

PROJECT MANUAL

September 26, 2024

VOLUNTEER STATE COMMUNITY COLLEGE DOMESTIC WATER IMPROVEMENTS

SBC No. 166/025-01-2023

Sumner County, Gallatin, Tennessee

OWNER:

TENNESSEE BOARD OF REGENTS

DESIGNER:

CT CONSULTANTS, INC.

2964 SIDCO DR.

NASHVILLE, TN 37204

(615) 349-4024



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Website: www.ctconsultants.com

Project # 220439

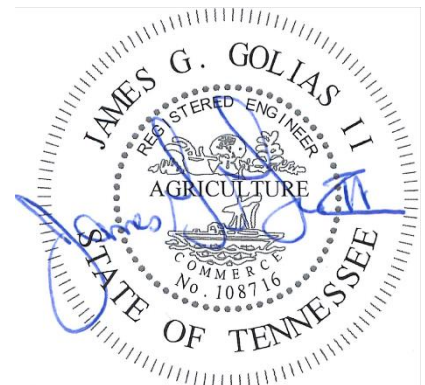


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00 11 16 – INVITATION TO BID

PROJECT:

VOLUNTEER STATE COMMUNITY COLLEGE - DOMESTIC WATER IMPROVEMENTS
SBC Number 166/025-01-2023
Volunteer State Community College
Gallatin, Sumner County

INVITATION:

The State of Tennessee is inviting General Contractor bids for the Work of this project. Examine documents at the Designer's office or Plan Rooms on or after October 2, 2024.

Bidding Documents in PDF format may be obtained at no cost from the following source.

CT Consultants, Inc. plan room at <https://bids.ctconsultants.com>. Please contact planroom@ctconsultants.com to receive the bid forms or call (440) 530-2351 if you encounter any problems viewing, registering or paying for the documents. Hard copies of the Drawings and Project Manual/Spec Book may be purchased at a non-refundable cost of One Hundred Twenty Five Dollars (\$125.00). Although documents will be available until the bid opening, bidders shall plan accordingly to provide themselves with sufficient time to receive documents and submit their bids.

Entities obtaining Bidding Documents become Bidders of Record for notifications. Bidders of Record may purchase hard copies of Bidding Documents from the same source (nonrefundable).

Bidders shall be licensed and qualified per state law. Five percent (5%) Bid Security is required in the form of a Bid Bond or check (certified or cashier's) made payable to State of Tennessee. Non-discrimination policy applies.

BIDS RECEIVED AT:

Tennessee Board of Regents
Office of Facilities Development, 3rd Floor
1 Bridgestone Park
Nashville, TN 37214
Until 2:00 pm, local time
On October 30, 2024

PRE-BID CONFERENCE AT:

Volunteer State Community College
Wood Campus Center, Basement 106 (Follow Signs for Deliveries)
1480 Nashville Pike
Gallatin, TN 37066
At 10:00 am, local time
On October 16, 2024

PLAN ROOMS:

CT Consultants, Nashville

00 11 16 – INVITATION TO BID

Associated General Contractors (AGC), 2924 Foster Creighton Drive, Nashville, TN
Construct Connect , Nashville

Builders Exchange of Tennessee, 300 Clark Street, Knoxville TN

Nashville Contractors Association, 7430 Burleson Lane, Murfreesboro, TN

AGC of Eastern Tennessee, 101 West 21st Street, Chattanooga, TN

Nashville Contractors Association, 7430 Burleson Lane, Murfreesboro TN

Dodge Room, 5800 Building 5708 Uptain Road St 900, Chattanooga, TN

DESIGNER:

CT Consultants, Inc. 2964 Sidco Drive, Nashville, TN 37204

END OF SECTION

00 21 13 – INSTRUCTIONS TO BIDDERS

PART 1 - GENERAL

1.01 BIDDING DOCUMENTS

- A. Bidding Documents may be obtained by Bidders and Subcontractors as described in the Invitation to Bid.
- B. Bidders of Record will be issued subsequent addenda.

1.02 EXAMINATION

- A. Bidders shall carefully examine site and documents to obtain first-hand knowledge of existing conditions and Work proposed.
- B. Contractor will not be given extra payment for conditions which can be determined by examining site and documents.

1.03 QUESTIONS

- A. Bidders shall submit questions about bidding documents to Designer in writing. Replies will be issued to Bidders of Record by addenda and will become part of Contract Documents. Designer and Owner will not make oral clarifications.
- B. Questions shall be received by Designer at least six calendar days before bid opening date.
- C. Normal practice is that no addenda affecting pricing will be issued less than three calendar days before bid opening date.

1.04 SUBSTITUTIONS

- A. Substitution requests before receipt of bids shall be prepared in accordance with 01 25 13 Product Substitution Procedures.
- B. Substitution requests before receipt of bids shall be received ten calendar days before date set to receive bids. However, regardless of the date received, consideration of substitution requests is not an obligation of the Designer or Owner and the Designer will determine if sufficient time is available for evaluation of the request.
- C. Acceptable substitutions will be identified in addenda.
- D. Bidders submitting bids in reliance upon a substitution when the substitution has not been approved prior to bidding do so at their own risk.

1.05 LICENSING AND QUALIFICATIONS

- A. Bidders shall be familiar with the Contractors Licensing Act of 1976, as currently amended (codified in Tennessee Code Annotated (TCA) § 62-6-101, et seq.). A contract will not be awarded to a bidder whose bid is in conflict with State licensing law.
- B. Bidders with five or more employees are required by TCA § 50-9-113 to submit a completed Section 00 45 21 Drug-Free Workplace Affidavit with their bid that attests they have a complying drug-free workplace program.
- C. In compliance with TCA § 50-9-114 bidders are advised that the Owner does not operate a certified drug-free workplace program that serves for compliance with TCA § 50-9-113.

00 21 13 – INSTRUCTIONS TO BIDDERS

- D. Bids submitted shall not include a contractor or subcontractor disqualified from participating in State Building Commission projects. The State Architect maintains a list of those that are disqualified.
- E. The bidder and its subcontractors shall not knowingly utilize the services of an illegal immigrant in the performance of the Work, and shall not knowingly utilize the services of any subcontractor, sub-subcontractor, or consultant who utilizes the services of an illegal immigrant in the performance of the Work.
- F. In compliance with the Iran Divestment Act bids submitted shall not include a contractor or subcontractor on the list created pursuant to TCA § 12-12-106.

1.06 BID FORM

- A. Make bids on an unaltered Bid Form. Submit one Bid Form. Failure to completely fill out Bid Form may cause bid to be rejected.
- B. To indicate availability of an Add Alternate at no additional charge, write "No Charge" in the space. Additional stipulations or qualifications on Bid Form may cause bid to be rejected.
- C. Bid Form shall be signed by person or persons legally authorized to bind Bidder to contract.

1.07 BID SECURITY

- A. Bid Security is required in the amount of five percent (5%) of total amount of bid, including alternates, in the form of a Bid Bond or check (certified or cashier's) made payable to State of Tennessee.
- B. Bid Bonds shall be issued by Surety company licensed to do business in Tennessee by Tennessee Department of Commerce and Insurance, and shall have certified and current Power-of-Attorney for Attorney-in-Fact attached.
- C. Owner may retain Bid Security of bidders to whom award is being considered until either (a) Contract has been executed, or (b) specified time has elapsed so that bid is not binding, or (c) bid has been rejected. If Bidder refuses to enter into Contract or fails to furnish all required attachments properly executed, the amount of Bid Security shall be forfeited to Owner as liquidated damages, not as penalty.

1.08 BID SUBMITTAL

- A. Submit Bid Form, with required attachments, enclosed and sealed in a 9 inch by 12 inch Bid Envelope with Bid Envelope cover information as provided in Section 00 47 13 attached to the Bid Envelope. Bidder shall fill in blank spaces on face of Envelope except the blank space provided for Designer's approval.
- B. If any work, regardless of dollar value, is required for any or of the subcontract trades listed on the Bid Envelope form, list subcontractor(s) that will perform that work. If Bidder will perform that work with Bidder's own forces, fill in Bidder's name as subcontractor. If no work is required in a category, write "None Required" in space provided for subcontractor(s). If acceptance of Alternate or combination of Alternates changes subcontractor, indicate change on Bid Envelope.
- C. Provide State contractor license number, expiration date, and applicable classifications for Bidder and listed subcontractors, as applicable by State licensing law.

00 21 13 – INSTRUCTIONS TO BIDDERS

- D. Bidders are solely responsible for ensuring that bids are received by the time and at the place identified for receipt of bids. The bid opening time shall be established by the timepiece of the Owner's representative. Bids received late will be returned unopened.
- E. A bid sent by mail or courier shall be enclosed in an envelope clearly marked "Bid Envelope Enclosed".

1.09 MODIFICATION AND WITHDRAWAL PRIOR TO CLOSE OF BIDDING

- A. Modification: Bids, once submitted, may be modified before the scheduled opening time only upon receipt of a written modification signed by a person legally authorized to bind Bidder to contract. Modification to a bid may be made as an "Add" or "Deduct" only. Modification to bid may be written on the Bid Envelope with the signature of an authorized representative of the Bidder also written on the Bid Envelope. Modification shall indicate only the amount of change, clearly identified as an "Add" or "Deduct", and not indicate either the prior or resulting bid amount.
- B. Withdrawal: Bids, once submitted, may be withdrawn before the scheduled opening time only upon receipt of a written withdrawal request signed by a person legally authorized to bind Bidder to contract.

1.10 POST-BID WITHDRAWAL OF BID FROM CONSIDERATION DUE TO MISTAKE

A request to withdraw a bid due to a mistake shall follow the Policy and Procedure of the State Building Commission. In addition to the requirements therein, such requests shall be delivered in writing to the Owner not later than twenty-four hours after the time fixed for receipt and opening of bids.

1.11 CONSIDERATION OF BIDS

- A. To be considered, bids shall be made in accordance with these Instructions to Bidders. Failure to comply with these requirements may cause bid to be rejected.
- B. The Owner reserves right to: reject Unit Prices proposed in a bid without invalidating other portions of bid; reject a bid which does not provide all required Unit Prices; waive informalities; and, reject any or all bids.
- C. It is Owner's intent to award contract based upon lowest evaluated responsive bid submitted by responsible Bidder for Base Bid plus Alternates (if any) taken in order up to, but not to exceed the Bid Target. If the Base Bid of all bidders exceeds the established Bid Target, the low Bidder is determined by the lowest Base Bid submitted by a responsible Bidder irrespective of any Alternates (if any) bid. When Alternates are included in bidding, Bid Target will be announced at bid opening prior to opening bids. Alternates may be accepted or rejected at Owner's discretion, provided that final combination of Base Bid and accepted Alternates does not change low Bidder as established by above method.
- D. In the event of tie bids, preference will be given to in-State bidder over out-of-State bidder; and, if a tie still exists, successful Bidder will be determined by chance, e.g. a coin toss.

1.12 POST-BID INFORMATION

Each Bidder shall be prepared, if requested by Owner or Designer, to present, within ten days of the request, evidence of experience, qualifications, and financial ability to carry out the terms of the contract.

00 21 13 – INSTRUCTIONS TO BIDDERS

1.13 BONDS

- A. If the initial Contract Sum as awarded exceeds \$100,000, the successful Bidder shall provide Contract Bond in an amount of 100 percent of Contract Sum and in accordance with the requirements and form exhibited as Section 00 61 13.
- B. The successful Bidder shall furnish, if applicable, a Three Year Roof Bond in an amount stipulated on the Bid Form and in accordance with the requirements and the form exhibited as Section 00 61 43.

1.14 EXECUTION OF THE CONTRACT

- A. If a Bidder is presented the written Agreement form for signing, then that Bidder shall deliver to the Owner, within ten calendar days after presentation, the required number of counterparts of the signed Agreement Form, Contract Bond, Roof Bond (if required), and certificates of insurance, ACH Credits Form, and W-9 federal tax form.
- B. Failure of the Bidder to return the Agreement as stipulated above shall entitle the Owner to require forfeiture of Bid Security and to proceed with award to the next lowest responsive Bidder.

1.15 AWARD OF THE CONTRACT

Presentation of Agreement form by Owner to Bidder for signature does not constitute award of Contract. Contract shall not be considered awarded until Bidder has received a fully executed Agreement.

1.16 DIVERSITY PARTICIPATION

- A. It is the express desire of the Owner and the State Building Commission to include an emphasis on diversity in its contractual relationships with contractors for the construction, demolition or renovation of State projects under jurisdiction of the Commission. The Commission acknowledges that firms who demonstrate and embrace diversity within their programs and policies are assisting the State in achieving its goals in building a more reflective marketplace of the community within this State.
- B. It is a requirement of all successful Bidders or proposers on projects under the jurisdiction of the State Building Commission that they report to the State the names and amounts of contracts entered into with diversity-owned businesses on their contract with the State in order for the State to collect data on such participation.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

SECTION 002513 – PRE-BID MEETING

PART 1 - GENERAL

1.1 PRE-BID MEETING

- A. Pre-bid meeting attendance is not mandatory.

1.2 MEETING AGENDA

1. Project name and location and review meeting purpose
2. Introduction of attendees as appropriate
3. Bid opening time and place
4. Availability of Electronic Documents and Addenda to-date including Instructions to Bidders, Bid Form, Construction Bid Envelope, and Drug-Free Workplace Affidavit.
5. Applicability of all documents in bid preparation. Bidders are solely responsible for misinterpretations resulting from using an incomplete set of the documents.
6. Owner's prohibition of the use of services of an illegal immigrant and the related attestation on the Bid Form.
7. Unless confirmed in writing by Addendum no changes are binding, and no interpretations or clarifications are reliable.
8. Sequence and timetable for questions of interpretation or clarification and issuance of Addenda.
9. Requests for interpretation or clarification must be (1) in writing, (2) to a designated email address, and (3) prior to a set deadline.
10. Proper bid submittal requirements including the following:
 - a. Bid Form
 - b. Construction Bid Envelope including identification of Subcontractors and filling in the Subcontractor name or Bidder name if any work is required for a category.
 - c. Bid Security
 - d. Drug-Free Workplace Affidavit
11. Alternates and Unit Prices if applicable in this bid
12. Special administration, if applicable, such as Commissioning and Scheduling
13. Scope of Work and Contract Time review.
14. Structured phases and related scopes and schedule milestones, if applicable.
15. General Conditions Article 11 insurance requirements.
16. Builders' Risk insurance required by General Conditions Article 11.
17. Major demolition projects insurance required by Supplementary Conditions.
18. General Conditions Article 7 requirements regarding changes in the Work including limits on costs for Direct Payroll Expense, overhead, and profit.
19. Diversity Business Liaison Presentation
20. Site access, construction staging areas, construction work force parking arrangements, on-going user operations, car/bus/delivery traffic that must be accommodated, and expectations for construction personnel courtesy and decorum toward site occupants and the public
21. Conditional or qualified bids are unacceptable.

22. Requirement to visit the site and become familiar with the local conditions under which the work is to be performed and to correlate all observations with the requirements of the Bidding Document.
23. Opportunities to tour the site
24. Substitution request procedures in the Instructions to Bidders
25. Reading of previously received questions and responses as appropriate
26. Questions, requiring name and affiliation to be given with the question

END OF SECTION 002513

BID FORMS

The bid forms are not available online.

Potential Bidders may obtain Bid Forms in PDF format at not cost from the following source:

CT Consultants, Inc.: Contact planroom@ctconsultants.com or call 440-530-2351

Agreement

Between Owner and Contractor

Where the Basis of Payment is a
Stipulated Sum.

AGREEMENT

made as of the <<Number, e.g. "2nd">> day of <<Month>>
in the year of <<Year number in words>>.

BETWEEN THE OWNER:

State of Tennessee, via the Contracting Agency:
<<State Procurement Agency>>
<<Street or P.O. Box>>
<<City, State, Zip Code>>

AND THE CONTRACTOR:

<<Contractor Name>>
<<Street or P.O. Box>>
<<City, State, Zip Code>>

ACH Address: <<Street or P.O. Box>>
<<City, State, Zip Code>>

THE PROJECT:

<<SBC Number>>
<<Campus or Institution Name>>
<<Project Title Designated by Owner>>

THE DESIGNER:

<<Designer Name>>
<<Street or P.O. Box>>
<<City, State, Zip Code>>

THE OWNER AND THE CONTRACTOR AGREE AS SET FORTH BELOW.

00 52 13 – AGREEMENT

ARTICLE 1 – THE WORK AND THE CONTRACT DOCUMENTS

- 1.1 The Contractor shall perform all the Work required by the Contract Documents for the Project identified on page one.
- 1.2 The Contract Documents are identified in the Conditions of the Contract (General, Supplementary, and other Conditions). These form the Contract and constitute the entire agreement between the Owner and the Contractor, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. An enumeration of the Contract Documents appears in paragraph 1.4.
- 1.3 Terms used in this Agreement which are defined in the Conditions of the Contract shall have the meanings designated in those Conditions.
- 1.4 The Contract Documents, except for Modifications issued after execution of this Agreement, are enumerated as follows:
 1. This Agreement.<<Continued list of Contract Documents including applicable drawings, project manual, and addenda>>

00 52 13 – AGREEMENT

ARTICLE 2 – TIME OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

- 2.1 The Work to be performed under this Contract shall be commenced on the date stipulated in the Notice to Proceed; and, subject to authorized adjustments, Substantial Completion shall be achieved in
 <<Number of calendar days from and including the date stipulated in the Notice to Proceed>>
- 2.2 Liquidated Damages, as set forth in the Conditions of the Contract, are
 <<Dollar amount per calendar day>>

ARTICLE 3 – CONTRACT SUM

- 3.1 The Owner shall pay the Contractor in current funds for the performance of the Work, subject to Modifications as provided in the Contract Documents, the Contract Sum of
 <<Contract Sum in words>>
 (\$<<Contract Sum in numbers>>)
- 3.2 The Contract Sum is determined as follows:
 <<Listing of base bid and any alternates and total>>
- 3.3 The following Unit Prices will be used as specified:
 <<Listing or statement of none established at initial award>>

00 52 13 – AGREEMENT

This instrument may be executed in one or more counterparts. It shall be fully executed when each party whose signature is required has signed at least one counterpart, even though no one counterpart contains the signatures of all the parties to this instrument. Electronic, scanned or facsimile signatures shall have the same force and effect as original signatures.

This Agreement entered into as of the day and year first written above as witnessed:

BY CONTRACTOR: <<Contractor Name>>

Signature: _____
Name: _____
Title: _____

AND BY OWNER: State of Tennessee,
<<State Procurement Agency>>

By: _____
Head of Higher Education Institution
<<Name>>
<<Title>>

Approved: _____
Head of Financial Office
<<Name>>
<<Title>>

Approved: _____
Head of Legal Office
<<Name>>
<<Title>>

Approved: _____
Head of State Procurement Agency
<<Name>>
<<Title>>

Approved: _____
State Architect

END OF AGREEMENT FORM for the Project titled:

<<SBC Number>>
<<Campus or Institution Name>>
<<Project Title Designated by Owner>>

00 61 13 – CONTRACT BOND

Bond No. <<Number>>

TENNESSEE STATE BUILDING COMMISSION STANDARD FORM

Know all men by these presents: that we

<<Name>>

(hereinafter called the "Principal") and

<<Name>>

(hereinafter called the "Surety") do hereby acknowledge ourselves indebted and securely bound and held unto

State of Tennessee

<<State Procurement Agency>>

<<Address Line 1>>

<<Address Line 2>>

(hereinafter called the "Owner"), and in the penal sum of

<<Amount>>

good and lawful money of the United States of America, for the use and benefit of those entitled thereto, for the payment of which, well and truly to be made, we bind ourselves, our heirs, our administrators, executors, successors, and assigns, jointly and severally, firmly by these presents.

But the condition of the foregoing obligation or bond is this:

Whereas, the Owner has engaged the principal for the sum of

<<Amount>>

to complete the Work of the project titled: <<Title>>

SBC No. <<Number>>

as more fully appears in a written agreement or contract bearing the date of <<Date>>

a copy of which said agreement or contract is by reference hereby made a part thereof, as fully and to the same extent as if copied in length herein, and it is the desire of the Owner that the Principal shall assure all undertakings under said agreement or contract and shall assure and protect all laborers and furnishers of material on said Work both as provided by Tennessee Code Annotated Sections 4-15-102 (f)(2) and 12-4-201 through 12-4-206, and any and all amendments thereto, and shall assure the prompt payment of claims as provided by Tennessee Code Annotated Sections 12-4-207 through 12-4-208, and any and all amendments thereto. The Principal shall also comply with provisions of Tennessee Code Annotated Sections 12-4-401 through 12-4-415, and any and all amendments thereto, pertaining to the payment of the prevailing wage rate.

00 61 13 – CONTRACT BOND

Now, therefore, if the Principal shall fully and faithfully perform all undertakings and obligations under the contract hereinbefore referred to and shall fully indemnify and hold harmless the Owner from all costs and damage whatsoever which it may suffer by reason of any failure on the part of the Principal to do so, and shall fully reimburse and repay the Owner any and all outlay and expense which it may incur in making good any such default, and shall fully pay for all of the labor, material and work used by the Principal and any immediate or remote sub-contractor or furnisher of material under him in the performance of said contract, in lawful money of the United States, as the same shall become due, then this obligation or bond shall be null and void, otherwise to remain in full force and effect.

And for value received, it is therefore stipulated and agreed that no change, extension of time, alteration or addition to the terms of the contract or to the Work to be performed thereunder or to the specifications accompanying the same shall in any wise affect the obligation under this bond, and notice is hereby waived of any such change, extension of time, alteration or addition to the terms of the contract or to the Work or to the specifications.

In witness whereof the Principal has hereunto affixed its signature and Surety has hereunto caused to be affixed its corporate signature and seal, by its duly authorized officers, on this <<Day number>> day of <<Month>>, 20<<Year number>>.

Executed in <<Number>> counterparts.

Witness:

<<Name of Principal>>
(Name of Principal)

<<Name of Surety>>
(Name of Surety)

(Authorized Signature)

(Signature of Attorney-in-fact)

<<Name of Signatory>>
(Name of Signatory)

<<Name of Attorney-in-fact>>
(Name of Attorney-in fact)

<<Title of Signatory>>
(Title of signatory)

<<License Number>>
(Tennessee license number of Agent
or Attorney-in-fact)

(Countersignature of Agent
if not same as Attorney-in-fact)

Surety Company issuing bond shall be licensed to transact business in State of Tennessee by Tennessee Department of Commerce and Insurance. Bonds shall have certified and current Power-of-Attorney for the Surety's Attorney-in-Fact attached. Attorney-in-Fact who executes bond on behalf of Surety shall be licensed by the State of Tennessee, and shall affix license number to bond; or, countersignature by a licensed agent of the State of Tennessee, and the agent's license number, shall be affixed to the bond in addition to the signature of the Attorney-in-Fact.

END OF SECTION



AIA® Document A201® – 2017

General Conditions of the Contract for Construction

for the following PROJECT:
(Name and location or address)

Section 00 72 13 of all General Work of the Owner as of April 2023

THE OWNER:
(Name, legal status and address)

Tennessee Board of Regents

THE ARCHITECT/DESIGNER:
(Name, legal status and address)

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

For guidance in modifying this document to include supplementary conditions, see AIA Document A503™, Guide for Supplementary Conditions.

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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 Basic Definitions

§ 1.1.1 The Contract Documents

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the ~~Architect-Designer~~. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding or proposal requirements.

§ 1.1.2 The Contract

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the ~~Architect-Designer~~ or the ~~Architect's-Designer's~~ consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the ~~Architect-Designer~~ or the ~~Architect's-Designer's~~ consultants, or (4) between any persons or entities other than the Owner and the Contractor. The ~~Architect-Designer~~ shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the ~~Architect's duties-Designer's duties~~.

§ 1.1.2.1 Presentation by Owner of an unexecuted Agreement or Modification does not constitute a commitment by Owner to execute the subject document and does not provide Owner authorization to any person or entity to proceed as if document will be executed.

§ 1.1.3 The Work

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

§ 1.1.4 The Project

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by Separate Contractors. The Project is identified in the first page of the Agreement with an Owner's project number in the format of 999/999-99-9999. This project number may differ from the number as used on other Contract Documents. This Owner's project number is to be shown in all correspondence related to the Project.

§ 1.1.5 The Drawings

The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams.

§ 1.1.6 The Specifications

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

§ 1.1.7 Instruments of Service

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the ~~Architect-Designer~~ and the ~~Architect's-Designer's~~ consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 1.1.8 Initial Decision Maker

~~The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2. The Initial Decision Maker shall not show partiality to the Owner or Contractor and shall not be liable for results of interpretations or decisions rendered in good faith-Designer.~~

§ 1.1.9 Project Manual

The Project Manual is a volume or set that may include portions of the Contract Documents and other documents.

§ 1.1.10 Provide or Provided

"Provide" or "Provided" as used in Contract Documents includes furnishing and installing a thing, product, system or the like.

§ 1.2 Correlation and Intent of the Contract Documents

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 1.2.1.1 The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§ 1.2.4 Within the Specifications, the sections of Division One (01) are General Requirements, and apply to all sections of the Specifications.

§ 1.3 Capitalization

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles, or (3) the titles of other documents published by the American Institute of Architects.

§ 1.4 Interpretation

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

§ 1.5 Ownership and Use of Drawings, Specifications, and Other Instruments of Service

§ 1.5.1 ~~The Architect-Designer and the Architect's-Designer's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, except the design and the Contract Documents, and retain all common law, statutory, and other reserved rights in their Instruments of Service, including copyrights. The design and the Contract Documents are property of the State of Tennessee, and may be used again only for the benefit of the State and on authority of the State Building Commission (SBC). The Contractor, Subcontractors, Sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Service, the design, or the Contract Documents. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Architect's or Architect's-consultants'-reserved rights.~~

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors, and suppliers are authorized to use and reproduce the Instruments of ~~Service-Service, the design, or the Contract Documents~~ provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, solely and exclusively for execution of the Work. ~~All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service.~~ The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of ~~Service-Service, the design, or the Contract Documents~~ on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the ~~Owner, Architect, and the Architect's-consultants-Owner with respect to the design and the~~

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Contract Documents, and the Designer and the Designer's consultants with respect to the Instruments of Service other than the design and the Contract Documents.

§ 1.6 Notice

§ 1.6.1 Except as otherwise provided in Section 1.6.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic transmission is set forth in the Agreement.transmission.

§ 1.6.2 Notice of Claims as provided in Section 15.1.3 shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

§ 1.7 Digital Data Use and Transmission

The parties shall agree upon protocols governing the transmission and use development, use, transmission, and exchange of Instruments of Service or any other information or documentation in digital form. ~~The parties will use AIA Document E203™ 2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data form~~

§ 1.8 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203™ 2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document G202™ 2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

ARTICLE 2 OWNER

§ 2.1 General

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect Designer does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

~~§ 2.1.2 The Owner shall furnish to the Contractor, within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of, or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein. Public construction projects are not subject to mechanic's liens in Tennessee. The remedy afforded to laborers and furnishers of material on State projects is referenced in Section 15.2.8.~~

§ 2.2 Evidence of the Owner's Financial Arrangements

~~§ 2.2.1 Prior to commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence. If commencement of the Work is delayed under this Section 2.2.1, the Contract Time shall be extended appropriately. The SBC project number constitutes verification that funding has been established as a matter of public record.~~

~~§ 2.2.2 Following commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract only if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due;~~

or (3) a change in the Work materially changes the Contract Sum. If the Owner fails to provide such evidence, as required, within fourteen days of the Contractor's request, the Contractor may immediately stop the Work and, in that event, shall notify the Owner that the Work has stopped. However, if the request is made because a change in the Work materially changes the Contract Sum under (3) above, the Contractor may immediately stop only that portion of the Work affected by the change until reasonable evidence is provided. If the Work is stopped under this Section 2.2.2, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided in the Contract Documents.

~~§ 2.2.3 After the Owner furnishes evidence of financial arrangements under this Section 2.2, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.~~

~~§ 2.2.4 Where the Owner has designated information furnished under this Section 2.2 as "confidential," the Contractor shall keep the information confidential and shall not disclose it to any other person. However, the Contractor may disclose "confidential" information, after seven (7) days' notice to the Owner, where disclosure is required by law, including a subpoena or other form of compulsory legal process issued by a court or governmental entity, or by court or arbitrator(s) order. The Contractor may also disclose "confidential" information to its employees, consultants, sureties, Subcontractors and their employees, Sub-subcontractors, and others who need to know the content of such information solely and exclusively for the Project and who agree to maintain the confidentiality of such information.~~

§ 2.3 Information and Services Required of the Owner

§ 2.3.1 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

~~§ 2.3.2 The Owner shall retain an architect lawfully licensed to practice architecture, or an entity lawfully practicing architecture, in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number. "Designer" is the licensed prime design professional or firm lawfully practicing architecture, landscape architecture, or engineering, identified in Bidding Documents and Agreement form for project, or the authorized representative thereof.~~

~~§ 2.3.3 If the employment of the Architect terminates, Designer is terminated, the Owner shall employ a successor to whom the Contractor has no reasonable objection and Designer whose status under the Contract Documents shall be that of the Architect, Designer.~~

§ 2.3.4 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 2.3.5 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

~~§ 2.3.6 Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2. The Contractor will be furnished, free of charge, such copies of Contract Documents as are reasonably necessary for execution of the Work.~~

§ 2.4 Owner's Right to Stop the Work

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

§ 2.5 Owner's Right to Carry Out the Work

~~If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect and the Architect may, pursuant to Section 9.5.1, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect, or failure. If current and future payments are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 15.~~ § 2.5.1 If Contractor defaults or neglects to carry out the Work in accordance with Contract Documents and fails within a ten-day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies.

§ 2.5.2 If the Contractor fails to complete the Work in accordance with the time limit stipulated in the Certificate of Substantial Completion, then Owner may take over the completion of Work without advance notice to Contractor and without prejudice to any other remedy that Owner may have.

§ 2.5.3 In such cases as described in Sections 2.5.1 and 2.5.2, an appropriate modification will be issued deducting from the Contract Sum the reasonable cost of correcting such deficiencies or completing such Work, regardless of whether Owner actually undertakes completing such Work, in which case the deduction shall be based on the Designer's estimate in accordance with Section 7.3.7, including Owner's expenses and compensation for the Designer's additional services made necessary by such default, neglect, or failure. Such action by the Owner and amounts charged to Contractor are both subject to prior approval of the Designer. If the unpaid balance of the Contract Sum is not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

§ 2.5.4 In the case of a Contract Sum based upon a Guaranteed Maximum Price that includes a GMP Contingency, the unused GMP Contingency shall not be included in the calculation required by Section 2.5.3 of unpaid balance of the Contract Sum, and the reduction in the Contract Sum shall not be applied to the GMP Contingency.

