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Note: This Process Guide is continually reviewed by the Design Review Group, GSFIC Construction Division. Any suggestions or comments on items contained within or suggested additions may be addressed to Manager, Design Review Group, GSFIC.

## 1.1 PURPOSE AND INTENT

Definitions of significant terms used in this guide are given below. These definitions are intended to be consistent with the definitions given in the various contracts used by the Georgia State Financing and Investment Commission (GSFIC). Abbreviations used in this guide are also defined below for convenience

# **1.2 DEFINITIONS**

- <u>Commitment Letter</u>. An inter-agency agreement between the GSFIC and a Using Agency defining the commitment to finance and administer the development of the project.
- <u>Construction Professional</u>. As used in the State Construction Manual, this is another name for the General Contractor (Design-Bid-Build delivery), Construction Manager/General Contractor -CM/GC (Construction Management delivery) or the Design-Builder (Design-Build delivery).
- <u>Design Professional.</u> The lead Design Professional in Responsible Charge is generally selected by the Using Agency for the production of construction documents (drawings and specifications) and the supervision of the construction of the project.
- <u>Design Professional Contract</u>. The agreement between the Owner and the Design Professional which defines the scope of services of the Design Professional during the duration of the project. The Design Professional Contract may be executed first with the Using Agency then "assigned" to the Construction Division, GSFIC for continuation and completion of the project.
- <u>Owner</u>. The term "Owner" means the entity of State government that has entered into the Contract with the Design Professional. In some projects, the Design Professional will be engaged by the Using Agency for the design phase and then the contract is assigned to the GSFIC for the construction phase.
- Special Inspections. Special Inspections is the monitoring of the materials and workmanship critical to the integrity of the building structure as required by the International Building Code. It is a review of the work of the contractors and their employees to ensure that the approved plans and specifications are being followed and that relevant codes and referenced standards are being observed. The Special Inspection process is a requirement of the Contract Administration phase of the Design Professional Contract.
- <u>Using Agency</u>. The state agency for which the project is being constructed.

## 1.3 ABBREVIATIONS

The following abbreviations are commonly used in the contract, guidelines and other documents used by the Georgia State Financing and Investment Commission.

- <u>BMP</u>- Best Management Practices (Erosion, Sedimentation, Pollution Control)
- <u>CCO</u> Component Change Order
- <u>CCS</u> Construction Compliance Specialist (GSFIC position)
- <u>CD</u> Construction Documents (Change Order)

- <u>CM/GC</u> Construction Manager at Risk delivery method
- <u>DB</u> Design-Builder (Delivery Method)
- <u>DBB</u> Design-Bid-Build delivery method
- <u>DP</u> Design Professional
- <u>EER</u> Environmental Effects Report (GEPA)
- <u>GEPA</u> Georgia Environmental Policy Act
- <u>GSFIC</u> Georgia State Financing and Investment Commission
- <u>GMP</u>- Guaranteed Maximum Price (Change Order)
- LIA Local Issuing Authority (Land Disturbance Permitting)

# 1.4 NEW TERMINOLOGY

All GSFIC contracts, guidelines, policies and forms were revised beginning in 2002 with the development of the State Construction Manual. Below is a list of key terms and nomenclature amended from the pre-2002 versions of these documents.

OLD TERM	
Architect	Des
General Contractor	Cor
Construction Manager	CM
Construction Schedule	Cor
	Ove
General Conditions	Gei
Special Conditions (Section F)	Sup
Periodical Estimate	App
Order of Condemnation	Not
Site Memorandum	Site
Budget Certificate	Sta
Final Certificate	Cei
n/a	Cei
Resident Engineer Inspector	Cor

NEW TERM Design Professional Contractor or Construction Professional CM/GC or Construction Professional Construction Progress Schedule/ Overall Progress Schedule General Requirements Supplemental General Requirements Application for Payment Notice of Non-Compliance Site Investigations Report Statement of Probable Construction Cost Certificate of Material Completion Certificate of Final Completion Contract Compliance Specialist

## SECTION TWO: Design Process

## 2.1 PURPOSE AND INTENT

SECTION TWO outlines those items of work that normally are required prior to and during the design of projects. Items have been grouped by category to provide easy reference. However, the Design Professional is still responsible to comply with all requirements of the Design Professional Contract as further explained or described in this Section.

**2.2 PRE-DESIGN** (Items generally required before or concurrently with design start)

#### 2.2.1 GSFIC Commitment Letter

If the project is funded by bonds, a Commitment Letter (inter-agency agreement) is required prior to commencement of any work. If the Using Agency desires to begin work in advance of a Commitment Letter, special authorization is required from GSFIC if such costs are to be reimbursed through future bond proceeds.

#### **2.2.2.** Plat of Boundary Line Survey from Using Agency

The Owner or Using Agency shall furnish complete information to the Design Professional regarding the legal boundaries, use and restrictions of the Project Site. The Owner is also responsible for ensuring legal title to the Project Site. Such information may be provided by a Plat of Boundary Line Survey or substitute information if a current Plan is deemed not necessary and the Design Professional concurs.

#### **2.2.3** Site Investigations Report

The Site Investigations Report is a geotechnical investigation of the subsurface and its purpose is two-fold. First, the Design Professional relies on this information to design the foundations and related elements of the project structure. Second, if adverse subsurface conditions exist (rock, unsuitable soil, etc.), it is the Owner's policy that the Design Professional quantify these conditions to the extent practical and include this work in the bid specifications (or Component Construction Documents for CM/GC, Design-Build Delivery) along with specification of unit prices for adjusting the actual quantities at the conclusion of the work. This work is then administered under the "Force Account" procedures but the Owner realizes a "bid price" for the bulk of unsuitable material and only the adjustments to actual quantities are paid or credited at the established unit prices.

The Design Professional engages the Geotechnical Engineer following the procedures of Special Inspections and Testing (See 2.6.7). The Site Investigations Report is Form GSFIC-CS-406 and information from this Report is then provided in the Design Professional's Statement of Probable Construction Cost – Form GSFIC-CS-407.

For Design-Bid-Build Delivery, the information about addressing unsuitable subsurface conditions is provided to the Owner's Project Manager for inclusion in the Supplementary General Requirements prior to issuance of bid documents. For CM/GC and Design-Build Delivery, if the Construction Contract has not been awarded, this process is the same. But if the CM/GC or Design-Build contract has been awarded, then this information shall be communicated by Bulletin to the Construction Professional and the Owner shall incorporate this into the Contract by Change Order.

Again, the intent is to "bid" the specified estimated amount of unsuitable material and then to "adjust" the final cost based on specified unit prices. The Construction Professional (and subcontractors) are not to estimate or assume in their cost any unforeseen or adverse subsurface condition other than as specified by the Design Professional in the Contract Documents as a result of the Site Investigations Report and Survey of Building Site Conditions (e.g. utilities, foundations, etc.).

The Site Investigations Report (Stage One and Stage Two statements) must be completed prior to the preparation of any Component Change Order or Guaranteed Maximum Price Change Order which would involve site grading or otherwise be affected by this report.

## 2.2.4 Subsurface Geotechnical Report Furnished to Bidders

The Geotechnical investigations and reports obtained by the Design Professional are not intended for distribution to prospective contractors and subcontractors. However, it is the policy of the GSFIC that such information, if requested, should be made available with appropriate reservations. The following specimen language shall therefore be included in the specifications as applicable:

"Subsurface Investigation Report:

1. Soil and subsurface investigations were conducted at the site, the results of which are found in a report dated *{insert date of report}* prepared by *{insert name and address of investigating firm}*.

2. Reference: A copy of the report will be available to bidders at the office of the Design Professional [*show name and address*] between 8:00 a.m. and 5:00 p.m., Monday through Friday.

3. Copies: Bidders will be furnished copies of the report at the cost of reproduction, postage, and handling, upon written request to the Design Professional. Such requests, accompanied by check for \$[*insert amount*], shall be in the following form:

"Please forward a copy of the Subsurface Investigation Report for [*insert Project Number and Name*]. In consideration for furnishing the report, the contracting firm herein named releases the [*insert name of Using Agency*], the Georgia State Financing and Investment Commission, and [*insert name of design professional*] from any responsibility or obligation for the accuracy or completeness of work performed under the contract resulting from assumptions based on use of such report."

4. Status: The Subsurface Investigation Report is not a part of the contract documents.

5. Interpretation: Data concerning subsurface materials or conditions which are based upon soundings, test pits, test borings, or other means, have been obtained by the Design Professional for its use in designing the project. The accuracy or completeness of the data is not guaranteed; and therefore, the Construction Professional shall not rely on this information without independent verification. Neither the [*insert name of Using Agency*], the Georgia State Financing and Investment Commission, nor Design Professional will be responsible in any way for additional compensation except as provided in the General Requirements Section – Changes due to Subsurface or Other Unforeseen Conditions."

## 2.2.5 GEPA Evaluation

The Georgia Environmental Policy Act (GEPA) is a state law designed to help state agencies conduct their projects "with awareness that they are stewards of air, land, water, plants, animals and environmental, historical and cultural resources." This is accomplished by completing environmental evaluations of each project or "proposed government action" as prescribed by the Act.

The first step in the GEPA evaluation process is for the Using Agency to make a determination the proposed project qualifies as a "Proposed Governmental Action" under the Act. Most all State capital projects will fall under this requirement.

The second step in the GEPA evaluation process is for the Design Professional and Using Agency to determine if the proposed Project "could significantly adversely affect the quality of the environment." The GEPA Guidelines, referenced below, provide a convenient check list and discussion on making this determination. Upon completion of this step, the Using Agency then whether or not a GEFA "Environmental Effects Report is required.

The third step is preparation of the Environmental Effects Report (EER). The EER will require a joint effort of the Design Professional and Using Agency and must address the following:

- The environmental impact of the Project
- Alternatives to the Project, including "no action"
- Any adverse environmental effects which cannot be avoided
- Mitigation measures proposed to avoid or minimize the adverse impact of the Project
- The relationship between the value of the short term uses of the environment involved in the Project and the maintenance and enhancement of its long-term value.
- The effect of the Project on the quality and quantity of water supply
- The effect of the Project on the energy use or energy production.
- Any beneficial aspects of the Project, both short-term and long-term, and its economic advantages and disadvantages.

For descriptive guidelines on complying with GEPA, see the below website:

http://www.georgiaepd.org/Files\_PDF/techguide/pcb/GEPA\_Guidelines.pdf

This link to "The Georgia Environmental Policy Act Guidelines" is further clarified as follows:

- The term "Responsible Government Official" shall mean the Using Agency Director or authorized representative of the Using Agency. The Construction Division, GSFIC shall not act in this capacity but will assist in the coordination of required documentation and review.
- The environmental considerations described in the EPD Guidelines relate to the Site Evaluation and Planning Services and Schematic Design Services- a part of Basic Services of the Design Professional.
- The requirements to comply with GEPA and prepare an Environmental Effects Report/GEPA Evaluation are not to be confused with an Environmental Site Assessment (ESA) which is a separate study conducted at the time of site selection (See State Construction Manual Chapter 2.3 Paragraph C8).

