
REQUEST FOR PROPOSALS

Construction Manager / General Contractor

For the Project Titled:

John Sevier Exterior Building Updates

SBC NUMBER: 529/070-01-2013

STATE OF TENNESSEE

Department of General Services



Release Date: November 25, 2015



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for
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1. INTRODUCTION

1.1. Statement of Procurement Purpose

The State of Tennessee, Department of General Services, State of Tennessee Real Estate Asset Management ("STREAM"), hereinafter referred to as the "State," or the "Owner," has issued this Request for Proposals ("RFP") to define minimum contract requirements; solicit responses; detail response requirements; and, outline the State's process for evaluating responses and selecting a Construction Manager/General Contractor ("CM/GC") to provide the needed services.

Through this RFP, the State seeks to procure necessary services at the most favorable, competitive prices and to give ALL qualified businesses, including those that are owned by minorities, women, Tennessee service-disabled veterans, and small business enterprises, an opportunity to do business with the State as contractors, subcontractors or suppliers.

1.2 Project Description

The State is seeking to hire a CM/GC who can effectively partner with the State on the exterior building updates of the John Sevier State Office Building.

Refer to RFP Attachment 6.7., Project Charter, for the project description.

1.3. Current Project Status

The Designers for the Project are anticipated to be given the Notice-To-Proceed to begin design Development ("DD") Phase on 1/18/2016.

The Designer (see contact information below) may be contacted for partial design development document information. These are preliminary drawings and it is expected changes will be made during the Construction Documents ("CD") Phase with the input of the CM/GC.

Hart Freeland Roberts
Rex Garton
615-370-8500
RGarton@hfrdesign.com

1.4. Project Location

The Project(s) shall be located in Nashville, Davidson County, Tennessee.

1.5. Project Expectations and Objectives

The following are characteristics that Respondents should be able to demonstrate:

1. A proven track record of providing successful pre-construction services, with a particular emphasis on preparing detailed construction phase scheduling, providing continuous value analysis, and accurate cost estimating.
2. Significant experience with exterior renovations on historic buildings.
3. Significant BIM experience.
4. Experience with managing and meeting construction schedules and providing CM/GC services on State projects.

This Project has been designated by the State of Tennessee, Department of General Services, as a Project which is to be designed and constructed pursuant to, and in all respects in accordance with, the most current version of the State of Tennessee Office of the State Architect Building and Information modeling ("BIM") and Construction Operations Building Information Exchange ("COBie") Standards, which

are posted on the website of the Office of the State Architect (provided below), and which will be incorporated by reference into all design and construction contracts entered into by the State relating to the Project.

<http://tn.gov/finance/article/fa-osa-designers-info>

The Project will be one of the pilot projects for the Tennessee High Performance Building Requirements ("TN HPBr"). Refer to *Pro Forma* Contract Attachment E for a copy of the TN HPBr.

The Respondent must have a working understanding of all applicable codes required by the State of Tennessee as listed in the Owner's Designers' Manual (The Designers' Manual is accessible online, located at <http://www.tn.gov/generalservices/article/designers-manual-2014>

1.6. **Project Construction Budget**

Below is the estimated Guaranteed Maximum Price ("GMP"), for all work associated with the Scope of Services outlined in RFP Attachment 6.6., *Pro Forma* Contract, Attachment C, CM/GC Scope of Services and Deliverables:

GMP - **\$12,100,000.00**

It is imperative to the Owner that the cost of construction for the Project does not exceed the GMP.

1.7. **Scope of Service, Contract Period, & Required Terms and Conditions**

RFP Attachment 6.6., *Pro Forma* Contract, details the State's requirements and the scope of services and deliverables to be provided by the CM/GC.

The *pro forma* contract substantially represents the contract document that the successful Respondent must sign.

If the Project is not substantially complete within the time period set forth in the construction contract, the liquidated damage amount will be \$1,000 per day, until final substantial completion is achieved.

1.8. **Nondiscrimination**

No person shall be excluded from participation in, be denied benefits of, or be otherwise subjected to discrimination in the performance of a contract pursuant to this solicitation or in the employment practices of the Contractor on the grounds of handicap or disability, age, race, creed, color, religion, (subject to *Tennessee Code Annotated*, Sections 4-21-401 and 405), sex, national origin, or any other classification protected by federal, Tennessee state constitutional, or statutory law. The Contractor pursuant to this solicitation shall, upon request, show proof of such nondiscrimination and shall post in conspicuous places, available to all employees and applicants, notices of nondiscrimination.

1.9. **RFP Communications**

1.9.1. The State has assigned the following RFP identification number that must be referenced in all communications regarding this RFP:

SBC PROJECT 529/070-01-2013

1.9.2. **Unauthorized contact about this RFP with employees or officials of the State of Tennessee except as detailed below may result in disqualification from consideration under this procurement process.**

- 1.9.2.1. Prospective Respondents must direct communications concerning this RFP to the following person designated as the Solicitation Coordinator:

Nickie Smith, Solicitation Coordinator

Department of General Services
Central Procurement Office, 3rd Floor
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue
Nashville, TN 37243
Phone: (615) 532-7475
Email: Nickie.Smith@TN.gov

- 1.9.2.2. Notwithstanding the foregoing, Prospective Respondents may alternatively contact:

- a. staff of the Governor's Office of Diversity Business Enterprise for assistance available to minority-owned, woman-owned, Tennessee service-disabled veteran owned, and small businesses as well as general, public information relating to this RFP (visit www.tn.gov/businessopp/ for contact information); and
- b. the following individual designated by the State to coordinate compliance with the nondiscrimination requirements of the State of Tennessee, Title VI of the Civil Rights Act of 1964, the Americans with Disabilities Act of 1990, and associated federal regulations:

Pamela Fitzpatrick
Department of General Services
William R. Snodgrass Tennessee Tower, 22nd Floor
312 Rosa L. Parks Avenue
Nashville, TN 37243
(615) 253-2561
Email: Pamela.Fitzpatrick@tn.gov

- 1.9.3. Only the State's official, written responses and communications with Respondents are binding with regard to this RFP. Oral communications between a State official and one or more Respondents are unofficial and non-binding.
- 1.9.4. Potential Respondents must ensure that the State receives all written questions and comments, including questions and requests for clarification, no later than the Written Questions & Comments Deadline detailed in the RFP Section 2, Schedule of Events.
- 1.9.5. Respondents must assume the risk of the method of dispatching any communication or response to the State. The State assumes no responsibility for delays or delivery failures resulting from the Respondent's method of dispatch. Actual or digital "postmarking" of a communication or response to the State by a specified deadline is not a substitute for the State's actual receipt of a communication or response.
- 1.9.6. The State will convey all official responses and communications related to this RFP to the prospective Respondents from whom the State has received a Notice of Intent to Respond (refer to RFP Section 1.13.).
- 1.9.7. The State reserves the right to determine, at its sole discretion, the method of conveying official, written responses and communications related to this RFP. Such written communications may be transmitted by mail, hand-delivery, facsimile, electronic mail, Internet posting, or any other means deemed reasonable by the State. For internet posting, please refer to the following website: <http://www.tn.gov/generalservices/article/request-for-proposals>

- 1.9.8. The State reserves the right to determine, at its sole discretion, the appropriateness and adequacy of responses to written comments, questions, and requests related to this RFP. The State's official, written responses will constitute an amendment of this RFP.
- 1.9.9. Any data or factual information provided by the State (in this RFP, an RFP amendment or any other communication relating to this RFP) is for informational purposes only. The State will make reasonable efforts to ensure the accuracy of such data or information; however it is the Respondent's obligation to independently verify any data or information provided by the State. The State expressly disclaims the accuracy or adequacy of any information or data that it provides to prospective Respondents.

1.10. Assistance to Respondents With a Handicap or Disability

Prospective Respondents with a handicap or disability may receive accommodation relating to the communication of this RFP and participating in the RFP process. Prospective Respondents may contact the Solicitation Coordinator to request such reasonable accommodation no later than the Disability Accommodation Request Deadline detailed in the RFP Section 2, Schedule of Events.

1.11. Respondent Required Review & Waiver of Objections

- 1.11.1. Each prospective Respondent must carefully review this RFP, including but not limited to, attachments, the RFP Attachment 6.6., *Pro Forma* Contract, and any amendments, for questions, comments, defects, objections, or any other matter requiring clarification or correction (collectively called "questions and comments").
- 1.11.2. Any prospective Respondent having questions and comments concerning this RFP must provide them in writing to the State no later than the Written Questions & Comments Deadline detailed in the RFP Section 2, Schedule of Events.
- 1.11.3. Protests based on any objection to the RFP shall be considered waived and invalid if the objection has not been brought to the attention of the State, in writing, by the Written Questions & Comments Deadline.

1.12. Pre-Response Conference

A Pre-response Conference will be held at the time and date detailed in the RFP Section 2, Schedule of Events. Pre-response Conference attendance is not mandatory, and prospective Respondents may be limited to a maximum number of attendees depending upon overall attendance and space limitations.

The conference will be held at:

William R. Snodgrass Tennessee Tower
3rd Floor, Conference Room E
312 Rosa L. Parks Avenue
Nashville, TN 37243

The purpose of the conference is to discuss the RFP scope of services. The State will entertain questions, however prospective Respondents must understand that the State's oral response to any question at the Pre-response Conference shall be unofficial and non-binding. Prospective Respondents must submit all questions, comments, or other concerns regarding the RFP in writing prior to the Written Questions & Comments Deadline date detailed in the RFP Section 2, Schedule of Events. The State will send the official response to these questions and comments to prospective Respondents from whom the State has received a Notice of Intent to respond as indicated in RFP Section 1.13. and on the date detailed in the RFP Section 2, Schedule of Events.

Attendees should allow sufficient time to locate vehicle parking, and to obtain a visitor's badge at the security station. Each visitor must present proper photo identification, such as a valid driver's license.

1.13. **Notice of Intent to Respond**

Before the Notice of Intent to Respond Deadline detailed in the RFP Section 2, Schedule of Events, prospective Respondents should submit to the Solicitation Coordinator a Notice of Intent to Respond (in the form of a simple e-mail or other written communication). Such notice should include the following information:

- the business or individual's name (as appropriate)
- a contact person's name and title
- the contact person's mailing address, telephone number, facsimile number, and e-mail address

A Notice of Intent to Respond creates no obligation and is not a prerequisite for submitting a response, however, it is necessary to ensure receipt of any RFP amendments or other notices and communications relating to this RFP.

1.14. **Response Deadline**

A Respondent must ensure that the State receives a response no later than the Response Deadline time and date detailed in the RFP Section 2, Schedule of Events. A response must respond, as required, to this RFP (including its attachments) as may be amended. The State will not accept late responses, and a Respondent's failure to submit a response before the Response Deadline will result in disqualification of the response. It is the responsibility of the Respondent to ascertain any additional security requirements with respect to packaging and delivery to the State of Tennessee. Respondents should be mindful of any potential delays due to security screening procedures, weather, or other filing delays whether foreseeable or unforeseeable.

2. RFP SCHEDULE OF EVENTS

2.1. The following RFP Schedule of Events represents the State's best estimate for this RFP.

| EVENT | TIME (central time zone) | DATE (all dates are state business days) |
|--|-----------------------------|---|
| 1. RFP Issued | | November 25, 2015 |
| 2. Disability Accommodation Request Deadline | | December 1, 2015 |
| 3. Pre-response Conference | 11:00 am | December 8, 2015 |
| 4. Notice of Intent to Respond Deadline | | December 9, 2015 |
| 5. Written "Questions & Comments" Deadline | 11:00 am | December 14, 2015 |
| 6. State Response to Written "Questions & Comments" | | December 21, 2015 |
| 7. Response Deadline | 2:00 pm | January 7, 2016 |
| 8. State Completion of Technical Response Evaluations | | January 13, 2016 |
| 9. State Opening & Scoring of Cost Proposals | | January 14, 2016 |
| 10. State Notice of Intent to Award Released <u>and</u> RFP Files Opened for Public Inspection | | January 15, 2016 |
| 11. State Building Commission (SBC) Approval Sought | | February 11, 2016 |
| 12. State sends contract to Contractor for signature | | February 11, 2016 |
| 13. Contractor Signature Deadline | | February 18, 2016 |

2.2. **The State reserves the right, at its sole discretion, to adjust the RFP Schedule of Events as it deems necessary.** Any adjustment of the Schedule of Events before the Notice of Intent to award is released shall constitute an RFP amendment, and the State will communicate such to prospective Respondents from whom the State has received a Notice of Intent to Respond (refer to section 1.13).

3. RESPONSE REQUIREMENTS

3.1. Response Form

A response to this RFP must consist of two parts, a Technical Response and a Cost Proposal.

- 3.1.1. **Technical Response.** RFP Attachment 6.2., Technical Response & Evaluation Guide provides the specific requirements for submitting a response. This guide includes mandatory requirement items, general qualifications and experience items, and technical qualifications, experience, and approach items all of which must be addressed with a written response and, in some instances, additional documentation.

NOTICE: A technical proposal should not include any pricing or cost information related to this project. If any pricing or cost information amounts related to this project are included in any part of the technical proposal, the State may deem the proposal to be non-responsive and reject it.

- 3.1.1.1. A Respondent must use the RFP Attachment 6.2., Technical Response & Evaluation Guide to organize, reference, and draft the Technical Response by duplicating the attachment, adding appropriate page numbers as required, and using the guide as a table of contents covering the Technical Response.
- 3.1.1.2. A response should be economically prepared, with emphasis on completeness and clarity. A response, as well as any reference material presented, must be written in English and must be written on standard 8 ½" x 11" pages (although oversized exhibits are permissible) and use a 12 point font for text. All response pages must be numbered.
- 3.1.1.3. All information and documentation included in a Technical Response should respond to or address a specific requirement detailed in the RFP Attachment 6.2., Technical Response & Evaluation Guide. All information must be incorporated into a response to a specific requirement and clearly referenced. Any information not meeting these criteria will be deemed extraneous and will not contribute to evaluations.
- 3.1.1.4. The State may determine a response to be non-responsive and reject it if:
- a. the Respondent fails to organize and properly reference the Technical Response as required by this RFP and the RFP Attachment 6.2., Technical Response & Evaluation Guide; or
 - b. the Technical Response document does not appropriately respond to, address, or meet all of the requirements and response items detailed in the RFP Attachment 6.2., Technical Response & Evaluation Guide.
- 3.1.2. **Cost Proposal.** A Cost Proposal must be recorded on an exact duplicate of the RFP Attachment 6.3., Cost Proposal & Scoring Guide. The Cost Proposal is broken down into Sections A through E as follows:

- Section A – Pre-Construction Phase Services Fee Guide
- Section B – CM/GC Construction Services Percent Fee
- Section C – CM/GC Construction Services General Conditions Monthly Rate
- Section D – CM/GC Construction Services General Conditions Lump Sum Costs
- Section E – Summary & Scoring Guide

All sections of the Cost Proposal must be completed.

NOTICE: If a Respondent fails to submit a cost proposal exactly as required, the State may deem the response to be non-responsive and reject it.

- 3.1.2.1. A Respondent must only record the proposed cost exactly as required by the RFP Attachment 6.3., Cost Proposal & Scoring Guide and must NOT record any other rates, amounts, or information.
- 3.1.2.2. The proposed cost shall incorporate ALL costs for services under the contract for the total contract period, including any renewals or extensions.
- 3.1.2.3. A Respondent must sign and date the Cost Proposal.
- 3.1.2.4. A Respondent must submit the Cost Proposal to the State in a sealed package separate from the Technical Response (as detailed in RFP Sections 3.2.3., *et seq.*).

3.2. Response Delivery

- 3.2.1. A Respondent must ensure that both the original Technical Response and Cost Proposal documents meet all form and content requirements, including all required signatures, as detailed within this RFP.
- 3.2.2. A Respondent must submit original Technical Response and Cost Proposal documents and copies as specified below.

- 3.2.2.1. **One (1)** original of the Technical Response paper document labeled:

“SBC Project No. 529/070-01-2013 TECHNICAL PROPOSAL ORIGINAL”

AND

Six (6) copies of the Technical Response paper document labeled:

“SBC Project No. 529/070-01-2013 TECHNICAL PROPOSAL COPY”

AND

One (1) digital copy of the Technical Response in the form of one (1) digital document in “PDF” format properly recorded on its own otherwise blank, standard CD-R recordable disc or USB flash drive labeled:

“SBC Project No. 529/070-01-2013 TECHNICAL PROPOSAL RESPONSE COPY ORIGINAL”

Any discrepancy between the paper Technical Proposal document and any digital copies may result in the State rejecting the proposal as non-responsive. In the event of a discrepancy between the original Technical Proposal document and the digital copies, the original, signed document will take precedence.

- 3.2.2.2. **One (1)** original Cost Proposal paper document labeled:

“SBC Project No. 529/070-01-2013 COST PROPOSAL ORIGINAL”

AND

One (1) copy in the form of a digital document in “PDF” format properly recorded on separate, blank, standard CD-R recordable disc or USB flash drive labeled:

“SBC Project No. 529/070-01-2013 COST PROPOSAL COPY”

In the event of a discrepancy between the original Cost Proposal document and the digital copy, the original, signed document will take precedence.

3.2.3. A Respondent must separate, seal, package, and label the documents and copies for delivery as follows:

3.2.3.1. The Technical Response original document and digital copies must be placed in a sealed package that is clearly labeled:

“DO NOT OPEN... RFP SBC Project # 529/070-01-2013 TECHNICAL RESPONSE FROM [RESPONDENT LEGAL ENTITY NAME]”

3.2.3.2. The Cost Proposal original document and digital copy must be placed in a separate, sealed package that is clearly labeled:

“DO NOT OPEN... RFP SBC Project # 529/070-01-2013 COST PROPOSAL FROM [RESPONDENT LEGAL ENTITY NAME]”

3.2.3.3. The separately, sealed Technical Response and Cost Proposal components may be enclosed in a larger package for mailing or delivery, provided that the outermost package is clearly labeled:

“RFP SBC Project # 529/070-01-2013 SEALED TECHNICAL RESPONSE & SEALED COST PROPOSAL FROM [RESPONDENT LEGAL ENTITY NAME]”

3.2.4. A Respondent must ensure that the State receives a response no later than the Response Deadline time and date detailed in the RFP Section 2, Schedule of Events at the following address:

Nickie Smith, Solicitation Coordinator
Department of General Services
Central Procurement Office, 3rd Floor
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue
Nashville, TN 37243
Phone: (615) 532-7475

3.3. Response & Respondent Prohibitions

3.3.1. A response must not include alternate contract terms and conditions. If a response contains such terms and conditions, the State, at its sole discretion, may determine the response to be a non-responsive counteroffer and reject it.

3.3.2. A response must not restrict the rights of the State or otherwise qualify either the offer to deliver goods or provide services as required by this RFP or the Cost Proposal. If a response restricts the rights of the State or otherwise qualifies either the offer to deliver goods or provide services as required by this RFP or the Cost Proposal, the State, at its sole discretion, may determine the response to be a non-responsive counteroffer and reject it.

3.3.3. A response must not propose alternative goods or services (*i.e.*, offer services different from those requested and required by this RFP) unless expressly requested in this RFP. The State may consider a response of alternative goods or services to be non-responsive and reject it.

- 3.3.4. A Cost Proposal must be prepared and arrived at independently and must not involve any collusion between Respondents. The State will reject any Cost Proposal that involves collusion, consultation, communication, or agreement between Respondents. Regardless of the time of detection, the State will consider any such actions to be grounds for response rejection or contract termination.
- 3.3.5. A Respondent must not provide, for consideration in this RFP process or subsequent contract negotiations, any information that the Respondent knew or should have known was materially incorrect. If the State determines that a Respondent has provided such incorrect information, the State will deem the Response non-responsive and reject it.
- 3.3.6. A Respondent must not submit more than one Technical Response and one Cost Proposal in response to this RFP, except as expressly requested by the State in this RFP. If a Respondent submits more than one Technical Response or more than one Cost Proposal, the State will deem all of the responses non-responsive and reject them.
- 3.3.7. A Respondent must not submit a response as a prime contractor while also permitting one or more other Respondents to offer the Respondent as a subcontractor in their own responses. Such may result in the disqualification of all Respondents knowingly involved. This restriction does not, however, prohibit different Respondents from offering the same subcontractor as a part of their responses (provided that the subcontractor does not also submit a response as a prime contractor).
- 3.3.8. The State shall not consider a response from an individual who is, or within the past six (6) months has been, a State employee. For purposes of this RFP:
 - 3.3.8.1. An individual shall be deemed a State employee until such time as all compensation for salary, termination pay, and annual leave has been paid;
 - 3.3.8.2. A contract with or a response from a company, corporation, or any other contracting entity in which a controlling interest is held by any State employee shall be considered to be a contract with or proposal from the employee; and
 - 3.3.8.3. A contract with or a response from a company, corporation, or any other contracting entity that employs an individual who is, or within the past six (6) months has been, a State employee shall not be considered a contract with or a proposal from the employee and shall not constitute a prohibited conflict of interest.

3.4. **Conflict of Interest**

- 3.4.1. This RFP is also subject to *Tennessee Code Annotated*, Section 12-4-101.
- 3.4.2. This RFP is also subject to State Building Commission Policy and Procedure 12.02, and the Duties and Obligations of the State are subject to Policy 12.02.

3.5. **Response Errors & Revisions**

A Respondent is responsible for any and all response errors or omissions. A Respondent will not be allowed to alter or revise response documents after the Response Deadline time and date detailed in the RFP Section 2, Schedule of Events unless such is formally requested, in writing, by the State.

3.6. **Response Withdrawal**

A Respondent may withdraw a submitted response at any time before the Response Deadline time and date detailed in the RFP Section 2, Schedule of Events by submitting a written request signed by an authorized Respondent representative. After withdrawing a response, a Respondent may submit another response at any time before the Response Deadline. After the Response Deadline, a Respondent may

only withdraw all or a portion of a response where the enforcement of the response would impose an unconscionable hardship on the Respondent.

3.7. Response Preparation Costs

The State will not pay any costs associated with the preparation, submittal, or presentation of any response.

4. GENERAL CONTRACTING INFORMATION & REQUIREMENTS

4.1. RFP Amendment

The State at its sole discretion may amend this RFP, in writing, at any time prior to contract award. However, prior to any such amendment, the State will consider whether it would negatively impact the ability of potential Respondents to meet the response deadline and revise the RFP Schedule of Events if deemed appropriate. If a RFP amendment is issued, the State will convey it to potential Respondents who submitted a Notice of Intent to Respond (refer to RFP Section 1.13). A response must address the final RFP (including its attachments) as amended.

4.2. RFP Cancellation

The State reserves the right, at its sole discretion, to cancel the RFP or to cancel and reissue this RFP in accordance with applicable laws and regulations.

4.3. State Right of Rejection

4.3.1. Subject to applicable laws and regulations, the State reserves the right to reject, at its sole discretion, any and all responses.

4.3.2. The State may deem as non-responsive and reject any response that does not comply with all terms, conditions, and performance requirements of this RFP. Notwithstanding the foregoing, the State reserves the right to waive, at its sole discretion, minor variances from full compliance with this RFP. If the State waives variances in a response, such waiver shall not modify the RFP requirements or excuse the Respondent from full compliance, and the State may hold any resulting Contractor to strict compliance with this RFP.

4.4. Assignment & Subcontracting

The Contractor may not subcontract, transfer, or assign any portion of the Contract awarded as a result of this RFP without prior approval of the State. The State reserves the right to refuse approval, at its sole discretion, of any subcontract, transfer, or assignment.

4.5. Insurance

The Owner will require the apparent successful Respondent to provide proof of insurance coverage as required by the Owner's Designers' Manual (Conditions of the Contract) before entering into a contract. Refer to Article 11 of the General Conditions of the Contract for Construction and any Supplementary Conditions (RFP Attachment 6.6). Failure to provide evidence of such insurance coverage is a material breach and grounds for termination of the contract negotiations. Any insurance required by the Owner shall be in form and substance acceptable to the Owner.

4.6. Professional Licensure and Department of Revenue Registration

4.6.1. Respondents shall be familiar with the Contractors Licensing Act of 1994, as currently amended (codified in Tennessee Code Annotated Sections 62-6-101, et seq). A contract will not be awarded to a Respondent whose proposal is in conflict with the State of Tennessee licensing law.

4.6.2. Before the response to this RFP is submitted, the apparent successful Respondent (and Respondent employees and subcontractors, as applicable) must hold all necessary, appropriate business and professional licenses to provide service as required. The Owner may require any Respondent to submit evidence of proper licensure.

4.6.3. Respondent shall complete the Response Package Cover Sheet, RFP Attachment 6.4.a., which is to be affixed to the outermost container of the response package. The dollar limit on the license

must be sufficient to support the preliminary estimated construction cost for this Project (Refer to GMP in RFP Section 1.6.).

- 4.6.4. All persons, agencies, firms, or other entities that provide legal or financial opinions, which a Respondent provides for consideration and evaluation by the State as a part of a response to this RFP, shall be properly licensed to render such opinions.
- 4.6.5. Before the Contract resulting from this RFP is signed, the apparent successful Respondent must be registered with the Tennessee Department of Revenue for the collection of Tennessee sales and use tax. The State shall not award a contract unless the Respondent provides proof of such registration or provides documentation from the Department of Revenue that the Contractor is exempt from this registration requirement. The foregoing is a mandatory requirement of an award of a contract pursuant to this solicitation. For purposes of this registration requirement, the Department of Revenue may be contacted at: TN.Revenue@tn.gov.

4.7. **Disclosure of Response Contents**

- 4.7.1. All materials submitted to the State in response to this RFP shall become the property of the State of Tennessee. Selection or rejection of a response does not affect this right. By submitting a response, a Respondent acknowledges and accepts that the full response contents and associated documents will become open to public inspection in accordance with the laws of the State of Tennessee.
- 4.7.2. The State will hold all response information, including both technical and cost information, in confidence during the evaluation process. Notwithstanding the foregoing, a list of actual Respondents submitting timely responses may be available to the public, upon request, after technical responses are opened.
- 4.7.3. Upon completion of response evaluations, indicated by public release of a Notice of Intent to Award, the responses and associated materials will be open for review by the public in accordance with *Tennessee Code Annotated*, Section 10-7-504(a)(7).

4.8. **Contract Approval and Contract Payments**

- 4.8.1. After contract award, the Contractor who is awarded the contract must submit appropriate documentation with the Department of Finance and Administration, Division of Accounts.
- 4.8.2. This RFP and its contractor selection processes do not obligate the State and do not create rights, interests, or claims of entitlement in either the Respondent with the apparent best-evaluated response or any other Respondent. State obligations pursuant to a contract award shall commence only after the contract is signed by the State agency head and the Contractor and after the Contract is approved by all other state officials as required by applicable laws and regulations.
- 4.8.3. No payment will be obligated or made until the relevant contract is approved as required by applicable statutes and rules of the State of Tennessee.
 - 4.8.3.1. The State shall not be liable for payment of any type associated with the contract resulting from this RFP (or any amendment thereof) or responsible for any goods delivered or services rendered by the Contractor, even goods delivered or services rendered in good faith and even if the Contractor is orally directed to proceed with the delivery of goods or the rendering of services, if it occurs before the contract start date or after the contract end date.
 - 4.8.3.2. All payments relating to this procurement will be made in accordance with the Payment Terms and Conditions of the contract resulting from this RFP (refer to RFP Attachment 6.6., *Pro Forma Contract*, Section C).

- 4.8.3.3. If any provision of the contract provides direct funding or reimbursement for the competitive purchase of goods or services as a component of contract performance or otherwise provides for the reimbursement of specified, actual costs, the State will employ all reasonable means and will require all such documentation that it deems necessary to ensure that such purchases were competitive and costs were reasonable, necessary, and actual. The Contractor shall provide reasonable assistance and access related to such review. Further, the State shall not remit, as funding or reimbursement pursuant to such provisions, any amounts that it determines do not represent reasonable, necessary, and actual costs.

4.9. **Severability**

If any provision of this RFP is declared by a court to be illegal or in conflict with any law, said decision will not affect the validity of the remaining RFP terms and provisions, and the rights and obligations of the State and Respondents will be construed and enforced as if the RFP did not contain the particular provision held to be invalid.

4.10. **Joint Ventures**

Firms submitting Qualification Statements as a Joint Venture must file a statement of partnership authority with the Tennessee Secretary of State's office in compliance with Tenn. Code Ann. § 61-1-303 as well as have similar projects completed as the Joint Venture.

If a Respondent intends to submit a Proposal as a joint venture, then the following requirements shall apply:

- a. For the purposes of this RFP, the Owner recognizes a joint venture as separate organizations or business entities that intend to combine professional or technical expertise and business experience, and to share contractual and project responsibilities in performance of a contract pursuant to this RFP;
- b. The joint venture shall meet the licensure requirements stated in the RFP; or each joint venture participant shall meet the licensure requirements stated in the RFP;
- c. The joint venture shall meet the insurance requirements stated in the RFP, or each joint venture participant shall meet the insurance requirements state in this RFP;
- d. Each joint venture participant shall individually provide all documentation required for review of financial responsibility and stability. A sub-contractor to a Respondent is not a joint venture participant.

5. EVALUATION & CONTRACT AWARD

5.1. Evaluation Categories & Maximum Points

The Owner will consider qualifications, experience, technical approach, and cost in the evaluation of proposals and award points in each of the categories detailed below (up to the maximum evaluation points indicated) to each apparently responsive proposal.

| EVALUATION CATEGORY | MAXIMUM POINTS POSSIBLE |
|---|-------------------------|
| General Qualifications & Experience (refer to RFP Attachment 6.2., Section B) | 30 |
| Technical Qualifications, Experience & Approach (refer to RFP Attachment 6.2., Section C) | 40 |
| Cost Proposal (refer to RFP Attachment 6.3., Section A - E) | 30 |

5.2. Evaluation Process

The evaluation process is designed to award the contract resulting from this RFP not necessarily to the Respondent offering the lowest cost, but rather to the Respondent deemed by the State to be responsive and responsible who offers the best combination of attributes based upon the evaluation criteria. ("Responsive Respondent" is defined as a Respondent that has submitted a response that conforms in all material respects to the RFP. "Responsible Respondent" is defined as a Respondent that has the capacity in all respects to perform fully the contract requirements, and the integrity and reliability which will assure good faith performance.)

The proposal evaluation will be a two-part process; a Technical Proposal evaluation (containing Qualifications, Experience, and Technical Approach) and a Cost Proposal evaluation. The apparent successful Respondent will be identified by the Qualified Proposal having the highest total combined score in both parts.

5.2.1. **Technical Response Evaluation.** The Solicitation Coordinator and the Proposal Evaluation Team (consisting of three (3) or more State employees) will use the RFP Attachment 6.2., Technical Response & Evaluation Guide to manage the Technical Response Evaluation and maintain evaluation records.

5.2.1.1. The State reserves the right, at its sole discretion, to request Respondent clarification of a Technical Response or to conduct clarification discussions with any or all Respondents. Any such clarification or discussion will be limited to specific sections of the response identified by the State. The subject Respondent must put any resulting clarification in writing as may be required and in accordance with any deadline imposed by the State.

5.2.1.2. **Mandatory Requirements.** The Solicitation Coordinator will review each Mandatory Requirement (See RFP Attachment 6.2., Technical Response & Evaluation Guide, Section A— Mandatory Requirements) to determine compliance. If the Solicitation Coordinator determines that a response failed to meet one or more of the mandatory requirements, the Solicitation Coordinator shall seek the advice of an attorney on the staff of the Department of General Services who will review the proposal and document his/her determination of whether:

- a. the response adequately meets RFP requirements for further evaluation;
- b. the State will request clarifications or corrections for consideration prior to further evaluation; or,
- c. the State will determine the response to be non-responsive to the RFP and reject it.

5.2.1.3. Proposal Evaluation Team members will independently evaluate each Technical Response (that is responsive to the RFP) against the evaluation criteria in this RFP, and will score each in accordance with the RFP Attachment 6.2., Technical Response & Evaluation Guide.

5.2.1.4. For each response evaluated, the Solicitation Coordinator will calculate the average of the Proposal Evaluation Team member scores for RFP Attachment 6.2., Technical Response & Evaluation Guide, and record each average as the response score for the respective Technical Response section.

The proposal score will be used in the following formula to determine the points a Respondent will receive for the Technical proposal:

$$\frac{\text{Score for Proposal Being Evaluated}}{\text{Highest Scoring Proposal}} \times \text{Maximum Technical Points} = \text{Technical Proposal Points}$$

5.2.1.5. The proposal score for the Technical Proposal section must attain a combined score of **forty-nine (49)** points or above in order to be considered. The proposal receiving the highest evaluation score will be allocated the maximum score of **seventy (70)** points. Before Cost Proposals are opened, the Proposal Evaluation Team will review the Technical Response Evaluation record and any other available information pertinent to whether or not each Respondent is responsive and responsible. If the Proposal Evaluation Team identifies any Respondent that does not to meet the responsive and responsible thresholds such that the team would not recommend the Respondent for Cost Proposal Evaluation and potential contract award, the team members will fully document the determination.

5.2.2. **Cost Proposal Evaluation.** Cost Proposals will only be considered for those proposals that have attained a minimum score of **forty-nine (49) points** or above in the Part One evaluation process. The Solicitation Coordinator will open for evaluation the Cost Proposal of each Respondent deemed by the State to be responsive and responsible and calculate and record each Cost Proposal score in accordance with the RFP Attachment 6.3., Cost Proposal & Scoring Guide. The Cost Proposal containing the lowest total evaluation cost amount for the cost proposal section will receive the maximum score of **thirty (30)** points. The combined cost points will be used in the following formula to determine the score a Respondent will receive for the Cost Proposal:

$$\frac{\text{Lowest Cost of Qualified Cost Proposals}}{\text{Cost for Proposal Being Evaluated}} \times \text{Maximum Cost Points} = \text{Cost Proposal Points}$$

5.2.3. **Total Response Score.** The Solicitation Coordinator will calculate the sum of the Technical Response section scores and the Cost Proposal score and record the resulting number as the total score for the subject Response (refer to RFP Attachment 6.5., Score Summary Matrix).

5.3. Contract Award Process

- 5.3.1 The Solicitation Coordinator will forward the scores established by Section 5.2.3. above to the proper officials of the procuring agency who will consider the same to determine which Respondent should be recommended for agreement award to the State Building Commission (“SBC”).

The Owner will issue a Notice of Intent to Award. The Notice of Intent to Award date is detailed in RFP Section 2, Schedule of Events. The Notice of Intent to Award shall not create rights, interests, or claims of entitlement in the Respondent named in the Notice of Intent to Award.

NOTICE: The Notice of Intent to Award shall not create rights, interests, or claims of entitlement in either the apparent best-evaluated Respondent or any other Respondent.

- 5.3.2. The Respondent awarded the contract by the SBC must sign a contract drawn by the State pursuant to this RFP. The contract shall be substantially the same as the RFP Attachment 6.6., *pro forma* Contract. The Respondent must sign the contract by the Contractor Signature Deadline detailed in the RFP Section 2, Schedule of Events. If the Respondent fails to provide the signed contract by this deadline, the State may determine that the Respondent is non-responsive to this RFP and reject the response.

If the Owner determines that a proposal is non-responsive and rejects it after opening Cost Proposals, the RFP Coordinator will re-calculate scores for each remaining responsive Cost Proposal to determine (or re-determine) the apparent best evaluated proposal. The RFP Coordinator will forward the re-calculated scores to the proper officials of the procuring agency who will consider the same to determine which Respondent should be recommended for contract award to the SBC.

5.4. Protest Process

Any protests or appeals of protests pursuant to this RFP or the Notice of Intent to Award shall be handled in accordance with the SBC By-laws, Policy and Procedure Item 18.

SBC PROJECT 529/070-01-2013

RESPONSE STATEMENT OF CERTIFICATIONS AND ASSURANCES

The Respondent must sign and complete the Proposal Statement of Certifications and Assurances below as required, and it must be included in the Technical Proposal (as required by RFP Attachment 6.2., Technical Proposal & Evaluation Guide, Section A, Item A.1.).

The Respondent does, hereby, expressly affirm, declare, confirm, certify, and assure ALL of the following:

1. The Respondent will comply with all of the provisions and requirements of the RFP.
2. The Respondent will provide all services as defined in the Scope of Services of the RFP Attachment 6.6., *Pro Forma Contract* for the total contract period.
3. The Respondent accepts and agrees to all terms and conditions set out in the RFP Attachment 6.6., *Pro Forma Contract*.
4. The Respondent acknowledges and agrees that a contract resulting from the RFP shall incorporate, by reference, all proposal responses as a part of the contract.
5. The Respondent will comply with:
 - (a) the laws of the State of Tennessee;
 - (b) Title VI of the federal Civil Rights Act of 1964;
 - (c) Title IX of the federal Education Amendments Act of 1972;
 - (d) the Equal Employment Opportunity Act and the regulations issued there under by the federal government; and,
 - (e) the Americans with Disabilities Act of 1990 and the regulations issued there under by the federal government.
6. To the knowledge of the undersigned, the information detailed within the proposal submitted in response to the RFP is accurate.
7. The proposal submitted in response to the RFP was independently prepared, without collusion, under penalty of perjury.
8. No amount shall be paid directly or indirectly to an employee or official of the State of Tennessee as wages, compensation, or gifts in exchange for acting as an officer, agent, employee, subcontractor, or consultant to the Respondent in connection with the RFP or any resulting contract.
9. Both the Technical Proposal and the Cost Proposal submitted in response to the RFP shall remain valid for at least 120 days subsequent to the date of the Cost Proposal opening and thereafter in accordance with any contract pursuant to the RFP.

By signing this Proposal Statement of Certifications and Assurances, below, the signatory also certifies legal authority to bind the proposing entity to the provisions of this RFP and any contract awarded pursuant to it. If the signatory is not the Respondent (if an individual) or the Respondent's company *President or Chief Executive Officer*, this document must attach evidence showing the individual's authority to bind the proposing entity.

DO NOT SIGN THIS DOCUMENT IF YOU ARE NOT LEGALLY AUTHORIZED TO BIND THE PROPOSING ENTITY

SIGNATURE:

PRINTED NAME & TITLE:

DATE:

**RESPONDENT LEGAL ENTITY
NAME:**

**RESPONDENT FEDERAL EMPLOYER IDENTIFICATION NUMBER (or
SSN):**

TECHNICAL RESPONSE & EVALUATION GUIDE

SECTION A: MANDATORY REQUIREMENTS. The Respondent must address all items detailed below and provide, in sequence, the information and documentation as required (referenced with the associated item references). The Respondent must also detail the response page number for each item in the appropriate space below.

