

CITY OF SARATOGA SPRINGS

800 WEST (FOOTHILL BLVD) ROADWAY IMPROVEMENTS

CONTRACT DOCUMENTS

Project Engineer

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INVITATION TO BID

Notice is hereby given that the CITY OF SARATOGA SPRINGS (OWNER) will accept bids for the construction of the 800 WEST (FOOTHILL BLVD) ROADWAY IMPROVEMENTS according to Drawings and Specifications prepared by the ENGINEER – CMT TECHNICAL SERVICES. The highlights of the scope of work are as follows:

- Widening, mill-and-overlay, and restriping of the existing 800 West road from Pioneer Crossing to Pony Express Parkway (approximately 1.6 miles) and a realignment of the 800 West / 400 North / Evans Lane intersection to eliminate existing offset. Demolition work includes removal of existing asphalt pavement, removal of existing concrete, curb, utilities, street signs, etc. New construction work includes mill and overlay of existing asphalt pavement, road widening, signage, earthwork, installation of concrete curb and gutter, concrete sidewalk, street signs, roadway striping, storm drain pipe and structures, trenching vault and conduit installation for power, adjust utility manholes, and a fully signalized intersection at 400 North.

Bids will be received by the OWNER through the online Utah Public Procurement Place (U3P) website at Utah.bonfirehub.com until 11:00 a.m. local time on Tuesday, April 22, 2025. The Bids will then be opened and tabulated and a public virtual meeting will be held at 2:00 p.m. that same day to announce the preliminary results. Detailed instructions to attend this virtual meeting are as follows:

<https://us02web.zoom.us/j/83179203588?pwd=YyNdoavQWHRL1efM27qqfro9P1PcHK.1>

Meeting ID: 831 7920 3588, Passcode: 566976

An OPTIONAL pre-bid meeting will be held Thursday, April 10, 2025 at 1:30 p.m., in-person and virtually. The in-person option will be at the Saratoga Springs Public Works offices at 213 N 900 E, Saratoga Springs, UT 84045. The virtual option will be online at <https://us02web.zoom.us/j/87132148890?pwd=IXX8J7HxVg53vRJyoC5bXWuAJzTJwi.1> (Meeting ID: 871 3214 8890, Passcode: 270916)

OWNER requires the Project to be substantially completed by Friday, August 8, 2025.

Bid Documents will be available on or after Wednesday, April 2, 2025. Bid Documents may be obtained online at the U3P website. Questions related to the bid must be posted to the U3P website portal by Thursday, April 17, 2025 at 5:00 p.m.

Submit your Bid on the Bid Form provided through the U3P website at Utah.bonfirehub.com. A Bid security in the amount of five percent (5%) of the base bid will be required to accompany bids. All questions relative to the project shall be submitted via the same U3P website.

The OWNER reserves the right to reject any or all bids; or to accept or reject the whole or any part of any bid; or to waive any informality or technicality in any bid in the best interest of the OWNER. Only bids giving a firm quotation properly signed will be accepted.

- END OF DOCUMENT -

BIDDING REQUIREMENTS

Instructions to Bidders

TABLE OF ARTICLES

ARTICLE 1 - DEFINED TERMS

1.01 Terms used in these Instructions to Bidders will have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:

- A. Issuing Office--The office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered.

ARTICLE 2 - COPIES OF BIDDING DOCUMENTS

2.01 Bid documents may be obtained online at the Utah Public Procurement Place (U3P) website at purchasing.utah.gov.

2.02 Complete sets of Bidding Documents must be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

2.03 Owner and Engineer in making copies of Bidding Documents available on the above terms do so only for the purpose of obtaining Bids for the Work and do not confer a license or grant for any other use.

ARTICLE 3 - QUALIFICATIONS OF BIDDERS

3.01 Bidders are not required to be pre-qualified for this project by Owner.

ARTICLE 4 - EXAMINATION OF BIDDING DOCUMENTS, OTHER RELATED DATA, AND SITE

4.01 Underground Facilities

- A. Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or contiguous to the Site is based upon information obtained by a site topographic survey and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others.

4.02 Hazardous Environmental Condition

- A. The Supplementary Conditions identify those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that ENGINEER has used in preparing the Bidding Documents.

4.03 Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated conditions appear in paragraphs 5.03, 5.04, and 5.05 of the General Conditions.

Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work appear in paragraph 5.06 of the General Conditions.

4.04 On request, Owner will provide Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies as Bidder deems necessary for submission of a Bid. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies. Bidder shall comply with all applicable Laws and Regulations relative to locating of excavation and utility.

4.05 Additional Owner Provided Information:

A. Reference is made to Article 8 of the Supplementary Conditions for the identification of the general nature of other work that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) that relates to the Work contemplated by these Bidding Documents. On request, Owner will provide to each Bidder for examination access to or copies of Contract Documents (other than portions thereof related to price) for such other work.

B. Paragraph 7.12.C of the General Conditions states that if an Owner safety program exists it will be noted in the Supplementary Conditions.

4.06 It is the responsibility of each Bidder before submitting a Bid to:

A. Examine and carefully study the Bidding Documents, the other related data identified in the Bidding Documents, and any Addenda;

B. Visit the Site and become familiar with and satisfy Bidder as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;

C. Become familiar with and satisfy Bidder as to all Federal, State, and local Laws and Regulations that may affect cost, progress, or performance of the Work;

D. Carefully study all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 5.03 of the General Conditions, and (2) reports and drawings of Hazardous Environmental Conditions at the Site which have been identified in the Supplementary Conditions as provided in paragraph 5.07 of the General Conditions;

E. Obtain and carefully study (or accept 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 any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents, and safety precautions and programs incident thereto;

- F. Agree at the time of submitting its Bid that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its 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;
- G. Become 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;
- H. Correlate 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, studies, and data with the Bidding Documents;
- I. Promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder; and
- J. Determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.

4.07 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Bidding Documents and applying any specific means, methods, techniques, sequences, and procedures of construction that may be shown or indicated or expressly required by the Bidding Documents, that Bidder has given Engineer written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in Bidding Documents and the written resolutions thereof by Engineer are acceptable to Bidder, and that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

ARTICLE 5 - PRE-BID CONFERENCE

5.01 An optional pre-bid conference will be held virtually on Thursday, April 10, 2024 at 1:30 p.m. local time. Representatives of Owner and Engineer will be present to discuss the Project. Owner will post Addenda to the U3P website as Owner considers necessary in response to questions arising at the conference. Oral statements may not be relied upon and will not be binding or legally effective.

ARTICLE 6 - SITE AND OTHER AREAS

6.01 The Site is identified in the Bidding Documents. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by Owner unless otherwise provided in the Bidding Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment, or storage of

materials and equipment to be incorporated in the Work are to be obtained and paid for by Contractor.

ARTICLE 7 - INTERPRETATIONS AND ADDENDA

- 7.01 All questions about the meaning or intent of the Bidding Documents are to be submitted via the U3P website. Interpretations or clarifications considered necessary by Owner in response to such questions will be issued by Addenda to the same U3P website. Questions received less than three days prior to the date for opening of Bids may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
- 7.02 Addenda may be issued to clarify, correct, or change the Bidding Documents as deemed advisable by Owner or Engineer.

ARTICLE 8 - BID SECURITY

- 8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of 5% of Bidder's maximum Bid price and in the form of a certified check or a Bid bond (EJCDC No. C-430, 2013 Edition) issued by a surety meeting the requirements of paragraphs 6.01 and 6.02 of the General Conditions.
- 8.02 The Bid security of the Successful Bidder will be retained until such Bidder has executed the Contract Documents, furnished the required contract security and met the other conditions of the Notice of Award, whereupon the Bid security will be returned. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 15 days after the Notice of Award, Owner may annul the Notice of Award and the Bid security of that Bidder will be forfeited. The Bid security of other Bidders whom Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven days after the Effective Date of the Agreement or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be returned.
- 8.03 Bid security of other Bidders whom OWNER believes do not have a reasonable chance of receiving the award will be returned within seven days after the Bid opening.

ARTICLE 9 - CONTRACT TIMES

- 9.01 The number of days within which, or the dates by which, the Work is to be substantially completed and ready for final payment are set forth in the Agreement.

ARTICLE 10 - LIQUIDATED DAMAGES

- 10.01 Provisions for liquidated damages are set forth in the Agreement.

ARTICLE 11 - SUBSTITUTE AND "OR-EQUAL" ITEMS

- 11.01 The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration of possible substitute or "or-equal" items. Whenever it is specified or described in the Bidding Documents that a

substitute or "or-equal" item of material or equipment may be furnished or used by CONTRACTOR if acceptable to ENGINEER, application for such acceptance will not be considered by ENGINEER until after the Effective Date of the Agreement. The procedure for submission of any such application by CONTRACTOR and consideration by ENGINEER is set forth in the General Conditions and may be supplemented in the General Requirements.

ARTICLE 12 - SUBCONTRACTORS, SUPPLIERS, AND OTHERS

- 12.01 If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, individuals, or entities to be submitted to Owner in advance of a specified date prior to the Effective Date of the Agreement, the apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to Owner a list of all such Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work for which such identification is required. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, individual, or entity if requested by Owner. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit a substitute, without an increase in the Bid.
- 12.02 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest responsible Bidder that proposes to use acceptable Subcontractors, Suppliers, individuals, or entities. Declining to make requested substitutions will not constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner and Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to revocation of such acceptance after the Effective Date of the Agreement as provided in paragraph 6.06 of the General Conditions.
- 12.03 Contractor shall not be required to employ any Subcontractor, Supplier, individual, or entity against whom Contractor has reasonable objection.
- 12.04 The Contractor shall not award work to Subcontractor(s) in excess of the limits stated in SC 7.06.

ARTICLE 13 - PREPARATION OF BID

- 13.01 The Bid form is included with the Bidding Documents. Additional copies may be obtained from Engineer.
- 13.02 All blanks on the Bid form shall be completed in ink and the Bid signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each Bid item listed therein, or the words "No Bid," "No Change," or "Not Applicable" entered.
- 13.03 A Bid by a corporation shall be executed in the corporate name by the president or a vice-president or other corporate officer accompanied by evidence of authority to sign.

The corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be provided on the Bid Form.

- 13.04 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership shall be provided on the Bid Form.
- 13.05 A Bid by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be shown.
- 13.06 A Bid by an individual shall show the Bidder's name and business address.
- 13.07 A Bid by a joint venture shall be executed by each joint venturer in the manner indicated on the Bid form. The official address of the joint venture must be provided on the Bid Form.
- 13.08 All names shall be printed in ink below the signatures.
- 13.09 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers and dates of which shall be filled in on the Bid form.
- 13.10 The postal and email addresses and telephone number for communication regarding the Bid shall be shown.
- 13.11 The Bid shall contain evidence of Bidder's authority and qualification to do business in the state or locality where the Project is located or Bidder shall covenant in writing to obtain such qualification prior to award of the Contract and attach such covenant to the Bid. Bidder's state contractor license number, if any, shall also be shown on the Bid Form.

ARTICLE 14 - BASIS OF BID; COMPARISON OF BIDS

14.01 Unit Price

- A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the Bid schedule.
- B. The total of all bid prices will be the sum of the products of the estimated quantity of each item and the corresponding unit price. The final quantities and Contract Price will be determined in accordance with paragraph 13.03 of the General Conditions.
- A. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of the words.

14.02 Allowances

- A. For cash allowances the Bid price shall include such amounts as the Bidder deems proper for Contractor's overhead, costs, profit, and other expenses on account of cash allowances, if any, named in the Contract Documents, in accordance with Paragraph 13.02.B of the General Conditions.

ARTICLE 15 - SUBMITTAL OF BID

- 15.01 The Bid Form is to be completed and submitted with all the attachments outlined in Article 7 of the Bid Form.
- 15.02 A Bid shall be submitted no later than the date and time prescribed and at the place indicated in the Invitation to Bid.

ARTICLE 16 - MODIFICATION AND WITHDRAWAL OF BID

- 16.01 A Bid may be modified or withdrawn by an appropriate document duly executed in the manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids.
- 16.02 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid or negotiated, that Bidder will be disqualified from further bidding on the Work. This provision to withdraw a Bid without forfeiting the Bid security does not apply to Bidder's errors in judgment in preparing the Bid.

ARTICLE 17 - OPENING OF BIDS

- 17.01 Bids will be opened after the deadline to submit Bids. A public virtual meeting will be held to announce the preliminary results. These results will also be posted to the U3P website.

ARTICLE 18 - BIDS TO REMAIN SUBJECT TO ACCEPTANCE

- 18.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, at its sole discretion, release any Bid and return the Bid security prior to the end of this period.

ARTICLE 19 - EVALUATION OF BIDS AND AWARD OF CONTRACT

- 19.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable inquiry and evaluation, to be non-responsible. Owner also reserves the right to waive all informalities not involving price, time, or changes in the Work and to negotiate contract terms with the Successful Bidder.

- 19.02 More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any Bidder has an interest in more than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder has an interest.
- 19.03 In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.
- 19.04 In evaluating Bidders, Owner will consider the qualifications of Bidders and may consider the qualifications and experience of Subcontractors, Suppliers, and other individuals or entities proposed for those portions of the Work for which the identity of Subcontractors, Suppliers, and other individuals or entities must be submitted as provided in the Supplementary Conditions.
- 19.05 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, individuals, or entities to perform the Work in accordance with the contract Documents.
- 19.06 If the Contract is to be awarded, Owner will award the Contract to the responsible Bidder whose Bid, conforming with all the material terms and conditions of the Instructions to Bidders, is lowest, price and other factors considered. If detailed in the bid form, factors such as additive alternate bids, discounts, transportation costs, and life cycle costs may be used to determine which bidder, if any, is offered the award.

ARTICLE 20 - CONTRACT SECURITY AND INSURANCE

- 20.01 Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds and insurance. When the Successful Bidder delivers the executed Agreement to Owner, it shall be accompanied by such bonds.

ARTICLE 21 - SIGNING OF AGREEMENT

- 21.01 When Owner gives a Notice of Award to the Successful Bidder, it shall be accompanied by the required number of unsigned counterparts of the Agreement with the other Contract Documents which are identified in the Agreement as attached thereto. Within 15 days thereafter, Successful Bidder shall sign and deliver the required number of counterparts of the Agreement and attached documents to Owner. Within ten days thereafter, Owner shall deliver one fully signed counterpart to Successful Bidder with a complete set of the Drawings with appropriate identification.

- END OF DOCUMENT -

Bid Form

Project Identification:

800 WEST (FOOTHILL BLVD) ROADWAY IMPROVEMENTS

Contract Identification and Number:

ARTICLE 1 - BID RECIPIENT

1.01 This Bid Is Submitted To: CITY OF SARATOGA SPRINGS

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in the Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 - BIDDER'S ACKNOWLEDGMENTS

2.01 Bidder accepts all of the terms and conditions of the Advertisement and Instructions to Bidders, including without limitations those dealing with the dispositions of Bid security. The Bid will remain subject to acceptance for 30 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 - BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, the other related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged:

Addendum No.	Addendum Date
_____	_____
_____	_____
_____	_____

B. 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.

C. 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.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in SC-5.03, and (2) reports and drawings of Hazard Environmental Conditions, if any, at the Site that have been identified in SC-5.06 as containing reliable "technical data."

E. Bidder has considered the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations

obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) 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; and (3) Bidder's safety precautions and programs.

- F. Based on the information and observations referred to in Paragraph 3.01.E above, 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.
- G. 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.
- H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer is acceptable to Bidder.
- I. 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.
- J. Bidder will submit written evidence of its authority to do business in the State or other jurisdiction where the Project is located not later than the date of its execution of the Agreement.

ARTICLE 4 - BIDDER'S CERTIFICATION

4.01 Bidder further represents that:

- A. This Bid is genuine and not made in the interest of or on the 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;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
 - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;
 - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 5 - BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

Bid Schedule					
	ITEM	UNIT	EST. QUANTITY	UNIT PRICE	TOTAL PRICE
1	Mobilization	Lump	1		
2	Quality Control	Lump	1		
3	Traffic Control	Lump	1		
4	Erosion Control/SWPPP	Lump	1		
5	Survey Layout	Lump	1		
6	Survey As-Built with GIS	Lump	1		
7	Clearing and Grubbing	SF	218,000		
8	Asphalt/Concrete Sawcut	LF	10,600		
9	Asphalt Removal	SY	36,500		
10	Concrete Removal	SY	650		
11	Curb & Gutter Removal	LF	1,760		
12	Traffic Sign Removal	Each	16		
13	Striping Removal	LF	4,600		
14	Fence Removal	LF	1,200		
15	Boulder Removal	Each	1		
16	Roadway Excavation	CY	1,600		
17	Export Undocumented Fill & Import Granular Borrow (Contingency Item)	CY	2,000		
18	Earthwork / Material Transport	Lump	1		
19	Seeding	SY	8,700		
20	Striping	Lump	1		
21	Traffic/Street Sign	Each	35		
22	Pothole Existing Utility (As Necessary)	Each	20		
23	Soft Spot Stabilization (Contingency Item)	SY	550		
24	Granular Borrow Fill	CY	3,200		
25	Untreated Base Course	CY	4,250		
26	Hot Mix Asphalt	Ton	13,800		
27	30" Curb & Gutter	LF	985		
28	UDOT Type B5 10" Wide Median Curb	LF	670		
29	Plowable End Section	Each	2		
30	31" W-Beam Guardrail w/ Crash Cushions	LF	190		
31	5" Concrete Sidewalk	SF	3,900		
32	6" Drivable Concrete Sidewalk/Flatwork	SF	1,480		
33	Tactile/Truncated Dome Pad	Each	8		
	Road & Excavation Subtotal				

34	Storm Drain Structure Removal	Each	8		
35	8" - 24" Pipe Removal	LF	90		
36	Communications/Fiber Structure Removal & Relocation	Each	1		
37	Light Pole & Foundation Removal	Each	1		
38	Irrigation Structure Removal	Each	2		
39	Fire Hydrant Removal	Each	1		
40	15" PVC	LF	22		
41	15" RCP (Class III)	LF	38		
42	18" RCP (Class III)	LF	44		
43	24" RCP (Class III)	LF	6		
44	24" CMP	LF	15		
45	4' Diameter Manhole	Each	1		
46	4'x6' Catch Basin / Manhole Combo Box	Each	2		
47	2'x2' Catch Basin	Each	1		
48	Connect New SD Pipe To Existing Structure	Each	2		
49	15" / 18" / 24" Flared-End Outlet	Each	4		
50	Rip-rap (D50 = 6")	CY	10		
51	Adjust Utility structure/lid to Grade & Collar	Each	38		
52	Electrical Installation (Including trenching, furnishing all vaults and conduit)	Lump	1		
53	6" PVC C900 Waterline	LF	20		
54	Fire Hydrant Assembly	Each	1		
	Storm Drain / Utilities Subtotal				
55	Traffic Signal at 400 N Intersection	Lump	1		
	Traffic Signal Subtotal				
	Bid Schedule Total				

Unit Prices have been computed in accordance with paragraph 13.03 of the General Conditions.

Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Bid items will be based on actual quantities, determined as provided in the contract Documents.

ARTICLE 6 - TIME OF COMPLETION

6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damage.

ARTICLE 7 - ATTACHEMENTS TO THIS BID

7.01 The following documents are attached to and made a condition of the Bid:

- A. Required Bid security in the form of a Bid Bond (EJCDC No. C-430) or Certified Check);
- B. Document 00 45 00 - List of Subcontractors;
- C. Evidence of authority to do business in the state or jurisdiction of the Project; or a written covenant to obtain such license within the time frame for acceptance of Bids.

ARTICLE 8 - DEFINED TERMS

8.01 The terms used in this Bid with the initial capital letters have the meanings indicated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 - BID SUBMITTAL

9.01 This Bid is submitted by:

If Bidder is:

An Individual

Name (typed or printed): _____

By: _____
(Individual's signature)

SEAL,
if required
by State

Doing business as:

A Partnership

Partnership Name: _____

By: _____
(Signature of general partner -- attach evidence of authority to sign)

SEAL,
if required
by State

Name (typed or printed):

A Corporation

Corporation Name:

State or Jurisdiction of Incorporation: _____

Type (General Business, Profession, Service, Limited Liability):

By: _____
(Signature -- attach evidence of authority to sign)

Name (typed or printed):

Title: _____

Attest _____
(Signature of Corporate Secretary)

CORPORATE
SEAL,
if required by State

Date of Qualification to do business in _____ [State or other jurisdiction where
Project is located] is ____/____/____

A Joint Venture

Name of Joint Venture: _____

First Joint Venture Name: _____

SEAL,
if required
by State

By: _____

(Signature of joint venture partner -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Second Joint Venture Name: _____

SEAL,
if required
by State

By: _____

(Signature of joint venture partner -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is party to the venture should be in the manner indicated above.)

Bidder's Business address: _____

Business Phone No. (____)_____

Business FAX No. (____)_____

Business E-Mail Address _____

State Contractor License No. _____. (If applicable)

Employer's Tax ID No. _____

Phone and FAX Numbers, and Address for receipt of official communications, if different from Business contact information: _____

9.02 Bid submitted on _____, 20____.

BID BOND

Any singular reference to Bidder, Surety, Owner or other party shall be considered plural where applicable.

BIDDER (*Name and Address*):

SURETY (*Name and Address of Principal Place of Business*):

OWNER (*Name and Address*):

City of Saratoga Springs
1307 N. Commerce Dr. #200
Saratoga Springs, Utah 84045

BID

Bid Due Date:

Description: **City of Saratoga Springs – 800 West (Foothill Blvd) Roadway Improvements**

BOND

Bond Number:

Date (*Not earlier than Bid due date*):

Penal sum _____ \$ _____
(Words) (Figures)

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

BIDDER

SURETY

Bidder's Name and Corporate Seal (Seal) _____ (Seal)
Surety's Name and Corporate Seal

By: _____
Signature

By: _____
Signature (Attach Power of Attorney)

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Note: Above addresses are to be used for giving any required notice. Provide execution by any additional parties, such as joint venturers, if necessary.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation shall be null and void if:
 - 3.1 Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
 - 3.2 All Bids are rejected by Owner, or
 - 3.3 Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from Bid due date without Surety's written consent.
6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after Bid due date.
7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

DOCUMENT 00 45 00

LIST OF SUBCONTRACTORS

The bidder shall list below the names and business address of each subcontractor who will perform Work under this Contract in excess of five percent (0.05) of the total bid price and shall also list the portion of the work which will be done by such subcontractor. After the opening of proposals, no changes or substitutions will be allowed without the written approval of the Owner. NOTE: Attach additional sheets if required.

<u>WORK TO BE PERFORMED</u>	<u>SUBCONTRACTOR'S NAME AND ADDRESS</u>
1. _____ _____	_____ _____
2. _____ _____	_____ _____
3. _____ _____	_____ _____
4. _____ _____	_____ _____
5. _____ _____	_____ _____
6. _____ _____	_____ _____

- END OF DOCUMENT -

SECTION 01 10 25S

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Measurement and payment details for the 800 West (Foothill Blvd) Roadway Improvements project.

1.02 RELATED SECTIONS

- A. Section 01270 – Unit Prices: Criteria applicable to Work performed under a unit price or lump sum price payment method.

1.03 MEASUREMENT AND PAYMENT

- A. Measurement shall be made at the units or lump sums as described below. The Engineer will verify measurement and quantities.
- B. Unit Quantities: Quantities and measurements indicated in the Bid Form are mainly for contract purposes. If quantities and measurements supplied or placed in the Work vary significantly from contracted amounts, the Contractor may submit evidence of such for payment. Unless it can be clearly shown that additional quantities are outside the original scope of Work, the contract amounts will rule.
- C. Payment shall be made at the unit price or lump sum price bid in the bid schedule for the items described below; which shall be payment in full for all costs of furnishing labor, tools, equipment, materials, testing, etc., to complete the items of work as specified and as indicated on the drawings.
- D. 800 West (Foothill Blvd) Roadway Improvements Bid:
 - 1. Mobilization (Bid Item 1)
 - a. Basis for measurement: Lump Sum
 - b. Basis for payment: Payment for mobilization will be paid on a percentage basis according to the following table.

Percent of Original Contract Amount Earned	Percentage of Amount Bid to be Paid
5	50
50	30
100	20

- c. Bid price includes the following items:
 - i. All preparatory work and operations.
 - ii. Moving the required equipment on and off the project site.
 - iii. Installing temporary construction power, wiring, and fencing.
 - iv. Developing construction water supply.
 - v. Providing on-site sanitary facilities and potable water facilities as specified.
 - vi. Arranging for and erection of Contractor's work and storage yard.
 - vii. Contractor and subcontractor insurance and bonds.
 - viii. Obtaining all required permits (including UDOT coordination and permitting), licenses, and fees.
 - ix. Developing construction schedule.
 - x. Submitting a traffic control plan and acquiring permit.
 - xi. Coordination, general conditions, and professional consulting as needed.
 - xii. Cleanup and demobilization as required.
 - xiii. Contract closeout.

2. Quality Control (Bid Item 2)

- a. Basis for measurement: Lump Sum
- b. Basis for payment: Payment for quality control will be paid on a percentage basis according to the percentage of the project completed.
- c. Bid price includes the cost to provide the Contractor's portion of the quality control requirements described in the project specifications and Saratoga/APWA Standards. It includes all the labor, equipment, and incidentals necessary to complete the quality control through construction and submit results to the Engineer.

3. Traffic Control (Bid Item 3)

- a. Basis for measurement: Lump Sum
- b. Basis for payment: Payment for traffic control will be paid on a percentage basis according to the percentage of the project completed.
- c. Bid price includes developing a traffic control plan acceptable to the owner and engineer; flagging; furnishing, installing, maintaining, and moving all traffic control devices. It also includes cost of clearing, hauling, and proper disposal upon completion of the project.

4. Erosion Control/SWPPP (Bid Item 4)

- a. Basis for measurement: Lump Sum

- b. Basis for payment: Payment for Erosion Control / SWPPP will be paid on a percentage basis according to the percentage of the project completed.
 - c. Bid price includes creating and maintaining a SWPPP book acceptable to OWNER and with UPDES permitting and all associated record keeping and inspections to comply with city, state, and federal regulations on site. The cost of the UPDES permit shall be included. The bid price also includes furnishing, erecting, and maintaining erosion control devices during project construction, as indicated on the approved drawings, the UPDES permit, and as directed by the city's inspector. It also includes providing dust control (spraying water) and street sweeping as required.
- 5. Survey Layout (Bid Item 5)
 - a. Basis for measurement: Lump Sum
 - b. Basis for payment: Payment for survey layout will be paid on a percentage basis according to the percentage of the project completed.
 - c. Bid price includes all survey control, layout, staking, and restaking to complete the project. This includes, but is not limited to survey mobilization, horizontal and vertical control, and staking construction limits, saw cuts, rough grading, drainage and utilities, curb and gutter, striping, and signs.
 - i. This line item does not include survey layout and installation of City provided Cremation Pins and Lawn Burial Pins (Items B. 27, B.28).
- 6. Survey As-Built with GIS (Bid Item 6)
 - a. Basis for measurement: Lump Sum
 - b. Basis for payment: Bid price includes complete electronic documents and accepted by Saratoga Springs.
 - c. Bid price includes providing as-built GIS utility information on all utilities installed as part of this project, in a City-defined format. This bid item includes all field survey/drafting/computer work necessary to deliver the data to Saratoga Springs.
- 7. Clearing and Grubbing (Bid Item 7)
 - a. Basis for measurement and payment: Square Foot
 - b. Bid price includes clearing, removing, and disposing of existing plant life, vegetation (trees – regardless of size, stumps, shrubs, root systems, tree debris, etc.), and miscellany within the limits of disturbance.
- 8. Asphalt/Concrete Sawcut (Bid Item 8)
 - a. Basis for measurement and payment: Linear Foot

- b. Bid Price includes sawcut of asphalt and concrete flatwork as necessary to accommodate road and site improvements, regardless of depth.
- 9. Asphalt Removal & Concrete Removal (Bid Items 9 and 10)
 - a. Basis for measurement and payment: Square Yard
 - b. Bid price includes removal, hauling and disposal of existing asphalt and concrete materials necessary to complete work, regardless of existing depth.
- 10. Curb & Gutter Removal (Bid Item 11)
 - a. Basis for measurement and payment: Linear Foot
 - b. Bid price includes removal, hauling, and disposal of existing concrete materials necessary to complete work, regardless of existing depth.
- 11. Traffic Sign Removal (Bid Item 12)
 - a. Basis for measurement and payment: Each – Removed
 - b. Bid price includes removal, hauling, and disposal of existing traffic sign materials necessary to complete work.
- 12. Striping Removal (Bid Item 13)
 - a. Basis for measurement and payment: Linear Foot
 - b. Bid price includes removal of the paint striping and associated materials (i.e. thermoplastic markings), including disposal as indicated in the drawings and specifications and as necessary to complete work.
- 13. Fence Removal (Bid Item 14)
 - a. Basis for measurement and payment: Linear Foot
 - b. Bid price includes removal, hauling, and disposal of existing fencing, fence posts, and fence gate materials necessary to complete work. Damaged fencing materials shall be replaced with new materials as part of this line item.
- 14. Boulder Removal (Bid Item 15)
 - a. Basis for measurement and payment: Each – Removed
 - b. Bid price includes removal, hauling, and disposal of existing boulders and stones necessary to complete work.
- 15. Roadway Excavation (Bid Item 16) (Saratoga Standards 02115, 02116)
 - a. Basis for measurement and payment: Cubic Yard
 - b. Bid price includes excavating and relocating or disposing of existing soil to the limits identified in project plans and specifications.

16. Export Undocumented Fill & Import Granular Borrow (Contingency Item) (Bid Item 17)

- a. Basis for measurement and payment: Cubic Yard
- b. Bid price includes excavation and disposal of undocumented materials and import and placement of granular borrow to the limits identified in project plans and specifications. Undocumented fill may be used as import if it is shown to meet requirements of granular borrow by geotechnical analysis reviewed and approved by Engineer.

17. Earthwork / Material Transport (Bid Item 18) (Saratoga Standard 02116)

- a. Basis for measurement and payment: Cubic Yard
- b. Bid price includes all labor, equipment, and materials to import, haul, place, and compact AASHTO A-4 or better material to line and grade as directed in the drawings and specifications, including all incidentals to complete the work.

18. Seeding (Bid Item 19) (Saratoga Standards 02727)

- a. Basis for measurement and payment: Square Yard - Placed
- b. Bid price includes all labor, equipment, tools, supplies and materials required to complete this work item as specified, including but not limited to furnishing, hauling, placing, leveling and watering as necessary until project substantial completion. Seed mix shall be that described in Saratoga Springs standard specifications, section 02727.

