

## 500.1 – Phase B Checklist for the Architect-Engineer

This checklist is to be used by the Architect-Engineer and shall be included in the Phase B submittal.

**Instructions:** The Architect-Engineer will mark the box below indicating completion of each action in accordance with the requirements in the Procedures Manual (including applicable laws, regulations, and requirements) or that the action is not applicable to the Project.

### Project Administration:

- | YES                      | N/A                      |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <b>Fee:</b> The fee was negotiated prior to start of Phase B.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <b>Preparation:</b> The Architect-Engineer has reviewed requirements in Chapter 5 – Phase B Design Development of the Capital Construction Project Procedures Manual.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <b>Pre-Design Issues:</b> The Architect-Engineer has reviewed the Pre-Design and Phase A Checklist. Any carry-forward items have been included or attached to the Phase B Checklist.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <b>Phase A Issues:</b> Unresolved or incomplete issues from Phase A have been reviewed with the Using Agency, Owner, Project Manager and Commissioning Authority.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <b>Phase B Authorization:</b> The Project Manager has issued Phase B authorization.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <b>Federal Funds:</b> The status of permit review on Projects with Federal funding has been identified.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <b>Project Directory:</b> The updated Project Directory has been distributed.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <b>Progress and Design Review Meetings:</b> The Architect-Engineer has scheduled, and will conduct and document Phase B Progress and Design Review Meetings with the Owner, Using Agency and Design Team.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <b>Commissioning Meetings:</b> The Architect-Engineer has attended/will attend Phase B Commissioning Team Meetings.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <b>Regulatory Reviews:</b> Regulatory authorities have been conferred with and preliminary reviews will be obtained as documents develop.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <b>Project Program/Owner's Project Requirements:</b> The Architect-Engineer has reviewed and revised the Project Program and/or the Owner's Project Requirements as appropriate and necessary.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <b>Verification:</b> The Architect-Engineer has verified that the Design Development documents comply with the Project Program and/or Owner's Project Requirements.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <b>Preliminary Surveys:</b> Completed preliminary geotechnical, topographic and survey documents have been obtained. Initiated <b>final subsurface investigations</b> and any other survey information based on the Phase A plan. All information has been forwarded to the appropriate consultants.             |
| <input type="checkbox"/> | <input type="checkbox"/> | <b>Additional Data:</b> All other data received from Owner, Using Agency or consultants has been reviewed. If necessary, additional data was requested.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <b>Phase B Design Development Documents:</b> The Architect-Engineer has prepared Phase B Design Development documents (approximately 40% complete documents) that adhere to project requirements and construction budget. Value engineering options have been considered continuously during design development. |
| <input type="checkbox"/> | <input type="checkbox"/> | <b>Formatting:</b> All consultants have been required to produce their design documents following the same format as the architectural documents.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <b>Pre-Submittal Commissioning Review:</b> The pre-submittal commissioning review and coordination meeting has been conducted.   |

**Project Administration: (continued)**

YES N/A

**Seismic Requirements:** The services of a Structural Engineer have been obtained to investigate/report on review of applicable seismic regulations.

**Single Source Procurement:** A need determination was made and authorization received from the Division of Engineering and Contract Administration for the use of any single source procurements or restrictive specifications (i.e., less than 3 manufacturers) of materials or services.

**Mechanical and Electrical Engineers:** The Architect-Engineer has coordinated the services of Mechanical and Electrical Engineers who were responsible for the following tasks and have provided this information in useable format to the Architect-Engineer. The Architect-Engineer has ensured that Mechanical and Electrical Engineer(s):

YES N/A

Contacted utility companies and public authorities for all services and initiated approval process.

Investigated and reported on their review of all applicable local public utility regulations.

Determined the space needs and location for all systems and provided information to the Architect-Engineer.

**Phase B Budget, Area Calculations and Scheduling:** In the narrative of the Phase B submittal:

YES N/A

**Cost Estimate:** The Architect/Engineer's Estimate of Construction Cost "Phase B" has been prepared based upon Design Development documents and all available data. Incorporate each consultant's estimate for their portion of the project. **See Section 508** of the Procedures Manual.