The Solicitation Coordinator will review the response to determine if the Mandatory Requirement Items are addressed as required and mark each with pass or fail. For each item that is not addressed as required, the Proposal Evaluation Team must review the response and attach a written determination. In addition to the Mandatory Requirement Items, the Solicitation Coordinator will review each response for compliance with all RFP requirements.

| RESPONDENT LEGAL ENTITY NAME: | | | |
|--|-------------|---|-----------|
| Response Page # (Respondent completes) | Item Ref. | Section A— Mandatory Requirement Items | Pass/Fail |
| | | The Technical Response must be delivered to the State no later than the Technical Response Deadline specified in the RFP § 2, Schedule of Events. | |
| | | The Technical Response and the Cost Proposal documentation must be packaged separately as required (refer to RFP Section 3.2., <i>et seq.</i>). | |
| | | The Technical Response must NOT contain cost or pricing information of any type. | |
| | | The Technical Response must NOT contain any restrictions of the rights of the State or other qualification of the response. | |
| | | A Respondent must NOT submit alternate responses. | |
| | | A Respondent must NOT submit multiple responses in different forms (as a prime and a sub-contractor) . | |
| | A.1. | Detail the name, e-mail address, mailing address, telephone number, and facsimile number of the person the State should contact regarding the response. | |
| | A.2. | Describe the Respondent’s form of business (<i>i.e.</i> , individual, sole proprietor, corporation, non-profit corporation, partnership, limited liability company) and business location (physical location or domicile). Detail the number of years the Respondent has been in business. | |
| | A.3. | Briefly provide size of firm by office or branch if applicable, including, number of principals/owners, number of office personnel, and number of field personnel by skill set. | |
| | A.4. | <u>Statement of Certifications and Assurances:</u> Provide the Statement of Certifications and Assurances (RFP Attachment 6.1.) completed and signed by an individual empowered to bind the Respondent to the provisions of this RFP and any resulting contract. The document must be signed without exception or qualification. | |

| RESPONDENT LEGAL ENTITY NAME: | | | |
|---|--------------|--|-----------|
| Response Page # (Respondent completes) | Item Ref. | Section A— Mandatory Requirement Items | Pass/Fail |
| | A.5. | <p><u>Conflict of Interest:</u> Provide a statement, based upon reasonable inquiry, of whether the Respondent or any individual who shall perform work under the contract has a possible conflict of interest (e.g., employment by the State of Tennessee, or other conflict as set forth in Item 12 of the SBC By-Laws, Policy & Procedures) and, if so, the nature of that conflict.</p> <p>NOTE: Any questions of conflict of interest shall be solely within the discretion of the State, and the State reserves the right to cancel any award.</p> | |
| | A.6. | <p><u>Response Package Cover Sheet:</u> The outermost container displays Contractor Licensing information, with the Respondent's State of Tennessee Contractor's License Number, Classification, Expiration Date, and License Limit (Refer to RFP Attachment 6.4.a.).</p> <p>The dollar limit on the license is sufficient to support the GMP provided in RFP Section 1.6.</p> | |
| | A.7. | <p><u>Bonding:</u> Provide a letter from an insurance/surety. The surety for any and all bonds must have a rating of "A" or better with the U.S. Treasury Department Agency.</p> <p>The letter from the surety company must include the Respondent's capability to provide bonding for this Project in accordance with the Terms and Conditions of the Contract. The letter must include the Respondent's individual project and overall bonding capabilities and specify the Respondent's monetary bonding capacity.</p> | |
| | A.8. | <p><u>Insurance:</u> Provide a Certificate of Insurance (ACORD) stating the Respondent's capability to provide insurance for this Project in accordance with the requirements as specified in the General Conditions of the Contract for Construction and any Supplementary Conditions (RFP Attachment 6.6.).</p> | |
| | A.9. | <p><u>Builder's Risk:</u> Provide an ACORD document from insurance agent to confirm coverage for the estimated amount of this project. The policy shall be "All-Risk" Builder's Risk.</p> <p>An Installation Floater Policy is not acceptable for the Builder's Risk Policy.</p> | |
| | A.10. | <p>For the last three (3) years, provide the following ratios for the Respondent, calculated according to the generally accepted accounting principles:</p> <p>1.) Quick Ratio and 2.) Debt/Worth.</p> <p>NOTE: The Owner may request CPA audited or reviewed financial statements prepared in accordance with generally accepted accounting principles from the apparent best-evaluated Respondent prior to final award of the agreement. If the requested documents do</p> | |

| RESPONDENT LEGAL ENTITY NAME: | | | |
|---|--------------|--|-----------|
| Response Page # (Respondent completes) | Item Ref. | Section A— Mandatory Requirement Items | Pass/Fail |
| | | not support the financial stability of the Respondent the Owner reserves the right to reject the proposal. | |
| | A.11. | Provide a statement of whether, in the last ten (10) years, the Respondent has filed (or had filed against it) any bankruptcy or insolvency proceeding, whether voluntary or involuntary, or undergone the appointment of a receiver, trustee, or assignee for the benefit of creditors. If so, include an explanation providing relevant details. | |
| | A.12. | Provide a statement of whether there have been any mergers, acquisitions, or sales of the Respondent within the last five (5) years. If so, include an explanation providing relevant details. | |
| | A.13. | Provide a statement of whether the Respondent or, to the Respondent's knowledge, any of the Respondent's employees, agents, independent contractors, or subcontractors, proposed to provide work on a contract pursuant to this RFP, have been convicted of, pled guilty to, or pled <i>nolo contendere</i> to any felony. If so, include an explanation providing relevant details. | |
| | A.14. | Provide a statement of whether there is any material, pending litigation against the Respondent that the Respondent should reasonably believe could adversely affect its ability to meet contract requirements pursuant to this RFP or is likely to have a material adverse effect on the Respondent's financial condition. If such exists, list each separately, explain the relevant details, and attach the opinion of counsel addressing whether and to what extent it would impair the Respondent's performance in a contract pursuant to this RFP. NOTE: All persons, agencies, firms, or other entities that provide legal opinions regarding the Respondent must be properly licensed to render such opinions. The Owner may require the Respondent to submit proof of such licensure detailing the state of licensure and licensure number for each person or entity that renders such opinions. | |
| | A.15. | If you are responding as a Joint Venture, include a copy of your filed statement of partnership authority with the Tennessee Secretary of State's office in compliance with Tenn. Code Ann. § 61-1-30. | |
| | A.16. | Provide a statement and any relevant details addressing whether the Respondent is any of the following: a) is presently debarred, suspended, proposed for debarment, or voluntarily excluded from covered transactions by any federal or state department or agency; b) has within the past three (3) years, been convicted of, or had a civil judgment rendered against the contracting party from commission of fraud, or a criminal offence in connection with obtaining, attempting to obtain, or performing a public (federal, state, or local) transaction or grant under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or | |

| RESPONDENT LEGAL ENTITY NAME: | | | |
|---|------------------|--|------------------|
| Response Page # (Respondent completes) | Item Ref. | Section A— Mandatory Requirement Items | Pass/Fail |
| | | receiving stolen property; is presently indicted or otherwise criminally or civilly charged by a government entity (federal, state, or local) with commission of any of the offenses detailed above; and has within a three (3) year period preceding the contract had one or more public transactions (federal, state, or local) terminated for cause or default. | |
| <i>State Use – Solicitation Coordinator Signature, Printed Name & Date:</i> | | | |

RFP ATTACHMENT 6.2. — SECTION B

TECHNICAL RESPONSE & EVALUATION GUIDE

SECTION B: GENERAL QUALIFICATIONS & EXPERIENCE. The Respondent must address all items detailed below and provide, in sequence, the information and documentation as required (referenced with the associated item references). The Respondent must also detail the response page number for each item in the appropriate space below. Proposal Evaluation Team members will independently evaluate and assign one score for all responses to Section B— General Qualifications & Experience Items.

| | | |
|--|------------------|--|
| RESPONDENT LEGAL ENTITY NAME: | | |
| Response Page # (Respondent completes) | Item Ref. | Section B— General Qualifications & Experience Items |
| | B.1. | Detail the number of years the Respondent has been in business as a Contractor. Detail the number of years the Respondent has been in business under its present business name. If applicable, list any former names under which your organization has operated. Briefly describe how long the Respondent has been performing the services required by this RFP. |
| | B.2. | List jurisdictions and trade categories in which your organization is legally qualified to do business, and include registration or license numbers, if applicable. |
| | B.3. | <p>The statements requested below are intended to illustrate evidence of previous specialized knowledge and experience with CM/GC services. Statements should be able to demonstrate experience with all of the task types within the scope of work as required by the contract agreement. Please provide:</p> <ul style="list-style-type: none"> a) Summary information about your company’s CM/GC experience; b) Summary information about your experience with providing and/or utilizing BIM and COBie data in convertible electronic format for project record and facility management purposes; and c) Information about three (3) recent projects for different owners in the United States your CM/GC team has successfully provided. <p>The information provided should include the names of the employees on the CM/GC teams that you describe. Of particular interest are any projects involving one or more of the following:</p> <ul style="list-style-type: none"> • Significant exterior building renovations and restoration work for historic structures; • Construction on exterior of historic buildings and ability to recognize period stone and architecture • Restoration of bronze doors, cast iron spandrels, decorative metalwork, and exterior fixtures • Replace or restoration of windows for energy efficiency. |
| | B.4. | <p>Provide a minimum of two (2), or a maximum of four (4), detailed previous examples with similar scope and complexity to the services sought by the Owner in this RFP. The examples should include current (ongoing) and completed (preferable within the last five (5) years) projects and Respondent should indicate those projects that were for the State of Tennessee within the last five (5) years. List projects starting with the most recent and include the information as listed below for <u>each</u> project:</p> <ul style="list-style-type: none"> 1) Team’s performance with an emphasis on accelerated schedule and adherence to a budget. |

| RESPONDENT LEGAL ENTITY NAME: | | |
|---|--------------|---|
| Response Page # (Respondent completes) | Item Ref. | Section B— General Qualifications & Experience Items |
| | | <p>2) Project name and location.</p> <p>3) Brief description of scope.</p> <p>4) Project size:</p> <ol style="list-style-type: none"> a) Total dollars per square foot; b) Number of stories; and c) Gross square foot area. <p>5) Year contracted and scope completed.</p> <p>6) Client reference name / title, role on project, and contact information.</p> <p>7) Project Prime Contractor and Prime Designer Firm Names to include, the key personnel and their roles on the project (from both the Prime Contractor and Prime Designer).</p> <p>8) Each example should also identify the following:</p> <ol style="list-style-type: none"> a) schedule; and b) project challenges and resolutions to those challenges. <p>A related Project Reference Form, RFP Attachment 6.4.b., is provided for the Respondent's use in compiling and presenting this information. Provide a Project Reference Form for up to four (4) projects of similar scope and complexity.</p> |
| | B.5. | <p>Provide documentation of the Respondent's commitment to diversity as represented by the following:</p> <p>(a) <u>Business Strategy</u>. Provide a description of the Respondent's existing programs and procedures designed to encourage and foster commerce with business enterprises owned by minorities, women, Tennessee service-disabled veterans, and small business enterprises. Please also include a list of the Respondent's certifications as a diversity business, if applicable.</p> <p>(b) <u>Business Relationships</u>. Provide a listing of the Respondent's current contracts with business enterprises owned by minorities, women, Tennessee service-disabled veterans and small business enterprises. Please include the following information:</p> <ol style="list-style-type: none"> (i) contract description and total value; (ii) contractor name and ownership characteristics (<i>i.e.</i>, ethnicity, gender, Tennessee service-disabled); (iii) contractor contact name and telephone number. <p>(c) <u>Estimated Participation</u>. Provide an estimated level of participation by business enterprises owned by minorities, women, Tennessee service-disabled veterans, and small business enterprises if a contract is awarded to the Respondent pursuant to this RFP. Please include the following information:</p> <ol style="list-style-type: none"> (i) a percentage (%) indicating the participation estimate. (Express the estimated participation number as a percentage of the total estimated contract value that will be dedicated to business with subcontractors and supply contractors having such ownership characteristics only and DO NOT INCLUDE DOLLAR AMOUNTS); |

| | | |
|--|------------------|--|
| RESPONDENT LEGAL ENTITY NAME: | | |
| Response Page # (Respondent completes) | Item Ref. | Section B— General Qualifications & Experience Items |
| | | <p>(ii) anticipated goods or services contract descriptions;</p> <p>(iii) names and ownership characteristics (i.e., ethnicity, gender, Tennessee service-disabled veterans) of anticipated subcontractors and supply contractors.</p> <p>NOTE: In order to claim status as a Diversity Business Enterprise under this contract, businesses must be certified by the Governor's Office of Diversity Business Enterprise (Go-DBE). Please visit the Go-DBE website at https://tn.diversitysoftware.com/FrontEnd/StartCertification.asp?TN=tn&XID=9265 for more information.</p> <p>(d) <u>Workforce</u>. Provide the percentage of the Respondent's total current employees by ethnicity and gender.</p> <p>NOTE: Respondents that demonstrate a commitment to diversity will advance State efforts to expand opportunity to do business with the State as contractors and subcontractors. Response evaluations will recognize the positive qualifications and experience of a Respondent that does business with enterprises owned by minorities, women, Tennessee service-disabled veterans and small business enterprises and who offer a diverse workforce.</p> |
| | B.6. | Provide a list or chart presenting annual dollar workload volume inclusive of number of projects on a per year basis for the last five (5) years. |
| | B.7. | Continuous Improvement Process – Describe how customer feedback is received and provide copies of the feedback received from the last five (5) projects completed. The projects completed can include projects worked on with the State. If you do not have a Continuous Improvement Process in place, please so state. |
| | | <p>SCORE (for <u>all</u> Section B—Qualifications & Experience Items above): (maximum possible score = 30)</p> |
| State Use – Evaluator Identification: | | |

RFP ATTACHMENT 6.2. — SECTION C

TECHNICAL PROPOSAL & EVALUATION GUIDE

SECTION C: TECHNICAL QUALIFICATIONS, EXPERIENCE & APPROACH. The Respondent must address all items (below) and provide, in sequence, the information and documentation as required (referenced with the associated item references). The Respondent must also detail the proposal page number for each item in the appropriate space below. A Proposal Evaluation Team, made up of three or more State employees, will independently evaluate and score the proposal's response to each item.

| RESPONDENT LEGAL ENTITY NAME: | | |
|---|------------------|--|
| Proposal Page # (Respondent completes) | Item Ref. | Section C— Technical Qualifications, Experience & Approach Items |
| | C.1. | <p>Provide a narrative that illustrates how the Respondent will:</p> <ul style="list-style-type: none"> • Ensure on time delivery of the Project • Ensure delivery of the Project at or below budget • Provide valuable pre-construction services • Complete the delivery of scope of services (RFP Attachment 6.6.). |
| | C.2. | To the extent not addressed in the response to C.1. above, provide a summary of challenges and risks that you see in this Project and your approach to addressing these challenges and risks. |
| | C.3. | <p><u>Project Approach:</u></p> <p>a) Discuss your CM/GC team's approach to accomplish the Owner's scope of services and work plan. Specifically describe the Respondent's approach/procedures for the following items:</p> <ul style="list-style-type: none"> • project schedule development and maintenance, including recovery schedules as necessary • project document completion • budget preparation and budget confirmation at each design phase • submittal approval listing individuals and their titles • estimate at each design phase as applicable to this project • subcontractor awards and oversight • project budget tracking • closeout procedures including: <ul style="list-style-type: none"> ○ punch list development ○ operations and maintenance manuals ○ warranties - provide a narrative of how warranty service calls are managed during the warranty phase ○ as-built drawings and specifications <p>b) Explain your firm's typical approach to ensuring that the operations and logistics surrounding construction have been planned. In particular explain, in detail, the following items:</p> <ul style="list-style-type: none"> • Identification of individuals that are part of the CM/GC team while working in the building • Working hours (proposed) • Security of both the building and the floors under construction • Risk assessment and plans for potential risks • Material storage, deliveries |

| | | |
|---|------------------|---|
| RESPONDENT LEGAL ENTITY NAME: | | |
| Proposal Page # (Respondent completes) | Item Ref. | Section C— Technical Qualifications, Experience & Approach Items |
| | C.4. | <p><u>Project Staffing:</u></p> <ul style="list-style-type: none"> a) Describe how the Proposer shall staff this project. Identify individuals who shall be assigned to perform duties under the Agreement, including Proposer Executive(s), Project Manager(s), Superintendent(s) and others who comprise the project team, as well as those who may be reporting to State officials regarding project deliverables. Are the individuals that provide schedules, quality control, safety, and estimates, in-house and independent of project management? b) Include the percentage of time each proposed individual will be involved in this project during each phase. c) Include project schedule development and maintenance, including recovery schedules as necessary. d) Explain the criteria used in developing this team. e) Provide concise summary resumes of these key personnel. <ul style="list-style-type: none"> 1.) Detail each individual's position/role with the Proposer team including the Proposer's subcontractors. 2.) Highlight applicable experience, positions, and/or work demonstrating similar responsibility. f) Utilizing an organization chart: <ul style="list-style-type: none"> 1.) Indicate lines of authority; and 2.) Illustrate how the project team will interface with the team. |
| | C.5. | <p><u>Project Schedule:</u></p> <ul style="list-style-type: none"> a) Provide a narrative that illustrates how the Proposer will manage the project, ensure completion of the scope of services, and accomplish required objectives within the Owner's project schedule Identify any objectives critical to project schedule and strategies to achieve them. Will scheduling be accomplished in-house or using external staff? Provide a narrative describing proposer's experience with cost loaded scheduling. The State uses Primavera version 6 to schedule and monitor its construction program. Provide a narrative demonstrating how you currently provide or plan to provide efficient compatibility with our computer system and schedulers. b) Provide a schedule of all work between schematic design document turn-over to construction start. Schedule shall include milestone activities, including but not limited to: <ul style="list-style-type: none"> o Bid package development/award; o Estimate at each design phase; o GMP presentation to Owner; and o Any Owner required deliverables to meet these dates c) Based on the information available and the information provided, please explain your approach for completing construction within the time frame set by the State. Explain the sequencing of the work and the construction schedule. <ul style="list-style-type: none"> o d) Provide a narrative that illustrates how the Proposer manages obstacles and plans recovery actions using the project schedule. Are submittals tracked on the project schedule? |
| | C.6. | <p><u>Reporting:</u></p> <ul style="list-style-type: none"> a) Detail your Team's special or unique capabilities, operating procedures, |

| | | |
|---|------------------|---|
| RESPONDENT LEGAL ENTITY NAME: | | |
| Proposal Page # (Respondent completes) | Item Ref. | Section C— Technical Qualifications, Experience & Approach Items |
| | | <p>technology, programs, innovative solutions, etc., that would directly benefit the Owner. Identify programs that this CM/GC team will use. Technology should cover at least the following areas of the project:</p> <ul style="list-style-type: none"> o Scheduling o Estimating o Job Costs o Project Management o As-Built /Drawings and Specifications (including photographs) o Drafting software o File sharing software <p>b) Provide examples of monthly reports, including but not limited to the following:</p> <ul style="list-style-type: none"> o Project summaries o Charts o Schedules <p>Status reports, etc. which detail up to-date data or information on project components. The emphasis here is demonstrating the reporting methodology for informing the Owner.</p> |
| | C.7. | <p><u>Quality Control:</u> Describe how you would create and maintain a Design and Construction Quality Management Plan through the life of the project. Refer to requirements listed in the 2014 Designers' Manual, Chapter Three Project Design, Initiating Design/General Procedures (all phases) Section 3.01.B.12.</p> |
| SCORE (for <u>all</u> Section C— Technical Qualifications, Experience & Approach Items above): | | |
| | | <i>(maximum possible score=40)</i> |
| <i>Owner Use – Evaluator Identification:</i> | | |
| <i>Owner Use – RFP Coordinator Signature, Printed Name & Date:</i> | | |

End of Section C

**Sections A through E
CM/GC Construction Services**

| | |
|--|---|
| PRE-CONSTRUCTION SERVICES FEE GUIDE - RFP ATTACHMENT 6.3. - SECTION A | |
| RESPONDENT NAME: | |
| <p>Provide the total lump sum fee for delivery of the Pre-Construction Phase Services for this Project as defined by CM/GC Scope of Services and Deliverables, Section 1. This fee should not include costs of printing the Designer's design/construction documents, geotechnical investigations, environmental testing, and property surveys during the Design Phase. This fee will be paid upon successful completion of services and is not to be included as a part of the CM/GC construction services fixed fee. This fee may be negotiated prior to execution of the Pro Forma Master Contract.</p> | |
| <p>The Pre-Construction Fee shall be broken down as follows: Seven (7) Months</p> | |
| Pre-Construction Lump Sum Amount | <p>\$ (The Owner will insert value at RFP Attachment 6.3., Section D.1.)</p> |

RFP ATTACHMENT 6.3. (continued)

| CM/GC CONSTRUCTION SERVICES PERCENT FEE - RFP ATTACHMENT 6.3. = SECTION B | |
|---|--|
| RESPONDENT NAME: | |
| <p>The proposed cost for the CM/GC construction services percent fee shall be for providing the construction services defined in the CM/GC Scope of Services and Deliverables, Section 2 for the total contract time and project closeout. The Fee shall be stated as a percentage of the Project construction cost that includes the following:</p> <ul style="list-style-type: none"> • General company overhead and profit • Personnel not directly assigned to the Project such as accountants, clerks, secretaries and personnel other than those listed under Construction Services General Conditions Budget (whether on site or in the office) • Company officers and other personnel with supervisory status not listed under Construction Services General Conditions Budget • The cost of main office equipment and related supplies, maintenance and service not located on site. • THIS PERCENTAGE WILL BE MULTIPLIED BY THE PROJECT BUDGET CONSTRUCTION COST LISTED IN SECTION D FOR EVALUATION PURPOSES; HOWEVER, THE FINAL FEE WILL BE CALCULATED BASED UPON THE GUARANTEED MAXIMUM PRICE (GMP) INCLUDING THE GENERAL CONDITIONS FEE AT THE END OF DESIGN. | |
| CM/GC Construction Services Percent Fee | <div style="text-align: right; margin-bottom: 5px;">_____ %</div> <p style="font-size: small; margin: 0;">(The Owner will insert value at RFP Attachment 6.3., Section D.2.)</p> |

RFP ATTACHMENT 6.3. (continued)

**CM/GC CONSTRUCTION SERVICES
GENERAL CONDITIONS MONTHLY RATE - RFP ATTACHMENT 6.3. - SECTION C**

RESPONDENT NAME: _____

Provide the proposed General Conditions Total Monthly Costs as described below for the construction scope and the construction services target duration identified in the RFP, shown below as a Total Monthly Rate. This rate will be multiplied by the duration of the project, in months, to determine a not to exceed amount for the Monthly General Conditions. General Conditions shall be invoiced at actual cost.

The proposed amount shall include all General Conditions monthly costs for personnel and equipment of the quantity and type required to accomplish the services as defined by the RFP and the scope of the project for the entire duration of the Contract Time defined by the Pro Forma General Conditions and the GMP. Monthly costs include, but are not limited to, the following:

- Personnel Costs including Labor Burden of all personnel directly assigned to the Project including but not limited to:
 - Superintendent
 - Assistant Superintendent
 - Project Manager
 - Project Director
 - Project Engineer
 - Safety Director
 - Construction Documentation Manager/Coordinator
 - Trades Coordinator
 - Project Scheduler
- Photographs
- Temporary Utilities Required for Construction, including usage charges
- Office and Storage trailer(s)
- Portable Toilets
- Phones, pagers, faxes and other communications devices
- Safety Measures
- Vehicles and Fuel
- Parking and Shuttle services
- Office Furniture and Equipment
- Supplies and other expenses
- Trash, Dumpster Rental and Disposal, Monthly cleanup
- Other Monthly Costs Identified by the Respondent (included in the CM/GC General Condition Total Monthly Rate amount listed below and to be inserted at RFP Attachment 6.3., Section D.3.):
 - _____
 - _____

Note: All charges for the project as a direct expense of the Construction Manager must be included either as a Monthly General Conditions Rate or as a part of the General Conditions Total Lump Sum Cost. All other work must be competitively procured as a part of the GMP.

(This figure is for contractual purposes only and will not be evaluated.) Labor burden multiplier _____%

Note: The labor burden multiplier shall be limited to a maximum of thirty nine percent (39%) of base salary or hourly wage pursuant to the Pro Forma General Conditions.

| | |
|--|--|
| CM/GC General Condition Total Monthly Rate | \$ _____ (The Owner will insert value at RFP Attachment 6.3., Section D.3.) |
|--|--|

RFP ATTACHMENT 6.3. (continued)

**CM/GC CONSTRUCTION SERVICES
GENERAL CONDITIONS TOTAL LUMP SUM COSTS — SECTION D**

RESPONDENT NAME: _____

Provide the proposed General Conditions Total Lump Sum Costs as described below for the construction scope and the construction services target duration identified in the RFP, shown below as a Total Lump Sum Costs. This cost will be used as a not to exceed amount for the Lump Sum General Conditions. General Conditions shall be invoiced at actual cost.

The proposed amount shall include all General Conditions lump sum costs of the quantity and type required to accomplish the services as defined by the RFP and the scope of the project for the entire duration of the Contract Time defined by the Pro Forma General Conditions and the GMP. Lump sum costs include, but are not limited to, the following:

- Project Mobilization and Demobilization Charges
- Project Final Cleaning including trade cleaning if not procured as a separate package
- Project Layout and Surveying
- All required permits and related fees
- General Liability Insurance as required by the Pro Forma General Conditions
- Builder's Risk insurance as required by the Pro Forma General Conditions
- Project Signage
- All general project testing if not procured as a part of a separate package
- All Temporary Construction Items not included as a Monthly cost
- Substantial Completion
- Warranty Inspection
- Installation and Removal of Temporary Utility Conveyances
- Reproduction of Documents for sub trades
- Trade contract Bidding including advertising
- Printing and Record Drawings
- Project Punch List work and Final Inspection
- Other Lump Sum Costs Identified by the Respondent (included in the CM/GC General Total Lump Sum Costs amount listed below and to be inserted at RFP Attachment 6.3., Section D.2.):
 - _____
 - _____
- Contract Bond Rate shall be listed separately as indicated below

Note: All charges for the project as a direct expense of the Construction Manager must be included either as a Monthly General Conditions Rate or as a part of the General Conditions Total Lump Sum Cost. All other work must be competitively procured as a part of the GMP.

| | |
|------------------------------------|--|
| CM/GC General Total Lump Sum Costs | \$ _____ (The Owner will insert value at RFP Attachment 6.3., Section D.2.) |
|------------------------------------|--|

| | |
|---|---|
| Contract Bond rate percentage based on the total GMP target | _____ % (The Owner will insert value at RFP Attachment 6.3., Section D.5.) |
|---|---|

RFP ATTACHMENT 6.3. (continued)

**CM/GC CONSTRUCTION SERVICES
COST PROPOSAL SUMMARY FORM**

SUMMARY & SCORING GUIDE - RFP ATTACHMENT 6.3. - SECTION E

RESPONDENT NAME:

Signature & Date:

The signatory must be an individual or a company officer empowered to contractually bind the Respondent.

The proposed cost and the submitted technical proposal associated with this cost shall remain valid for at least one hundred twenty (120) days subsequent to the date of the Cost Proposal opening and thereafter in accordance with any resulting contract between the Respondent and the Owner. All monetary amounts are United States currency.

| | | Owner Use Only |
|------------------------------|---|--|
| 1. | Pre-Construction Phase Services Lump Sum Fee Seven (7) Months | \$ _____ (The Owner will insert value from RFP Attachment 6.3., Section A.) |
| 2. | Construction Services Fee _____ % x \$12,100,000.00* <u>*Note: This figure is for evaluation purposes ONLY. See Section B above for additional information regarding the final calculation for Construction Services.</u> | \$ _____ (The Owner will insert value from RFP Attachment 6.3., Section B and multiply by \$12,000,000.00). |
| 3. | Construction Services General Conditions Budget – Monthly Cost Total _____ x Twelve (12) Months Monthly Rate for new Construction Phase *NOTE: The months are for evaluation purposes only. | \$ _____ (The Owner will insert value from RFP Attachment 6.3., Section C and multiply by (12) months). |
| 4. | Construction Services General Conditions Budget – Lump Sum Total | \$ _____ (The Owner will insert value from RFP Attachment 6.3., Section D Lump Sum Total.) |
| 5. | Construction Bond Amount _____ % x \$12,100,000.00* * Note: This figure is for evaluation purposes only. The stated percentage rate will be calculated against the actual approved GMP. | \$ _____ (The Owner will insert value from RFP Attachment 6.3., Section D and multiply by \$12,100,000.00. |
| TOTAL COST ITEMS 1- 5 | | \$ _____ |

The RFP Coordinator will use this sum and the formula below to calculate the Cost Proposal Score. Numbers rounded to two (2) places to the right of the decimal point will be standard for calculations.

| | | |
|---|-------------------------------------|----------|
| $\frac{\text{lowest evaluation cost amount from all proposals}}{\text{evaluation cost amount being evaluated}}$ | $\times 30$ (maximum section score) | = SCORE: |
|---|-------------------------------------|----------|

Owner Use – RFP Coordinator Signature, Printed Name & Date:

RESPONSE PACKAGE COVER SHEET

CM/GC

John Sevier Exterior Building Updates

SBC PROJECT NUMBER: 529/070-01-2013

Tennessee Contractor and Professional's License Information

Any blank spaces may cause Proposal to be unacceptable and rejected.

Provide State contractor license number, expiration date, and classifications for Respondent as applicable and in accordance with State of Tennessee licensing law. Provide all names as used for licensing or other legal transactions.

Respondent Identification:

Respondent _____
Address _____

Tennessee Contractor License information:

License Number _____

License Classification(s) applicable to Project _____

License expiration date _____ \$(_____)
Dollar Limit

Project Reference Form

Project #

Page 1 of 2

Utilize project reference forms with Section B, Qualifications and experience, of the Qualifications and Evaluation Guide.

| | | | |
|-------------------------|---------|--------|-------|
| RESPONDENT NAME: | | | |
| Owner/Agency Name: | _____ | | |
| Address: | City: | State: | Zip: |
| Contact Person's Name: | Title: | | _____ |
| Phone: | E-Mail: | | _____ |

Project Information:

| | |
|---|--|
| Project Title: | |
| Owner's Project or Contract #: | |
| Project Location (City, State): | |
| Construction Start Date: | |
| Construction Completion Date: | |
| Project Square Footage (New): | |
| Project Square Footage (Renovation): | |
| Dollar Value of Construction: \$ | |
| Project Executive: | |
| Project Manager: | |
| Other Key Personnel (Project Lead and Team Members) | |
| Third Party Commissioning Agent (if used): | |
| Sustainability Criteria (if used): | |

Project Reference Form

Project #

Utilize project reference forms with Section B, Qualifications and experience, of the Qualifications and Evaluation Guide.

| | |
|-------------------------|--|
| RESPONDENT NAME: | |
|-------------------------|--|

A. Provide a brief description of the project that includes the scope of the work and the services provided by your firm. Relate the work in this project to the scope and required services contained in the RFP.

SCORE SUMMARY MATRIX

| | <i>RESPONDENT NAME</i> | | <i>RESPONDENT NAME</i> | | <i>RESPONDENT NAME</i> | |
|---|------------------------|--|------------------------|--|------------------------|--|
| GENERAL QUALIFICATIONS & EXPERIENCE (maximum: 30) | | | | | | |
| <i>EVALUATOR NAME</i> | | | | | | |
| <i>EVALUATOR NAME</i> | | | | | | |
| <i>REPEAT AS NECESSARY</i> | | | | | | |
| | AVERAGE: | | AVERAGE: | | AVERAGE: | |
| TECHNICAL QUALIFICATIONS, EXPERIENCE & APPROACH (maximum: 40) | | | | | | |
| <i>EVALUATOR NAME</i> | | | | | | |
| <i>EVALUATOR NAME</i> | | | | | | |
| <i>REPEAT AS NECESSARY</i> | | | | | | |
| | AVERAGE: | | AVERAGE: | | AVERAGE: | |
| COST PROPOSAL (maximum: 30) | SCORE: | | SCORE: | | SCORE: | |
| TOTAL RESPONSE EVALUATION SCORE: (maximum: 100) | | | | | | |

Solicitation Coordinator Signature, Printed Name & Date:

SBC Project No. 529/070-01-2013

PRO FORMA CONTRACT

The *pro forma* contract detailed in following pages of this exhibit contains some “blanks” (signified by descriptions in capital letters) that will be completed with appropriate information in the final contract resulting from the RFP.

Pro Forma Master Contract and Contract Attachments

Attachment A: Attestation re Personnel Used in Contract Performance

Attachment B: Pre-Construction Services Payment Schedule

Attachment C: CM/GC Scope of Services and Deliverables

Attachment D: CM/GC Services Agreement with Guaranteed Maximum Price
(00 52 23-1)

- Contract Bond (00 61 13)
- Three Year Roof Bond (00 61 43-1)
- AIA Document A201 – 1997 Edition (00 72 23)
- Supplementary Conditions (00 73 15.01)

Attachment E: HPBr Manual, OPR, and Checklist

Project Management Office

State of Tennessee Real Estate Asset Management (STREAM)

PROJECT CHARTER

Version 1

Author: Felicia Thepthongsay

John Sevier Exterior Building Updates SBC No.529/070-01-20113 General Services

| Document Owner | Document Approver | Revision | Issued | Revision Description |
|----------------|-------------------|----------|---------|--|
| Brian Wilson | Matt Ingham | 0 | 05/2014 | Initial Issuance |
| Brian Wilson | Matt Ingham | 1 | 07/2014 | Conflict of Interest Language |
| Brian Wilson | Matt Ingham | 2 | 12/2014 | Delivery of Project to Agency Clarification |
| Brian Wilson | Matt Ingham | 3 | 01/2015 | Updated Phases in Schedule Milestone Table |
| Brian Wilson | Matt Ingham | 4 | 02/2015 | Added Agency Approver Review/Signature |
| Brian Wilson | Matt Ingham | 5 | 03/2015 | Added Designer Clarification in Section 2 |
| Brian Wilson | Matt Ingham | 6 | 06/2015 | Modified Sections 4.6 and 5.1 for Delivery Date Def. |

| | | |
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1. INTRODUCTION

The STREAM Project Management Team has commissioned this Project Charter (PC) for the [development and construction of John Sevier Exterior Building Updates](#).

1.1. Project Description

This project is to upgrade the exterior envelope keeping the historical integrity of its appearance, window and roof repair or replacement.

1.2. Needs Assessment

The building is extremely outdated, energy inefficient, poor operating systems and is experience major water intrusion.

- *Age: 74 years*
- *Conditions: Poor condition*
- *Environmental concerns: asbestos is most likely present*
- *Sustainability opportunities: absolutely*
- *Suitability of existing infrastructure*
- *Areas under consideration: complete renovation needed*
- *Maintenance information*
- *Warranty information*
- *Critical material/systems information*

See Appendix B: Property Condition Assessment Checklist

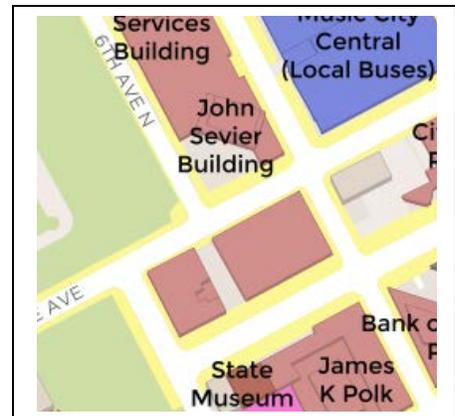
1.3. Goals and Objectives

The first priority is to repair the exterior envelope and roof including windows to make it more energy efficient and water tight.

1.4. Site Data and History

- *John Sevier State Office Building*
- *500 Charlotte Ave., Nashville, TN*
- *Built 1940 the building is 74 years old*
- *Attorney General's Office*
- *205 FTE's*
- *7:00 am to 6:00 pm*

This building has had no renovations and is a historic structure and will need to follow the Tennessee Historic Commission guidelines



2. PROJECT ORGANIZATION

2.1. Project Team

| TITLE | NAME | EMAIL | OFFICE # | CELL # |
|--|--------------------------------------|--|--------------|--------------|
| Agency Representative (AR) | Michael Leftwich | michael.leftwich@ag.tn.gov | | |
| Facilities Director | Kevin Powell | Kevin.powell@tn.gov | 615-532-7550 | 615-517-2835 |
| Facility Manager (FM) | Paul Rockey | Paul.Rockey@am.jll.com | 615-532-2921 | 615-906-1648 |
| Facility Engineer (FE) | Duane Hayward | Duane.Hayward@am.jll.com | 615-741-2105 | 615-406-3474 |
| Agency Manager - Capital Projects (AM) | Felicia Thepthongsay | Felicia.thepthongsay@tn.gov | 615-253-8528 | |
| Project Manager (PM) | Melissa Marvel | Melissa.marvel@tn.gov | 615-532-9016 | |
| Environmental / Safety | Laura Waynick | Laura.Waynick@tn.gov | 615-741-9225 | |
| Energy | Jay Harrison | Jay.Harrison@tn.gov | 615-741-9374 | |
| Tenant Services | Kathleen Hansen | Kathleen.hansen@tn.gov | 615-532-8915 | |
| Executive Director of Capital Projects | Natalie Hansen | Natalie.hansen@tn.gov | 615-741-1579 | |
| Designer (DOR)* | Rex Garton (Hart Freeland & Roberts) | RGarton@hfrdesign.com | 615.370.8500 | |
| General Contractor (GC) | TBD | | | |

2.2. Roles and Responsibilities

| ROLE | RESPONSIBILITY |
|--|--|
| Agency Representative (AR) | The agency representative for that tenant will approve the work being provided in their space. |
| Facilities Director | Facility communication to facilities manager and general knowledge of the project to the affected tenants, public, and end users. |
| Facility Manager (FM) | Facility coordination and access. Facility communication to affected tenants, public, and end users. Project support for discovery, scope, budget, planning, inspections, and execution. Coordination and execution of out of scope, operational or maintenance work required for the delivery of the project or discovered to be deficient by inspectors. |
| Facility Engineer (FE) | Facility coordination and access. Project support for discovery, scope, budget, planning, and execution. Coordination and execution of operational or maintenance work (out of scope) required for the delivery of the project. |
| Agency Manager - Capital Projects (AM) | Project development, coordination, scope definition, budget, approvals, and documentation until SBC project authorization are granted. Agency/facility coordination, support, discovery, due diligence, issue resolution for the life of the project. Project guidance and oversight for the life of the project. |
| Project Manager (PM) | Day-to-day project management, controls, oversight, and reporting. Professional consultant and general contractor guidance and coordination on matters related to conducting business with STREAM and compliance with STREAM policies and procedures. Agency Manager project support for development, scopes, budgets, pre-planning. |

| | |
|--|---|
| Environmental / Safety | Maintain and provide access to all EHS facility data, policies, and procedures. Provide project and consultant guidance in all EHS matters. Provide evaluation of all EHS components of the Construction Documents. Provide oversight of all EHS work. |
| Energy | Maintain and provide access to all Sustainable Design Guidelines data, policies, and procedures. Provide project and consultant guidance in all SDG matters. Provide evaluation of all SDG components of the Construction Documents. Provide oversight of all SDG work. |
| Tenant Services | Contractual authority for all project approvals after SBC project authorization. Third level reviewer of changes to project design and construction budgets. Project guidance and oversight for the project team and the work throughout the life of the project. |
| Executive Director Capital Projects | Guidance and oversight of the entire capital projects team.. |
| Designer (DOR) | Execution of design and construction documents necessary to accurately and successfully procure and permit the work of the project according to all applicable laws, codes, policies, procedures, and organizations having jurisdiction over the work of the project . Presentation of design as necessary to obtain project authorizations. Construction contract administration as a representative of and protecting the State's interest. Oversight over the work of the project for compliance with design intent and documentation. |
| General Contractor (GC) | Accurate and successful execution of work defined by the design and construction documents according to all applicable laws, codes, policies, procedures, and organizations having jurisdiction over the work of the project. |

2.3. Project Structure

The project manager (Melissa Marvel) will oversee the project; the Agency Manager (Felicia Thepthongsay) will stay in contact with the project manager; and Kathleen Hansen with Tenant Services to be dispersed all communication to the agency. The Facilities Manager (Paul Rockey) will need to be contacted when the building needs to be accessed by the contractor and all related personnel for the project.

***No one should communicate directly with the agency without going through the Agency Manager. **

2.4. Project Facilities and Resources

| RESOURCE REQUIREMENT | RESPONSIBILITY |
|---|-----------------------|
| Facility Access | Facilities Management |
| Project site office with fixtures, furniture, equipment, telephone, fax, internet, etc. | General Contractor |
| Material storage and lay down area designation | Facilities Management |
| Temporary toilet and hand wash facilities | General Contractor |
| Safety and directional signage | General Contractor |
| Parking | General Contractor |

3. RISKS

- Unknown or unforeseen site issues: as much preconstruction due diligence as possible in anticipation of these unforeseen site issues

4. SCOPE

4.1. Assumptions

- GC and FM will remain engaged to maintain communications with affected personnel (i.e. Facilities Manager, Designer and Project Manager).
- Construction is procured based on calendar days.
- Contractor is responsible for all required permitting.
- Designer is responsible for identification of potential environmental hazards associated with this work and, if found, inclusion of remediation in the construction documents. Owner considers hazard related identification, design, and documentation as additional services to the base design contract.
- Designer is responsible for compliance with the OSA's Sustainable Design policies and procedures.
- This project only has State of Tennessee funding and therefore will NOT require wage determination.

4.2. Constraints

- *The Cordell Hull/Central Services project will affect this project from 11/2015 to 11/2017. The Central Services Building will be demolished and a garage constructed.*
- *5th and 6th avenue access will be limited*
- *Limited lay down space.*

4.3. Pre-planning Scope

JLL Preplanning scope: N/A

4.3.1. IN-Scope Items

- Remediate all hazardous material
- Restore all bronze doors, cast iron spandrels, decorative metalwork, and exterior fixtures.
- Replace or restore all windows; add new interior aluminum secondary window or provide insulated glass for energy efficiency. (state will consult historic commission)
- Repoint existing stonework; new mortar must match the historic mortar in color, texture and tooling, it must have greater vapor permeability, sand must match as well.
- Repair cracks and chipping of the existing stone
- Clean existing building façade; test clean various areas to determine best method and possibly apply a permeable water repellent coating to stone
- Remove and reroof all existing roofs, repair or replace all gutters, flashing, rain leaders, etc., including the 6th floor expansion area, the roof pavers on the capitol side will need to be repaired or replaced to match its original historic purpose
- Construct exterior walls for the 6th floor expansion
- Landscaping; (this may or may not include removal and replacement of all mature trees).

4.3.2. OUT-of-Scope Items

- *6th floor expansion interior portion, this will be done at the time of the interior renovation project.*

4.4. Delivery Method

This project will be executed using a Construction Manager/ General Contractor delivery method.

4.5. Critical Success Factors

- *Timing This project must be completed by 10/1/2017*

5. SCHEDULE

5.1. Major Milestones

Delivery of Project to Agency by: November 1, 2017

| PHASE | START | | END | |
|-----------------------------|--------------------------------------|------------|----------------------------------|-----------|
| | MILESTONE | DATE | MILESTONE | DATE |
| Pre-Planning (00) | Agency Identifies Potential Project | | Governor's Budget Approved | 2013 |
| Approvals (10) | Change in Scope Presentation to SBC* | 6/18/2015 | SBC Approval* | 7/9/2015 |
| Approvals (10) | Assign PM | 6/18/2015 | Design Contract Executed | 8/19/2013 |
| Program Verification (20) | CM/GC RFP | 2/18/2016 | Program Confirmation by Designer | 1/31/2016 |
| Schematic Design (30) | SDP NTP | 11/17/2015 | SDP Approval | 1/15/2016 |
| Design Development (40) | DDP NTP | 1/18/2016 | DDP Approval | 3/21/2016 |
| Construction Documents (50) | CDP NTP | 3/22/2016 | 100% CDP Submittal | 6/24/2016 |
| Procurement (60) | 100% CDP Approval | 6/27/2016 | Construction Contract Executed | 9/28/2016 |
| Construction (70) | Notice to Proceed Construction | 10/1/2016 | Substantial Completion | 10/1/2017 |
| Closeout (80) | Punch List Completed | 10/31/2017 | Project Documents Archived | 1/31/2018 |
| Warranty (90) | Start of Warranty | 10/1/2017 | End of Warranty | 10/1/2018 |
| End of Project (99) | End of Warranty Inspection | 9/1/2018 | End Of Project | 10/1/2018 |

* Date range for Prepare for Presentation to SBC / SBC Approval should fall within date range for Assign PM / Design Contract Executed.

6. COST

6.1. Project Budget and Funding Authority

| | |
|------------------------------|---|
| Project Budget | 15,520,000 |
| Funding Source(s) | 13/14 FRF CFCI (A), 12/13 FRF Current Funds-Cap Maint (R), FRF Reserves |
| Method of Finance(s) | 529/070-01-2013 |
| MACC (if known) | 12,100,000 |
| Bid Target (if known) | 11,000,000 |

7. APPROVAL

Approval of the Project Charter indicates an understanding of the purpose and content described in this deliverable. By signing this deliverable, each individual agrees work should be initiated on this project and necessary resources should be committed as described herein.

STREAM Agency Manager / Approver – Capital Projects (must be a State employee)

Felicia Thepthongsay

Print

Signature

Date

Comments:

Facility Director

Kevin Powell

Print

Signature

Date

Comments:

STREAM Director of Capital Projects

Stephanie Burd

Print

Signature

Date

Comments:

Agency Representative

Michael Leftwich

Print

Signature

Date

Comments:

STREAM Executive Director Capital Projects

Natalie Hansen

Print

Signature

Date

Comments:

| APPENDICES | ATTACHMENTS |
|--|-------------|
| A. Acronyms | A. OPR |
| B. Property Condition Assessment Checklist | |
| | |

APPENDIX A

Acronyms

Add/delete as necessary for your project.

| | |
|--------|---|
| ACM | Asbestos Containing Materials |
| ACT | Acoustical Ceiling Tile |
| AR | Agency Representative |
| BIM | Building Information Modeling |
| CIP | Capital Projects Implementation Policy and Procedure Manual |
| CRS | Capital Request Summary |
| DGS | Department of General Services |
| DOR | Designer of Record |
| DAD | Director of Agency Development |
| DDC | Director of Project Design &Construction |
| DPM | Deputy Program Manager |
| EOW | End of Warranty |
| FE | Facilities Engineer |
| FM | Facilities Manager |
| FRF | Facilities Revolving Fund |
| GC | General Contractor |
| HPBr | High Performance Building Requirements |
| MCP | Agency Manager- Capital Projects |
| OSA | Office of the State Architect |
| PM | Project Manager |
| PMA | Program Management Administrator |
| PMC | Program Management Cost Control Coordinator |
| PMO | Project Management Office |
| PMP | ProjectManagement Plan |
| PMS | Program Management Scheduler Control Coordinator |
| QA/QC | Quality Assurance/Quality Control |
| SBC | State Building Commission |
| S/C | Substantial Completion |
| State | State of Tennessee |
| STREAM | State of Tennessee Real Estate Asset Management |

APPENDIX B

Property Condition Assessment Checklist

Complete all relevant information for your project.

| Project Activity at Building | | | |
|--|------------|-----------|---|
| | Yes | No | Comments |
| Are there other projects in process or planned at the building? | X | | Central Services will be demolished and a garage built in its place. 5 th and 6 th Ave will have limited access. Coordination is key on these two projects |
| What are the planned schedules for other projects? | X | | Coordination of schedules will need to take place between this project and the Cordell Hull/Central Services projects. |
| Are there any planned or forecasted maintenance or service scheduled for the building? | | X | Contact Facilities Management |
| It is necessary to notify building occupants? | X | | Kathleen Hansen will notify the AG's office. |

| Vendor Selection | | | |
|--|------------|-----------|-----------------|
| | Yes | No | Comments |
| Are there proprietary vendors that are required to perform building related activities, such as Fire Life Safety, Electrical, Mechanical, or Infrastructure? | | X | |

| Building Rules & Regulations | | | |
|---|------------|-----------|---|
| | Yes | No | Comments |
| Obtain building rules & regulations for distribution to the project team. | X | | Contact facilities management |
| Define building access process? | X | | Contact facilities manager |
| How do project team members access the building? | X | | Contact facilities manager |
| Define parking guidelines for the project team. | X | | The contractor is responsible for their own parking |
| Define Freight Elevator access, hours of operation and reservation process. | X | | Contact facilities manager |
| Define construction Working Hours. | X | | All work is done during normal hours except for when special circumstances arise. (6am-6pm) |

| | | | |
|--|---|---|---|
| Does the Fire Marshall need to be notified? | X | | The Designer of Record will notify them |
| Define Loading Dock environment. | X | | Contact facilities manager |
| Define Path of Travel to the job-site within the building. | X | | Contact facilities manager |
| Is testing required for any existing building systems or conditions? | X | | Asbestos testing will be required |
| Water Supply | X | | Contact facilities management |
| Sewer | | X | |
| Electrical | X | | Contact facilities management |
| Fire Life/Safety | X | | Contact facilities management |
| Environmental Hazards | X | | Contact Laura Waynick |
| HVAC | | X | |
| Are there known asbestos, mold, or other environmental or health issues at the building? | | | Contact Laura Waynick |

| Existing Floor Plan Documents | | | |
|--|------------|-----------|--------------------|
| | Yes | No | Comments |
| Are existing floor plans available? | | X | N/A |
| Are existing Auto CAD plans available? | | X | N/A |
| Are existing As-Built plans available? | X | | Records Management |
| Are existing environmental and health surveys available? | X | | Laura Wyanick |

**CONSTRUCTION MANAGER / GENERAL CONTRACTOR
MASTER CONTRACT
BETWEEN THE STATE OF TENNESSEE,
DEPARTMENT OF GENERAL SERVICES
AND
CONTRACTOR NAME
TO
SBC PROJECT NUMBER 529/070-01-2013**

This Master Contract (the "Master Contract"), by and between the State of Tennessee, Department of General Services, hereinafter referred to as the "Owner" and Contractor Legal Entity Name, hereinafter referred to as the "Contractor," is for the provision of pre-construction and construction services, as further defined in the "SCOPE OF SERVICES." Owner and Contractor are hereinafter collectively referred to as the "Parties".

The Contractor is a/an Individual, For-Profit Corporation, Non-Profit Corporation, Special Purpose Corporation Or Association, Partnership, Joint Venture, Or Limited Liability Company. Contractor Place of Incorporation or Organization: Location
Contractor Edison Registration ID # Number

A. SCOPE OF SERVICES:

- A.1. The Contractor shall provide all service and deliverables as required, described, and detailed herein and shall meet all service and delivery timelines as specified by the Master Contract.
- A.2. The Contractor shall provide consulting, scheduling and estimating/cost control services during the pre-construction phase of the project, and shall be the general contractor during construction, holding the trade contracts and providing the management and construction services during the construction phase. As soon as practicable after execution of this Master Contract, the Contractor and the Owner shall negotiate in good faith mutually acceptable terms, conditions, and pricing for a written construction services agreement with a guaranteed maximum price, covering the construction phase. The Contractor shall competitively procure and contract with the trade contractors and assume the responsibility and the risk of construction delivery within the specified cost and schedule terms, and provide a guaranteed maximum price for the scope(s) of work for the project titled Exterior Building Updates, John Sevier State Office Building, Nashville, Davidson County, Tennessee, SBC Project No. 529/070-01-2013. (Refer to CM at Risk Scope of Services and Deliverables, Master Contract Attachment C).