• An Environmental Site Assessment (ESA) if available, is valuable information to the Design Professional when preparing the Environmental Effects Report/GEPA Evaluation.

For Projects constructed for the Georgia Board of Regents (BOR), the Design Professional shall consult with the BOR Program Manager and/or the BOR Director of Environmental Affairs. For BOR Projects, see also:

http://www.usg.edu/ehs/guidelines/gepa.phtml

## 2.2.6 Hazardous Materials

If the Design Professional designs any work which will involve the use or handling of hazardous materials such as flammable and combustible liquids, welding gases, fuel gas, dry cleaning fluids, and liquefied petroleum, the Design Professional MUST obtain copies of the regulations of the Hazardous Materials Division of the Office of the State Fire Marshal in order to design, specify, and supervise accordingly.

See <u>http://www.gainsurance.org/FireMarshal/Rules%20and%20Regulations.aspx</u>

## 2.2.7 Water Wells

The Water Wells Standards Act of 1985 (O.C.G.A. 12-5-120 *et seq.*) [Available through <u>www.legis.state.ga.us.</u>] provides standards for siting, constructing, operating, maintaining, and abandoning wells and boreholes. The Act requires that individual and non-public wells must be located as far removed from known or potential sources of pollutants as possible. Licensing requirements for drilling contractors are established by the Act, as well a State Water Well Standards Advisory Council. The Council is authorized to adopt and amend rules and regulations that are reasonable to govern the licensing of well contractors. Compliance with the Water Wells Standards Act is required for all activities that utilize well water and are enforceable under Georgia law. Notify the Owner's Project Manager if a well is to be drilled. The Design Professional will be required to contact the Department of Natural Resources and obtain all information and requirements to comply with the aforesaid law.

**2.2.8** Space Standards

The Georgia Department of Administrative Services (DOAS) has developed guidelines for allocation of net assignable space for various needs and tasks. These guidelines and instructions my be found at <u>www.doas.georgia.gov</u>.

In addition, Using Agencies may also have published guidelines on both design and space allocation standards. Compliance with such guidelines will be required for Agency review of each design phase. The Design Professional shall acquire and review such guidelines and standards to incorporate into the design. Any questions regarding compliance or interpretation of these guidelines should be addressed to the Using Agency.

## 2.3 DRAWINGS

2.3.1 Plot Plan

The working drawings of the Construction Documents must include a Plot Plan designated as such on the drawing and consisting of ONE sheet only. All proposed work, including utilities and buildings, shall be sited on the Plot Plan to scale.

The Plot Plan shall be referenced to a Plat of Boundary Line Survey, if available, or substitute information regarding the proposed Project property as provided by the Owner and Using Agency. In the absence of a current Plat of Boundary Line Survey of the Project site, the Design Professional must concur that the substitute property information provided by the Owner is sufficient to properly identify, locate and layout the proposed Project.

The Owner and Using Agency is responsible to ensure the proposed Project site and delineated by the Design Professional on the Plot Plan has proper title vested in the State of Georgia.

The Design Professional shall ensure the "work limits" lines shown on the Plot Plan do not extend beyond the property lines of the Using Agency as shown on the Plat of Boundary Line Survey or substitute property information. No work of the Construction Professional (including storing of materials or staging of any work) shall be permitted beyond the perimeter of the property except as to such easements, licenses, permits, or rights-of-way that have been obtained by the Using Agency and are shown on the property information and on the Plot Plan.

#### Certificate of Design Professional.

There must be written on the Plot Plan a Certificate of the Design Professional in the following language:

#### CERTIFICATE OF DESIGN PROFESSIONAL

"I certify (a) that this plot plan is correct and that it delineates the true, complete, and existing physical conditions on the site as described in the Survey of Building Site Conditions obtained by the Design Professional and as of the date of the present certificate, (b) that it shows boundaries and distances which appear on the property information (Plat of Boundary Line Survey or substitute documents) provided by the Using Agency, (c) that no portion of the work shown on this plot plan extends beyond the boundaries of the site as described on the aforesaid property information except the following [insert the word "NONE" or insert a description of each exception including: (1) acknowledge receipt of copy of easement, rights-of-way, permit or license, and (2) acknowledge receipt of written consent of the Owner as, for example: "Laying of sewer line across property of John Doe pursuant to grant of rights-of-way dated (insert date) (copy of which grant of rights-of-way has been furnished to the Design Professional by the Using Agency) and accordance with written consent of the Owner dated (insert date)," or, as for another example: "Grading on the property of Richard Roe pursuant to grant of easement dated 11-10-06 (copy of which grant of easement has been furnished to the Design Professional by the Using Agency) and in accordance with written consent of the Owner dated 01-01-09"], (d) I certify that there is no work of any description required for completion of the Project which does not lie within the scope and boundaries of the Project and of any easements, licenses, permits, or rights-of-way listed hereinabove, and (e) I also certify that in the design of the work I have taken into consideration all restrictions, covenants, controls, easements, and rights-of-way shown on the Plat of Survey of Building Site Conditions."

## 2.3.2 Erosion, Sedimentation & Pollution Control Plan

Refer to the Georgia State Soil and Water Conservation Commission website <u>www.gaswcc.georgia.gov</u>; Documents; Plan Review Checklist – Stand Alone Projects. This Checklist provides information on completing the Erosion, Sedimentation & Pollution Control plans and the required certifications required of the Design Professional or Consultant preparing the plans.

**2.3.3** Specialty Electrical System One Line Diagrams (i.e. Fire Alarm, etc.)

When a project includes a fire alarm, security, or audio-visual system, a one-line diagram shall be provided on the drawings. The one-line diagram shall be complete and all devices, panels, and other required equipment.

**2.3.4** Construction Fencing

Construction fences are required on all projects administered by GSFIC for liability and loss prevention purposes. A minimum six foot high chain link fence and gates shall be shown within the limits of construction.

#### 2.4 SPECIFICATIONS

**2.4.1** Project Manual Arrangement and Supplementary General Requirements

The Specifications when completed shall be bound and edge taped. Front Cover of the specification must bear the signatures and seals of all consultants and the Design Professional. The arrangement of the Specification book shall be as follows:

- 1. GSFIC Form Contract (or actual contract if CM/GC)
- 2. GSFIC Supplementary General Requirements (see below)
- 3. Design Professional's Trade/Technical Specifications

Supplementary General Requirements is a section of the Contract Documents which amend or add to the General Requirements. Supplementary General Requirements are prepared by the Owner with input from the Using Agency and Design Professional. The Supplementary General Requirements will be issued to you for inclusion in the Project Manual prior to final printing and binding. The Supplementary General Requirements include items that address:

- a) Special Conditions such as unit pricing or inclusion in bid for unsuitable soil, rock and ground water and similar potential changed conditions.
- b) Special security, access and scheduling requirements required by the Using Agency at the project site.
- c) Any special changes required of the General Requirements for this specific project.
- d) Any other special or unique conditions on this project other than technical specifications and drawing information.
- 2.4.2 Precision and Adequacy

#### Precision:

The Design Professional shall designate completely, definitely, and clearly the methods and materials for construction such that the Construction Professional can suitably and adequately prepare estimates and can obtain subcontractor and trade contractor/supplier bids.

## Manufacturer's Recommendations.

When the Design Professional references a manufacturer's published recommendations as part of the specification, he must have a copy of the

printed recommendations available for use by the Construction Professional and review by the Owner. References to such recommendations in the specifications shall include the name of the manufacturer and date of the publication. If there has been no publication of the recommendations, then the Design Professional is obliged to designate completely, definitely, and clearly the methods and materials for installation that are recommended.

If the Design Professional has specified a "manufacturer's recommendations" are part of the specifications in respect to installation of the product or system, it is required that copies of this document be furnished to the Owner for Owner's use in providing to the Project Manager and Contract Compliance Specialist during the construction phase. In recognition of the fact the Construction Professional is allowed to chose from any one of the multiple specified manufacturers (See Trade Names below), this requirement for furnishing the actual manufacturer's recommendations for the product/system selected can be placed on the Construction Professional as a required submittal.

The Design Professional shall carefully review any references to manufacturer's recommendations to ensure there is no conflict or disclaimer that would create a conflict with any other provision of the Contract Documents including warranty.

## 2.4.3 Options

As a general rule "Options" should not be provided in the trade sections of the contract documents. Do not confuse "Options" with "Alternates" which may be provided in the bid documents (Design-Bid-Build) or in the Component Change Order Documents (CM/GC and Design-Build) to which the Owner makes the final decision. In the event the Design Professional intends to provide two or more "Options" for the Construction Professional on a specific item of the work, all such "Options" must be fully defined with definite, complete and accurate descriptions as with any other portion of the work.

## **2.4.4** Performance Specifications

The Design Professional is required to design the project and to designate completely, definitely, and clearly the Work that the Construction Professional is to perform. In most cases this will mean the specification of product or manufacturer names and model numbers (three required). However, as in the case of control systems, the Design Professional will define the performance of the system without the designation of individual members of the system. In the event the Design Professional uses this method, great care must be taken to insure that the Design Professional meets his obligation of the responsibility for design.

The Design Professional shall indicate in the Construction Documents when particular shop drawings will require the seal of a specialty consultant or where "Performance specifications" requiring design services to be performed by the Construction Professional are being proposed. The Design Professional shall not require the Construction Professional to provide professional services that constitute the practice of architecture or engineering in the Construction Documents except as may be required to complete the design intent as expressed by performance specifications requiring the seal of a specialty consultant; or, unless the Construction Professional design services or certifications related to systems, materials, or equipment are specifically required of the Construction Professional by the Contract Documents, the Design Professional will specify all performance and design criteria that such services must satisfy. In

any event, the Design Professional remains the designer of record for the Project and must certify compliance with all provisions of the Contract Documents.

Additionally, in the case of Fire Sprinkler and Fire Alarm Systems requiring the additional review and approval by a regulatory agency, these performance specifications, if used, and the subsequent shop drawings with the seal of a specialty consultant will also require the formal review from the applicable regulator agency (See Section 3).

## 2.4.5 Trade Names

Where practical, the Design Professional should designate the physical properties of materials, products, or equipment and, where possible, use an ASTM number, a Commercial Standard, a Federal Specification number, or any recognized designation. Alternatively, the Design Professional may utilize manufacturer's trade names and model numbers to specify the material, product or equipment.

