Contract Documents and terms of side agreement or special easement, right is reserved to waive requirement for written release if: (i) Contractor's failure to obtain such statement is due to grantor's refusal to sign, and this refusal is not based upon any legitimate Claims that Contractor has failed to fulfill terms of side agreement or special easement, or (ii) Contractor is unable to contact or has had undue hardship in contacting grantor.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 MAINTENANCE OF RECORD DOCUMENTS

A. General:

1. Promptly following commencement of Contract Times, secure from Engineer at no cost to Contractor, one complete set of Contract Documents. Drawings will be full size.

- 2. Label or stamp each record document with title, "RECORD DOCUMENTS," in neat large printed letters.
- 3. Record information concurrently with construction progress and within 24 hours after receipt of information that change has occurred. Do not cover or conceal Work until required information is recorded.

B. Preservation:

- 1. Maintain documents in a clean, dry, legible condition and in good order. Do not use record documents for construction purposes.
- 2. Make documents and Samples available at all times for observation by Engineer.

C. Making Entries on Drawings:

- 1. Using an erasable colored pencil (not ink or indelible pencil), clearly describe change by graphic line and note as required.
 - a. Color Coding:
 - Green when showing information deleted from Drawings.
 - 2) Red when showing information added to Drawings.
 - 3) Blue and circled in blue to show notes.
- 2. Date entries.
- 3. Call attention to entry by "cloud" drawn around area or areas affected.
- 4. Legibly mark to record actual changes made during construction, including, but not limited to:
 - a. Depths of various elements of foundation in relation to finished first floor data if not shown or where depth differs from that shown.
 - b. Horizontal and vertical locations of existing and new Underground Facilities and appurtenances, and other underground structures, equipment, or Work. Reference to at least two measurements to permanent surface improvements.
 - c. Location of internal utilities and appurtenances concealed in the construction referenced to visible and accessible features of the structure.
 - d. Locate existing facilities, piping, equipment, and items critical to the interface between existing physical conditions or construction and new construction.
 - e. Changes made by Addenda and Field Orders, Work Change Directive, Change Order, and Engineer's written interpretation and clarification using consistent symbols for each and showing appropriate document tracking number.

- 5. Dimensions on Schematic Layouts: Show on record drawings, by dimension, the centerline of each run of items such as are described in previous subparagraph above.
 - a. Clearly identify the item by accurate note such as "cast iron drain," "galv. water," and the like.
 - b. Show, by symbol or note, vertical location of item ("under slab," "in ceiling plenum," "exposed," and the like).
 - c. Make identification so descriptive that it may be related reliably to Specifications.

3.02 FINAL CLEANING

- A. At completion of the Work or of a part thereof and immediately prior to Contractor's request for certificate of Substantial Completion; or if no certificate is issued, immediately prior to Contractor's notice of completion, clean entire Site or parts thereof, as applicable.
 - 1. Leave the Work and adjacent areas affected in a cleaned condition satisfactory to Owner.
 - 2. Remove grease, dirt, dust, paint or plaster splatter, stains, labels, fingerprints, and other foreign materials from exposed surfaces.
 - 3. Repair, patch, and touch up marred surfaces to specified finish and match adjacent surfaces.
 - 4. Clean all windows.
 - 5. Clean and wax wood, vinyl, or painted floors.
 - 6. Broom clean exterior paved driveways and parking areas.
 - 7. Hose clean sidewalks, loading areas, and others contiguous with principal structures.
 - 8. Rake clean all other surfaces.
 - 9. Remove snow and ice from access to buildings.
 - 10. Replace air-handling filters and clean ducts, blowers, and coils of ventilation units operated during construction.
 - 11. Leave water courses, gutters, and ditches open and clean.
- B. Use only cleaning materials recommended by manufacturer of surfaces to be cleaned.

END OF SECTION

SECTION 01 78 23 OPERATION AND MAINTENANCE DATA

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Detailed information for the preparation, submission, and Engineer's review of Operations and Maintenance (O&M) Data, as required by individual specification sections.

1.02 DEFINITIONS

- A. Final Data: Engineer-accepted data, submitted as specified herein.
- B. Preliminary Data: Initial and subsequent submissions for Engineer's review.
- C. Maintenance Operation: As used on Maintenance Summary Form is defined to mean any routine operation required to ensure satisfactory performance and longevity of equipment. Examples of typical maintenance operations are lubrication, belt tensioning, adjustment of pump packing glands, and routine adjustments.

