State Construction Manual

State of North Carolina

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Eleventh Edition

July 2017

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CHAPTER 100

State Construction Office

Section 101 Jurisdiction

A. Definition of "State Buildings:"

"State buildings," as defined by General Statute (GS) 143-336**,** refers to *all State buildings, utilities, and other property developments except the State Legislative Building, railroads, highway structures, bridge structures, and any buildings, utilities, or property owned or leased by the North Carolina Global TransPark Authority.*

B. Definition of "Construction and Renovation:"

The definition of construction and renovation work, for which the State Construction Office has oversight on State buildings, is defined in the Permits Section of the General Statutes (GS 153A-357) and the State Building Code. On State projects, permits require an approval letter for the design of the project. The State Construction Office's scope of work for which permits are required includes construction, reconstruction, alteration, repair, relocation to another site, removal, or demolition of any building. This also includes the installation, extension or general repair of any plumbing, heating, cooling or electrical systems.

C. Building Code Enforcement:

In August 2009, Senate Bill (SB) 425 was enacted, which added the responsibility and jurisdiction for code compliance and electrical inspections of State and University projects to the State Construction Office. These responsibilities are not limited by the amount of source of funding. All State and University projects which construct, alter, renovate or add to State buildings or property, or are affected by any of the North Carolina Building Codes shall be submitted for code review and approval prior to the start of construction. This includes the UNC Healthcare system and ECU Medical Faculty Practice Plan. For all state buildings, the Department of Administration, through the State Construction Office, is the Authority Having Jurisdiction (AHJ) over the administration and enforcement of all sections of the North Carolina State Building Code as described in GS 143-139(e). This includes electrical wiring inspections required in GS 143-143.2. Additionally, no projects are exempt from the State Construction code enforcement of GS 143-139(e).

1. Capital Improvement Project Oversight:

The State Construction Office has oversight of construction and renovation of capital improvement projects for State buildings, with some exemptions

a) University Project Exemptions:

University projects with total project expenditure (budget) of two million dollars ($2,000,000) or less, as defined in GS 116-31.11, are exempt from State Construction architectural and engineering oversight required by GS 143-341. However, these

projects are not exempt from State Construction code enforcement required by GS 143-139(e). In addition, designer selection and construction administration for these projects is the responsibility of the owner. For projects with total project expenditure (budget) between five hundred thousand dollars ($500,000) and two million dollars ($2,000,000), UNC-General Administration is the awarding authority. For projects with total project expenditure (budget) that are under five hundred thousand dollars ($500,000), the specific university is the awarding authority

b) Community College Project Exemptions:

All community college projects with an estimated total project expenditure (budget) below the public bidding threshold of five hundred thousand dollars ($500,000) or less are exempt from State Construction oversight, as required in GS 143-129. The building code is enforced through the local Authority Having Jurisdiction (AHJ), which is usually a county, town or city inspections department.

c) Other Facility Exemptions:

Exemptions exist, with no dollar limit, for UNC HealthCare Systems and ECU Medical Faculty Practice Plan, GS 116-37(j) and GS 116-40.6(e) respectively. Department of Transportation 'Right-of-Way' construction is exempt according to GS 143-341(4)k. Some Department of Transportation and Department of Public Safety construction projects may also be exempt, according to GS 143-134, if performed with in-house employees or prison labor. NC State Legislative Building and property owned/leased by the NC global TransPark Authority are exempt by definition, GS 143-336

d) Privately Funded Projects on State Owned Land:

All projects constructed for the use of State or any State institution, regardless of land, ground or other lease arrangements, shall be submitted to the State Construction Office for code review and approval. For all Agency projects and University projects with a total project expenditure (budget) of more than two million dollars ($2,000,000), reviews for energy efficiency, Performance Standards for Sustainable Energy-Efficient Public Buildings Article 8C and State Construction Guidelines will also be performed. The State Construction Office will inspect, observe and assist with construction administration; however, no contractual matters and/or change orders will be reviewed or processed. Acceptance of the project at completion will be subject to a complete State Construction Office final inspection with all life safety systems tested.

e) Privately Funded Projects on Private Land:

For all projects constructed with private funds on private land for use by the State or any State institution, or connected to the State's utilities, reviews for energy efficiency, Performance Standards for Sustainable Energy-Efficient Public Buildings Article 8C and State Construction Guidelines will be performed. Permitting and code compliance review will be conducted by the local Authority Having Jurisdiction (AHJ). The State Construction Office will not be involved in contractual matters or construction administration. A complete facility assessment and inspection shall be conducted prior to the building being donated and/or purchased by the State. To expedite the transfer of the private property to the State's inventory, the State Construction Office should review and inspect during the construction phase of the project.

f) Privately Funded Projects on Community College Land:

All privately funded projects with total project expenditure (budget) of five hundred thousand dollars ($500,000) or larger, constructed on Community College land shall be submitted to the State Construction Office review of energy efficiency, Performance Standards for Sustainable Energy-Efficient Public Buildings Article 8C and State Construction Guidelines. Permitting and code compliance reviews are required to be conducted by the local Authority Having Jurisdiction (AHJ). The State Construction Office will inspect, observe and assist with construction administration. Acceptance of the project at completion will be subject to a complete State Construction Office Final Inspection with all life safety systems tested, and issuance of the local Authority Having Jurisdiction (AHJ) Certificate of Occupancy.

Section 102 Responsibility of State Construction Office

A. Certification of Statement of Needs (OC-25):

The statement of needs describes a proposed project and is submitted on a Form OC-25, which is also called a Cost Estimate. It must be approved by the Department as feasible, according to GS 143-341(3)b1. Certification of needs is the initial step in submitting a capital project request for authorization and/or appropriation by the State legislature.

B. Procurement of Design Services:

The State Construction Office oversees the selection and contracting of architects and engineers to design State projects, in compliance with State Building Commission rules except as noted in Chapter 3 of the State Construction Manual. State Construction Office and State Building Commission Rules are in North Carolina Administrative Code (NCAC) 30 of the NC Administrative Code.

C. Review and Approval of Plans and Specifications, General Supervision:

The State Construction Office has general supervision of the administration and enforcement of all sections of the North Carolina State Building Code. Responsibilities as defined in GS 143-341(3)a and in GS 143-139(e) include examination and approval of plans and specifications, as well as building code compliance for construction and renovation of State buildings.

D. Management of Bidding and Construction Contracting:

The State Construction Office oversees the solicitation, bidding and contracting of construction and renovation for State buildings in compliance with GS 143-128 and GS 143-129 governing public contracts. The State Construction Office is the awarding authority for construction contracts except as noted in Section 101 of the State Construction Manual.

E. Supervision and Inspection of Construction Work:

The State Construction Office has responsibility for supervision and inspection of work and materials used in the construction or renovation of State facilities as described in GS 143-341(3)d except as noted in Section 101 of the State Construction Manual

F. Electrical Wiring Inspections:

Electrical wiring inspections are required in GS 143-143.2 by the appropriate official electrical inspector or inspection department. For State buildings, the State Construction Office has that responsibility, as noted in GS 143-341(3)d. No project is exempt from electrical inspection(s), regardless of dollar value or funding source.

G. Authority to Seek Remedies:

The State Construction Office has the authority to seek remedies in State buildings that violate the North Carolina Building Code. Preventing occupancy of a building is an available remedy as described in GS 143-139(e)

H. Project Approval and Acceptance:

No construction work on a State building may be accepted by the State or by any State agency until it has been approved by the Department of Administration through the State Construction Office as noted in GS GS 143-341(3)d. A Certificate of Compliance must be issued by each designer on every state project, then uploaded into the State Construction Office InterScope database. University of North Carolina projects are exempt as noted in Section 101 of the State Construction Manual, but compliance certificates are required to be issued to the campus on which projects are performed.

I. Facilities Condition Assessment Program (FCAP):

The Facilities Condition Assessment Program (FCAP) was established to meet the requirements of GS 143C-8-2, which gives the Department of Administration responsibility for providing a condition assessment of State owned facilities every three years.

J. Assessment for Purchase of Buildings:

The Department of Administration is responsible for Real Property Control, including the purchase of buildings, under Council of State oversight. The Facility Condition Assessment Program (FCAP) supports this statutory responsibility of the Department by inspecting buildings prior to purchase and providing cost estimates on needed repairs to aid in purchase price negotiations. This helps the Department ensure purchased buildings are safe and economical to operate and maintain.

Section 103 Other Responsibilities

A. Administration of Flood Plain Guidelines:

Under the provisions of Executive Order 123, the State Construction Office is to administer a uniform flood plain development and permitting policy for any state construction within a Federal Emergency Management Agency (FEMA) designated flood plain. Flood Plain Guidelines are available on the State Construction website under Resources-Forms and Documents-Flood Plain Management.

B. Allocation of Energy Efficiency Tax Deduction:

GS 143-341(3)f establishes the State Construction Office as the Owner of all state property as it relates to the allocation of Federal Section 179D Tax Deduction for Energy Efficient Commercial Buildings. Any designer requesting a tax deduction should contact the State Construction Office.

Section 104 Organization of State Construction Office

The State Construction Office is organized into three sections with general responsibilities described below. A staff listing is available on the State Construction website under Contact Us-SCO Staff Listing.

A. Design Review Section:

- Examination and approval of all plans and specifications for construction or renovation of State buildings throughout the state, including building code enforcement
- Contracts for design.

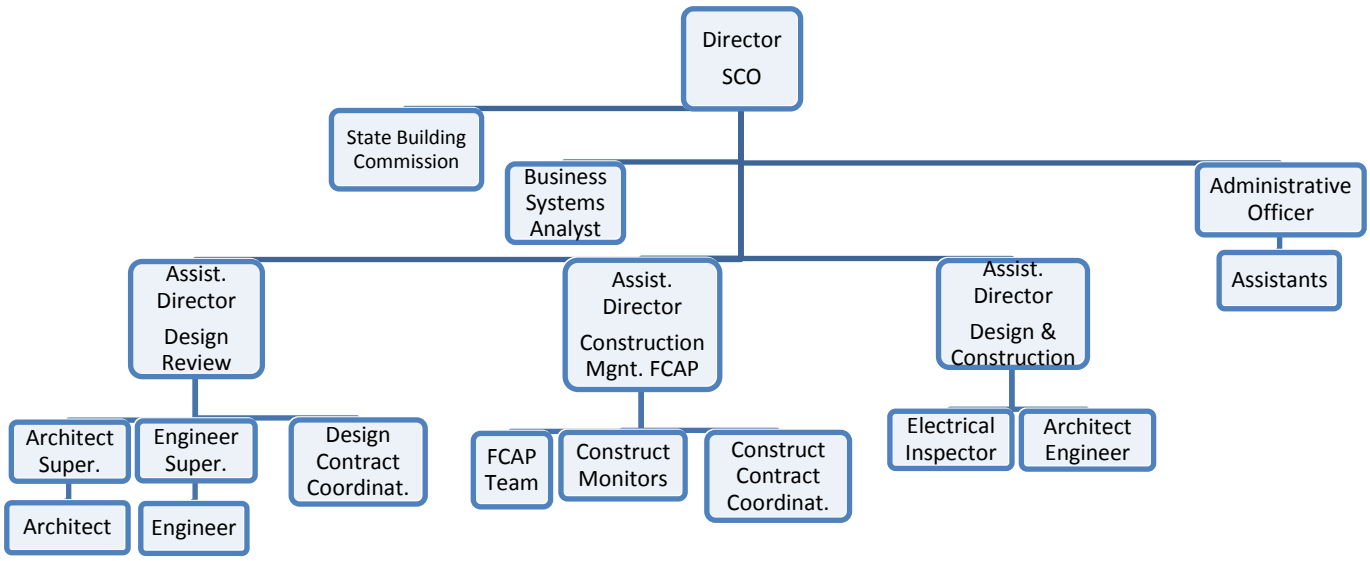
B. Construction Management Section:

- Supervision and inspection of all work done and materials used in construction or renovation of State buildings
- Acting as the official electrical inspector
- Acceptance of constructed buildings on behalf of the State
- Management of State buildings in Wake County
- Assessment of State and private buildings
- Certification that statements of need are feasible
- Inspect and assess state facilities conditions, needs and report to owners for budgetary planning
- Contracts for construction

C. Design and Construction Services Section:

- Examination and approval of all plans and specifications for construction or renovation of Department of Administration projects throughout the state, including building code enforcement
- Provide in-house design services for Department of Administration projects
- Monitor all project construction for the downtown government complex

D. Organization Chart:



Section 105 State Building Commission

Created in July 1987 by the Legislature, GS 143-135.25 established the State Building Commission as the successor to the previous Capital Building Authority. Nine members are appointed by the Governor and the General Assembly, representing owners, designers, contractors, local governments and the public. Members serve three-year terms with each member limited to two consecutive terms. The Commission is only required to meet four times annually but, typically, meets monthly in the State Construction Office. The State Construction Office and State Building Commission Rules are in North Carolina Administrative Code (NCAC) 30 of the NC Administrative Code.

Section 106 Forms and Guidelines

Forms and guidelines can be found on the State Construction website under Resources-Forms and Documents

CHAPTER 200

Agencies and Institution Capital Projects

Section 201 Definitions

A. Capital Improvement:

"Capital improvement project" in GS 143C-1-1 refers to the construction, alteration, renovation, or addition to State buildings for which State funds are used. These projects are to be publicly advertised and competitively bid.
(G.S. 143-135.27, note that G.S. 143-1 referenced in this statute has been repealed and replaced by G.S. 143C-1-1).

B. State Buildings:

"State buildings," as defined by GS 143-336**,** refers to *all State buildings, utilities, and other property developments except the State Legislative Building, railroads, highway structures, bridge structures, and any buildings, utilities, or property owned or leased by the North Carolina Global TransPark Authority.*

C. Capital Projects Funds:

"Capital Projects Funds" as defined by GS 143C-1-3, refers to *Accounts for financial resources to be used for the acquisition or construction of major capital facilities other than those financed by proprietary funds or in trust funds for individuals, private organizations, or other governments. Capital outlays financed from general obligation bond proceeds should be accounted for through a capital projects fund.*

D. Capital Project Coordinator:

The Capital Project Coordinator is the individual authorized by the Owner (Agency, Community College or University) to coordinate all capital improvement projects and related matters with the State Construction Office and to represent that agency on all matters presented to the State Building Commission. This individual may have other titles and responsibilities within his or her institution, but shall carry out the duties assigned as Capital Project Coordinator (CPC). The duties of the Capital Project Coordinator (CPC) may be delegated to a designated assistant or representative.

Section 202 Responsibilities of Owning Agencies

A. Appointment of Capital Project Coordinator (CPC):

Agencies, Community Colleges or Universities shall name staff members as Capital Projects Coordinators (CPC's) responsible for all capital project. The term "Owner" typically refers to the owning agency Capital Projects Coordinator (CPC) or designee. The State Construction Office will periodically, and based on demand, conduct a course of instruction on the role and duties of

the Capital Project Coordinator (CPC), as well as topics pertinent to the state construction process. GS 143-135.26(4) and NCAC-30E &30F.

B. Establishment of Needs, Scope and Budget:

State agencies, institutions, and community colleges (owners) shall establish needs, scope, schedule and budgets for new physical facilities as well as repair and renovation needs. The owner shall request legislative funding by describing the proposed capital project on Form OC-25 Cost Estimate. The Form OC-25 Cost Estimate can be completed online in the State Construction Office InterScope database as a Cost Estimate. The State Construction Office Facility Condition Assessment Program (FCAP) reports can assist owners in prioritizing needs and preparing cost estimates, and should be included with each renovation funding request.

Once the Form OC-25 Cost Estimate is complete and certified by the State Construction Office, the owner submits the request to the Office of State Budget and Management for possible inclusion in a budget request for funding project.

Community Colleges are exempt from OC-25 process.

C. Capital Project Requests:

Capital projects must be authorized by the State legislature. Project requests are submitted for the upcoming fiscal period (2 year budget cycle) as described in the State Budget Manual. Project needs identified outside the normal 2 year budget cycle may be authorized through procedures established by the Office of State Budget and Management. For new capital project funding, funds available are typically reversions of monies not spent under the previous budget cycle. Repair and renovation funds are typically appropriated annually and shall not be used to construct new facilities nor to increase an existing building footprint **except for State or Federal Code Requirements.** For Special Appropriations, allocations are created by specific legislative bills.

Capital Improvement Funding Categories have typically included:

1. **Appropriations/Bonds:**
   Funding authorized by legislation with funds provided by the State for specific projects.

2. **COPS:**
   Funding authorized by legislation with funds provided by borrowing under a “Certificates of Participation” debt mechanism. COPS funding may be for specific projects or for repairs and renovations.

3. **Repairs and Renovations:**
   Funding authorized and provided by the State for repairs and renovations necessary to maintain existing facilities.

4. **Self Liquidating:**
   Funding authorized by legislation for specific projects with funds provided from debt where proceeds generated from the sale of goods or services, such as Housing, Bookstore, Dining, Athletics, etc. are used to retire the debt.

5. **Other Non-Appropriated:**
   Funding from other sources such as gifts, grants, donations, or other non-State sources.

D. Certification of Form OC-25 (Cost Estimate):

State institutions and agencies planning a capital project request shall use Form OC-25 Cost Estimate Proposed Repair and Renovation Capital Improvement Project for verification of scope, schedule and cost estimate. This form is available on the State Construction Office InterScope Project Environment under the heading Cost Estimate, and can be completed on-line once the Capital Project Coordinator has obtained a log-in password. The Form OC-25 Cost Estimate shall fully describe the proposed project and justification for need. Each form shall be completed by an authorized representative of the institution or agency.

The State Construction Office is to certify the statements of need submitted as Form OC-25 Cost Estimate are feasible, or sufficiently defined in overall scope; building program; site development; construction and equipment budgets; and comprehensive project scheduling so as to reasonably ensure completion within the amount of funds requested. GS 143-341(3)b1. Certification is required by the budget statute GS 143C-3-3(c)(3), except that in the case of a project of The University of North Carolina for which advance planning has not been completed, the request may be submitted without this certification under Session Law 2011-145 Section 30.12 (a). Advance planning is often needed in order to sufficiently define the project in order to obtain a certified OC-25.

State Construction Office will review and certify the forms. The forms are then submitted by the agency to the Office of State Budget and Management for consideration in a proposed State Budget. Universities must follow additional approval processes within each institution and through the Board of Governors before submissions are made.

E. Owner Responsibility for Design and Construction:

Projects are authorized by the legislature. The Owner will expeditiously follow all procedures and actively participate in the designer selection, commissioning and contracting processes. The Owner will also provide all programming and information needed for the designer to prepare an appropriate scope of design work, schedule and design fee to meet the requirements established in the authorization.

During the design process the owner shall meet regularly and as needed to coordinate with, and to provide program information to the designer as required to meet schedules. The owner shall review and approve plans and specifications at designated design stages to ensure project design, program and scope are appropriate and within budget. Owner reviews must be completed prior to plan submission to the State Construction Office. The submittal shall include Owner comments and/or approvals.

Should there be any changes in scope, budget, schedule, or design fee, the Owner should request the design contract be amended accordingly and should do so in a timely manner. Similarly, changes to the construction contract should be reflected promptly.

For design and construction of Capital Projects, the owner shall ensure that the performance of building systems meets the design intent. To provide quality assurance on a project, the owner may contract with an independent Commissioning Authority to serve as an advisor, depending on the method of compliance is selected, on projects above the size thresholds in GS 143-135.37(d), currently 20,000 square feet with some exceptions. Commissioning Guidelines are available on the State Construction Office website.

Section 203 Emergency Projects

Emergency situations are addressed in Administrative Code NCAC 30D.0302(e) for Special Procedures for Emergency Projects and reads as follows:

On occasion, emergency design or consultation services may be required for restoration or correction of a facility condition which by its nature poses a hazard to persons or property, or when an emergency exists. Should this situation occur, in all likelihood there will not be sufficient time to follow the normal procedures described in this Rule. The Capital Projects Coordinator on these occasions may declare an emergency, notify the State Construction Office and then obtain the services of a designer or consultant for consultation or design of the corrective action. In all cases, such uses of these emergency powers shall involve a written description of the condition and rationale for employing this special authority signed by the head of the agency and presented to the SBC at its next normal meeting. Timeliness for obligation of funds or other non-hazardous or non-emergency situations do not constitute sufficient grounds for invoking this special authority.

Section 204 Real Property

A. Demolition of Buildings:

1. General Authority:

No building or structure owned by the State of North Carolina, with the exception of highways, bridges and railroads, may be razed, demolished or otherwise disposed of unless and until authority for such disposition has been approved by the Council of State and given in writing by the Department of Administration, State Property Office according to the conditions of GS 143-341(4) and other applicable statutes. All buildings to be razed or demolished shall be surveyed for asbestos-containing materials or other hazardous materials that shall be properly removed in accordance with environmental regulations and legally disposed of prior to demolition.

2. Procedure to Obtain Authority:

Request for authority to raze or demolish any building or structure as defined above shall be made to the State Property Office on Form PO-2, Disposition of Real Property. Such request shall be accompanied by a resolution of the board or governing body where such board or governing body exists**.**

B. Acquisition of Property – Gift of Existing Real Estate to the State:

For the State to accept a gift of land, buildings or other structures, proposals shall be submitted by the recipient institution to the State Property Office, which will review and provide a referral to the Office of State Budget and Management (OSBM). If approved by the Office of State Budget and Management (OSBM), the State Property Office shall request the State Construction Office to provide an engineering team to inspect and evaluate the property as to suitability for use and estimate the cost of any needed repairs or renovations. The State Property Office will report State Construction's findings and make recommendations to the Council of State.

For new building construction to be provided as a gift, contact the Construction Management section of the State Construction Office at 919-807-4100.