When specifying trade names and model numbers, it is the policy of the Owner to promote competition among manufacturers and suppliers. When specifying trade names or brand names to identify parts and components of the Work, the Design Professional shall specify a minimum of three products that fulfill the design requirements and level of quality, such designations then become the only authorized and acceptable products for that element of the work. Under no circumstance should the Design Professional include the words "or equal" in any specification or drawing.

It is further the policy of the Owner that during the bidding phase of Design-Bid-Build projects and during the preconstruction phase of CM/GC and Design-Build projects preceding the GMP Change Order, the Design Professional shall consider additional products of manufacturers as requested by bidders or Construction Professionals (See Section 4.9), which products after approval then become part of the specifications. After award of the Construction Agreement (Design-Bid-Build) or execution of the GMP Change Order (CM/GC, Design-Build), no further substitutions of specified products are allowable.

## **2.4.6** Warranties and Guarantees

The Design Professional is cautioned to not include any language in the trade sections regarding warranties and guarantees that would diminish, conflict or be confused with the provisions of the Construction Agreement (Section 6 Part 5 Correction of Work after Material Completion). The only circumstance where the Design Professional would include a warranty or guarantee provision in the trade sections of the specifications is where an "extended" warranty is desired. An "extended" warranty would be any guarantee that extends beyond a period of five years following the date of Material Completion. Extended warranty requirements most often relate to HVAC and Electrical equipment, refrigeration roof systems, paint and coatings, and similar items.

Such extended warranties shall be provided by the Construction Professional to the Design Professional and Owner as part of the Documents and Deliverables required at Material Completion and shall provide for the direct enforcement by the Owner.

## 2.4.7 Carpet Testing

Carpet Testing is not included in the General Requirements and must be specified by the Design Professional in the trade sections as more fully described in Section 2.6.8.

## 2.4.8 HVAC and Systems Start-up and Testing

The Design Professional must carefully coordinate the provisions in trade specifications regarding system start-up, testing, training of staff and related services. The General Requirements provide the general obligations of the Construction Professional. The trade specifications may expand and further clarify this General Requirement but must not conflict or diminish the effect of this Section.

The Test and Balance (TAB) requirements of the specifications shall include 100% of the HVAC controls and equipment. Cubic feet per minute (CFM) shall be measured at the diffusers, grills, across coils and along with the Wet Bulb/Dry Bulb temperatures.

Further, if a Commissioning Authority is engaged on this Project, the duties and responsibilities of the Commissioning Authority may not reduce, alter or conflict with the basic requirements of the General Requirements of the Construction Contract and the Basic Services of the Design Professional.

## **2.4.9** Pre-installation Meetings

Special meetings with the Construction Professional, Design Professional and applicable subcontractors, suppliers and design consultants may be called by the Construction Professional as he deems appropriate. However, it is in the Owner's and Design Professional's interest to require certain pre-installation meetings for specialty trades to promote quality assurance, coordinate inspections and avoid delays. Accordingly, the Design Professional shall provide requirements within the trade sections of the Specifications for mandatory pre-installation meetings for the following general areas of work:

- Concrete and Framing
- Roofing
- Glazing
- Interior Finishes [floor, walls, ceilings, etc.]
- Fire Alarm and Life Safety Systems
- Other trade and specialty systems as deemed necessary by Design Professional or Using Agency

# 2.5 COORDINATION OF WORK

2.5.1 Work "By Others"

As a general rule, the Design Professional shall show no work on the drawings or specifications that is to be performed by anyone other than the Construction Professional. Exceptions to this rule may include the following:

- a) Work to be performed by public and private utility companies to enter the Project work limits and connect to the Project. Note: Such authorization may require a Revocable License Agreement issued by the Owner to the respective utility company and specific work limits for this utility company shall be clearly delineated on the Revocable License Agreement and the drawings.
- b) Any "Separate Contracts" for work contracted by the Owner pursuant to a scope item of the Program which is not practical or desired to be performed by the Construction Professional (e.g.

Communications equipment, existing campus-wide security and energy management systems, etc.).

- c) Installation of any "Owner Procured" Furniture, Fixtures and Equipment if such installation is scheduled prior to the Material Completion Date (not recommended).
- d) Work performed, or being performed, by a previous phase of the Project. In such case, the work should be completed prior to the commencement of construction on the subsequent Project and the drawings should reflect the "as completed" conditions.

## **2.5.2** Power Utility Coordination

The Design Professional shall consult with the Using Agency to determine the initial parameters regarding provision of electrical utility service. Depending on the projected service loads of the Project, location of the Project in Georgia and existence of current electrical service agreements and utility infrastructure at the Project site, the choice of electrical power may provided by:

- Georgia Power Company
  - Local EMC

•

- Municipal Power Company
- Existing Using Agency Distribution System

In most major projects, a "negotiation" must take place between the Owner and the respective utility provider to determine the agreement as to any infrastructure and metering costs associated with the construction of the utility's facilities to service the Project (including provision of temporary construction power). In most cases, the utility company will provide all of its work at no cost in return for the future revenues from energy consumption by the Using Agency.

After an initial agreement has been finalized for the provision of electrical service to the Project, the Design Professional's Electrical Engineer shall then communicate with the applicable power utility for the coordination of required service and connections. Provision of any required primary feeder system, service transformers, and metering requirements shall then be described in the contract documents with definition of who performs (utility or Construction Professional).

When the primary distribution system is privately owned and maintained by a campus system, the Design Professional shall at a minimum contact and meet with the physical plant office, presenting a site plan and calculations including anticipated connected and demand loads before construction documents are completed.

When the public utility is Georgia Power Company, it is recommended their current edition "Blue-Book" be reviewed. An electronic copy can be found at <a href="http://www.georgiapower.com/powerzone/pdfs/BlueBook.pdf">http://www.georgiapower.com/powerzone/pdfs/BlueBook.pdf</a>.

## **2.5.3** State of Georgia Telecommunications Guidelines

The current State of Georgia Telecommunications Guidelines (GTG), formerly known as the State of Georgia Telecommunications Design Manual (GTDM), shall be followed for telecommunications, cable television, or closed circuit television systems. The manual may be found at <u>www.gsfic.ga.gov</u>. See Section 3.3.3 regarding submittal requirements. Ensure if any work is to be performed as a "Separate Contract" with the Owner or Using Agency, specific language in the Specifications must describe the intended coordination.

## **2.5.4** Utility Connection Fees

Most projects require connection to municipal and private utilities with required permit fees, tap-in fees, water meter fees, etc. The Contract Documents should address the payment of these fees to avoid any confusion or delay to the project. As a general rule, the Construction Professional should be required by the Contract Documents to "arrange for and pay" the required fees to complete the utility connections. The Design Professional shall determine the cost of such fee for each specific utility connection and include this information on the Contract Documents either (a) On the drawings, (b) In the technical specifications or (c) In the Supplementary General Requirements – preferred. In the case of Design-Bid-Build projects, this will allow all bidders to include this amount in their bids and avoid multiple contacts to the utility companies.

As an alternative, the costs of utility connections could be specified as "by the Owner" but that is not recommended for coordination and risk of delay reasons.

In the event the utility connection is a significant cost (e.g. \$75,000+), the Design Professional shall consult with the Owner to determine the best method to address this item.

# 2.6 INSPECTIONS AND TESTING REQUIREMENTS IN SPECIFICATIONS

## 2.6.1 General

This Section of the Process Guide highlights subjects pertaining to specific inspection or testing requirements to conform to codes or GSFIC policy but is not inclusive of all prudent inspection and testing requirements as may be required or recommended by the Design Professional. The Design Professional shall ensure the specifications adequately provide information on all such required inspections and testing to be performed during the Construction Phase and/or comply with requirements directly as required. Specifications shall coordinate with the language provided in the General Requirements of the Construction Agreements entitled "Inspections of Work" and "Testing." These referenced sections define terms of how inspections and testing is performed and who is responsible for costs and retesting.

## 2.6.2 Authorities Having Jurisdiction

Generally, local code enforcing authorities have no purview on state projects. Exceptions include specific areas where the State regulatory agency has delegated code enforcement to a local jurisdiction such as with Land Disturbance Permitting and Food Service Permitting. In order to avoid problems during the construction phase, the Design Professional should avoid using the term "Authority Having Jurisdiction" in specifications but specifically name the proper authority such as: the State Fire Marshal, the Department of Labor, the Department of Human Resources, or in the event no authority has jurisdiction, the Design Professional.

## **2.6.3** Building Official, Special Inspections and Required Code Inspections

For most State agencies and authorities, there is no designated "Building Official" as defined in the International Building Code with Georgia Amendments; and, with some exceptions, State construction projects do not fall under the jurisdiction of local counties and cities. Accordingly, city and county building departments including their respective permitting and inspection services are not engaged nor perform any services on State construction projects.

The Design Professional with his consultants shall perform as part of Construction Administration services all "required inspections" as listed and more fully described in the applicable Building Codes as stated in the Design Professional Contract as "Building Official," "Authority Having Jurisdiction," or "Required" inspections - regardless of whether or not a "Building Official" has been designated by the Using Agency. The intent of this provision of the Design Professional Contract is to ensure these original Code referenced inspections are in fact performed even though the Georgia Amendments to said codes have eliminated certain sections where these "Building Official inspections" were described. The Design Professional shall have no additional powers of a "Building Official" including "interpretations" of the codes.

The Design Professional shall coordinate all "Special Inspections" as required by the code. See also other "Special Inspections" in Section 2.4.7. All required code inspections and record keeping services of the Design Professional shall be a part of Evaluations of the Work and Basic Services of this Contract.

## **2.6.4** State Fire Marshall Inspections

The General Requirements of the Construction Agreements specify under the Section entitled "Inspection of Work" describes the requirements for Fire Marshal Inspections. These requirements place the responsibility on the Construction Professional to request inspections at specified intervals. These requests are made directly to the State Fire Marshall in writing with notice also to the Owner and Design Professional. Generally no further specification language is required by the Design Professional on this subject except as described below:

#### **2.6.4.1** Fire Alarm System Testing Requirements

The National Fire Alarm Code, NFPA 72-2002, Sections 10.4.1.1, 10.4.1.2.1.1, and 10.4.1.2.1.4 requires Initial Acceptance Testing for new systems and Functional Testing for existing system additions or modifications. The Design Professional shall include in the specifications a requirement for the Construction Professional and Fire Protection Trade/Subcontractor to complete and execute the *Inspection and Testing Form* (Figure 10.6.2.3 of the referenced Code Sections). No other forms or affidavits are acceptable. Further, ensure all specification language on this topic is coordinated with the General Requirements provisions titled "Inspections of the Work" and "Fire Marshal Inspections."

Note, in the event the Owner intends to engage a separate firm to perform Building Commissioning, such contract shall specifically exclude commissioning of the fire alarm system due to the extensive requirements and comprehensive methods already prescribed by NFPA 72 Chapter 10 as a Code minimum.