B. CONTRACT PERIOD:

- B.1. Contract Period. This Master Contract shall be effective for the period commencing on the date of full and complete execution of this Master Contract and shall be effective for the period of time necessary for the Contractor to complete construction of the Project to the satisfaction of the Owner (the "Effective Period"). In no event shall the Effective Period extend beyond the final completion and close out of the contract for construction related to SBC Project No. 529/070-01-2013, Exterior Building Updates, John Sevier State Office Building, Nashville, Davidson County, Tennessee. The Contractor hereby acknowledges and affirms that the Owner shall have no obligation for services rendered by the Contractor which were not performed within this specified contract period.
- B.2. Term Extension. The Owner reserves the right to extend this Master Contract for an additional period or periods of time. An extension of the term of this Master Contract will be affected through an amendment to the Master Contract. If the extension of the Master Contract necessitates additional funding beyond that which was included in the original Master Contract, the increase in the Owner's maximum liability will also be affected through an amendment to the Master Contract.

B.3. Construction Services Agreement with a Guaranteed Maximum Price. Under no circumstances shall the initial term of the construction services agreement with a guaranteed maximum price, to be negotiated after execution of this Master Contract, extend beyond that set forth in Sections B.1 and B.2 above.

C. PAYMENT TERMS AND CONDITIONS:

C.1. Lump Sum Payment For Pre-Construction Phase Services. Payment by the Owner to the Contractor under this Master Contract for pre-construction phase services shall be a lump sum of **Insert Amount in Words** and No/100ths Dollars (**\$Insert Number Amount**). This amount shall constitute the entire lump sum fee due the Contractor for the pre-construction phase services hereunder regardless of the difficulty, materials or equipment required. The Master Contract amount includes, but is not limited to, all applicable taxes, fees, overheads, and all other direct and indirect costs incurred or to be incurred by the Contractor for pre-construction phase services. This pre-construction phase services lump sum fee does not include the amounts that are to be covered under the construction services agreement with a guaranteed maximum price.

The pre-construction services phase lump sum fee represents available funds for payment to the Contractor and does not guarantee payment of any such funds to the Contractor under this Master Contract unless the Contractor performs said work. In which case, the Contractor shall be paid in accordance with Section C.3.

C.2. Compensation Firm. The lump sum fee liability of the Owner for pre-construction phase services under this Master Contract is firm for the duration of the Master Contract and is not subject to escalation for any reason unless amended.

C.3. Payment Methodology. For payment for the pre-construction phase services described in Section A of this Master Contract, the Contractor shall submit an invoice, in form and substance acceptable to the Owner and with all of the required, if any, supporting documentation, prior to any payment. Progress payments and final payment for the construction phase shall be applied for and paid as provided in the construction services agreement with a guaranteed maximum price. See **Attachment B** for allowed monthly charges.

C.4. Travel Compensation. The Contractor shall not be compensated or reimbursed for travel, meals, or lodging over and above the pre-construction services phase lump sum fee under this Master Contract and the guaranteed maximum price for construction under the construction services agreement.

C.5. Invoice Requirements. The Contractor shall invoice the Owner only for completed increments of service and for the amount stipulated in section C.3, above, and present said invoices no more often than monthly, with all necessary supporting documentation, to:

Original: Ron Maupin
Department of Finance and Administration
Office of Business and Finance
312 Rosa L. Parks Avenue
W. R. Snodgrass Tennessee Tower, 20th Floor
Nashville, Tennessee 37243

a. Each invoice shall clearly and accurately detail all of the following required information (calculations must be extended and totaled correctly).

- (1) Invoice Number (assigned by the Contractor);
- (2) Invoice Date;
- (3) Contract Number SBC Project No. 529/070-01-2013
- (4) Customer Account Name: Department of General Services, Real Estate Asset Management;
- (5) Customer Account Number (assigned by the Contractor to the above-referenced State Agency);
- (6) Contractor Name;
- (7) Contractor Federal Employer Identification, Social Security, or Tennessee Edison

- Registration ID Number Referenced in Preamble of this Master Contract;
- (8) Contractor Contact for Invoice Questions (name, phone, and/or fax);
 - (9) Contractor Remittance Address;
 - (10) Description of Delivered Service;
 - (11) Total Amount Due for delivered service (as stipulated in Section C.3. above);
 - (12) Further, the monthly invoices will include the name of each individual, the individual's job title, the number of hours worked during the period, the hourly rate, the total compensation requested for the individual, the total amount due the Contractor for the period involved, each project expenditure to-date, total expenditures to date and balance of funds remaining in the contract.

- b. The Contractor understands and agrees that an invoice under this Master Contract shall:
- (1) include only charges for service described in Master Contract Section A and in accordance with payment terms and conditions set forth in Master Contract Section C;
 - (2) only be submitted for completed service and shall not include any charge for future work;
 - (3) not include sales tax or shipping charges; and
 - (4) initiate the timeframe for payment (and any discounts) only when the Owner is in receipt of the invoice, and the invoice meets the minimum requirements of this Section C.5.

C.6. Payment of Invoice. A payment by the Owner shall not prejudice the Owner's right to object to or question any payment, invoice, or matter in relation thereto. A payment by the Owner shall not be construed as acceptance of any part of the work or service provided or as approval of any amount invoiced.

C.7. Invoice Reductions. The Contractor's invoice shall be subject to reduction for amounts included in any invoice or payment theretofore made which are determined by the Owner, on the basis of audits conducted in accordance with the terms of the Master Contract, not to constitute proper remuneration for compensable services.

C.8. Deductions. The Owner reserves the right to deduct from amounts, which are or shall become due and payable to the Contractor under this or any contract between the Contractor and the State of Tennessee any amounts, which are or shall become due and payable to the State of Tennessee by the Contractor.

C.9. Prerequisite Documentation. The Contractor shall not invoice the Owner under this Master Contract until the Owner has received the following documentation properly completed.

- a. The Contractor shall complete, sign, and present to the Owner an "Authorization Agreement for Automatic Deposit (ACH Credits) Form" provided by the Owner. By doing so, the Contractor acknowledges and agrees that, once said form is received by the Owner, all payments to the Contractor, under this or any other contract the Contractor has with the State of Tennessee shall be made by Automated Clearing House (ACH).
- b. The Contractor shall complete, sign, and present to the Owner a "Substitute W-9 Form" provided by the Owner. The taxpayer identification number detailed by said form must agree with the Contractor's Federal Employer Identification Number or Tennessee Edison Registration ID referenced in this Master Contract.

D. STANDARD TERMS AND CONDITIONS:

D.1. Required Approvals. The Owner is not bound by this Master Contract until it is signed by the contract parties and approved by the appropriate officials in accordance with applicable Tennessee laws and regulations (depending upon the specifics of this contract, said officials may include, but are not limited to the Office of the State Architect, the Commissioner of General Services, the Comptroller of the Treasury, and the Office of the Attorney General). Approvals shall be evidenced by a signature or electronic approval.

- D.2. Modification and Amendment. This Master Contract may be modified only by a written amendment signed by all parties hereto and approved by both the officials who approved the base contract and, depending upon the specifics of the contract as amended, any additional officials required by Tennessee laws and regulations (said officials may include, but are not limited to, the Office of the State Architect, the Commissioner of General Services, the Comptroller of the Treasury, and the Office of the Attorney General).
- D.3. Termination for Convenience. The Owner may terminate this Master Contract without cause for any reason. Said termination shall not be deemed a breach of contract by the Owner. The Owner shall give the Contractor at least thirty (30) days written notice before the effective termination date. The Contractor shall be entitled to compensation for satisfactory, authorized service completed as of the termination date, but in no event shall the Owner be liable to the Contractor for compensation for any service which has not been rendered. Upon such termination, the Contractor shall have no right to any actual general, special, incidental, consequential, or any other damages whatsoever of any description or amount. In no event shall the Owner's exercise of its right to terminate this Master Contract for convenience relieve the Contractor of any liability to the Owner for any damages or claims arising under this Master Contract.
- D.4. Termination for Cause. If the Contractor fails to properly perform its obligations under this Master Contract in a timely or proper manner, or if the Contractor materially violates any terms of this Master Contract ("Breach Condition"), the Owner shall have the right to immediately terminate the Master Contract and withhold payments in excess of fair compensation for completed services. Notwithstanding the above, the Contractor shall not be relieved of liability to the Owner for damages sustained by virtue of any Breach Condition and the Owner may seek other remedies allowed at law or in equity for breach of this Master Contract.
- D.5. Assignment and Subcontracting. The Contractor shall not assign this Master Contract or enter into a subcontract for any of the services provided under this Master Contract without obtaining the prior written approval of the Owner. If such subcontracts are approved by the Owner, each shall contain, at a minimum, sections of this Master Contract pertaining to "Conflicts of Interest", "Nondiscrimination," and "Records" (as identified by the section headings). Notwithstanding any use of approved subcontractors, the Contractor shall be the prime contractor and shall be responsible for all work performed.
- D.6. Conflicts of Interest. The Contractor warrants that no part of the Contractor's compensation shall be paid directly or indirectly to an employee or official of the State of Tennessee as wages, compensation, or gifts in exchange for acting as an officer, agent, employee, subcontractor, or consultant to the Contractor in connection with any work contemplated or performed under this Master Contract.

The Contractor acknowledges, understands, and agrees that this Master Contract shall be null and void if the Contractor is, or within the past six (6) months has been, an employee of the State of Tennessee or if the Contractor is an entity in which a controlling interest is held by an individual who is, or within the past six (6) months has been, an employee of the State of Tennessee.

The Contractor acknowledges, understands, and agrees that it and its performance under this Contract are subject to State Building Commission Policy and Procedure 12.02, "Organizational Conflicts of Interest," (the "SBC Conflict Policy"), and that Contractor has read and understands all of the provisions and requirements of same.

- D.7. Nondiscrimination. The Contractor hereby agrees, warrants, and assures that no person shall be excluded from participation in, be denied benefits of, or be otherwise subjected to discrimination in the performance of this Master Contract or in the employment practices of the Contractor on the grounds of handicap or disability, age, race, color, religion, sex, national origin, or any other classification protected by Federal, Tennessee State constitutional, or statutory law. The Contractor shall, upon request, show proof of such nondiscrimination and shall post in conspicuous places, available to all employees and applicants, notices of nondiscrimination.

- D.8. Prohibition of Illegal Immigrants. The requirements of Tenn. Code Ann. § 12-3-309 addressing the use of illegal immigrants in the performance of any contract to supply goods or services to the state of Tennessee, shall be a material provision of this Master Contract, a breach of which shall be grounds for monetary and other penalties, up to and including termination of this Master Contract.
- a. The Contractor agrees that the Contractor shall not knowingly utilize the services of an illegal immigrant in the performance of this Master Contract and shall not knowingly utilize the services of any subcontractor who will utilize the services of an illegal immigrant in the performance of this Master Contract. The Contractor shall reaffirm this attestation, in writing, by submitting to the Owner a completed and signed copy of the document at Exhibit A, hereto, with each invoice, as described in C.3, during the period of this Master Contract. If the Contractor is a party to more than one contract with the Owner, the Contractor may submit one attestation that applies to all contracts with the Owner. All Contractor attestations shall be maintained by the Contractor and made available to State officials upon request.
 - b. Prior to the use of any subcontractor in the performance of this Master Contract, and semi-annually thereafter, during the Term, the Contractor shall obtain and retain a current, written attestation that the subcontractor shall not knowingly utilize the services of an illegal immigrant to perform work under this Master Contract and shall not knowingly utilize the services of any subcontractor who will utilize the services of an illegal immigrant to perform work under this Master Contract. Attestations obtained from subcontractors shall be maintained by the Contractor and made available to State officials upon request.
 - c. The Contractor shall maintain records for all personnel used in the performance of this Master Contract. Contractor's records shall be subject to review and random inspection at any reasonable time upon reasonable notice by the Owner.
 - d. The Contractor understands and agrees that failure to comply with this section will be subject to the sanctions of Tenn. Code Ann. § 12-3-309 for acts or omissions occurring after its effective date.
 - e. For purposes of this Master Contract, "illegal immigrant" shall be defined as any person who is not: (i) a United States citizen; (ii) a Lawful Permanent Resident; (iii) a person whose physical presence in the United States is authorized; (iv) allowed by the federal Department of Homeland Security and who, under federal immigration laws or regulations, is authorized to be employed in the U.S.; or (v) is otherwise authorized to provide services under the Master Contract.
- D.9. Licensure. The Contractor and its employees and all sub-contractors shall be licensed pursuant to all applicable federal, state, and local laws, ordinances, rules, and regulations and shall upon request provide proof of all licenses.
- D.10. Records. The Contractor shall maintain documentation for all charges under this Master Contract. The books, records, and documents of the Contractor, for work performed or money received under this Master 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.
- D.11. Monitoring. The Contractor's activities conducted and records maintained pursuant to this Master Contract shall be subject to monitoring and evaluation by the Owner, the Comptroller of the Treasury, or their duly appointed representatives.
- D.12. Progress Reports. The Contractor shall submit brief, periodic, progress reports to the Owner as requested.
- D.13. Strict Performance. Failure by any party to this Master Contract to insist in any one or more cases upon the strict performance of any of the terms, covenants, conditions, or provisions of this Master Contract shall not be construed as a waiver or relinquishment of any such term,

covenant, condition, or provision. No term or condition of this Master Contract shall be held to be waived, modified, or deleted except by a written amendment signed by the parties hereto.

- D.14. Independent Contractor. The parties hereto, in the performance of this Master Contract, shall not act as employees, partners, joint ventures, or associates of one another. It is expressly acknowledged by the parties hereto that such parties are independent contracting entities and that nothing in this Master Contract shall be construed to create an employer/employee relationship or to allow either to exercise control or direction over the manner or method by which the other transacts its business affairs or provides its usual services. The employees or agents of one party shall not be deemed or construed to be the employees or agents of the other party for any purpose whatsoever.

The Contractor, being an independent contractor and not an employee of the State of Tennessee, agrees to provide insurance coverage as required by construction services agreement with a guaranteed maximum price.

- D.15. Limitation of Owner's Liability. The Owner shall have no liability except as specifically provided in this Contract. In no event will the Owner be liable to the Contractor or any other party for any lost revenues, lost profits, loss of business, decrease in the value of any securities or cash position, time, money, goodwill, or any indirect, special, incidental, punitive, exemplary or consequential damages of any nature, whether based on warranty, contract, statute, regulation, tort (including but not limited to negligence), or any other legal theory that may arise under this Master Contract or otherwise. The Owner's total liability under this Master Contract (including any exhibits, schedules, amendments or other attachments to the Master Contract) or otherwise shall under no circumstances exceed the Maximum Liability. This limitation of liability is cumulative and not per incident.

- D.16. Force Majeure. "Force Majeure Event" means fire, flood, earthquake, elements of nature or acts of God, wars, riots, civil disorders, rebellions or revolutions, acts of terrorism or any other similar cause beyond the reasonable control of the Party except to the extent that the non-performing Party is at fault in failing to prevent or causing the default or delay, and provided that the default or delay cannot reasonably be circumvented by the non-performing Party through the use of alternate sources, workaround plans or other means. A strike, lockout or labor dispute shall not excuse either Party from its obligations under this Master Contract. Except as set forth in this Section, any failure or delay by a Party in the performance of its obligations under this Master Contract arising from a Force Majeure Event is not a default under this Master Contract or grounds for termination. The non-performing Party will be excused from performing those obligations directly affected by the Force Majeure Event, and only for as long as the Force Majeure Event continues, provided that the Party continues to use diligent, good faith efforts to resume performance without delay. The occurrence of a Force Majeure Event affecting Contractor's representatives, suppliers, subcontractors, customers or business apart from this Master Contract is not a Force Majeure Event under this Master Contract. Contractor will promptly notify the Owner of any delay caused by a Force Majeure Event (to be confirmed in a written notice to the Owner within one (1) day of the inception of the delay) that a Force Majeure Event has occurred, and will describe in reasonable detail the nature of the Force Majeure Event. Contractor will not increase its charges under this Master Contract or charge the Owner any fees other than those provided for in this Master Contract as the result of a Force Majeure Event.

- D.17. State and Federal Compliance. The Contractor shall comply with all applicable State and Federal laws and regulations in the performance of this Master Contract.

- D.18. Governing Law. This Contract shall be governed by and construed in accordance with the laws of the State of Tennessee. The Tennessee Claims Commission or the state or federal courts in Tennessee shall be the venue for all claims, disputes, or disagreements arising under this Master Contract. The Contractor acknowledges and agrees that any rights, claims, or remedies against the State of Tennessee or its employees arising under this Master Contract shall be subject to and limited to those rights and remedies available under Tenn. Code Ann. §§ 9-8-101 - 407.

- D.19. Entire Agreement. This Master Contract is complete and contains the entire understanding between the Parties relating to its subject matter, including all the terms and conditions of the

Parties' agreement. This Master Contract supersedes any and all prior understandings, representations, negotiations, and agreements between the Parties, whether written or oral.

- D.20. Severability. If any terms and conditions of this Master Contract are held to be invalid or unenforceable as a matter of law, the other terms and conditions hereof shall not be affected thereby and shall remain in full force and effect. To this end, the terms and conditions of this Master Contract are declared severable.
- D.21. Headings. Section headings of this Master Contract are for reference purposes only and shall not be construed as part of this Master Contract.

E. SPECIAL TERMS AND CONDITIONS:

- E.1. Conflicting Terms and Conditions. Should any of these special terms and conditions conflict with any other terms and conditions of this Master Contract, these special terms and conditions shall control.
- E.2. Communications and Contacts. All instructions, notices, consents, demands, or other communications required or contemplated by this Master Contract shall be in writing and shall be made by certified, first class mail, return receipt requested and postage prepaid, by overnight courier service with an asset tracking system, or by EMAIL or facsimile transmission with recipient confirmation. Any such communications, regardless of method of transmission, shall be addressed to the respective party at the appropriate mailing address, facsimile number, or EMAIL address set forth below or to that of such party of address, as may be hereafter specified by written notice.

The Owner:

Agency Manager, Title
State of Tennessee, Department of General Services
Real Estate Asset Management
312 Rosa L. Parks Avenue, Suite 2400
Nashville, Tennessee 37243
Email Address
Telephone # Number

The Contractor:

Contact Name & Title Firm Name
Address
City, State Zip
Email Address
Telephone # Number
FAX # Number

All instructions, notices, consents, demands, or other communications shall be considered effectively given upon receipt or recipient confirmation as may be required.

- E.3. Document Priority. Should any conflict arise within any of the requirements of these Master Contract documents, the documents shall be interpreted in priority in the following order:
1. Construction services agreement with guaranteed maximum price, upon negotiation of its terms and conditions and execution by both parties, and subsequent amendments, and modifications;
 2. Addenda or amendments to the documents referenced in 3 and 4 below;
 3. This Master Contract and its attachments;
 4. The request for proposal documents, which are incorporated by reference; and,
 5. The proposer's proposal, which is hereby incorporated by reference.
- E.4. Subject to Funds Availability. The Master Contract is subject to the appropriation and availability of State or federal funds. In the event that the funds are not appropriated or are otherwise unavailable, the Owner reserves the right to terminate this Master Contract upon written notice to the Contractor. The Owner's exercise of its right to terminate this Master Contract shall not constitute a breach of Master Contract by the Owner. Upon receipt of the written notice, the Contractor shall cease all work associated with the Master Contract. If the

Owner terminates this Master Contract due to lack of funds availability, the Contractor shall be entitled to compensation for all conforming goods requested and accepted by the Owner and for all satisfactory and authorized services completed as of the termination date. Should the Owner exercise its right to terminate this Master Contract due to unavailability of funds, the Contractor shall have no right to recover from the Owner any actual, general, special, incidental, consequential, or any other damages of any description or amount.

- E.5. Tennessee Consolidated Retirement System. Subject to statutory exceptions contained in Tenn. Code Ann. §§ 8-36-801, *et seq.*, the law governing the Tennessee Consolidated Retirement System (“TCRS”), provides that if a retired member of TCRS, or of any superseded system administered by TCRS, or of any local retirement fund established under Tenn. Code Ann. §§ 8-35-101, *et seq.*, accepts State employment, the member's retirement allowance is suspended during the period of the employment. Accordingly and notwithstanding any provision of this Master Contract to the contrary, the Contractor agrees that if it is later determined that the true nature of the working relationship between the Contractor and the Owner under this Master Contract is that of “employee/employer” and not that of an independent contractor, the Contractor, if a retired member of TCRS, may be required to repay to TCRS the amount of retirement benefits the Contractor received from TCRS during the Term.
- E.6. Tennessee Department of Revenue Registration. The Contractor shall comply with all applicable registration requirements contained in Tenn. Code Ann. §§ 67-6-601 – 608. Compliance with applicable registration requirements is a material requirement of this Master Contract.
- E.7. Patents or Copyrights. The Contractor shall indemnify and hold the Owner harmless of all claims or suits which may be brought against the Owner for infringement of any laws regarding patents or copyrights which may arise from the performance of the Contractor under the Master Contract. In any such action brought against the Owner, the Contractor shall satisfy and indemnify the Owner for the amount of any final judgment, or settlement entered into in good faith by the Owner for infringement.

(The remainder of this page left blank intentionally)

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 (1) counterpart, even though no one (1) counterpart contains the signatures of all parties to this instrument. Electronic, scanned or facsimile signatures shall have the same force and effect as original signatures.

IN WITNESS WHEREOF:

CONTRACTOR LEGAL ENTITY NAME:

Contractor Signatory, Contractor Title

DATE: _____

STATE OF TENNESSEE,

OFFICE OF THE STATE ARCHITECT:

Peter L. Heimbach, Jr., State Architect

DATE: _____

DEPARTMENT OF GENERAL SERVICES:

Robert E. Oglesby, Commissioner

DATE: _____

APPROVED AS TO COMPLIANCE WITH POLICY AND STATUTE:

Justin P. Wilson, Comptroller of the Treasury

DATE: _____

APPROVED AS TO COMPLIANCE WITH FORM AND LEGALITY:

Herbert H. Slatery III, Attorney General and Reporter

DATE: _____

ATTESTATION RE PERSONNEL USED IN CONTRACT PERFORMANCE

| | |
|--|-----------------|
| SUBJECT CONTRACT NUMBER: | 529/070-01-2013 |
| CONTRACTOR LEGAL ENTITY NAME: | |
| FEDERAL EMPLOYER IDENTIFICATION NUMBER: (or Social Security Number) | |

The Contractor, identified above, does hereby attest, certify, warrant, and assure that the Contractor shall not knowingly utilize the services of an illegal immigrant in the performance of this Master Contract and shall not knowingly utilize the services of any subcontractor who will utilize the services of an illegal immigrant in the performance of this Master Contract.

CONTRACTOR SIGNATURE

NOTICE: This attestation MUST be signed by an individual empowered to contractually bind the Contractor. If said individual is not the chief executive or president, this document shall attach evidence showing the individual's authority to contractually bind the Contractor.

PRINTED NAME AND TITLE OF SIGNATORY

ATTACHMENT B TO MASTER CONTRACT

BETWEEN THE STATE OF TENNESSEE,
DEPARTMENT OF GENERAL SERVICES,
AND

CONTRACTOR

SBC PROJECT NUMBER 529/070-01-2013

Pre-Construction Services Payment Schedule

Agreed Lump Sum Amount: \$
Current Established Months: Will Determine No. Of Monthly Payments
Projected Start Date: Full and complete execution of this Master Contract

| | | |
|-----------|----------------------------------|----------|
| Payment 1 | for services ending first month | \$ |
| Payment 2 | for services ending second month | \$ |
| Payment 3 | for services ending third month | \$ |
| Payment 4 | for services ending fourth month | \$ |
| Payment 5 | for services ending fifth month | \$ |
| Payment 6 | for services ending sixth month | \$ _____ |
| | | \$ |

Note: If services are completed early, the Lump Sum balance may be invoiced as a final payment

CM/GC Scope of Services and Deliverables

John Sevier Exterior Building Updates

SBC Project No. 529/070-01-2013

1 PRE-CONSTRUCTION PHASE SERVICES

The CM/GC services shall consist of providing Pre-Construction Phase Services ("PCPS") as required including an acceptable Guaranteed Maximum Price ("GMP").

Pre-Construction Requirements:

- a) Attend weekly (as scheduled) project meetings/design review meetings with appropriate preconstruction personnel to provide ongoing input with respect to cost, schedule and constructability to ensure quality, schedule and budget goals are met.
- b) Provide pricing information upon commencement of PCPS for the existing Design Development Phase ("DDP") level construction documents, and then again at the end of DDP, and then again upon 100% construction documents via a bound report containing a detailed quantity and unit cost take-off of all work necessary for construction of the Project. This pricing information shall be submitted with a complete unit price, material quantity, a total cost itemization, any subcontractor quotations used in the development of pricing, bid tabulation sheets used to evaluate subcontractor pricing, a detailed listing of qualifications and assumptions, a summary listing of any outstanding document inconsistencies, and any potential risks that could impact budget parameters and final delivery of the construction phase of the Project.
- c) Concurrent with the submission of estimates as listed, the CM/GC will prepare and submit a schedule, using critical path method, or other scheduling method suitable to the Owner, for the construction phase of the Project. The schedule shall be presented with each estimate and shall reflect any revisions in the estimates, which affect the construction time.
- d) Value engineering will be an on-going process throughout the Preconstruction Phase of the Project. Value engineering shall be defined as appropriate cost/benefit measures to provide the same or equivalent functionality and quality that add value to the project. Upon receipt of documents issued for pricing, the CM/GC will submit a detailed list of value engineering options, the benefit to the project for each option including initial costs as a part of a life cycle cost analysis. The CMGC will meet and work with the Owner and the Designer in the evaluation of the various options and incorporate selected options into the estimates.

1.1 Project Review

1.1.2 The CM/GC shall meet with the Owner, the Designer and any other design team members to gain a full understanding of the program, the design documents, the Project scope and all other aspects of the Project.

1.1.3 The CM/GC is an integral part of the Project team that will coordinate the development and progress of the pre-construction and construction phases.

1.1.4 The CM/GC may develop written Project procedures, in cooperation with the Owner and the Designer, that will augment the Owner's Designers' Manual, as necessary, to be used as a guide for the management and coordination of this Project.

1.2 Consultation During Project Development

1.2.1 The CM/GC shall attend regularly scheduled meetings with the Designer and consultants during the design phase established by the contract between the Owner and the Designer, to advise them on matters relating to site use, improvements, selection of materials, building methods, construction details, building systems and equipment, phasing and sequencing, and cost. During the design work, the CM/GC shall provide a written, detailed coordination, constructability and quality review of all drawings and Specifications, in a form acceptable to the Owner and coordinated with the Designer. This review shall make an effort, to the best of the CM/GC's ability, to:

- a) Identify, minimize and eliminate areas of conflict, errors, omission, and overlapping of the Work to be performed by the various subcontractors.
- b) Endeavor to minimize cost and value engineer where appropriate to meet budgets or other Owner needs. Verify basis of design and value-engineering alternatives are compatible for the use and purpose necessary to meet or exceed the designed intent.
- c) Allow for phased and/or fast track bid packages as may be required.

By the nature of the CM/GC at risk delivery method, the CM/GC agrees and accepts greater responsibility for

coordination and review of the contract documents than that which is associated with a design, bid, build delivery method. This obligation is in addition to the diligence required by AIA Document A201, paragraph 3.2.

The CM/GC shall not be called upon to provide advice on legal issues or to engage in the practice of architecture or engineering. The CM/GC's review of design documents is solely in its capacity as a CM/GC and general contractor, not as a design professional. Such review is limited to issues of constructability, cost, value analysis, and scheduling. The CM/GC is not responsible for design of the Project.

1.3 Schedule

1.3.1 The CM/GC in consultation with the Designer shall prepare, provide, and maintain appropriately detailed pre-construction phase Critical Path Method ("CPM") schedules utilizing the same standard software that will later be used to develop the Project Construction Schedule. Provide schedule software data and updates in digital format compatible with State system Primavera P6.

1.3.2 The Project schedule shall be sufficiently detailed to allow for a realistic projection of design activity sequences and durations. Updated schedules will be required at the end of each design phase established by the contract between the Owner and the Designer, and after major value analysis decisions.

1.3.3 Within twenty(20) days from the execution of the PCPS contract, the CM/GC is to establish a detailed CPM schedule of the pre-construction phase with the concurrence of the Owner and the Designer. The CM/GC is responsible to monitor this schedule during the pre-construction/design phase, and advise the Owner of any deficiencies in adhering to this schedule by any party.

1.4 Constructability Review

1.4.1 CM/GC shall review the design documents during the pre-construction phase as to constructability. The review shall be conducted and reported following "Uniformat." With respect to each such issue, the CM/GC shall submit a written report to both the Owner and the Designer. At a minimum, each such written report shall contain:

- a) A description of the constructability issue with background information;
- b) a summary of the CM/GC's in-depth study/research including a description of the degree that the design/construction documents have been reviewed; and,
- c) written recommendations for addressing the issue.

1.4.2 The CM/GC shall promptly notify the Owner and Designer in writing upon recognizing any features in the design documents that appear to the CM/GC to be ambiguous, confusing, conflicting or erroneous.

1.5 Construction Cost Model / Estimates

1.5.1 The CM/GC shall develop a Project Construction Cost Model/Estimate ("CCME") that shall be independent from any similar estimate of probable construction cost required of the Designer and shall be updated as needed, but at a minimum at the end of each design phase during which the CM/GC is performing PCPS.

1.5.2 At Owner's cost, the Owner may request an independent confirming estimate at any phase, or, may request that an independent review of the CM/GC's detailed estimate be made to generally confirm quantities, costs, or rates shown.

1.5.3 Each CCME must contain a statement of the total amount determined to be the total construction costs for the Project, including alternates, CM/GC construction services general conditions budget, CM/GC construction services fixed fee, and CM/GC contingency.

1.5.4 The Maximum Allowable Construction Cost ("MACC") is the amount available for construction: GMP target as established by the Owner plus the Owner's construction contingency. The GMP Target shall include the amount available for construction, the CM/GC construction services General Conditions Budget, CM/GC construction services Fixed Fee, and CM/GC Contingency.

1.5.5 Each CCME and the Designer's estimate of probable construction cost will be reviewed by the Designer and the Owner for reasonableness and compatibility with the GMP target. The Owner, Designer and the CM/GC will work together to resolve questions and differences that may occur between the Designer's estimate of probable construction cost and the CCME and to reach a mutually acceptable joint estimate of probable construction cost.

1.5.6 In the event that the Designer's or the CM/GC's estimate of probable construction cost exceeds the GMP target, the Owner may direct the CM/GC to continue to provide its pre-construction phase services in conjunction with the Designer's redesign of the Project as necessary to maintain the Project program within the GMP target; in which case, the CM/GC shall do so without additional compensation. Also, the Owner may elect to revise the Project scope or increase funding.

1.6 Value Analysis

1.6.1 The CM/GC shall, after a complete review of the Project program, review the design documents available at the time of the CM/GC's commencement of PCPS, and obtain an understanding of the intent of the Owner and the Designer, provide an initial value analysis study within a time frame agreed upon between Owner, Designer, and

CM/GC based on available information and offer cost savings suggestions to the Owner. All recommendations shall be in writing, and must be fully reviewed with the Designer and Owner, and approved by the Owner prior to implementation.

1.6.2 Value analysis efforts are intended to facilitate a design by the Designer that is effective in first costs as well as long term operational costs relative to issues of energy use and facility maintainability. Value analysis studies shall include life cycle cost analysis as may be required to assist the Designer to achieve an appropriate balance between costs, aesthetics and function. The CM/GC's analyses and recommendations are for issues of constructability, scheduling, value analysis, and cost, and are not made in the capacity of a design professional evaluating the adequacy of the design or compliance of the design with applicable design standards or codes.

1.6.3 Value analysis efforts shall take into consideration applicable constructability issues.

1.6.4 All value analysis studies must be provided on a timely basis within the pre-construction schedule.

1.6.5 Value analysis shall be continuous.

1.6.6 The CM/GC shall conduct a value analysis study on a date agreed upon by the Project team which shall include, but not be limited to, the items noted below:

- a) Develop value analysis concepts for consideration at the session noted in (b) below. This activity shall be coordinated with the Designer.
- b) Brainstorming session(s) with design team and Owner.
- c) Written cost studies and a pro/con evaluation shall be produced and submitted to the Owner within one (1) week of the brainstorming session.
- d) Formal presentation of the written study shall be conducted by the CM/GC.
- e) A formal written value analysis study document including a summary of value analysis items, applicable cost savings, selected items and their corresponding cost savings shall be presented to the Owner and Designer.

1.7 Coordination of Contract Documents

1.7.1 The CM/GC shall review the construction documents, recommending alternatives whenever the CM/GC recognizes that design details unduly affect costs, construction feasibility or schedules. The CM/GC shall notify the Designer and the Owner in writing upon recognizing any features in the construction documents, which appear to the CM/GC to be ambiguous, confusing, conflicting or erroneous.

1.7.2 The CM/GC shall provide a thorough trade coordination review of the construction documents before trade contract bidding. Review shall be performed utilizing a structured, industry-accepted process. The CM/GC shall review the final documents to see that all comments have been incorporated.

1.7.3 All ambiguous, confusing, conflicting and/or erroneous features discovered in the construction documents by the CM/GC during the review process shall be promptly reported to the Owner and Designer.

1.8 Guaranteed Maximum Price (GMP) for Construction

1.8.1 The GMP shall be established not later than the date documented in the Project schedule. If no date is scheduled, the GMP shall be established no later than thirty (30) days after final review submission of the CDP documents to the Owner. The CM/GC may bid trade contracts, and/or major equipment packages, prior to establishment of the GMP at its own risk subject to Paragraph 1.10 below; however, the CM/GC shall not enter into binding contracts with trade contractors or suppliers until after the Construction Services Agreement - Guaranteed Maximum Price (CSA-GMP) is negotiated and executed. The CM/GC shall develop and provide to the Owner a GMP which shall include all construction costs, and all other projected costs including, but not limited to, the CM/GC GMP contingency, the CM/GC construction services Fee, and construction services general conditions budget. The GMP shall identify each anticipated trade contract amount, the CM/GC's fixed fee, general condition's reimbursable costs, identifying all line items, and all Project related costs, such as bonds, personnel payroll benefits, and other costs.

1.8.2 As the drawings and specifications may not be complete at the time the GMP proposal is prepared, the CM/GC at risk may provide for a contingency as defined in Article 1.9.2 for further development of the Drawings and Specifications by the Designer that is consistent with the Contract Documents and reasonably inferable there from. Such further development does not include such things as material changes in scope, systems, kinds and quality of materials, finishes or equipment, all of which, if required, shall be incorporated by Change Order.

1.8.3 The CM/GC's detailed construction cost estimates and GMP will be reviewed by the Designer and the Owner for reasonableness and compatibility with the Project GMP target. The Owner, Designer and the CM/GC will work together to resolve questions and differences that may occur between the GMP target and the CM/GC's construction cost estimate and corresponding GMP.

1.8.4 The GMP shall not exceed the GMP target as established by the Owner.

1.8.5 In the event that the GMP exceeds the GMP target, the Owner reserves the right to direct the CM/GC to continue to provide pre-construction phase services in conjunction with the Designer's redesign of the Project as necessary to maintain the Project program and meet the GMP target.

- a) After consultation with the Owner, the CM/GC shall coordinate and cooperate with the Project team as the Designer alters and redrafts construction documents as necessary to accomplish the required reduction in cost.
- b) The CM/GC shall analyze the Designer's originally submitted and as altered and redrafted construction documents, and make recommendations to the Owner as to ways and methods to reduce the costs of constructing the Project to a sum which does not exceed the GMP target.
- c) The CM/GC shall develop and provide to the Owner and Designer a revised GMP in connection with the redrafted and altered construction documents.

1.8.6 Upon acceptance by the Owner of a GMP, the Owner and the CM/GC shall negotiate and execute a mutually acceptable agreement including the approved GMP as a part of the CSA-GMP. All required bonds and insurance shall be provided in accordance with the terms of the CSA-GMP, and shall be furnished on or before the date of the Owner's execution of the CSA-GMP.

1.8.7 The CM/GC shall perform the work set forth in this section without additional compensation over and above the lump sum pre-construction fee provided in the PCSP contract.

1.8.8 All costs associated with the GMP are subject to audit at Owner's discretion. The CM/GC shall keep full and detailed accounts and exercise such controls as may be necessary for proper financial management under this contract. The Owner and the Owner's accountants or other representatives shall be afforded access to the CM/GC's records, books, correspondence, instructions, drawings, receipts, subcontracts, purchase orders, vouchers, memoranda and other data relating to this Project, and the CM/GC shall preserve these for a period of five years after final payment, or for such longer period as may be required by law. Any such audit shall be performed in accordance with generally accepted government auditing standards. Copies of such audits shall be provided to the Tennessee Comptroller of the Treasury, and the Department of Finance and Administration and shall be made available to the public.

1.9 Contingencies

1.9.1 Owner's Construction Contingency:

- a) An Owner's Construction Contingency ("Owner's Construction Contingency") will be established. Expenditures against this contingency will be available to cover all costs resulting from modifications not specifically covered in subparagraph 1.9.2 and initiated by the Owner's designated representative and implemented through a modification to the CSA-GMP during the construction phase services.
- b) The Owner's Construction Contingency is not included in the GMP.

1.9.2 CM/GC-GMP Contingency

- a) The GMP shall include a construction contingency (the "CM/GC-GMP Contingency") in an amount approved by the Owner, to help reduce the risks assumed by the CM/GC in providing the GMP for the Project. The Owner and the CM/GC acknowledge that the contingency is included to adjust the estimate for eventualities which have not been taken into precise account in the establishment of the GMP, including, but not limited to, those resulting from
 - 1) the construction documents not being complete at the time the GMP is established, and/or the refinement of design details within the scope of the work and the standards of quality on which the final, approved GMP was based, that were not present in, or, reasonably inferable, from the documents at the time the GMP is proposed, or, are not common industry practice in similar situations or uses;
 - 2) Scope gaps between trade contractors,
 - 3) unforeseen field conditions, circumstances, or other occurrences which a prudent CM/GC would not have reasonably detected or anticipated during the discharge of the CM/GC's pre-construction duties;
 - 4) Costs due to subcontractor or subcontracted labor disputes that impact the project;
 - 5) CM/GC to provide written justification and relevant substantiating estimate with back-up as visual verification that the fund is being used accurately and correctly. Owner reserves the right to reject use of funds when they are inadequately justified or inaccurate.

b) The amount of the CM/GC-GMP Contingency is the maximum sum available to the CM/GC to cover costs incurred as a result of such unanticipated causes or details. Cost overruns in excess of the amount of the CM/GC-GMP Contingency will be borne by the CM/GC, unless the GMP is adjusted pursuant to the terms of the Owner-CM/GC CSA-GMP. If all of the funds in the CM/GC-GMP Contingency are expended, or, in the event the cost of the work exceeds the GMP and any adjustments as may be due under the terms of this agreement, the CM/GC shall continue to perform at no additional cost to the Owner until the work is complete. The CM/GC shall be responsible for paying all costs, in accordance with the terms of this agreement that may be necessary to complete the work, even if such amounts are in aggregate in excess of the GMP.

c) The CM/GC-GMP Contingency may be applied to any items within the cost of the work without the necessity of a modification, without constituting a change in the work, and without resulting in any change in the GMP. The CM/GC shall advise Designer and Owner in writing prior to applying a part of the CM/GC-GMP Contingency to an item within the cost of the work. Any use of the CM/GC-GMP Contingency fund requires mutual agreement by the CM/GC and Owner, which shall not be unreasonably withheld. The CM/GC shall fully document the change on its copy of the construction documents that will be used as a part of the record documents.

d) The amount of the CM/GC-GMP Contingency is to be reviewed by the Owner as part of its review of the GMP. No set amount or percentage for the CM/GC-GMP Contingency will be agreed to prior to the submittal of the GMP. The Owner retains the right to specifically request revisions to the amount of the CM/GC-GMP Contingency prior to the Owner's acceptance and approval of the GMP.

e) The CM/GC's Contingency is not available and shall not be used for activities including, but not limited to, the following:

- 1) Payment of liquidated damages, reimbursement of additional consultant services due to deficient or delayed work, or similar back charges or damages from the Owner caused by the CM/GC;
- 2) Correction of errors, omissions, conflicts or defects in the documents that would be discoverable through reasonable review and inspection of the documents during the constructability reviews required by this contract;
- 3) Correction of items that are not precisely depicted on the contract drawings but are common industry practice to complete the work, in similar situations or uses;
- 4) Correction of take-off and/or estimating mistakes made by a subcontractor and/or supplier;
- 5) Any costs that are recovered by the CM/GC from insurance, sub-contractors, suppliers, or, any other source;
- 6) To supplement the CM/GC's own office or field staff, beyond the levels or commitment originally agreed to, without prior written consent of the Owner;
- 7) Any use, regardless of meeting conditions above, that is for the sole use, benefit or convenience of the CM/GC and would not create any additional benefit or difference to the final Work than the original construction documents would have provided;
- 8) To reimburse CM/GC for insurance deductibles; and,
- 9) Correction of items, not precisely depicted, that enables work to comply with all building, health, accessibility, safety, and fire codes.

1.10 Non-Acceptance of the GMP and Termination

1.10.1 The Owner, at its sole discretion, may decline to proceed with the CM/GC's GMP for the Project or Project phase(s) and thereupon without penalty, the contract services for the Project or Project phase(s) shall terminate at the end of the pre-construction phase.

1.10.2 In any event, such termination shall likewise terminate all further services and obligations of the CM/GC for the Project or Project phase(s). The CM/GC shall accept the lump sum contract amount for PCPS as full and complete reimbursement of all costs and services performed by the CM/GC for PCPS, and shall not be entitled to any further amount for such services. Thereafter, the Owner shall have the right to continue its activities to place the Project or Project phase(s) under construction with no obligation or restriction regarding the CM/GC and with full ownership and use of any data and information developed during PCPS.

1.10.3 Termination under this section is in addition to the termination provisions set forth elsewhere in the contract, including, but not limited to, the conditions of the contract included in the CSA-GMP.

1.11 Ownership of Documents

1.11.1 All data information, material and all copies thereof developed by the CM/GC, or in the CM/GC's possession or control, relating to the Project are the property of the Owner and shall be turned over to the Owner within ten (10) days after the Owner's request. However, the CM/GC may keep its own counterparts of executed agreements and one duplicate of its other data and documents for its own records but not for reuse.

1.12 Trade Contractor Qualification Requirements

1.12.1 The Owner and the Designer shall cooperate and participate with the CM/GC in the CM/GC's establishment of qualification requirements for all trade contractors. Then the CM/GC shall proceed to obtain written, sealed competitive bids from qualified trade contractors.

1.12.2 Basic qualification information from principal trade contractors may be requested on AIA Document 305 (Contractor's Qualification Statement). There may be a need to request additional Project or task specific information. The CM/GC may establish any qualification requirements that are not prohibited by law or by any specific and explicit terms of any written and published State Building Commission (SBC) policies and procedures.

1.12.3 The CM/GC shall conduct pre-bid meetings and award meetings for all trade contracts. The CM/GC shall notify the Owner and Designer of the time and place of each such meeting.

1.12.4 The CM/GC may verify any trade contract bid as hereinafter provided.

2 CONSTRUCTION PHASE SERVICES

The CM/GC services shall consist of providing Construction Phase Services (“CPS”) as required herein and by the contract documents including, but not limited to, the conditions of the contract and all additional documents enumerated in Article 1 of the CSA-GMP to effect the complete construction of the Project and to maintain the established GMP of the Project.

2.1 Consultation During Continuing Project Development

Upon acceptance of the GMP, the CM/GC shall continue to advise and assist the Owner and Designer during any continuing design activities as described in Section 1 – Pre-Construction Phase Services, but solely in its capacity as a CM/GC and general contractor, not as a design professional. Such advice and assistance is limited to issues of constructability, cost, value analysis, and scheduling. The GM/GC is not responsible for design of the Project.

2.2 Project Construction Costs

2.2.1 The CM/GC will publicly bid trade contracts in accordance with the established Project schedule. Upon completion of the award process for trade contracts, the CM/GC will summarize the values of all of the subcontracts and compare this total with the budgeted amount within the GMP cost summary. Should the value of the awarded subcontracts be less than the GMP trade contract budget, a reserve fund will be established. The sum of the CM/GC contingency and the reserve fund shall be limited to ten percent of the value of the GMP or a different percent agreed to by the Owner and the CM/GC. Any funds in excess of the ten percent cap will be deducted from the GMP by modification and added to the Owner’s Contingency. The CM/GC may utilize the reserve fund as follows:

- a) There are certain uses for the CM/GC Contingency delineated in 1.9.2 above. The CM/GC can only utilize the reserve fund for these uses after the CM/GC Contingency has been expended and upon prior written approval of the Owner, which shall not be unreasonably withheld.
- b) The CM/GC shall be authorized to use or allocate reserve funds for other purposes only upon mutual agreement that the purpose is appropriate to the Project and to the CSA-GMP, and only with the prior written approval of the Owner.