CHAPTER 300

Procurement of Design Services

Section 301 Design Services

A. Basic Requirements for Public Projects:

Certain public projects must be designed by a licensed professional architect or engineer, as required by GS 133-1.1 . A design professional is required for the following:

Public Project Owner	Project Type	Project Cost
Agency & Community College	Public building repair, no major structural change	>$300,000
University	Public building repair, no major structural change	>$500,000
Agency, Community College, & University	Public building repair, affecting life safety systems	>$100,000
Agency, Community College, & University	Public building repair, includes major structural change	>$135,000
Agency, Community College, & University	New construction or addition to public buildings or State-owned and operated utilities	>$135,000

For these projects that require design professionals, GS 133-1.1 states that architects and engineers must conduct frequent and regular inspections of the work and must issue a signed and sealed Certificate of Compliance. For projects with multiple Designers of Record, each architect or engineer providing a sealed drawings is required to provide a Certificate of Compliance. This document requires the designer to certify that he has conducted adequate and thorough inspections in order to determine that, to the best of his knowledge, the contractor has complied with plans, specifications, and contract requirements. This form is provided on the State Construction Office website.

For certain project types, the Certificate of Compliance must be uploaded onto the State Construction Office InterScope database following final project acceptance. Final payment to the design professional and contractor cannot be released until this Certificate has been received by the Awarding Authority. These requirements are summarized below:

Awarding Authority	Project Type (Total Project Budget)	Certificate of Compliance Documentation
State Construction Office	State Agency - Major - SCO Oversight (>$500,000)	Upload into InterScope
State Construction Office	State Agency - Minor - SCO Oversight (<=$500,000)	Upload into InterScope
State Construction Office	University - SCO Oversight (>$2,000,000)	Upload into InterScope
State Construction Office	Community College - Major - SCO Oversight (>$500,000)	Upload into InterScope
University	University - Download - No SCO Oversight (<=$2,000,000)	Provide to Awarding Authority
Community College	Community College - Minor - No SCO Oversight (<=$500,000)	Provide to Awarding Authority

Section 302 Designer Selection – Basis Requirements

Procurement of design services for architectural, engineering (which includes commissioning), and surveying are governed by "Article 3D - Procurement of Architectural, Engineering, and Surveying Services" in GS 143-64.31-.34 and the "State Building Commission Designer and Consultant Selection Policy" in 01 NCAC 30D. GS 143-64.31(a) exempts special emergency projects involving the health and safety of people or property and GS 143-64.34 exempts Capital Improvement Projects under the jurisdiction of the State Building Commission, University of North Carolina, and community colleges with an estimated total project budget of less than $500,000. "Major" projects with an estimated total project budget greater than $500,000 must meet all the requirements of GS 143-64.31-.34 which are summarized below:

1. Public advertisement on the State of North Carolina Interactive Purchasing System (IPS) website for a period of at least 15 calendar days.

2. Qualifications based selection process without regard for fee. Following the qualifications based selection, the scope of work, contract requirements, and design fee will be negotiated. If a contract cannot be negotiated with the best qualified firm, negotiations with that firm shall be terminated and initiated with the next best qualified firm.

3. Good faith efforts by the Owner to notify minority firms of the opportunity to submit qualifications for consideration.

4. Preference of North Carolina resident firm over non-resident firm.

Section 303 Roles in Designer Selection Process

Various project types involve different levels of participation by State Construction Office as summarized in table below:

Owner	Project Type (Total Project Budget)	Public Advertisement	Designer Selection Approval	Design Contract Negotiation
State Agency	Minor - SCO Oversight (<=$500,000)	Not Required	State Construction Office	SCO
State Agency	Major - SCO Oversight (>$500,000)	IPS Website for minimum of 15 calendar days	State Building Commission	SCO
State Agency	Emergency	Not Required	Agency with Reporting to SBC	SCO
University	Download - Minor(<= $500K)	Not Required	University	University
University	Download Major- ($500K and $2,000,000)	UNC Website & IPS Website for 15 calendar days	University	University
University	Major (>$2,000,000)	UNC Website & IPS Website for 15 calendar days	University	SCO
University	Emergency	Not Required	University with Reporting to SBC	SCO (If >$2,000,000)
Community College	Minor(<=$500K)	Not Required [RC1]	Community College	Community College
Community College	Major - SCO Oversight (>$500,000)	IPS Website for minimum 15 calendar days	Community College	SCO

Community College	Emergency	Not Required	Community College with Reporting to SBC	SCO (If >$500,000)

Section 304 (>$500,000) Informal Designer Selection for Major Projects

A. Public Announcement:

Projects with an estimated total project budget greater than $500,000 are considered to be "Major" projects and are required to be publically advertised for a minimum of 15 calendar days. Per GS 143-341(3)b1, an SCO approved Estimated Project Cost Estimate (OC-25) is required for any State Agency project with an estimated total project budget greater than $100,000.

1. For State Agency projects, the Owner's Capital Projects Coordinator (CPC) should complete the Advertisement for Design Services form from the SCO website and email the completed form to scoads@doa.nc.gov for posting on the State of North Carolina Interactive Purchasing System (IPS) website.

2. For University projects, the University should publically advertise using the standard University procedures.

3. For Community College projects, the Community College should publically advertise using their own procedures appropriate to their respective Board of Trustees. Community Colleges may also use the Advertisement for Design Services form from the SCO website and email the completed form to scoads@doa.nc.gov for posting on the State of North Carolina Interactive Purchasing System (IPS) website

B. Pre-Selection:

1. For State Agency projects, the CPC will coordinate with SCO to create a pre-selection committee of interested parties to include a minimum of two representatives from State Construction Office with at least one member of the pre-selection committee being a licensed professional. The pre-selection committee will review the responsive qualification packages submitted in response to the Advertisement for Design Services and determine the most qualified firms to be interviewed by the pre-selection committee. This list of most qualified firms should include at least three firms but no more than six firms to be interviewed and evaluated. The pre-selection of the most qualified firms should include review of designer evaluations from InterScope.

The firms to be interviewed will be notified by the State Construction Office. Firms are typically given a 10-15 day notice in advance of the interview. Firms should prepare a presentation of their qualifications and experience to the pre-selection committee. Interviews are typically held at the State Construction Office but may also be held at the Owner's facility depending for specific projects. Interviews for smaller projects are typically 30 minutes in total duration with time shared between a presentation session and a questions and answers session. Interviews for larger projects are typically 45 minutes in total duration with time shared between a presentation session and a questions and answers session. Any specific issues that the designers need to address in the presentation should be provided to them in advance as part of the invitation to

interview.

Following the interviews, the pre-selection committee should determine the three most qualified firms for the particular project and rank the three firms in priority order. In selecting the three firms to be presented to the SBC, the pre-selection committee should take into consideration the following ten factors identified in 01 NCAC 30D as:

a) Specialized or appropriate expertise in the type of project.

b) Past performance on similar projects.

c) Adequate staff and proposed design or consultant team for the project.

d) Current workload and State projects awarded.

e) Proposed design approach for the project including design team and consultants.

f) Recent experience with project costs and schedules.

g) Construction administration capabilities.

h) Proximity to and familiarity with the area where project is located.

i) Record of successfully completed projects without major legal or technical problems.

j) Other factors that may be appropriate for the project.

2. Universities should follow procedures appropriate to their respective Board of Trustees.

3. Community Colleges should follow their own procedures appropriate to their respective Board of Trustees.

C. Documentation:

1. For State Agency projects, the CPC should prepare an information package documenting the designer selection process for the project for delivery to the State Building Commission by the State Construction Office. The information package for designer selection should include at least three reasons for the selection of the number one firm.

2. Universities should follow procedures appropriate to their respective Board of Trustees.

3. Community Colleges should follow their own procedures appropriate to their respective Board of Trustees.

D. Selection:

1. For State Agency projects, the Pre-Selection committee members should understand that the final approval of a designer selection is the responsibility and authority of the State Building Commission. As such, no pre-selection committee members shall divulge any information about discussions or decisions made by the pre-selection committee. Designers and other interested parties should not contact any member of the pre-selection committee prior to final action by the State Building Commission.

2. Universities should follow procedures appropriate to their respective Board of Trustees.

3. Community Colleges should follow their own procedures appropriate to their respective Board of Trustees.

E. Approval:

1. For State Agency projects, the SBC is the final approval authority. Upon a determination by the SBC that the standard procedures and criteria have been properly followed, the SBC will select the firms in the priority order recommended, select the firms in a different priority order from that recommended and give justification for such selection, or request a new priority list and give justification for such request.

2. Universities should follow procedures appropriate to their respective Board of Trustees. The designer selection results for University projects shall be submitted to the SBC.

3. Community Colleges should follow their own procedures appropriate to their respective Board of Trustees.

F. Notification:

The selected designer will be notified by the Owner or the State Construction Office. Following notification of the selected designer, the CPC should contact the selected designer to share all necessary project information and obtain a design fee proposal for the project. Upon review and approval of the information contained in the designer's proposal, the CPC will forward the design fee proposal along with all appropriate project information to the SCO Design Contracts Coordinator to allow for negotiation of a design contract.

Section 305 Designer Selection for Minor Projects (<= $500,000)

A. Public Announcement:

Projects with an estimated total project budget less than or equal to $500,000 are considered to be "Minor" projects and are not required to be publically advertised. There are no General Statute requirements for public advertisement for design services on projects where the estimated expenditure of public money is less than $500,000. The designer selection process for Major projects may be used for any Minor project if desired but is strictly optional. Per GS 143-341(3)b1, an SCO approved Estimated Project Cost Estimate (OC-25) is required for any State Agency project with an estimated total project budget greater than $100,000.

B. Selection, Approval, and Notification:

1. For State Agency projects, the selection of a designer is determined by the Owner's CPC in coordination with the State Construction Office. The CPC may recommend a designer based on their knowledge of the firm's qualifications or past performance on previous projects for the Owner. The CPC may also consult with State Construction Office representatives and review designer evaluations in InterScope as part of the selection process. The CPC should recommend a designer for final approval by SCO. Following SCO approval of the selected designer, the CPC should contact the selected designer to share all necessary project information and obtain a design fee proposal for the project**.** Upon review and approval of the information contained in the designer's proposal, the CPC will forward the design fee proposal along with all appropriate project information to the SCO Design Contracts Coordinator to allow for negotiation of a design contract.

2. Universities should follow procedures appropriate to their respective Board of Trustees. The designer selection results for University projects shall be submitted to the SBC. Negotiation and creation of the design contract will be the responsibility of the University. The contract will be executed using the UNC Standard Form of Agreement which is a modified version of the Standard Form of Agreement between Owner and Designer.

C. Community Colleges should follow their own procedures appropriate to their respective Board of Trustees. Negotiation and creation of the design contract will be the responsibility of the Community College.

Section 306 Standard Design Contract

Contracts for design shall be executed on the Standard Form of Agreement between Owner and Designer (Form OC-22) which includes, by reference, the latest edition of State Construction Office Manual available on the SCO website. The designer should carefully review this material prior to negotiating the contract. Preliminary design, studies, planning activities, and other specialty services may be executed using a Letter Agreement contract applicable to the project circumstances.

The standard design contract form is for use only for "standard" capital improvement projects for State of North Carolina facilities. The designer should verify the scope of work as defined by the Owner. Major institutions or large scale projects may require more extensive design activity and submittals such as presentations to numerous groups or stakeholders, additional design documentation at early design stages, phased construction, renderings, models, and other design tasks. These special project requirements should be addressed under Article 14 of the design contract as Additional Services.

For contract execution, the Owner will be listed as The State of North Carolina through the specific State Agency or specific University.

Community Colleges are locally owned and operated by their Board of Trustees but received funding support from the State of North Carolina. Per GS 143-341(3)a.2. and GS 143-129(a), any Community College project with a total project budget over $500,000 is required to follow all State Construction Office policies, forms and procedures, including architectural and engineering review and approval, except local jurisdictions have building code compliance authority. Community College projects using the State Construction Office forms and documents shall delete the State of North Carolina as the Owner and substitute the Trustees of the specific Community College as the Owner on all bid forms and contract documents.

A. Definitions:

1. Owner.
   The State of North Carolina through the specific State Agency or specific University or the Trustees of the specific Community College.

2. Project Scope.
   Description of the intended use, size, budget, and special requirement for the facility as defined in the project OC-25 and/or as modified by the capital appropriation.

3. Project Budget.
   The total funds available for the project.

4. Project Reserves or Owner Reserves.
   The amount set aside for work or equipment in the project budget that are not intended to be included in the design or construction contract. Examples are:

   (a) Site work and/or Utilities infrastructure not part of the facility or by others.

   (b) Moveable Equipment by Owner.

   (c) Data/video equipment/cabling not part of general construction.

   (d) Parking allocations.

   (e) Utilities contribution.

   (f) Special Inspections (SI) may be held in reserve if the SI final scope of work is not clear at the time the contract is negotiated.

5. Commissioning.
   May be desired or required depending on the specific project requirements.

6. Balance of Project Budget.
   The total Project Budget minus the Project Reserves, but including design and contingency funds.

7. Owner's Contingency.
   Owner's reserve funds to pay for soils investigations, testing, change orders, fee adjustments, and other owner's costs. This figure is typically 3% of the construction cost for new buildings projects and 5% for renovation projects. The Owner's Contingency funds cannot be used in financing the award of the construction contract.

8. Design Fee.
   Negotiated fee between the State Construction Office and the Designer as a lump sum.

9. Construction Funds Available.
   The amount of funds remaining for the award of construction contracts. This is the total project budget less the design fee, less the owner's fixed contingency and less any reserves. For the Construction Manager at Risk construction delivery method, the Construction Funds Available should be the Guaranteed Maximum Price (GMP).

10. Schedule.
    Describes the design phases with estimated dates for each design phase submittal. An estimated Approved for Bid date is also frequently identified but not required for all projects depending on their available funds or source of funds. Designers are encouraged to consult with the SCO Design Review Section as to the specific submittals required and estimated time of review for each phase. Typical Design Review periods are described in Section 402.

11. Administrative Costs.
    Administrative costs in Article 1-21 should be verified by the Designer, and verify Owner requirements for review copies at various design stages.

12. Supplemental Agreement or Design amendment.
    An Amendment to the Standard Design Agreement is required for specific changes to the project scope and design fees and shall be outlined in an amended Article 14 subject to execution by the Owner and the Designer.

B. Negotiation of Design Agreement.

1. The selected designer will be notified by the Owner or the State Construction Office. Following notification of the selected designer, the CPC should contact the selected designer to share all necessary project information and obtain a design fee proposal for the project. Upon review and approval of the information contained in the designer's proposal, the CPC will forward the design fee proposal along with all appropriate project information to the SCO Design Contracts Coordinator to allow for negotiation of a design contract. The selected Designer will receive a written request to submit a design fee proposal for consideration. The Designer shall carefully review scope, budget, site, special requirements and regulatory time frames of the project with Consultants and the Owner. The Designer shall also review the current State Construction Manual as well as all applicable forms, procedures and guidelines required for the project.

2. A proposed lump sum design fee based on the project program, scope and budget. A breakdown of specific tasks and fees may also be required if there are specific Additional Services required for the project that are above and beyond the standard Basic Services.

3. A proposed design production schedule and an anticipated Approved for Bid date. Designer should verify current regulatory review times for use in preparation of the schedule.

4. Proposed professional Consultants to be employed for the project.

5. The design contract fees will be negotiated with the State Construction Office on an individual project basis with input from the Owner.

6. The Designer should consult with the Owner as to the number of submittal copies the Owner requires for each stage of review and for record drawings, including facility management needs.

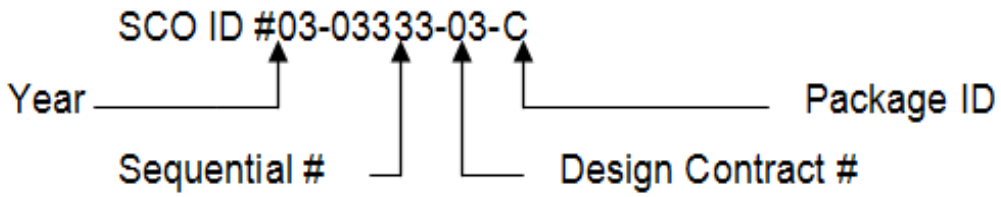
C. Negotiation of Design Agreement.

Upon request of the Owner, the State Construction Office shall prepare the design agreement and forward it to the Designer and Owner for execution and distribution of executed copies. No obligation on the part of the state shall exist until a design contract has been properly executed and distributed. Proceeding without a contract would be at the Designer's own risk and may delay the review of any design submittals for the project. Typically, design submittals will not be reviewed until a design contract has been prepared.

- **SCO Project Identification Number.**

  The project specific SCO Project Identification Number will be identified on the first page of the design contract. This number must be shown on all correspondence, planes, drawings, specifications, change orders, and other project documents to accurately track the project. All project tracking, data, correspondence, filing and project identification is

dependent on this SCO Project Identification Number.



Year is the date the project was funded.

- Sequential # is assigned by the computer filing system and is a unique number to the project.
- Design Contract # is for multiple design contracts, if any, on the same project.
- Package ID letter is for the design or construction contract phases or packages within the project.

The SCO Project Identification Number was developed to uniquely identify a project that may have different designers and different components, packages or phases

D. **Other Project Identification Numbers.**

Most State Agency and University projects will also use an Office of State Budget Management (OSBM) Code number and Item number to identify the project funding source or sources. The North Carolina Community College System uses a NCCCS Number to identify their projects. These numbers will be identified on the design contract and should also be provided on all documents and correspondence (including email and voice mail) to expedite communications and documentation.

Section 307 Other types of Design Contracts

A. Advance Planning Phase or Preliminary Design

Owners are encouraged to engage designers as necessary to assist in programming, scope and budget analysis, site selection, studies, master planning, and other strategic project decisions. Typically, these preliminary design services are performed independently from the design contract for Basic Services that includes Schematic Design, Design Development, Construction Documents, Bidding, Construction Administration, and Closeout services required by the Standard Form of Agreement between Owner and Designer (Form OC-22). Such preliminary design services are most frequently contracted by using a Letter Agreement instead of the Standard Form of Agreement. The resulting design reports, studies, documentation, and estimates shall be used for the creation of the Estimated Project Cost Estimate (OC-25) for approval by SCO.

Certain projects require compliance with the Performance Standards for Sustainable, Energy-Efficient Public Buildings (Article 8C) per GS 143-135.35-.40 and, therefore,

require an Advance Planning Phase submittal to SCO for review and approval based on confirmation that the project qualifies as a Major Facility Construction Project or a Major Facility Renovation Project per the definitions in GS 143-136.36. In accordance with GS 143-135.37(a1), a "Net Savings Required" cost analysis is required to be included in the Advance Planning Phase submittal to SCO for review and approval.

As a matter of clarification and distinction, the term "Advance Planning Only" which is frequently used in place of its full description of "ADVANCE PLANNING ONLY - NO CONSTRUCTION FUNDS AVAILABLE" refers to the situation when a capital improvement project is not fully funded but adequate funding is in place to complete a specific phase of the Design described in the Basic Services. Such design contracts should be negotiated based on the full funding amount but will include a limitation that the project will terminate upon completion of the approved specific phase of the Design unless extended in writing by the Owner and upon such extension and full funding the design fee will be increased to the full fee required for completion of the project. When used in this context "Advance Planning Only" should specifically refer to the completion of the SD, DD or CD phases of Design instead of the separate Advance Planning Phase as described in this section

B. Commissioning

For projects subject to compliance with the Performance Standards for Sustainable, Energy-Efficient Public Buildings (Article 8C) per GS 143-135.35-.40, an engineering firm should be selected to provide Building Commissioning services. The Commissioning Agent should be an independent, third party firm that is not part of the design team or the construction team working on the project. Commissioning Agents should be selected using the qualifications based selection process and based on the estimated total project budget for the project. The anticipated total fee for building commissioning services should not be used as a basis for the selection of Commissioning Agents.

C. Fixed Term Contract or Annual Service Agreement:

A Fixed Term Contract (also known as an Annual Service Agreement) is a contract option for an Owner that may need the services of a designer for projects under $300,000 on a fixed term basis for the period of one year. No fixed term contract fee under the jurisdiction of the State Building Commission shall exceed $150,000 in total volume per year regardless of the number of projects. No fee shall exceed $36,000 per project. Fixed term contracts may be extended for a term of one additional year. Total fees shall not exceed $150,000 for the first year or $300,000 for the two-year period regardless of the number of projects. The designer for a fixed term contract shall be selected in accordance with the procedures described in 01 NCAC 30D .0302(c) of the State Building Commission Designer and Consultant Selection Policy.

CHAPTER 400

Regulatory Review Agencies

Section 401 General Requirements

This chapter is intended to provide the Designer a listing of the possible regulatory review or permitting agencies that may impact the project. A brief description of each agency's responsibility and jurisdiction is provided. The Designer is required to review these and note those that are applicable to the proposed project. Some agency reviews serve only State facilities and others serve both private sector and public sector projects. This means the Designer may be familiar with, or have experience with, many of these agencies.

There are other agencies exercising inspection authority such as OSHA, who are not involved in the review process but may be involved during construction. The Designer must conform to all federal and state laws, codes and regulations applicable to the process or project regardless of whether a review is provided or approval given.

1. Indicate on all submittal letters, transmittal forms, e-mail and other correspondence to the State Construction Office any reviewing agencies that are receiving copies of the documents. Ensure that all correspondence and documents are clearly identified by project title, agency/institution name and, most importantly, the SCO ID # assigned to the project when the design contract was initiated or as required.

2. According to the Standard Form of Agreement between Owner and Designer, Article 1 "Basic Services of the Designer" Paragraphs 1-12 shall be the responsibility of the Designer except where noted otherwise. The Designer to file all applicable permits and submit plans, specifications and other required documents directly to any local, state or federal agency having jurisdiction over any part of the project. Review comments and approval from all agencies having jurisdiction shall be provided directly to the Designer with copies to the State Construction Office. All reviews and approvals shall be obtained by the Designer prior to establishing a bid date.

