Guidelines for Predesign of Major Capital Projects

Office of Planning and Budget
and the
Georgia State Financing and Investment Commission

April 2001

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Preface:

This edition of the Predesign Guidelines is an update to the July 2000 edition. Primarily it involves clarifications to the text. In addition, the following are new and significant enhancements to this version, based on recent state experience, which will assist agencies conducting predesign studies:

- Revision of the **Project Implementation Plan Summary**, shown as Figure 3
- Inclusion of "**Exterior Space Program and Requirements**" guidance in the Program Analysis section
- Inclusion of a **Summary of Key Cost-Related Factors and Features**, shown as Figure 11
- Revision of the **Total Project Cost Summation** presentation, shown as Figure 14
- Inclusion of example **Predesign Services Contracts**, Appendix A
- Inclusion of an **Agency Predesign Checklist**, Appendix B

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CONTENTS

I. INTRODUCTION

Background

Over the past several years there has been considerable discussion among state agencies, legislative committees, and the private sector related to improving the state's construction management process. There is general agreement that appropriations for design and construction of major capital projects sometimes occurred with key aspects of the project not fully identified or defined at the time the project funding was requested or approved. These include:

- Comprehensive identification of the agency's specific functional, technical, and space requirements,
- Site selection and complete assessment of existing conditions,
- Project cost estimate based on the complete facility scope and site specific conditions,
- Identification of the intended project delivery approach, and
- Intended project schedule.

Problems resulting from this lack of definition often included numerous and significant changes during the design and construction phases as additional user requirements were identified and the project scope was either reduced to fit an insufficient budget, or sometimes enhanced to fit an available project budget surplus.

Purpose of Predesign

The purpose of conducting a predesign study is, prior to final project approval, to:

1. Reduce the majority of project uncertainty related to:
   - Scope,
   - Major project/funding milestones,
   - Selection of project delivery method for construction, and
   - Cost;
2. Establish an appropriate total project budget for the complete implementation of the project; and
3. Document the above information into a single comprehensive report.

Conducting predesign as a distinct project phase is intended, and should be embraced by agencies, as an "upfront" expenditure of time, effort, and resources to advance the project, rather than as imposed "additional" work. All of the predesign items have to be addressed at some point prior to construction, even if predesign does not exist as a separate activity. It is anticipated that the early determination of project requirements, constraints, options, analyses, decisions, and documentation that are an integral part of predesign will not only assist, but also actually expedite, a project to its timely and successful completion, and that more fully meets the needs of its users.

Defining Predesign

In 1998 the Official Code of Georgia Annotated (OCGA) was revised [§50-22-2(2.1)] to recognize the importance of predesign in the construction process, and provides the following definition:

> **Predesign** means the phase of an activity [project] where requirements programming, site analysis, and other appropriate studies are conducted to develop essential information, including cost

estimates, to support and advance the decision-making process prior to the design and implementation phases of an activity.

Predesign advances the project by performing needed analyses and lays the foundation of information to enable the eventual design team to respond effectively and efficiently to an agency's documented requirements. It also provides an opportunity to conduct and document trade-off analyses related to scope, phasing, site options, and alternatives more cost-effectively than during design.

When funded as a separate activity, predesign is not, however, to be considered an advance commitment for subsequent project funding for design and construction. Rather, it provides the necessary information to support the decision-making process regarding subsequent project approval and funding actions.

The predesign activity assumes an orderly project development process where a project moves from the definition of need based on the agency's stated mission, goals and objectives, through predesign, programming, design, construction and occupancy. This also assumes that an agency's capital outlay request from year to year will follow the same basic process and that there will be few, if any, requests for design and construction funds for projects for which there had been no request for predesign funds in the previous budget cycle. If a project is not funded in one budget cycle, it will continue to be requested in the next budget cycle, based on the assumption that the need still exists.

Management of the Predesign Process

Depending on the size of the project and its complexity, the agency may decide to prepare the entire study with its own personnel, contract with a consultant to prepare the report in its entirety or, utilizing in-house personnel to manage and coordinate the process, engage separate consultants for each specialty required in the production of the study. In any event, the final study is submitted by the agency requesting funds, not the consultant, if any, preparing the report.

Regardless of the number of entities utilized to prepare the overall report, *the requesting agency is responsible for insuring that individual sections have been coordinated and are consistent.* A primary example of where this coordination effort is critical is verifying that the final information included in the Program Analysis section is consistent with the final information submitted in the Project Cost Estimate. It is important to understand and realize that, regardless of whether the information included in the predesign report is obtained with in-house personnel, by an outside consultant, or by a combination of both, the responsibility for the adequacy, compilation, and overall completeness of the final document rests with the state agency having the report prepared. Consequently, it is incumbent upon agency personnel to carefully review and approve the complete report before sending it outside of the agency for any review, approval, or any other use.

If the agency elects to seek an outside consultant, before contracting with one, the agency must first make a preliminary determination as to whether the estimated fees and investigative costs for the study are likely to exceed the statutory thresholds under OCGA §50-22 which specifies when an agency must employ a public selection process. A suitably detailed agreement should be prepared, including a schedule of performance and a recital of milestone dates with accompanying fee payments. In most cases the agency should reference items from these

Predesign Guidelines in establishing the specific services to be provided and the resulting contractual deliverables. Example contracts for predesign services are included in Appendix A.

Agencies conducting predesign for the first time, or with unfamiliar personnel, should contact or meet with the Office of Planning and Budget (OPB) or the Georgia State Financing and Investment Commission (GSFIC) early in the process to clarify any questions related to the guidelines. It is also encouraged that the agency fully present the predesign requirements and expectations to consultants so that they have a complete understanding of anticipated work prior to finalizing the contract for services.

Future Additions to the Guidelines

The Office of Planning and Budget and the Georgia State Financing and Investment Commission have coordinated the preparation of this guidance material. Its development included input and review of predesign guidance from other states, assistance from state agencies, and discussions with private sector and professional architecture and engineering organization representatives, to provide a common and general statewide framework of what constitutes predesign. It is envisioned that future supplements to this material will provide additional guidance and suggestions on methodologies and approaches to perform the various analyses.

The major portion of the document assumes that the predesign study is being performed for the proposed construction of a new facility, as opposed to the renovation or restoration of an existing facility. For renovation projects close attention should be paid to Section V of the manual. It further presumes that the traditional design/bid/build method of project delivery method is used.

General Comments

Individual departments and agencies may have their own predesign guidelines and/or requirements. It is envisioned that they can be combined with this material to result in a single predesign study and report. Agencies should also consider coordinating predesign with other necessary studies appropriate during this phase of project development. This includes compliance with the Georgia Environmental Policy Act regarding information to support an initial determination if the proposed project may significantly adversely affect the quality of the environment.