19. Striping (Bid Item 20)

- a. Basis for measurement and payment: Lump Sum
- b. Basis for payment: Payment for striping will be paid on a percentage basis according to the percentage of the project completed.
- c. Bid price includes all labor, equipment, and materials to complete the work as directed in the plans and specifications and per the MUTCD. This item includes all striping of lines, legends, pictures, and text as shown on the plans. Removal of unauthorized, smeared, or damaged markings will be the responsibility of the contractor and will not be reimbursed.

20. Traffic / Street Sign (Bid Item 21)

- a. Basis for measurement and payment: Each – Installed
- b. Bid price includes all labor, equipment, and materials to furnish and install the sign, post, hardware, and concrete base with bedding and backfill per city standards and MUTCD and as described on the drawings, as necessary to complete the work.

This item includes any type and size of road/street sign, including multiple signs or placards on a single post or installing a sign on an existing post or pole.

21. Pothole Existing Utility (As Necessary) (Bid Item 22)

- a. Basis for measurement and payment: Each
- b. Bid price includes all labor, equipment, and materials to pothole existing utilities if necessary to determine vertical alignment and depth. All utilities on the drawings are approximate and should be verified by the CONTRACTOR.
- c. Potholes are to be temporally filled with soil or covered with steel plates for traffic purposes.

22. Soft Spot Stabilization (Contingency Item) (Bid Item 23)

- a. Basis for measurement and payment: Square Yard
- b. Bid price includes excavation, removal, proper disposal, and replacement of soft earth as indicated in the drawings, specifications, and geotechnical report or as encountered in the field. Soft earth is defined as existing, native material prohibiting the contractor from properly preparing the subgrade and placing the granular borrow for the roadway section. It also includes placing, stabilizing, and compacting imported granular borrow and any other material to complete the work as well as any fabric requirements as identified by the geotechnical engineer and approved by the engineer. Soft spot stabilization shall only be performed when it prevents the contractor from performing the work and as approved by the ENGINEER.

23. Granular Borrow Fill & Untreated Base Course (Bid Items 24 and 25)

- a. Basis for measurement and payment: Cubic Yard - Placed
- b. Bid price includes all labor, equipment, and materials to import, haul, place, and compact AASHTO A-4 or better material to line and grade as directed in the drawings and specifications, including all incidentals to complete the work.

24. Hot Mix Asphalt (Bid Item 26)

- a. Basis for measurement and payment: Ton – Placed
- b. Bid price includes all labor, equipment, and materials to import, haul, place, and compact the material to line and grade as directed in the drawings and specifications, including all incidentals to complete the work. This item includes aggregates, asphalt binder, hydrated lime, and other additives, etc.
- c. This item also includes installing a tack coat to the edges of existing asphalt when paving against an asphalt sawcut.

25. 30" Curb and Gutter (Bid Item 27) (Saratoga Standard Detail ST-2A)

- a. Basis for measurement and payment: Linear Foot – Installed (measured along the top back of curb)
- b. Bid price includes all labor, equipment, and materials to install the concrete curb & gutter as directed in the plans and specifications. It also includes furnishing and installing reflectors and curb transitions where indicated.

26. UDOT Type B5 10" Wide Median Curb (Bid Item 28)

- a. Basis for measurement and payment: Linear Foot – Installed (measured along the top back of curb)
- b. Bid price includes all labor, equipment, and materials to install the concrete curb and associated reinforcing as directed in the plans and specifications. It also includes furnishing and installing reflectors and curb transitions where indicated or required by UDOT standards.

27. Plowable End Section (Bid Item 29)

- a. Basis for measurement and payment: Each – Installed
- b. Bid price includes all labor, equipment, and materials to install plowable end sections as directed in the plans and specifications.

28. 31" W-Beam Guardrail (Bid Item 30)

- a. Basis for measurement and payment: Linear Foot – Installed
- b. Bid price includes all labor, equipment, and materials to construct the guardrail as directed in the plans and specifications. All earthwork, foundations, hardware, site restoration, crash cushioning, and any other incidental shall be included.

29. 5" Concrete Sidewalk & 6" Drivable Concrete Sidewalk/Flatwork (Bid Items 31 and 32)

- a. Basis for measurement and payment: Square Foot – Installed
- b. Bid price includes all labor, equipment, and materials to complete the work as directed in the plans and specifications. This item includes ADA ramps and other concrete transitions.

30. Tactile/Truncated Dome Pad (Bid Item 33)

- a. Basis for measurement and payment: Each – Installed
- b. Bid price includes all labor, equipment, and materials to install the tactile / truncated dome pads according to the plans, specifications, and city standards. All incidentals shall be included to complete the work.

31. Storm Drain Structure Removal (Bid Item 34)

- a. Basis for measurement and payment: Each – Removed

- b. Bid price includes excavation, removal, hauling, and proper disposal of existing storm drain structure and related parts. This item also includes backfilling, compaction, grading, restoring the surface to existing conditions, and all incidentals to complete the work.

32.8" – 24" Pipe Removal (Bid Item 35)

- a. Basis for measurement and payment: Linear Foot – Removed (measured along centerline of pipe)
- b. Bid price includes excavation, removal, hauling, and proper disposal of existing storm drain pipe and any associated end sections or other related parts. It also includes grouting holes created from pipe removal in drainage structures, backfilling, compaction of the trench, grading, restoring the surface to existing conditions, and all incidentals to complete the work.

33. Communications/Fiber/Electrical/Power Structure Removal & Relocation (Bid Item 36)

- a. Basis for measurement and payment: Each – Relocated
- b. Bid price includes removal, hauling, and installation of relocated utility structure. CONTRACTOR shall be responsible for damages during removal and until the parts are given to the city. The bid price shall also include all necessary coordination, labor, and equipment to remove any associated wiring, junction boxes and fuses, and conduits, and to restore the site to its existing condition, including any incidentals to complete the work. Coordinate electrical work with the city and Rocky Mountain Power.

34. Light Pole & Foundation Removal (Bid Item 37)

- a. Basis for measurement and payment: Each – Removed
- b. Bid price includes removal, hauling, and salvaging the street light poles and luminaires to the city. CONTRACTOR shall be responsible for damages during removal and until the parts are given to the city. The bid price shall also include all necessary coordination, labor, and equipment to remove any associated wiring, junction boxes and fuses, and conduits, and to restore the site to its existing condition, including any incidentals to complete the work. Coordinate electrical work with the city and Rocky Mountain Power.

35. Irrigation Structure Removal (Bid Item 38)

- a. Basis for measurement and payment: Each – Removed
- b. Bid price includes excavation, removal, hauling, and proper disposal of existing irrigation structure and related parts. This item also includes backfilling, compaction, grading, restoring the

surface to existing conditions, and all incidentals to complete the work.

36. Fire Hydrant Removal (Bid Item 39)

- a. Basis for measurement and payment: Each – Removed
- b. Bid price includes excavation, removal, hauling, and proper disposal of existing fire hydrant structure, the associated valve, and any other related parts. This item also includes backfilling, compaction, grading, restoring the surface to existing conditions, and all incidentals to complete the work.

37. 15" PVC (Bid Item 40) (Saratoga Standard 02410)

- a. Basis for measurement and payment: Linear Foot – Installed (measured along centerline of pipe with no deduction for fittings)
- b. Bid price includes all necessary labor, equipment, and materials to excavate the trench and furnish and install the water pipe with suitable bedding and backfill according to the drawings and specifications. It also includes the cost of incidental work such as removal of interfering structures and obstructions, removal and disposal of excess material, pipe fittings and elbows, caps, reducers, connections, thrust blocking with necessary reinforcement, joint restraints, PE wrap, tape wrap, tracer wire, control of water in the trench, sub-grade stabilization, grading, surface restoration, shoring and bracing, disinfecting, flushing, testing, and commissioning, and any necessary incidentals for a complete job. There will be no payments for over-excavation unless approved by ENGINEER prior to excavating. Depths may vary in some locations in order to avoid other utilities and drainage pipes. The CONTRACTOR shall anticipate depths will increase in some areas, particularly at intersections.

38. 15", 18", & 24" RCP (Class III) (Bid Items 41, 42 and 43) (Saratoga Standard 02335)

- a. Basis for measurement and payment: Linear Foot – Installed (measured along centerline of pipe with no deduction for fittings)
- b. Bid price includes all necessary labor, equipment, and materials to excavate the trench and furnish and install the storm drain pipe with suitable bedding and backfill to the finished grade or subgrade as indicated in the drawings. It also includes removal of interfering structures and obstructions, removal and disposal of excess material, pipe fittings, connections, control of water in the trench, sub-grade stabilization, shoring and bracing, and any necessary incidentals for a complete job.

39. 24" CMP (Bid Item 44)

- a. Basis for measurement and payment: Linear Foot – Installed (measured along centerline of pipe)
- b. Bid price includes all necessary labor, equipment, and materials to excavate the trench and furnish and install the storm drain pipe with suitable bedding and backfill to the finished grade or subgrade as indicated in the drawings. It also includes removal of interfering structures and obstructions, removal and disposal of excess material, pipe fittings, connections, control of water in the trench, sub-grade stabilization, shoring and bracing, and any necessary incidentals for a complete job.

40.4' Storm Drain Manhole (Bid Item 45) (Saratoga Standard 02340)

- a. Basis for measurement and payment: Each – Installed
- b. Bid price includes all necessary labor, equipment, and materials required to furnish and install a complete drainage structure. Includes but not limited to the following: Excavation, concrete, reinforcing steel, grate/lid and frame, grade rings, steps, bedding, backfill, and any other items required in the drawings and specifications. The connection to any pipe culvert or other drainage feature, including grouting and other incidentals, will be part of this construction and no separate payment will be made for this work.

41.4'x6' Catch Basin / Manhole Combo Box, and 2'x2' Catch Basin (Bid Items 46 and 47)

- a. Basis for measurement and payment: Each – Installed
- b. Bid price includes all necessary labor, equipment, and materials required to furnish and install a complete drainage structure including but not limited to the following: Excavation, concrete, reinforcing steel, grate/lid and frame, grade rings, steps, bedding, backfill, and any other items required in the drawings and specifications. The connection to any pipe culvert or other drainage feature, including grouting and other incidentals, will be part of this construction and no separate payment will be made for this work.

42. Connect New SD Pipe to Existing Structure (Bid Item 48) (Saratoga Standards 02335, 02340)

- a. Basis for measurement and payment: Each – Installed
- b. Bid price includes all necessary labor, equipment, and materials required to furnish and install a drainage pipe connection to existing structure. Includes but not limited to the following: Excavation, concrete, reinforcing steel, grate/lid and frame, grade rings, steps, bedding, backfill, and any other items required in the drawings and specifications. The connection to any pipe culvert or other drainage feature, including grouting

and other incidentals, will be part of this construction and no separate payment will be made for this work.

43. 15" / 18" / 24" Flared-End Outlet (Bid Item 49)

- a. Basis for measurement and payment: Each – Installed
- b. Bid price includes the cost to furnish and install the type of concrete end section indicated on the plans. It also includes additional excavation outside the typical trench section due to the additional size of the structure; connection of the end section to existing or new pipe; adjustment of end section to final grade; placement and compaction of backfill; and any necessary incidentals for a complete job.

44. Rip Rap (D50 = 6") (Bid Item 50)

- a. Basis for measurement and payment: Cubic Yard – Placed
- b. Bid price includes cost of furnishing, hauling, grading, shaping, and installation. Material used shall be a 6" median angular rock. Rocks shall be keyed into the native earth and/or other rocks to lock them in place and complete the armoring. Rip rap gradations must be approved by the ENGINEER prior to placement. The rip rap shall be placed as located and detailed on the plans.

45. Adjust Utility Structure/Lid to Grade & Collar (Bid Item 51)

- a. Basis for measurement and payment: Cubic Yard
- b. Bid price includes all necessary labor, equipment, and materials required to raise or lower the utility structure/lid elevation as indicated in the drawings. Price includes but is not limited to the following: Saw cutting and pavement removal, adjusting or reconstructing the valve structure, replacing the lid at the correct elevation, pouring a concrete collar as specified, protection during paving, and any replacement parts to the structure, sufficient to complete the work.

46. Electrical Installation (Including trenching, furnishing all vaults and conduit) (Bid Item 52)

- a. Basis for measurement and payment: Lump Sum
- b. Basis for payment: payment will be paid on a percentage basis according to the percentage of the job completed.
- c. Bid price includes all necessary labor, equipment, and materials to furnish and install per Rocky Mountain Power standards all necessary conduits and electrical vaults. Electrical connections are NOT included in this item, and will be performed by Rocky Mountain Power. Contractor will be responsible to coordinate as necessary with Rocky Mountain Power for electrical connections and any inspections required by Rocky Mountain Power.

47.6" PVC C900 Waterline (Bid Item 53) (Saratoga Standard 02410)

- a. Basis for measurement and payment: Linear Foot – Installed (measured along centerline of pipe with no deduction for fittings)
- b. Bid price includes all necessary labor, equipment, and materials to excavate the trench and furnish and install the water pipe with suitable bedding and backfill according to the drawings and specifications. It also includes the cost of incidental work such as removal of interfering structures and obstructions, removal and disposal of excess material, pipe fittings and elbows, caps, reducers, connections, thrust blocking with necessary reinforcement, joint restraints, PE wrap, tape wrap, tracer wire, control of water in the trench, sub-grade stabilization, grading, surface restoration, shoring and bracing, disinfecting, flushing, testing, and commissioning, and any necessary incidentals for a complete job. There will be no payments for over-excavation unless approved by ENGINEER prior to excavating. Depths may vary in some locations in order to avoid other utilities and drainage pipes. The CONTRACTOR shall anticipate depths will increase in some areas, particularly at intersections.

48. Fire Hydrant Assembly (Bid Item 54)

- a. Basis for measurement and payment: Each – Installed
- b. Bid price includes all necessary labor, equipment, and materials to excavate, furnish, and install the fire hydrant assembly with suitable bedding and backfill according to the drawings and specifications. It also includes the cost of incidental work such as removal of interfering structures and obstructions, removal and disposal of excess material, pipe fittings and elbows, caps, reducers, connections, nut extensions, thrust blocking with necessary reinforcement, joint restraints, PE wrap, tape wrap, tracer wire, control of water in the trench, sub-grade stabilization, grading, surface restoration, shoring and bracing, disinfecting, flushing, testing, and commissioning, and any necessary incidentals for a complete job.

49. Traffic Signal at 400 N Intersection (Bid Item 55)

- a. Basis for measurement and payment: Lump Sum
- b. Basis for payment: Payment for signalization will be paid on a percentage basis according to the percentage of the job completed.
- c. Bid price includes all necessary labor, equipment, and materials to furnish, install, and program all the signal modifications at the 800 West and 400 North intersection according to the drawings and specifications. OWNER to furnish traffic signal poles (with all appurtenances) and pedestrian push-button poles.

Contractor to furnish all other items. Contractor to install all items. This item includes removals with hauling and salvaging or disposal, connections, excavation, control of water in the excavation, sub-grade stabilization, shoring and bracing, backfill, compaction, site restoration, and any necessary incidentals to provide a fully functional intersection traffic signal.

END OF SECTION

CONTRACT FORMS

DOCUMENT 00 50 00
Notice of Intent to Award

Date: _____

Project: 800 West (Foothill Blvd) Roadway Improvements

Owner: City of Saratoga Springs

Owner's Contract No.:

Contract:

Engineer's Project No.: 1005.2316

Bidder:

Bidder's Address: *[send Notice of Award Certified Mail, Return Receipt Requested]*

You are hereby notified that your BID has been accepted for items in the amount of:

\$ _____.

You are required to return an acknowledged copy of this NOTICE OF INTENT TO AWARD to the OWNER.

Dated this ____ day of _____, **20**_____.

City of Saratoga Springs

Owner

By _____

Title _____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF INTENT TO AWARD is hereby acknowledged

By _____

this the _____ day of _____, _____

By _____

Title

Copy to Engineer

DOCUMENT 00 51 00
Notice of Award

Date: _____

Project: 800 West (Foothill Blvd) Roadway Improvements

Owner: City of Saratoga Springs

Owner's Contract No.:

Contract:

Engineer's Project No.: 1005.2316

Bidder:

Bidder's Address: *[send Notice of Award Certified Mail, Return Receipt Requested]*

You are notified that your Bid dated _____ for the above Contract has been considered. You are the Successful Bidder and are awarded a Contract for _____

[Indicate total Work, alternates, or sections of Work awarded.]

The Contract Price of your Contract is _____ Dollars (\$_____).

Three copies of the proposed Contract Documents (except Drawings) accompany this Notice of Award.

Drawings will be delivered separately or otherwise made available to you immediately.

You must comply with the following conditions precedent within 15 days of the date you receive this Notice of Award.

1. Deliver to the Owner three fully executed counterparts of the Contract Documents.
2. Deliver with the executed Contract Documents the Contract security [Bonds] as specified in the Instructions to Bidders (Article 20), General Conditions (Paragraph 5.01), and Supplementary Conditions (Paragraph SC-5.01).
3. Other conditions precedent:

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

Within ten days after you comply with the above conditions, Owner will return to you one fully executed counterpart of the Contract Documents.

City of Saratoga Springs

Owner

By: _____
Authorized Signature

Title

Copy to Engineer

AGREEMENT

THIS AGREEMENT is by and between City of Saratoga Springs (“Owner”) and
____ (“Contractor”).

Owner and Contractor hereby agree as follows:

ARTICLE 1 – WORK

1.01 *Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:*

- Widening, mill-and-overlay, and restriping of the existing 800 West road from Pioneer Crossing to Pony Express Parkway (approximately 1.6 miles) and a realignment of the 800 West / 400 North / Evans Lane intersection to eliminate existing offset. Demolition work includes removal of existing asphalt pavement, removal of existing concrete, curb, utilities, street signs, etc. New construction work includes mill and overlay of existing asphalt pavement, road widening, signage, earthwork, installation of concrete curb and gutter, concrete sidewalk, street signs, roadway striping, storm drain pipe and structures, trenching vault and conduit installation for power, adjust utility manholes, and a fully signalized intersection at 400 North.

ARTICLE 2 – THE PROJECT

2.01 The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows: **800 West (Foothill Blvd) Roadway Improvements**

ARTICLE 3 – ENGINEER

3.01 The Project has been designed by CMT Technical Services (Engineer). Engineer is to act as Owner’s representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4 – CONTRACT TIMES

4.01 *Time of the Essence*

- A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 *Dates for Substantial Completion and Final Payment*

- A. The Work shall be substantially completed on or before August 8, 2025 and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before October 1, 2025.

4.03 *Dates for Additive Alternate Substantial Completion and Final Payment*

Not used.

4.04 *Liquidated Damages*

- A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial loss if the Work is not completed within the times specified in Paragraph 4.02 and 4.03 above, plus any extensions thereof allowed in accordance with Article 11 of the General Conditions. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty), Contractor shall pay Owner \$5,000.00 for each day that expires after the time specified in Paragraphs 4.02 and 4.03 above for Substantial Completion until the Work, including any Additive Alternates, is substantially complete. After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by Owner, Contractor shall pay Owner \$5,000.00 for each day that expires after the time specified in Paragraph 4.02 or 4.03 above for completion and readiness for final payment until the Work is completed and ready for final payment.

4.05 *Traffic Control*

- A. Contractor recognizes that 800 West and adjacent roads are vital transportation routes in Saratoga Springs that must be kept operational and free-flowing as much as practical. Contractor shall ensure the following during construction:
1. During peak hours, defined as 6:00am to 9:00am and 5:00pm to 8:00pm, at least one lane of traffic each direction shall remain operational on 800 West. Outside of peak hours, one traffic-controlled lane shall remain operational. Total/full closures on 800 West are not allowed.
 2. As part of the re-alignment of 400 North to the new intersection location, total/full closures of 400 North shall not have a total duration of longer than two weeks.
- B. Saratoga Springs is anticipating the Splash Bash and Splash Parade to occur between June 9 – June 14, 2025. During this time period, no construction closures of any portions of 800 West or 400 North along the to-be-determined parade route will be allowed. All accesses to area City Parks during this time period shall be fully retained.

ARTICLE 5 – CONTRACT PRICE

- 5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to Paragraphs 5.01.A below:
- A. For all Work, at the prices stated in Contractor's Bid, attached hereto as an exhibit.

ARTICLE 6 – PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

- A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

- A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment on or about the 1st day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below. All such payments will be measured by the schedule of values established as provided in Paragraph 2.03.A of the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements.
 - 1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Engineer may determine or Owner may withhold, including but not limited to liquidated damages, in accordance with Paragraph 15.01 of the General Conditions.
 - a. 90% percent of Work completed (with the balance being retainage). If the Work has been 50 percent completed as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer, then as long as the character and progress of the Work remain satisfactory to Owner and Engineer, there will be no additional retainage; and
 - b. 95% percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).
- B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 100 percent of the Work completed, less such amounts as Engineer shall determine in accordance with Paragraph 15.01 of the General Conditions and less 100 percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the tentative list of items to be completed or corrected attached to the certificate of Substantial Completion.

6.03 *Final Payment*

- A. Upon final completion and acceptance of the Work in accordance with Paragraph 15.05 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 15.06.

ARTICLE 7 – INTEREST

7.01 All moneys not paid when due as provided in Article 15 of the General Conditions shall bear interest at the rate of 5% percent per annum.

ARTICLE 8 – CONTRACTOR’S REPRESENTATIONS

8.01 In order to induce Owner to enter into this Agreement, Contractor makes the following representations:

- A. Contractor has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.
- B. Contractor 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.
- C. Contractor 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.
- D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities), if any and (2) reports and drawings of Hazardous Environmental Conditions, if any.
- E. Contractor has considered the information known to Contractor; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Contract Documents; and (3) Contractor’s safety precautions and programs.
- F. Based on the information and observations referred to in Paragraph 8.01.E above, Contractor does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.
- G. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
- H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
- I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 9 – CONTRACT DOCUMENTS

9.01 *Contents*

A. The Contract Documents consist of the following:

1. This Agreement (pages 1 to 7, inclusive).
2. Performance bond (pages 1 to 3, inclusive).
3. Payment bond (pages 1 to 3, inclusive).
4. General Conditions (pages 1 to 72, inclusive).
5. Supplementary Conditions (pages 1 to 12, inclusive).
6. Specifications as listed in the table of contents of the Project Manual. Saratoga Springs Standard Technical Specifications and Drawings (latest edition) and the 2017 APWA Utah Chapter Manual of Standard Specifications are included by reference. The City's standards and specifications are available on the City's website at <https://saratogaspringscity.com/266/Standards-Specifications>
7. Drawings with each sheet bearing the following general title: 800 West (Foothill Blvd) Roadway Improvements
8. Addenda (numbers 1 to 3, inclusive).
9. Exhibits to this Agreement (enumerated as follows):
 - a. Contractor's Bid
 - b. Documentation submitted by Contractor prior to Notice of Award.
10. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
 - a. Notice to Proceed.
 - b. Work Change Directives.
 - c. Change Orders.

B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 9.

D. The Contract Documents may only be amended, modified, or supplemented as provided in Paragraph 3.04 of the General Conditions.

ARTICLE 10 – MISCELLANEOUS

10.01 *Terms*

- A. Terms used in this Agreement will have the meanings stated in the General Conditions and the Supplementary Conditions.

10.02 *Assignment of Contract*

- A. No assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, moneys that may become due and moneys 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.

10.03 *Successors and Assigns*

- A. 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 to all covenants, agreements, and obligations contained in the Contract Documents.

10.04 *Severability*

- A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall 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.

10.05 *Contractor's Certifications*

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 10.05:
 - 1. “corrupt practice” means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process or in the Contract execution;
 - 2. “fraudulent practice” means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. “collusive practice” means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and
4. “coercive practice” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement. Counterparts have been delivered to Owner and Contractor. All portions of the Contract Documents have been signed or have been identified by Owner and Contractor or on their behalf.

This Agreement will be effective on _____(which is the Effective Date of the Agreement).

OWNER:

City of Saratoga Springs

By: _____

Title: _____

Attest: _____

Title: _____

Address for giving notices:

City of Saratoga Springs

1307 N. Commerce Dr. #200

Saratoga Springs, Utah 84045

(If Owner is a corporation, attach evidence of authority to sign. If Owner is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)

CONTRACTOR

By: _____

Title: _____

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

Attest: _____

Title: _____

Address for giving notices:

License No.: _____
(Where applicable)

Agent for service of process:

Change Order

No. _____

Date of Issuance: _____ Effective Date: _____

Project: Wildflower Cemetery	Owner: City of Saratoga Springs	Owner's Contract No.:
Contract:		Date of Contract:
Contractor:		Engineer's Project No.: 1005.2316

The Contract Documents are modified as follows upon execution of this Change Order:

Description:

Attachments (list documents supporting change):

CHANGE IN CONTRACT PRICE:

Original Contract Price:

Increase from previously approved Change Orders No. original to No. 1:

Contract Price prior to this Change Order:

Increase of this Change Order:

Contract Price incorporating this Change

CHANGE IN CONTRACT TIMES:

Original Contract Times: ☐ Working ☐ Calendar days

Substantial completion (days or date): _____

Ready for final payment (days or date): _____

[Increase] [Decrease] from previously approved Change Orders No. _____ to No. _____:

Substantial completion (days): _____

Ready for final payment (days): _____

Contract Times prior to this Change Order:

Substantial completion (days or date): _____

Ready for final payment (days or date): _____

[Increase] [Decrease] of this Change Order:

Substantial completion (days or date): _____

Ready for final payment (days or date): _____

Contract Times with all approved Change Orders:

Substantial completion (days or date): _____

Ready for final payment (days or date): _____

RECOMMENDED:

By: _____
Engineer (Authorized Signature)

Date: _____

Approved by Funding Agency (if applicable):

ACCEPTED:

By: _____
Owner (Authorized Signature)

Date: _____

ACCEPTED:

By: _____
Contractor (Authorized Signature)

Date: _____

Date: _____

Change Order

Instructions

A. GENERAL INFORMATION

This document was developed to provide a uniform format for handling contract changes that affect Contract Price or Contract Times. Changes that have been initiated by a Work Change Directive must be incorporated into a subsequent Change Order if they affect Price or Times.

Changes that affect Contract Price or Contract Times should be promptly covered by a Change Order. The practice of accumulating Change Orders to reduce the administrative burden may lead to unnecessary disputes.

If Milestones have been listed in the Agreement, any effect of a Change Order thereon should be addressed.

For supplemental instructions and minor changes not involving a change in the Contract Price or Contract Times, a Field Order should be used.

B. COMPLETING THE CHANGE ORDER FORM

Engineer normally initiates the form, including a description of the changes involved and attachments based upon documents and proposals submitted by Contractor, or requests from Owner, or both.

Once Engineer has completed and signed the form, all copies should be sent to Owner or Contractor for approval, depending on whether the Change Order is a true order to the Contractor or the formalization of a negotiated agreement for a previously performed change. After approval by one contracting party, all copies should be sent to the other party for approval. Engineer should make distribution of executed copies after approval by both parties.

If a change only applies to price or to times, cross out the part of the tabulation that does not apply.

Notice to Proceed

Date: _____

Project: 800 West (Foothill Blvd) Roadway Improvements

Owner: City of Saratoga Springs

Owner's Contract No.: N/A

Contract: _____

Engineer's Project No.: 1005.2316

Contractor: _____

Contractor's Address: _____

You are notified that the Contract Times under the above Contract will commence to run _____. On or before that date, you are to start performing your obligations under the Contract Documents. In accordance with Article 4 of the Agreement, the date of Substantial Completion is _____, and the date of readiness for final payment is _____.

Before you may start any Work at the Site, Paragraph 2.01.B of the General Conditions provides that you and Owner must each deliver to the other (with copies to Engineer and other identified additional insureds and loss payees) certificates of insurance which each is required to purchase and maintain in accordance with the Contract Documents.

Also, before you may start any Work at the Site, you must:

- Execute Contract document provided by the City
- Apply for and receive an approved City Encroachment permit.

City of Saratoga Springs

Owner

Given by: _____

Authorized Signature

Title

Date

Copy to Engineer

DOCUMENT 00 61 00

PERFORMANCE BOND

Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

CONTRACTOR (*Name and Address*): SURETY (*Name, and Address of Principal Place of Business*):

OWNER (*Name and Address*):

City of Saratoga Springs
1307 N. Commerce Dr. #200
Saratoga Springs, Utah 84045

CONTRACT

Effective Date of Agreement:
Amount:
Description (*Name and Location*):

BOND

Bond Number:
Date (*Not earlier than Effective Date of Agreement*):
Amount:
Modifications to this Bond Form:

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

CONTRACTOR AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal

Surety's Name and Corporate Seal

By: _____
Signature

By: _____
Signature (Attach Power of Attorney)

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Note: Provide execution by additional parties, such as joint venturers, if necessary.

Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner for the performance of the Contract, which is incorporated herein by reference.

1. If Contractor performs the Contract, Surety and Contractor have no obligation under this Bond, except to participate in conferences as provided in Paragraph 2.1.
2. If there is no Owner Default, Surety's obligation under this Bond shall arise after:
 - 2.1 Owner has notified Contractor and Surety, at the addresses described in Paragraph 9 below, that Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with Contractor and Surety to be held not later than 15 days after receipt of such notice to discuss methods of performing the Contract. If Owner, Contractor, and Surety agree, Contractor shall be allowed a reasonable time to perform the Contract, but such an agreement shall not waive Owner's right, if any, subsequently to declare a Contractor Default; and
 - 2.2 Owner has declared a Contractor Default and formally terminated Contractor's right to complete the Contract. Such Contractor Default shall not be declared earlier than 20 days after Contractor and Surety have received notice as provided in Paragraph 2.1; and
 - 2.3 Owner has agreed to pay the Balance of the Contract Price to:
 1. Surety in accordance with the terms of the Contract; or
 2. Another contractor selected pursuant to Paragraph 3.3 to perform the Contract.
3. When Owner has satisfied the conditions of Paragraph 2, Surety shall promptly, and at Surety's expense, take one of the following actions:
 - 3.1 Arrange for Contractor, with consent of Owner, to perform and complete the Contract; or
 - 3.2 Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or
 - 3.3 Obtain bids or negotiated proposals from qualified contractors acceptable to Owner for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by Owner and contractor selected with Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Contract, and pay to Owner the amount of damages as described in Paragraph 5 in excess of the Balance of the Contract Price incurred by Owner resulting from Contractor Default; or
 - 3.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:
 1. After investigation, determine the amount for which it may be liable to Owner and, as soon as practicable after the amount is determined, tender payment therefor to Owner; or
 2. Deny liability in whole or in part and notify Owner citing reasons therefor.
4. If Surety does not proceed as provided in Paragraph 3 with reasonable promptness, Surety shall be deemed to be in default on this Bond 15 days after receipt of an additional written notice from Owner to Surety demanding that Surety perform its obligations under this Bond, and Owner shall be entitled to enforce any remedy available to Owner. If Surety proceeds as provided in Paragraph 3.4, and Owner refuses the payment tendered or Surety has denied liability, in whole or in part, without further notice Owner shall be entitled to enforce any remedy available to Owner.
5. After Owner has terminated Contractor's right to complete the Contract, and if Surety elects to act under Paragraph 3.1, 3.2, or 3.3 above, then the responsibilities of Surety to Owner shall not be greater than those of Contractor under the Contract, and the responsibilities of Owner to Surety shall not be greater than those of Owner under the Contract. To the limit of the amount of this Bond, but subject to commitment by Owner of the Balance of the Contract Price to mitigation of costs and damages on the Contract, Surety is obligated without duplication for:

- 5.1 The responsibilities of Contractor for correction of defective Work and completion of the Contract;
- 5.2 Additional legal, design professional, and delay costs resulting from Contractor's Default, and resulting from the actions of or failure to act of Surety under Paragraph 3; and
- 5.3 Liquidated damages, or if no liquidated damages are specified in the Contract, actual damages caused by delayed performance or non-performance of Contractor.