**Space Study Statement:** The area calculation (net and gross) in the Space Study Statement of the Estimate of Construction Cost "Phase B" has been revised. Update accordingly the Architect/Engineer's Estimate of Construction Cost. **See Section 508** of the Procedures Manual.

**Project Schedule:** The Project Schedule has been revised. Update according to the Architect/Engineer's Estimate of Construction Cost. **See Section 508** of the Procedures Manual.

**Energy Model:** The Architect-Engineer has prepared an estimate of probable systems operating costs and included the required energy model. This estimate of operating cost shall be forwarded separately to the Division of Engineering and Contract Administration and the Agency for inclusion in their future operating budget in addition to being included in the narrative.

**Approvals:** Written approval has been obtained from the Project Manager for any increase in area or cost.

**Phase A Budget Exceeded:** The Architect-Engineer has informed the Project Manager that the Project will exceed the Phase A budget with explanation of the increased cost.

**Projects Seeking LEED Certification:**

YES N/A

**Enhanced Commissioning:** The Architect-Engineer has participated in the Commissioning Authority design development review process if enhanced commissioning is used.

**LEED Points:** The LEED points being pursued have been finalized and included in the narrative.

**Updated Energy Model:** An updated energy model has been provided to document compliance with the required number of points for LEED Energy and Atmosphere Credit 1. The Using Agency shall apply a contingency in developing their projected operating costs. See Phase A Using Agency Responsibilities Section 302.

**Phase B Review and Approval:**

- |                          |                          |   |
|--------------------------|--------------------------|---|
| YES                      | N/A                      |   |
| <input type="checkbox"/> | <input type="checkbox"/> | <b>Copies:</b> Six sets of Phase B documents have been submitted to the Project Manager.  |
| <input type="checkbox"/> | <input type="checkbox"/> | <b>Phase B Review Meeting:</b> The Architect-Engineer will conduct the Phase B Review Meeting. (This meeting is scheduled by the Project Manager.)  |
| <input type="checkbox"/> | <input type="checkbox"/> | <b>Documentation:</b> The Architect-Engineer shall document Phase B Review Meeting comments, revisions and changes and incorporate such comments, revisions and changes into Phase B Documents. |

**Phase B Submittal Checklist:**

The following documents are required to be provided in the Phase B submittal unless they are not applicable. The Architect-Engineer shall mark the appropriate box identifying whether the submittal contains each item or whether the item is not applicable to the Project.

- |                          |                          |  |
|--------------------------|--------------------------|--|
| Provided                 | N/A                      |  |
| <input type="checkbox"/> | <input type="checkbox"/> | <b>Phase B Checklist:</b> Completed copy of Phase B Checklist.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <b>Phase B Cost Estimate:</b> Completed copy of the Phase B Estimate of Construction Cost. <b>See Section 508.</b>   |
| <input type="checkbox"/> | <input type="checkbox"/> | <b>Design Narrative:</b> Design Narrative describing the proposed design, materials and equipment.   |
| <input type="checkbox"/> | <input type="checkbox"/> | <b>Commissioning Plan:</b> Revised Commissioning Plan to reflect the Phase B Design Development Plan. See the Phase B Commissioning Plan requirements in <b>Section 504 and the Phase B Commissioning Plan Checklist in Section 500.4.</b> |

**Drawings:** **Phase B Design Development Drawings** shall be provided in 24" x 36" or 30" x 42" bound format. Phase B drawings may be submitted as half-size or 11" x 17" prints upon approval of the Project Manager. Include the following at a minimum:

- |                          |                          |                              |
|--------------------------|--------------------------|------------------------------|
| Provided                 | N/A                      |                              |
| <input type="checkbox"/> | <input type="checkbox"/> | Site Plan                    |
| <input type="checkbox"/> | <input type="checkbox"/> | Site Utility Plan            |
| <input type="checkbox"/> | <input type="checkbox"/> | Architectural Floor Plans    |
| <input type="checkbox"/> | <input type="checkbox"/> | Architectural Elevations     |
| <input type="checkbox"/> | <input type="checkbox"/> | Sections                     |
| <input type="checkbox"/> | <input type="checkbox"/> | Typical Construction Details |
| <input type="checkbox"/> | <input type="checkbox"/> | Structural Plans             |