Questions or comments regarding this material should be addressed to Office of Planning and Budget, Capital Budgeting Section, at (404) 656-6364 or e-mailed to **NIRN*@mail.opb.state.ga.us***. This report is available on the Internet from the Office of Planning and Budget at ***www.opb.state.ga.us/capital_budgeting.htm.***

These predesign guidelines are also a chapter in the state's construction manual being prepared by GSFIC. For further information on the state construction manual, contact GSFIC at 404-463-8599 or e-mail ***lholland@gsfic.state.ga.us.***

II. GETTING READY FOR PREDESIGN

The very name of "predesign" implies that it precedes the formal design activity. Predesign is not, however, the first thing that should occur in the life of a capital outlay project. Each agency has its own unique mission statement and has defined its goals, both long and short term. In order to achieve these goals and objectives, the agency will require physical space for its operations. The needs analysis and planning for the acquisition or construction of this space is a major activity, which should occur before beginning predesign. Although certainly not a complete list, the following are samples of the types of questions that should be asked and the decisions documented **BEFORE** proceeding with a predesign effort.

1. **CONSISTENCY WITH AGENCY AND STATE STRATEGIC PLANS**

The proposed project should be consistent with, and directly support, the agency's mission, goals, objectives, programs, and plans, as well as the overall state strategic plan.

2. **NEW SPACE OR RENOVATION OF EXISTING SPACE**

Is there space currently available that can or should be renovated to accommodate the required space needs? If so, can the project be phased so that disruption of existing functions will be kept to a minimum? Is the cost of renovation more or less cost-effective than new construction? Are there ADA, hazardous materials, or historical concerns in the proposed renovation? Is suitable vacant land available in the area where the space is needed?

3. **LEASE, BUILD, OR BUY**

There are both advantages and disadvantages to an agency's "owning" its own space. For example, who provides for building maintenance and repairs, building security, custodial, grounds maintenance, elevator maintenance and other services? Is reasonably priced leased space available in the location where the space is needed? Is the space to house a unique function that will require special design features and construction techniques? Is there existing suitable space available in the area where the space is needed that can be purchased and renovated? Has the Space Management Division of the Department of Administrative Services been consulted?

4. **STAND ALONE OR CO-LOCATE WITH ANOTHER AGENCY**

Are there relationships with another local, state, or Federal agency(s) that would make co-location a benefit to both? Is there existing available space in the custody of another agency in the area where the space is needed? Has the statewide inventory of buildings been reviewed to see if existing space, including state-owned historic properties, is available?

5. REORGANIZATION, REASSIGNMENT, OR PRIVATIZATION

Are there opportunities to provide for the needed space through reorganization or reassignment of existing duties within the agency? Could existing space be more efficiently utilized? Are there functions, either new or existing, which could be privatized that would reduce the need for additional space?

III. DEFINITION OF A PREDESIGN STUDY

Predesign is the phase in the capital project development process that serves as a bridge between project planning activities, where a project is initially defined in response to an identified capital need, and the formal design phase, where activities are conducted to develop detailed plans and specifications which enable the construction of an approved project. **Figure 1** shows the relationship of predesign as part of the overall capital project development process.

Capital projects are initially identified in the **needs** phase and then given conceptual definition in the **planning** phase relative to general project type, size, location, and timing. For example, an agency may determine the need for new facilities to be completed and in operation for 5,000 additional beds over the next 10 years. The planning phase will address the number of facilities, the approximate size of each, their potential geographic location by region, county, etc., and their sequencing and timetable. Often projects in the planning phase are conceptually defined in broad terms, identified by an approximate total gross square footage (or some other unit, such as number of beds) and an order-of-magnitude cost based on a single "average" unit cost (such as "cost per square foot" or "cost per bed"). Also, for some agencies and project types, planning activities may include evaluation of alternatives such as build *vs*. lease, renovate *vs*. build new, and privatization options.

Projects identified in the planning phase for potential capital funding should be included in the five-year Capital Improvement Program as an early indication of future capital projects and associated funding needs. Experience has shown that although these conceptual planning definitions and rough cost "guesstimates" are sufficient for discussion and planning purposes, they are not really suitable for documenting a project's complete scope, nor are they an accurate representation of its likely complete cost. Early project identification with an overall implementation timetable does however establish an available time window to complete additional project analyses and refinement (**predesign**) to develop the project budget request for funding design and construction. Thus, major capital projects proposed for design and construction funding several years out are potential candidates for **predesign** to support further development of the project scope, site selection, and project cost estimate. This information is necessary to adequately define the project and for making subsequent recommendation, approval, and budget decisions.

Predesign should provide the following information in a manner, and at a level of detail, appropriate for a particular project's type, complexity, size, and site characteristics:

- Summary of basis of project need and expected occupant use, and prior planning efforts supporting the project
- Details related to the project scope
    - Documentation of user requirements (known existing and potential future)
    - Architectural/engineering program related to space, special systems, and equipment to meet those requirements
- Identification and evaluation of potential site(s) and analysis of existing conditions
- Construction cost and total project cost estimates based on the project scope, site characteristics, and expected implementation schedule
- Proposed project management and administration process (i.e., method of construction delivery)
- Project implementation plan showing the project schedule and funding requirements to complete the project.

Figure 1
Capital Project Development Process (Design/Bid/Build Delivery Method)

Phase	Associated Activities	Expected Results and Products
Identification of Need	- Strategic plans - Condition assessments - Legislative actions - Facility master plans - Service population criteria and projections - Programmatic initiatives	Determination of the appropriate role of capital projects in addressing short term and long range agency needs.
Project Identification and Planning	- Validate previous phase information - Evaluation of potential alternatives - Relative project urgency and priority - Conceptual project definition and cost magnitude for out-year projects - Development and annual update of five year Capital Improvement Program (CIP)	Projects included in five-year CIP. Project sequencing based on project type and magnitude, urgency and priority, lead time of support activities, desired completion date, and reasonable expectation of overall funding availability. Request predesign for appropriate projects.
Predesign	- Validate previous phase information - Architectural space and engineering programs documenting specific user requirements and operational intent - Analysis of site specific characteristics and other existing conditions - Verify site ownership - Complete GA Historic Preservation Act requirements (OCGA 12-3-55 and 56) - Complete GA Environmental Policy Act requirements (OCGA 12-16-1) - Cost estimate based on proposed site, detailed scope, and other specific requirements and considerations - Major project & funding milestones used to prepare budget requests - Project delivery method recommendation	Determinations of appropriate site, project scope, and cost estimate suitable for making budgetary decisions on continuing or funding the design and construction phases. Refine project information in the CIP. Request design and construction funding if not previously approved. Recommended project delivery method selected.
Design	- Validate previous phase information - Engage design professional - Acquisition of site, if necessary - Finalize design solution to meet user needs - Prepare construction drawings & specifications (bid documents) - Initiate commissioning reviews - Confirm project design within stated cost limitation at preliminary, pre-final, and final design stages - Obtain all regulatory and using agency reviews and approvals	Design based on previous predesign programming and within approved budget to smoothly advance project into construction without adverse scope, budget, or schedule changes.
Bid and Award	- Solicit bids and confirm within approved project budget - Award contract(s)	Project awarded to lowest responsible and responsive bidder within the budgeted cost.
Construction	- Project constructed in accordance with plans & specifications - Loose equipment and furniture specified, procured and installed - Inspection and testing to insure conformance with plans and specifications - Continue commissioning activities	Project managed within approved scope, budget, and schedule. Adverse and unanticipated changes minimized.
Occupancy	- Using agency takes possession - Complete commissioning activities	Project in operation with all systems and subsystems fully functional, meeting user needs and operational intent.