6. Surety shall not be liable to Owner or others for obligations of Contractor that are unrelated to the Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than Owner or its heirs, executors, administrators, or successors.

7. Surety hereby waives notice of any change, including changes of time, to Contract or to related subcontracts, purchase orders, and other obligations.

8. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the Work or part of the Work is located, and shall be instituted within two years after Contractor Default or within two years after Contractor ceased working or within two years after Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

9. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the address shown on the signature page.

10. When this Bond has been furnished to comply with a statutory requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory requirement shall be deemed deleted herefrom and provisions conforming to such statutory requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

11. Definitions.

- 11.1 Balance of the Contract Price: The total amount payable by Owner to Contractor under the Contract after all proper adjustments have been made, including allowance to Contractor of any amounts received or to be received by Owner in settlement of insurance or other Claims for damages to which Contractor is entitled, reduced by all valid and proper payments made to or on behalf of Contractor under the Contract.
- 11.2 Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.
- 11.3 Contractor Default: Failure of Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Contract.
- 11.4 Owner Default: Failure of Owner, which has neither been remedied nor waived, to pay Contractor as required by the Contract or to perform and complete or otherwise comply with the other terms thereof.

FOR INFORMATION ONLY – *(Name, Address and Telephone)*

Surety Agency or Broker:

Owner's Representative *(Engineer or other party)*:

PAYMENT BOND

Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

CONTRACTOR (*Name and Address*):

SURETY (*Name, and Address of Principal Place of Business*):

OWNER (*Name and Address*):

City of Saratoga Springs
1307 N. Commerce Dr. #200
Saratoga Springs, Utah 84045

CONTRACT

Effective Date of Agreement:

Amount:

Description (*Name and Location*):

BOND

Bond Number:

Date (*Not earlier than Effective Date of Agreement*):

Amount:

Modifications to this Bond Form:

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

CONTRACTOR AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal (Seal)

Surety's Name and Corporate Seal (Seal)

By: _____
Signature

By: _____
Signature (Attach Power of Attorney)

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Note: Provide execution by additional parties, such as joint venturers, if necessary.

1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner to pay for labor, materials, and equipment furnished by Claimants for use in the performance of the Contract, which is incorporated herein by reference.
2. With respect to Owner, this obligation shall be null and void if Contractor:
 - 2.1 Promptly makes payment, directly or indirectly, for all sums due Claimants, and
 - 2.2 Defends, indemnifies, and holds harmless Owner from all claims, demands, liens, or suits alleging non-payment by Contractor by any person or entity who furnished labor, materials, or equipment for use in the performance of the Contract, provided Owner has promptly notified Contractor and Surety (at the addresses described in Paragraph 12) of any claims, demands, liens, or suits and tendered defense of such claims, demands, liens, or suits to Contractor and Surety, and provided there is no Owner Default.
3. With respect to Claimants, this obligation shall be null and void if Contractor promptly makes payment, directly or indirectly, for all sums due.
4. Surety shall have no obligation to Claimants under this Bond until:
 - 4.1 Claimants who are employed by or have a direct contract with Contractor have given notice to Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.
 - 4.2 Claimants who do not have a direct contract with Contractor:
 1. Have furnished written notice to Contractor and sent a copy, or notice thereof, to Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials or equipment were furnished or supplied, or for whom the labor was done or performed; and
 2. Have either received a rejection in whole or in part from Contractor, or not received within 30 days of furnishing the above notice any communication from Contractor by which Contractor had indicated the claim will be paid directly or indirectly; and
 3. Not having been paid within the above 30 days, have sent a written notice to Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to Contractor.
5. If a notice by a Claimant required by Paragraph 4 is provided by Owner to Contractor or to Surety, that is sufficient compliance.
6. When a Claimant has satisfied the conditions of Paragraph 4, the Surety shall promptly and at Surety's expense take the following actions:
 - 6.1 Send an answer to that Claimant, with a copy to Owner, within 45 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.
 - 6.2 Pay or arrange for payment of any undisputed amounts.
7. Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by Surety.
8. Amounts owed by Owner to Contractor under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any performance bond. By Contractor furnishing and Owner

accepting this Bond, they agree that all funds earned by Contractor in the performance of the Contract are dedicated to satisfy obligations of Contractor and Surety under this Bond, subject to Owner's priority to use the funds for the completion of the Work.

9. Surety shall not be liable to Owner, Claimants, or others for obligations of Contractor that are unrelated to the Contract. Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

10. Surety hereby waives notice of any change, including changes of time, to the Contract or to related subcontracts, purchase orders, and other obligations.

11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the Work or part of the Work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Paragraph 4.1 or Paragraph 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the addresses shown on the signature page. Actual receipt of notice by Surety, Owner, or Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.

13. When this Bond has been furnished to comply with a statutory requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory requirement shall be deemed deleted herefrom and provisions conforming to such statutory requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory Bond and not as a common law bond.

14. Upon request of any person or entity appearing to be a potential beneficiary of this Bond, Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.

15. Definitions

15.1 Claimant: An individual or entity having a direct contract with Contractor, or with a first-tier subcontractor of Contractor, to furnish labor, materials, or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Contract, architectural and engineering services required for performance of the Work of Contractor and Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

15.2 Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.

15.3 Owner Default: Failure of Owner, which has neither been remedied nor waived, to pay Contractor as required by the Contract, or to perform and complete or otherwise comply with the other terms thereof.

FOR INFORMATION ONLY – (*Name, Address, and Telephone*)

Surety Agency or Broker:

Owner's Representative (*Engineer or other*):

**Application For Payment
Change Order Summary**

Approved Change Orders		
Number	Additions	Deductions
TOTALS		
NET CHANGE BY CHANGE ORDERS		

1. ORIGINAL CONTRACT PRICE..... \$ _____
2. Net change by Change Orders..... \$ _____
3. Current Contract Price (Line 1 ± 2)..... \$ _____
4. TOTAL COMPLETED AND STORED TO DATE
(Column F on Progress Estimate)..... \$ _____
5. RETAINAGE:
 a. X _____ **Work Completed**..... \$ _____
 b. X _____ **Stored Material**..... \$ _____
 c. **Total Retainage (Line 5a + Line 5b)**..... \$ _____
6. AMOUNT ELIGIBLE TO DATE (Line 4 - Line 5c)..... \$ _____
7. LESS PREVIOUS PAYMENTS (Line 6 from prior Application)..... \$ _____
8. AMOUNT DUE THIS APPLICATION..... \$ _____
9. BALANCE TO FINISH, PLUS RETAINAGE
(Column G on Progress Estimate + Line 5 above)..... \$ _____

Contractor's Certification

The undersigned Contractor certifies that to the best of its knowledge: (1) all previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with Work covered by prior Applications for Payment; (2) title of all Work, materials and equipment incorporated in said Work or otherwise listed in or covered by this Application for Payment will pass to Owner at time of payment free and clear of all Liens, security interests and encumbrances (except such as are covered by a Bond acceptable to Owner indemnifying Owner against any such Liens, security interest or encumbrances); and (3) all Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

By: _____ Date: _____

Payment of: \$ _____
 (Line 8 or other - attach explanation of the other amount)

is recommended by: _____ (Engineer) _____ (Date)

Payment of: \$ _____
 (Line 8 or other - attach explanation of the other amount)

is approved by: _____ (Owner) _____ (Date)

Approved by: _____ Funding Agency (if applicable) _____ (Date)

Endorsed by the Construction Specifications Institute.

Certificate of Substantial Completion

Project: 800 West (Foothill Blvd) Roadway Improvements	
Owner: City of Saratoga Springs	Owner's Contract No.:
Contract:	Engineer's Project No.: 1005.2316

This [tentative] [definitive] Certificate of Substantial Completion applies to:

☐ All Work under the Contract Documents: ☐ The following specified portions of the Work:

Date of Substantial Completion

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor, and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Project or portion thereof designated above is hereby declared and is also the date of commencement of applicable warranties required by the Contract Documents, except as stated below.

A [tentative] [definitive] list of items to be completed or corrected is attached hereto. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance and warranties shall be as provided in the Contract Documents except as amended as follows:

☐ Amended Responsibilities ☐ Not Amended

Owner's Amended Responsibilities:

Contractor's Amended Responsibilities:

The following documents are attached to and made part of this Certificate:

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract Documents.

Executed by Engineer	Date
Accepted by Contractor	Date
Accepted by Owner	Date

Certificate of Final Acceptance

Project: 800 West (Foothill Blvd) Roadway Improvements	
Owner: City of Saratoga Springs	Owner's Contract No.:
Contract:	Engineer's Project No.: 1005.2316

This [tentative] [definitive] Certificate of Final Completion applies to:

☐ All Work under the Contract Documents: ☐ The following specified portions of the Work:

Date of Final Completion

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor, and Engineer, and found to be complete.

The Date of Completion of the Work or portion thereof designated above is hereby established, subject to the provisions of the Contract pertaining to Final Acceptance.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance and warranties shall be as provided in the Contract Documents except as amended as follows:

☐ Amended Responsibilities ☐ Not Amended

Owner's Amended Responsibilities:

Contractor's Amended Responsibilities:

The following documents are attached to and made part of this Certificate:

Executed by Engineer	Date
Accepted by Contractor	Date
Accepted by Owner	Date

CONDITIONS OF THE CONTRACT

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by



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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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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.
1. *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.
 2. *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 form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *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, or both; 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, or both; 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; or (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. 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), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. (“CERCLA”); (b) the Hazardous Materials Transportation Act, 49 U.S.C. §§5501 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. (“RCRA”); (d) the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; (e) the Clean Water Act, 33 U.S.C. §§1251 et seq.; (f) the Clean Air Act, 42 U.S.C. §§7401 et seq.; or (g) any other federal, state, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree 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 the 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. *Engineer*—The individual or entity named as such in the Agreement.
21. *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.
22. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated in the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, does not establish a Hazardous Environmental Condition.
23. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

24. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
25. *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.
26. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.
27. *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.
28. *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.
29. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
30. *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.
31. *Project Manual*—The written documents prepared for, or made available for, procuring and constructing the Work, including but not limited to the Bidding Documents or other construction procurement documents, geotechnical and existing conditions information, the Agreement, bond forms, General Conditions, Supplementary Conditions, and Specifications. The contents of the Project Manual may be bound in one or more volumes.
32. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative or "RPR" includes any assistants or field staff of Resident Project Representative.
33. *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.
34. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer's review of the submittals and the performance of related construction activities.
35. *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.
36. *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.

37. *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 furnished by Owner which are designated for the use of Contractor.
38. *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.
39. *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.
40. *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 thereof.
41. *Successful Bidder*—The Bidder whose Bid the Owner accepts, and to which the Owner makes an award of contract, subject to stated conditions.
42. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
43. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, 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.
44. *Technical Data*—Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (a) subsurface conditions at the Site, or physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) or (b) Hazardous Environmental Conditions at the Site. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then the data contained in boring logs, recorded measurements of subsurface water levels, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical or environmental report prepared for the Project and made available to Contractor are hereby defined as Technical Data with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06.
45. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including but not limited to those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, fiber optic transmissions, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
46. *Unit Price Work*—Work to be paid for on the basis of unit prices.
47. *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.

48. *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 the following paragraphs are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:*
1. 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 supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. *Day:*
1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective:*
1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - c. 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 15.04).
- E. *Furnish, Install, Perform, Provide:*
1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
 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. 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 Bonds and Evidence of Insurance*

- A. *Bonds*: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Contractor’s Insurance*: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract), the certificates and other evidence of insurance required to be provided by Contractor in accordance with Article 6.
- C. *Evidence of Owner’s Insurance*: After receipt of the executed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or otherwise), 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 executed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.
- B. Owner shall maintain and safeguard at least one original printed record version of the Contract, 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 specifically required by the Contract Documents), Contractor shall submit to Engineer for timely review:
 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
 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 *Initial 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 for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.03.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.
 1. 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.
 3. 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.

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may transmit, and shall accept, Project-related correspondence, text, data, documents, drawings, information, and graphics, including but not limited to Shop Drawings and other submittals, in electronic media or digital format, either directly, or through access to a secure Project website.
- B. If the Contract does not establish protocols for electronic or digital transmittals, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. When transmitting items in electronic media or digital format, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the recipient's use of software application packages, operating systems, or

computer hardware differing from those used in the drafting or transmittal of the items, or from those established in applicable transmittal protocols.

ARTICLE 3 – DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one 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 or digital versions of the Contract Documents (including any printed copies derived from such electronic or digital versions) and the printed record version, the printed record version shall 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.

3.02 *Reference Standards*

- A. Standards Specifications, Codes, Laws and Regulations
 - 1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean 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, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, 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, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, 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 Documents 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 Documents 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:*

1. 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 shall 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 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 thereunder.
- 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 give written notice to Owner and Contractor 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:
 - 1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media editions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or
 - 2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude 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 thirtieth 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 sixtieth day after the day of Bid opening or the thirtieth 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 shall 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 shall 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 shall 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 the Contract Times and Contract Price. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the 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. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall 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 utility owners (other than those performing other work at or adjacent to the Site by arrangement with the Owner, as contemplated in Article 8); and
 4. acts of war or terrorism.
- D. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5.
- E. Paragraph 8.03 governs delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.
- F. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor.

- G. Contractor must submit any Change Proposal seeking an adjustment in Contract Price or Contract Times under this paragraph within 30 days of the commencement of the delaying, disrupting, or interfering event.

ARTICLE 5 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor 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; 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 7.12, 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 at law; 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 shall 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 known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site;
 - 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities); 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 upon the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. 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; or
 - 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.

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 either:
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; or
 2. is of such a nature as to require a change in the Drawings or Specifications; or
 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 the necessity of Owner's obtaining 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 above; 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. *Possible Price and Times Adjustments:*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, or both, 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 conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
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; or
 - 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 as 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, or both, then any such adjustment shall 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, or both, 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.

5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or adjacent to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:
 1. Owner and Engineer do not warrant or guarantee the accuracy or completeness of any such information or data provided by others; and
 2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - a. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents as being at the Site;
 - c. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
 - d. 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 in the Contract Documents, or was not shown or indicated 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), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer.

- C. *Engineer's Review:* Engineer will promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the Underground Facility in question; 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 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. *Possible Price and Times Adjustments:*
 - 1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, or both, to the extent that any existing Underground Facility at the Site that was not shown or indicated in the Contract Documents, 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. Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated the existence or actual location of the Underground Facility in question;
 - 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;
 - c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times; and
 - d. Contractor gave the notice required in Paragraph 5.05.B.
 - 2. 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, or both, then any such adjustment shall 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, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

5.06 *Hazardous Environmental Conditions at Site*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
1. those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
 2. 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 Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. 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; or
 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, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, 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.
- 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.
- I. 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 or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the 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.H shall obligate 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 shall obligate 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 all of Contractor's obligations under the Contract. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the Supplementary Conditions, or other specific provisions of the Contract. Contractor shall also furnish such other bonds as are required by the Supplementary Conditions or other specific provisions of the Contract.
- B. All bonds shall be in the form prescribed by the Contract except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (as amended and supplemented) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.
- C. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds in the required amounts.
- D. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or its right to do business is terminated in any state or jurisdiction where any part of the Project is located, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the bond and surety requirements above.
- E. If 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.
- F. Upon request, Owner shall provide a copy of the payment bond to any Subcontractor, Supplier, or other person or entity claiming to have furnished labor or materials used in the performance of the Work.

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. Contractor shall deliver to Owner, with copies to each named insured and additional insured (as identified in this Article, in the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Contractor has obtained and is

maintaining the policies, coverages, and endorsements 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 and endorsements, and documentation of applicable self-insured retentions and deductibles. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.

- D. Owner shall deliver to Contractor, with copies to each named insured and additional insured (as identified in this Article, the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Owner has obtained and is maintaining the policies, coverages, and endorsements required of Owner by the Contract (if any). Upon request by 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 and endorsements, and documentation of applicable self-insured retentions and deductibles. Owner may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.
- E. 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, shall not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- F. If either party does not purchase or maintain all of the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
- G. If Contractor has failed to obtain and maintain required insurance, Owner may exclude the Contractor from the Site, impose an appropriate set-off against payment, and exercise Owner's termination rights under Article 16.
- H. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price shall be adjusted accordingly.
- I. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests.
- J. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner and other individuals and entities in the Contract.

6.03 *Contractor's Insurance*

- A. *Workers' Compensation:* Contractor shall purchase and maintain workers' compensation and employer's liability insurance for:
 - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts.
 - 2. United States Longshoreman and Harbor Workers' Compensation Act and Jones Act coverage (if applicable).
 - 3. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees (by stop-gap endorsement in monopolist worker's compensation states).

4. Foreign voluntary worker compensation (if applicable).
- B. *Commercial General Liability—Claims Covered:* Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against:
1. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees.
 2. claims for damages insured by reasonably available personal injury liability coverage.
 3. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.
- C. *Commercial General Liability—Form and Content:* Contractor's commercial liability policy shall be written on a 1996 (or later) ISO commercial general liability form (occurrence form) and include the following coverages and endorsements:
1. Products and completed operations coverage:
 - a. Such insurance shall be maintained for three years after final payment.
 - b. 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 three years thereafter.
 2. Blanket contractual liability coverage, to the extent permitted by law, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
 3. Broad form property damage coverage.
 4. Severability of interest.
 5. Underground, explosion, and collapse coverage.
 6. Personal injury coverage.
 7. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together); or CG 20 10 07 04 and CG 20 37 07 04 (together); or their equivalent.
 8. For design professional additional insureds, ISO Endorsement CG 20 32 07 04, "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.
- D. *Automobile liability:* Contractor shall purchase and maintain automobile liability insurance against claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy shall be written on an occurrence basis.
- E. *Umbrella or 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. Subject to industry-standard exclusions, the coverage afforded shall follow form as to each and every one of the underlying policies.
- F. *Contractor's pollution liability insurance:* Contractor shall purchase and maintain a policy covering third-party injury and property damage claims, including clean-up costs, as a result

of pollution conditions arising from Contractor's operations and completed operations. This insurance shall be maintained for no less than three years after final completion.

- G. *Additional insureds*: The Contractor's commercial general liability, automobile liability, umbrella or excess, and pollution liability policies shall include and list as additional insureds Owner and Engineer, and any individuals or entities identified in the Supplementary Conditions; include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds; and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby (including as applicable those arising from both ongoing and completed operations) on a non-contributory basis. Contractor shall obtain all necessary endorsements to support these requirements.
- H. *Contractor's professional liability insurance*: If Contractor will provide or furnish professional services under this Contract, through a delegation of professional design services or otherwise, then Contractor shall be responsible for purchasing and maintaining applicable professional liability insurance. This insurance shall provide protection against claims arising out of performance of professional design or related services, and caused by a negligent error, omission, or act for which the insured party is legally liable. It shall be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. If such professional design services are performed by a Subcontractor, and not by Contractor itself, then the requirements of this paragraph may be satisfied through the purchasing and maintenance of such insurance by such Subcontractor.
- I. *General provisions*: The policies of insurance required by this Paragraph 6.03 shall:
 - 1. include at least the specific coverages provided in this Article.
 - 2. be written for not less than the limits of liability provided in this Article and in the Supplementary Conditions, or required by Laws or Regulations, whichever is greater.
 - 3. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed, or renewal refused until at least 10 days prior written notice has been given to Contractor. Within three days of receipt of any such written notice, Contractor shall provide a copy of the notice to Owner, Engineer, and each other insured under the policy.
 - 4. remain in effect at least until final payment (and longer if expressly required in this Article) 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 Documents.
 - 5. be appropriate for the Work being performed and provide protection from claims that may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed 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.
- J. The coverage requirements for specific policies of insurance must be met by such policies, and not by reference to excess or umbrella insurance provided in other policies.

6.04 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 6.03, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.
- B. 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.

6.05 *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 full insurable replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:
 - 1. include the Owner and Contractor as named insureds, and all Subcontractors, and any individuals or entities required by the Supplementary Conditions to be insured under such builder's risk policy, as insureds or named insureds. For purposes of the remainder of this Paragraph 6.05, Paragraphs 6.06 and 6.07, and any corresponding Supplementary Conditions, the parties required to be insured shall collectively be referred to as "insureds."
 - 2. be written on a builder's risk "all risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire; lightning; windstorm; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; flood; collapse; explosion; debris removal; demolition occasioned by enforcement of Laws and Regulations; water damage (other than that caused by flood); and such other perils or causes of loss as may be specifically required by the Supplementary Conditions. If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; or flood, are not commercially available under builder's risk policies, by endorsement or otherwise, such insurance may be provided through other insurance policies acceptable to Owner and Contractor.
 - 3. 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.
 - 4. cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects).

5. extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier).
 6. extend to cover damage or loss to insured property while in transit.
 7. allow for partial occupation or use of the Work by Owner, such that those portions of the Work that are not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
 8. allow for the waiver of the insurer's subrogation rights, as set forth below.
 9. provide primary coverage for all losses and damages caused by the perils or causes of loss covered.
 10. not include a co-insurance clause.
 11. include an exception for ensuing losses from physical damage or loss with respect to any defective workmanship, design, or materials exclusions.
 12. include performance/hot testing and start-up.
 13. be maintained in effect, subject to the provisions herein regarding Substantial Completion and partial occupancy or use of the Work by Owner, until the Work is complete.
- B. *Notice of Cancellation or Change:* All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 6.05 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured.
- C. *Deductibles:* The purchaser of any required builder's risk or property insurance shall pay for costs not covered because of the application of a policy deductible.
- D. *Partial Occupancy or Use by Owner:* If Owner will occupy or use a portion or portions of the 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 notice of such occupancy or use to the builder's risk insurer. The builder's risk insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy; rather, those portions of the Work that are occupied or used by Owner may come off the builder's risk policy, while those portions of the Work not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
- E. *Additional Insurance:* 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 6.05, it may do so at Contractor's expense.
- F. *Insurance of Other Property:* If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, such as tools, construction equipment, or other personal property owned by Contractor, a Subcontractor, or an employee of Contractor or a Subcontractor, then the entity or individual owning such property item will be responsible for deciding whether to insure it, and if so in what amount.

6.06 *Waiver of Rights*

- A. All policies purchased in accordance with Paragraph 6.05, expressly including the builder's risk policy, shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors. 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 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 Subcontractors, all individuals or entities identified in the Supplementary Conditions as insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. 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:
 - 1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
 - 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 6.06.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them.
- D. Contractor shall be responsible for assuring that the agreement under which a Subcontractor performs a portion of the Work 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 any of the perils or causes of loss covered by builder's risk insurance and any other property insurance applicable to the Work.

6.07 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of insurance required by Paragraph 6.05 will be adjusted and settled with the named insured that purchased the

policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.

- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.05 shall distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the money so received applied on account thereof, and the Work and the cost thereof covered by Change Order, if needed.

ARTICLE 7 – CONTRACTOR'S RESPONSIBILITIES

7.01 *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. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.02 *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 at all times maintain good discipline and order at the Site.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall 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.

7.03 *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 shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and

guarantees required by the Specifications shall 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 shall 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.

7.04 "Or Equals"

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, 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 material or equipment, or items from other proposed suppliers under the circumstances described below.
 - 1. If Engineer in its sole discretion determines that an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer shall deem it an "or equal" item. For the purposes of this paragraph, a proposed item of material or equipment will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that:
 - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
 - 2) it 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) it has a proven record of performance and availability of responsive service; and
 - 4) it is not objectionable to Owner.
 - b. Contractor certifies that, if approved and incorporated into the Work:
 - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) it 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 shall result in any change in Contract Price. The Engineer's denial of an "or-equal" request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents.
- E. *Treatment as a Substitution Request:* If Engineer determines that an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the proposed item as a substitute pursuant to Paragraph 7.05.

7.05 Substitutes

- A. Unless the specification or description of an item of material or equipment 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 material or equipment under the circumstances described below. To the extent possible such requests shall be made before commencement of related construction at the Site.
 - 1. 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 material or equipment from anyone other than Contractor.
 - 2. The requirements for review by Engineer will be as set forth in Paragraph 7.05.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 material or equipment that Contractor seeks to furnish or use. The application:
 - a. shall 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 that specified, and
 - 3) be suited to the same use as that 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 that specified, and

- 2) available engineering, sales, maintenance, repair, and replacement services.
- d. shall 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 shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.05.D, by timely submittal of a Change Proposal.

7.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner.
- B. Contractor shall retain specific Subcontractors, Suppliers, or other individuals or entities 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, Supplier, or other individual or entity 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 five days.

- E. Owner may require the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work. 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, Suppliers, or other individuals or entities 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, Supplier, or other individual or entity so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity.
- F. If Owner requires the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, or both, 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, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.
- 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 fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions.
- J. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors, Suppliers, and all other individuals or entities performing or furnishing any of the Work.
- K. Contractor shall restrict all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed herein.
- L. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- M. All Work performed for Contractor by a Subcontractor or Supplier shall be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer.
- N. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor on account of Work performed for Contractor by the particular Subcontractor or Supplier.

O. Nothing in the Contract Documents:

1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier, or other individual or entity; nor
2. shall create 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.

7.07 *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 a particular 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 shall be disclosed by Owner 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.

7.08 *Permits*

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits and licenses. 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

7.09 *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.

7.10 *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. Except where otherwise expressly required by applicable Laws and Regulations, 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 shall not be Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Owner or Contractor may give 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 notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.11 *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.

7.12 *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. 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.
- B. 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. Contractor shall notify Owner; the owners of adjacent property, Underground Facilities, and other utilities; and other contractors and utility owners performing work at or adjacent to the Site, when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
 - C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
 - D. 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.
 - E. All damage, injury, or loss to any property referred to in Paragraph 7.12.A.2 or 7.12.A.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).
 - F. Contractor's duties and responsibilities for safety and protection shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 15.06.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).
 - G. Contractor's duties and responsibilities for safety and protection shall 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.

7.13 *Safety Representative*

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

7.14 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of 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 threatened 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 thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

7.16 *Shop Drawings, Samples, and Other Submittals*

A. *Shop Drawing and Sample Submittal Requirements:*

- 1. Before submitting a Shop Drawing or Sample, Contractor shall have:
 - a. reviewed and coordinated the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
 - c. determined and verified 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
 - d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
- 2. Each submittal shall 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 submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be set forth in a written communication separate from the Shop Drawings or Sample submittal; and, in addition, in the case of Shop Drawings by a specific notation made on each Shop Drawing submitted to Engineer for review and approval of each such variation.

- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals. Each submittal will be identified as Engineer may require.

1. *Shop Drawings:*

- a. Contractor shall submit the number of copies required in the Specifications.
- b. Data shown on the Shop Drawings will 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.D.

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.D.

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. *Other Submittals:* Contractor shall submit other submittals to Engineer in accordance with the accepted Schedule of Submittals, and pursuant to the applicable terms of the Specifications.

D. *Engineer's Review:*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. 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, conform to the information given in 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 shall 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.
5. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 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, shall 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, Sample, or other submittal shall 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.D.4.

E. *Resubmittal Procedures:*

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 submittals with sufficient information and accuracy to obtain required approval of an item with no more than three submittals. Engineer will record Engineer's time for reviewing a fourth or subsequent submittal of a Shop Drawings, sample, or other item requiring approval, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges.
3. If Contractor requests a change of a previously approved submittal item, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

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 and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 1. abuse, modification, or improper 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.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
 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. any inspection, test, or approval by others; or
 8. any correction of defective Work by Owner.

- D. 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 shall 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 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 performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the 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 shall 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.
- C. The indemnification obligations of Contractor under Paragraph 7.18.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
 - 1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
 - 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

7.19 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable Laws and Regulations.
- B. If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, and other submittals prepared by such professional. Shop

Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this paragraph, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 7.16.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria specified by Owner or Engineer.

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 utility work at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford each other contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work. 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.
- D. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 8, 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.

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; and
 - 3. the extent of such authority and responsibilities.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

- A. If, in the course of performing other work at or adjacent to the Site for Owner, the Owner's employees, any other contractor working for Owner, or any utility owner 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, or both. 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 shall 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. When applicable, any such equitable adjustment in Contract Price shall 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 is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- 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. 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 to 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.
- C. 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 to Contractor.

- D. 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 shall 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 Documents (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 10.08. 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 *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 Paragraph 10.08. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent, or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

10.04 *Rejecting Defective Work*

- A. Engineer has the authority to reject Work in accordance with Article 14.

10.05 *Shop Drawings, Change Orders and Payments*

- A. Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, are set forth in Paragraph 7.16.
- B. Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, are set forth in Paragraph 7.19.
- C. Engineer's authority as to Change Orders is set forth in Article 11.
- D. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.06 *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.

10.07 *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.

10.08 *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, shall 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 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 10.08 shall also apply to the Resident Project Representative, if any.

10.09 *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 (if any) of which Engineer has been informed.

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

11.01 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
 - 1. *Change Orders:*
 - a. If an amendment or supplement to the Contract Documents includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order. A Change Order also may be used to establish amendments and supplements of the Contract Documents that do not affect the Contract Price or Contract Times.
 - b. Owner and Contractor may amend those terms and conditions of the Contract Documents that do not 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, without the recommendation of the Engineer. Such an amendment shall be set forth in a Change Order.
 - 2. *Work Change Directives:* 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 11.04 regarding change of Contract Price. Contractor must submit any Change Proposal seeking an

adjustment of the Contract Price or the Contract Times, or both, no later than 30 days after the completion of the Work set out in the Work Change Directive. Owner must submit any Claim seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 60 days after issuance of the Work Change Directive.

3. *Field Orders*: 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. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.02 *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. Such changes shall be supported by Engineer's recommendation, to the extent the change involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters. Such changes 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 shall be performed under the applicable conditions of the Contract Documents. Nothing in this paragraph shall obligate 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.

11.03 *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.

11.04 *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 shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment of Contract Price shall 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); or
 2. 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 11.04.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 11.04.C).

- C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit shall be determined as follows:
1. a mutually acceptable fixed fee; or
 2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 13.01.B.3, the Contractor's fee shall be five 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 11.01.C.2.a and 11.01.C.2.b is that the Contractor's fee shall be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.A.1 and 13.01.A.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 five 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 shall be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the work;
 - d. no fee shall 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 will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
 - f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 11.04.C.2.a through 11.04.C.2.e, inclusive.