3. While a county or city cannot restrict the use of land for State use, under the provisions of GS 153A Article 18, and under GS 160A Article 19, respectively, they may regulate and restrict the following:

   - the height, number of stories, and size of buildings and other structures;
   - the percentage of a lot that may be occupied;
   - the size of yards, courts and other open spaces;
   - the density of population;
   - the location and use of buildings, structures, and land for trade, industry, residence, or other purposes, except farming.

4. It shall be the Designer's responsibility to submit the necessary plans, specifications and other information as may be required to obtain zoning approval from the city or county. Copies of the city or county approval shall be forwarded by the Designer to the Owner and to

the State Construction Office. The Designer shall also obtain required local approvals (city, county, utility authority) for tie-ins for water, sanitary sewer, storm sewers and other utilities, as well as modifications and/or improvements to streets, curbs and sidewalks on public right-of-way.

5. Under GS143-135.1, State owned facilities are only exempt from local building authority inspections or local codes when plans and specifications are approved by the Department of Administration. State agency and UNC System projects are exempt from local building authority inspections under this provision.
   It is the responsibility of the Designer to determine federal requirements that may impact the project. The Designer should confer with the Owner, the State Construction Office, other State agencies, and federal authorities regarding this process.

6. The State of North State of North Carolina web site provides access to all State departments, agencies and institutions and should be used as a source of information. Website addresses and phone numbers change quite often, which means accessing the main State Website may be easier for first time users. Agencies are listed in a drop down list under "Government" tab at: http://ncgov.com/government/agencies

7. Listed in the following sections are some of the main agencies for reviewing and approving the process of design and construction to ensure compliance with contracts, statutes, codes, regulations, rules and policies established for public construction projects.

8. The NC Administrative Code requires projects to be resubmitted for review if they have not been bid within six (6) months of final approval by the State Construction Office. This ensures code and/or regulation changes are as up to date as possible.

Section 402 Agency Review Times

The State Building Commission has adopted rules to provide for consistent, concurrent and expeditious reviews for State and Community College capital improvement projects. The following review timeframes apply to any State regulatory Agency that reviews and approves or permits these projects, except where other applicable statutes may define other timeframes. The times given are calendar days from receipt of submittal until completion of the review for each discipline of review required. These times should be used by Owners and Designers when estimating project schedules. The review times for each design phase are:

FULL SCO OVERSIGHT PROJECTS (*including courtesy review oversight*)

Advance Planning	15 calendar days
Schematic Design	30 calendar days
Design Development	30 calendar days
Construction Documents	60 calendar days
Final Approval	15 calendar days

LIMITED SCO OVERSIGHT PROJECTS (project subject to Code Review only – CD phase only)

Code Enforcement Review	15 calendar days
Six (6) Month Expiration Re-Review	15 calendar days

Other statutory timeframes, such as Department of Environment and Natural Resources regulations, may override this schedule.

Meeting these timeframes will be contingent upon the Owner and Designer providing finished, complete submittals as defined by this Manual for each stage of design.

Section 403 Owner Review

The owning agency or institution of a capital project may not be a regulatory Agency, but their review and approval is the most important in the process. The public funds were appropriated to the owning Agency for facilities to support a program or service provided by the State or Community College. It is important that the Owner approve all plans submitted prior to their transmittal to the State Construction Office and other review entity.

The Owner is the most familiar with the program, staff, spaces and overall operation, and needs to ensure that the design, materials, equipment and systems meet those needs and that the project is within the scope and funds established by the appropriation or budget.

The Facilities Management department of each owning agency or institution must, by State Building Commission Rules, be a major participant in the design, review and approval of any capital project to ensure that not only the scope and program are addressed, but that the maintenance, serviceability, life safety and environmental support systems operate safely, effectively and efficiently over the life of the building.

The Capital Projects Coordinator (CPC) shall be responsible for ensuring that facilities maintenance personnel are fully involved in the review and input provided to the Designer. Their comments should also be included with the Owner's review and approval letter to the State Construction.

Section 404 Department of Administration

A. State Construction Office: 919-807-4100

The State Construction Office has jurisdiction and responsibilities as described in Chapter 100 of this Manual.

B. State Environmental Clearinghouse: 919-807-2425

1. The North Carolina Environmental Policy Act, as set forth in GS113A, involving construction of structures, grading, land/air/water-disturbing activities, or the construction of water distribution or sewer collection systems or extensions be subject to the provisions of this Act.

2. The Act is applicable to projects involving the expenditure of public funds or use of public land where there is a state approval action. Projects funded in part or wholly by federal funds are not subject to review under the North Carolina Environmental Policy Act if, as part

of the federal environmental policy requirements, the necessary environmental documents were submitted to the State Clearinghouse.

3. Projects involving only interior renovations, except those projects involving a state or national historic site, are not required to be reviewed under the Environmental Policy Act. Other projects may also fall into the category of not having to be reviewed under the Environmental Policy Act if the Agency has established "minimum criteria" with the State Clearinghouse. For those projects subject to the Environmental Policy Act. The requirements of the Act may be fulfilled by filing one or more of the following with the State Clearinghouse:

   a) Environmental Assessment (EA)

   b) A Finding of No Significant Impact (FONSI)

   c) Environmental Impact Statement (EIS)

4. Sixteen (16) copies of the above shall be submitted to: State Clearinghouse, Department of Administration, 116 W. Jones Street, Raleigh, NC 27603. Submission instructions may be obtained directly from the State Clearinghouse. Submissions must include the following:

   a) Sixteen (16) copies of a clear readable map

   b) A summary of the proposed action (to be published in the *North Carolina Environmental Bulletin)*

   c) Identification of the State Agency (Owner) responsible for the project

   d) Contact person for the project

   e) Source of funding (budget code and item

5. The State Agency responsible for compliance may choose to immediately prepare an Environmental Impact Statement (EIS) if the project is of considerable size or complexity. Assistance with preparation of the documents is available, upon request, from the State Clearinghouse.

6. For other major projects of less size and complexity, the responsible State Agency may meet the requirements by filing an Environmental Assessment (EA) and Finding of No Significant Impact (FONSI). If the EA demonstrates that the project activity will not have a significant impact on the environment, the state agency may file a FONSI at the same time. If the preparer is uncertain of the impacts, the EA may be filed, then based on the comments received after review, a decision may be made whether to file a FONSI or an EIS.

7. After being filed with the State Clearinghouse, the document is circulated to appropriate state and local agencies for review and comment. The review period varies depending on the type of document and date of receipt. The official period is counted from the date a notice of the document is published in the North Carolina Environmental Bulletin. The Bulletin is published bi-weekly by the State Clearinghouse. For specific information about the time required for review, contact the State Clearinghouse directly.

8. At the end of the review period, the responsible state agency is notified of the comments. If any further action is needed, the agency will be notified at that time.

C. State Property Office: 919-807-4650

The primary mission of State Property Office is to administer the acquisition and disposition of all state-owned land or any interest by deed, lease, easement, or allocation; manage the State's submerged lands, and maintain an accurate inventory of state lands and buildings.

Section 405 Department of Labor

The Department of Labor no longer reviews plans and specifications during design phase.

A. Elevator and Amusement Device Bureau: 919-807-2770

The Department of Labor will inspect and approve installations on all projects involving elevators, dumbwaiters, escalators, moving walks, stairway inclined lifts, and vertical wheelchair lifts. Inspection and approval must be obtained prior to building occupancy and inspections are made annually thereafter.

Elevator design and installation shall be in accordance with the North Carolina Building Code, Chapter 30 – Elevators and Conveying Systems.

B. Boiler and Pressure Vessel Division: 919-807-2760

The Department of Labor will inspect and approve installations of all pressure vessels. Copies of the Uniform Boiler and Pressure Vessel Act of North Carolina may be obtained directly from the Department of Labor website or from the NCGS 95 Article 7A and 7B. Inspection and approval must be obtained prior to building occupancy and inspections are made annually thereafter.

Section 406 Department of Health Human Services

A. Division of Health Service Regulation Construction Section: 919-855-3893

1. Construction or renovation of any state-owned facility, which is licensed in whole or in part as an acute general hospital (more than two beds), must be reviewed and approved by the DHHS Construction section. The review is for compliance with minimum standards for facility licensure (copies available from the Division of Health Service Regulation).

2. Construction or renovation of any state-owned facility licensed in part or in whole as a nursing home must be reviewed and approved by the DHHS Construction section. The review is for compliance with minimum standards for licensure (copies available from the Division of Health Service Regulation.

3. Construction or renovation for any state-owned facility providing services for treatment of mental health, mental retardation or substance abuse and seeing federal reimbursement under Title 18 and Title 19 of the Social Security Act shall have plans and specifications reviewed and approved by the DHHS Construction section. The review is required to ensure compliance with minimum federal standards for life safety under Medicare and Medicaid and before certification for reimbursement can begin. An on-site inspection to ensure compliance with federal standards will also be made by a representative of the DHHS Construction section, under their contractual responsibility with the federal government for "fire authority" in North Carolina in regard to life safety under Medicare and Medicaid. For reference, the Designer is referred to NFPA-101 (National Fire Protection Association) latest edition.

4. Plan review by the Division of Health Service Regulation will be made at each design phase described in Chapter 500 of the State Construction Manual. One set of plans and specifications are to be forwarded directly to the Division, simultaneous with the submission to the State Construction Office.

Section 407 Department of Natural and Cultural Resources

A. State Historic Preservation Office: 919-807-6570

1. The staff of the North Carolina Historic Preservation Commission, under GS 121-12(a), is required to review and comment on plans and specifications for any construction, renovation, demolition and interior or exterior rehabilitation of projects affecting properties included in the National Register of Historic Places in North Carolina. Plan review is required at each design stage. Standards for historic preservation projects with guidelines for applying the standards are available from this section.

2. In addition, the North Carolina Historical Preservation Commission has the responsibility under GS 121-12(a) to review proposed projects involving disturbance in areas that have not been previously disturbed. Previous ground disturbance includes grading and subsurface excavations for site preparation, borrowing, and the installation of septic and underground storage tanks, water, sewer and utility lines. Agricultural tillage and use do not constitute ground disturbance.

3. The Owner shall determine if a proposed construction project is involved with previously undisturbed ground by forwarding to the Office of State Archaeology for comments, a map showing the area involved and a description of the proposed project. Additional information such as a site plan may be requested by the Office and shall be furnished by the Owner. Comments shall be obtained prior to beginning any design work.

4. The Owner shall furnish to the Designer and the State Construction Office a statement certifying that the project has no involvement with undisturbed ground or the Owner shall provide a statement certifying approval of the project site by the Office of Archives and History if the project has involvement with undisturbed ground.

5. Approval of the schematic design phase will not be given by the State Construction Office until certification has been received.

6. For properties and Historic Districts listed in the National Register of Historic Places, a current list may be obtained by calling the State Historic Preservation Office at 919-807-6570.

B. Division of Parks and Recreation: 919-707-9300

1. The Division of Parks and Recreation is required to issue a state lakes construction permit prior to the construction of any pier, boat ramp, seawall, boat stall, pavilion, platform, patio or other structure upon the floor of any state lake. (GS 113-35).

2. The application shall be made to the Division of Parks and Recreation prior to the initiation of the project. Three sets of plans and specifications shall be submitted at each design stage to the Division of Parks and Recreation. Normal review time is 15 to 20 days.

Section 408 Information Technology Systems

A. Information Technology Systems: 919-754-6100

ITS under GS147-33.82 is a receipts supported agency providing design consulting and procurement for information technology systems for state agencies, except constituent institutions of the UNC system.

1. The Designer should consult and cooperate with the Owner about his information technology systems needs and the role of ITS as the Owner's consultant and provider.

2. ITS may be the Owner's consultant and provider of equipment and cabling.

3. The Designer shall provide the building elements of communications closets, distribution conduit and receptacle boxes in accordance with State standards or standards of the constituent institution of the UNC system as appropriate.

4. The general conditions of the construction contract require building contractors to accommodate the Owner's ITS contractor and to cooperate with him and coordinate their schedules.

Section 409 Department of Environmental Quality

The DENR Contacts tab on the Department of Environment and Natural Resources website provides the locations of the regional offices and contacts for many of their programs. The website also has a Customer Service Center to assist in review and permit requirements.

A. Division of Waste Management: 919-707-8200

Plans and specifications relating to the construction, renovation or alterations to hazardous waste management facilities and solid waste disposal facilities, including solid waste incinerators, underground storage tanks (UST's), Brownfields, Superfund sites, etc. may need to be reviewed and approved and permits issued.

B. Division of Air Quality: 919-707-8200

1. The Division of Air Quality, under the provisions of GS143-215.108 and GS143-215.109, is required to issue an air quality permit prior to the construction or operation of any air contaminant source, any equipment which may result in emissions of air contaminants or is likely to cause air pollution, and any construction or installation of any air-cleaning device.

2. Some activities have been designated by the Environmental Management Commission as not likely to contravene air quality standards and therefore do not require a permit.

3. The construction of a complex source may require a permit. The term complex source includes shopping centers; sport complexes; drive-in theaters; parking lots and garages; residential, commercial, industrial or institutional developments; amusement parks and recreational areas; highways; and airport facilities.

4. A permit is required for the construction or modification of any facility that would result in:

a) Open parking lots, including shopping center lots having 1,500 or more vehicle capacity, and parking decks, including shopping center decks and parking garages having capacity for 750 or more vehicles.

b) Subdivisions, housing developments, apartment complexes and trailer courts having 500 or more units resulting in a population density of 7,680 per square mile (12 persons per acre) or more.

c) Stadiums and sport arenas having a seating capacity of 25,000 or more, or 8,000 vehicle parking spaces or more.

d) Drive-in theaters having 700 or more parking spaces.

e) Amusement parks and recreation areas designed to serve 25,000 persons per day or more, or to accommodate parking of 8,000 vehicles or more.

5. Applications shall be filed prior to project initiation with the Division of Air Quality Permits Section.

6. If the proposed source is on the Code of Federal Regulation list of sources requiring a review for prevention of significant deterioration (Environmental Protection Agency permit for which state has partial delegation), the Division of Air Quality is responsible for administrative and technical review.

7. For a PSD (prevention of significant deterioration) permit or for any other source the director may designate, a public notice shall be issued 30 days prior to propose final action and a public hearing may be required.

8. Three sets of plans and specifications at each design stage shall be submitted to the Division of Air Quality. Normal review time is 60 days.

C. Division of Energy, Mineral Land Resources: 919-707-9200

1. Prior to the commencement of any land-disturbing activity on any state construction project that involves earth moving (grading, filling, excavating, etc.) of more than 1.0 contiguous acre an erosion control plan must be submitted to and approved by the Land Quality Section regional engineer.

2. One set of plans is required for the review process. Plans shall be submitted directly to the regional engineer by the Designer.

3. A copy of the letter of approval shall be submitted by the Designer to the State Construction Office. Project construction will not be commenced without this letter of approval.

4. The Owner is required to confer with the regional engineer to determine required extent of control by Owner after final acceptance of the project. (GS 113A-50 thru GS 113A-66)

5. The construction, modification or repair of fluid impoundment structures is subject to review by the Land Quality Section of the Division of Energy, Mineral and Land Resources. The Designer must file a statement concerning dam location, height, purpose, impoundment capacity and estimated project cost. A determination will be made by the North Carolina Department of Environment and Natural Resources as to whether a permit is required. Generally, any dam 15 feet or greater in height (measured from lowest point on the

downstream toe to crest) or with an impoundment capacity of 10 acre-feet or greater, will require a permit.

6. If a permit is required, the application must be filed by the Designer at least 60 days before the proposed start of construction. Plan approval and impoundment approval based on certification of as-built construction is required. Four sets of plans and specifications are required for review by this agency. Plans shall be submitted at each design stage. Normal review time is 30 days and 15 day final. Permit application forms and additional information may be obtained from the Land Quality Section regional engineer.

D. Division of Water Resources: 919-707-9000

The goal is to maintain, restore and improve an aquatic environment able to protect the existing or best intended uses of North Carolina's surface waters and to ensure compliance with state and federal water quality standards. Those uses include drinking water, recreational activities, agricultural and other purposes and the protection and maintenance of aquatic life.

1. The Water Quality Section is required to review and approve plans and specifications, and a National Pollutant Discharge Elimination System (NPDES) permit must be issued prior to the construction or operation of any treatment works, or disposal system which would result in a discharge into surface waters.

2. An NPDES permit shall be obtained by the Owner with the assistance of the Designer for any project involving any of the following and no person shall do any of the following things without first obtaining a permit (GS 143-215.1(a).

   a) Make any outlets into the waters of the state.

   b) Construct, alter, extend, operate or change the method of operation any sewer system, treatment works or disposal system within the state.

   c) Increase the quantity of waste or change the nature of the waste discharged through any outlet or any disposal system in any way that would result in a violation of effluent standards.

   d) Cause or permit any waste, directly or indirectly, to be discharged to or in any manner intermixed with the waters of the state in violation of water quality standards.

   e) Cause or permit any waste for which pretreatment is required to be discharged directly or indirectly, from a pretreatment facility to any disposal system or to alter, extend or change the construction or method of operation or increase the quantity or change the nature of the waste discharged from or processed in such a facility.

   f) Enter a contract for the construction and installation of any outlet, sewer system, treatment works, and pretreatment facility or disposal system or for the alteration or extension of any such facility.

   g) Certain municipalities and campuses of the UNC system have been given permitting authority. Designers shall consult with the Division of Water Quality regarding jurisdiction.

3. The application must be filed at least 180 days prior to the construction of new facilities or expansion of existing facilities. Circulation of a public notice at least 45 days prior to any proposed final action is required. Normal processing time is 90 to 120 days.

4. Two sets of plans, at the final design stage, shall be submitted to the Water Quality Section for review and issuance of an authorization to construct after the NPDES permit is issued. Additional information and permit application forms may be obtained from the Division of Water Quality.

5. The Water Quality Section is required to review and approve plans and specifications and a non-discharge permit must be issued prior to the construction, alteration, or extension and operation of any sewer system, treatment works or disposal system which does not discharge to surface waters. This includes sewer line extensions, spray irrigation systems, sludgeland-farming systems, waste recycle systems and evaporative systems, not processed by the Division of Environmental Health.

6. A construction permit, issued by the appropriate jurisdiction, shall be obtained by the Owner with the assistance of the Designer for any project involving item 2 above and no person shall do any of the things without first obtaining a permit (GS 143-215.1).

7. The application shall be filed at least 90 days prior to award of contracts for construction. An on-site inspection may be required and will be accomplished by the Division of Water Quality's appropriate regional office. Monitoring requirements may be added as permit conditions.

   Two sets of plans and specifications for review by the Water Quality Section shall be submitted at the final design stage to the Division of Water Quality. Normal review time is 30 days.

8. The Water Quality Section is required to review and approve plans and specifications and a permit must be issued prior to the construction of any project involving the withdrawing, obtaining or utilizing surface waters or ground waters in excess of 100,000 gallons per day in an area designed as a "capacity use area." The existing capacity use area in the state is in the coastal area, centering in Beaufort, Pamlico and Washington counties.

9. The permit application shall be filed prior to project initiation with the Division of Water Quality, Permits and Engineering Branch. A pre-application technical conference is usually required. Construction standards, periodic reports and withdrawal limits may be required.

   Two sets of plans and specifications for review by the Water Quality Section shall be submitted at each design stage to the Water Quality Section. Normal review time is 30 days.

10. The Water Quality Section is required to review and approve plans and specifications and a permit must be issued prior to the construction of a water well with a design capacity of 100,000 gallons per day or greater, or of any well added to an existing well system if the combined system capacity is 100,000 gallons per day or greater. The permit application shall be filed prior to project initiation with the Water Quality Section, Permits and Engineering Branch. Construction firms must be registered. Water well construction standards, well maintenance provisions and certain data and reports are required. Two sets of plans and specifications at each design stage shall be submitted to the Water Quality Section. Normal review time is seven days. Visit the Division of Water Quality website for additional criteria and information.

11. The Water Quality Section must issue a 401 water quality certification prior to any activity that may result in a discharge requiring a federal permit to navigable waters (GS 143-215.3(c)). The application must be filed in seven copies with the Water Quality Section, Permits and Engineering Branch, prior to project initiation. Project description, nature of discharge, and maps are required. Public notice is issued at least 30 days prior to proposed final action. Review time is normally 60 days

E. Division of Coastal Management: 252-808-2808

1. A Coastal Area Management Act (CAMA) permit for your project may be required if it meets all of the following conditions:

   - It is in one of the 20 counties covered by CAMA (see list below).
   - It is considered "development" under CAMA. I
   - t is in, or it affects, an Area of Environmental Concern (AEC) established by the Coastal Resources Commission.
   - It does not qualify for an exemption.

2. “Development" includes activities such as dredging or filling coastal wetlands or waters, and construction of marinas, piers, docks, bulkheads, oceanfront structures and roads.

3. Areas of Environmental Concern are the foundation of the Coastal Resources Commission's permitting program for coastal development. An AEC is an area of natural importance: It may be easily destroyed by erosion or flooding; or it may have environmental, social, economic or aesthetic values that make it valuable to our state. The Coastal Resources Commission classifies areas as AECs to protect them from uncontrolled development, which may cause irreversible damage to property, public health or the environment. AECs cover almost all coastal waters and about 3 percent of the land in the 20 coastal counties.

   The Coastal Resources Commission has established four categories of AECs:

   - The Estuarine and Ocean System
   - The Ocean Hazard System
   - Public Water Supplies
   - Natural and Cultural Resource Areas

4. If you're planning any sort of development - from a sandbag structure to a bridge to a condominium - in the coastal area, and your project is in an AEC, you're probably going to need a CAMA permit. You'll also need to follow development rules specific to that AEC. You're probably in an AEC if your project is:

   - in or on navigable waters within the 20 CAMA counties
   - on a marsh or wetland
   - within 75 feet of the mean high water line along an estuarine shoreline
   - near the ocean beach
   - near an inlet
   - within 30 feet of the normal high water level of areas designated as inland fishing waters by the North Carolina Marine Fisheries Commission
   - near a public water supply.