IV. CONTENTS OF A PREDESIGN STUDY

This document presents state guidelines on the content and format of a predesign study for major capital projects. These guidelines should be applied with appropriate flexibility based on the project's specific circumstances. For example, a site that is well known and sufficiently documented may not need a complete new geo-technical study during predesign. Special programs, such as laboratories, auditoriums, etc., may need extra study. This predesign guidance outlines the topics and issues to be addressed as part of a predesign study. It is not all-inclusive and additional items may be identified and addressed related to unique topics or aspects of specific projects. **Figure 2** is an example of an outline of a predesign study.

The level of consultant support needed to complete the predesign study should be based on the expertise and capabilities of the agency's staff and the complexity of the project. The documentation developed in the predesign phase should result in a project scope, major project/funding milestones, and project cost definition. It should contain sufficient detail to support decision-making regarding project advancement and enable an architect/engineering team to commit to development of a design, completion of contract documents, and assumption of contract administration responsibility within the estimated cost.

The following sections provide guidance related to each suggested chapter of a predesign study report as `noted in **Figure 2**.

1. EXECUTIVE SUMMARY

The executive summary section presents essential and high-level information about the project. It summarizes material that is presented in the subsequent sections related to the purpose and function of the project, description of project type, size (e.g., gross square footage, number of floors, etc.), location, major project funding amounts and milestones, recommended project delivery method, and construction cost estimate and total project cost estimate. The information contained in the executive summary should not require a technical background to understand. Significant unresolved or incomplete issues to be addressed in subsequent project activities (such as plans to prepare an environmental impacts report) should also be identified. The one page project implementation plan summary prepared and presented in the Project Analyses section should also be included in the Executive Summary section. See **Figure 3** for an example of a one-page project implementation plan summary. Generally, the executive summary should not be any longer than three pages in length.

2. PROJECT ANALYSIS

The project analysis section describes the scope of the project, provides background information, documents the project need, identifies alternatives considered to meet the need, and presents how the proposed solution meets those needs.

Figure 2
Example - Outline of a Predesign Study

Predesign Study

1. **Table of Contents**

2. **Executive Summary**

3. **Project Analysis**

   - **Project Description**
   - **Project Scope**
   - **Background**
   - **Expected Use and Users**
   - **Analysis**
   - **Project Implementation Plan**
     - **Management Plan**
     - **Schedule**
     - **Funding Plan**

4. **Program Analysis**

   - **Architectural and Occupancy Requirements**
   - **Total Gross Space Program**
   - **Relation Matrices**
   - **Special Performance Requirements**
   - **Loose Equipment and Furniture**
   - **Fixed Equipment and Fixtures**
   - **Exterior Space Program and Requirements**

5. **Site Analysis**

   - **Existing Conditions and Suitability**
   - **Evaluation of Site to Meet Requirements**

6. **Project Cost Estimate**

   - **Design Assumptions and Narrative Specifications**
   - **Construction Cost Estimate**
   - **Total Project Cost**

7. **Operations and Maintenance Impacts**

8. **Project Drawings/Diagrams**

9. **Appendix**

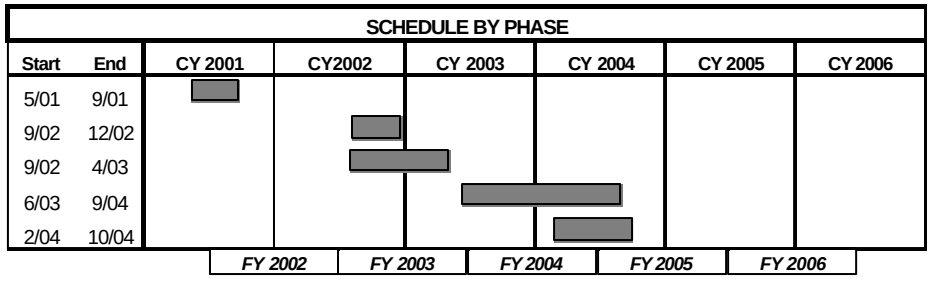
Figure 3
Example – Project Implementation Plan Summary

	COST BY ITEM		COST BY PHASE				
Cost Component	**%**	**Amount**	**Predesign**	**Property Acq**	**Design**	**Construction**	**Equipment**
Predesign		$55,000	$55,000				
Property Acquisition		$500,000		$500,000			
Total Construction Cost [TCC] (escalated)		$5,800,000				$5,800,000	
A/E Fees (% of TCC)	6.0%	$348,000			$243,600	$104,400	
Inspection, Testing, Surveys (% of TCC)	2.0%	$116,000			$34,800	$81,200	
Construction Monitoring [zero $ if GSFIC managed]		$70,000				$70,000	
Loose Equipment & Furniture		$1,105,000					$1,105,000
Environmental / Archeological Studies		$10,000			$10,000		
Commissioning (% of TCC)	1.5%	$87,000			$17,400	$69,600	
Other - *Sewer Agreement with City*		$100,000				$100,000	
Project Contingency	5.0%	$406,800		$25,000	$15,290	$311,260	$55,250
TOTAL PROJECT COST		**$8,597,800**	$55,000	$525,000	$321,090	$6,536,460	$1,160,250

SCHEDULE

Delivery Method: Design-Bid-Build

	Start	End
Predesign	5/01	9/01
Land Acquisition	9/02	12/02
Design	9/02	4/03
Construction	6/03	9/04
Loose Equip. (procure and install)	2/04	10/04



	FUNDING	FISCAL YEAR	FUNDING BY PHASE				
FUNDING PLAN	**AVAILABLE**	**FUNDING**	**Predesign**	**Property Acq**	**Design**	**Construction**	**Equipment**
Amended FY 2001 - Actual	5/01	$55,000	$55,000				
Planned Request - FY 2003	*9/02*	*$7,382,550*		$525,000	$321,090	$6,536,460	
Planned Request - FY 2004	*9/03*	*$1,160,250*					$1,160,250
TOTAL PROJECT FUNDING		**$8,597,800**					

The project analysis section should discuss the following topics as appropriate to the project:

Project Description

- Agency Name - Name of agency requesting funding.
- Project Title - Titles should convey location, project type, and scope.
- Agency Contact - Name, title, address, telephone, and email address of person(s) responsible for preparation of the predesign study and overall project management.
- Consultant Contacts – Firm, address, telephone, and email address of key consultants conducting the predesign study.