## **2.6.4.2** Fire Alarm System Design and the Georgia Accessibility Code/ ADAAG

The installed Fire Alarm System shall meet the current requirements of the Georgia Accessibility Code and Americans with Disabilities Act (ADA) in addition to the National Fire Alarm Code (NFPA 72). If the Georgia Accessibility Code or ADA Accessibility Guidelines (ADAAG) exception of "equivalent facilitation" is being used for deviations by the Design Professional\*, a detailed description and calculations shall be provided to the Office of the State Fire Marshal (See Section 3.3.2.4 below)I to clearly show evidence of providing substantially equivalent or greater access to and usability of the facility.

\*Note: If the Fire Alarm System Design is specified as a "Performance Specification", the Design Professional must comply with this requirement of the

Process Guide and Code and carefully coordinate the "approval" of any "equivalent facilitation" proposed by the Construction Professional and Trade Contractor with the Owner and State Fire Marshall in preparing the required design and shop drawings

**2.6.5** Other Regulatory Agency Inspections.

The General Requirements of the Construction Agreements do not specify instructions to the Construction Professional on requesting and scheduling other inspections from applicable regulatory agencies. The Design Professional therefore must include language in the trade sections of the Specifications describing the procedures for requesting, scheduling and conducting any inspections as required by applicable regulatory agencies. Contact your GSFIC Project Manager for a copy of Form GSFIC-CS-410 Regulatory Agency Approval Checklist for a list of typical items requiring regulatory agency review and approval.

**2.6.6** Building Commissioning

The General Requirements of the Construction Agreements include language requiring the coordination of the Construction Professional with a Commissioning Authority (if engaged). A Commissioning Authority may be engaged by the Owner either as a direct contract, a part of the Construction Professional agreement or as an additional service to the Design Professional. In any event, the engagement of a Commissioning Authority will not reduce or eliminate any requirement of the Construction Professional and Design Professional to perform, inspect or verify completion of any of the building systems as required by the General Requirements (See Construction Agreements Section 6 "Operation of Building Systems", "Operation and Maintenance Training" and other references to equipment start up and operation) and any normal and customary requirements placed in the Specifications by the Design Professional.

## **2.6.7** Special Inspections

This Section describes the responsibilities of the Design Professional in administering the Special Inspections Program. Note that on Design-Build delivery methods, the Owner, not the Design Professional, engages these services. On all other delivery methods, the Design Professional administers this Program. The Design Professional shall carefully review the General Requirement's language pertaining to "Inspections of the Work" and supplement this language in the trade specifications, where required, to accommodate the requirements of the Special Inspections Program.

The requirements contained within the <u>International Building Code Chapter 17 -.</u> <u>Structural Tests and Special Inspection with Georgia Amendments</u> will be strictly enforced on all projects. If the Design Professional contends that specific Special Inspections are not warranted, he shall petition the Owner (Attn: GSFIC Project Manager) in writing providing sufficient justification to review such request. All decisions to waive specific requirements of Chapter 17 shall be confirmed by the Owner in writing to the Design Professional.

The Design Professional is contractually obligated to fulfill the role of the Building Official in respect to code required and special inspections. The Design Professional shall:

Prepare the Special Inspection Program.

With the assistance of the Structural Engineer of Record, the Design Professional shall prepare and submit to the Owner during completion of Construction Documents (*See Section 3.7.4 Submittals*) the <u>Statement of Special Inspections</u>, which shall include the <u>Schedule of Special Inspection</u> <u>Services</u>. These documents shall list items for which Special Inspection is required. They should also list the Special Inspection, his agents and their duties. For additional assistance see <u>GSFIC Special Inspection Guidelines</u>.

Engage the Special Inspector(s).

Except for projects utilizing a Design-Build delivery system, to which the Owner engages the Special Inspection Services, the Design Professional is responsible for engaging the Special Inspector(s), its agents and any testing agencies required for the Special Inspection Program.

Refer to Sections 1 and 3 of the Design Professional contract and <u>GSFIC</u> <u>GUIDELINES FOR DESIGN PROFESSIONALS FOR SELECTING SPECIAL</u> <u>INSPECTIONS, MATERIAL TESTING, GEOTECHNICAL, AND/OR</u> <u>RELATED SERVICES</u>

## 2.6.8 Carpet Specification and Manufacturer's Certifications

In preparing the carpet specifications, the Design Professional shall consult with the Office of the State Fire Marshal to ensure the required fire performance characteristics (flame spread, critical radiant flux, smoke contribution, etc.) are addressed and the corresponding Reference Standards are listed under the Quality Assurance section of the carpet specification. The specifications shall indicate (a) the "Class" for flame spread criteria, and (b) the "number –(minimum \_\_\_\_\_ watts per square centimeter)" of the smoke density criteria both as approved by the State Fire Marshal for the subject project (or area divisions within a project).

## 2.6.8.1 Carpet Specifications

For all projects, the specifications shall include the submittal requirement of the following two documents for each carpet type:

#### (1) SPECIMEN AFFIDAVIT OF CARPET MANUFACTURER [to be completed and signed by an officer of the company]

I, an officer of the carpet manufacturing company, certify the carpet delivered to [*Insert the Project Number and Name*] on or about [*date of delivery*] by the manufacturer, [*Insert manufacturer's name*], complies with the following carpet construction specifications: [*Insert the complete carpet construction specifications as manufactured*] and that such carpet construction specifications meet or exceed the carpet construction specifications in the contract documents for the named Project. I further certify the materials of the aforesaid carpet comply fully with carpet specifications in the contract documents for the named Project and are of the following description: [*Insert a complete description of the materials*]

JOHN SMITH MANUFACTURING COMPAN
---------------------------------

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

(2) REPORT OF INVESTIGATION – FIRE PERFORMANCE CHARACTERISTICS: A report of investigation of surface burning characteristics indicating the carpet meets or exceeds the flame spread criteria and smoke density criteria as specified in the carpet specifications in the contract documents for the named Project. Such report of investigation shall be provided from the Southwest Research Institute, 6220 Culebra Road, San Antonio, Texas, 78228, Commercial Testing Company Inc., 1215 South Hamilton Street, PO Box 985, Dalton, Georgia 30720, or other approved organization.

In addition the above, the Design Professional shall also address sub-floor moisture conditions, sub floor alkalinity conditions, bond and adhesion testing requirements, Using Agency requirements for attic stock and related subjects within the carpet specifications.

## 2.6.8.2 Carpet Construction Testing

The Design Professional shall include in the specifications the following provisions for carpet testing for each type (or major run) of carpet specified. For projects with minimal amounts of carpeting, upon recommendation from the Design Professional, the Owner may (in writing) waive this requirement.

-Testing of Carpet

"When the carpet has been suitably stored at the job site, the Construction Professional shall remove a test sample, as selected by the Design Professional, of approximately  $6\frac{1}{2} \times 12$  feet or  $7 \times 7$ feet. The Design Professional shall deliver the test sample to a testing laboratory selected for Carpet Testing to determine compliance with the carpet construction specifications. No carpet may be installed until the results of the testing laboratory, the Affidavit of the Carpet Manufacturers and the Reports of Investigation-Fire Performance Characteristics have been satisfactorily received and approved by the Design Professional. The Construction Professional shall allow a minimum of 45 days for the aforesaid testing and reviews by the Design Professional."

## 2.6.9 BMP Testing

The Design Professional shall ensure the required testing of BMP's as stipulated in the Erosion Control Checklist (including requirements for testing within seven (7) days of installation) are incorporated into the trade specifications and are part of the Design Professional's evaluation of the Work or Special Inspections. *See* Section 2.3.2

# 2.7 MISCELLANEOUS REQUIREMENTS

## **2.7.1** Service and Maintenance Agreements

It is generally in the best interests of the Owner to include the requirements for a one year "maintenance and service" agreement for certain systems such as

elevators and escalators, landscape, HVAC chemical treatment and similar systems. The Design Professional shall consult with the Using Agency to determine which maintenance and service agreements are desired. In some cases, the Using Agency may prefer to amend certain existing agreements to incorporate the additional scope of work for the new Project; however, this may lead to disputes regarding warranties and guarantees with the Construction Professional.

It is recommended that the maintenance and service agreement provisions be specified in the applicable trade sections and commence for a one year term on the date of Material Completion. Further, it is recommended the specification provisions require the submission of a proposal to the Using Agency (at Material Completion) from the maintenance/service contractor for exercising two additional one year terms of said agreement (to be considered at end of each term).

## 2.7.2 Loose Equipment and Furnishings

Unless otherwise stipulated in the Program (Exhibit A to Design Professional Contract), as a general rule, the Design Professional is only required to design and specify in the Construction Documents "Fixed Equipment" and furnishings that require structural or fixed utility connections to the building.

"Loose Equipment" is defined as such items as furniture, artwork, administrative equipment, maintenance equipment etc., that can be delivered to a dock and placed in the building by operating personnel.

There are practical exceptions to this general rule:

• Kitchen equipment is both fixed and loose. It may be advisable to procure such

equipment (except expendables) through one source (contractor or vendor).

• Fixed equipment such as laboratory, kitchen, and maintenance equipment can be procured by the agency as loose equipment then connected and installed to the facility by the building contractor or separate contractor provided that arrangements are coordinated in the both the Design and Construction Documents for such installation.

• Loose equipment can be included in the Construction Documents and provided to the agency at Material Completion of the project, but generally the cost will be higher due to inability to exercise discounts on State-wide contracts and the Construction Professional's overhead and profit.

#### SECTION THREE: Design Review Process

#### 3.1 PURPOSE AND INTENT

Section Three describes the Design Review Process and information about required submittals. Projected review time frames shall be correlated with the Preliminary Design and Construction Schedule (Exhibit B to Design Professional Contract). For CM/GC and Design-Build delivery methods, this schedule in then eventually incorporated into Overall Project Schedule prepared by the Construction Professional. It is critically important review time frames are accurately represented in the Overall Construction Schedule to avoid potential of a delay claim.

#### 3.2 REVIEW AGENCIES

#### 3.2.1 Using Agency

Throughout the design process and at the completion of each major design phase, the Design Professional shall obtain the approval of the Using Agency. Such review and approval shall be in addition to other agency review requirements as described in this section and in the Design Professional Contract. The primary purpose and scope of Using Agency review shall be to confirm acceptability of the design as interpreted from the Program (Exhibit A to Design Professional Contract) and any special design criteria as established by the Using Agency

#### **3.2.2** GSFIC Construction Services - Design Review Group

The Design Review Group within GSFIC's Construction Services Division performs Constructability, Code Compliance, and Probable Construction Cost reviews of all projects prior to (a) Advertisement for bids (Design-Bid-Build) or (b) Issuance of a Notice to Proceed for Construction Phase Services (CM/GC or Design-Build). *Constructability* reviews check for conformance with GSFIC policies and guidelines, completeness, coordination of documents and code compliance.

