**LANL ESM Chapter 15**  
**Attachment A**  
**Commissioning Process Flow Chart**

### Preliminary Design (< 60%)
- **Review and Concur**
- **Determine Applicability of LANL Cx Process to the specific project**
- **Identify and Document the Owner’s Project Requirements for Cx and Develop Project Execution plan**
- **Establish and Document the Graded Approach for the Project**
- **Prepare Preliminary Commissioning Schedule, Cost Estimate, Initial Commissioning Plan and Division of Responsibility (DOR)**
- **Review and Comment on Design Operability, Maintainability and Testing Readiness**

### Final Design (> 90%)
- **Review and Concur**
- **Determine and Select the Project Cx Agent (CA) and Members of the Cx Team**
- **Review and Comment on Design Operability, Maintainability and Testing Readiness**
- **Finalize and Issue Cx Plan**
- **Incorporate Specific Cx Rqmts into the Project Specs**
- **Issue Approved Cx Plan and Project Summary Schedule**
- **Develop detailed Cx Schedules and incorporate into Master Const Schedule**
- **Develop Component and System Test Procedures for each system**

### Construction
- **Review and Approve**
- **Incorporate Project Specific Cx Rqmts into the Project Spec**
- **Issue Approved Cx Plan and Project Summary Schedule**
- **Develop Component and System Test Procedures for each system**
- **Turnover**
- **Begin Installation Verification Walkdowns and assume custody and care of systems from Const**

*Note: There will usually be overlap between the Const and Comm phases.*
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**NOTES:**
1. Construction Management Procedure CMP 401 Startup and Commissioning Process Component Test procedure
2. Construction management Procedure CMP 400 Startup and Commissioning Process Procedure