

Feasibility Study – General Template

Table of Contents

01: Executive Summary

- A. Background
- B. Project Description
- C. Project Goals & Vision
- D. Guiding Principles
- E. Site Drivers (if applicable)
- F. Building Design (Generic Project Description, Rationale, Alternatives Considered: Language that may be used for CPIP, A-1, and other University Documentation)
- G. Cost & Timeline

02: Process Overview

Process will vary by consultant and project type, but should generally include the following:

- A. Project Kickoff / Visioning / Discovery
- B. Project Workshops / Stakeholder Involvement
- C. Analysis of Existing Conditions
- D. Alternatives Development / Consensus Building
- E. Refinement of Preferred Concept Design
- F. Final Deliverable Development
- G. Proposed Study Schedule with benchmark dates noted. (Include dates requiring alignment for necessary approvals. This is different from Project Schedule noted in Section 08.c.)

03: Existing Facilities & Conditions

- A. Building Condition Assessment / Facilities Condition Index (FCI - information available from University Facilities to be supplemented by consultant team when required)
- B. Current Conditions
 - I. Stakeholder / Departmental Assessment
 - II. Photographs of Existing Conditions (May be included as Appendix.)
 - III. Health/Safety/Accessibility/Code Issues
 - IV. Results of Destructive Testing (For renovation projects if warranted by building age and FCI)
- C. Current & Projected Enrollment
- D. Alignment with Long-range Framework Plan
- E. References to Previous Studies
- F. Hazardous Materials survey analysis or request (must be updated if more than 3 years old).

04: Proposed Architectural Program

- A. Program Overview / Program Requirements
- B. Program Distribution
 - I. Distribution by Space Type (Instructional, Research, Office, etc.)
 - II. Distribution by Program/Department (for shared facilities)
- C. Program Space List
 - I. Graphic Representation
 - II. Tabular Schedule of Spaces (to also be provided in spreadsheet format)
- D. Customer/Stakeholder Approval (recommend signature sheet to be included with appendices that indicates stakeholder/departmental and University Facilities – Planning Design & Construction (PDC) approval of program before study proceeds to next phase.)
- E. Identify existing personnel, rooms or groups, building and site items, permanent or semi-permanent elements that must be relocated – permanently or temporarily. These items must be accounted for in the subsequent schemes, phasing plans and cost estimates.

05: Site Analysis / Site Selection

- A. Site Analysis
 - I. Utilities
 - II. Topography
 - III. Access / Campus Circulation
 - IV. Climate & Orientation
 - V. Cultural Resource Assessment (when required, to be performed by a consultant under contract with the University)
 - VI. Relationship/Alignment to Long-range Framework Plan
 - VII. Campus Precinct (Adjacencies, Context, Opportunities)
 - VIII. Soils – Concerns regarding soils should be addressed within the feasibility study. The consultant team should discuss with PDC staff whether a geotechnical study should be performed to identify potential issues or impacts to proposed foundation/structural systems.
- B. Site Selection
 - I. Site Options
 - II. Site Utility Requirements
 - III. Transformer (Please contact CU Facilities)
 - IV. Preferred Site
- C. Analysis of Hazardous Materials (where applicable for existing structures and/or site reuse).

06: Concept Design

- A. Massing Studies
- B. Site Plan
- C. Plan Diagrams
- D. Section Perspective / Axonometric Projections
- E. Concept Images / Renderings
- F. Chart of Spaces showing programmed SF and as-designed SF

07: Proposed Concept Building Design Guidelines

- A. Mechanical, Electrical, Plumbing, Fire Protection Systems Narratives
- B. Structural Narrative
- C. Utility Controls (JCI, etc.)
- D. Code Summary with documented assumptions or rulings especially related to atriums, terraces and other spaces open to interpretation.
- E. Clemson Computing & Information Technology (CCIT)
 - I. Network (Cabling, Pathways, IT Closets)
 - II. Audio-Visual
- F. Equipment (Fixed and Loose Equipment needs – particularly for lab-related projects)
- G. Interior Design Narrative
- H. Security, Access Control
 - I. A3 – Card Access
 - II. CUPD – Security Cameras
- I. University Facilities – Utilities & Maintenance (identification of any utility rerouting, extensions or equipment relocation)
- J. Sustainability Goals / Pathway to Net Zero
- K. Transportation Impacts: The feasibility study should consider any potential impacts to campus circulation, particularly impacts to vehicular traffic, transit operations or bicycle/pedestrian circulation both during construction and after project delivery. The consultant team should discuss with the PDC – Infrastructure team whether an independent traffic impact analysis should be performed.
- L. Develop and maintain a Risk Register chart outlining items not fully resolved, unknown conditions that require further testing, tie-ins to existing systems based on assumptions or other items outside of the scope of the study that need to be addressed in the implementation of the concept.
- M. Relationship to Clemson University Forest (CF): Proposed projects that impact the CF will incur a fee for any necessary timber removal. Fees are based on dollar/ton values associated with the species of trees removed. Please see the following map for all areas considered part of the CF: <https://www.clemson.edu/public/experimental-forest/map/index.html>

08: Conceptual Cost Estimate, Project Schedule & Procurement Delivery

- A. Construction Cost Summary (Examples can be provided.)
 - I. Assumptions (Construction Start, Construction Mid-Point, Rate of Escalation, etc.)
 - II. Estimate Information: Date of Estimate, Estimator, Construction Cost per Sq. Ft.
- B. Include an estimated cost for a BDA (Bi-Directional Amplifier) system for the building.
- C. Total Project Cost Estimate (to also be provided in spreadsheet format)
- D. Proposed Project Schedule (coordinated with University Facilities - PDC and Finance & Operations to incorporate standard State two-phase approval process.)
- E. Recommended method of project delivery (Design-Bid Build, CMAR, etc.)

09: Implementation Information

- A. Funding Sources (to be coordinated with University Facilities - PDC and Finance & Operations)
- B. Estimated Operating Costs (to be coordinated with University Facilities – Utilities & Maintenance – utility rates, anticipated custodial/maintenance costs per square foot)
- C. Narrative for State forms A-1 (See 01.F)
- D. Identification and Cost Estimates for Enabling Projects or Backfill Projects: The feasibility study should account for any enabling projects required for project delivery including utility/infrastructure improvements, parking/transportation system modifications, and/or renovation projects associated with temporary or permanent departmental relocations necessitated by the project in question.

10: Final Approval

- A. Finance & Operations Review and Approval
- B. Final Customer/Stakeholder Approval - recommended signature sheet signifying approval of final draft document to be signed by the following:
 - a. Planning & Design
 - b. Project Manager assigned to study from University Facilities - PDC
 - c. Departmental/Stakeholder Representatives
 - d. University Facilities – Utilities & Maintenance
 - e. CCIT

11: Appendices

- A. Project Cost Estimate – Detailed Estimate
 - a. 3rd Party / CM Cost Estimate (if applicable)
- B. Site Plan
- C. Infrastructure Plan
- D. Traffic Management Plan (if required)
- E. Geotechnical Report / Soils Study (if required)
- F. Project Directory / Study Participants
- G. Program – Stakeholder Approval (with signatures – see 04.D)
- H. Meeting Minutes / Chats from Teams/Zoom Meetings
- I. Photographs of Existing Conditions
- J. References to Previous/Related Studies (if applicable)
- K. Risk Register
- L. Hazardous Materials Survey (where applicable)