Design review services are in addition to Using Agency review. It should be noted that Design Review Group review is not a substitute nor should it replace the Design Professionals' standard Quality Assurance/Quality Control responsibilities.

**3.2.3** State Fire Marshal

The Office of the Insurance and Safety Fire Commissioner (State Fire Marshal) reviews all State projects for compliance with Life Safety Codes and issues all construction permits on State projects. The State Fire Marshal delegates review of certain State projects to the GSFIC; however, all transmittals and issuance of permits flow through the Office of the Insurance and Safety Fire Commissioner. The areas of review include: Overall compliance with the applicable Life Safety and related adopted NFPA Codes, Fire Sprinkler Systems and Fire Alarm Systems (including ADA equivalencies).

#### **3.2.4** State Telecommunications Guidelines (GSFIC)

The GSFIC Construction Services Division, Design Review Group performs all plans reviews for telecommunications, cable television and CCTV systems as described in the current State of Georgia Telecommunications Guidelines (GTG),

formerly known as the State of Georgia Telecommunications Design Manual (GTDM).

**3.2.5** Georgia Department of Natural Resources (DNR)

There are multiple environmental compliance requirements on most capital projects. Contract your GSFIC Project Manager for assistance in identifying and coordinating requirements for:

- Georgia Environmental Policy Act (GEPA) evaluations
- Erosion, Sedimentation & Pollution Control Plan
- Notice of Intent Land Disturbance Permits
- National Pollution Discharge Elimination Systems (NPDES) Permits
- Air Quality Permits
- Underground Storage Tanks

Additional "environmental" requirements and guidelines may be found at the Georgia Soil and Water Conservation Commission (<u>www.gaswcc.ga.gov</u>) and Georgia Environmental Facilities Authority (<u>www.gefa.org</u>).

**3.2.6** Other Agencies

Contact your GSFIC Project Manager or GSFIC Construction Services for assistance in identifying other required regulatory agencies. Form GSFIC-CS-410 has been prepared to assist Design Professionals with this information; however, it remains the primary responsibility of the Design Professional to comply with all regulatory rules, codes and regulations pertaining to the Project.

**3.2.7** Transmittal Letter

All submittals shall be accompanied by a Transmittal Letter including the GSFIC project name and number, the name of the Using Agency, the identification of the submittal (e.g. Design Development, GMP, etc.), the action requested, and the Design Professional's name, e-mail address and phone number. All Transmittal Letters (less enclosures) should also be copied to the GSFIC Project Manager.

## 3.3 REVIEW PROCEDURES

3.3.1 Using Agency

The Using Agency must review and approve all design to ascertain compliance with the Owner/Using Agency's Program and any special design criteria as established by the Using Agency. Review times vary from agency to agency and the Design Professional must coordinate with the Using Agency Project Representative or GSFIC Project Manager the notice requirements and projected review times for each phase of design. Be aware of potential delays in scheduling executive or board approval of major documents due to meeting and travel schedules of the agency officials.

In order to expedite the review process, it is customary for the Design Professional to initiate the review process concurrently with all applicable review agencies. This is particularly important in the CM/GC and Design-Build delivery method in regards to prompt processing of Component Change Order Construction Documents.

**3.3.2** State Fire Marshal

For all State projects, the State Fire Marshal's Office is responsible for the review of construction documents for compliance with state minimum standards for fire

safety, life safety, and accessibility, issuing Construction Permits and issuing Certificates of Occupancy for those types of buildings listed in O.C.G.A. § 25-2-13. Further, the State Fire Marshal's Office has deputized some members of the GSFIC, Design Review Group to review plans and specifications and issue Construction Permits for State projects; however, all submissions and transmittal letters must be directed to the State Fire Marshal's Office.

As a service to Design Professionals, the State Fire Marshal's Office will perform informal Fire Marshal reviews of preliminary plans and issue written comments to assist in the completion of design. This is encouraged for large or complex projects to avoid delays in issuing the final approval and construction permits. Design Professionals should follow the submission process outlined below and mark the request as "Preliminary Review". Drawings submitted for a preliminary review are not required to be signed and sealed.

For CM/GC and Design-Build delivery methods, if site grading and other construction phase services are to commence in advance of the completed construction documents, the State Fire Marshall's Office will consider the issuance of two intermediate construction permits:

- Construction Permit (Site Preparation Only)
- Construction Permit (Building Shell Only)

See submittal requirements below including the submission of signed and sealed construction documents (for site preparation, building shell, etc. acknowledging drawings may be incomplete but otherwise must be sealed).

For all delivery methods when the construction documents are fully completed a Construction Permit (Final) must be requested.

#### State Fire Marshall Submittal Instructions:

Two (2) sets of sealed plans and specifications, with a Form <u>354 Transmittal</u> <u>Letter</u>, must be submitted to the State Fire Marshal's Office at the address below for a construction permit (Site Preparation, Building Shell or Final). All submitted documents are forwarded from the Fire Marshal's Office to Deputized State Inspectors at GSFIC, Design Review Group for review and then sent back to the Fire Marshal's Office for distribution and filing. Submit all plans to:

> State Fire Marshal Two Martin Luther King, Jr. Drive West Tower, Suite 620 Atlanta, Georgia 30334

For further information, visit <u>http://www.inscomm.state.ga.us/</u>

The time required for review will vary due to the size and complexity of the project; however, projects will be reviewed within thirty (30) business days.

During the Construction Phase of a project, the State Fire Marshall is also required to review and approve the shop drawings for the Fire Sprinkler System. Regardless of whether or not the Fire Sprinkler System is fully designed in the Construction Documents or issued as a Performance Specification for final design by the Fire Protection trade/sub contractor, the State of Georgia Fire Protection and Safety Code requires the submission of final shop drawings and other design information by the trade/sub contractor.

If any other element of the Fire Protection design was issued as a Performance Specification which is not reviewed by the State Fire Marshal's office other than

Sprinkler shop drawings, the Design Professional remains responsible for the review and approval of such documents.

## **3.3.2.1** Specific Requirements for Construction Permit (Site Preparation Only)

Requests for a Construction Permit (Site Preparation Only) for the CM/GC and Design-Build delivery methods are limited to demolition, site grading, utility installation/relocation and related site preparation work. The Construction Permit (Site Preparation Only) consists of a letter issued by the State Marshal's Office.

The following statement shall be on the cover sheet of drawings submitted for a Construction Permit (Site Preparation Only).

"To the best of my knowledge, information and belief, the plans, specifications and addenda comply with the applicable building codes in effect at the time of issuance for construction."

Signature of Design Professional

Date

Minimum submittal requirements shall include:

- 1. Site Plan
- 2. Applicable Site Preparation Construction Documents (Stamped Plans and Specifications)
- 3. Documentation showing:
  - Scope of proposed building project
  - Proposed site layout and schematic floor plans of proposed buildings
  - Date/edition of applicable Codes to be used in design
  - A draft Life Safety Plan to include at a minimum:
    Occupancy Classification
    Construction types
    - -Proposed occupancy
    - -Proposed Sprinkler systems

# **3.3.2.2** Specific Requirements for Construction Permit (Building Shell Only)

Requests for a Construction Permit (Building Shell Only) for the CM/GC and Design-Build delivery methods are limited foundations and superstructure work in addition to site preparation work (demolition, site grading, utility installation/relocation and related site preparation work). The Construction Permit (Building Shell Only) consists of a letter issued by the State Marshal's Office.

The following statement shall be on the cover sheet of drawings submitted for a <u>Construction Permit (Shell Only)</u>:

"To the best of my knowledge, information and belief, the plans, specifications and addenda comply with the applicable building codes in effect at the time of issuance for construction."

# Signature of Design Professional

Date

In addition to the requirements listed above to obtain a Construction Permit (Site Preparation Only) provide the following minimum additional submittal requirements (as applicable) for new buildings or additions: • CCO Construction Documents (Stamped Plans and Specifications) shall include:

- a. Site Plan and civil drawings
- b. Life Safety Plans (see below)
- c. Structural Drawings
- Life Safety Evaluation Plan for each component shall include:
  - a. Life Safety Plan to include at a minimum:
    - -Occupancy Classification
    - -Construction types
    - -Proposed occupancy
    - -Proposed Sprinkler systems
  - b. Atrium Smoke Analysis and Calculations (if applicable)
  - c. Fire wall details (if applicable)
  - d. Floor plans, elevations and cross sections
  - e. Occupancy load and square footage calculations
  - f. Egress Plan, travel distances, common paths of travel

Note: For additions, include the same information for the existing structure.

**3.3.2.3** Construction Permit (Final)

Requests for a Construction Permit (Final) is required of all projects regardless of the delivery method.

The following statement shall be on the cover sheet of drawings submitted for a Construction Permit (Final).

"To the best of my knowledge, information and belief, the plans, specifications and addenda comply with the applicable building codes in effect at the time of issuance for construction."

## Signature of Design Professional

Date

In addition to the requirements listed above to obtain a Construction Permit (Site Preparation Only) and Construction Permit (Building Shell Only), submit complete and final Construction Documents (Design-Bid-Build delivery) or GMP Construction Documents (CM/GC and Design-Build delivery). All submitted documents shall be signed and sealed by the Design Professional and consultants.

Reminder: If any of the aforesaid Construction Documents contain Performance Specifications for any elements of the Fire Protection Systems, such Shop Drawings, when submitted by the Construction Professional shall be submitted for review as an addendum to original submittal for Construction Permit (Final).

## **3.3.2.4** Fire Sprinkler Systems Design/Shop Drawing Review

The State of Georgia Fire Protection and Safety Codes requires the trade/sub contractor who installs the work to hold a Certificate of Competency (CC) as issued by the State Fire Marshal's Office. This requirement is stated in the General Requirements of the Construction Documents but may be repeated in the trade section of the specifications for emphasis. The Codes further require the submission of shop drawings and related documentation from the

trade/sub contractor for water based fire protection systems, if specified, regardless of whether or not such systems were fully designed by the Design Professional. The submission of these documents must be sent under transmittal of <u>Form 354S</u>. This requirement is not stated in the General Requirements and must be provided by the Design Professional in the trade specifications.

Specifically, the Design Professional shall include language in the trade specification for water-based fire protection systems that provides for:

- The Certificate of Competency of the fire sprinkler trade/sub contractor shall be submitted to the Construction Professional, Design Professional and Owner as required by the General Requirements.
- The fire sprinkler trade/sub contractor shall submit the required documentation and obtain approval <u>directly</u> from the State Fire Marshall's Office for all work related to the water-based fire protection system.
- Submittal shall consist of a minimum of two sets of sealed shop drawings, hydraulic calculations and Owner's Information Certificate along with a completed Transmittal Letter on Fire Marshal <u>Form 354S</u> to:

State Fire Marshal Two Martin Luther King, Jr. Drive West Tower, Suite 620 Atlanta, Georgia 30334

• After approval by the State Fire Marshall's Office, the fire sprinkler trade/sub contractor shall then submit the approved documents to the Construction Professional and Design Professional for final review and approval as a regular Shop Drawing submittal.

