

# Exhibit B - A/E Scope of Services (CM Adviser Project)

## State of Ohio Professional Services Agreements for Public Facility Construction

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### ARTICLE 1 - BASIC SERVICES

#### 1.1 General

1.1.1 Basic Services to be provided by the A/E shall consist of the activities and stages set forth in **Article 2** through **Article 8**, inclusive, and include usual and customary normal architectural, civil, structural, mechanical, electrical, and landscape design and engineering services for the Project, any necessary signage and graphics, and any services necessary to comply with the ORC Section 3379.10 Percent for Arts Program.

#### 1.2 Sustainability Requirements

1.2.1 This Project shall be designed and constructed in accordance with the requirements of Am. Sub. H.B. 251 of the 126<sup>th</sup> General Assembly and the resulting rules, policies, and procedures adopted by the Commission establishing Sustainability Requirements for Capital Improvements Projects, including applicable provisions of OAC Section 3318-3-:

1.2.21.2.1.1 The A/E, assisted by the CM, shall incorporate cost-effective, energy-efficient, green-building practices to the maximum extent possible into the Project.

1.2.1.2 If the Owner is an agency of the state of Ohio, the A/E shall design new construction so that fossil-fuel, greenhouse gas emitting, energy consumption of the facility is reduced by 65 percent, as compared to the regional average for that building type as evidenced by the U.S. Environmental Protection Agency's Target Finder calculator.

1.2.1.3 If the Owner is an agency of the state of Ohio, the A/E shall design renovations so that fossil-fuel, greenhouse gas emitting, energy consumption of the facility is reduced by 50 percent, as compared to the regional average for that building type as evidenced by the U.S. Environmental Protection Agency's Target Finder calculator.

1.2.1.4 The Owner may apply to the Commission for a waiver of compliance with the requirements of Section 1.2.1.2 and/or Section 1.2.1.3.

#### 1.3 Qualifications-Based Selection of Construction Manager

1.3.1 To the extent the Contracting Authority requests, the A/E shall assist the Contracting Authority with the selection of the CM if the A/E is selected before the CM.

#### 1.4 Consultation

1.4.1 The A/E and CM shall jointly schedule and attend regular meetings with the Contracting Authority and Owner. The A/E shall consult with the Contracting Authority, Owner, and CM regarding Site use and improvements and the selection of materials, building systems, and equipment. The A/E shall give due consideration to the CM's recommendations to the Contracting Authority, Owner, and A/E on construction feasibility; actions designed to minimize adverse effects of labor or material shortages; time requirements for procurement, installation and construction completion; and factors related to construction cost, including estimates of alternative designs or materials, budgets and possible economies of scale.

**1.4.2** At all appropriate times throughout performance of the Services, the A/E shall contact, meet, consult, and otherwise coordinate with the Contracting Authority, Owner, CM, governmental authorities with jurisdiction over the Project, and others for the purpose of facilitating the Project's design and construction.

## **1.5 Design Schedule**

**1.5.1** Within 10 days after execution of this Agreement, or other period agreed by the A/E and Contracting Authority, the A/E shall submit, for approval by the Contracting Authority and Owner, a Design Schedule for performance of the A/E's Services.

**1.5.2** The Design Schedule shall include allowances for reasonable periods required for the review and approval of items by the Contracting Authority and Owner, and for approvals of governmental authorities that have jurisdiction over the Project.

**1.5.3** Unless the Contracting Authority or Owner notify the A/E of objections to the Design Schedule within 30 days of receipt thereof, the Contracting Authority and Owner shall be deemed to have approved the Design Schedule.

**1.5.4** The A/E shall coordinate the Design Schedule with the Project Schedule.

**1.5.5** The A/E shall not exceed or adjust the Design Schedule after its initial approval without the prior written consent of the Contracting Authority and Owner.

**1.5.6** The A/E shall perform its Services in a timely manner consistent with the Project Schedule.

## **ARTICLE 2 - PROGRAM VERIFICATION ~~STAGE~~**

### **2.1 Commencement**

**2.1.1** The A/E's Services will begin on the date set forth in a notice that the Contracting Authority will issue to the A/E ("Notice to Commence Services").

### **2.2 Organizational Meeting**

**2.2.1** Unless the Contracting Authority agrees otherwise in writing, the A/E's Services will begin with an organizational meeting between the Contracting Authority, Owner, A/E, and CM. All of the A/E's key personnel involved in the Project shall attend the organizational meeting.

**2.2.2** During the organizational meeting, the attendees will:

**2.2.2.1** review the responsibilities of each of the Contracting Authority and the Owner's key personnel involved in the Project;

**2.2.2.2** review the scope of the A/E's Services and the responsibilities of each of the A/E's key personnel involved in the Project;

**2.2.2.3** review the scope of the CM's services and the responsibilities of each of the CM's key personnel involved in the Project;

**2.2.2.4** review and establish lines of communication between the Contracting Authority, Owner, A/E, and CM;

**2.2.2.5** review then-available programming and other documents that reflect the current status of the Project's design;

**2.2.2.6** review and reach agreement on the scope and timing of the A/E's deliverables and other information the CM needs to properly solicit Bids for the Work; and

**2.2.2.7** review and reach agreement on timing and sequencing requirements for the A/E and CM's deliverables and related review and revision periods.

**2.2.3** If the CM has not submitted a proposed Project Schedule to the Contracting Authority, Owner, and A/E before the organizational meeting or if the organizational meeting resulted in changes to a previously submitted Project Schedule, within 5 days after the organizational meeting is adjourned, the CM will submit a proposed or revised Project Schedule to the Contracting Authority, Owner, and A/E.

**2.2.3.1** The Contracting Authority, Owner, A/E, and CM will promptly thereafter consult with one another as necessary to reach agreement on the Project Schedule, which shall be used as the basis for moving forward with the Project subject to revision.

**2.2.3.2** The A/E shall align the Design Schedule with the agreed-upon Project Schedule.

**2.2.4** Within 5 days after the organizational meeting is adjourned, the CM will prepare and distribute the meeting's minutes.

**2.2.4.1** If the Project is administered using the State's web-based project management software, the A/E shall receive the minutes of the organizational meeting from the CM through the "Meeting Minutes" business process.

## 2.3 General Requirements

**2.3.1** In addition to performing those Services required to comply with **Sections 2.4** through **2.7**, during the Program Verification Stage, the A/E shall:

**2.3.1.1** review the preliminary Project needs, design, schedule, and budget information furnished by the Contracting Authority and Owner to ascertain the requirements of the Project and arrive at a mutual understanding of the Project's preliminary requirements with the Contracting Authority, Owner, and CM;

**2.3.1.2** verify Owner-provided drawings and information concerning existing buildings, utilities, and other conditions, and prepare measured drawings of existing conditions when necessary to properly perform the Services;

**2.3.1.3** document and evaluate existing building and utilities systems to be affected during the Project; and

**2.3.1.4** meet with the Contracting Authority to identify and evaluate Program requirements.

## 2.4 A/E's Program Verification Submission

**2.4.1** Based upon a mutual understanding of the Project's preliminary requirements, the A/E shall prepare the Program Documents. The A/E shall submit the provisional Program Documents to the Contracting Authority, Owner, and CM on or before the date identified in the Project Schedule for that submission.

**2.4.2** The provisional Program Documents shall be in the form of a written report, which may include graphics, but shall include:

**2.4.2.1** an executive summary of the Program Documents;

**2.4.2.2** a narrative description of the Project and the design goals;

**2.4.2.3** a description of space requirements, including a listing of desired spaces and identification of each space's basic criteria such as dimensions, proportions, ceiling heights, and service, equipment, storage, utility, access, flexibility, configuration, security, adjacency, aesthetic, and other requirements;

**2.4.2.4** a description of planning and design criteria such as workstation, office/room standards; clustering and layout criteria; circulation criteria; applicable space-planning modules; dimensional criteria; building systems interface criteria; envelope criteria; accessibility requirements; and a description of performance criteria applicable to building components such as envelope, structure, interior construction, and mechanical, electrical, and plumbing systems;

**2.4.2.5** a preliminary estimate of Construction Cost ("A/E's Program Estimate") using area, volume or similar conceptual estimating techniques;

**2.4.2.6** a preliminary evaluation of the Program, Project Schedule, and Construction Budget requirements, each in terms of the other including a description of the distribution of the Construction Budget between major Project components, contingencies, and other categories the Contracting Authority may designate;

**2.4.2.7** preliminary recommendations regarding selection of materials, building systems, and equipment;

**2.4.2.8** a review of feasible alternative approaches to design and construction of the Project, if any, including the estimated budget and schedule impacts of those alternative approaches;

**2.4.2.9** an identification of Applicable Law; and

**2.4.2.10** all other documents and information required under the **Minimum Stage Submission Requirements** attached as an exhibit to the **Agreement Form**.

**2.4.3** If the Project is administered using the State's web-based project management software, the A/E shall submit the provisional Program Documents, and any revisions, through the "Program of Requirements" business process.

## 2.5 Review of Provisional Program Documents

**2.5.1** The CM will review the provisional Program Documents after receiving them. At completion of that review, the CM will provide a written "Opinion of Document Characteristics" to the Contracting Authority and send a copy of the Opinion to the A/E.

**2.5.2** Through that Opinion, the CM will document the CM's opinion of the provisional Program Documents in terms of what the CM would reasonably expect to see in program documents on a similar project. The Contracting Authority's agreement with the CM further defines the criteria of the CM's review.