2.2.2 Unless otherwise provided in the contract documents to be the responsibility of the Owner, or separate contractor, the CM/GC’s construction phase services shall include team management and coordination; purchasing and procurement services; subcontract management and coordination, bid packaging; bidding; scheduling; cost controls and change order evaluation and management; periodic meetings between the Owner, CM/GC and the Designer; site coordination of Owner’s independent consultants such as testing and/or inspection; submittal process management; subcontracting; field management; quality control; safety program; post-construction phase close-out process, and warranty period services. All of these services shall be included in the CM/GC’s agreed upon fee and/or general conditions costs. This also shall include providing through itself or its subcontractors, all necessary supervision, labor, inspection, testing, start-up, material, equipment, machinery, temporary utilities, and other temporary facilities to permit the CM/GC to complete all construction of the work consistent with the construction documents.

2.2.3 Upon completion of the CM/GC’s obligations under the CSA-GMP, any and all non-expended funds remaining in the GMP will be retained by the Owner.

2.3. Project Construction Schedule

2.3.1 The CM/GC shall provide a CPM Project schedule utilizing accepted standard computer based software compatible with Primavera P6. The scheduling software shall allow for integration of all aspects of the Project and provide for coordination of all work to be performed. The scheduling software used by the CM/GC shall be capable of producing and coordinating logic developed network diagrams, and tabular format reports. The CPM Project schedule shall be prepared using the preconstruction schedule and the notice to proceed as the start, continuing until the completion of the one (1) year warranty review and completion. The observance of these requirements herein is the essential part of the work to be done, and no direct compensation will be allowed for fulfilling these requirements, as they are considered subsidiary to the work. The CM/GC shall provide an individual, the scheduler (the “Scheduler”), to create and maintain the Project schedule. Scheduler shall be proficient in CPM analysis as demonstrated through certification from Project Management Institute, Association for the Advancement of Cost Engineering, or possess sufficient experience to be able to perform required tasks utilizing the software and be able to prepare and interpret reports from the software. Scheduler shall be made available for discussion or meetings when requested. Schedule data compatible with Primavera 6 shall be provided digitally in a compatible format by the CM/GC so the State may load and evaluate the schedule. The schedule shall include activities of other projects adjacent to the site, if applicable, through coordination with the Designer. Utility and infrastructure work may be involved in the project. Those activities shall be included in the schedule, highlighting coordination points with others. Proposed changes in the work shall require schedule evaluation information to aid with project decisions. Do not use negative lags, lags in excess of 10 days, start to finish relationships, open ended activities, constraints, or manually

modified dates. The CM/GC shall prepare a schedule of values associated with each item within the scope. The schedule dollar value earned for each activity in the schedule shall be used for the application for payment and cash flow predictions.

2.3.2 After acceptance of the GMP and issuance of a CSA-GMP to the CM/GC for a construction phase of the Project and within fifteen (15) days after receipt of the written Notice To Proceed with construction (NTP), the CM/GC shall submit a preliminary CPM schedule that is consistent with the preliminary schedule included in trade contract bid packages.

2.3.3 The CM/GC shall develop the complete and final CPM schedule in the form of a CPM network diagram using the CM/GC's logic and time estimates for each segment of the work. The network diagram will be drawn in a level of detail suitable for display of salient features of the work including, but not limited to, the placing of orders for materials, submission of shop drawings for approval, approval of shop drawings by the Designer, delivery of material, and all work activities inclusive of the punch list. Each work activity shall be assigned a time estimate by the CM/GC. One-day shall be the smallest time unit used. Data shall also be provided in Gantt form.

2.3.4 Upon completion of the network diagrams, the CM/GC shall have computer input data prepared, and a computer run made to generate a printout for the Project based on the information supplied. In the event the completion date indicated by the schedule exceeds the contractual date(s), the logic and time estimates used to develop the plan will be reviewed, changes will be made in the logic and time estimates, and another computer run will be made to generate a new schedule. This procedure shall be repeated, if necessary, to provide a plan and schedule to meet the contractual date(s). All submissions shall be both in hard copy and in electronic format. CM/GC shall submit a baseline for approval. The baseline, also known as a target, becomes the benchmark against which performance is measured.

2.3.5 Within thirty (30) days after receipt of the written NTP with construction, the final CPM schedule shall be submitted to the Designer and the Owner. This working plan shall show job identification, job duration, calendar dates for start and finish of each job, and jobs critical to the completion of the Project on schedule. All schedule submittals in addition to the electronic P6 compatible native format data shall also include electronic forms including Portable Document File ("PDF") plots of the schedule. A PDF plot defining the critical path and two-week look ahead shall be submitted in any State approved format including web portal, electronic mail, Compact Disc ("CD") Rom, Digital Video Disc ("DVD") Rom, or external drive, etc. Activity durations are created in whole workdays with a maximum of twenty (20) workdays. Durations greater than twenty (20) workdays may be used for non-construction activities with prior Owner approval.

2.3.6 The CM/GC shall review the plan and schedule each month. An updated Project schedule shall be furnished showing actual completed work at the end of each month in respect to the entire Project.

2.3.7 The CM/GC shall provide regular monitoring of the schedule as construction progresses, identify potential variances between scheduled and desired completion dates, review schedule for work not started or incomplete and take the action necessary to meet the required completion date.

2.3.8 Adherence to Schedule:

- a) It is the CM/GC's responsibility to meet the required construction completion date(s) as modified pursuant to Article 8 of the conditions of the contract.
- b) If the CM/GC finds that the schedule is likely to be impacted by an action or inaction on the part of the Owner, the CM/GC must review the situation with the Designer and the Owner in a timely manner, and proceed in accordance with the conditions of the contract.

2.3.9 Total Float ("TF") shall be defined as the number of days from the late finish date ("LFD") to the early finish date ("EFD") of an activity. When the LFD is later than the EFD, the total float shall be positive. When the LFD and the EFD are the same, the total float shall be zero. When the LFD is earlier than the EFD, the total float shall be negative. Unless otherwise specified, all references to float shall mean Total Float.

Time extensions shall be granted only to the extent that equitable adjustments for the activity or activities affected exceed or exceeded the total or remaining float along the critical path or activities at the time of the actual delay. The critical path is defined as the longest continuous series of activities through the network to a contract milestone or to contract completion. Where the path to a specific milestone has become negative the critical path shall be the longest continuous chain of activities with the greatest amount of negative float. Float is not for the exclusive use or benefit of either the State or the CM/GC, but is an expiring resource available to all parties, acting in good faith, as needed to meet any contract milestone(s). Time extensions shall not be granted until a delay occurs that is:

- a) Beyond the control of and without fault of or negligence of the CM/GC; and
- b) Extends the actual performance of the work beyond any milestone(s).

2.3.10 CM/GC acknowledges and agrees that the late finish of activities shall never exceed:

- a) Finish milestones;
- b) Substantial Completion;
- c) Final Completion; and,
- d) Contract end date.

2.4 Trade Contracts

2.4.1 The CM/GC shall prepare trade contract packages as required. Contracts between the CM/GC and trade contractors shall be in accordance with the conditions of the contract, and shall be procured in accordance with the SBC policies and procedures for bidding of public contracts (this document can be accessed at <http://www.tn.gov/finance/OSA/documents/SBCPolicyMASTER.pdf> or a hard copy can be requested through the Owner), and documents enumerated in Article I of the CSA-GMP.

2.4.2 After the CM/GC has developed qualifications for trade contractors, the CM/GC shall invite and receive bids for all qualified contractors for each package. The CM/GC shall publicly open the bids and then tabulate the bids received on each package. Next, the CM/GC shall determine the apparent low bidder for each package. Upon this determination, the CM/GC shall have the right to review all bid documentation from the apparent low bid contractor to verify the scope of the bid. If the CM/GC's review shows that the low bidder fully accounted for all costs associated with the scope of the work on which it was bidding, and the low bidder fully and strictly satisfies all qualification criteria and requirements established pursuant to subparagraph 1.12.2, then the contract shall be awarded to the low bidder as a subcontractor. If, however, the CM/GC's review shows that the low bidder failed to account for all costs associated with the scope of the work on which it was bidding or the low bidder is not in full and strict compliance with all qualification criteria and requirements established pursuant to subparagraph 1.12, then the bid may be disqualified with the approval of the Owner, which shall not be unreasonably withheld. The CM/GC shall have the right as outlined above to verify the scope and qualifications of each low bidder in the same manner to determine the lowest verified bid from a qualified bidder.

2.4.3 The CM/GC may repeat the bidding for a trade contract only if:

- a) the initial bidding produces no responsible, responsive bid for that portion of the work;
- b) no responsible, responsive bidder for that portion of the work will execute the subcontract form included in the bid package without material alterations; or,
- c) the Owner approves of such a re-bid, which approval shall not be unreasonably withheld.

2.4.4 All contract documents between the CM/GC and the trade contractors shall be made available for review by the Designer and the Owner.

2.4.5 Trade contracts are not to include contingencies. All construction contingency is to be included in the CM/GC-GMP Contingency.

2.5 Long Lead Time Items

2.5.1 The CM/GC shall recommend to the Owner and Designer a schedule for procurement of long-lead time items and/or activities that will constitute part of the work as required to meet the project schedule. Procurement of long-lead time items shall be considered a part of the services covered under the construction phase contract.

2.6 Project Control

2.6.1 Project Staffing

- a) The CM/GC's on-site representatives shall coordinate the work of the trade contractors and any pre-purchased major equipment suppliers and coordinate the work with the activities and responsibilities of the Owner, Designer and CM/GC to complete the Project in accordance with the CSA-GMP requirements.
- b) The CM/GC shall maintain a competent and adequate full-time staff at the Project site to coordinate and provide adequate direction of the work, and to monitor progress of the trade contractors on the Project at all times.
- c) The on-site CM/GC representatives will remain on the job and in responsible charge as long as those persons remain employed by the CM/GC, unless the Owner has reason to agree otherwise during the course of the Project.
- d) Wages or salaries of the CM/GC's supervisory and administrative personnel, when stationed at the site, with the Owner's written approval shall be in accordance with the following. No CM/GC personnel stationed at the CM/GC's home office or branch office shall be charged to the cost of the work. Non-field office based CM/GC management and support personnel shall be expected to provide service and advice from time to time throughout

the Project. Their time, devoted to Project matters, is considered to be covered by and included in the CM/GC fee.

2.6.2 Meetings

- a) The CM/GC shall schedule and conduct regular progress meetings with trade contractors as conditions on the Project require. The CM/GC shall conduct bi-weekly Owner's meetings and other meetings as may be required, at which trade contractors, Owner, Designer, and other designated representatives, and the CM/GC can discuss jointly such matters as identified in the Owner's Designers' Manual under Administrative Procedures, Chapter 6, paragraph 6.07 Progress Meetings. Bi-weekly Owner's meetings shall be recorded and copies of the recordings shall be promptly made available to the Owner.
- b) The CM/GC shall take and distribute complete minutes of meetings to all attendees, and to the Designer and Owner even if not attending, within three (3) days of such meetings. Representatives of the Owner and Designer may attend meetings and shall in any case receive all notices and minutes of meetings.

2.6.3 The CM/GC may self perform Project work to assist with the coordination of trade contracts and minor Project facilitation. The CM/GC, its subsidiaries and/or its associates, shall not perform trade contract work. The maximum percent of the GMP that the CM/GC, its subsidiaries and/or its associates, can self perform shall be three percent (3%).

2.7 Requests for Information ("RFI")

2.7.1 The CM/GC will be responsible for developing and implementing a RFI form for use on the Project.

2.7.2 The CM/GC will be responsible for logging and reviewing all RFIs prior to submission to the Designer. The CM/GC is to ensure that the RFIs submitted are not frivolous.

2.7.3 The CM/GC shall track and monitor all RFIs throughout the Construction Phase in a timely manner until they are processed by the Designer.

2.7.4 All responses to the RFIs that have an added cost impact shall also be discussed with the Designer and the Owner.

2.7.5 The CM/GC shall develop an RFI aging report which is to be submitted at each progress meeting.

2.8 Substitution Requests

2.8.1 The CM/GC shall log all substitution requests.

2.8.2 The CM/GC shall review all substitution requests to ensure that they are complete; and, if not complete, return them to the trade contractor for proper submission.

2.8.3 The CM/GC shall not submit a substitution request to the Designer if CM/GC believes it to be inappropriate. The CM/GC's review of substitution requests will be solely in its capacity as a CM/GC and general contractor, not as a design professional. Such review shall be in accordance with the contract documents enumerated in Article 1 of the CSA-GMP.

2.8.4 The CM/GC shall track and monitor all substitution requests throughout the construction phase until all substitution requests are processed by the Designer. The CM/GC shall ensure that all substitution requests are submitted in accordance with the contract documents.

2.8.5 The CM/GC shall include substitution requests, if any, on the agenda at the progress meetings.

2.9 Project Photographs

2.9.1 The CM/GC shall submit progress photographs monthly in sufficient detail to properly record the work.

2.9.2 The CM/GC shall submit aerial progress photographs monthly.

2.10 Cost Control

2.10.1 The CM/GC shall develop and maintain an effective system of Project cost tracking and control.

2.10.2 The CM/GC shall maintain cost accounting records on authorized work performed under unit costs, actual costs for labor and material, or other bases requiring accounting records, and afford the Designer and the Owner access to these records and preserve them in accordance with Paragraph D.10 of the PCSP contract.

2.11 Quality Control / Inspection

2.11.1 The CM/GC shall perform quality control inspections on the work of the trade contractors to guard the Owner against defects and deficiencies in the work and shall coordinate this activity with the on-site duties of the Designer. CM/GC shall advise the Designer of any apparent variation and deviation from the contract documents and shall take

the necessary action to cause such variations and deviations from the contract documents to be corrected. CM/GC shall provide one set of all inspection reports (in binder form) as part of the bi-weekly job progress meetings. CM/GC quality control begins during the construction document phase and continues until the completion of the one (1) year warranty verification and completion.

2.11.2 The Owner reserves the right to independently contract for compliance inspection and testing.

2.11.3 The CM/GC shall track deficiencies reported by the Designer, as well as those noted in item 2.10.1. and any items reported by the Owner's independently contracted inspection and testing as described in 2.11.2

2.11.4 The CM/GC shall anticipate details not precisely depicted that make the ongoing and completed work comply with building, health, accessibility, safety, and fire codes, etc.

2.12 Project Safety

2.12.1 The CM/GC shall develop and implement a Project safety program in accordance with the conditions of the contract and applicable regulations.

2.12.2 It is understood that the Owner requires a safe work environment. A safe work environment is considered part of this agreement. No safety incentives shall be part of this agreement without the prior written approval of the Owner. If the CM/GC wishes to provide safety incentives, he may do so at his own cost.

2.12.3 The CM/GC shall document any safety violations it discovers and actions taken to protect the safety of persons and property engaged in the work.

2.13 Modifications and Change in GMP

2.13.1 Changes in the scope of work to be performed during the construction phase shall be governed by the conditions of the contract.

2.13.2 The CM/GC shall develop and implement a system for review, negotiation, and processing of proposed modifications that is consistent and compatible with the contract documents; and shall, with complete supporting data, recommend necessary changes to the Owner and the Designer for approval.

2.13.3 Modification proposals will consist of actual costs only; that is, trade contractors' change order proposals and general conditions items, if applicable, only. No additional CM/GC fee shall be assessed for Owner requested modifications to the work of the Project until such modifications aggregate to a sum in excess of five percent (5%) of the Project original GMP. Project original GMP is defined as the GMP for the total overall project in its entirety, including all fast tracked activities and/or pre-purchased items.

2.13.4 All actual net costs associated with scope reductions shall revert to the Owner in accordance with the conditions of the contract.

2.13.5 At such time as the modifications exceed five percent (5%) of the GMP, the CM/GC fee used shall be the lower of the rates stated in Paragraph 7.3 of the general conditions, or, the fee applied to the actual original GMP.

2.14 Shop Drawing Review/Processing

2.14.1 The CM/GC will be responsible for logging all shop drawings / submittals prior to submission to the Designer. The CM/GC is to ensure that shop drawing / submittal packages are submitted in accordance with the contract documents and, if not appropriately submitted, return them to the trade contractor for proper submission.

2.14.2 The CM/GC shall develop and implement a system for review, acceptance or rejection, and processing of all shop drawings / submittals, including the projected lead time on the CPM schedule; and shall review this system with the Designer.

2.14.3 The CM/GC shall be responsible for tracking and monitoring all shop drawings/submittals throughout the construction phase until all shop drawings/submittals have been approved by the Designer.

2.14.4 The CM/GC shall include shop drawings as an agenda item on all progress meetings.

2.14.5 The CM/GC shall develop a shop drawings/submittal aging report which is to be submitted at each bi-weekly progress meeting.

2.15 Document Control

2.15.1 The CM/GC shall devise, implement and maintain at the Project site, a structured document control system which includes and tracks records of all necessary contracts, RFI's, shop drawings, samples, purchases, materials, equipment, maintenance and operating manuals and instructions, and any other documents and revisions thereto which arise out of the contract; and, shall keep these documents readily available to the Designer and the Owner any time during the performance of this contract.

2.16 Reports

2.16.1 General

- a) The CM/GC shall keep accurate and detailed written records of Project progress during all stages of construction.
- b) The CM/GC shall submit a monthly progress report, bound in booklet form, to the Designer and the Owner to include a progress report on the status of construction, updated copies of all logs including pending action items log, RFI log, modification status log, submittals log, visitors log, wage rate transmittals (if applicable), an updated construction schedule, updated contract time and GMP status, and progress photographs.

2.16.2 Daily Diary

The CM/GC shall maintain a detailed daily diary of all events, which occur at the jobsite or elsewhere, and which affect, or may be expected to affect, Project progress. The diary shall record, as applicable, weather data, including minimum and maximum temperatures, precipitation type and amount, sky conditions, and wind velocities, and be used to support the standard weather delay report. The diary shall include a detailed list of all material deliveries to the site and describe the construction activities of the day along with manpower and equipment usage, including that of the trade contractors. The diary shall be available to the Designer and Owner at all times and shall be turned over to the Owner upon completion of the contract.

2.17 Bidding Documents

2.17.1 The following bidding requirements, contract forms, conditions of the contract, and general requirements shall be a part of the CSA-GMP and, in all cases in these documents:

- a) The contract documents including AIA Document A201-1997 General Conditions of the Contract for Construction and Supplementary Conditions as enumerated in Article 1 of the CSA-GMP, herein collectively referred to as Conditions of the Contract.
- b) Wage Rate Determination(s), if applicable - from the Tennessee Department of Labor and Workforce Development, applicable to the portions of the Work performed by the CM/GC and applicable to portions of the Work performed by the CM/GC's trade contractors regardless of the number of subcontract tiers between the CM/GC and the worker.
- c) Standard bidding and construction documents that are applicable to the CM/GC's work are identified in Article 1 of the CSA-GMP.
- d) Bid openings shall be conducted in the presence of the Owner following SBC policy.

STATE OF TENNESSEE

Real Estate Asset Management

Construction Services Agreement Between Owner and Construction Manager / General Contractor

where the Basis of Payment is a
GUARANTEED MAXIMUM PRICE

Use only with the coordinated documents identified in the current
Designers' Manual
for projects of the State Building Commission of Tennessee

AGREEMENT

made as of the _____ day of _____ in the year of Two Thousand Fifteen

BETWEEN the Owner: STATE OF TENNESSEE, Department of General Services

and the Contractor:

the Project: **Exterior Building Updates
John Sevier State Office Building
Nashville, Davidson County, Tennessee
SBC Project No. 529/070-01-2013**

the Designer: **HFR Design
214 Centerview Drive, Suite 300
Brentwood, Tennessee 37027
Rex Garton**

The Owner and the CM / GC agree as set forth below.

005223-1

ARTICLE 1
THE WORK AND THE CONTRACT DOCUMENTS

- 1.1 The Construction Manager / General Contractor shall perform all the Work required by the Contract Documents for the Project identified on page one.
- 1.2 The Contract Documents include the Master Contract and the Individual Contract elements of the Contract Documents identified below in Paragraph 1.4. These form the Contract and together 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:

The Construction Manager / General Contractor (CM/GC) Master Contract

Dated _____ between the State of Tennessee, Department of General Services and for the project titled:

**Exterior Building Updates
John Sevier State Office Building
Nashville, Davidson County, Tennessee
SBC Project No. 529/070-01-2013**

This Agreement

Conditions of the Contract:

AIA 1997 Edition A201 General Conditions dec 07 OFD 007223 CM/GC as modified (48 pages)
STREAM July 2015 Std LF 007315.01 Supplementary Conditions (2 pages)

Specifications

Drawings, dated _____, as identified in the Project Manual

The portions of the following addenda as pertain to the documents listed above:

Scope of Services and Deliverables

Document dated _____

Standard Bidding and Construction Documents applicable to the CM/GC's Work that are included in the Owner's Designers' Manual:

- 00 38 60..... Disqualified Contractors and Subcontractors
- 00 54 33..... ACH form
- 00 54 35..... Substitute W-9 form
- 00 61 13..... Contract Bond
- 01 21 19..... Allowances
- 01 22 13..... Unit Prices
- 01 26 00..... Contract Modification Procedures
- 01 26 10 CM / GC – GMP Contingency and Owner Reserve Procedures
- 01 26 20..... Weather Delays
- 01 26 39 Form For Field Order
- 01 26 40..... Form for Amendment, Change Order or Directive
- 01 26 50..... Cost Itemization Form
- 01 29 73..... Schedule of Values
- 01 29 76..... Payment Procedures
- 01 29 76.13... Attestation of Personnel Used in Contract Performance
- 01 31 13.91... Commissioning Coordination
- 01 31 19..... Project Meetings
- 01 31 90..... Administrative Logs
- 01 32 13 Scheduling of Work
- 01 32 16 Progress Schedules and Reports
- 01 33 91..... Commissioning Submittals
- 01 41 15..... Basic Regulatory Requirements
- 01 43 25..... Testing Laboratory Services
- 01 52 25 Owner's Field Offices
- 01 62 25..... Product Options and Substitutions
- 01 62 32..... Substitution Request Form
- 01 77 70..... Closeout Procedures
- 01 77 70.91... Contract Commissioning Closeout
- 01 78 21G..... Closeout Submittals (detailed Example)
- 01 78 88..... Report of Subcontractors and Suppliers
- 01 79 13..... Demonstration and Training

The Owner's Designers Manual can be accessed at
<http://tn.gov/generalservices/article/designers-manual-2014>

or a hard copy can be requested through the Owner.

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 for the work and each Phase thereof in accordance with the number of calendar days Contract Time allotted each, from and including the Commencement of each, wholly and severally for the Work of each Phase.

_____ **Calendar Days From the Notice to Proceed for the Work.**

2.2 Liquidated Damages, as set forth in paragraph 9.12 of the General Conditions, are
_____ **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 additions and deductions by Change Order as provided in the Contract Documents, an amount not to exceed the Guaranteed Maximum Price, also referred to as the "Contract Sum", of

3.2 The Guaranteed Maximum Price (GMP) is determined as follows:

| | |
|--|-------|
| Trade Contracts: | \$ |
| General Conditions Budget: | \$ |
| CM / GC Contingency: | \$ |
| CM / GC Construction Services Fixed Fee: | \$ |
| Project Related Cost | \$ |
| | ----- |
| Guarantee Maximum Price: | \$ |

3.3 Unit Prices will be used as specified.

005223-4

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 (1) counterpart, even though no one (1) 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 CONSTRUCTION MANAGER /
GENERAL CONTRACTOR:**

Signature: _____

Name: _____

Title: _____

**AND BY OWNER: STATE OF TENNESSEE
 Department of General Services**

APPROVED: _____
Peter L. Heimbach, Jr., State Architect

APPROVED: _____
Robert E. Oglesby, Commissioner
Department of General Services

APPROVED: _____
Justin P. Wilson, Comptroller of the Treasury
for compliance with policy and statute

APPROVED: _____
Herbert H. Slatery III, Attorney General
for form and legality

END of AGREEMENT FORM for the Project titled:

Exterior Building Updates
John Sevier State Office Building
Nashville, Davidson County, Tennessee
SBC Project No. 529/070-01-2013

005223-5

CONTRACT BOND

TENNESSEE STATE BUILDING COMMISSION STANDARD FORM

BOND NO. _____

Know all men by these presents: that we

(hereinafter called the "Principal") and

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

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

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

to complete the Work of the project titled:

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

a copy of which said agreement or contract is by reference hereby made a part hereof, as fully and to the same extent as if copied at 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

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 hereby 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 of _____, 20____.

Executed in _____ counterparts.

Witness:

(name of Principal)

(name of Surety)

(authorized signature)

(signature of Attorney-in-fact)

(name of signatory)

(name of Attorney-in-fact)

(title of signatory)

(Tennessee license number of Agent or Attorney-in-fact)

(countersignature of resident 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 and a resident of State of Tennessee, and shall affix license number to bond; or, countersignature by a licensed agent who is a resident of 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.

THREE-YEAR ROOF BOND
TENNESSEE STATE BUILDING COMMISSION STANDARD FORM

BOND NO. _____

GENERAL INFORMATION:

Principal: _____

Surety Name: _____

& Address: _____

Building Owner: State of Tennessee

Project: _____

Project Contract Date: _____

KNOW ALL MEN BY THESE PRESENTS:

That we, the Principal and the Surety, are held and firmly bound unto the Building Owner in the amount of

for the payment thereof in good and lawful money of the United States of America the Principal and the Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

Whereas, Principal has, by written agreement referenced above, entered into a contract (hereinafter referred to as "the Contract" and hereby referenced herein) with the Owner for the construction of the Project identified above.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Principal shall fully indemnify the Owner for all loss that the Owner may suffer by reason of any defective material and/or workmanship in the materials furnished for and the installation of the above referenced Project roofing system which become apparent during the period of three (3) years from the date of Substantial Completion of the above referenced Project roofing system, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

Surety hereby agrees 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 way affect the obligations 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.

00 61 43

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 of _____, 20__.

Executed in _____ counterparts.

Witness:

(name of Principal)

(name of Surety)

(authorized signature)

(signature of Attorney-in-fact)

(name of signatory)

(name of Attorney-in-fact)

(title of signatory)

*(Tennessee license number of Agent or
Attorney-in-fact)*

*(countersignature of resident 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 and a resident of State of Tennessee, and shall affix license number to bond; or, countersignature by a licensed agent who is a resident of 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.

AIA[®] Document A201[™] – 1997

General Conditions of the Contract for Construction

for the following PROJECT:

(Name and location or address):

all Tennessee Board of Regents General Work

OFD 00 72 23 CM/GC

December 2007

THE OWNER:

(Name and address): Tennessee Board of Regents

THE ARCHITECT:

(Name and address):

THE DESIGNER:

as identified in the agreement

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

This document has been approved and endorsed by The Associated General Contractors of America

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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 BASIC DEFINITIONS

§ 1.1.1 THE CONTRACT DOCUMENTS

The Contract Documents consist of the Agreement between Owner and Contractor (hereinafter the Agreement), Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, the Contractor's GMP Qualifications and Assumptions, 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 other documents such as bidding requirements (advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor's bid or portions of Addenda relating to bidding 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 ~~Architect-Designer~~ and Contractor, (2) between the Owner and a Subcontractor or Sub-subcontractor, (3) between the Owner and ~~Architect-Designer~~ or (4) between any persons or entities other than the Owner and 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-Designer's~~ duties.

§ 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~~ constitutes 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 or by separate contractors.

§ 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 THE PROJECT MANUAL

The Project Manual is a volume or set assembled for the Work which may include the bidding requirements, sample forms, Conditions of the ~~Contract and Specifications~~ Contract, schedules, tables, drawings, and Specifications.

§ 1.1.8 PROVIDE OR PROVIDED:

"Provide" or "Provided" as used in Contract Documents includes furnishing and install 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 and required of the Contractor to produce the indicated results.

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§ 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 which 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

§ 1.3.1 Terms capitalized in these General Conditions include those which 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

§ 1.4.1 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 EXECUTION OF CONTRACT DOCUMENTS

§ 1.5.1 The Contract Documents shall be signed by the Owner and Contractor. If either the Owner or Contractor or both do not sign all the Contract Documents, the ~~Architect-Designer~~ shall identify such unsigned Documents upon request.

§ 1.5.2 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.

§ 1.6

OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER INSTRUMENTS OF SERVICE OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER DOCUMENTS

§ 1.6.1 The Drawings, Specifications and other documents, including those in electronic form, prepared by the ~~Architect-Designer~~ and the ~~Architect's-Designer's~~ consultants are ~~Instruments of Service Documents~~ through which the Work to be executed by the Contractor is described. The Contractor may retain one record set. Neither the Contractor nor any Subcontractor, Sub-subcontractor or material or equipment supplier shall own or claim a copyright in the Drawings, Specifications and other documents prepared by the ~~Architect-Designer~~ or the ~~Architect's-Designer's~~ consultants, and unless otherwise indicated the ~~Architect-Designer~~ and the ~~Architect's-Designer's~~ consultants shall be deemed the authors of them and will retain all common law, statutory and other reserved rights, in addition to the copyrights. ~~All copies of Instruments of Service, them. All copies of Documents, except the Contractor's record set, shall be returned or suitably accounted for to the Architect-Designer, on request, upon completion of the Work. The Drawings, Specifications and other documents prepared by the Architect-Designer and the Architect's-Designer's consultants, and copies thereof furnished to the Contractor, are for use solely with respect to this Project. They are not to be used by the Contractor or any Subcontractor, Sub-subcontractor or material or equipment supplier on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect-Designer and the Architect's-Designer's consultants. The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are authorized to use and reproduce applicable portions of the Drawings, Specifications and other documents prepared by the Architect-Designer and the Architect's-Designer's consultants appropriate to and for use in the execution of their Work under the Contract Documents. All copies made under this authorization shall bear the statutory copyright notice, if any, shown on the Drawings, Specifications and other documents prepared by the Architect and the Architect's consultants. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' copyrights or other reserved rights.~~

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~~ representative in accordance with State Building Commission policy.

~~§ 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 mechanics' liens in Tennessee. The remedy afforded to laborers and furnishers of material on State projects is referenced in subparagraph 4.4.8.~~

§ 2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

~~§ 2.2.1 The Owner shall, at the written request of the Contractor, prior to commencement of the Work and thereafter, furnish to the Contractor reasonable evidence that financial arrangements have been made to fulfill the Owner's obligations under the Contract. Furnishing of such evidence shall be a condition precedent to commencement or continuation of the Work. After such evidence has been furnished, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor. Owner's project number constitutes verification that funding has been established as a matter of public record.~~

§ 2.2.2 Except for permits and fees, including those required under Section 3.7.1, which are the responsibility of the Contractor under the Contract Documents, 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.

§ 2.2.3 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.

§ 2.2.4 Information or services required of the Owner by the Contract Documents shall be furnished by the Owner with reasonable ~~promptness~~ promptness so as not to delay the progress of the Work. Any other information or services relevant to the Contractor's performance of the Work under the Owner's control shall be furnished by the Owner after receipt from the Contractor of a written request for such information or services.

§ 2.2.5 Unless otherwise provided in the Contract Documents, the Contractor will be furnished, free of charge, such copies of Drawings and Project Manuals as are reasonably necessary for execution of the Work.

§ 2.3 OWNER'S RIGHT TO STOP THE WORK

§ 2.3.1 If the Contractor fails to correct Work which is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or persistently 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.

§ 2.4 OWNER'S RIGHT TO CARRY OUT THE WORK

~~§ 2.4.1 If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a seven 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 after such seven day period give the Contractor a second written notice to correct such deficiencies within a three day period. If the Contractor within such three day period after receipt of such second notice fails to commence and continue to correct any deficiencies, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case an~~

~~appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor 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. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. Contract Documents or fails to fulfill requirements of Contract, then Owner may after ten (10) days written notice to Contractor and without prejudice to any other remedy that Owner may have, make good such deficiencies.~~

§ 2.4.2 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.

§ 2.4.3 In such cases as described in 2.4.1 and 2.4.2, appropriate modification will be issued deducting from the Contract Sum payment then or thereafter due Contractor the 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 7.3.6, including cost of Designer's additional services made necessary by such default, neglect, or failure. Designer will approve such action and the amount charged to Contractor. If neither the balance of the Contract Sum nor payments then or thereafter due Contractor, other than the Contractor's Contingency, are sufficient to cover such amount, Contractor shall pay difference to Owner.

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 term "Contractor" means the Construction Manager / General Contractor or the Contractor's ~~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 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 other than ~~the Contractor-the Contractor~~ except for such activities or duties assumed by the Owner under other Contracts.

§ 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 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.

§ 3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

§ 3.2.1 Since the Contract Documents are complementary, before starting each portion of the Work, the Contractor shall carefully study and compare the various Drawings and other Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.2.3, 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 construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, any errors, inconsistencies or omissions discovered by the Contractor shall be reported promptly to the ~~Architect-Designer~~ as a request for information in such form as the ~~Architect-Designer~~ may require.

§ 3.2.2 Any design errors or omissions noted by the Contractor during this review shall be reported promptly to the ~~Architect, Designer,~~ but 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-professional.~~ The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, building codes, and rules and regulations, but any nonconformity discovered by or made known to the Contractor shall be reported promptly to the ~~Architect, Designer.~~

§ 3.2.3 If the Contractor believes that additional cost or time is involved because of clarifications or instructions issued by the ~~Architect-Designer~~ in response to the Contractor's notices or requests for information pursuant to

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Sections 3.2.1 and 3.2.2, the Contractor shall make Claims as provided in Sections 4.3.6 and 4.3.7. If the Contractor fails to perform the obligations of Sections 3.2.1 and 3.2.2, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations. ~~The Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents or for differences between field measurements or conditions and the Contract Documents unless the Contractor recognized such error, inconsistency, omission or difference and knowingly failed to report it to the Architect.~~ Owner or Designer for damage resulting from error, inconsistency, or omission in Contract Documents, unless Contractor discovered, or in the exercise of reasonable diligence should have discovered such error, inconsistency, or omission and failed to report it to Designer. If contractor performs construction activity when Contractor knows, or should know in exercise of reasonable diligence that the activity involves error, inconsistency, or omission in Contract Documents, Contractor shall assume responsibility for such performance and shall bear the attributable costs for correction.

§ 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, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and 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 written notice and a proposal of corrective changes to the Owner and ~~Architect~~ Designer and shall not proceed with that portion of the Work without ~~further written instructions from the Architect.~~ If the Contractor is then instructed to proceed with the required means, methods, techniques, sequences or procedures without acceptance of changes proposed by the Contractor, the Owner shall be solely responsible for any resulting loss or damage. written instructions from the Designer that are accepted by the Contractor.

§ 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 not receive material nor labor 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 The Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order.~~ 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 as required for Designer's consideration. Designer and Owner will be final judge of acceptability of substitution. No substitution shall be made without authority in writing from Designer. Not later than twenty-one (21) days after award of contract, Contractor shall provide a list showing names of manufacturers proposed for each specified product, and applicable name of installer, whether Contractor or subcontractor. Designer will within fourteen (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

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manufacturer shall not constitute waiver of requirements of Contract Documents. Products 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 Contract. The Contractor shall not permit employment of unfit persons or persons not 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 a 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 PREVAILING WAGE SCALE:

§ 3.4.7.1 Contractor is required to comply with policies, conditions and rules of the Tennessee Department of Labor pursuant to TCA § 12-4-401, et seq, which include that if the Contract Sum exceeds fifty thousand dollars (\$50,000.00), Contractor is required to pay Prevailing Wage Scale current in the area of the Project to laborers and mechanics employed on the Work, 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.

§ 3.4.7.2 When a Federal Wage Scale will apply to the Project, it will be included in Contract Documents, and Contractor shall pay not less than rates set forth. If both federal and State wage rates apply to project, Contractor shall pay the higher of the two wage scales for each craft or trade.

§ 3.4.7.3 Current Prevailing Wage Scale Determination(s) for this project will have been bound herein, or issued by addendum at the end of the Conditions, if Owner's estimate of the value of Work indicates that it is required. Failure of Owner or Designer to provide current wage scale decision prior to bidding does not relieve Contractor of obligations set forth above.

§ 3.4.7.4 If Prevailing Wage Rates applicable to the Project change during the course of the Contract, or differ from those provided in Contract Documents, equitable adjustment in Contract Sum shall be made.

§ 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 otherwise required or permitted by the Contract Documents, that the Work will be free from defects not inherent in the quality required or permitted, and that the Work will conform to the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, modifications 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.

§ 3.6 TAXES

§ 3.6.1 The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor which 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 Subparagraph 3.6.1 notwithstanding, if after bids are received or negotiations concluded, the State of Tennessee enacts a change in a 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 AND NOTICES

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit and other permits and governmental fees, licenses and inspections necessary for proper execution and completion of the Work which are customarily secured after execution of the Contract and which are legally required when bids are received or negotiations concluded.

§ 3.7.2 ~~The~~ Except as provided in subparagraph 3.7.5, the Contractor shall comply with and give notices required by laws, ordinances, rules, regulations and lawful orders of public authorities applicable to performance of the Work.

§ 3.7.3 ~~If~~ Except as provided in subparagraph 3.7.5, it is not the Contractor's responsibility to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, building codes, and rules and regulations. However, if the Contractor observes that portions of the Contract Documents are at variance therewith, the Contractor shall promptly notify the ~~Architect-Designer~~ and Owner in writing, and necessary changes shall be accomplished by appropriate Modification.

§ 3.7.4 ~~If~~ Except as provided in subparagraph 3.7.5, if the Contractor performs Work knowing it to be contrary to laws, statutes, ordinances, building codes, and rules and regulations without such notice to the ~~Architect-Designer~~ and Owner, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.5 This subparagraph applies to any applicable local government permit. The Owner is an agency of state government, and as such has sovereign immunity from the laws, ordinances, rules, regulations, and lawful orders of

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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.

§ 3.8 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;
- .3 whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order-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.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner in sufficient time to avoid delay in the Work.

§ 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. Contractor shall not change such designation without consent of Owner; and, Owner's consent shall not be unreasonably withheld. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor. Important communications shall be confirmed in writing. Other communications shall be similarly confirmed on written request in each case.

§ 3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall prepare and submit for the Owner's and Architect's-Designer's information a Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.

§ 3.10.2 The Contractor shall prepare and keep current, for the Architect's-Designer's approval, a schedule of submittals which is coordinated with the Contractor's construction schedule and allows the Architect-Designer reasonable time to review 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 specification of Progress Schedules. If provided, the purpose of such services is to assist in producing a progress schedule for the Work; however, no express or implied guarantee or warranty is provided by the Owner regarding the suitability of the derived schedules, and the Contractor retains full responsibility for the suitability of the schedules and for conforming to them. Contractor shall fully cooperate in developing a schedule, and shall require the necessary forces assisting the Contractor to likewise cooperate fully.

§ 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

§ 3.11.1 The Contractor shall maintain at the site for the Owner one record copy of the Drawings, Specifications, Addenda, Change Orders and other Modifications, in good order and marked currently to record field changes and selections made during construction, and one record copy of approved Shop Drawings, Product Data, Samples and similar required submittals. These shall be available to the Architect-Designer and shall be delivered to the Architect Designer for submittal to the Owner upon completion of the Work.

§ 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 which 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. The purpose of their submittal is to demonstrate for those portions of the Work for which submittals are required by the Contract Documents the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents. 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 which 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 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. Submittals which are not marked as reviewed for compliance with the Contract Documents and approved by the Contractor may be returned by the Architect-Designer without action.

§ 3.12.6 By approving and submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents that the Contractor has 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 has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 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 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 informed the Architect-Designer in writing of such deviation 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 its responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect's-Designer's approval thereof.

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§ 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 written 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 which 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.~~ ~~Work.~~ The Contractor shall not be required to provide professional services in violation of applicable law. 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 cause such services or certifications to be provided by a properly 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, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided the Owner and ~~Architect-Designer~~ have specified to the Contractor all performance and design criteria that such services must satisfy. ~~Pursuant to this Section 3.12.10, the Architect will review, 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.~~ The Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

§ 3.13 USE OF SITE

§ 3.13.1 The Contractor shall confine operations at the site to areas permitted by law, ordinances, permits 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.

§ 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 such construction by the Owner or a separate contractor except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's 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 or rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove from and about the Project waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the ~~cost thereof shall be charged to the Contractor.~~ Contractor shall be responsible for the cost without increase to the Contract Sum.

§ 3.16 ACCESS TO WORK

§ 3.16.1 The Contractor shall provide the Owner and ~~Architect-Designer~~ access to the Work in preparation and progress wherever ~~located.~~ located, so that each may perform functions and exercise rights under the Contract Documents.

§ 3.17 ROYALTIES, PATENTS AND COPYRIGHTS

§ 3.17.1 The Contractor shall pay all royalties and license fees. The Contractor ~~shall~~ subject to approval by the Attorney General of the State of Tennessee with respect to suits or claims against Owner, defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect-Designer harmless from loss on account thereof, but shall not be responsible for such 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 the Contractor knows or has reason to believe that the required design, process or product is an infringement of a copyright or a patent, the Contractor shall be responsible for such loss unless such information is promptly furnished to the Architect-Designer.

§ 3.18 INDEMNIFICATION

§ 3.18.1 To the fullest extent permitted by law and ~~to the extent claims, damages, losses or expenses are not covered by Project Management Protective Liability insurance purchased by the Contractor in accordance with Section 11.3, the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's 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 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, 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 which would otherwise exist as to a party or person described in this Section 3.18.~~

§ 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.

§ 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 MINORITY-OWNED BUSINESSES:

§ 3.20.1 To the extent that the Contractor or a subcontractor is a Minority-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 Minority-owned Businesses on State projects in order for the State to collect data on such participation.

§ 3.20.2 "Minority-owned Business" means a business which is solely owned, or at least fifty-one percent (51%) of the assets of outstanding stock of which is owned, by an individual who personally manages and controls the daily operations of such business, and who is impeded from normal entry into the economic mainstream because of past practices of discrimination based on race, religion, ethnic background, sex, or disability.

§ 3.20.3 To be a "Minority-owned Business" for the purposes of this contract, a business must be certified as a "Minority-owned Business" by an agency of the federal government or the government of the State of Tennessee which is normally engaged in the practice of providing such certification.

ARTICLE 4 ADMINISTRATION OF THE CONTRACT

§ 4.1 ARCHITECT/DESIGNER

§ 4.1.1 ~~The Architect is the person lawfully licensed to practice architecture or an entity lawfully practicing architecture identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The term "Architect" means the Architect or the Architect's authorized representative. "Designer" is the~~

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licensed prime design professional or firm lawfully practicing architecture, landscape architecture, or engineering, identified in the Bidding Documents and Agreement form for project, or the authorized representative thereof.

§ 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.

§ 4.1.3 If the employment of the Architect-Designer is terminated, the Owner shall employ a new Architect ~~against whom the Contractor has no reasonable objection and~~ Designer whose status under the Contract Documents shall be that of the former Architect-Designer.

§ 4.2 ARCHITECT'S ADMINISTRATION OF THE CONTRACT DESIGNER'S 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 (1) during construction, (2) until final payment is due and (3) ~~with the Owner's concurrence, from time to time at the Owner's request during~~ the one-year period for correction of Work described in Section 12.2. The Architect-Designer will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents, unless otherwise modified in writing in accordance with other provisions of the Contract.

§ 4.2.2 The Architect-Designer, as a representative of the Owner, will visit the site at intervals appropriate to the stage of the Contractor's operations (1) to become generally familiar with and to keep the Owner informed about the progress and quality of the portion of the Work completed, (2) to endeavor to guard the Owner against defects and deficiencies in the Work, and (3) to determine in general if the Work 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 neither have control over or charge of, nor be responsible 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, except as provided in Section 3.3.1.

§ 4.2.3 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 Facilitating Contract Administration. Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor shall endeavor to communicate with each other through the Architect-Designer about matters arising out of or relating to the Contract. Communications by and with the Architect's-Designer's consultants shall be through the Architect-Designer. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the ~~Owner~~ Owner or the Owner's designee.

§ 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 will have 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 13.5.2 and 13.5.3, whether or not such 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, material and equipment 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~~

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Data, and Samples, checking for compliance with the requirements and conformance with the intent of the Contract Documents. The Designer's action will be taken with such reasonable promptness as to cause no delay in the Work or in the activities of the Owner, Contractor or separate contractors, while allowing sufficient time in the Architect's Designer's professional judgment to permit adequate review-review in accordance with 3.10.2. 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, unless otherwise specifically stated by the Architect-Designer, 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 authorize minor changes in the Work as provided in Section 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, will 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, and will issue a final Certificate for Payment upon compliance with the requirements of the Contract Documents.

§ 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 duties, responsibilities and limitations of authority of such project representatives shall be as set forth in an exhibit to be incorporated in the Contract Documents, incorporated in the Contract Documents if requested by the Contractor.