Note, the Design Professional cannot make any changes to the shop drawing submittal approved by the State Fire Marshall that would adversely affect or compromise said approval. In the event any such conflicts occur (e.g. conflict of sprinkler grid with ceiling/lighting grid), the Design Professional, Owner and Construction Professional should confer and discuss possible remedies to such situation which may include a revision and re-submission of the documents by the trade/sub contractor.

The time required for State Fire Marshall review of water-based fire protection systems will vary due to the size and complexity of the project; however, most typical projects can be reviewed in the following time frames:

Fire Sprinkler Review:

10 business days

## **3.3.2.5** Fire Alarm System Review

If the Fire Alarm System is shown on the Construction Documents as a Performance Specification, Shop Drawings, when submitted by the Construction Professional shall be submitted for review to the State Fire Marshall as an addendum to original submittal for the Construction Permit (Final) using a Form <u>354 Transmittal Letter</u>. The Design

Professional shall include instructions to the Construction Professional in the specific trade section

## 3.3.3 Telecommunications Reviews

The GSFIC Construction Services Division, Design Review Group performs all plans reviews for telecommunications systems. Contact the GSFIC Design Review Group for initial submittal coordination. Mail design submissions to the GSFIC address below for review.

**Contact Information:** 

GSFIC, Design Review Group Second Floor 270 Washington Street Atlanta, Georgia 30334 404-463-5671

**3.3.4**. GSFIC Constructability, Code Compliance, and Probable Construction Cost Reviews- General

All projects, in which the construction phase will be administered by GSFIC, are required to have Constructability, Code Compliance, and Probable Construction Cost reviews. Specific requirements for the three project delivery methods; Design-Bid-Build, CM/GC, and Design Build, are addressed below. Review comments will be sent directly to the Design Professional with copies to the GSFIC Project Manager, Using Agency's Authorized Representative and the GSFIC project files.

Although acquisition of the required NPDES and Land Disturbance Permits are the responsibility of the Construction Professional and issued through the Department of Natural Resources and Local Issuing Authority, the design documents including the Erosion, Sedimentation & Pollution Control Plan must comply with all applicable regulatory requirements. The GSFIC Design Review Group will provide advance review of this documentation during the design phase. All such requirements must be completed at the completion of final Construction Documents.

To facilitate response from the Design Professional, an electronic version of the GSFIC Comment Review Form will be sent, and the Design Professional is required to provide a written response to each comment indicating how each comment is to be addressed in the final construction documents. Review comments are color coded as follows:

**BLACK** text indicates a constructability issue, incomplete, or incorrect item.

**BLUE** text indicates a code related comment.

**RED** text indicates a critical comment.

On the Comment Review Form, the Design Professional shall provide his responses only in the column labeled: "DP Responses". GSFIC requests that Design Professionals clearly identify where changes have or will be made in the construction documents (i.e., drawing and detail number, or specification section and paragraph). Responses to Schematic Design Documents and Design Development Documents may refer to the incorporation of such changes in the final Construction Documents (or CCO/GMP Construction Documents) but otherwise such responses as "will comply" are not acceptable.

GSFIC requests the Design Professional return the completed Comment Review Form promptly and within thirty days to the Design Review Group. Responses to items that are deemed to be unacceptable to the Design Review Group will be highlighted in YELLOW and noted as OPEN.

After review of the final Construction Documents (including CCO/GMP Construction Documents) and the Design Professional's incorporation of such comments in revised drawings and specifications, the Design Review Group will perform a Back Check to confirm final review. Once all outstanding comments have been addressed, GSFIC will notify the Design Professional in writing that the Back Check review process is complete and that final construction documents can be distributed.

Submittal Requirements for Constructability, Code Compliance, and Probable Construction Cost reviews:

Three (3) sets of plans and specifications. Statement of Probable Construction Cost provided on Form GSFIC-CS-407 with attachments on both hard and electronic copy (if available). All submittals addressed to:

Construction Services - Design Review Group Attention: Administrative Assistant Georgia State Financing and Investment Commission Construction Division - Second Floor 270 Washington Street Atlanta, GA 30334

Plans are limited to a maximum 30"x42" dimension. The weight of bound plans should not exceed a maximum weight of twenty pounds per volume.

Specific guidelines on GSFIC Review procedures for each delivery type are provided below:

## **3.3.4.1** Design-Bid-Build (DBB) Delivery Method

General. The DBB Delivery Method requires complete approval of documents prior to the advertisement for bids for general contractors. Accordingly, the completion of all design and program requirements, regulatory agency requirements, Using Agency final reviews and other matters are of utmost importance. Refer to Form GSFIC-CS-411 Construction Documents Completion Checklist available from the GSFIC Project Manager for further details.

Schematic Design Documents Review.

- 1. Submit 3 sets of drawings to GSFIC Design Review Group for Constructability Review
- 2. Submit Form GSFIC-CS-407 Statement of Probable Construction Cost with enclosures.
- 3. Submit 2 set of drawings to the State Fire Marshal's Office for Life Safety /Accessibility Review (See Paragraph 3.7.2).
- 4. Submit drawings as required to other applicable Regulatory Agencies (See Section 2.6.5)

Design Development Documents Review.

- 1. Submit 3 sets of drawings to GSFIC Design Review Group for Constructability Review
- 2. Submit Form GSFIC-CS-407 Statement of Probable Construction Cost.
- 3. Submit Form GSFIC-CS-406 Site Investigations Report.
- 4. Submit Environmental Effects Report (EER) or statement if not applicable (See Paragraph 2.2.8).
- 5. Submit 2 set of drawings to the State Fire Marshal's Office for Life Safety /Accessibility Review (See Paragraph 3.7.2).
- 6. Submit drawings as required to other applicable Regulatory Agencies (See Section 2.5.5)

Construction Documents

- 1. Submit 3 sets of drawings and specifications to GSFIC Design Review Group for Constructability Review
- 2. Submit Form GSFIC-CS-407 Statement of Probable Construction Cost.
- 3. Submit 2 sets of sealed drawings and specifications to the State Fire Marshal's Office for Life Safety / Accessibility Review
- 4. Submit drawings as required to other applicable Regulatory Agencies (See Form GSFIC-CS-410) and specifically documents required to attain the Land Disturbance permits (Erosion, Sedimentation and Pollution Control Plan) through Department of Natural Resources.
- 5. Submit Statement of Special Inspections Form GSFIC-CS-432 with attached proposed Schedule of Special Inspection Services (See Section 2.6.6).

Back Check of Construction Documents

1. Submit three (3) sets of corrected drawings, specifications and response to GSFIC Design Review Group review comments.

NOTE: Contact the lead reviewer at GSFIC Design Review Group for approval to submit only the corrected pages in lieu of complete sets of drawings and specifications.

2. Submit Form GSFIC-CS-407 Statement of Probable Construction Cost if amended by revisions to the Construction Documents.

Please Note: If all comments made during the Construction Document review have not been satisfactorily addressed after a Back Check review a meeting may be called at the GSFIC office. Attendance will be required by the Design Professional and all consulting engineers with outstanding comments.

## Bid Documents

After satisfactory completion of the Back Check, the Design Professional shall prepare and submit the final Bid Documents. The GSFIC requires one set of Contract (Bid) Documents signed and sealed by the Design Professional and all major consultants. An additional set may be required by the Using Agency.

Drawings must be fully completed, all references to "Not for Construction" removed, Specifications bound and edge taped. Front Cover of the specification must bear the signatures and seals of all consultants and the Design Professional. All drawings must be sealed and signed by all engineering disciplines.

Refer to Form GSFIC-CS-411 CONSTRUCTION DOCUMENTS COMPLETION CHECKLIST which is provided to the Design Professional by the GSFIC Project Manager after approval of the Construction Documents under cover of Form Letter GSFIC-CS-421. These documents provide specific information on preparation of Bid Documents to include:

- Alternates
- Supplementary General Requirements
- Correlation Review
- Property Matters
- Budget
- Bidding Procedures

The final Bid Document set for GSFIC shall be delivered to the GSFIC Project Manager, Project Management Group, Construction Services Department. The GSFIC Project Manager shall then complete requirements for transmittal of Project to the Procurement Department for the bidding and award phase.

The Design Professional will be contacted by the Procurement Department and furnished instructions for coordinating the bidding and award phase.

#### Addenda, Bulletins, Change Orders

After the Bid Documents have been completed, dated, stamped and sealed, all future changes must be confirmed by a published and numbered Addendum issued by the Design Professional. The GSFIC Procurement Department will provide specific instructions to the Design Professional (Form GSFIC-PS-303) regarding transmittal of Addenda to prospective bidders, the Using Agency and GSFIC.

Bidders may receive two types of addenda. Standard Addenda (identified as Standard Addenda A-1, Standard Addenda A-2, etc.) are issued only by the Owner and are reserved for making changes to the General Requirements, Supplementary General Requirements and Bid Requirements. Addenda (identified as Addendum No. 1, Addendum No. 2, etc.) are issued by the Design Professional and are used to (a) Correct discovered errors and omissions in the bid documents, (b) approve the addition of a manufacturer's product (see Paragraph 9 (d) Instructions to Bidders in the Contract Documents), or (c) to clarify items in the bidding documents.

Addenda must be approved by the GSFIC prior to issuance to bidders. Depending on the nature of the correction or changed condition and its effect on the prior approval of the plans and specifications by the GSFIC, Using Agency and applicable regulatory agencies, both the GSFIC and Design Professional should carefully coordinate and communicate these activities to avoid a postponement of the proposed bid opening date.

Bidders must acknowledge receipt of all Standard Addenda and Addenda on their Proposal Form submitted at bid opening. Failure to acknowledge these addenda may result in rejection of their proposal. Accordingly, it is extremely important the Design Professional keeps an accurate record of all persons, firms and agencies who have received bidding documents (including GSFIC, Using agency, regulatory agencies, etc.) and that all parties receive copies of issued addenda. During the bidding phase and prior to award of a construction contract, no bulletins or change orders are allowed. Any changes to the bidding documents are processed as (pre-bid) Addenda. In the event a further change is required in the bidding documents after bids are received but prior to award, such changes are processed as a (post-bid) Addenda issued only to the GSFIC and specific party identified by the GSFIC (i.e. proposed General Contractor) and Using Agency.

#### Addenda:

1. Submit a copy of pre-bid addenda to the Procurement Services Department ATTN: Bidding Manager at least 10 working days prior to the bid opening date. Review and approval by the GSFIC and Using Agency will be coordinated by this department. However, the Design Professional remains responsible to secure the approvals of any applicable regulatory agency which is a prerequisite to Owner approval.

