



## A-13 - PROJECT PROCESS & PROCEDURES

### A-13.1 – UNC Facilities Services - Design Reviews

UNC Chapel Hill requires that all project drawings, documents, and reports for capital projects are reviewed by Facilities Services personnel. Design Teams shall provide adequate time in their project design schedules to account for design reviews by Facilities which typically run parallel with State Construction Office reviews for drawing package submittals. The following guidance is recommended to Design Teams

#### Design Submittal Format

##### Hardcopies & Digital Format

All drawing sets more than 15 sheets shall be submitted as hardcopies; basically, any capital project. Design teams may request a reduced quantity of hardcopies from those shown below, at the discretion of the Facilities Planning project Manager.

1. A total of six (6) sets (drawings and specifications) shall be provided by the designer:
  - 1 set: User – *half size*
  - 1 set: Project Manager – *half size*
  - 1 set: Facilities Planning - *half size, place in designated flat file*
  - 1 set: Engineering Services – *half size, place at Engineering Table*
  - 1 set: Construction Manager – *full size*
  - 1 set: Plan Review Room – *full size, place in downstairs Plan Room*
2. PDF's of drawings and specifications shall be uploaded onto Dr. Checks upon successful intake.
3. The Project review time starts when Hardcopies have been received at Facilities and distributed.

#### Design Submittal Intake

For Design Development (DD) and Construction Document (CD) stage submittals only, UNC Facilities requires an intake review of the submittal package to determine that it meets the minimum content requirements for its specific submittal stage.

The FPD project manager will hold a meeting with a representative from Engineering and Construction to review the content of the design submittal. The PM shall catalog the deficiencies of the design submittal, as applicable. At the conclusion of the meeting the PM advises the design team of the following:

- a. *Acceptance*
  - i. The PDF of the Design Submittal is posted to ProjNet and the clock starts on the previously specified review duration. The submitted Hardcopies are distributed around Facilities for review.
- b. *Rejection*
  - i. The list of deficiencies is transmitted to the Design team lead. An in-person meeting is recommended to review the deficiencies in detail.
  - ii. A schedule for Re-Submittal shall be established.
  - iii. The submitted Hardcopies shall be recycled.



## Project Design Process

This section outlines the procedures that are unique to capital projects at The University of North Carolina at Chapel Hill. These requirements supplement the planning procedures required by North Carolina's Division of Administration, North Carolina State Construction Office, as outlined in the North Carolina State Construction Manual or NCSCO Manual.

The manual can be accessed at:

<http://www.nc-sco.com/scomanual.aspx>

## Project Design Sequence

### Overview

The Designer submits a proposed Project Development Schedule to the University's Project Manager for approval. This schedule will incorporate the end-of-phase milestone dates stipulated in the Design Contract. In addition, this schedule will show:

- The start dates and duration of each major design phase
- The duration and completion dates of each design review period, which are required to maintain the project schedule
- The project duration and completion dates and other project-related activities, such as funding decisions, surveys, sub-surface investigations, and zoning approvals
- The estimated duration of the construction contract award process and the construction process

The Project Development Schedule is updated and resubmitted with each end-of-phase submittal described below.

### Project Design Phases – Required Documentation

The Designer is expected to conduct project design and coordination meetings to verify the project program and review the design as it develops. The Designer is expected to take minutes of all meetings and distribute them to all participants through the FPD Project Manager.

The Designer is required to make submittals of design documents at the conclusion of each design phase to the State Construction Office, the University Facilities Planning Department, and any other pertinent review agency. The requirements for each project development phase are outlined in Chapter 300 of the SCO Manual.

#### 1. **Schematic Design Phase (SD)**

The Designer shall confer with the University's Project Manager, the future occupants, and the owner representatives at the beginning of the schematic design phase to review the program and establish the project requirements.