Project Scope

- Mission - Brief mission statement of the agency as it relates to the requested facility.
- Goals and objectives - Describe the specific goals and objectives that will be met by this project.
  - Administration - Policy, program, and service
  - Facility - Technical and facility needs
  - Other
- Design Philosophy **-** Brief statement of the agency's reasoning for the type of design recommended in the document. For example, if the building is an addition to an existing building, the design should complement the existing structure. If the building is a new building on an existing campus, is the intent to conform to previous buildings or to create a "flagship" building?
- Organizational Culture - What type of culture is supported and fostered by the facility (e.g., open vs. secured, formal vs. informal)?
- Operational Intent - Brief statement on the operational intent of the project. For example, will it be open twenty-four hours a day, seven days a week, or eight hours a day for weekdays only? Will it be open to the general public, clients, or restricted to state employees? What type of organizational culture should the facility support

Background

- Existing Facilities - Description of any other existing facilities that will be directly or indirectly affected by this project (amount of freed up space made available by relocation to proposed facility, addition to an existing facility, renovation to or demolition of an existing facility, changes in egress to adjacent facilities, etc.).
- Proposed project's relationship to agency and campus strategic and master plans.
- Previous Action Taken – Provide history of project planning. Describe if the project is in the agency's current five-year capital plan. If not, provide a short explanation.

Expected Use and Users (staff, visitors, clients, etc.)

- Describe the proposed uses of the facility (i.e., classroom, office, etc*.)* and the type and daily and peak number of intended users and occupants by category (i.e., by state employees, general public, agency clients, students, etc*.)*

Analysis

- Purpose of the Project - Problem Statement - A description that defines the specific problem or objective that creates the need for the project. The project should be consistent with the function, objectives, and policies of the agency and the state.
- Project Proposal - Solution - Describe in brief and accurate detail the proposed solution to the problem and quantify how the proposed project meets those short term and long range objectives. Identify the total project cost and anticipated project milestones, including anticipated date of completion. Include a discussion of the major project/funding milestones planned for the proposed project.
- Alternatives Considered - A brief description of major alternatives considered and the reasons for rejecting alternatives not recommended, such as renovation *vs*. new construction, or leasing, building "massing" layouts, or program configurations.
- Participating Organizations - List any other state, federal, or local agencies or public or private sector organizations directly affected by, or potentially involved in, this project related to implementation, reviews, approvals, use, or funding.

Project Implementation Plan

In addition to the predesign phase being used to develop key project information, such as the project scope and program requirements, site analysis, and cost estimates, another critical aspect of the predesign phase is to pull all this information together in a project implementation plan. The project implementation plan presents how the project is expected to be managed and funded, and its overall schedule.

- Management Plan
  - Management Organization - This section describes the agency's proposed intent in regards to the management of the design and construction of the project. A description of the staff's technical capability, experience, and staffing needs in reviewing and approving design and construction work should be included. Roles and responsibilities between agency field/campus and central offices should be noted. Any costs for special consultant services should be included in the project cost estimate.
  - Methods of Accomplishment - Identify the proposed project delivery method to be used. If an alternative to the traditional design-bid-build delivery method is proposed, identify the alternative project delivery method recommended and the rationale and basis for its selection. The selection of an alternative delivery method may influence the project cost, schedule, and timing of required funding actions. If building commissioning is included in the project, discuss how it will be performed.
- Schedule

  A reasonable milestone and duration master schedule for the project, including land acquisition, design, construction, and loose equipment and furniture installation. The schedule should be compatible with the recommended project delivery method. Overly optimistic compaction of design or construction phases due to unrealistic schedule durations or unlikely funding actions should be avoided.
- Funding Plan

  Include a funding plan showing approved, pending approval, and proposed funding actions and amounts by fiscal year to support the planned project implementation schedule, and that is consistent with the total project cost estimate. Agencies should coordinate with the Office of Planning and Budget if there are any questions regarding development of the funding plan.

The predesign should include a concise summary of the project implementation plan as shown in **Figure 3**. This one page summary first restates the Total Project Cost and shows the project costs distributed by phase. The schedule notes the start and end dates for each phase, which is also shown graphically as a simple bar chart. The funding plan portion shows the required funding for each phase [consistent with the cost distribution by phase] and by planned funding action and fiscal year needed to support the schedule.

Note that the proposed delivery method may impact the schedule and funding plan. For example, to support design-bid-build delivery, funding may be approved by phases (design and construction) without adversely affecting the schedule. However, to support design/build, generally design and construction phases would be funded together. *The Project Analysis section will require the direct participation of agency staff to present a clear and comprehensive overview of the project consistent with the agency's implementation plans.*

3. PROGRAM ANALYSIS

The programming activity defines the complete and specific needs of the user translated into facilities terms. The program will identify the requirements of all architectural spaces, equipment, and any special needs (i.e., security fencing, surveillance cameras, special ventilation requirements, etc.) which define the project and will be included in the eventual design of the facility. This includes defining a project's functional needs, interior and exterior functional requirements (including space sizes, contents, activities), and relationships. A project program serves not only as a basis for design and a source of information about a project, but is also the basis to develop the estimated construction cost.

The program analysis may be the most extensive and most important section of the predesign study. The requirements should not be unnecessarily restrictive in nature, but should clearly and directly express the existing and future potential needs of the agency. Consultants likely will be needed to conduct or assist in the program analysis. However, it is important that the user agency be heavily involved in the process by providing initial guidance and information and then actively involved in the review of the analysis. All final decisions should be made by the agency.

The State has established guidelines for the allocation of space for various office types (See **Figure 4**). The space guidelines, prepared by the Department of Administrative Services, contain instructions to agencies for their application. Agencies preparing predesign documents should follow these guidelines. If agency or project specific space, parking, telecommunications, or other program standards are used they, should be referenced in this section and explicitly included in the report Appendix.

The program describes the scope (what, and how much) and quality (the level of performance and amenity) to be accommodated. Scope, quality, and site conditions are key factors in establishing the project cost. Programming and costing should be seen as both simultaneous and reciprocal and may involve several iterations as trade-offs and alternatives are developed and considered.