## Change Orders:

Change Orders are processed by the Owner after the award of a construction contract. The GSFIC Project Manager shall coordinate all internal reviews of Change Orders with the Design Review Group. However, the Design Professional remains responsible to secure the approvals of any applicable regulatory agency which is a prerequisite to Owner approval.

## Bulletins:

Bulletins issued to the Construction Professional shall also be copied to the Owner addressed to the GSFIC Project Manager. Any questions regarding Bulletins will be addressed by the GSFIC Project Manager.

## **3.3.4.2** Construction Manager at Risk (CM/GC) and Design-Build

General. Both the CM/GC and Design-Build Delivery Methods provide for the commencement of construction services simultaneous with the completion of the design of the Project. Accordingly, the numbers and sequences of submittals for Owner, Using Agency and regulatory agency reviews are critically important to advancement of the Overall Project Schedule- one of the primary reasons for using this delivery method. However, it is important to point out the same level of review and approval is required by the Owner, Using Agency and applicable regulatory agencies as is provided under the Design-bid-build delivery method. In the Design-Build agreement, the Design Professional acts as the "Architect of Record" within the Design-Build agreement and coordinates review and approval of design documents accordingly.

Therefore, the Design Professional shall prepare and arrange for the Owner, Using Agency and applicable regulatory agency reviews of (1) Schematic Design, (2) Design Development and (3) Construction Documents as described and defined in the Design Professional Contract or Design-Build Contract. And in addition, the Design Professional shall prepare and arrange these same reviews for all separate construction documents prepared for (5) Component Change Orders and (6) the Guaranteed Maximum Price (GMP) Change Order.

The CM/GC and Design-Build delivery methods allow for the CM/GC to commence construction phase services and to eventually propose a GMP Change Order with partially complete documents. However, all documents provided to the Construction Professional for construction must be stamped and sealed by the Design Professional (even if incomplete). Further, these

documents (CCO, GMP CO) must comply with all design and program requirements, regulatory agency requirements, Using Agency final reviews and other matters. Refer to Form GSFIC-CS-411 Construction Documents Completion Checklist available from the GSFIC Project Manager for further details. As a practicable matter, these reviews must be coordinated quickly and simultaneously with all parties to achieve the overall intent of the CM/GC or Design-Build delivery method and accelerated Overall Project Schedule.

Schematic Design Documents Review.

- 1. Submit 3 sets of drawings to GSFIC Design Review Group for Constructability Review
- 2. Submit Form GSFIC-CS-407 Statement of Probable Construction Cost with enclosures.
- 3. Submit 2 set of drawings to the State Fire Marshal's Office for Life Safety /Accessibility Review (See Paragraph 3.7.2).
- 5. Submit drawings as required to other applicable Regulatory Agencies (See Section 2.6.5)

Design Development Documents Review.

- 1. Submit 3 sets of drawings to GSFIC Design Review Group for Constructability Review
- 2. Submit Form GSFIC-CS-407 Statement of Probable Construction Cost.
- 3. Submit Form GSFIC-CS-406 Site Investigations Report.
- 4. Submit Environmental Effects Report (EER) or statement if not applicable.
- 5. Submit 2 set of drawings to the State Fire Marshal's Office for Life Safety /Accessibility Review (See Section 3.7.2).
- 6. Submit drawings as required to other applicable Regulatory Agencies (See Section 2.6.5)

Component Construction Documents (CCO Change Order Documents) and Guaranteed Maximum Price Construction Documents (GMP Change Order Documents:

- 1. Submit 3 sets of drawings and specifications to GSFIC Design Review Group for Constructability Review
- 2. Submit 2 sets of sealed drawings and specifications to the State Fire Marshal's Office for Life Safety / Accessibility Review

Exception: Certain CCO Construction Documents not pertaining to Life Safety subjects are not required after issuance of initial Construction Permit-(Site Preparation Only)but shall be reviewed as normal Design Development and Construction Documents submissions (see above and below).

- 3. Submit drawings as required to other applicable Regulatory Agencies (See Form GSFIC-CS-410) and specifically documents required to attain the Land Disturbance permits (Erosion, Sedimentation and Pollution Control Plan) through Department of Natural Resources
- 4. Submit Statement of Special Inspections Form GSFIC-CS-432 with attached proposed Schedule of Special Inspection Services (See Section 2.6.6).

Construction Documents (CD Change Order Documents)

- 1. Submit 3 sets of drawings and specifications to GSFIC Design Review Group for Constructability Review
- 2. Submit Form GSFIC-CS-407 Statement of Probable Construction Cost.
- 3. Submit 2 sets of sealed drawings and specifications to the State Fire Marshal's Office for Life Safety / Accessibility Review
- 4. Submit drawings as required to other applicable Regulatory Agencies (See Form GSFIC-CS-410) and specifically documents required to attain the Land Disturbance permits (Erosion, Sedimentation and Pollution Control Plan) through Department of Natural Resources.

Back Check of Construction Documents

1. Submit three (3) sets of corrected drawings, specifications and response to GSFIC Design Review Group review comments.

Note: Contact the lead reviewer at GSFIC Design Review Group for approval to submit only the corrected pages in lieu of complete sets of drawings and specifications.

If all comments made during the Construction Document review have not been satisfactorily addressed after a Back Check review a meeting may be called at the GSFIC office. Attendance will be required by the Design Professional and all consulting engineers with outstanding comments.

Addenda, Bulletins, Revised Drawings, Supplemental Drawings, Change Orders

In the CM/GC and Design-Build delivery methods, changes and additions to construction documents are incorporated into the respective agreements through bulletins, supplemental drawings and revised drawings which then are incorporated into subsequent Component Construction Documents, GMP Construction Documents and the final Construction Documents (CD Change Order).

Change Orders are generally only issued after execution of the GMP Change Order except in rare cases where a change is necessary to a Component Change Order.

In all cases where a change or addition is made to the construction documents being provided to the Construction Professional, such documents shall be provided to the Owner, Using Agency and applicable regulatory agency for review. The Design Professional and GSFIC Project Manager shall coordinate the receipt and transmittal of such documents to the respective parties of the Owner, Using Agency and applicable regulatory agency to accomplish said review and where required approval by the appropriate parties.

Other Regulatory Agencies

The Design Professional shall refer to Form GSFIC-CS-410 Regulatory Agency Approval Checklist, available from the GSFIC Project Manager, in addition to a review of applicable codes and regulations to determine which additional regulatory agencies must review the Construction Documents. Each of these regulatory agencies may have a specific form and procedure for requesting and obtaining approval. Review times will vary according to the regulatory agency and complexity of the project. It is strongly advised to identify and contact each of the required regulatory agencies at the very start of a project to avert any potential delays to approval or start of construction. If any difficulties are encountered with regulatory agencies, the GSFIC Project Manager should be advised and consulted.

## 3.4 ADDITIONAL SUBMITTALS

**3.4.1** Required Submittals- In addition to the items outlined above, the Design Professional shall provide directly or make available to the Construction Professional any requirements for documentation or permit application required by a Regulatory Agency (*See Form GSFIC-CS-410*) as part of a permit application, plans approval or otherwise.

**3.4.2** Supplemental Submittals- Additional submittals may be required to address specific questions or concerns during the Design Review Process. The applicable Regulatory Agencies or the GSFIC Design Review Group may request such information as deemed prudent and necessary for Owner review.

## SECTION FOUR: Construction Process

# 4.1 PURPOSE AND INTENT

Section Four describes the processes required by GSFIC during the construction phase of a project. The purpose and intent of this section is to provide requirements which shall be made a part of the technical specifications and/or drawings. This section also includes information on GSFIC processes which the Design Professional shall adhere to during the construction phase of a project.

# 4.2 CONSTRUCTION PHASE DEFINED

During the bidding phase, the Design Professional is engaged in reviewing and approving alternate products, issuing addenda and assisting the Owner in tabulation of bids. For Design-Bid- Build Projects, the Construction Phase begins with the award of the Construction Contract, issuance of Notice to Proceed and authorization from the Owner to the Design Professional to commence Construction Phase Services.

For Construction Management (CM/GC) and Design-Build Projects, the Construction Phase begins with the issuance of the first Component Change Order (CCO) for construction phase services.

# 4.3 COMMUNICATION CHANNELS

The Construction Professional is directed in the Construction Agreement regarding communications, meetings, submittals and teamwork/partnering with the Project Team consisting of the Owner, Using Agency, Design Professional and Construction Professional. The Owner will assign a Project Manager to promote these teamwork objectives. It is critically important to the success of any project that the Design Professional, Construction Professional and Owner's representatives (Project Manager,

Contract Compliance Specialist and Using Agency Authorized Representative) maintain and promote positive and effective communication (both written, electronic and verbal) among the Project Team Members. The Owner's Project Manager should be copied on all communication and correspondence related to the Project.

## 4.4 EVALUATIONS OF THE WORK BY DESIGN PROFESSIONAL AND CONSULTANTS

The Design Professional Contract describes the services required of the Design Professional and Consultants during the Construction phase of the Project. The frequency and content of site evaluations of the work are the responsibility of the Design Professional and shall be performed as necessary to:

- Confirm the Work complies with the Contract Documents and applicable codes (including acceptance of written reports of inspections by regulatory agencies)
- Perform other inspections as stipulated in the Contract Documents
- Inspect Work prior to covering
- Certify Work for Applications for Payment
- Certify Work for Material Completion
- Certify Work for Final Completion.

The Design Professional Contract also provides that the Design Professional and consultants shall contact the Owner's Contract Compliance Specialist and CM/GC at each Site visit and shall maintain a log of all its visits by discipline; and that written reports of field observations and evaluations shall be provided to the Construction Professional and Owner within seven (7) days of any Site visit. A monthly summary report shall be provided to the Owner with copy to the Construction Professional.

## 4.4.1 Required Code Inspections

<u>Building Official Inspections</u>. In addition to regular site visits, evaluations and observation of the Work, the Design Professional shall perform inspections as identified in the applicable Building Codes as "Building Official," "Authority Having Jurisdiction," or "required" inspections. The Design Professional shall refer any requests for code variances to the Owner. The inspections performed by the Design Professional, and coordinated with notification from the Construction Professional shall include (but not be limited to) all inspections required by the applicable codes and as further described below:

## **4.4.1.1** <u>General Construction</u>:

• <u>Footing and Foundation inspection</u>. Footing and foundation inspections shall be made after excavations for footings to be constructed are complete and any required reinforcing steel is in place.

• <u>Concrete slab and under-floor inspection.</u> Concrete slab and under-floor inspections shall be made after in-slab or under-floor reinforcing steel and building service equipment, conduit, piping accessories and other ancillary equipment items are in place, but before any concrete is placed or floor sheathing installed, including the sub-floor.