- a. *Existing Conditions* - The University attempts to provide accurate, as-built drawings for the use of the Designer. However, due to the age of many of the University's buildings and the many renovations some buildings have endured, as-built drawings are not always available. It is the responsibility of the Designer to notify the Project Manager when any information regarding the existing conditions of a project is inaccurate or inadequate.



- b. *Site Utilities Information* - Additional information is available on the conditions of existing structures, maintenance items that need to be addressed, and hazardous materials in existing structures. This information should not be considered complete or accurate. The Designer is responsible to review record documents of existing facilities to determine all utility and subsurface tie-ins to adjacent buildings, or building being renovated, including storm and foundation drains, and to determine all utilities located within the project limits, including areas impacted by work of the project. Project impact limits include improvements may be off the main project site, but are part of the project, such as utility extensions, driveways, and roadways.
- c. *Geotechnical Information* - As part of the Designer's services to the University, the Designer shall recommend a qualified, licensed geotechnical services firm that will provide all project required geotechnical information for the project. The geotechnical consultant shall contract directly with the University, but still be obligated to coordinate its services with the lead designer.
- d. *Schematic Design Submittal* - The Schematic Design Submittal to the University consists of a minimum of seven (7) complete sets of documents, plus an electronic file in pdf format or as determined by the Project Manager. The University will review the documents for completion prior to submission to State Construction Office.
  - i. In addition to the requirements outlined in the North Carolina State Construction Manual, these documents should include the following information:
    1. Proposed walk and bikeways, disability, vehicular, fire and service access shown on site plans
    2. Net square feet for each space and comparison to program
    3. A LEED Checklist
    4. A Conceptual Landscape Plan
    5. A Tree Protection Plan (at this stage the plan may be interpreted as an evaluation of the impact to the existing landscape)
    6. An initial inventory of valuable and reusable building materials available for reuse in this project, other projects, in general or to be recycled
    7. Owner's Project Requirements (OPR) document, as facilitated by the University's commissioning (Cx) agent
    8. A Stormwater Concept Plan (See the University's Stormwater Design Guidelines for specific components, which include an existing conditions analysis, an estimate of proposed impervious cover, and estimated size and location of proposed stormwater infrastructure and best management practices.)
    9. A preliminary energy model that evaluates orientation, day lighting opportunities, and HVAC strategies

## 2. Design Development Phase (DD)

Based on the approved schematic submittal, the Designer shall prepare the design development documents.

- a. *Design Development Submittal* - The Design Development Submittal to the University consists of a minimum of five (5) complete sets of documents, plus an electronic file in pdf format or as determined by the Project Manager. The University will review the documents for completion prior to submission to State Construction Office. In addition to the requirements outlined in the SCO Manual, these documents are to include the following:



- i. Site and space planning information for waste and recycling collection
- ii. Equipment and furniture layouts for all room.
  1. Note: If the architectural contract includes the moveable equipment portion of the work, the Designer shall provide the moveable furniture and equipment layouts. If the moveable equipment is not in the contract, the Designer will provide floor plans to the University.
- iii. Outline specification for the Energy Management Control System
- iv. An updated Owner's Project Requirement (OPR) document and a Basis of Design document with input from each designer
- v. An updated project development schedule
- vi. Stormwater Management report (See the University's Stormwater Design Guidelines for specific components.)
- vii. An updated LEED checklist including supporting documentation for projected energy and water savings
- viii. A fully developed energy model including all files required to allow UNC to rerun the energy model
- ix. Site Utility Plans
- x. Prior to the Construction Document submittal, submit a response to the substantive Design Development Review Comments in Dr. Checks.

### 3. Construction Documents Phase (CD)

Based upon the approved design development submittal, the Designer shall prepare construction documents and other materials required for the receipt of bids on the project. The Designer will prepare these documents as described in the North Carolina State Construction Manual Section 205.

The University fully supports and encourages minority business participation in campus projects. The Designer shall make every effort to ensure that the latest requirements from the State Construction Office are followed during the preparation of documents for bidding.

The Designer and the University are responsible for determining the fees applicable to the project. The Designer and the University shall agree upon what fees are paid by the University, and what fees are listed in the specification for payment by the construction contract.