**2.5.3** If it is the CM's opinion that the provisional Program Documents do not reflect what the CM would reasonably expect to see in program documents on a similar project, the A/E shall immediately meet with the Contracting Authority and the CM to review the Opinion. The Contracting Authority will thereafter determine an appropriate course of action, which may include the A/E's revision and resubmission of its provisional Program Documents under **Section 2.4** and the CM's re-evaluation of them.

## **2.6 CM's Program Verification Stage Submission**

**2.6.1** At the completion of the activities described under **Section 2.5** and based on the provisional Program Documents, the CM will submit its Program Verification Stage Submission, which will include the CM's estimate of Construction Costs ("CM's Program Estimate") using area, volume or similar conceptual estimating techniques.

**2.6.1.1** If the CM's Program Estimate exceeds the Construction Budget or varies from the A/E's Program Estimate by more than 5 percent of that estimate, the Contracting Authority may require the A/E to immediately work with the CM to develop viable proposals to reconcile the estimates with each other and the Construction Budget. The CM will present those proposals as an addendum to its Program Verification Stage Submission.

## **2.7 Program Documents Review**

**2.7.1** After the Contracting Authority and Owner have had a reasonable period to review the provisional Program Documents and the CM's Program Verification Stage Submission, the Contracting Authority, A/E, and CM shall meet to discuss the provisional Program Documents and the Contractor's Program Verification Stage Submission and reach agreement on any Contracting Authority-authorized adjustments to the Project Schedule, Construction Budget, or Project Budget and any necessary clarifications of the provisional Program Documents and CM's Program Verification Stage Submission.

**2.7.2** Unless the Contracting Authority agrees otherwise in writing, within 5 business days after the review meeting, the A/E and CM shall revise their respective Program submissions to reflect the adjustments and clarifications agreed upon in the review meeting, and resubmit those documents to each other, the Owner, and Contracting Authority.

**2.7.3** When the Contracting Authority and Owner approve the revised Program submissions and sign the related Design Review Acceptance form, the revised Program submissions shall become the Approved Program of Requirements.

# **ARTICLE 3 - SCHEMATIC DESIGN ~~STAGE~~**

## **3.1 Commencement**

**3.1.1** Unless the Contracting Authority directs otherwise in writing, the Schematic Design Stage will begin upon completion of the activities described under **Article 2**.

## **3.2 General Requirements**

**3.2.1** In addition to performing those Services required to comply with **Sections 3.3** through **3.7**, during the Schematic Design Stage, the A/E shall:

**3.2.1.1** advise the Contracting Authority, Owner, and CM in writing if at any time it appears that the Project Schedule or Construction Budget may be exceeded and make recommendations for corrective action;

**3.2.1.2** meet with the Contracting Authority, Owner, and CM at intervals acceptable to the Contracting Authority and the Owner, to review drawings and other documents that depict the current status of the Schematic Design Stage of the Project;

**3.2.1.3** further evaluate and refine the Approved Program of Requirements;

**3.2.1.4** identify all issues related to compliance with Applicable Law and participate in related meetings with government authorities that have jurisdiction over the Project;

**3.2.1.5** investigate existing conditions and verify the accuracy of Owner-provided information about existing conditions, as appropriate;

**3.2.1.6** notify the Owner of the need for and assist the Owner in selecting, retaining, and coordinating the professional services of any Separate Consultants required for the Project;

- 3.2.1.7 assist the Owner and CM with filing documents required for the approvals of governmental authorities with jurisdiction over the Project;
- 3.2.1.8 work with the CM to locate new grading, drainage, and Site utilities;
- 3.2.1.9 review and provide recommendations concerning Site use and improvements and alternative approaches to selection of materials, building systems, and equipment; and
- 3.2.1.10 assist the CM with the CM's obligations to provide recommendations on construction feasibility, availability of materials and labor (including actions designed to minimize adverse effects of labor shortages), time requirements for construction, and factors related to Project cost, including costs of alternative designs or materials, preliminary budgets, and possible economies of scale.

### 3.3 Preliminary Life Cycle Cost Analysis

3.3.1 At the time set forth in the Project Schedule, the A/E shall prepare and submit practical alternative three design concepts, considering passive and/or active building components, for the purpose of minimizing future energy consumption, for a preliminary Life Cycle Cost Analysis ("LCCA") and the preliminary LCCA for each concept to the CM.

3.3.1.1 The A/E shall estimate the annual energy consumption and associated energy costs of each alternative, analyze their impact on facility life-cycle costs and incorporate cost effective alternatives into the final design.

3.3.1.2 The A/E shall re-evaluate life cycle cost as additional alternatives are considered during the continuing design development to assure their cost effective implementation.

3.3.1.3 The CM shall promptly review, comment on, and forward the alternative design concepts preliminary LCCAs with the CM's comments to the Owner and Contracting Authority.

3.3.2 The alternative design concepts may include:

3.3.2.1 A baseline alternative, which complies in all aspects with the requirements of the current version of the Ohio Building Code ("OBC"), including the version of ASHRAE/IESNA 90.1 referenced in OBC Chapter 35;

3.3.2.2 A high performance alternative, which demonstrates 20 percent improvement in energy efficiency over the version of ASHRAE/IESNA 90.1 referenced in OBC Chapter 35; and

3.3.2.3 A high performance alternative, which demonstrates 30 percent improvement in energy efficiency over the version of ASHRAE/IESNA 90.1 referenced in OBC Chapter 35, and includes one or more renewable energy sources, such as waste heat recovery, solar energy, wind energy, biomass fuel energy, or geothermal energy.

3.3.3.2 The A/E shall base the Schematic Design Documents on the Owner's selected preliminary design concept.

3.3.3 If the Project constructs or renovates an area 5,000 square feet or more, the A/E, assisted by the CM, shall submit a design to the Commission that incorporates a life cycle cost analysis that shall determine the reasonably expected costs of facility ownership, operation, maintenance, and disposal including labor and materials for the economic life of the facility.

### 3.4 A/E's Schematic Design Submission

3.4.1 At the completion of the Schematic Design Stage, the A/E shall submit the provisional Schematic Design Documents to the Contracting Authority, Owner, and CM.

3.4.2 The provisional Schematic Design Documents shall include:

3.4.2.1 a conceptual site plan and preliminary building plans, sections, and elevations illustrating the Project's scale and the relationship of Project components to one another and the relationship of the Project to surrounding properties;

3.4.2.2 if not noted on the drawings, a written description of preliminary selections of major building systems and construction materials;

3.4.2.3 an estimate of Construction Cost ("A/E's Schematic Design Estimate") using area, volume or similar conceptual estimating techniques;

3.4.2.4 cost evaluations of alternative building systems and construction materials;

3.4.2.5 an identification of any unresolved issues related to compliance with Applicable Law;

3.4.2.6 a written description of all modifications of the Approved Program of Requirements;

**3.4.2.7** if agreed in writing by the Contracting Authority, the A/E will develop study models, perspective sketches, electronic modeling, or combinations of those media; and

**3.4.2.8** all other documents and information required under the **Minimum Stage Submission Requirements** attached as an exhibit to the **Agreement Form**.

**3.4.3** If the Project is administered using the State's web-based project management software, the A/E shall submit the provisional Schematic Design documents, and any revisions, through the "Design Review" business process.

### 3.5 Review of Provisional Schematic Design Documents

**3.5.1** The CM will review the provisional Schematic Design Documents after receiving them. At the completion of that review, the CM will provide a written "Opinion of Document Characteristics" to the Contracting Authority and send a copy of the Opinion to the A/E.

**3.5.2** Through that Opinion, the CM will document the CM's opinion of the provisional Schematic Design Documents in terms of what the CM would reasonably expect to see in schematic design documents on a similar project. The Contracting Authority's agreement with the CM further defines the criteria of the CM's review.

**3.5.3** If it is the CM's opinion that the provisional Schematic Design Documents do not reflect what the CM would reasonably expect to see in schematic design documents on a similar project, the A/E shall immediately meet with the Contracting Authority and CM to discuss the Opinion. The Contracting Authority will thereafter determine an appropriate course of action, which may include the A/E's revision and resubmission of its provisional Schematic Design Documents under **Section 3.3.3** and the CM's re-evaluation of them.

### 3.6 CM's Schematic Design Submission

**3.6.1** At the completion of the activities described under **Section 3.4.3** and based on the provisional Schematic Design Documents, the CM will submit its Schematic Design Stage Submission, which will include the CM's estimate of Construction Costs ("CM's Schematic Design Estimate").

**3.6.1.1** If the CM's Schematic Design Estimate exceeds the Construction Budget or varies from the A/E's Schematic Design Estimate by more than 5 percent of that estimate, the Contracting Authority may require the A/E to immediately work with the CM to develop viable proposals to reconcile the estimates with each other and the Construction Budget. The CM will present those proposals as an addendum to its Schematic Design Stage Submission.

### 3.7 Schematic Design Documents Review

**3.7.1** After the Contracting Authority and Owner have had a reasonable period to review the provisional Schematic Design Documents, the Contracting Authority, A/E, and CM shall meet to discuss the provisional Schematic Design Documents and CM's Schematic Design Stage Submission and to reach agreement on any Contracting Authority-authorized adjustments to the Approved Program of Requirements, Project Schedule, Construction Budget, or Project Budget and any necessary clarifications of the provisional Schematic Design Documents and CM's Schematic Design Stage Submission.

**3.7.2** Unless the Contracting Authority agrees otherwise in writing, within 5 business days after the review meeting, the A/E and CM shall revise their respective Schematic Design submissions to reflect the adjustments and clarifications agreed upon in the review meeting, and resubmit those documents to each other, the Owner, and Contracting Authority.

**3.7.3** When the Contracting Authority and the Owner approve the revised Schematic Design submissions and sign the related Design Review Acceptance form, the revised Schematic Design submissions shall become the final Schematic Design Documents.