Figure 4
Space Management Policies, Procedures and Guidelines

Extract from DOAS - Space Guidelines

An average of 200 square feet per position shall be the goal in space planning for the typical office environment. The average will fluctuate due to a number of factors. The average will increase due to the inclusion of: board rooms, hearing rooms, large file rooms, computer rooms, large waiting rooms, stairways, elevators, public hallways, restrooms, existing building conditions, etc.

Generally the lower the staff numbers, the higher the average square footage; the higher the staff numbers, the lower the average square footage.

The individual position standards shown below are for planning purposes. They may change due to pre-existing conditions (building structure, fixtures, room enclosures, etc.).

A. Enclosed Offices

Constitutional Officers	400 NSF
Agency Heads	
(more than 800 employees)	400 NSF
(less than 800 employees)	350 NSF
Agency Deputy	
(more than 800 employees)	350 NSF
(less than 800 employees)	300 NSF
Division Directors	
(more than 150 employees)	300 NSF
(50 - 150 employees)	250 NSF
(less than 50 employees)	200 NSF
Deputy Directors, Managers & Supervisors	
(more than 25 employees)	200 NSF
(12 - 25 employees)	175 NSF
(up to 12 employees)	150 NSF
Professional Staff	101 to 120 NSF

B. Open Office System

Manager/Supervisor	125 NSF
Professional	85 NSF
Clerical	50 NSF

C. Common-Function Areas

Conference/Meeting Rooms	
(Average Number of Persons)	20 NSF
Classroom/Training Room	
Per desk or chair	10 NSF
Per desk and chair	20 NSF
Reception Area (Average Visitor Load Per Day)	10 NSF per person
Exhibit Areas	
(internal duplicating, libraries, mail rooms, supply rooms, etc.)	
- Actual measurement of equipment plus circulation	

D. File and Computer Rooms

Determine room size based on equipment and circulation space requirements

The following are some typical programming issues that should be addressed:

Architectural and Occupancy Requirements

- Identify the basic elements and set up the structure and techniques to obtain necessary information from owners, managers, and users - any people with necessary knowledge or significant influence:
  - Owner

    The program must reflect the owner's needs and aspirations, goals, organization, and procedures.
  - Users

    In some projects, the owner is not the project's ultimate user. In these situations, it is important that the programmer understands that the needs and aspirations of the owner and users may be quite different and that both must be recognized in the design. In case of conflict, the owner shall be the final authority.
  - External Requirements and Standards

    Planning and zoning ordinances, building codes, and other regulations all affect facility requirements. At the same time, planning and design standards (such as floor area requirements for auditorium seating, viewing standards for projected media, and utility requirements for laboratories) will establish certain program requirements.
  - Programmer's Experience

    The programmer's experience with the facility type, the owner type, or situation faced by the owner can be invaluable in identifying and presenting options that lie beyond the owner's familiarity. Experienced programmers understand that interactive guidance to owners is central to effective programming and will provide this guidance during the process.

- Prepare a space requirement information outline - Organize the material into small parts related to user interests and to the ways in which the designer will proceed, and then key all information to the outline. (***Figure 5*** *is an example of a room/space data sheet. Agencies are free to use other formats to document the needed information for determining floor space and associated requirements).*
  - Interview the key decision-makers. Organize the material into small parts related to the owner's interests and to the ways in which the designer will proceed, and then key all information to the outline.
  - Document and evaluate:

    Have occupants and decision-makers evaluate the present spaces.

    Start with the user's present building (if one exists); how much space is used by each employee/entity, what works well and what does not.

    Identify existing equipment and furniture types and the likely degree they may be relocated to the new facility.

    Have occupants and decision-makers participate in identifying areas and features to retain or change.

Figure 5

Example - Room/Space Data Sheet

1. Use/Functional Component (Div., Depart., Etc.):	Office of Special Interests
2. Name of space:	Director's office
3. Total number of rooms/spaces like this:	6
4. Occupants per room/space:	1
5. Purpose:	General Office
6. Desired NSF floor area:	240 NSF per space
7. Architectural features:	
a. Ceiling height	9" 0"
b. Suggested materials for	
Floor	Carpet
Walls	Vinyl Paper
Ceiling	Acoustical Tile
c. Acoustical requirements (special)	None
d. Lighting requirements (special)	None
e. Other special requirements	Windows that can be opened
8. Special performance systems and utility requirements:	
a. Telephones	Yes
b. Computer outlet	Yes - back and side wall furthest from door
c. Data cabling	Yes
d. Audio/Visual	Yes - front wall in corner opposite door w/110V outlet
e. Distance learning	N/A
f. Heating, ventilating, air conditioning	Standard
g. Electrical	Duplex outlets every 4 feet on all walls
h. Plumbing	None
i. Environmental	None
j. Hazardous material handling	None
k. Other	Clock outlet on wall above door
l. Security requirements	Card key access
m. Life safety	Standard
n. Noise control	Yes
o. Vibration control	No
p. Hours of operation	Assume 24 hour/7 day week
9. Relationship to other areas:	Close to front of building
10. Fixed equipment:	None
11. Loose equipment and furniture:	New cherry wood desk (1); credenza (1); bookcase (2); high back chair (1); computer (1); visitor chair (2)
12. Codes and regulations; constraints/requirements:	None
13. Comments:	Users would like window in each space

- Explain the amount of contact with the general public and any special requirements for parking, public transportation, etc.
  - Space and use requirements; include projected growth and flexibility to expand.
  - Functional requirements / Common Uses / Shared spaces of each agency.
  - Group like type spaces.
  - Spatial relationships between spaces.
  - People: Number and functional responsibility of personnel.
  - Utilize existing applicable state / agency / industry space standards and guidelines to prepare a detailed list of each space:

    Space title and function

    Size of space based on position / job title

    Efficiency determination: gross vs. net square footage ratio

    Project sequencing constraints and requirements

    Codes/Regulations

    Building and life safety

    Accessibility

Total Gross Space Program

The total area of a building [that area enclosed within the exterior walls] is a combination of the assignable (net) and non-assignable areas of the facility and is generally known as the ”gross area”. For predesign purposes, the gross area may be calculated by multiplying the assignable net area by a “grossing” factor to account for non-assignable spaces that must be accommodated in the building envelope. The selection and application of this factor is both an art and a science and is extremely important in arriving at a relatively accurate overall facility size and its estimated construction cost.

