

Element Z General Design Requirements

Owner Standards and Other
Requirements

Z3035 Project Commissioning

PART 1 - GENERAL

1.01 OVERVIEW

- A. MD Anderson is committed to commissioning our facilities to ensure that all systems are complete and functioning properly upon occupancy and that the facility staff has adequate system documentation and training. Commissioning refers to a systematic process confirming that building systems have been installed, properly started, and consistently operated according to criteria set forth in the Contract Documents, that all systems are complete and functioning in accordance with the A/E's Design Intent Document at Substantial Completion, and that the Contractor has provided MD Anderson's facility staff with adequate system documentation and training.
- B. MD Anderson may contract directly with a Commissioning Authority as an extension of Owner's staff, to perform technical reviews of project design documents, observe completion of construction, verify equipment and system startup by Contractor or Subcontractor, observe prefunctional tests and functional performance tests of systems and integrated systems against requirements of the project Contract Documents, track deficiencies, and recommend solutions. The Commissioning Authority has authority only as delegated by the Owner but has no authority to alter design or installation procedures.
- C. To clarify the A/E's role in the design and construction process, this Design Guideline Element describes the intended scope of services that both the Commissioning Authority and A/E will be responsible for.

PART 2 - COMMISSIONING AUTHORITY'S RESPONSIBILITIES

2.01 GENERAL

- A. In general, the Commissioning Authority, if retained by MD Anderson, will provide the following services during the Project's Design and Construction Phases.

2.02 DESIGN PHASE

- A. Review and comment on project Drawings and Specifications for clarity, completeness, and compliance with the Owner's Design Guidelines.
- B. Recommend alternative design approaches or value engineering items based on project Design Phase reviews.
- C. Work with the A/E to make modifications and/or additions to the Master Construction Specifications for coordination with Commissioning requirements specific to the project scope.

2.03 CONSTRUCTION PHASE

- A. Provide input to the Contractor on the first draft Commissioning Plan. The Commissioning Plan is a document prepared by the Contractor and approved by MD Anderson that provides.

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the structure, schedule, and coordination planning for the Commissioning process from the construction phase through the warranty period. Review the Commissioning Plan for completeness.

- B. Participate in Contractor's Pre-Installation meetings and Pre-Commissioning meetings with subcontractors.
- C. Review Contractor submittals applicable to systems being commissioned for compliance with commissioning needs, concurrent with A/E and MD Anderson reviews.
- D. Review Test, Adjust, and Balance (TAB) execution plan and review completed TAB reports.
- E. Before startup, gather and review current control sequences and interlocks and work with Contractor and A/E until sufficient clarity has been obtained, in writing, to be able to prepare detailed testing procedures.
- F. Verify start-up and prefunctional testing of all systems as defined in the Commissioning Plan. Monitor execution of functional performance testing, Owner demonstration of tests, integrated systems testing, and document results, follow-up, and signoffs.
- G. Provide solution recommendations on deficiencies noted during the Commissioning process.
- H. Perform site visits, as necessary, to observe component and system installations. Attend selected project meetings to obtain information on construction progress. Review project construction meeting minutes for revisions/substitutions relating to the commissioning process. Assist in resolving any discrepancies.

PART 3 - ARCHITECT/ENGINEER'S RESPONSIBILITIES

3.01 GENERAL

- A. The following describe the A/E's activities to support the commissioning process from the design phase through construction.

3.02 DESIGN PHASE

- A. Document the development of design intent and operating parameters by all A/E team members within a document titled "Design Intent Document". The Design Intent Document describes the complete architectural and engineering design intent for the project including design guiding principles, assumptions, issues, recommendations, and narrative assessment of the architectural and infrastructure systems that comprise the building.
- B. Update the Design Intent Document at each phase of design to incorporate current design documentation. Refer to Design Guideline Element Z2010 Design Submittal Requirements for additional information on the Design Intent Document format.
- C. Adapt Owner's Master Construction Specifications to apply to project-specific applications.
- D. Specify control sequences of operation within the Contract Documents.

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- E. Clarify the operation and control of equipment and systems to be commissioned where the Contract Documents are not sufficient for writing the Commissioning Plan and detailed test procedures.
- F. Participate in project meetings related to commissioning activities.

3.03 CONSTRUCTION PHASE

- A. Review prefunctional checklist, functional performance test, and integrated system test procedures and results.
- B. Review functional performance test trend log data.
- C. Review training plan.
- D. Review test, adjust, and balance execution plan.
- E. Coordinate resolution of design and operational deficiencies identified during commissioning, according to the Contract Documents.
- F. Review operating and maintenance manuals.
- G. Coordinate resolution of design non-conformance and design deficiencies identified during warranty-period commissioning.
- H. Participate in project meetings related to commissioning activities.

PART 4 - PRODUCTS

4.01 GENERAL

- A. Refer to Master Construction Specifications for fire suppression, plumbing, mechanical and electrical commissioning requirements, including examples of prefunctional checklists and functional performance tests to be used during the commissioning process.

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PART 5 - DOCUMENT REVISION HISTORY

| Issue | Date | Revision Description | Reviser |
|--------|----------|--|------------|
| | 20070101 | Initial Adoption of Element | |
| Rev. 1 | 20131217 | Changed the term "Commissioning Consultant" to "Commissioning Authority" throughout document. Added fire suppression and plumbing to 4.01 A. | DOS |
| Rev. 2 | 20241203 | Revised to Z3035 from Z2035 | Brian Ogle |
| Rev. 3 | | | |
| Rev. 4 | | | |
| Rev. 5 | | | |

END OF ELEMENT Z3035