**Division 210000 Fire Suppression drawings:**

- |                          |                          |   |
|--------------------------|--------------------------|---|
| Provided                 | N/A                      |   |
| <input type="checkbox"/> | <input type="checkbox"/> | Fire Suppression Entry Schematic                |
| <input type="checkbox"/> | <input type="checkbox"/> | Routing of Distribution Mains                   |
| <input type="checkbox"/> | <input type="checkbox"/> | Location of Major Equipment in Mechanical Rooms |
| <input type="checkbox"/> | <input type="checkbox"/> | Schematics & Details Index                      |

**Division 220000 Plumbing drawings:**

- |                          |                          |                                  |
|--------------------------|--------------------------|----------------------------------|
| Provided                 | N/A                      |                                  |
| <input type="checkbox"/> | <input type="checkbox"/> | Domestic Water Systems Schematic |
| <input type="checkbox"/> | <input type="checkbox"/> | Piping Plans                     |
| <input type="checkbox"/> | <input type="checkbox"/> | Schematic & Details Index        |

**Division 230000 HVAC drawings:**

- |                          |                          |                                     |
|--------------------------|--------------------------|-------------------------------------|
| Provided                 | N/A                      |                                     |
| <input type="checkbox"/> | <input type="checkbox"/> | Single Line Air Distribution Layout |
| <input type="checkbox"/> | <input type="checkbox"/> | Single Line Main Piping Layout      |
| <input type="checkbox"/> | <input type="checkbox"/> | Schematics & Details Index          |

**Drawings: (continued)**

**Division 250000 Integrated Automation drawings:**

- | Provided                 | N/A                      |   |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | Fire Alarm Zone coordinated with Division 28. |
| <input type="checkbox"/> | <input type="checkbox"/> | Smoke Zones coordinated with Division 28.     |
| <input type="checkbox"/> | <input type="checkbox"/> | Security Zones coordinated with Division 28.  |
| <input type="checkbox"/> | <input type="checkbox"/> | Device & Outlet Locations                     |
| <input type="checkbox"/> | <input type="checkbox"/> | Preliminary Systems Riser Diagrams            |
| <input type="checkbox"/> | <input type="checkbox"/> | Cable Tray / Conduit Routing Plan             |
| <input type="checkbox"/> | <input type="checkbox"/> | Schematics & Details Index                    |

**Division 260000 Electrical drawings:**

- | Provided                 | N/A                      |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Preliminary Light Fixture / Switching Layout                                   |
| <input type="checkbox"/> | <input type="checkbox"/> | Preliminary Power Receptacle Layout coordinated with Division 27 requirements. |
| <input type="checkbox"/> | <input type="checkbox"/> | Panel Locations coordinated with Division 27 requirements.                     |
| <input type="checkbox"/> | <input type="checkbox"/> | Electrical Power Riser Diagram   |
| <input type="checkbox"/> | <input type="checkbox"/> | Schematics & Details Index   |

**Division 270000 Communications drawings:**

- | Provided                 | N/A                      |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Preliminary System Architecture Riser Diagram                                |
| <input type="checkbox"/> | <input type="checkbox"/> | Cable Tray / Conduit Routing Plan coordinated with Division 26 requirements. |
| <input type="checkbox"/> | <input type="checkbox"/> | Voice / Data Outlet Locations coordinated with Division 26 requirements.     |
| <input type="checkbox"/> | <input type="checkbox"/> | Schematics & Details Index   |

**Division 280000 Electronic Safety & Security drawings:**

- | Provided                 | N/A                      |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Fire Alarm Zones coordinated with Division 25. |
| <input type="checkbox"/> | <input type="checkbox"/> | Smoke Zones coordinated with Division 25.      |
| <input type="checkbox"/> | <input type="checkbox"/> | Security Zones coordinated with Division 25.   |
| <input type="checkbox"/> | <input type="checkbox"/> | Device Locations                               |
| <input type="checkbox"/> | <input type="checkbox"/> | Preliminary Systems Riser Diagram              |
| <input type="checkbox"/> | <input type="checkbox"/> | Schematics & Details Index                     |

**Revised Outline Specifications / Design Narrative:** See Section 307.1. Submit Equipment and fixtures data (cut) sheets for all significant equipment and fixtures. See Section 506.4 - Phase B Submittal.