## ARTICLE 4 - DESIGN DEVELOPMENT ~~STAGE~~

### 4.1 Commencement

**4.1.1** Unless the Contracting Authority directs otherwise in writing, the Design Development Stage will begin upon completion of the activities described under **Article 3**.

## 4.2 General Requirements

**4.2.1** In addition to performing those Services required to comply with **Sections 1.1** through **4.6**, during the Design Development Stage, the A/E shall:

- 4.2.1.1** advise the Contracting Authority, Owner, and CM in writing if at any time it appears that the Project Schedule or Construction Budget may be exceeded and make recommendations for corrective action;
- 4.2.1.2** meet with the Contracting Authority, Owner, and CM at intervals acceptable to the Contracting Authority and Owner, to review drawings and other documents that depict the current status of the Design Development Stage of the Project;
- 4.2.1.3** further evaluate and refine the Approved Program of Requirements;
- 4.2.1.4** prepare and submit a sole-source justification letter describing any materials, products, or systems included in the Work that are only available from a single manufacturer, supplier, or contractor to the Contracting Authority for its approval in writing;
- 4.2.1.5** resolve all issues related to compliance with Applicable Law (except to the extent stated otherwise in writing by the A/E for necessary variances and waivers at the time of the A/E's provisional Design Development Document submission) and participate in related meetings with government authorities that have jurisdiction over the Project;
- 4.2.1.6** investigate existing conditions and verify the accuracy of Owner-provided information about existing conditions, as appropriate;
- 4.2.1.7** notify the Owner of the need for and assist the Owner in selecting, retaining, and coordinating the professional services of any Separate Consultants required for the Project;
- 4.2.1.8** assist the Owner and CM with filing documents required for the approvals of governmental authorities with jurisdiction over the Project;
- 4.2.1.9** review and provide recommendations concerning Site use and improvements and alternative approaches to selection of materials, building systems, and equipment; and
- 4.2.1.10** assist the CM with the CM's obligations to provide recommendations on construction feasibility, availability of materials and labor (including actions designed to minimize adverse effects of labor shortages), time requirements for construction, and factors related to Project cost, including costs of alternative designs or materials, preliminary budgets, and possible economies of scale.

## 4.3 Life Cycle Cost Analysis

- ~~**4.3.1** The A/E shall prepare and submit 3 copies of the revised LCCA for the selected design concept to the CM. The CM shall promptly review, comment on, and forward the revised Life Cycle Cost Analysis with the CM's comments to the Owner and Contracting Authority.~~
- ~~**4.3.2** If the Project creates or renovates an area greater than 5,000 square feet, the A/E shall also submit the revised LCCA to the Ohio Facilities Construction Commission.~~

## 4.4.3 A/E's Design Development Submission

- ~~**4.4.14.3.1** The A/E shall submit the provisional Design Development Documents to the Contracting Authority, Owner, and CM on or before the date identified in the Project Schedule for that submission.~~
- ~~**4.4.24.3.2** The provisional Design Development Documents shall include:
 
  - ~~**4.4.2.14.3.2.1** plans, sections, elevations, typical construction details, and equipment layouts that illustrate and describe refinement of the Project's design and the size and character of the Project in terms of architectural, structural, mechanical, plumbing, and electrical systems, materials, and other elements as may be appropriate;~~
  - ~~**4.4.2.24.3.2.2** specifications sufficient to identify the quality and other characteristics of the proposed or selected materials, equipment, finishes, fixtures, and systems;~~
  - ~~**4.4.2.34.3.2.3** a detailed estimate of Construction Cost ("A/E's Design Development Estimate");~~
  - ~~**4.4.2.44.3.2.4** a written description of all proposed or previously agreed upon Alternates, which description may be included in the specifications rather than as a separate document;~~
  - ~~**4.4.2.54.3.2.5** a written description of all proposed or previously agreed upon Allowances;~~
  - ~~**4.4.2.64.3.2.6** an identification of any unresolved issues related to compliance with Applicable Law;~~
  - ~~**4.4.2.74.3.2.7** a written description of all modifications of the Approved Program of Requirements; and~~~~

**4.4.2.84.3.2.8** all other documents and information required under the **Minimum Stage Submission Requirements** attached as an exhibit to the **Agreement Form**.

**4.4.34.3.3** If the Project is administered using the State's web-based project management software, the A/E shall submit the provisional Design Development Documents and any revisions through the "Design Review" business process.

**4.4.44.3.4** If the Owner is a cabinet agency of the state of Ohio and the Project consists of new construction, addition, or major renovation, the A/E shall also submit 1 copy of the following provisional Design Development Documents as PDF files to the Ohio Homeland Security Infrastructure Protection and Technology Unit (Department of Public Safety, Strategic Analysis and Information Center, 1970 West Broad Street, Second Floor, Columbus, Ohio 43223) through the Contracting Authority for review and written comment:

**4.4.4.14.3.4.1** site plan with walkways, roadways, and parking lots shown;

**4.4.4.24.3.4.2** building egress plan showing emergency egress routes, exits, and entrances;

**4.4.4.34.3.4.3** major elevations including fresh air intake locations;

**4.4.4.44.3.4.4** security plan with camera locations and access control facilities; and

**4.4.4.54.3.4.5** symbol legends for each type of drawing requested.

#### **4.54.4 Review of Provisional Design Development Documents**

**4.5.14.4.1** The CM will review the provisional Design Development Documents after receiving them. At the completion of that review, the CM will provide a written "Opinion of Document Characteristics" to the Contracting Authority and send a copy of the Opinion to the A/E.

**4.5.24.4.2** Through that Opinion, the CM will document the CM's opinion of the provisional Design Development Documents in terms of what the CM would reasonably expect to see in design development documents on a similar project. The Contracting Authority's agreement with the CM further defines the criteria of the CM's review.

**4.5.34.4.3** If it is the CM's opinion that the provisional Design Development Documents do not reflect what the CM would reasonably expect to see in design development documents on a similar project, the A/E shall immediately meet with the Contracting Authority and CM to discuss the Opinion. The Contracting Authority will thereafter determine an appropriate course of action, which may include the A/E's revision and resubmission of its provisional Design Development Documents under **Section 4.3** and the CM's re-evaluation of them.

#### **4.64.5 CM's Design Development Stage Submission**

**4.6.14.5.1** At the completion of the activities described under **Section 4.3.3** and based on the provisional Design Development Documents, the CM will submit its Design Development Stage Submission, which will include the CM's estimate of Construction Costs ("CM's Design Development Estimate").

**4.6.1.14.5.1.1** If the CM's Design Development Estimate exceeds the Construction Budget or varies from the A/E's Design Development Estimate by more than 5 percent of that estimate, the Contracting Authority may require the A/E to immediately work with the CM to develop viable proposals to reconcile the estimates with each other and the Construction Budget. The CM will present those proposals as an addendum to its Design Development Stage submission.

#### **4.74.6 Design Development Documents Review**

**4.7.14.6.1** After the Contracting Authority and Owner have had a reasonable period to review the provisional Design Development Documents, the Contracting Authority, Owner, A/E, and Contractor shall meet to discuss the provisional Design Development Documents and the CM's Design Development Stage Submission and reach agreement on any Contracting Authority-authorized adjustments to the Approved Program of Requirements, Project Schedule, Construction Budget, or Project Budget and any necessary clarifications of the provisional Design Development Documents and CM's Design Development Stage Submission.

**4.7.24.6.2** Unless the Contracting Authority agrees otherwise in writing, within 5 business days after the review meeting, the A/E and CM shall revise their respective Design Development Stage submissions to reflect the adjustments and clarifications agreed upon in the review meeting (including any comments from the Ohio Homeland Security Infrastructure Protection and Technology Unit, which have been reviewed and approved by the Owner), and resubmit those documents to each other, the Owner, and Contracting Authority.

**4.7-34.6.3** When the Contracting Authority and Owner approve the revised Design Development submissions and sign the related Design Review Acceptance form, the revised Design Development submissions shall become the final Design Development Documents.

## ARTICLE 5 - CONSTRUCTION DOCUMENTS ~~STAGE~~

### 5.1 Commencement

**5.1.1** Unless the Contracting Authority directs otherwise in writing, the Construction Documents Stage will begin upon completion of the activities described under **Article 4**.

### 5.2 General Requirements

**5.2.1** In addition to performing those Services required to comply with **Sections 5.3** through **5.9**, during the Construction Documents Stage, the A/E shall:

**5.2.1.1** advise the Contracting Authority, Owner, and CM in writing if at any time it appears that the Project Schedule or Construction Budget may be exceeded and make recommendations for corrective action;

**5.2.1.2** meet with the Contracting Authority, Owner, and CM at intervals acceptable to the Contracting Authority and Owner, to review drawings and other documents that depict the current status of the Construction Documents Stage of the Project;

**5.2.1.3** if professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the CM, specify all performance and design criteria that those services must satisfy;

**5.2.1.4** incorporate into the Construction Documents the design requirements of government authorities with jurisdiction over the Project;

**5.2.1.5** prepare the Drawings and Specifications to support the CM's plan for packaging and bidding the Work and to encourage competition considering general market conditions and any analysis of labor provided by the CM;

**5.2.1.6** compile the Project Manual in conjunction with the CM;

**5.2.1.7** resolve all issues related to compliance with Applicable Law (except to the extent stated otherwise in writing by the A/E for necessary variances and waivers at the time of the A/E's Construction Documents submission) and participate in related meetings with government authorities that have jurisdiction over the Project;

**5.2.1.8** ensure that the Work on the various building systems are coordinated, and proper coordination has been provided for phased construction, if any;

**5.2.1.9** work with the CM to identify areas of the Project that have incomplete documentation or uncoordinated multi-discipline work and thereafter resolve those issues;

**5.2.1.10** with the CM's assistance, develop and include Alternates in the Contract Documents;

**5.2.1.11** notify the Owner of the need for and assist the Owner in selecting, retaining, and coordinating the professional services of any Separate Consultants required for the Project; and

**5.2.1.12** assist the Owner and CM with filing documents required for the approvals of governmental authorities with jurisdiction over the Project.