ARTICLE 3 CONTRACTOR

§ 3.1 General

§ 3.1.1 ~~The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's term "Contractor" means the Contractor or the Contractor's authorized representative. When the Agreement is a Construction Services Agreement between the Owner and a Construction Manager / General Contractor, the term "Contractor" means Construction Manager / General Contractor or its authorized representative.~~

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.3 The Contractor shall not be relieved of its obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect-Designer in the Architect's-Designer's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

§ 3.1.4 At the time of bid and award, Contractor shall not be currently disqualified from participating in State construction projects under the supervision of the SBC. Such disqualification extends to succeeding or related corporations, partnerships, joint ventures, and other business organizations having substantial factual or legal connections, continuity, or identity with those that have been disqualified.

§ 3.1.5 Boycott of Israel

Pursuant to Tenn. Code Ann. § 12-4-119, Contractor certifies that it is not currently engaged in, and will not for the duration of the Contract, engage in a boycott of Israel, as defined by Tenn. Code Ann. § 12-4-119(a)(1).

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§ 3.2 Review of Contract Documents and Field Conditions by Contractor

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.3.4, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the ~~Architect may require.~~ Designer may require prior to proceeding with the work. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents. Contractor shall not perform construction activity when Contractor knows, in exercise of reasonable diligence, that the activity involves error, inconsistency, or omission in Contract Documents.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the ~~Architect-Designer~~ may require.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the ~~Architect-Designer~~ issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall submit Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or ~~3.2.3, 3.2.3~~ with reasonable diligence, the Contractor shall pay such costs and damages to the Owner, subject to Section 15.1.7, as would have been avoided if the Contractor had performed such ~~obligations.~~ obligations with reasonable diligence. If the Contractor performs those ~~obligations,~~ obligations with reasonable diligence, the Contractor shall not be liable to the Owner or ~~Architect-Designer~~ for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

§ 3.3 Supervision and Construction Procedures

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences, or procedures, the Contractor shall evaluate the jobsite safety thereof and shall be solely responsible for the jobsite safety of such means, methods, techniques, sequences, or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely notice to the Owner and ~~Architect-Designer,~~ and shall propose alternative means, methods, techniques, sequences, or procedures. The ~~Architect-Designer~~ shall evaluate the proposed alternative solely for conformance with the design intent for the completed construction. Unless the ~~Architect-Designer~~ objects to the Contractor's proposed alternative, the Contractor shall perform the Work that the Designer accepted and the Contractor approved using its alternative means, methods, techniques, sequences, or procedures.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

§ 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

§ 3.4 Labor and Materials

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work. Contractor shall receive neither material, equipment, labor, nor services from one who submitted a competing general bid for the same contract and subsequently withdrew, reneged, or otherwise failed to enter into the contract.

§ 3.4.2 Except in the case of minor changes in the Work approved by the ~~Architect-Designer~~ in accordance with Section 3.12.8 or ordered by the ~~Architect-Designer~~ in accordance with Section 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the ~~Architect-Designer~~ and in accordance with a Change Order or Construction Change Directive. Specified materials, equipment, and systems are essential elements of the Contract. If Contractor desires to use another material, equipment, or system in lieu thereof, Contractor shall request approval in writing and shall submit samples and data, including an estimate of difference in cost, as required for Designer's consideration. No substitution shall be made without approval in writing from Designer. Owner will be final judge of acceptability of substitution.

§ 3.4.2.1 Not later than 21 days after award of contract, Contractor shall provide a list showing names of manufacturers proposed for each specified project, and applicable name of installer, whether Contractor or subcontractor. Designer will within 14 days reply in writing to Contractor stating whether Owner or Designer, after due investigation, has reasonable objection to any such manufacturer or installer. If adequate data on proposed manufacturer or installer is not available, designer may state that action will be deferred until Contractor provides further data. Contractor shall not make use of a manufacturer, or installer to which Owner or Designer has reasonably objected. Contractor shall receive appropriate adjustment in Contract Sum, Contract Time, or both for making such change unless objection was based on failure of manufacturer or installer to meet requirements of Contract Documents, in which case neither Contract Sum nor Contract Time shall be adjusted. Failure to object to a manufacturer shall not constitute waiver of requirements of Contract Documents. Projects furnished by listed Contractor's manufacturers must conform to requirements of Contract Documents.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

§ 3.4.4 Contractor shall disclose existence and extent of financial interests, whether direct or indirect, which Contractor has in proposed subcontractors and material suppliers.

§ 3.4.5 Prohibition of Illegal Immigrants

§ 3.4.5.1 The requirements of Public Acts of 2006, Chapter Number 878, of the State of Tennessee, addressing the use of illegal immigrants in the performance of any contract to supply goods or services to the State of Tennessee, shall be material provision of this Contract, a breach of which shall be grounds for monetary and other penalties, including termination of this Contract.

§ 3.4.5.2 The Contractor by entering into this contract attests, certifies, warrants, and assures that the Contractor shall not knowingly utilize the services of an illegal immigrant in the performance of this Contract and shall not knowingly utilize the services of any subcontractor or consultant who will utilize the services of any illegal immigrant in the performance of this Contract.

§ 3.4.5.3 The Contractor understands and agrees that failure to comply with this section will be subject to the sanctions of Public Chapter 878 of 2006 for acts or omissions occurring after its effective date. This law provides for the prohibition of a Contractor from contracting with, or submitting an offer, proposal, or bid to contract with the State of Tennessee to supply goods or services for a period of one year after a Contractor is discovered to have knowingly used the services of illegal immigrants during the performance of this Contract.

§ 3.4.5.4 For purposes of this Contract, "illegal immigrant" shall be defined as any person who is not either a United States citizen, a lawful permanent resident, or a person whose physical presence in the United States is authorized or allowed by the Department of Homeland Security and who, under Federal immigration laws and/or regulations, is authorized to be employed in the U.S. or is otherwise authorized to provide services under the Contract.

§ 3.4.6 Non-Discrimination in Employment

§ 3.4.6.1 Contractor shall not discriminate against any employee nor applicant for employment because of race, creed, color, religion, sex, age, or national origin as defined in Tennessee Code Annotated (TCA) § 4-21-401, et seq, nor because of handicap, in accordance with TCA § 8-50-103.

§ 3.4.6.2 Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to handicap, race, creed, color, religion, sex, age, or national origin, including but not limited to practices in recruitment, recruitment advertising, employment, selection for training or apprenticeship, rates of pay or other forms of compensation, upgrading, demotion, transfer, layoff, or termination.

§ 3.4.6.3 Contractor shall post in conspicuous places, available to employees and applicants for employment, notices setting forth these policies of non-discrimination.

§ 3.4.6.4 Solicitations or advertisements for employees placed by or in behalf of Contractor shall state that qualified applicants shall receive consideration for employment without regard to handicap, race, creed, color, religion, sex, age, or national origin.

§ 3.4.7 State Prevailing Wage

§ 3.4.7.1 On contracts determined by the Department of Labor and Workforce Development to be "Highway Construction", Contractor is required to comply with policies, conditions and rules of the Tennessee Department of Labor pursuant to TCA §12-4-401, et. seq., and pay prevailing highway wage scale to laborers and mechanics employed on the Work or designated portion thereof, as set forth in said rules, policies, and statute, and to furnish weekly payrolls with the decision number noted on each to the Tennessee Department of Labor and Workforce Development.

§ 3.4.7.2 Owner and Designer shall have endeavored to provide current state highway prevailing wage decision and rate scale as an attachment to this section; however, their failure to do so shall not relieve Contractor of responsibility to comply with the requirement. If state highway prevailing wage decision and rate scale applicable to Project changes during the course of Project, or differs from rate scale provided in Contract Documents, there shall be an equitable adjustment of Contract Sum.

§ 3.4.7.3 When a federal wage scale applies to the Project, it will also be included in the Contract Documents, and the Contractor shall pay not less than the rates set forth therein; and so, shall pay the higher of the state rate and the federal rate if a labor classification exists in both wage scales applicable to the same worker.

§ 3.4.8 Payrolls and Basic Records

§ 3.4.8.1 Contractor and its subcontractors shall maintain payrolls and basic payroll records for all laborers and mechanics working on the contract during the contract and shall make them available to the government until 3 years after contract completion. Records shall contain the name and address of each employee, social security number, labor classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. If federal wage rates and record-keeping apply, the records need not duplicate those required for federal compliance.

§ 3.4.8.2 Contractor and its subcontractors shall allow authorized representatives of the government to inspect, copy, or transcribe records maintained these requirements, and shall allow authorized representatives of the government to interview employees in the workplace during working hours.

§ 3.4.9 Subcontracts

Contractor shall insert these provisions in subcontracts and require subcontractors to include these provisions in any lower tier subcontracts. Contractor shall be responsible for compliance with the provisions set forth herein by direct subcontractors and lower tier subcontractors.

§ 3.5 Warranty

§ 3.5.1 The Contractor warrants to the Owner and Architect-Designer that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free

from defects, ~~except for those inherent in the quality of the Work the Contract Documents require or permit, defects~~. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the ~~Architect, Designer~~, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 3.5.2 All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.4.

~~§ 3.6 Taxes~~

~~The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.~~

§ 3.6 Taxes § 3.6.1 The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

§ 3.6.2 If the State of Tennessee enacts, after bids are received or negotiations concluded, a change in sales, consumer, use, or similar state tax for the Work or a portion thereof provided by the Contractor, the Contract Sum shall be accordingly adjusted by appropriate modification or the Owner may make other lawful provision to mitigate the change.

§ 3.6.3 Neither Contract Sum nor Contract Time shall be adjusted for impacts resulting from a change in a tax by a governmental body other than the State of Tennessee, regardless of when the tax is enacted or goes into effect.

§ 3.7 Permits, Fees, Notices and Compliance with Laws

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

§ 3.7.2 ~~The Contractor~~ Contractor, ~~except as provided in Section 3.7.3~~, shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

§ 3.7.3 If the Contractor Contractor, except as provided in this section, performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction. The Owner is an agency of state government, and as such has sovereign immunity from the laws, ordinances, rules, regulations, and lawful orders of local governments within the state; however, the Contractor shall obtain all normal permits whenever possible as if the Owner had no such immunity. If a delay or denial in securing a local permit occurs, the Contractor shall continue the Work, inform the Designer and the Owner of the situation, propose corrective measures, and continue to pursue the customary permits.

§ 3.7.4 Concealed or Unknown Conditions

If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents taking into account that unless otherwise stipulated in Contract Documents, excavations and other subsurface construction activity shall be considered unclassified down to design depth, regardless of substrate and abandoned or inactive infrastructure, or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the ~~Architect before conditions are disturbed~~ Designer in accordance with Section 15.1.4 before continuing activities that could lead to a claim for additional cost and in no event later than 14 days after first observance of the conditions. The ~~Architect~~ Designer will promptly investigate such conditions and, if the ~~Architect~~ Designer determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend ~~that an equitable~~

~~adjustment be made in the Contract Sum or Contract Time, or both. If the Architect an adjustment in the Work, Contract Sum and/or Contract Time. If the Designer determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect-Designer shall promptly notify the Owner and Contractor, stating the reasons. If either party disputes the Architect's-Designer's determination or recommendation, that party may submit a Claim as provided in Article 15.~~

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect-Designer. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

§ 3.8 Allowances

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents,

- .1 allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- .3 whenever costs are ~~more than or less than~~ allowances, the Contract Sum shall be adjusted accordingly ~~by Change Order. by Modification.~~ The amount of the ~~Change Order-Modification~~ shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under ~~Section 3.8.2.2.~~ Section 3.8.2.2; and
- .4 Contractor shall monitor the costs included in allowances, and shall not incur excess costs without first obtaining a Modification adjusting the allowance sufficient for the excess.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.9 Superintendent

§ 3.9.1 The Contractor shall employ and designate a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the ~~Work.~~ Work through final inspection. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

~~§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the name and qualifications of a proposed superintendent. Within 14 days of receipt of the information, the Architect may notify the Contractor, stating whether the Owner or the Architect (1) has reasonable objection to the proposed superintendent or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.~~

§ 3.9.3 The Contractor shall not employ a ~~proposed~~ superintendent to whom the Owner or Architect-Designer has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

§ 3.10 Contractor's Construction and Submittal Schedules

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's Designer's information a Contractor's construction schedule for the Work. The schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time

required for completion of each portion of the Work. The schedule shall provide for the orderly progression of the Work to completion and shall not exceed time limits current under the Contract Documents. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project.

§ 3.10.2 The Contractor, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, shall submit a submittal schedule for the ~~Architect's~~ Designer's approval. The ~~Architect's~~ Designer's approval shall not be unreasonably delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the ~~Architect-Designer~~ reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, or fails to provide submittals in accordance with the approved submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and ~~Architect-Designer~~.

3.10.4 Scheduling Assistance

Owner may provide the Scheduling Assistance. If provided, such services will be set forth in the specifications of Progress Schedules.

§ 3.10.5 Commissioning Consultant

Owner may provide the services of a Commissioning Consultant, either as a consultant engaged by the Owner, or as Subcontractor under a specified allowance and selected by the Owner. If provided, such services will be set forth in the Specifications. The Contractor retains full responsibility for compliance with the Contract Documents. Contractor shall fully cooperate in commissioning, and shall require the necessary forces assisting the Contractor to likewise cooperate fully. If commissioning activities are included in the Work they shall not be a cause for delay or cost claims.

§ 3.11 Documents and Samples at the Site

The Contractor shall make available, at the Project site, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. These shall be in electronic form or paper copy, available to the ~~Architect-Designer~~ and Owner, and delivered to the ~~Architect-Designer~~ for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.12 Shop Drawings, Product Data and Samples

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules, and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier, or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples that illustrate materials, equipment, or workmanship, and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the ~~Architect-Designer~~ is subject to the limitations of Section 4.2.7. Informational submittals upon which the ~~Architect-Designer~~ is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the ~~Architect-Designer~~ without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve, and submit to the ~~Architect-Designer~~, Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents, in accordance with the submittal schedule approved by the ~~Architect-Designer~~ or, in the absence of an

approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of Separate Contractors.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner and ~~Architect-Designer~~ that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do ~~so~~, so prior to providing that which is the subject of the submittal, and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents. If a portion of Work demonstrated by a submittal deviates from the requirements of the contract Documents, the Contractor shall specifically identify the deviation and its difference in cost as part of the submittal.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples, or similar submittals, until the respective submittal has been approved by the ~~Architect-Designer~~.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from the requirements of the Contract Documents by the ~~Architect's-Designer's~~ approval of Shop Drawings, Product Data, Samples, or similar submittals, unless the Contractor has specifically notified the ~~Architect-Designer~~ of such deviation and its difference in cost at the time of submittal and (1) the ~~Architect-Designer~~ has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals, by the ~~Architect's-Designer's~~ approval thereof.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples, or similar submittals, to revisions other than those requested by the ~~Architect-Designer~~ on previous submittals. In the absence of such notice, the ~~Architect's-Designer's~~ approval of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures. The Contractor shall not be required to provide professional services in violation of applicable law.

§ 3.12.10.1 If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the ~~Architect-Designer~~ will specify all performance and design criteria that such services must satisfy. The Contractor shall be entitled to rely upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings, 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 the ~~Architect-Designer~~. The Owner and the ~~Architect-Designer~~ shall be entitled to rely upon the adequacy and accuracy of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and ~~Architect-Designer~~ have specified to the Contractor the performance and design criteria that such services must satisfy. ~~Pursuant to this Section 3.12.10, the Architect will review and approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.~~

§ 3.12.10.2 If the Contract Documents require the Contractor's design professional to certify that the Work has been performed in accordance with the design criteria, the Contractor shall furnish such certifications to the ~~Architect-Designer~~ at the time and in the form specified by the ~~Architect-Designer~~.

§ 3.13 Use of Site

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 3.14 Cutting and Patching

§ 3.14.1 The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting, or patching shall be restored to the condition existing prior to the cutting, fitting, or patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or Separate Contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter construction by the Owner or a Separate Contractor except with written consent of the Owner and of the Separate Contractor. Consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold, from the Owner or a Separate Contractor, its consent to cutting or otherwise altering the Work.

§ 3.15 Cleaning Up

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials and rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus materials from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the Owner shall be entitled to reimbursement from the Contractor.

§ 3.16 Access to Work

The Contractor shall provide the Owner and ~~Architect-Designer~~ with access to the Work in preparation and progress wherever located.

§ 3.17 Royalties, Patents and Copyrights

The Contractor shall pay all royalties and license fees. The Contractor shall ~~defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, indemnify and hold harmless the Owner, Designer, Designer's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorney's fees, arising out of or resulting from alleged infringement of copyrights and patent rights,~~ but shall not be responsible for defense or loss when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications, or other documents prepared by the Owner or ~~Architect-Designer~~. However, if an infringement of a copyright or patent is discovered by, or made known to, the Contractor, the Contractor shall be responsible for the loss unless the information is promptly furnished to the ~~Architect-Designer~~.

§ 3.18 Indemnification

§ 3.18.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, ~~Architect, Architect's consultants,~~ and agents and employees of ~~any of them~~ the Owner from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible ~~property~~ property, including loss of use resulting therefrom (other than the Work itself), but only to the extent caused by the willful or negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18. Contractor agrees to indemnify the Designer and Designer's consultants based on the willful or negligent acts or omissions of the Contractor, except that Contractor shall not indemnify the Designer and Designer's consultants based on design mistakes and errors or omissions.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

ARTICLE 4 — ARCHITECT

§ 3.19 Relations with Owner's Representatives

§ 3.19.1 Contractor, subcontractors, material suppliers, and sub-subcontractors shall neither offer nor give a product, service, payment, negotiable instrument, gift, gratuity, or other compensation in connection with this project to a representative or employee of the State of Tennessee, the Designer, or the Designer's consultants without Owner's consent. Evidence of a violation of this requirement may be cause for termination of this Contract.

§ 3.20 Participation of Diversity-Owned Businesses

§ 3.20.1 It is the express desire of the State Building Commission to include an emphasis on diversity in its contractual relationships with contractors for the construction, demolition or renovation of State projects under the jurisdiction of the Commission. Refer to Item 5 in the State Building Commission Policy.

§ 3.20.2 To the extent that the Contractor or a subcontractor is a Diversity-Owned Business, the Contractor shall report to the State its own status in this regard and the names and amounts of contracts entered into with Diversity-owned Businesses on the State projects in order for the State to collect data on such participation.

§ 3.21 Financial Records

§ 3.21.1 The Contractor shall maintain documentation for all charges under this Contract. The books, records, and documents of the Contractor, insofar as they relate to work performed or money received under this contract, shall be maintained for a period of five (5) full years from the date of the final payment and shall be subject to audit at any reasonable time and upon reasonable notice by the State, the Comptroller of the Treasury, or their duly appointed representatives. The financial statements shall be prepared in accordance with generally accepted accounting principles.

ARTICLE 4 DESIGNER

§ 4.1 General

§ 4.1.1 The ~~Architect-Designer~~ is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement.

§ 4.1.2 Duties, responsibilities, and limitations of authority of the ~~Architect-Designer~~ as set forth in the Contract Documents shall not be restricted, modified, or extended without written consent of the Owner, Contractor, and ~~Architect-Designer~~. Consent shall not be unreasonably withheld.

§ 4.2 Administration of the Contract

§ 4.2.1 The ~~Architect-Designer~~ will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for Payment. The Architect (1) during construction, (2) until final payment is due, and (3) at the Owner's request during the one-year period for correction of Work described in Section 12.2. The Designer will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 The ~~Architect-Designer~~ will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, (1) to become generally familiar with the progress and quality of the portion of the Work completed, (2) endeavor to guard the Owner against defects and deficiencies in the Work, and (3) to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the ~~Architect-Designer~~ will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The ~~Architect-Designer~~ will not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these which are solely the Contractor's rights and responsibilities under the Contract Documents.

§ 4.2.3 On the basis of the site visits, the ~~Architect-Designer~~ will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner (1) known deviations

from the Contract Documents, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) defects and deficiencies observed in the Work. The ~~Architect-Designer~~ will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The ~~Architect-Designer~~ will not have control over or charge of, and will not be responsible for acts or omissions of, the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 4.2.4 Communications

The Owner and Contractor shall include the ~~Architect-Designer~~ in all communications that relate to or affect the ~~Architect's-Designer's~~ services or professional responsibilities. The Owner shall promptly notify the ~~Architect-Designer~~ of the substance of any direct communications between the Owner and the Contractor otherwise relating to the Project. Communications by and with the ~~Architect's-Designer's~~ consultants shall be through the ~~Architect-Designer~~. Communications by and with Subcontractors and suppliers shall be through the Contractor. Communications by and with Separate Contractors shall be through the ~~Owner-Owner or the Designer~~. The Contract Documents may specify other communication protocols.

§ 4.2.5 Based on the ~~Architect's-Designer's~~ evaluations of the Contractor's Applications for Payment, the ~~Architect-Designer~~ will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 The ~~Architect-Designer~~ has authority to reject Work that does not conform to the Contract Documents. Whenever the ~~Architect-Designer~~ considers it necessary or advisable, the ~~Architect-Designer~~ will have authority to require inspection or testing of the Work in accordance with Sections 13.4.2 and 13.4.3, whether or not the Work is fabricated, installed or completed. However, neither this authority of the ~~Architect-Designer~~ nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the ~~Architect-Designer~~ to the Contractor, Subcontractors, suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The ~~Architect-Designer~~ will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, ~~but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's checking for compliance with the requirements and conformance with the intent of the Contract Documents.~~ The ~~Designer's~~ action will be taken in accordance with the submittal schedule approved by the ~~Architect-Designer~~ or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the ~~Architect's-Designer's~~ professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The ~~Architect's-Designer's~~ review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5, and 3.12. The ~~Architect's-Designer's~~ review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The ~~Architect's-Designer's~~ approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 The ~~Architect will prepare-Designer will assist the Owner in preparing~~ Change Orders and Construction Change Directives, and may order minor changes in the Work as provided in Section 7.4. The ~~Architect-Designer~~ will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.9 The ~~Architect-Designer~~ will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

§ 4.2.10 If the Owner and ~~Architect-Designer~~ agree, the ~~Architect-Designer~~ will provide one or more Project representatives to assist in carrying out the ~~Architect's-Designer's~~ responsibilities at the site. The Owner shall notify the Contractor of any change in the duties, responsibilities and limitations of authority of the Project representatives.

§ 4.2.11 The ~~Architect-Designer~~ will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The ~~Architect's-Designer's~~ response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 4.2.12 Interpretations and decisions of the ~~Architect-Designer~~ will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the ~~Architect-Designer~~ will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either, and will not be liable for results of interpretations or decisions rendered in good faith, accordance with a reasonable and professional standard of care.

§ 4.2.13 The ~~Architect's-Designer's~~ decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 4.2.14 The ~~Architect-Designer~~ will review and respond to requests for information about the Contract Documents. The ~~Architect's-Designer's~~ response to such requests will be made in writing within any time limits agreed upon or otherwise ~~with reasonable promptness, within 14 days.~~ If appropriate, the ~~Architect-Designer~~ will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 Definitions

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a Separate Contractor or the subcontractors of a Separate Contractor.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.2 Award of Subcontracts and Other Contracts for Portions of the Work

§ 5.2.1 Unless otherwise stated in the Contract Documents, the Contractor, ~~as seen as practicable within 21 days after~~ award of the Contract, shall notify the Owner and ~~Architect-Designer~~ of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design. Within 14 days of receipt of the information, the ~~Architect-Designer~~ may notify the Contractor whether the Owner or the ~~Architect-Designer~~ (1) has reasonable objection to any such proposed person or entity or (2) requires additional time for review. Failure of the ~~Architect-Designer~~ to provide notice within the 14-day period shall constitute notice of no reasonable objection. No construction activity shall be commenced by a person or entity in question until all objections have been resolved. If required, Contractor shall furnish evidence satisfactory to Designer, showing each proposed Subcontractor is competent to execute work covered by the subcontract. Subcontractors identified as part of Contractor's bid for this Project shall be used in the capacity listed, unless otherwise approved by the Owner in accordance with State Building Commission policy.

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or ~~Architect-Designer~~ has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.3 If the Owner or ~~Architect-Designer~~ has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or ~~Architect~~ has no reasonable objection. ~~If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required. Designer has no reasonable objection.~~

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person, or entity for one previously selected if the Owner or ~~Architect-Designer~~ makes reasonable objection to such substitution.

§ 5.2.5 Contractor shall not award subcontract to one who submitted a competing general bid for the same Contract and subsequently withdrew, reneged, or otherwise failed to enter into contract.

§ 5.2.6 Contractor shall not allow work under the Contract to be performed contrary to the requirements of Section 3.4.5 nor by a Contractor or Subcontractor that has been disqualified from participating in State construction projects under the supervision of the State Building Commission. Such disqualification extends to succeeding or related corporations, partnerships, joint ventures, and other business organizations having substantial factual or legal connections, continuity, or identity with those that have been disqualified. If such a participant is discovered, Contractor shall immediately discontinue the participation and provide a suitable substitute at no additional cost to the Owner, and provide documentation to the Owner of the action taken to comply with this requirement.

§ 5.3 Subcontractual Relations

By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work that the Contractor, by these Contract Documents, assumes toward the Owner and Architect-Designer. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect-Designer under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

§ 5.4 Contingent Assignment of Subcontracts

§ 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

- .1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

Assignment is at the option of Owner, and creates no duty or obligation upon Owner to exercise this option, nor is any right created for any subcontractor to expect or rely upon such assignment. When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 Owner's Right to Perform Construction and to Award Separate Contracts

§ 6.1.1 The term "Separate Contractor(s)" shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

§ 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each Separate Contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with any Separate Contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to its construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, Separate Contractors, and the Owner until subsequently revised.

§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces or with Separate Contractors, the Owner or its Separate Contractors shall have the same obligations and rights that the Contractor has under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6, and Articles 10, 11, and 12.

§ 6.2 Mutual Responsibility

§ 6.2.1 The Contractor shall afford the Owner and Separate Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a Separate Contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly notify the ~~Architect-Designer~~ of apparent discrepancies or defects in the construction or operations by the Owner or Separate Contractor that would render it unsuitable for proper execution and results of the Contractor's Work. Failure of the Contractor to notify the ~~Architect-Designer~~ of apparent discrepancies or defects prior to proceeding with the Work shall constitute an acknowledgment that the Owner's or Separate Contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work. The Contractor shall not be responsible for discrepancies or defects in the construction or operations by the Owner or Separate Contractor that are not apparent.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a Separate Contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a Separate Contractor's delays, improperly timed activities, damage to the Work or defective construction.

§ 6.2.4 The Contractor shall promptly remedy damage that the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or Separate Contractor as provided in Section 10.2.5.

§ 6.2.5 The Owner and each Separate Contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.3 Owner's Right to Clean Up

If a dispute arises among the Contractor, Separate Contractors, and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the ~~Architect-Designer~~ will allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 General

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor, and ~~Architect-Designer~~. A Construction Change Directive requires agreement by the Owner and ~~Architect-Designer~~ and may or may not be agreed to by the Contractor. An order for a minor change in the Work may be issued by the ~~Architect-Designer~~ alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents. The Contractor shall proceed promptly with changes in the Work, unless otherwise provided in the Change Order, Construction Change Directive, or order for a minor change in the Work.

§ 7.2 Change Orders

§ 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor, and Architect-Designer stating their agreement upon all of the following:

- .1 The change in the Work;
- .2 The amount of the adjustment, if any, in the Contract Sum; and that the price includes all eligible overhead and profit, and represents all direct and indirect costs associated with the change; and
- .3 The extent of the adjustment, if any, in the Contract Time.

§ 7.2.2. Unless otherwise agreed in writing by Owner and Contractor, the method of determining adjustments in Contract Sum shall be by one or more of the methods set forth in Section 7.3.3, and shall be based on reasonable expenditures and savings as set forth in Section 7.3.4.

§ 7.2.3 When the Owner and Contractor agree with a determination made by the Designer concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, the Owner may issue a written approval of the adjustment(s) prior to being recorded in a Change Order. Such approval shall be effective immediately and shall be recorded by preparation and execution of an appropriate Change Order.

§ 7.3 Construction Change Directives

§ 7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect-Designer, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 As provided in Section 7.3.4.

§ 7.3.4 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect-Designer shall determine the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount, in accordance with Section 7.3.11. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect-Designer may prescribe, an itemized accounting together with appropriate supporting data. ~~Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.4 shall be limited to the following:~~

§ 7.3.4.1 Costs for the purpose of this Section 7.3.4 shall be limited to the following:

- .1 ~~Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, workers' compensation insurance, and other employee costs approved by the Architect; Direct personnel expense (DPE);~~
- .2 ~~Costs of materials, supplies, and equipment, including cost of transportation, thereof, whether incorporated or consumed;~~
- .3 ~~Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others; Machinery and equipment costs based on (1) rental costs for rental of machinery and~~

- equipment rented from others and (2) costs for machinery and equipment owned by the Contractor limited to not more than eighty percent (80%) of the applicable average rental rate as listed in the current edition of the AED Green Book for Rental Rates and Specifications for Construction Equipment;
- .4 Costs of premiums for all bonds and insurance, insurance to the extent required by Contract Documents, permit fees, and sales, use, or other similar taxes, directly related to the change; and
 - .5 Costs of supervision and field office personnel directly attributable to the change. Additional DPE of superintendence directly attributable to authorized overtime; and,
 - .6 Reasonable DPE of project manager and clerical work directly attributable to estimating and coordinating the change.
 - .7 The following items are "Class 1 Time-Related Expenses", and shall be considered as costs when Contract Time is extended due to additional work or a Class 1 cause defined in Section 8.3, and solely to the extent directly attributable to extension of time; field offices, sheds, phones/communication devices, sanitary facilities, dumpsters, trash collection and disposal, on-site utilities, drinking items, supplies, cleaning, safety programs, and all other construction facilities, temporary controls and fixtures not specifically required for additional work; costs of superintendence; superintendent's vehicle; and other general use vehicles, being those requiring a class D, H, or M license, and excluding those requiring a class A, B, or C license, as set forth in the Tennessee Driver Handbook or comparable current successor publication of the Tennessee Department of Safety and Homeland Security. The daily maximum amount allowed for Class 1 Time-Related Expenses shall be calculated as, and equal to four and one-half percent (4.50%) of the original Contract Sum divided by the original Contract Time.
 - .8 If the Contract Sum is a Guaranteed Maximum Price between the Owner and a Construction Manager / General Contractor, the costs for project manager, clerical work, and Class 1 Time-Related Expenses included by Sections 7.3.4.1.6 and 7.3.4.1.7 and the extra five percent (5%) for the Contractor in Section 7.3.11.1 shall not apply. In such cases, the CM/GC Fee and General Conditions costs shall apply in accordance with the Master Contract provisions for Modifications and Change in GMP.