1.03 SEQUENCING AND SCHEDULING

- A. Equipment and System Data:
 - 1. Preliminary Data:
 - a. Do not submit until Shop Drawing for equipment or system has been reviewed and approved by Engineer.
 - b. Submit prior to shipment date.
 - 2. Final Data: Submit Instructional Manual Formatted data not less than 30 days prior to equipment or system field functional testing.
- B. Materials and Finishes Data:
 - 1. Preliminary Data: Submit at least 15 days prior to request for final inspection.
 - 2. Final Data: Submit within 10 days after final inspection.

1.04 DATA FORMAT

A. Prepare preliminary data in the form of an instructional manual. Prepare final data on electronic media.

B. Instructional Manual Format:

- 1. Binder: Commercial quality, permanent, three-ring or three-post binders with durable plastic cover.
- 2. Size: 8-1/2 inches by 11 inches, minimum.
- 3. Cover: Identify manual with typed or printed title "OPERATION AND MAINTENANCE DATA" and list:
 - a. Project title.
 - b. Designate applicable system, equipment, material, or finish.
 - c. Identity of separate structure as applicable.
 - d. Identify volume number if more than one volume.
 - e. Identity of equipment number and specification section.
- 4. Spine:
 - a. Project title.
 - o. Identify volume number if more than one volume.
- 5. Title Page:
 - a. Contractor name, address, and telephone number.
 - b. Subcontractor, Supplier, installer, or maintenance contractor's name, address, and telephone number, as appropriate.
 - 1) Identify area of responsibility of each.
 - 2) Provide name and telephone number of local source of supply for parts and replacement.
- 6. Table of Contents:
 - a. Neatly typewritten and arranged in systematic order with consecutive page numbers.
 - b. Identify each product by product name and other identifying numbers or symbols as set forth in Contract Documents.
- 7. Paper: 20-pound minimum, white for typed pages.
- 8. Text: Manufacturer's printed data, or neatly typewritten.
- 9. Three-hole punch data for binding and composition; arrange printing so that punched holes do not obliterate data.
- 10. Material shall be suitable for reproduction, with quality equal to original. Photocopying of material will be acceptable, except for material containing photographs.

C. Electronic Media Format:

- 1. Portable Document Format (PDF):
 - a. After all preliminary data has been found to be acceptable to Engineer, submit Operation and Maintenance data in PDF format on CD.
 - b. Files to be exact duplicates of Engineer-accepted preliminary data. Arrange by specification number and name.
 - c. Files to be fully functional and viewable in most recent version of Adobe Acrobat.
 - d. PDF shall be formatted to link individual sections to the Table of Contents.

1.05 SUBMITTALS

A. Informational:

- 1. Data Outline: Submit two copies of a detailed outline of proposed organization and contents of Final Data prior to preparation of Preliminary Data.
- 2. Preliminary Data:
 - a. Submit two copies for Engineer's review.
 - b. If data meets conditions of the Contract:
 - 1) One copy will be returned to Contractor.
 - 2) One copy will be retained in Engineer's file.
 - c. If data does not meet conditions of the Contract:
 - 1) All copies will be returned to Contractor with Engineer's comments (on separate document) for revision.
 - 2) Engineer's comments will be retained in Engineer's file.
 - 3) Resubmit two copies revised in accordance with Engineer's comments.
- 3. Final Data: Submit one electronic copy in format specified herein.

1.06 DATA FOR FOUIPMENT AND SYSTEMS

- A. Content For Each Unit (or Common Units) and System:
 - 1. Product Data:
 - a. Include only those sheets that are pertinent to specific product.
 - b. Clearly annotate each sheet to:
 - 1) Identify specific product or part installed.
 - 2) Identify data applicable to installation.
 - 3) Delete references to inapplicable information.
 - c. Function, normal operating characteristics, and limiting conditions.
 - d. Performance curves, engineering data, nameplate data, and tests.
 - e. Complete nomenclature and commercial number of replaceable parts.
 - f. Original manufacturer's parts list, illustrations, detailed assembly drawings showing each part with part numbers and sequentially numbered parts list, and diagrams required for maintenance.
 - g. Spare parts ordering instructions.
 - h. Where applicable, identify installed spares and other provisions for future work (e.g., reserved panel space, unused components, wiring, terminals).
 - 2. As-installed, color-coded piping diagrams.