11.05 *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 shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment in the Contract Times shall comply with the provisions of Article 12.
- B. An adjustment of the Contract Times shall be subject to the limitations set forth in Paragraph 4.05, concerning delays in Contractor's progress.

11.06 *Change Proposals*

- A. Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; appeal an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; contest a set-off against payment due; or seek other relief under

the Contract. The Change Proposal shall specify any proposed change in Contract Times or Contract Price, or both, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents.

1. *Procedures:* Contractor shall submit each Change Proposal to Engineer promptly (but in no event later than 30 days) after the start of the event giving rise thereto, or after such initial decision. 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. The supporting data shall 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. Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal.
 2. *Engineer's Action:* Engineer will review each Change Proposal and, within 30 days after receipt of the Contractor's supporting data, either deny the Change Proposal in whole, approve it in whole, or deny it in part and approve it in part. Such actions shall 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.
 3. *Binding Decision:* Engineer's decision will be final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- B. *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 that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice shall be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

11.07 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders covering:
1. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
 2. changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
 3. changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.02, (b) required because of Owner's 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 in the Contract Price or Contract Times, or other changes, which embody the substance of any final and binding results under Paragraph 11.06, or Article 12.

- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of this Paragraph 11.07, it shall be deemed to be of full force and effect, as if fully executed.

11.08 *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 shall be submitted 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; and
 - 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.
- 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 shall rest with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, or both, 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 shall be stated in writing and submitted to the other party, with a copy to Engineer.
- D. *Mediation:*
 - 1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate shall 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 shall 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 shall 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 shall 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 shall 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 shall be incorporated in a Change Order 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. 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 shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 13.01.C, and shall 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. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, and vacation and holiday pay applicable

thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall 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 shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and 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, who 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 shall 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 for services specifically related to the Work.
5. Supplemental costs including 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, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
 - c. Rentals of all construction equipment and machinery, and the parts thereof, whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the 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 property insurance established in accordance with Paragraph 6.05), 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 shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining 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 shall not include any of the following items:

- 1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, 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. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
- 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
- 4. 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.
- 5. 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:* When the Work as a whole is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 11.04.C.

E. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

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:
 - 1. 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
 - 2. 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 on account of any of the foregoing will be valid.
- C. *Contingency Allowance*: Contractor agrees that a 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 on account of Work covered by allowances, and the Contract Price shall 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, subject to the provisions of the following paragraph.
- E. Within 30 days of Engineer's written decision under the preceding paragraph, Contractor may submit a Change Proposal, or Owner may file a Claim, seeking an adjustment in the Contract Price if:
 - 1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement;
 - 2. there is no corresponding adjustment with respect to any other item of Work; and
 - 3. Contractor believes that it is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price, and the parties are unable to agree as to the amount of any such increase or decrease.

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 will 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 therewith 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 shall 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 shall 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 shall 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 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 shall 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 special 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, or both, 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 shall 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 rejected Work as required by Engineer, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, then Owner may, after seven 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 on account of 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:*
1. 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. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens, and evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
 2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
 3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.
- C. *Review of Applications:*
1. 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, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid on account of the Contract Price, 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

- e. 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:*

- 1. 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 on account of Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages on account of 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;
 - i. an event that would constitute a default by Contractor and therefore justify a termination for cause has occurred;
 - j. liquidated 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;
 - l. there are other items entitling 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 shall 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 shall be treated as an amount due as determined by Paragraph 15.01.C.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 seven 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 shall 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 seven 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:
 - 1. 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 E for that part of the Work.
 - 2. 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 6.05 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:*
 - 1. 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 7.11), and other documents, Contractor may make application for final payment.

2. The final Application for Payment shall 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 disputes that Contractor believes are unsettled; and
 - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
3. In lieu of 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 Application and Acceptance:*

1. 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 ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the Application for Payment to Owner for payment. Such recommendation shall 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. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to the provisions of Paragraph 15.07. 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. *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.
- D. *Payment Becomes Due:* Thirty days after the presentation to Owner of the final Application for Payment and accompanying documentation, the amount recommended by Engineer (less any further sum Owner is entitled to set off against Engineer's recommendation,

including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions above with respect to progress payments) will become due and shall be paid by Owner to Contractor.

15.07 *Waiver of Claims*

- A. The making of final payment will not constitute a waiver by Owner of claims or rights against Contractor. Owner expressly reserves claims and rights arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 15.05, from Contractor's failure to comply with the Contract Documents or the terms of any special guarantees specified therein, from outstanding Claims by Owner, or from Contractor's continuing obligations under the Contract Documents.
- 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 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 terms of any applicable special guarantee required by the Contract Documents, or by any specific provision of the Contract Documents), any Work is found to be defective, or if the repair of any damages to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas used by Contractor as permitted by Laws and Regulations, is found to be defective, then 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 other adjacent areas;
 - 2. correct such defective Work;
 - 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, 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 therefrom.
- B. If 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 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 correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others).
- C. 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.
- D. 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.

- E. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph shall not 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, or both, directly attributable to any such suspension. Any Change Proposal seeking such adjustments shall 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:
 - 1. 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) ten 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) 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 seven 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 shall govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate For Convenience*

- A. Upon seven 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):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
 - 3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid on account of loss of anticipated overhead, profits, or revenue, 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 seven 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, seven 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; and
 - 2. Disputes between Owner and Contractor concerning the Work or obligations under the Contract Documents, and arising 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; or
 - 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 Documents requires the giving of written notice, it will be deemed to have been validly given if:
 - 1. delivered in person, by a commercial courier service or otherwise, to the individual or to a member of the firm or to an officer of the corporation for which it is intended; or
 - 2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the sender of the notice.

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 shall not constitute a waiver of that provision, nor shall 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 or completion of the Contract or termination 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 *Headings*

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

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SUPPLEMENTARY CONDITIONS

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract (No. EJCDC C-700, 2013 Edition) and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.

ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

The terms used in these supplementary conditions which are defined in the standard general conditions of the construction contract (EJCDC C-700, 2013 edition) have the meanings assigned to them in the general conditions.

ARTICLE 2 – PRELIMINARY MATTERS

SC-2.01 Delete Paragraphs 2.01 B. and C. in their entirety and insert the following in their place:

- B. Evidence of Contractor's Insurance: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner copies of the policies of insurance (including all endorsements, and identification of applicable self-insured retentions and deductibles) required to be provided by Contractor in Article 6. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.
- C. Evidence of Owner's Insurance: After receipt from Contractor of the executed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor copies of the policies of insurance to be provided by Owner under Article 6 (if any). Owner may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.

SC-2.02.A. Amend the first sentence of Paragraph 2.02.A. to read as follows:

Owner shall furnish to Contractor up to 5 copies of the Contract Documents which may include bound reduced drawings. Additional quantities of the Contract Documents will be furnished at reproduction cost.

ARTICLE 3 – DOCUMENTS INTENT, REQUIREMENTS, REUSE

Add the following new paragraph immediately after paragraph 3.03.B:

- C. In the event of an inconsistency between provisions in any of the contract documents, the order of precedence shall be established by the most stringent of the criteria and conditions.

ARTICLE 4 – COMMENCEMENT AND PROGRESS OF THE WORK

SC-4.01.A Delete paragraph 4.01.A of the General Conditions and insert the following in its place:

- A. The Contract Times will commence to run on the day indicated in the Notice to Proceed. Any Work undertaken by CONTRACTOR prior to the date indicated in the Notice to Proceed will be entirely at his own risk

ARTICLE 5 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

SC 5.06 Delete Paragraphs 5.06.A and 5.06.B in their entirety and insert the following:

- A. No reports or drawings related to Hazardous Environmental Conditions at the Site are known to Owner.
- B. Not Used.

ARTICLE 6 – BONDS AND INSURANCE

SC 6.03 Add the following new paragraph immediately after Paragraph 6.03.J:

- K. Contractor shall provide the following minimum insurance coverage with insurers admitted in the State of Utah with a Bests' rating of no less than A-, IX, and in the limits as listed in this document, unless approved by the Director of Risk Management and written for not less than the following, or greater if required by law and all such insurance to be primary to any insurance maintained by Owner, shall name Owner as additional insured with waiver of subrogation:
 - 1. WORKERS' COMPENSATION and EMPLOYERS LIABILITY: Workers' compensation statutory limits, as required by the Workers Compensation Act of the State of Utah, and Employers Liability limits set at a minimum of \$300,000 for each accident, disease, and employee. No officer or owner of any business or organization subject to the Workers' Compensation Act of the State of Utah may be excluded from this requirement.
 - 2. AUTOMOBILE LIABILITY: \$1,000,000 combined single limit "per accident" for bodily injury and property damage. "Any Auto" coverage is required.
 - 3. GENERAL LIABILITY: \$1,000,000 combined single limit per occurrence, personal injury and property damage. 2,000,000 aggregate. Broad Form Commercial General Liability is required (ISO 1993 or better). Completed Operations insurance must be kept in effect for 2 years after completion of work.
 - 4. The Contractor shall not commence Work under this Agreement until all of the insurance required herein shall have been obtained by the Contractor. The Contractor shall furnish to the Owner Certificates of Insurance verifying that such insurance has been obtained. Such certificates will provide that Owner will receive at least thirty (30) days prior written notice of any material change in, cancellation of, or non-renewal of such insurance.
 - 5. If applicable, professional liability (errors & omissions) Insurance coverage for a limit of \$2,000,000. Insurance shall be carried for two years after the work has been completed.
 - 6. EMPLOYMENT PRACTICES LIABILITY: \$1,000,000 per occurrence, \$1,000,000 aggregate. Required for employers subject to the provisions of Title VII of the Civil Rights Act and the Utah Antidiscrimination Act.
 - 7. If Contractor uses any subcontractors, Contractor will provide for subcontractors or require the same insurance provisions for its subcontractors.
 - 8. The Contractor shall warranty all work for one year according to the provisions included within Article 15.08 of the General Conditions.
 - 9. Any deductibles or self-insured retention exceeding 5% of the limit of the policy must be declared to and approved by the City. At the option of the City, the insurer may be required to either: reduce or eliminate such deductibles or self-

insured retention with respect to the City, its officers, officials, and employees; or the contracting party may be required to procure a bond guaranteeing payment of losses and related investigations, claim distributions, and defense expenses.

10. The contracting party shall disclose to the City all incidents or occurrences of accident, injury, and property damage within 24 hours of occurrence.

11. The policies are to contain, or to be endorsed to contain, the following provisions:

a. General Liability and Automobile Liability Coverages

- i. The City and its officers, officials, employees, and volunteers are to be covered as an additional insured with respect to liability arising out of activities performed by or on behalf of the contracting party; products and completed or ongoing operations of the contracting party; premises owned, leased, hired, or borrowed by the contracting party. The coverage shall contain no limitations on the scope of protection afforded to the City and its officers, officials, employees, or volunteers.
- ii. The contracting party's insurance coverage shall be a primary insurance. Any insurance or self-insurance maintained by the City, its officers, officials, employees, or volunteers shall be in excess of the contracting party's insurance and shall not reduce the contracting party's obligations in this policy.
- iii. Any failure to comply with any reporting provision of the any policy shall not affect coverage provided to the City and its officers, officials, employees, or volunteers.
- iv. The contracting party's insurance shall apply separately to each insured against whom a claim is made or suit is brought, except with respect to the limits of the insurer's liability.
- v. All property damage liability insurance must include coverage for damages to premises rented. This provision may not be excluded by endorsement or omission from the commercial general liability coverage.

b. Workers' Compensation and General Liability Coverage

- i. The insurer shall agree to waive all rights of subrogation against the City and its officers, officials, employees, and volunteers for losses arising from work performed by the contracting party for the City, and for any loss falling under general liability insurance coverage.

c. All Coverage

- i. Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, canceled by either party, reduced in coverage or in limits except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to the City .

d. Waivers of Insurance

- i. A waiver of automobile insurance may be granted by the City if the party seeking a waiver certifies to the City that it does not intend to use an automobile or any other motorized vehicle in the course of its business or within the City limits.
 - ii. A waiver of workers' compensation insurance may be granted by the City if the party seeking a waiver certifies to the City that it is a sole proprietor or is an organization with no employees. All such waivers are conditioned on compliance with the requirements to obtain a workers' compensation waiver found in the Workers' Compensation Act.
- e. Special Coverages
 - i. The City may require special coverages in addition to the coverages listed in this policy for certain types of contractors, providers of certain services, or the issuance of certain permits. The limits for special coverages shall be determined through consideration of the hazardousness of the work or project, the proximity of the project to the public, and the duration of the work or project. Special coverage(s), if required, may not be excluded from the insured party's policy by endorsement. Special coverages which the City may require include:
 - a. Abuse and molestation coverage;
 - b. Advertising injury coverage;
 - c. Aircraft liability coverage;
 - d. Asbestos abatement liability coverage;
 - e. Boiler and machinery liability coverage;
 - f. Builder's risk coverage;
 - g. Course of construction coverage;
 - h. Environmental coverage;
 - i. Excess liability coverage;
 - j. Explosion, collapse, underground (XCU) coverage;
 - k. Garagekeeper's coverage;
 - l. Liquor liability coverage;
 - m. Medical malpractice coverage;
 - n. On-hook liability coverage;
 - o. Pollution liability coverage;
 - p. Railroad protective liability coverage;
 - q. Watercraft liability coverage
- f. Claims-made Policies
 - i. With the exception of policies for professional liability, including errors and omissions, environmental liability, and employment liability, claims-made policies will not be accepted by the City as adequate insurance coverage.

g. Evaluation of Loss History

- i. The City reserves the right to adjust all liability limits based on a pre-contract evaluation of a party's loss history. The City shall give fair notice of any adjustment of liability limits. In order to properly and fairly evaluate the risk of loss, the City shall require that all contract and permit applicants submit detailed plans for the contract or permit applied for, as well as a loss history conducted by a credible third party.

h. Care, Custody, or Control Exclusions

- i. If a contracting party's business requires the exercise of care, custody, or control over City property or public property within the limits of the City, and the party's general liability coverage includes a care, custody, or control exclusion, that party must also possess supplementary insurance which covers the City or public property within the insured party's care, custody, or control.

i. Other Laws

- i. All contracting parties shall obey all federal, state, county, and municipal laws, ordinances, regulations, and rules applicable to their operations and required insurance. Failure to do so shall result in the contracting party holding the City harmless from any liability arising out of or in connection with said violations. This shall include any attorney's fees and costs incurred by the City in connection with a violation of any federal, state, county, or municipal law, ordinance, or regulation by a contracting party.

SC-6.05. Add the following to the list of requirements in Paragraph 6.05.A, as a numbered item:

13. Include by express endorsement coverage of damage to Contractor's equipment.

ARTICLE 7 – CONTRACTOR'S RESPONSIBILITIES

SC-7.02.B. Amend the first and second sentences of Paragraph 7.02.B to state "...all Work at the Site shall be performed during regular working hours, Monday through Friday. Contractor shall not perform Work on a Saturday, Sunday, or any legal holiday without written authorization from the Owner."

SC-7.02.C. Add the following new paragraph immediately after Paragraph 7.02.B:

Contractor shall be responsible for the cost of any overtime pay or other expense incurred by the Owner for Engineer's services (including those of the Resident Project Representative, if any), Owner's representative, and construction observation services, occasioned by the performance of Work on Saturday, Sunday, any legal holiday, or as overtime on any regular work day. If Contractor is responsible but does not pay, or if the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under Article 15.

SC-7.02.C. Add the following new subparagraph immediately after Paragraph 7.02.C:

1. For purposes of administering the foregoing requirement, additional overtime costs are defined as any hours over 8 hours on any regular work day and any hours worked on Saturday, Sunday, and any legal holiday.

SC-7.12.H. Add a new paragraph immediately after paragraph 7.12 G. of the General Conditions which is to read as follows:

- H. Protection of Person and Property: CONTRACTOR is solely responsible for safety measures in connection with the Project. CONTRACTOR shall take appropriate measures to prevent damage, injury or loss to: (1) all persons on the site or who may be affected by the Project; (2) all labor, materials and equipment to be incorporated into the Project; (3) other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities and underground facilities. CONTRACTOR shall comply with all applicable laws and regulations relating to the safety and protection of persons or property. CONTRACTOR shall erect and maintain all necessary safeguards for such safety and protection. If CONTRACTOR must enter a confined space, it shall have all personnel and monitoring equipment on site to necessary to comply with all OSHA and Owner's safety guidelines. A Confined Space Entry Permit shall be properly completed before entering a confined space. CONTRACTOR shall be responsible to erect and maintain all necessary traffic barricades and to provide all necessary traffic control. CONTRACTOR shall notify owners of adjacent property, including Blue Stakes notification to underground utility owners and shall cooperate with them in the protection, removal, relocation or replacement of their property. Any damage, injury or loss to any property caused, directly or indirectly, in whole or in part, by CONTRACTOR, any subcontractor, supplier, individual or entity performing the Project, shall be remedied by CONTRACTOR.

SC-7.18.D. Add a new paragraph immediately after paragraph 7.18 C. of the General Conditions which is to read as follows:

- D. To the fullest extent permitted by law, CONTRACTOR agrees to indemnify and hold harmless Owner from and against all claims, costs, losses and damages, including attorney fees, arising out of the performance of this Agreement, provided that any such claim, cost, loss, or damage: (1) is attributable to bodily injury, sickness, disease , death, injury to tangible property, loss of use of property, including interruption of business; and (2) is caused in whole or in part by any negligent act or omission of CONTRACTOR, any subcontractor or supplier for whom CONTRACTOR is responsible, regardless of whether caused in part by any negligent act or omission of Owner.

ARTICLE 8 – OTHER WORK AT THE SITE

Add a new paragraph immediately after paragraph 7.02 of the General Conditions which is to read as follows:

- C. Should CONTRACTOR cause damage to the work or property of any separate contractor at the site, or should any claim arising out of CONTRACTOR's performance of the Work at the site be made by any separate contractor against CONTRACTOR, OWNER, ENGINEER, ENGINEER's Consultants, the Construction Coordinator or any other person, CONTRACTOR shall promptly attempt to settle

with such other contractor by agreement, or otherwise resolve the dispute by arbitration or at law. CONTRACTOR shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold OWNER, ENGINEER, ENGINEER's Consultants and the Construction Coordinator harmless from and against all claims, damages, losses and expenses (including, but not limited to, fees of engineers, architects, attorneys and other professionals and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any separate contractor against OWNER, ENGINEER, ENGINEER's Consultants or the Construction Coordinator to the extent based on a claim arising out of CONTRACTOR's performance of the Work. Should a separate contractor cause damage to the Work or property of CONTRACTOR or should the performance of Work by any separate contractor at the site give rise to any other claim, CONTRACTOR shall not institute any action, legal or equitable, against OWNER, ENGINEER, ENGINEER's Consultants or the Construction Coordinator or permit any action against any of them to be maintained and continued in its name or for its benefit in any court or before any arbiter which seeks to impose liability on or to recover damages from OWNER, ENGINEER, ENGINEER's Consultants or the Construction Coordinator on account of any such damage or claim. If CONTRACTOR is delayed at any time in performing or furnishing Work by any act or neglect of a separate contractor and OWNER and CONTRACTOR are unable to agree as to the extent of any adjustment in Contract Times attributable thereto, CONTRACTOR may make a claim for an extension of times in accordance with Article 11. An extension of the Contract Times shall be CONTRACTOR's exclusive remedy with respect to OWNER, ENGINEER, ENGINEER's Consultants and Construction Coordinator for any delay, disruption, interference or hinderance caused by any separate contractor. This paragraph does not prevent recovery from OWNER, ENGINEER, ENGINEER's Consultant or Construction Coordinator for activities that are their respective responsibilities.

ARTICLE 10 – ENGINEER’S STATUS DURING CONSTRUCTION

SC-10.03 Project Representative

Add the following new paragraphs immediately after Paragraph 10.03.A:

- B. The Resident Project Representative (RPR) will be Engineer's representative at the Site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding RPR's actions.
 - 1. General: RPR's dealings in matters pertaining to the Work in general shall be with Engineer and Contractor. RPR's dealings with Subcontractors shall only be through or with the full knowledge and approval of Contractor. RPR shall generally communicate with Owner only with the knowledge of and under the direction of Engineer.
 - 2. Schedules: Review the progress schedule, schedule of Shop Drawing and Sample submittals, and Schedule of Values prepared by Contractor and consult with Engineer concerning acceptability.
 - 3. Conferences and Meetings: Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings, and prepare and circulate copies of minutes thereof.

4. Liaison:
 - a. Serve as 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 on-Site operations.
 - c. Assist in obtaining from Owner additional details or information, when required for proper execution of the Work.
5. Interpretation of Contract Documents: Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.
6. Shop Drawings and Samples:
 - a. Record date of receipt of Samples and Contractor-approved Shop Drawings.
 - b. Receive Samples which are furnished at the Site by Contractor, and notify Engineer of availability of Samples for examination.
 - c. Advise Engineer and Contractor of the commencement of any portion of the Work requiring a Shop Drawing or Sample submittal for which RPR believes that the submittal has not been approved by Engineer.
7. Modifications: Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report such suggestions, together with RPR's recommendations, if any, to Engineer. Transmit to Contractor in writing decisions as issued by Engineer.
8. Review of Work and Rejection of Defective Work:
 - a. Conduct on-Site observations of Contractor's work in progress to assist Engineer in determining if the Work is in general proceeding in accordance with the Contract Documents.
 - b. Report to Engineer whenever RPR believes that any part of Contractor's work in progress is defective, will not produce a completed Project that conforms generally to the Contract Documents, or will imperil the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise Engineer of that part of work in progress that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.
9. Inspections, Tests, and System Start-ups:
 - a. Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.
 - b. Observe, record, and report to Engineer appropriate details relative to the test procedures and systems start-ups.

10. Records:

- a. Prepare a daily report or keep a diary or log book, recording Contractor's hours on the Site, Subcontractors present at the Site, weather conditions, data relative to questions of Change Orders, Field Orders, Work Change Directives, or changed conditions, Site visitors, deliveries of equipment or materials, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to Engineer.
- b. Record names, addresses, fax numbers, e-mail addresses, web site locations, and telephone numbers of all Contractors, Subcontractors, and major Suppliers of materials and equipment.
- c. Maintain records for use in preparing Project documentation.

11. Reports:

- a. Furnish to Engineer periodic reports as required of progress of the Work and of Contractor's compliance with the Progress Schedule and schedule of Shop Drawing and Sample submittals.
- b. Draft and recommend to Engineer proposed Change Orders, Work Change Directives, and Field Orders. Obtain backup material from Contractor.
- c. Immediately notify Engineer of the occurrence of any Site accidents, emergencies, acts of God endangering the Work, force majeure or delay events, damage to property by fire or other causes, or the discovery of any Constituent of Concern or Hazardous Environmental Condition.

12. Payment Requests: Review applications for payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Engineer, noting particularly the relationship of the payment requested to the Schedule of Values, Work completed, and materials and equipment delivered at the Site but not incorporated in the Work.

13. Certificates, Operation and Maintenance Manuals: During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Contract Documents to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have these documents delivered to Engineer for review and forwarding to Owner prior to payment for that part of the Work.

14. Completion:

- a. Participate in Engineer's visits to the Site to determine Substantial Completion, assist in the determination of Substantial Completion and the preparation of a punch list of items to be completed or corrected.
- b. Participate in Engineer's final visit to the Site to determine completion of the Work, in the company of Owner and Contractor, and prepare a final punch list of items to be completed and deficiencies to be remedied.
- c. Observe whether all items on the final list have been completed or corrected and make recommendations to Engineer concerning acceptance and issuance of the notice of acceptability of the work.

C. The RPR shall not:

1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).
2. Exceed limitations of Engineer's authority as set forth in the Contract Documents.
3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.
4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of Contractor's work.
5. 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.
6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
7. Accept Shop Drawing or Sample submittals from anyone other than Contractor.
8. Authorize Owner to occupy the Project in whole or in part.

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

SC 13.01.B.5.c Delete Paragraph 13.01.B.5.c in its entirety and insert the following in its place:

c. Construction Equipment and Machinery:

- 1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
- 2) Costs for equipment and machinery owned by Contractor will be paid at a rate shown for such equipment in the Rental Rate Blue Book. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs. Costs will include 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, shall cease to accrue when the use thereof is no longer necessary for the changed Work. Equipment or machinery with a value of less than \$1,000 will be considered small tools.

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

- E. The unit price of an item of Unit Price Work shall be subject to reevaluation and adjustment under the following conditions:
1. if the extended price of a particular item of Unit Price Work amounts to 25 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 25 percent from the estimated quantity of such item indicated in the Agreement; and

2. if there is no corresponding adjustment with respect to any other item of Work; and
3. if Contractor believes that Contractor has incurred additional expense as a result thereof, Contractor may submit a Change Proposal, or if Owner believes that the quantity variation entitles Owner to an adjustment in the unit price, Owner may make a Claim, seeking an adjustment in the Contract Price.

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

SC 15.01.B.1 The first sentence of paragraph 15.01.B.1 of the general conditions is hereby deleted in its entirety and the following is substituted in lieu thereof:

1. At least thirty (30) 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. SC 15.01.D.1 The first sentence of paragraph 15.01.D.1 of the general conditions is hereby deleted in its entirety and the following is substituted in lieu thereof:

SC 15.03.B 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, shall 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 Article 15.

SC15.01.D.1. The first sentence of paragraph 15.01.D.1 of the general conditions is hereby deleted in its entirety and the following is substituted in lieu thereof:

1. Twenty 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.

SC 15.03.B 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, shall 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 Article 15.

ARTICLE 17 – FINAL RESOLUTION OF DISPUTES

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

SC-17.02 Arbitration

- A. All matters subject to final resolution under this Article will be decided by arbitration in accordance with the rules of the State of Utah, subject to the conditions and limitations of this paragraph. This agreement to arbitrate and any other agreement

or consent to arbitrate entered into 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 arbitrator or arbitration provider, and a copy will be sent to Engineer for information. The demand for arbitration will be made within the specific time required in this Article, or if no specified time is applicable within a reasonable time after the matter in question has arisen, and in no event shall 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. The demand for arbitration should include specific reference to Paragraph SC-17.02.D below.
- C. No arbitration arising out of or relating to the Contract shall 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:
 - 1. the inclusion of such other individual or entity is necessary if complete relief is to be afforded among those who are already parties to the arbitration; and
 - 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.
- D. The award rendered by the arbitrator(s) shall be consistent with the agreement of the parties, in writing, and include a concise breakdown of the award, and a written explanation of the award specifically citing the Contract provisions deemed applicable and relied on in making the award.
- E. 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.
- F. The fees and expenses of the arbitrators and any arbitration service shall be shared equally by Owner and Contractor.

SC-17.03 Attorneys' Fees: 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.

- END OF DOCUMENT -

STATEMENT OF PROJECT SPECIFICATIONS

Standard Specifications:

The Standard Technical Specifications and Drawings for City of Saratoga Springs, Utah, updated January 2025, and the 2017 APWA Utah Chapter Manual of Standard Specifications apply on this project as a Specification Book with the Saratoga Springs technical specifications and drawings governing as determined by the City of Saratoga Springs.

Link to the City of Saratoga Springs Standards and Specifications:

<https://www.saratogasprings-ut.gov/DocumentCenter/View/14878/2025-Standard-Technical-Specifications-And-Drawings> within the Engineering Department Page.

Refer to the SPECIAL PROVISIONS and SUPPLEMENTAL SPECIFICATIONS for other project specifications.

TECHNICAL SPECIFICATIONS

SECTION 01200

PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Procedures for preparation and submittal of applications for progress payments.
- B. Documentation of changes in Contract Price and Contract Time.
- C. Change procedures.
- D. Correlation of Contractor submittals based on changes.
- E. Procedures for preparation and submittal of application for final payment.

1.02 RELATED SECTIONS

- A. Document 00500 - Agreement: Contract Price, retainages, payment period, monetary values of unit prices.
- B. Document 00700 - General Conditions and Document 00800 - Supplemental General Conditions: Additional requirements for progress payments, final payment, changes in the Work.
- C. Document 00800 - Supplemental General Conditions: Percentage allowances for Contractor's overhead and profit.

1.03 APPLICATIONS FOR PROGRESS PAYMENTS

- A. Payment Period: Submit at intervals stipulated in Section 27 of the General Conditions.
- B. Present required information in typewritten form.
- C. Form: Contract Form including continuation sheets when required.
- D. For each item, provide a column for listing each of the following:
 - 1. Item Number.
 - 2. Description of work.
 - 3. Scheduled Values.
 - 4. Previous Applications.
 - 5. Work in Place under this Application.
 - 6. Authorized Change Orders.
 - 7. Total Completed to Date of Application.
 - 8. Percentage of Completion.
 - 9. Balance to Finish.
 - 10. Retainage.
- E. Execute certification by signature of authorized officer.

- F. List each authorized Change Order as a separate line item, listing Change Order number and dollar amount as for an original item of Work.
- G. Submit three copies of each Application for Payment.
- H. Include the following with the application:
 - 1. Transmittal letter as specified for Submittals in Section 01300.
 - 2. Construction progress schedule, revised and current as specified in Section 01300.
 - 3. Project record documents as specified in Section 01780, for review by the Owner which will be returned to the Contractor.
- I. When the City Engineer or City Inspector requires substantiating information, submit data justifying dollar amounts in question. Provide one copy of data with cover letter for each copy of submittal. Show application number and date, and line item by number and description.

1.04 MODIFICATION PROCEDURES

- A. Submit name of the individual authorized to receive change documents and who will be responsible for informing others in Contractor's employ or Subcontractors of changes to the Work.
- B. The City Engineer or City Inspector will advise of minor changes in the Work not involving an adjustment to Contract Price or Contract Time as authorized by the Conditions of the Contract by issuing supplemental instructions in writing.
- C. Construction Change Directive: The City Engineer may issue a document, signed by the Owner, instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
 - 1. The document will describe changes in the Work, and will designate method of determining any change in Contract Price or Contract Time.
 - 2. Promptly execute the change in Work.
- D. Proposal Request: The City Engineer may issue a document which includes a detailed description of a proposed change with supplementary or revised Drawings and specifications, a change in Contract Time for executing the change and the period of time during which the requested price will be considered valid. The Contractor shall prepare and submit a fixed price quotation within seven days.
- E. The Contractor may propose a change by submitting a request for change to the City Engineer, describing the proposed change and its full effect on the Work, with a statement describing the reason for the change, and the effect on the Contract Price and Contract Time with full documentation and a statement describing the effect on Work by separate or other contractors. Document any requested substitutions in accordance with Section 01600.
- F. Computation of Change in Contract Amount:
 - 1. For change requested by the City Engineer for work falling under a fixed price contract, the amount will be based on Contractor's price quotation.
 - 2. For change requested by the Contractor, the amount will be based on the Contractor's request for a Change Order as approved by the City Engineer.
 - 3. For pre-determined unit prices and quantities, the amount will be based on the fixed unit prices.
 - 4. For change ordered by the City Engineer without a quotation from the Contractor, the amount will be determined by the City Engineer based on the Contractor's substantiation of costs as specified for Time and Material work.