§ 7.3.4.2 Direct Personnel Expense (DPE)

§ 7.3.4.2.1 Direct personnel expense (DPE) costs delineated in Sections 7.3.4.1, 7.3.4.1.5, 7.3.4.1.6, and 7.3.4.1.7 shall be limited to base salary or hourly wage plus a maximum of thirty-nine percent (39%) of base salary or hourly wage, and further limited to a maximum of \$155 per hour, including all labor burden.

§ 7.3.4.3 Specifically excluded from costs and included in overhead or general requirements are: corporate, home office, and branch office overhead, rent, mortgage, off-site utilities, project management, and personnel not otherwise mentioned; capital expenses and interest on capital; hand tools; and the items of cost listed in Section 7.3.4.1.7 when Contract Time is not extended due to additional work or a Class 1 clause.

§ 7.3.4.4 To facilitate checking for increases or decreases in the Contract Sum, proposals, shall be accompanied by Contractor's complete itemization of costs of work including labor, materials and equipment, plus an amount for overhead and profit.

§ 7.3.5 If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.

§ 7.3.6 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect-Designer of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 7.3.7 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect-Designer. When both additions

and credits covering related Work or substitutions are involved in a change, the ~~allowance amount~~ for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. ~~The Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.~~

§ 7.3.10 When the Owner and Contractor agree with a determination made by the ~~Architect~~ Designer concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately ~~and the Architect will prepare a~~ and shall be recorded by preparation and execution of an appropriate Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.3.11 Overhead and Profit

§ 7.3.11.1 The amount recoverable as overhead and profit on costs stipulated in Section 7.3.4 shall be limited to the following:

- .1 For Contractor performed work, the Contractor shall be entitled to overhead of ten percent (10%) of the cost of the self-performed work (the "Overhead") and profit of five percent (5%) of the sum of the cost of the self-performed work and the Overhead. The Contractor's Overhead of ten percent (10%) is not applied to the Class I Time Related Expenses in § 7.3.4.1.7.
- .2 For Subcontractor performed work:
 - .a The Contractor shall be entitled to profit of five percent (5%) of the sum of all Subcontractor's itemized costs, Subcontractor Overhead, and Subcontractor Profit. The Contractor shall not be entitled to recover any overhead on work performed by a Subcontractor.
 - .b The Subcontractor shall be entitled to overhead of ten percent (10%) of its itemized cost ("Subcontractor Overhead") and profit of five percent (5%) of the sum of its itemized cost and the Subcontractor Overhead ("Subcontractor Profit").
- .3 For Sub-subcontractor performed work, a Subcontractor shall be entitled to profit of five percent (5%) of the sum of all Sub-subcontractor's cost. The Subcontractor shall not be entitled to recover any overhead on work performed by its Sub-subcontractors.

§ 7.3.11.2 When the Contract Sum is a Guaranteed Maximum Price between the Owner and a Construction Manager / General Contractor, the extra five percent (5%) for the Contractor in Section 7.3.11.1 shall not apply. In such cases, the CM/GC Fee shall apply in accordance with the Master Contract provisions for Modifications and Change in GMP.

§ 7.4 Minor Changes in the Work

The ~~Architect~~ Designer may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The ~~Architect's Designer's~~ order for minor changes shall be in writing. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the ~~Architect~~ Designer and shall not proceed to implement the change in the Work. If the Contractor performs the Work set forth in the ~~Architect's Designer's~~ order for a minor change without prior notice to the ~~Architect~~ Designer that such change will affect the Contract Sum or Contract Time, the Contractor waives any adjustment to the Contract Sum or extension of the Contract Time.

ARTICLE 8 TIME

§ 8.1 Definitions

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date certified by the ~~Architect~~ Designer in accordance with Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 8.2 Progress and Completion

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, commence the Work prior to the effective date of insurance required to be furnished by the Contractor and Owner.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion ~~within the Contract Time~~ in accordance with the Agreement.

§ 8.3 Delays and Extensions of Time

~~§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by (1) an act or neglect of the Owner or Architect, of an employee of either, or of a Separate Contractor; (2) by changes ordered in the Work; (3) by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, adverse weather conditions documented in accordance with Section 15.1.6.2, or other causes beyond the Contractor's control; (4) by delay authorized by the Owner pending mediation and binding dispute resolution; or (5) by other causes that the Contractor asserts, and the Architect determines, justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine. The basis exists for an extension of time if Contractor is delayed in performing Work, but solely to the extent that delays are unforeseeable, unavoidable, and beyond the control and without fault or negligence, in whole or in part, of Contractor, subcontractors, sub-subcontractors, and suppliers at every tier, and said delays directly impact the Contractor's ability to achieve Substantial Completion in accordance with the Contract Time requirements, and said delays cannot be made up by reasonable efforts otherwise and said delays stem from the following causes:~~

~~§ 8.3.1.1 Class 1 causes: an act or failure to act that is contrary to the Contract Documents on the part of Owner or Designer or an employee of either, or of a separate Contractor employed by Owner, or an injunction against Owner or Owner's representatives; any impact to the Contractor that requires an adjustment in the Contract Sum and Contract Time.~~

~~§ 8.3.1.2 Class 2 causes: abnormal weather, acts of God, riots, civil commotion, acts of War, fire, unavoidable casualties, epidemics, quarantine restrictions, labor disputes, unusual delay in transportation, freight embargoes, or insolvency of subcontractors, sub-subcontractors, or suppliers.~~

~~§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15. If the basis exists for an extension of time under Section 8.3.1, Owner may either:~~

- ~~.1 in the case of additional work or a Class 1 cause, assign the Class 1 Time-Related Expenses, defined in Section 7.3.4.1.7, plus the overhead and profit allowed in Section 7.3.11, to a special allowance that can be earned based upon the extent of actual use of the related Time Extension in completion of the Work;~~
- ~~.2 accept the reasonable and appropriate time extension as determined by Designer to cover such delay, and in the case of a Class 2 cause, there will be no corresponding adjustment in Contract sum, and the sole recourse of Contractor will be entitlement to time extension as provided by Designer regardless of actual source or cause of delay;~~
- ~~.3 order Contractor to accelerate construction activity by working overtime and by adding extra forces in order to overcome such delays, and adjusting the Contract Sum in accordance with Article 7 to compensate Contractor for such directed acceleration; however, direct costs used in determining such compensation shall be limited to properly substantiated and documented premium or overtime labor costs; or~~
- ~~.4 employ a combination of the above remedies.~~

~~§ 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents. Extension of Contract Time due to Class 2 causes shall be applied to the Contract Time prior to the application of Class 1 time.~~

§ 8.3.4 Neither Owner nor Designer will be obligated or liable to Contractor for, and Contractor hereby expressly waives claims against Owner and Designer on account of damages, costs, expenses, or related impacts which Contractor, subcontractors, sub-subcontractors, suppliers, or other persons may incur as a result of a Class 2 cause enumerated in Section 8.3.1. Contractor's sole and exclusive remedy and full compensation in such event shall be extension of Contract Time in accordance with provisions of the Contract Documents. Contractor likewise waives claims of damages, costs, or expenses due to a delay resulting from a Class 1 cause except and solely to the extent of costs allowed under Section 7.3.4.

§ 8.3.5 Claims relating to time shall be made in accordance with applicable provisions of Article 15 or shall receive no consideration. If monthly Weather Delay Reports are required by the specifications, then claims for time extension based upon weather delays will be denied if a submitted report does not corroborate the Claim or if no report was submitted when it was required, and Contractor waives the right to such claims.

§ 8.3.6 Extensions of time shall be implemented in accordance with Article 7.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 Contract Sum

§ 9.1.1 The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents. The Contract Sum is not subject to change due to commodity, equipment, or labor cost fluctuations.

§ 9.1.2 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed so that application of such unit prices to the actual quantities causes substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably ~~adjusted.~~ adjusted subject to limitation and requirements contained in the Contract Documents.

§ 9.2 Schedule of Values

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit a schedule of values to the ~~Architect-Designer~~ before the first Application for Payment, allocating the entire Contract Sum to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, required by the ~~Architect-Designer~~. This schedule, unless objected to by the ~~Architect-Designer~~, shall be used as a basis for reviewing the Contractor's Applications for Payment. Any changes to the schedule of values shall be submitted to the ~~Architect-Designer~~ and supported by such data to substantiate its accuracy as the ~~Architect-Designer~~ may require, and unless objected to by the ~~Architect-Designer~~, shall be used as a basis for reviewing the Contractor's subsequent Applications for Payment.

§ 9.3 Applications for Payment

§ 9.3.1 ~~At least ten days before~~ Prior to the date established for each progress payment, the Contractor shall submit to the ~~Architect-Designer~~ an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. The application shall be notarized, ~~if required,~~ and supported by all data substantiating the Contractor's right to payment that the Owner or ~~Architect-Designer~~ require, such as copies of requisitions, and releases ~~and waivers of liens from~~ Subcontractors and suppliers, and shall reflect retainage if provided for in the Contract Documents.

§ 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, ~~or by interim determinations of the Architect,~~ but not yet included in Change Orders.

§ 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage,

and transportation to the site, for such materials and equipment stored off the site, extent those costs have been included in the Contract Sum and actually incurred. Additional costs, which may be attendant to the off-site storage, are the responsibility of the Contractor, and cannot be claimed by Contractor against Owner.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner ~~no later than the time of payment at the time payment is received by the Contractor.~~ The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or encumbrances, in favor of the Contractor, Subcontractors, suppliers, or other persons or entities that provided labor, materials, and equipment relating to the Work.

§ 9.3.4 In Applications for Payment, the amount represented as total completed and stored to date shall reflect that portion of the Contract Sum properly allocable to labor, materials, and equipment incorporated in the Work and materials and equipment suitably stored in accordance with Section 9.3.2, and not exceed the Contract Sum less the value of incomplete Work and corrections required. This total completed and stored to date shall not be construed to define completion as determined by Substantial Completion or final completion of the Work according to Sections 9.8, 9.9, or 9.10.

§ 9.3.5 Applications for Payment shall indicate retainage withheld from the total completed and stored to date as follows: five percent (5%) until acceptance of a certificate of Substantial Completion; and, thereafter two percent (2%) until final payment. The resulting amount shall be indicated as the total earned less retainage. Applications that reduce retainage shall be accompanied by Consent of Surety, if a bond was required according to Section 11.4.

§ 9.3.6 Applications for Payment shall indicate the total earned less retainage, and the aggregate of previous payments made subtracted therefrom, and an amount requested.

§ 9.4 Certificates for Payment

§ 9.4.1 The ~~Architect-Designer~~ will, within seven days after receipt of the Contractor's Application for Payment, either (1) issue to the Owner a Certificate for Payment in the full amount of the Application for Payment, with a copy to the Contractor; or (2) issue to the Owner a Certificate for Payment for such amount as the ~~Architect-Designer~~ determines is properly due, and notify the Contractor and Owner of the ~~Architect's-Designer's~~ reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Application for Payment, and notify the Contractor and Owner of the ~~Architect's-Designer's~~ reason for withholding certification in whole as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the ~~Architect-Designer~~ to the Owner, based on the ~~Architect's-Designer's~~ evaluation of the Work and the data in the Application for Payment, that, to the best of the ~~Architect's-Designer's~~ knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion, and to specific qualifications expressed by the ~~Architect-Designer~~. However, the issuance of a Certificate for Payment will not be a representation that the ~~Architect-Designer~~ has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 Decisions to Withhold Certification

§ 9.5.1 The ~~Architect-Designer~~ may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the ~~Architect's-Designer's~~ opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the ~~Architect-Designer~~ is unable to certify payment in the amount of the Application, the ~~Architect-Designer~~ will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and ~~Architect-Designer~~ cannot agree on a revised amount, the ~~Architect-Designer~~ will promptly issue a Certificate for

Payment for the amount for which the Architect-Designer is able to make such representations to the Owner. The Architect-Designer may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's-Designer's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims, unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a Separate Contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 ~~repeated~~ failure to carry out the Work in accordance with the Contract Documents. Documents, or
- .8 potential liquidated damages and other unsettled claims.

§ 9.5.2 When either party disputes the Architect's-Designer's decision regarding a Certificate for Payment under Section 9.5.1, in whole or in part, that party may submit a Claim in accordance with Article 15.

§ 9.5.3 When any of the reasons for withholding certification are removed, certification will be made for respective amounts previously withheld.

§ 9.5.4 If the Architect-Designer withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or supplier to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect-Designer and the Contractor shall reflect such payment on its next Application for Payment.

§ 9.6 Progress Payments

§ 9.6.1 After the Architect-Designer has issued a Certificate for Payment, the Owner shall make payment in ~~the manner and within the time provided in the Contract Documents, and shall so notify the Architect.~~ accordance with TCA § 12-4-701 et seq. as may from time to time be amended.

- .1 Payment is due not later than 45 days after an undisputed Certificate for Payment has been received by Owner. Owner will endeavor to make payment within 21 days, but shall not be obligated to do so.
- .2 Based upon Certificates for Payment issued by the Designer, correcting the Application for Payment as appropriate, the Owner shall make progress payments to the Contractor as provided in the Contract Documents.

§ 9.6.2 The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment from the Owner, the amount to which the Subcontractor is ~~entitled, reflecting percentages actually retained from payments to the Contractor on account of~~ entitled for the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.3 The Architect-Designer and Owner will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect-Designer and Owner on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors and suppliers to ascertain whether they have been properly paid. Neither the Owner nor Architect-Designer shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.

§ 9.6.5 The Contractor's payments to suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 ~~Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors or provided by suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, create any fiduciary liability or tort liability on the part of the Contractor for breach of trust, or entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision. When Contract Sum meets the statutory threshold, pursuant to TCA § 66-34-104, the Contractor shall comply with the procedures established by the Tennessee State Treasurer and Department of Finance and Administration for establishment of an interest-bearing retainage escrow account.~~

§ 9.6.8 Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any ~~lien claim or other claim~~ for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a ~~lien claim or other claim~~ for payment, the Owner shall notify the ~~Contractor.~~ Contractor and the Designer. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the ~~lien or other claim~~ for payment has been asserted. The Designer may act in accordance with Section 9.5 or the Contractor may furnish acknowledgement of the claim from the Surety satisfactory to the owner to indemnify the Owner in making payment to the Contractor without reduction of the claim.

§ 9.7 Failure of Payment

If the ~~Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date payment is due as established in the Contract Documents, the amount certified by the Architect or awarded by binding dispute resolution, currently due as of that date pursuant to the terms of the Contract Documents (including certification by the Designer),~~ then the Contractor may, upon seven additional days' notice to the Owner and ~~Architect, Designer,~~ stop the Work until payment of the amount ~~owing due~~ has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided for in the Contract Documents.

§ 9.8 Substantial Completion

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use. In order to occupy or utilize the Work for its intended use, Owner must have received from the State Fire Marshal the Certificate of Occupancy, or in the case of renovations the Project Completion Form, and the Owner must have received substantially complete Product Data, Operating and Maintenance Data, orientation, and training, as may be required by specifications.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the ~~Architect-Designer~~ a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Contractor's list, the ~~Architect-Designer~~ will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's-Not later than at the time of this inspection, the Contractor will submit its application for payment commensurate with Substantial Completion. If the Designer's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect-Designer. In such case, the Contractor shall then submit a request for another inspection by the Architect-Designer to determine Substantial Completion.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the ~~Architect-Designer~~ will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the list accompanying ~~the Certificate.~~ the Certificate, subject to the provisions of Section 9.12.2. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate. ~~Upon such acceptance, and consent of surety if any, the Owner shall make payment of retainage applying to the Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.~~

§ 9.9 Partial Occupancy or Use

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the ~~Architect-Designer~~ as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the ~~Architect-Designer~~.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor, and ~~Architect-Designer~~ shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.10 Final Completion and Final Payment

§ 9.10.1 Upon receipt of the Contractor's notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the ~~Architect-Designer~~ will promptly make such inspection. When the ~~Architect-Designer~~ finds the Work acceptable under the Contract Documents and the Contract fully performed, the ~~Architect-Designer~~ will promptly issue a final Certificate for Payment stating that to the best of the ~~Architect's Designer's~~ knowledge, information and belief, and on the basis of the ~~Architect's Designer's~~ on-site visits and inspections, the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The ~~Architect's Designer's~~ final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the ~~Architect-Designer~~ (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect, (3) a written statement that the Contractor knows of no reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment, (5) documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties, and (6) if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts and releases and waivers of ~~liens, claims, security interests, or encumbrances~~ arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor ~~may furnish a bond shall furnish acknowledgement of the matter from the Surety~~ satisfactory to the Owner to indemnify the Owner against such ~~lien, claim, security interest, or encumbrance. If a lien, claim, security interest, or encumbrance matter in~~

lieu of such a release or waiver. If such matter remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging the lien, claim, security interest, or encumbrance, such matter, including all costs and reasonable attorneys' fees.

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect-Designer so confirms, the Owner shall, upon application by the Contractor and certification by the Architect-Designer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed, corrected, and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of the surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect-Designer prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

§ 9.10.4 The making of final payment shall not constitute a waiver of Claims by the Owner ~~except those arising from for the following:~~

- .1 ~~liens,~~ Claims, security interests, or encumbrances arising out of the Contract Documents and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents; Documents, irrespective of when such failure is discovered;
- .3 terms of special warranties required by the Contract Documents; or
- .4 audits performed by the Owner, if permitted by the Contract Documents, after final payment.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor, or a supplier, payment, shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

§ 9.10.6 Final payment constituting the entire unpaid balance of Contract Sum, shall be paid by Owner to Contractor when Work has been completed, the Contract fully performed, and a final Certificate for Payment issued by Designer.

§ 9.10.7 If there is no Contract Bond, the final Certificate may be withheld until the prospect of final payment is advertised once, 30 days prior to issuance of the final payment, for the benefit of those to whom the Contractor may be indebted.

§ 9.11 Method of Payment

§ 9.11.1 Payments to Contractor shall be made through Owner's automated clearing house wire transfer system. Contractor shall have completed an Authorization Agreement for Automatic Deposits ACH Credits Form prior to commencing Work and prior to submitting a first application for payment. At the Owner's option, other payment options may be utilized.

§ 9.11.2 Debit entries to correct errors authorized by the Authorization Agreement for Automatic Deposits ACH Credits Form shall be limited to those errors detected prior to the effective date of the credit entry. The remittance advice shall note that a correcting entry was made. Corrections shall be made within two banking days of the effective date of the original transaction. Other errors detected at a later date shall take the form of a refund, or in some instances, a credit memo if additional payments are to be made.

§ 9.11.3 The Owner reserves the right to deduct from amounts which are or shall become due and payable to Contractor under this or any contract between the parties any amounts which are or shall become due and payable to the State by the Contractor.

§ 9.12 Liquidated Damages

§ 9.12.1 Time being of the essence, Contractor further agrees to accept conditions for Liquidated Damages in the amount set forth in Contract Documents for each calendar day in excess of allotted time for Substantial Completion, or approved extension thereof, parties agreeing that the amount of damages resulting from delay would be uncertain and difficult to prove, and further agreeing that such Liquidated Damages set forth in the Owner-Contractor Agreement are a reasonable estimate of those damages which could result from delay.

§ 9.12.2 If a portion of the Work is certified Substantially Complete, the amount of Liquidated Damages applicable to the remaining Work may be reduced by Written mutual agreement.

§ 9.12.3 Secondary Liquidated Damages shall be twenty-five percent (25%) of that originally required by the Contract Documents, and shall accrue until such time that Work has been completed and the Contract fully performed if:

.1 the time for completion stipulated in the Certificate of Substantial Completion has passed; or, if no such time was stipulated, then 30 calendar days has passed following the certified date of Substantial Completion and;

.2 the Contract Time, including approved extensions, plus 30 calendar days, has passed.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 Safety Precautions and Programs

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract.

§ 10.2 Safety of Persons and Property

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury, or loss to

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

§ 10.2.2 The Contractor shall comply with, and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities, bearing on safety of persons or property or their protection from damage, injury, or loss.

§ 10.2.3 The Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment, or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3. The Contractor may make a Claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable to acts or omissions of the Owner or ~~Architect-Designer~~ or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. Owner reserves the right to make repairs to damaged property and deduct all costs from the Contract Sum. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and ~~Architect-Designer~~.

§ 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

§ 10.2.8 Injury or Damage to Person or Property

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, notice of the injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21-14 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 10.3 Hazardous Materials and Substances

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and notify the Owner and ~~Architect-Designer~~ of the condition.

§ 10.3.2 Upon receipt of the Contractor's notice, pursuant to circumstances described in Section 10.3.1, Owner will have the option to either terminate the contract as provided in Article 14, proceed with Contractor in a mutually agreed plan of action, or as follows: the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and ~~Architect-Designer~~ the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of the material or substance or who are to perform the task of removal or safe containment of the material or substance. The Contractor and the ~~Architect-Designer~~ will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or ~~Architect-Designer~~ has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the ~~Architect-Designer~~ have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, Following claim and modification processes in accordance with Articles 15 and 7, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.

~~§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss, or expense is due to the fault or negligence of the party seeking indemnity.~~

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for hazardous materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for hazardous materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

§ 10.3.5 The Contractor shall reimburse the Owner for the cost and expense the Owner incurs (1) for remediation of hazardous materials or substances the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, ~~the Owner shall reimburse the Contractor for all cost and expense thereby incurred.~~ Contractor may file claim under Article 15 for consideration.

§ 10.4 Emergencies

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 Contractor's Liability Insurance and Bonds

~~§ 11.1.1 The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Contractor shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Owner, Architect, and Architect's consultants shall be named as additional insureds under the Contractor's commercial general liability policy or as otherwise described in the Contract Documents, from and maintain in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located such insurance required by the Contract Documents as will protect the Contractor and the Owner from claims set forth below which may arise out of or result from the Contractor's operations and completed operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:~~

- .1 Claims under workers' compensation, disability benefit and other similar employee benefit acts that are applicable to the Work to be performed;
- .2 Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
- .3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;
- .4 Claims for damages insured by usual personal injury liability coverage;
- .5 Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property on or away from the site, including loss of use resulting therefrom;
- .6 Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle;
- .7 Claims for bodily injury or property damage arising out of completed operations; and
- .8 Claims involving contractual liability insurance applicable to the Contractor's obligations under Section 3.18.

~~§ 11.1.2 The Contractor shall provide surety bonds of the types, for such penal sums, and subject to such terms and conditions as required by the Contract Documents. The Contractor shall purchase and maintain the required bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located. Insurance required by Section 11.1.1 shall be written for not less than limits of liability specified in the Contract Documents or required by law, whichever coverage is greater. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from the date of commencement of the Work until the date of final payment and termination of any coverage required to be maintained after final payment, and, with respect to the Contractor's completed operations coverage, until four years after Substantial Completion. Specific lines of coverage and limits of liability provided by the Contractor shall be written in a comprehensive form satisfactory to the Owner in the following minimum requirements:~~

- .1 Commercial General Liability, with limits for bodily injury and property damage of

Each Occurrence	\$1,000,000
Annual Aggregate	\$2,000,000

and including:
premises & operations;
underground, explosion, & collapse;
products & completed operations;
contractual;
independent contractors; and,
personal injury (employment exclusion deleted).
The General Aggregate shall apply specifically to this project, using ISO form CG 2503 or the equivalent. The policy will contain a Waiver of Subrogation endorsement in favor of the Owner.
- .2 The Contractor will maintain a Contractor's Pollution Liability policy with limits of

Each Occurrence	\$1,000,000
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- Annual Aggregate \$2,000,000
Coverage will commence prior to the beginning of the Work and will be maintained until four years after Substantial Completion. The policy will be written on a primary and non-contributory basis and will name the Owner as an additional insured for both on-going and completed operations. Coverage will apply to all construction operations, transit and disposal of material at non-owned disposal sites performed by or on behalf of the Contractor. The Policy shall not contain coverage exclusions related to asbestos, lead, silica or mold/microbial matter. The policy will contain a Waiver of Subrogation endorsement in favor of the Owner.
- .3 Commercial Automobile Liability, with combined single limits for bodily injury and property damage of
Each Occurrence \$1,000,000
and including owned, hired, and non-owned vehicles; or, if there are no owned vehicles, Contractor may provide written certification of such and provide coverage limited to hired and non-owned vehicles. The policy will be written on a primary and non-contributory basis and will name the Owner as an additional insured, and will contain a Waiver of Subrogation endorsement in favor of the Owner.
- .4 Workers Compensation and Employer's Liability, (without restriction as to whether covered by Worker's Compensation law), with Workers Compensation according to statute, and Employer's Liability: \$500,000 per occurrence for bodily injury, \$500,000 per employee for bodily injury by disease and a \$500,000 policy limit for bodily injury by disease. The policy will contain a Waiver of Subrogation endorsement in favor of the Owner.
- .5 If an exposure exists, Aircraft and Watercraft Liability (owned & non-owned), with limits approved by Owner shall be provided.
- .6 The Contractor will maintain Excess or Umbrella Liability coverage that is as broad or broader than the required Commercial General Liability, Commercial Automobile Liability and Employer's Liability with minimum limits of \$5,000,000 per Occurrence, \$5,000,000 Annual Aggregate. The Excess or Umbrella policy will be written on a primary and non-contributory basis and will name the Owner as an additional insured.

§ 11.1.3 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished. Certificates of insurance acceptable to the Owner shall be filed with the Owner prior to Owner's execution of the Agreement and thereafter upon renewal or replacement of each required policy of insurance. Certificate(s) of insurance provided to attest to coverage shall specifically cite each element of coverage and not less than limits set forth in Section 11.1.2, as confirmation of complete coverage, and shall identify Contractor, Producer, Insurance Carrier, Project, and certificate holder, and state Producer's notice requirements as set forth in Section 11.1.4. The term "Commercial General Liability" shall mean all of the coverage listed in Section 11.1.2.1a unless specifically noted otherwise in the certificate. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment as required by Section 9.10.2 and thereafter upon renewal or replacement of such coverage until the expiration of the time required by Section 11.1.2. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness.

§ 11.1.4 Notice of Cancellation or Expiration of Contractor's Required Insurance. Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by the Contract Documents, the Contractor shall provide notice to the Owner of such impending or actual cancellation or expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage. The Contractor and its subcontractors shall cause the commercial general liability, auto, pollution and excess/umbrella coverage required by the Contract Documents to include (1) the Owner, the Designer and the Designer's consultants as additional insureds on a primary and non-contributory basis for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations using ISO form CG 2010 (07/04); and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's completed operations, using ISO form CG 2037 (07/04) edition.

§ 11.2 Owner's Insurance

§ 11.2.1 The Owner shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Owner shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located.

§ 11.2.2 Failure to Purchase Required Property Insurance. If the Owner fails to purchase and maintain the required property insurance, with all of the coverages and in the amounts described in the Agreement or elsewhere in the Contract Documents, the Owner shall inform the Contractor in writing prior to commencement of the Work. Upon receipt of notice from the Owner, the Contractor may delay commencement of the Work and may obtain insurance that will protect the interests of the Contractor, Subcontractors, and Sub-Subcontractors in the Work. When the failure to provide coverage has been cured or resolved, the Contract Sum and Contract Time shall be equitably adjusted. In the event the Owner fails to procure coverage, the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent the loss to the Owner would have been covered by the insurance to have been procured by the Owner. The cost of the insurance shall be charged to the Owner by a Change Order. If the Owner does not provide written notice, and the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain the required insurance, the Owner shall reimburse the Contractor for all reasonable costs and damages attributable thereto.

§ 11.2.3 Notice of Cancellation or Expiration of Owner's Required Property Insurance. Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any property insurance required by the Contract Documents, the Owner shall provide notice to the Contractor of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance.

§ 11.1.5 Contractor shall notify Owner in writing of changes in coverage or carrier not later than ten days after notification of Contractor by Producer, or ten days before Contractor makes a change, whichever occurs first. By way of an endorsement to the policy, the Insurer will be required to provide written notice if policies are cancelled or modified before expiration date thereof.

§ 11.1.6 If professional design services or certifications by an appropriately licensed design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, as referenced in Sections 3.12.10.1 and 3.12.10.2, then that professional(s) shall maintain Professional Liability Insurance in the amount of: Each Claim \$ 1,000,000, Annual Aggregate \$1,000,000. The Professional Liability Insurance coverage shall be maintained for four years after the date of Substantial Completion of the Project. The Contractor is responsible for requiring that the Professional Liability Insurance is acquired and maintained.

§ 11.2 (Deleted)

§ 11.3 Waivers of Subrogation Property Insurance

§ 11.3.1 The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Architect and Architect's consultants; and (3) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Architect, Architect's consultants, Separate

~~Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property. Contractor shall purchase from and maintain, with a company or companies licensed to do business in Tennessee by the Department of Commerce and Insurance, property insurance written on a builder's risk "all risk" or equivalent policy form in the amount of the initial Contract Sum plus value of subsequent Contract modifications for the covered project at the site on a replacement cost basis. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Section 9.10 or until no person or entity other than the Owner has an insurable interest in the property required by this Section 11.3 to be covered, whichever is later. This insurance shall specify the Owner as named insured, and the Contractor, Subcontractors and Sub-subcontractors as insureds under the policy.~~

~~§ 11.3.2 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 11.3.1 for damages caused by fire or other causes of loss covered by this separate property insurance.~~

~~§ 11.4 Loss of Use, Business Interruption, and Delay in Completion Insurance~~

~~The Owner, at the Owner's option, may purchase and maintain insurance that will protect the Owner against loss of use of the Owner's property, or the inability to conduct normal operations, due to fire or other causes of loss. The Owner waives all rights of action against the Contractor and Architect for loss of use of the Owner's property, due to fire or other hazards however caused.~~

~~§ 11.5 Adjustment and Settlement of Insured Loss~~

~~§ 11.5.1 A loss insured under the property insurance required by the Agreement shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.5.2. The Owner shall pay the Architect and Contractor their just shares of insurance proceeds received by the Owner, and by appropriate agreements the Architect and Contractor shall make payments to their consultants and Subcontractors in similar manner.~~

~~§ 11.5.2 Prior to settlement of an insured loss, the Owner shall notify the Contractor of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The Contractor shall have 14 days from receipt of notice to object to the proposed settlement or allocation of the proceeds. If the Contractor does not object, the Owner shall settle the loss and the Contractor shall be bound by the settlement and allocation. Upon receipt, the Owner shall deposit the insurance proceeds in a separate account and make the appropriate distributions. Thereafter, if no other agreement is made or the Owner does not terminate the Contract for convenience, the Owner and Contractor shall execute a Change Order for reconstruction of the damaged or destroyed Work in the amount allocated for that purpose. If the Contractor timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Owner may proceed to settle the insured loss, and any dispute between the Owner and Contractor arising out of the settlement or allocation of the proceeds shall be resolved pursuant to Article 15. Pending resolution of any dispute, the Owner may issue a Construction Change Directive for the reconstruction of the damaged or destroyed Work.~~

~~§ 11.3.1.1 Property insurance shall be on an "all-risk" or equivalent policy form and shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, earthquake, flood, windstorm, and debris~~

removal and shall cover reasonable compensation for Designer's services and Contractor's work required as a result of such insured loss. The policy will be written to include a waiver of subrogation applying to all parties.