§ 4.2.11 The Architect-Designer will interpret and decide matters concerning performance under 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. If no agreement is made concerning the time within which interpretations required of the Architect-Designer shall be furnished in compliance with this Section 4.2, then delay shall not be recognized on account of failure by the Architect-Designer to furnish such interpretations until 15 days after written request is made for them.

§ 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 initial 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 so 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.

§ 4.3 CLAIMS AND DISPUTES

§ 4.3.1 Definition. A Claim is a demand or assertion by one of the parties seeking, as a matter of right, adjustment or interpretation of Contract terms, payment of money, extension of 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. Claims must be initiated by written notice. The responsibility to substantiate Claims shall rest with the party making the Claim.

§ 4.3.2 Time Limits on Claims. Claims by either party-party, except claims of Liquidated Damages, must be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later. If the impact of the condition giving rise to the Claim cannot be fully evaluated, a preliminary notice of a pending claim shall be made within the stated time limit subject to further action in a timely manner. Claims must be initiated by written notice to the Architect-Designer and the other party.

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§ 4.3.3 Continuing Contract Performance. Pending final resolution of a Claim except as otherwise agreed in writing or as provided in Section 9.7.1 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.

§ 4.3.4 Claims for Concealed or Unknown Conditions. If conditions are encountered at the site which are (1) subsurface or otherwise concealed physical conditions which 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 infrastructures or (2) unknown physical conditions of an unusual nature, which 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, then notice by the observing party shall be given to the other party promptly before conditions are disturbed and in no event later than 21 days after first observance of the conditions. The ~~Architect-Designer~~ will promptly investigate such conditions and, if 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 an equitable adjustment in the Contract Sum or Contract Time, or both. If the ~~Architect-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 so notify the Owner and Contractor in writing, stating the reasons. Claims by either party in opposition to such determination must be made within 21 days after the ~~Architect-Designer~~ has given notice of the decision. If the conditions encountered are materially different, the Contract Sum and Contract Time shall be equitably adjusted, but if the Owner and Contractor cannot agree on an adjustment in the Contract Sum or Contract Time, the adjustment shall be referred to the ~~Architect-Designer~~ for initial determination, subject to further proceedings pursuant to Section 4.4.

§ 4.3.5 Claims for Additional Cost. If the Contractor wishes to make Claim for an increase in the Contract Sum, written notice as ~~provided herein shall be given before proceeding to execute the Work, 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 4.4.~~ 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 10.6.

§ 4.3.6 If the Contractor believes additional cost is involved for reasons including but not limited to (1) a written interpretation from the ~~Architect-Designer~~, (2) an order by the Owner to stop the Work where the Contractor was not at fault, (3) a written order for a minor change in the Work issued by the ~~Architect-Designer~~, (4) failure of payment by the Owner, (5) termination of the Contract by the Owner, (6) Owner's suspension or (7) other reasonable grounds, Claim shall be filed in accordance with this Section 4.3.

§ 4.3.7 Claims for Additional Time

§ 4.3.7.1 ~~If the Contractor wishes to To make Claim for an increase in the Contract Time, written notice as provided herein shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work- Contract Time, Contractor shall give written notice as provided herein, and either: 1) include an estimate of cost, which shall be limited to that allowed by 8.3.3, and an explanation of the cause and probable effect on progress of Work; or, 2) provide a brief description of the delay with an acceptable timeframe for later submission of the required estimate and explanation. In the case of a continuing delay only one Claim is necessary-delay, only one claim is necessary, and Contractor shall subsequently detail the full scope of the delay.~~

§ 4.3.7.2 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~~ and a description of how the conditions had an adverse effect on the scheduled construction.

§ 4.3.8 Injury or Damage to Person or Property. If either party to the Contract 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, written notice of such injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 4.3.9 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed in a proposed Change Order or Construction Change Directive so that

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application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted ~~adjusted~~ subject to limitations and requirements contained in the Contract Documents.

§ 4.3.10 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-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 4.3.10 shall be deemed to preclude an award of liquidated direct damages, when applicable, in accordance with the requirements of the Contract Documents.~~ profit.

§ 4.4 RESOLUTION OF CLAIMS AND DISPUTES

§ 4.4.1 Decision of ~~Architect-Designer~~. Claims, including those alleging an error or omission by the Architect but excluding those arising under Sections 10.3 through 10.5, ~~Designer~~, shall be referred initially to the Architect for decision. ~~An initial decision by the Architect-Designer for decision. An initial decision or other action by the Designer in accordance with 4.4.2 shall be required as a condition precedent to mediation, arbitration or litigation of all Claims between the Contractor and Owner arising prior to the date final payment is due, unless 30 days have passed after the Claim has been referred to the Architect with no decision having been rendered by the Architect. The Architect 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 4.4.2.~~

§ 4.4.2 The ~~Architect-Designer~~ will review Claims and within ten days of the receipt of the Claim or information preliminary or pursuant to a Claim or a modification to a Claim 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 ~~Architect-Designer~~ is unable to resolve the Claim if the ~~Architect-Designer~~ lacks sufficient information to evaluate the merits of the Claim or if the ~~Architect-Designer~~ concludes that, in the ~~Architect's-Designer's~~ sole discretion, it would be inappropriate for the ~~Architect to resolve the Claim.~~ Designer to resolve the Claim. If Designer approves the Claim, respondent shall have ten (10) days after receipt to protest. If Designer rejects the Claim, claimant shall have thirty (30) days after receipt to protest, or the decision shall be final. If Designer suggests compromise, parties shall have ten (10) days after receipt to protest. If the Designer declines to resolve the claim, the Owner may, but is not obligated to, then take the lead in resolving the claim.

§ 4.4.3 In evaluating Claims, the ~~Architect-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 ~~Architect-Designer~~ in rendering a decision. The ~~Architect-Designer~~ may request the Owner to authorize retention of such persons at the Owner's expense.

§ 4.4.4 If the ~~Architect-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 such request, and shall either provide a response on the requested supporting data, advise the ~~Architect-Designer~~ when the response or supporting data will be furnished or advise the ~~Architect-Designer~~ that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the ~~Architect-Designer~~ will either reject or approve the Claim in whole or in part.

§ 4.4.5 The ~~Architect-Designer~~ will approve or reject Claims by written decision, which shall state the reasons therefor and which shall notify the parties of any change in the Contract Sum or Contract Time or both. The

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approval or rejection of a Claim by the Architect-Designer shall be final and binding on the parties but subject to ~~mediation and arbitration~~ to mediation, if consented to by both parties, and to remedies as otherwise provided by law.

~~§ 4.4.6 When a written decision of the Architect states that (1) the decision is final but subject to mediation and arbitration and (2) a demand for arbitration of a Claim covered by such decision must be made within 30 days after the date on which the party making the demand receives the final written decision, then failure to demand arbitration within said 30 days' period shall result in the Architect's decision becoming final and binding upon the Owner and Contractor. If the Architect renders a decision after arbitration proceedings have been initiated, such decision may be entered as evidence, but shall not supersede arbitration proceedings unless the decision is acceptable to all parties concerned. The State of Tennessee is not subject to arbitration.~~

~~§ 4.4.7 Upon receipt of a Claim against the Contractor or at any time thereafter, the Architect-Designer or 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 Architect-Designer or the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.~~

~~§ 4.4.8 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 prior to resolution of the Claim by the Architect, by mediation or by arbitration. 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., the policies of the State Building Commission, and paragraph 11.5 of these Conditions. Specific requirements for notice of Claims on the bond are set forth in TCA § 12-4-205.~~

~~§ 4.5 MEDIATION~~ The State of Tennessee is not subject to mandatory mediation.

~~§ 4.5.1 Any Claim arising out of or related to the Contract, except Claims relating to aesthetic effect and except those waived as provided for in Sections 4.3.10, 9.10.4 and 9.10.5 shall, after initial decision by the Architect or 30 days after submission of the Claim to the Architect, be subject to mediation as a condition precedent to arbitration or the institution of legal or equitable proceedings by either party.~~

~~§ 4.5.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be in accordance with the Construction Industry Mediation Rules of the American Arbitration Association currently in effect. Request for mediation shall be filed in writing with the other party to the Contract and with the American Arbitration Association. The request may be made concurrently with the filing of a demand for arbitration but, in such event, mediation shall proceed in advance of arbitration or legal or equitable 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.~~

~~§ 4.5.3 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.~~

§ 4.6 ARBITRATION

The State of Tennessee is not subject to arbitration.

~~§ 4.6.1~~ ~~§ 4.6.2~~ ~~§ 4.6.3~~ ~~§ 4.6.4~~ Any Claim arising out of or related to the Contract, except Claims relating to aesthetic effect and except those waived as provided for in Sections 4.3.10, 9.10.4 and 9.10.5, shall, after decision by the Architect or 30 days after submission of the Claim to the Architect, be subject to arbitration. Prior to arbitration, the parties shall endeavor to resolve disputes by mediation in accordance with the provisions of Section 4.5.

~~§ 4.6.2~~ Claims not resolved by mediation shall be decided by arbitration which, unless the parties mutually agree otherwise, shall be in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association currently in effect. The demand for arbitration shall be filed in writing with the other party to the Contract and with the American Arbitration Association, and a copy shall be filed with the Architect.

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~~§ 4.6.3 A demand for arbitration shall be made within the time limits specified in Sections 4.4.6 and 4.6.1 as applicable, and in other cases within a reasonable time after the Claim has arisen, and in no event shall it be made after the date when institution of legal or equitable proceedings based on such Claim would be barred by the applicable statute of limitations as determined pursuant to Section 13.7.~~

~~§ 4.6.4 Limitation on Consolidation or Joinder. No arbitration arising out of or relating to the Contract shall include, by consolidation or joinder or in any other manner, the Architect, the Architect's employees or consultants, except by written consent containing specific reference to the Agreement and signed by the Architect, Owner, Contractor and any other person or entity sought to be joined. No arbitration shall include, by consolidation or joinder or in any other manner, parties other than the Owner, Contractor, a separate contractor as described in Article 6 and other persons substantially involved in a common question of fact or law whose presence is required if complete relief is to be accorded in arbitration. No person or entity other than the Owner, Contractor or a separate contractor as described in Article 6 shall be included as an original third party or additional third party to an arbitration whose interest or responsibility is insubstantial. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of a Claim not described therein or with a person or entity not named or described therein. 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.~~

~~§ 4.6.5~~ ~~§ 4.6.6~~ ~~§ 4.6.5~~ Claims and Timely Assertion of Claims. 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.

~~§ 4.6.6 Judgment on Final Award. 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.~~

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 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 or the bidding requirements, the Contractor, as soon as practicable within 21 days after award of the Contract, shall furnish in writing to the Owner through the Architect Designer the names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work. The Architect-Designer will promptly reply to the Contractor in writing stating whether or not the Owner or the Architect-Designer, after due investigation, has reasonable objection to any such proposed person or entity. Failure of the Owner or Architect to reply promptly 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 a 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-Designer has no reasonable objection. If the proposed but rejected Subcontractor was able to meet requirements of Contract Documents and reasonably capable

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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.

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

§ 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 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

§ 5.3.1 By appropriate agreement, written where legally required for validity, 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, which the Contractor, by these 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 which 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 which the Owner accepts by notifying the Subcontractor and Contractor in writing; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

§ 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 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.

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 Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these including those portions related to ~~insurance and waiver of subrogation-insurance~~. If the Contractor claims that delay or additional

cost is involved because of such action by the Owner, the Contractor shall make such Claim as provided in Section 4.3.

§ 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 other separate contractors and the Owner in reviewing their construction schedules when directed to do so. The Contractor shall make any revisions to the 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, the Owner shall be deemed to be subject to the same obligations and to have the same rights which apply to the Contractor 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 report to the ~~Architect-Designer~~ apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor so to report 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, except as to defects not then reasonably discoverable.

§ 6.2.3 The Owner shall be reimbursed by the Contractor for costs incurred by the Owner which are payable to a separate contractor because of delays, improperly timed activities or defective construction of the Contractor. The Owner shall be responsible to the Contractor for costs incurred by the Contractor because of ~~delays, improperly timed~~ construction activities, damage to the ~~Work-Work~~, or defective construction of a separate contractor.

§ 6.2.4 The Contractor shall promptly remedy damage wrongfully caused by the Contractor to completed or partially completed construction or to property of the Owner or separate contractors 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

§ 6.3.1 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~~ responsible as provided in 3.15.2.

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, and the Contractor shall proceed promptly, 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 change in the Work;
- .2 the amount of the adjustment, if any, in the Contract Sum; and that the price includes 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 ~~Methods used in determining adjustments to the Contract Sum may include those listed in Section 7.3.3.~~ 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 7.3.3, and shall be based on reasonable expenditures and savings as set forth in 7.3.6.

§ 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 7.3.6.

§ 7.3.4 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.

§ 7.3.5 A Construction Change Directive signed by the Contractor indicates the agreement of the Contractor 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.

§ 7.3.6 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the method and the adjustment shall be determined by the Architect-Designer 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, ~~a reasonable an~~ allowance for overhead and ~~profit~~ profit in accordance with 7.3.10. 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 7.3.6 shall be limited to the following:~~

- ~~.1 costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers' compensation insurance;~~
- ~~.2 costs of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;~~

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- ~~3~~ rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
- ~~4~~ costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the Work; and
- ~~5~~ additional costs of supervision and field office personnel directly attributable to the change.

§ 7.3.6.1 Costs for the purpose of this 7.3.6 shall be limited to the following:

§ 7.3.6.1.1 Payroll Expense of labor;

§ 7.3.6.1.2 costs of materials, supplies, and equipment, including cost of transportation thereof, whether incorporated or consumed;

§ 7.3.6.1.3 rental costs of machinery and equipment rented from others, and not more than eighty percent (80%) of the (Associated Equipment Distributors Nationally Averaged Rental Rates for Construction Equipment) for machinery and equipment belonging to Contractor;

§ 7.3.6.1.4 costs of premiums for bonds and insurance to the extent required by Contract Documents, permit fees, and sales, use, or other similar taxes related to the Work;

§ 7.3.6.1.5 additional Direct Payroll Expense of superintendence directly attributable to authorized overtime; and,

§ 7.3.6.2 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 due to a Class 1 cause defined in 8.3, and solely to the extent directly attributable to extension of time. In all other instances, the following items shall be considered fixed costs already included in the general requirements of the Work for the duration of the Contract Time:

§ 7.3.6.2.1 field offices, sheds, phones, sanitary facilities, on-site utilities, drinking fountains, cleaning, safety programs, and other construction facilities and temporary controls not specifically required for additional work;

§ 7.3.6.2.2 costs of superintendence;

§ 7.3.6.2.3 superintendent's vehicle;

§ 7.3.6.2.4 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.

§ 7.3.6.3 for trade contracts direct payroll expense (DPE) costs delineated in 7.3.6.1.1, 7.3.6.1.5, 7.3.6.1.6, and 7.3.6.2.2 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 one hundred fifty five dollars (\$155) per hour, to cover social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers' compensation insurance.

§ 7.3.6.4 Specifically excluded from costs and included in overhead are:

§ 7.3.6.4.1 corporate, home office, and branch office overhead, rent, mortgage, off-site utilities, project management, and personnel not otherwise mentioned;

§ 7.3.6.4.2 capital expenses and interest on capital;

§ 7.3.6.4.3 hand tools

§ 7.3.6.5 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 allowance for overhead and profit.

§ 7.3.7 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change which 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 for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

~~§ 7.3.8 Pending final determination of the total cost of a Construction Change Directive to the Owner, amounts not in dispute for such changes in the Work shall be included in Applications for Payment accompanied by a Change Order indicating the parties' agreement with part or all of such costs. For any portion of such cost that remains in dispute, the Architect will make an interim determination for purposes of monthly certification for payment for those costs. That 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 4, included in the Contract Sum by the Construction Change Directive for such changes shall be included in the Schedule of Values.~~

§ 7.3.9 When the Owner and Contractor agree with the 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 shall be recorded by preparation and execution of an appropriate Change Order.

§ 7.3.10 The allowance for overhead and profit on costs as stipulated in subparagraph 7.3.6 shall be:

§ 7.3.10.1 ten percent (10%) overhead added to the itemized cost; plus,

§ 7.3.10.2 five percent (5%) profit added to the itemized cost and overhead; plus

§ 7.3.10.3 five percent (5%) added to the itemized cost, overhead, and profit, when the itemized cost is for work performed by a subcontractor or sub-subcontractor.

§ 7.4 MINOR CHANGES IN THE WORK

§ 7.4.1 The ~~Architect-Designer~~ will have authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes shall be effected by written order and shall be binding on the Owner and Contractor. The Contractor shall carry out such written orders promptly.

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, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by Article 11 to be furnished by the Contractor and Owner. The date of commencement of the Work shall not be changed by the effective date of such insurance. ~~Unless the date of commencement is established by the Contract Documents or a notice to proceed given by the Owner, the Contractor shall notify the Owner in writing not less than five days or other agreed period before commencing the Work to permit the timely filing of mortgages, mechanic's liens and other security interests.~~

§ 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 DELAYS AND EXTENSIONS OF TIME, AND FORCED ACCELERATION

§ 8.3.1 ~~If the Contractor is delayed at any time in the commencement or progress of the Work by an act or neglect of the Owner or Architect, or of an employee of either, or of a separate contractor employed by the Owner, or by changes ordered in the Work, or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties or other causes beyond the Contractor's control, or by delay authorized by the Owner pending mediation and arbitration, or by other causes which the Architect determines may justify delay, then the Contract Time shall be extended by Change Order 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.

§ 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 Section 4.3. If the basis exists for an extension of time under 8.3.1, Owner may either:~~

§ 8.3.2.1 in the case of additional work or a Class 1 cause, assign the Class 1 Time-Related Expenses, defined in 7.3.6.2, plus the overhead and profit allowed in 7.3.10, 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;

§ 8.3.2.2 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;

§ 8.3.2.3 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,

§ 8.3.2.4 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. 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 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~~

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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 7.3.6."

§ 8.3.4 Claims relating to time shall be made in accordance with applicable provisions of 4.3 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.

§ 8.3.5 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 a Guaranteed Maximum Price (GMP) as 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.

§ 9.1.2 Contract Sum is not subject to change due to commodity, equipment or labor cost fluctuations.

§ 9.2 SCHEDULE OF VALUES

§ 9.2.1 Before the first Application for Payment, the Contractor shall submit to the ~~Architect-Designer~~ a schedule of values allocated to various portions of the Work, prepared in such form and supported by such data to substantiate its accuracy as the ~~Architect-Designer~~ may require. This schedule, unless objected to by the ~~Architect-Designer~~, shall be used as a basis for reviewing the Contractor's 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 for operations completed in accordance with the schedule of values. Such application shall be notarized, ~~if required,~~ and supported by such data substantiating the Contractor's right to payment as the Owner or ~~Architect-Designer~~ may require, such as copies of requisitions from Subcontractors and material suppliers, and reflecting retainage if provided for in the Contract Documents.

§ 9.3.1.1 As provided in Section 7.3.8, such applications may include requests for payment on account of changes in the Work which 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 Such applications ~~may~~ shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay to a Subcontractor or material 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 off-site storage, will not constitute a basis for increasing the Contract Sum.

§ 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, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.

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§ 9.3.4 In Applications for Payment, the amount represented as total completed and stored to date shall reflect the 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 subparagraph 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 for substantial completion or final completion of the Work according to 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.

§ 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 issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Architect-Designer determines is properly due, or notify the Contractor and Owner in writing of the Architect's-Designer's reasons for withholding certification in whole or in part 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 comprising the Application for Payment, that the Work has progressed to the point indicated and that, to the best of the Architect's-Designer's knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents. 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. The issuance of a Certificate for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified. 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 material 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 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 another 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; accrued potential liquidated damages and other unsettled claims; or

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.7 ~~persistent~~ failure to carry out the Work in accordance with the Contract Documents.

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

§ 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.

§ 9.6.1.1 Payment is due not later than forty five (45) days after an undisputed Certificate for Payment has been received by Owner. Owner will endeavor to make payment within twenty-one (21) days, but shall not be obligated to do so.

§ 9.6.1.2 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 promptly pay each Subcontractor, upon receipt of payment from the Owner, out of the amount paid to the ~~Contractor on account of such Subcontractor's portion of the Work, Contractor~~, the amount to which said Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of entitled for such 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 Neither the Owner nor ~~Architect-Designer~~ shall have an obligation to pay or to see to the payment of money to a Subcontractor except as may otherwise be required by law.

§ 9.6.5 Payment to material 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 and 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, shall create any fiduciary liability or tort liability on the part of the Contractor for breach of trust or shall entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision. Contracts for improvement of real property when the original Contract Sum meets the statutory threshold, 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.~~

§ 9.7 FAILURE OF PAYMENT

§ 9.7.1 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 arbitration, 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' written notice to the Owner and ~~Architect~~, 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 shut-down, delay and start-up, plus interest as provided for in the Contract Documents.

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§ 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 complete Product Data, Operating & Maintenance Data, orientation, and training, as may be required by specifications, and use and occupancy permits.

§ 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 which shall establish the date of Substantial Completion, shall establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall finish all items on the list accompanying the ~~Certificate-~~ the Certificate, subject to the provisions of 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 such Certificate. Upon such acceptance and consent of surety, if any, the Owner shall make payment of retainage applying to such 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 as required under Section 11.4.1.5 and authorized by public authorities having jurisdiction over the Work. 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 written 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 and, 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 terms and conditions of 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 and will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner, (3) a written statement that the Contractor knows of no substantial 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 and (5), if required by the ~~Owner, Owner in writing,~~ other data establishing payment or satisfaction of obligations, such as receipts, releases and ~~waivers of liens, waivers,~~ 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 acknowledgment of the matter from the Surety~~ satisfactory to the Owner to indemnify the Owner against such ~~lien. If such lien 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 such ~~lien, 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 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 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 and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract ~~Documents;~~ Documents irrespective of when such failure is discovered; or
- .3 terms of special warranties required by the Contract Documents.

§ 9.10.5 Acceptance of final payment ~~by the Contractor, a Subcontractor or material supplier~~ 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.

§ 9.11 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.

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§ 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:

§ 9.12.3.1 the time for completion stipulated in the Certificate of Substantial Completion has passed; or, if no such time was stipulated, then thirty (30) calendar days has passed following the certified date of Substantial Completion; and,

§ 9.12.3.2 the Contract Time, including approved extensions, plus thirty (30) calendar days, has passed.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 SAFETY PRECAUTIONS AND PROGRAMS

§ 10.1.1 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 or the Contractor's Subcontractors or Sub-subcontractors; 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 give notices and comply with applicable laws, ordinances, rules, 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 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 owners and users of adjacent sites and utilities.

§ 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, except damage or loss 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 effect emergency repairs to damaged property and make appropriate claims for costs. 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 load or permit any part of the construction or site to be loaded so as to endanger its safety.

§ 10.3 HAZARDOUS MATERIALS

§ 10.3.1 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~~, Contractor which has neither been rendered harmless nor specified as inherent in the Work, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Owner and ~~Architect Designer~~ in writing.

§ 10.3.2 Under circumstances described in 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 verify that it has been 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 such material or substance or who are to perform the task of removal or safe containment of such 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. The Contract Time shall be extended appropriately and the Contract Sum shall be increased in the amount of the Contractor's reasonable additional costs of shut-down, delay and start-up, which adjustments shall be accomplished as provided for claims in Article 4 and for changes in the Work in Article 7.

§ 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) and provided that such damage, loss or expense is not due to the sole negligence of a party seeking indemnity.~~

§ 10.4 The Owner shall not be responsible under Section 10.3 for materials and substances brought to the site by the Contractor unless such materials or substances were required by the Contract Documents.

§ 10.5 ~~If, without negligence on the part of the Contractor, the Contractor is held liable 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 indemnify the Contractor for all cost and expense thereby incurred.~~

§ 10.6 EMERGENCIES AND UNREASONABLE RISK

§ 10.6.1 In an emergency or unreasonable risk 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 Section 4.3 and Article 7.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 CONTRACTOR'S LIABILITY INSURANCE

§ 11.1.1 The Contractor shall purchase 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 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 which 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, 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 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 date of commencement of the Work until date of final payment and termination of any coverage required to be maintained after final payment. Specific lines of coverage and limits of liability provided by Contractor shall be written in a comprehensive form, satisfactory to Owner in the following minimum requirements:

§ 11.1.2.1 Comprehensive General Liability

§ 11.1.2.1a including:

- Premises / Operations
- Underground, explosion, collapse
- Products / Completed Operations
- Contractual
- Independent Contractors
- Owner/Contractor Protective
- Broad Form Property Damage
- Personal injury (Employment Exclusion deleted)

§ 11.1.2.1b Combined single limits for bodily injury and property damage:

Each Occurrence: **\$1,000,000**

Aggregate: **\$2,000,000**

§ 11.1.2.1c Products and Completed Operations to be maintained for one year after final payment.

§ 11.1.2.1d Asbestos abatement insurance

§ 11.1.2.1d.1 Non-friable asbestos: If removal or abatement of non-friable asbestos is included in the Work, and Contractor's General Liability Insurance coverage excludes risks associated with asbestos, Contractor shall provide evidence of a Special Endorsement.

§ 11.1.2.1d.2 Friable asbestos: If removal or abatement of friable asbestos is included in the Work, Contractor shall provide evidence of a special endorsement.

§ 11.1.2.1d.3 Special Endorsement: Evidence of a Special Endorsement shall be in the form of a Certificate of Insurance certifying a special endorsement for asbestos abatement insurance with a minimum \$500,000 limit of liability. If Contractor is performing no portion of the asbestos

removal or abatement with its own forces, Contractor, in lieu of its own such endorsement, may substitute a Certificate showing such special endorsement covering the subcontractor or subcontractor which is actually performing the asbestos removal or abatement.

§ 11.1.2.2 Comprehensive Automobile Liability:

§ 11.1.2.2a 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.

§ 11.1.2.2b Bodily injury and property damage combined single limits:

Each Occurrence: \$500,000

§ 11.1.2.3 Workers Compensation and Employer's Liability, (without restriction as to whether covered by Workmen's Compensation law):

§ 11.1.2.3.a Workers Compensation: according to statute

§ 11.1.2.3.b Employer's Liability: \$100,000

§ 11.1.2.4 If an exposure exists, Aircraft and Watercraft Liability (owned & non-owned), with limits approved by Owner shall be provided.

§ 11.1.3 Certificates of insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work. ~~These certificates and the insurance policies required by this Section 11.1 shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner. Certificate(s) of insurance provided to attest to coverage shall specifically cite each element of coverage and not less than limits set forth in 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 11.1.4. The term "Commercial General Liability" shall mean all of the coverage listed in 11.1.2.1.a unless specifically noted otherwise in the certificate. If any of the foregoing insurance coverages are required to remain in force after final payment and are reasonably available, an additional certificate evidencing continuation of such coverage shall be submitted with the final Application for Payment as required by Section 9.10.2. 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 in accordance with the Contractor's information and belief.~~

§ 11.1.4 Contractor shall notify Owner in writing of changes in coverage or carrier not later than 10 days after notification of Contractor by Producer, or 10 days before Contractor makes a change, whichever occurs first. Contractor shall require that if policies are cancelled or modified before expiration date thereof, Producer shall endeavor to mail 10 days prior written notice to certificate holder named therein.

§ 11.2 OWNER'S LIABILITY INSURANCE

~~§ 11.2.1 The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance.~~

~~§ 11.3~~ **§ 11.3.1 § 11.3 PROJECT MANAGEMENT PROTECTIVE LIABILITY INSURANCE**

~~§ 11.3.1~~ **§ 11.3.1** ~~Optionally, the Owner may require the Contractor to purchase and maintain Project Management Protective Liability insurance from the Contractor's usual sources as primary coverage for the Owner's, Contractor's and Architect's vicarious liability for construction operations under the Contract. Unless otherwise required by the Contract Documents, the Owner shall reimburse the Contractor by increasing the Contract Sum to pay the cost of purchasing and maintaining such optional insurance coverage, and the Contractor shall not be responsible for purchasing any other liability insurance on behalf of the Owner. The minimum limits of liability purchased with such coverage shall be equal to the aggregate of the limits required for Contractor's Liability Insurance under Sections 11.1.1.2 through 11.1.1.5.~~

~~§ 11.3.2 To the extent damages are covered by Project Management Protective Liability insurance, the Owner, Contractor and Architect waive all rights against each other for damages, except such rights as they may have to the proceeds of such insurance. The policy shall provide for such waivers of subrogation by endorsement or otherwise.~~

~~§ 11.3.3 The Owner shall not require the Contractor to include the Owner, Architect or other persons or entities as additional insureds on the Contractor's Liability Insurance coverage under Section 11.1.~~

§ 11.4 PROPERTY INSURANCE

~~§ 11.4.1 Unless otherwise provided, the The Owner shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance written on a~~

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builder's risk "all-risk" or equivalent policy form in the amount of the initial Contract Sum, plus value of subsequent Contract modifications and cost of materials supplied or installed by others, comprising total value for the entire for the covered Project at the site on a replacement cost basis without optional deductibles 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 11.4 to be covered, whichever is later. This insurance shall include interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Project. specify the Owner, as named insured and the Contractor, Subcontractors and Sub-subcontractors, as additional insureds under the policy.

§ 11.4.1.1 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, ~~falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements,~~ and shall cover reasonable compensation for Architect's and Contractor's Designer's services and expenses and Contractor's work required as a result of such insured loss. Such insurance carried by the Owner will include a \$10,000 deductible clause. The deductible is the responsibility of the Contractor.

§ 11.4.1.2 If the Owner does not intend to purchase such property insurance required by the Contract and with all of the coverages in the amount described above, the Owner shall so inform the Contractor in writing prior to commencement of the Work. The Contractor may then effect insurance which will protect the interests of the Owner as a named insured, Contractor, Subcontractors and Sub-subcontractors in the Work, and by appropriate Change Order if not included in the Contract Sum the cost thereof shall be charged to the Owner. If the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain insurance as described above, without so notifying the Contractor in writing, then the Owner shall bear all reasonable costs properly attributable thereto.

§ 11.4.1.3 ~~If the property insurance requires deductibles, the Owner shall pay costs not covered because of such deductibles.~~

§ 11.4.1.4 ~~This property insurance shall cover portions of the Work stored off the site, and also portions of the Work in transit. The Owner's property insurance shall exclude portions of the Work stored off-site or in transit; and, Contractor shall provide insurance upon such portions to protect the Owner's interest.~~

§ 11.4.1.5 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.

§ 11.4.2 Boiler and Machinery Insurance. The Owner 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.

§ 11.4.3 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. ~~The Owner waives all rights of action against the Contractor for loss of use of the Owner's property, including consequential losses due to fire or other hazards however caused.~~

§ 11.4.4 ~~If the Contractor requests in writing that insurance for risks other than those described herein or other special causes of loss be included in the property insurance policy, the Owner shall, if possible, include such insurance, and the cost thereof shall be charged to the Contractor by appropriate Change Order.~~ **§ 11.4.5** **§ 11.4.6** Before an exposure to loss may occur, the Owner shall file with the Contractor a copy of each policy that includes insurance coverages required by this Section 11.4. 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 (10) days written notice to the Contractor should the policy be

canceled prior to the expiration date. Failure to provide such notice shall impose no obligation or liability of any kind upon the Owner or issuing company.

~~§ 11.4.5 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, the Owner shall waive all rights in accordance with the terms of Section 11.4.7 for damages caused by fire or other causes of loss covered by this separate property insurance. All separate policies shall provide this waiver of subrogation by endorsement or otherwise.~~

~~§ 11.4.6 Before an exposure to loss may occur, the Owner shall file with the Contractor a copy of each policy that includes insurance coverages required by this Section 11.4. Each policy shall contain all generally applicable conditions, definitions, exclusions and endorsements related to this Project. Each policy shall contain a provision that the policy will not be canceled or allowed to expire, and that its limits will not be reduced, until at least 30 days' prior written notice has been given to the Contractor.~~

~~§ 11.4.7 Waivers of Subrogation. 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, and (2) the Architect, Architect's consultants, separate contractors described in Article 6, 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 covered by property insurance obtained pursuant to this Section 11.4 or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the Owner as fiduciary. The Owner or Contractor, as appropriate, shall require of the Architect, Architect's consultants, separate contractors described in Article 6, if any, and the subcontractors, sub-subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.~~

~~§ 11.4.8 A loss insured under Owner's property insurance 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 11.4.10. 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.~~

~~§ 11.4.9 If required in writing by a party in interest, the Owner as fiduciary shall, upon occurrence of an insured loss, give bond for proper performance of the Owner's duties. The cost of required bonds shall be charged against proceeds received as fiduciary. The Owner shall deposit in a separate account proceeds so received, which the Owner shall distribute in accordance with such agreement as the parties in interest may reach, or in accordance with an arbitration award in which case the procedure shall be as provided in Section 4.6. If after such 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 after notification of a Change in the Work in accordance with Article 7.~~

~~§ 11.4.10 The Owner as fiduciary shall have power to adjust and settle a loss with insurers unless one of the parties in interest shall object in writing within five days after occurrence of loss to the Owner's exercise of this power; if such objection is made, the dispute shall be resolved as provided in Sections 4.5 and 4.6. The Owner as fiduciary shall, in the case of arbitration, make settlement with insurers in accordance with directions of the arbitrators. If distribution of insurance proceeds by arbitration is required, the arbitrators will direct such distribution.~~

§ 11.5 PERFORMANCE BOND AND PAYMENT BOND

~~§ 11.5.1 The Owner shall have the right to require the Contractor to furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in bidding requirements or specifically required in the Contract Documents on the date of execution of the Contract. 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 provisions of 11.5.3.

§ 11.5.2 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 and Owner shall promptly furnish a copy of the bonds or shall permit a copy to be made.

§ 11.5.3 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 written request or to requirements specifically expressed in the Contract Documents, it must, if required 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 which 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, costs of uncovering and replacement shall, by appropriate Change Order, be at the Owner's expense. If such Work is not in accordance with the Contract Documents, correction shall be at the Contractor's expense-uncovering, correction, and recovering shall be by the Contractor with no increase to the Contract Sum unless the condition was caused by the Owner or a separate contractor in which event the Owner shall be responsible for payment of such costs. The Contract Time shall be adjusted for all such requests to examine, except for time due to corrective Work.

§ 12.2 CORRECTION OF WORK

§ 12.2.1 BEFORE OR AFTER SUBSTANTIAL COMPLETION

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

§ 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 an 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 written 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 noneonforming 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 2.4-with 2.4 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 (2) additional years for a total period of three (3) years. Until such time as the three (3) 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 Subparagraph 12.2.2, all of Company's actions, whether of omission or commission, pursuant to the

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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 performance 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 which 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 ~~shall~~, without increase in the Contract Sum, bear the cost of correcting destroyed or damaged construction, whether completed or partially completed, of the Owner or separate contractors caused by the Contractor's correction or removal of Work which 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 which the Contractor might have under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 ~~relates and time periods of applicable special warranties, relate~~ 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 NONCONFORMING WORK ACCEPTANCE OF INCOMPLETE OR NONCONFORMING WORK

§ 12.3.1 If the Owner prefers to accept Work which 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

§ 13.1.1 The Contract shall be governed by the law of the place where the Project is located.

§ 13.2 SUCCESSORS AND ASSIGNS

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to the other party hereto and to partners, successors, assigns and legal representatives of such other party in respect 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 such 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 an institutional lender providing construction financing for the Project. In such event, the lender shall assume the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate such assignment.~~

§ 13.3 WRITTEN NOTICE

§ 13.3.1 Written notice shall be deemed to have been duly served if delivered in person to the individual or a member of the firm or entity or to an officer of the corporation for which it was intended, or if delivered at or sent by registered or certified mail to the last business address known to the party giving notice.

§ 13.4 RIGHTS AND REMEDIES

§ 13.4.1 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.

§ 13.4.2 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 in writing.

§ 13.4.3 If normal 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.

§ 13.5 TESTS AND INSPECTIONS

§ 13.5.1 Tests, inspections and approvals of portions of the Work required by the Contract Documents or by laws, ordinances, rules, regulations or orders of public authorities having jurisdiction shall be made at an appropriate time. Unless otherwise provided, the Contractor 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 shall ~~bear as a cost of the Work pay~~ 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 which do not become requirements until after bids are received or negotiations concluded.

§ 13.5.2 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 13.5.1, 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 13.5.3, shall be at the Owner's expense.

§ 13.5.3 If such procedures for testing, inspection or approval under Sections 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by the correction of such failure including those of repeated procedures and compensation for the Architect's services and expenses shall be at the Contractor's expense thereafter and compensation for the Designer's services and expenses with no increase to the Contract Sum.

§ 13.5.4 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~~.

§ 13.5.5 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.

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

§ 13.6 INTEREST

§ 13.6.1 Payments due and unpaid under the Contract Documents shall bear interest from the date payment is ~~due at such rate as the parties may 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 9.6.1 in accordance with TCA § 12-4-704, as may from time to time be amended.~~

§ 13.7 COMMENCEMENT OF STATUTORY LIMITATION PERIOD

§ 13.7.1 ~~As between the Owner and Contractor:~~

- ~~1. Before Substantial Completion. As to acts or failures to act occurring prior to the relevant date of Substantial Completion, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than such date of Substantial Completion;~~

- ~~.2 Between Substantial Completion and Final Certificate for Payment. As to acts or failures to act occurring subsequent to the relevant date of Substantial Completion and prior to issuance of the final Certificate for Payment, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than the date of issuance of the final Certificate for Payment; and~~
- ~~.3 After Final Certificate for Payment. As to acts or failures to act occurring after the relevant date of issuance of the final Certificate for Payment, any applicable statute of limitations shall commence to run and any alleged cause of action shall be deemed to have accrued in any and all events not later than the date of any act or failure to act by the Contractor pursuant to any Warranty provided under Section 3.5, the date of any correction of the Work or failure to correct the Work by the Contractor under Section 12.2, or the date of actual commission of any other act or failure to perform any duty or obligation by the Contractor or Owner, whichever occurs last.~~

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 or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, for any of the following reasons:

- .1 issuance of an order of a court or other public authority having jurisdiction which requires all Work to be stopped;
- .2 an act of government, such as a declaration of national emergency which requires all Work to be stopped; ~~stopped or;~~
- .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 promptly, upon the Contractor's request, reasonable evidence as required by Section 2.2.1-Documents.~~

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, 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 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' written notice to the Owner and ~~Architect-Designer~~, terminate the Contract and recover from the Owner payment for Work executed and for proven loss with respect to materials, equipment, tools, and construction equipment and machinery, including reasonable overhead, profit and ~~damages~~ costs as defined in 7.3.6.

§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing portions of the Work under contract with the Contractor because the Owner has persistently 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' written 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 ~~persistently refuses~~ or repeatedly ~~refuses or fails~~ to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
- .3 ~~persistently disregards~~ ~~disregards or repeatly fails to comply with~~ laws, ordinances, or rules, regulations or orders of a public authority having jurisdiction; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 14.2.2 When any of the above reasons exist, the Owner, upon certification by the ~~Architect-Designer~~ that sufficient cause exists to justify such action, 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' written notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- .1 take possession of all Work in place and of the site and of 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 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 ~~Architect-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 as described in 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 written 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 of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment for ~~Work executed, and costs incurred by reason of such termination, along with reasonable overhead and profit on the Work not executed.~~ the completed portion of Work plus a fraction of five percent (5%) of the remaining balance of the Contract Sum, which fraction shall be equal to the value of the Work completed divided by the Contract Sum.

SUPPLEMENTARY CONDITIONS

Modifications to AIA Document A201-1997 OFD 00 72 23 CM/GC December 2007

The following supplements modify, change, delete from or add to "General Conditions of the Contract for Construction", AIA Document A201, 1997 Edition, for all General Work (OFD 00 72 23 CM/GC) December 2007 issue. Where an Article, Paragraph, Subparagraph or Clause of General Conditions is modified or deleted by Supplementary Conditions unaltered provisions of that Article, Paragraph, Subparagraph or Clause shall remain in effect.

TITLE PAGE

TITLED REFERENCE: Delete that designated and substitute with the following: "Tennessee Department of General Services projects utilizing CM/GC Agreement"

THE OWNER: Delete that designated and substitute with the following: "State of Tennessee, Department of General Services"

3 CONTRACTOR

3.4 Add subparagraphs 3.4.5.5 through 3.4.5.7 as follows:

3.4.5.5 The Contractor shall reaffirm this attestation, in writing, by submitting to the Owner a completed and signed copy of the standard form entitled "Personnel Used in Contract Performance" with each application for payment. This form is provided in the Contract Documents. Such attestations shall be maintained by the Contractor and made available to state officials upon request.

3.4.5.6 Prior to the use of any subcontractor in the performance of this Contract, and semi-annually thereafter, during the period of this Contract, the Contractor shall obtain and retain a current, written attestation that the subcontractor shall not knowingly utilize the services of an illegal immigrant to perform work relative to this Contract and shall not knowingly utilize the services of any subcontractor who will utilize the services of an illegal immigrant to perform work relative to this Contract. Attestations obtained from such subcontractors shall be maintained by the Contractor and made available to state officials upon request.

3.4.5.7 The Contractor shall maintain records for all personnel used in the performance of this Contract. Said records shall be subject to review and random inspection at any reasonable time upon reasonable notice by the Owner.

3.10 Delete subparagraphs 3.10.4 and 3.10.5, and substitute subparagraphs 3.10.4 through 3.10.7 as follows:

3.10.4 Scheduling Agent

At any time during the course of the Work, Owner may provide the services of a Construction Scheduling Agent. If provided, such services will be set forth in the specification of Progress Schedules. If provided, the purpose of such services is to assist in producing a progress schedule for the Work; however, no express or

implied guarantee or warranty is provided by the Owner regarding the suitability of the derived schedules, and the Contractor retains full responsibility for the suitability of the schedules and for conforming to them. Contractor shall cooperate fully in developing a schedule, and shall require the necessary forces assisting the Contractor to likewise cooperate fully.

3.10.5 Commissioning Agent

At any time during the course of the Work, Owner may utilize the services of a Commissioning Agent to have selected building systems commissioned. If utilized, such services and systems will be set forth in the specifications of Commissioning Requirements. If utilized, the purpose of such services is to ensure that all building systems perform interactively according to the design intent as indicated by the Contract Documents and the Owner's operational needs. The Commissioning Agent will direct the commissioning process. Contractor shall cooperate fully in the commissioning process, and shall require the necessary forces assisting the Contractor to likewise cooperate fully.

3.10.6 Hazardous Materials Agent

At any time during the course of the Work, Owner may utilize the services of a Hazardous Materials Agent to perform assessment of possible hazardous materials encountered by the Contractor in performance of the Work. If utilized, such services will be set forth in the specifications of Hazardous Materials Assessment Requirements. If utilized, the purpose of such services is to determine the appropriate course of action to contend with such materials in accordance with the Contract Documents. Contractor shall cooperate fully in the assessment process, and shall require the necessary forces assisting the Contractor to likewise cooperate fully.

3.10.7 Disaster Recovery Agent

At any time during the course of the Work, Owner may utilize the services of a Disaster Recovery Agent to perform emergency disaster recovery services at the project site relating to Contractor performance of the Work, or other circumstances. Time being of the essence, such work will be to mitigate material damages that has occurred with the intent to lessen costs potentially to the Contractor and Owner. Contractor shall cooperate fully in the disaster recovery process, and shall require the necessary forces assisting the Contractor to likewise cooperate fully.

3.18 Delete subparagraph 3.18.1, and substitute as follows:

00 73 15.01

3.18.1 To the fullest extent permitted by law the Contractor shall indemnify and hold harmless the Owner, and agents and employees of 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, 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 which 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 Designers and Designer's consultants based on design mistakes and errors or omissions.

3.21 Add paragraph 3.21 as follows:

3.21 Security of Protected Information

3.21.1 Contractor is required to comply with policies, conditions and rules of the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and its accompanying regulations, which includes protection of the security of information identified as protected health information (PHI).

3.21.2 If Contractor is notified of the presence of PHI contained in facilities identified in the Work, then Contractor shall transmit such notice to all employees, subcontractors, material suppliers, and other affiliates of the Contractor allowed access to such facilities during the course of the Work.

3.21.3 All individuals notified per the requirements of this paragraph shall not read, examine, remove, or otherwise interfere with PHI. They shall not allow access to PHI, or disclose the contents of PHI, to any other person. All such individuals with knowledge of an unauthorized disclosure of PHI shall notify either an appropriate State official or a manager of the Contractor with responsibility for notifying the appropriate State official.

3.22 Records

3.22.1 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.

11 INSURANCE

11.1.2.1b Delete Each Occurrence: \$1,000,000 and Aggregate: \$2,000,000 and insert the following in its place and stead, Each Occurrence: \$3,000,000 and Aggregate: \$5,000,000.

11.4.1 Delete first sentence and substitute:

The 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.

11.4.1.1 Delete the last two sentences and substitute: Any deductibles shall be the responsibility of the Contractor.

11.4.1.2 Delete clause.

11.4.1.4 Delete the clause in its entirety and substitute: This property insurance shall cover portions of the work stored off the site and also portions of the work in transit. The Contractor shall present a certificate of insurance demonstrating coverage of the property stored off the site or in transit at the time payment for that portion of the work is presented.