- a. *Construction Documents Submittal* - The Construction Document Submittal to the University consists of a minimum of five (5) complete sets of documents, plus an electronic file in pdf format or as determined by the Project Manager. The University will review the documents for completion prior to submission to State Construction Office. In addition to the requirements outlined in the North Carolina State Construction Manual, these documents are to include the following:
  - i. Drawings, containing:
    1. Stormwater management plans and details
    2. Tree protection plan
    3. Erosion Control plans
    4. Annual water and sewage volume
    5. Annual usage volume of non-potable water. Detailed plan sheets showing outdoor service enclosure(s) including screen wall details, electrical



- requirements, lighting drainage, a note listing the buildings that the site(s) are intended to serve
  6. Plans showing clearly marked locations of the walkway recycling sites and installation details
  7. Clearly marked locations of all indoor recycling locations -AND- detail sheets showing the plans for any recycling cabinets to be built by the project
  8. Drawings are to have noted the locations of all items which Contractor is to salvage
- ii. Project Manual, shall include:
1. An updated Owner's Project Requirements (OPR) and Basis of Design documents
  2. CSI Master Format Specifications Sections
  3. A utility Load Summary Sheet identifying estimated utility loads
  4. A Statement of Special Inspections that lists all required inspections and identifies the Special Inspector
  5. Recycling and waste management requirements
  6. An updated LEED checklist, including supporting documentation for projected energy and water savings
  7. Integrated functional testing protocols and equipment testing checklist
  8. Sequence of operations for HVAC controls
  9. Updated Stormwater Management Report (See: University's Stormwater Design Guidelines for specific components)
  10. Utility plans and profiles of all utilities up to the building perimeter
  11. An updated energy model including all files required to allow UNC to rerun the energy model
- iii. Project Specific Guidance
1. Specifications & Front End Documents (*refer to Design Guidelines Section A-14*)
    - a. UNC-CH General Requirements - The Designer is responsible for procuring the most current version of the University's General Requirements and incorporating them into the contract documents. The Project Manager will provide a copy upon request.
    - b. General Conditions - The Designer is responsible for procuring the most current version of the State of North Carolina's General Conditions. Copies may be found at the State Construction Office's website, [http://www.nc-sco.com/Forms/Alpha\\_All\\_Forms.htm](http://www.nc-sco.com/Forms/Alpha_All_Forms.htm)
  2. Pedestrian Safety Plans
    - a. The Designer is responsible for coordinating with FPD and creating a site plan to maintain an accessible pathway around the building and immediately adjacent site during construction. This plan shall include locations for temporary signage to illustrate the accessible pathway to campus users.
  3. Construction Logistics Plans
    - a. The Designer is responsible for coordinating with FPD and creating a site construction logistics plan to include locations for: (1) haul route; (2) construction fencing; (3) project limits; (4) temporary parking; (5) plans for access to the building (if occupied) and adjacent buildings such that deliveries and recycling/waste collection services can be maintained.



4. Demolition plans
  - a. Note the requirement of contacting Office of Waste Reduction and Recycling to remove indoor containers and dumpsters as the project phasing affects different areas
- iv. Cost Estimate
  1. At the CD phase, a third-party, Construction Cost Estimate shall be provided with a minimum sixteen division breakdown. The estimate shall include general contractor fees, overhead & profit in percentages aligned with the current SCO guidance for construction contract efforts.

#### Design Response

The University uses an online Design Review and Checking System call “Dr Checks”, administered by ProjNet for logging and tracking design review comments throughout the entire design process. The Project Manager will provide instructions for accessing and using the Dr. Checks system.

The designer shall provide responses on Dr. Checks to review comments generated by University personnel following the initial submittal for the schematic design phase, the design development phase and the construction document phase.