**Division 21 Fire Suppression Outline Specification/Design Narrative:** See Section 307.2

- | Provided                 | N/A                      |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Updated portions of the Systems Basis of Design Document |
| <input type="checkbox"/> | <input type="checkbox"/> | Updated Cost Projections                                 |
| <input type="checkbox"/> | <input type="checkbox"/> | Utility coordination description                         |
| <input type="checkbox"/> | <input type="checkbox"/> | Flow Calculations  |
| <input type="checkbox"/> | <input type="checkbox"/> | Commissioning requirements                               |
| <input type="checkbox"/> | <input type="checkbox"/> | Functional Performance Test(s)                           |

**Revised Outline Specifications / Design Narrative: (continued)**

**Division 22 Plumbing Outline Specification/Design Narrative: See Section 307.3**

- | Provided                 | N/A                      |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Updated portions of the Systems Basis of Design Document |
| <input type="checkbox"/> | <input type="checkbox"/> | Updated Cost Projections                                 |
| <input type="checkbox"/> | <input type="checkbox"/> | Utility coordination description                         |
| <input type="checkbox"/> | <input type="checkbox"/> | Operating & Peak Flow Calculations                       |
| <input type="checkbox"/> | <input type="checkbox"/> | Commissioning requirements                               |
| <input type="checkbox"/> | <input type="checkbox"/> | Functional Performance Test(s)                           |

**Division 23 HVAC Outline Specification/Design Narrative: See Section 307.4**

- | Provided                 | N/A                      |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Updated portions of the Systems Basis of Design Document |
| <input type="checkbox"/> | <input type="checkbox"/> | Updated Cost Projections                                 |
| <input type="checkbox"/> | <input type="checkbox"/> | Updated Life Cycle Evaluations                           |
| <input type="checkbox"/> | <input type="checkbox"/> | Utility coordination description                         |
| <input type="checkbox"/> | <input type="checkbox"/> | Equipment List   |
| <input type="checkbox"/> | <input type="checkbox"/> | Controls Sequence of Operation                           |
| <input type="checkbox"/> | <input type="checkbox"/> | Smoke Control and Life Safety Coordination Summary       |
| <input type="checkbox"/> | <input type="checkbox"/> | Functional Performance Test(s)                           |
| <input type="checkbox"/> | <input type="checkbox"/> | Commissioning requirements                               |

**Division 25 Integrated Automation Outline Specification/Design Narrative: See Section 307.5**

- | Provided                 | N/A                      |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Updated portions of the Systems Basis of Design Document |
| <input type="checkbox"/> | <input type="checkbox"/> | Updated Cost Projections                                 |
| <input type="checkbox"/> | <input type="checkbox"/> | Fire Alarm Zone discussion coordinated with Division 28. |
| <input type="checkbox"/> | <input type="checkbox"/> | Smoke Zones discussion coordinated with Division 28.     |
| <input type="checkbox"/> | <input type="checkbox"/> | Security Zones discussion coordinated with Division 28.  |
| <input type="checkbox"/> | <input type="checkbox"/> | Equipment List & Cut Sheets                              |
| <input type="checkbox"/> | <input type="checkbox"/> | Controls Sequence of Operation                           |
| <input type="checkbox"/> | <input type="checkbox"/> | Smoke Control and HVAC Coordination Summary              |
| <input type="checkbox"/> | <input type="checkbox"/> | Functional Performance Test(s)                           |
| <input type="checkbox"/> | <input type="checkbox"/> | Commissioning requirements                               |