- 3. Charts of valve tag numbers, with the location and function of each valve.
- 4. Drawings:
 - a. Supplement product data with Drawings as necessary to clearly illustrate:
 - 1) Format:
 - a) Provide reinforced, punched, binder tab; bind in with text.
 - b) Reduced to 8-1/2 inches by 11 inches, or 11 inches by 17 inches folded to 8-1/2 inches by 11 inches.
 - c) Where reduction is impractical, fold and place in 8-1/2-inch by 11-inch envelopes bound in text.
 - d) Identify Specification section and product on Drawings and envelopes.
 - 2) Relations of component parts of equipment and systems.
 - 3) Control and flow diagrams.
 - 4) Coordinate drawings with Project record documents to assure correct illustration of completed installation.
- 5. Instructions and Procedures: Within text, as required to supplement product data.
 - a. Format:
 - 1) Organize in consistent format under separate heading for each different procedure.
 - 2) Provide logical sequence of instructions for each procedure.
 - 3) Provide information sheet for Owner's personnel, including:
 - a) Proper procedures in event of failure.
 - b) Instances that might affect validity of guarantee or Bond.
 - b. Installation Instructions: Including alignment, adjusting, calibrating, and checking.
 - c. Operating Procedures:
 - 1) Startup, break-in, routine, and normal operating instructions.
 - 2) Test procedures and results of factory tests where required.
 - 3) Regulation, control, stopping, and emergency instructions.
 - 4) Description of operation sequence by control manufacturer.
 - 5) Shutdown instructions for both short and extended duration.
 - 6) Summer and winter operating instructions, as applicable.
 - 7) Safety precautions.
 - 8) Special operating instructions.

- d. Maintenance and Overhaul Procedures:
 - 1) Routine maintenance.
 - 2) Guide to troubleshooting.
 - 3) Disassembly, removal, repair, reinstallation, and reassembly.
- 6. Guarantee, Bond, and Service Agreement: In accordance with Section 01 77 00, Closeout Procedures.
- B. Content for Each Electric or Electronic Item or System:
 - 1. Description of Unit and Component Parts:
 - a. Function, normal operating characteristics, and limiting conditions.
 - b. Performance curves, engineering data, nameplate data, and tests.
 - c. Complete nomenclature and commercial number of replaceable parts.
 - d. Interconnection wiring diagrams, including control and lighting systems.
 - 2. Circuit Directories of Panelboards:
 - 3. Electrical service.
 - 4. Control requirements and interfaces.
 - 5. Communication requirements and interfaces.
 - 6. List of electrical relay settings, and control and alarm contact settings.
 - 7. Electrical interconnection wiring diagram, including as applicable, single-line, three-line, schematic and internal wiring, and external interconnection wiring.
 - 8. As-installed control diagrams by control manufacturer.
 - 9. Operating Procedures:
 - a. Routine and normal operating instructions.
 - b. Startup and shutdown sequences, normal and emergency.
 - c. Safety precautions.
 - d. Special operating instructions.
 - 10. Maintenance Procedures:
 - a. Routine maintenance.
 - b. Guide to troubleshooting.
 - c. Adjustment and checking.
 - d. List of relay settings, control and alarm contact settings.
 - 11. Manufacturer's printed operating and maintenance instructions.
 - 12. List of original manufacturer's spare parts, manufacturer's current prices, and recommended quantities to be maintained in storage.

C. Maintenance Summary:

- Compile individual Maintenance Summary for each applicable equipment item, respective unit or system, and for components or sub-units.
- 2. Format:
 - a. Use Maintenance Summary Form bound with this section or electronic facsimile of such.
 - b. Each Maintenance Summary may take as many pages as required.
 - c. Use only 8-1/2-inch by 11-inch size paper.
 - d. Complete using typewriter or electronic printing.
- 3. Include detailed lubrication instructions and diagrams showing points to be greased or oiled; recommend type, grade, and temperature range of lubricants and frequency of lubrication.
- 4. Recommended Spare Parts:
 - a. Data to be consistent with manufacturer's Bill of Materials/Parts List furnished in O&M manuals.
 - b. "Unit" is the unit of measure for ordering the part.
 - c. "Quantity" is the number of units recommended.
 - d. "Unit Cost" is the current purchase price.

1.07 DATA FOR MATERIALS AND FINISHES

- A. Content for Architectural Products, Applied Materials, and Finishes:
 - 1. Manufacturer's data, giving full information on products:
 - a. Catalog number, size, and composition.
 - b. Color and texture designations.
 - c. Information required for reordering special-manufactured products.
 - 2. Instructions for Care and Maintenance:
 - a. Manufacturer's recommendation for types of cleaning agents and methods.
 - b. Cautions against cleaning agents and methods that are detrimental to product.
 - c. Recommended schedule for cleaning and maintenance.
- B. Content for Moisture Protection and Weather Exposed Products:
 - 1. Manufacturer's data, giving full information on products:
 - a. Applicable standards.
 - b. Chemical composition.
 - c. Details of installation.
 - 2. Instructions for inspection, maintenance, and repair.