§ 11.3.1.2 For Work stored off the site, or in transit, the Contractor shall provide insurance upon such Work to protect the Owner's Interest.

§ 11.3.1.3 Partial occupancy or use in accordance with Section 9.9 shall not commence until the insurance company or companies providing property insurance have consented to such partial occupancy or use by endorsement or otherwise. The Owner and the Contractor shall take reasonable steps to obtain consent of the insurance company or companies and shall, without mutual written consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse or reduction of insurance.

§ 11.3.1.4 Builder's Risk Insurance (BRI) for the full amount of the Contract Sum, unless the Work consists entirely of hazardous materials abatement or other demolition with no constructive patching or renovating, in which case there will be no BRI.

§ 11.3.1.5 The Contractor will be responsible for maintaining its own insurance for owned, leased and borrowed tools and equipment. The policy will contain a Waiver of Subrogation endorsement in favor of the Owner.

§ 11.3.2 Boiler and Machinery Insurance

The Contractor shall purchase and maintain boiler and machinery insurance required by the Contract Documents or by law, which shall specifically cover such insured objects during installation and until final acceptance by the Owner; this insurance shall include interests of the Owner, Contractor, Subcontractors and Sub-subcontractors in the Work, and the Owner and Contractor shall be named insureds.

§ 11.3.3 Loss of Use Insurance

The Owner, at the Owner's option, may purchase and maintain such insurance as will insure the Owner against loss of use of the Owner's property due to fire or other hazards, however caused.

§ 11.3.4 Before an exposure to loss may occur, the Contractor shall file with the Owner a copy of each policy that includes insurance coverages required by this Section 11.3. Each policy shall contain all generally applicable conditions, definitions, exclusions and endorsements related to this Project. Each policy shall contain a provision that the Issuing company will endeavor to provide ten days written notice to the Owner should the policy be canceled prior to the expiration date.

§ 11.3.5 A loss insured under the Contractor's property insurance shall be adjusted by the Contractor as fiduciary and made payable to the Contractor as fiduciary for the insureds. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner.

§ 11.3.6 If after an insured loss no other special agreement is made and unless the Owner terminates the Contract for convenience, replacement of damaged property shall be performed by the Contractor.

§ 11.4 Contract Bond

§ 11.4.1 If the initial Contract Sum as awarded exceeds \$100,000, Contractor shall provide Contract Bond, in the amount of one hundred percent (100%) of Contract Sum covering faithful performance of contract and payment of obligations arising thereunder. If a Contract Bond is required, and a Three Year Roof Bond is also stipulated in the Bidding Documents, then the Three Year Roof Bond shall be provided as stipulated. Bond(s) shall be executed on Tennessee State Building Commission Standard Form(s) exhibited in Bidding Documents for project, and subject to provision of Section 11.4.3.

§ 11.4.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

§ 11.4.3 Surety is the person or entity identified as such in a bond and is referred to throughout the Contract Documents as if singular in number. The term "Surety" means the Surety or the Surety's authorized representative.

Surety Company issuing Bond shall be licensed to transact business in Tennessee by Department of Commerce and Insurance. Bonds shall have certified and current Power-of-Attorney for the Surety's Attorney-in-Fact attached. Attorney-in-Fact who executes bond on behalf of Surety shall be one who is licensed by Tennessee as a resident agent, and shall affix license number to bond; or, countersignature by and license number of a licensed resident agent shall be affixed to the bond in addition to the signature of the Attorney-in-Fact.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 Uncovering of Work

§ 12.1.1 If a portion of the Work is covered contrary to the ~~Architect's-Designer's~~ request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the ~~Architect-Designer~~, be uncovered for the ~~Architect's-Designer's~~ examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the ~~Architect-Designer~~ has not specifically requested in writing to examine prior to its being covered, the ~~Architect-Designer~~ may request in writing to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an equitable adjustment to the Contract Sum and Contract Time as may be appropriate. If such Work is not in accordance with the Contract Documents, the costs of uncovering and recovering the Work, and the cost of correction, shall be at the Contractor's expense.

§ 12.2 Correction of Work

§ 12.2.1 Before Substantial Completion

The Contractor shall promptly correct Work rejected by the ~~Architect-Designer~~ or failing to conform to the requirements of the Contract Documents, discovered before Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the ~~Architect's-Designer's~~ services and expenses made necessary thereby, shall be at the Contractor's expense.

§ 12.2.2 After Substantial Completion

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so, unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor of known noncomplying Work and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct ~~nonconforming noncomplying~~ Work within a reasonable time ~~during that period~~ after receipt of notice from the Owner or ~~Architect-Designer~~, the Owner may correct it in accordance with Section 2.5. If Three Year Roof Bond has been provided, then with regard to the total roofing system, its installation, and materials, the one year time period hereunder is extended for two additional years for a total period of three years. Until such time as the three years hereunder have expired, Contractor's obligations hereunder shall be joint and several with Company as defined and set forth in the Roofing System Warranty. For the purpose of Section 12.2.2, all of Company's actions, whether of omission or commission, pursuant to the Roofing System Warranty are likewise actions of contractor hereunder and shall in no way negate or reduce the responsibilities of Contractor hereunder.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction of the Owner or Separate Contractors, whether completed or partially completed, caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 and time period of applicable special warranties relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 Acceptance of Incomplete or Nonconforming Work

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its completion or removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 Governing Law

The Contract shall be governed by the law of the place where the Project is located, ~~excluding that jurisdiction's choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.~~ located.

§ 13.2 Successors and Assigns

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. ~~Except as provided in Section 13.2.2, neither~~ Neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

~~§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate the assignment.~~

§ 13.3 Rights and Remedies

§ 13.3.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.

§ 13.3.2 No action or failure to act by the Owner, ~~Architect, Designer,~~ or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed upon in writing.

§ 13.3.3 If procedures within the Contract fail to satisfy a Claim against the Owner, further action is to be taken up with the Tennessee Claims Commission, pursuant to TCA § 9-8-101, et seq. Damages recoverable against the State shall be limited expressly to claims awarded by the Commission, or any appellate decision of such claim awarded by the Commission.

§ 13.4 Tests and Inspections

§ 13.4.1 Tests, inspections, and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules, and regulations or lawful orders of public authorities. Unless otherwise provided, the ~~Contractor-Designer~~ shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public ~~authority, and authority.~~ The Owner shall bear all related costs of tests, inspections, and approvals. The Contractor

shall give the Architect-Designer timely notice of when and where tests and inspections are to be made so that the Architect-Designer may be present for such procedures. The Owner shall bear costs of tests, inspections, or approvals that do not become requirements until after bids are received or negotiations concluded. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

§ 13.4.2 If the Architect-Designer, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Section 13.4.1, the Architect-Designer will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection, or approval, by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect-Designer of when and where tests and inspections are to be made so that the Architect-Designer may be present for such procedures. Such costs, except as provided in Section 13.4.3, shall be at the Owner's expense.

§ 13.4.3 If procedures for testing, inspection, or approval under Sections 13.4.1 and 13.4.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Architect's-Designer's services and expenses, shall be at the Contractor's expense.

§ 13.4.4 Required certificates of testing, inspection, or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect-Designer.

§ 13.4.5 If the Architect-Designer is to observe tests, inspections, or approvals required by the Contract Documents, the Architect-Designer will do so promptly and, where practicable, at the normal place of testing.

§ 13.4.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ 13.5 Interest

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due ~~at the rate the parties agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located~~ past due as stated in Section 9.6.1 in accordance with TCA § 12-4-704 as may from time to time be amended.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Contractor

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, for any of the following reasons:

- .1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- .2 An act of government, such as a declaration of national emergency, that requires all Work to be stopped;
- .3 Because the Architect-Designer has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- .4 ~~The Owner has failed to furnish to the Contractor reasonable evidence as required by Section 2.2.~~

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, repeated suspensions, delays, or interruptions of the entire Work by the Owner as described in Section 14.3, constitute in the aggregate more than ~~100 percent~~ one hundred percent (100%) of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' notice to the Owner and Architect-Designer, terminate the Contract and recover from the Owner payment for Work executed, ~~as well as reasonable overhead and profit on Work not executed, and costs including eligible overhead, profit, and costs as defined in Section 7.3.4~~ incurred by reason of such termination. .

§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, or their agents or employees or any other persons or entities performing portions of the Work because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' notice to the Owner and the ~~Architect, Designer,~~ terminate the Contract and recover from the Owner as provided in Section 14.1.3.

§ 14.2 Termination by the Owner for Cause

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- .1 ~~repeatedly~~ refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or suppliers;
- .3 ~~repeatedly~~ disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 14.2.2 When any of the reasons described in Section 14.2.1 exist, and upon certification by the ~~Architect-Designer~~ that sufficient cause exists to justify such action, the Owner may, without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- .1 Exclude the Contractor from the site and take possession of all Work, the site, and all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the ~~Architect's-Designer's~~ services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the ~~Initial Decision Maker, Designer,~~ upon application, and this obligation for payment shall survive termination of the Contract.

§ 14.3 Suspension by the Owner for Convenience

§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work, in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay, or interruption under Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

- .1 that performance is, was, or would have been, so suspended, delayed, or interrupted, by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of the Contract.

§ 14.4 Termination by the Owner for Convenience

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the ~~Work;~~ Work, including materials for which Owner has paid and which are stored off-site; and

- 3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case the event of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed; costs incurred by reason of the termination, including costs attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement. Contractor's sole and exclusive remedy shall be to receive payment for the reasonable value of the completed portion of Work plus a portion ("P") of the remaining balance of the Contract Sum calculated under the following formula.

$$"P" = [(Remaining Balance of Contract Sum) \times (.05)] \times [(Value of the Work Completed) / (Contract Sum)]$$

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 Claims

§ 15.1.1 Definition

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, a change in the Contract Time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim. This Section 15.1.1 does not require the Owner to file a Claim in order to impose ~~liquidated damages~~ Liquidated Damages in accordance with the Contract Documents.

§ 15.1.2 Time Limits on Claims

~~The Owner and Contractor shall commence all Claims and causes of action against the other Owner and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the binding dispute resolution method selected in the Agreement Contract Documents and Section 13.3.3 and within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive Contractor waives all Claims and causes of action not commenced in accordance with this Section 15.1.2.~~

§ 15.1.3 Notice of Claims

~~§ 15.1.3.1 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by shall be initiated by written notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Designer. . Claims by either party under this Section 15.1.3.1 shall be initiated within 21-14 days after occurrence of the event giving rise to such Claim or within 21-14 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later. If the effect of the condition giving rise to the Claim cannot be fully evaluated, a preliminary notice of pending claim shall be made within the stated time limit subject to further action in a timely manner.~~

~~§ 15.1.3.2 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party. In such event, no decision by the Initial Decision Maker is required.~~

§ 15.1.4 Continuing Contract Performance

~~§ 15.1.4.1 Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents. Designer will issue recommendations for change orders and certificates for payment in accordance with its decisions issued pursuant to Section 15.2.5.~~

~~§ 15.1.4.2 The Contract Sum and Contract Time shall be adjusted in accordance with the Initial Decision Maker's decision, subject to the right of either party to proceed in accordance with this Article 15. The Architect will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker.~~

§ 15.1.5 Claims for Additional Cost

If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. written notice as required by the Contract Documents shall be given to the Owner by the Contractor, and written notice received by the Contractor from Owner acknowledging the claim and authorizing construction activity to proceed, before the Contractor shall proceed to execute the construction activity giving rise to the claim; thence, the claim shall be addressed under provisions of Section 15.2. Documentation of claims shall conform to the requirements of Article 7. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.6 Claims for Additional Time

§ 15.1.6.1 ~~If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section 15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay. To make a Claim for an increase in Contract Time, Contractor shall give written notice as provided herein, and include an estimate of cost, which shall be limited to that allowed by Section 8.3.3, and an explanation of the cause and probable effect on progress of the Work. In the case of a continuing delay, only one Claim is necessary.~~ necessary, and Contractor shall subsequently detail the full scope of the delay.

§ 15.1.6.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated, and had an adverse effect on the scheduled construction.

§ 15.1.7 Waiver of Claims for Consequential Damages

The Contractor and Owner ~~waive Claims against each other~~ waives Claims against the Owner for consequential damages arising out of or relating to this Contract. ~~This mutual waiver includes~~

- ~~1—damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and~~
- ~~2—damages incurred by the Contractor for principal office expenses~~ Contract including but not limited to either party's termination in accordance with Article 14, principal office expenses, including the compensation of personnel stationed there, at the principal office, and any damages for losses of financing, business, and reputation, and for loss of profit, except anticipated profit arising directly from the Work.

~~This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.7 shall be deemed to preclude assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.~~

§ 15.2 Initial Decision Resolution of Claims and Disputes

§ 15.2.1 ~~Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision Claims shall be referred to the Designer for initial decision. An initial decision or other action by the Designer in accordance with Section 15.2.2 shall be required as a condition precedent to mediation of any Claim. If an initial decision has not been rendered within 30 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation and binding dispute resolution without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner. Claims or action pursuant to remedies provided by law for Claims between Owner and Contractor, unless the Designer fails to timely comply with Section 15.2.2.~~

§ 15.2.2 ~~The Initial Decision Maker~~ Designer will review Claims and within ten days of the receipt of a Claim or information preliminary or pursuant to a Claim or modification to a Claim and take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the ~~Initial Decision Maker~~ Designer is unable to resolve the Claim if the ~~Initial Decision Maker~~ Designer lacks sufficient information to evaluate the merits of the Claim or if the ~~Initial Decision Maker~~ Designer concludes that, in the ~~Initial Decision Maker's~~ Designer's sole discretion, it would be inappropriate for the ~~Initial Decision~~

~~Maker to resolve the Designer to resolve the Claim. If Designer approves or rejects the Claim, parties have ten days to request reconsideration based upon additional information, or the decision shall be final. If Designer suggests compromise, parties have ten days to respond. If the Designer declines to resolve the claim, the Owner may, but is not obligated to, take the lead in resolving the Claim.~~

~~§ 15.2.3 In evaluating Claims, the Initial Decision Maker-Designer may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker-Designer in rendering a decision. The Initial Decision Maker-Designer may request the Owner to authorize retention of such persons at the Owner's expense.~~

~~§ 15.2.4 If the Initial Decision Maker-Designer requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of the request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker-Designer when the response or supporting data will be furnished, or (3) advise the Initial Decision Maker-Designer that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker-Designer will either reject or approve the Claim in whole or in part.~~

~~§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision Designer will render an initial decision which shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution, the provisions in Section 15.2.2, and thereafter to mediation if consented to by both parties, and to remedies as otherwise provided by law.~~

~~§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.~~

~~§ 15.2.6.1 Either party may, within 30 days from the date of receipt of an initial decision, demand in writing that the other party file for mediation. If such a demand is made and the party receiving the demand fails to file for mediation within 30 days after receipt thereof, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.~~

~~§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.~~

~~§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines. As a matter of law, the State of Tennessee and its property are not subject to mechanic's and material suppliers liens. Subcontractors, suppliers, and other claimants are protected through the Contract Bond as required by TCA § 12-4-201 et seq., and Section 11.4 of these Conditions. Specific requirements for notice of Claims on the bond are set forth in the TCA § 12-4-205.~~

~~§ 15.3 Mediation~~

~~The State of Tennessee is not subject to mandatory mediation.~~

~~§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract, except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.7, shall be subject to mediation as a condition precedent to binding dispute resolution.~~

~~§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall~~

proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

~~§ 15.3.3~~ Either party may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 60 days after mediation has been demanded without resolution of the dispute, demand in writing that the other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to file for binding dispute resolution within 60 days after receipt thereof, then both parties waive their rights to binding dispute resolution proceedings with respect to the initial decision.

~~§ 15.3.4~~ The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

§ 15.4 Arbitration

The State of Tennessee is not subject to mandatory arbitration.

~~§ 15.4.1~~ If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. The Arbitration shall be conducted in the place where the Project is located, unless another location is mutually agreed upon. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

~~§ 15.4.1.1~~ A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

~~§ 15.4.2~~ The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

~~§ 15.4.3~~ The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement, shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

§ 15.4.4 Consolidation or Joinder

~~§ 15.4.4.1~~ Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

~~§ 15.4.4.2~~ Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

~~§ 15.4.4.3 The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as those of the Owner and Contractor under this Agreement.~~

Certification of Document's Authenticity
AIA® Document D401™ – 2003

I, Dick Tracy, hereby certify, to the best of my knowledge, information and belief, that I created the attached final document simultaneously with this certification at 14:52:06 CT on 04/06/2023 under Order No. 3104238195 from AIA Contract Documents software and that in preparing the attached final document I made no changes to the original text of AIA® Document A201™ – 2017, General Conditions of the Contract for Construction, other than changes shown in the attached final document by underscoring added text and striking over deleted text.

(Signed)

(Title)

(Dated)

SECTION 011100 - SUMMARY OF WORK

PART 1 - GENERAL

1.1 LOCATION OF THE PROJECT

- A. The project is located at Volunteer State Community College:
1480 Nashville Pike, Gallatin, TN 37066
- B. The project Owner is Tennessee Board of Regents. Located at Office of Facilities Development, 3rd Floor, 1 Bridgestone Park Nashville, TN 37214.
- C. Volunteer State Community College Campus Contact is William Newman, William.Newman@volstate.edu (615) 300-2000.

1.2 PROJECT DESCRIPTION

- A. Contract: Stipulated Sum as described in Document 05 52 13 – Agreement Form. The contractor will be furnished free of charge a sufficient number of electronic Drawings and Project Manuals to perform the work.
- B. The project consists of the water line replacement at Volunteer State. A new 8” water Main will serve as the domestic and fire line for the campus, and the water line will be connected to the existing buildings. The existing water mains will be abandoned and left in place.
- C. Schedule
 - 1. The work is to be completed so that the campus has water at all times during school hours.

1.3 SPECIFICATIONS

- A. In general, these Specifications describe the work to be performed by the various trades, other than work specifically excluded. It shall be the responsibility of the Contractor and Subcontractors to perform all work incidental to their trade, whether or not specific mention is made of each item, unless such incidentals are included under another Item.
- B. It is advised that the Contractor and all Subcontractors familiarize themselves with the contents of the complete Specifications, particularly for the trades preceding, following, related or adjacent to their work.

1.4 USE OF PREMISES

- A. The Limit use of site and premises to allow:
 - o Owner occupancy
 - o Work by other contractors
 - o Continued owner occupancy by the owner’s security force
- B. Coordinate use of premises under direction of Owner.

- C. Assume full responsibility for protection and safekeeping of productions under this contract.

1.5 USE OF PREMISES

- A. Owner will occupy site and premises during entire construction period for conduct of his (or her) normal operations.
- B. Cooperate with Owner in scheduling operations to minimize conflict and to facilitate Owner Usage.
- C. Schedule the work to accommodate this requirement.

END OF SECTION 011100

01 22 13 – UNIT PRICES

PART 1 - GENERAL

1.01 SUMMARY

- A. Unit prices are subject to determination at the time of a Modification if the solicited unit price was not accepted and not listed in the Agreement.
- B. Unit prices may be established by appropriate Modification.
- C. Unit price items are listed in Section 01 22 15 with related sections for each.
- D. If no base quantity is stipulated, or if the base quantity is zero, then the unit price is invalid.
- E. Unit prices include all direct and indirect costs, except overhead and profit, associated with the unit price item, and are treated as direct prices to the Owner by the Contractor, regardless of whether the work of the unit price item is being performed by a subcontractor or a sub-subcontractor.
- F. Each unit price multiplied by its base quantity constitutes an allowance included in the Contract Sum.

1.02 ADMINISTRATION

- A. Use the related item number on all unit price documentation.
- B. Represent the allowance for each unit price item as a distinct line item in the Schedule of Values.
- C. Keep a daily log of actual quantities of specified work units encountered, consumed, or expended. When submitting an application for payment which includes payment for unit price items, provide Designer a copy or report of the log which is acceptable to Designer. Actual quantities and the Contractor's log are subject to verification by Designer.
- D. Adjustment of costs
 - 1. Continuously monitor the consumption of each base quantity and the associated use of the allowance and the anticipated use to complete the Work. Do not exceed an allowance.
 - 2. If a base quantity and the associated allowance are at risk of being exceeded, request a Modification to increase them in a timely manner to avoid delay in the Work.
 - 3. If all of the Work of an allowance is complete and there is unexpended Allowance remaining, request a modification to decrease the allowance to equal the amount that has been used.
- E. If adjustments exceed, or are expected to exceed, a cumulative twenty five percent (25%) of the initial base quantity, either party to the Contract may initiate renegotiation for a new unit price. Such a new unit price shall be made a part of the Contract by appropriate Modification.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

01 22 15 – LIST OF UNIT PRICES

PART 1 - GENERAL

1.01 LIST OF UNIT PRICES

Item No.	Related Sections	Base Quantity	Unit	Unit Price Per Unit	Work Included
1	312000 PART 3.4	200	CY		Rock Excavation and Exporting Off-site
2	312000 PART 3.4	100	CY		Excavating Unsuitable soils, exporting off-site, and if needed, importing of satisfactory backfill replacement.
3	331113.01 PART 2	100	LF		8" D.I. Pipe, including all associated fittings
4	331113.01 PART 2	100	LF		6" D.I. Pipe, including all associated fittings
5	331113.01 PART 2	50	LF		4" D.I. Pipe, including all associated fittings
6	331113.01 PART 2	50	LF		3" D.I. Pipe, including all associated fittings
7	331113.01 PART 2	50	LF		2.5" Copper Pipe, including all associated fittings
8	331113.01 PART 2	50	LF		1.5" Copper Pipe, including all associated fittings
9	331113.01 PART 2	10	LF		1" Copper Pipe, including all associated fittings

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

01 23 00 – ALTERNATES

PART 1 - GENERAL

1.01 REQUIREMENTS

- A. Section includes identification of each Alternate by number, and describes the basic changes to be incorporated into the Work if a particular Alternate is made a part of the work by specific provisions in the Agreement between the Owner and the Contractor.
- B. Related sections are referenced in the definition of each Alternate.
- C. Coordination of related work and modifications to surrounding work as required to properly integrate each Alternate, and to provide the complete construction required by the Contract Documents, is the responsibility of the Contractor.

1.02 DESCRIPTION OF ALTERNATES

Alternate No. 1: STATION 25+13 TO STATION 30+11 WATER LINE. Installation of 8" D.I. pipe, backflow preventor assembly and meter installation. Along with Pavement repair, restriping, and miscellaneous ancillary improvements per C1.08 through C1.09 of the drawings.

Alternate No. 2: STATION 14+17 TO STATION 18+08 WATER LINE. Installation of 8" D.I. water line installation. Along with concrete repair and miscellaneous ancillary improvements per C1.05 through C1.06 of the drawings.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

01 25 13 PRODUCT SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.01 SUBSTITUTIONS:

- A. Contractor assumes all risks associated with premature ordering and installation of substitute products.
- B. The specifically named manufacturers, products, and systems, and descriptive characteristics used in the Contract Documents normally serve only to establish a level of quality and a performance standard. Unless a specific restriction is placed upon an item in the specifications, Contractor may submit proposals for substitutions. The Owner reserves the right to disallow substitutions.
- C. Delays caused by tardiness of Contractor in preparing and forwarding submittals do not constitute an acceptable basis for consideration of substitute products. Delays due to factors which were in effect prior to project bidding do not constitute an acceptable basis for consideration of substitute products.
- D. Decisions heretofore made concerning the equivalence or equality of materials, supplies and equipment furnished for or incorporated in other projects, completed or under construction for the Owner shall not be considered as precedents or criteria and shall have no bearing or influence on the question of equivalent, equal or comparable materials, supplies and equipment for the Work.

1.02 SUBSTITUTION REQUEST FORM:

- A. Requests for substitutions shall be submitted to Designer on the form exhibited as Section 01 25 33, or in a similar format which provides the same or more information.
- B. When making requests for substitutions, Contractor assumes the following responsibilities:
 - 1. To have investigated the proposed substitute product and determined it is equal or superior in all respects to that specified;
 - 2. To provide the same warranty for substitute that Contractor would for that specified;
 - 3. To provide complete cost data, and waive all claims for additional costs related to substitution which subsequently become apparent; and
 - 4. To coordinate installation of the accepted substitute, making such changes as may be required for Work to be complete in all respects.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

01 25 33 – PRODUCT SUBSTITUTION REQUEST FORM

To: CT Consultants	Project: Volunteer State Community College Domestic Water Improvements
Attention: <<Designer contact>>	SBC Number: 166/025-01-2023
Specified Item Name and Manufacturer: <<Item name and manufacturer>>	Proposed Substitute Item Name and Manufacturer: <<Item name and manufacturer>>

1. The following are attached (mark all that apply):
 - Complete Description Catalog
 - Laboratory Tests Specifications Data
2. This substitution will have the following effects on dimensions, gauges, weights, etc.:
<<Comments>>
3. This substitution will have the following effects on wiring, piping, ductwork, etc.:
<<Comments>>
4. This substitution will have the following effects on other trades:
<<Comments>>
5. This substitution will have the following effect on construction schedules:
<<Comments>>
6. The proposed substitute(s) differs from the specified product(s) in quality and performance as follows:
<<Comments>>
7. Manufacturer guarantees for the substitute(s) and the specified product(s) are (check one):
 - The Same Different (if different, explain below)<<Comments>>

01 25 33 – PRODUCT SUBSTITUTION REQUEST FORM

8. Information on the availability of maintenance services and replacement materials for proposed substitute(s) is provided on an attached sheet.

- Attached Not Applicable

9. Names, addresses, and phone numbers of fabricators and suppliers for proposed substitute(s) are provided on an attached sheet.

- Attached Not Applicable

10. If the proposed substitution is accepted, it will result in:

- No Cost Impact
 A Cost Decrease of \$<<Amount>>
 A Cost Increase of \$<<Amount>> As Shown on Attached Itemization

11. License fees or royalties are pending on the proposed substitute.

- No Yes (if yes, explain below)

<<Comments>>

12. The undersigned shall pay for additional studies, investigations, submittals, redesign, and analysis by the Designer necessitated by this substitution request.

Substitutions must be requested in accordance with applicable Contract requirements. After bidding, substitutions are to be submitted only by Contractor. Substitute products should not be ordered or installed without written acceptance.
--

Submitted By:

Signature:	Date: <<Date>>
Printed Name: <<Name>>	Firm Name: <<Name>>

13. Designer Review and Comments:

- Accepted Rejected
 Accepted as Noted Rejected (received too late)
 Rejected (submitted incomplete)

<<Comments>>

Signature:	Date:
Printed Name:	Firm Name:

14. Owner Review:

Signature:	Date:
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END OF SECTION

01 26 00 – CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.01 SUPPORTING DOCUMENTATION FOR PROPOSALS OR CLAIMS

- A. Propose related changes to Work, Contract Sum, and Contract Time, in writing together. Propose unrelated changes separately. Attach and reference pertinent documents related to the change.
- B. For a change in the Work, specifically describe proposed change, or briefly describe the proposed change with specific reference to a completely descriptive attachment, such as a request for proposal from the Designer.
- C. For a change in Contract Sum, state briefly the reason for change, state the amount, and provide itemization of values on the following forms or similar forms providing the same information:
 - 1. Section 01 26 54 Form for Price Summary, listing the itemizations of Work by subcontractors and the Contractor that together apply to an entire related change in work.
 - 2. Section 01 26 55 Form for Price of Work, detailing the quantities, units, costs, and extensions for materials, equipment, and labor, subtotaled, plus overhead, and profit related to a specific proposed change in the Work.
 - 3. Section 01 26 56 Form for Price of Time, if applicable, deriving an average cost per day.
- D. For a change in Contract Time:
 - 1. Fully describe the extent of and reasons for the change and effect of the change on the construction schedule, and attach a revised construction schedule. Take into account weekends, holidays, and the specified standard baseline for weather delays during the period of the requested extension.
 - 2. For a change based on weather-related delay refer to Section 01 26 20.

1.02 SIGNATURES FOR CHANGE ORDER

Form shall be similar in format and content to Section 01 26 40 and signed by authorized representatives of the Owner, Designer, and Contractor according to the following procedure:

- 1. Designer prepares and submits supporting documents to Owner.
- 2. Owner produces and signs three (3) counterparts of form. Owner scans and transmits an informational copy to its construction representative, Designer, and Contractor.
- 3. Owner's construction representative brings owner's three original, signed counterparts to next progress meeting, unless urgency and opportunity make for a more timely execution.
- 4. Designer and Contractor both sign all three (3) counterparts at progress meeting. Each retains a counterpart, and the Owner's construction representative retains the third for the Owner.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

01 26 20 – WEATHER DELAYS

PART 1 - GENERAL

1.01 EXTENSION OF CONTRACT TIME

If a Claim is made for an extension of time based upon weather delays in accordance with the General Conditions an extension may be granted only for the number of weather delay days in excess of the number of days listed for the applicable month on the standard baseline.

1.02 STANDARD BASELINE FOR ADVERSE WEATHER

- A. The standard baseline is defined as the number of calendar days for each month during which construction activity exposed to weather conditions is expected to be prevented and suspended by cause of adverse weather. Suspension of construction activity for the number of days each month as listed in the standard baseline is included in the Work and is not eligible for extension of Contract Time.
- B. The Owner has established a standard baseline for the State of Tennessee as follows:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12	11	8	7	7	6	7	5	4	5	6	11

1.03 ADVERSE WEATHER AND WEATHER DELAY DAYS

- A. Adverse weather is defined as the occurrence of one or more of the following conditions within a 24 hour day that prevents construction activity exposed to weather conditions or access to the site:
1. Precipitation (rain, snow, or ice) in excess of one-tenth inch liquid measure.
 2. Temperatures that do not rise above the minimum required for the day's construction activity, if such temperature requirement is specified or accepted as standard industry practice.
 3. Sustained wind speed in excess of the maximum for the day's construction activity, if such sustained wind speed maximum is specified or accepted as standard industry practice.
 4. Dry out days under the following conditions:
 - a. more precipitation days occur than listed in the standard baseline;
 - b. there is a hindrance to site access or sitework and Contractor has taken all reasonable accommodations to avoid such hindrance; and,
 - c. no more than one dry out day is allocated for each additional day of precipitation more than the standard baseline that total one inch or more, liquid measure, unless specifically recommended by the Designer.
- B. A weather delay day may be counted if adverse weather prevents work on the project for 50% or more of the contractor's scheduled work day and critical path construction activities were included in the day's schedule, including a weekend day or holiday if Contractor has scheduled construction activities that day.