Typically, the grossing factor is intended to cover required constructed space such as walls, columns, mechanical chases, electrical and communications risers, air handler rooms, vestibules, corridors, main restrooms, stairs, elevator shafts and equipment rooms, custodial closets, electrical and communications closets, and main mechanical and electrical rooms that are not part of the net assignable space program. When a facility is programmed in this manner, then it is recommended that a grossing factor from the high end of a published range (see **Figure 6**) be used to ensure that these needs can fit within the total target square gross footage.

Alternatively, accuracy can be enhanced by treating many of these spaces (such as atriums, corridors, restrooms) as net areas and programming each of them by creating individual Room/Space Data Sheets. When programming is pursued in this comprehensive fashion, it is appropriate to use a grossing multiplier from the lower end of a published range since uncertainty has been reduced.

The selection of the appropriate grossing factor should also consider the overall intended spaciousness of the facility and the intensity of staff, client, and visitor volumes and peak circulation requirements. Also, since single floor buildings have no need for stairways and elevators, lower range grossing factors may be more appropriate.

Figure 6

Examples - Building Gross Area Multipliers

Building / Space Type	Illustrative Net to Gross Area Multipliers
Administration Buildings / Normal	1.3 - 1.8
Administration Buildings / Headquarters	1.4 - 1.9
Auditoria	1.3 - 1.6
Classroom Facilities	1.4 - 1.6
Central Energy Plants	1.1 - 1.2
Dormitories	1.3 - 1.6
Food Service Facilities	1.4 - 1.5
Laboratories / Normal	1.3 - 1.6
Laboratories / R&D	1.4 - 1.8
Libraries	1.3 - 1.5
Maintenance Facilities	1.1 - 1.3
Medical Facilities	1.5 - 1.9
Museums	1.3 - 1.5
Recreation Centers	1.3 - 1.6
Warehouses	1.1 - 1.2
Large volume, large circulation buildings	1.3 - 1.5
Large volume, small circulation buildings	1.1 - 1.2

Certain buildings may combine more than one function or primary type of assignable space so that the use of several grossing multipliers for each subtotal of similar net spaces may yield a more accurate gross building prediction than by simply applying a single factor.

Shown in **Figure 6** are illustrative examples of grossing factors for various building/space types along with potential ranges of grossing multipliers. **Figure 7** is an example total gross area computation for a multi-function building, which combines three discreet categories of functional space.

Relation Matrices

To assist the future project designer in achieving functional layouts, it is desirable to record preliminary information about the ideal arrangement among the programmed spaces. Based upon information gathered from future facility users and their current representatives, desired proximity relationships should be converted into an affinity matrix capable of indicating at a glance whether spaces should be adjacent, close, neutrally-placed or remote from one another. An example of such a matrix is shown in **Figure 8** for reference.

Figure 7
Example – Total Gross Area Computation

The following is a calculation for a mixed-function building containing an administration area, classrooms, and a maintenance area (Net areas should be taken from the Room Data Sheets).

Areas	No. Rooms/ Spaces	NSF Per Space	Total NSF	x Grossing Multiplier	GSF
ADMINISTRATION					
Covered Drop Off	1	900	900		
Vestibule	1	80	80		
Lobby and Exhibit	1	250	250		
Receptionist	1	100	100		
Secretary	1	125	125		
Director	1	200	200		
Conference Room	1	300	300		
File Room	1	150	150		
Assistant Director	1	175	175		
Secretary	1	125	125		
Work Room	1	200	200		
Subtotal			**2,605**	**x 1.6**	**4,168**
LEARNING CENTER					
Classrooms	20	800	16,000		
Shared Storage Closets	6	100	600		
Shared Offices	10	175	1,750		
Demonstration Labs	3	750	2,250		
Lab Storage Closets	3	50	150		
Subtotal			**20,750**	**x 1.5**	**31,125**
AREA MAINTENANCE					
Engine Maintenance	1	1275	1,275		
Electric Motor Rebuild	1	650	650		
Maintenance Storage	1	900	900		
Subtotal			**2,825**	**x 1.25**	**3,531**
TOTAL			**26,180**		**38,824**
		Average Building Grossing Factor		**38,824 / 26,180 = 1.48**	

Figure 8
Example - Space Relationship Matrix

Department: Director's Office Complex

	Director's Office	Executive Assistant	Reception	Director's Conference Room	File Room
Director's Office		●	✖	●	
Executive Assistant	●		●	●	●
Reception	✖	●		●	✖
Director's Conference Room	●	●	●		○
File Room		●	✖	○	

□ No significant interaction between spaces
○ Some interaction between spaces
● Strong interaction between spaces
✖ Separation required between spaces

Special Performance Requirements

All special requirements that will define this entire project or specific spaces or functions should be identified. These might include electronic, voice, data, audio visual, communications or other similar provisions as well as zoning, environmental issues, symbolic or aesthetic goals, etc. Specific acoustical or sound separation requirements should be defined, as well as any unusual lighting requirements. Symbolic or aesthetic goals are to be documented, with particular attention being paid to contextual settings or surrounding buildings with which the project is to be compatible. Architectural style, use of materials and detailing may be important considerations during design, and they should be addressed during predesign to a reasonable extent and incorporated in the construction cost estimate.

Any issues which relate to historical districts or landmark building status (in the case of a renovation) should be documented, along with the restrictions that will be placed on the project and the processes and/or agencies involved in securing approvals for the project.

System compatibility issues should be investigated and documented. These issues include a situation in which a project will require the involvement of a specific provider or vendor to insure compatibility of a system. Examples might include, but are not limited to, the use of a specific fire alarm system or HVAC control system to tie in with a system already in use on that campus or in a building.

With respect to the engineering systems of the planned facility, the operational intent of each system is to be defined as fully as possible. Issues such as division of HVAC systems and zoning, controls, exhaust, filtration, ventilation criteria, emergency power requirements, etc., are to be identified and documented with respect to applicable regulations or guidelines as well as the users' requirements.