1.08 SUPPLEMENT

- A. The supplement listed below, following "End of Section," is part of this specification.
 - 1. Maintenance Summary Form.
- PART 2 PRODUCTS (NOT USED)
- PART 3 EXECUTION (NOT USED)

END OF SECTION

MAINTENANCE SUMMARY FORM

PROJECT:_		CONTRACT NO.:	
1. EQUIPM	ENT ITEM		
2. MANUFA	ACTURER		
3. EQUIPM	ENT/TAG NUMBER(S)		
4. WEIGHT	OF INDIVIDUAL COMPONENTS (OVER 100 POUNDS)	
5. NAMEPL	ATE DATA (hp, voltage, speed, etc.)		
6. MANUFA	ACTURER'S LOCAL REPRESENTAT	IVE	
		Telephone No	
	Address		
	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	

7. MAINTENANCE REQUIREMENTS

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Maintenance Operation Comments	Frequency	Lubricant (If Applicable)
List briefly each maintenance operation required and refer to specific information in manufacturer's standard maintenance manual, if applicable. (Reference to manufacturer's catalog or sales literature is not acceptable.)	List required frequency of each maintenance operation.	Refer by symbol to lubricant required.

8. LUBRICANT LIST

Reference Symbol	Shell	Exxon Mobile	Chevron Texaco	BP Amoco	Or Equal
List symbols used in No. 7 above.		List equivalent lubricants, as distributed by each manufacturer for the specific use recommended.			anufacturer

9. RECOMMENDED SPARE PARTS FOR OWNER'S INVENTORY

Part No.	Description	Unit	Quantity	Unit Cost	
Note: Identify parts provided by this Contract with two asterisks.					

SECTION 01 88 15 ANCHORAGE AND BRACING

PART 1 GENERAL

1.01 SUMMARY

A. This section covers requirements for anchorage and bracing of equipment, distribution systems, and other nonstructural components required in accordance with the ICC 2018 International Building Code (IBC), for seismic, wind, gravity, soil, and operational loads.

1.02 REFERENCES

- A. The following is a list of standards which may be referenced in this section:
 - 1. American Institute of Steel Construction (AISC) 360, Specification for Structural Steel Buildings.
 - 2. American Society of Civil Engineers (ASCE): ASCE 7, Minimum Design Loads for Buildings and Other Structures.
 - 3. International Code Council (ICC): International Building Code (IBC).
 - 4. National Fire Protection Association (NFPA): 13, Standard for the Installation of Sprinkler Systems.
 - 5. State of Utah.

1.03 DEFINITIONS

- A. Designated Seismic System: Architectural, electrical, and mechanical system or their components for which component importance factor is greater than 1.0.
- B. Positive Attachment: Attachment of component or distribution system to structure using appropriate structural-grade materials whereby explicit design calculations for the anchorage are not required.

1.04 DESIGN AND PERFORMANCE REQUIREMENTS

A. General:

- 1. Anchorage and bracing systems shall be designed by a qualified professional engineer registered in the State of Utah.
- 2. Design anchorage into concrete including embedment in accordance with ACI 318-14; Chapter 17 (or other industry standard approved by Engineer), and Project Specifications.
 - a. Unless otherwise noted, design for cracked concrete condition.

- 3. Design anchorage and bracing of architectural, mechanical, and electrical components and systems in accordance with this section, unless a design is specifically provided within Contract Documents or where exempted hereinafter.
- 4. Design attachments, braces, and anchors for equipment, components, and distribution systems to structure for gravity, seismic, wind, and operational loading.
- 5. Design seismic anchorage and bracing for modified existing architectural, mechanical, or electrical systems where code requirements would dictate design for similar new components.
- 6. Anchor and brace piping and ductwork, whether exempt or not exempt for this section, so that lateral or vertical displacement does not result in damage or failure to essential architectural, mechanical, or electrical equipment.
- 7. Architectural Components: Includes, but are not limited to, nonstructural walls and elements, partitions, cladding and veneer, access flooring, signs, cabinets, suspended ceilings, and glass in glazed curtain walls and partitions.
- 8. Provide supplementary framing where required to transfer anchorage and bracing loads to structure.
- 9. Adjust equipment pad sizes or provide additional anchorage confinement reinforcing to provide required anchorage capacities.
- 10. Anchor existing equipment as noted on Drawings.
- 11. Furniture, except storage cabinets and shelving over 6 feet tall and temporary or movable equipment are exempt.
- 12. Design seismic anchorage and bracing for:
 - a. Seismic Design Category D, E or F:
 - 1) Mechanical, Plumbing, and Electrical Components that are without positive attachment to the structure.
 - 2) Mechanical, Plumbing, and Electrical Components with I_p of 1.0 that have positive attachment to the structure weighing more than 400 pounds with center of mass more than 4 feet above the floor, and without flexible connections between component and associated ductwork, piping, and conduit.
 - 3) Mechanical, Plumbing, and Electrical Components with I_p of 1.5 that are positively attached to the structure weighing more than 20 pounds.
 - 4) In distribution systems, where support of in-line components (valves, pumps, mixing boxes) does not support the complete tributary contribution from the attached distributions system.