**Division 26 Electrical Outline Specification/Design Narrative: See Section 307.6**

- | Provided                 | N/A                      |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Updated portions of the Systems Basis of Design Document |
| <input type="checkbox"/> | <input type="checkbox"/> | Updated Cost Projections                                 |
| <input type="checkbox"/> | <input type="checkbox"/> | Updated Life Cycle Evaluations                           |
| <input type="checkbox"/> | <input type="checkbox"/> | Utility coordination description                         |
| <input type="checkbox"/> | <input type="checkbox"/> | Lighting Level requirements                              |
| <input type="checkbox"/> | <input type="checkbox"/> | Electrical Load Estimate                                 |
| <input type="checkbox"/> | <input type="checkbox"/> | Lighting Controls Sequence of Operation                  |
| <input type="checkbox"/> | <input type="checkbox"/> | Smoke Control and Life Safety Coordination Summary       |
| <input type="checkbox"/> | <input type="checkbox"/> | Functional Performance Test(s)                           |
| <input type="checkbox"/> | <input type="checkbox"/> | Commissioning requirements                               |

**Revised Outline Specifications / Design Narrative: (continued)**

**Division 27 Communications Outline Specification/Design Narrative:** See Section 307.7

- | Provided                 | N/A                      |   |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | Updated portions of the Systems Basis of Design Document                    |
| <input type="checkbox"/> | <input type="checkbox"/> | Updated Cost Projections  |
| <input type="checkbox"/> | <input type="checkbox"/> | Equipment List & Cut Sheets   |
| <input type="checkbox"/> | <input type="checkbox"/> | Functional Performance Test(s)  |
| <input type="checkbox"/> | <input type="checkbox"/> | Commissioning requirements  |
| <input type="checkbox"/> | <input type="checkbox"/> | Discussion of coordination with the Commonwealth Office of Technology (COT) |

**Division 28 Electronic Safety & Security Outline Specification/Design Narrative:** See Section 307.8

- | Provided                 | N/A                      |   |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | Updated portions of the Systems Basis of Design Document  |
| <input type="checkbox"/> | <input type="checkbox"/> | Updated Cost Projections                                  |
| <input type="checkbox"/> | <input type="checkbox"/> | Fire Alarm Zones discussion coordinated with Division 25. |
| <input type="checkbox"/> | <input type="checkbox"/> | Smoke Zones discussion coordinated with Division 25.      |
| <input type="checkbox"/> | <input type="checkbox"/> | Security Zones discussion coordinated with Division 25.   |
| <input type="checkbox"/> | <input type="checkbox"/> | Smoke Control and Electrical Coordination Summary         |
| <input type="checkbox"/> | <input type="checkbox"/> | Functional Performance Test(s)                            |
| <input type="checkbox"/> | <input type="checkbox"/> | Commissioning requirements                                |

**Phase B Commissioning Plan:** The Phase B Commissioning Plan has been prepared by the Commissioning Authority.

**Division 011913 Commissioning Authority Documents:** The following items, prepared by the Commissioning Authority, have been included in the Phase B submittal:

- | Provided                 | N/A                      |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Updated Owner's Project Requirements           |
| <input type="checkbox"/> | <input type="checkbox"/> | Updated Systems Basis of Design Documents      |
| <input type="checkbox"/> | <input type="checkbox"/> | Pre-submission Design Review Report            |
| <input type="checkbox"/> | <input type="checkbox"/> | Updated Commissioning Plan                     |
| <input type="checkbox"/> | <input type="checkbox"/> | Specification Table of Contents                |
| <input type="checkbox"/> | <input type="checkbox"/> | Specification / Commissioning Integration Plan |
| <input type="checkbox"/> | <input type="checkbox"/> | Construction Forms & Checklists Outline        |
| <input type="checkbox"/> | <input type="checkbox"/> | Functional Performance Test(s) defined         |
| <input type="checkbox"/> | <input type="checkbox"/> | Systems Manual Outline                         |

**End of Phase B Checklist for the Architect-Engineer**