- G. Substantiation of Costs: Provide full information required for evaluation.
1. On request, provide following data:
 - a. Quantities of products, labor, and equipment.
 - b. Taxes, insurance, and bonds.
 - c. Overhead and profit.
 - d. Justification for any change in Contract Time.
 - e. Credit for deletions from Contract, similarly documented.
 2. Support each claim for additional costs with additional information:
 - a. Origin and date of claim.
 - b. Dates and times work was performed, and by whom.
 - c. Time records and wage rates paid.
 - d. Invoices and receipts for products, equipment, and subcontracts, similarly documented.
 3. For Time and Material work, submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract.
- H. Execution of Change Orders: The City Engineer will issue Change Orders for signatures of parties as provided in the Conditions of the Contract on Contract Change Order Form.
- I. After execution of Change Order, promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum.
- J. Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.
- K. Promptly enter changes in Project Record Documents.

1.05 APPLICATION FOR FINAL PAYMENT

- A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Price, previous payments, and sum remaining due.
- B. Application for Final Payment will not be considered until the following have been accomplished:
 1. All closeout procedures specified in Section 01700.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01270

UNIT PRICES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Measurement and payment criteria applicable to Work performed under a unit price or lump sum price payment method.
- B. Defect assessment and non-payment for rejected work.

1.02 COSTS INCLUDED

- A. Unit Prices or Lump Sum Prices included on the Bid Form shall include full compensation for all required labor, Products, tools, equipment, plant, transportation, services and incidentals; erection, application or installation of an item of the Work; overhead and profit.

1.03 UNIT QUANTITIES SPECIFIED

- A. Quantities indicated in the Bid Form are for bidding and contract purposes only. Quantities and measurements of actual Work will determine the payment amount.
- B. Quantities indicated in the Bid Form will be the maximum amount of these items to be used, without prior approval, in writing, by the City Engineer or City Inspector. Over-runs of these items will not be paid for if prior approval was not received by the Contractor; and will be at the Contractor own expense, with no additional cost to the Owner.

1.04 MEASUREMENT OF QUANTITIES

- A. Measurement methods delineated in the individual specification sections complement the criteria of this section. In the event of conflict, the requirements of the individual specification section govern.
- B. Take all measurements and compute quantities. Measurements and quantities will be verified by the City Inspector or City Engineer.
- C. Assist by providing necessary equipment, workers, and survey personnel as required.
- D. Measurement Devices:
 - 1. Weigh Scales: Inspected, tested and certified by the applicable state Weights and Measures department within the past year.
 - 2. Platform Scales: Of sufficient size and capacity to accommodate the conveying vehicle.
 - 3. Metering Devices: Inspected, tested and certified by the applicable State department within the past year.
- E. Measurement by Weight:
 - 1. Concrete reinforcing steel, rolled or formed steel or other metal shapes will be measured by handbook weights. Welded assemblies will be measured by handbook or scale weight.
 - 2. Soil material will be measured by scale weight. Weights will be converted to volume measurements by use of soil density.
- F. Measurement by Volume: Measured by cubic dimension using mean length, width and height or thickness.

- G. Measurement by Area: Measured by square dimension using mean length and width or radius.
- H. Linear Measurement: Measured by linear dimension, at the item centerline or mean chord.
- I. Stipulated Sum/Price Measurement: Items measured by weight, volume, area, or linear means or combination, as appropriate, as a completed item or unit of the Work.
- J. Perform surveys required to determine quantities, including control surveys to establish measurement reference lines. Notify the City Inspector or City Engineer prior to starting work.
- K. Contractor 's Engineer Responsibilities: Sign surveyor's field notes or keep duplicate field notes, calculate and certify quantities for payment purposes.

1.05 PAYMENT

- A. Payment for Work governed by unit prices will be made on the basis of the actual measurements and quantities of Work which is incorporated in or made necessary by the Work and accepted by the City Inspector or City Engineer, multiplied by the unit sum/price.
- B. Payment will not be made for any of the following:
 - 1. Products wasted or disposed of in a manner that is not acceptable.
 - 2. Products determined as unacceptable before or after placement.
 - 3. Products not completely unloaded from the transporting vehicle.
 - 4. Products placed beyond the lines and levels of the required Work.
 - 5. Products remaining on hand after completion of the Work.
 - 6. Loading, hauling, and disposing of rejected Products.

1.06 DEFECT ASSESSMENT

- A. Replace Work, or portions of the Work, not conforming to specified requirements.
- B. If, in the opinion of the City Inspector or City Engineer it is not practical to remove and replace the Work, the City Inspector or City Engineer, will direct one of the following remedies:
 - 1. The defective Work may remain, but the unit sum/price will be adjusted to a new sum/price at the discretion of the City Engineer.
 - 2. The defective Work will be partially repaired to the instructions of the City Engineer, and the unit / sum price will be adjusted to a new sum/price at the discretion of the City Engineer.
- C. If, in the opinion of the Owner, it is not practical to remove and replace the Work, the Owner will direct one of the following remedies:
 - 1. The defective Work may remain, but the unit price or lump sum price will be adjusted to a new sum/price at the discretion of the Owner.
 - 2. The defective Work will be partially repaired to the instructions of the Owner, and the unit sum/price will be adjusted to a new sum/price at the discretion of the Owner.
- D. The individual specification sections may modify these options or may identify a specific formula or percentage sum/price reduction.
- E. The authority of the City Engineer to assess the defect and identify payment adjustment is final.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01282

PAYMENT

PART 1 GENERAL

1.01 RELATED SECTIONS

- A. Section 01200: Price and Payment Procedures.
- B. Section 01270: Unit Prices.

1.02 REFERENCES

- A. Rental Rate Blue Book for Construction Equipment
- B. Wall Street Journal

1.03 SCOPE OF PAYMENT

- A. The Owner shall fully compensate the Contractor as provided in the contract for:
 - 1. Furnishing all materials, labor, equipment, tools, transportation, and incidentals required for acceptable completion of the work.
- B. Lump sum or unit price:
 - 1. Consider payment as full compensation for all resources and incidentals necessary to complete the work.
- C. The Owner will not pay the Contractor for:
 - 1. Work that is in excess of that contained in the contract.
 - 2. Removal and replacement of defective work.
 - 3. Loss of anticipated profits.
- D. Partial payment or releasing of retainage does not relieve the Contractor of the obligation to correct all defective work or materials.

1.04 ELIMINATED ITEMS

- A. Accept the City Engineer's authority to eliminate contract items found to be unnecessary to complete the work.
- B. Request reimbursement for all costs incurred before notification of elimination.

1.05 VARIATION IN QUANTITIES AND SIGNIFICANT CHANGES IN CHARACTER OF WORK

- A. The Owner will pay the original contract unit prices for the accepted quantities of work or provide adjustment when the accepted quantities of work vary from the estimated quantities in the contract.
 - 1. The Owner will not allow compensation for any increased expenses, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor resulting either directly from such alterations or indirectly from unbalanced allocation among the contract items of overhead expense and subsequent loss of expected reimbursement or from any other cause.

1.06 DIFFERING SITE CONDITIONS, CHANGES, AND EXTRA WORK

- A. The Owner will pay for differing site conditions, changes, and extra work at either unit price or lump sum as stipulated in the order authorizing the work.
- B. The City Engineer uses contract unit prices if they are representative of the work to be performed.
 - 1. Unit price work will be reimbursed at the rates established in the contract.
 - a. These rates include compensation for the actual work and associated field indirect costs, home office overheads, profit, and all other costs incidental to the work unless otherwise defined in the contract.
- C. Negotiated lump sum or unit pricing for changes to the contract work will be based on the Contractor's estimate to do the work as validated by the City Engineer's review or independent cost estimate.
 - 1. Support the price with a detailed cost estimate. Include the following in the estimate:
 - a. Labor and equipment hours based on agreed upon productivity rates.
 - b. Use the actual cost of wages, benefits, burdens, and other labor related expenses for the labor rates applied to the estimated man-hours.
 - 1) Include certified accounting records verifying these costs or make them available upon request of the City Engineer.
 - c. Materials will be reimbursed at actual cost as determined by supplier invoices or estimates.
 - 1) Materials produced on site, such as granular borrow or UTBC will be reimbursed according to the labor and equipment rates used to produce such materials.
 - d. Use the actual cost of the equipment to the Contractor for equipment rates applied to the estimated equipment hours.
 - 1) Include certified accounting records verifying these costs or make them available upon request of the City Engineer.
 - 2. A markup of 15 percent will be paid on all expenses identified above. This markup compensates the Contractor for home office overheads, profit, and incidental costs.
 - 3. No other expenses will be compensated unless approved by the City Engineer.

1.07 COMPENSATION FOR EXCUSABLE DELAYS

- A. Document all costs claimed that result directly from a delay caused by the Owner.
 - 1. Use actual records kept in the usual course of business and measure increased ownership expenses according to generally accepted accounting principles.
 - a. Do not use equipment rental rate guides.
 - 2. The Owner will not compensate for the following:
 - a. Profit more than provided in accordance with this section
 - b. Loss of profit
 - c. Labor inefficiencies
 - d. Home office overhead exceeding that provided
 - e. Consequential damages, including, but not limited to, loss of bonding capacity, loss of bidding opportunities, and insolvency
 - f. Any indirect costs or expenses
 - g. Attorney's fees, claims preparation expenses, or litigation costs
- B. Compensable costs will be determined as follows:
 - 1. Direct Costs: Actual costs of the Contractor's workforce and equipment idled by the delayed activity.
 - a. Provide an accountant's certification of all costs.
 - 2. Field Indirect Costs: Actual costs for job-site supervision and field office operating costs, or other costs not directly associated with a particular work activity, for the period of delay.
 - a. Provide an accountant's certification of all costs.

3. Home Office Overhead: Unabsorbed home office costs that would have been paid for by the project billings if the work had not been delayed. To be entitled to home office overhead costs, demonstrate the delay-causing event resulted in financial harm.
 - a. No unabsorbed home office overheads will be reimbursed for the first five calendar days of the delay-causing event.
 - b. Calculate home office overhead cost from the sixth calendar day of the delay-causing event through its end if the project is between 0 and 95 percent complete.
 - c. Use the following formula to calculate home office overhead costs:

$$E = D [0.05(A)/C]$$

Where:

0.05 = Allowed markup for home office overhead

A = Current contract value

C = Total contract duration in calendar days, including approved time extensions

D = Number of calendar days the critical path of the schedule is delayed due to the delay-causing event minus five.

E = Total reimbursable amount for unabsorbed home office overhead

- d. No home office overheads will be reimbursed if the delay occurs after the project is 95 percent complete.
- C. The total reimbursable cost for a compensable delay is the sum of the daily agreed to costs for direct costs, field indirect costs, and unabsorbed home office overhead costs as computed in accordance with this article for the duration of the delay. No other costs, including profit, will be reimbursed.

1.08 FORCE ACCOUNT

- A. The City Engineer may require the Contractor to work on a force account basis when the Contractor and City Engineer are unable to negotiate an agreed upon price for changed or added work.
 1. Costs reimbursed in accordance with this section are considered full and complete compensation for:
 - a. All field indirect costs, including project management and supervision, field office operating costs, and all field office staff, except for time spent in immediate and direct supervision of the force account work.
 - b. All home office overhead costs and other indirect costs incurred as a result of the force account work.
 2. The Owner will not compensate for small tools costing \$200 or less or any other costs for which no specific allowance is provided in this section.
- B. Compensation for labor:
 1. The Owner will pay straight time for all hours worked. Overtime must have the prior written approval of the City Engineer.
 2. The Owner will pay for all labor, including direct supervision used in the actual and direct performance of the work at the wage or scale agreed upon in writing before beginning work.
 3. The Owner will reimburse for actual costs paid to or in behalf of workers, including health and welfare required by collective bargaining agreements or other employment contract generally applicable to the classes of labor employed on the work.
 4. The Owner will pay the Contractor an amount equal to 60 percent of the sum of the above items to cover the costs of bonds, insurance, taxes, and all other indirect costs in addition to the above costs.
 - a. Submit wage, payroll, and cost records pertaining to work paid for on a force account basis to the City Engineer. This information is open to inspection or audit.
 5. The Owner will reimburse for actual costs for subsistence and travel allowance.

C. Compensation for materials:

1. The Owner will pay for all materials accepted by the City Engineer and incorporated in the project at actual cost, including sales taxes and transportation charges plus 15 percent.
 - a. Materials such as saw blades, drill bits, etc., expended in the course of performing the work, excluding equipment, are considered incorporated in the project.
 - b. Include invoices with statements for all materials used. Certify by affidavit the cost of material furnished from Contractor's stocks when no invoice is available.

D. Compensation for equipment:

1. The Owner will not pay for pickup trucks used solely for transportation.
2. The Owner will pay for machinery or special equipment, excluding small tools, authorized by the City Engineer at an hourly rate obtained from the Rental Rate Blue Book for Construction Equipment. These hourly rental rates are determined by the monthly rental rate taken from the above-mentioned publication divided by 176. The total hourly rates have been computed from equipment costs currently in effect and do not include costs for operating personnel.

Obtain this publication through:

Equipment Watch

1735 Technology Drive, Suite 410

San Jose, CA 95110-1313

Phone: (800) 669-3282

Fax: (800) 224-3527

Refer to <http://www.udot.utah.gov/go/standardsreferences>.

The rates require adjustment by a Regional Factor and a Depreciation Factor with operating and standby rates established as follows:

- a. Operating Rate - For those hours the equipment is actually in use.
 - 1) Includes ownership and operating costs adjusted for Depreciation and Region factors.
 - b. Standby Rate - Compensation for equipment required to be at the work site but not operating. This rate is 50 percent of the adjusted ownership and operating costs computed above.
 - 1) The duration of allowable standby time is to be approved in writing by the City Engineer with a maximum of eight hours per day or 40 hours in a week.
3. The Owner will use the shown capacity that is closest to the manufacturer's when the Manufacturer's Rated Capacity falls between those shown in the Rental Rate Blue Book for Construction Equipment.
 4. Agree upon all rates in writing before beginning work.
 5. Obtain approval from the City Engineer for any equipment rental rates not provided before the start of any force account work.
 6. The Owner will allow move-in and move-out transportation cost for a piece of equipment not available on the job, if the particular piece of equipment is not moved onto the job under its own power.
 - a. The Owner will allow hourly operating rate for equipment moved to the site under its own power.
 - b. The Owner will pay these charges only once for any particular piece of equipment except in unusual circumstances that must be justified in writing and agreed to by the City Engineer.
 7. The Owner will add a 10 percent allowance on the first \$5,000 plus five percent of the balance in excess of \$5,000 for overhead for all rented or leased equipment paid for by invoices when the equipment used is specialized and not available in the Contractor's inventory and is rented or leased from an outside source.
 - a. Submit the rental or lease agreement to the City Engineer for approval where the rental rate charged exceeds the rate determined by the Rental Rate Blue Book for Construction Equipment.
 - b. The Owner will pay equipment-operating costs at the rate from the Rental Rate Blue Book for Construction Equipment for rented or leased equipment for each hour the equipment was actually used.

8. The equipment may be rented from a local source when the required equipment is in the Contractor's available inventory but not on the project site. The City Engineer may approve rental rates for equipment obtained from local sources when such rates are within 10 percent of the Rental Rate Blue Book for Construction Equipment. Move-in and move-out costs for Contractor owned equipment may be considered when comparing rental costs of equipment obtained from local sources when the equipment is to be used less than a week.
 - a. This option is only allowed when the cost of locally rented equipment is less than using Contractor owned equipment including move-in and move-out charges.
 - b. Such rentals must be supported by a cost analysis indicating the method used was the least expensive.
 - c. The Owner will reimburse for such equipment based on the Rental Rate Blue Book for Construction Equipment if the Contractor elects to rent equipment of a type that is in the Contractor's inventory and the rental costs exceed that allowed by this article.
- E. Subcontracts:
1. The Owner will pay an additional allowance equal to six percent for overhead for the subcontract for all force account work performed under an approved subcontract.
 2. The City Engineer will review each situation to determine that performing the work by subcontract is justified.
- F. Provide an itemized statement of the cost of the force account work at the City Engineer's request including:
1. Name, classification, date, daily hours designating straight time and overtime, total hours, rate, and extension for each laborer and supervisor. Payrolls may be used for some of this information.
 2. Designation, dates, daily hours, total hours, rental rate, and extension for each unit of machinery and equipment.
 3. Quantities of materials, prices, and extensions.
 4. Transportation of materials and equipment.
 5. Cost of fringe benefits and subsistence.
 6. Subcontractors.

1.09 PROGRESS PAYMENTS

- A. The Owner will make progress payments at least once each month as the work is progressing.
- B. More frequent payments may be made during any period when the Owner determines that the value of work performed during the period is sufficient to warrant a payment.
- C. Payments are based on estimates prepared by the City Engineer of the value of the work performed and materials in place under the contract and for payment for material on hand in accordance with this section.
- D. The Owner will not make any progress payment when the total value of the work done since the last estimate is less than \$1,000.
- E. The Owner will deduct and retains five percent from the total value of work until after the entire contract has been completed in an acceptable manner with the following exceptions:
 - a. Retention for subcontracted work is paid upon satisfactory completion and acceptance by the Owner.
 - b. The City Engineer may prepare a semi-final estimate with the consent of the Surety from which the Owner retains 1.5 percent of the original contract amount when no less than 95 percent of the work has been completed. The Owner certifies the remainder for payment, less all previous payments.
- F. The Owner will pay the Contractor within 14 calendar days after certification and approval of billings and estimates.

1. The Contractor and City Engineer agree to a Saturday partial estimate closing date. Succeeding partial estimates close on the same Saturday for each succeeding month.
2. The Contractor approves partial estimate before submission.

1.10 PAYMENT FOR MATERIAL ON HAND

- A. Present the delivery copies of invoices. The Owner may include advance payments for acceptable nonperishable materials purchased expressly for incorporation in the work when delivered in the vicinity of the project or stored in approved storage place in the partial payment invoice.
 1. The City Engineer determines the amount to be included in the estimate, but in no case will the amount exceed the value of the materials as shown on the delivery invoice or 75 percent of the in-place price, whichever is less.
 - a. When advance payments are made for acceptable material on hand, provide property insurance covering these materials, as described in Article 5 of the General Conditions of these Contract Documents, to protect the Owner from loss of these materials.
 2. Furnish evidence that the stockpiled materials are irrevocably obligated to the project when the approved storage location is other than the project site.
 3. The Owner will not pay when the invoice value of such materials, as determined by the City Engineer, amounts to less than \$2,000 or if materials are to be stored less than 30 calendar days, unless otherwise specified.
 4. Furnish the City Engineer certified paid invoices or a certified statement with a copy of the check showing payment within 60 calendar days following the date of the estimate invoice on which the stockpile material is to be paid by the Owner.
 5. Material will be removed from the next partial estimate as stockpiled materials if proper invoices showing payment to the supplier is not received.
- B. The Owner will not make any partial payment on living or perishable materials until incorporated as specified in the contract.
- C. The Owner will not pay for materials brought onto the site at the Contractor's election that may be incorporated into the project such as fuels, supplies, metal decking forms, ties, or supplies used to improve efficiency of operations.
- D. Approval of partial payment for stockpiled materials does not constitute final acceptance of such materials for use in completing items of work.
- E. The Owner will purchase at actual cost and without any percentage allowance for profit, materials delivered to the project in compliance with the contract or left unused due to changes in plans or variation in quantities, if the materials are not practicably returnable for credit.
 1. Purchased materials become the property of the Owner.
 2. Actual costs are based on invoice price plus transportation costs.
- F. Payment is limited to contract quantities unless ordered by the City Engineer. Assume responsibility for excess materials delivered to the project or aggregate produced beyond the contract amount without authority from the City Engineer.
- G. Surplus aggregates up to the contract quantities may be purchased provided the material is stockpiled where directed and meets specification requirements when stockpiled at the option of the Owner.
 1. The Owner will pay for material accepted on an agreed price basis, which price is normally the Contractor's production cost.
 2. The Owner pays a negotiated price for transporting and stockpiling materials at the directed location.

1.11 FINAL PAYMENT

- A. The City Engineer prepares the final estimate of work performed when the project has been accepted in accordance with the appropriate sections of the General Conditions and Supplemental General Conditions.
 - 1. The Owner will process the estimate for final payment if the Contractor approves the final estimate and does not object to the quantities within 30 calendar days of receiving the final estimate.
 - 2. The Owner will pay the entire sum due after deducting all previous payments and all amounts to be retained or deducted under the provisions of the contract after approval of the final estimate by the Contractor.
- B. File a full, complete, and itemized written statement with the Owner justifying the adjustment within 30 calendar days after the final estimate is submitted for approval if additional payment is due from the Owner.
 - 1. Contractor waives all disputes not itemized.
 - 2. Submission of disputes by the Contractor will not be reason for withholding full payment of the total value of work shown on the City Engineer's final estimate.
 - 3. The Owner will evaluate the dispute.
 - a. The final estimate is revised accordingly under the terms of the contract if it is determined that additional payment is due.
 - b. The estimate as submitted is final if it is determined that no additional payment is due.
- C. All prior partial estimates and payments are subject to correction in the final estimate and payment.
- D. The Owner will complete and deliver the final estimate to the Contractor within 90 days of contract completion.

1.12 FUEL COST ADJUSTMENT

- A. Fuel cost adjustment is intended to limit the risk to the Contractor from potentially unstable fuel prices that might occur during the contract.
 - 1. This provision is not intended to estimate actual quantities of fuel used in construction operations or compensate for actual price variations experienced by the Contractor.
 - 2. The Owner will determine adjustments under the provisions of this section and presumes the Contractor has relied on these provisions when determining unit bid prices.
 - 3. The Contractor may invoke this provision at any time during the contract by written notification to the City Engineer.
 - a. Adjustments are then made on all prior and future partial estimates.
 - b. This provision becomes effective when it remains in effect for the duration of the contract.
- B. Abbreviations and Terms:
 - 1. Estimate Price for fuel (EPf): The fuel price established for the partial estimate period.
 - a. The Owner will determine the EPf on the first Monday of each month using the spot price per barrel for West Texas Intermediate (WTI) crude oil posted in the commodities and futures section of the Wall Street Journal. This spot price is averaged with spot prices posted for the previous three Mondays to establish the EPf.
 - b. The EPf remains in effect until the first Monday of the following month and is used for regular partial estimates closed before the first Monday of the following month.
 - 2. Base Price for fuel (BPf): The contract base fuel price, equal to the EPf in effect on the date of the contract bid opening.

3. Fuel Factor (FF): A combined diesel and gasoline usage factor established for purposes of calculating the Fuel Cost Adjustment.
 - a. Table 1 shows the items of work eligible for adjustment.
4. Fuel Cost Adjustment (FCA): The fuel cost adjustment in dollars determined in accordance with this article.

C. Determining FCA:

1. FCA only applies to acceptable work performed on major contract items and eligible items in Table 1 with an individual value of more than \$100,000, or as otherwise specified in Table 1, based on original contract quantities.
2. FCA does not apply to work added by change order.
3. FCA may be positive or negative depending on the changes or differences between the BPf and the EPf.
4. Work performed after the expiration of contract time and approved time extensions, the EPf will be limited to the lesser of:
 - a. The EPf for the estimate period when the work was performed.
 - b. The EPf for the last partial estimate period before the expiration of the contract time.

D. FCA formula:

1. When the EPf is more than 15 percent above the BPf:

$$FCA = \frac{[(EPf - BPf) - 0.05 BPf] Q (FF)}{42}$$

2. When the EPf is more than 15 percent below the BPf:

$$FCA = \frac{[(EPf - BPf) + 0.05 BPf] Q (FF)}{42}$$

3. Where:

Q = Quantity of acceptable work performed
 FF = Fuel factor for Q
 42 = Conversion of gallons of fuel per barrel of crude

- E. The Owner will determine the feasibility of proceeding with the remainder of the project and will notify the Contractor in writing if the project is to be terminated if the EPf increases by more than 50 percent from the BPf for an eligible item of work.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01325

CONSTRUCTION PROGRESS SCHEDULE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Preliminary schedule.
- B. Construction progress schedule, bar chart type.

1.02 REFERENCES

- A. AGC (CPM) - The Use of CPM in Construction - A Manual for General Contractors and the Construction Industry; Associated General Contractors of America; latest edition.
- B. M-H (CPM) - CPM in Construction Management - Project Management with CPM, O'Brien, McGraw-Hill Book Company; latest edition.

1.03 SUBMITTALS

- A. Within 10 days after date of Agreement, submit preliminary schedule defining planned operations for the first 60 days of Work, with a general outline for remainder of Work.
- B. If preliminary schedule requires revision after review, submit revised schedule within 10 days, as directed by the City Inspector or City Engineer.
- C. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
 - 1. Include written certification that major contractors have reviewed and accepted proposed schedule.
- D. Within 10 days after joint review, submit complete schedule.
- E. Submit updated schedule with each Application for Payment, as directed by the City Inspector or City Engineer.
- F. Submit the number of opaque reproductions the Contractor requires, plus one copy which will be retained by the City Engineer.
- G. Submit under transmittal letter form specified in Section 01300.

1.04 QUALITY ASSURANCE

- A. Scheduler: Contractor's personnel or specialist Consultant specializing in CPM scheduling with one years minimum experience in scheduling construction work of a complexity comparable to this Project, and having use of computer facilities capable of delivering a detailed graphic printout within 48 hours of request.

1.05 SCHEDULE FORMAT

- A. Listings: In chronological order according to the start date for each activity. Identify each activity with the applicable specification section number.
- B. Diagram Sheet Size: Maximum 22 x 17 inches or width required.
- C. Sheet Size: Multiples of 8-1/2 x 11 inches.
- D. Scale and Spacing: To allow for notations and revisions.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PRELIMINARY SCHEDULE

- A. Prepare preliminary schedule in the form of a horizontal bar chart.

3.02 CONTENT

- A. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction.
- B. Identify each item by specification section number.
- C. Identify work of separate stages and other logically grouped activities.
- D. Provide sub-schedules for each stage of Work identified in Section 01100.
- E. Provide sub-schedules to define critical portions of the entire schedule.
- F. Include conferences and meetings in schedule.
- G. Show accumulated percentage of completion of each item, and total percentage of Work completed, as of the first day of each month.
- H. Provide separate schedule of submittal dates for shop drawings, product data, and samples, owner-furnished products, Products identified under Allowances, and dates reviewed submittals will be required from the City Engineer. Indicate decision dates for selection of finishes.
- I. Indicate delivery dates for owner-furnished products.
- J. Coordinate content with schedule of values specified in Section 01200.
- K. Provide legend for symbols and abbreviations used.

3.03 BAR CHARTS

- A. Include a separate bar for each major portion of Work or operation.
- B. Identify the first work day of each week.

3.04 REVIEW AND EVALUATION OF SCHEDULE

- A. Participate in joint review and evaluation of schedule with the City Inspector or City Engineer at each submittal.
- B. Evaluate project status to determine work behind schedule and work ahead of schedule.
- C. After review, revise as necessary as result of review, and resubmit within 10 days.

3.05 UPDATING SCHEDULE

- A. Maintain schedules to record actual start and finish dates of completed activities.
- B. Indicate progress of each activity to date of revision, with projected completion date of each activity.
- C. Annotate diagrams to graphically depict current status of Work.

- D. Identify activities modified since previous submittal, major changes in Work, and other identifiable changes.
- E. Indicate changes required to maintain Date of Substantial Completion.
- F. Submit reports required to support recommended changes.
- G. Provide narrative report, as directed by the City Inspector or City Engineer, to define problem areas, anticipated delays, and impact on the schedule. Report corrective action taken or proposed and its effect including the effects of changes on schedules of separate contractors.

3.06 DISTRIBUTION OF SCHEDULE

- A. Distribute copies of updated schedules to Contractor 's project site file, to Subcontractors, suppliers, City Engineer, Owner, and other concerned parties.
- B. Instruct recipients to promptly report, in writing, problems anticipated by projections shown in schedules.

END OF SECTION

SECTION 01500

TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Temporary sanitary facilities.
- B. Temporary Controls: Barriers, enclosures, and fencing.
- C. Vehicular access and parking.

1.02 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required chemical or marine type toilets of acceptable type. Provide at time of project mobilization.
- B. Use of existing facilities is permitted, where acceptable to the owners of the facilities.
- C. Maintain daily in clean and sanitary condition.
- D. At end of construction, remove portable toilets completely.

1.03 BARRIERS

- A. Provide sufficient barriers at all unsafe places at or near construction areas and to protect existing facilities and adjacent properties from damage from construction operations; in all cases maintain safe passageways through construction areas.
- B. Provide protection for plants designated to remain. Replace damaged plants.
- C. Protect non-owned vehicular traffic, stored materials, and structures from damage.

1.04 FENCING

- A. Where required, provide temporary fences at construction areas to contain domestic animals.
- B. After project work is completed, the temporary fences shall be totally removed.

1.05 VEHICULAR ACCESS AND PARKING

- A. Coordinate access and haul routes with governing authorities and the Owner.
- B. Provide and maintain access to fire hydrants, free of obstructions.
- C. Maintain at least one lane of traffic for local residences.
- D. Provide and maintain access to adjacent businesses as directed.
- E. Provide means of removing mud from vehicle wheels before entering streets.
- F. Provide temporary parking areas to accommodate construction personnel.

1.06 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary equipment, facilities, materials, prior to Substantial Completion inspection.

- B. Remove underground installations to a minimum depth of 2 feet. Grade site as indicated.
- C. Clean and repair damage caused by installation or use of temporary work.
- D. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01560

SAFETY STANDARDS AND ACCIDENT PREVENTION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Safety Standards.
- B. Accident Prevention.

1.02 DEFINITIONS

- A. OSHA - Occupational Safety and Health Administration.
- B. UOSHA - Utah Occupational Safety and Health Administration.

1.03 SUBMITTALS

- A. See Section 01300 - Administrative Requirements, for submittal procedures.
- B. Provide copy of OSHA 200 for past two years.
- C. Provide copy of citation history from OSHA for past two years.
- D. Provide copy of safety and health program.