If your project is in one of these areas, contact the Division of Coastal Management office nearest you.

5. Section 103(5)(b) of the Coastal Area Management Act exempts the following activities from permitting requirements:

   - road maintenance within a public right-of-way;
   - utility maintenance on projects that already have CAMA permits;
   - energy facilities covered by other laws or N.C. Utilities Commission rules;
   - agricultural or forestry production that doesn't involve the excavation or filling of estuarine or navigable waters or coastal
   - marshland (Note: these activities are not exempt from permitting requirements under the state's Dredge and Fill Law);
   - agricultural or forestry ditches less than 6 feet wide and 4 feet deep;
   - emergency maintenance and repairs when life and property are in danger;
   - the construction of an accessory building usually found with an existing structure, if no filling of estuarine or navigable waters
     or coastal marshland is involved.

6. In addition, CAMA allows the Coastal Resources Commission to exempt some types of minor maintenance and improvements. These types of projects are those with successful track records in protecting the resources around them. In all cases, you should check with the Division of Coastal Management to make sure that your project qualifies for an exemption.
   A CAMA permit is required for any person (agency) who undertakes any major development in an area of environmental concern in any of the 20 counties of the coastal zone. The 20 counties of the coastal zone are:

Beaufort	Chowan	Hertford	Pasquotank
Bertie	Craven	Hyde	Pender
Brunswick	Currituck	New Hanover	Perquimans
Camden	Dare	Onslow	Tyrrell
Carteret	Gates	Pamlico	Washington

7. The permit must be issued before any construction takes place. Public notice is issued after receipt of the complete application. A major development is any development requiring permission, licensing, approval or certification from the NC Department of Environment and Natural Resources, the Department of Health and Human Services, the Department of Administration; or which occupies a land or water area in excess of 20 acres; or which involves drilling or excavating natural resources, or which occupies on a single parcel a structure(s) in excess of a ground area of 60,000 square feet.

8. The permit application shall be accompanied by an informational drawing showing a plat of the project. Drawing should be on 8 1/2" x 11" paper and to a scale of 1" = 200' or less. Additional engineering drawings may be required on specific projects for detailed review.

Application shall be submitted to the Division of Coastal Management, Raleigh, N.C. 27611. Normal review time is 60 days

9. A state dredge and fill permit is required for any project involving construction in any estuarine waters, tidelands, marshlands or state-owned lands. The application shall be filed prior to project initiation with Division of Coastal Management. A pre-application technical conference is usually required and an on-site field inspection is required. The applicant is required to serve each adjacent riparian property Owner with a copy of the application. The application shall be accompanied by a work plat at a scale of 1" = 200' or less and must be on 8 1/2" x 11" paper. Additional engineering drawings may be required on specific projects for detailed review. Normal review time is 55 days. Applications shall be submitted to the Division of Coastal Management, Raleigh, N.C. 27611

F. Division of Environmental Health Dairy and Food Protection Branch: 919-707-8400

1. Dairy and Food Protection Branch:

is required to review and approve plans and specifications for new construction and renovation of educational institutions, hospitals, nursing and rest homes, sanitariums, orphanages, residential care, and confinement institutions where lodging is provided or food is handled. The review relates to the location, sanitary construction, and health management of environmental sanitation facilities at state institutions. Plans and specifications will be reviewed at each design stage and will be submitted directly to the Branch.

2. Pools, Tattoos and State Institutions Branch: 919-707-5854

The Pools, Tattoos and State Institutions Branch protects public health by assuring safe and sanitary design, construction and operation of public swimming pools. This branch is also responsible for assuring the sanitation of state institutions and promoting quality improvement in all environmental health programs.

3. On-Site Waste Water Section: 919-707-5854

Projects with on-site waste water systems (septic tanks, etc.) shall make application and submit plans and specifications to the local health department having jurisdiction in the project area. Prior to local approval, projects with subsurface wastewater systems exceeding 3000 gallons per day shall have plans and specifications submitted for review and approval by the Section's Engineering Team. State review and approval is prerequisite for any subsurface system designed for the collection, treatment and disposal of industrial process water.

4. Public Water Supply: 919-707-5854

A public well site approval letter (permit) must be obtained from this branch for any public water supply well. Surveillance of all public water supplies. Enforcement of public water supply rules. Consultation services and technical assistance. Assistance in planning and designing water supply systems. Review of technical plans and specifications for water supply construction. Training program for water works operators. Investigation of spills of hazardous substances that may affect public water supplies.

Section 410 Department of Transportation

The North Carolina Department of Transportation website provides locations of all Division and District Offices, addresses and phone numbers.

1. The Board of Transportation has established rules, regulations and ordinances relating to utilities on highway rights of way and driveway entrance regulations. It shall be the responsibility Owner with the assistance of the Designer to obtain required encroachment agreements and driveway permits. Certification by the Designer that all such agreements and permits have been obtained shall be made to the State Construction Office before a bid date will be established. (GS 136-18)

2. Driveway permit applications shall be made to the District Engineer Office having jurisdiction. Utility encroachment agreements are normally handled by the Division Office; however, there may be instances where approval must be obtained through the state office of Department of Transportation in Raleigh.

3. The Division of Highways has prepared manuals relating to both Driveway Entrance Regulations and Policies and Procedures for Accommodating Utilities on Highway Rights of Way. Designer should obtain copies of the manuals that cover in detail all requirements for approvals, permits, as well as technical requirements for material and methods of construction.

4. Under the provisions of GS 136-18 (22), a permit from the Board of Transportation is required for the construction or alteration of any airport or aircraft landing area. Designers involved in construction projects of this nature shall obtain from the Raleigh office of the Department of Transportation all required permits and shall forward copies to the Owner and the State Construction Office.

   Note: Construction of any structures in or near an airport or aircraft landing area shall be coordinated with the FAA and the local airport authority for zoning requirements and FAA approval.

Section 411 Department of Agriculture & Consumer Services

A. Standards Division - LP Gas: 919-707-3225

National Fire Protection Association Pamphlet No. 58 has been adopted by GS 119-49 and authority has been granted to the commissioner of Agriculture by this statute to approve plans for LP gas installations that use in excess of 4000 gallons water capacity. Inspection of LP gas installations by the Department of Agriculture and Consumer Services is also required to ensure compliance with the LP gas law.

For installations subject to the State Building Code, inspection responsibility of the Department of Agriculture and Consumer Services ends at the outlet of the first stage pressures regulator.

Plans and specifications shall be submitted at each design stage to the Division.

CHAPTER 500

Design Guidelines

Section 501 General

A. Design Overview:

Project design phases described in this chapter reflect a typical new state construction project, subject to the “formal” bidding and contract process. “Informal”, University “download”, Community College, and various project types have unique review requirements that may differ from those described here. Refer to Table 501 at the end of this chapter for specific review requirements.

In project for State agencies and all projects under $2m for constituent campuses of the UNC system are submitted to State Construction Office for North Carolina State Building Code review and approval. Information required for review should be commensurate with the details listed under Construction Documents. Questions should be directed to the State Construction Office Review Section. Information for UNC reviews is located on SCO web site Under University Download Review requirements.

1. Public projects are diverse and must be adapted to these specific submittal requirements. The State Construction Office Design Review Section should be contacted to verify submittal requirements for each project. Other review agencies must be contacted individually to verify requirements for submitting project documents.

2. It is the Designer’s responsibility to determine and show all work required to accurately bid and construct the project. The phrase “As Required” can be extremely problematic during bidding and construction because the Designer has not indicated work required or scope to bid.

3. Since all work on public projects must be competitively bid, “Cash allowances” for work not fully defined are not permitted.

4. Narrative descriptions in the project manual requiring the bidder to visit the site and inspect the conditions are not substitutes for graphic drawings detailing the work.

5. The Designer shall obtain all State Construction Office and other regulatory agencies procedural and technical guidelines, including site investigations and existing conditions, prior to starting design work on the project.

6. The State Construction Office Project ID#, contact name, phone number, and e-mail address must be on all documents and correspondence.

7. The Designer shall perform a thorough job check and design team coordination of documents prior to each submittal. It is not the role of State Construction Office review staff to resolve errors and omissions in the Designer’s work.

8. An Integrated Design approach shall be utilized by the Design and Owner team. This approach shall include team meetings early in the design process to better enable a fully-integrated design of the most energy efficient and cost effective building. Refer to the "Whole Building Design Guide" (a program of the National Institute of Building Sciences) www.wbdg.org for more information on Integrated Design approach.

9. On projects to be delivered by CM at Risk method, the design team shall include the CM. It is expected that the CM will attend design meetings and will be involved with decisions regarding the use of materials, constructability issues, schedule and cost estimating.

10. A Sustainable Energy Efficient Buildings Deliverables Checklist is available on the SCO website at http://ncadmin.nc.gov/businesses/construction/forms-documents, to assist the design team with requirements of energy and water efficient buildings. The standards are based on GS.143-135.35 -.40.

11. Executive Order 50 requires preference for use of North Carolina manufactured materials shall be followed.

B. Professional Seals:

1. Public projects above certain cost thresholds must be designed by an architect or engineer as described in GS 133-1.1.

2. Professional seals identifying the Designer of Record shall be affixed to all drawings, specifications and other technical submissions at all design phase submittals. No signature or date is required over the imprinted seals until final bid documents are printed for release to bidders. Designers may stamp documents as "Review Only", "Not for Construction", "Design Development" or any other statement accepted by their respective licensing boards. Do not stamp over the seal such that name, license number and state are obscured.

3. The State Construction Office follows the NC Architect and Engineer licensing board rules. Designer is directed to the use of the words "all", "may", and definition of "direct supervision". 2 NCAC 02.0206(A) (1) (A) (B) and (5) (A) and (c) (1-6). A presentation describing requirements for professional seals is on the SCO website at http://ncadmin.nc.gov/businesses/construction/forms-documents.

4. Professional seals are require on the following documents:

   a) All consultants' drawings and specifications including Architecture, Civil/Structural, Landscape Architecture, Electrical, Mechanical, plumbing, gas, and Fire Protection.

   b) Other consultant drawings and specification that may include but limited to; kitchen, theater lighting, low-voltage, communications, security, audio visual, building automation, CCTV etc.

C. Legislative Requirements for the Design of Public Works:

1. GS133-1.1 states that public projects above certain Legislative cost thresholds must be designed by an Architect or Engineer.

2. GS133-1 states it is unlawful for Designers to specify products or materials in which they have a financial interest.

3. GS133-2 states it is unlawful for Designers of public work to employ or allow any manufacturer or representative to write, plan or draw any part thereof.

4. GS133-3 states specifications shall be competitive by using performance specifications or specifying three or more brand names. Owner preferred alternates are permitted in limited circumstances that will provide cost savings, maintain or improve the functioning of any process or system affected by the preferred item or items. A justification for the preferred alternate must be available to the public, in writing, and explained in an open meeting prior to bid. Substitutions are allowed prior to bid with Designer approval.

5. GS133-4 states any person, firm or corporation violating GS 133-3 shall be guilty of a Class 3 Misdemeanor - loss of license to practice profession for 1 year and subject to $500 fine.

Section 502 Forms and Guidelines

The State Construction Office has specific Bidding and Contract Forms, Design Review Forms, and Design Guidelines that must be incorporated into State projects where appropriate. These Forms and Guidelines are available for download on the State Construction Office website at www.nc-sco.com**.**

Section 503 Drawings

A. Sizes:

1. Drawing sheet size shall be consistent throughout the set. 24”x36”, 30”x42” and 36”x48” are common sizes. Use of oversize sheets must be approved by State Construction Office prior to start of work. Do not mix drawing sizes within the same project documents.

2. Drawing shall be edge bound. For convenience and handing, each bound set shall not exceed 1 inch in thickness. Large project may require multiple volumes.

3. Reduced drawings and electronic media are not suitable for review. However, submittal with a very large number of drawing sheets should include an additional half-size set as a useful cross reference set for reviewers.

4. Complete sets must be provided with each submittal or re-submittal. No single sheets or partial sets are acceptable. If review comments are minor or limited, with approval from State Construction Office, corrected sheets may be submittal for review compliance verification with a complete bid set provided later when the project is issued for bids.

5. All fonts, notes schedules and room names should be 1/8” minimum in height. Project Record Drawings are presently archived by microfilm in black and white and must be legible on a microfilm reader and for reproduction when needed. Specifications and files are archived by boxing and storage.

B. Orientation and Presentation:

1. All Sites and Building plans shall have the same orientation on all drawings for all disciplines. Various plan orientations by different disciplines can cause errors and confusion by reviewers and bidders.

2. All Sites and Building plans shall indicate true North and Plan North. A survey benchmark shall be provided on the drawings locating the building (X&Y) as well as elevation.

3. Column lines and designation shall be included on all plans sheets, elevations, building sections and wall sections for orientation and reference between disciplines

C. Cover Sheet and Title:

1. Cover Sheet and all drawings shall have project name, agency/institution, Designer and Consultants, the SCO Project ID number and drawing index. The SCO project ID number is on the Owner/Designer Agreement.

2. The current North Carolina State Building Code summary Sheet, Appendix B, shall follow the cover sheet. This form is required by the North Carolina State Building Code to identify all code decisions and information for the project. An electronic template is available from the State Construction Office website at www.nc-sco.com.

D. Arrangement of Drawings:

The following drawing order is recommended but can be modified by the Designer to fit the specific project:

1. Cover Sheet, Drawing Index, Vicinity and Location Maps. General "G" series.
2. Building Code Summary, Appendix B
3. Life Safety Plans
4. Reprint of Test Reports such as UL Design
5. Civil "C" Series
6. Landscape "LS" Series
7. Architecture "A" Series
8. Structure "S" Series
9. Mechanical "M" Series
10. Plumbing "P" Series
11. Fire Protection "FP" Series
12. Other specialty drawings may include:
    a) Kitchen "K" Series
    b) Theatre Lighting "TL" Se
13. Demolition drawing such as Arch Demo "AD" etc. should precede their respective discipline.

Section 504 Programming and Advance Planning

The project scope, complexity and/or the Owner's need for clarification and definition of the program, budget, space needs, site considerations, etc., may necessitate or benefit from pre-design or Advance Planning effort. Such effort should occur prior to preparation of Form OC-25 cost estimate. The Advance Planning contract may be a letter agreement or limited scope design contract.

Advance Planning documents can be a cost effective approach for creating a realistic program and budget. Especially for large for State projects, the Schematic Design phase has been lengthy in time and ineffective due to "moving targets" for budgets, programs and even site selection. The Advance Planning document should expand and refine components of Form OC-25 to realistically define

design goals and objectives relative to the budget. Consensus in Advance Planning will facilitate better communications and understanding of the owner's needs and the designer's direction and goals for the project. At a minimum, the Advance Planning document should:

A. Establish Components of the Project Budget:

1. Reserves funds for furniture, equipment, utilities, landscaping, communications, special inspections, etc. Some of these items may not be in design or construction contracts.

2. Owner Construction Contingency for change orders, testing, soils, survey, to be used at the discretion of the Owner. This contingency is not part of construction cost estimate.

3. Design Fees for basic services, additional services – programming, models, presentations, etc.

4. Construction Funds Available (CFA) is the remaining funds available to award a construction contract. The Designer should use this as the construction cost estimate target.

5. Construction Procurement Method: The Owner and Designer should review Chapter 600, Construction Contracts and Bidding, to determine the procurement method proposed for the project. The plans and specification shall be properly prepared to reflect the construction procurement method selected.

B. Special Owner/User Requirements:

Special requirements from the Owner such as guidelines for energy conservation, sustainable design and construction, life cycle cost evaluations, hazardous materials used, asbestos and lead paint.

For research, laboratory and other building types where hazardous materials are used or stored, the Designer shall discuss with the Owner the chemicals that will be used within the facility. Development of the Hazardous Material Analysis takes time that must be accounted for the Designer's schedule. The Analysis is to be submitted no later than the Design Development phase.

C. Site Evaluation:

Evaluate each site for regulatory zoning constraints, physical characteristics, historic and environmental issues, subsurface investigations, flood plain, and any other requirement information.

D. Space Program:

Provide a space program to identify the primary users and spaces planned for the facility. The program will allow an early test of the project budget assumptions allowing adjustments to be made prior to starting the design phase. The space program should include individual room square footages, primary adjacencies and special space requirements for building equipment such as mechanical, electrical, plumbing and structural systems.

E. Preliminary Project Schedule:

Establish a preliminary project schedule to identify milestone design and construction delivery dates. The schedule should include owner and regulatory reviews times and any special starting

or phasing requirements. Include a master schedule if the outcome of this project contingent upon the starting or completion of other related projects.

F. Facilities Condition Assessment Program Recommendations:

If available for existing building, an integrate Facilities Condition Assessment Program recommendations and Department of Insurance inspections reports for code compliance and life safety.

G. Sustainable, Energy Efficient Buildings (GS 143-135.35-40):

1. All State project that meet the limits stated in the statute reference above shall require that the Project Team identify the following items in the Advance Planning Phase:

   a) Construction Cost

   b) Design Fee

   c) Commissioning Cost

2. Designer shall submit written project criteria, design recommendations and rationale that led to their design recommendations to the State Construction Office for the following Advance Planning Phase design decisions:

   a) Identify and review potential energy and water conservation strategies for the building type and location.

   b) Evaluate building geometry, daylight depth and site development implications for north and south exposure.

   c) Daylight feasibility report.

   d) Identify local materials and their sources.

   e) Identify code requirements and required enhancements related to existing building.

3. A checklist to assist design team with commissioning requirements of energy and water efficient buildings is available in the forms section of the State Construction Office website: www.nc-sco.com.

H. "Net Savings Required" Cost Analysis per G.S. 143-13J..37(a1)

1. Determine the "Net Savings" for a major facility construction or renovation project.

Section 505 Schematic Design Phase

A. Schematic Plan Overview:

The Designer shall prepare Schematic Design drawings and documents illustrating the recommended implementation of the program and project requirements. It is essential that consultants for site work, structural, mechanical, plumbing, electrical, and fire protection be involved in the early design process. The Designer shall initiate a building preliminary code

analysis identifying major code considerations including but not limited to occupancy group, construction type, building height, number of stories, floor area, and sprinkler protection. An Owner approved set of Schematic Design documents shall be submitted to the State Construction Office and regulatory agencies that have jurisdiction such that all agency reviews are concurrent. The Owner and regulatory agencies shall forward copies of the review comments to the State Construction Office.

Project Scope and Budget:

The Designer shall consult with the Owner to review the program and establish or verify the project scope and budget requirements. The State Construction Office recommends the base bid scope be established at approximately 90% of the available Construction Funding.

If the Owner has not prepared a program or there has not been advanced planning, then programming shall become the initial step of the schematic design phase. The program shall include the Owner's goal for energy conservation and energy use; sustainable design and construction including life cycle cost evaluations and the application and suitability of these goals for the particular project. The Designer shall confirm in writing such requirements to the Owner with a copy included in the Schematic Design submittal to the State Construction Office.

If hazardous chemicals will be used or stored in the building, the Designer should begin discussions with the Owner to determine the impact such materials may have on the design. A detailed Hazardous Materials Analysis is required at the Design Development submittal, but even at this stage of the design, code requirements pertaining to hazardous chemicals should be considered.

Integrate into the project the State Construction Office Facility Condition Assessment Program (FCAP) recommendations and Department of Insurance annual inspection reports for required code and life safety improvements.

For building renovation projects or projects that require the demolition of existing structures, abatement of hazardous materials such as asbestos and lead paint shall be considered.

B. Additional Design Scope:

The Designer should verify any additional scope of work or submittals required by the Owner. Examples include documents required for presentations to other interested groups or stakeholders, phased construction, or CMR involvement.

C. Owner/Other Agency Reviews:

Submittal of the Schematic Design phase shall be reviewed and approved for submission by the Owner prior to submission to the State Construction Office and other regulatory agencies having jurisdiction such that all agency reviews are concurrent. The Owner, regulatory agencies or Designer shall forward a copy of any review comments to the State Construction Office**.**

Indicate on the transmittal letter to the SCO any other reviewing agencies receiving copies for review.

D. Minimum Requirements for Schematic Design Submittal:

1. A written narrative and general description of the project based on the Designer's studies and program describing the proposed construction materials, structural, mechanical, plumbing, and electrical systems. Outline or narrative specifications are acceptable and desired. Full specifications will not be reviewed at this phase. If a numbering system is used, then CSI Master Format 1995 or 2004 should be used throughout by all design disciplines and at each submittal phase.

2. A statement of probable construction cost based upon gross area, volume or other appropriate units. Separate line items shall be provided for site work, utility extensions and other items outside the structure. Provide a complete budget summary showing the breakdown of total appropriated funds and all line item funds reflected in the design contract. This is to verify the Designer has a clear understanding of the design contract line items and the cost estimate summary.

3. The Designer and consultants shall confer jointly with the Owner on the most economical and appropriate location and orientation of the facility on the proposed site. This effort shall consider site conditions and the implications for various building systems. Energy Modeling (where required to satisfy the requirements of GS 143-135.35-40 for Sustainable, Energy Efficient Buildings) and LCCA results (civil/structural, general and PM&E) should be considered, as well as space requirements, functionality and special conditions, when determining the most effective building design and location.

   a) When the scope involves site modifications, a current site survey is necessary. The Designer shall define the scope of the survey as appropriate to the project requirements. The Owner will contract with the surveyor for these services directly and will pay the costs from the Owner's project contingency. Surveying activities are professional services that cannot be bid competitively and must use appropriate Qualification Based Selection procedures.

   b) When the scope of the project requires a structural and foundation design, the Designer shall initiate a basic soils investigation program. The Owner shall select a geotechnical engineering consultant using Qualification Based Selection procedures. Subsurface investigation shall be provided in a formal report and a copy provided to the State Construction Office with the Design Development submittal. The Designer shall consider the report's recommendations during formulation of the project design, plans and specifications. The contract for the Geotechnical service shall include review of the Design's plans and specifications. A copy of the report shall be included in the bid documents and noted as for the bidder's information only. Referencing the report "recommendations" shall not substitute for properly evaluated and prepared specifications and plans by the Designer.