01 26 20 – WEATHER DELAYS

1.04 DOCUMENTATION AND SUBMITTALS

A. Weather Delay Report:

1. Use a copy of Section 01 26 25 as a weather delay report, indicating for each calendar month the days on which construction activity affecting the critical path of the Work was prevented by weather conditions.
2. In the column for the cause, indicate measurement of precipitation, temperature, wind, or other influencing factors.
3. Describe the construction activity that was scheduled, on the critical path, and delayed.
4. At the end of the month, add up the number of days delay, subtract the baseline number given in this Section, and show the resulting claimable days in excess of baseline.
5. Submit a copy of the completed report with the next application for payment. Reports submitted with applications for payment do not constitute a claim or preliminary claim for extension of time.

B. Claim for a time extension based on weather delay(s):

1. Submit a copy of all reports completed since the last month for which a time extension was previously claimed, or the commencement of Work if no previous claim, through the last month for which delay is being claimed. Claims for time extension based upon weather delays are unjustified if a submitted report does not corroborate the claim or if no report was submitted when it was required with an application for payment.
2. Submit daily jobsite work logs showing which and to what extent critical path construction activities have been affected by weather on a monthly basis.
3. Submit actual weather data to support claim for time extension obtained from nearest NOAA weather station or other independently verified source approved by Designer at beginning of project.
4. Organize claim documentation to facilitate evaluation on a basis of calendar month periods and the standard baseline.
5. Submit in accordance with the requirements of the Contract Documents.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

01 26 25 – WEATHER DELAY REPORT

SBC Project Number and Project Name:		Month and Year Reported Below:
Date	Weather condition causing delay	Work scheduled on critical path for this day that was delayed.
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
	Total number of days this month with delay due to weather	
	Baseline number from Section 01 26 20	
	Total – Baseline = claimable days	

END OF SECTION

01 26 40 – FORM FOR AMENDMENT, CHANGE ORDER, OR DIRECTIVE

[] Amendment PROJECT:
 [] Change Order Project Number:
 [] Construction Change Directive Modification Number:
 Original Contract Date: Date This Change Initiated:

The following changes in the Contract are hereby directed:

Item	Reference	Work	Contract Sum	Contract Time
------	-----------	------	-----------------	------------------

The original Contract Sum \$
 Net Change previously authorized..... \$
 The Contract Sum prior to this Modification..... \$
 This modification (*increases / does not change / decreases*) the Contract Sum... \$
 The new Contract Sum, including this modification \$
 This Modification (*increases / does not change / decreases*) the Contract Time..
 The new Contract Time, including this Modification.....
 The last day of the Contract Time, including this Modification.....

CONTRACTOR
Signed

DESIGNER
Signed

OWNER
Signed

Name
&
Date

Name
&
Date

Name
&
Date

For

For

For

Changes over 10% cumulatively or exceeding \$500,000.00, STATE ARCHITECT:

Signed

Name

Date

01 26 54 - FORM FOR PRICE SUMMARY

SBC Project Number:	Project Name:
---------------------	---------------

Name of General Contractor:

Proposal Number:	Date Itemized:	Page	of	pages
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Work by Subcontractors	Name of Subcontractor	Costs and Allowances

	Subtotal:	0.00
General Contractor mark-up on Subtotal: <input style="width: 50px; border: 1px solid black;" type="text"/> % =		0.00
Subtotal for General Contractor for work by subcontractors:		0.00

Work by General Contractor	

Subtotal (including Subcontractors and the General Contractor):	0.00
---	------

Cells with red underline (if viewed in color) are for you to fill in. Others are protected.

Bond Premium:		%	=	0.00
---------------	--	---	---	------

Rounding off is permitted if rounding up for decreases and rounding down for increases. Math functions in Excel show rounded to nearest penny, but carry exact value for calculations. Let embedded math do its work.

Total:	0.00
---------------	------

This spreadsheet is available on the Owner's Designers' Manual website.

01 26 55 - FORM FOR PRICE OF WORK

SBC Project Number:	Project Name:
---------------------	---------------

Work itemized below provided by: _____

Proposal Number:	Date Itemized:	Page	of	pages
------------------	----------------	------	----	-------

Description	Material				Equipment				Labor			
	Quantity	Unit	Cost	Extension	Quantity	Unit	Cost	Extension	Quantity	Unit	Cost	Extension
				0.00				0.00				0.00
				0.00				0.00				0.00
				0.00				0.00				0.00
				0.00				0.00				0.00
				0.00				0.00				0.00
				0.00				0.00				0.00
				0.00				0.00				0.00
				0.00				0.00				0.00
				0.00				0.00				0.00
				0.00				0.00				0.00
				0.00				0.00				0.00
				0.00				0.00				0.00
				0.00				0.00				0.00
				0.00				0.00				0.00
				0.00				0.00				0.00
				0.00				0.00				0.00
				0.00				0.00				0.00
				0.00				0.00				0.00
				0.00				0.00				0.00
				0.00				0.00				0.00
				0.00				0.00				0.00
				0.00				0.00				0.00
				0.00				0.00				0.00
				0.00				0.00				0.00
				0.00				0.00				0.00
				0.00				0.00				0.00

Materials	Subtotal	0.00	Equipment	Subtotal	0.00
	% Sales Tax =	0.00		% Burden =	0.00
	Cost:	0.00		Cost:	0.00

Cells with red underline (if viewed in color) are for you to fill in. Other cells are protected. Rounding off is permitted if rounding up for decreases and rounding down for increases.

Math functions in Excel show rounded to nearest penny, but carry exact value for calculations.

Let embedded math in "extension" columns do its work.

This spreadsheet is available on the Owner's Designers' Manual website.

Subtotal of Costs of Materials + Equipment + Labor = \$	0.00
10% Overhead allowed on costs = \$	0.00
Subtotal of Costs + Overhead = \$	0.00
5% Profit allowed on Costs + Overhead = \$	0.00
Total for this change = \$	0.00

01 26 56 - FORM FOR PRICE OF TIME

SBC Project Number:	Project Name:
---------------------	---------------

Work itemized below provided by: _____

Proposal Number:	Date Itemized:	Page	of	pages
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Description	Period Cost	Period (Year, Month, Week, Day)	Cost Per Day
Superintendent Salary	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid black;"/>
Superintendent Vehicle	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid black;"/>
General Use Vehicles	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid black;"/>
-----	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid black;"/>
-----	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid black;"/>
-----	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid black;"/>
Field Office	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid black;"/>
Field Office Equipment	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid black;"/>
Computer	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid black;"/>
Fax Machine	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid black;"/>
Copier	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid black;"/>
Typewriter	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid black;"/>
Calculator	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid black;"/>
Field Office Utilities	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid black;"/>
Electricity	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid black;"/>
Natural Gas	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid black;"/>
Water Service	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid black;"/>
Drinking Water	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid black;"/>
Telephone Service	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid black;"/>
On-Site Storage	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid black;"/>
Shed	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid black;"/>
Trailer	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid black;"/>
Safety Program	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid black;"/>
Cleaning	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid black;"/>
Site Toilet(s)	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid red;"/>	<hr style="border-top: 1px solid black;"/>

Cells with red underline (if viewed in color) are for you to fill in. Other cells are protected. Math functions show rounded to penny, but carry exact value for calculations. Let embedded math do its work. Use "Year", "Month", "Week", or "Day" for period. This spreadsheet is available on the Owner's Designers' Manual website. See A201 7.3.11.1 for Class 1 time.

Subtotal of Costs:
 5% for Profit:
Total per day:

01 29 54 – RETAINAGE ESCROW INITIATION

PART 1 - GENERAL

1.01 BASIC REQUIREMENTS

- A. Reference Tennessee Code Annotated (TCA) § 66-34-104.
- B. In accordance with State law retainage shall be deposited into an interest-bearing escrow account if the original Contract Sum is \$500,000 or greater.
- C. Failure to have the escrow account operational by the time of the Contractor's second application for payment will result in delay of payment or inability of the Owner to make payment. Any such delay or inability to pay will not be grounds for relief under the prompt payment statutes.

1.01 BANKING INSTITUTION REQUIREMENTS

The banking institution handling the retainage escrow account must be in an appropriate custodial care agreement with the State Treasurer. If not already in such an agreement, a banking institution can request such an agreement from the State Treasurer, subject to meeting eligibility requirements of TCA §12-4-108(c).

1.03 PROCESS

- A. Shortly after award of contract, the Tennessee Department of Finance and Administration (F&A) will send the Contractor information for starting the account. This information typically includes the following:
 - 1. Procedural guide
 - 2. Forms including the basic application provided herein as Form A.
 - 3. List of banks that currently have agreements with the State to host retainage escrow accounts.
- B. The instructions from F&A will include a name and phone number to call for help if the Contractor needs help completing Form A or if the Contractor plans to use a lending institution that does not have a current agreement with the State for hosting retainage escrow.
- C. Immediately upon award of a contract with a Contract Sum of \$500,000 or greater, complete the Form A shown in this section, arrange for the completed Form A to be executed by the escrow bank, and instruct the bank to submit the original wet-signature Form A to the following address.

Retainage Escrow Coordinator
Tennessee Department of Finance and Administration
Office of Business and Finance
Suite 2000 William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue
Nashville TN 37243-0294

01 29 54 – RETAINAGE ESCROW INITIATION

FORM A
APPLICATION FOR THE SUBSTITUTION OF SECURITIES FOR ALL AMOUNTS
RETAINED ON STATE BUILDING COMMISSION CONSTRUCTION CONTRACTS

Date: _____

RE: Contract Number: _____

Project No.: _____

Location: _____

Dear State Building Commission:

Pursuant to the provisions of Tennessee Code Annotated, Sections 12-4-108,

Contractor's name and
address as appearing
on construction
Contract:

[Empty rectangular box for contractor information]

hereby requests that whenever payment for which certain amounts are retained by the State Building Commission as determined by the subject construction contract, the amount so retained be substituted for approved securities, as designated by the Tennessee State Treasurer.

The undersigned Contractor hereby appoints _____
(Name of Banking Institution)

located at _____ to be its
(Complete Address of Banking Institution)

agent and attorney-in-fact to receive all amounts retained by the State Building Commission under the provisions of the subject construction Contract and to purchase Retainage Securities of the following type:

(Description & Account Number)

The appointed Banking Institution, as indicated by the acceptance signature shown below, agrees to enter or has already entered into a Trust Agreement with the Tennessee State Treasurer to act as custodian and servicing agent of Retainage Securities and to perform all assigned duties and responsibilities with respect thereto as set forth in the Trust Agreement, which is herein incorporated by reference.

Very truly yours,

(Signature of Authorized Representative of Contractor)

(Title)

ACCEPTED:

(Signature of Authorized Officer of Banking Institution)

(Title)

CONTACT PERSON (BANK) _____ PLEASE PRINT

PHONE NUMBER _____

END OF SECTION

01 29 73 – SCHEDULE OF VALUES

PART 1 - GENERAL

1.01 FORM AND APPROVAL

- A. The form for the Schedule of Values shall be AIA Document G703 Continuation Sheet.
- B. If objected to by the Designer or the Owner revise and resubmit the Schedule of Values to the Designer's and Owner's satisfaction prior to submitting an Application for Payment.

1.02 LEVEL OF DETAIL

- A. Provide a breakdown of the Contract Sum in sufficient detail to facilitate ongoing evaluation of Applications for Payment and progress measurement and reports.
- B. Round off line items to the nearest whole dollar with the total equal to the Contract Sum.

1.03 ALLOCATION OF VALUES

- A. Phases:
 - 1. If Phases are stipulated with distinct commencement, duration, or completion requirements, divide the allocation to correspond to the Phases.
 - 2. Within each Phase subdivide the allocations as described below and subtotal.
- B. Sitework:

Provide line items for sitework including categories for site utilities, roads and parking, and appurtenances according to general type and physical separation.
- C. Each involved building or major structure:
 - 1. Categorize items by major trades or units of work corresponding to the divisions and sections of the specifications.
 - 2. Further subdivide as desired but maintain a distinct and identifiable correspondence to this allocation.
- D. If allowances are stipulated in the Work, provide a line item in the Schedule of Values for each allowance, including quantity allowances associated with Unit Prices. If the project has phases associate the allowance with the relevant phase.
- E. If the Contract is a CM/GC contract based on a Guaranteed Maximum Price (GMP) with estimated trades identified as a part of the GMP, provide a distinct line item for each estimated trade.
- F. Prior to receipt of written approval of a Change Order, do not show in any respect a Change Order intended to modify the Contract sum, regardless of the Change Order's status prior to being fully execute. After a Change Order which modifies the Contract Sum is approved and fully executed by the Owner show the Change Order as follows.
 - 1. Provide a single line item for each fully executed Change Order with identification by Change Order number.
 - 2. Maintain these line items through the balance of the project.
- G. For the final statement of accounting incorporate Change Orders that modify the Contract Sum into the appropriate allocations.

END OF SECTION

01 29 76 – PROGRESS PAYMENT PROCEDURES

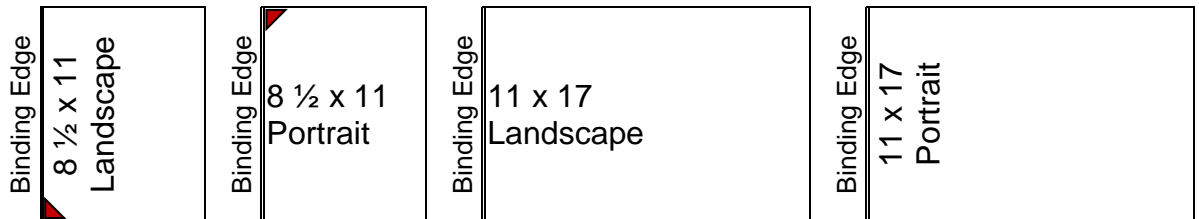
PART 1 – GENERAL

1.01 SUBMITTAL:

A. In each Application for Payment provide the document indicated in the following table according to its context.

Counterpart or Copy	Progress Payment	Reducing Retainage Upon Subst. Completion	Final Payment	Document	§ 1.03 Subsection
counterpart	YES	YES	YES	G702 Application	A
copy	YES	YES	YES	G703 Continuation	B
copy	no	no	YES	Final Accounting	C
copy	YES	YES	YES	Contingency & Reserve Logs (if CM/GC)	D
copy	if any	if any	no	Off-Site Stored Materials documents	E
counterpart	no	no	YES	Affidavit of Payment	F
counterpart	no	YES	YES	Consent of Surety with Power of Attorney	G
copy	no	no	YES	Insurance Certificate	H
copy	no	no	YES	Statement of Continuing Insurability	I
copy	no	if any	if any	U&O Permit	J
copy	no	YES	YES	Data Binder Receipt(s)	K
copy	no	no	YES	Roof Warranty or Warranties	L
copy	no	no	YES	Report of Subcontractors and Suppliers	M
copy	YES	if any	no	Visitor Log	N
copy	YES	if any	no	Weather Delay Report	O

B. Provide application documents assembled in order listed above on 8½” x 11” pages, except 11” x 17” pages can be used for Progress Schedules and Submittal Logs if folded to fit an 8½” x 11” size. Orient all pages as shown below. Provide application sets bound with a single clip (no staple) affixed to the upper left of the G702 first page (according to its orientation ▽).



C. Counterpart documents shall be original instruments with wet signatures and embossed or wet-stamped seals, in each set of application documents.

01 29 76 – PROGRESS PAYMENT PROCEDURES

- D. Provide a draft submission, including attachments, as a PDF attached to an email, to Designer and to the Owner's construction representative three days prior to actual submittal.
- E. Provide actual submission of five sets of the application documents to the Designer at progress meeting, substantial completion inspection meeting, or final inspection meeting. If submitted outside of these meetings, provide conveyance of application to Designer, from Designer to Owner's construction representative, and from Owner's construction representative to Owner's central office.

1.02 INCLUSIONS AND CALCULATIONS:

- A. Accurately represent all values with two decimal places, calculated to the penny.
- B. Stored Materials: Materials suitably stored on-site but not yet incorporated into the Work can be included; and, those suitably stored off-site can be included if documented in accordance with later provisions of this section.
- C. On CM/GC contracts, the total completed and stored to date for estimated trades can only be included once bids have been taken, subcontracts awarded, and the actual price reconciled to the Reserve Log.
- D. Calculation of retainage and amounts withheld:
 - 1. Credit for completed work and stored materials, and deductions for incomplete work, comprise the Total Completed and Stored to Date. The Total Completed and Stored to Date shall not include the value of punch list items that remain incomplete after Substantial Completion.
 - 2. Retainage is calculated as a percentage of Total Completed and Stored to Date: 5% prior to Substantial Completion; 2% after Substantial Completion; then, none at final payment. In the continuation sheets, showing retainage at individual line items is not required and is discouraged, as it promotes rounding errors. Retainage should only be shown at phase sub-totals, if phases exist, and when retainage rates vary between phases.
 - 3. Other amounts withheld (i.e., potential liquidated damages or in response to subcontractor claims of non-payment) can be added to the continuation sheet and deducted from the Total Completed and Stored to Date, or can be deducted from the resulting current payment due after retainage and prior payments are accounted.
- E. If a billing period would cross a State fiscal year (ending June 30, starting July 1), provide separate pay requests for the portion of work performed in each fiscal year.

1.03 FORMS, FORMAT, AND CONTENT:

- A. G702 Application: Use AIA Document G702 Application and Certificate for Payment
 - 1. For project identification, include the Owner's project number featured prominently, institution name, and work name, which is normally the project title shown in the Agreement.
 - 2. Provide a unique, sequential application number.
 - 3. Include the Contractor's address exactly as provided in the ACH Form.
 - 4. Show the county where the Work is located, normally where AIA captions "Contract for".

01 29 76 – PROGRESS PAYMENT PROCEDURES

- B. G703 Continuation: Use AIA Document G703 Continuation Sheet itemized with the line items and values of the schedule of values accepted by Designer, and values and percentages for each line item. If there are phases, include a sub-total for each phase as well as a grand total.
- C. Final Accounting: Allocate final Contract Sum as if Modifications had been fully incorporated in Contract Sum at award of Contract, and shall follow the same format as the schedule of values.
- D. GMP Contingency Log and Reserve Log, only if a CM/GC contract.
- E. Off-Site Stored Materials: If any, provide the following.
 - 1. Statement identifying where materials are stored, and assuring that materials are tagged to identify them for use in the project.
 - 2. Bill(s) of sale for materials claimed that list(s) all items.
 - 3. Certificate of insurance covering materials claimed, recognizing Owner's right to make claims.
- F. Affidavit of Payment of Debts and Claims: Provide counterpart using AIA Document G706, when requesting final payment for the Work or reduction of retainage to zero for any portion of the Work.
- G. Consent of Surety:
 - 1. If seeking reduction in retainage prior to final payment for the entire Work, or final payment on only a portion of the Work, provide counterpart using AIA Document G707A Consent of Surety to Reduction in Retainage, or a similarly formed letter.
 - 2. If seeking final payment, provide counterpart using AIA Document G707 Consent of Surety Company to Final Payment, or a similarly formed letter.
 - 3. If Contractor has listed exceptions in the affidavit of payment, Surety's consent shall acknowledge such exceptions.
 - 4. If Contract is not bonded, consent of surety is not required, and Owner will instead advertise a public notice of settlement, and wait 30 days for responses, before accepting the application.
 - 5. Provide counterpart of power of attorney with consent of surety.
- H. Insurance Certificate: If seeking final payment, provide certificate of insurance for products and completed operations as required by the General Conditions of the Contract for Construction.
- I. Statement of continuing insurability: If seeking final payment, a letter written to the effect required by the General Conditions of the Contract.
- J. Use & Occupancy Permit (some jurisdictions have a different name): Provide copy with first application following substantial completion.
- K. Data Binder Receipt:
 - 1. With first application following substantial completion, provide copy of document identifying to whom Contractor delivered the operating and maintenance data binders.
 - 2. With application for final payment, provide copy of document identifying to whom Contractor delivered project data binders

01 29 76 – PROGRESS PAYMENT PROCEDURES

- L. Roof Warranty or Warranties, if any required, on the Owner's section 07 50 36 standard form.
- M. Report of Subcontractors and Suppliers, on the standard form.
- N. Visitor Log for the period covered by application. After substantial completion, provide log(s) for periods prior to substantial completion that have not been provided in a prior application.
- O. Weather Delay Report for all calendar months completed, up to the date of substantial completion, and not previously submitted.

1.04 CERTIFICATION

- A. Designer, if in disagreement with the amounts claimed in an application, may either return application to Contractor for revision and resubmittal, or revise application by hand to indicate corrections Designer considers appropriate.
- B. Designer, finding an application complete and correct, will certify the application and return one of the sets to Contractor to indicate the action taken.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

01 31 19 – PROJECT MEETINGS

PART 1 - GENERAL

1.01 SCHEDULING AND ATTENDANCE

- A. The Designer, in cooperation with the Owner and the Contractor, will schedule and administer a pre-construction meeting, periodic progress meetings, and any required special meetings.
- B. Representatives of the Owner and the Designer will attend.
- C. Attending representatives of the Contractor, subcontractors, and suppliers shall be qualified and authorized to act on behalf of the entity each represents.
- D. The Contractor representative shall be authorized to sign Change Orders.

1.02 PRE-CONSTRUCTION MEETING

- A. A pre-construction meeting will be scheduled upon the award of the contract prior to the issuance of the Notice to Proceed.
- B. The Contractor shall arrange for the following participants in the pre-construction meeting:
 - 1. The Contractor's superintendent and management representative having authority to sign change orders.
 - 2. Major subcontractors' representatives
 - 3. Major suppliers' representatives
 - 4. Others as desired

1.03 PROGRESS MEETINGS

- A. Progress meetings are held to provide a regular and frequent opportunity for the following purposes:
 - 1. Conduct a general review of the progress of the Work aimed at identifying and mitigating impediments to timely completion.
 - 2. Provide an opportunity for the Contractor to submit Applications for Payment along with appropriate attachments and other submittals.
 - 3. Designer and Contractor sign Change Orders in accordance with § 01 26 00.
- B. Progress meetings will be scheduled and conducted at the project site when deemed advisable by the Designer until the Work is complete, typically twice monthly.
- C. The Contractor shall arrange for the following participants in progress meetings:
 - 1. The Contractor's superintendent and management representative having authority to sign change orders.
 - 2. Subcontractors' representatives, as befits the agenda
 - 3. Suppliers' representatives, as befits the agenda
 - 4. Others, as appropriate.
- D. Proceedings of these meetings will be recorded and the Contractor will be furnished copies for its use and for distribution to subcontractors, material suppliers and vendors.

01 31 19 – PROJECT MEETINGS

1.04 SPECIAL MEETINGS

The Contractor and its subcontractors and suppliers shall attend special meetings as deemed necessary and requested by the Designer.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

01 31 80 – Project Team Evaluation

PART 1 - GENERAL

1.01 REQUIREMENTS

- A. State of Tennessee Office of the State Architect requires that all Contractors and Designers Comply with the TEAM EVALUATION found on their website <https://www.tn.gov/content/tn/osa/capital---real-estate/capital-projects.html>.
- B. Comply with PROJECT TEAM EVALUATIONS GUIDELINES in Appendix 3: System or Campus Specific Guidelines and Requirements; TBR Instructions for Project Execution; Team, 360 Evaluations Instructions - September 2019.

1.02 EVALUATIONS OF DESIGNER AND OWNER BY CONTRACTOR

- A. Provide complete evaluations of the Designer and Owner at project team evaluations meetings.
- B. Provide evaluations and use the forms in the Project Team Evaluations format and evaluation rubric provided on the State of Tennessee Office of the State Architect (OSA) website. on the Office of the State Architect website.
- C. Provide interim evaluations as needed during the construction.
- D. Provide final evaluations prior to Final Inspection.
- E. Final project payment will be withheld until Final Team Evaluations have been completed and submitted to Designer.

1.03 EVALUATIONS OF CONTRACTOR BY OWNER AND DESIGNER

The Owner and Designer shall complete evaluations of the Contractor in accordance with the Project Team Evaluations information provided on the OSA website.

1.04 PROJECT TEAM EVALUATION MEETINGS

Provide a representative at project team evaluation meeting(s) at times and locations established by the Owner or Designer to support required evaluations. The representative shall have knowledge of the project to enable discussion of evaluation of project team members and authority to adjust evaluations in the meeting(s).

1.05 EVALUATION GRIEVANCES

Grievances with evaluations shall be handled in accordance with Scoring Reviews information provided on the OSA website.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

01 31 90 – ADMINISTRATIVE LOGS

PART 1 - GENERAL

1.01 SUBMITTALS LOG

- A. If any shop drawings, product data, or sample submittals are required by the Contract Documents, maintain a submittals log to record the status of submittals made to the Designer.
- B. Process:
 - 1. Submit three (3) copies with each Application for Payment.
 - 2. Clearly identify the Project.
 - 3. Record activities with respect to shop drawings, product data, samples, and such other submittals which are required by the Contract Documents.
 - 4. Indicate for each submittal made to date:
 - a. Title or name, and type of submittal.
 - b. Date submitted to the Designer.
 - c. Date returned by the Designer.
 - d. General nature of the Designer's response.

1.02 VISITOR LOG

- A. Maintain visitor log in the field office (or with the project superintendent when no field office is required) to record visits by all persons not a part of the Contractor's forces, materials suppliers, or subcontractors' forces, until substantial completion of the entire Work.
- B. Process:
 - 1. Submit a copy with each counterpart of each application for payment, covering the period since the last log(s) submitted.
 - 2. Clearly identify the Project.
 - 3. Use the form of specification Section 01 31 93, and indicate:
 - a. Visitor name and affiliation.
 - b. Date and time of visit.
 - c. Length of time on site.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

01 32 00 – CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 – GENERAL

1.01 IDENTIFICATION

- A. Identify clearly the Project, SBC Number, and date of issuance or revision on each submitted schedule.

1.02 CONSTRUCTION SCHEDULE FORMAT

- A. Use a bar chart or critical path schedule format or other method approved by the Designer. A critical path schedule is recommended to enable meeting requirements for documentation for time extension requests.
- B. Utilize a construction scheduling software for development and updates.
- C. Outline the orderly progress of the Work as planned from the Notice to Proceed through Substantial Completion on the contractually required date.
- D. Categorize the Work by major work area and distinct trade or team. If phases are specified also categorize by phase.
- E. Divide work activities into one month or less duration.
- F. Provide an identifiable relationship to the schedule of values.
- G. Identify projected monthly progress, points of 50% completion and Substantial Completion, and other major milestones.
- H. If included in the Work, commissioning and storm water pollution protection plan activities shall be major milestones.
- I. If planting that is seasonally sensitive is included in the Work, show such distinctly in a seasonally appropriate time.
- J. Transmit the schedule in PDF format when requested by the Owner or Designer.

1.03 INITIAL CONSTRUCTION SCHEDULE

Submit within 21 days of award of the Contract and no later than the date of submission of the first Application for Payment.

1.04 UPDATED CONSTRUCTION SCHEDULE

- A. Submit a copy attached to each counterpart of Applications for Payment.
- B. Format in a manner similar to the initial progress schedule and as follows:
 - 1. Indicate the initial construction schedule for the Work.
 - 2. Identify the actual progress through the period covered by the current Application for Payment.
 - 3. Indicate the planned progress through Substantial Completion including extensions of time made by Modification.
 - 4. If actual progress falls behind previous projections, indicate the recovery plan so that the Work will be completed on time.

1.05 SUBMITTALS SCHEDULE

- A. Submit in writing with the initial construction schedule.
- B. The submittals schedule may be incorporated into the construction schedule if clearly identified.

01 32 00 – CONSTRUCTION PROGRESS DOCUMENTATION

- C. Identify submittals to be made.
- D. Show date for submission and date by which Designer should respond, allowing sufficient time for review. Designer may require revision of the submittals schedule if times allotted for review are insufficient.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

SECTION 013319 - FIELD TEST REPORTING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes, but is not limited to, services performed by an independent testing laboratory. Laboratory services covered under this section are for testing materials used for field constructed elements of the work. Performance testing of manufactured items and shop fabricated materials shall be covered under their respective specification section.
- B. All testing performed under this item shall be for the protection and benefit of the Owner and shall not be construed by the Contractor as a comprehensive quality control program intended to protect the Contractor, his subcontractors, or his suppliers. The testing frequency and types of testing shall be at the discretion of the Owner.
- C. Inspections, tests, and related actions specified in this section and elsewhere in the contract documents are not intended to limit the Contractor's own quality control procedures and testing, which facilitate overall compliance with requirements of the contract documents. Requirements for the Contractor to provide quality control services as required by the Engineer, the Owner, governing authorities, or other authorized entities are not limited by the provisions of this Section.
- D. The Contractor is required to cooperate with the independent testing laboratories performing required inspections, test, and similar services and the Engineer or his representative.
- E. Materials and installed work may require testing or retesting at any time during progress of work. Retesting of rejected materials or installed work shall be done at Contractor's expense.

1.2 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Supplementary Conditions and Division 1 Specifications sections, apply to work of this section.
- B. The Contract Documents may include testing requirements furnished under other Sections. Work elements which may include other testing requirements are:
 - 1. Water utility distribution systems.
 - 2. Asphalt and concrete paving.

1.3 SELECTION AND PAYMENT

- A. The Owner will employ an independent testing laboratory to perform specified testing. The contractor is not responsible for paying the independent testing.
- B. Employment of testing laboratory in no way relieves the Contractor of the obligation to perform work in accordance with requirements of the contract documents.
- C. The testing laboratory and their personnel shall be under the direction of the Engineer's on-site representative, regardless of who employs their services.