1.04 SAFETY STANDARDS AND ACCIDENT PREVENTION

- A. Health and safety, as well as environmental concerns, are given top priority by the Owner.
- B. With respect to all work performed for this Contract, the Contractor shall:
 - 1. Provide a safe and healthful work place in accordance with all federal, state and local regulations.
 - 2. Conform to all rules and regulation of OSHA.
 - 3. Immediately notify the OWNER of ANY accident or job related illness that occurs on the job site.
 - 4. Notify UOSHA of any serious accident within 12 hours of such occurrence, as required by the Utah Administrative Code R574-102 13.1.1.
 - 5. Notify the OWNER of any sub-contractor retained to work on this project; and assure that they are informed of the Safety and Health Standards required by this Contract.
 - 6. Provide the OWNER with a traffic plan for the work zone and buffer zone. Plan must be approved by U.D.O.T. where necessary.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SPECIAL PROVISION

SECTION 02116M

FILL AND BACKFILL

Delete Article 3.02 B and replace with the following:

- B. Repair subgrade soft spots, as directed by the Engineer, in accordance with Section 02118 – Subgrade Soft Spot Repair.

END OF SECTION

SPECIAL PROVISION

SECTION 02118S

SUBGRADE SOFT SPOT REPAIR

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Remove and replace soft spots in the existing subgrade, as directed by the Engineer.

1.02 RELATED SECTIONS

- A. Section 02116: Fill and Backfill
- B. Section 02621: Gravel Surfacing and Road Base

1.03 RELATED SECTIONS

- A. AASHTO T 180 - Standard Method of Test for Moisture-Density Relations of Soils Using a 10-lb (4.54 kg) Rammer and an 18-in.(457 mm) Drop
- B. AASHTO M 288 - Geotextile Specification for Highway Applications
- C. ASTM C 136 - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
- D. ASTM D 1883 - Standard Test Method for CBR (California Bearing Ratio) of Laboratory-Compacted Soils
- E. ASTM D 4318 - Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils

PART 2 PRODUCTS

2.01 COARSE ROCK BACKFILL

- A. Use Granular Borrow or other angular, well-graded gravel such as a pit run or crushed rock meeting the following. Refer to Section 02116
 - 1. Minimum CBR of 30%; ASTM D 1883
 - 2. Maximum size of 4 inches; ASTM C 136
 - 3. Maximum 15% percent passing the no. 200 sieve; ASTM C 136
 - 4. Maximum liquid limit of 35; ASTM D 4318
 - 5. Maximum plasticity index of 15; ASTM D 4318

2.02 CAPPING ROCK BACKFILL

- A. Use Granular Borrow, Section 02116, or Untreated Base Course, Section 02621.

2.03 GEOTEXTILE FABRIC

- A. Use Woven Fabric meeting AASHTO M 288 Class 3, such as Mirafi 500X or Propex 200ST

PART 3 EXECUTION

3.01 REMOVE SOFT SUBGRADE

- A. Remove subgrade material at locations directed by the Engineer to the following depths

Standard Stabilization: 18 inches

Deep Stabilization: 24 inches

- B. Compact existing surface with plate compactor.

Standard Stabilization: Minimum 3 passes

Deep Stabilization: Minimum 4 passes

3.02 PLACE COARSE ROCK BACKFILL LAYER

- A. Place Coarse Rock in following lift configurations and seat with static roller, minimum 5 passes. Stop rolling if Coarse Rock layer shows signs of pumping.

Standard Stabilization: One 12-inch lift

Deep Stabilization: Bottom lift – 12 inches, top lift – 6 inches

3.03 PLACE CAPPING ROCK BACKFILL LAYER

- A. Place Capping Rock in one 6-inch lift and compact to minimum 85% of maximum laboratory density (AASHTO T-180). Stop rolling if Coarse Rock layer shows signs of pumping.

3.04 OPTIONAL USE OF GEOTEXTILE FABRIC

- A. At contractor's discretion, a geotextile fabric may be used to reduce excavation depth and backfill material thickness. Notify Engineer of intention prior to beginning excavation.
- B. After the excavation of the disturbed soils, spread the fabric across the bottom of the excavation and up the sides to the top of the excavation. Place in accordance with the manufacturer's recommendation, including proper overlaps.
- C. Place backfill material can then be placed over the fabric in as described above with the following thickness modifications

Standard Stabilization:

Coarse Rock Backfill – 8 inches

Capping Rock Backfill – 4 inches

Deep Stabilization:

Coarse Rock Backfill – 12 inches

Capping Rock Backfill – 6 inches

END OF SECTION

SECTION 02621M

GRAVEL SURFACING AND ROAD BASE

Delete Part 2 – PRODUCTS and replace with the following:

PART 2 PRODUCTS

2.1 UNTREATED BASE COURSE

A. Material: Use Untreated Base Course as per UDOT Specification 02721 – Untreated Base Course, with the following modifications:

1. Use UTBC with a minimum 90% CBR, tested at 95% ± 1% compaction.

END OF SECTION

SECTION 02727M

RESTORING NATIVE AREA

Delete Part 2 – PRODUCTS and replace with the following:

PART 2 PRODUCTS

2.1 MATERIALS

A. Restoring Native Grass Seed.

1. Native Grass Mix. Native grass seed shall be fresh, clean, new crop seed; mechanically premixed to the specified proportions. Native grass seed shall be a blend of the following seeds:

Type 3: Grass Mix (Short)	Broadcast	%
Blue Grama (<i>Bouteloua gracilla</i>)	4.0	30.77%
Sheep fescue (<i>festuca ovina</i>)	5.0	38.46%
Sandberg Bluegrass (<i>Poa sandbergii</i>)	4.0	30.77%
Totals	13.0	100.00%

2. Standards. Grass seeds shall comply with "Standards of Official Seed Analysis of North America," published by the Associations of Official Seed Analysts, most recent edition; for 85% purity, 80% germination and 1% (maximum) weed seed (68% PLS).
3. Delivery. Seed shall be delivered to the site in original unopened containers, bearing the dealer's guaranteed analysis and germination percentage and a certificate or stamp or release by a County agriculture commissioner.
4. Seed to be applied by hydraulic method shall be mixed with wood fiber mulch, fertilizer and polymer at 50 pounds per 100 square feet.

END OF SECTION

SECTION 01 11 00S

SUMMARY OF WORK

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Contract Description
- B. Specifications
- C. Coordination of Work
- D. CONTRACTOR Use of Premises
- E. OWNER Supplied Products
- F. Future Work.

1.2 CONTRACT DESCRIPTION

- A. Contract Description: Widening, mill-and-overlay, and restriping of the existing 800 West road from Pioneer Crossing to Pony Express Parkway (approximately 1.6 miles) and a realignment of the 800 West / 400 North / Evans Lane intersection to eliminate existing offset. Demolition work includes removal of existing asphalt pavement, removal of existing concrete, curb, utilities, street signs, etc. New construction work includes mill and overlay of existing asphalt pavement, road widening, signage, earthwork, installation of concrete curb and gutter, concrete sidewalk, street signs, roadway striping, storm drain pipe and structures, trenching vault and conduit installation for power, adjust utility manholes, and a fully signalized intersection at 400 North.
- B. Except as specifically noted otherwise, provide and pay for:
 - 1. Insurance and bonds.
 - 2. Labor, materials, and equipment.
 - 3. Tools, equipment, and machinery required for construction.
 - 4. Utilities and drainage required for construction.
 - 5. Temporary facilities.
 - 6. Traffic control and erosion control measures.
 - 7. Other facilities and services necessary for proper execution and completion of the Work.
- C. Secure and pay for all permits including excavation permits, Utah Department of Transportation encroachment permits, and government fees and licenses.

- D. Comply with codes, ordinances, regulations, orders, and other legal requirements of public authorities having bearing on the performance of the Work.

1.3 SPECIFICATIONS

- A. CONTRACTOR shall comply with the Standard Technical Specifications and Drawings for City of Saratoga Springs, Utah, updated January 2025, the 2017 APWA Utah Chapter 2017 Manual of Standard Specifications, and the Supplemental Specifications and Special Provisions provided herein.

1.4 COORDINATION OF WORK

- A. Maintain overall coordination of the Work.
- B. Obtain construction schedules from each subcontractor, and require each subcontractor to maintain schedules and coordinate modifications.
- C. Coordinate traffic closures with ENGINEER on a weekly basis.
- D. Attend weekly progress/coordination meetings with OWNER, ENGINEER, and affected parties.
- E. Maintain traffic flow of all travel lanes at all times, unless otherwise approved by the OWNER, ENGINEER, and UDOT (if applicable). Flagging and other traffic control devices will be provided and maintained by the CONTRACTOR as required. Contractor shall submit a traffic control plan stamped and signed by a registered engineer.
- F. The CONTRACTOR is responsible to maintain water service as much as possible for the duration of the project. CONTRACTOR shall notify local residences or businesses no less than 24 hours prior to any disruption of water supply. Periods of interrupted water supply to local residences or businesses should not exceed eight (8) hours at any time.

1.5 CONTRACTOR USE OF PREMISES

- A. Limit use of site and premises to allow:
 - 1. Owner occupancy.
 - 2. Residential access (if applicable).
- B. Coordinate use of site and premises under direction of OWNER.

- C. CONTRACTOR is responsible for the protection and safekeeping of materials and products stored within the premises.
- D. Additional storage or work areas to complete the Work shall be obtained and payed for by the CONTRACTOR.

1.6 OWNER SUPPLIED PRODUCTS

- A. Traffic signal poles.

PART 2 – PRODUCTS

Not used.

PART 3 – EXECUTION

Not used.

END OF SECTION

BID SPECIFIC SPECIAL PROVISIONS

PART 1: GENERAL PAYMENT CONSIDERATIONS

Payment for the various items of the bid sheets, as further specified herein, shall include all compensation to be received by the CONTRACTOR for furnishing all tools, equipment, supplies, and manufactured articles; and for all labor operations, and incidentals appurtenant to the items of work being described, as necessary to complete the various items of the work all in accordance with the requirements of the Contract Documents, including all appurtenances thereto, and including all costs of compliance with the regulations of public agencies having jurisdiction, including safety and health requirements of the Occupational Safety and Health Administration of the U.S. Department of Labor (OSHA). No separate payment will be made for any item that is not specifically set forth in the Bid Schedule, and all costs therefore shall be included in the prices named in the Bid Schedule for the various appurtenant items of work.

PART 2: RIGHT OF REJECTION

The Project Engineer, acting for the Owner, shall have the right, at all times and places, to reject any articles or materials to be furnished hereunder which, in any respect, fail to meet the requirements of the Contract Documents, regardless of whether the defects in such articles or materials are detected at the point of manufacture or after completion of the work at the site. If the Project Engineer or Inspector, through an oversight or otherwise, has accepted materials or work which is contrary to the Contract Documents, such material, no matter in what stage or condition of manufacture, delivery, or erection, may be rejected by the Project Engineer for the Owner.

PART 3: LIMITATION OF OPERATIONS

3.1 ITEMS OF WORK

The items of work to be completed with this project shall be limited to those items specifically included in the Bid Schedule.

PART 4: INTENT

It is the intent of these Contract Documents to describe the work, functionally complete, to be constructed in accordance with the Contract Documents. Any work, materials, or equipment that may be reasonably inferred from the Contract Documents as being required to produce the intended result shall be supplied whether or not specifically called for. When words which have a well-known technical or trade meaning are used to describe work, materials, or equipment, such words shall be interpreted in accordance with that meaning. Reference to standard specifications, manuals, or codes of any technical society, organization, or association, or to the laws or regulations of any government authority, whether such reference be specific or by implication, shall mean the latest standard specifications, manual codes, or laws or regulations in effect at the time of opening of bids, except as may be otherwise specifically stated. However, no provision of any referenced standard specification, manual, or code (whether or not specifically incorporated by reference in the Contract Documents)

shall be effective to change the duties and responsibilities of the Owner, the Contractor, or the Project Engineer or any of their consultants, agents, or employees from those set forth in the Contract Documents.

NOTE: If, during the performance of the work, the Contractor finds a conflict, error, or discrepancy in the Contract Documents, the Contractor shall so report to the Project Engineer in writing at once and before proceeding with the work affected thereby, shall obtain a written interpretation, clarification, or correction from the Project Engineer.

PART 5: ORDER OF PRECEDENCE

In resolving conflicts resulting from conflicts, errors, or discrepancies in any of the following Contract Documents, the order of precedence shall be as follows:

1. Change Orders
2. Agreements
3. Contractor's Bid (bid form)
4. Bid Specific Special Provisions (Drawings)
5. Supplementary General Conditions
6. Standard Technical Specifications and Drawings for City of Saratoga Springs, Utah
7. APWA Manual of Standard Specifications
8. State of Utah (UDOT) Standard Specifications for Road and Bridge Construction

PART 6: CONSTRUCTION LIMITS

1. LIMITATION OF OPERATIONS

- a. Do not disturb active irrigation/agricultural operations located to the east of existing 800 West, between 1200 North and Talus Ridge Drive. Approximate extents are shown on the project plan drawings grading extents have been designed intended to avoid these areas.
 - i. Contractor shall notify Owner if during project Work, the possibility of disturbing these active irrigation/agricultural operations arises, to discuss potential Work modifications.
 - ii. Do not perform any modified work without approval of the Engineer.

APPENDIX

FOOTHILL BOULEVARD PAVEMENT EVALUATION

Prepared for:

Saratoga Springs

December 31, 2024

Prepared by:

Kevin Biel, E.I.T.

Tim Biel, P.E.

CMT Technical Services



FOOTHILL BOULEVARD PAVEMENT EVALUATION

Saratoga Springs

Introduction

Foothill Boulevard is an existing 3-4 lane pavement located just South of SR-73 in Saratoga Springs, UT. It is our understanding that the city will likely be reconstructing this roadway in the next 10-15 years. As part of this planned reconstruction, Saratoga Springs City desired an investigation of the condition of the existing pavement and the identification of any recommendations for intermediate-term maintenance. The segment of Foothill Boulevard is located between approximately Talus Ridge Drive and 1200 N. This summary includes the field investigation and engineering evaluation of the roadway based on AASHTO and UDOT practices for pavement analysis, design, and management.

Roadway Investigation

A field investigation was performed by CMT personnel on December 12, 2024, and included 6 cores taken from the pavement (Figure 1) and subgrade depth and support evaluations based on field CBRs derived from Dynamic Cone Penetrometer testing in each hole. DCP results are included in the appendix.



Figure 1. Foothill Core Locations

Foothill Boulevard Pavement Evaluation

Coring of the pavement identified core depths ranging from 4 inches thick to 6 inches thick. The pavement appears to have been previously sealed and is exhibiting environmental distress along the entire pavement. The cracking is environmental with a few areas of significant structural failure in the travel lanes. The cracks have been crack-sealed in some areas, but most areas of this roadway with cracks have not been sealed. Cores 3, 4, and 5 were located right next to cracks and none of the cores were cracked. This likely means that the cracks are not full depth. In addition, core 1 had a 2" layer underneath the current asphalt layer that was completely stripped and deteriorated. The layers in the remaining cores appear to be in good condition as all cores exhibited low voids.

The core depths are shown in Figure 2 below and photos are included in the appendix.

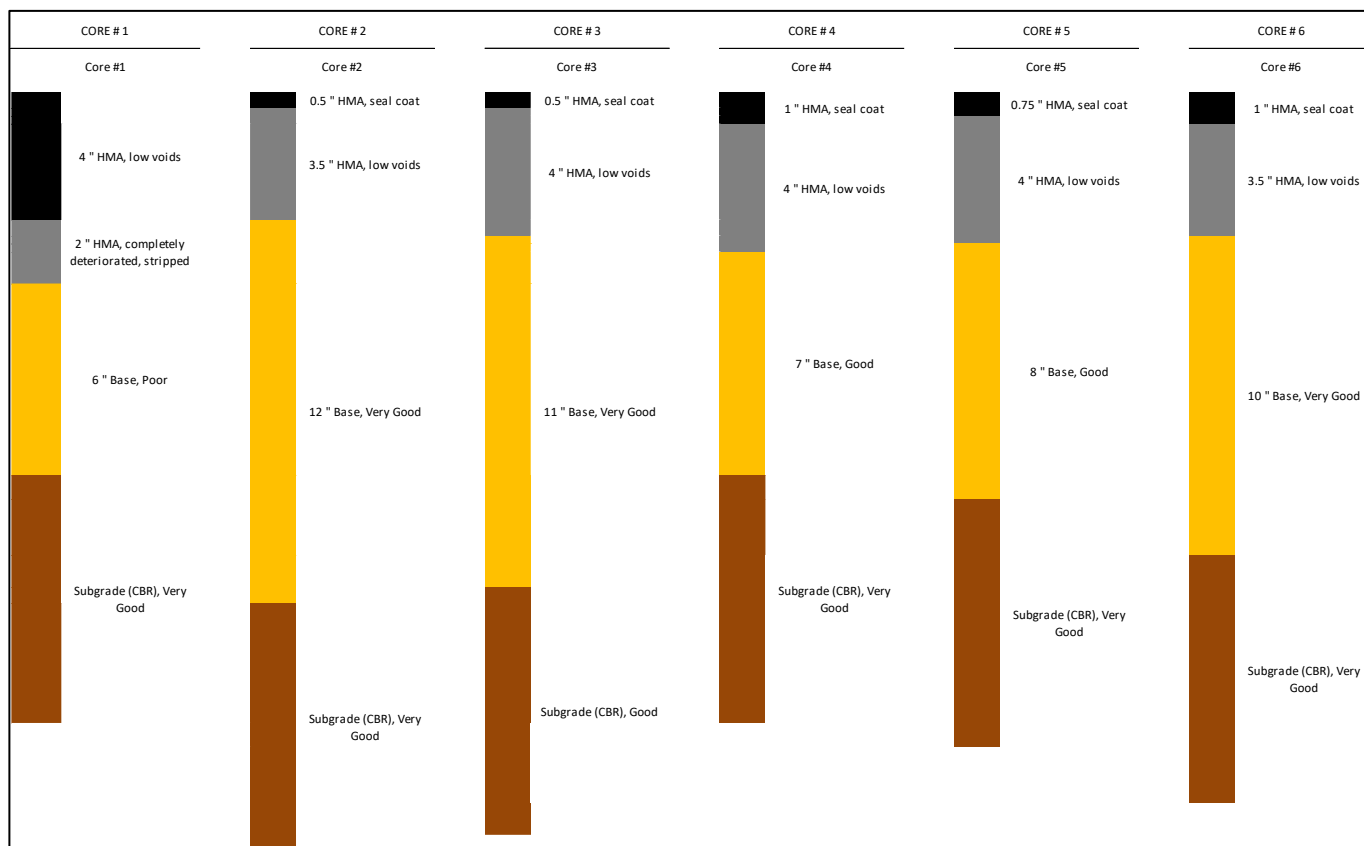


Figure 2. Field Investigation Information

Evaluation

In general, the pavement is in fair condition, with moderate environmental cracking throughout the whole length. There are only a few small locations of structural cracking distress, and the base course generally has above average structural quality. CBR values from the DCP testing average over 80% with the exception of core #1, and the asphalt thickness ranges above 4" which is typical for a local major collector roadway.

This pavement section is currently a major collector for Saratoga Springs, with the traffic consisting primarily of residential traffic and few trucks. However, due to increasing traffic volumes, it is expected that this section of roadway will need complete reconstruction in 10 to 15 years. In order to prevent major rehabilitation in these next 10 to 15 years, this pavement needs a minor rehabilitation in the next 1 to 3 years: either a thin (2") mill and fiber or hi-mod overlay or a thick (4") mill and overlay. The actual timing and depth of the overlay will be dependent upon the future loading and environmental conditions experiences.

Foothill Boulevard Pavement Evaluation

Of note, the only area that may need reactive maintenance would be the few structural failure locations in the travel lanes. These areas should be observed and if vertical deflection ensues, full depth base course soft spot repair will likely be necessary. Based on current traffic, patching may be necessary in the next year or two in these structural failure locations.

Summary and Recommendations

Existing Pavement Sections

This section of Foothill Boulevard is in fair condition, with a few concerning structural failure locations requiring repair or maintenance. It is CMT's opinion that Saratoga Springs can manage the next 10 to 15 years of this roadway with a minor rehabilitation mill and overlay procedure taking place in the next 1 to 3 years. Below is a table of cost estimates for potential minor rehabilitation alternatives, a brief description of each one, and CMT's recommended course of action:

Project Alternatives	Immediate Cost	Annual Cost
2" Mill & Overlay – Hi-Mod/Fiber Reinforced	\$650,000	\$81,000
4" Mill & Overlay	\$1,230,000	\$123,000
Full-Depth Reconstruction Alternative	\$1,670,000	\$67,000

ALTERNATIVE I – 2" MILL & OVERLAY – HIMOD/FIBER REINFORCED

Concept: Mill 2" of existing asphalt, replace with 2" of HI-MOD or Fiber Reinforced HMA.

Estimated Cost: \$650,000

Expected Life: 8-10 years, with multiple seal coats

Next Step: Typical seal coating in 2-3 years, followed by periodic crack sealing and subsequent seal coats in 7 to 8 years.

ALTERNATIVE II – 4" MILL & OVERLAY (RECOMMENDED)

Concept: Mill 4" of existing asphalt, replace with 4" HMA

Estimated Cost: \$1,230,000

Expected Life: 10-12 years, with multiple seal coats

Next Step: Typical seal coating in 2-3 years, followed by periodic crack sealing and subsequent seal coats in 7 to 8 years.

Widening Area

In order to accommodate the City of Saratoga Springs's growing transportation needs, Foothill Boulevard has a future widening planned. Widening the existing pavement section will result in improved traffic flow, fewer safety hazards, and an extended roadway service life. CMT has been asked to provide a recommended pavement section that best fits Saratoga Springs' current budget and future traffic management needs. It is CMT's recommendation that the section for the widening is 5" of HMA over 8" of UTBC (matching the existing pavement section). Best practices recommend matching the existing pavement section to ensure proper drainage across base course layers.

Foothill Boulevard Pavement Evaluation

ALTERNATIVE III – NEW PAVEMENT CONSTRUCTION

Concept: Place 5" of HMA over 8" of UTBC

Estimated Cost: \$1,670,000

Expected Life: 10 years, with multiple seal coats

Next Step: Typical seal coating in 2-3 years, followed by periodic crack sealing

CONSTRUCTION AND MATERIALS DETAILS

All designs and performance expectations are based on the use of quality materials and construction practices. It is our recommendation that the project materials and construction practices be performed under the **current APWA – Utah Chapter standards** using selected asphalt mixes designed to provide better environmental durability. Specific minimum materials properties to be included in the project are:

Hot Mix Asphalt:	APWA Section 32 12 05: SP-1/2" or 3/8", PG58-28, 75G, 15% RAP Max
Hi-Mod or Fiber Reinforced HMA:	CMT to provide when relevant
Untreated Base Course:	APWA Section 32 11 23: Class A Untreated Base Course
Pavement Removal:	APWA Section 02 41 14: with Curb and Gutter
Pavement Marking:	APWA Section 32 17 23

Based on observations of field conditions and materials properties, it is recommended that the construction be observed by a qualified inspector to verify that proper materials design, placement, and construction practices are followed. In addition, CMT Technical Services can provide specifications that enforce responsibility for proper Quality Control (QC) efforts on the contractor, with verification of QC activities by the qualified inspector.

LONG TERM MAINTENANCE

It is highly recommended that surface seals be placed on the asphalt pavements every 5 to 7 years throughout the life of the pavements as performance dictates.

Limitations

The conclusions and recommendations presented are professional opinion, based on engineering experience and judgment. As the extent of the investigation and evaluation was limited, identification of all possible conditions is not guaranteed. Review of the project did not include review of design practices or standards other than those specifically indicated.

APPENDIX

Core Photos

DCP Results

Foothill Boulevard Pavement Evaluation

Foothill Blvd Minor Pavement Rehab Cost Estimate

Target SN: NA

2" Mill & Overlay - Hi-Mod/Reinforced Asphalt									
Item	Cost	Unit	Unit Weight		Depth (in)	SN	Cost		
PCC Pavement - 6" Thick	\$ 20.00	SY	155 lb/ft ³		0.40	0	0.00	\$ -	per SY
Hi-Mod/Fiber Hot Mix Asphalt (HMA)	\$ 115.00	Ton	148 lb/ft ³		0.40	2	0.80	\$ 12.77	per SY
Cement Treated Base	\$ 14.53	SY	140 lb/ft ³		0.30	0	6.00	\$ -	per SY
Untreated Base Course (UTBC)	\$ 35.00	CY	144 lb/ft ³		0.12	0	0.00	\$ -	per SY
Granular Borrow (GB)	\$ 25.00	CY	138 lb/ft ³		0.10	0	0.00	\$ -	per SY
Roadway Milling	\$ 4.00	SY	138 lb/ft ³			2	6.80	\$ 4.00	per SY
					Contingency	30%	\$ 5.03		per SY
Structural Design				8	YR		\$ 21.80	per SY	

4" Mill & Overlay									
Item	Cost	Unit	Unit Weight		Depth (in)	SN	Cost		
PCC Pavement - 6" Thick	\$ 20.00	SY	155 lb/ft ³		0.40	0	0.00	\$ -	per SY
Hi-Mod/Fiber Hot Mix Asphalt (HMA)	\$ 100.00	Ton	148 lb/ft ³		0.40	4	1.60	\$ 25.53	per SY
Cement Treated Base	\$ 14.53	SY	140 lb/ft ³		0.30	0	6.00	\$ -	per SY
Untreated Base Course (UTBC)	\$ 35.00	CY	144 lb/ft ³		0.12	0	0.00	\$ -	per SY
Granular Borrow (GB)	\$ 25.00	CY	138 lb/ft ³		0.10	0	0.00	\$ -	per SY
Roadway Milling	\$ 6.00	SY	138 lb/ft ³			4	7.60	\$ 6.00	per SY
					Contingency	30%	\$ 9.46		per SY
Structural Design				10	YR		\$ 40.99	per SY	

Full-Depth Reconstruction									
Item	Cost	Unit	Unit Weight		Depth (in)	SN	Cost		
Stone Matrix Asphalt (SMA)	\$ 20.00	Ton	148 lb/ft ³		0.40	0	0.00	\$ -	per SY
Hot Mix Asphalt (HMA)	\$ 1,000.00	Ton	148 lb/ft ³		0.40	5	2.00	\$ 27.75	per SY
Fiber Reinforcement	\$ 100.00	Ton	148 lb/ft ³		0.30	0	0.00	\$ -	per SY
Untreated Base Course (UTBC)	\$ 35.00	CY	144 lb/ft ³		0.12	8	0.96	\$ 7.78	per SY
Granular Borrow (GB)	\$ -	CY	138 lb/ft ³		0.08	0	0.00	\$ -	per SY
Roadway Excavation (Road Ex)	\$ 20.00	CY	138 lb/ft ³			13	2.96	\$ 7.22	per SY
					Contingency	30%	\$ 12.83		per SY
Structural Design				25	YR		\$ 55.58	per SY	

Project Length	0.00	MI
	1500	YD
Project Width	20	YD
Project Area	30,000.00	SY
Patching Percentage	0%	
Patching Area	-	SY
Tons FDR	13,050.00	Tons
Tons Cement	1,305.00	Tons

SY Units/Prices for FDR

	Tons/SY	Cost/SY
FDR Processing	0.435	\$8.00
Cement (5%)	0.022	\$3.26
Cement (10%)	0.044	\$6.53

% Cement	\$/Ton
10.0%	\$150.00

CTB

6	\$14.53
8	\$18.16

Project Option	Immediate Cost	Annual Cost
2" Mill & Overlay - Hi-Mod/Reinforced Asphalt	\$653,919.09	\$81,739.89
4" Mill & Overlay	\$1,229,838.19	\$122,983.82
Full-Depth Reconstruction	\$1,667,432.81	\$66,697.31