11.4.2 At beginning of first sentence delete "The Owner shall purchase..." and substitute "The Contractor shall purchase...".

11.4.6 Substitute all references to "Owner" with "Contractor", and substitute all references to "Contractor" with "Owner".

11.4.8 Delete clause.

11.4.9 At the end of the paragraph delete "after notification of a change in the work in accordance with Article 7."

END

Tennessee High Performance Building Requirements: Manual

January 19

2015

The HPBr Manual is the main reference guide for the High Performance Building Requirements. All State of Tennessee projects will comply with the credits detailed in this document; it is adaptable to individual project objectives and scope.

**HPBr
Manual
Version 1.0**

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1 Tennessee High Performance Design

1.1 Introduction

The State of Tennessee High Performance Building Requirements, an Office of the State Architect (OSA) program acknowledged by the State Building Commission (SBC), are to be used in conjunction with Designer and Contractor contracts and related documents as well as other state manuals, standards, and guidelines. Referenced standards within the HPBr are intended to supplement and/or exceed the requirements of these other documents.

1.2 Purpose and Intent

The Tennessee HPBr is to be utilized by the three State Procurement Agencies (SPAs): State of Tennessee Real Estate Asset Management (STREAM), Tennessee Board of Regents (TBR), and the University of Tennessee (UT), as their minimum high performance building standard for Designers and Contractors. This is to ensure that the principles of high performance building design, construction, and operational practices are being implemented on State Building Commission projects. The HPBr has been created by the OSA, in collaboration with the three SPAs and with the assistance of consultant Smith Seckman Reid. Consideration of the Owner's operations profile (staff, resources and abilities), costs (first, life cycle, and long term operating), and benefits (economic, environmental, and social) has been taken in the development of the document. The HPBr is to be used as a mandatory design, construction, and operations tool for all SBC projects including: new construction, renovations, additions, and capital maintenance.

1.3 Procedure

This Manual is to be used in conjunction with the Owner's Project Requirements (OPR) and the Checklist (both explained below) to provide a high performance framework to the project team. At the beginning of each project, the Owner will use the Checklist and the OPR to determine and record the applicability of each credit to the particular project. Credit applicability is based on the building/site scope as well as classification according to the Applicability Tree (located in the OPR). Each project must achieve a minimum of 50% of all applicable points, including all applicable Required credits.

The Manual (this document) functions as a reference document, outlining the specific requirements of each credit.

The OPR is to be used as an Owner's tool for identifying project goals, outlining special building requirements, and providing commissioning guidance.

The Checklist is a tracking tool to develop the list of applicable credits, determine minimum point requirements, set project point targets, and track progress towards those targets.

This program expects all Designers and Contractors to only propose solutions which are consistent with the implied intent of each credit and in compliance with the Owner's expectations as documented in the OPR and Checklist. The proposed solutions should also consider total cost of ownership, the project budget, and the maintainability of the solution.

1.3.1 Roles and Responsibilities

- 1.3.1.1 **Owner:** The State of Tennessee SPA, as Owner, shall assume the responsibilities of the “Owner”, as referenced in HPBr documents for the relevant project will be responsible for decisions on credits associated with project location consideration, site design, project scope, and ongoing building operations and maintenance.
- 1.3.1.2 **Designer:** The Designer shall be responsible for tracking the project’s high performance design criteria on the HPBr Checklist/Tracking Form and reporting progress to the Owner at each phase of the project. The Designer shall evaluate all credits of the HPBr for feasibility of implementation in the project Design. The Designer shall coordinate the implementation of assigned credits into the construction documents.
- 1.3.1.3 **Contractor:** The Contractor shall be responsible for executing high performance design criteria during construction, recording progress of assigned credits, and generating and reporting required documentation to the Designer per the forms in the HPBr Checklist.
- 1.3.2 **Checklist** – The Checklist distinguishes whether credits are “Required,” or “Elective.” With input from the Designer, the Owner identifies which credits are applicable to the building/site scope (e.g. if the project is new construction on a site with no existing buildings, LM1.1 ‘Reuse existing buildings’ would not be applicable). In case of Project Team disagreement on the applicability of a particular credit, the Owner will make final determination.
- The Checklist automatically calculates the minimum point requirement to be 50% of the points identified as “applicable.” The Owner and Designer will then determine which of the applicable credits will be pursued. The Checklist is an Excel Workbook that tracks the status of each credit. Within the Checklist workbook are the following tools:
- 1.3.2.1 **Credit Verification Form** – During each phase (Programming, SD, DD, CD) the Project Team will verify the status of each credit the project is attempting by signing this form.
- 1.3.2.2 **One-Time Completion Form** – If the Owner determines that 5 (five) or fewer HPBr credits are applicable to the project’s building/site scope of work, this form may be used. The credits deemed applicable to the building/site scope are identified along with the credits to be pursued by the project team.
- Once the form is complete, it is signed by the Owner, design team, and Contractor and filed. Using this form commits the project team to designing and constructing/implementing the selected credits. Submission and approval of Verification Forms or any other information is subsequently not required. This form is intended for minor or routine projects with limited opportunities for enhancing building performance.
- 1.3.2.3 **Materials and Resources Calculator** – This tab of the Checklist document is used to inform credit achievement and compliance with a number of Materials and Resources credits.
- 1.3.2.4 **Daylight and Views Calculator** – This tab of the Checklist document is used to inform credit achievement and compliance with a number of Indoor Environment Quality credits.
- 1.3.3 **Owner Project Requirements (OPR)** – The OPR is completed as early as possible in the project, preferably during the pre-planning phase, and identifies the project objectives that will define its success. If the OPR is not completed during pre-planning, it should be done as soon as otherwise possible. If the project has a Commissioning Agent, the Agent should review the OPR

against the Checklist and the design documents, providing feedback to the owner throughout the design process.

- 1.3.3.1 **Project Applicability Tree** – This decision tree, included in the OPR template document, should be used by the Owner during completion of the OPR to determine which credits in the Energy Efficiency section will be considered Required or Elective (Priority 1 or 2). The Tree uses criteria including the Maximum Allowable Construction Cost (or MACC) and project building/site scope to inform the level of performance and key credit requirements.
- 1.3.4 **HPBr Manual** – The Manual provides detailed information about each credit. It should be used for reference and guidance on what is required to comply with (and claim) each credit.
- 1.3.5 **Credit Responsibility** – Design criteria of the HPBr are applicable during all phases of a project from initiation, approval, design, and construction. The Owner, Designer, and Contractor shall be responsible for specific credits as designated on the HPBr Checklist. The Owner will complete the OPR and a draft Checklist at the beginning of the project. The Designer shall submit an updated Checklist to the Owner at the end of each project design phase (Programming, SD, DD, CD) as a required deliverable before a Notice to Proceed (NTP) for the next phase of contracted work can be obtained.
- 1.3.6 **Credit Level** – Designers shall meet the applicable Required credits and complete as many additional Elective credits necessary to reach the project performance targets, unless the project type does not allow for compliance (such as small rehabilitation projects that do not cover all areas of the HPBr scope). To comply with the HPBr, a minimum of 50% of points applicable to each project must be achieved. Where a credit is deemed not applicable to the building/site scope by the Owner, it will be excluded from the scope of the project (regardless of its status as Required or Elective.).
 - 1.3.6.1 **Required:** Compliance with credit criteria is mandatory for all applicable projects.
 - 1.3.6.2 **Elective:** This Credit Level is split into Priority 1 and Priority 2 categories. Compliance with Elective credit criteria is recommended where applicable to project program and supported by project budget (first cost) and future operating criteria. It will not always be possible for a given project to achieve all Elective points. Priority 1 credits are more desirable than Priority 2.
- 1.3.7 **Definitions (Appendix A):** Project teams may refer to Appendix A for technical definitions.
- 1.4 **Organization**

The HPBr categories include groups of credits with the performance and sustainability criteria for state projects. The HPBr was developed based on the existing framework of the State of Tennessee Sustainable Design Guidelines (SDG), which borrowed structure and content from the LEED Rating System.
- 1.4.1 **Land Management (LM)** – The focus of this category is to encourage the Owner and design teams to consider opportunities to reuse previously developed sites, limit erosion impacts during construction, consider the site's proximity to public transit systems, design landscape for native planting and reduced irrigation, reduce heat island effects, managing stormwater runoff, and exterior lighting pollution.

- 1.4.2 **Water Efficiency (WE)** – The focus of this category is to encourage the design team to decrease the demand for potable water. Strategies include reduced irrigation demand with native plantings, stormwater reclamation and management, and low-flow interior fixtures.
- 1.4.3 **Energy Efficiency (EE)** – The focus of this category is to encourage design teams to consider opportunities to improve energy performance, track and monitor building performance, and use renewable energy. These opportunities include commissioning, the evaluation of building systems (HVAC, lighting, etc.), the implementation of metering and controls to measure actual energy performance, as well as evaluating onsite renewable energy opportunities (solar PV, wind, etc).
- 1.4.4 **Materials and Resources (MR)** – The focus of this category is to encourage the design team to use more sustainable materials and divert construction waste from landfills. The project team should recycle all possible materials during the construction and demolition processes such as cardboard, wood, plastics, and metals. The design team should consider specifying and utilizing Tennessee products and regional materials. The team should also consider rapidly renewable materials, materials with high recycled content, and other sustainable materials whenever possible.
- 1.4.5 **Indoor Environment Quality (EQ)** – The focus of this category is to encourage health and comfort for building occupants. The design team should emphasize pollutant source control, thermal comfort controls, lighting controls, ventilation, and filtration. An Indoor Air Quality (IAQ) Management Plan should be developed and implemented during construction and before occupation.
- 1.4.6 **Innovation in Design and Construction (ID)** – The focus of this category is to encourage the design team to develop and incorporate innovative ideas and standards that move beyond the minimum requirements discussed in the previous categories.
- 1.5 Tracking Form and Calculation Tools (Appendix B - Electronic)**
Design teams may obtain current versions of the HPBr Manual, Checklist, and OPR from the State project manager or the following websites:
- 1.5.1 State of Tennessee Real Estate Management (STREAM): Within the STREAM website, the Designer Manual and HPBr documents can be found by going to the Office of State Architect page.
- 1.5.2 Tennessee Board of Regents: Within the TBR's website, the Designer Manual can be found within the Office of Facilities Development at the Facilities sub-page. The Designer's Manual contains a link to download the HPBr.
- 1.5.3 University of Tennessee: Within the UT website, the Designer Manual can be found on the page of the Division of Facilities Planning, one of the departments on the site. The Designer's Manual contains a link to download the HPBr.
- 1.6 Assessment Review**
- 1.6.1 The Checklist and required documentation for all projects shall be submitted by the Designers and Contractors and reported to the project Owner for review.

- 1.6.2 While utilizing the HPBr, Designers and state project Owners should review all references and the latest editions of adopted codes, standards, regulations, etc. If any references are believed to be incorrect or out of date, this information should be communicated to the OSA for review.

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High Performance Building Requirements

LM Land Management Credits

LM1. Site Selection – If the design team is involved in site selection, document the following:

LM1.1 Re-use buildings and sites before building new. If the project is re-using an existing building, document the percentages of building components to remain.

- Percentage of existing walls, floor and roof
- Percentage of interior non-structural elements

LM1.2 Select land that does not have the following attributes:

- Prime Farmland, per the USDA Code of Federal Regulations, or state or local guidelines.
- Previously undeveloped land within 5 vertical feet of a 100-year FEMA designated floodplain
- Land that is habitat to endangered or threatened species on a Federal or State list
- Land within 100 horizontal feet of a wetland, designated by Federal, State, or Local jurisdiction.
- Previously undeveloped land within 50 horizontal feet of a body of water that could support fish or recreation: rivers, lakes, and streams.

LM1.3 Remediate/restore and use contaminated sites. Brownfields are defined under an ASTM Phase II Environmental Assessment, EPA Brownfields definitions, or other federal, state, or local assessments or cleanup programs.

LM1.4 Re-develop or develop sites in urban environments with existing infrastructure and Pedestrian Access to goods and services.

LM2. Site Disturbance

LM2.1 Site Disturbance During Construction

In order to effectively reduce erosion and sedimentation impacts, Best Management Practices (BMP's) must be designed, implemented, and maintained during land disturbing activities for all projects. The Tennessee Erosion and Sediment Control Handbook provided by the Tennessee Department of Environment and Conservation (TDEC) is designed to provide information to planners, developers, engineers, and contractors on the proper selection, installation, and maintenance of BMP's. The handbook is intended for use during the design and construction of all projects to protect the waters of the State. It also aids in the development of Storm Water Pollution Prevention Plans (SWPPP's) and other reports, plans, or specifications required when participating in Tennessee's water quality regulations. The handbook is currently available for download at the Tennessee Erosion Prevention and Sedimentation Control website by clicking on the direct link to the TDEC handbook.

LM2.2 On Greenfield sites, limit all site disturbance to the following:

- 40 horizontal feet beyond the building perimeter,
- 10 feet beyond surface walkways, patios, surface parking and utilities less than 12 inches in diameter;
- 15 feet beyond primary roadway curbs and main utility branch trenches;

- and 25 feet beyond constructed areas with permeable surfaces (such as pervious paving areas, stormwater detention facilities, and playing fields) that require additional staging areas in order to limit compaction in the constructed area.
- The Designer shall instruct the Contractor to provide verification of credit compliance through any of the following documents:
 - Submittals
 - 'Construction Issue' plans
 - 'As Built' plans
 - Other appropriate records

LM3. Transportation

LM3.1 Identify and/or plan for public mass transit near the building.

- Locate two or more public or city funded bus lines within ¼ mile of the primary building entrance or locate a train station within ½ mile of the primary building entrance.
- Verify that routes to and from bus stops and train stations have Pedestrian Access.
- Ensure that a covered bus stop is available if the bus route cannot stop within 100 yards of a building entrance and the bus route is adjacent to the property boundary.

LM3.2 Design and construct bicycle storage for 5% of building occupants (full-time equivalent employees) and showering/changing facilities for 0.5% of building occupants, within 200 yards of a building entrance.

LM3.3 Design and construct preferred parking for carpool transit for 5% of all parking spaces.

LM3.4 Design and construct preferred parking for low emitting/fuel efficient vehicles for 5% of all parking spaces

LM4. Landscape Design

LM4.1 Vegetated Open Space:

- Design vegetated open space adjacent to the building equal to or greater than the building footprint.

LM4.2 Drought tolerant plantings:

- Utilize native and adapted vegetation that are climate-tolerant to Tennessee and applicable to sustainable design techniques for all landscaping. See definitions in Appendix A for more guidance.
- www.plantnative.org provides information regarding plant species native to Tennessee, including suppliers.
- The Designer shall instruct the Contractor to provide verification of credit compliance through any of the following documents:
 - Submittals
 - 'Construction Issue' plans
 - 'As Built' plans

- Other appropriate records

LM5. Design to reduce heat island effects

LM5.1 Non–roof surface

- Design 50% of site area as highly reflective or non-absorptive (excluding building footprint). Possible strategies are as follows:
 - Use pervious/open-grid paving materials to promote infiltration and reduce heat island effect.
 - Utilize a parking deck to reduce the area of asphalt contributing to heat island effect and to reduce the overall impervious area contributing to runoff.
 - Use light colored paving surfaces with a Solar Reflectance Index (SRI) greater than 29 to limit heat island effect.
 - Plant tree types that will shade hardscape surfaces within 5 years to reduce urban heat islands.
 - For further guidance regarding SRI values, please reference the ASTM E1980 standard.

LM5.2 Roof Surfaces

- For low-sloped roofs (slope ≤ 2:12), finished roof surface should have an SRI of 78 or greater for 75% of the roof surface.
- For steep-sloped roofs (slope > 2:12), finished roof surface should have an SRI of 29 or greater for 75% of the roof surface.
- When utilizing vegetated roof surfaces, the vegetated space should cover at least 50% of the roof surface.
- When utilizing a combination of vegetated and high solar reflectance roof surfaces, install them such that the following equation is satisfied:

$$\frac{\text{Area of SRI Roof}}{0.75} + \frac{\text{Area of Vegetated Roof}}{0.5} \geq \text{Total Roof Area}$$

- For further guidance regarding SRI values, please reference the ASTM E1980 standard.
- The Designer shall instruct the Contractor to provide verification of credit compliance through any of the following documents:
 - Submittals
 - 'Construction Issue' plans
 - 'As Built' plans
 - Other appropriate records

LM6. Stormwater Design

- LM6.1** On Greenfield sites, design the stormwater management system for post-development site discharge rate and volume to not exceed pre-development discharge rate and volume. Design

and calculations should be based on a 2-year 24-hour storm, or local code guidelines, whichever requirement is more stringent.

LM6.2 On previously developed sites, design the stormwater management system for post-development site discharge rate and volume to be 25% less than pre-development discharge rate and volume. Designs and calculations should be based on a 2-year 24-hour storm, or local code guidelines, whichever is more stringent.

LM6.3 Design to remove 80% Total Suspended Solids from the first inch of rain for each rainfall event (90% of the average annual rainfall), or local code guidelines, whichever is more stringent.

Recommended BMPs are as follows:

- Bioswales and vegetated filter strips
- Retention ponds
- Vegetated roof
- Stormwater harvesting for re-use
- Pervious paving materials

LM6.4 Reference Tennessee Department of Environment and Conservation (TDEC) Storm Water Permitting Phase II MS4s.

LM7. Exterior Site Lighting:

Design building façade and site lighting that promote safety but minimize light pollution from the building site.

LM7.1 Design exterior area lighting power to be at least 20% less than is allowed by ASHRAE 90.1-2007, Section 9.4.5.

LM7.2 Use fixture types designed as “cutoff” and “full-cutoff” styles to minimize fixture lumens emitted at 90 degrees or higher from straight down.

LM7.3 Design the placement and fixture styles of site and all exterior lighting to minimize light trespass at the site boundary. Document the foot-candle levels at the site boundary with a site illumination model.

WE Water Efficiency Credits

WE1. Water Efficient landscaping

WE1.1 Irrigation: Design systems that use at least 50% less potable water than conventional means. Demonstration of 50% less water consumption shall be based on irrigation demand during the month of July. Water conservation strategies may include the following:

- Use of native/adapted species
- Placement and density of plantings

WE1.2 Non potable water sources: Minimize potable water use by incorporating as many water conservation measures listed below as feasible. When possible, also consider captured rainwater, recycled graywater, cooling tower blowdown, and/or municipally treated waste water for site landscape irrigation. Recommended water conservation measures include:

- Mulching of trees, shrubs, flower beds
- High efficiency technologies such as drip irrigation and micro-spray
- Daily and yearly irrigation schedules
- Moisture and weather-based irrigation control

WE2. Wastewater Treatment and Conveyance

WE2.1 Evaluate on-site treatment of wastewater for projects that do not have sewer access.

WE2.2 Use of non-potable water for sewage conveyance or composting. This strategy should be considered on a project-by-project basis. If utilized, collaborate closely with the local authority having jurisdiction regarding system design and implementation.

WE3. Reduced Potable Water Demand

WE3.1 Exceed the Energy Policy Act of 2005 fixture flow and use rates by at least 20% by installing high efficiency fixtures as specified below:

| Commercial Fixtures | EPAct Baseline | High Efficiency Fixtures |
|--|------------------------------|--------------------------|
| Commercial Toilets | 1.6 gallons per flush (gpf) | 1.28 gpf |
| Commercial Urinals | 1.0 gpf | 0.5 gpf |
| Commercial Lavatory (restroom) Faucets | 0.5 gallons per minute (gpm) | 0.5 gpm |
| Showerheads | 2.5 gpm | 1.5 gpm |
| Kitchen Faucet | 2.2 gpm | 1.8 gpm |

- Tankless type toilets that use dual-mode flushometers, 1.6/1.1 gpf on the up/down flush, are an acceptable alternative.

- Tank type toilets that use a dual-mode operation, 1.6/0.9 gpf on the up/down flush, are an acceptable alternative.
- Ultra-high efficiency urinals that use 0.13 gpf or water-free urinals shall be considered on a project-by-project basis.

WE3.2 Utilize auto-flow/auto-flush valves on lavatories, urinals, and toilets.

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EE Energy Efficiency Credits

Energy Efficiency General Requirements:

- Refer to the Project Applicability Tree and Owner's Project Requirements to determine whether each Energy Efficiency credit is Required or Elective.
- Code Compliance: Project shall comply with ASHRAE/ANSI/IESNA Standard 90.1-2007, "Energy Standard for Buildings Except Low-Rise Residential Buildings," according to the project scope. Individual addenda to ASHRAE Standard 90.1-2007 may be optionally applied by the Project Team if used in each addendum's entirety.
- When Life-Cycle Cost Analyses (LCCA) are required for energy efficiency or on-site renewable energy credits (EE3.2, EE3.3, and EE7.1), they shall be performed using the most recent version of the publicly-available BLCC5 software provided by the National Institute of Standards and Technology (NIST), or other equivalent methods, using the following parameters:
 - Assume the project is a Financed Project, unless otherwise notified by the Owner.
 - Study Period = 20 years
 - Nominal Discount Rate = Shall be equal to the 20-year Treasury Yield at Constant Maturity rate posted in the Federal Reserve release H.15 for the first month of the year in which the project design was initiated. Monthly Treasury Yields can be found on the Federal Reserve website:
<http://www.federalreserve.gov/releases/h15/data.htm>
 - Fuel cost escalation rates = Use the most current DOE Projections for each fuel type included in BLCC5
 - Inflation on capital investment costs, residual values, O&M costs, and replacement costs for use during the study period shall be based on the most recent annual average increase in the Consumer Price Index, as can be determined using this calculator on the website of the U.S. Bureau of Labor Statistics:
http://www.bls.gov/data/inflation_calculator.htm
 - For example, to determine the applicable inflation rate, calculate the percentage increase in the buying power of \$100 between the year in which the project design was initiated and the previous year.
 - O&M Costs: Include maintenance and equipment replacement costs in the LCCA. Assumptions regarding preventative vs. deferred maintenance and capital renewal should be equally applied to each design option investigated.
 - Salvage Value: If equipment replacement costs are included in the LCCA, include a salvage or residual value at the end of the study period proportional to the remaining effective life of the equipment.

- For financed projects, assume bonds are paid in annual, interest-only payments for the study period (at a rate equal to the discount rate). At the last month of the study period (19 years 11 months), the initial loan amount is to be paid in a lump sum.
- Use of LCCA is discussed within other credit requirements and is required for select projects, as shown in the Project Applicability Tree.

EE1. Commissioning Requirements

Basic Commissioning – Commissioning performed by Design Engineer of Record

Advanced Commissioning – Commissioning performed by 3rd party consultant

- The Owner will determine what level of commissioning is to be applied to each project based on budget and goals. Please refer to OPR for project-specific determination on Basic or Advanced levels of commissioning. See below for Basic and Advanced Commissioning requirements.

EE1.1 Basic Commissioning

- Basic commissioning requires the Design Engineer of Record to perform the commissioning.
- The commissioning requirements should be modified based on the specific type of project and how many systems will be impacted (i.e. all of them in a New Construction project, but perhaps only some in a Renovation).
- Review the Owner Project Requirements (OPR) with the Owner to align with project objectives.
- Reference and follow the State developed specifications as applicable:
 - Commissioning, Std 01 91 13
 - Performance Testing Identification Form, Std 01 91 23
 - Performance Testing Procedures Form, Std 01 91 26
 - Functional Performance Testing Certification, Std 01 91 29
 - Mech'l & Control Systems Commissioning, Std 23 08 00
 - Sensor Point Calibration Check Sheet, Std 23 08 13
 - Terminal Box Point Calibration Check Sheet, Std 23 08 16
 - Electrical & Lighting Commissioning, Std 23 08 00
 - Panelboard check sheet, Std 23 08 06
 - Power Circuit Check Sheet, Std 23 08 13
 - Generator Testing Procedures Form, Std 23 08 30
 - Generator Testing Findings Form, Std 23 08 32
 - Lighting Check Sheet, Std 23 08 50
- Both EE1.1 and EE1.2 cannot be claimed on a single project. Only one commissioning credit can be pursued.

EE1.2 Advanced Commissioning (Performed by 3rd Party Commissioning Agent)

- Refer to “State Commissioning Contract Attachment 6.6” for commissioning requirements
- Additional requirements may be added to specific projects as needed (with approval from the Owner).
- Both EE1.1 and EE1.2 cannot be claimed on a single project. Only one commissioning credit can be pursued.

EE2. Energy Efficient Purchasing Policy

EE2.1 In accordance with Tennessee Code Annotated section 12-3-905, purchase and install Energy Star qualified equipment for all Energy Star eligible equipment types including appliances, office equipment, electronics, and commercial food service equipment.

EE3. Energy Efficiency in New Construction and Renovation Projects

Building Energy Modeling responsibility and workflow:

- The engineer of record and the commissioning agent typically have the knowledge and expertise to execute the energy modeling, LCCA, and M&V scopes of work. The procured consultant for these tasks will be determined by the Owner on a project by project basis

Building Energy Modeling Concepts:

- A building energy model is to be used as a decision-making and goal-tracking tool throughout the design process. Energy modeling at each phase is intended to inform decisions that may be more difficult or costly to change later in the design process. In order to meet this intent, modeling results for each applicable phase (as defined below) should be communicated to all appropriate members of the Project Team in enough time for any energy saving measures to be incorporated into the design documents.
- Note that the Baseline Design or Baseline Model is defined as a representation of a hypothetical design based on the proposed building project, but adjusted according to ASHRAE 90.1, Appendix G. This representation is used as the basis for calculating the baseline building performance for rating above-standard design.
- Modeling protocols in ASHRAE 90.1-2007, Appendix G must be used, including provisions for Simulation Program requirements (G2.2), Climatic Data (G2.3), and Energy Rates (G2.4).
- All anticipated end-use load components should be included in the energy model.
- The following counties of Southwest TN are considered Climate Zone 3A: Chester, Crockett, Dyer, Fayette, Hardeman, Hardin, Haywood, Henderson, Lake, Lauderdale, Madison, McNairy, Shelby, and Tipton. All other counties in TN are defined as Climate Zone 4A (per 90.1 Table B-1).

- If the building area of a renovation or addition project is served by an HVAC air-side system outside the project scope, the entire area served by that HVAC air-side system shall be included in the energy model.
 - Exception: Existing building plans are not available for those areas outside of the project scope. In this case, areas outside the project scope shall be ignored, and HVAC fan power shall be normalized in terms of kW/cubic feet of air per minute (CFM) within the energy model.
- If chilled water, hot water, or steam is provided from outside the project area, Addendum 'ai' to ASHRAE 90.1-2007 must be applied in its entirety to the Proposed and Baseline energy models. Addendum 'ai' describes an equitable way to model purchased chilled water, hot water, and/or steam within the Proposed and Baseline energy models. It is intended to be used for projects served by municipal or campus central energy plants outside the project scope. The addendum is publicly available from www.ashrae.org.

EE3.1 Schematic Design Energy Modeling

- Timing: Project Teams shall complete this credit as soon as feasible, but no later than the Schematic Design phase.
- Building Design Criteria: Identify and report the appropriate indoor design temperatures, desired horizontal illuminance levels, estimated peak internal loads, number of peak occupants, hourly internal load profiles and operations schedules, code-mandated HVAC requirements, and any known requirements for system redundancy, flexibility, and future capacity.
- Site Assessment: Identify and report the feasibility of potential site-specific and climate-specific passive and active design strategies and concepts such as, but not limited to, the following: passive solar heating, sun shading of windows, use of high thermal mass, night flushing, natural ventilation, evaporative cooling, daylight harvesting, on-site solar photovoltaics, and on-site wind turbines.
- Energy Model Creation: Create a building energy model based on the available plans, specifications, narratives, and BIMs. If the architectural building layout is not yet fully designed, a geometrically-simplified model may be used for this phase of analysis, provided that the appropriate weather data, gross floor area, number of floors, and appropriate internal loads and load profiles for the given building type (office, school, etc.) are applied to the energy model.
- Load Reduction Strategies: Use the building energy model to analyze a minimum of four (4) of the following load reduction strategies and identify the sensitivity of the building to various parametric changes on a base case model. This list should not be interpreted as an exhaustive list of load reduction strategies.

- Investigate the effect of alternate building massing or building forms
- Rotate the building from its original orientation
- Incrementally decrease window-to-wall ratio
- Application of permanent exterior shading devices to various building facades.
- Incrementally increase wall insulation above the Baseline Design
- Incrementally increase roof insulation above the Baseline Design
- Incrementally decrease lighting power density below the Baseline Design
- Incrementally decrease window U-value below the Baseline Design
- Incrementally decrease window solar heat gain coefficient below the Baseline Design
- HVAC System Options: Use the building energy model to test the energy savings potential of at least two (2) HVAC systems options other than that in the Baseline Design. This analysis is independent of the load reduction analysis and should use a consistent set of building envelope and internal load parameters among all system options. HVAC system options are intended to be based on high performance cooling/heating technologies, alternative air or water distribution systems, etc.
- Reporting:
 - A summary of pertinent inputs and assumptions from the Building Design Criteria and Energy Model Creation sections shall be provided to the Owner.
 - A narrative shall be provided to the Owner that summarizes the results and recommendations of the site assessment.
 - A report shall be provided to the Owner that describes the Load Reduction Analysis and HVAC System Options study and shall consist of an executive summary, description of evaluation methods and means, analysis results, recommendations, and calculations. This report shall quantitatively show the relative effect on energy costs and peak heating and cooling loads for each of the analyzed load reduction measures and HVAC system options. It shall also provide interpretation of the data and recommendations based on the results. The intent of this report is to provide the HVAC sizing and energy cost implications of the various options to inform Owner decisions on maximizing building performance within the total project budget.

EE3.2 Energy Efficiency Life Cycle Cost Analysis

- If EE3.1 or EE3.3 is pursued, it is preferable that the same project team member completes the required analyses for all credits.
- Referring to criteria given in Energy Efficiency General Requirements section, utilize Life-Cycle Cost Analysis (LCCA) to compare the cost-effectiveness of at least two (2) building design options or Energy Conservation Measures (ECMs) investigated as part of the EE3.1 or EE3.3 credits.

- These options and measures may include various HVAC system options or controls, building envelope improvements, lighting equipment or controls, service water heating equipment or controls, or a combination of these.
- LCCA is typically applied to design options that are mutually exclusive (LED vs. Fluorescent lighting, Chiller manufacturer 'A' vs. Chiller manufacturer 'B', VAV Air Handling Units vs. DOAS Units serving Fan Coil Units, Baseline Design vs. Proposed Design)
- Note that LCCA provides the largest benefit when evaluating building systems comprising a relatively large portion of the construction costs, O&M costs, and energy costs (such as the HVAC system).
- Reporting
 - A summary of pertinent inputs and assumptions for the LCCA shall be provided to the Owner.
 - A report shall be provided to the Owner describing the quantitative results of the LCCA. These results must be accompanied by an interpretation of the data and recommendations. The intent of this report is to provide the life-cycle cost implications of various options to inform Owner decisions on maximizing building performance within the total project budget.
 - The LCCA report should be utilized as a decision making tool, but it should not necessarily provide the final determination on whether a particular energy saving measure should be implemented. The goal is to facilitate a more informed building owner, capable of weighing all information available to make a decision. If the option with lowest TCO is not chosen, the other factors going into the decision should be discussed. Examples of reasons why this might be the case include, but are not limited to, special acoustics requirements, a first-cost not supported by the budget, maintainability or interoperability with existing systems, etc.
 - If the analysis for this credit is performed concurrently with the analysis for either EE3.1 or EE3.3, the LCCA input and outputs may be combined with the reports for that credit.

EE3.3 Minimum Energy Performance

- Scope: The scope of this credit is to establish the state's minimum energy saving requirements and further develop the energy conservation measures from the schematic modeling phase in order to meet or exceed those goals.
- Code Compliance: The project shall comply with ASHRAE/ANSI/IESNA Standard 90.1-2007, "Energy Standard for Buildings Except Low-Rise Residential Buildings," according to the project scope. Individual addenda to ASHRAE Standard 90.1-2007 may be optionally applied by the Project Team if used in each addendum's entirety.

- Minimum Energy Cost Savings: The project's Proposed Design shall demonstrate energy cost savings of at least 20% using the Performance Rating Method of ASHRAE Standard 90.1-2007, Appendix G.
 - Exception: The project complies with ASHRAE/ANSI/IESNA Standard 90.1-2010, "Energy Standard for Buildings Except Low-Rise Residential Buildings," according to the project scope. Individual addenda to ASHRAE Standard 90.1-2007 may be optionally applied by the Project Team if used in each addendum's entirety.
 - Exception: Since the intent of requiring energy cost savings is to reduce the Total Cost of Ownership (TCO) for State-owned buildings, if these energy cost savings can be proven not to be life-cycle cost effective through an LCCA, the proposed building design may be modified so as to achieve an energy cost savings level at or better than the maximum level that is life-cycle cost effective, but at a minimum complies with ASHRAE Standard 90.1-2007. The result of this LCCA should be presented to the Owner and show all design options investigated.
 - Exception: When the building design cannot achieve 20% energy cost savings within the project construction budget. In this case, the energy analysis and first cost comparisons shall be presented to the Owner, describing the first cost savings and energy cost penalty of not meeting these minimum energy cost savings.
- Design Development Energy Modeling
 - Update building usage assumptions and inputs based on latest design documents.
 - Preferably during Schematic Design, but no later than the Design Development phase, evaluate at least nine (9) additional load reduction measures or ECMs that contribute to meeting the Owner's energy cost saving goals relative to the ASHRAE Baseline model. These ECMs must be in addition to those performed as a part of EE3.1, if pursued. To ensure that a sufficient variety of measures are investigated, ECMs from at least 3 of the following categories must be modeled:
 - Building Envelope
 - Lighting: Equipment, daylighting, and controls
 - HVAC: Equipment and controls
 - Plug/Process Loads
 - Service Water Heating: Equipment and controls
 - Reporting
 - A summary of inputs and assumptions shall be provided to the Owner.
 - The results of this analysis shall be communicated to the Owner and shall include, at a minimum:
 - energy costs of each ECM analyzed (in terms of total cost, cost per square foot, by end use, % savings to Baseline, and by fuel type)
 - energy consumption of each ECM analyzed (in terms of total consumption, consumption per square foot, by end use, % savings to Baseline and by fuel type)

- Construction Document Energy Modeling
 - A building energy model of the proposed and baseline designs shall be created based on 100% Construction Documents or later. This model shall include all final HVAC and lighting control sequences, equipment capacities, and equipment efficiencies.
 - A summary of inputs and assumptions shall be provided to the Owner.
 - A comparison of the energy consumption and energy costs of the Proposed and Baseline Designs shall be provided to the Owner.

EE3.4 Improved Energy Performance

- The HPBr awards points based on the total energy cost savings demonstrated in the energy model as compared to the ASHRAE 90.1 Baseline Design.
- Where a project exceeds the Minimum Energy Cost Savings defined in EE3.3, additional points will be awarded, as presented in the table below.

| % Energy Cost Savings | | Points |
|-----------------------|-----------------------|--------|
| Over ASHRAE 90.1-2007 | Over ASHRAE 90.1-2010 | |
| 23 | 3 | 1 |
| 26 | 6 | 2 |
| 29 | 9 | 3 |
| 32 | 12 | 4 |
| 35 | 15 | 5 |
| 40 | 20 | 6 |
| 45 and above | 25 and above | 7 |

EE4. Existing Building Energy Efficiency

All projects shall comply with ASHRAE/ANSI/IESNA Standard 90.1-2007, “Energy Standard for Buildings Except Low-Rise Residential Buildings”, according to the project scope. Individual addenda to ASHRAE Standard 90.1-2007 may be optionally applied by the project team if used in each addendum’s entirety.

- EE4.1** Lighting Power Reduction – For projects including the addition or alteration of interior lighting, demonstrate a reduction in installed lighting power density below that allowed by ASHRAE 90.1-2007, Chapter 9, using either the Building-Area method or the Space-by-Space method. The HPBr awards points for reductions in installed lighting power as follows:

| % Lighting Power Reduction | Points |
|----------------------------|--------|
| 10 | 1 |
| 20 | 2 |
| 30 | 3 |
| 40 | 4 |
| 50 | 5 |

EE4.2 Daylight Harvesting – For projects including the addition or alternation of interior lighting, install daylight responsive controls that control either 1) all regularly occupied daylit spaces within 15 feet of windows or 2) at least 50% of all connected interior lighting loads within the project scope. Controls must dim or switch electric lights in response to presence or absence of daylight illumination in the space. Design documents must list the illumination set point for each daylight control zone to allow for lighting control system to be properly commissioned.

EE4.3 Occupancy Sensors – For projects including the addition or alternation of interior lighting, when it does not affect the safety or security of building occupants, occupancy sensors or smart controls must be installed that automatically turn lighting off based on vacancy in the following spaces (these are in addition to those required by the mandatory provisions of ASHRAE 90.1-2007):

- Storage and supply rooms between 50 ft² and 1,000 ft²
- Rooms used for document copying and printing
- Office spaces up to 250 ft²
- Restrooms
- Dressing and Locker rooms

EE4.4 High Efficiency HVAC – For projects including the HVAC equipment installation or replacements, install HVAC equipment as a part of the project scope that complies with the minimum efficiency requirements listed in ASHRAE Standard 189.1-2009, Appendix C.

EE5. Energy Metering, Monitoring, and Reporting

Energy Metering General Concepts:

- To facilitate cost-effective energy sub-metering, new or altered energy distribution systems should be designed such that each primary circuit, panel, feeder, piping system, or supply mechanism provides only one of the following energy end-uses:
 - HVAC system total energy use (including fans, pumps, space cooling, space heating, etc.)
 - Lighting system total energy use (Interior and Exterior lighting)

- Plug loads (including all equipment connected to convenience receptacle outlets).
- Separate process loads exceeding 5% of peak connected load (including data centers, commercial kitchens, etc.)

EE5.1 Building-Level Metering

- For each applicable energy source below, utility meters or supplemental permanent sub-meters shall be provided and equipped with a local data port connected to the Building Automation System (BAS) or a separate Energy Information System (EIS):
 - Grid-provided Electricity
 - Natural Gas
 - District/Campus Chilled Water
 - District/Campus Steam / Hot Water
 - On-site Renewable Electric Power
- Data Centers with dedicated cooling systems shall be sub-metered downstream of the UPS (this sub-metering configuration is a requirement for achieving an Energy Star Rating).
- Provide the IT/Telecommunications infrastructure and capability to allow for the installation of a permanent, readily accessible and visible display near the main building entrance or on a publicly available Internet web site. The display shall be capable of providing current and historical energy demand and consumption for each fuel type as well as total energy consumption. The resulting information is meant to support decisions on efficient energy use and reduction through operational change, maintenance, control adjustment, and facility upgrade.

EE5.2 System Level Energy Metering with Measurement and Verification for New Construction

- The Project Team shall develop and implement a Measurement & Verification (M&V) Plan in accordance with Option D (Calibrated Simulation) of the 2006 International Performance Measurement & Verification Protocol (IPMVP) Volume III. The initial M&V Period shall include at least one continuous 12-month period. The M&V Plan shall include at a minimum the following:
 - State which option and savings method from the IPMVP will be used
 - Identify roles and responsibilities involved with the M&V program
 - State assumptions about significant variables or unknowns
 - Create an accurate baseline using techniques appropriate to the project
 - Describe the method of ensuring accurate energy savings determination
 - Define post-installation inspection plan
 - Specify criteria for equipment metering, calibration, and measurement period.
 - Define the level of accuracy to be targeted.
 - Indicate quality assurance measures
 - Describe the contents of reports to be prepared, along with a schedule

- Determine the most cost effective method to provide permanent measuring devices with remote communication capability to monitor all energy loads listed in Energy Metering General Concepts above which are installed within the project scope. To facilitate this, all control devices and sensors should have the capability to be easily integrated into the BAS. In addition to direct energy measurements, trending HVAC equipment statuses, temperatures, flow rates, and pressures may assist in reconciling predicted and actual energy performance. An example of HVAC trended points is provided in the table below.

| Instrument | Unitary or Packaged AC | Air handling units | AHUs with humidifiers | Chillers | Cooling Towers | Boilers | Pumps | |
|-----------------------------|------------------------|--------------------|-----------------------|----------|----------------|---------|-------|--|
| supply air temp | X | X | X | | | | | |
| return air temp | X | X | X | | | | | |
| mixed air temp | | X | X | | | | | |
| return air humidity | | | X | | | | | |
| chilledwater supply temp | | | | X | | | | |
| chilled water return temp | | | | X | | | | |
| condenser water supply temp | | | | X | | | | |
| condenser water return temp | | | | X | | | | |
| hot water supply temp | | | | | | X | | |
| hot water return temp | | | | | | X | | |
| status on/off | | | | X | X | | X | |

- At a minimum, all trended data points shall be recorded every 15 minutes and produce hourly energy profiles.
- The BAS, or a separate EIS, shall be specified to record all energy load data programmed with the required data trending and storage capacity to meet the intent of the M&V Plan. At a minimum, the system shall generate building level and system level reports on an hourly, daily, monthly, and annual basis. The system shall be capable of storing or archiving all data for a minimum of 36 months.
- At the end of the initial 12-month M&V period, a contracted M&V Analyst shall submit a Final M&V Report to the Owner and Project Team, including the following information:

- The results of the reconciliation between actual energy use and energy use predicted during the design phases.
- Discussion of variances between actual and predicted energy use, operational parameters, and other design phase assumptions that affected these results.
- Actual avoided energy use and energy costs compared to design phase model. Use either Savings Estimation Method 1 or 2 from the 2006 IPMVP Volume III, Option D.
- Based on the results of the energy model reconciliation, as well as gathered trended data and observations, make recommendations for corrective or future actions to improve ongoing building energy performance.

EE5.3 System Level Energy Metering with Measurement and Verification for Existing Buildings

- The Project Team shall develop and implement a Measurement & Verification (M&V) Plan in accordance with Option B (Retrofit Isolation) or Option D (Calibrated Simulation) of the 2006 International Performance Measurement & Verification Protocol (IPMVP) Volume III. The initial M&V Period shall include at least one continuous 12-month period. The M&V Plan shall, at a minimum:
 - State which option and savings method from the IPMVP will be used
 - Identify roles and responsibilities involved with the M&V program
 - State assumptions about significant variables or unknowns
 - Create an accurate baseline using techniques appropriate to the project
 - Describe the method of ensuring accurate energy savings determination
 - Define post-installation inspection plan
 - Specify criteria for equipment metering, calibration, and measurement period.
 - Define the level of accuracy to be targeted.
 - Indicate quality assurance measures
 - Describe the contents of reports to be prepared, along with a schedule
- Determine most cost effective method to provide permanent measuring devices with remote communication capability to monitor all energy loads listed in Energy Metering General Concepts above which are installed within the project scope. To facilitate this, all control devices and sensors should have the capability to be easily integrated into the BAS or EIS.
- At a minimum, all trended data shall be recorded every 15 minutes and produce hourly energy profiles.
- The BAS or a separate EIS shall be specified to record all energy load data programmed with the required data trending and storage capacity to meet the intent of the M&V Plan. At a minimum, the system shall generate building level and system level reports on an hourly,

- daily, monthly, and annual basis. The system shall be capable of storing or archiving all data for a minimum of 36 months.
- At the end of the initial 12-month M&V period, the contracted M&V Analyst shall submit a Final M&V Report to the Owner and Project Team, including the following information:
 - The results of the reconciliation between actual energy use and energy use predicted during the design phase.
 - Discussion of variances between actual and predicted energy use, operational parameters, and other design phase assumptions that affected these results.
 - Actual avoided energy use and energy costs compared to design phase model. Use either Savings Estimation Method 1 or 2 from the 2006 IPMVP Volume III, Option B or D.
 - Based on the results of the energy model reconciliation, as well as gathered trended data and observations, make recommendations for corrective or future actions to improve ongoing energy performance.

EE6. Long-Term Energy Reporting

EE6.1 Before substantial completion of the project, the Owner shall designate a dedicated member of the operations staff with the ongoing role of entering energy and water consumption data as well as building operational parameters into Energy Star Portfolio Manager.

EE7. Renewable Energy

EE7.1 Onsite Renewable Energy

- Evaluate project site for on-site renewable energy opportunities to offset the building's energy consumption from local grid power by means of life-cycle cost analysis (LCCA).
- This credit may still present a good opportunity for large-scale renovations or additions to existing facilities, however, it is only Required for New Construction projects.
- Evaluating on-site renewable energy by means of life-cycle cost analysis is required by TCA 4-3-1012 for New Construction projects. Possible on-site energy sources include:
 - Solar photovoltaic
 - Solar water heating
 - Wind generated electricity
 - Low-impact ("micro") hydro-electric systems
- LCCA of onsite renewable energy should include the incremental costs above the base design. For example, using building-mounted PV panels on the south face of a building may be more cost-effective when used as an alternative to window overhangs. In this case, the first costs of PV, for the purposes of the LCCA, would not be the installed cost of the PV

panels, but instead be the difference in cost between the window overhangs and the PV panels.