1.4 REFERENCES

- A. AASHTO T-19, Standard Method of Test for Unit Weight and Voids in Aggregate.
- B. AASHTO T-37, Standard Method of Test for Sieve Analysis of mineral Filler for Road and Paving Materials.
- C. AASHTO T-230, Standard Method of Test for Determining Degree of Pavement Compaction of Bituminous Aggregate Mixtures.
- D. ASTM C-29, Standard Method of Test for Unit Weight and Voids in Aggregate.
- E. ASTM C-31, Standard Practice for Making and Curing Concrete Test Specimens in the Field.
- F. ASTM C-33, Standard Specification for Concrete Aggregates.
- G. ASTM C-39, Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
- H. ASTM C-40, Test Method for Organic Impurities in Fine Aggregates for Concrete.
- I. ASTM C-42, Standard Test Methods for Obtaining and Testing Drilled Cored and Sawed Beams of Concrete.
- J. ASTM C-88, Standard Test Method for Soundness of Aggregate by use of Sodium Sulfate or Magnesium Sulfate.
- K. ASTM C-94, Standard Specification for Ready-Mixed Concrete.
- L. ASTM C-117, Standard Test Method for Materials Finer than 75-um (No. 200) Sieve in Mineral Aggregates by Washing.
- M. ASTM C-136, Standard Method for Sieve Analysis of Fine and Course Aggregate.
- N. ASTM C-142, Test Method for Clay Lumps and Friable Particles in Aggregate.

- O. ASTM C-143, Standard Test Method for Slump of Hydraulic Cement Concrete.
- P. ASTM C-172, Standard Practice for Sampling Freshly Mixed Concrete.
- Q. ASTM C-173, Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method.
- R. ASTM C-231, Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method.
- S. ASTM C-535, Standard Test Method for Resistance to Degradation of Large-Size Course Aggregate by Abrasion and Impact in the Los Angeles Machine.
- T. ASTM C-1064, Standard Test Method for Temperature of Freshly Mixed Portland Cement Concrete.
- U. ASTM D-698, Standard Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 5.5-lb. (2.49-kg) Rammer and 12-inc. (305-mm) Drop.
- V. ASTM D-2487, Standard Test Method for Classification of Soils for engineer purposes.
- W. ASTM D-2940, Standard Specification for Graded Aggregate Material for Bases or Subbases for Highways or Airports.
- X. ASTM D-4253, Standard Test Method for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table.
- Y. ASTM D-4254, Standard Test Method for Minimum Index Density and Unit Weight of Soils and Calculation of Relative Density.
- Z. ASTM D-4832, Standard Test Method for Preparation and Testing of Controlled Low Strength Material (CLSM) Test Cylinders.

1.5 SUBMITTALS

- A. Prior to the start of work, Owner to provide submit testing laboratory name, address, and telephone number, and names of full-time specialist and responsible officer.

1.6 QUALITY ASSURANCE

- A. Except as otherwise indicated, the testing laboratory engaged shall be prequalified by the Tennessee Department of Transportation for the types of services specified herein.

- B. The field personnel utilized to perform all field-testing and preparation shall be certified for those tests being performed.

1.7 RESPONSIBILITIES

- A. Testing Laboratory Responsibilities:
 - 1. Provide qualified personnel at the site. Cooperate with the Engineer and Contractor in performance of services.
 - 2. Perform specified sampling and testing of products in accordance with the specified standards.
 - 3. Ascertain compliance of materials and mixes with requirements of the contract documents.
 - 4. Immediately notify the Engineer and Contractor of observed irregularities or nonconformance of work or products.
 - 5. Perform additional tests required by the Engineer.
 - 6. Testing personnel are to report to the Engineer or his representative upon arrival on site for instructions and requirements. Prior to leaving the site, furnish the Engineer or his representative all test results whether in a formal or informal format.
 - 7. Attend preconstruction meetings and progress meetings.
- B. Contractor Responsibilities:
 - 1. Provide access to materials proposed to be used which require testing.
 - 2. Cooperate with laboratory personnel and provide access to the work.
 - 3. Provide incidental labor and facilities:
 - a. To provide access to work to be tested.
 - b. To obtain and handle samples at the site or at the source of products to be tested.
 - c. To facilitate tests.
 - d. To provide storage and curing of test samples as required by the testing laboratory.
 - 4. Notify the Engineer and laboratory 24 hours prior to expected time for operations requiring testing services for scheduling purposes. Materials will not be permitted to be placed without the proper testing being performed in conformance with this Section.

1.8 LIMITS OF LABORATORY AUTHORITY

- A. The laboratory may not release, revoke, alter, or enlarge the requirements of the contract documents.
- B. The laboratory may not approve or accept any portion of the work.
- C. The laboratory may not assume any duties of the Contractor.
- D. The laboratory has no authority to stop the work.

1.9 SCHEDULE OF TESTS

Testing anticipated on this project shall include, but is not limited to:

- A. Earthwork
 - 1. Special backfill material sieve analysis per ASTM C-136, one test per source.
 - 2. On-site trench backfill analysis per ASTM D-2487, as directed by Engineer.
 - 3. Pipe bedding and cover sieve analysis per ASTM C-136, one test per source.
 - 4. Drainage fill sieve analysis per ASTM C-136, one test per source.
 - 5. Soil compaction per ASTM D-698.
 - a. Trench backfill testing shall be at least one (1) test/50 L.F. of each lift;
 - b. Subgrade and/or subbase testing shall be at least one (1) test/200 L.F. of pavement or 5,000 S.F. of slabs subject to greater frequency due to soil conditions or Engineer's direction.
 - 6. Backfill compaction per ASTM D-4253 and D-4254, one test per 50 L.F. of each lift.
 - 7. Low Strength Mortar testing per ASTM D-4832.
- B. Concrete
 - 1. Concrete aggregate deleterious substances per ASTM C-40, ASTM C-117, and ASTM C-142, one test per source.
 - 2. Concrete aggregate abrasion per ASTM C-535, one test per source.
 - 3. Sodium sulfate soundness of coarse aggregate per ASTM C-88, one test per source.
 - 4. Sampling Fresh Concrete: ASTM C-172, except modified for slump to comply with ASTM C 94.
 - a. When cylinders and/or beam samples are made, the slumps and air test shall be made using concrete from the same batch.
 - b. Slump: ASTM C-143; one test at point of discharge for each day's pour of each type of concrete; additional tests when concrete consistency seems to have changed.
 - c. Air Content: ASTM C-173, volumetric method of lightweight concrete; ASTM C-231 pressure method for normal weight concrete; at least one for each pour of each type of air-entrained concrete, and each time a set of compression test specimens is made.
 - d. Concrete Temperature: ASTM C-1064, test hourly when air temperature is 40° F. (4° C.) and below, and when 80° F. (27° C.) and above; and each time a set of compression test specimens is made.
 - e. Compression Test Specimen: ASTM C-31; one set of 4 standard cylinders for each compressive strength test, unless otherwise directed. Mold and store cylinders for laboratory cured test specimens except when field-cure test specimens are required.
 - f. Compressive Strength Tests: ASTM C-39; one set for each day's pour exceeding 5 cubic yards plus additional sets for each 50 cubic yards over and above the first 25 cubic yards of each concrete class placed in any one day; one specimen tested at 7 days, two specimens

tested at 28 days, and one specimen retained in reserve for later testing if required. A strength test shall be the average of the strengths of two cylinders made from the same sample of concrete and tested at 28 days.

- i. When frequency of testing will provide less than 5 strength tests for a given class of concrete, conduct testing from at least 5 randomly selected batches or from each batch if fewer than 5 are used.
- ii. Strength level of concrete will be considered satisfactory if averages of sets of three consecutive strength test results equal or exceed specified compressive strength, and no individual strength test result falls below specified compressive strength by more than 500 psi.
- g. When cylinders and/or beam samples are made, the slumps and air test shall be made using concrete from the same batch.

5. Nondestructive Testing: Penetration resistance, sonoscope, or other nondestructive devices may be permitted but shall not be used as the sole basis for acceptance or rejection.

6. Additional Tests: The testing service will make additional tests of in-place concrete when test results indicate specified concrete strengths and other characteristics have not been attained in the structure, as directed by Engineer. Testing service may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42, or by other methods as directed.

- a. Contractor shall pay for such tests conducted, and any other additional testing as may be required, when unacceptable concrete is verified.

C. Pavement

1. Aggregate base sieve analysis per ASTM D-2940, one test per source.
2. Sodium sulfate soundness of aggregate base per ASTM C-88, one test per source.
3. Percent of fractured pieces for aggregate base per TDOT 903, one test per source.

D. Asphalt

1. Provide testing for mixture acceptance in accordance with Tennessee Department of Transportation Procedures.

E. Water Line Disinfection

1. Obtain Bac-T samples for testing at a maximum distance of every 1,300 ft

PART 2 – PRODUCTS (NOT APPLICABLE)

PART 3 – EXECUTION

3.1 SEQUENCING AND SCHEDULING

- A. The Contractor shall coordinate the sequence of work activities so as to accommodate required testing and shall allow sufficient time for testing of materials by the laboratory so as to cause no delay in the work or the work of any other Contractor. In addition, the Contractor shall coordinate his work so as to avoid the necessity of removing and replacing work to accommodate inspections and tests.

3.2 LABORATORY TEST RESULTS

- A. The testing laboratory shall submit a certified written report of each inspection, test, or similar service concurrently to the Owner, Engineer, and Contractor.
- B. Written reports of each inspection, test, or similar service shall include, but not be limited to, the following:
 1. Name of testing laboratory.
 2. Project name and construction contract reference number.
 3. Dates and locations of samples and tests or inspections.
 4. Date of report.
 5. Names of individuals making the inspection or test.
 6. Designation of the work and test method.
 7. Test results.
 8. Notation of significant ambient conditions at the time of sample taking and testing.

END OF SECTION 013319

01 41 15 – BASIC REGULATORY REQUIREMENTS

PART 1 - GENERAL

1.01 APPLICABLE CODES, RULES, STANDARDS, REGULATIONS, AND LAWS

- A. Comply with all applicable codes, standards, regulations and laws.
- B. The following is a list of major codes that may govern the project. It is not to be considered all-inclusive of codes and regulations that may apply and current revisions and editions must be confirmed.
 - 1. Currently adopted codes of the Tennessee Department of Commerce and Insurance, State Fire Marshal's Office. Refer to the Codes Enforcement section of the Office's web site for further information which may include, but is not limited to the following.
 - a. building codes
 - b. fuel gas codes
 - c. mechanical codes
 - d. plumbing codes
 - e. property maintenance codes
 - f. fire codes
 - g. energy conservation codes
 - h. existing building codes
 - i. fire protection and life safety codes
 - 2. Current rules of the Tennessee Department of Commerce and Insurance, Division of Fire Prevention. Refer to the Division's web site for further information which may include, but is not limited to the following.
 - a. electrical installation rules
 - b. equitable restroom rules
 - c. construction plans and specifications review rules
 - 3. Current rules of the Tennessee Department of Labor and Workforce Development, Board of Boiler Rules. Refer to the Board's web site for further information.
 - 4. Current rules of the Tennessee Department of Labor and Workforce Development, Elevator & Amusement Device Safety Board. Refer to the Board's web site for further information.
 - 5. The Tennessee Public Building Accessibility Act, Tennessee Code Annotated (TCA) § 68-120-204 with comments as follows. Reference the web site of the Tennessee Department of Commerce and Insurance, Division of Fire Protection.
 - a. ADA Title II, State and local government facilities must follow the requirements of the 2010 standards, including both the Title II regulations at 28 CFR 35.151 and the 2004 ADAAG at 36 CFR part 1191, appendices B and D. In the few places where requirements between the two differ, the requirements of 28 CFR 35.151 prevail. The compliance date is March 15,

01 41 15 – BASIC REGULATORY REQUIREMENTS

2012, for all newly constructed or altered State and local government facilities permitted after this date.

- b. ADA Title III, Public accommodations and commercial facilities must follow the requirements of the 2010 standards, including both the Title III regulations at 28 CFR part 36, subpart D: and the 2004 ADAAG at 36 CFR part 1191, appendices B and D. In the few places where requirements between the two differ, the requirements of 28 CFR part 36, subpart D prevail. The compliance date is March 15, 2012, for all newly constructed or altered facilities permitted after this date.
 - c. Reference:
U.S. Department of Justice
Civil Rights Division,
Disability Rights Section-NYA
950 Pennsylvania Ave, NW
Washington, DC 20530
(202) 514-4609
6. The Tennessee Water Quality Act of 1977, TCA § 69-3-101. For further information refer to the web site of the Tennessee Department of Environment and Conservation, Division of Water Resources.
 7. ASHRAE Standards:
 - a. 62.1-2013, Ventilation for Acceptable Indoor Air Quality
 - b. 90.1-2010, Energy Standard for Buildings Except Low-Rise Residential Buildings. A COMCHECK compliance certificate for envelope, interior lighting, exterior lighting, and mechanical must be submitted with the designers seal affixed to it.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

01 45 29 – TESTING LABORATORY SERVICES

PART 1 - GENERAL

1.01 TESTING REQUIRED BY SECTIONS 1704 AND 1705 OF THE INTERNATIONAL BUILDING CODE

For the types of work listed under Sections 1704 and 1705 of the International Building Code, the Owner and Designer shall make arrangements for the employment and payment of services of approved agencies to perform inspections and tests.

1.02 TESTING OTHER THAN THAT REQUIRED BY SECTIONS 1704 AND 1705 OF THE INTERNATIONAL BUILDING CODE

- A. For the types of work not listed under Sections 1704 and 1705 of the International Building Code the Contractor shall employ and pay for the services of an independent testing laboratory, approved by the Designer, to perform specified services and testing. Employment of laboratory does not relieve Contractor's obligations to perform the Work.
- B. Coordinate and pay for inspections and testing required by law, ordinance, rules, regulations, orders, or approvals of public authorities as required by the Contract Documents. Furnish copies of products test reports as required.
- C. Furnish incidental labor and facilities to facilitate inspections and tests and for storage and curing of test samples.
- D. Notify the lab sufficiently before operations to allow for laboratory personnel assignment and tests scheduling.
- E. Make arrangements with lab and pay for additional samples and tests required for Contractor's convenience.
- F. Contractor employed testing laboratory qualifications.
 - 1. Meet basic requirements of ASTM E329-18 Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection.
 - 2. Be authorized to operate in the State of Tennessee.
- G. Contractor employed testing laboratory duties and limitations of authority:
 - 1. Perform specified inspections, sampling, materials testing and methods of construction testing and promptly submit an electronic copy of the written report of each test and inspection to the Designer.
 - 2. Laboratory is not authorized to release, revoke, alter or enlarge on requirements of the Contract Documents, approve or accept portions of the Work, or perform duties of the Contractor.

END OF SECTION

01 60 00 – PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.01 ENVIRONMENTAL, HAZARDOUS PRODUCTS, MATERIALS, OR WASTES

- A. Do not incorporate in the Work hazardous materials or products as currently defined in the Resource Conservation and Recovery Act of 1976 (RCRA), the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), or Environmental Protection Agency (EPA) regulations, rules, or requirements, as amended, and/or State and local regulations, rules, or requirements that are equivalent or more stringent than the Federal regulations, rules, or requirements unless the Contract Documents give no other option than to provide a material or product that contains a hazardous material, component, constituent, waste, or leachate. In studying the Contract Documents and carrying out the Work, report at once to the Designer the discovery of a product or material that contains or is suspected to contain hazardous materials, components, constituents, waste, or leachate.
- B. Do not incorporate in the Work a product or material that contains concentrations of a constituent, component, or material above the threshold levels which would require adherence to hazardous waste disposal regulations as currently defined, or could cause a release or threat of release of a hazardous substance at a level that would require a remedial response or removal action as currently defined by RCRA, CERCLA, or the EPA.
- C. Select materials and products meeting specified requirements that comply with EPA requirements as regards hazardous materials content. In making requests for substitutions, determine that materials and products proposed for substitution comply with RCRA, CERCLA, and EPA requirements, and supply chemical constituent information and/or Material Safety Data Sheets (MSDS) with the substitution request.

1.02 TRANSPORTATION AND HANDLING

- A. Materials, products and equipment shall be properly containerized, packaged, boxed and protected to prevent damage during transportation and handling.
- B. More detailed requirements for transportation and handling are specified under the technical sections.

1.03 STORAGE AND PROTECTION

- A. Provide suitable temporary weather tight storage facilities as may be required for materials that will be damaged by storage in the open.
- B. On-site storage space is limited to the site. Acquisition of any additional off-site space is the responsibility of the Contractor.
- C. Allocate the available storage areas and coordinate their use by trades. Maintain a current list showing all items and where they are stored.
- D. Store and protect materials delivered to the site from damage. Do not use damaged material in the work.

1.04 INSTALLATION REQUIREMENTS

Manufactured articles, materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned as directed by the respective manufacturers, unless otherwise specified.

01 60 00 – PRODUCT REQUIREMENTS

1.05 IDENTIFYING MARKINGS

Nameplates and other identifying markings shall not be affixed on exposed surfaces of manufactured items installed in finished spaces.

1.06 PRODUCT APPROVAL STANDARDS

A. Definitions:

1. The term “product” shall include material, equipment, assembly methods, manufacturer, brand, trade name or other description.
2. References to approved equal, approved substitution, or similar terms mean that Designer approval is required.

B. Proof of Compliance: Where the specifications require conformance with Federal specification, ASTM designation, ANSI specification or other association standard, the Contractor shall, where requested or specified, submit supporting test data to substantiate compliance.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

SECTION 016600 - PRODUCT HANDLING AND PROTECTION

PART 1 - GENERAL

1.1 DELIVERY AND STORAGE OF MATERIALS

- A. The Contractor shall be responsible for delivery and storage of all materials.
- B. The Contractor shall coordinate with the Engineer on the arrangement for storing construction materials and equipment. Deliveries of all construction materials and equipment should be made at suitable times.
- C. The Contractor shall store all materials required for the performance of this contract at sites designated by the Engineer.
- D. All stockpiles shall be neat, compact, completely safe, and barricaded with warning lights if necessary.
- E. Precautions shall be taken so that no shade trees, shrubs, flowers, sidewalks, driveways or other facilities will be damaged by the storage of materials. The Contractor shall be responsible for the restoration of all stockpile sites to their original condition.
- F. Materials, tools and machinery shall not be piled or placed against shade trees, unless they shall be amply protected against injury therefrom. All materials, tools, machinery, etc. stored upon public thoroughfares must be provided with red lights at night time so as to warn the traffic of such obstruction.
- G. Materials shall be so stored as to assure the preservation of their quality and fitness for the work. Stored materials, even though approved before storage, shall again be inspected prior to their use in the work. Stored materials shall be located so as to facilitate their prompt inspection. Approved portions of the construction site may be used for storage purposes and for the placing of the Contractor's plant and equipment, but any additional space required therefore must be provided by the Contractor at his expense. Private property shall not be used for storage purposes without written permission of the property owner or lessee, and copies of such written permission shall be furnished the Engineer. All storage sites shall be restored to their original condition by the Contractor at his expense.

END OF SECTION 016600

01 77 70 – CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.01 PRE-CLOSEOUT SUBMITTALS

- A. Submit required tabulations when Work reaches seventy-five percent completion; however, regardless of percent completion, submit not later than 30 days prior to the scheduled date on which Substantial Completion is required.
- B. Submit tabulations of the following.
 - 1. Equipment and systems for which the specifications require demonstrations or training, indicating relevant specification sections, scheduled time and place for demonstration and training sessions, and intended audience. Adjust schedule if instructed by Designer to do so.
 - 2. Equipment and systems for which operating and maintenance data are required in the Operating and Maintenance Data Binders and related documents are required in the Project Data Binders.
 - 3. Spare parts and extra materials required, indicating the relevant specification sections, and the appropriate party to whom the items are to be delivered.

1.02 REQUEST FOR CLOSEOUT INSPECTION

- A. Substantial Completion: When Contractor considers Work substantially complete, Contractor shall submit the following to Designer.
 - 1. Written assertion that Work is Substantially Complete
 - 2. A list of items to be completed or corrected and dates scheduled for completion or correction of each item
 - 3. Certification that orientation and training for facility maintenance personnel is complete or written assertion that such orientation and training will be certified prior to inspection
 - 4. Written assertion that Operating & Maintenance Data Binders are complete and available or will be prior to inspection
 - 5. When a Use and Occupancy Permit applies, a copy of the final approval(s), or written assertion that they will be complete and available prior to inspection
 - 6. A draft of the application for payment corresponding to the Substantial Completion, with written assertion that an application for payment will be ready and submitted at the inspection
 - 7. When there is Commissioning, written assertion that Commissioning requirements have been completed or will be prior to inspection
 - 8. When there is a storm water permit, written statement of the status of final stabilization required under the Storm Water Pollution Prevention Plan (SWPPP) for the TDEC Construction General Permit (CGP) Notice of Termination (NOT).
- B. Final Inspection: When Contractor considers Work complete, Contractor shall submit the following to Designer.
 - 1. Certification that a qualified person authorized by Contractor has reviewed the Contract Documents and inspected the Work
 - 2. Written assertion that the Work is complete and in accordance with Contract Documents and ready for Final Inspection

01 77 70 – CLOSEOUT PROCEDURES

3. Written assertion that additional materials necessary to augment the Operating & Maintenance Data Binders with instructions for adding these to the Binders, or full replacement Binders, are complete and available or will be prior to inspection
 4. Written assertion that Project Data Binders and Construction Record Documents are complete and available or will be prior to inspection
 5. An application for final payment
- C. Upon receipt of an appropriate request for inspection, Designer will schedule an inspection meeting with Contractor, and Owner's representatives to determine the status of completion.

1.03 RESULTS OF CLOSEOUT INSPECTIONS

- A. Should the Designer determine that Work is not complete to the degree asserted by Contractor, Designer will promptly notify Contractor in writing stating the deficiencies. Contractor shall take immediate steps to remedy deficiencies and make a request for Re-Inspection.
- B. Substantial Completion: Designer will prepare a Certificate of Substantial Completion accompanied by a list of items to be completed or corrected, and will submit Certificate to Contractor and to Owner for signature with an accounting of Liquidated Damages due, when Designer verifies the following.
1. Work is Substantially Complete based on an inspection conducted pursuant to an appropriate request for Closeout inspection
 2. Orientation and training for facility maintenance personnel is complete
 3. Operating & Maintenance Data Binders are complete and have been delivered to the Owner
- C. Final Inspection: Designer will certify that the Work is Complete, and will initiate Final Adjustments, when Designer verifies the following.
1. Work is complete in accordance with Contract Documents based on an inspection conducted pursuant to an appropriate request for Closeout inspection
 2. Orientation and training for facility maintenance personnel is complete
 3. Additional materials necessary to augment the Operating & Maintenance Data Binders with instructions for adding these to the Binders, or full replacement Binders, are complete and have been delivered to the Owner
 4. Project Data Binders and Construction Record Documents are complete and have been delivered to the Designer.

1.04 RE-INSPECTION FEES:

If the Work fails a Closeout inspection, and a subsequent inspection is requested and conducted based on Contractor assertion of the same stage of completion, Owner will compensate Designer for performing such re-inspection as additional services, and deduct the amount of such compensation from the Contract Sum by appropriate modification.

1.05 FINAL ADJUSTMENTS

- A. When Designer has certified that the Work is complete, Designer will determine whether modification is needed to reflect appropriate adjustments to Contract Sum

01 77 70 – CLOSEOUT PROCEDURES

which were not previously effected. If such modification is needed, Designer shall assist the Owner in its preparation and deliver it to Contractor, who in the case of a change order, shall sign and return it to Designer.

- B. When Designer has certified that the Work and needed modifications to the Contract are complete, and if necessary, Designer will instruct Contractor to submit a revised final application for payment.

1.06 ONE-YEAR CORRECTIVE INSPECTION

- A. An inspection will be scheduled and conducted at project site prior to one year from date Substantial Completion was achieved, but as close to the end of that year as is reasonably possible.
- B. The inspection will be attended by at least one representative each of Owner, Designer, and Contractor.
- C. The inspection will confirm non-conforming items previously identified for correction by the Owner, and whether corrections have been completed or are still outstanding, and is intended to be an opportunity for Contractor to become aware of any outstanding corrections needed.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

01 78 01 – CLOSEOUT SUBMITTALS

PART 1 - GENERAL

1.01 DATA BINDERS

- A. Provide two complete sets on paper in three ring binders and a complete set in PDF format. Identify project and type of data on face and saddle.
- B. Provide information required by Contract Documents, including:
 - 1. Cover sheet giving complete project title and number, Contractor's name, address, phone number, superintendent's name, and related information.
 - 2. Table of Contents identifying material in Binder, and identifying missing materials to be added later or certifying completeness of Binder.
- C. Operating & Maintenance Data Binders
 - 1. Provide Product Data. Include: manufacturer; model number; names, addresses, & telephone numbers of suppliers, installers, & servicers; related information for repair, renovation, or additions.
 - 2. Provide Operating and Maintenance Data, including: instructions and schedules for proper operation, maintenance, servicing, and lubrication with manufacturer's parts list, illustrations, assembly drawings, maintenance diagrams, and list of recommended lubricants and cleaning agents; as-installed control diagrams and coordination drawings with color coded piping and wiring diagrams; valve tag charts with numbers, locations, and functions; panel board circuit directories; and, list of materials and parts furnished for Owner. Review brochures and manufacturer's standard printed information for data pertaining to models other than those actually provided, and mark to clearly omit inapplicable information and identify units actually installed.
 - 3. If Commissioning applies, provide Commissioning functional performance test certifications and data. If separate binders of this information have not been submitted already, provide a third copy in a separate binder.
 - 4. If a SWPPP applies, provide a section into which the Designer can add the Storm Water Operation & Maintenance Plan.
- D. Project Data Binders
 - 1. On the form exhibited as Section 01 78 88, provide required information for general contractor and all subcontractors and major material suppliers.
 - 2. Provide a copy of the Certificate of Substantial Completion.
 - 3. Provide a copy of the State Fire Marshal's Certificate of Occupancy, and other Use and Occupancy Permits, Certificate(s) of Inspection, or letter(s) of acceptance from governing authorities as apply.
 - 4. Provide guarantees, warranties, bonds, certifications, maintenance agreements, service contracts, and related documents, including beginning date, duration, information about instances which might affect validity, and proper procedure in case of failure.
 - 5. If a SWPPP applies, provide the twice-weekly inspection reports and site audit reports.

01 78 01 – CLOSEOUT SUBMITTALS

1.02 CONSTRUCTION RECORD DOCUMENTS

Keep the record copy of Contract Documents required by the Conditions in good condition and in the course of the Work, legibly mark these to record actual conditions of Work, including: location, depth, and identification of new and existing underground items, utilities, valves, tap points, equipment, service access, test points, and related features; field changes in dimensions and detail; changes by addenda or Modification; and, description and details of features for maintenance, service, replacement, or expansion of the Work.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

SECTION 017821 - CLEANING AND PROTECTION

PART 1 - GENERAL

1.1 GENERAL

- A. On or before the completion date for the work, the Contractor shall tear down and remove all temporary structures built by him, all construction plant used by him, and shall repair and replace all parts of existing embankments, fences or other structures which were removed or injured by his operations or by the employees of the Contractor. The Contractor shall thoroughly clean out all buildings, sewers, drains, pipes, manholes, inlets and miscellaneous and appurtenant structures, and shall remove all rubbish leaving the grounds in a neat and satisfactory condition.
- B. As circumstances require and when ordered by the Engineer, the Contractor shall clean the road, driveway, and/or sidewalk on which construction activity under this contract has resulted in dirt or any other foreign material being deposited with an automatic self-contained mechanical sweeper with integral water spray, vacuum and on-board or supplementary containment.
- C. Failure to comply with this requirement when ordered by the Engineer or his representative, may serve as cause for the Engineer to stop the work and to withhold any monies due the Contractor until such order has been complied with to the satisfaction of the Engineer.
- D. As the work progresses, and as may be directed, the Contractor shall remove from the site and dispose of debris and waste material resulting from his work. Particular attention shall be given to minimizing any fire and safety hazard from form materials or from other combustibles as may be used in connection with the work, which should be removed daily.
- E. The Contractor shall wash all windows and other glass surfaces, leaving all areas free from putty marks, paint, etc.
- F. During and after installation, the Contractor shall furnish and maintain satisfactory protection to all equipment against injury by weather, flooding or breakage thereby permitting all work to be left in a new condition at the completion of the contract.

END OF SECTION 017821

01 78 25 – DATA BINDER RECEIPT

PART 1 - GENERAL

1.01 CONTRACTOR PREPARATION AND USE OF THIS FORM

A. Use this form or a reasonable facsimile to verify delivery of Data Binders. Fill in the identifying information following this paragraph, then use the prepared form as a receipt, for signature by the person to whom Data Binders are delivered. Provide a copy of the receipt with the Application for Payment.

1. For the Application for Payment commensurate with Substantial Completion, provide a copy indicating delivery of Operating and Maintenance Data Binders.
2. For the Application for Payment commensurate with Final Completion, provide a copy indicating delivery of Project Data Binders.

B. Identifying Information:

1. For the Work:

Project Name: _____

Institution: _____

Location: _____

SBC No.: _____

2. For the Data Binder(s), mark only one of the boxes below:

<input type="checkbox"/>	Only Operating & Maintenance Data Binder (due at substantial completion inspection)
<input type="checkbox"/>	Only Project Data Binder (due at final inspection)
<input type="checkbox"/>	Both Data Binders

1.02 RECIPIENT SIGNATURE

A. By signature below, recipient acknowledges receipt of the Data Binder identified above, but does not certify the completeness or correctness of the Data Binder.

Recipient Signature:

Recipient's name and title or
affiliation with Owner or Designer

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

01 78 88 – REPORT OF SUBCONTRACTORS AND SUPPLIERS

PART 1 - GENERAL

1.01 REQUIREMENTS

Submit required reports of subcontractors and suppliers on forms similar to the example herein or on forms with equivalent content and detail.

1.02 EXAMPLE REPORT

REPORT OF SUBCONTRACTORS AND SUPPLIERS			
Project:		SBC No.	Report Date:
General Contractor Name, Address, Phone, and Principal Contact:			General Contractor Diversity-Owned? If "Yes", provide classification and certifying agency. ___ Yes ___ No
Work of Subcontractor or Major Material Supplied and Dollar Value	Firm Name and Address	Principal Contact and Phone Number	Diversity-Owned Business? If "Yes", provide classification and certifying agency. ___ Yes ___ No
			___ Yes ___ No
			___ Yes ___ No
			___ Yes ___ No
			___ Yes ___ No
			___ Yes ___ No
			___ Yes ___ No
			___ Yes ___ No
			___ Yes ___ No
			___ Yes ___ No
			___ Yes ___ No
			___ Yes ___ No

Continue report as required on additional pages. Page ___ of ___.

END OF SECTION

SECTION 024116 – STRUCTURE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification sections, apply to work of this section.

1.2 DESCRIPTION OF WORK

- A. This section includes all demolition of existing structures and removal of pavement, piping, and equipment necessary to clear space for new construction and/or to rehabilitate existing construction.

1.3 REQUIREMENTS OF REGULATORY AGENCIES

- A. State and local code requirements shall control the disposal of debris resulting from the removal operation.