### 5.3 Notice of Project Changes

**5.3.1** As the A/E develops the Construction Documents, the A/E shall promptly notify the Contracting Authority, Owner, and CM in writing of the need for any changes in Project requirements or in construction materials, systems, or equipment and of the need for any adjustments in the Construction Budget and Project Schedule.

**5.3.1.1** Upon prior written approval of the Owner and the Contracting Authority of any such changes or adjustments in Project requirements or in construction materials, systems, or equipment, the CM, with assistance of the A/E, shall revise the Construction Budget and Project Schedule, as applicable, incorporating such changes or adjustments.

### 5.4 Preliminary Submissions

**5.4.1** No less than 30 days before the scheduled date for the completion of the Construction Documents, the CM and the A/E shall jointly deliver to the Contracting Authority for review the entire, fully prepared and compiled "front-end" of the Project Manual and Division 01 of the Specifications.

**5.4.2** On the date that marks the expiration of 75 percent of the time allotted in the Project Schedule for the Construction Documents Stage, the A/E shall make the then-current Construction Documents (“75 percent Construction Documents progress submission”) available for the CM to allow the CM to begin to prepare Bid documents such as Bid forms and Contractor scopes of work.

## 5.5 A/E’s Construction Documents Submission

**5.5.1** The A/E shall submit the provisional Construction Documents to the Contracting Authority, Owner, and CM on or before the date identified in the Project Schedule for that submission.

**5.5.2** The provisional Construction Documents shall include:

**5.5.2.1** Drawings setting forth in detail the requirements for construction of the Project;

**5.5.2.2** Specifications prepared in accordance with the most-current CSI *MasterFormat*;

**5.5.2.3** the Project Manual;

**5.5.2.4** a detailed estimate of Construction Cost (“A/E’s Construction Documents Estimate”); and

**5.5.2.5** all other documents and information required under the **Minimum Stage Submission Requirements** attached as an exhibit to the **Agreement Form**.

**5.5.3** If the Project is administered using the State’s web-based project management software, the A/E shall submit its provisional Construction Documents and any revisions through the “Design Review” business process.

## 5.6 Review of Provisional Construction Documents

**5.6.1** The CM will review the provisional Construction Documents after receiving them. At the completion of that review, the CM will provide a written “Opinion of Document Characteristics” to the Contracting Authority and send a copy of the Opinion to the A/E.

**5.6.2** Through that Opinion, the CM will document the CM’s opinion of the provisional Construction Documents in terms of what the CM would reasonably expect to see in construction documents on a similar project. The Contracting Authority’s agreement with the CM further defines the criteria of the CM’s review.

**5.6.3** If it is the CM’s opinion that the provisional Construction Documents do not reflect what the CM would reasonably expect to see in construction documents on a similar project, the A/E shall immediately meet with the Contracting Authority and CM to discuss the Opinion. The Contracting Authority will thereafter determine an appropriate course of action, which may include the A/E’s revision and resubmission of its provisional Construction Documents under **Section 5.5** and the CM’s re-evaluation of them.

## 5.7 CM’s Construction Documents Stage Submission

**5.7.1** At the completion of the activities described under **Section 5.5.3** and based on the provisional Construction Documents, the CM will submit its Construction Documents Stage Submission, which will include in its Construction Documents Stage Submission the CM’s estimate of Construction Costs (“CM’s Construction Documents Estimate”).

**5.7.2** If the CM’s Construction Documents Estimate exceeds the Construction Budget or varies from the A/E’s Construction Documents Estimate by more than 5 percent of that estimate, the Contracting Authority may require the A/E to immediately work with the CM to develop viable proposals to reconcile the estimates with each other and the Construction Budget. The CM will present those proposals as an addendum to its Construction Documents Stage Submission.

## 5.8 Construction Documents Review

**5.8.1** After the Contracting Authority and Owner have had a reasonable period to review the provisional Construction Documents, the Contracting Authority, A/E, and CM shall meet to review the provisional Construction Documents and the CM’s Construction Documents Stage Submission and to reach agreement on any Contracting Authority-authorized adjustments to the Approved Program of Requirements, Project Schedule, Construction Budget, or Project Budget and any necessary clarifications of the provisional Construction Documents and the CM’s Construction Documents Stage Submission.

**5.8.2** Unless the Contracting Authority agrees otherwise in writing, within 5 business days after the review meeting, the A/E and CM shall revise their respective Construction Documents submissions to reflect the adjustments and clarifications agreed upon in the review meeting, and resubmit those documents to each other, the Owner, and Contracting Authority.

**5.8.3** When the Contracting Authority and Owner approve the revised Construction Documents submissions and sign the related Design Review Acceptance form, the revised Construction Documents submissions shall become the final Construction Documents.

## 5.9 Government Approvals

### 5.9.1 Plan Approval.

**5.9.1.1** The A/E shall secure the required structural, plumbing, HVAC, and electrical plan approvals with assistance of the CM.

**5.9.1.2** The A/E shall attend final inspections required for any permit applicable to the Work including the life safety inspection.

### 5.9.2 National Pollutant Discharge Elimination System (“NPDES”) Storm Water General Permit.

**5.9.2.1** The A/E shall secure the NPDES general permit by submitting a Notice of Intent (“NOI”) application form to the Ohio Environmental Protection Agency at least 45 days prior to the start of construction.

**5.9.2.2** The A/E shall prepare and certify a storm water pollution prevention plan to provide sedimentation and erosion controls at the Project.

**5.9.2.3** The A/E shall prepare and process the required Notice of Termination (“NOT”) prior to Contract Completion.

~~5.9.3 If the Project is administered using the State’s web-based project management software, the A/E shall document transmission of government-approved Construction Documents and any revisions through the “Transmittal” business process, with physical copies sent to their offices.~~

## ARTICLE 6 - BIDDING AND AWARD ~~STAGE~~

### 6.1 Obtaining Bids

**6.1.1** The A/E shall assist the CM to develop and make recommendations for bidding criteria, bidding schedules, and bidding information and develop Bidders’ interest in the Project.

**6.1.2** The A/E shall prepare Addenda and issue them through the CM as necessary to render interpretations and clarifications of the Contract Documents.

### 6.2 Bid Packages

**6.2.1** The A/E shall obtain all necessary prevailing wage determinations and shall include them in the Contract Documents.

**6.2.2** The A/E shall assist the CM, or its designee (e.g., its reprographer), to assemble and distribute the Contract Documents to prospective Bidders, the Contracting Authority, the Owner, and other appropriate persons, including, but not limited to, any applicable local or regional plan room organizations.

**6.2.2.1** If the Project utilizes the State’s electronic bidding software, the CM or its designee shall provide the Contract Documents in PDF format to the Contracting Authority 1 business day before the first advertisement.

### 6.3 Pre-bid Conference

**6.3.1** The A/E shall assist the CM to conduct pre-bid conference(s) with prospective Bidders to familiarize Bidders with the Contract Documents, including any special requirements of the Contract Documents.

**6.3.2** At the pre-bid conference(s), the CM, with assistance of the A/E shall also familiarize prospective Bidders with requirements of equal employment opportunity, prevailing wage, EDGE, Drug Free Safety Program, campaign contribution limits, ethics compliance, Sustainability Requirements, an overview of the State’s electronic bidding software if applicable, an overview of the State’s web-based project management software if applicable, and other requirements, as necessary.

**6.3.3** The A/E shall respond to questions from the pre-bid conference(s), and the CM shall prepare and issue pre-bid conference minutes, attached to one or more written Addenda issued by the A/E, with assistance of the CM, within 5 days of the conference.

## 6.4 Bid Review

**6.4.1** The A/E shall assist the CM, in accordance with Applicable Law, review all Bids received for responsiveness, investigate responsibility of Bidders, and deliver a written recommendation to the Contracting Authority about award, or rejection, of any Bid or Bids for each contract for the Project.

**6.4.2** In making the recommendation, the A/E shall assist the CM to evaluate all applicable Alternates referenced in the Contract Documents.

## 6.5 Substitutions

**6.5.1** If a Bidder proposes to use an article, device, material, equipment, form of construction, fixture, or item other than the Basis of Design or Acceptable Components named in the Specifications, the Bidder shall certify that the proposed item is equal in quality and all aspects of performance and appearance, to the item specified.

**6.5.2** If the A/E approves the Proposed Substitution, the A/E shall issue an Addendum accepting the Substitution.

**6.5.3** If the A/E does not approve the Proposed Substitution, the A/E shall inform the Bidder of its decision, which is final. The A/E may reject a proposed Substitution because the Bidder failed to provide sufficient information to enable the A/E to completely evaluate the Proposed Substitution without causing a delay in the scheduled bid opening.

**6.5.4** Proposed Substitutions received by the A/E less than 10 days prior to the bid opening shall not be considered.

**6.5.5** The A/E shall consider Requests for Substitutions after the bid opening only when the Contractor can conclusively demonstrate to the A/E the following conditions:

**6.5.5.1** The specified Basis of Design Components, Acceptable Components, or Substitutions approved prior to the bid opening, through no fault of the Contractor or Contractor's Subcontractors and Material Suppliers, are not available; or

**6.5.5.2** The specified Basis of Design Components, Acceptable Components, or previously approved Substitutions will not perform as designed or intended.