- A report summarizing the process and results of the LCCA must be provided to the Owner at the end of the Schematic Design phase.

EE7.2 Green Power

- Provide Renewable Energy Credits (RECs) equal to 10% of annual site electrical costs over at least 2 years through TVA or other local power authority OR
- Provide RECs equal to 35% of annual site electrical costs over at least 2 years from another source.

DRAFT

MR Material and Resource Credits

MR1. Recyclable Collection & Storage

- Coordinate all recycling efforts with the State organization that will occupy the building. Many State agencies have pre-existing recycling programs.

MR1.1 Comply with the following requirements:

- Identify local / regional availability for collection of recyclables from the facility.
- Identify recyclable materials to be generated by building occupants and operations. Including but not limited to the following:
 - paper / cardboard
 - plastic
 - metal
 - glass
- Allocate space in building for central collection and storage of recyclables. Size collection area to meet demand of building occupants, below are guidelines for recycling areas, these figures can be used at the discretion of the Project Team:

| Building Square Footage | Minimum Recycling Area (sq. ft.) |
|-------------------------|----------------------------------|
| 0 to 5,000 | 80 |
| 5,001 to 15,000 | 120 |
| 15,001 to 50,000 | 170 |
| 50,001 to 100,000 | 220 |
| 100,001 to 200,000 | 270 |
| 200,001 or greater | 500 |

MR2. Construction Waste Management

MR2.1 Comply with the following requirements:

- Identify availability of local construction waste hauling and recycling facilities within the region of the construction site, such as:
 - One stop facilities
 - Specified material facilities (i.e. wood only, metal only....)
- Identify recyclable waste materials anticipated during construction, including, but not limited to, the following:
 - Rubble: concrete, brick, block debris, etc.
 - Wood
 - Plastics

- Metals
- Drywall
- Cardboard, packaging materials, etc
- The Designer shall instruct the Contractor to develop a waste management plan, including, but not limited to, the following:
 - Plan to address procedure for sorting, hauling, and tracking rate of recyclables from construction site
 - Address training of onsite personnel to ensure participation in program.
- Design to maximize material with standard modular dimensions and encourage reduced overage in construction material orders to minimize waste on site.
- The Designer shall instruct the Contractor to provide documentation during construction that 50% or more material has been diverted from the landfill to be salvaged or recycled. Point thresholds are as follows:
 - 50% – 1 pt
 - 75% – 2 pt
 - 90% – 3 pt

MR3. Sustainable Material Preferences

MR3.1 Recycled Materials

- Select construction materials that are high in recycled content, such that 10% (based on cost) of all building materials are recycled. This credit excludes mechanical, electrical, and plumbing (MEP) equipment.
- Research local availability of fly-ash concrete and synthetic gypsum board for use in construction when appropriate.
- Specify submittals to include percentages of recycled material by weight and identify post-consumer and post-industrial recycled content.
- The Designer shall instruct the Contractor to provide material verification with submittals necessary to document that 10% of building materials (excluding MEP equipment) by cost, are recycled.

MR3.2 Recycled Content Materials 20%

- The Designer shall instruct the Contractor to provide material verification with submittals necessary to document that 20% of building materials (excluding MEP equipment) by cost, are recycled.

MR3.3 Tennessee Produced Materials (non-wood): utilize building materials/products such that 10% (based on cost, excluding MEP equipment) of the project is comprised of materials harvested AND manufactured in the state of Tennessee. For a product that is only harvested OR manufactured in TN, 50% of that material cost will contribute to this credit.

- Materials which satisfy the MR3.3 requirements can be automatically included in MR3.5 Regional Materials.
- The Designer shall instruct the Contractor to provide verification of credit compliance through any of the following documents:
 - Submittals
 - 'Construction Issue' plans
 - 'As Built' plans
 - Other appropriate construction records

MR3.4 Tennessee Produced Wood Products: utilized materials/products such that 50% of the wood products (based on cost) in the project are comprised of wood materials harvested and manufactured in Tennessee. For products that are only harvested OR manufactured in TN, 50% of that material cost will contribute to this credit.

- Materials which satisfy the MR3.4 requirements can be automatically included in MR3.5 Regional Materials.
- The Designer shall instruct the Contractor to provide verification of credit compliance through any of the following documents:
 - Submittals
 - 'Construction Issue' plans
 - 'As Built' plans
 - Other appropriate construction records

MR3.5 Regional Materials: utilize building materials that are regional to the project site, regardless of which state they are produced in, such that 20% (based on cost, excluding MEP equipment) of the project is comprised of materials harvested AND manufactured within 500 miles of the project site. For products that are only harvested OR manufactured within 500 miles, 50% of that material cost will contribute to this credit.

- Any materials which qualify for either MR3.3 or MR3.4 can also be counted for this credit.
- The Designer shall instruct the Contractor to provide verification of credit compliance through any of the following documents:
 - Submittals
 - 'Construction Issue' plans
 - 'As Built' plans
 - Other appropriate construction records

MR3.6 Where practical, utilize salvaged materials in design and construction of state projects.

- Identify locally available resources for salvaged materials that may meet the projects functional and aesthetic needs.
- The Designer shall instruct the Contractor to provide material verification of credit compliance with submittals and cost data.

- The Designer shall instruct the Contractor to provide verification of credit compliance through any of the following documents:
 - Submittals
 - 'Construction Issue' plans
 - 'As Built' plans
 - Other appropriate construction records

MR3.7 Where practical, specify and utilize natural materials of rapidly renewable origins.

- Rapidly renewable materials replenish in 10 years or less.
- Preferred renewable materials for use include linoleum, cotton batt insulation, wool carpet, cork and bamboo flooring.
- The Designer shall instruct the Contractor to provide verification of credit compliance through any of the following documents:
 - Submittals
 - 'Construction Issue' plans
 - 'As Built' plans
 - Other appropriate construction records

EQ Indoor Environmental Quality Credits

EQ1. Tobacco Smoke Control - Non-Smoking Facilities

EQ1.1 Comply with all of the following:

- All State-owned and operated buildings must be non-smoking.
- Any designated smoking areas must be located as required by State law, Owner requirement, or at least 25 feet away from entries, outdoor air intakes and operable windows, whichever requirement is most stringent.

EQ2. Minimum Ventilation

EQ2.1 Design to comply with ASHRAE Standard 62.1-2007 “Minimum Ventilation for Acceptable Indoor Air Quality,” or the 2012 International Mechanical Code (IMC).

- If ASHRAE 62.1-2007 is used for compliance, utilize either the Ventilation Rate Procedure (VRP) or IAQ procedure as described in the reference standard.

EQ3. Outdoor Air Delivery Monitoring

EQ3.1 Outdoor air delivery monitoring is required for mechanical systems that utilize direct measurement of outdoor air as a method for determining the ventilation rates.

- The measurement system must provide an alarm when sensed airflow rate is 10% below design minimum outdoor air rate (see ASHRAE 62.1-2007 or the 2012 IMC).

EQ4. CO₂ Monitoring

EQ4.1 Provide carbon dioxide monitors within all densely occupied spaces (greater than 25 people per 1000 sq.ft.) served by the air handling unit that measures outside air. Locate monitors between 3 and 6 feet above the floor. Monitors shall communicate with the building automation system to provide an alarm when sensed carbon dioxide is 10% above the setpoint for the space. To avoid nuisance alarms, appropriate CO₂ setpoints should be calculated using methods in ASHRAE 62.1–2007, Appendix C.

EQ5. Air Quality Management:

EQ5.1 During Construction - Develop and implement an Indoor Air Quality (IAQ) Management Plan for the Construction phase as follows:

- Meet or exceed the recommended Control Measures of the Sheet Metal and Air Conditioning Contractors National Association (SMACNA) IAQ Guidelines for Occupied Buildings under Construction, 2nd Edition 2007, ANSI/SMACNA 008-2008 (Chapter 3).
- Protect stored on-site or installed absorptive materials from moisture damage.
- If permanently installed air handlers are used during construction, filtration media with a Minimum Efficiency Reporting Value (MERV) of 8 shall be used at each return air grille. (The procedure for determining MERV ratings is contained in ASHRAE 52.2-1999.) Replace all filtration media immediately prior to occupancy.

- The Designer shall instruct the Contractor to provide verification of credit compliance through any of the following documents:
 - Submittals
 - 'Construction Issue' plans
 - 'As Built' plans
 - Other appropriate records

EQ5.2 Before Occupancy – The Designer shall instruct the Contractor to develop and implement an Indoor Air Quality (IAQ) Management Plan for the pre-occupancy phase as follows:

- **OPTION 1 — Flush-Out**
 - After construction ends, prior to occupancy and with all interior finishes installed, perform a building flush-out by supplying a total air volume of 14,000 cu.ft. of outdoor air per sq.ft. of floor area while maintaining an internal temperature of between 80 and 60 degrees F and relative humidity no higher than 60%.
 - If occupancy is desired prior to completion of the flush-out, the space may be occupied following delivery of a minimum of 3,500 cu.ft. of outdoor air per sq.ft. of floor area to the space. Once a space is occupied, it shall be ventilated per the design minimum outside air rate determined from ASHRAE 62.1-2007 or the 2012 IMC.
 - During each day of the flush-out period, ventilation shall begin a minimum of three hours prior to occupancy and continue during occupancy. These conditions must be maintained until a total of 14,000 cu.ft./sq.ft. of outside air has been delivered to the space.
- **OPTION 2 — Air Testing**
 - Conduct baseline IAQ testing, after construction ends and prior to occupancy, using testing protocols consistent with the United States Environmental Protection Agency Compendium of Methods for the Determination of Air Pollutants in Indoor Air.
 - All materials used in the construction of the building shall meet the requirements or credits EQ6.1-EQ6.5. The VOC content of the following materials must be less than the limits indicated unless the only materials available do not also meet the functional needs of a given space. The Designer shall instruct the Contractor to provide material verification with submittals:
- The Designer shall instruct the Contractor to provide verification of credit compliance through any of the following documents:
 - Submittals
 - 'Construction Issue' plans
 - 'As Built' plans
 - Other appropriate records

EQ6. Material VOC Limits

The Volatile Organic Compounds (VOC) content of adhesives, sealants, and paints / coatings used must not exceed the limits established below for interior products (those inside the weather barrier). The The Designer shall instruct the Contractor to provide material verification with submittals.

| EQ Table – Material VOC Limits | |
|---|-----|
| Architectural Adhesives (g/L less water): | |
| a. Indoor Carpet: | 50 |
| b. Carpet Pad: | 50 |
| c. Wood Flooring | 100 |
| d. Rubber Floor: | 60 |
| e. Subfloor: | 50 |
| f. Ceramic Tile: | 65 |
| g. VCT & Asphalt: | 50 |
| h. Drywall & Panel: | 50 |
| i. Cove Base: | 50 |
| j. Multipurpose: | 70 |
| k. Structural Glazing: | 100 |
| Specialty Adhesives (g/L less water): | |
| a. PVC Welding: | 510 |
| b. CPVC Welding: | 490 |
| c. ABS Welding: | 325 |
| d. Plastic Cement: | 250 |
| e. Primer for Plastic: | 550 |
| f. Contact: | 80 |
| g. Special Purpose Contact: | 250 |
| h. Structural Wood Member: | 140 |

| | |
|---|--------------------|
| i. Sheet Applied Rubber: | 850 |
| j. Top & Trim: | 250 |
| Substrate Specific (g/L less water): | |
| a. Metal to Metal: | 30 |
| b. Plastic Foams: | 50 |
| c. Porous Material (except wood): | 50 |
| d. Wood: | 30 |
| e. Fiberglass: | 80 |
| Sealants (g/L less water): | |
| a. Architectural: | 250 |
| b. Architectural Porous: | 775 |
| c. Nonmembrane Roof: | 300 |
| d. Roadway: | 250 |
| e. Single-Ply Roof Membrane: | 450 |
| f. Other: | 750 |
| g. Aerosol General Purpose mist spray: | 65% VOCs by weight |
| h. Aerosol General Purpose web spray: | 55% VOCs by weight |
| i. Aerosol Special Purpose: | 70% VOCs by weight |
| Paints (g/L less water): | |
| a. Flats: | 50 |
| b. Non-Flats: | |
| Anti-corrosive and anti-rust paints applied to interior ferrous metal substrates: | |
| a. VOC limit is (g/L less water): | 250 |
| Coatings (g/L less water) | |
| a. Clear wood finish, varnish: | 350 |

| | |
|--------------------------------|-----|
| b. Clear wood finish, lacquer: | 550 |
| c. Floor coatings: | 100 |
| d. Sealers and undercoaters: | 200 |
| e. Shellac, clear: | 730 |
| f. Shellac, pigmented: | 550 |
| g. Stain: | 250 |

EQ6.1 Adhesives and Sealants

- Adhesives and sealants used must not exceed the limits established in the EQ Table. The Designer shall instruct the Contractor to provide verification of credit compliance through any of the following documents:
 - Submittals
 - 'Construction Issue' plans
 - 'As Built' plans
 - Other appropriate construction records

EQ6.2 Paints

- Paints used must not exceed the limits established in the EQ Table.
- The Designer shall instruct the Contractor to provide verification of credit compliance through any of the following documents:
 - Submittals
 - 'Construction Issue' plans
 - 'As Built' plans
 - Other appropriate construction records

EQ6.3 Coatings and anti-corrosive paints

- Coatings and anti-corrosive paints used must not exceed the limits established in the EQ Table.
- The Designer shall instruct the Contractor to provide verification of credit compliance through any of the following documents:
 - Submittals
 - 'Construction Issue' plans
 - 'As Built' plans
 - Other appropriate construction records

EQ6.4 Flooring Systems

- All carpet systems must meet or exceed the requirements of the Carpet and Rug Institute's Green Label Plus Indoor Air Quality Test Program.
- All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute Green Label program.
 - All carpet adhesive: VOC limit of 50 g/L.
- All hard surface flooring must meet the testing and product requirement of FloorScore certification.
 - Tile, masonry, terrazzo, cut stone and solid wood flooring without coatings or sealants qualify for credit without testing.
- The Designer shall instruct the Contractor to provide verification of credit compliance through any of the following documents:
 - Submittals
 - 'Construction Issue' plans
 - 'As Built' plans
 - Other appropriate construction records

EQ6.5 Composite wood and agrifiber products must contain no added urea-formaldehyde resins.

- The Designer shall instruct the Contractor to provide verification of credit compliance through any of the following documents:
 - Submittals
 - 'Construction Issue' plans
 - 'As Built' plans
 - Other appropriate construction records

EQ7. Pollutant Control

EQ7.1 Entryway Systems - design to minimize and control pollutant entry into buildings and later cross-contamination of regularly occupied areas:

- Employ permanent entryway systems at least six feet long in the primary direction of travel to capture dirt and particulates from entering the building at all entryways that are directly connected to the outdoors. Acceptable entryway systems include permanently installed grates, grilles, or slotted systems that allow for cleaning underneath. Roll-out mats are only acceptable when maintained on a weekly basis. Qualifying entryways are those that serve as regular entry points for building users.

EQ7.2 Where hazardous gases or chemicals may be present or used, including garages, housekeeping/laundry areas, and designated copying/printing rooms, exhaust each space sufficiently to create negative pressure with respect to adjacent spaces with the doors to the room closed. For each of these spaces, provide self-closing doors and deck to deck partitions

or a hard lid ceiling. The exhaust rate shall be at least 0.50 cfm/sq.ft. or per local codes (whichever requirement is more stringent) with no air recirculation.

EQ7.3 In mechanically ventilated buildings, each ventilation system that supplies outdoor air to regularly occupied areas of the building shall be provided with particle filters or air cleaners to clean the outdoor air which comply with one of the following criteria:

- Filtration media rated at a Minimum Efficiency Reporting Value (MERV) of 13 or higher in accordance with ASHRAE 52.2.
- Filtration media having a minimum dust spot efficiency of 80% or higher and greater than 98% arrestance on a particle size of 3-10 μg .
- Clean filtration media shall be installed immediately prior to occupancy.

EQ8. Thermal Comfort

EQ8.1 Design HVAC systems and the building envelope to meet the requirements of ASHRAE Standard 55-2004, Thermal Comfort Conditions for Human Occupancy.

EQ9. Individual Occupant System Controls

EQ9.1 Lighting Controls

- Provide individual lighting controls for 90% of building occupants.
- Provide lighting system controllability for all shared multi-occupant spaces to allow lighting level adjustments that meet group needs.

EQ9.2 Thermal Comfort

- Provide individual comfort controls to 50% of building occupants.
- Provide comfort system controls for all shared multi-occupant spaces per ASHRAE standard 55-2004.

EQ10. Daylight to Occupied Spaces

EQ10.1 Design the building envelope to achieve a 2% glazing factor in a minimum of 75% of all regularly occupied areas. The glazing factor is calculated as follows:

$$\text{Glazing Factor} = \frac{\text{Window Area}}{\text{Floor Area}} \times \text{Window Geometry Factor} \times \frac{\text{Actual } T_{\text{vis}}}{\text{Minimum } T_{\text{vis}}} \times \text{Window Height Factor}$$

- A spreadsheet calculator has been developed to calculate the Glazing factor from the information provided. This spreadsheet program includes all necessary instructions for calculating Glazing Factor from building geometry.
- At the option of the design team, a daylight simulation model may be used instead of or in addition to the above calculation method. Using a computer simulation model, demonstrate that a minimum daylight illumination level of 25 foot-candles has been achieved in a minimum of 75% of all regularly occupied areas. Modeling must demonstrate 25 horizontal foot-candles under clear sky conditions, at noon, on the equinox, at 30" above the finished floor.

EQ11. Views from Occupied Spaces

EQ11.1 Design the building envelope and space layout to allow a direct line of sight to the outdoor environment via vision glazing between 2'6" and 7'6" above finish floor for building occupants in 90% of all regularly occupied areas. Determine the area with direct line of sight by totaling the regularly occupied square footage that meets the following criteria:

- In plan view, the area is within sight lines drawn from perimeter vision glazing.
- In section view, a direct line of sight can be drawn from the area to perimeter vision glazing.
- Line of sight may be drawn through interior glazing.
- For private offices, the entire square footage of the office can be counted if 75% or more of the area has direct line of sight to perimeter vision glazing.
- For multi-occupant spaces, the actual square footage with direct line of sight to perimeter vision glazing is counted.

$$\frac{\text{Total floor area with direct line of sight}}{\text{Total regularly occupied floor area}} \times 100\% = \text{Views Percentage}$$

- A spreadsheet calculator has been developed to calculate the views percentage from the information provided. This spreadsheet program includes all necessary instructions for calculating views percentage from building geometry.

ID Innovation in Design and Construction Credits

The design team, Owner, and Contractor are encouraged to demonstrate greater accomplishments in project design and performance by either exceeding the established standards throughout the HPBr, or by seeking innovative performance in sustainable categories not specifically addressed by this document. This category provides project teams the opportunity to highlight dynamic and effective high performance features of their projects and to enhance the credits within HPBr.

The following are suggested topics that can be addressed with the goal of moving beyond the minimum requirements. For credit categories not listed, the design team must submit a statement of intent for the proposed innovation, a measurable method of compliance, and a benchmark for acceptable performance to be reviewed by the State project manager. The proposed credits will be assessed by the Office of State Architect for applicability, individual approval, and possible adoption into the HPBr.

ID1. Tennessee Advancement

- Owner, design team, or Contractor (at the direction of the Designer) shall provide verification of credit compliance through any of the following documents:
 - Submittals
 - 'Construction Issue' plans
 - 'As Built' plans
 - Other appropriate records

ID1.1 Watershed Restoration

- Tennessee waters support an astonishing variety of wildlife, including more than 325 species of fish, 132 species of mussels, and 101 species of crayfish. In addition, Tennessee's 70 amphibian, 61 reptile, 300 bird and 89 mammal species all rely on Tennessee's water resources. Four of the eight most ecologically rich rivers in North America are in Tennessee. Project Teams are encouraged to assess nearby streams and watersheds regarding water quality and overall health of flora and fauna and engage in restoration practices in conjunction with TDEC guidelines.

ID1.2 Green Housekeeping Practices

- Select building materials that require minimal cleaning and maintenance.
- Provide information on proposed cleaning agents and the independent certification those agents adhere to. Document that the cleaning agents and building materials are compatible and that the building materials will maintain their integrity through their expected useful life.

ID1.3 Exemplary Efforts

- Recycled Content:
 - Specify and install construction materials with 30% recycled content by cost, not including MEP equipment.
- Exemplary performance in Water Use Reduction:

- Exceed the Energy Policy Act of 2005 fixture flow and use rates by 40% by installing high efficiency fixtures.

ID1.4 Construction Site Energy Efficiency

- Meet at least two of the following requirements during construction:
 - Utilize alternative fuels such as bio-diesel in construction equipment.
 - During construction, meet the site lighting criteria of LM7.
 - During construction, coordinate evening site lighting with local curfew hours.

ID1.5 Regional Materials

- Utilize building materials that are regional to the project site, regardless of which state they are produced in, such that 30% (based on cost, excluding MEP equipment) of the project is comprised of materials harvested AND manufactured within 500 miles of the project site. For products that are only harvested OR manufactured within 500 miles, 50% of that material cost will contribute to this credit.

ID2. Environmentally Accredited Project Team

ID2.1 Provide certification that a design or construction project team leader meets at least one of the following professional accreditations:

- LEED AP (Accredited Professional) – from the US Green Building Council
- Certified Energy Manager (CEM) – from the Association of Energy Engineers
- Certified Measurement & Verification Professional (CMVP) – from the Association of Energy Engineers
- Green Globes Professional (GGP) – from the Green Building Initiative
- Additional energy or environmental accreditations may be submitted to the OSA for approval or possible inclusion into future revisions of the HPBr.

Appendix A – Definitions

Adhesive- A substance used to bond two surfaces together by attachment. Adhesives include all bonding and adhesive primers.

Aerosol Adhesive- An adhesive deployed as a spray/aerosol. These adhesives include special purpose, mist and web spray adhesives.

Agrifiber Board- A composite panel product derived from recovered agricultural waste fiber and agricultural prunings. The recovered fibers are processed and mixed with resins to produce products with characteristics similar to those derived from wood fiber.

Baseline Design- A computer representation of a hypothetical design based on the proposed building project, but adjusted according to ASHRAE 90.1, Appendix G. This representation is used as the basis for calculating the baseline building performance for rating above-standard design.

Best Management Practices (BMP)- These are standards of design or planning as defined by national, state, or local codes and guidelines.

Brownfield- Property with the potential presence of hazardous substances, pollutants or contaminants which may complicate redevelopment efforts. See also www.epa.gov/brownfields

Building Envelope- The envelope includes the exterior of a building's construction, including the walls, windows, roofs and floors.

Building Footprint- The area on a building site defined by the perimeter of the building plan. Any non building facilities are not included in the footprint, including landscaping parking areas, walkways, and other similar areas.

Contaminant- An unwanted airborne constituent that may reduce air quality (ASHRAE 62.1).

Energy Conservation Measures (ECMs)- Installations of equipment or systems, or modifications of equipment or systems, for the purpose of reducing energy use and/or costs.

ENERGY STAR® Rating- The rating a building earns using the ENERGY STAR Portfolio Manager to compare building energy performance to similar buildings in similar climates. A score of 50 represents average building performance.

Exhaust Air- The air removed from a space and discharged to outside the building by means of mechanical or natural ventilation systems.

Footcandle (fc)- A unit of illuminance equal to one lumen of light falling on a one-square foot area from a one candela light source at a distance of one foot.

Formaldehyde- Formaldehyde is a naturally occurring volatile organic compound which is carcinogenic and an irritant when present in relatively high concentrations. It has been known to cause headaches,

dizziness, mental impairment, and other symptoms. When present in air at levels above 0.1 ppm (parts per million), it may cause watery eyes, burning sensations in the eyes, nose, and throat; nausea; coughing; chest tightness; wheezing; skin rashes; as well as asthmatic and allergic reactions.

Functional Performance Testing (FPT)- FPT is used to determine the ability of commissioned systems to perform in accordance with the Owner's Project Requirements, Basis of Design, and construction documents.

Full-Time Equivalent (FTE)- A metric for building occupants equal to one person occupying a building for an eight-hour period per workday.

Greenfield Sites- These are sites which have not been previously cleared, developed or graded and remain in a natural state.

Heat Island Effect- Solar energy is absorbed by various constructed surfaces (e.g. roads, walkways, buildings, parking lots, etc) which are found in high concentrations in dense urban areas. The storage and buildup of this solar energy leads to warmer temperatures in large urban areas compared to surrounding rural areas.

HVAC Systems- Include heating, ventilating, and air-conditioning systems used to provide thermal comfort and ventilation for building interiors.

Hybrid Vehicles- Hybrids which use a gasoline engine to drive an electric generator which then stores power in batteries to run electric motors to propel the vehicle.

Impervious Surfaces- Surfaces which do not allow infiltration of water into the subsurface. This effects the stormwater runoff potential of the material, which can be estimated for various surface materials.

Indoor Air Quality- The quality of air inside a space or building. Indoor air quality affects the health and well-being of building occupants.

Laminate Adhesive- A type of adhesive commonly used in wood/agrifiber products as a bonding agent.

Landscaped Area- The landscapes area of the site is equal to the total site area, less the building footprint, paved surfaces, water bodies, and other non planted areas.

LEED Accredited Professional (AP) - A design and construction industry professional who has been recognized by the US Green Building Council as an individual with expertise in the principles of green building Design, construction, and operation.

Life Cycle Cost Analysis (LCCA) Method- A technique of economic evaluation that sums over a given study period the costs of initial investment (less resale value), replacements, operations (including energy use), and maintenance and repair of an investment decision (expressed in present or annual value terms).

Light Pollution- Waste light from building sites and lighting installations produces glare, when directed upward or off site.

Micro-irrigation- Micro-irrigation is an irrigation technique which involves systems with small sprinklers, micro-jets, or drippers designed to release small volumes of water to meet (and not exceed), irrigation requirements. Sprinklers and micro-jets are often installed within a few centimeters of the ground, while drippers are commonly positioned on or below grade.

Open Space Area- Open Space areas shall be defined by local zoning requirements. If local zoning requirements do not clearly define these areas, they shall be defined for the purposes of this document as the property area minus the development footprint. It must also be vegetated and pervious, except where noted in the credit requirements. For projects located in urban areas which qualify for LM4.1, open space also includes non-vehicular, pedestrian-oriented hardscape areas.

Open-grid Pavement- This is defined as pavement which is greater than 50% pervious and contains vegetation in the open cells.

Outdoor Air- The ambient air that enters a building through a ventilation system, through intentional openings for natural ventilation, or by infiltration (ASHRAE 62.1).

Owner's Project Requirements (OPR)- An explanation of the ideas, concepts and criteria that are determined by the Owner to be important to the success of the project (previously called the Design Intent).

Pedestrian Access- Implies that pedestrians can gain access to services comfortably without being blocked by walls, freeways or other unreasonable barriers.

Perviousness- Perviousness describes a material which allows moisture to pass through it. In the context of this document, perviousness pertains primarily paving materials and their ability to allow moisture to penetrate through them and into the ground.

Post-consumer- Post-consumer describes waste material generated by households or by commercial and industrial facilities in their role as end-users of the product, which can no longer be used for its original purpose. This waste includes returns of materials from the distribution chain (source: ISO 14021). Examples of this kind of waste category include construction and demolition debris, materials collected through many recycling programs, , discarded products (e.g., furniture, cabinetry and decking) and urban maintenance waste (e.g., leaves, grass clippings, tree trimmings, etc.).

ppm- Parts per million

Pre-consumer Content- Pre-consumer content is material diverted from the waste stream during the manufacturing process. If materials are reworked, reground, or scrap generated in a process (and capable of being reclaimed within the same process) (source ISO 14021). Examples include planer shavings, ply trim, sawdust, chips, bagasse, sunflower seed hulls, walnut shells, culls, trimmed materials, print overruns, over-issue publications, and obsolete inventories. (Previously referred to as Post-industrial Content.)

Preferred Parking- Preferred parking spots are those that are closest to a main entrance, exclusive of handicapped spaces.

Proposed Design - A computer representation of the actual building design, as reflected in the design documents, used as the basis for calculating the design energy cost.

Rapidly Renewable Materials- Material considered to be agricultural products, both fiber and animal, which take 10 years or less to produce and harvest in an ongoing and sustainable manner.

Recycling- The collection, reprocessing, and re-use of waste materials which have been diverted or recovered from the conventional solid waste stream.

Regularly Occupied Spaces- Areas where workers are normally seated or standing during an average work day; in residential applications it refers primarily to living and family rooms.

Relative Humidity- The ratio of partial density of water vapor in the air to the saturation density of water vapor at the same temperature and the same total pressure (ASHRAE 55).

Renewable Energy Certificates (RECs)- RECs are sold separately from the electrons that make up the electricity and represent an investment in green, renewable power.

Sealant- Any adhesive with properties that have been specifically formulated to fill, seal, or waterproof gaps or joints between two surfaces. These may include primers and caulks.

Sedimentation- Sedimentation is the addition of soils to water bodies. This may occur through natural or human-caused processes. Sedimentation decreases water quality and can damage the ecosystems of lakes, rivers and streams.

Shared (Group) Multi-occupant Spaces- These areas include retail sales floors, conference rooms, classrooms and other indoor spaces which may be used as places of congregation for presentations, training, etc.

Solar Reflectance Index (SRI)- SRI is the measure of a material's ability to reject solar heat. It is defined so that a standard black surface (reflectance 0.05, emittance 0.90) is 0 and a standard white surface (reflectance 0.80, emittance 0.90) is 100. Once the maximum and minimum temperature rises of a given material have been computed, the SRI can be found by interpolating between the values for white and black. Materials with the highest SRI values are the coolest choices. Due to the way SRI is defined a relative scale, particularly hot materials may have slightly negative values, and particularly cool materials can sometimes exceed 100. (Lawrence Berkeley National Laboratory Cool Roofing Materials Database)

Square Footage- Square footage is the total area in square feet of all rooms of a building. This figure should include corridors, elevators, stairwells and shaft spaces.

Stormwater Runoff- Runoff water volumes are created during precipitation events and flow across surfaces into sewer systems or receiving bodies of water. Any precipitation waters that leave project site boundaries on the surface are considered stormwater runoff.

Threatened Species- Threatened species are animals or plants which are vulnerable to endangerment within the near future.

Total Cost of Ownership (TCO)- The TCO is defined as a financial cost/benefit analysis method intended to account for total economic value over the course of the project's entire life cycle.

Total Suspended Solids (TSS)- TSS are particles or flecks that are too small or light to be separated from stormwater through simple gravity settling. Suspended solids of this small size are typically removed via filtration.

T_{vis}: Visible Light Transmittance- The ratio of total light transmitted to total incident light. It is the amount of visible light passing through a glazing surface divided by the amount of light striking that glazing surface. T_{vis} is typically represented number from 0 to 1. A higher T_{vis} value indicates that a greater amount of visible spectrum incident light is passing through the glazing.

Urea Formaldehyde- A combination of urea and formaldehyde that is used in some adhesives and will sometimes emit formaldehyde at room temperature.

Ventilation- The process of supplying air to or removing air from a space for the purpose of controlling air contaminant levels, humidity, or temperature within the space (ASHRAE 62.1).

Vision Glazing- Any exterior windows above 2'-6 and below 7'-6 which permit views from inside a building to the outside of the project space are considered vision glazing.

VOCs (Volatile Organic Compounds)- VOCs are carbon compounds that participate in atmospheric photochemical reactions. These do not include carbon monoxide, carbon dioxide, carbonic acid, metallic carbides and carbonates, or ammonium carbonate. VOCs vaporize or exist in a gaseous state at room temperatures.

Tennessee High Performance Building Requirements: OPR

November 9

2015

The OPR is a deliverable of the High Performance Building requirements and is completed for State of Tennessee Projects. This document shall be completed for all State of Tennessee projects; it is adaptable to individual project objectives and scope.

Owner Project Requirements

| | |
|------------------------------|---------------------------------|
| PROJECT NAME: | John Sevier Exterior Renovation |
| SBC #: | |
| LOCATION: | Nashville, TN |
| AGENCY NAME: | General Services |
| OPR AUTHOR: | Edward Wansing |
| DATE OPR CREATED: | 11/9/15 |
| VERSION NO. and DATE: | Version #1 November 9, 2015 |

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1. Owner Project Requirements Summary

The Owner Project Requirements (OPR) is a deliverable of the State of Tennessee High Performance Building Requirements which promotes the design, construction, and operation of high performance state-owned buildings. The goal of the HPBr is to embed a greater economic value within the state building portfolio through reduced operating costs, higher performance and increased sustainability.

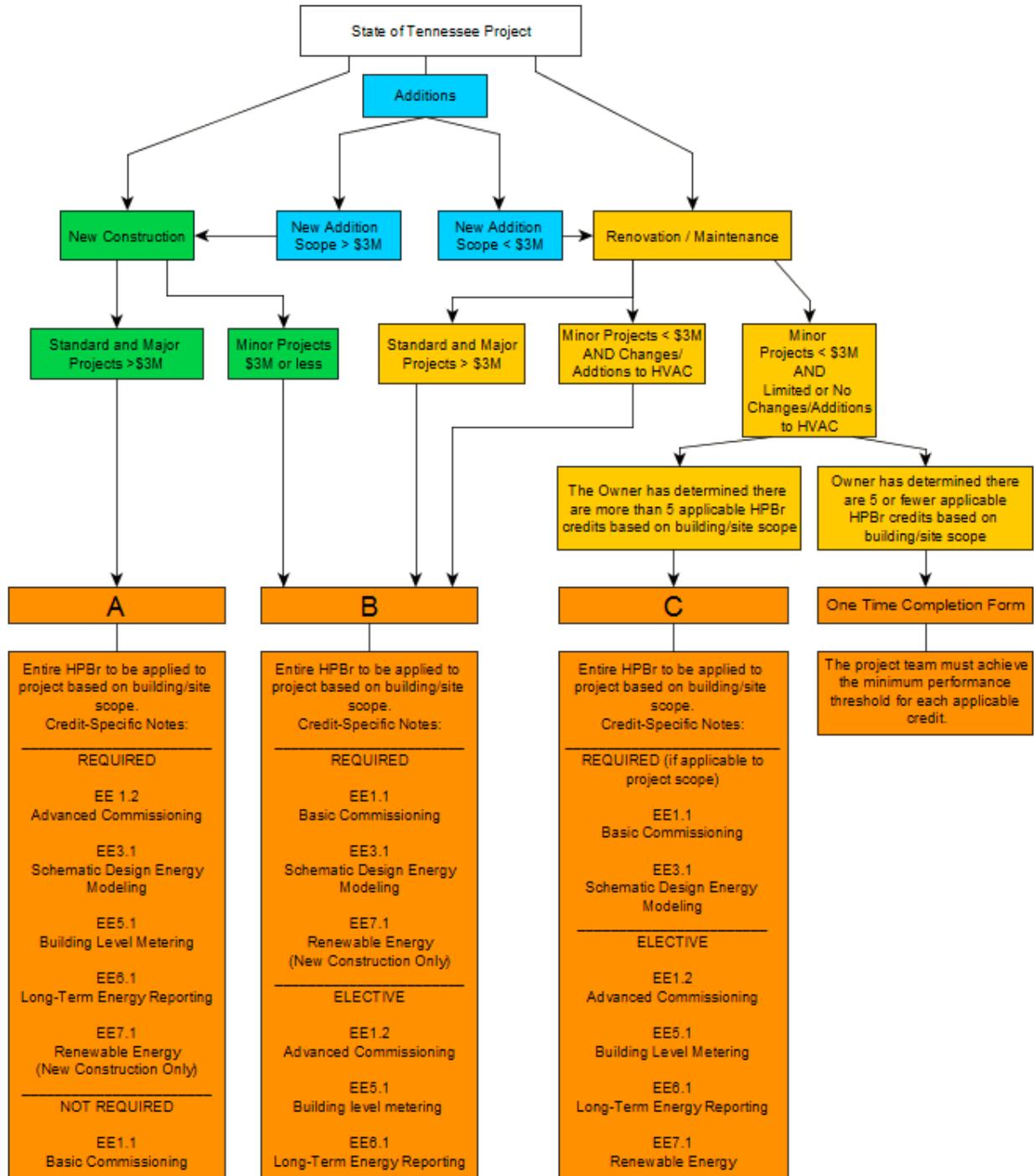
The OPR identifies the intended functional requirements and the expectations of the building's design and operation, including those systems which will be commissioned. The OPR is to be used in conjunction with the State of Tennessee High Performance Building Requirements (HPBr) Manual. The Manual provides detailed direction to the project team in terms of site, materials, energy efficiency, indoor environment, and other high performance design features. The OPR will provide early stage guidance to the project team, informing all parties on project-specific owner requirements. It will also serve as an overview of the commissionable systems which will be included in the Commissioning Plan.

The OPR also incorporates the HPBr Project Applicability Tree. The Tree guides the Owner and Design Team through the process of determining whether particular energy efficiency credits apply to a given project and what their minimum level of achievement must be.

The more accurate and complete the OPR is, the more it can serve as the basis for evaluating project activities and decisions from design through operations. The Commissioning Agent will review the OPR for completeness and the project team is responsible for ensuring that the performance criteria contained in this document are incorporated into the design documents, and building construction.

2. Project Applicability Tree

State of Tennessee High Performance Building Requirements: Project Applicability Tree



3. Project Information Table

| Project Classification | | | | | |
|--|--|--|---|--------------------------------------|--|
| Project Type | <input type="checkbox"/> New Construction <input checked="" type="checkbox"/> Renovation/Addition <input type="checkbox"/> Capital Maintenance | | | | |
| Project MACC Budget (Maximum Allowable Construction Cost) | <input type="checkbox"/> Major (\$20M or more) <input checked="" type="checkbox"/> Standard (<\$20M and >\$3M) <input type="checkbox"/> Minor (\$3M or less) | | | | |
| Project Requirements on Applicability Tree (Refer to the figure above) The credits under the selected option shall be "Required" | <input type="checkbox"/> A EE1.2 EE3.1 EE3.2 EE3.3 EE5.1 EE5.2 EE6.1 EE7.1 | <input checked="" type="checkbox"/> B EE1.1* EE3.1 EE3.3 EE5.1 EE6.1 EE7.1 | <input type="checkbox"/> C EE1.1* EE7.1 | <input type="checkbox"/> D EE1.1* | <input type="checkbox"/> One-Time HPBr Completion Form |
| Choose Basic or Advanced Commissioning* (Owner to de-select systems not to be commissioned in "Commissioning" section below) | <input type="checkbox"/> EE1.1 Basic Commissioning <input checked="" type="checkbox"/> EE1.2 Advanced Commissioning <input type="checkbox"/> Not applicable based on building/site scope | | | | |

*When only Basic Commissioning is Required based on project Application, Advance Commissioning may still be chosen at the Owner's discretion

| General Operation Schedules | |
|-----------------------------|---|
| Lighting | Weekday: <i>[Example: 7 AM to 9 PM]</i> Saturday: <i>[Example: 8 AM to 12 PM]</i> Sunday: <i>[Example: Off]</i> Holiday: <i>[Example: Off]</i> |
| HVAC | Weekday: <i>[Example: 7 AM to 9 PM]</i> Saturday: <i>[Example: 8 AM to 12 PM]</i> Sunday: <i>[Example: Off]</i> Holiday: <i>[Example: Off]</i> |
| After-hour overrides | <i>[Example: Allow a 2 hour occupant override of lighting on each floor]</i> |

Project Overview and Special Requirements

Project Description:
(Include general description, leasable area, conditioned area, gross floor area, occupancy figures including type and number, as well as expected facility and program life spans)

- Remediate all hazardous material; restore all bronze doors, cast iron spandrels, decorative metalwork, and exterior fixtures; replace or restore all windows; add new interior aluminum secondary window or provide insulated glass for energy efficiency; repoint existing stonework; new mortar must match the historic mortar in color, texture and tooling, it must have greater vapor permeability, be softer than the masonry units and historic mortar; sand must match as well; repair cracks and chipping of the existing stone; clean existing building façade; test clean various areas to determine best method and possibly apply a permeable water repellent coating to stone; remove and reroof all existing roofs, repair or replace all gutters, flashing, rain leaders, etc., including the 6th floor expansion area, the roof pavers on the capitol side will need to be repaired or replaced to match its original historic purpose; construct exterior walls for the 6th floor expansion; landscaping.

Planned future program or building changes as well as any concurrent projects
(Include location changes, space usage, related scopes, etc.)

-

General Building Requirements
(Include those related to ventilation, occupancy, etc. where applicable to the entire building)

- Building envelope U-values should meet or exceed ASHRAE 90.1-2013 requirements. Roof insulation shall provide at least an average rating of R-30, and exterior wall insulation shall provide a minimum rating of R-10 continuous insulation or directly equivalent, unless it can be shown through energy modeling and life cycle analysis to not be cost-effective.
- Roof shall be an Energy Star rated bright white cool roof membrane.
- Fenestration will meet ASHRAE 90.1-2013 requirements through replacement of existing single pane windows with double pane insulated glazing system or the addition of an interior storm window.

Special Building Requirements
(Include laboratory, server room, or other special area requirements as applicable)

- Fenestration changes must comply with Historic Commission requirements.

Special HVAC System Requirements
(Include required or desired characteristics such as type of system, humidity control, etc.)

-

Special Lighting Requirements
(Include required or desired characteristics such as illuminance levels, power density, fixture requirements, control interfaces, etc.)