#### Fixture, Furniture & Equipment (FFE) Inventory

The project shall provide the final inventory for Moveable Fixtures, Furniture & Equipment which includes detailed info and quantities on fixture, furniture and equipment (Brand, year, etc.). The FFE Inventory schedule shall indicate: whose equipment it is, who will be getting it, and how it will be transferred, delivered, or moved.

#### Bidding Phase

The Designer’s bidding phase responsibilities, related to advertising for bids, opening of bids, disposition of bids, and award of the construction contract(s), are outlined in the SCO Manual. They shall conform to the applicable North Carolina General Statutes.

1. *Prerequisites to Advertisement for Bids*

The Designer is to furnish two sets of revised copies of the construction documents to the University’s Project Manager. The Designer shall provide additional sets, as required by the SCO Manual, to the State Construction Office and other regulatory agencies having jurisdiction.

Upon final approval of the construction documents, the Designer provides the University with a minimum of five (5) copies of the “As-Bid” construction documents. The Designer is to establish the date for receipt of bids in consultation with the University’s Project Manager and the State Construction Office. The Project Manager is responsible for notifying the University’s Historically Underutilized Businesses (HUB) office.

2. *Bid Date*

The Designer must coordinate with the Project Manager in setting the date and time of the bid opening.

3. *Pre-bid conferences*

Pre-bid conferences are arranged at the convenience of the Designer and the University’s Project Manager. Preferred alternate meeting must be scheduled at the same timeframe of pre-bid meeting.

4. *Bid Openings*



It is the Designer's or – for a project with a Construction Manager at risk (CM-R) – the CM-R's responsibility to accept and open bids.

**5. *Certified Bid Tabulation***

It is the Designer's or for a project with a CM-R – the CM-R's responsibility to provide Certified Bid Tabulation to the University within 48 hours after the bid opening, together with MBE appendices required under the "Guidelines for Recruitment and Selection of Minority Businesses for Participation in State Construction Contracts" to the University's Design Manager. The Design Manager will forward these documents to the State Construction Office.

Construction Phase

The construction phase for the project begins when the Designer receives a fully executed copy of the construction contract(s).

The Designer's responsibilities during the construction phase are outlined in Sections 205 and 206 of the SCO Manual.



## Submittal Review Types & Durations

### Feasibility Studies

Preliminary drafts of a feasibility study will be submitted at the discretion of the PM. The final draft of a feasibility studies will be submitted for review. List of reviewers shall be limited to people that were involved in the study.

#### Study Review Phases:

##### Preliminary Drafts (optional)

1. Open for Comment: Minimum 2 – 4 weeks depending on project.
2. Open for Evaluation: PM to determine deadline based on comments.

##### Final Draft

1. Open for Comment: Minimum 2 – 4 weeks depending project.
2. Open for Evaluation: PM to determine deadline based on comments.
3. Open for Backcheck: Upload Final Document. Backcheck is for record only and Designer not expected to respond.

### Design Drawing & Specification Submittals

It is recommended that the Design Submittal packages are delivered to SCO and Facilities simultaneously to assist with shortening a project's overall design duration.

#### Review Phases:

##### Schematic Design

1. Open for Comments: Minimum 4-week review
2. Close Comments and open for Evaluation: Evaluation remains open until all comments are resolved.
3. Open for Backcheck: Open no later than Design Development submittal.

##### Schematic / Design Development Combined - *option for smaller projects*

1. Open for Comments: Minimum 4-week review.
2. Close Comment and open for Evaluation: Evaluation remains open until all comments are resolved.
3. Open for Backcheck: Open no later than Design Development submittal.

##### Design Development

1. Open for Comments: Minimum 4-week review.
2. Close Comments and open for Evaluation: Evaluation remains open until all comments are resolved.
3. Open for Backcheck: Open no later than 75% or Construction Documents submittal.

##### 75% Construction Documents – *an option for larger/complex project*

1. Open for Comments: Minimum 4-week review.
2. Close for Comments and open for Evaluation: Evaluation remains open until all comments are resolved.
3. Open for Backcheck: Open no later than Construction Documents submittal.