## 6.6 Pre-award Conferences

**6.6.1** The A/E shall assist the CM to conduct pre-award conferences with apparent successful Bidders and shall assist the Contracting Authority gather documentation for contract execution from such Bidders.

**6.6.2** Upon failure of a Bidder to provide such documentation in a timely manner, the A/E, in conjunction with the CM, shall assist the Contracting Authority in considering whether an extension of time for submitting such documentation is appropriate.

## 6.7 Subcontractor and Material Supplier Review

**6.7.1** The A/E, in conjunction with the CM, based upon review of the Contract Documents, any past experience, and reasonable inquiry, shall participate in investigating any Subcontractor or Material Supplier proposed by any Contractor and recommend approval or disapproval.

**6.7.2** After receiving original or amended **Subcontractor and Material Supplier Declaration** forms from a Contractor, the CM shall verify that the forms are complete and deliver them to the A/E and the Contracting Authority.

**6.7.3** Upon the Contracting Authority's receipt of the forms, the A/E, in conjunction with the CM and Owner shall consult with the Contracting Authority in performing an initial review of each Subcontractor and Material Supplier listed.

**6.7.4** If the Project is administered using the State's web-based project management software, the A/E shall review and recommend approval or disapproval to the Contracting Authority of each Subcontractor and Material Supplier through the "Subcontractor Supplier Declaration" business process.

## 6.8 Over Budget Options

**6.8.1** If the Construction Budget is exceeded by the total of the lowest responsive and responsible Bids and any legally negotiated prices for the Project, the Contracting Authority and Owner shall, at their option:

**6.8.1.1** Approve in writing an increase in the Construction Budget and rebid the Project;

**6.8.1.2** Authorize rebidding or renegotiation for some or all parts of the Project within a reasonable time without an increase in the Construction Budget;

**6.8.1.3** Abandon the Project, in whole or in part, and terminate this Agreement; or

**6.8.1.4** Cooperate in the revision of the Project Scope as defined in **Section 5.7.2** to reduce the actual cost of construction to the Construction Budget.

**6.8.2** If the Contracting Authority and Owner adopt the option in **Section 6.8.1.1** above and such increase in the Construction Budget is more than 10 percent, the A/E may request, in writing, an adjustment to the Basic Fee.

**6.8.3** If the Contracting Authority and the Owner adopt the option in **Section 6.8.1.4** above, the A/E, with assistance of the CM, shall appropriately modify the Approved Program of Requirements, Project Schedule, and Contract Documents and cooperate in any necessary bidding or negotiation without additional charge.

## **6.9 Further Revisions to Cost Estimate and Project Schedule**

**6.9.1** If necessary, the A/E shall inform the CM, the Contracting Authority, and the Owner of the need for any adjustments in the Detailed Estimate of Construction Cost and Project Schedule.

**6.9.2** Upon approval of the Contracting Authority and Owner of any such adjustments, the A/E shall assist the CM to prepare a revised Detailed Estimate of Construction Cost or a revised Project Schedule, as applicable, incorporating such adjustments.

## **6.10 Conformed Documents**

**6.10.1** During the entire bidding and award Stage, the A/E shall incorporate all Addenda information into the Contract Documents; and, between the date that the Contracting Authority issues a Notice of Intent to Award for the first construction contract for the Project and the effective date of the first construction contract Notice to Proceed, the A/E shall provide updated Contract Documents that conform in every regard to the documents originally issued for bidding purposes plus all of the information in all Project Addenda and accepted Alternates ("Conformed Documents").

**6.10.2** The A/E shall issue the Conformed Documents to the successful Bidder(s) through the CM, upon award of their respective contracts.

**6.10.3** If the amount of a contract is \$500,000 or less, the A/E shall furnish 5 sets of Conformed Documents to the respective Contractor. If the amount of a contract is greater than \$500,000, the A/E shall furnish 7 sets of Conformed Documents to the respective Contractor. The A/E shall also issue 1 set of Conformed Documents to the CM.

**6.10.4** The A/E shall provide Electronic Files to each requesting Contractor for the Contractor's convenience for the purpose of preparing its submittals, including, but not limited to, Shop Drawings and Coordination Drawings. The A/E shall provide such Electronic Files at no additional cost to the Contractor or the Owner.

## **6.11 Partnering**

**6.11.1** The A/E shall, prior to construction of the Project, participate in the creation and implementation of a partnering arrangement, and shall participate in partnering meetings with the Contracting Authority, Owner, appropriate Consultants, A/E's field representative, CM, Contractors, and other parties involved in the Project. Partnering meetings may be conducted during both the design and construction stages of the Project.

**6.11.2** The formation of a cohesive, mutually beneficial partnering arrangement among the Contractors, the Contracting Authority, the CM, the A/E, and the Owner will accomplish the construction of the Project most effectively and efficiently. This arrangement draws on their collective strengths, skills, and knowledge to achieve a Project of the intended quality, within budget, and on schedule. To achieve that objective, participation in a partnering session is required for the following key stakeholders:

**6.11.2.1** Contracting Authority: Project Manager

**6.11.2.2** Owner: Primary representative

**6.11.2.3** CM: Project manager, project engineer if applicable, field representative, schedule manager if applicable, and estimator if applicable.

**6.11.2.4** A/E: Principal-in-charge, project manager, field representative, major consultants

**6.11.2.5** Contractors: Principal-in-charge, project manager, and superintendent

**6.11.2.6** Separate Contractors: Principal-in-charge, project manager, and superintendent

**6.11.2.7** Major Subcontractors (e.g., masonry, fire protection): Principal-in-charge, project manager or superintendent

**6.11.2.8** CxA, if applicable

**6.11.3** The purpose of the partnering arrangement is to build cooperative relationships between the Project's key stakeholders, avoid or minimize disputes, and nurture a more collaborative ethic characterized by trust, cooperation and teamwork. This arrangement is intended to produce a voluntary, non-binding, but formally structured agreement among the Project's key stakeholders, leading to an attitude that fosters risk sharing.

**6.11.4** To create and implement the partnering arrangement, the Project's key stakeholders shall meet prior to the construction of the Project for developing a partnering agreement. The arrangement should be comprehensive and focus on all issues necessary for successful completion of the Project, and shall identify common goals and objectives, develop a problem solution process, an Alternative Dispute Resolution ("ADR") strategy, and an implementation plan for the partnering arrangement.

**6.11.5** Formal contractual relations, responsibilities, and liabilities are not affected by any partnering arrangement. The A/E shall include in its Basic Fee the resources necessary to participate in the partnering meetings.

**6.11.6** Partnering services may extend over the entire period of performance of the Project and may include intervention or project realignment services to be utilized if serious disputes arise. The Project's key stakeholders should agree, during the initial partnering session, to the types of situations and circumstances in which intervention or realignment services shall be utilized.

**6.11.6.1** If realignment or intervention services are utilized, partnering facilitators shall not be called as witnesses in any litigation, mediation, or quasi-judicial proceeding.

## **ARTICLE 7 - CONSTRUCTION STAGE**

### **7.1 Duration; Extent, Access**

**7.1.1** Unless the Contracting Authority agrees otherwise in writing, the Construction Stage will commence with the Contracting Authority's issuance of the Notice to Proceed and will terminate upon Contract Completion.

**7.1.2** The A/E shall have access, at all times, to the Project whenever any Work is in preparation or in progress.

### **7.2 Progress of the Project**

**7.2.1** The A/E shall assist the CM to record the progress of the Project and provide written reports to the Contracting Authority and Owner on a monthly basis, unless otherwise agreed in writing. Such reports shall include information on each Contractor's Work, as well as completion status on the entire Project, showing percentages of completion.

**7.2.1.1** If the Project is administered using the State's web-based project management software, the A/E shall issue written reports to the Contracting Authority, Owner, CM, and each Contractor through the "Field Reports" business process.

### **7.3 Construction Progress Schedule**

**7.3.1** The A/E shall review the Construction Progress Schedule for conformance with the Contract Documents, provide a copy of the Construction Progress Schedule and schedule of submittals to the Contracting Authority and Owner, and assist the CM to incorporate the approved Construction Progress Schedule and schedule of submittals into the Project Schedule.

**7.3.1.1** If the Project is administered using the State's web-based project management software, the A/E shall receive the initial and all updates of the Construction Progress Schedule from the CM through the "Schedule Approvals" business process.

**7.3.2** The A/E shall periodically inform the Contracting Authority and Owner of the need to update the Project Schedule as required to show current conditions, including conformance to the Construction Progress Schedule, as updated from time to time.

**7.3.2.1** If such conditions indicate that Milestone completion dates shown on the Project Schedule may not be met, the A/E shall recommend corrective action to the CM, Contracting Authority, and Owner and carry out the directions of the Contracting Authority so that the Milestone completion dates may be met, unless the Contracting Authority and Owner agree in writing to revise the Milestone completion dates.

## 7.4 Meetings

**7.4.1** The A/E shall participate in weekly progress meetings with the CM, Contracting Authority, Owner, appropriate Consultants, Contractors, Subcontractors, and any other parties involved in the Project to discuss such matters as procedures, progress, problems, and scheduling.

**7.4.1.1** The A/E shall assist the CM to prepare and distribute written agendas and minutes of all progress meetings to the Contracting Authority, Owner, Contractor, and any other parties involved.

