

# NC State University Design and Construction Guidelines

## Division 00 Planning & Design – Drawing Standards

### 1.0 Purpose

- A. The following guidelines identify drawing requirements for each design phase submittal review and record set submittal. This guideline does not include Building Information Modeling files.

### 2.0 General Requirements

- A. NC State maintains data for NC State facilities, including as-built data, dwg building floor plans, mapping, space data survey and utility information.
- B. Drawing Set (Hard Copy)
  - 1. Cover Sheet - All projects require a cover sheet with the following information -
    - a) NC State Project Name
    - b) NC State Project Number
    - c) NC State Building Name (s)
    - d) NC State Building Number or Utility Zone Number (s)
    - e) Project Phase (i.e. Schematic Design, Design Development, 100% Bid Documents, or Record Set)
    - f) Sheet Name with discipline letter preceding sheet number (i.e. A100 for an Architectural Plan).
    - g) Drawing Index
    - h) Site Map
    - i) For interior renovations, a hatched key plan indicating the extent of work
  - 2. Drawing Sizes – sheet sizes shall not exceed 36” x 48” and shall not be less than 24” x 36” in size.
  - 3. Include licensing seal on 100% bid documents and record set documents.
- C. Drawing Set (Electronic Copy). All electronic copies must be on compact discs (CD's)
  - 1. Format shall be .pdf.
  - 2. Submission is required at each project phase.
  - 3. File naming shall be as follows:
    - a) Typical file naming shall be as follows -  
bldg #\_ncsu project number\_date\_phase.pdf  
Example:  
135\_201300001\_10-31-12\_sd.pdf

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- b) For projects with multiple buildings, the lowest building number shall be used in file name.
- c) For projects with more than 50 sheets, save each discipline as one file. Include the cover sheet with drawing index in each .pdf file. Add the discipline designation to the end of the file name.

Example:

135\_201300001\_10-31-12\_sd\_a.pdf

- d) For projects that do not involve a specific building or Utility Zone Number, the following designations shall be used.

Type of Project	Bldg # Substitution
Studies	study
Paving, Sidewalks, etc.	campus

### D. Electronic Source CADD Files (Record Set and first Construction Document Submittal)

1. Electronic files of all drawings shall include source drawings, font libraries, custom line styles/codes, plot style tables and other digital CADD related information.
2. The files shall be in AutoCAD .dwg format; the AutoCAD version shall be within the last 2 years of the current release.
3. Drawings shall be drawn at a scale of 1 to 1 in model space. Interior spaces shall be in Architectural inches. Exterior space shall be in US survey foot.
4. For exterior projects use NAD 83 North Carolina State plane coordinates.
5. All external references shall be bound as inserts or inserted directly as a block into the drawing. X-refs of any kind are not acceptable.
6. Remove licensing seals from drawing files.
7. Drawings shall be purged and audited.
8. Submission shall not include backup .bak files or .zip files.
9. Site, Civil, and Survey drawings shall use the NC State mapping drawing template, which includes NC State standard layers, linetypes and block symbols. The current version can be downloaded at [www.ncsu.edu/facilities/files/NCSU\\_CIV-SRV\\_TEMPLATE.dwg](http://www.ncsu.edu/facilities/files/NCSU_CIV-SRV_TEMPLATE.dwg)

### E. Submission

1. Hard Copy - The Drawing Set shall be submitted on bond paper.

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2. Electronic Files for the Record Drawing Set and Source CADD Files shall be accompanied by a transmittal with a listing of the included documents and the following information:
  - a) NC State Project Number
  - b) NC State Project Name
  - c) NC State Building Number(s)
  - d) NC State Building Name (s)
  - e) NC State Project Manager's Name and Phone Number
  - f) Submitting Professional's Name and Address
3. Electronic Files shall be submitted on a CD or DVD
  - a) A .pdf file of the transmittal shall be included on each disk