##### Construction Documents

1. Open for Comments: Minimum 4-week review.





2. Close for Comments and open for Evaluation: Evaluation remains open until all comments are resolved.
3. Open for Backcheck: Open no later than Final Construction / Bid Set is submitted. Minimum 2 weeks for comments to be resolved.

#### Addendums and Value Engineering

Any addendums issued during the bid phase of the project shall be submitted as PDF's on Dr. Checks.

*Review time shall be 3-5 working days.*

Any design elements removed from, or changes made to the project due to Value Engineering shall be submitted as PDF's on Dr. Checks.

*Review time shall be 3-5 working days.*

### **A-13.2 – UNC Committee Approvals**

Capital Improvements Project will require review by several entities at multiple stages through the course of the design effort. The Facilities Planning Project Manager will coordinate presentation materials with the design team for the following groups:

#### **1. Design Review Committee**

- a. Guides the Architectural & Landscape Design aesthetic. Meetings are led by the University Architect.

#### **2. Chancellor's Buildings & Grounds Committee**

- a. Reviews Site Selection for all new buildings and additions as well as any site improvement projects. Also reviews designer selections.

#### **3. Board of Governors**

- a. Approves initial Authority request, as well as requests for Authority Increases.

#### **4. Board of Trustees**

- a. Approves design of new exterior projects, typically in two steps:
  - i. (1) For Information Only (FIO)
  - ii. (2) Final Review



### A-13.3 – Site Development & Regulatory Approvals

#### General Information

The following guidelines and parameters are provided by UNC to assist design teams in their development of the project program and design extents, with a mind towards promoting eco-friendly and sustainable development while conscious of both project budget and project schedule impacts. This list is not exhaustive and is not meant to detail every conceivable constraint. It is incumbent upon the design team to perform due diligence with respect to local, State, and Federal requirements for sites on campus and proposed improvements.

For University projects, permitting typically includes both local and state agencies. The permitting requirements for a specific project will be determined by Facilities Planning during the pre-design phase of each project.

The Designer is responsible for coordinating with the Facilities Planning Project Manager on all submittals to Outside Agencies. The Designer is responsible for ensuring that all documents meet Agency Standards and for soliciting and responding to review comments at each phase.

#### Regulatory Reviews & Approvals

##### Jordan Lake Rules

As a State entity, the University is required to meet the requirements of 15A NCAC 02B .0271 Jordan Water Supply Nutrient Strategy: Stormwater Requirements for State and Federal Entities. The University is responsible to the North Carolina Division of Water Quality for these requirements. For individual development sites, the University's Stormwater Engineer and the Environment, Health, and Safety Department will review the plans for compliance. Details can be found in the Stormwater Design Guidelines.

##### Environmental Reviews

The University is subject to state and federal approvals of construction activities on State owned property with land disturbance and/or air quality impacts.

#### **1. Environmental Assessment (EA) or Finding of No Significant Impact (FONSI)**

The ES or FONSI is required of all new buildings or significant additions. The Facilities Planning Project Manager submits the EA/FONSI with information supplied by the designer, at the end of the Design Development phase of the design process.

#### **2. Air Pollution Permits**

If a generator is to be used in the project, the University must obtain a modification to its air permit. The Designer must notify the Environmental Affairs Manager of the UNC Environment, Health and Safety Office when the generator's make and model have been determined.

#### **3. Erosion & Sedimentation Control (ESC) Plan**

An ESC Plan is required to be submitted to the NC DLQ for all projects one (1) acre or larger. The ESC plan must be reviewed by UNC Environment, Health and Safety before the plan is submitted to DLQ. These projects will receive a NC General Permit and are required to follow all the conditions of the permit.



**4. State Natural Heritage Area**

Construction adjacent to the Heritage Areas shall be avoided to the greatest extent possible. Design teams may download a map from the DEQ website.