**.1** If the Project is administered using the State's web-based project management software, the CM shall distribute meeting agendas and minutes to each Contractor, the A/E, Contracting Authority, and Owner through the "Meeting Minutes" business process and document issues identified during progress meetings that require resolution by one or more construction participants through the "Action Items" business process.

**7.4.1.2** The minutes of each progress meeting shall reflect any objection made to the minutes of the previous meeting and any response.

**7.4.1.3** The CM shall notify the A/E, each Contractor, and other Persons involved in the Project of the time and place of the progress meetings that shall thereafter be the same day and hour of the week for the duration of the Project, unless the CM notifies the Contractors and other persons involved in the Project of a different day and hour at least 2 days in advance.

**7.4.2** The A/E shall attend and participate in preconstruction, quality control, pre-installation, and special meetings with the CM, Contracting Authority, Owner, appropriate Consultants, Contractors, Subcontractors, and any other parties involved in the Project.

**7.4.3** The A/E shall attend the CM's weekly coordination meeting for the Contractors and appropriate Subcontractors at the request of the CM.

**7.4.4** The A/E shall participate in a pre-closeout conference conducted by the Contracting Authority to familiarize the Contractors with Closeout requirements and procedures, including any special requirements of the Contract Documents.

## 7.5 Site Visits and Observation

**7.5.1** The A/E shall notify, advise, and consult with the CM, Contracting Authority, and Owner and protect the State against Defective Work throughout the completion of the Project, which includes the Correction Period.

**7.5.2** The A/E shall designate a field representative, subject to the Contracting Authority's approval, to review the Work of each Contractor for Defective Work, to maintain familiarity with the progress and quality of the Work on the Project, to observe and check the progress and quality of the Work, and to take action as necessary or appropriate to achieve conformity with the Contract Documents.

**7.5.3** The A/E, and appropriate Consultants, shall also visit the Project at such intervals as the Contracting Authority requires, to review the Work of each Contractor for Defective Work, to become familiar with the progress and quality of the Work on the Project, and to determine if the Work is proceeding in conformity with the Contract Documents.

**7.5.3.1** Such visits shall specifically include those listed in the Agreement, observation of large excavations, observation of footings during placement of concrete and observation of masonry work, structural steel erection, roofing work and interior finishes.

**7.5.4** In all events, the A/E and appropriate Consultants, shall be at the Site for such purposes not less than the number of hours per week identified in the Agreement whenever any Work is in preparation or progress, unless otherwise expressly provided in writing by the Contracting Authority.

**7.5.5** If the A/E becomes aware, either through such visits or otherwise, of any Defective Work on the Project, then the A/E shall immediately report the Defective Work to the CM, Contracting Authority, and Owner, together with recommendations for the correction thereof, and shall deliver written notice to any applicable Contractor to correct such Defective Work. Such written notice shall specify the time within which the Contractor shall correct the Work. ("72-Hour Notice")

**7.5.5.1** If the Project is administered using the State's web-based project management software, the A/E shall issue written notice of Defective Work to the Contractor with copies to the Contracting Authority and Owner, through the "72 Hour Notice" business process.

**7.5.6** The A/E may disapprove or reject any item of Work that it believes will not produce a Project that conforms to the Contract Documents or will prejudice the integrity of the design concept of the Project as a functioning whole as indicated by the Contract Documents.

**7.5.7** The A/E shall immediately notify the CM, Contracting Authority, and Owner any time the A/E disapproves or rejects an item of Work.

## **7.6 Investigation of Conditions for Renovation or Remodeling**

**7.6.1** For renovation and remodeling, the A/E shall, as portions of the Project become accessible, assist the CM to investigate existing conditions, and verify the accuracy of information provided by the Owner about such existing conditions.

## **7.7 Interpretations**

**7.7.1** The A/E shall render interpretations of the Contract Documents necessary for the proper execution or progress of the Work on the Project.

**7.7.2** The A/E shall respond to the Contractor's Request for Interpretation ("RFI") within 3 days of receiving the RFI.

**7.7.3** All interpretations shall be in writing, shall be consistent with the intent of, and reasonably inferable from, the Contract Documents and shall be delivered to the Contracting Authority, the Owner, the CM, and each Contractor.

**7.7.4** If the Project is administered using the State's web-based project management software, the A/E shall render its interpretations to the Contracting Authority, Owner, CM, and each Contractor through the "Request for Interpretations" business process.

## **7.8 Differing Site Condition Investigation**

**7.8.1** Promptly after receiving notice of a Differing Site Condition from a Contractor, the A/E with assistance of the CM, shall investigate to determine whether the Contractor has encountered a Differing Site Condition.

**7.8.2** The A/E shall give written notice of its determination to the Contracting Authority and Contractor within 10 days after completing the investigation through the CM.

**7.8.3** If the A/E determines that the Contractor has encountered a Differing Site Condition, the CM shall prepare (as appropriate) a resulting Change Order or a Change Directive through which the Contracting Authority may convey its disagreement with the A/E's determination.

## **7.9 Coordination Drawings**

**7.9.1** The A/E, with assistance of the CM, shall review the Coordination Drawings to determine whether the Coordination Participants achieved the goals established in the coordination meetings.

**7.9.2** The A/E shall report any concerns, in writing, to the Coordination Participants within 14 days after receiving the drawings.

**7.9.3** If installed Work causes or contributes to interference with subsequent Work of a Separate Contractor, the A/E shall determine the needed modifications to the installed Work to accommodate the subsequent Work.

**7.9.4** If the Project is administered using the State's web-based project management software, the A/E shall receive and forward Coordination Drawings to its Consultants using the "Submittals" business process.

## **7.10 Submittal Review**

**7.10.1** The A/E shall review Submittals such as Shop Drawings, Product Data, and Samples for conformity with design intent and conformity with the Contract Documents within 14 days of receiving Submittals or in accordance with the approved submittal schedule, or other period as mutually agreed by the A/E and submitting Contractor.

**7.10.2** The A/E shall also review drawings, calculations, and designs required of the Contractor and its Subcontractors and provided with such Submittals (except calculations and designs of manufacturers of original equipment and systems to be installed in the Project and except calculations and designs which the Contract Documents expressly make the sole responsibility of one or more Contractors, Subcontractors, Material Suppliers, or other persons).

**7.10.3** The A/E shall act upon resubmission of corrected Submittals within 14 days of receiving them, or other period as mutually agreed by the A/E and submitting Contractor.

**7.10.4** The Contractor shall review and stamp “approved” all Submittals before forwarding them to the A/E. If it is apparent to the A/E that the Contractor has not reviewed the Submittals, or has conducted an incomplete review of them, the A/E may reject the Submittals.

**7.10.5** The A/E may hold samples and other Submittals used to coordinate finishes, colors, patterns, textures, or other characteristics until Submittals for adjacent materials are available. The A/E shall issue a written notice to the submitting Contractor, through the CM, stating that the Submittal is being held, within 7 days of receiving it.

**7.10.6** If the Project is administered using the State’s web-based project management software, the A/E shall receive and forward submittals to its Consultants, and return reviewed submittals to the Contractor, using the “Submittals” business process.

### **7.11 Additional Tests and Inspections**

**7.11.1** If the A/E, in consultation with the CM, determines that any portion of the Work requires inspection, testing, or approval not otherwise required under the Contract Documents, the A/E shall order the inspection, testing, or approval.

**7.11.2** Within 5 days after completion of an inspection, test, or approval, the A/E shall provide an original report of the inspection, test, or approval to the applicable Contractor, the CM, and the Contracting Authority with a recommendation for or against acceptance of the results therein.

**7.11.3** The Owner shall reimburse the A/E for the special inspection, test, or approval as a change in the Services.

**7.11.4** The A/E shall not be reimbursed or otherwise compensated for any special inspection, testing, or approval made necessary by the act or omission of the A/E or any Consultant of the A/E.

### **7.12 Change Order Procedure**

#### **7.12.1 Paperwork Consolidation.**

**7.12.1.1** Related Modifications, with the same or similar justification (e.g., Owner Request or field resolution), may be consolidated into the same change-related document.

**7.12.1.2** Add and deduct Modifications, with the same or similar justification, may be included on the same Change Order.

**7.12.1.3** Modifications resulting from errors or omissions shall not be combined with other modifications.

#### **7.12.2 Modification Numbering.**

**7.12.2.1** The CM, in consultation with the A/E, shall assign a number to each Modification, which shall uniquely identify it.

#### **7.12.3 Modification Log.**

**7.12.3.1** The CM shall create and maintain a Modification Log for the Project.

#### **7.12.4 Reconciliation of Unit Price Items.**

**7.12.4.1** The Contracting Authority may increase, decrease, or delete entirely the scheduled quantities of Work to be performed and materials to be furnished by Change Order.

**7.12.4.2** The A/E shall assist the CM issue a Change Order to reconcile the difference between scheduled and actual quantities of Work performed and materials furnished.

**7.12.4.3** If the actual quantity of a Unit Price item differs from the scheduled quantity by 20 percent or more, so that application of the Unit Price to the quantities of Work proposed would create an undue hardship on either the Owner or the Contractor, the A/E shall assist the CM issue a Proposal Request and subsequent Change Order to adjust the Unit Price.

**7.12.4.4** If the actual quantity of a Unit Price item exceeds the scheduled quantity by 20 percent or more, the Contractor shall immediately notify the CM, who shall issue a Change Directive and subsequent Change Order to authorize an adjustment in the scheduled quantity, with assistance of the A/E.

#### **7.12.5 Change Orders.**

**7.12.5.1** The CM shall prepare each Change Order form, attach the supporting documentation, and issue the Change Order form to the Contractor for signature with the revised Modification Log.