- 5) Electrical distribution systems for seismic forces and relative displacements as required in ASCE 7-16 Section 13.3.
 - a) Exceptions in accordance with ASCE 7-16 Section 13.6.5.
- 6) Duct distribution systems for seismic design forces and relative displacements as required in ASCE 7-16 Section 13.3.
 - a) Exceptions in accordance with ASCE 7-16 Section 13.6.6.
- 7) Piping and tubing distribution systems for seismic design forces and relative displacements as required in ASCE 7-16 Section 13.3.
 - a) Exceptions in accordance with ASCE 7-16 Section 13.6.7.3.
- 8) Architectural Components except those exempted in ASCE 7-16 Section 13.5.
- 13. Seismic Component Importance Factor:
 - a. Ip = 1.0, unless noted otherwise.
 - b. Ip shall be taken as 1.5 if any of the following conditions apply:
 - Component is required to function for life-safety purposes after an earthquake, including fire protection sprinkler systems and egress stairways.
 - 2) Component contains hazardous materials.
 - 3) Component is in or attached to Occupancy Risk Category IV structure and is needed for continued operation of facility or its failure could impair continued operation of facility.
 - c. Refer to Section 01 45 36, Equipment Seismic Certification, for list of designated components which Ip equals 1.5.
- 14. For components exempted from design requirements of this section, provide bolted, welded, or otherwise positively fastened attachments to supporting structure.

B. Design Loads:

- 1. Gravity: Design anchorage and bracing for self-weight and superimposed loads on components and equipment.
- 2. Wind: Design anchorage and bracing for wind criteria provided on General Structural Notes on Drawings for exposed architectural components and exterior and wind-exposed mechanical and electrical equipment. Alternately, manufacturer certification may be provided for components such as roofing and flashing to verify attachments meet Project-specific design criteria.

3. Operational:

- a. For loading supplied by equipment manufacturer for IBC required load cases.
- b. Loads may include equipment vibration, torque, thermal effects, effects of internal contents (weight and sloshing), water hammer, and other load-inducing conditions.
- c. Locate braces to minimize vibration to or movement of structure.
- d. For vibrating loads, use anchors meeting requirements of Section 05 05 19, Post-Installed Anchors, for anchors with designated capacities for vibratory loading per manufacturer's ICC-ES report.
- 4. Hydraulic: Design of anchorage for submerged gates and other mechanical equipment shall include hydrostatic and hydrodynamic loads determined in accordance with Section 15.7 of ASCE 7-16.

5. Seismic:

- a. In accordance with 2018 IBC, Section 1613, and Chapter 13 of ASCE 7-16.
- b. Design anchorage and bracing for design criteria listed on General Structural Notes on Drawings.
- c. Design anchorages for parts or elements of architectural, mechanical, and electrical systems in accordance with provisions of IBC and Site-specific seismic criteria noted on Drawings.
- d. Design forces for anchors in concrete or masonry shall be in accordance with ASCE 7-16, Section 13.4.2 with IBC Section 1905.1.8 modifications for concrete and as applicable for Project Seismic Design Category.

C. Seismic Design Requirements:

- 1. Nonstructural Components: Design as nonbuilding structures for components with weights greater than or equal to 25 percent of effective seismic weight of overall structure.
- 2. Analyze local region of body of nonstructural component for load transfer of anchorage attachment if component Ip = 1.5.
- 3. Fire protection sprinkler systems designed and constructed in accordance with NFPA 13 shall be considered to meet requirements of Chapter 13 of ASCE 7-16.
- 4. Existing components, systems, and equipment in their final condition that are modified by Project requirements and are not exempted by above paragraphs require the same anchorage and bracing drawing and calculation submittals as new equipment. Field verify existing conditions.
- 5. Other seismic design and detailing information identified in ASCE 7-16, Chapter 13, is required to be provided for new and

modified or noted architectural, mechanical and electrical components, systems, or equipment.