4. For Sustainable, Energy Efficient Buildings (GS 148-135.35-40), the Designer shall submit the following data to the State Construction Office as part of the Schematic Design phase:

   a) Daylight factor Calculations to confirm proportion and characterize programmed spaces and areas where daylighting is desirable or allowed by the owner's program.

   b) Base building characteristics that are to be used for an hourly energy performance simulation model based on specific building geometry.

   c) A baseline energy simulation model to establish a base building that meets the ASHRAE 90.1 2004 baseline building and is NC Code compliant.

d) A Life Cycle Cost Analysis (GS 143-64.10-15) with preliminary calculations of the cost to construct the ASHRAE 90.1 baseline and alternate buildings, along with their projected payback. The Life Cycle Cost Analysis (LCCA) shall be submitted to ensure preliminary decisions regarding site characteristics and building orientation (including internal room arrangements and fenestration) are optimized relative to life cycle cost decisions for building systems. The LCCA shall be sealed, signed and dated, and then updated at each future submittal to reflect any changes to the project. The Designer shall consider the results of the LCCA throughout the design of the project. Submittals without the appropriate LCCA report will not be approved to proceed to the next phase.

e) Energy strategies for variable building elements that investigate each of the following:

(1) Building Envelope

(2) Lighting control and lighting design

(3) HVAC system control and design

(4) Service water heating systems

5. A code analysis should be initiated to confirm that the proposed facility is, at this level of development, within the requirement of the current North Carolina State Building Code. Preliminary Building Code information including but not limited to occupancy group, construction type, building height, number of stories, floor area, and sprinkler protection.

6. A scaled site plan, with a north arrow, showing the location and size of the proposed facility in relation to existing real or assumed property lines, buildings, roads, walkways, parking and existing utility services. Importance shall be placed on early determination of the adequacy and availability of all existing utility services. The Designer shall review all available as-built drawings related to the project, which may or may not accurately reflect field conditions, and will be responsible for examining all existing conditions.

7. Single line drawings of the proposed floor plan(s) that show the rooms and spaces, including mechanical and electrical rooms, service areas, etc. Rooms shall be identified by name or use for consideration of code implications. Space allocations shall be compared with those specified in the advance planning programming phase.

8. Scaled proposed exterior building elevations to show massing and height.

9. Scaled building sections to show relationship between floors.

E. Designer Responsible for Plan Check:

It is expected that the Designer will have done a thorough job check and coordination prior to each submittal. It is not the role of State Construction Office review staff to resolve simple errors and omissions in the Designer's work.

F. Approval to Proceed:

The Designer should secure from the Owner and the State Construction Office written approval of the Schematic Design submittal before proceeding to the next phase. If the submittal does not sufficiently address the basic elements of the project, it will be returned "Not Approved" and a re-submittal showing further development will be required.

G. Commissioning Authority:

The Commissioning Authority shall review the Schematic Design package against the modeling assumptions and make written comments to the design team for incorporation into the project by the design team. Refer to the "Commissioning of Buildings" on the State Construction Office website at www.nc-sco.com.

Section 506 Combined Schematic and Design Development

Combining Schematic Design and Design Development submittals is acceptable for specific project types with the concurrence of the State Construction Office. Types of projects that could be considered for a combined SD/DD submittal include.

A. Architecture:

Minor Renovations/upfit, Small Metal Buildings, Window Replacement, Roofing Repair/Replacement, Waterproofing, etc.

B. Civil/Structure:

Sitework/Utility Infrastructure, Repair/Renovation of Structural Elements, Grading, Paving and on-grade parking.

C. Mechanical:

Mechanical Equipment replacement, Fire Sprinkler Upgrade, Life safety Code Renovations, Mechanical Systems Upfit/Retrofit.

D. Electrical:

Electrical Equipment Upgrades/Replacements, Fire Alarm Systems, Telecommunication Systems, Lighting Renovations, etc.

Section 507 Design Development Phase

A. Design Development Overview:

Based on the approved Schematic Design submittal, the Designer shall prepare the Design Development documents, which shall set forth in writing and drawings all basic program elements, systems and materials to be used in the project. The Design development submittal is a further development of the Schematic Design submittal. The Designer and their consultants shall have completed a Life Cycle Cost Analysis of various building orientations, materials, finishes, and PME system alternatives. The Designer shall select the systems and materials that are the best value for the project over the life of the building. Life Cycle Cost Analysis (LCCA) guidelines are available at http://ncadmin.nc.gov/businesses/construction/forms-documents.

B. Owner/Other Agency Reviews:

Submittal of the Design Development phase shall be reviewed and approved by the Owner prior to submission to the State Construction Office and other regulatory agencies having jurisdiction such that all agency reviews are concurrent. The Designer shall forward a copy of any review comments to the State Construction Office.

The transmittal letter shall indicate any other reviewing agencies receiving copies for review.

C. Minimum Requirements of Design Development Submittal:

1. A written response to Schematic Design review comments on the design firm's letterhead. The letter shall include the name of respondents for each discipline. The response must detail how and where the comments have been addressed. An electronic copy (pdf) of the review letter, copied to the Owner, will be provided to the Designer.

2. A statement of probable construction cost using the CSI Master Format Division, 1995 or 2004, with appropriate units of measure such as area, volume, linear feet, tons BTU/hour, etc. The Designer shall carefully consider the cost estimate at this phase and whether the project is within budget. Take into consideration the actual systems and materials proposed. Provide a complete budget tabulation summary showing the breakdown of total appropriated funds and line items from the design contract. Site work and utility services shall be shown as separate items. If the scope and budget are not aligned at this point, making the necessary adjustments in scope or funding later could be costly in time and dollars to both the Owner and the Designer.

3. If applicable, a Hazardous Materials Analysis formatted in accordance with the requirements of Chapters 3 and 4 of the North Carolina State Building Code is required at this submittal to verify types and quantities of hazardous chemicals, and the number and placement of control areas relative to the allowances and limitations of the Building Code. The Analysis must be included with the Design Development submittal to ensure approval to proceed to the next design phase. If the Analysis is not submitted until the Construction Document phase, it may require re-design and result in significant delays for the Owner.

4. The soil investigation report, boring logs and all other reports or studies made for the project shall be considered by the Designer in his design and included in this submittal

5. A written description of the engineering rationale leading to the utilization of systems as shown on the drawings.

6. Outline specification with brief descriptions of building systems and materials in CSI Master Format division and numbering – 1995 or 2004 should be used throughout by all design disciplines. Full specifications will not be reviewed at this phase.

7. Drawings at the Design Development phase shall clearly show the locations of all rated walls. Plans shall a common compass orientation with north at the top of the sheet, and include a north arrow, numeral scale, and graphic scale. Up/down direction of all stairs and ramps is required.

   Discipline specific drawing requirements for Design Development submittals shall include all requirements of Schematic Design drawings (see Section 505) and the following:

   a) Building Code Summary (Appendix B) to include all preliminary code information needed to support the proposed design including but not limited to occupancy group, construction type, building height, number of stories, floor area, and sprinkler protection. The Building Code Summary is available for download from the State Construction Office website at www.nc-sco.com.

   b) Life Safety Plans showing the occupancy group, area in square feet, and occupant load of each room or space, dead ends corridors, common paths of travel, travel distances,

dimensions to show remoteness of exits, exit widths at each exit and stair, actual and allowable occupant load at each exit and stair, and doors equipped with panic hardware.

c) Fire Resistance Construction Plans to show areas of fire rated floor assemblies, and the fire rated columns and beams required to support them.

d) Civil Drawings. Civil plans showing proposed grading, benchmarks, site drainage and sedimentation control; utility infrastructure, roads, parking, adjacent structures and site data as furnished on previous submittals. All plans shall include information relative to flood plain involvement of this project. (See Floodplain Evaluation Procedures on the State Construction Office website at www.nc-sco.com).

e) Architectural Drawings:

(1) Scaled Architectural Site Plan: Show adjacent structures, separation distances between structures and all real and assumed property lines, parking, accessible routes, and identify all building entrances/exits.

(2) Floor Plans at 1/8" or ¼" scale: Show all fire rated wall construction. The plans shall clearly reflect the requirements of the building code analysis for the building type.

(3) Building Elevations at 1/8" or 1/16" scale: Show exterior finish materials, fenestrations, doorways, expansion joints, floor and roof level elevations.

(4) Building Sections at 1/8" or ¼" scale: Taken at appropriate locations to show major vertical spaces, large volumes such as atriums, shafts, basement, and adjacent structures.

(5) Roof Plan at 1/8" or ¼" scale: Include roof slope and roof drainage information and indicate all roof top or roof mounted equipment.

(6) Reflected Ceiling Plan at 1/8" or ¼" scale: Indicate the location of all ceiling mounted fixtures, devices, equipment, and other ceiling appurtenances.

(7) Wall Sections at ¾" or 1" scale: Show construction of the wall from foundation to roof, including floor construction. Label the spaces/rooms and indicate building grid line and floor elevations.

(8) Enlarged Details at 1½" or 3" scale.

(9) Room Finish Schedule: Show basic materials proposed for the floors, walls and ceilings.

(10) Door Schedule: Include fire ratings, door types, frame types, glazing types, hardware groups, etc.

f) Structural Drawings:

(1) Identify allowable soil bearing pressures and live loads used in the design.

(2) Provide a foundation plan showing the basic elements of the foundation and additional details and information as necessary to delineate the size, type and probable depth of special foundations such as piles or caissons.

(3) Provide floor and roof framing plans showing size, spacing and type of primary members. Show locations of shear walls and/or bracing with such additional details and information as necessary to describe the method of lateral load resistance.

g) Mechanical Drawings: At a minimum, mechanical drawings shall include the following: major HVAC equipment rooms and the basic layout of the heating, ventilating and air conditioning distribution system, a diagram of the temperature control systems; schematic diagram of air, hot water and/or steam systems, chilled water and condenser water systems. Rated walls shall be shown on all plans.

h) Plumbing Drawings: At a minimum, plumbing drawings shall include the general development of the plumbing system. The drawing shall show source of water supply and waste disposal termination; water distribution and waste collection plan diagrams, including fixtures.

i) Electrical Drawings: At a minimum, electrical drawings shall include the following: basic electrical service equipment and its location to include the electrical power distribution components, primary service switches, transformers, generators, main switchgear, motor control centers, and the locations of the electrical and telecommunication rooms:

(1) Provide single line diagrams of the power distribution systems including primary, secondary and emergency power.

(2) Provide similar diagrams for fire alarm, telecommunications, security and all other systems included in the electrical scope of work.

(3) An estimated load summary in KVA rating, the connected load, the demand load and the DF are required with this submittal.

(4) Electrical floor plans shall show the basic layout of the lighting, emergency lighting, power receptacles, smoke and heat detectors, data/telecommunications outlets or other systems in the project. The plans shall show location of all fire rated construction.

j) Fire Protection: At a minimum, fire protection drawings shall clearly reflect compliance with NFPA 13, 13R, 14, 20, and 24, the NC State Fire Code, the NC State Building Code, and applicable State Construction Office Guidelines.

(1) Floor Plans at 1/8” or ¼” scale.

(2) Indicate the location of all valves, mains, drains and FDC locations. Plans must clearly indicate that the fire protection scope of work begins 12” above the finish floor.

(3) Sprinkler Design Data Summary shall include the following; Project name and address, total building height in feet, type of system, hazard classification, design data, design density, hose allowance, and water supply information.

(4) Drawing shall include fire protection equipment locations with schedule, and indicate electrical demands.

(5) Piping schematic shall include all valves flow and tamper switch locations from point of city/county connection to further valve system.

8. Energy Code Compliance: For all State buildings, the Designer shall comply with the NC Energy Conservation Code and State Construction Office procedures for Implementation of Life Cycle Cost Analysis for State Buildings. Compliance may be demonstration by using the appropriate forms from ASHRAE/IESNA Standard 90.1 User's Manual or other methods approved by the State Construction Office. The Life Cycle Cost Analysis shall be sealed, signed and dated by the designer. Use only the methods and forms provided in the guidelines.

9. Sustainable, Energy Efficient Buildings GS 143-135.35-40:

   a) Final submittal of energy Model should be submitted at this phase, and should include a model of baseline ASHRAE 90.1 building, along with list of options and costs for up to two (2) alternate building models that result in a 20% (major renovations) or 30% (new construction) more efficient building than baseline model.

   b) Designer shall submit the following data along with forms provided in this section to the State Construction Office at the end of the Design Development phase:

      (1) Revised energy simulation model developed in the Schematic Design phase, refining the proposed energy conservation options. Compare via software the proposed options with the base building that meets ASHRAE 90.1 2004 baseline and NC State Building Code.

      (2) The incremental cost increases, if any, for each energy conservation strategy based on the difference of the cost of constructing the energy conservation option versus the cost of constructing the base ASHRAE 90.1 2004 building.

      (3) Updated LCCA comparing the energy conservation options for up to two composite buildings to ASHRAE 90.1 2004 compliant base building.

      (4) Selection of resultant the Energy Conservation Measures to be implemented and summarize the final building construction.

      (5) Water reduction calculation for both indoor and outdoor water use relative to baseline. Refer to the "Water Conservation" available in the drop down menu under "Guidelines on State Construction Office website.

   c) The Commissioning Authority shall review the DD design package against the modeling assumptions and shall make recommendations for incorporation into the project by the design team. Refer to "Building Commissioning" in the drop down menu under "Guidelines" on the State Construction Office website. (Sustainable, Energy Efficient Buildings Advanced Planning Flowchart, GS 143-135.35-40.

D. Designer Responsible for Plan Check:

It is expected that the Designer will have done a thorough job check and coordination prior to each submittal. It is not the role of State Construction Office review staff to resolve simple errors and omissions in the Designer's work.

E. Approval to Proceed:

The Designer should secure from the Owner and the State Construction Office written approval of the Design Development submittal before proceeding to the next phase. If the submittal does not

sufficiently address the basic elements of the project, it will be returned “Not Approved” and a re-submittal showing further development will be required.

Section 507 Construction Documents Phase

A. Construction Document Overview:

Based upon the approved Design Development submittal, the Designer shall prepare construction drawings and specifications setting forth all the work in detail and describing the work to be performed, including: materials, products, and finishes: workmanship; finishes; plumbing, mechanical, electrical, and fire protection systems; special equipment; site work; and utility connections and services. The Construction Document submittal is a further development of the Design Development drawings and specifications.

Complete bidding information including the Proposal, Contract, Bond Forms, General and Supplementary General Conditions of the Contract, and all other information, forms, and documents required to effectively bid the project and receive competitive bids shall be provided.

Requirements for Construction Document submittals shall include all requirements of Design Development submittals (see Section 507) and any additional requirements of this section.

B. Owner/Other Agency Reviews:

Submittal of the Construction Document phase shall be reviewed and approved by the Owner prior to submission to the State Construction Office and other regulatory agencies having jurisdiction such that all agency reviews are concurrent. The Designer shall forward a copy of any review comments to the State Construction Office**.**

The transmittal letter shall indicate any other reviewing agencies receiving copies for review.

See Chapter 400 for the number of copies to be submitted by regulatory review agencies and the Owner. The State Construction Office will typically require only one set of complete documents. On large projects where drawings and specifications must be printed in 2 or more large volumes, 2 complete sets may reduce time in review. In addition, 2 sets of reduced drawings may assist the Design Review Staff in conducting concurrent reviews and cross referencing information.

C. Design Calculations:

The Designer and his consultants shall retain design calculations for all systems, including roofing, structural, special foundations, and mechanical and electrical designs. Calculations shall be kept in a reproducible format and submitted to the State Construction Office upon request.

D. Minimum Requirements of Construction Document Submittal:

1. A written response to Design Development review comments on the design firm’s letterhead. The letter shall include the name of respondents for each discipline. The response must detail how and where the comments have been addressed. An electronic copy (pdf) of the review letter, copied to the Owner, will be provided to the Designer.

2. The Designer shall provide a construction cost estimate using quantity take-offs of major sections within Master Format Division. Overhead, profit, taxes, insurance, bonds, contractor’s contingency, etc., shall be included. Estimate shall be escalated to the midpoint of construction time. Estimate must be prepared for all bid items, including alternates as a

separate line item. A summary tabulation shall be furnished showing the current design contract total budget and line items for reserves, owner contingency, and design fee. The remaining funds are available for construction bids and award. Owner contingency should not be used to award a construction contract. The Designer is responsible for bringing the project within the Construction Funds Available as set forth in the design contract. It is essential that accurate and proper construction estimates be developed at this stage to avoid delays and added cost to the state resulting from bids that exceed the construction funds available.

The State Construction Office recommends the base bid scope be established at 90% of the Construction Funds Available with add alternates to 110% of those funds to permit flexibility and/or the ability to award a contract without negotiating down, which is not advantageous to the Owner. An estimate considerably over the construction funds available cannot be approved for bids unless scope is reduced and/or Owner provides evidence that additional funds can and will be added to the project for award of contract. An amendment to the contract will be necessary to reflect any new funding or added scope.

If the low bid(s) are over the construction funds available for the project and additional funds are not available, negotiations in consultation with the State Construction Office may be successful in bringing the project within the available budget. Bids exceeding the construction funds by 15% or more will be difficult to resolve. It is generally viewed as a better value to reduce scope and re-bid than to negotiate more than 15%.

3. Sustainable, Energy Efficient Buildings (GS 143-135.35-40):

   a) The Design team shall incorporate the energy conservation options into the project. The energy model submittal from the design development phase shall be re-submitted with the documentation for this phase. If alterations have occurred due to site or building changes, the model shall be updated and indicated to contain altered information.

   b) The LCCA shall be refined and updated and submitted in accordance with the requirements of Life Cycle Cost Manual.

   c) Designers shall refine, update and submit the water reduction calculation for both indoor and outdoor water use.

   d) Commissioning Authority shall review the construction document package against the modeling assumptions and shall make recommendations for incorporation into the project by the design team. Refer to “Building Commissioning” in the drop down menu on the State Construction Office website under “Guidelines”.

4. The Project Manual shall be complete and contain all the required SCO bidding and contract forms and documents, as listed below and available on the State Construction Office website at www.nc-sco.com. The format shall be 8½ x 11 securely left side bound in the following order.

   a) Single Volume Project Manual:

      (1) Manual Cover – State Construction Office Project ID number and Professional Seals affixed. [Professional Seals may be on a flysheet following the cover]

      (2) Newspaper Advertisement formatted and edited for the project.

(3) Notice to Bidders formatted and edited for the project

(4) Table of Contents

(5) Instructions to Bidders and General Conditions of the Contract

(6) Supplementary General Conditions prepared by the Designer, formatted and edited specifically for the project

(7) Guidelines for MBE Participation

(8) Special Conditions if any by agency/institution

(9) Subsurface Investigation report, hazardous materials surveys, etc.

(10) Statement of Special Inspections (if required by the State Construction Office in DD Phase review or earlier)

(11) Statement of Contractor's Responsibility (if required by wind and/or seismic conditions.)

(12) Technical Specification Divisions, CSI 1995 or 2004 version

(13) Form of Proposal formatted and edited for the project

(14) MBE Contractor List and Affidavits A through D

(15) Form of Bid Bond

(16) Form of Construction Contract

(17) Form of Performance Bond

(18) Form of Payment Bond

(19) Sheet for attaching Power of Attorney

(20) Sheet for attaching Insurance Certificates

(21) Approval of the Attorney General

(22) Office of State Budget and Management.

b) Multiple Volumes Project Manual:

(1) The cover of each volume shall include the State Construction Office Project ID number and Professional Seals. Volumes should be noted as Volume 1, 2 etc. [Professional Seals may be on a flysheet following the cover]

(2) The Bid Forms and contractual documents [Items (13)-(22)] may be included in the front of the first volume preceding item 12 (Technical Specifications), or as a separate volume. Note that if submitted as a separate volume, the requirements of Item (1) above apply.

5. In addition to the newspaper and web site advertisements, full information on the details and requirements of bidding the project shall be provided in a Notice to Bidders. The State Construction Office format contains the appropriate language. Items to be edited by the Designer include:

   a) Identify the "Owner as the State of North Carolina (or Trustees of ___ Community College) through the using agency, department, institution, etc. including the location of the project.

   b) Identify the specific physical location where bids will be received including the building name, floor, and room/room number, and the name of the person to receive bids. Ensure adequate access or parking is available for bidders. The bid opening must be held in a "public place" meaning publicly owned facility and not a private facility or office. There must be a "physical address" for use by delivery services or postal service (NO P.O. Box). Many state facilities have centralized mail service that can be problematic in timely delivery of bids. If the pre-bid location is the same as the bid opening, then bidders are less likely to have delivery problems on bid day. The bid opening and bid receiving location must be the same to avoid confusion. The prospective bidder is responsible for on-time delivery of his bid at the proper location and time.

   c) The AIA/AGC Joint Cooperative Committee recommendation for bid openings is Tuesday through Thursday 1:00 to 4:00 pm with 3:00 pm being traditional. Dual bidding is required to be separated by 1 hour. (Note: AIA/AGC recommendations may not agree with State requirements in some instances. In such cases, SCO requirements will govern and shall be followed).

   d) Identify the project contract type being bid – Single Prime, Separate, Dual, etc.

6. Instructions to Bidders and General Conditions of the Contract:

   a) Form OC-15: This document is to be used for single and multi-prime bidding on State capital construction projects and Community College projects that are reviewed, approved, and inspected by the State Construction Office.

   b) For projects less than $2 million, constituent institutions of UNC system use a modified version of the OC-15, the Instructions to Bidders, and the General Conditions of the Contract Standard Form for Construction Projects.

   c) Form OC-15CM is used for projects delivered under the Construction Management at Risk project delivery method. Forms are available on the SCO website at http://ncadmin.nc.gov/businesses/construction/forms-documents.

   d) These forms are not to be modified in any manner except by a Supplementary General Condition.