**7.12.5.2** If the Contractor is in agreement with the Change Order, the Contractor shall sign and return the Change Order to the CM, who shall recommend approval by signing and forwarding the Change Order and the revised Modification Log to the A/E.

**7.12.5.3** When the A/E receives the Change Order signed by the Contractor and the CM, the A/E shall recommend approval by signing the form and transmitting the Change Order and the revised Modification Log to the Owner.

**7.12.5.4** If the Project is administered using the State's web-based project management software, the A/E shall receive and recommend Change Orders for approval, using the "Change Order" (~~Agency/Higher Education~~) or "Contract Modifications" (~~School Facilities~~) business process.

#### **7.12.6 Proposal Requests.**

**7.12.6.1** The A/E shall prepare Proposal Requests with estimated costs and other necessary documentation seeking Proposals from the Contractor for adjustments of the Contract Sum or the Contract Times, or both, associated with potential and proposed changes in the Work, and submit Proposal Requests to the CM for review.

**7.12.6.2** If the Project is administered using the State's web-based project management software, the A/E shall prepare and distribute Proposal Requests using the "Change Order" (~~Agency/Higher Education~~) or "Contract Modifications" (~~School Facilities~~) business process with the "Proposal Request" workflow.

#### **7.12.7 Request for Change Order.**

**7.12.7.1** The Contractor may initiate a change in the Work by submitting written notice to the A/E through the CM accompanied by a Proposal. The A/E shall promptly evaluate the Request for Change Order and submit a written recommendation to the CM, Contracting Authority, and Owner.

**7.12.7.2** If the Project is administered using the State's web-based project management software, the A/E shall respond to the Contractor's Request for Change Order using the "Change Order" (~~Agency/Higher Education~~) or "Contract Modifications" (~~School Facilities~~) business process.

### **7.13 Change Directives**

**7.13.1** A Change Directive may, if necessary:

**7.13.1.1** State a proposed basis for adjustment, if any, in the Contract Sum or Contract Times, or both; or

**7.13.1.2** Limit the scope of the change in the Work by a fixed adjustment of the Contract Sum.

**7.13.2** If a change in the Contractor's Work must start immediately to avoid an imminent impact to the schedule of the Project, the CM shall prepare a Change Directive, for the A/E, Contracting Authority, and Owner's signatures pursuant to **Section 7.13.1**, authorizing the Contractor to proceed.

**7.13.3** A Change Directive shall be used to direct a change in a Contractor's Work in the absence of total agreement on the terms of a Change Order.

**7.13.3.1** A Change Directive may also be used in the absence of agreement as to whether the subject of the Change Directive actually constitutes a change in the Work.

**7.13.4** If the Project is administered using the State's web-based project management software, the A/E shall receive and recommend Change Directives for approval, using the "Change Order" (~~Agency/Higher Education~~) or "Contract Modifications" (~~School Facilities~~) business process with the "Change Directive" workflow.

### **7.14 Orders for Minor Changes in the Work**

**7.14.1** The A/E may order minor changes in the Work not involving adjustment of the Contract Sum or extension of the Contract Times and not inconsistent with the intent of the Contract Documents.

**7.14.2** The A/E shall issue orders for minor changes in the Contractor's Work by written order to the Contractor, through the CM. The CM shall keep a log of all Orders for Minor Change in the Work.

**7.14.3** If the Project is administered using the State's web-based project management software, the A/E shall prepare and recommend Orders for Minor Changes in the Work for approval, using the "Action Items" business process.

### **7.15 Claims Analysis**

**7.15.1** The CM, in consultation with the A/E and Contracting Authority, shall respond to the Contractor's written notice of a Claim within a reasonable time of receipt, but not to exceed 10 days.

**7.15.2** The CM shall review each Contractor Claim, prepare a written analysis of its content, and submit the written analysis to the Project Manager no more than 30 days after receiving the Contractor's substantiated and certified Claim. The written analysis shall include:

**7.15.2.1** A narrative of the CM's examination of the facts giving rise to the Claim;

**7.15.2.2** Identification of relevant Contract Documents and language;

**7.15.2.3** An analysis of whether the Contractor complied with the requirements of the Contract Documents pertaining to Claim initiation and substantiation including the issues of entitlement to, and calculation of, adjustments of the Contract Sum and Contract Times;

**7.15.2.4** An analysis of claimed additional labor, materials, and equipment for the scope of the Work items described;

**7.15.2.5** An analysis of any time extension for any interference, disruption, hindrance, impact, or delay claimed (to include the calculation of any concurrent delays affecting entitlement);

**7.15.2.6** A concluding opinion regarding the Contractor's entitlement to, and the appropriateness and reasonableness of all, or any part of, the Claim; and

**7.15.2.7** An appendix containing copies of contemporaneous documentation supporting the concluding opinion.

**7.15.3** The A/E and the CM shall attend dispute resolution meetings convened by the Contracting Authority related to each Claim.

## 7.16 Schedule of Values

**7.16.1** The Contractor shall submit to the A/E, through the CM, a Schedule of Values with separate amounts shown for labor and materials for each branch of the Contractor's Work.

**7.16.2** The A/E **shall review and** may return the Schedule of Values to the Contractor for re-submittal if it does not meet the requirements or contains insufficient items or details of the Work, or approve the Schedule of Values if the A/E determines that it conforms to the requirements in the General Conditions.

**7.16.3** If the Project is administered using the State's web-based project management software, the A/E shall receive and process the Contractor's Schedule of Values, using the "Contract Schedule of Values" business process.

## 7.17 Payments

**7.17.1** The Contractor may submit a Contractor Payment Request to the A/E through the CM each month or upon another interval approved by the Contracting Authority. When the rate of Work and amount involved is sufficient that it is considered appropriate by the Contracting Authority, the Contractor may submit Contractor Payment Requests twice a month.

**7.17.1.1** If the Project is not administered using the State's web-based project management software, the Contractor shall submit 1 draft copy of its Contractor Payment Request ("Pencil Copy") to the A/E through the CM not less than 1 week prior to submitting multiple copies of its Contractor Payment Request.

**7.17.1.2** The A/E shall review the Pencil Copy and provide comments to the Contractor within 3 days of receiving it.

**7.17.1.3** The Contractor shall incorporate the A/E's comments into its Contractor Payment Request prior to submitting multiple copies for payment.

**7.17.2** Based upon the A/E's review of the applicable Work and evaluations of the Contractor Payment Request, the A/E shall review and approve, modify, or reject the amounts shown on such Payment Request as being due to the Contractor.

**7.17.3** The A/E may request, from a Contractor, additional documentation in connection with each payment to the Contractor.

**7.17.4** Each Contractor Payment Request that the A/E determines that it will recommend shall be signed by the A/E and delivered to the Contracting Authority.

**7.17.5** The A/E may recommend to the Contracting Authority that payments be withheld from, or Liquidated Damages be assessed against, a Contractor Payment Request.

**7.17.6** If the Project is administered using the State's web-based project management software, the A/E shall receive and approve the Contractor's Contractor Payment Request, using the "Contractor Pay Request" (~~Agency/Higher Education~~) or "Applications for Payment" (~~School Facilities~~) business process.

## ARTICLE 8 - CLOSEOUT

### 8.1 Substantial Completion

**8.1.1** Within 3 business days of receipt of the Contractor's request for the Substantial Completion inspection of the Work, the A/E shall notify the Contractor, through the CM, of acceptance or rejection of the request, stating reasons for any rejection.

**8.1.2** Within 7 days of its acceptance of a Contractor's request, the A/E shall conduct the A/E's Review, with assistance of the CM, to determine whether the Contractor's Work, or the designated portion, is Substantially Complete.

**8.1.3** The A/E shall notify the CM, requesting Contractor, Contracting Authority, and Owner of the scheduled time of the Substantial Completion inspection.

**8.1.4** If the A/E determines that the Work is Substantially Complete, within 3 business days after the Substantial Completion inspection, the A/E shall prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion and include a list of Defective, incomplete, or unacceptable Work ("A/E's Punch List") and issue it through the CM. The A/E's Punch List shall include **(1)** the items on the applicable Contractor's Punch List that are not yet completed or corrected as of the date of the Substantial Completion inspection, and **(2)** comments from the CM, Contracting Authority, and Owner.

**8.1.4.1** If the Project is administered using the State's web-based project management software, the A/E shall receive the Contractor's Punch List from the CM, and distribute the A/E's Punch List through the CM, using the "Punch List" business process.

**8.1.5** If the A/E accepts a request for the Substantial Completion inspection and subsequently determines that the Work is not Substantially Complete, the A/E may request compensation for expenses related to excessive Punch List activities.

### 8.2 Partial Occupancy

**8.2.1** The A/E, in coordination with the CM, shall assist the Contracting Authority and Owner in determining dates of Partial Occupancy of the Work or portions thereof designated by the Owner, and shall assist in obtaining any certification required by Applicable Law.

**8.2.2** Before the Owner commences Partial Occupancy, the A/E shall process a Certificate of Substantial Completion for the designated area listing incomplete or Defective Work under the Contract for approval of the Contracting Authority.

**8.2.2.1** If the Project is administered using the State's web-based project management software, the A/E shall process the partial Certification of Contract Completion, using the "Closeout - Contractor" business process.

### 8.3 Contract Completion

**8.3.1** Within 3 business days of receipt of the applicable Contractor's notice that all Punch List items have been completed, the A/E with assistance of the CM shall complete a Final Inspection of the Work for compliance with the Contract Documents.

**8.3.2** If multiple inspections of items on the A/E's Punch List are required because of the Contractor's failure to properly and timely complete them, the A/E may request compensation for expenses related to excessive Punch List activities.

