

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 ECU DFMS Procedures Manual (including applicable laws, regulations, and requirements) or that the action is not applicable to the Project.

Project Administration:

- | YES | N/A | |
|--------------------------|--------------------------|--|
| ☐ | ☐ | Fee: The fee was negotiated prior to start of Phase B. |
| ☐ | ☐ | Preparation: The Architect-Engineer has reviewed requirements in Chapter 5 – Phase B Design Development of the ECU DFMS Procedures Manual. |
| ☐ | ☐ | Pre-Design Issues: 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. |
| ☐ | ☐ | Phase A Issues: Unresolved or incomplete issues from Phase A have been reviewed with the DFMS Project Management and Commissioning Authority. |
| ☐ | ☐ | Phase B Authorization: The DFMS Project Management has authorized Phase B work. |
| ☐ | ☐ | Federal Funds: The status of permit review on Projects with Federal funding has been identified. |
| ☐ | ☐ | Project Directory: The updated Project Directory has been distributed. |
| ☐ | ☐ | Progress and Design Review Meetings: The Architect-Engineer has scheduled and will conduct and document Phase B Progress and Design Review Meetings with the DFMS Project Management and Design Team. |
| ☐ | ☐ | Commissioning Meetings: The Architect-Engineer has attended/will attend Phase B Commissioning Team Meetings. |
| ☐ | ☐ | Regulatory Reviews: Regulatory authorities have been conferred with and preliminary reviews will be obtained as documents develop. |
| ☐ | ☐ | Project Program/Owner's Project Requirements: The Architect-Engineer has reviewed and revised the Project Program and/or the DFMS Project Management Requirements as appropriate and necessary. |
| ☐ | ☐ | Verification: The Architect-Engineer has verified that the Design Development documents comply with the Project Program and/or DFMS Project Management Requirements. |
| ☐ | ☐ | Preliminary Surveys: Completed preliminary geotechnical, topographic and survey documents have been obtained. Initiated final subsurface investigations and any other survey information based on the Phase A plan. All information has been forwarded to the appropriate consultants. |
| ☐ | ☐ | Additional Data: All other data received from DFMS Project Management, or consultants has been reviewed. If necessary, additional data was requested. |
| ☐ | ☐ | Phase B Design Development Documents: 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. |
| ☐ | ☐ | Formatting: All consultants have been required to produce their design documents following the same format as the architectural documents. |
| ☐ | ☐ | Pre-Submittal Commissioning Review: The pre-submittal commissioning review and coordination meeting has been conducted. |

Project Administration: (continued)

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

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Procurement: A need determination was made, and authorization received from DFMS Project Management for 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
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Contacted utility companies and public authorities for all services and initiated approval process.

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

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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
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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 ECU DFMS Procedures Manual.

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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.

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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.

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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 to DFMS Project Management for inclusion in future operating budget in addition to being included in the narrative.

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Approvals: Approval has been obtained from the DFMS Project Management for any increase in area or cost.

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

Projects Seeking LEED Certification:

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

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

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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 DFMS Project Management shall apply a contingency in developing their projected operating costs. See Phase A Owner Responsibilities Section 302.

Phase B Review and Approval:

YES	N/A
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Copies: Three sets (two hard copy and one electronic or as requested by DFMS Project Management) of Phase B documents have been submitted to the Project Manager.

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Phase B Review Meeting: The Architect-Engineer will conduct the Phase B Review Meeting. (This meeting is scheduled by the Project Manager.)

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Documentation: 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
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Phase B Checklist: Completed copy of Phase B Checklist.

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Phase B Cost Estimate: Completed copy of the Phase B Estimate of Construction Cost. **See Section 508.**

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Design Narrative: Design Narrative describing the proposed design, materials, and equipment.

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Commissioning Plan: Revised Commissioning Plan to reflect the Phase B Design Development Plan. See the Phase B Commissioning Plan requirements in **Section 504 and the Phase B Commissioning Plan Checklist in Section 500.4.**

Drawings:

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

Provided	N/A
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Site Plan

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Site Utility Plan

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Architectural Floor Plans

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Architectural Elevations

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Sections

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Typical Construction Details

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Structural Plans

Division 210000 Fire Suppression drawings:

Provided	N/A
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Fire Suppression Entry Schematic

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Routing of Distribution Mains

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Location of Major Equipment in Mechanical Rooms

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Schematics & Details Index

Division 220000 Plumbing drawings:

Provided	N/A
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Domestic Water Systems Schematic

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Piping Plans

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Schematic & Details Index

Division 230000 HVAC drawings:

Provided	N/A
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Single Line Air Distribution Layout

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Single Line Main Piping Layout

Drawings: (continued)

☐	☐	Schematics & Details Index
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Division 250000 Integrated Automation drawings:

Provided	N/A	
☐	☐	Fire Alarm Zone coordinated with Division 28.
☐	☐	Smoke Zones coordinated with Division 28.
☐	☐	Security Zones coordinated with Division 28.
☐	☐	Device & Outlet Locations
☐	☐	Preliminary Systems Riser Diagrams
☐	☐	Cable Tray / Conduit Routing Plan
☐	☐	Schematics & Details Index

Division 260000 Electrical drawings:

Provided	N/A	
☐	☐	Preliminary Light Fixture / Switching Layout
☐	☐	Preliminary Power Receptacle Layout coordinated with Division 27 requirements.
☐	☐	Panel Locations coordinated with Division 27 requirements.
☐	☐	Electrical Power Riser Diagram
☐	☐	Schematics & Details Index

Division 270000 Communications drawings:

Provided	N/A	
☐	☐	Preliminary System Architecture Riser Diagram
☐	☐	Cable Tray / Conduit Routing Plan coordinated with Division 26 requirements.
☐	☐	Voice / Data Outlet Locations coordinated with Division 26 requirements.
☐	☐	Schematics & Details Index

Division 280000 Electronic Safety & Security drawings:

Provided	N/A	
☐	☐	Fire Alarm Zones coordinated with Division 25.
☐	☐	Smoke Zones coordinated with Division 25.
☐	☐	Security Zones coordinated with Division 25.
☐	☐	Device Locations
☐	☐	Preliminary Systems Riser Diagram
☐	☐	Schematics & Details Index

Revised Outline Specifications / Design Narrative: 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:

Provided	N/A	
☐	☐	Updated portions of the Systems Basis of Design Document
☐	☐	Updated Cost Projections
☐	☐	Utility coordination description
☐	☐	Flow Calculations
☐	☐	Commissioning requirements
☐	☐	Functional Performance Test(s)

Revised Outline Specifications / Design Narrative: (continued)**Division 22 Plumbing Outline Specification/Design Narrative:**

Provided	N/A	
☐	☐	Updated portions of the Systems Basis of Design Document
☐	☐	Updated Cost Projections
☐	☐	Utility coordination description
☐	☐	Operating & Peak Flow Calculations
☐	☐	Commissioning requirements
☐	☐	Functional Performance Test(s)

Division 23 HVAC Outline Specification/Design Narrative:

Provided	N/A	
☐	☐	Updated portions of the Systems Basis of Design Document
☐	☐	Updated Cost Projections
☐	☐	Updated Life Cycle Evaluations
☐	☐	Utility coordination description
☐	☐	Equipment List
☐	☐	Controls Sequence of Operation
☐	☐	Smoke Control and Life Safety Coordination Summary
☐	☐	Functional Performance Test(s)
☐	☐	Commissioning requirements

Division 25 Integrated Automation Outline Specification/Design Narrative:

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

Division 26 Electrical Outline Specification/Design Narrative:

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

Revised Outline Specifications / Design Narrative: (continued)**Division 27 Communications Outline Specification/Design Narrative:**

Provided	N/A	
☐	☐	Updated portions of the Systems Basis of Design Document
☐	☐	Updated Cost Projections
☐	☐	Equipment List & Cut Sheets
☐	☐	Functional Performance Test(s)
☐	☐	Commissioning requirements
☐	☐	Discussion of coordination with the ECU IT Department

Division 28 Electronic Safety & Security Outline Specification/Design Narrative:

Provided	N/A	
☐	☐	Updated portions of the Systems Basis of Design Document
☐	☐	Updated Cost Projections
☐	☐	Fire Alarm Zones discussion coordinated with Division 25.
☐	☐	Smoke Zones discussion coordinated with Division 25.
☐	☐	Security Zones discussion coordinated with Division 25.
☐	☐	Smoke Control and Electrical Coordination Summary
☐	☐	Functional Performance Test(s)
☐	☐	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	
☐	☐	Updated Owner's Project Requirements
☐	☐	Updated Systems Basis of Design Documents
☐	☐	Pre-submission Design Review Report
☐	☐	Updated Commissioning Plan
☐	☐	Specification Table of Contents
☐	☐	Specification / Commissioning Integration Plan
☐	☐	Construction Forms & Checklists Outline
☐	☐	Functional Performance Test(s) defined
☐	☐	Systems Manual Outline

End of Phase B Checklist for the Architect-Engineer