1.4 PROTECTION

- A. Structures shall be removed in such a manner as not to damage portions of the existing structure which are to remain in place.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

3.1 PAVEMENTS, SIDEWALKS, CURBING, SIMILAR STRUCTURES

- A. Removal of existing pavements, sidewalks, curbing, and similar structures shall end at an existing joint or a sawed joint. Sawed joints shall be straight, neat and free from chipped or damaged edges.
- B. For removal of reinforced or nonreinforced concrete, the minimum depth of saw cut shall be 3 in.
- C. For removal of reinforced concrete, the depth of saw cut shall be sufficient to cut the steel.
- D. If the concrete is coated with a bituminous surface or other material, the depth shall be sufficient to cut into the concrete, not including the coating depth, as specified above.

3.2 EXCAVATION OF RIGID PAVEMENT

- A. The Contractor shall excavate rigid pavement, consisting of concrete or concrete base with a wearing surface of brick or bituminous concrete, wherever such excavation is required for the purpose of this Contract.
- B. Pavement shall be excavated to neat lines and, only to widths required for trenches, for pipe laying and for construction of structures. Adequate provision shall be made to prevent settlement and breakage of pavement beyond the approved limits of excavation.
- C. All pavement broken or damaged beyond the limits above stated, or the approved extension thereof, shall be replaced by the Contractor at his expense.

3.3 GUARDRAIL AND FENCE

- A. Where so required by the Drawings, existing guardrail and fence shall be carefully dismantled and stored for reuse or for salvage by the Owner.
- B. Wood posts and other materials not considered salvageable by the Engineer shall be disposed of by the Contractor.
- C. The Contractor will be required to replace, at no cost to the Owner, material lost or damaged by negligence or by the use of improper methods.

3.4 EQUIPMENT REMOVAL

- A. All equipment, valves, piping, fittings, and miscellaneous steel structures that are removed shall remain the property of the Owner and shall be stored at site selected by the Owner. The Owner reserves the right to require the Contractor to dispose of certain unwanted portions of removed equipment and materials. The Owner shall have the right to reject any or all materials removed during construction, and the Contractor shall haul away and dispose of these materials in a suitable manner at no additional cost to the Owner.

3.5 DISPOSAL OF DEBRIS

- A. All debris resulting from demolition operations; i.e., broken concrete, masonry, pipe, miscellaneous metal, trees and brush, equipment, etc., shall be disposed of off-site.
- B. The Contractor shall police the hauling of debris to insure that all spillage from haul trucks is promptly and completely removed.

END OF SECTION 024116

SECTION 311000 – SITE CLEARING

SECTION 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, include General and Supplementary Conditions and Division 01 Specification Sections, apply to this section.

1.2 SUMMARY

- A. This Section includes the following:

1. Protecting existing trees, shrubs, groundcovers, plants and grass to remain.
2. Removal of specified existing trees, shrubs, groundcovers, plants and grass.
3. Removing above- and below-grade site improvements.
4. Disconnecting, capping or sealing, and abandoning site utilities in place.
5. Temporary erosion and sedimentation control measures.

- B. Related Sections include the following:

1. Division 02 Section "Structure Demolition" for demolition of buildings, structures, and site improvements.
2. Division 31 Section "Earth Moving" for soil materials, excavating, backfilling, and site grading.

1.3 DEFINITIONS

- A. Topsoil: Natural or cultivated surface-soil layer containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 2 inches in diameter; and free of subsoil and weeds, roots, toxic materials, or other non-soil materials.

1.4 MATERIAL OWNERSHIP

- A. Cleared materials shall become Contractor's property and shall be removed from Project site.

1.5 PROJECT CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.

1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
 2. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.
- B. Utility Locator Service: Notify utility locator service for area where Project is located before site clearing.
- C. Do not commence site clearing operations until temporary erosion and sedimentation control measures are in place.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Filter Fabric: Manufacturer's standard, non-woven, pervious, geotextile fabric of polypropylene, nylon, or polyester fibers.
- B. Organic Mulch: Wood and bark chips, free of deleterious materials.
- C. Satisfactory Soil Materials: Requirements for satisfactory soil materials are specified in Division 31 Section "Earth Moving."
1. Obtain approved borrow soil materials off-site when satisfactory soil materials are not available on-site.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect and maintain benchmarks and survey control points from disturbance during construction.
- B. Locate and clearly flag trees and vegetation to remain or to be relocated.
- C. Protect existing site improvements to remain from damage during construction.
1. Restore damaged improvements to their original condition, as acceptable to Owner.

3.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL

- A. Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to sediment and erosion control Drawings.
- B. Inspect, repair, and maintain erosion and sedimentation control measures during construction until permanent vegetation has been established.
- C. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

3.3 UTILITIES

- A. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 - 1. Notify the managing Design Professional and Owner not less than three business days in advance of proposed utility interruptions. Provide proposed interruption schedule.
 - 2. Do not proceed with utility interruptions without written permission from the managing Design Professional.

3. CLEARING AND GRUBBING

- A. Remove obstructions, trees, shrubs, grass, and other vegetation as specified to permit installation of new construction.
 - 1. Do not remove trees, shrubs, and other vegetation indicated to remain, be preserved, or to be relocated.
 - 2. Cut minor roots and branches of trees indicated to remain in a clean and careful manner where such roots and branches obstruct installation of new construction. Employ a Certified Arborist, licensed in jurisdiction where Project is located, to submit details of proposed repairs, pruning or alterations, and to repair damage to trees and shrubs. Landscape Architect shall review and approve any recommendations by the Certified Arborist prior to altering the existing trees or vegetation.
 - 3. Grind stumps and remove roots, obstructions, and debris extending to a depth of 18 inches below exposed sub-grade.
 - 4. Use only hand methods for grubbing within tree protection zone.
 - 5. Chips removed tree branches and legally dispose of off site.

3.6 SITE IMPROVEMENTS

- A. Remove existing above-grade and below-grade improvements as indicated and as necessary to facilitate new construction.

- B. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.
 - 1. Unless existing, full-depth joints coincide with line of demolition, neatly saw-cut length of existing pavement to remain before removing existing pavement. Saw-cut faces vertically.
 - 2. Paint cut ends of steel reinforcement in concrete to remain to prevent corrosion.

3.7 DISPOSAL

- A. Disposal: Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.

END OF SECTION 311000

SECTION 312000 – EARTH MOVING

SECTION 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, include General and Supplementary Conditions and Division 01 Specification Sections, apply to this section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Preparing sub-grades for walks, pavements, lawns and grasses and exterior plants.
 - 2. Sub-base course for asphalt paving.
- B. Related Sections include the following:
 - 1. Division 31 Section "Site Clearing" for temporary erosion and sedimentation control measures, and removal of above- and below-grade improvements and utilities.

1.3 DEFINITIONS

- A. Backfill: Soil material or controlled low-strength material used to fill an excavation.
- B. Base Course: Course placed between the sub-base course and hot-mix asphalt paving.
- C. Bedding Course: Course placed over the excavated sub-grade in a trench before laying pipe.
- D. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.
- E. Excavation: Removal of material encountered above sub-grade elevations and to lines and dimensions indicated.
 - 1. Bulk Excavation: Excavation more than 10 feet in width and more than 30 feet in length.
 - 2. Unauthorized Excavation: Excavation below sub-grade elevations or beyond indicated lines and dimensions without direction by Designer. Unauthorized excavation, as well as remedial work directed by the Designer, shall be without additional compensation.
- F. Fill: Soil materials used to raise existing grades.

- G. Rock: Rock material in beds, ledges, un-stratified masses, conglomerate deposits, and boulders of rock material that exceed 1 cu. yd. for bulk excavation or 3/4 cu. yd. for footing, trench, and pit excavation that cannot be removed by rock excavating equipment equivalent to the following in size and performance ratings, without systematic drilling, ram hammering, ripping, or blasting, when permitted:
 - 1. Excavation of Footings, Trenches, and Pits: Late-model, track-mounted hydraulic excavator; equipped with a 42-inch- wide, maximum, short-tip-radius rock bucket; rated at not less than 138-hp flywheel power with bucket-curling force of not less than 28,090 lbf and stick-crowd force of not less than 18,650 lbf ; measured according to SAE J-1179.
 - 2. Bulk Excavation: Late-model, track-mounted loader; rated at not less than 210-hp flywheel power and developing a minimum of 48,510-lbf breakout force with a general-purpose bare bucket; measured according to SAE J-732.
- H. Rock: Rock material in beds, ledges, un-stratified masses, conglomerate deposits, and boulders of rock material 3/4 cu. yd. or more in volume that exceed a standard penetration resistance of 100 blows/2 inches when tested by an independent geotechnical testing agency, according to ASTM D 1586.
- I. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.
- J. Sub-base Course: Course placed between the sub-grade and base course for hot-mix asphalt pavement, or course placed between the sub-grade and a cement concrete pavement or a cement concrete or hot-mix asphalt walk.
- K. Sub-grade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below sub-base, drainage fill, or topsoil materials.
- L. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

1.4 PROJECT CONDITIONS

- A. Existing ground elevations of the site are shown by figures and or by contours on the drawings. The contours and elevations of the present ground are believed to be reasonably correct, but do not purport to be absolutely so, and together with any schedule of quantities, are presented only as an approximation. The Contractor shall satisfy himself, however, by actual examination on the site of the Work, as to the existing elevations and contours, and the amount of work required.
- B. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted in writing by Designer and then only after arranging to provide temporary utility services according to requirements indicated.

1. Notify Designer not less than two days in advance of proposed utility interruptions.
2. Do not proceed with utility interruptions without the Designer's written permission.
3. Contact utility-locator service for area where Project is located before excavating.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Deliver Products to the site, store and protect under provisions of Sections 016600, Product Handling and Protection

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

- A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.
- B. Satisfactory Soils: ASTM D 2487 Soil Classification Groups GW, GP, GM, SW, SP, and SM, or a combination of these groups; free of rock or gravel larger than 3 inches in any dimension, debris, waste frozen materials, vegetation, and other deleterious matter.
- C. Unsuitable Soils: Soil Classification Groups GC, SC, CL, ML, OL, CH, MH, OH, and PT according to ASTM D 2487, or a combination of these groups.
 1. Unsuitable soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.
- D. Subbase Material: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a 1-1/2-inch sieve and not more than 12 percent passing a No. 200 sieve.
- E. Base Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 95 percent passing a 1-1/2-inch sieve and not more than 8 percent passing a No. 200 sieve.
- F. Engineered Fill: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a 1-1/2-inch sieve and not more than 12 percent passing a No. 200 sieve.
- G. Bedding Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; except with 100 percent passing a 1-inch sieve and not more than 8 percent passing a No. 200 sieve.
- H. Sand: ASTM C 33; fine aggregate, natural, or manufactured sand.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
- B. Preparation of sub-grade for earthwork operations including removal of vegetation, topsoil, debris, obstructions, and deleterious materials from ground surface is specified in Division 31 Section "Site Clearing."
- C. Protect and maintain erosion and sedimentation controls, which are specified in Division 31 Section "Site Clearing," during earthwork operations.
- D. Provide protective insulating materials to protect subgrades and foundation soils against freezing temperatures or frost.

3.2 DEWATERING

- A. Prevent surface water and ground water from entering excavations, from ponding on prepared sub-grades, and from flooding Project site and surrounding area.
- B. Protect sub-grades from softening, undermining, washout, and damage by rain or water accumulation.
 - 1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.
 - 2. Install a dewatering system to keep sub-grades dry and convey ground water away from excavations. Maintain until dewatering is no longer required.

3.3 EXPLOSIVES

- A. Explosives: Do not use explosives.

3.4 EXCAVATION, GENERAL

- A. Unclassified Excavation: Excavate to sub-grade elevations regardless of the character of soil materials, and obstructions. No changes in the surface and subsurface conditions encountered. Unclassified excavated materials may include Contract Sum or the Contract Time will be authorized for removal of obstructions.
 - 1. If excavated materials intended for fill and backfill include unsuitable soil materials, notify Designer. Authorized removal of unsuitable soils, removal off site, and

replacing with satisfactory soil materials will be paid for according to Contract provisions for changes in the work.

2. If rock is encountered, Contractor to notify Designer. Authorized rock excavation and removal off site will be paid for according to Contract provisions for changes in the work.
3. Remove rock to lines and grades indicated to permit installation of permanent construction without exceeding the following dimensions:
 - a. 24 inches outside of concrete forms other than at footings.
 - b. 12 inches outside of concrete forms at footings.
 - c. 6 inches outside of minimum required dimensions of concrete cast against grade.
 - d. Outside dimensions of concrete walls indicated to be cast against rock without forms or exterior waterproofing treatments.
 - e. 6 inches beneath bottom of concrete slabs on grade.
 - f. 6 inches beneath pipe in trenches, and the greater of 24 inches wider than pipe or 42 inches wide.

3.5 EXCAVATION FOR WALKS AND PAVEMENTS

- A. Excavate surfaces under walks and pavements to indicated lines, cross sections, elevations, and subgrades.

3.6 SUBGRADE INSPECTION

- A. Notify Designer when excavations have reached required sub-grade.
- B. If Designer determines that unsuitable soil is present, continue excavation and replace with compacted backfill or fill material as directed.
- C. Proof roll sub-grade below pavement with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding. Do not proof roll wet or saturated sub-grades.
 1. Completely proof roll sub-grade in one direction, repeating proof-rolling in direction perpendicular to first direction. Limit vehicle speed to 3 mph .
 2. Proof-roll with a loaded 10-wheel, tandem-axle dump truck weighing at least 15 tons.
 3. Excavate soft spots, unsuitable soils, and areas of excessive pumping or rutting, as determined by Designer, and replace with compacted backfill or fill as directed.
- D. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.
- E. Reconstruct sub-grades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Designer, without additional compensation.

3.7 STORAGE OF SOIL MATERIALS

- A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 - 1. Stockpile soil materials away from edge of excavations. Do not store within the tree protection area.

3.8 BACKFILL

- A. Place and compact backfill in excavations promptly, but not before completing the following:
 - 1. Construction below finish grade including, where applicable, sub-drainage, damp-proofing, waterproofing, and perimeter insulation.
 - 2. Surveying locations of underground utilities for Record Documents.
 - 3. Testing and inspecting underground utilities.
 - 4. Removing concrete formwork.
 - 5. Removing trash and debris.
 - 6. Removing temporary shoring and bracing, and sheeting.
 - 7. Installing permanent or temporary horizontal bracing on horizontally supported walls.
- B. Place backfill on sub-grades free of mud, frost, snow, or ice.

3.9 SOIL FILL

- A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.
- B. Place and compact fill material in layers to required elevations as follows:
 - 1. Under grass and planted areas, use satisfactory soil material.
 - 2. Under walks and pavements, use satisfactory soil material.
 - 3. Under steps and ramps, use engineered fill.
 - 4. Under building slabs, use engineered fill.
 - 5. Under footings and foundations, use engineered fill.
- C. Place soil fill material on sub-grades free of mud, frost, snow, or ice.

3.10 SOIL MOISTURE CONTROL

- A. Uniformly moisten or aerate sub-grade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.
 - 1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.

2. Remove and replace, or scarify and air dry otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.11 COMPACTION OF SOIL BACKFILLS AND FILLS

- A. Place backfill and fill soil materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches in loose depth for material compacted by hand-operated tampers.
- B. Place backfill and fill soil materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.
- C. Compact soil materials to not less than the following percentages of maximum dry unit weight according to ASTM D 698:
 1. Under structures, building slabs, steps, and pavements, scarify and recompact top 12 inches of existing sub-grade and each layer of backfill or fill soil material at 98 percent.
 2. Under walkways, scarify and recompact top 6 inches below sub-grade and compact each layer of backfill or fill soil material at 95 percent.
 3. Under lawn or unpaved areas, scarify and recompact top 6 inches below sub-grade and compact each layer of backfill or fill soil material at 85 percent.

3.12 GRADING

- A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
 1. Provide a smooth transition between adjacent existing grades and new grades.
 2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.
- B. Site Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:
 1. Lawn or Unpaved Areas: Plus or minus 1 inch.
 2. Walks: Plus or minus 1/2 inch.
 3. Pavements: Plus or minus 1/2 inch.
- C. Grading inside Building Lines: Finish sub-grade to a tolerance of 1/2 inch when tested with a 10-foot straightedge.

3.13 SUBBASE AND BASE COURSES

- A. Place sub-base and base course on sub-grades free of mud, frost, snow, or ice.
- B. On prepared sub-grade, place sub-base and base course under pavements and walks as follows:
 - 1. Place base course material over sub-base course under hot-mix asphalt pavement.
 - 2. Shape sub-base and base course to required crown elevations and cross-slope grades.
 - 3. Place sub-base and base course 6 inches or less in compacted thickness in a single layer.
 - 4. Place sub-base and base course that exceeds 6 inches in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches thick or less than 3 inches thick.
 - 5. Compact sub-base and base course at optimum moisture content to required grades, lines, cross sections, and thickness to not less than 95 percent of maximum dry unit weight according to ASTM D 698.
- C. Pavement Shoulders: Place shoulders along edges of sub-base and base course to prevent lateral movement. Construct shoulders, at least 12 inches wide, of satisfactory soil materials and compact simultaneously with each sub-base and base layer to not less than 95 percent of maximum dry unit weight according to ASTM D 698.

3.14 FIELD QUALITY CONTROL

- A. Contractor inspect and test sub-grades and each fill or backfill layer. Proceed with subsequent earthwork only after test results for previously completed work comply with requirements.
- B. Test compaction of soils in place according to ASTM D 1556, ASTM D 2167, ASTM D 2922, and ASTM D 2937, as applicable. Tests will be performed at the following locations and frequencies:
 - 1. Paved Areas: At sub-grade and at each compacted fill and backfill layer, at least 1 test for every 10,000 sq. ft. or less of paved area or building slab, but in no case fewer than 2 tests.
- C. When sub-grades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil to depth required; recompact and retest until specified compaction is obtained.

3.15 PROTECTION

- A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.

- B. Repair and reestablish grades to the specified tolerances were completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
 - 1. Scarify or remove and replace soil material to depth as directed by Designer; reshape and recompact.

- C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
 - 1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.16 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Disposal: Transport surplus satisfactory soil to designated storage areas on Owner's property. Stockpile or spread soil as directed by Designer.
 - 1. Remove waste material, including unsuitable soil, trash, and debris, and legally dispose of it off Owner's property.

END OF SECTION 312000

SECTION 312323.13 – COMPACTED BACKFILL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.

1.2 DESCRIPTION OF WORK

- A. The Contractor shall furnish, place and compact all the materials needed from select excavated materials or furnish additional suitable material if the excavated material is deemed unsuitable or the moisture content is not or can not be made to be within acceptable tolerances of optimum moisture to achieve the specified compaction.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Suitable excavated material as specified in TDOT Section 203.

PART 3 - EXECUTION

3.1 PLACING

- A. Compacted backfill shall be properly placed in layers sufficient to meet the compaction requirement of 95% of maximum laboratory dry density per ASTM D 698 throughout the entire layer and thoroughly compacted with mechanical compaction equipment with moisture adjustment as needed. Should after settlement occur, the Contractor must add and compact additional material, and he must maintain the backfill at the required finished grade or sub-grade until the project is satisfactorily completed and during the correction period.
- B. Approved mechanical compaction equipment shall be used for tamping backfill. Flooding, jetting or puddling of backfill will not be permitted.

END OF SECTION 312323.13

SECTION 321216 - ASPHALT PAVING

SECTION 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, include General and Supplementary Conditions and Division 01 Specification Sections, apply to this section.

1.2 SUMMARY

- A. Section Includes:

1. Cold milling of existing hot-mix asphalt pavement.
2. Hot-mix asphalt patching.
3. Hot-mix asphalt paving.
4. Hot-mix asphalt paving overlay.
5. Pavement-marking paint.

- B. Related Sections:

1. Division 02 Section "Structure Demolition" for demolition, removal, and recycling of existing asphalt pavements, and for geotextiles that are not embedded within courses of asphalt paving.
2. Division 31 Section "Earth Moving" for aggregate sub-base and base courses.
4. Division 32 Section "Concrete Paving Joint Sealants" for joint sealants and fillers at paving terminations.

1.3 DEFINITION

- A. Hot-mix Asphalt Paving Terminology: Refer to ASTM D 8 for definitions of terms.

1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A paving-mix manufacturer registered with and approved by Tennessee Department of Transportation (TDOT) specifications.

- B. Regulatory Requirements: Comply with materials, workmanship, and other applicable requirements of Standard Specifications for Road and Bridge Construction of TDOT for asphalt paving work.

1. Measurement and payment provisions and safety program submittals included in standard specifications do not apply to this Section.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver pavement-marking materials to Project site in original packages with seals unbroken and bearing manufacturer's labels containing brand name and type of material, date of manufacture, and directions for storage.
- B. Store pavement-marking materials in a clean, dry, protected location within temperature range required by manufacturer. Protect stored materials from direct sunlight but not within any tree protection area.

1.6 PROJECT CONDITIONS

- A. Environmental Limitations: Do not apply asphalt materials if sub-grade is wet or excessively damp, if rain is imminent or expected before time required for adequate cure, or if the following conditions are not met:
 - 1. Prime Coat: Minimum surface temperature of 60 deg F .
 - 2. Tack Coat: Minimum surface temperature of 60 deg F .
 - 3. Slurry Coat: Comply with weather limitations in ASTM D 3910.
 - 4. Asphalt Base Course: Minimum surface temperature of 40 deg F and rising at time of placement.
 - 5. Asphalt Surface Course: Minimum surface temperature of 60 deg F at time of placement.
- B. Pavement-Marking Paint: Proceed with pavement marking only on clean, dry surfaces and at a minimum ambient or surface temperature of 55 deg F for water-based materials, and not exceeding 95 deg F.

PART 2 - PRODUCTS

2.1 AGGREGATES

- A. General: Use materials and gradations that have performed satisfactorily in previous installations.
- B. Coarse Aggregate: ASTM D 692, sound; angular crushed stone, crushed gravel, or cured, crushed blast furnace slag.
- C. Fine Aggregate: AASHTO M 29, sharp-edged natural sand or sand prepared from stone, gravel, cured blast-furnace slag, or combinations thereof.
 - 1. For hot-mix asphalt, limit natural sand to a maximum of 20 percent by weight of the total aggregate mass.

- D. Mineral Filler: AASHTO M 17, rock or slag dust, hydraulic cement, or other inert material.

2.2 ASPHALT MATERIALS

- A. Asphalt Binder: AASHTO M 320 or AASHTO MP 1a.
- B. Asphalt Cement: ASTM D 3381 for viscosity-graded material .
- C. Prime Coat: Asphalt emulsion prime coat complying with TDOT requirements.
- D. Tack Coat: AASHTO M 140 emulsified asphalt, or AASHTO M 208 cationic emulsified asphalt, slow setting, diluted in water, of suitable grade and consistency for application.
- E. Water: Potable.
- F. Undersealing Asphalt: ASTM D 3141, pumping consistency.

2.3 AUXILIARY MATERIALS

- A. Sand: AASHTO M 29, Grade Nos. 2 or 3.
- B. Joint Sealant: AASHTO M 324, Type I Type II or III , hot-applied, single-component, polymer-modified bituminous sealant.
- C. Pavement-Marking Paint: Latex, waterborne emulsion, lead and chromate free, ready mixed, complying with FS TT-P-1952, Type II, with drying time of less than three minutes.

2.5 MIXES

- A. Hot-Mix Asphalt: Dense, hot-laid, hot-mix asphalt plant mixes approved by authorities having jurisdiction; designed according to procedures in AIMS-2, "Mix Design Methods for Asphalt Concrete and Other Hot-Mix Types"; and complying with the following requirements:
 - 1. Provide mixes with a history of satisfactory performance in geographical area where Project is located.
 - 2. Base Course: As indicated.
 - 3. Surface Course: As indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that sub-grade is dry and in suitable condition to begin paving.
- B. Proof-roll sub-grade below pavements with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated sub-grades.
 - 1. Completely proof-roll sub-grade in one direction, repeating proof-rolling in direction perpendicular to first direction. Limit vehicle speed to 3 mph.
 - 2. Proof roll with a loaded 10-wheel, tandem-axle dump truck weighing at least 15 tons.
 - 3. Excavate soft spots, unsuitable soils, and areas of excessive pumping or rutting, as determined by the Designer, and replace with compacted backfill or fill as directed.
- C. Proceed with paving only after unsatisfactory conditions have been corrected.

3.3 PATCHING

- A. Hot-Mix Asphalt Pavement: Saw cut perimeter of patch and excavate existing pavement section to sound base. Excavate rectangular or trapezoidal patches, extending 12 inches into adjacent sound pavement, unless otherwise indicated. Cut excavation faces vertically. Remove excavated material. Recompact existing unbound-aggregate base course to form new sub-grade.
- B. Portland Cement Concrete Pavement: Break cracked slabs and roll as required to reseal concrete pieces firmly.
 - 1. Pump hot undersealing asphalt under rocking slab until slab is stabilized or, if necessary, crack slab into pieces and roll to reseal pieces firmly.
 - 2. Remove disintegrated or badly cracked pavement. Excavate rectangular or trapezoidal patches, extending into adjacent sound pavement, unless otherwise indicated. Cut excavation faces vertically. Recompact existing unbound-aggregate base course to form new sub-grade.
- C. Tack Coat: Apply uniformly to vertical surfaces abutting or projecting into new, hot-mix asphalt paving at a rate of 0.05 to 0.15 gal./sq. yd.
 - 1. Allow tack coat to cure undisturbed before applying hot-mix asphalt paving.
 - 2. Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.
- D. Patching: Fill excavated pavements with hot-mix asphalt base mix for full thickness of patch and, while still hot, compact level and flush with adjacent surface.
- E. Patching: Partially fill excavated pavements with hot-mix asphalt base mix and, while still hot, compact. Cover asphalt base course with compacted, hot-mix surface layer finished flush with adjacent surfaces.

3.4 SURFACE PREPARATION

- A. General: Immediately before placing asphalt materials, remove loose and deleterious material from substrate surfaces. Ensure that prepared sub-grade is ready to receive paving.
- B. Prime Coat: Apply uniformly over surface of compacted unbound-aggregate base course at a rate of 0.15 to 0.50 gal./sq. yd. . Apply enough material to penetrate and seal but not flood surface. Allow prime coat to cure.
 - 1. If prime coat is not entirely absorbed within 24 hours after application, spread sand over surface to blot excess asphalt. Use enough sand to prevent pickup under traffic. Remove loose sand by sweeping before pavement is placed and after volatiles have evaporated.
 - 2. Protect primed substrate from damage until ready to receive paving.
- C. Tack Coat: Apply uniformly on existing pavement at a rate of 0.05 to 0.15 gal./sq. yd.
 - 1. Allow tack coat to cure undisturbed before applying hot-mix asphalt paving.
 - 2. Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.

3.5 HOT-MIX ASPHALT PLACING

- A. Machine place hot-mix asphalt on prepared surface, spread uniformly, and strike off. Place asphalt mix by hand to areas inaccessible to equipment in a manner that prevents segregation of mix. Place each course to required grade, cross section, and thickness when compacted.
 - 1. Place hot-mix asphalt base course in number of lifts and thicknesses indicated.
 - 2. Place hot-mix asphalt surface course in single lift.
 - 3. Spread mix at minimum temperature of 250 deg F .
 - 4. Begin applying mix along centerline of crown for crowned sections and on high side of one-way slopes unless otherwise indicated.
 - 5. Regulate paving machine speed to obtain smooth, continuous surface free of pulls and tears in asphalt-paving mat.
- B. Place paving in consecutive strips along trench.
 - 1. After first strip has been placed and rolled, place succeeding strips and extend rolling to overlap previous strips. Complete a section of asphalt base course before placing asphalt surface course.
- C. Promptly correct surface irregularities in paving course behind paving machine. Use suitable hand tools to remove excess material forming high spots. Fill depressions with hot-mix asphalt to prevent segregation of mix; use suitable hand tools to smooth surface.

3.6 JOINTS

- A. Construct joints to ensure a continuous bond between adjoining paving sections. Construct joints free of depressions, with same texture and smoothness as other sections of hot-mix asphalt course.
 - 1. Clean contact surfaces and apply tack coat to joints.
 - 2. Offset longitudinal joints, in successive courses, a minimum of 6 inches .
 - 3. Offset transverse joints, in successive courses, a minimum of 24 inches .
 - 4. Construct transverse joints at each point where paving contractor/machine ends a day's work and resumes work at a subsequent time. Construct these joints using either "bulkhead" or "papered" method according to AI MS-22, for both "Ending a Lane" and "Resumption of Paving Operations."
 - 5. Compact joints as soon as hot-mix asphalt will bear roller weight without excessive displacement.
 - 6. Compact asphalt at joints to a density within 2 percent of specified course density.

3.7 COMPACTION

- A. General: Begin compaction as soon as placed hot-mix paving will bear roller weight without excessive displacement. Compact hot-mix paving with hot, hand tampers or with vibratory-plate compactors in areas inaccessible to rollers.
 - 1. Complete compaction before mix temperature cools to 185 deg F.
- B. Breakdown Rolling: Complete breakdown or initial rolling immediately after rolling joints and outside edge. Examine surface immediately after breakdown rolling for indicated crown, grade, and smoothness. Correct application and rolling operations to comply with requirements.
- C. Intermediate Rolling: Begin intermediate rolling immediately after breakdown rolling while hot-mix asphalt is still hot enough to achieve specified density. Continue rolling until hot-mix asphalt course has been uniformly compacted to the following density:
 - 1. Average Density: 96 percent of reference laboratory density according to AASHTO T 245, but not less than 94 percent nor greater than 100 percent.
 - 2. Average Density: 92 percent of reference maximum theoretical density according to ASTM D 2041, but not less than 90 percent nor greater than 96 percent.
- D. Finish Rolling: Finish roll paved surfaces to remove roller marks while hot-mix asphalt is still warm.
- E. Edge Shaping: While surface is being compacted and finished, trim edges of pavement to proper alignment. Bevel edges while asphalt is still hot; compact thoroughly.

- F. Repairs: Remove paved areas that are defective or contaminated with foreign materials and replace with fresh, hot-mix asphalt. Compact by rolling to specified density and surface smoothness.
- G. Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened.
- H. Erect barricades to protect paving from traffic until mixture has cooled enough not to become marked.

3.8 INSTALLATION TOLERANCES

- A. Pavement Thickness: Compact each course to produce the thickness indicated within the following tolerances:
 - 1. Base Course: Plus or minus 1/2 inch .
 - 2. Surface Course: Plus 1/4 inch , no minus.
- B. Pavement Surface Smoothness: Compact each course to produce a surface smoothness within the following tolerances as determined by using a 10-foot straightedge applied transversely or longitudinally to paved areas:
 - 1. Base Course: 1/4 inch .
 - 2. Surface Course: 1/8 inch .
 - 3. Crowned Surfaces: Test with crowned template centered and at right angle to crown. Maximum allowable variance from template is 1/4 inch .