Figure 3. Core Photo 1

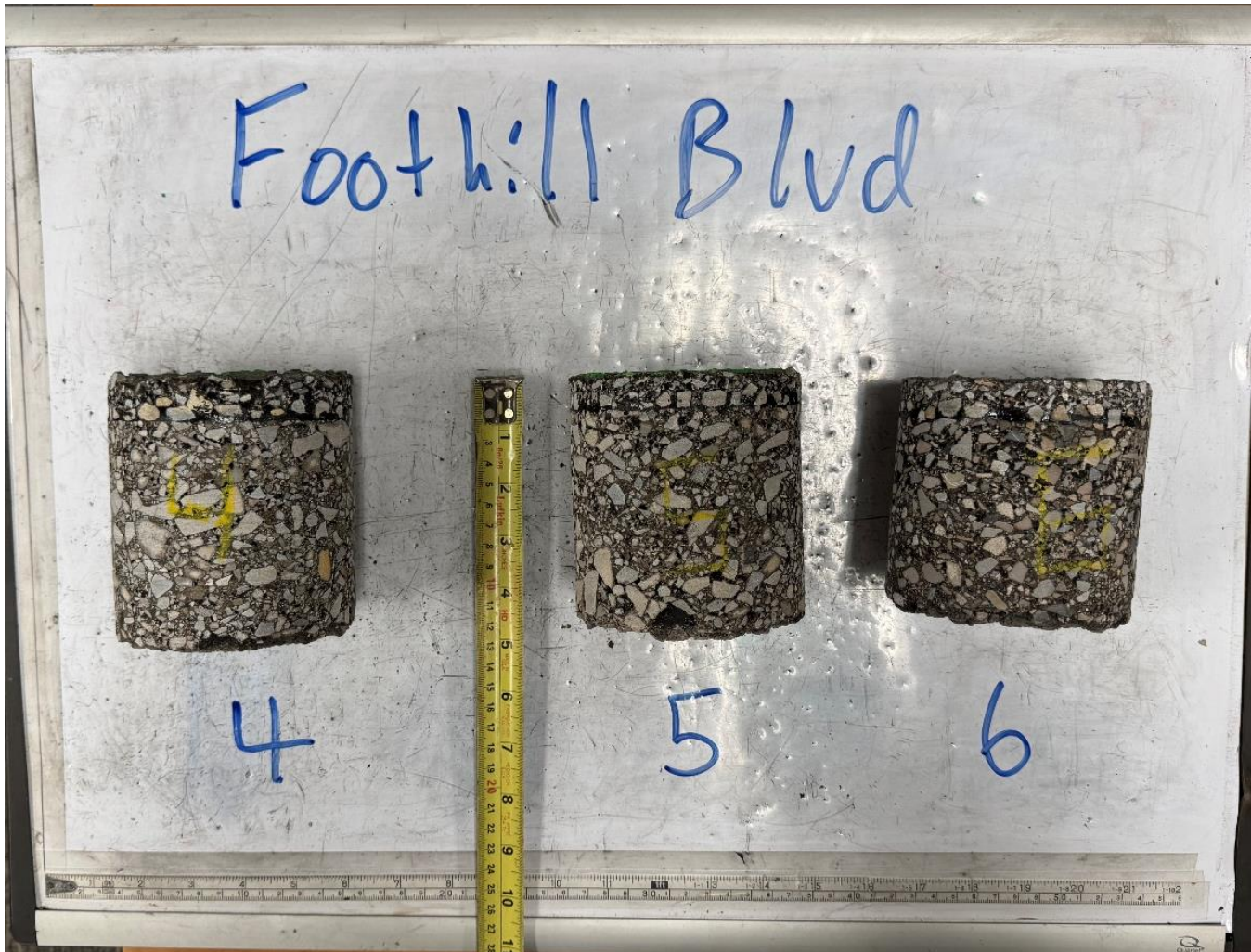
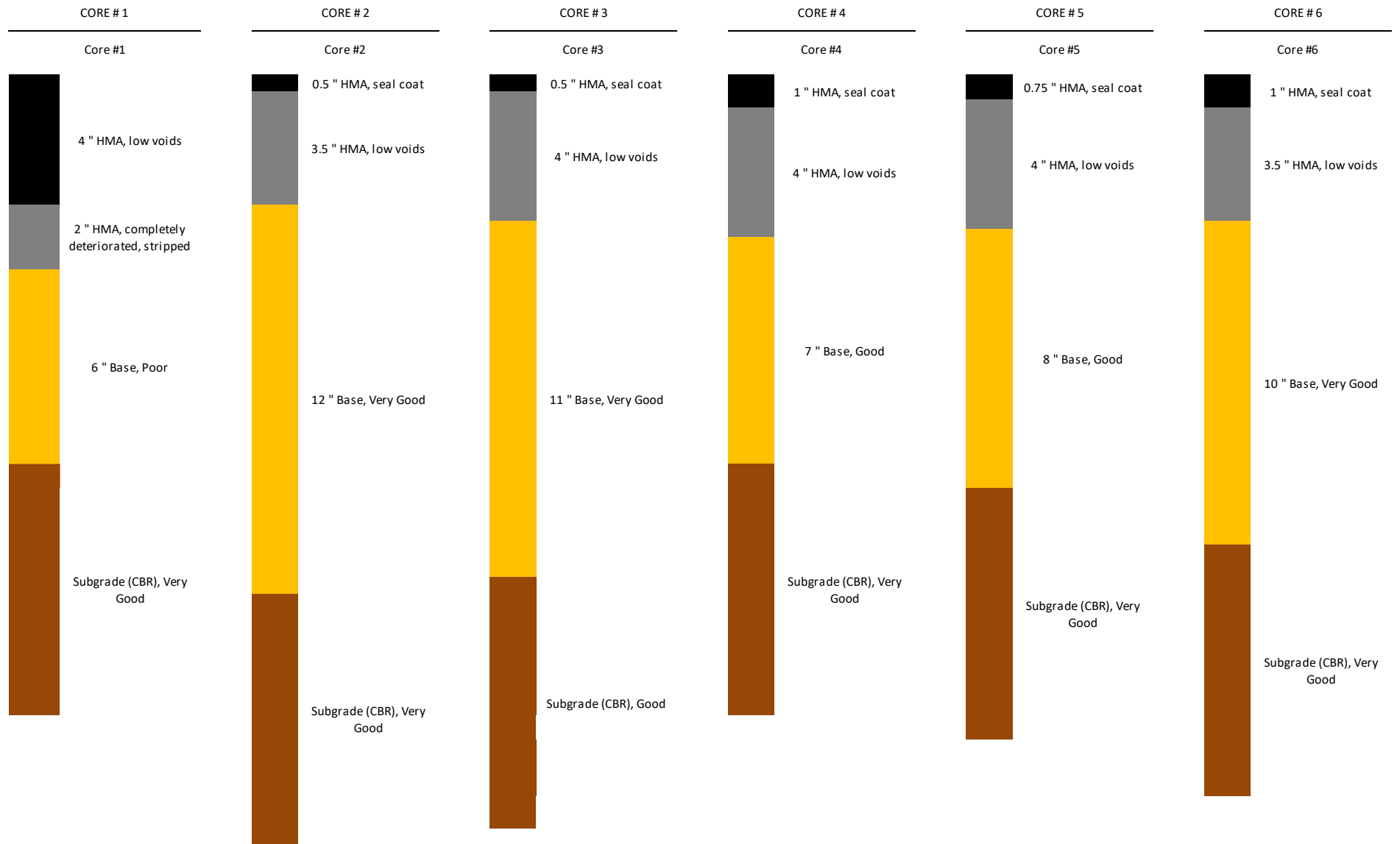


Figure 4. Core Photo 2

Foothill Boulevard Pavement Evaluation



Foothill Boulevard Pavement Evaluation

Project: Foothill Blvd Location: SS

No of Cores: 6

Date: 12/12/2024 Performed By: KB

Existing Pavement Information

Core #	Location	No of Layers	Depth 1st	Comments	Depth 2nd	Comments	Total Asphalt Depth	Depth	CBR	In-situ	Lab (Est)
1	Core #1	2	4	low voids	2	completely deteriorated, stripped	6	6	30	79	43
2	Core #2	2	1	seal coat	4	low voids	4	12	100	70	39
3	Core #3	2	1	seal coat	4	low voids	5	11	95	50	28
4	Core #4	2	1	seal coat	4	low voids	5	7	85	79	43
5	Core #5	2	1	seal coat	4	low voids	5	8	80	79	43
6	Core #6	2	1	seal coat	4	low voids	5	10	100	79	43
avg.							4.8	9.0	81.7		



GEOTECHNICAL ENGINEERING STUDY

Foothill Boulevard (800 W.) Road Widening and Improvements

Saratoga Springs, Utah 84321
CMT PROJECT NO. 21526

FOR:
Saratoga Springs Public Works
213 N. 900 E.
Saratoga Springs, Utah 84045

September 30, 2024

ENGINEERING • GEOTECHNICAL • ENVIRONMENTAL (ESA I & II) •
MATERIALS TESTING • SPECIAL INSPECTIONS •
ORGANIC CHEMISTRY • PAVEMENT
DESIGN • GEOLOGY

September 30, 2024

Mr. Jeremy Lapin, PE
Saratoga Springs Public Works
213 N. 900 E.
Saratoga Springs, Utah 84045

Subject: Geotechnical Engineering Study
Proposed Foothill Boulevard (800 W.) Road Widening and Improvements
From SR-73 to Pony Express Parkway
Saratoga Springs, Utah 84045
CMT Project Number: 21526

Mr. Lapin:

Submitted herewith is the report of our geotechnical engineering study for the referenced roadway widening project. This report contains the results of our findings and an engineering interpretation of the results with respect to the available project characteristics. It also contains recommendations to aid in the design and construction of the earth related phases of this project.

On August 23, 2024, a CMT Technical Services (CMT) staff professional was on-site and observed the drilling of 10 bore holes extending to depths of about 4.0 to 21.5 feet below the existing ground surface along the proposed widening alignments.

We appreciate the opportunity to work with you at this stage of the project. CMT offers a full range of Geotechnical Engineering, Geological, Material Testing, Special Inspection services, and Phase I and II Environmental Site Assessments. With offices throughout Utah, Idaho, Arizona, Colorado and Texas, our staff is capable of efficiently serving your project needs. If we can be of further assistance or if you have any questions regarding this project, please do not hesitate to contact us at 801-590-0394.

Sincerely,
CMT Technical Services


Bryan N. Roberts, P.E.
Senior Geotechnical Engineer



Reviewed by:


Andrew M. Harris, P.E.
Geotechnical Services Manager

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1.0 INTRODUCTION

1.1 General

CMT Technical Services (CMT) was retained to conduct a geotechnical subsurface study for the proposed roadway widening and improvements extending over about 8,800 lineal feet of Foothill Boulevard in Saratoga Springs, Utah as shown in the **Exhibit 1 -Vicinity Map** below.



EXHIBIT 1-VICINITY MAP

1.2 Objectives, Scope and Authorization

The objectives and scope of our study were planned with respect to the Request for Proposal titled “Saratoga Springs, 800 West (Foothill Blvd) From SR-73 to Pony Express Parkway” and the associated CMT proposal for services. In general, for the geotechnical study the objectives were to define and evaluate the subsurface soil and groundwater conditions along the edge of the existing roadways and provide appropriate earthwork and utility recommendations to be utilized in the design and construction of the proposed improvements.

In accomplishing these objectives, our scope of work has included performing field exploration, which consisted of the drilling/logging/sampling of 10 bore holes along the pavement edges, performing laboratory testing on representative samples of the subsurface soils collected in the bore holes, and conducting an office

program, which consisted of correlating available data, performing engineering analyses, and preparing this summary report.

1.3 Project Understanding

We understand that widening of Foothill Boulevard between SR-73 and Pony Express is currently being planned. This section of roadway will be widened to be a five (5) lane minor arterial roadway (85-ft ROW) with a total length of about 8,800 feet. Currently this stretch of roadway is a two-lane connector with a center lane. Site development will require some earthwork in the form of minor cutting and filling to achieve a similar grades.

2.0 FIELD EXPLORATION

2.1 General

In order to define and evaluate the subsurface soil and groundwater conditions, 7 bore holes were drilled, along the existing roadways, to depths of approximately 11.5 to 21.5 feet below the existing ground surface. An additional 3 bore holes were completed to about 4 feet to obtain bulk soil samples for laboratory testing. The locations of the bore holes are shown on **Figure 1 Site Plan**, included in the Appendix. The field exploration was performed under the observation of an experienced member of our geotechnical staff. Upon completion of the field investigation, the bore holes were backfilled with auger cuttings.

Samples of the subsurface soils encountered in the bore holes were collected at varying depths through the hollow stem drill augers. Relatively undisturbed samples of the subsurface soils were obtained by driving a split-spoon sampler with 2.5-inch outside diameter rings/liners and by pushing 3 inch inside diameter Shelby tubes into the undisturbed soils below the drill augers. Disturbed samples were collected utilizing a standard split spoon sampler and from auger cuttings. The standard split spoon sampler was driven 18 inches into the soils below the drill augers using a 140-pound hammer free-falling a distance of 30 inches. The number of hammer blows needed for each 6-inch interval was recorded. The sum of the hammer blows for the final 12 inches of penetration is known as a standard penetration test and this 'blow count' was recorded on the bore hole logs. The blow count provides a reasonable approximation of the relative density of granular soils, but only a limited indication of the relative consistency of fine-grained soils because the consistency of these soils is significantly influenced by the moisture content.

The subsurface soils encountered in the bore holes were classified in the field based upon visual and textural examination, logged and described in general accordance with ASTM¹ D-2488. These field classifications were supplemented by subsequent examination and testing of select samples in our laboratory. Logs of the bore holes, including a description of the soil strata encountered, is presented on each individual Bore Hole Log, **Figures 2 through 11** included in the Appendix. Sampling information and other pertinent data and observations are also included on the logs. In addition, a Key to Symbols defining the terms and symbols used

¹ American Society for Testing and Materials

on the logs is provided as **Figure 12** in the Appendix. A pavement evaluation including asphalt cores and DCP testing of subgrade materials was also completed by CMT. This report is attached in the appendix.

3.0 LABORATORY TESTING

3.1 General

Selected samples of the subsurface soils were subjected to various laboratory tests to assess pertinent engineering properties, as follows:

1. Moisture Content, ASTM D-2216, Percent moisture representative of field conditions
2. Dry Density, ASTM D-2937, Dry unit weight representing field conditions
3. Atterberg Limits, ASTM D-4318, Plasticity and workability
4. Gradation Analysis, ASTM D-1140/C-117, Grain Size Analysis
5. One Dimension Consolidation, ASTM D-2435, Consolidation properties
6. Laboratory Compaction Test, ASTM D 1557, Modified Proctor density
7. California Bearing Ratio, ASTM D-2937, Subgrade support properties

3.2 Lab Summary

Laboratory test results are presented on the bore hole logs (**Figures 2 through 11**), and in the following **Lab Summary Table**:

LAB SUMMARY TABLE

BORE HOLE	DEPTH (feet)	SOIL CLASS	SAMPLE TYPE	MOISTURE CONTENT(%)	DRY DENSITY (pcf)	GRADATION			ATTERBERG LIMITS		
						GRAV.	SAND	FINES	LL	PL	PI
B-1	2.5	CL	SPT	15.4		4	2	93.9	45	20	25
	5	CL	Rings	22.3	97				50	19	31
	7.5	CL	Rings	21.9	103		1	99.3			
B-2	2.5	CL	Shelby	13.7	99		7	92.5			
	5	CL	SPT						47	20	27
	10	CL	Shelby	21.8	104		1	99			
	20	ML-CL	SPT						22	17	5
B-3	2.5	CL	Shelby	19.9			3	97	34	18	16
	10	CL	Shelby	34.1	85		6	93.7			
B-4	5	CL	Rings	14.1	101	9	10	81	25	16	9
B-5	0	CL	SPT	8.5		2	23	75.3	29	17	12
	1.5	CL	Shelby	8.2	103						
	7.5	CL	Rings	15.6	96		11	88.6			
B-6	2.5	CL	SPT	15.4			3	97.2			
	5	CL	Shelby	14.6	93		1	99.3			
	7.5	CL	SPT	14.6					50	21	29
	10	CL	Rings	6	99		22	78.5			
B-7	2.5	CL	SPT	15.1		3	3	94.4	44	19	25
	10	CL	Shelby	27.8	93						
Bulk 1	0-3	CL	Bulk			4	3	92.8			
Bulk 2	0-3	CL	Bulk			9	12	79.3			
Bulk 3	0-3	CL (FILL)	Bulk			4	12	89.1			

3.3 One-Dimensional Consolidation Tests

A consolidation test was performed on each of two representative sample of the natural, medium stiff, fine-grained clay soil encountered within bore hole B-1 at 5 feet and bore hole B-5 at 2.5 feet. Based upon data obtained from the consolidation tests, the clay soils tested are moderately over-consolidated and will exhibit moderate strength and compressibility characteristics under additional loading. Detailed results of the tests are maintained within our files and can be transmitted to you, upon your request.

3.4 Compaction Test

Three bulk samples of the near surface clay soil were taken from shallow bore hole locations labeled Bulk 1, Bulk 2, and Bulk 3 on Figure 1. A compaction test and subsequent California Bearing Ratio (CBR) test was performed on each sample. The compaction tests were completed in accordance with the (ASTM² D-1557) specifications.

Location	Optimum Moisture Content (percent)	Maximum Dry Density (pcf)	Percent Gravel	Percent Sand	Percent Fines Content	USCS Soil Classification
Bulk-1	13.8	114.9	0	7	93	CL
Bulk-2	13.3	117.8	7	11	79	CL
Bulk-3	16.2	111.6	4	7	89	CL (FILL)

3.5 California Bearing Ratio (CBR) Test

A California Bearing Ratio (CBR) test was performed on each bulk sample described above in Section 3.4 Compaction Test. The results of the CBR tests are presented below:

Location	Moisture Content at Compaction (%)	Compacted Dry Density (PCF)	Percent Compaction	Percent Swell	Measured CBR @ 0.1
Bulk-1	12.6	110.8	96.4	3.01	4
Bulk-2	12.3	115.8	98.3	1.5	5
Bulk-3	15.9	107	95.9	2.68	4

4.0 SITE CONDITIONS

4.1 Surface Conditions

Foothill Boulevard (800 West) is currently a north-south, asphalt paved two-lane collector with a single turn lane at the center of the road. The section of roadway evaluated as part of this study extends between SR-73 and Pony Express (see **Vicinity Map** in **Section 1.1** above). Residential development and open farm fields border the roadway section along the east and west. The road is presently paved with asphalt concrete which is supported on untreated base course.

4.2 Subsurface Soils

The bore holes were completed along the edge of the roadways with general locations shown on Figure 1 Site Plan. A relatively thin layer of topsoil was encountered at the surface ranging from several inches up to about 12 inches thick at all the explorations locations with the exception of the bore hole labeled "Bulk-3" which encountered clay FILL to the full depth penetrated of about 4 feet below ground surface.

Below the topsoil, natural soils encountered consisted primarily of CLAY with varying silt and fine sand content and trace gravel as well as occasional layers of clayey SILT/silty CLAY to the maximum depth penetrated, about 21.5 feet.

In general, the natural clay soils were medium stiff to stiff, based on sampling blow counts. Clay soils below about 3 feet at bore hole B-5 were soft to medium stiff based on sampling blow counts. Additionally, the natural clay soils were slightly moist grading moist and occasionally very moist, ranged in color from brown to gray, and appear to be moderately over consolidated, based on laboratory consolidation testing.

4.3 Groundwater

Groundwater was not observed within the bore holes at the time of the field investigation, which extended to depth of 4 to 21.5 feet. However, very moist clay soils were encountered in bore hole B-3 at a depth of about 10 feet and bore hole B-7 at a similar depth below the ground surface.

4.4 Site Subsurface Variations

Based on the results of the subsurface explorations and our experience, variations in the continuity and nature of subsurface conditions should be anticipated. Due to the heterogeneous characteristics of natural soils, care should be taken in interpolating or extrapolating subsurface conditions between or beyond the exploratory locations.

Undocumented/non-engineered fill material was encountered at the bore hole labeled Bulk-3 to the max depth of about 4 feet. It is possible that fills may be present along the roadway which were not directly defined in the completed bore holes and which likely vary in depth and lateral extent along the roadway alignment.

5.0 SITE PREPARATION AND GRADING

5.1 General Site Preparation

It is anticipated that site preparation will consist of the removal of existing surface vegetation, topsoil, any other deleterious materials, loose/disturbed soils from beneath an area extending out horizontally at least 3 feet beyond new improvement areas.

Where existing, in place fills are less than about 3.0 feet thick and clean of deleterious materials it is our opinion that they may remain provided the upper 12 inches is scarified, moisture conditioned and recompacted in place to the requirements outlined in section **5.5 Fill Placement and Compaction** below. Where the existing undocumented fill sequence is greater than 3.0 feet thick and less than about 6.0 feet thick, we recommend reworking and compacting the upper one-half, minimum, of the fill thickness as outlined in section **5.5 Fill Placement and Compaction** below. The upper about 8 inches of native subgrade should also be similarly prepared and compacted.

Below new utilities, and in particularly gravity fed utilities such as storm drains and sanitary sewer, we recommend all undocumented fill, if encountered, be removed down to suitable natural soil and replaced with compacted structural fill.

Subsequently the exposed subgrade must be proofrolled by passing moderate-weight rubber tire-mounted construction equipment over the surface at least twice. If excessively soft or otherwise unsuitable soils are encountered beneath footings, they must be completely removed. In general, below pavement and outside flatwork areas, unsuitable natural soils should be removed to a maximum depth of 2 feet and replaced with compacted granular structural fill/stabilization fill.

The exposed subgrade should be examined by a CMT geotechnical engineer to assess that loose and/or disturbed soils have been removed/properly prepared, prior to placing site grading fills, and pavements.

Fill placed over large areas to raise overall site grades can induce settlements in the underlying natural soils. If more than 4 feet of site grading fill is anticipated over the natural ground surface, we should be notified to assess potential settlements and provide additional recommendations as needed. These recommendations may include placement of the site grading fill far in advance to allow potential settlements to occur prior to construction.

5.2 Temporary Excavations

To reduce disturbance of the natural soils during excavation, it is recommended that smooth edge buckets/blades be utilized where possible. Further heavy wheel traffic over the clay subgrade may destabilize the natural soils if high in moisture content and should be avoided when/where possible.

All excavations must be inspected periodically by qualified personnel. If any signs of instability or excessive sloughing are noted, immediate remedial action must be initiated. All excavations should be made following OSHA safety guidelines.

5.3 Utility Trenches

For the bedding zone around the utility, we recommend utilizing sand bedding fill material that meets current APWA³ requirements.

Most utility companies and local governments are requiring Type A-1a or A-1b (AASHTO Designation) soils (sand/gravel soils with limited fines) be used as backfill over utilities within public rights of way, and the backfill be compacted over the full depth above the bedding zone to at least 96% of the maximum dry density as determined by AASHTO T-180 (ASTM D-1557).

Where the utility does not underlie structurally loaded facilities and public rights of way, on-site fill and natural soils may be utilized as trench backfill above the bedding layer, provided they are free of deleterious material, properly moisture conditioned and compacted to a minimum 90 percent of the maximum dry density.

³ American Public Works Association

5.4 Stabilization

The fine-grained soft clay soils at this site may be susceptible to rutting and pumping under heavy wheel traffic. The likelihood of disturbance or rutting and/or pumping of the existing natural soils is a function of the soil moisture content, the load applied to the surface, as well as the frequency of the load. Consequently, rutting and pumping can be minimized by avoiding concentrated traffic, minimizing the load applied to the surface by using lighter equipment and/or partial loads, by working in drier times of the year, or by providing a working surface for the equipment. Rubber-tired equipment particularly, because of high pressures, promotes instability in moist/wet, soft soils.

To stabilize soft subgrade conditions (if encountered), a mixture of coarse, clean, angular gravels and cobbles and/or 1.5- to 2.0-inch clean gravel should be utilized. This coarse material may be placed and worked into the soft soils until firm and non-yielding or the soft soils removed an additional, minimum of 18 inches, and backfilled with the clean stabilizing fill. A test area should be implemented to achieve a proper stabilization strategy. Often the amount of gravelly material can be reduced with the use of a geotextile fabric such as Mirafi RS280i or equivalent. Its use will also help avoid mixing of the subgrade soils with the gravelly material. After excavating the soft/disturbed soils, the fabric should be spread across the bottom of the excavation and up the sides a minimum of 18 inches. Otherwise, it should be placed in accordance with the manufacturer's recommendation, including proper overlaps. The gravel material can then be placed over the fabric in compacted lifts as described above.

5.5 Fill Placement and Compaction

The various types of compaction equipment available have their limitations as to the maximum lift thickness that can be compacted. For example, hand operated equipment is limited to lifts of about 4 inches and most "trench compactors" have a maximum, consistent compaction depth of about 6 inches. Large rollers, depending on soil and moisture conditions, can achieve compaction at 8 to 12 inches loose.

We recommend for best compaction results that the moisture content for structural fill/backfill be within 2% of optimum.

Field density tests should be performed to verify that proper compaction is being achieved as outlined by project specifications.

Native subgrade preparation prior to fill/pavement section placement should be moisture conditioned and compacted to a minimum 93 percent of the modified proctor density (AASHTO T-180/ASTM D-1557). Preparation of in-situ fill must be compacted to a minimum 95 percent of the modified proctor density. Subsequent structural materials placed and compacted within the roadway area must be compacted to a minimum of 96% of the Modified Proctor. Where fills are deeper than about 8 feet, such as in utility trenches, it is recommended that the backfill be compacted to 97%.

5.7 Equipment Pads and Sidewalks

Small, slab-on-grade equipment pads may be required at the intersection which may be designed utilizing a uniform bearing pressure of 1,000 pounds per square foot supported over a minimum 10 inches of APWA Class A or UDOT aggregate base course over natural, stable, undisturbed soil or approved structural fill. Subgrade soil below flatwork should be similarly prepared out outlined in section **5.1 General Site Preparation** above. We recommend that sidewalks be supported directly by a minimum of 4 inches of APWA Class A or UDOT aggregate base course.

5.8 Precast Concrete Culverts

Should precast concrete culverts be installed which require spread foundations we recommend a design bearing pressure of 1,500 pounds per square foot if established on suitable, undisturbed and stable natural soil or structural fill extending to suitable natural soils.

We also recommend the following:

1. Exterior footings subject to frost should be placed at least 30 inches below final grade.
2. Continuous footing widths should be maintained at a minimum of 18 inches.
3. Isolated footings should be a minimum of 24 inches wide.

6.0 LATERAL EARTH PRESSURES

Utility boxes may be required which are anticipated to extend up to about 8 feet below the ground surface. The lateral pressures imposed upon subgrade facilities will depend upon the relative rigidity and movement of the backfilled structure. Following are the recommended lateral pressure values, which also assume that the soil surface behind the wall is horizontal and that the backfill within 3 feet of the wall will be compacted with hand-operated compacting equipment.

CONDITION	STATIC (psf/ft)*	SEISMIC (psf)*
Active Pressure (wall is allowed to yield, i.e. move away from the soil, with a minimum 0.001H movement/rotation at the top of the wall, where "H" is the total height of the wall)	43	26
At-Rest Pressure (wall is not allowed to yield)	64	N/A
Passive Pressure (wall moves into the soil)	350	125

*Equivalent Fluid Pressure (applied at 1/3 Height of Wall)

*Equivalent Fluid Pressure (added to static and applied at 1/3 Height of Wall)

7.0 PAVEMENTS

All pavement areas must be prepared as discussed above in **Section 5.0 Site Preparation and Grading** above. Pavement section design with a discussion of anticipated traffic will be provided in separate report documents.

8.0 QUALITY CONTROL

We recommend that CMT be retained as part of a comprehensive quality control testing and observation program. With CMT onsite we can help facilitate implementation of our recommendations and address, in a timely manner, any subsurface conditions encountered which vary from those described in this report. Without such a program CMT cannot be responsible for application of our recommendations to subsurface conditions which may vary from those described herein. This program may include, but not necessarily be limited to, the following:

8.1 Field Observations

Observations should be completed during all phases of construction such as site preparation, foundation excavation, structural fill placement and concrete placement.

8.2 Fill Compaction

Compaction testing by CMT is required for all structural supporting fill materials. Maximum Dry Density (Modified Proctor, ASTM D-1557) tests should be requested by the contractor immediately after delivery of any fill materials. The maximum density information should then be used for field density tests on each lift as necessary to ensure that the required compaction is being achieved.

8.3 Excavations

All excavation procedures and processes should be observed by a geotechnical engineer from CMT or his representative. In addition, for the recommendations in this report to be valid, all backfill and structural fill placed in trenches and all pavements should be density tested by CMT. We recommend that freshly mixed concrete be tested by CMT in accordance with ASTM designations.

9.0 LIMITATIONS

The recommendations provided herein were developed by evaluating the information obtained from the subsurface explorations and soils encountered therein. The exploration logs reflect the subsurface conditions only at the specific location at the particular time designated on the logs. Soil and ground water conditions may differ from conditions encountered at the actual exploration locations. The nature and extent of any variation in the explorations may not become evident until during the course of construction. If variations do appear, it may become necessary to re-evaluate the recommendations of this report after we have observed the variation.

Our professional services have been performed, our findings obtained, and our recommendations prepared in accordance with generally accepted geotechnical engineering principles and practices. This warranty is in lieu of all other warranties, either expressed or implied.

We appreciate the opportunity to be of service to you on this project. If we can be of further assistance or if you have any questions regarding this project, please do not hesitate to contact us at (801) 590-0394. To schedule materials testing, please call (801) 381-5141.

APPENDIX

SUPPORTING DOCUMENTATION



800 West to Pony Express

800 West to Pony Express, Saratoga Springs, Utah

Bore Hole Log

B-1

Total Depth: 16.5'

Water Depth: (see Remarks)

Date: 8/23/24

Job #: 21526

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Blows (N)		Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
					Total				Gravel %	Sand %	Fines %	LL	PL	PI
0		Topsoil												
		Light Gray CLAY (CL) with roots												
		slightly moist, medium stiff												
4				1	6 6 3	9	15.4		4	2	94	45	20	25
		grades with some pinholes and oxidation		2	4 3 4	7	22.3	97				50	19	31
		grades brown with trace oxidation												
8			moist	3	6 9 15	24	21.9	103	0	1	99			
				4	3 3 3	6								
12														
		grades light gray tan with some sand and trace organics												
		very stiff		5										
16		END AT 16.5'												
20														
24														
28														

Remarks: Groundwater not encountered during drilling.

Coordinates: 40.3636873°, -111.935321°

Surface Elev. (approx): Not Given

Equipment: Hollow-Stem Auger

Automatic Hammer, Wt=140 lbs, Drop=30"

Excavated By: Direct Push

Logged By: Jake Engman

Page: 1 of 1

Figure:

2

800 West to Pony Express

800 West to Pony Express, Saratoga Springs, Utah

Bore Hole Log

B-2

Total Depth: 21.5'

Water Depth: (see Remarks)

Date: 8/23/24

Job #: 21526

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Blows (N)		Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
					Total				Gravel %	Sand %	Fines %	LL	PL	PI
0		Light Gray Brown CLAY (CL) with some roots												
		slightly moist, stiff												
4		grades with some oxidation and trace organics		6			13.9	99	0	7	93			
		slightly moist, stiff		7	4 3 4	7						47	20	27
8		grades gray		8	5 5 7	12								
12		moist		9			21.8	104	0	1	99			
		Gray Sandy Silt/Clay (ML-CL)												
16		moist, medium stiff		10	4 5 6	11								
20				11	4 5 6	11	13.7					22	17	5
		END AT 21.5'												
24														
28														

Remarks: Groundwater not encountered during drilling.

Coordinates: °, °

Surface Elev. (approx): Not Given

Equipment: Hollow-Stem Auger

Automatic Hammer, Wt=140 lbs, Drop=30"

Excavated By: Direct Push

Logged By: Jake Engman

Page: 1 of 1

CMT TECHNICAL SERVICES

Figure:

3

800 West to Pony Express

800 West to Pony Express, Saratoga Springs, Utah

Bore Hole Log

B-3

Total Depth: 11.5'

Water Depth: (see Remarks)

Date: 8/23/24

Job #: 21526

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Blows (N)		Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
					Total				Gravel %	Sand %	Fines %	LL	PL	PI
0		Topsoil												
		Light Brown Silty CLAY (CL) with some roots slightly moist, medium stiff												
4		grades light gray with some oxidation and rootholes slightly moist, stiff		12			19.9		0	3	97	34	18	16
				13	4 5 3	8								
8				14	4 4 10	14								
		grades brown clay with some oxidation and trace roots very moist		15			34.1	85	0	6	94			
12		END AT 11.5'												
16														
20														
24														
28														

Remarks: Groundwater not encountered during drilling.

Coordinates: °, °

Surface Elev. (approx): Not Given

CMT TECHNICAL
SERVICES

Equipment: Hollow-Stem Auger

Automatic Hammer, Wt=140 lbs, Drop=30"

Excavated By: Direct Push

Logged By: Jake Engman

Page: 1 of 1

Figure:

4

800 West to Pony Express

800 West to Pony Express, Saratoga Springs, Utah

Bore Hole Log

B-4

Total Depth: 11.5'

Water Depth: (see Remarks)

Date: 8/23/24

Job #: 21526

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Blows (N)		Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
						Total			Gravel %	Sand %	Fines %	LL	PL	PI
0		Topsoil;		16	2 2 3	5								
		Gray Brown CLAY (CL) with trace fine gravel and roots slightly moist, medium stiff												
4		grades light gray silty clay with some gravel and roots		17	4 2 3	5								
				18			14.1	101	9	10	81	25	16	9
8				19	6 4 5	9								
				20	6 7 7	14								
12		END AT 11.5'												
16														
20														
24														
28														

Remarks: Groundwater not encountered during drilling.