7. Supplementary General Conditions shall be prepared by the Designer. Editing of the General Conditions beyond the items described below is strongly discouraged. Excessive editing may result in delay and creates legal/contractual conflicts and situations that may make legal defense of the contract documents problematic and costly. Supplementary General Conditions shall be prepared by the Designer and are reserved for additions or modifications as indicated below:

a) General Conditions Article 1.b:
Owner may be Trustee of a Community College.

b) General Conditions Article 14.e:
If the service of a surveyor is required for bench marks, elevations, layout, and utilities.

c) General Conditions Article 14.f:
If the project is a single prime construction contract, the single prime contractor by default is the project expeditor. See General Conditions Article 1.i.

d) General Conditions Article 14.g and 14.j:
If the construction contract is over $500,000, remove all languages pertaining to Bar Chart Schedule.
If the construction contract is less than $500,000, remove all languages pertaining to CPM Schedule.

e) General Conditions Article 23.a:
The Designer, in consultation with the Owner, shall establish a time of completion in consecutive calendar days from Notice to Proceed to Final Acceptance. For projects where completion dates are more important than the number of days allowed to complete the work, a critical completion date may be substituted for the number of calendar days allowed. Projects such as University Residence Halls may benefit from this approach.

f) General Conditions Article 23.b:
Liquidated damages, where required, shall be estimated on a per day basis to cover any loss or damages to the Owner should there be delay in completion or occupancy of the project.

g) General Conditions Article 24:
Modification to Minimum Insurance – If the Owner requires modifications to the insurance coverage noted in the General Conditions, the need for the change must be demonstrated to the State Construction Office. If the State Construction Office agrees, SCO will seek comment and approval from the Attorney General's Office.

h) General Conditions Article 38.d:
Contractor shall post a sign indicating Fire Arms are prohibited on the construction site.

i) General Conditions Article 40:
Review this article thoroughly in conjunction with Division 01 specification on Temporary Utilities. For renovation/addition projects in particular, the responsibilities of each party during construction should be clarified. (Some State facilities own their utility systems.)

j) Other:

(1) Special requirements of participating Federal Agencies, if required.

(2) Owner prepared Supplementary General Conditions or Special Conditions are not an acceptable substitution for the required Designer prepared Supplementary General Conditions unless prior approval have been obtained from the State Construction Office (GS 116-31.11(b)). Many Owner requirements can be effectively addressed within Division 1 of the specifications rather than being incorporated into the General Conditions.

(3) The Owner may include a “standard” Project Requirements in specification “Division 01 General Requirements” for technical and procedural issues specific to their facility such as parking, rules, security, work periods, fencing, safety, conduct, etc. These are not conditions of the contract but are technical and procedural requirements. These requirements should stand-alone and not be repetitious or in conflict with the State General Conditions or its Supplementary General Conditions.

8. Minority Business Enterprise Guidelines, a contractor list form, Affidavits A, B, C, D, and Appendix E are available on State Construction Office website and require no editing. The Guidelines and Appendix E should follow the Supplementary General Conditions in the manual. The List and Affidavits A-D should follow the Proposal Form. The MBE guidelines and MBE forms provide all necessary instructions for use and are available on the State Construction Office website.

   MBE Identification List and either Affidavit A or Affidavit B must be submitted with the bid.

9. Division 1 Specifications – General Requirements:

   a) Temporary Utilities: Many State institutions have their own utility systems. Clarify with the Owner whether any Owner utilities may be used and how, especially on renovations/additions projects. Include any charges to be assessed.

   b) Alternates: List and describe Alternates to be used. Limit the use of alternates and “Owner-preferred” alternates. An excessive number of alternates can discourage bidders, over complicate design and construction, and be misconstrued as “price shopping”. Keep alternates simple and clearly identified in scope and details.

      If the “base bid” is set at 90% of the project construction funds with add alternates adding up to 110% of funds available, then award of contract may be expedited without time lost on negotiations or “value engineering”.

      (1) Bid Alternates – Bid Alternates are line item components of the project that are set aside on the Proposal Form for separate bids to give the Owner control and flexibility over how budgeted funds can best be used to adjust scope or meet budget limitations. It is State Construction Office policy to only use ADD alternates and not DEDUCT alternates to control project costs. The construction industry consensus is that deleting work on a bid project returns only a portion of the true value of the alternate scope.

         While the use of alternates may be helpful in controlling budget, such alternates should be held to a <u>minimum</u>, be as simple as possible, be thoughtfully configured in consideration of the size of the project verses the size/value of the alternates, and not more than 10% of the construction budget. Consideration should also be given to prioritizing the alternates.

         Bid alternates may not be used as a means for price shopping.

      (2) Owner Preferred Alternates – Owner preferred Alternates were established by GS 133-3 in 2002. The Owner may bid an alternate for a preferred ‘brand’ of product under the conditions and procedures described in the statute. Such preferred alternates should be limited to equipment and components of building control systems, fire alarm systems, energy management systems, building security systems, (including door hardware), and central utility systems. Appearance and

color, while important, are not a performance standard. If a particular item must match an existing element, color, or texture, it is sufficient to specify that as a requirement and let other manufacturers meet those requirements. Procedures to comply with GS 133-3 are available at the State Construction Office website under Guidelines.

c) Cash Allowances are not used in public work as there is no “competitive bidding” process as required by statute. Estimated quantity allowances are acceptable with a unit price solicitation on the Proposal Form. Quantity Allowances can be used to adjust the cost up or down after the actual quantity has been established and verified. Base bid quantities should be carefully estimated to ensure project contingency is not critically depleted.

   Exception: Brick products may be purchased using a set dollar allowance per 1000 brick provided in the bid documents. All other costs for labor and materials for masonry shall be included in the base bid.

d) Unit prices are not considered in determining the low bidder and may be negotiated with the low bidder if prices are out of line compared to other bids. The Designer shall estimate and provide a “quantity allowance” in the bid documents for the bidder to include in the base bid. The bid Proposal Form shall request a single unit price from the bidder that will be used to adjust the actual quantity or scope up or down.

e) Owner supplied items or work should be fully identified and explained to eliminate duplication and confusion during bidding.

f) In renovation/remodeling projects, items to be salvaged and turned over to the Owner, and items to be removed, stored, and reinstalled must be identified.

10. Technical Specifications:

a) Divisions: The CSI Master Format should be used for uniformity and consistency in all State projects. Designer may use either the CSI 1995 or 2004 version. However, it is recommended the CSI 2004 be used since the 1995 version is no longer supported by CSI.

b) Format for all specifications shall be in narrative or “imperative” form. So-called “streamline”, “short form” or “outline” specification are not acceptable for a Construction Document submittal. Specifications shall be complete and concise, in simple language known to the construction trades. Specification content shall relate only to the specific project requirements. The division of responsibility between prime contracts (such as between food service equipment and plumbing or electrical and mechanical) shall be carefully coordinate and noted. The specifications shall be customized and tailored to the project.

c) Do not mix CSI 1995 and CSI 2004 version of the specification in the construction manual. The two formats are not consistent with each other.

d) Specifications shall be created via electronic wood processor. Copies shall be legible and securely bound. Review sets shall be complete and fully edited for the project.

e) Neither Federal Specification (FS) nor Military Specification (MS) are to be used or referenced. The State Construction Office and many contractors do not have those specifications. Reference standards such as UL, FM, NFPA, etc. are appropriate.

E. Designer Responsible for Plan Check:

It is expected that the Designer will have done a thorough job check and coordination prior to each submittal. It is not the role of State Construction review staff to resolve simple errors and omissions in the Designer's work.

F. Approval to Proceed:

The Designer should secure from the Owner and the State Construction Office written approval of the Construction Document submittal before proceeding to the next phase. If the submittal does not sufficiently address the basic elements of the project, it will be returned "Not Approved" and a re-submittal showing further development will be required.

Section 508 Final Submittal

A. Final Submittal for Bid:

The Final Submittal is not intended to be another project review. Final submittal is to verify the Designer's written responses to the State Construction Office Construction Document review comments and verify the required revisions have been made to the project documents.

Provide a written response to the Construction Documents review comments with this submittal. The Designer responses shall be written on the Design Firm's letterhead with all respondent's names, phone numbers and email addresses. Responses shall indicate the specific page/paragraph/sheet/detail where revisions occur in the specifications/drawings and/or explanation to questions(s) raised. If new sheet(s) added or removed, and/or re-arrangement within a sheet, clarify the change. Evidence of approval from other review agencies having jurisdiction are required.

If the Construction Document submittal was incomplete, the Designer's responses or the Final submittal may generate additional questions or comments. If the Final submittal shows non-compliance with previous CD review comments or has generated more comments, the submittal is considered "Not Approved for Bid" and another submittal will be necessary.

An e-copy of the Final Review/Approval letter will be e-mailed, copied to the Owner, to the Designer to facilitate a response letter. Final project approval letters from the Owner and all regulatory agencies having jurisdiction must be on file with the State Construction.

B. "Sit-down" Final:

Upon request by the Designer and only where the conditions listed below are met, a "sit-down" review meeting may be scheduled at the State Construction Office in Raleigh. While the Designer may request a "sit-down" final when the Final is submitted, the State Construction Office will schedule the meeting for a date no less than 14 days after receipt of the Final documents. Note that the 14 days starts when the project is logged into our tracking system (InterScope).

1. The total of all CD review comments do not exceed 7 pages.

2. The Final submittal resolves all code issues identified at the CD.

3. The Final submittal satisfactorily addresses all CD review comments.

4. Other regulatory approvals are provided.

5. Approval letter from the Owner.

If the submittal is complete, all comments satisfactorily addressed, and other regulatory approvals are provided, the project may be approved to bid the day of the sit down review.

C. Approved for Bid:

The State Construction Office Final Review letter states that the project is Approved for Bids subject to approval of involved regulatory agencies. Coordinate a bid date with State Construction Office when all approvals have been obtained. The State Construction Office may be generally satisfied with the project documents but has not received comments or concurrence from the Owner or other regulatory approvals that are necessary for approval to bid. Final project approval letters from the Owner and all regulatory agencies having jurisdiction must be on file with State Construction Office before a bid date may be established. Email approval letters to scoreview@doa.nc.gov

Section 509 Bid Date

A. Setting Bid Date:

Upon approval of all regulatory agencies, the Owner and Designer in consultation with the State Construction Office, shall establish the date of receipt of bids. When the bid date is established, email State Construction Office at scoads@doa.nc.gov, a copy of the completed Notice to Bidders to State Construction Office for posting on the State IPS website for public advertisements. A review of statutory authority and procedures may be helpful at this point.

Section 510 Addenda/Proposed Change Order

A. Addenda:

Design Review Section at the State Construction Office will continue to assist the Designer and Owner in the review of Addenda that affect Life Safety, Structural and Code changes during the bid period. The submitted Addendum or Addenda shall include a Transmittal Letter, A letter explaining the change, full size drawing sheet(s) with change(s) highlighted.

B. Proposed Change Order:

Design Review Section will continue to assist the Designer and Owner in the review of Proposed Change Order (PCO) that affect Life Safety, Structural and Code changes during construction. The submitted PCO shall include a Transmittal Letter, A letter explaining the change, full size drawing sheet(s) with change(s) highlighted.

TABLE 500

TYPES OF REVIEWS

Owner	Project Type	SCO Code Review[7]	SCO Tech Review	Local AHJ Code Review[9]	SCO Forms Documents Required	
State Agencies	Minor (<$500K)	X	X		X	Notes 1, 2, 5
State Agencies	Major (>=$500K)	X	X		X	
State Agencies	Emergency	X	X			Note 6
University	Download-Minor (<$500K)	X				Notes 2, 5
University	Download-Major (>$500K and <$2M)	X				
University	Major (>$2M)	X	X		X	
University	Emergency	X	X			Note 6
Community College	Minor (<$500K)		X	X	X	Notes 1,2,5
Community College	Major (>=$500K)		X	X	X	
Community College	Emergency		X	X		Note 6
Fed Funded - State Land	DOT Highway Visitor Center	X				Notes 2,4,5
UNC Hospitals		X				Notes 2,4,5
Global Transpark		X				Notes 2,4,5
Privately Funded	State Land	X	X			Notes 2,4,5
Privately Funded	Private Land		X	X		Notes 2, 3
Privately Funded	Community College Land		X	X		Notes 2,4,5
	Design Build	X	X		X	Notes 2,4,5
	CM at Risk	X	X		X	Notes 2,4,5

Notes:

1 - May be exempt from SCO technical review on request.

2 - HUB Documentation for projects that cost <$300K is the responsibility of the owner. Comply with Agency HUB.

3 - SCO Courtesy Review.

4 - Formal Bids and contracts are required on construction projects that have a total project cost of $500,000 or more. (Major)

5 - Informal bidding may be used for projects with a total project cost less than $500,000 (Minor).

6 - Emergency designation requires approval of SCO. Emergency projects may begin construction prior to completion of SCO review.

7 - Building Code review by the State Construction Office is required for all State and University projects by GS143-139.

8 - Review for energy efficiency GS143-135.35 to .40 and State Construction Guidelines by the State Construction Office jurisdiction.

9 - Local Authority Having Jurisdiction Code review and permitting are required.

Section 511 Electronic Submittal Requirements

State Construction Office is currently accepting Electronic submittal for Plan Review on a limited trial basis. The following project types can be submitted electronically:

1. University Download project less than $2 million for Code Review Only.
2. Small projects such as informal.
3. Other projects requiring "Code Only" reviews.

These electronic submittals should be a maximum of 30-MG per project submittal broken down into three PDF files as follows:

1. Cover letter, transmittal, brief narration of project, overall cost estimate, contact information (emails, phones numbers), meeting minutes, etc.
2. Specification: "Searchable PDF" file is required.
3. Drawings:
    a. All drawings to be in one PDF file.
    b. Maximum number of drawings per file: 20

Additional information for specifications and drawings include seal of the design firm and designer on the specification and on each drawing sheet. See Chapter 500 Design Guidelines in the State Construction Manual.

Electronic submittals should be emailed to our General Email address at scoreview@doa.nc.gov. Your email subject should indicate this as a "REVIEW SUBMITTAL."

CHAPTER 600

Construction Contracts and Bidding

Section 601 Formal & Informal Contract Definitions

GS 143-128 and 129 govern construction contracting for public work in North Carolina. The terms formal and informal are not clearly established in the statutes except to prescribe dollar limit classifications for public contracting and bidding. The total construction contracting value is used to determine if a project is informal or formal. The current threshold is $500,000, above which projects are formal, and below informal. This classification impacts how the project construction documents and contracts are written and organized as well as the method and procedures for bidding and award of a public project.

A project may not be subdivided or phased with the purpose or the intent to evade the formal contract requirements, according to GS143-133.

Section 602 Informal Contacts, Bidding Procedures & Award

A. An SCO Informal Contract format is available on the SCO Website. It is a simplified and condensed form with a Notice to Bidders, abbreviated OC-15 General Conditions of the Contract, a Supplementary General Conditions page for Designer edits and a simplified combination proposal and contract form. An Informal Contract in no way implies that plans and specifications may be less than fully developed or inadequately describe the work to be done. Constituent institutions of the UNC system may use the SCO format or develop their own.

B. On projects where construction cost will be less than $500,000, a public advertisement, bid bonds, performance bonds and payment bonds are not required but may be included if the Owner desires

C. The receipt of three (3) bids is not required to open bids. But, for the advantages of competitive bids, at least three (3) bids should be solicited. Bids may be faxed or sent electronically to the Owner.

D. If the low bid exceeds $500,000, then, if reasonable and practical, the bid may be negotiated below $500,000 for an award of an informal contract, by reducing the project scope or the bid value. If this is impractical or unreasonable to do, then the project shall be re-bid under the formal contract process.

E. MBE requirements and 10% goal also apply on informal contracts BUT the Owner has the responsibility to make a good faith effort to solicit minority bids and to attain the goal. (GS 143-131 (b)). Documentation and data on MBE participation is required for informal projects and must be reported annually to the Department of Administration – HUB Office. A reporting form is available on the HUB website (HUBSCO).

Section 603 Formal Contracts Bidding Procedures & Award

GS143-129 establishes considerable requirements for the public bidding process and is the basis for many of the rules and forms created for this most important part of the capital construction process. Statutory rules and procedures are intended to be fair and equitable to all parties participating in the process, as well as providing good stewardship in the use of public funds.

When all regulatory reviews have been completed and approvals have been obtained for formal projects, the project is ready for advertisement and bidding. The Designer and Owner, in consultation with the State Construction Office-Design Review Section, shall establish a bid date. Constituent institutions of the UNC system establish bid dates for their projects less than $2M.

The documents, forms and formats to be used and edited for projects under the jurisdiction of the SCO are as described under Chapter 500. For Construction Document review all forms shall be edited as required for the specific project complete, and ready for bidding except for the bid date. Forms are available in electronic format in MSWord (doc) or Acrobat (pdf) under Forms on the SCO website. Construction bidding involves**.**

A. Advertisement:

1. Newspaper/Electronic Advertising:

Where the contract is to be let by a board or governing body of the State government or of a State institution, proposals shall be invited by advertisement in a newspaper having general circulation in the State of North Carolina." (GS 143-129 (b)) The Sunday editions of the major newspapers in the State are usually selected for their larger circulation. Other days are not excluded but may be less effective in attracting bidders.

(NOTE) Where the contract is to be let by a political subdivision of the State (county, city, town), proposals shall be invited by advertisement in a newspaper having general circulation in the political subdivision or by electronic means, or both. A decision to advertise solely by electronic means, whether for particular contracts or generally for all contracts that are subject to this Article, shall be approved by the governing board of the political subdivision of the State at a regular meeting of the board.

In addition to the newspapers, the State Interactive Purchasing System (IPS) is the electronic notification system for all State purchasing, designer solicitations and construction bidding. Upon approval to bid by SCO for State agencies and Community Colleges, provide an e-copy of the final completed Notice to Bidders to the State Construction Office for posting on the State IPS website.

Constituent institutions of the UNC system submit advertisements electronically through the UNC web site which are then also placed on the State IPS site.

2. Advertisement Format:

The newspaper advertisement shall be prepared in the SCO format, which complies with required statutory language for a "public notice". The ad shall be published in one issue of the newspaper. The completed ad shall be included with the construction document submittal for review. The ad needs to include name of the Owner, the type contract being solicited, project name and a basic description of the scope. The Owner and Designer's names should be included as contacts. Please use discretion in the size of the ad relative to the project size because of the expense of newspaper advertising. A sample "Advertisement for Bids" form is on the SCO web site. The newspaper ad does not need to fully describe the project and all the details and information that are included in the Notice to Bidders.

3. Elapsed Time from Advertisement to Bid Opening:

"Bids may not be received until at least seven (7) days have lapsed from the date of advertisement," according to GS143-129 (b). The statute requires a minimum of at least seven (7) full days elapsed time between the date of publication and the date of the opening of bids. There are numerous requirements for more time such as the MBE program which requires 21 days elapsed time. Pre-bid conferences or the issuance of addendums may also extend the bid time. A period of three (3) to six (6) weeks between advertising and receipt of bids should be provided as a matter of general policy. Seven-day bid times are only used in re-bid situations A copy of the actual advertisement shall be furnished with affidavit of publication to the Owner**.** Payment for advertisement shall be by the Owner.

4. Plans to be Furnished:

All contractors who desire to bid shall be furnished complete sets of plans and specifications upon payment of a plan deposit when required. Plan deposit amount shall reflect the cost of

replacement should the documents not be returned in good usable condition. Plan deposit shall be returned in accordance with the Notice to Bidders. Cost of mailing plans and specifications to the bidder shall be borne by the Designer. The Designer shall take into consideration the fact that it is necessary for a bidder to mark-up plans on those portions of the work for which he is submitting a bid.

5. Plan Rooms:

Plans are to be made broadly accessible to prospective bidders with physical and electronic plan rooms providing support.

a) Complete plans, specifications and contract documents will be open for inspection in the offices of ___ (Owner and the Designer) __ and in the plan rooms of the Associated General Contractors, Carolinas Branch, __ (City) ___ in the local North Carolina offices of McGraw-Hill Dodge Corporation, and in the Eastern Regional Office of Reed Construction Data in Norcross, GA and in Minority Plan Rooms in ---- (Edit list below) --- or may be obtained by those qualified as prime bidders, upon deposit of dollars ($) in cash or certified check. The full plan deposit will be returned to those bidders provided all documents are returned in good, usable condition within ten (10) days after the bid date.

b) Projects within the following counties: Buncombe, Haywood, Henderson, Jackson, Madison and Swain shall have bid documents (Plans and Specifications) submitted to the Asheville Business Development Center, 70 Woodfin Place, Suite 305, Asheville, NC 28801, Phone: 828-252 2516.

c) Projects within the following counties: Durham, Person , Orange, Chatham and Wake shall have bid documents submitted to NC Institute of Minority Economic Development, Inc. at MCTAP/NCIMED, Inc., 114 West Parrish Street, 4th Floor, Durham, NC. 27701.(919-956-8889).

d) Projects within the following counties: Mecklenburg, Cabarrus, Iredell, Union, Gaston, Anson, Rowan and Lincoln shall have bid documents submitted to Minority Contractors Resource Center, 418 W. Trade St., Charlotte, NC 28202. Ph. (704)-332-5746 Fax (704)-332-5990.

e) Projects in the Greenville/Eastern NC areas: shall have bid documents submitted to **East Coast Digital (ECD) Plan Room, Minority Plan Room Provider,** 210 E 14th. St., STE. D, Greenville, NC 27858, Tel. 252-758-1616, Fax 252-758-7311.

6. Prequalification (See Section 605):

When prime contractors are pre-qualified, the Advertisement for Bidders shall be published as described but shall include a listing of the pre-qualified prime contractors. Subcontractors will know who the prime bidders are and plans and specifications shall be made available as described in the Notice to Bidders.