1.05 SUBMITTALS

A. Action Submittals:

- 1. Shop Drawings:
 - a. List of architectural, mechanical, and electrical equipment requiring Contractor-designed anchorage and bracing, unless specifically exempted.
 - b. Manufacturers' engineered seismic and non-seismic hardware product data.
 - c. Attachment assemblies' drawings including seismic attachments; include connection hardware, braces, and anchors or anchor bolts for nonexempt components, equipment, and systems.
 - d. List of existing architectural, mechanical, and electrical equipment or components to be modified in Project requiring Contractor-designed anchorage and bracing in final retrofitted condition.
 - e. Drawings for seismic attachment assemblies include connection hardware, braces, and anchors (or anchor bolts) for modified, nonexempt existing components, equipment, and distribution systems where a combination of new and existing systems or components' final condition would require anchorage or bracing under this specification for new equipment.
 - f. Submittal will be rejected if proposed anchorage method would create excessive stress to supporting member. Revise anchorages and strengthen structural support to eliminate overstressed condition.

B. Informational Submittals:

- 1. Anchorage and Bracing Calculations: For attachments, braces, and anchorages, include IBC and Project-specific criteria as noted on General Structural Notes on Drawings, in addition to manufacturer's specific criteria used for design; sealed by a civil or structural engineer registered in the State of Utah.
- 2. Manufacturer's hardware installation requirements.

C. Deferred Submittals:

 Submitted seismic anchorage drawings and calculations are identified as IBC deferred submittals and will be submitted to and must be accepted by the Engineer prior to installation of component, equipment, or distribution system. 2. Submit deferred Action Submittals such as Shop Drawings with supporting deferred informational submittals such as calculations no less than 4 weeks in advance of installation of component, equipment or distribution system to be anchored to structure.

1.06 SOURCE QUALITY CONTROL

- A. Contractor and supplier shall accommodate Owner-furnished shop fabrication related special inspections and testing.
- B. Provide all specified, regulatory required, or required repair verification inspection and testing in accordance with Section 01 45 16.13, Contractor Quality Control, unless otherwise indicated as Owner furnished.
- C. Provide Source Quality Control for welding and hot-dip galvanizing of anchors in accordance with Section 05 50 00, Metal Fabrications.

PART 2 PRODUCTS

2.01 GENERAL

- A. Design and construct attachments and supports transferring seismic and non-seismic loads to structure of materials and products suitable for application and in accordance with design criteria shown on Drawings and nationally recognized standards.
- B. Provide anchor bolts for anchorage of equipment to concrete or masonry in accordance with Section 05 50 00, Metal Fabrications. Provide anchor bolts of the size, minimum embedment, and spacing designated in calculations submitted by Contractor and accepted by Engineer.
- C. Provide post-installed concrete and masonry anchors for anchorage of equipment to concrete or masonry in accordance with Section 05 05 19, Post-Installed Anchors. Provide post-installed anchors of the size, minimum embedment, and spacing designated in calculations submitted by Contractor and accepted by Engineer.
- D. Do not use powder-actuated fasteners or sleeve anchors for seismic attachments and anchorage where resistance to tension loads is required. Do not use expansion anchors, other than undercut anchors, for nonvibration isolated mechanical equipment rated over 10 horsepower.

PART 3 EXECUTION

3.01 GENERAL

- A. Make attachments, bracing, and anchorage in such a manner that component lateral force is transferred to lateral force resisting system of structure through a complete load path.
- B. Design, provide, and install overall seismic anchorage system to provide restraint in all directions, including vertical, for each component or system so anchored.
- C. Provide snubbers in each horizontal direction and vertical restraints for components mounted on vibration isolation systems where required to resist overturning.
- D. Calculations shall limit anchor bolt concrete edge distance to a maximum of 4 inches or as required to provide sufficient anchor bolt capacity to resist applied loads.
- E. Provide piping anchorage that maintains design flexibility and expansion capabilities at flexible connections and expansion joints.
- F. control centers and telemetry equipment at base and within 12 inches from top of equipment, unless approved otherwise by Engineer.
- G. Do not attach architectural, mechanical, or electrical components to more than one element of a building structure at a single restraint location where such elements may respond differently during a seismic event. Do not make such attachments across building expansion and contraction joints.

3.02 INSTALLATION

- A. Do not install components or their anchorages or restraints prior to review and acceptance by Engineer.
- B. Notify Engineer upon completion of installation of seismic restraints.

3.03 FIELD QUALITY ASSURANCE AND QUALITY CONTROL

- A. In accordance with Section 05 05 19, Post-Installed Anchors.
- B. Quality Assurance: In accordance with IBC Chapter 17 requirements and as indicated on the General Structural Notes on Drawings.

C. Provide all specified, regulatory required, or required repair verification inspection and testing in accordance with Section 01 45 16.13, Contractor Quality Control, unless otherwise indicated as Owner furnished.