Coordinates: ° , °

Surface Elev. (approx): Not Given

Equipment: Hollow-Stem Auger

Automatic Hammer, Wt=140 lbs, Drop=30"

Excavated By: Direct Push

Logged By: Jake Engman

Page: 1 of 1

CMT TECHNICAL SERVICES

Figure:

5

800 West to Pony Express

800 West to Pony Express, Saratoga Springs, Utah

Bore Hole Log

B-5

Total Depth: 11.5'

Water Depth: (see Remarks)

Date: 8/23/24

Job #: 21526

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Blows (N)		Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
						Total			Gravel %	Sand %	Fines %	LL	PL	PI
0		Topsoil		21	3	8	8.5		2	23	75.3	29	17	12
		Light Gray Sandy CLAY (CL)		22			8.2	103						
		dry to slightly moist, medium stiff												
4				23	4	4								
				24	3	3								
					2	1								
		grades with some oxidation												
8				25	6	16	15.6	96	0	11	89			
		slightly moist, stiff												
				26	2	2								
		soft			1									
12		END AT 11.5'												
16														
20														
24														
28														

Remarks: Groundwater not encountered during drilling.

Coordinates: 40.383342°, -111.9351°

Surface Elev. (approx): Not Given

Equipment: Hollow-Stem Auger

Automatic Hammer, Wt=140 lbs, Drop=30"

Excavated By: Direct Push

Logged By: Jake Engman

Page: 1 of 1

Figure:

6

CMT TECHNICAL SERVICES

800 West to Pony Express

800 West to Pony Express, Saratoga Springs, Utah

Bore Hole Log

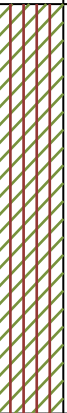
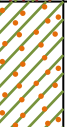
B-6

Total Depth: 11.5'

Water Depth: (see Remarks)

Date: 8/23/24

Job #: 21526

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Blows (N)		Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
					Total				Gravel %	Sand %	Fines %	LL	PL	PI
0		Topsoil												
4		Light Gray Brown Silty CLAY (CL) with trace roots and organics slightly moist, medium stiff												
				27	3 3 4	7	15.4		0	3	97			
		grades trace oxidation		28			14.6	93	0	1	99			
8				29	8 8 10	18	14.6					50	21	29
		Tan Fine Sandy CLAY (CL)												
		slightly moist, very stiff		30	11 12 15	27	6	99	0	22	78			
12		END AT 11.5'												
16														
20														
24														
28														

Remarks: Groundwater not encountered during drilling.

Coordinates: °, °

Surface Elev. (approx): Not Given

Equipment: Hollow-Stem Auger

Automatic Hammer, Wt=140 lbs, Drop=30"

Excavated By: Direct Push

Logged By: Jake Engman

Page: 1 of 1

CMT TECHNICAL SERVICES

Figure:

7

800 West to Pony Express

800 West to Pony Express, Saratoga Springs, Utah

Bore Hole Log

B-7

Total Depth: 11.5'

Water Depth: (see Remarks)

Date: 8/23/24

Job #: 21526

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Blows (N)		Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
					Total				Gravel %	Sand %	Fines %	LL	PL	PI
0		Topsoil;												
		Light Gray Silty CLAY (CL) with major roots, organics and trace oxidation												
		slightly moist, stiff												
4		grades no roots		31	5 7 4	11	15.1		3	3	94	44	19	25
				32	6 5 6	11								
8		grades gray brown with some fine sand, trace roots and oxidation		33	4 2 2	4								
				34			27.8	93						
12		END AT 11.5'												
16														
20														
24														
28														

Remarks: Groundwater not encountered during drilling.

Coordinates: °, °

Surface Elev. (approx): Not Given

CMT TECHNICAL SERVICES

Equipment: Hollow-Stem Auger

Automatic Hammer, Wt=140 lbs, Drop=30"

Excavated By: Direct Push

Logged By: Jake Engman

Page: 1 of 1

Figure:

8

800 West to Pony Express

800 West to Pony Express, Saratoga Springs, Utah

Bore Hole Log Bulk-1

Total Depth: 4'

Water Depth: (see Remarks)

Date: 8/23/24

Job #: 21526

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Blows (N)		Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
						Total				Gravel %	Sand %	Fines %	LL	PL
0		Brown Silty CLAY (CL) with trace fine sand slightly moist, stiff												
				35					4	3	93			
4		END AT 4.0'												
8														
12														
16														
20														
24														
28														

Remarks: Groundwater not encountered during drilling.

Coordinates: °, °

Surface Elev. (approx): Not Given

Equipment: Hollow-Stem Auger

Automatic Hammer, Wt=140 lbs, Drop=30"

Excavated By: Direct Push

Logged By: Jake Engman

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CMT TECHNICAL
SERVICES

Figure:

9

800 West to Pony Express

800 West to Pony Express, Saratoga Springs, Utah

Bore Hole Log Bulk-2

Total Depth: 4'

Water Depth: (see Remarks)

Date: 8/23/24

Job #: 21526

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Blows (N)		Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
					Total				Gravel %	Sand %	Fines %	LL	PL	PI
0		Brown Clayey SILT (ML) with some fine sand and trace gravel and trace roots dry to slightly moist, soft		36										
4									9	12	79			
4		END AT 4.0'												
8														
12														
16														
20														
24														
28														

Remarks: Groundwater not encountered during drilling.

Coordinates: °, °

Surface Elev. (approx): Not Given

CMT TECHNICAL
SERVICES

Equipment: Hollow-Stem Auger

Automatic Hammer, Wt=140 lbs, Drop=30"

Excavated By: Direct Push

Logged By: Jake Engman

Page: 1 of 1

Figure:

10

800 West to Pony Express

800 West to Pony Express, Saratoga Springs, Utah

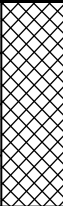
Bore Hole Log Bulk-3

Total Depth: 4'

Water Depth: (see Remarks)

Date: 8/23/24

Job #: 21526

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Blows (N)		Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
						Total				Gravel %	Sand %	Fines %	LL	PL
0		Fill; sandy clay/silt dry to slightly moist, medium dense												
				37					4	12	89			
4		END AT 4.0'												
8														
12														
16														
20														
24														
28														

Remarks: Groundwater not encountered during drilling.

Coordinates: °, °

Surface Elev. (approx): Not Given

Equipment: Hollow-Stem Auger

Automatic Hammer, Wt=140 lbs, Drop=30"

Excavated By: Direct Push

Logged By: Jake Engman

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CMT TECHNICAL
SERVICES

Figure:

11

800 West to Pony Express

Key to Symbols

800 West to Pony Express, Saratoga Springs, Utah

Date: 8/23/24

Job #: 21526

① Depth (ft)	② GRAPHIC LOG	③ Soil Description	④ Sample Type	⑤ Sample #	⑥ Blows(N)	⑦ Total	⑧ Moisture (%)	⑨ Dry Density(pcf)	⑩ Gradation			⑪ Atterberg																																																													
									Gravel %	Sand %	Fines %	LL	PL	PI																																																											
COLUMN DESCRIPTIONS																																																																									
Depth (ft.): Depth (feet) below the ground surface (including groundwater depth - see below right). Graphic Log: Graphic depicting type of soil encountered (see below). Soil Description: Description of soils, including Unified Soil Classification Symbol (see below). Sample Type: Type of soil sample collected; sampler symbols are explained below-right. Sample #: Consecutive numbering of soil samples collected during field exploration. Blows: Number of blows to advance sampler in 6" increments, using a 140-lb hammer with 30" drop. Total Blows: Number of blows to advance sampler the 2nd and 3rd 6" increments. Moisture (%): Water content of soil sample measured in laboratory (percentage of dry weight). Dry Density (pcf): The dry density of a soil measured in laboratory (pounds per cubic foot).					Gradation: Percentages of Gravel, Sand and Fines (Silt/Clay), from lab test results of soil passing No. 4 and No. 200 sieves. Atterberg: Individual descriptions of Atterberg Tests are as follows: LL = Liquid Limit (%): Water content at which a soil changes from plastic to liquid behavior. PL = Plastic Limit (%): Water content at which a soil changes from liquid to plastic behavior. PI = Plasticity Index (%): Range of water content at which a soil exhibits plastic properties (= Liquid Limit - Plastic Limit).																																																																				
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SAMPLER SYMBOLS - Block Sample - Bulk/Bag Sample - Modified California Sampler 3.5" OD, 2.42" ID - D&M Sampler - Rock Core - Standard - Penetration Split Spoon Sampler - Thin Wall (Shelby Tube) WATER SYMBOL - Encountered Water Level - Measured Water Level (see Remarks on Logs)																																																																									

Note: Dual Symbols are used to indicate borderline soil classifications (i.e. GP-GM, SC-SM, etc.).

- The results of laboratory tests on the samples collected are shown on the logs at the respective sample depths.
- The subsurface conditions represented on the logs are for the locations specified. Caution should be exercised if interpolating between or extrapolating beyond the exploration locations.
- The information presented on each log is subject to the limitations, conclusions, and recommendations presented in this report.

Figure:

12



CMT TECHNICAL SERVICES	800 West to Pony Express 800 West to Pony Express, Saratoga Springs, Utah	SITE PLAN	Date:	25-Sep-2023	Figure: 1
			CMT No.:	21526	

800 West to Pony Express

800 West to Pony Express, Saratoga Springs, Utah

Bore Hole Log

B-1

Total Depth: 16.5'

Water Depth: (see Remarks)

Date: 8/23/24

Job #: 21526

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Blows (N)		Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
					Total				Gravel %	Sand %	Fines %	LL	PL	PI
0		Topsoil												
		Light Gray CLAY (CL) with roots												
		slightly moist, medium stiff												
4				1	6 6 3	9	15.4		4	2	94	45	20	25
		grades with some pinholes and oxidation		2	4 3 4	7	22.3	97				50	19	31
		grades brown with trace oxidation												
8			moist	3	6 9 15	24	21.9	103	0	1	99			
				4	3 3 3	6								
12														
		grades light gray tan with some sand and trace organics												
		very stiff		5										
16	END AT 16.5'													
20														
24														
28														

Remarks: Groundwater not encountered during drilling.

Coordinates: 40.3636873°, -111.935321°

Surface Elev. (approx): Not Given

Equipment: Hollow-Stem Auger

Automatic Hammer, Wt=140 lbs, Drop=30"

Excavated By: Direct Push

Logged By: Jake Engman

Page: 1 of 1

Figure:

2

800 West to Pony Express

800 West to Pony Express, Saratoga Springs, Utah

Bore Hole Log

B-2

Total Depth: 21.5'

Water Depth: (see Remarks)

Date: 8/23/24

Job #: 21526

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Blows (N)		Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
					Total				Gravel %	Sand %	Fines %	LL	PL	PI
0		Light Gray Brown CLAY (CL) with some roots												
		slightly moist, stiff												
				6			13.9	99	0	7	93			
4		grades with some oxidation and trace organics												
		slightly moist, stiff		7	4 3 4	7						47	20	27
8				8	5 5 7	12								
		grades gray												
		moist		9			21.8	104	0	1	99			
12														
		Gray Sandy Silt/Clay (ML-CL)												
		moist, medium stiff												
16				10	4 5 6	11								
20				11	4 5 6	11	13.7					22	17	5
		END AT 21.5'												
24														
28														

Remarks: Groundwater not encountered during drilling.

Coordinates: ° , °

Surface Elev. (approx): Not Given

Equipment: Hollow-Stem Auger

Automatic Hammer, Wt=140 lbs, Drop=30"

Excavated By: Direct Push

Logged By: Jake Engman

Page: 1 of 1

CMT TECHNICAL SERVICES

Figure:

3

800 West to Pony Express

800 West to Pony Express, Saratoga Springs, Utah

Bore Hole Log

B-3

Total Depth: 11.5'

Water Depth: (see Remarks)

Date: 8/23/24

Job #: 21526

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Blows (N)		Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
					Total				Gravel %	Sand %	Fines %	LL	PL	PI
0		Topsoil												
		Light Brown Silty CLAY (CL) with some roots slightly moist, medium stiff												
4		grades light gray with some oxidation and rootholes slightly moist, stiff		12			19.9		0	3	97	34	18	16
				13	4 5 3	8								
8				14	4 4 10	14								
		grades brown clay with some oxidation and trace roots very moist		15			34.1	85	0	6	94			
12		END AT 11.5'												
16														
20														
24														
28														

Remarks: Groundwater not encountered during drilling.

Coordinates: °, °

Surface Elev. (approx): Not Given

CMT TECHNICAL
SERVICES

Equipment: Hollow-Stem Auger

Automatic Hammer, Wt=140 lbs, Drop=30"

Excavated By: Direct Push

Logged By: Jake Engman

Page: 1 of 1

Figure:

4

800 West to Pony Express

800 West to Pony Express, Saratoga Springs, Utah

Bore Hole Log

B-4

Total Depth: 11.5'

Water Depth: (see Remarks)

Date: 8/23/24

Job #: 21526

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Blows (N)		Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
						Total			Gravel %	Sand %	Fines %	LL	PL	PI
0		Topsoil;		16	2 2 3	5								
		Gray Brown CLAY (CL) with trace fine gravel and roots slightly moist, medium stiff												
4		grades light gray silty clay with some gravel and roots		17	4 2 3	5								
				18			14.1	101	9	10	81	25	16	9
8				19	6 4 5	9								
				20	6 7 7	14								
12		END AT 11.5'												
16														
20														
24														
28														

Remarks: Groundwater not encountered during drilling.

Coordinates: ° , °

Surface Elev. (approx): Not Given

Equipment: Hollow-Stem Auger

Automatic Hammer, Wt=140 lbs, Drop=30"

Excavated By: Direct Push

Logged By: Jake Engman

Page: 1 of 1

CMT TECHNICAL SERVICES

Figure:

5

800 West to Pony Express

800 West to Pony Express, Saratoga Springs, Utah

Bore Hole Log

B-5

Total Depth: 11.5'

Water Depth: (see Remarks)

Date: 8/23/24

Job #: 21526

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Blows (N)		Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
						Total			Gravel %	Sand %	Fines %	LL	PL	PI
0		Topsoil		21	3	8	8.5		2	23	75.3	29	17	12
		Light Gray Sandy CLAY (CL)		22			8.2	103						
		dry to slightly moist, medium stiff												
4				23	4	4								
				24	3	3								
					2	1								
		grades with some oxidation												
8				25	6	16	15.6	96	0	11	89			
		slightly moist, stiff												
				26	2	2								
		soft			1									
12		END AT 11.5'												
16														
20														
24														
28														

Remarks: Groundwater not encountered during drilling.

Coordinates: 40.383342°, -111.9351°

Surface Elev. (approx): Not Given

Equipment: Hollow-Stem Auger

Automatic Hammer, Wt=140 lbs, Drop=30"

Excavated By: Direct Push

Logged By: Jake Engman

Page: 1 of 1

Figure:

6

CMT TECHNICAL SERVICES

800 West to Pony Express

800 West to Pony Express, Saratoga Springs, Utah

Bore Hole Log

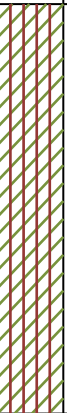
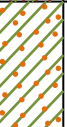
B-6

Total Depth: 11.5'

Water Depth: (see Remarks)

Date: 8/23/24

Job #: 21526

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Blows (N)		Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
					Total				Gravel %	Sand %	Fines %	LL	PL	PI
0		Topsoil												
4		Light Gray Brown Silty CLAY (CL) with trace roots and organics slightly moist, medium stiff												
				27	3 3 4	7	15.4		0	3	97			
		grades trace oxidation		28			14.6	93	0	1	99			
8				29	8 8 10	18	14.6					50	21	29
		Tan Fine Sandy CLAY (CL)												
		slightly moist, very stiff		30	11 12 15	27	6	99	0	22	78			
12		END AT 11.5'												
16														
20														
24														
28														

Remarks: Groundwater not encountered during drilling.

Coordinates: ° , °

Surface Elev. (approx): Not Given

Equipment: Hollow-Stem Auger

Automatic Hammer, Wt=140 lbs, Drop=30"

Excavated By: Direct Push

Logged By: Jake Engman

Page: 1 of 1

CMT TECHNICAL SERVICES

Figure:

7

800 West to Pony Express

800 West to Pony Express, Saratoga Springs, Utah

Bore Hole Log

B-7

Total Depth: 11.5'

Water Depth: (see Remarks)

Date: 8/23/24

Job #: 21526

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Blows (N)		Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
					Total				Gravel %	Sand %	Fines %	LL	PL	PI
0		Topsoil;												
		Light Gray Silty CLAY (CL) with major roots, organics and trace oxidation												
		slightly moist, stiff												
4		grades no roots		31	5 7 4	11	15.1		3	3	94	44	19	25
				32	6 5 6	11								
8		grades gray brown with some fine sand, trace roots and oxidation		33	4 2 2	4								
				34			27.8	93						
12		END AT 11.5'												
16														
20														
24														
28														

Remarks: Groundwater not encountered during drilling.

Coordinates: °, °

Surface Elev. (approx): Not Given

CMT TECHNICAL SERVICES

Equipment: Hollow-Stem Auger

Automatic Hammer, Wt=140 lbs, Drop=30"

Excavated By: Direct Push

Logged By: Jake Engman

Page: 1 of 1

Figure:

8

800 West to Pony Express

800 West to Pony Express, Saratoga Springs, Utah

Bore Hole Log Bulk-1

Total Depth: 4'

Water Depth: (see Remarks)

Date: 8/23/24

Job #: 21526

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Blows (N)		Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
						Total				Gravel %	Sand %	Fines %	LL	PL
0		Brown Silty CLAY (CL) with trace fine sand slightly moist, stiff												
				35					4	3	93			
4		END AT 4.0'												
8														
12														
16														
20														
24														
28														

Remarks: Groundwater not encountered during drilling.

Coordinates: °, °

Surface Elev. (approx): Not Given

Equipment: Hollow-Stem Auger

Automatic Hammer, Wt=140 lbs, Drop=30"

Excavated By: Direct Push

Logged By: Jake Engman

Page: 1 of 1

CMT TECHNICAL
SERVICES

Figure:

9

800 West to Pony Express

800 West to Pony Express, Saratoga Springs, Utah

Bore Hole Log Bulk-2

Total Depth: 4'

Water Depth: (see Remarks)

Date: 8/23/24

Job #: 21526

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Blows (N)		Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
					Total				Gravel %	Sand %	Fines %	LL	PL	PI
0		Brown Clayey SILT (ML) with some fine sand and trace gravel and trace roots dry to slightly moist, soft		36										
4									9	12	79			
4		END AT 4.0'												
8														
12														
16														
20														
24														
28														

Remarks: Groundwater not encountered during drilling.

Coordinates: °, °

Surface Elev. (approx): Not Given

CMT TECHNICAL
SERVICES

Equipment: Hollow-Stem Auger

Automatic Hammer, Wt=140 lbs, Drop=30"

Excavated By: Direct Push

Logged By: Jake Engman

Page: 1 of 1

Figure:

10

800 West to Pony Express

800 West to Pony Express, Saratoga Springs, Utah

Bore Hole Log Bulk-3

Total Depth: 4'

Water Depth: (see Remarks)

Date: 8/23/24

Job #: 21526

Depth (ft)	GRAPHIC LOG	Soil Description	Sample Type	Sample #	Blows (N)		Moisture (%)	Dry Density(pcf)	Gradation			Atterberg		
						Total				Gravel %	Sand %	Fines %	LL	PL
0		Fill; sandy clay/silt dry to slightly moist, medium dense												
				37					4	12	89			
4		END AT 4.0'												
8														
12														
16														
20														
24														
28														

Remarks: Groundwater not encountered during drilling.

Coordinates: °, °

Surface Elev. (approx): Not Given

Equipment: Hollow-Stem Auger

Automatic Hammer, Wt=140 lbs, Drop=30"

Excavated By: Direct Push

Logged By: Jake Engman

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CMT TECHNICAL
SERVICES

Figure:

11

800 West to Pony Express

Key to Symbols

800 West to Pony Express, Saratoga Springs, Utah

Date: 8/23/24

Job #: 21526

① Depth (ft)	② GRAPHIC LOG	③ Soil Description	④ Sample Type	⑤ Sample #	⑥ Blows(N)	⑦ Total	⑧ Moisture (%)	⑨ Dry Density(pcf)	⑩ Gradation			Atterberg																																																													
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Depth (ft.): Depth (feet) below the ground surface (including groundwater depth - see below right). Graphic Log: Graphic depicting type of soil encountered (see below). Soil Description: Description of soils, including Unified Soil Classification Symbol (see below). Sample Type: Type of soil sample collected; sampler symbols are explained below-right. Sample #: Consecutive numbering of soil samples collected during field exploration. Blows: Number of blows to advance sampler in 6" increments, using a 140-lb hammer with 30" drop. Total Blows: Number of blows to advance sampler the 2nd and 3rd 6" increments. Moisture (%): Water content of soil sample measured in laboratory (percentage of dry weight). Dry Density (pcf): The dry density of a soil measured in laboratory (pounds per cubic foot).					Gradation: Percentages of Gravel, Sand and Fines (Silt/Clay), from lab test results of soil passing No. 4 and No. 200 sieves. Atterberg: Individual descriptions of Atterberg Tests are as follows: LL = Liquid Limit (%): Water content at which a soil changes from plastic to liquid behavior. PL = Plastic Limit (%): Water content at which a soil changes from liquid to plastic behavior. PI = Plasticity Index (%): Range of water content at which a soil exhibits plastic properties (= Liquid Limit - Plastic Limit).																																																																				
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SAMPLER SYMBOLS Block Sample Bulk/Bag Sample Modified California Sampler 3.5" OD, 2.42" ID D&M Sampler Rock Core Standard Penetration Split Spoon Sampler Thin Wall (Shelby Tube)																																																																									
WATER SYMBOL Encountered Water Level Measured Water Level (see Remarks on Logs)																																																																									

Note: Dual Symbols are used to indicate borderline soil classifications (i.e. GP-GM, SC-SM, etc.).

- The results of laboratory tests on the samples collected are shown on the logs at the respective sample depths.
- The subsurface conditions represented on the logs are for the locations specified. Caution should be exercised if interpolating between or extrapolating beyond the exploration locations.
- The information presented on each log is subject to the limitations, conclusions, and recommendations presented in this report.

Figure:

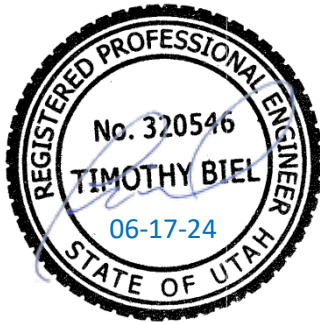
12

FOOTHILL BOULEVARD SARATOGA SPRINGS PAVEMENT EVALUATION

Prepared for:

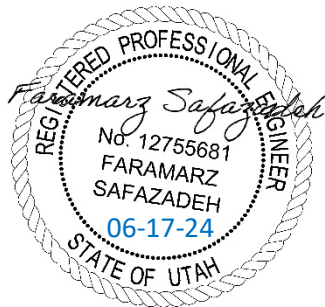
Saratoga Spring Public Works

June 17, 2024



Prepared by:

***Timothy D. Biel, M.S., P.E.
Faramarz Safazadeh Ph.D., P.E.
CMT Technical Services***



CMT
TECHNICAL
S E R V I C E S

FOOTHILL BLVD – SARATOGA RD, SARATOGA SPRINGS PAVEMENT EVALUATION

Executive Summary

CMT Technical Services performed an evaluation of the existing Foothill Blvd, Saratoga Springs City, Utah. A design of Foothill Blvd pavement has been performed (Figure 1).



Figure 1. Foothill Blvd Location

EVALUATION AND DESIGN

A pavement design was performed using the AASHTO 1993 method. The roadway is categorized as a low-volume arterial with future traffic, including semi-trucks, garbage trucks, delivery vehicles, school buses, etc. Typical 20-year ESAL loads for this road is expected to be around 1,000,000 ESALs (Figure 2).

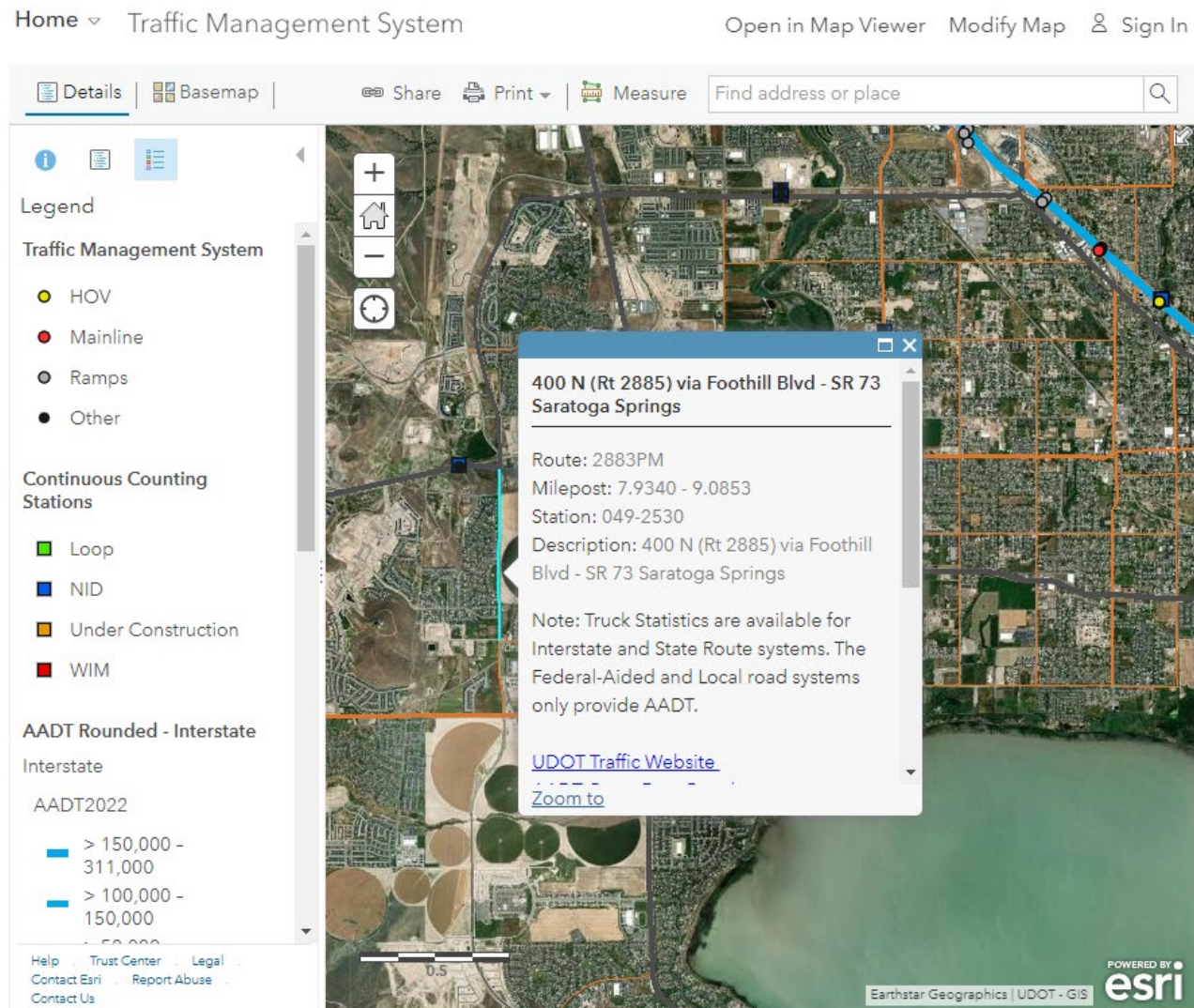


Figure 2. UDOT Traffic Statistics

As this segment of the road is expected to be connected to the Mountainview corridor the category of the road to a major arterial. The "20-Year ESAL Requirement" for "MAJOR & PRINCIPLE ARTERIAL (Class IV)" is 2,000,000 ESALs based on Table 6 of the Saratoga Spring City standards (Updated April 2, 2021). Therefore, the calculated structural number is 4.24 using a CBR value of 4% (4500 psi), ESAL loading of 2,018,023, and the typical local design default inputs. A Type 1 Geogrid above a Properly-Prepared Subgrade Protection Layer is needed based on Table 9 of the City Standards. Although for CBR values greater than 9%, a subgrade protection layer is not required. Table 1 shows the summary of the proposed design for this project to achieve the required structural number needed (4.24).

Table 1. Summary of the Alternatives

	Layers	Thickness (in)	Total Construction thickness (in)	SN
Design	HMA	6	27	4.24
	UTBC	8		
	GB	13		

The design alternative consists of a new 6" HMA cap over 8" of untreated granular base (UTBC) over 13" of granular borrow (GB).

Construction Issues

- All construction procedures and practices (either alternative) must be in accordance with the APWA specifications, with specific requirements included below.

CONSTRUCTION AND MATERIALS DETAILS

All designs and performance expectations are based on the use of quality materials and construction practices. It is our recommendation that the project materials and construction practices be performed under the **current APWA – Utah Chapter standards (including addendums)** using selected asphalt mixes designed to provide better environmental durability. Specific minimum materials properties to be included in the project are:

Hot Mix Asphalt:	APWA Section 32 12 05: Class III Mix, 15% RAP Max
Untreated Base Course:	APWA Section 32 11 23: Class A Untreated Base Course
Pulverized Pavement Base Course:	Updated APWA Section 32 11 24: with Portland Cement Stabilizer (CTBC) – <i>CMT Technical Services will provide if this option is selected.</i>
Pavement Removal:	APWA Section 02 41 14: with Curb and Gutter
Pavement Marking:	APWA Section 32 17 23

Based on observations of field conditions and materials properties, it is recommended that the construction be observed by a qualified inspector to verify that proper materials design, placement, and construction practices are followed. In addition, CMT Technical Services can provide specifications that enforce responsibility for proper Quality Control (QC) efforts on the contractor, with verification of QC activities by the qualified inspector.

LONG TERM MAINTENANCE

It is highly recommended that surface seals be placed on the pavements every 5 to 7 years throughout the life of the pavements as performance dictates.

Limitations

The conclusions and recommendations presented are professional opinions based on engineering experience and judgment. As the extent of the investigation and evaluation was limited, identification of all possible conditions is not guaranteed. A Review of the project did not include a review of design practices or standards other than those specifically indicated.

WinPAS

Pavement Thickness Design According to
1993 AASHTO Guide for Design of Pavements Structures
American Concrete Pavement Association

Flexible Design Inputs

Project Name: Foothill Blvd Project
Route: Arterial
Location: Saratoga Springs
Owner/Agency: Saratoga Springs City Public Works
Design Engineer: Design Alt I

Flexible Pavement Design/Evaluation

Structural Number	4.24	Subgrade Resilient Modulus	4,500.00 psi
Total Flexible ESALs	2,018,023	Initial Serviceability	4.50
Reliability	90.00 percent	Terminal Serviceability	2.00
Overall Standard Deviation	0.45		

Layer Pavement Design/Evaluation

Layer Material	Layer Coefficient	Drainage Coefficient	Layer Thickness	Layer SN
Asphalt Cement Concrete	0.40	1.00	6.00	2.40
Untreated Base Course	0.10	1.00	8.00	0.80
Granular Subbase	0.08	1.00	13.00	1.04
Σ SN				4.24