**8.3.3** When all items on the A/E's Punch List have been completed to the A/E's satisfaction and all requirements of the Contract Documents have been completed, the A/E shall prepare and recommend execution of a Certificate of Contract Completion.

**8.3.3.1** When items of Work cannot be completed until a subsequent date, the A/E may recommend that these items be deferred and the Contracting Authority may release payment to the Contractor, as determined in the Contracting Authority's sole discretion. The A/E shall list deferred items on a partial Certificate of Contract Completion with the dates the items are to be completed.

**8.3.3.2** If the Project is administered using the State's web-based project management software, the A/E shall process the Final Certification of Contract Completion, using the "Closeout - Contractor" business process.

**8.3.4** Upon execution of a Certificate of Contract Completion, the A/E shall receive, review for conformity with the requirements of the Contract Documents, and transmit to the Contracting Authority through the CM any affidavits and turn over to the Owner any keys, manuals and the originals of any guarantees, warranties, releases, bonds, and waivers.

**8.3.5** The A/E shall transmit a copy of any guarantees, warranties, releases, bonds, and waivers to the Contracting Authority through the CM.

## 8.4 Record Documents

**8.4.1** The A/E shall prepare the Record Documents by revising the Contract Documents and related electronic files on the basis of the information contained on the As-Built Documents submitted by the Contractor and the A/E's observations during the progress of the Project. The Record Documents shall detail the actual construction of the Project and contain such annotations by the A/E as may be necessary for someone unfamiliar with the Project to understand the changes that were made to the Contract Documents.

**8.4.2** The A/E shall label the revised Contract Documents and related electronic files as "Record Documents" and reflect the date on which the A/E finished preparing them.

**8.4.3** The A/E shall furnish to the Owner, through the CM, 1 set of Record Documents in the form of paper documents and 1 set in the form of electronic files.

**8.4.4** By submitting the Record Documents to the Owner, the A/E certifies that the Record Documents are complete, correct, and accurate, to the best of the A/E's knowledge based upon the As-Built Documents delivered to the A/E by Contractor and the A/E's observations during the progress of the Project.

## 8.5 Post-Occupancy

**8.5.1** During the Correction Period, the A/E shall work with the Contracting Authority, Owner, CM, and Contractor to investigate suspected Defective Work and to design and coordinate its repair or completion. The Owner shall not be obligated to compensate the A/E for the A/E's performance of the A/E's services under this **Section 8.5.1** unless it has been determined that the Defective Work was not the result of the A/E's failure to meet its obligations under the Agreement.

**8.5.2** The A/E shall participate in a walk-through of the Project with the Owner and the CM one month prior to the expiration of each Correction Period. The A/E shall consult with the CM and the Owner to address any issue identified in the walk-through according to the procedures specified in the General Conditions. The A/E shall notify the Contractor of such defects in writing with a request that the Contractor correct the Defective Work, prior to the end of the Correction Period.

# ARTICLE 9 - ADDITIONAL SERVICES

## 9.1 General Requirements

### 9.1.1 Services Not Included in Basic Services.

**9.1.1.1** The A/E shall provide the services listed in **Sections 9.1.2 through 9.1.18** as Additional Services only when identified in the **Agreement Form** and approved in writing by the Contracting Authority in consultation with the Owner.

**9.1.1.2** The Fee for the Additional Services listed in **Sections 9.1.2 through 9.1.18** shall be paid as provided in the **Agreement Form**, in addition to payment for the Basic Services; however, the A/E shall not be compensated for any of the Additional Services listed in **Sections 9.1.2 through 9.1.18** made necessary by any act or omission of the A/E or any of the A/E's Consultants.

**9.1.1.3** Unless waived by the Contracting Authority in writing, authorization to provide Additional Services must be obtained prior to providing the Additional Services.

**9.1.2 Specialized Services.** Providing specialized design and engineering services for acoustical analysis or design, computer services, communication consultant services, design or specification of unusual or large volumes of fixtures, furnishings, and equipment.

**9.1.3 Additional On-Site Services.** Providing administration or observation of construction beyond the Basic Services provided pursuant to the **Agreement Form**.

**9.1.4 Extensive Change Orders.** Preparing Drawings, Specifications, cost estimates, and other documents and supporting data in connection with Change Orders beyond those services to be reasonably provided as Basic Services.

**9.1.5 Perspectives, Models, Renderings.** Preparing professional perspectives, physical models, or renderings, which are not otherwise useful or necessary to the A/E in providing the Basic Services required hereunder and are provided at the prior written request of the Contracting Authority in consultation with the Owner.

**9.1.6 Grant Applications.** Preparing applications and supporting documents for governmental grants, loans, or advances.

- 9.1.7 Special Studies.** Providing planning services, site evaluations, environmental studies, or comparative studies of prospective sites, preparing special surveys, studies, and submissions required under Applicable Law.
- 9.1.8 Surveys.** Providing surveying services, including land surveys and rights-of-way studies.
- 9.1.9 Investigation of Conditions for New Construction.** Providing services for new construction to investigate existing conditions or facilities, to make measured drawings thereof, or to verify the accuracy of drawings or other information furnished by the Owner.
- 9.1.10 Constructability and Cost Analyses.** Preparing extensive analyses of the construction feasibility of the Project or of owning and operating costs, or preparing detailed quantity surveys or inventories of material, equipment, and labor beyond those services to be reasonably provided as Basic Services.
- 9.1.11 Off-Site Services.** Providing planning or design services for off-site utilities, which are not adjacent to the Project, building connections, or roadways.
- 9.1.12 Certain Revisions.** Making revisions in Drawings, Specifications, or other Contract Documents at the request of the Contracting Authority when such revisions are inconsistent with written approvals or instructions previously given or are required by the enactment or revision of Applicable Law subsequent to the preparation of such documents.
- 9.1.13 Replacement Work.** Providing consultation and other services in connection with replacement of any Work damaged by fire, casualty, or other incident not caused by negligence of the A/E or any Consultant of the A/E.
- 9.1.14 Contractor Default.** Providing services made necessary by a Contractor's default.
- 9.1.15 Additional Documents.** Providing more sets of Contract Documents than the number required as Basic Services.
- 9.1.16 Prototype Design.** Use of the A/E's Documents for one or more prototype projects as described in the A/E Standard Terms and Conditions.
- 9.1.17 Special Inspections Required by the Ohio Building Code.**
- 9.1.17.1** The special inspections indicated in the current edition of the OBC Chapter 17 are not included as Basic Services; however, in the event such special inspections are required as a condition of the Plan Approval issued by the Building Authority that has jurisdiction over the Project, the A/E shall provide the special inspections and be compensated for such as Additional Services, and shall provide written notice to the Contractor, the Owner, and the Contracting Authority of the Special Inspection to be performed.
- 9.1.17.2** The A/E shall not be compensated for any such Additional Services made necessary by the act or omission of the A/E or any Consultant of the A/E.
- 9.1.18 Quality Assurance Testing.**
- 9.1.18.1 General Requirements.**
- .1** The Quality Assurance ("QA") Testing services listed under **Sections 9.1.18.2 through 9.1.18.10**, which is not intended to be an exhaustive list, are not included as Basic Services, however, the A/E shall provide such services when identified in the **Agreement Form** either itself (if qualified) or through a Consultant properly licensed to perform the required inspections and all related testing services.
  - .2** Unless otherwise specified in the Contract Documents, the A/E shall apply for, secure, and pay for the costs of quality assurance testing, structural testing and special inspections required under the current edition of Ohio Building Code ("OBC") Chapter 17.
  - .3** Such testing and inspections shall include geotechnical analysis, environmental testing and analysis, concrete, masonry, structural steel, reinforcing steel, welding, bolts, steel connections, HVAC systems and controls, plumbing and piping, air and water balancing and testing, or other testing (e.g., medical gases testing, lead shielding, etc.); or approval required by Applicable Law.
  - .4** The A/E shall identify the name or names of the Consultants it intends to use for all quality assurance and special inspections that would be reasonably anticipated for the Project and shall provide a Schedule of Fees for Typical Services for each Consultant. ~~The A/E may include a negotiated markup for the Consultant services used.~~
- 9.1.18.2 Geotechnical Analysis.** Sampling and analysis of soils and hydrologies, and subsequent reporting and recommendations, upon which architectural and engineering designs may be based. Applicable to Construction Stage observation, testing, and reporting of soils conditions, including testing for types and quality of fill material and its installation, compaction, soil density testing, caisson borings inspections, cut and fill monitoring, etc.

- 9.1.18.3 Environmental Testing and Analysis.** Sample and analysis of existing conditions or materials for any of a variety of environmental materials, including Hazardous Materials and suspected Hazardous Materials, and subsequent reporting.
- 9.1.18.4 Concrete.** Test for general quality, such as: slump, air entrainment, cylinder test, core test, ~~swiss~~ Swiss hammer.
- 9.1.18.5 Masonry.** Includes such testing as prism tests, mortar cube, grout tests, water infiltration.
- 9.1.18.6 Structural Steel, Reinforcing Steel, Welding, Bolts and Connections.** Includes any testing and reporting of any type of steel, including those listed above.
- 9.1.18.7 HVAC Systems and Controls.** Includes testing and balancing of any or all HVAC components including controls systems.
- 9.1.18.8 Plumbing and Piping.** Includes testing of water, waste, vent and process piping, and provide associated reporting.
- 9.1.18.9 Air and Water Testing and Balancing.** Includes testing and balancing of various pneumatic and hydronic piping, and provide associated reporting.
- 9.1.18.10 Other.** (e.g., Medical Gases testing, Lead Shielding, etc.)

**END OF DOCUMENT**