END OF SECTION

SECTION 01 91 14 EQUIPMENT TESTING AND FACILITY STARTUP

PART 1 GENERAL

1.01 DEFINITIONS

- A. Facility: Entire Project, or an agreed-upon portion, including all of its unit processes.
- B. Facility Performance Demonstration:
 - 1. A demonstration, conducted by Contractor, with assistance of Owner, to demonstrate and document the performance of the entire operating facility, both manually and automatically (if required), based on criteria developed in conjunction with Owner and as accepted by Engineer.
 - 2. Such demonstration is for the purposes of (i) verifying to Owner entire facility performs as a whole, and (ii) documenting performance characteristics of completed facility for Owner's records. Neither the demonstration nor the evaluation is intended in any way to make performance of a unit process or entire facility the responsibility of Contractor, unless such performance is otherwise specified.
- C. Functional Test: Test or tests in presence of Engineer and Owner to demonstrate that installed equipment meets manufacturer's installation, calibration, and adjustment requirements and other requirements as specified.
- D. Performance Test: Test or tests performed after any required functional test in presence of Engineer and Owner to demonstrate and confirm individual equipment meets performance requirements specified in individual sections.
- E. Unit Process: As used in this section, a unit process is a portion of the facility that performs a specific process function.

1.02 SUBMITTALS

- A. Informational Submittals:
 - 1. Facility Startup and Performance Demonstration Plan.
 - 2. Functional and performance test results.
 - 3. Completed Unit Process Startup Form for each unit process.
 - 4. Completed Facility Performance Demonstration/Certification Form.

1.03 FACILITY STARTUP AND PERFORMANCE DEMONSTRATION PLAN

- A. Develop a written plan, in conjunction with Owner's operations personnel; to include the following:
 - 1. Step-by-step instructions for startup of each unit process and the complete facility.
 - 2. Unit Process Startup Form (sample attached), to minimally include the following:
 - a. Description of the unit process, including equipment numbers/nomenclature of each item of equipment and all included devices.
 - b. Detailed procedure for startup of the unit process, including valves to be opened/closed, order of equipment startup, etc.
 - c. Startup requirements for each unit process, including water, power, and chemicals.
 - d. Space for evaluation comments.
 - 3. Facility Performance Demonstration/Certification Form (sample attached), to minimally include the following:
 - a. Description of unit processes included in the facility startup.
 - b. Sequence of unit process startup to achieve facility startup.
 - c. Description of computerized operations, if any, included in the facility.
 - d. Contractor certification facility is capable of performing its intended function(s), including fully automatic operation.
 - e. Signature spaces for Contractor and Engineer.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 GENERAL

- A. Facility Startup Meetings: Schedule, in accordance with requirements of Section 01 31 19, Project Meetings, to discuss test schedule, test methods, materials, chemicals and liquids required, facilities operations interface, and Owner involvement.
- B. Contractor's Testing and Startup Representative:
 - 1. Designate and furnish one or more personnel to coordinate and expedite testing and facility startup.
 - 2. Representative(s) shall be present during startup meetings and shall be available at all times during testing and startup.
- C. Provide temporary valves, gauges, piping, test equipment and other materials and equipment required for testing and startup.

D. Provide subcontractor and equipment manufacturers' staff adequate to prevent delays. Schedule ongoing work so as not to interfere with or delay testing and startup.

E. Owner will:

- 1. Provide water, power, chemicals, and other items as required for startup, unless otherwise indicated.
- 2. Operate process units and facility with support of Contractor.
- 3. Provide labor and materials as required for laboratory analyses.

3.02 EQUIPMENT TESTING

A. Preparation:

- 1. Complete installation before testing.
- 2. Furnish qualified manufacturers' representatives, when required by individual specification sections.
- 3. Obtain and submit from equipment manufacturer's representative Manufacturer's Certificate of Proper Installation Form, in accordance with Section 01 43 33, Manufacturers' Field Services, when required by individual specification sections.
- 4. Equipment Test Report Form:
 - a. Provide written test report for each item of equipment to be tested, to include the minimum information:
 - 1) Owner/Project Name.
 - 2) Equipment or item tested.
 - 3) Date and time of test.
 - 4) Type of test performed (Functional or Performance).
 - 5) Test method.
 - 6) Test conditions.
 - 7) Test results.
 - 8) Signature spaces for Contractor and Engineer as witness.
- 5. Cleaning and Checking:
 - a. Prior to beginning functional testing:
 - 1) Calibrate testing equipment in accordance with manufacturer's instructions.
 - 2) Inspect and clean equipment, devices, connected piping, and structures to ensure they are free of foreign material.
 - 3) Lubricate equipment in accordance with manufacturer's instructions.
 - 4) Turn rotating equipment by hand when possible to confirm that equipment is not bound.