B. Bid Bonds:

Bid security, bid bond or cash, in the amount of 5% of the total bid is required with the bid. Bid bonds are required with the bid at the bid opening. According to GS 143-129(b), “No proposal for construction or repair work may be considered or accepted by said board or governing body unless at the time of its filing the same shall be accompanied by a deposit with said board or

governing body of cash, or a cashier's check, or a certified check on some bank or trust company insured by the Federal Deposit Insurance Corporation in an amount equal to not less than five percent (5%) of the proposal. In lieu of making the cash deposit as above provided, such bidder may file a bid bond executed by a corporate surety licensed under the laws of North Carolina to execute such bonds, conditioned that the surety will upon demand forthwith make payment to the obligee upon said bond if the bidder fails to execute the contract in accordance with the bid bond. This deposit shall be retained if the successful bidder fails to execute the contract within 10 days after the award or fails to give satisfactory surety as required herein." A bid will not be read or considered without a valid bid security. Bid security, Proposal Form and MBE form(s) are all that are required with the bid. DO NOT require any other material with the bid.
The Bid Bond form required is available on the SCO Website and shall be included in the bid documents.

C. Performance and Payment Bonds:

Performance and payment bonds are required on formal projects on any prime construction contracts awarded over $500,000 under (GS44A-26).

When the total amount of construction contracts awarded for any one project exceeds five hundred thousand dollars ($500,000), performance and payment bonds, each for 100% of the amount of the contract, are **required** by the contracting body from any contractor or construction manager at risk with a contract more than fifty thousand dollars ($50,000).

The performance bond shall be solely for the protection of the contracting body that is constructing the project. The payment bond shall be solely for the protection of the persons furnishing materials or performing labor for which a contractor, subcontractor, or construction manager at risk is liable. In the discretion of the contracting body, performance and payment bonds may be required on any construction contract.

The performance bond and the payment bond shall be executed by one or more surety companies legally authorized to do business in the State of North Carolina and shall become effective upon the awarding of the construction contract. The prescribed forms are available on the SCO Website.

D. Number of Bids:

Receipt of three bids on any formal contract is required to open bids on the first advertisement. If an insufficient number of bids are received, then bids shall not be opened and the project shall be re-advertised and bids received again in no less than 7 days from re-advertisement. Do not make any changes to the bid documents between 1st and 2nd opening. Whatever number of bids received at the second opening may be opened and read, if desired, or the project may be bid again at a later time. (GS143-132).

E. State of North Carolina General Conditions and Forms:

State General Conditions of the Contract (UNC General Conditions of the Contract for formal projects under $2M) and all forms, formats and guidelines and must be used to ensure consistency in the process of design, contracting and construction across state government agencies and institutions. All forms are available on the SCO or UNC website.

F. State of North Carolina MBE Requirements:

MBE Requirements (GS143-128 (f)) – The State has a 10% goal for minority participation in State projects. MBE Guidelines and Affidavit forms are described in the project manual which also provides MBE program information and instructions for MBE Forms. Department of Administration HUB website has additional HUB program information, as well as listing HUB certified MBE firms.

G. Bids Under or Over Formal Threshold:

Should the low bid in a formal project be <$500,000 the formal award process would still apply. If a project is bid as a formal project, it cannot be changed and awarded as an informal one.

Section 604 Formal Bidding Methods and Contracting

The State under GS143-128 has required, since the 1930's, that public construction contracts be competitively bid in at least 4 subdivisions or branches of work – General, Plumbing, HVAC and Electrical contracts. "Separate plans and specifications" are required, and the Designer shall identify the scope of work required for each category in the specifications and on the drawings. There have been occasions when Elevators, Fire Protection Systems, Communications Systems and other Specialty Construction have been separate prime contracts as well but not required by statute. With changes effective January 1, 2002, multiple bidding and contracting methods were allowed, dollar thresholds for contracts, bonds, and professional licenses were raised, owner preferred alternates were revised, and MBE requirements and procedures strengthened. Following are the 4 major methods of bidding and contracting public work currently available for public entities.

1. Single Prime Contracting:

A single prime bid and contract with the Owner is permitted for any construction contracts of any dollar amount. GS143-128 requires a single prime bidder to identify on the proposal form the sub-contractors selected for the subdivisions or branches of work for:(1) General construction; (2) HVAC; (3) Plumbing; and (4) Electrical. The sub's license number is not required by statute but may be requested. The subcontractor bid quote to the prime bidder shall not be requested.
The single prime contractor whose bid is accepted shall not substitute any person as subcontractor in the place of the subcontractor listed in the original bid, except by permission of the Owner and in accordance with the statute. (See the Proposal Form format for listing of subcontractors.)
Under GS 87-1, a contractor that superintends or manages construction of any building, highway, public utility, grading, structure or improvement shall be deemed a "general contractor" and shall be so licensed. A 2004 revision to GS87.1.1 allows a PM or E contractor under GS 87 to contract directly (as single prime) with a public Owner and subcontract to other contractors provided the total general construction work does not exceed 25% of the total construction costs. (See GS 87-1 and NCLB GC Rules 0200.0210.)

2. Separate Prime Contracting:

Separate prime bids and contracts are still an option for the Owner. GS 143-128 has established the basic subdivisions of work as General, Plumbing, HVAC, and Electrical contracts. The Owner signs separate prime construction contracts with each subdivision contractor. Project documents shall have "separate specifications and drawings" prepared for each subdivision. The Owner shall designate one contractor, typically the General or the

contractor having the largest contract, as the "Project Expediter" to coordinate and schedule the work. The project expeditor has no contract with the other primes so the general contractor definition in GS 87-1 does not apply**.**

3. Dual Bidding:

Dual Bidding, defined in GS143-128 (d1), is a combination of bidding that permits both single prime and separate prime bids to be received together on one project and permits the Owner to contract with the lowest separate prime bids OR the lowest single prime bid. In determining the award, consideration may be given to the cost of construction oversight, time for completion, and other factors as appropriate. The lowest bid overall does not have to be accepted but, awarding to other than the low bidder should have reasonable justification. Separate drawings and specifications shall be prepared for the dual method as well.

Dual bids are to be received one hour apart. Separate prime bids are received on the first hour but not opened. Then single prime bids are received on the second hour and all bids received are then opened and read. Ex: 2:00 - Separate prime bids received but not opened. 3:00 - Single prime received. If sufficient bids are received per SBC procedures, then all bids may be opened. (A bidder may withdraw or change his bid up until the first bid is opened.)

4. Construction Manager at Risk and as Agent:

Construction Management at Risk is an authorized contracting method. The procedures for selecting a "Construction Manager at Risk" (CMR) are posted on the State Construction Office web site. The Request for Proposals (RFP) to be used in soliciting prospective Construction Managers is also on the web site. The CMR is selected on a qualification-based solicitation typically at the beginning of the design process and, working with the Owner and Designer, provides constructability input and cost estimating advice during design. When the construction documents are reviewed and approved by regulatory agencies, the CMR provides a GMP (guaranteed maximum price) acting as a construction manager to deliver the project. The GMP will be presented as either a pre-bid GMP (Final) or post-bid GMP (Preliminary). As suggested by the titles, a preliminary GMP is subject to adjustment after the bids are received, while the final GMP is a fixed price.

The Owner may accept, negotiate or decline the GMP offering and bid the work under another construction delivery method. If the GMP is accepted, the CMR is required by GS143-128.1 (a-d) to act as a fiduciary of the Owner in the bid process. The CMR shall publicly advertise for and pre-qualify all "first tier subcontractors," shall comply with the state MBE program requirements and open all bids in a public venue. All bids become public records. The CMR may self-perform work only under limited circumstances. The Designer should familiarize himself with the scope of his work under this delivery method and address this in his design contract if necessary. SCO Design Review Section reviews and approves the construction document plans and specifications for GMP. The CMR prepares the bid forms and bid packages. The Designer interprets the documents, approves products, issues addenda, change orders, etc. and performs contract administration.

A Construction Manager (CMA) as Agent is not a construction contracting method. The CM is an "agent" of the Owner similar to the Designer and is selected on a qualification-based solicitation and has a negotiated contract. The CM prepares the trade packages and solicits the bids for the Owner and then provides scheduling and construction administration. However, all construction contracts are with the Owner, not the CM. This is separate prime

contracting, but may involve many more construction trade contracts with the Owner than just the P, M & E contracts.

5. **Alternative Contracting Methods:**

   A written request and presentation may be made to the State Building Commission for consideration of a contracting method other than those listed above. Application procedures are available from SCO. Examples of alternate methods are design-build or separate prime bidding-single prime award, where separate primes are assigned to a general. In approving an alternate contracting method, the State Building Commission cannot waive bidding.

Section 605 Prequalification of Bidders

GS143-135.8. Pre-qualification - Bidders may be pre-qualified for any public construction project. If the Owner wishes to pre-qualify bidders under single-prime or multi-prime contracting prior to issuing bid documents, the forms and procedures prescribed by the State Building Commission as available on the SCO web site under "Prequalification of General Contractor" are to be used. Advertising to prequalify should follow the same procedures as advertising for bids.

Under the CMR contracting method, first tier subcontractors must be prequalified. Forms for prequalification are on the SCO Website.

Section 606 Proposal Form

A Proposal Form in MSWord format is available on the SCO Website. The proposal form will require important editing for a project. Maintain the existing text and edit the material in red or italics. Delete portions of the form not used on a specific project such as separate primes, alternates and unit prices, etc.

Section 607 Bidder Proposed Substitutions

Bidder proposed substitutions should be submitted no later than 10 days prior to bid date for Designer evaluation and inclusion in the last addenda that may be issued no later than 7 days prior to bid date. GS133-3 requires bidder proposed substitutions be submitted and approved prior to bid receipt. These would be bidder's "desired or voluntary" substitutions. Necessary or required substitutions can occur later when specified products are not available, late delivery, model changes, etc. then substitutions can be made after contract award per usual procedure in the General Conditions of the Contract.

Section 608 Pre-Bid Meetings

1. Prebid meetings should be scheduled no less than 7 days after posting of the bid advertisement and no later than 10 days prior to the bid opening to allow sufficient time for the Designer to prepare pre-bid minutes and any addenda that may need to be issued as a result of the meeting work and locating the place to receive bids. Project requirements may be explained and discussed and questions asked. Attendance sign-in sheets should be provided and questions and answers recorded for use in minutes and in any Addenda.

2. Mandatory attendance may be required in the Notice to Bidders if desired by the Owner but it can be problematic to the bid process. An attendance record must be made and it must be made clear in the notice to bidders and at the pre-bid meeting that any prospective bidder not attending will not be permitted to submit a bid on the project.

3. MBE Guidelines, bid forms and affidavits shall be discussed and clarified.

4. Owner Preferred Alternate(s) may be presented at the pre-bid meeting as it meets the requirements for a publicly advertised, open meeting as required by GS133-3. See GS133-3 Recommended Procedures under Guidelines on the SCO website.

5. Prebid meetings should be scheduled no later than 10 days prior to the bid opening to allow sufficient time for the Designer to prepare pre-bid minutes and any addenda that may need to be issued as a result of the meeting.

Section 609 Addenda

1. Addenda are changes made to the construction documents after project bid sets have been issued to bidders. Addenda are issued to all plan rooms and plan holders. Copies shall also be provided to the Owner, the State Construction Office and any other regulatory or review agencies involved.

2. No addenda shall be issued later than 7 days prior to bid opening. Should significant changes or issues arise prior to or after that time, an addendum may be issued to delay or postpone the bid opening as necessary to resolve and then properly inform bidders of such changes. In the case of the CM at Risk delivery method, designers should put any addenda in the hands of the CM no later than 10 days prior to first-tier subcontractor bid opening.

3. Addenda should be kept to a minimum, both as to number and content.

Section 610 Bid Opening time and Location

1. Location and time: Bid openings must be in a “public place” such as the owner’s facility, a public library or similar publicly owned and readily accessible facility. Not a private office such as Designer’s office or privately owned facility.

2. Dual Bidding: Under dual bidding method, separate prime and single prime split bidding time is required in public projects. Separate prime bids are received one hour prior to single prime bids to allow time for single prime bidders to receive quotes from the other bidders and subcontractors. All bids may be opened and read only after receipt of the single prime bids. No bids may be withdrawn after any bid is opened.

3. GS143-128 was amended in 1998 to require Public Schools (K-12) dual bids be separated by 3 hours. SB 914 in 2002 revised the time to one hour for all public entities using dual bidding.

4. Bid tabulation forms shall be provided by the Designer to all parties present at the bid opening for all single and multi-prime bids with adequate space and spaces to record base bids, all alternates, license numbers and bid bonds that may affect the bid award. Bid tabulations shall be provided by the CM at Risk on projects delivered by that construction method.

5. Bid clock time shall be determined as accurately as possible by the Owner/Designer. No further bids will be received after the designated time. If there is a “serious” event beyond the control of bidders and that is impacting a significant number of bidders being able to meet the bid deadline, then the Designer may postpone the opening a short time to allow the problem to be resolved. (Phone outage, fire alarm, traffic jam, Designer missing, etc.)

Section 611 Close of Bidding

1. At the appointed time the Owner, Designer or SCO representative will declare the receipt of bids closed. The Designer shall have sorted bids into single prime and separate prime bid categories. A determination as to whether sufficient bids have been received to open will be made in accordance with “Guidelines for Opening of Public Construction Bids” on the SCO Website. The State Construction Office is available by phone should any clarifications be required during the bid opening process.

2. If sufficient bids are available to proceed with the bid opening, then the following will be asked:

   - Whether bidders (present) have received all addenda issued.
   - Whether anyone was denied the right to bid.
   - Whether there are any objections to proceeding with the bid opening

3. If there is an objection to the opening of bids then the Designer/Owner shall determine the merits and implications of the objection and shall:

   - Attempt to address and satisfy the objection; or
   - Secure complete information as to the objection and proceed with opening of bids under protest, for later disposition by proper authority; or
   - Postpone the bid opening to a later date to allow sufficient time for the objection to be addressed; or
   - Rule the objection as an informality and proceed with the opening of bids.

Section 612 Change or Withdrawal of Bid

1. Prior to the opening of any bids, a bid may be changed or withdrawn. Example: Should a bidder not have received an addendum, he will have an opportunity to read the addenda to determine the impact on his work or bid. Then, he may change his bid, leave his bid as is or withdraw his bid.

2. Once any bid is opened, there shall be no changes or withdrawal of any bids by any bidder, nor bids returned to any bidders.

3. After the bid opening, a bidder may withdraw his bid from consideration without forfeiture of his bid security when the provisions of GS143-129.1 are followed and applicable.

   a) A written request must be made to the Owner or Designer prior to award of contract and no later than 72 hours after the bid opening. The Owner or Designer will contact the State Construction Office.

   b) A hearing will be held to determine if GS143-129.1 is applicable and whether the bid security may be returned.

c) Once a letter requesting withdrawal is received, the bidder may no longer participate in the project in any manner. He may not be a supplier of materials or labor, subcontractor at any level or bid the project should it be re-bid, without the prior written approval of the Owner. GS143-129.1

Section 613 Formal Opening of Bids

1. All bids shall be read aloud. The Designer/Owner/CM shall state the name of bidder, license number if applicable, bid security, base bid and all alternates. Unit prices are not typically read as they are not considered in the award of the contract. Any irregularities noted should also be stated during the reading of bids.

2. No announcements on low bidder(s) or decisions on irregularities should be made at the bid opening. State that bids will be reviewed and validated and decisions will be made public at a later time.

Section 614 Formal Re-Advertisement

If insufficient bids are received at the first bid opening, a new bid date may be set as early as possible; however, the minimum advertising period shall be seven (7) days. Note that this period must be 7 days elapsed time after reposting the advertisement, not necessarily 7 days from the initial bid opening date. At the re-bid, any number of bids received may be opened. This is the only occasion, insufficient number of bids at first opening, that less than 3 bids may be opened. Bid Postponement by addendum, cancellation or rejection of bids, and a second bidding after a scope change are not considered a re-bids.

Section 615 Negotiations

GS143-129 states “In the event the lowest responsible bids are in excess of the funds available for the project or purchase, the responsible board or governing body is authorized to enter into negotiations with the lowest responsible bidder above mentioned, making reasonable changes in the plans and specifications as may be necessary to bring the contract price within the funds available…“

The State Construction Office considers a 10-15% reduction of the bid price as being “reasonable changes” to the project. In general, if negotiation requires more than a 15% reduction, a better value may be received by making changes to the project and re-bidding.

If a contract cannot be awarded under the above conditions, the board or governing body is authorized to re-advertise, as herein provided, after having made such changes in plans and specifications as may be necessary to bring the cost of the project or purchase within the funds available. Changes are subject to approval by the reviewing authorities.

Section 616 Form of Formal Construction Contracts

The format for the standard Construction Contract is available on the SCO Website. The same form is used for constituent institutions of the UNC system. Selecting the form will also download the following associated documents and forms. This package of forms may be incorporated into the project manual without editing. The Designer will complete the forms after the award of contract is approved.

A Construction Contract Checklist for use by Designer and contractor for formal contract preparation is attached to the documents on the SCO Website but should not be included in the bid documents.

- Standard Construction Contract for formal bid projects.
- Performance Bond form
- Payment Bond form
- Sheet reminder for attaching Power of Attorney
- Sheet reminder for attaching Insurance Certificates
- Attachment page for Approval of the Attorney General and Certification by the Office of State Budget and Management

Construction Contract, Performance and Payments Bonds, Insurance Page, Power of Attorney and the Attorney General Approval/Budget Office Approval are all "bundled under "Construction Contract" under "Forms, on the SCO Website.

Standard Construction Manager at Risk (CMR) Contract- The formats for the standard Construction Manager at Risk contracts are available on the SCO Website. The CMR preconstruction services agreement is typically negotiated and executed prior to or during the early phases of design and terminates with the acceptance by the Owner of the GMP. The CMR provides a guaranteed maximum contract price (GMP) based on the Final approved set of construction drawings and specifications. If accepted by the Owner, the construction services contract is executed. A Construction Manager at Risk Checklist for contract preparation is available on the SCO Website.

Section 617 Formal Construction Contract Award

The following procedures will be followed in the award of construction contracts: (Checklist)

A. The Designer shall provide the Owner with a certified bid tabulation, a Bid Summary Sheet, a copy of the recommended bidder's Proposal Form, an Affidavit of MBE participation and the Designer's recommendations concerning disposition of bids. The certified bid tabulation sheet should indicate the project name, SCO #, each contractor's name (as listed with the Secretary of State or local county), each contractor's contractor license number, base bids, price of alternates, total price of each bid, and indicate the apparent low bidder. The Bid Summary Sheet shall include the gross square footage of the new or renovated project, and/or other pertinent information of the project that will enable the State Construction Office to develop realistic cost data. If bids are in excess of funds available, the Designer shall redesign and rebid the project or under provisions of G.S. 143-129 bring the project within the authorized budget. All negotiations are subject to approval of the State Construction Office. Negotiations shall show complete price breakdowns, including quantities of materials, material cost, labor, etc. Proposed negotiations shall be submitted to the State Construction Office for evaluation not less than ten (10) days prior to bid expiration date.

B. The Owner shall provide the State Construction Office with a copy of the certified bid tabulation, a Bid Summary Sheet, a copy of the recommended bidder's Proposal Form, an Affidavit of MBE participation and the Owner's recommendations concerning disposition of bids. The State Construction Office will review the documents for completeness and correctness and provide them to the Office of State Budget and Management.

C. Upon approval of the Office of State Budget and Management the State Construction Office shall issue an award letter to the Owner which shall detail the complete budget for the project including construction cost, Designer's fee, contingency reserve, movable equipment and any other specific reserves. The State Building Commission may delegate to the Department of Administration authority to award contracts for construction of buildings and other projects, which are not required by GS143-129 to be publicly advertised for proposals.

D. The Designer, upon receipt of the notification of award, shall notify the responsible low bidder(s) in writing and will prepare the contract documents. The Owner, if desired, may prepare the contract documents. In any event, contract documents shall include:

1. A copy of the contractor's proposal;

2. Form of Construction Contract;

3. Form of Performance Bond in the amount of 100 percent of the contract (G.S. 44A, Art. 3);

4. Form of Payment Bond in the amount of 100 percent of the contract (G.S. 44A, Art. 3);

5. Power of attorney (an instrument of a surety indicating that the person signing the performance and payment bonds is authorized to act in its behalf)

6. Public liability and property damage insurance and builder's risk policy, as required in the General Conditions of the Contract; and

7. Approval of the Attorney General and certification by the Office of State Budget and Management.

E. Upon completion and execution of the documents by the contractor, the Designer shall forward them to the Owner for execution. The Owner shall then forward them to the State Construction Office for approval. The State Construction Office shall obtain approval by the Attorney General for form and a certification of availability of funds by the Office of State Budget and Management.

F. Approved contract documents shall be returned to the Designer by the State Construction Office for distribution. The Designer shall coordinate with the State Construction Office the date of the pre-construction conference. No pre-construction conference or starting date will be scheduled until all contracts have been approved and distributed.

G. Upon award of the project construction contract(s), the SCO Construction Administration Section will assign a project monitor to represent the State Construction Office at the project during construction until completion and acceptance.

H. Note that for UNC institutions the awarding authority for formal projects under $2M is UNC-General Administration. The award request described in item 2 above is prepared as described and submitted to General Administration for approval. The awarding authority for informal projects in the UNC institutions is the campus on which the project is located.

CHAPTER 700

Construction Management

Section 701 Construction Management Section Responsibilities

A. Architecture and Engineering:

The State Construction Office (SCO) has the responsibility to inspect and accept construction of State buildings, from an architectural, engineering, and life-safety standpoint, for all projects that fall under the jurisdiction of GS143-341(3)(d)

B. Jurisdiction:

GS 143-139(e) gives SCO responsibility for enforcing the building code on State Buildings. SCO staff in the Construction Management Section will confirm that adequate on-site inspections have been performed for code compliance, and that Certificates of Compliance have been issued when the project is complete, including University Download Projects GS 116-31.11, and Community College projects.