**5. Wetlands, Streams, & Buffers**

For each project, review its proximity to existing wetlands. It is the goal of the University that new construction and grading shall not impact wetlands whatsoever. Impacts to wetlands will require federal and state permitting, with significant construction costs, submittal requirements and extended durations for review. Design teams shall demonstrate Avoidance and Minimization of design around wetland areas.

**6. Floodplain**

Currently a preference, UNC is working towards developing a requirement for a “True Zero-Foot Rise in the Floodplain” to preserve the future development of University land. The design team shall provide a Floodplain Study for all proposed construction work adjacent to or within the floodplain.

**7. Forests & Trees**

The Design team shall survey and document the number of specimen trees within the project limits, the size of the trees to be surveyed shall be not less than **12”** in diameter. UNC requests a Tree survey of all areas of proposed clearing. Use this survey to avoid construction where high-quality stands of trees are located.

**8. Air Quality Permits**

If a generator is to be used in the project, the University must obtain a modification to its air quality permit. The Designer must notify the Environmental Affairs Manager of the UNC Environment, Health and Safety (EHS) Office with the generator’s manufacturer-make and model as soon as they have been determined.

**Town Of Chapel Hill Approvals**

Buildings on campus are subject to Town zoning and require the appropriate permit ([Town’s](#) Land Use Management Ordinance). The designer shall coordinate with the FPD Project Manager to determine which zoning district applies and which permit(s) is (are) required.

The Facilities Planning Project Manager submits the permit application with information supplied by the designer, at the end of the Design Development phase of the design process.

**1. Site Development Permit (SDP)**

Typically, for buildings within the OI-4 zoning district (main campus) or U-1 zoning district (Carolina North), a Site Development Permit is the only Town zoning application required.

SDP Applications to the Town of Chapel Hill are not complete for the purposes of review or approval without final approval from OWASA.



## 2. Special Use Permit

The University operates several facilities on parcels outside of main campus. Properties within the Town of Chapel Hill's Planning jurisdiction have Land Use entitlements approvals via "Special Use Permits." The design team shall coordinate the need for an SUP modification with the Facilities Planning project manager. If needed, the project manager will coordinate the required documentation from the design team. The FPD project manager will submit the Application, supporting documentation, and fees to the Town of Chapel Hill.

## 3. Zoning Compliance Permit

The Town of Chapel Hill requires an approved site plan to locate occupiable buildings, site features, BMP's, as well as other land improvements via a "Zoning Compliance Permit." The design team shall coordinate the need for a new ZCP, or modification to an existing ZCP, with the Facilities Planning project manager. If needed, the project manager will coordinate the required documentation from the design team. The FPD project manager will submit the Application, supporting documentation, and fees to the Town of Chapel Hill.

### **Submittal Coordination & Responsibilities**

Responsibilities for preparing the various permit applications and other submittals required by the local, state, or federal agencies having jurisdiction over aspects of the project are as follows:

The University's Project Manager shall coordinate, prepare, and file on behalf of the University the submittals required by:

1. The Town of Chapel Hill, and the Town of Carrboro, on all matters
2. The North Carolina Department of Administration, to demonstrate compliance with the Environmental Policy Act
3. The North Carolina Department of Transportation (NCDOT), for encroachment agreements, driveways, and traffic control.
4. The North Carolina Division of Water Quality, for utilization of reclaimed water
5. Orange Water and Sewer Authority (OWASA) for water, reclaimed water, and sewer extensions and connections
6. Any work in area of streams or environmental areas will require appropriate environmental permits

The Designer will provide the background and technical materials necessary to support these submittals.

Materials include, but not limited to:

1. Site Development Permit Summary Sheets
2. Stormwater management plan including storm water calculations
3. Erosion and Sediment control plan
4. Traffic control plan
5. Exterior lighting plan

The Designer shall attend public hearings related to these submittals, as required.

The Designer will file all other applicable permit applications, plans, specifications, and other documents required by any local, state or federal agencies having jurisdiction over any part of the project. Including NCDOT (See Section 203 of the SCO Manual.)