- 5) Open and close valves by hand and operate other devices to check for binding, interference, or improper functioning.
- 6) Check power supply to electric-powered equipment for correct voltage.
- 7) Adjust clearances and torque.
- 8) Test piping for leaks.
- 6. Ready-to-test determination will be by Owner based at least on the following:
 - a. Acceptable Operation and Maintenance Data.
 - b. Notification by Contractor of equipment readiness for testing.
 - c. Receipt of Manufacturer's Certificate of Proper Installation, if so specified.
 - d. Adequate completion of work adjacent to, or interfacing with, equipment to be tested.
 - e. Availability and acceptability of manufacturer's representative, when specified, to assist in testing of respective equipment.
 - f. Satisfactory fulfillment of other specified manufacturer's responsibilities.
 - g. Equipment and electrical tagging complete.
 - h. Delivery of all spare parts and special tools.

B. Functional Testing:

- 1. Conduct as specified in individual specification sections.
- 2. Notify Owner and Engineer in writing at least 10 days prior to scheduled date of testing.
- 3. Prepare Equipment Test Report summarizing test method and results.
- 4. When, in Engineer's opinion, equipment meets functional requirements specified, such equipment will be accepted for purposes of advancing to performance testing phase, if so, required by individual specification sections. Such acceptance will be evidenced by Engineer/Owner's signature as witness on Equipment Test Report.

C. Performance Testing:

- 1. Conduct as specified in individual specification sections.
- 2. Notify Engineer and Owner in writing at least 10 days prior to scheduled date of test.
- 3. Performance testing shall not commence until equipment has been accepted by Engineer as having satisfied functional test requirements specified.
- 4. Type of fluid, gas, or solid for testing shall be as specified.

- 5. Unless otherwise indicated, furnish labor, materials, and supplies for conducting the test and taking samples and performance measurements.
- 6. Prepare Equipment Test Report summarizing test method and results.
- 7. When, in Engineer's opinion, equipment meets performance requirements specified, such equipment will be accepted as to conforming to Contract requirements. Such acceptance will be evidenced by Engineer's signature on Equipment Test Report.

3.03 STARTUP OF UNIT PROCESSES

- A. Prior to unit process startup, equipment within unit process shall be accepted by Engineer as having met functional and performance testing requirements specified.
- B. Make adjustments, repairs, and corrections necessary to complete unit process startup.
- C. Startup shall be considered complete when, in opinion of Engineer, unit process has operated in manner intended for 14 continuous days without significant interruption. This period is in addition to functional or performance test periods specified elsewhere.
- D. Significant Interruption:
 - 1. May include any of the following events:
 - a. Failure of Contractor to provide and maintain qualified onsite startup personnel as scheduled.
 - b. As determined by Engineer.
- E. A significant interruption will require startup then in progress to be stopped. After corrections are made, startup test period to start from beginning again.

3.04 FACILITY PERFORMANCE DEMONSTRATION

- A. When, in the opinion of Engineer, startup of all unit processes has been achieved, sequence each unit process to the point that facility is operational.
- B. Demonstrate proper operation of required interfaces within and between individual unit processes.
- C. After facility is operating, complete performance testing of equipment and systems not previously tested.

- D. Document, as defined in Facility Startup and Performance Demonstration Plan, the performance of the facility, until all unit processes are operable and under control of computer system.
- E. Certify, on the Facility Performance Demonstration/Certification Form, that facility is capable of performing its intended function(s), including fully automatic and computerized operation.

3.05 SUPPLEMENTS

- A. Supplements listed below, following "End of Section," are a part of this specification:
 - 1. Unit Process Startup Form (available in electronic format at Contractor's request).
 - 2. Facility Performance Demonstration/Certification Form (available in electronic format at Contractor's request).

END OF SECTION

UNIT PROCESS STARTUP FORM

OWNER:	PROJECT:
Init Process Description: (Include description and equipment number of all equip nd devices):	
Startup Drocodure (Describe procedure fo	or sequential startup and evaluation, includi
valves to be opened/closed, order of equip	
	micals, etc.):
Evaluation Comments:	

FACILITY PERFORMANCE DEMONSTRATION/CERTIFICATION FORM

OWNER:	PROJECT:	
Unit Processes Description (List unit proces	sses involved in facility startup):	
Unit Processes Startup Sequence (Describe computerized operations, if any):	sequence for startup, including	
Contractor Certification that Facility is cap function(s), including fully automatic opera		
Contractor:	Date:	_, 20
Engineer:(Authorized Signature)	Date:	_, 20