-

| |
|---|
| <p>Lighting Control Requirements (Include required or desired characteristics such as system requirements, individual device specifications, control interfaces, etc.)</p> |
| <ul style="list-style-type: none"> • |
| <p>Special Building Control Systems Requirements (Include required or desired integration or communication between control systems, including lighting, BAS, HVAC, Fire Suppression, etc)</p> |
| <ul style="list-style-type: none"> • |
| <p>Power Monitoring and Control</p> |
| <ul style="list-style-type: none"> • |
| <p>Building Water Conservation Requirements (Include required or desired design features oriented toward reducing water demand and consumption)</p> |
| <ul style="list-style-type: none"> • The building currently does not have an irrigation system. Provide native and drought tolerant landscaping. |

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| <p>Metering Requirements <i>(Include required or desired metering and sub metering for each utility service at each building and as requested by the State.)</i></p> |
| <ul style="list-style-type: none"> • |
| <p>Emergency Power Requirements <i>(Include required or desired design features oriented toward reducing emissions and providing an opportunity for cogeneration and peak load shaving.)</i></p> |
| <ul style="list-style-type: none"> • Emergency Power Generation unit shall provide a redundant source of electricity to the normal grid supplied power. • Generator shall be high efficiency natural gas fired unit. • Natural gas fired cogeneration unit shall be considered for electricity generation and building hot water needs. |

4. High Performance Building Goals

- A. High performance building criteria will be implemented to improve the following, based on the building/site scope:
 - a. Land Management
 - b. Water Efficiency
 - c. Energy Efficiency
 - d. Material and Resource Use
 - e. Indoor Environmental Quality
 - f. Innovation in Design and Construction
- B. The HPBr Checklist includes a summary of the Owner's high performance design requirements and has been attached to this document.
 - a. In addition to the credits found in the Project Information Table, the following credits will be "Required" except where they do not apply to the building/site scope of the project:
 - LM 2.1 Site Disturbance – Erosion Control
 - LM 4.2 Landscape Design
 - LM 6.4 Stormwater Design
 - WE 1.1 Water Efficient Landscaping
 - WE 3.1 Water Use Reduction
 - EE 2.1 Energy Efficient Purchasing Policy
 - MR 1.1 Recycling Storage and Collection
 - MR 3.1 Sustainable Materials
 - EQ 1.1 Tobacco Smoke Control
 - EQ 2.1 Minimum Ventilation
 - EQ 5.1 Air Quality Management – During construction
 - EQ 6.1 through EQ 6.5 Material VOC Limits

- EQ 7.2 Pollutant Control – Hazardous material storage
 - EQ 8.1 Thermal Comfort
 - b. Based on building/site scope, the project team will evaluate all applicable or relevant “Elective” credits to achieve all credits required by the Owner and as many as budgetary and other constraints allow. To comply with the HPBr, the project team will achieve 50% of the points applicable to the project. Determination for credit achievement will be made by the Owner.
 - c. While the HPBr Checklist provides a summary of the applicable requirements for each credit, more detailed instructions can be found in the HPBr Manual.
- C. Commissioning:
- a. The systems to be commissioned shall align with the contracted scope of commissioning work for both the Basic and Advanced commissioning credits.
 - b. The commissioning process should verify the installation, functional performance, and integration of the following building systems:
 - Minimum required systems to commission
 - Building Envelope/Enclosure
 - Other Systems:

High Performance Building Requirements CHECKLIST / TRACKING FORM

| Phase | Targeted Points |
|----------------|-----------------|
| Applicable | 52 |
| Minimum | 26 |
| Not Applicable | 44 |
| Programming | 0 |
| SD | 0 |
| DD | 0 |
| CD | 0 |
| Closeout | 0 |

| | |
|-----------------------------------|---------------------------------|
| SBC Number: | |
| Project Name: | John Sevier Exterior Renovation |
| Date: | 11/9/2015 |
| Project Type: | Renovation/Maintenance |
| Project Phase: | Programming |
| Category from Applicability Tree: | Category B |

Project Team Representatives

Initials

| | | | |
|-------|---|---------------------|--|
| O | - | Owner | |
| C | - | Contractor | |
| ME | - | Mechanical Engineer | |
| EE | - | Electrical Engineer | |
| CE | - | Civil Engineer | |
| A | - | Architect | |
| Other | - | Other | |

| | | | | Programming | | SD | | DD | | CD | | Closeout | | | | | | | | | | | |
|------------------|-----------|------------------------------------|--|------------------|-----|-----------|----------|-----------|-----------|----------|-----------|-----------|----------|-----------|-----------|----------|-----------|--------------------------------------|----------|---|--------------------------------------|----------|---|
| | | | | 0 | 0 | 104 | 0 | 0 | 104 | 0 | 0 | 104 | 0 | 0 | 104 | | | | | | | | |
| 22 Points | | | | LM Total: | | 0 | 0 | 22 | Primary Credit Responsibility | | | | | |
| Possible Points | Credit ID | Applicable to Building/Site Scope? | Description | Level: | Yes | M a y b e | No | Yes | M a y b e | No | Yes | M a y b e | No | Yes | M a y b e | No | Yes | M a y b e | No | Comment: Describe implementation approach for each pursued credit. If credits are not pursued, provide justification. | Role | Initials | |
| 1 | LM1.1 | Yes | Site Selection - Reuse Existing Buildings | Priority 2 | | | 1 | | | 1 | | | 1 | | | 1 | | | 1 | | O | 0 | |
| 1 | LM1.2 | Yes | Site Selection - Show preference for building on developed sites: Preserve farmland/habitat, wetlands, floodplains, public parkland | Priority 1 | | | 1 | | | 1 | | | 1 | | | 1 | | | 1 | | O | 0 | |
| 1 | LM1.3 | Yes | Site Selection - Brownfield Redevelopment - Remediate and Restore contaminated sites when possible | Priority 2 | | | 1 | | | 1 | | | 1 | | | 1 | | | 1 | | O | 0 | |
| 1 | LM1.4 | Yes | Site Selection - Urban Development - Locate building within existing infrastructure | Priority 1 | | | 1 | | | 1 | | | 1 | | | 1 | | | 1 | | O | 0 | |
| 1 | LM2.1 | Yes | Site Disturbance - Sediment and Erosion control during construction | Required | | | 1 | | | 1 | | | 1 | | | 1 | | | 1 | | C | 0 | |
| 1 | LM2.2 | Yes | Site Disturbance - Limit site disturbance during construction to minimum development footprint | Priority 1 | | | 1 | | | 1 | | | 1 | | | 1 | | | 1 | | CE | 0 | |
| 1 | LM3.1 | No | Transportation - Plan for access to public transportation | Priority 2 | | | 1 | | | 1 | | | 1 | | | 1 | | | 1 | | O | 0 | |
| 1 | LM3.2 | No | Transportation - Provide bicycle storage for 5% of building occupants and shower/changing facilities for 0.5% of FTE occupants | Priority 2 | | | 1 | | | 1 | | | 1 | | | 1 | | | 1 | | CE | 0 | |
| 1 | LM3.3 | No | Transportation - Plan site to include preferred parking for carpooling for 5% of all spaces provided | Priority 2 | | | 1 | | | 1 | | | 1 | | | 1 | | | 1 | | CE | 0 | |
| 1 | LM3.4 | No | Transportation - Plan site to include preferred parking for low-emitting/fuel efficient vehicles for 5% of all spaces provided | Priority 2 | | | 1 | | | 1 | | | 1 | | | 1 | | | 1 | | CE | 0 | |
| 1 | LM4.1 | Yes | Landscape Design - Maximize vegetated open space | Priority 2 | | | 1 | | | 1 | | | 1 | | | 1 | | | 1 | | Other | 0 | |
| 1 | LM4.2 | Yes | Landscape Design - Native and drought tolerant planting | Required | | | 1 | | | 1 | | | 1 | | | 1 | | | 1 | | Other | 0 | |
| 1 | LM5.1 | Yes | Heat Island Reduction - Non roof surface reflectivity and shading | Priority 1 | | | 1 | | | 1 | | | 1 | | | 1 | | | 1 | | CE | 0 | |
| 1 | LM5.2 | Yes | Heat Island Reduction - Reflective roof materials | Priority 2 | | | 1 | | | 1 | | | 1 | | | 1 | | | 1 | | A | 0 | |
| 1 | LM6.1 | Yes | Stormwater Design - Post development discharge rate and volume not to exceed Pre-development rate | Required | | | 1 | | | 1 | | | 1 | | | 1 | | | 1 | | CE | 0 | |
| 2 | LM6.2 | Yes | Stormwater Design - Reduce discharge rate and volume 25% on previously developed sites | Priority 2 | | | 2 | | | 2 | | | 2 | | | 2 | | | 2 | | CE | 0 | |
| 1 | LM6.3 | Yes | Stormwater Design - Design to remove 80% Total Suspended solids from the average annual rainfall event. Verify local requirements. | Priority 1 | | | 1 | | | 1 | | | 1 | | | 1 | | | 1 | | CE | 0 | |
| 1 | LM6.4 | Yes | Stormwater Design - Design per TDEC BMP References | Required | | | 1 | | | 1 | | | 1 | | | 1 | | | 1 | | CE | 0 | |
| 1 | LM7.1 | No | Exterior Site Lighting - Design exterior lighting power to be 20% less than is allowed by ASHRAE 90.1-2007 | Priority 2 | | | 1 | | | 1 | | | 1 | | | 1 | | | 1 | | EE | 0 | |
| 1 | LM7.2 | No | Exterior Site Lighting - Locate fixtures to minimize illuminance above the horizontal plane | Priority 1 | | | 1 | | | 1 | | | 1 | | | 1 | | | 1 | | EE | 0 | |
| 1 | LM7.3 | No | Exterior Site Lighting - Locate exterior fixtures to minimize light trespass at property lines. Document foot-candle levels at site boundary | Priority 1 | | | 1 | | | 1 | | | 1 | | | 1 | | | 1 | | EE | 0 | |
| 6 Points | | | | WE Total: | | 0 | 0 | 6 | 0 | 0 | 6 | Primary Credit Responsibility | | |
| Possible Points | Credit ID | Applicable to Building/Site Scope? | Description | Level: | Yes | M a y b e | No | Yes | M a y b e | No | Yes | M a y b e | No | Yes | M a y b e | No | Yes | M a y b e | No | Comment: Describe implementation approach for each pursued credit. If credits are not pursued, provide justification. | Role | Initials | |
| 1 | WE1.1 | Yes | Water Efficient Landscaping. Utilize efficient irrigation technologies and planting measures | Required | | | 1 | | | 1 | | | 1 | | | 1 | | | 1 | | | ME | 0 |
| 1 | WE1.2 | Yes | Water Efficient Landscaping. Non potable sources or no irrigation | Priority 1 | | | 1 | | | 1 | | | 1 | | | 1 | | | 1 | | | A | 0 |
| 1 | WE2.1 | No | Wastewater Treatment & Conveyance: On site treatment | Priority 2 | | | 1 | | | 1 | | | 1 | | | 1 | | | 1 | | | ME | 0 |
| 1 | WE2.2 | No | Wastewater Treatment & Conveyance: Utilize non potable water | Priority 2 | | | 1 | | | 1 | | | 1 | | | 1 | | | 1 | | | ME | 0 |
| 1 | WE3.1 | No | Water Use Reduction - Fixture flow and flush rates | Required | | | 1 | | | 1 | | | 1 | | | 1 | | | 1 | | | ME | 0 |
| 1 | WE3.2 | No | Water Use Reduction - Utilize auto-flow / auto-flush valves | Priority 2 | | | 1 | | | 1 | | | 1 | | | 1 | | | 1 | | | ME | 0 |
| 37 Points | | | | EE Total: | | 0 | 0 | 37 | 0 | 0 | 37 | Primary Credit Responsibility | | |
| Possible Points | Credit ID | Applicable to Building/Site Scope? | Description | Level: | Yes | M a y b e | No | Yes | M a y b e | No | Yes | M a y b e | No | Yes | M a y b e | No | Yes | M a y b e | No | Comment: Describe implementation approach for each pursued credit. If credits are not pursued, provide justification. | Role | Initials | |
| 1 | EE1.1 | Yes | Commissioning - Basic commissioning process | Required | | | 1 | | | 1 | | | 1 | | | 1 | | | 1 | | | O | 0 |
| 3 | EE1.2 | Yes | Commissioning - Advanced commissioning process | Priority 1 | | | 3 | | | 3 | | | 3 | | | 3 | | | 3 | | | | |
| 1 | EE2.1 | Yes | Energy Efficient Purchasing Policy - Energy Star qualified appliances & equipment | Required | | | 1 | | | 1 | | | 1 | | | 1 | | | 1 | | | O | 0 |
| 1 | EE3.1 | Yes | Energy Efficiency - Schematic Design energy modeling | Required | | | 1 | | | 1 | | | 1 | | | 1 | | | 1 | | | Other | 0 |

High Performance Building Requirements CHECKLIST / TRACKING FORM

| Phase | Targeted Points |
|----------------|-----------------|
| Applicable | 52 |
| Minimum | 26 |
| Not Applicable | 44 |
| Programming | 0 |
| SD | 0 |
| DD | 0 |
| CD | 0 |
| Closeout | 0 |

SBC Number: _____
 Project Name: **John Sevier Exterior Renovation**
 Date: **11/9/2015**
 Project Type: **Renovation/Maintenance**
 Project Phase: **Programming**
 Category from Applicability Tree: **Category B**

Project Team Representatives

Initials

| | | | |
|-------|---|---------------------|--|
| O | - | Owner | |
| C | - | Contractor | |
| ME | - | Mechanical Engineer | |
| EE | - | Electrical Engineer | |
| CE | - | Civil Engineer | |
| A | - | Architect | |
| Other | - | Other | |

| | | | | Programming | | SD | | DD | | CD | | Closeout | | | | | | | |
|-----------------|-----------|------------------------------------|---|------------------|-----|-----------|----|-----|-----------|----|-----|-----------|----|-----|-----------|----|--|------|----------|
| Checklist Total | | | | 0 | 0 | 104 | 0 | 0 | 104 | 0 | 0 | 104 | 0 | 0 | 104 | | | | |
| 1 | EE3.2 | Yes | Energy Efficiency - Life Cycle Cost Analysis | Priority 1 | | | | | | | | | | | | | | | |
| 1 | EE3.3 | Yes | Minimum Energy Performance - all projects to demonstrate compliance with ASHRAE 90.1-2010, according to project scope | Required | | | | | | | | | | | Other | 0 | | | |
| 8 | EE3.4 | | Improved Energy Performance - energy model is used during design, and final design demonstrates energy cost savings that exceed those required by the Minimum Energy Performance credit (EE3.3) | Priority 1 | | | | | | | | | | | Other | 0 | | | |
| 5 | EE4.1 | No | Energy Efficiency in Existing Buildings - Lighting Power Reduction | Priority 1 | | | | | | | | | | | EE | 0 | | | |
| 2 | EE4.2 | No | Energy Efficiency in Existing Buildings - Daylight Harvesting Controls | Priority 1 | | | | | | | | | | | EE | 0 | | | |
| 2 | EE4.3 | No | Energy Efficiency in Existing Buildings - Occupancy sensor-controlled lighting | Priority 1 | | | | | | | | | | | EE | 0 | | | |
| 2 | EE4.4 | No | Energy Efficiency in Existing Buildings - High efficiency HVAC Equipment | Priority 1 | | | | | | | | | | | ME | 0 | | | |
| 1 | EE5.1 | No | Energy Metering, Monitoring and Reporting: Building-Level Metering | Priority 1 | | | | | | | | | | | Other | 0 | | | |
| 3 | EE5.2 | No | Energy Metering, Monitoring and Reporting: System level energy metering with measurement and verification - New Construction | Priority 1 | | | | | | | | | | | Other | 0 | | | |
| 3 | EE5.3 | No | Energy Metering, Monitoring and Reporting: System level energy metering with measurement and verification - Existing Buildings | Priority 1 | | | | | | | | | | | Other | 0 | | | |
| 1 | EE6.1 | Yes | Long-Term Energy Reporting - Maintain energy and water consumption data in Energy Star Portfolio Manager | Priority 1 | | | | | | | | | | | O | 0 | | | |
| 1 | EE7.1 | Yes | Renewable Energy - Investigate life-cycle cost effectiveness of on-site renewable energy | Priority 1 | | | | | | | | | | | Other | 0 | | | |
| 1 | EE7.2 | No | Renewable Energy - Provide Renewable Energy Credits (RECs) equal to 10% of annual site electricity through TVA or RECs equal to 35% from another source | Priority 2 | | | | | | | | | | | O | 0 | | | |
| 15 Points | | | Materials and Resources | MR Total: | 0 | 0 | 15 | 0 | 0 | 15 | 0 | 0 | 15 | 0 | 0 | 15 | Primary Credit Responsibility | | |
| Possible Points | Credit ID | Applicable to Building/Site Scope? | Description | Level: | Yes | M a y b e | No | Yes | M a y b e | No | Yes | M a y b e | No | Yes | M a y b e | No | Comment: Describe implementation approach for each pursued credit. If credits are not pursued, provide justification. | Role | Initials |
| 1 | MR1.1 | Yes | Recycling Storage and Collection | Required | | | | | | | | | | | | | | O | 0 |
| 3 | MR2.1 | Yes | Construction Waste Management (50%, 75%, 95%) | Priority 1 | | | | | | | | | | | | | | C | 0 |
| 1 | MR3.1 | Yes | Sustainable Materials: Recycled content 10% | Required | | | | | | | | | | | | | | A | 0 |
| 1 | MR3.2 | Yes | Sustainable Materials: Recycled content 20% | Priority 2 | | | | | | | | | | | | | | A | 0 |
| 3 | MR3.3 | Yes | Sustainable Materials: Tennessee Produced Materials (non-wood) - Harvested AND manufactured in state - 10% of total cost. Harvested OR manufactured in TN, 50% of product cost contributes to credit. | Priority 2 | | | | | | | | | | | | | | A | 0 |
| 3 | MR3.4 | Yes | Sustainable Materials: Tennessee Produced Wood Products -Wood materials harvested AND manufactured in state - 50% of wood products. When harvested OR manufactured in state, 50% of material cost contributes to credit. | Priority 2 | | | | | | | | | | | | | | A | 0 |
| 1 | MR3.5 | Yes | Sustainable Materials: Regional materials - 20% | Priority 2 | | | | | | | | | | | | | | A | 0 |
| 1 | MR3.6 | Yes | Sustainable Materials: Material reuse | Priority 2 | | | | | | | | | | | | | | A | 0 |
| 1 | MR3.7 | No | Sustainable Materials: Rapidly renewables | Priority 2 | | | | | | | | | | | | | | A | 0 |
| 19 Points | | | Indoor Environmental Quality | EQ Total: | 0 | 0 | 19 | 0 | 0 | 19 | 0 | 0 | 19 | 0 | 0 | 19 | Primary Credit Responsibility | | |
| Possible Points | Credit ID | Applicable to Building/Site Scope? | Description | Level: | Yes | M a y b e | No | Yes | M a y b e | No | Yes | M a y b e | No | Yes | M a y b e | No | Comment: Describe implementation approach for each pursued credit. If credits are not pursued, provide justification. | Role | Initials |
| 1 | EQ1.1 | Yes | Tobacco Smoke Control | Required | | | | | | | | | | | | | | O | 0 |
| 1 | EQ2.1 | No | Minimum Ventilation: Design to meet ASHRAE 62.1-2007 or 2012 IMC | Required | | | | | | | | | | | | | | ME | 0 |
| 1 | EQ3.1 | No | Outdoor Air Delivery Monitoring: Provide a direct outdoor airflow measurement device | Priority 2 | | | | | | | | | | | | | | ME | 0 |
| 1 | EQ4.1 | No | CO2 Monitoring: Provide CO2 monitors in all high occupancy areas | Priority 2 | | | | | | | | | | | | | | ME | 0 |
| 1 | EQ5.1 | Yes | Air Quality Management: During construction | Priority 1 | | | | | | | | | | | | | | C | 0 |
| 1 | EQ5.2 | No | Air Quality Management: Before occupancy | Priority 2 | | | | | | | | | | | | | | C | 0 |
| 1 | EQ6.1 | Yes | Material VOC Limits: Adhesives and sealants | Required | | | | | | | | | | | | | | A | 0 |
| 1 | EQ6.2 | Yes | Material VOC Limits: Paints | Required | | | | | | | | | | | | | | A | 0 |
| 1 | EQ6.3 | Yes | Material VOC Limits: Coatings and anti-corrosive paints | Required | | | | | | | | | | | | | | A | 0 |
| 1 | EQ6.4 | No | Material VOC Limits: Flooring systems | Required | | | | | | | | | | | | | | A | 0 |
| 1 | EQ6.5 | Yes | Material VOC Limits: Composite wood and agrifiber | Required | | | | | | | | | | | | | | A | 0 |
| 1 | EQ7.1 | No | Pollutant Control: Entryway systems | Priority 1 | | | | | | | | | | | | | | A | 0 |
| 1 | EQ7.2 | No | Pollutant Control: Hazardous material storage | Required | | | | | | | | | | | | | | A | 0 |
| 1 | EQ7.3 | No | Pollutant Control: Filtration media | Priority 1 | | | | | | | | | | | | | | ME | 0 |
| 1 | EQ8.1 | No | Thermal Comfort: Design to meet ASHRAE Standard 55-2004 | Required | | | | | | | | | | | | | | ME | 0 |

High Performance Building Requirements CHECKLIST / TRACKING FORM

| Phase | Targeted Points |
|----------------|-----------------|
| Applicable | 52 |
| Minimum | 26 |
| Not Applicable | 44 |
| Programming | 0 |
| SD | 0 |
| DD | 0 |
| CD | 0 |
| Closeout | 0 |

SBC Number: _____
 Project Name: **John Sevier Exterior Renovation**
 Date: **11/9/2015**
 Project Type: **Renovation/Maintenance**
 Project Phase: **Programming**
 Category from Applicability Tree: **Category B**

Project Team Representatives

Initials

| | | | |
|-------|---|---------------------|--|
| O | - | Owner | |
| C | - | Contractor | |
| ME | - | Mechanical Engineer | |
| EE | - | Electrical Engineer | |
| CE | - | Civil Engineer | |
| A | - | Architect | |
| Other | - | Other | |

| | | | | Programming | | SD | | DD | | CD | | Closeout | | | | | | | |
|-------------------------|-----------|------------------------------------|--|------------------|----------|-----------|------------|----------|-----------|------------|----------|-----------|------------|----------|--------------------------------------|------------|---|-------|----------|
| Checklist Total | | | | 0 | 0 | 104 | 0 | 0 | 104 | 0 | 0 | 104 | 0 | 0 | 104 | | | | |
| 1 | EQ9.1 | No | Individual Occupant System Controls: Lighting | Priority 1 | | 1 | | 1 | | 1 | | 1 | | 1 | EE | 0 | | | |
| 1 | EQ9.2 | No | Individual Occupant System Controls: Thermal comfort | Priority 2 | | 1 | | 1 | | 1 | | 1 | | 1 | ME | 0 | | | |
| 1 | EQ10.1 | No | Daylight to Occupied spaces | Priority 1 | | 1 | | 1 | | 1 | | 1 | | 1 | A | 0 | | | |
| 1 | EQ11.1 | No | Views from Occupied spaces | Priority 1 | | 1 | | 1 | | 1 | | 1 | | 1 | A | 0 | | | |
| 5 Points | | | | ID Total: | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 5 | 0 | 5 | Primary Credit Responsibility | | | | |
| Possible Points | Credit ID | Applicable to Building/Site Scope? | Description | Level: | Yes | M a y b e | No | Yes | M a y b e | No | Yes | M a y b e | No | Yes | M a y b e | No | Comment: Describe implementation approach for each pursued credit. If credits are not pursued, provide justification. | Role | Initials |
| 1 | ID1.1 | Yes | Innovation in Design: Provide Specific Title | Priority 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | Other | 0 |
| 1 | ID1.2 | Yes | Innovation in Design: Provide Specific Title | Priority 2 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | Other | 0 |
| 1 | ID1.3 | Yes | Innovation in Design: Provide Specific Title | Priority 2 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | Other | 0 |
| 1 | ID1.4 | Yes | Innovation in Design: Provide Specific Title | Priority 2 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | Other | 0 |
| 1 | ID2.1 | Yes | Environmentally Accredited Design Team | Priority 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | 1 | | Other | 0 |
| Checklist Total: | | | | | 0 | 0 | 104 | 0 | 0 | 104 | 0 | 0 | 104 | 0 | 0 | 104 | | | |

Credit Verification Form

Phase: Programming

HPBr Points Required

26

TN High Performance Building Requirements

In accordance with the State Architect's office, a copy of this form must be submitted at the end of each project phase and accompany required Project Closeout documents. Acceptance by the State Project Manager is required upon review of completed Credit Verification Form.

HPBr Points Achieved

0

| Designated Project Team Member | Initials | Team Member Name | Date |
|--------------------------------|----------|--|------|
| Owner: | 0 | [sign/type team member name as verification that initialed credits are COMPLETE] | |
| Contractor: | 0 | [sign/type team member name as verification that initialed credits are COMPLETE] | |
| Mech. Eng.: | 0 | [sign/type team member name as verification that initialed credits are COMPLETE] | |
| Elec. Eng.: | 0 | [sign/type team member name as verification that initialed credits are COMPLETE] | |
| Civil Eng.: | 0 | [sign/type team member name as verification that initialed credits are COMPLETE] | |
| Architect: | 0 | [sign/type team member name as verification that initialed credits are COMPLETE] | |
| Other: | 0 | [sign/type team member name as verification that initialed credits are COMPLETE] | |

| # Points | Credit ID | Description | Credit Level: | Sign-Off (linked from HPBr Checklist) |
|----------|-----------|--|---------------|--|
| 0 | | Land Management | | |
| 0 | LM1.1 | Site Selection - Reuse Existing Buildings | Priority 2 | N/A |
| 0 | LM1.2 | Site Selection - Show preference for building on developed sites: Preserve farmland/habitat, wetlands, floodplains, public parkland | Priority 1 | N/A |
| 0 | LM1.3 | Site Selection - Brownfield Redevelopment - Remediate and Restore contaminated sites when possible | Priority 2 | N/A |
| 0 | LM1.4 | Site Selection - Urban Development - Locate building within existing infrastructure | Priority 1 | N/A |
| 0 | LM2.1 | Site Disturbance - Sediment and Erosion control during construction | Required | N/A |
| 0 | LM2.2 | Site Disturbance - Limit site disturbance during construction to minimum development footprint | Priority 1 | N/A |
| 0 | LM3.1 | Transportation - Plan for access to public transportation | Priority 2 | N/A |
| 0 | LM3.2 | Transportation - Provide bicycle storage for 5% of building occupants and shower/changing facilities for 0.5% of FTE occupants | Priority 2 | N/A |
| 0 | LM3.3 | Transportation - Plan site to include preferred parking for carpooling for 5% of all spaces provided | Priority 2 | N/A |
| 0 | LM3.4 | Transportation - Plan site to include preferred parking for low-emitting/fuel efficient vehicles for 5% of all spaces provided | Priority 2 | N/A |
| 0 | LM4.1 | Landscape Design - Maximize vegetated open space | Priority 2 | N/A |
| 0 | LM4.2 | Landscape Design - Native and drought tolerant planting | Required | N/A |
| 0 | LM5.1 | Heat Island Reduction - Non roof surface reflectivity and shading | Priority 1 | N/A |
| 0 | LM5.2 | Heat Island Reduction - Reflective roof materials | Priority 2 | N/A |
| 0 | LM6.1 | Stormwater Design - Post development discharge rate and volume not to exceed Pre-development rate | Required | N/A |
| 0 | LM6.2 | Stormwater Design - Reduce discharge rate and volume 25% on previously developed sites. | Priority 2 | N/A |
| 0 | LM6.3 | Stormwater Design - Design to remove 80% Total Suspended solids from the average annual rainfall event. Verify local requirements. | Priority 1 | N/A |
| 0 | LM6.4 | Stormwater Design - Design per TDEC BMP References | Required | N/A |
| 0 | LM7.1 | Exterior Site Lighting - Design exterior lighting power to be 20% less than is allowed by ASHRAE 90.1-2007 | Priority 2 | N/A |
| 0 | LM7.2 | Exterior Site Lighting - Locate fixtures to minimize illuminance above the horizontal plane | Priority 1 | N/A |
| 0 | LM7.3 | Exterior Site Lighting - Locate exterior fixtures to minimize light trespass at property lines. Document foot-candle levels at site boundary | Priority 1 | N/A |

Credit Verification Form

Phase: **Programming**

| HPBr Points Required | | TN High Performance Building Requirements | | | HPBr Points Achieved |
|-----------------------------|-----------|---|--------------|-----------------------------------|-----------------------------|
| 26 | | In accordance with the State Architect's office, a copy of this form must be submitted at the end of each project phase and accompany required Project Closeout documents. Acceptance by the State Project Manager is required upon review of completed Credit Verification Form. | | | 0 |
| 0 | | Water Efficiency | | | |
| # Points | Credit ID | Description | Credit Level | Sign-Off (from HPBr Checklist) | |
| 0 | WE1.1 | Water Efficient Landscaping, Utilize efficient irrigation technologies and planting measures | Required | N/A | |
| 0 | WE1.2 | Water Efficient Landscaping, Non potable sources or no irrigation | Priority 1 | N/A | |
| 0 | WE2.1 | Wastewater Treatment & Conveyance: On site treatment | Priority 2 | N/A | |
| 0 | WE2.2 | Wastewater Treatment & Conveyance: Utilize non potable water | Priority 2 | N/A | |
| 0 | WE3.1 | Water Use Reduction - Fixture flow and flush rates | Required | N/A | |
| 0 | WE3.2 | Water Use Reduction - Utilize auto-flow / auto-flush valves | Priority 2 | N/A | |
| 0 | | Energy Efficiency | | | |
| # Points | Credit ID | Description | Credit Level | Sign-Off (from HPBr Checklist) | |
| 0 | EE1.1 | Commissioning - Basic commissioning process | Required | N/A | |
| 0 | EE1.2 | Commissioning - Advanced commissioning process | Priority 1 | N/A | |
| 0 | EE2.1 | Energy Efficient Purchasing Policy - Energy Star qualified appliances & equipment | Required | N/A | |
| 0 | EE3.1 | Energy Efficiency - Schematic Design energy modeling | Required | N/A | |
| 0 | EE3.2 | Energy Efficiency - Life Cycle Cost Analysis | Priority 1 | N/A | |
| 0 | EE3.3 | Minimum Energy Performance - all projects to demonstrate compliance with ASHRAE 90.1-2010, according to project scope | Required | N/A | |
| 0 | EE3.4 | Improved Energy Performance - energy model is used during design, and final design demonstrates energy cost savings that exceed those required by the Minimum Energy | Priority 1 | N/A | |
| 0 | EE4.1 | Energy Efficiency in Existing Buildings - Lighting Power Reduction | Priority 1 | N/A | |
| 0 | EE4.2 | Energy Efficiency in Existing Buildings - Daylight Harvesting Controls | Priority 1 | N/A | |
| 0 | EE4.3 | Energy Efficiency in Existing Buildings - Occupancy sensor-controlled lighting | Priority 1 | N/A | |
| 0 | EE4.4 | Energy Efficiency in Existing Buildings - High efficiency HVAC Equipment | Priority 1 | N/A | |
| 0 | EE5.1 | Energy Metering, Monitoring and Reporting: Building-Level Metering | Priority 1 | N/A | |
| 0 | EE5.2 | Energy Metering, Monitoring and Reporting: System level energy metering with measurement and verification - New Construction | Priority 1 | N/A | |
| 0 | EE5.3 | Energy Metering, Monitoring and Reporting: System level energy metering with measurement and verification - Existing Buildings | Priority 1 | N/A | |
| 0 | EE6.1 | Long-Term Energy Reporting - Maintain energy and water consumption data in Energy Star Portfolio Manager | Priority 1 | N/A | |
| 0 | EE7.1 | Renewable Energy - Investigate life-cycle cost effectiveness of on-site renewable energy | Priority 1 | N/A | |
| 0 | EE7.2 | Renewable Energy - Provide Renewable Energy Credits (RECs) equal to 10% of annual site electricity through TVA or RECs equal to 35% from another source | Priority 2 | N/A | |

Credit Verification Form

Phase: **Programming**

| | | |
|--|---|---|
| HPBr Points Required 26 | TN High Performance Building Requirements In accordance with the State Architect's office, a copy of this form must be submitted at the end of each project phase and accompany required Project Closeout documents. Acceptance by the State Project Manager is required upon review of completed Credit Verification Form. | HPBr Points Achieved 0 |
|--|---|---|

| | | Materials and Resources | | |
|----------|-----------|--|--------------|-----------------------------------|
| # Points | Credit ID | Description | Credit Level | Sign-Off (from HPBr Checklist) |
| 0 | MR1.1 | Recycling Storage and Collection | Required | N/A |
| 0 | MR2.1 | Construction Waste Management (50%, 75%, 95%) | Priority 1 | N/A |
| 0 | MR3.1 | Sustainable Materials: Recycled content 10% | Required | N/A |
| 0 | MR3.2 | Sustainable Materials: Recycled content 20% | Priority 2 | N/A |
| 0 | MR3.3 | Sustainable Materials: Tennessee Produced Materials (non-wood) - Harvested AND manufactured in state - 10% of total cost. Harvested OR manufactured in TN, 50% of | Priority 2 | N/A |
| 0 | MR3.4 | Sustainable Materials: Tennessee Produced Wood Products -Wood material harvested AND manufactured in state - 50% of wood products. When harvested OR manufactured in | Priority 2 | N/A |
| 0 | MR3.5 | Sustainable Materials: Regional materials - 20% | Priority 2 | N/A |
| 0 | MR3.6 | Sustainable Materials: Material reuse | Priority 2 | N/A |
| 0 | MR3.7 | Sustainable Materials: Rapidly renewables | Priority 2 | N/A |
| 0 | | Indoor Environmental Quality | | |
| # Points | Credit ID | Description | Credit Level | Sign-Off (from HPBr Checklist) |
| 0 | EQ1.1 | Tobacco Smoke Control | Required | N/A |
| 0 | EQ2.1 | Minimum Ventilation: Design to meet ASHRAE 62.1-2007 or 2012 IMC | Required | N/A |
| 0 | EQ3.1 | Outdoor Air Delivery Monitoring: Provide a direct outdoor airflow measurement device | Priority 2 | N/A |
| 0 | EQ4.1 | CO2 Monitoring: Provide CO2 monitors in all high occupancy areas | Priority 2 | N/A |
| 0 | EQ5.1 | Air Quality Management: During construction | Priority 1 | N/A |
| 0 | EQ5.2 | Air Quality Management: Before occupancy | Priority 2 | N/A |
| 0 | EQ6.1 | Material VOC Limits: Adhesives and sealants | Required | N/A |
| 0 | EQ6.2 | Material VOC Limits: Paints | Required | N/A |
| 0 | EQ6.3 | Material VOC Limits: Coatings and anti-corrosive paints | Required | N/A |
| 0 | EQ6.4 | Material VOC Limits: Flooring systems | Required | N/A |
| 0 | EQ6.5 | Material VOC Limits: Composite wood and agrifiber | Required | N/A |
| 0 | EQ7.1 | Pollutant Control: Entryway systems | Priority 1 | N/A |
| 0 | EQ7.2 | Pollutant Control: Hazardous material storage | Required | N/A |
| 0 | EQ7.3 | Pollutant Control: Filtration media | Priority 1 | N/A |
| 0 | EQ8.1 | Thermal Comfort: Design to meet ASHRAE Standard 55-2004 | Required | N/A |
| 0 | EQ9.1 | Individual Occupant System Controls: Lighting | Priority 1 | N/A |
| 0 | EQ9.2 | Individual Occupant System Controls: Thermal comfort | Priority 2 | N/A |
| 0 | EQ10.1 | Daylight to Occupied spaces | Priority 1 | N/A |
| 0 | EQ11.1 | Views from Occupied spaces | Priority 1 | N/A |

Credit Verification Form

Phase: **Programming**

| | | | | |
|---|--|--|---------------------|---|
| HPBr Points Required 26 | <h3 style="margin: 0;">TN High Performance Building Requirements</h3> <p style="font-size: 10pt; margin: 0;">In accordance with the State Architect's office, a copy of this form must be submitted at the end of each project phase and accompany required Project Closeout documents. Acceptance by the State Project Manager is required upon review of completed Credit Verification Form.</p> | HPBr Points Achieved 0 | | |
| 0 | Innovation in Design and Construction | | | |
| # Points | Credit ID | Description | Credit Level | Sign-Off <small>(from HPBr Checklist)</small> |
| 0 | ID1.1 | Innovation in Design: Provide Specific Title | Priority 1 | N/A |
| 0 | ID1.2 | Innovation in Design: Provide Specific Title | Priority 2 | N/A |
| 0 | ID1.3 | Innovation in Design: Provide Specific Title | Priority 2 | N/A |
| 0 | ID1.4 | Innovation in Design: Provide Specific Title | Priority 2 | N/A |
| 0 | ID2.1 | Environmentally Accredited Design Team | Priority 1 | N/A |
| 0 | Total HPBr Points Achieved by Project | | | |

One-Time Completion Form

TN High Performance Building Requirements

**If a project has 5 (five) or fewer credits applicable to the project scope, this form may be used, signed, and filed (for future audit) by the Owner at the end of the Programming Phase. No further Credit Verification forms will need to be submitted.

| | | | |
|---|---|---|--|
| Owner's Organization: | | | |
| Owner Name: | | | |
| Date: | | | |
| SBC Number: | | | |
| Project Name: | | | |
| Project Scope/Description: | | | |
| Number of Applicable Credits: (If there are no applicable credits, use Statement B) | | | |
| Statement A: | | <p>After a complete and thorough review of the Tennessee High Performance Building Requirements Manual and Checklist, and in accordance with the Tennessee Code Annotated (TCA), the Owner has determined that there are between 5 (five) and 1 (one) Credits applicable to the scope of the examined project.</p> <p>The Project Team hereby commits to incorporating these selected Credits throughout the design and construction process and delivering a final product that is in full compliance with their requirements.</p> | |
| | | Credit Reference Number and Name | |
| List Applicable Credits: | 1 | | |
| | 2 | | |
| | 3 | | |
| | 4 | | |
| | 5 | | |
| Statement B: | | <p>After a complete and thorough review of the Tennessee High Performance Building Requirements Manual and Checklist, and in accordance with the Tennessee Code Annotated (TCA), The Owner has determined that there are 0 (zero) credits applicable to the scope of the examined project.</p> | |
| Commit to Statement A or B: (Indicate which option is applicable) | | | |
| Owner's Signature: (Required for A and B) | | Date: | |
| Designer's Signature: (Required for A only) | | Date: | |
| Contractor's Signature: (Required for A only) | | Date: | |

Materials and Resources Calculator

TN HPBr Appendix B

Instructions

Complete the table below with construction materials items, their associated costs, and percent by weight or volume of recycled content (pre and post-consumer).

Materials Table

| Description of Material | Total Construction Cost | Labor Cost | Equipment Cost | Material Cost (Less Labor & Equipment) | Resource Reuse (MR3.6) | Recycled Content (MR3.1 & MR3.2) | | | Rapidly Renewable Materials (MR3.7) | Regional Materials (MR3.5) | | Tennessee Produced Materials | | | | | |
|----------------------------------|-------------------------|------------|----------------|--|------------------------|----------------------------------|---------------|-----------|-------------------------------------|----------------------------|-------|------------------------------|----------------------------|---------------------------|------------------------|----------------------------|---------------------------|
| | | | | | | Post-Consumer | Pre-Consumer | Net Value | | Regional Materials | Value | Non-wood Materials (MR3.3) | | | Wood Materials (MR3.4) | | |
| | | | | | | | | | | | | Non-wood Materials | Harvested AND Manuf. in TN | Harvested OR Manuf. in TN | Value | Harvested AND Manuf. in TN | Harvested OR Manuf. in TN |
| Division | [\$] | [\$] | [\$] | [\$] | [\$] | [%] by weight | [%] by weight | [\$] | [\$] | [\$] | [%] | [%] | [%] | [\$] | [%] | [%] | [\$] |
| 03 CONCRETE | | | | 0 | 0 | | | 0 | | 0 | | | | 0 | | | 0 |
| 04 MASONRY | | | | 0 | | | | 0 | | 0 | | | | 0 | | | 0 |
| 05 METALS | | | | 0 | | | | 0 | | 0 | | | | 0 | | | 0 |
| 06 WOOD, PLASTICS & COMPOSITES | | | | 0 | | | | 0 | | 0 | | | | 0 | | | 0 |
| 07 THERMAL / MOISTURE PROTECTION | | | | 0 | | | | 0 | | 0 | | | | 0 | | | 0 |
| 08 DOORS & WINDOWS (OPENINGS) | | | | 0 | | | | 0 | | 0 | | | | 0 | | | 0 |
| 09 FINISHES | | | | 0 | | | | 0 | | 0 | | | | 0 | | | 0 |
| 10 SPECIALTIES | | | | 0 | | | | 0 | | 0 | | | | 0 | | | 0 |
| TOTAL | \$0 | \$0 | \$0 | \$0 | \$0 | | | \$0 | \$0 | \$0 | | | | \$0 | | | \$0 |

Points

- Percentage of Recycled Content (MR3.1 & MR3.2)
- Percentage of Tennessee Non-wood Materials (MR3.3)
- Percentage of Tennessee Wood Materials (MR3.4)
- Percentage of Regional Materials (MR3.5)
- Resource Reuse Percentage (MR3.6)
- Rapidly Renewable Materials Percentage (MR3.7)

0% 0
 0% 0
 0% 0
 0% 0
 0% 0
 0% 0

Daylight and Views Calculator

TN HPBr Appendix B

Requirements

Daylight: Achieve a minimum Daylight Factor of **2%** (excluding all direct sunlight penetration) in **75%** of all space occupied for critical visual tasks, not including copy rooms, storage areas, mechanical, laundry, and other low occupancy support areas. Exceptions include those spaces where tasks would be hindered by the use of daylight or where accomplishing the specific tasks within a space would be enhanced by the direct penetration of sunlight.

Daylit Area: The total floor area that meets the performance requirements for daylighting

Glare Control: Device or control method used to reduce excessively bright sources of light within the visual field that creates discomfort or loss in visibility.

Glazing Area: The entire area taken up by transparent light-transmitting glazing surfaces for the room. The area includes only the rough opening and excludes the frame, sash, and other non-glazed components.

Glazing Factor: The ratio of interior illuminance at a given point on a given plane (usually the work plane) to the exterior illuminance under known overcast sky conditions. LEED uses a simplified approach for its credit compliance calculations. The variables used to determine the daylight factor include the floor area, window area, window geometry, visible transmittance (T_{vis}) and window height.

Views: Direct line of sight to vision glazing from **90%** of all regularly occupied spaces, not including copy rooms, storage areas, mechanical, laundry, and other low occupancy support areas.

Window Geometry: Description of the window types in the room. The ratio is determined by the Window Geometry table.

Instructions

Note: Orange-colored cells are to be completed by Design Team.

1. First, list all regularly-occupied rooms and their associated square footages. Add rows by the Insert/Rows command between the existing rows. For each room, list each window geometry and the associated glazing area, transmittance, and window height factor. Window areas of the same geometry in the same room may be added together. The calculation may require substantial modification to fit a particular project; therefore, refer to the intent of the credit when modifying the spreadsheet. See the High Performance Building Requirements Manual (HPBr) for more information on how to determine access to views. Finally, designate the glare control used for each window geometry using the corresponding letter or letters from the Glare Control Chart. The table automatically calculates the daylight factor for each room.

2. Compare the amount of daylit area to the requirement listed above to determine if the project can qualify for the credit.

3. Using the drawings, highlight those areas in each room from which a direct line of sight through a clear glazed window (mounted on the vertical wall plane) is possible. Consider any obstruction by the wall thickness when figuring views at oblique angles. Window areas below 2'6" and above 7'6" (including daylight glazing, skylights, and roof monitors) do not qualify for the credit. Visually compare the highlighted areas of each room. In rooms that appear close to the required 90%, measure the area highlighted and compare this to the total square footage of that room. For those rooms that reach 90%, insert the TOTAL square footage for the room in Column L. When determining eligible rooms, consider any planned or anticipated tenant improvement permanent walls that will be in place for initial occupancy.

4. Compare the amount of area with sufficient views to the HPB requirement listed above to determine if the project can qualify for the credit.

Daylight and Views Calculator

TN HPBr Appendix B

Glare Control Chart

| Type | Description |
|------|--------------------------------|
| 1 | Fixed exterior shading devices |
| 2 | Light shelf, exterior |
| 3 | Light shelf, interior |
| 4 | Interior blinds |
| 5 | Pull-down shades |
| 6 | Fritted glazing |
| 7 | Drapes |
| 8 | Electronic black-out glazing |

Window Geometry Table

| Window Type | Geometry Factor | Minimum Tvis | Height Factor | Best Practice Glare Control |
|---|-----------------|--------------|---------------|---|
|  Sidelighting Daylight Glazing | 0.1 | 0.7 | 1.4 | Adjustable Blinds Interior light shelves Fixed translucent exterior shading devices |
|  Sidelighting Vision Glazing | 0.1 | 0.4 | 0.8 | Adjustable Blinds Exterior shading devices |
|  Toplighting Vertical Monitor | 0.2 | 0.4 | 1.0 | Fixed interior Adjustable exterior blinds |
|  Toplighting Sawtooth Monitor | 0.33 | 0.4 | 1.0 | Fixed interior Exterior louvers |
|  Toplighting Horizontal Skylights | 0.5 | 0.4 | 1.0 | Interior fins Exterior fins Louvers |

Daylighting and Views Calculator

| Room | Floor Area [SF] | Glazing Area [SF] | Window Geometry | | Transmittance (Tvis) | | Window Height Factor | Daylight Factor | | Daylit Area [SF] | Views [SF] | Glare Control |
|------|--------------------|----------------------|-----------------|--------|----------------------|-----|-------------------------|-----------------|------|---------------------|---------------|---------------|
| | | | Type | Factor | Actual | Min | | Each | Room | | | |
| 1 | | 0 | Horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | 0.0% | 0 | | |
| | | | Horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | | | | |
| | | | Horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | | | | |
| 2 | | 0 | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | 0.0% | 0 | | |
| | | | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | | | | |
| | | | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | | | | |
| 3 | | 0 | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | 0.0% | 0 | | |
| | | | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | | | | |
| | | | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | | | | |
| 4 | | 0 | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | 0.0% | 0 | | |
| | | | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | | | | |
| | | | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | | | | |
| 5 | | 0 | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | 0.0% | 0 | | |
| | | | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | | | | |
| | | | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | | | | |
| 6 | | 0 | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | 0.0% | 0 | | |
| | | | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | | | | |
| | | | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | | | | |
| 7 | | 0 | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | 0.0% | 0 | | |
| | | | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | | | | |
| | | | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | | | | |
| 8 | | 0 | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | 0.0% | 0 | | |
| | | | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | | | | |
| | | | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | | | | |
| 9 | | 0 | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | 0.0% | 0 | | |
| | | | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | | | | |
| | | | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | | | | |
| 10 | | 0 | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | 0.0% | 0 | | |
| | | | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | | | | |
| | | | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | | | | |
| 11 | | 0 | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | 0.0% | 0 | | |
| | | | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | | | | |
| | | | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | | | | |

| Room | Floor Area [SF] | Glazing Area [SF] | Window Geometry | | Transmittance (T _{vis}) | | Window Height Factor | Daylight Factor | | Daylit Area [SF] | Views [SF] | Glare Control |
|--------------|--------------------|----------------------|-----------------|--------|-----------------------------------|-----|-------------------------|-----------------|------|---------------------|---------------|---------------|
| | | | Type | Factor | Actual | Min | | Each | Room | | | |
| | | 0 | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | | | | |
| 12 | | 0 | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | 0.0% | 0 | | |
| | | 0 | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | | | | |
| | | 0 | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | | | | |
| 13 | | 0 | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | 0.0% | 0 | | |
| | | 0 | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | | | | |
| | | 0 | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | | | | |
| 14 | | 0 | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | 0.0% | 0 | | |
| | | 0 | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | | | | |
| | | 0 | horizontal | 0.5 | | 0.4 | 1.0 | 0.0% | | | | |
| TOTAL | 0 | | | | | | | | | 0 | 0 | |

| | |
|--|-----------|
| % Occupied Area meeting Daylight Requirements | 0% |
| Percentage of Occupied Area with Sufficient Views | 0% |