• <u>Frame inspection</u>. Framing inspections shall be made after the roof deck or sheathing, all framing, fire-blocking and bracing are in place and pipes, chimneys and vents to be concealed are complete and the rough electrical, plumbing, heating wires, pipes and ducts are approved.

• <u>Lath and gypsum board inspection (Fire Rated Walls).</u> Lath and gypsum board inspections shall be made after lathing and gypsum board, interior and exterior, is in place, but before any plastering is

applied or gypsum board joints and fasteners are taped and finished. Inspection of joints and penetrations in fire-resistance-rated assemblies shall be inspected prior to concealing.

• Energy efficiency inspections. Inspections shall be made to determine compliance with Section 713 of the International Building Code with Georgia Amendments Chapter 13 and shall include, but not be limited to, inspections for: envelope insulation R and U value, duct system R value, and HVAC and water-heating equipment efficiency.

• <u>Special Inspections.</u> The Design Professional shall verify the required special inspections as required by Section 1704 of the International Building Code with Georgia Amendments (see Section 1.1.2.5) review and assimilate the final report of special inspections with the Design Professional's Certificate of Material Completion.

- **4.4.1.2** <u>Electrical and Telecommunications Inspections.</u> Inspections shall be made of electrical and telecommunications systems to confirm compliance with the National Electrical Code with Georgia Amendments (NFPA 70) and include but are not limited to:
  - <u>Underground Inspection</u>: Electrical and telecommunication systems after underground components are installed and bedded in trenches or ditches and prior to placement of backfill.
  - <u>In-Slab Rough-in</u>: Electrical and telecommunication systems installed in slabs prior to placement of concrete.
  - <u>Wall and Ceiling Rough-in</u>: Electrical and telecommunication systems installed in walls and above ceilings prior to cover-up.
  - <u>Power Distribution Equipment</u>: Electrical switchgear, switchboards, distribution panels, branch circuit panels, automatic transfer switches, dry-type transformers, and motor control centers after all components are in-place but before covers are installed.
  - <u>Wiring Devices and Methods</u>: Electrical feeder and branch circuit wiring, devices, and device operation.
  - <u>Emergency Systems</u>: Electrical emergency systems and device operation.
  - <u>Lighting control systems</u>: Lighting control systems and device operation.
  - <u>Labeling</u>: Electrical system identification and warning labeling.
- **4.4.1.3** <u>Fire Alarm System Inspections.</u> Testing and Inspections of completed systems shall be performed in the presence of the Design Professional to confirm compliance with the National Fire Alarm Code (NFPA 72) and referenced in the Georgia State Life Safety Code (NFPA 101).
- **4.4.1.4** <u>Mechanical Inspections.</u> Required inspections shall be made of mechanical systems to confirm compliance with the International Mechanical Code with Georgia Amendments and include but are not limited to:
  - <u>Underground Inspections</u>; After underground piping is installed and bedded in trenches or ditches and prior to placement of backfill.
  - <u>Rough-in Inspection</u>: After walls, floors, roof framing, fire blocking, bracing, ductwork, piping, and other components of the mechanical system to be concealed in the completed structure are complete prior to installation of wall or ceiling membranes.

- <u>Pressure Tests</u>: Witness all required pressure testing of below grade and above grade piping.
- **4.4.1.5** <u>Plumbing Inspections</u>. Required inspections shall be made of plumbing systems to confirm compliance with the International Plumbing Code with Georgia Amendments and include but are not limited to:
  - <u>Underground Inspection</u>: After underground piping is installed and bedded in trenches or ditches and prior to placement of backfill.
  - <u>Rough-in Inspection and testing</u>: After walls, floors, roof framing, fire blocking, draft-stopping, bracing, sanitary, storm, and water distribution piping, and other components of the plumbing system to be concealed in the completed structure are complete prior to installation of wall and ceiling membranes.
  - <u>Pressure Tests</u>: Witness all required pressure testing of below grade and above grade piping.
- **4.4.1.6** <u>Fuel Gas Inspections.</u> Required inspections shall be made of Fuel Gas systems to confirm compliance with the International Fuel Gas Code with Georgia Amendments and include but are not limited to:
  - <u>Underground Inspection</u>: After underground piping is installed and bedded in trenches or ditches and prior to placement of backfill.
  - <u>Rough-in Inspection and testing</u>: After walls, floors, roof framing, fire blocking, draft-stopping, bracing, and other components of the fuel gas piping system are complete prior to installation of wall or ceiling membranes.
  - <u>Pressure Tests</u>: Witness all required pressure testing of below grade and above grade piping.

# 4.4.2 SPECIAL INSPECTIONS

- **4.4.2.1** Special Inspections (General): Refer to Section 2.2.7 and see <u>GSFIC Special Inspection Guidelines</u> for guidance on coordinating Special Inspections during the Construction Phase. The Design Professional is responsible for managing and coordinating the efforts of the various Special Inspectors or agents. The Design Professional may designate a single Special Inspector to oversee the process on his behalf; however the Design Professional remains the primary contact for GSFIC and is responsible for the collection and distribution of required forms and reports.
- **4.4.2.2** Final Report of Special Inspections: Prior to issuing the Design Professional's Certificate of Material Completion, the Design Professional shall obtain and review the Final Report of Special Inspections.

## 4.4.3 OTHER TESTS AND INSPECTIONS

The Design Professional shall ensure all other tests and inspections as required by the Contract Documents, applicable codes and other requirements are performed. Examples include:

- Carpet Testing (See Paragraph 2.4.5)
- BMP Installation within seven (7) days after initial construction operations (Erosion, Sedimentation & Pollution Control Plan)
- HVAC Test and Balance

## 4.5 CHANGE ORDERS

All Change Orders are issued by the Owner using the GSFIC "Two Step" process. Requests for Change Orders may be initiated by the Design Professional, Construction Professional or Owner. Change Orders are used to amend the Construction Agreement whenever there is a changed condition as to the Contract Documents (scope), Contract Time (Material Completion Date) or Contract Sum (compensation).

Most commonly, such change orders fall under one of these three categories:

- 1. Governmental -Changes in applicable codes or requirements of regulatory agencies.
- 2. Errors and Omissions Defects in the plans and specifications
- 3. Unforeseen job site conditions Hidden or subsurface conditions not discernable to the Construction Professional at contract execution

Change Orders are also issued to provide for interim payment of a Force Account Authorization or to confirm final contract adjustments for "allowances". Most common "allowances" are in respect to unsuitable soils, pile foundations, rock removal and similar sub-surface (indeterminate quantity items).

Change Orders are also issued to confirm settlement of a Claim, for acceptance of a Non-Compliance Order and other matters.

It is the policy of the Owner to issue Change Orders promptly for any bone-fide cause. Change Order requests should not be delayed, deferred or "grouped". The Design Professional is required to provide the necessary design documents for each Change Order and to recommend to the Owner as to the adjustments to the Construction Agreement (including cost and any time extension) are reasonable and appropriate.

## 4.6 NOTICES OF NON-COMPLIANCE

The Design Professional issues Notices of Non-Compliance whenever the work deviates from the Construction Documents. As a practical matter, such observations and documentation of contract deviations are noted on field reports from periodic inspections and in most cases are resolved timely by the Construction Professional. The more formal "Notice of Non-Compliance" should be used whenever the scope of the deviation is significant, may result in further damage or safety concern, represents a significant cost impact to the Owner or similar concern where it is in all parties interests to notify, document and follow-through with required corrections.

Notices of Non-Compliance are also issued by the Design Professional if the Construction Professional falls behind schedule or fails to complete a plan of corrective action regarding a breach of the schedule.

Finally, the inspections for Material Completion resulting in a "Punchlist" are all conformed to a final Notice of Non-Compliance.

If the Construction Professional fails to correct a Notice of Non-Compliance within the stipulated correction period, the Design Professional may recommend and the Owner may reduce the amount in question from the Construction Professional's Application for Payment.

# 4.7 REQUESTS FOR INFORMATION (RFI)

In accordance with the Construction Agreements, the Construction Professional may request clarification for any item of the Construction Documents. Requests for Information must be promptly addressed by the Design Professional within the time stipulated in both the Design Professional and Construction Agreements to avoid exposing the Owner to claims for delay. Periodic meeting with the Owner, Design Professional and Construction Professional (OAC Meetings) should have the RFI Submittal Log as a standing agenda item.

If an RFI discloses the need for a Change Order, the Design Professional shall promptly notify the Owner's Project Manager to commence the Change Order Process.

# 4.8 SHOP DRAWINGS AND SUBMITTALS

The Construction Professional is required to submit a Shop Drawing and Submittal Schedule for review and approval by the Design Professional as one of the Pre-construction requirements. Once approved, the Shop Drawing and Submittal Schedule must be closely administered by both Construction Professional and Design Professional.

Show Drawings are not to be used to correct errors or omission in the contract documents. If an error or omission exists, a Change Order should be used to correct the deficiency.

Any element of the work that the Design Professional issues as a "Performance Specification" requiring the stamp and seal of a specialty design architect or engineer must be carefully reviewed during the Shop Drawing Submittal Process. The Design Professional remains responsible for the complete design of the project and certification at Material Completion all work has been constructed in accordance with the Construction Documents and in accordance with all applicable and designated codes. This requirement applies additionally to elements of the fire alarm and fire sprinkler systems which require pre-approval from the State Fire Marshal.

# 4.9 APPROVAL OF SUBSTITUTE PRODUCTS (CM/GC AND DESIGN-BUILD)

On CM/GC and Design-Build Projects, if proposed Trade Contractors and Trade Suppliers request authorization to propose and install products of manufactures different from those described in the approved plans and specifications (Component Construction Documents or GMP Change Order Documents), the Design Professional shall coordinate with the Construction Professional to approve substitute products as follows:

a. <u>During CM/GC procurement of a Component</u>. If bidders (Trade Contractors/Trade Suppliers) to the CM/GC request a substitute product, the CM/GC shall coordinate the Request for Information (RFI) to the Design Professional the result of which shall be communicated to all prospective

bidders. If approved, the Design Professional shall include this additional product in the final Construction Documents.

- b. <u>During CM/GC procurement of the Work after GMP but before Construction</u> <u>Documents Change Order.</u> If bidders (Trade Contractors/Trade Suppliers) to the CM/GC request a substitute product, the CM/GC shall coordinate the request of this information in an RFI to the Design Professional the result of which shall be communicated to all prospective bidders for that element of the Work. If approved, the Design Professional shall include this additional product in the final Construction Documents.
- c. <u>After execution of the Construction Documents Change Order.</u> Requests by the CM/GC for a substitute product will be reviewed by the Design Professional and if approved will be confirmed by a Change Order to the CM/GC Contract.

END OF PROCESS GUIDE