3.9 PAVEMENT MARKING

- A. Allow paving to age for 30 days before starting pavement marking.
- B. Sweep and clean surface to eliminate loose material and dust.
- C. Apply paint with mechanical equipment to produce pavement markings, of dimensions indicated, with uniform, straight edges. Apply at manufacturer's recommended rates to provide a minimum wet film thickness of 15 mils.

3.11 DISPOSAL

- A. Except for material indicated to be recycled, remove excavated materials from Project site and legally dispose of them in an EPA-approved landfill. Do not allow materials to excessively accumulate on site.

END OF SECTION 321216

SECTION 321613.13 - CONCRETE CURBS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.

1.2 DESCRIPTION OF WORK

- A. Under this section the Contractor shall furnish and construct curbing of various, designated types as shown or scheduled on the Drawings.
- B. This section includes preparation of the base and/or subgrade construction of curbs, other work and materials incidental to the construction of curbing.

1.3 OWNER'S STANDARDS AND SPECIFICATIONS

- A. Items preceded by TDOT shall refer to the latest edition of the State of Tennessee, Department of Transportation, Standard Specifications for Road and Bridge Construction.

PART 2 - PRODUCTS

2.1 CONCRETE

- A. All concrete used shall be Class A.
- B. The Contractor may adjust water and percentages of fine and coarse aggregate within the limits specified (fine aggregate may range from 40 to 65%) to allow satisfactory placement.

2.2 FORMS

- A. Except for the templates between 10-foot sections, use forms of wood, metal, or other suitable material. Extend forms for the full depth of the concrete. Only use forms that are true to line, free from warp, and of sufficient strength to resist the pressure of the concrete without springing. On all radial sections, use curved forms of proper radius and that are of a design acceptable to the Engineer. Brace and stake forms to ensure that they will remain in both horizontal and vertical alignment until their removal.
- B. For the templates, use 1/8-inch thick metal, of the same width as that of the curb, gutter, or combination curb and gutter, and that is not less than 1/4 inch more in depth than the respective depth of the type curb and gutter being constructed. The templates shall have lugs or other devices to hold them in position during concrete placement and shall be of a design that will allow their removal without damaging the concrete. For gutters, use a

strike-off template, of the form and shape of the gutter, to shape the top surface of the gutter.

2.3 COMPACTION EQUIPMENT

- A. Compact the subgrade using tamping or rolling equipment that will produce the desired results.

2.4 MIXING AND FINISHING EQUIPMENT

- A. Use mixers that meet TDOT section 604.04. The Contractor may use a curb machine that will place the concrete in a satisfactory manner. Provide finishing equipment, including satisfactory floats, edgers, spades, and tamps.

PART 3 - EXECUTION

3.1 INSTALLATION

- B. All soil subgrade under curbs shall be compacted in accordance with Section 310000.
- C. All construction for curbing shall be in accordance with TDOT Section 702 for the type called for on the Drawings.

END OF SECTION 321613.13

SECTION 321623 - CONCRETE WALKS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.

1.2 DESCRIPTION OF WORK

- A. Under this section the Contractor shall furnish and construct sidewalks and stairs as shown or scheduled on the Drawings, specified or directed.
- B. This section includes preparation of the base and/or subgrade construction of walks, adjustment of manhole castings and valve boxes to conform to new elevations and other work and materials incidental to the construction of walks.

1.3 OWNER'S STANDARDS AND SPECIFICATIONS

- A. Items preceded by TDOT shall refer to the latest edition of the State of Tennessee, Department of Transportation, Standard Specifications For Road and Bridge Construction.

PART 2 - PRODUCTS

2.1 CONCRETE

- A. All concrete used shall be Class A.
- B. The Contractor may adjust water and percentages of fine and coarse aggregate within the limits specified (fine aggregate may range from 40 to 65%) to allow satisfactory placement.

2.2 FORMS

- A. Except for the templates between 10-foot sections, use forms of wood, metal, or other suitable material. Extend forms for the full depth of the concrete. Only use forms that are true to line, free from warp, and of sufficient strength to resist the pressure of the concrete without springing. On all radial sections, use curved forms of proper radius and that are of a design acceptable to the Engineer. Brace and stake forms to ensure that they will remain in both horizontal and vertical alignment until their removal.
- B. For the templates, use 1/8-inch thick metal, of the same width as that of the curb, gutter, or combination curb and gutter, and that is not less than 1/4 inch more in depth than the respective depth of the type curb and gutter being constructed. The templates shall have lugs or other devices to hold them in position during concrete placement and shall be of a design that will allow their removal without damaging the concrete. For gutters, use a strike-off template, of the form and shape of the gutter, to shape the top surface of the gutter.

2.3 COMPACTION EQUIPMENT

- A. Compact the subgrade using tamping or rolling equipment that will produce the desired results.

2.4 MIXING AND FINISHING EQUIPMENT

- A. Use mixers that meet TDOT section 604.04. The Contractor may use a curb machine that will place the concrete in a satisfactory manner. Provide finishing equipment, including satisfactory floats, edgers, spades, and tamps.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. All soil subgrade under walks and stairs shall be compacted in accordance with Section 312323.13.
- B. All service boxes, manholes and inlet tops shall be set to the required grades.
- C. All construction for walks shall be in accordance with TDOT Section 701 for the type called for on the Drawings.
- D. Minimum thickness of concrete walks shall be 4 inches.

END OF SECTION 321623

SECTION 331113.01 – WATER UTILITY DISTRIBUTION SYSTEM

PART 1 – GENERAL

1.1 SUMMARY

- A. Furnishing all labor, materials, tools, equipment, and services for all waterlines as shown on the Drawings.
- B. Although such is not specifically indicated, furnish and install all supplementary or miscellaneous items, appurtenances and devices incidental to or necessary for a functional and complete installation.

1.2 RELATED DOCUMENTS AND SECTIONS

- A. Drawings and general provisions of the Contract, including General Conditions, Supplementary Conditions (if included), and Division 1 Specifications Sections, apply to this Section.
- B. Section 013319 – Field Testing Reporting
- C. Section 016600 – Product Handling and Protection
- D. Section 031000 – Earthwork

1.3 PRODUCTS INSTALLED BUT NOT FURNISHED UNDER THIS SECTION

- A. Granular pipe bedding and cover material specified in Section 310000 – Earthwork.
- B. Special backfill material specified in Section 310000 – Earthwork.

1.4 DEFINITIONS

- A. Bedding: Material placed under, beside and directly over pipe for the full width of the trench up to a distance of 6 inches over the top of the pipe barrel prior to subsequent backfill operations.

1.5 SUBMITTALS

- A. Manufacturer's Affidavit: The manufacturer shall furnish an affidavit indicating that all pipe, fittings, valves, fire hydrants, and appurtenances have been manufactured and tested in accordance with the requirements of the applicable referenced Standards. A copy of the affidavit indicating the Project on which the material is to be used, shall be forwarded to ENGINEER prior to construction.

1.6 REFERENCES

- A. AWWA C104 - Cement-Mortar Lining for Ductile-Iron Pipe and Fittings
- B. AWWA C105 - Polyethylene Encasement for Ductile-Iron Pipe Systems
- C. AWWA C110 - Ductile-Iron and Gray-Iron Fittings
- D. AWWA C111 - Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings
- E. AWWA C116 - Protective Fusion-Bonded Coatings for the Interior and Exterior Surfaces of Ductile-Iron and Gray-Iron Fittings
- F. AWWA C150 - Thickness Design of Ductile-Iron Pipe
- G. AWWA C151 - Ductile-Iron Pipe, Centrifugally Cast
- H. AWWA C153 - Ductile-Iron Compact Fittings
- I. AWWA C213 - Fusion-Bonded Epoxy Coatings and Linings for Steel Water Pipe and Fittings
- J. AWWA C301 - Prestressed Concrete Pressure Pipe, Steel-Cylinder Type
- K. AWWA C400 - C400-03: AWWA Standard for Asbestos-Cement Pressure Pipe, 4 In. through 16 In. (100 mm through 400 mm), for Water Distribution Systems
- L. AWWA C502 - Dry-Barrel Fire Hydrants
- M. AWWA C504 - Rubber-Seated Butterfly Valves
- N. AWWA C509 - Resilient-Seated Gate Valves for Water Supply Service
- O. AWWA C515 - Reduced-Wall, Resilient-Seated Gate Valves for Water Supply Service
- P. AWWA C550 - Protective Interior Coatings for Valves and Hydrants
- Q. AWWA C600 - Installation of Ductile-Iron Mains and Their Appurtenances
- R. AWWA C651 - Disinfecting Water Mains
- S. AWWA C800 - Underground Service Line Valves & Fittings
- T. AWWA C810 – Replacement and Flushing of Lead Service Lines
- U. ASTM A36 - Standard Specification for Carbon Structural Steel
- V. ASTM A47 - Standard Specification for Ferritic Malleable Iron Castings
- W. ASTM A48 - Standard Specification for Gray Iron Castings

- X. ASTM A126 - Standard Specification for Gray Iron Castings for Valves, Flanges, and Pipe Fittings
 - Y. ASTM A181 - Standard Specification for Carbon Steel Forgings, for General-Purpose Piping
 - Z. ASTM A183 - Standard Specification for Carbon Steel Track Bolts and Nuts
 - AA. ASTM A307 -Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength
 - BB. ASTM B62 - Standard Specification for Composition Bronze or Ounce Metal Castings
 - CC. ASTM B88 - Standard Specification for Seamless Copper Water Tube
 - DD. ASTM B124 - Standard Specification for Copper and Copper Alloy Forging Rod, Bar, and Shapes
 - EE. ANSI B16.18 - Cast Copper Alloy Solder Joint Pressure Fittings
 - FF. ASTM D698 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12 400 ft-lbf/ft³ (600 kN-m/m³))
 - GG. AWWA C906-21 Polyethylene (PE) pressure Pipe & Fittings 4-inch through 63-inch for water dist.
 - HH. ASTM D3261 Butt Heat Fusion PE Fittings for PE Pipe and Tubing
 - II. ASTM D3350 Standard Specification for PE Pipe & Fittings Materials
 - JJ. ASTM D1238 Standard Test Method for Flow Rates of Thermoplastics by Extrusion Plastometer
 - KK. ASTM D1505 Density of Plastics
 - LL. ASTM D2837 Hydrostatic Design Basis
 - MM. NSF Std. #14 Plastic Piping Components &Y Related Materials
 - NN. ASTM F714 Standard Specification for Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter
 - OO. ASTM F905 Standard Practice for Qualification of Polyethylene Saddle-Fused Joints
 - PP. ASTM F 1055 Standard Specification for Electrofusion Type Polyethylene Fittings for Outside Diameter Controlled Polyethylene Pipe and Tubing
- 1.7 QUALITY ASSURANCE
- A. Field samples shall comply with Section 013319 – Field Test Reporting

- B. All pipes, fittings, valves, fire hydrants and appurtenances shall be appropriately marked for identification purposes. The materials and methods of manufacture, and completed pipes, fittings, valves, and appurtenances shall be subject to inspection and rejection at all times. OWNER and ENGINEER have the right to make inspections.

1.8 PROJECT CONDITIONS

- A. Comply with all provisions of Section 013543 – Environmental Protection at all times.
- B. Existing Conditions
 - 1. Verify locations of underground utilities.
 - 2. Protect existing structures and utilities from damage. Repair if damaged by this work.
 - 3. Do not change pipe sizes without securing written approval of Engineer.
- C. Field Measurements
 - 1. If it becomes necessary to change location of waterlines due to underground utility interference, secure approval of Engineer.
 - 2. If Contractor initiated, make changes approved by the Engineer without added cost to Owner.

1.9 DELIVERY STORAGE AND HANDLING

- A. Deliver products to the site, store and protect under provisions of Section 016600 – Product Handling and Protection.

PART 2 – PRODUCTS

2.1 General

- A. Compatibility
 - 1. Contractor is responsible for compatibility between pipe materials, fittings and appurtenances.

2.2 WATER MAIN PIPE AND FITTINGS

- B. Ductile Iron Pipe and Fittings
 - 1. Pipe shall be designed in accordance with AWWA C150, minimum Thickness Class 52 when buried; manufactured in accordance with AWWA C151; furnished in minimum nominal 18 foot laying lengths.
 - 2. Fittings: AWWA C110 or C153 and furnished with mechanical joints conforming to AWWA C111 and shall be cement lined with bituminous coating in accordance with AWWA C104, with fittings to be polyethylene encased when buried.
 - a. All fittings shall be furnished for 350 psi pressure rating.

- b. All fittings shall be installed with mechanical restraint joints and shall be EBAA Iron Sales, Inc. Series 1100, Tyler Union TUF Grip or approved equal.
- 3. Exterior Coating: Asphaltic material. Fittings may be coated with a fusion-bonded epoxy coating in accordance with AWWA C116.
- 4. Interior Lining: AWWA C104 cement mortar with seal coat, or AWWA C116 fusion-bonded epoxy coating.
- 5. Joints: AWWA C111, rubber gasket, push-on or mechanical type, with restrained type joints on all pipes.
 - a. For all bolted joints, bolt length shall be such that all threads of the nut will be engaged.
 - b. Restrained push-on joint gaskets shall be provided on all buried pipe joints; shall be completely boltless; McWane Super-Lock, American Flex-Ring, U.S. Pipe TR Flex, or as approved. Restrained mechanical joints shall be MEGALUG with Mega-Bond Coating System as manufactured by EBAA Iron, Inc., or as approved, of ductile iron and with a working pressure of at least 250 psi and a minimum safety factor of 2:1.
 - c. All pipe shall be flanged joints when not buried.

2.3 VALVES

- A. Follow PLAN NOTE requirements.
- B. Valve Boxes – follow PLAN NOTE requirements.
 - 1. Extensions shall be provided where the depth of trench is such that they are needed to bring up the top of the box to finished grade. The valve box shall be installed so that it is perfectly vertical and centered on the valve operating nut.

2.4 SERVICE CONNECTION AND BACTERIA SAMPLING AND FLUSHING ASSEMBLY PIPE

- A. Copper Pipe and Fittings:
 - 1. Pipe: ASTM B88, Type K, annealed, seamless copper water tube.
 - 2. Fittings: ASME B16.15 containing no lead, ASTM B584 and AWWA C800 service line fittings.
 - 3. Joints: Compression connections.

2.5 FIRE HYDRANTS

- A. Follow PLAN NOTES
 - 1. Suitable for setting in trenches of depths and in locations shown; CONTRACTOR responsible for determining hydrant depth of bury based on locations shown.
 - 2. Verify that the direction of opening, hydrant pumper nozzle, operating nut, outlet nozzle cap nuts and hose threads conform to those in the system before the new hydrants are shipped.
- B. Watch Valves and Valve Boxes: Watch valves and valve boxes shall be gate valves and valve boxes as specified in Article 2.3, with valves to have ends suitable for receiving the spigot end of 6 inch anchoring pipe.

- C. Piping:
1. Ductile Iron Pipe: AWWA C150, AWWA C151; asphaltic material, or AWWA C116 fusion-bonded epoxy exterior coating, AWWA C104 cement mortar with seal coat, or AWWA C116 fusion-bonded epoxy interior lining.
 2. AWWA C110 or C153 mainline tees with standard mechanical joint branch for connecting to anchoring pipe and fittings, and mechanical joint anchoring type branch when connecting to a watch valve; coated and lined as specified for pipe. C153 fittings to be polyethylene encased when buried.
 3. Anchoring pipe, plain end mechanical joint type incorporating an integral cast shoulder and follower gland.
 4. Anchoring Pipe Manufacturers: American Cast Iron Pipe Company, Clow Corporation, United States Pipe and Foundry Company, or as approved.

2.6 JOINT BOLTS AND NUTS

- A. Unless otherwise specified or noted, bolts and nuts on buried piping shall be low alloy steel cathodic to pipe with a minimum yield strength of 45,000 psi, and all other bolts and nuts shall be low carbon steel, ASTM A307, Grade B, zinc-plated.

PART 3 – EXECUTION

3.1 ALIGNMENT AND GRADE

- A. Horizontal and Vertical Control
1. All horizontal and vertical control required for the complete layout and performance of the Work under this contract shall be done by a registered surveyor at the Contractor's expense, and any observations by the Engineer of the Contractor's methods will not relieve the Contractor of his responsibility.
 2. The Contractor shall be solely responsible for the accuracy of all horizontal and vertical control.
- B. Alignment and grade shall be established by means of a laser beam.

3.2 PREPARATION

- A. String pipe sections along the route of the mains so as to interfere least with pedestrian and vehicular traffic and to protect the pipe.
- B. Excavate trench for Work of this Section; follow Section 310000.
- C. Location of service connections and insertion valves indicated are approximate. Final locations will be established during construction by OWNER.
- D. Do not install service connections until new mains have been successfully tested, disinfected, and placed in service.
- E. Prior to ordering tapping sleeve assembly, expose existing main and verify circumference of existing pipe.

3.3 BEDDING

- A. Place bedding material at trench bottom and shape for accurate placement and proper support of pipe.
- B. Place in 6 inch layers, loose measurement, and compact by hand or mechanical tamping to not less than 95 percent of maximum density as determined in accordance with ASTM D698 (Standard Proctor).
- C. Carefully place and tamp so as not to damage or displace joints or pipe. Do not drop material directly on pipe.
- D. Maintain optimum moisture content of bedding material to attain required compaction density.
- E. Construct thrust blocks at dead ends, and valves as shown. Place against firm, undisturbed soil. Provide straps and anchors as indicated; repair cuts and other damage to galvanized surfaces by applying two coats of cold galvanizing compound. Securely strap or block plugs and caps. Thrust blocks shall meet all applicable requirements of:
 - 1. Concrete: Class A.
 - 2. Straps and Anchors for Thrust Blocks: Galvanized steel.
 - 3. Cold Galvanizing Compound: ZRC Products Company, or as approved.

3.4 PIPE INSTALLATION

- A. The Contractor shall furnish all of the proper tools and equipment required for the safe, proper handling and laying of all pipe, fittings, and specials that are to be installed in this work. All storage, handling, laying, and backfill methods shall be performed so as to avoid damaging either the interior or the exterior surfaces of all pipe fittings, specials, joint materials, or other appurtenances, and any such damage shall be remedied at the Contractor's expense.
- B. Before any pipe is lowered into the trench, it shall be inspected for damage, and any unsatisfactory lengths shall be rejected. Cast metal pipe and fittings shall be inspected for cracks by ringing with a light hammer while suspended. The interior and exterior of each pipe length used shall be cleaned as necessary to remove all dirt or other foreign material before it is inspected. The interior of the pipe shall be kept clean until the work is accepted.
- C. No pipe shall be laid in water, mud or when trench conditions or weather is unsuitable for such work.
- D. If mud, surface water, leaves and/or other debris have been permitted to enter the strung-out pipe, the inside shall be cleaned with a strong hypochlorite solution after all such foreign materials are completely cleaned from the pipe and before the pipe is lowered into the trench.

- E. Pipe shall not be pushed off the bank nor shall it be permitted to fall into the trench. Each type of pipe, fitting, special or other appurtenances shall be handled in strict accordance with recommendations of its respective manufacturer.
- F. No rocks, stones, metal, concrete, bricks, pavement pieces, wood, soil lumps or other hard materials too big to pass through a six (6") inch screen shall be permitted within six (6") inches of the pipe after it is laid in the trench. Any pipe endangered by such debris shall be subject to removal and disposal at the Contractor's expense.
- G. When pipe laying is not in progress, the open ends of installed pipe shall be closed by appropriate means to prevent the entrance of dirt and water. In the event ground water, sewage water or other potential contaminants enter any portion of the pipeline, after it is laid, cleaning and preliminary disinfection with a strong hypochlorite solution shall be done.
- H. Provide non-conducting dielectric connections wherever jointing dissimilar metals.
- I. Use suitable fittings, usually 1/8 bends, when abrupt grade changes of the pipe are necessary to avoid existing utilities or other obstructions, so as to secure and easy flow of liquid and to provide sufficient cover below same unless noted otherwise.
- J. Install pipe to allow for expansion and contraction without stressing pipe or joints.
- K. Deflect pipe joints in strict accordance with the pipe manufacturer's instructions. For river crossing pipe, in no case shall joint deflection exceed 15 degrees during installation and 12 degrees after installation unless otherwise approved by manufacturer.
- L. With push-on joints, wipe surfaces that contact rubber gasket clean and dry just prior to making joint. Use lubricant in accordance with the manufacturer's instructions when making joint.
- M. With mechanical joints, brush surfaces that contact rubber gasket with soapy water to remove all sand and grit just prior to making joint.

3.5 VALVES

- A. Installation
 - 1. Valves shall be carefully handled and placed so as not to permit any damage to the interior coatings, disc or seat. Internal type lifting devices shall not be permitted. Do not use handwheels or stems as lifting or rigging points.
 - 2. All valves shall be carefully installed in their respective positions free from distortion and stress. Connecting joints shall conform to applicable requirements of the specifications.
 - 3. Stem guides shall be accurately aligned.
 - 4. If the valve box is tipped or otherwise not centered on the valve operating nut or not installed at the proper elevation, the Contractor shall, at his own expense, make whatever correction is required to remedy the defect promptly, upon notice to do so by the Engineer.

- B. Testing
 - 1. All valves shall be tested in place by the Contractor as far as practicable under conditions for the pipelines, in which they are placed, and defects revealed in valves or connections under test shall be corrected at the expense of the Contractor to the satisfaction of the Engineer.
- C. Operation and Maintenance Manuals
 - 1. Prior to or with the delivery of equipment, the manufacturer shall provide copies of an operation and maintenance manual including storage, installation, start-up, operating and maintaining instructions, and a complete parts and recommended spare parts list. The O & M Manuals shall be in compliance with the General Requirements of these specifications.

3.6 CONNECTION TO AND INSERTIONS INTO EXISTING WATER LINES

- A. Connect new mains to existing mains using proper fittings and in a manner acceptable to OWNER and ENGINEER.
- B. Expose existing mains at connection points 10 days prior to making connections to determine elevation, verify type of pipe, confirm outside diameter of pipe, and identify type of restraints existing.
- C. No cut-ins or connections to existing mains shall be made unless at least 48 hours notice is given to OWNER and ENGINEER.
- D. Plan all connecting work to reduce number of shutoffs.
- E. Two days prior to shutting valves on existing lines, notify all affected property owners, local official in charge of the water works system, and ENGINEER of such shutoff.
- F. Keep shutoff time to a minimum and do at off-peak hours.
- G. A representative of OWNER shall operate existing valves. CONTRACTOR shall not operate existing valves.
- H. OWNER and ENGINEER assume no responsibility for any delay occasioned by special requirements or conditions which must be met in making connections.
- I. Take extreme care in making connections to prevent contamination of existing mains.
- J. Before making cut-ins or connections to existing mains, wash all fittings, valves, and pipe with clean water, and then disinfect by washing with a chlorine solution having a residual chlorine strength of not less than 50 ppm.
- K. Plugs removed from existing mains that are not damaged may be reused within the Project, and those remaining after completion of construction shall remain the property of OWNER.
- L. Connections to AC pipe shall be made with appropriate fittings specifically designed for AC pipe connections, and shall be acceptable to OWNER. All connections to AC pipe

shall be via pad adapters. AC pipe must not be cut with a saw. All cuts shall be accomplished by snap cut.

3.7 ANCHORAGE

- A. All hydrants, plugs, caps, tees and bends shall be provided with a reaction backing or shall be restrained by attaching suitable metal rods, clamps, anchored fittings or harnessed joints, as shown on the plans or as specified so as to prevent movement.
- B. Reaction backing shall be of concrete, with steel reinforcement as required, unless otherwise shown on the drawings. Backing shall be placed between solid ground and the fitting or other part of the pipeline to be anchored; the area of bearing on the pipe and on the ground in each instance shall be that as indicated on the plans. The backing shall be so placed unless otherwise directed, that the pipe and fitting joints will be accessible for repair.
- C. Steel tie rods or clamps of adequate strength to prevent movement may be used instead of concrete backing. Steel tie rods or clamps shall be used to connect the hydrant watch valves to the main and to connect the hydrant to the water valves when shown on the drawings. Steel rods or clamps shall be painted with three coats of an approved bituminous paint or coat tar enamel.

3.8 BACKFILLING

- D. Backfilling shall be accomplished in a two-step procedure as follows: 1) partial backfill before leakage tests, and 2) completion of backfill after tests. Departure from this procedure due to traffic or other conditions shall be approved by the Engineer.

3.9 MAINTENANCE OF EXISTING DITCHES

- A. The Contractor shall use the utmost care in maintaining ditches and other waterways, and, if either bottoms or banks of such ditches are disturbed, they shall be promptly restored and maintained for the life of the guaranty period. Similar care shall be used in preventing damage to existing pavement by caving of trench walls and undermining such pavement. If pavement is damaged, the Contractor shall repair same at his own expense.

3.10 CLEARING SITE AND RESTORING DAMAGED SURFACES

- A. Upon completion of the backfill work, the Contractor shall immediately remove and dispose of all surplus materials including dirt and rubbish.
- B. Unless otherwise called for on the plans, the Contractor shall replace all pavement, sidewalks, sod, or other surfaces disturbed to a condition equal to that existing before the work was started, furnishing all materials, labor, equipment, etc., at no additional cost to the Owner.

3.11 LEAKAGE TESTS

- A. All pipeline construction shall be subjected to hydrostatic leakage testing of each valve section, as it is completed, unless otherwise directed by the Engineer. All pipes, valves, fittings, etc. shall be laid in such a manner as to leave all joints watertight.
- B. Each section of pipe being tested shall be filled slowly with water, and, before applying the specified test pressure, all air shall be expelled from the pipe. The method of obtaining and placing test water(s) into the pipeline shall be approved by the Engineer.
- C. The test shall be observed by the Engineer or his designate. The Owner will furnish a pressure gauge for measuring the pressure on the water main. The Contractor shall furnish a suitable pump, pipes, bulkheads and all appliances, labor, fuel, and other appurtenances necessary to make these tests.
- D. The test pressure shall be maintained for sufficient length of time to allow for a thorough examination of joints and elimination of leakage where necessary. The pipeline shall be made absolutely tight under the test pressure.
- E. The Contractor shall drain each section of the waterline piping after it has been tested. If the drains are connected to valve or drain vaults, then, within a reasonable period of time after the test has been completed, the Contractor shall pump all water out of the vaults.
- F. In cold weather, immediately after testing a section of the waterline piping, the Contractor shall open all valves, air cocks, by-passes, and drains; shall drain that section of the pipeline, including the bonnets of all valves contained therein, and shall take all other precautions necessary to prevent injury due to freezing to the water main, piping and appurtenances.
- G. Every precaution must be taken to remove, valve-off, or otherwise protect delicate control equipment in or attached to pipelines to prevent damage or injury thereto.
- H. Leakage is defined as the quantity of water that must be supplied into the newly laid pipe, or any valved section thereof, as required to maintain the specified leakage test pressure after the pipe has been filled with water and the air expelled as herein required.
- I. In calculating leakage, the Engineer will not make allowance for any leakage at the valves, the removable bulkheads, etc.
- J. The evaluation of actual leakage to standard pressure leakage is calculated by the application of the ratio determined from the square root of respective pressures, other factors being equal.
- K. The test pressure shall be 200 psi unless otherwise specified elsewhere in these specifications. Testing procedure shall be as specified herein for the particular pipe material contained in the section tested and shall be subject to modification as required by a particular pipeline material specification or part thereof, as contained elsewhere in these specifications.

- L. For cast iron pipe (CIP) or ductile iron pipe (DIP), AWWA C600 shall govern the test, except that the allowable leakage rate shall be 12 gpd per mile of pipe per inch of diameter.
- M. All defective materials and construction found in the pipeline as a result of leakage tests shall be corrected by removal of the defective materials and reconstruction with sound materials and construction. The entire section shall then be retested in accordance with the foregoing.
- N. Any testing performed without the knowledge of the Engineer shall not be considered a test for the purpose of this specification.
- O. The lack of hydrants, branch shutoff valves, or any other attachments to the line being tested shall not preclude the testing of each valved section as it is completed. In the event that hydrants, branch shutoff valves or any other attached appurtenances are not available for installation prior to testing of each valved section, then plugs or other approved means of containing line pressure must be utilized so as to test each valved section of main line as it is completed. A retest of each valved section will then be necessary after all appurtenances are installed. There will be no additional payment for any such retests.
- P. The Contractor shall provide all pressure test equipment. The Owner shall provide all test water required and shall provide test gauges.

3.12 DISINFECTION

- A. Prior to disinfection, all pipeline construction shall be flushed to remove any foreign material. Flushing shall be performed after completion and approval of the leakage tests. The minimum requirements for flushing are as follows:

<u>Pipe Size</u>	<u>Minimum GPM Required</u>
6"	220
8"	390
10"	610
12"	880
14"	1,200
16"	1,565
18"	1,980
20"	2,450
24"	3,500

- B. Flushing at these rates shall be continued for at least five (5) minutes. In the event the foregoing requirements cannot be met due to the Owner's facilities being inadequate, alternate rate(s) and duration(s) of flushing shall be used.
- C. Disinfecting water mains shall be in accordance with AWWA C651 and as specified herein.

- D. The following disinfectants may be used: Chlorine or chlorine water; calcium hypochlorite; sodium hypochlorite solution, or chlorinated lime-water mixture. Chlorine shall be applied at one extremity of a pipe section via a corporation stop (installed in the top of the pipe by the Contractor) and bled at the opposite extremity of a properly segregated section. Precautions shall be taken to prevent dosed water from flowing into the potable water supply. All high points on the section treated shall be properly vented for air escape.
- E. The rate of applying the disinfectant shall provide at least 25 ppm (mg per liter) chlorine dose at the outlet end of the line section being treated. The disinfecting period shall be twenty-four (24) hours, and, at the end of this period, a chlorine residual of at least 10 mg per liter shall exist at the outlet end of the line.

In the event of unfavorable or unsanitary conditions of installation, poor packing, or high pH, the period of disinfection may be extended. For shorter periods of disinfection, higher dosages shall be required.

- F. Sterilizing water shall be disposed of in a satisfactory manner by the Contractor. If the foregoing disinfection procedure fails to provide thorough disinfection of the line, it shall be repeated as necessary in the pipeline for a period of 20 - 30 days after it is placed into operation.
- G. Tests for efficacy of sterilization shall be made by the Owner, and repeated sterilization shall be carried out by the Contractor when required.
- H. Contractor shall provide all disinfectants and disinfection equipment. Owner shall provide all test waters needed.

END OF SECTION 331113.01