GS 143-341(d) gives the Department of Administration responsibility for electrical wiring inspections described in GS 143-143.2. SCO Electrical Inspectors provide these electrical inspections on all State projects where SCO is the Authority Having Jurisdiction. SCO Electrical Inspectors are assigned specific geographic areas of the State and a territory assignment map can be accessed under the “Contact US” tab of the SCO website. (Electrical inspector map)

Section 702 Project Monitor Responsibilities

A. Assignment of Project Monitor:

Upon receiving notification of the award of the construction contract, the Construction Management Section will assign a Project Monitor to represent the State Construction Office at the project site. Contracts within the State Government Center, in downtown Raleigh and Department of Administration projects will be administered and monitored by the Construction Management Section of the State Construction Office.

Project monitors are not assigned to University Download Projects as defined by GS 116-31.11, Department of Transportation building construction projects located within a State or Federal Highway right-of-way (welcome centers, visitor centers and rest-stops), or any property owned by the North Carolina Global Transpark.

B. Supervision Responsibilities:

The Project Monitor must be present at the pre-construction meeting to ensure that all required documentation throughout the duration of the project is presented to the project

team. Any State Construction project pre-construction meeting held without the Project Monitor is not valid and must be re-held with the Monitor in attendance.

The Project Monitor will attend the monthly construction meetings at the site and other meetings as needed to facilitate progress of the project.

The project monitor will verify that all project documentation is complete as listed on the "final inspection checklist"

C. Code Enforcement:

The Project Monitor will confirm that each project has been adequately inspected for code enforcement. The Project Monitor will verify that the Certificates of Compliance have been issued by each designer on the project.

Section 703 Designer Responsibilities

A. Pre-Construction Conference:

The Designer shall coordinate with the Owner and assigned State Construction Office Project Monitor to schedule a pre-construction conference. The Designer shall then give written notice to all contractors, the Owner and the State Construction Office as to the time and place of this conference. The purpose of this meeting is to review and confirm the requirements of the contract and the requirements of the State Construction Office and to coordinate activities for all construction, as described in the Pre-Construction Meeting Requirements & Agenda. The Designer shall send copies of the minutes of this conference to all contractors, the Owner, the State Construction Office Project Monitor and any other interested parties.

No pre-construction conference will be scheduled, or starting date established, until all contracts have been signed, fully executed by all Departments (including the Attorney General's Office) and distributed to all parties.

B. Notice to Proceed:

Designer shall issue letters of Notice to Proceed to all prime contractors. This letter shall establish the beginning date for each prime contract, and the required completion date. Copies of each letter issued by the Designer shall be furnished to the Owner Capital Project Coordinator and to the State Construction Office Project Monitor assigned to the project. The Notice to Proceed shall be issued only after receipt of fully executed contracts.

C. Inspections:

1. The Designer shall provide liaison and necessary inspection of the project to ensure compliance with the plans and specifications.

2. Inspections shall be by qualified representatives of the Designer's firm and his consultants.

3. Inspections shall be as often as necessary to ensure compliance with the contract documents, but in no case less than once per week while work is in progress.

4. When a full-time inspector is engaged for the project, this is an additional service provided by or through the Designer. The Designer shall be compensated in accordance with the provisions of the design contract.

5. In signing Certificates of Compliance at the end of the project, the Designers, for each architect or engineering consultant sealing drawings on the project, are certifying that the necessary inspections have been performed to ensure compliance with the plans and specifications.

D. Monthly Meetings:

The Designer shall establish and conduct a regularly scheduled monthly meeting to be held at the job site for all single and multi-prime projects. Under CM at Risk, the construction manager shall establish and conduct the regularly scheduled monthly meetings. All in-house consultants and contract consultants whose design is under current active construction shall be present at the job site for the monthly meeting. The consultants shall be available to answer questions and resolve all problems within their discipline. These meetings shall be open to subcontractors, material suppliers and any others who contribute to the progress of the project. Designer shall request that each prime contractor, or in the case of CM, each first tier subcontractor be represented by appropriately authorized project personnel. These representatives shall have authority to act on behalf of the contractor. It shall be the purpose of these meetings to effect coordination, cooperation and assistance in maintaining progress of the project on schedule in order to complete the project within the contract time. The format of these meetings shall include the following:

1. Review minutes of last job conference and resolve all uncorrected problems.

2. Review the required and official construction schedule for completion by all contractors and update when necessary.

3. Discus the progress of work and field observations since the previous meeting.

4. Review of Designer's Logs and discus Issues, Information, & Instructions; Proposals and Modifications.

5. Review any pending change orders or field orders.

Designer shall prepare and submit, to the Owner and the State Construction Office Project Monitor, minutes of the monthly meetings for all single and multi-prime projects. Under CM at Risk, the construction manager will prepare and submit minutes of the monthly meetings. These minutes shall include a roster of all participants and all documentation of all items relating to project status and progress. The monthly meeting minutes can be uploaded into the State Construction Office InterScope database as Package Documents.

E. Monthly Reports:

The Designer shall provide written copies of monthly construction progress reports. These reports shall be submitted in accordance with the Monthly Progress Report document. The Monthly Reports can be uploaded into the State Construction Office InterSscope database as Package Documents, with a copy or email notice sent to the Owner's designated representative and the State Construction Office Project Monitor. Reports shall be submitted by the 10th of each month. These reports shall include copies of weekly inspection reports by the Designer and by all

consultants involved, consistent with work in progress. A sample form for a weekly inspection report is on the SCO web site.

F. Shop Drawings:

The Designer shall process shop drawings, provide details, clarifications, interpretations, process material lists and other data with sufficient dispatch to avoid delay in the progress of construction. The Design Team shall also review shop drawings to verify compliance with energy conservation options.

G. Progress Payments:

The Designer shall provide general administration for construction contract processing, as well as payment request processing. Requests from contractors, including Construction Managers, shall be submitted to the Designer for approval. After payment requests have been approved by the Designer, the Designer's signature shall be affixed and the payment request forwarded to the Owner (with sufficient copies) for payment. The Designer's certificate shall reflect each of the following:

1. Total amount of contract
2. Extra work
3. Credits
4. Total contract plus or minus any changes
5. Value of work performed to date
6. Retainage
7. Amount previously paid
8. Amount of present certificates
9. Balance of contract sum

H. Field Testing and Delegated Authority Having Jurisdiction (AHJ):

The Designer shall approve results of all field testing on the project; and observe the operations of all building systems for determining compliance with specification requirements. The Designer shall observe and approve life-safety tests, as well as provide all documents required by the National Fire Protection Association (NFPA) guidelines. For the purpose of completing NFPA testing and inspection reports, the SCO delegates to the Designer of Record the responsibility of signing the forms as the Authority Having Jurisdiction (AHJ) for the Designer's specific area of expertise and professional license.

I. Change Orders and Field Orders:

Change Orders shall be filed electronically using the State Construction Office InterScope project environment. No change in the construction from approved plans and specifications shall be made until a change order or field order has been prepared and approved, except in the case of emergency, as covered in the General Conditions. Change orders shall be accompanied by a

complete breakdown showing computation of the cost, together with a written explanation of the change. The Designer, by his submission of the change order to the Owner, certifies that he has examined and analyzed the change order and has found it to be in order and reasonable.

Field orders may be issued to the contractors when necessary, so as not to delay the progress of construction. Under CM at Risk, changes in the work that are funded by the CM Contingency or project reserve that are part of the GMP contract must be documented in the same manner as a change order and authorized in writing by the Designer and Owner as a field change.

Section 704 Commissioning Authority

A. Requirement for Commissioning:

Commissioning is required on State projects according to GS 143-135.37(d) and the State Construction Building Commissioning Guidelines. In general, the Commissioning Authority will be under a separate contract with the Owner, but projects under the 20,000 square footage threshold of GS 143-135.37, with some exceptions, may be commissioned by the Designer.

B. Responsibilities of Commissioning Authority:

The Commissioning Authority responsibilities will include review of component and equipment submittals by contractors, review of systems to be commissioned, and review the contractor's pre-functional/start-up check lists. The Commissioning Authority will provide the projects functional testing procedures, validate the Test, Adjust, and Balance effort, and lead functional acceptance testing of commissioned systems. The Commissioning Authority will also review and approve training agendas, operation and maintenance manuals, project as-built documentation and record documents. Functional testing must be completed satisfactorily prior to final acceptance of the project.

C. Commissioning Report:

Evidence of completed functional testing is sufficient to accept the building at the final inspection. The commissioning report should be provided to the Owner no later than the project closeout phase, which is within 60 days of project acceptance.

Section 705 Electrical Inspection

A. General:

Electrical wiring inspections are required in GS 143-143.2, by the appropriate official electrical inspector or inspection department. For State buildings, the State Construction Office has that inspection responsibility for ALL projects as noted in GS 143-341(3)(d).

B. Inspectors Assigned Territory;

Electrical inspectors, as staff in the State Construction Office, are assigned to specific regions of the State (electrical inspector map). Electrical contractors shall contact inspectors directly to schedule inspections, and the electrical contractor must be present on-site at the time of inspection. There are many counties in North Carolina for which the SCO Electrical Inspector can only visit that area one day per week. The Electrical Contractor must plan ahead to coordinate the project around the inspector's schedule.

C. Scope of Electrical Inspection:

Electrical inspectors will perform periodic electrical inspections for ALL State projects, regardless of dollar value. Periodic electrical inspections coincide with the following construction phases:

1. Construction site power system
2. Trench and duct bank rough-ins
3. Under slab and in slab rough-ins
4. Wall rough-ins
5. Above ceiling
6. Conditional premises power
7. Final inspection (after a final inspection, an electrical certificate will be issued to describe permission for electrical power to be supplied to the building.)

Section 706 Special Inspection

Since 2009, the NC Building Code has required mandatory special inspections based upon specific building categories and components. Special inspections are no longer conducted at the discretion of the Building Code Official. The State Construction Office has published thorough Special Inspections Requirements and Guidelines which must be adhered to in the construction process.

Section 707 Surety

It shall be incumbent upon the Designer during the construction process to advise the surety company of any indication of failure on the part of a contractor to perform under the terms of his contract. Timely notification to the surety company of any such failure on the part of the contractor is essential. GS 143-129 provides that a bond written on a surety company against which the State of North Carolina has pending an unsettled claim or complaint for a period of more than 180 days, may be rejected by the Owner. Such rejection shall not be subject to protest by the contractor; however, the contractor shall be given a reasonable time to furnish a bond written by an acceptable surety company.

Section 708 Beneficial Occupancy

The Owner, with the approval of State Construction Office, may use a specified part of the project without significant interference with construction of the other parts of the project. Permission to use part of the project by the Owner shall be obtained from the prime contractors. The Designer shall schedule and conduct a beneficial occupancy inspection, with the approval of State Construction Office. Beneficial occupancy or partial utilization of the project shall not be permitted until all life safety is satisfactorily inspected by the Designers, and supporting documentation provided including National Fire Protection Association forms. The Designer must complete the State Construction Office “Project Approval Authorization: Partial Utilization (Beneficial Occupancy)” form. Refer to General Conditions, Article 24, for more information.

Section 709 Final Inspection

A. Notification:

Upon notification from the contractors that the project is complete, the Designer shall make a preliminary final inspection of the project. The Designer shall prepare a list of discrepancies as a punch list for the contractors. A copy of the punch list shall be sent to the State Construction Office prior to scheduling the final inspection. Upon notification by the contractors that the discrepancies have been completed, the Designer shall verify the completeness of the project and schedule a formal final inspection. For final inspection procedures, the Designer may utilize State Construction Office "Project Approval Authorization: Final Inspection for Owner Occupancy" form. When complete, the form should be uploaded into the State Construction Office InterScope database as one of the closeout documents.

B. Inspection Scheduling and Attendance:

Upon notification from the contractors that the project is complete, the Designer shall make a preliminary final inspection of the project. The Designer shall prepare a list of discrepancies as a punch list for the contractors. A copy of the punch list shall be sent to the State Construction Office prior to scheduling the final inspection. Upon notification by the contractors that the discrepancies have been completed, the Designer shall verify the completeness of the project and schedule a formal final inspection. For final inspection procedures, the Designer may utilize State Construction Office "Project Approval Authorization: Final Inspection for Owner Occupancy" form. When complete, the form should be uploaded into the State Construction Office InterScope database as one of the closeout documents.

C. Designer Certification:

The Designer shall certify in writing that all punch list items from the preliminary final inspection have been completed prior to scheduling a final inspection. The date and time of the final inspection shall be set by the Designer in consultation with the Owner and approved by the State Construction Office Project Monitor. The Designer shall furnish written notice of the inspection not less than seven (7) days prior to the inspection. The notice shall be sent to the Owner, the State Construction Office, the contractors concerned, the Board of Health (Sanitary Engineering Division, where applicable), and regulatory agencies exercising jurisdiction on the project. In the event that the project is not ready for final inspection on the date scheduled as determined by the State Construction Office, such occurrence shall be documented in writing and considered in the contractor's and Designer's evaluation.

The procedure for University Download Projects GS 116-31.11 is identical to the above except for the involvement of the SCO monitor.

D. Punch-list:

The Designers, including all in-house and contract consultants, shall be responsible for conducting the inspection in the presence of the above listed parties, and shall tabulate a punch list of any defects or discrepancies for correction by the responsible prime contractors. A scheduled time for completion of the punch-list items shall be established as required by contract, typically 30 days. Copies of the list will be furnished to all parties concerned. On completion of this final punch list, the Designer shall issue a letter stating that these final punch list items are

complete, and upload the letter into the State Construction InterScope database as a project closeout document.

E. Punch-list Completion Document:

Upon notification by the prime contractors that the discrepancies have been completed, the Designer, in consultation with the Owner, shall schedule another inspection to verify all final punch list items. The Designer shall confirm in writing, the completion of all final punch list items by the contractors, and upload the punch list completion confirmation letter into the State Construction Office InterScope database, as a Package Document, within 30 days of project acceptance. Final punch list items not completed by the contractors within the established time of completion shall be dealt with in accordance with Article 28 of the General Conditions of the contract.

F. Completion Date and Liquidated Damages:

Upon completion of the project, the Designer shall compute the total time for completion as allow in the contract, plus any time extensions granted and determine the number of days, if any, in excess of the contract construction time for which the prime contractors appear liable for liquidated damages. The Designer shall then notify the affected contractors of any proposed assessments of liquidated damages and allow the contractors time to respond. The Designer shall then prepare recommendations to the Owner and to the State Construction Office as to the amount of liquidated damages, if any, to be assessed and the portion of such assessment attributed to each prime contractor.

G. Maintain Builders Risk Insurance:

The contractors shall not cancel their builder's risk insurance until final acceptance of the project. The contractor shall forward cancellation notice to the Designer and the Owner.

H. Contractor and Designer Affidavits:

Upon acceptance of the project, the Designer shall assemble written guarantees, affidavits, and materials of instruction for operation, and other closeout documents from contractors; issue certificates of final completion and certificates of compliance as required by GS 133-1.1b which requires that:

1. The inspections of the construction, repairs or installations have been conducted with the degree of care and professional skill and judgment ordinarily exercised by a member of my (our) profession; and

2. To the best of my (our) knowledge, and in my (our) professional opinion as an architect or engineer, the contractor has fulfilled the obligations of such plans, specifications and contract; final certificates for payment; set the date for the beginning of the guarantee period; and forward all closing papers to the Owner.

I. Certificates of Compliance:

Within 15 days of the acceptance of the project, or within 15 days of verifying completion of the punch list items, the Designer shall provide certificates of compliance to the Owner, the State Construction Office and to the surety company. Also, Certificates of Compliance shall be provided by various in-house and contract consultants as required by law. The Certificates of Compliance

should be uploaded into the State Construction Office InterScope database, as a closeout document.

Section 710 Owner Insurance Coverage

The Owner shall notify the State Property Office and Department of Insurance of notice of either Beneficial Occupancy and/or Final Acceptance of a project and complete and submit the "Property Reporting Form (Building Update Form)"

Section 711 Construction Claims

A. Contractor Claims:

The Designer shall be advised of the dispute and, in consultation with the Owner, render a decision. If the Designer's decision is unacceptable to the contractor, the Designer will request that the State Construction Office Project Monitor meet with the contractor and the Designer to attempt to resolve the dispute.

On failing to reach a satisfactory settlement, the claim will proceed in accordance with GS 143-135.3. For University Download projects GS 116-31.11 the Designer will request that UNC-General Administration meet to attempt to resolve the controversy. If it cannot be resolved to the contractor's satisfaction, the decision may be appealed to the State Construction Office.

B. Designer Claims:

The Owner shall be advised by the Designer of the claim and the Owner in consultation with the State Construction Office will render a decision. If the decision is unacceptable to the Designer, and a satisfactory settlement cannot be achieved, the Designer may request an informal hearing with the State Construction Office in accordance with GS 143-135.3.

On failing to reach a satisfactory settlement, the claim will proceed in accordance with GS 143-135.3. For University Download Projects GS 116-31.11the Designer will request that UNC-General Administration meet to attempt to resolve the controversy. If it cannot be resolved to the Designer's satisfaction, the decision may be appealed to the State Construction Office.

Section 712 Designer Evaluation

The Capital Projects Coordinator is required to follow the procedures established by the State Building Commission, under NCAC-30F, to evaluate the Designer at the completion of the project. Interim evaluation of the Designer is allowed under the State Building Commission rule. Specific requirements and guidelines for entering Designer Evaluations into InterScope are found at: Designer Electronic Evaluations.

Section 713 Contractor Evaluation

The Capital Projects Coordinator is required to follow the procedures established by the State Building Commission, under NCAC-30F to evaluate the contractor at the completion of the project. Interim evaluation of the Contractor is allowed under the State Building Commission rules. Specific

requirements and guidelines for entering Contractor Evaluations into InterScope are found at: Contractor Electronic Evaluations.

Section 714 Post Occupancy Phase

Starting with the first month of operation of a building, the public agency shall compare data obtained from the building energy usage (via meters installed on-site) with the final energy model results.

At the completion of the first twelve months of building operations, the Owner is required by GS 143-135,37(e) to compare the actual energy and water use data with the energy model results and assumptions. If energy and/or water usage exceeds the model projections by 15% or more, the Owner will further investigate and resolve any issues found, or recommend further corrections or modifications to meet efficiency standards.

The Commissioning Authority will perform opposite seasonal testing, coordinate a ten month warranty review, and participate with the Owner in collecting building data for the twelve month measurement and verification of energy performance. The Commissioning Authority will deliver a complete commissioning systems manual to the Owner that includes a re-commissioning plan.

Section 715 Project Closeout and Record Documents

A. Final Payment to Designer:

Final payment to the Designer will not be made until all closeout documents listed below have been provided to and approved by the Owner and the State Construction Office.

B. Contractor As-Built Drawings:

The contractor shall provide marked-up drawings, specifications and other material that reflect actual final conditions of the project in compliance with the Article 32 (d) of the General Conditions of the Contract. The contractor should forward the marked-up drawings and material to the designer for editing of the record documents, and the original marked-up plans should be given to the owner to document details of the actual conditions that may not be completely shown on the electronic Record Drawing files.

C. Record Document Requirements:

The Designer should take the marked-up drawings from the contractor, including any hand-written notes or other material, and produce electronic record drawings and specifications for the project. Original as-built mark-ups should be given to the Owner. Record documents should be uploaded into the State Construction Office InterScope database and provided to the Owner. UNC formal projects under $2M should also be uploaded into InterScope and provided to the Owner.

D. Approval of Final Project Closeout Documents:

The closeout documents, required upon acceptance of the project, should be uploaded by the Designer into the State Construction Office InterScope database and provided to the Owner. The Project Monitor will verify that all required closeout documents have been uploaded and approved prior to authorizing final payment to the Designer. All closeout documents should be provided within 60 days of project acceptance, unless required earlier by the contract.

Closeout documents uploaded into the State Construction InterScope database are considered to be the Final Report on the project. A separate Final Report, a past requirement of the State Construction Office, does not need to be submitted.

1. Final Inspection Checklist:

The Designer shall provide a completed, signed copy of the Final Inspection for Owner Occupancy form, which should have been available at the time of final inspection.

2. Verification of Punch List Completion:

The Designer shall provide written confirmation that the final punch list items are complete.

3. Unsettled Claim Verification:

The Designer shall confirm that no unsettled claims exist on the project.

4. Record Documents:

Record drawings shall be provided for the project. Two files should be made available for each drawing. One file type should be computer-aided design (CAD) drawing files, with or without designer seals, for the owner to use as a basis for future project drawings. A full set of these CAD drawing files should be provided to the owner, in a digital media acceptable to the owner such as a compact disk. Printed copies of record drawings may be provided at the owner's request. The building summary sheet and the architectural floor plans should be given to the State Property Office as CAD drawing files, in the same digital media as the owner drawing files.

Pdf files should also be provided as permanent drawings, with Designer seals, that cannot be electronically edited. The pdf files can either be uploaded into the State Construction Office InterScope database, which is preferable, or for extremely large files, another digital media such as a compact disk can be provided. For any record drawing digital media delivered to State Construction, identical files should be given to the owner.

5. Final Pay Application:

Minority Business Enterprise Final Documentation
Consent of Surety of Final Payment
Contractor's Affidavit of Release of Liens
Contractor's Affidavit of Payment of Debts and Claims

6. Certificates of Compliance:

A Certificate of Compliance from every Designer or consultant sealing drawings on the project shall be uploaded onto the State Construction InterScope database. On University Download Projects GS 116-31.11 this certificate should be uploaded into InterScope and provided to the Owner.

7. Certificate of Completion:

One Certificate of Completion shall be issued for each project by the lead Designer and uploaded into the State Construction Office InterScope database. On University Download Projects GS 116-31.11 this certificate should be uploaded into InterScope and provided to the Owner.