Examples of special requirements that should be considered include the following:

- Telecommunications Requirements
- Electrical and mechanical systems
    - Energy supply
    - Special HVAC
    - Environmental Needs
    - Ensure adequacy of existing power distribution center where applicable
    - Ensure adequacy of existing heating/cooling plant where applicable
    - Emergency power system justification and requirements
- Storage requirements:
    - Under/Above Ground Storage Tanks (UST/AST)
    - Hazardous material handling/storage
    - Lab storage
    - General purpose storage
    - Special storage
    - Hospital waste storage
        - Bio-hazardous waste
        - Radioactive waste
        - General waste
    - Chemical Storage
    - Ventilation requirements
- Security Requirements
    - Identify user groups with specific security needs
    - Identify the public interaction within the space
    - Identify departments / agencies with no public interaction
    - Identify need for card key access
        - Alarm systems
        - Fencing requirements
- Operational Requirements
    - Vehicle fueling stations
    - Food service operations
    - Shipping/Receiving functions (loading dock access, etc.)
    - Waste and refuse removal (space for dumpsters, etc.)
- Codes/Regulations
    - List all codes and regulations that may have an effect on this project
        - Building Codes - State and Local
        - Environmental
        - Other

- Future Growth

  Identify design measures and features that allow for future growth and change

  Identify elements subject to probable change, both in the short and long term

  Assess probabilities of change and indicate where expansion, contraction, or alteration should be provided in design

  Note technology and space needs that may change (e.g., mechanical and electrical systems, labs, computers)

  Identify if energy and utility systems will allow for efficient building or campus expansion

Loose Equipment and Furniture

Loose equipment and furniture are items needed for the eventual use of the facility at its initial occupancy, but are not generally included as part of the main construction contract. Common examples are personal computers, copiers, desks, chairs, and file cabinets. Fixed equipment and fixtures items are normally part of the construction documents and include such items as carpets, blinds, voice and data communications infrastructure, built-in cabinets, and built-in laboratory or shop equipment. If the item or equipment requires the services of a technician or some other trade for its installation, it probably belongs in the construction contract. Loose equipment and furniture can be delivered and installed ready for use without major effort or simple connection to utility stations or scribing to the walls.

Summation of information on loose equipment and furniture from the room data sheets provides the primary portion of determining the total need. Additional miscellaneous equipment and furniture should be added for those spaces and functions not specifically addressed by room data sheets.

The process to determine loose equipment and furniture involves grouping major and significant cost items onto a summary sheet, estimating quantities, determining reasonable unit costs, and estimating the total cost. Any cost for loose equipment and furniture, though not included in the construction cost, must be estimated and included as a line item in the total project cost. If the agency believes that a significant consultant effort related to loose equipment inventories, layouts, etc., will be required during the design phase, then appropriate allowances should be provided to cover this additional cost. **Figure 9** is an example of a Loose Equipment and Furniture summary sheet. If applicable and appropriate, agencies may document loose equipment and furniture needs and costs from recently completed projects of similar type, size, and configuration, and use the cost per space or station to develop the total loose equipment and furniture cost allocation, with specific lists of items and quantities to be developed during design.

If it is planned to relocate existing equipment, it is important to realize the time that predesign, design, and construction will take. It is possible that existing equipment may be obsolete prior to occupying the new facility. It is also important to note that there is a cost in both time and dollars in the relocation of existing equipment. Other than the obvious expense of simply moving the equipment, there is the question of how existing staff will be affected while the equipment is unavailable and being moved.

Figure 9

Example – Loose Equipment & Furniture Cost Estimation

Department /Space [1]	# of Spaces in Facility [1]	Equipment and Furniture per Space [1]	Quantity per Space [1]	Unit Cost [2]	Total Cost
ADMINISTRATION					
Manager's Office	10	Manager's desk	1	$1,000	$10,000
		Credenza	1	800	8,000
		Desk chair	1	400	4,000
		Visitor chair	3	200	6,000
		Book case	2	200	4,000
		Computer system	1	2,500	25,000
		Telephone	1	200	2,000
Secretary	5	Desk	1	500	2,500
		Credenza	1	800	4,000
		Desk chair	1	250	1,250
		Visitor chair	1	200	1,000
		Book case	1	200	1,000
		Computer system	1	2500	12,500
		Telephone	1	200	1,000
LABORATORY					
Sterile Storage	3	Metal shelving unit	4	300	3,600
		Metal storage unit	4	500	6,000
Total Programmed Spaces					**$91,850**
Allowance for Unprogrammed Spaces, 5% of programmed [2]					**$4,593**
Subtotal if all purchased new					**$96,443**
Subtract 25% to reflect planned relocation & use of existing items [2]					**($24,111)**
Add estimated cost for refurbishment of existing loose equipment and furniture [2]					**$10,000**
Add estimated cost to relocate existing equipment and furniture [2]					**$5,000**
Total Estimated Cost of Loose Equipment and Furniture					**$87,332**

[1] *From Room Space Data Sheets*

[2] *Estimated by qualified agency staff, consultant, or from published sources*

Fixed Equipment and Fixtures

Fixed equipment, such as walk-in freezers, ovens, special laboratory equipment, security equipment, etc., must be included in the project as a part of the construction cost. Such equipment is installed at the time of original construction and usually requires some special connection or utility. If these needs are not addressed in this stage, agencies may be faced with the requirement to eliminate or defer some other part of the project in order to provide a complete, functional facility.

Exterior Space Program and Requirements

Often-overlooked aspects of a new construction project are requirements outside of the exterior of the building. These may include parking spaces, access and circulation roads, sidewalks, entrance plazas, lighting, fencing, landscaping, and signage. Specific exterior items should be identified and quantified in this section of the report, and also included as part of the construction cost estimate as appropriate.

4. SITE ANALYSIS

The proposed site is analyzed through a series of investigations to understand the opportunities and constraints that may be imposed upon a project and its design. Studies are conducted to evaluate existing conditions. These studies may include, but are not limited to, geo-technical reports, land surveys, and utility surveys. This section should identify the site-specific location and identify factors such as zoning, accessibility, transportation, environmental limitations, regulatory factors, etc., that are important considerations to the project.

The site analysis requires a program and a site. The program and site are analyzed to determine their compatibility. The predesign report should clearly present how the site analysis findings impact, and are incorporated, into the project's scope and cost estimate. For example, if the site analysis determines the need for a storm water detention pond, the site plan should show the potential location and the construction cost estimate should include its cost.

The determination of the site suitability for the program requires an analysis of the following site-specific needs:

Existing Conditions and Suitability

Evaluation of site as applicable and appropriate:

- Cultural Factors
  - State Agency Stewardship of Historic Properties (OCGA §12-3-55 and 56). Ensure that no historical sites were suitable under the law
  - Site history to the extent of previous uses of the site
  - The possibility exists that numerous other acts may apply to the property and may have to be researched such as Native American Graves Protection and Repatriation Act
- Land use, verification of property ownership, control
- Economic Value
- Physical Issues
  - Topography
    - Categorize existing conditions
    - Use existing information to determine risk of construction on site

Geo-technical/Soils

Categorize soils in area

Perform limited soil borings and soils investigation that may be necessary to analyze conditions present in area where the proposed project would be physically located

Make preliminary determination of bearing capacity of soil

Review surface, storm water, or groundwater characteristics

- Utilities Systems Availability, Compatibly and Existing Capacities

  Water

  Sewer

  Gas

  Electricity

  Telephone

  Cable

  Other

- Environmentally Sensitive Conditions

  Steep Slopes

  Unstable soils

  Flood plains

  Water supplies and resources

  Wetlands

  Protected Species and Critical Habitats

  Other

- Hazardous Materials - Review title and site records for history of underground or surface storage of hazardous materials such as:

  Asbestos-containing materials (ACM's)

  Lead paint

  Toxic waste

  Underground Storage Tanks (UST)

  Due diligence survey: determines previous environmental contaminants

  Check with EPA and Georgia EPD

- Site Survey

  For the predesign process the present land survey should be less than 10 years old *(further project development will require a more current survey).*

- Regulatory Factors

  Zoning Codes

  Review with the county/city the zoning classification

  Identify any inconsistencies with current zoning

- Building Codes and Requirements

  Any local codes or special code needs

  Design review

  Land use permits

  Other

Adverse cost impacts

Any delays that may be imposed in the design or construction phase

Evaluation of Site to Meet Requirements

The evaluation of the site to ensure compatibility with all elements of the project and program to include the following issues as appropriate and applicable to the project:

- Information to support agency determination if the project may significantly adversely affect the quality of the environment and if an environmental effects reports is required per the Georgia Environmental Policy Act (GEPA, OCGA §12-16-1)
- Building footprint
- The site coverage of the building, parking and other impervious areas
- Suitability of soil to support proposed building
- Configuration of the building
- Degree of earthwork and grading required for the project
- Vehicle access, parking, circulation, and delivery
    - May be largest area needed on the site
    - May be set by zoning ordinances or other local regulations
- Circulation and Open Space Requirements
    - Space for pedestrian and vehicular circulation
    - May depend on site configuration, land value, and design objectives
- Special Constraints and Requirements
    - Utility easements
    - Set backs
    - Rights-of-way
    - Need for retention/detention ponds
    - Parks and recreation areas
    - Flood plain areas
    - Barrier Islands
    - Environmental
    - Historical/Archeological
    - Ecological preserves
    - Other
- Access Issues
    - Site Accessibility
        - Impact of project on traffic flows
        - Identify required improvements
        - Identify rights-of-way or additional land that may be needed to provide access to the site

- Utilities

  Identify type, capacity, and tie-in requirements for all utilities

  Water

  Gas

  Telephone

  Electricity

  Cable

  Sewer

  Other

5. PROJECT COST ESTIMATE

One of the key informational items developed during predesign is a project cost that includes all direct and associated costs for all activities and phases, including design, construction, loose equipment, and start-up [building commissioning], move-in, and contingencies.

It is recommended that a cost engineer or a professional consulting firm prepares the construction cost estimate and that they work closely with agency staff in developing the total project cost estimate. The construction cost estimate must pull together the program requirements, site conditions, and reasonable project/facility design assumptions to develop the estimate. Although the potential cost magnitude of the project must be kept in mind throughout the predesign phase, the detailed construction cost estimate should not be prepared until other portions of the study have been completed, and should take into consideration all of the scope elements and site conditions of the proposed project.

Design Assumptions and Narrative Specifications

Building configuration, methods, materials and systems vary from one building and type of construction to another. Building assumptions, such as architectural treatments, building systems/components, and any special accommodations (i.e., security, parking, environmental constraints, etc.) not previously identified should be defined and documented in this section. The objective is not to "lock-in" a particular design configuration, but to understand and document the assumptions and associated cost impacts that are used for the basis of the construction cost estimate.

This section should describe the assumptions used in preparing the cost for each item in the category, defend more expensive choices and discuss any trade-offs that were considered (i.e., sloped *vs*. flat floor, or standing seam *vs.* built-up roof, etc.). Brief narrative specifications should be presented by CSI *UniFormat* category (See **Figure 10**). A concise summary of key cost estimate design assumptions and features should also be prepared to assist in confirmation that basic program requirements are met and to highlight the various structural, architectural, mechanical, electrical, and site features used in the construction cost estimate (See **Figure 11**).

Figure 10

CSI *UniFormat* Levels 1 And 2

A. FOUNDATIONS

- A 11. Standard Foundations
- A 12. Special Foundations

B. SUBSTRUCTURE

- B 21. Slab on Grade
- B 22. Basement Excavation
- B 23. Basement Walls

C. SUPERSTRUCTURE

- C 31. Floor Construction
- C 32. Roof Construction
- C 33. Stair Construction

D. EXTERIOR CLOSURE

- D 41. Exterior Walls
- D 42. Exterior Doors and Windows

E. ROOFING

- E 51. Roof Construction

F. INTERIOR CONSTRUCTION

- F 61. Partitions
- F 62. Interior Finishes
- F 63. Specialties

G. CONVEYING SYSTEM

- G 71. Elevators
- G 72. Moving Stairs / Walks
- G 73. Dumbwaiters

H. MECHANICAL

- H 81. Plumbing
- H 82. HVAC
- H 83. Fire Protection
- H 84. Special Mechanical Systems

I. ELECTRICAL

- I 91. Service and Distribution
- I 92. Lighting and Power
- I 93. Special Electrical Systems
- I 931. Telecommunications

J. GENERAL CONDITIONS, OH & P

K. EQUIPMENT

- K 111. Fixed Equipment
- K 112. Furnishings
- K 113. Special Construction

L. SITE WORK

- L 121. Site Preparation
- L 122. Site Improvements
- L 123. Site Utilities
- L 124. Off-Site Work

UNIFORMAT was recently revised into nine primary categories, from the 12 categories described in these guidelines.

Construction cost estimates may be prepared using either version of primary categories, depending upon estimator familiarity and data availability.

Figure 11

Example – Summary of Key Cost-Related Factors and Features

Project Name _____ **Location (County/City)** _____

Total NSF _____ Total GSF _____ Average Grossing Factor _____

Total Buildings _____ GSF/Floor _____

Structural Features

Foundation	Type			SF
Substructure	Type			SF
Superstructure	Type Load-bearing Walls		Thickness	
	Type Elevated Floor Systems		Thickness	

Architectural Features

Interior Specialties				
Exterior Specialties				
Major Fixed Equipment				
Roofing System	Type			SF
Elevators	Number	Type	Capacity	

Mechanical Features

Cooling System	Type	Capacity	
Heating System	Type	Capacity	
Air Distribution	Type		
Instrumentation and Controls	Type		
Fire Protection	Sprinkler System	Wet or Dry Pipe?	
Special Mechanical Systems			

Electrical Features

Power Service and Distribution	
Telephone	
Data/Cable Communications	
Emergency Power/UPS	
Special Electrical Systems	

Site Features

Parking	For spaces	SF		
Access Roads	Length	Lane Width		
Sidewalks	Length	Average Width		
Landscaping	Type & SF of Grass/Shrubs	Type & SF of Irrigation System		
Major Demolition or Renovations				
Excavation/Grading	General Soil Conditions	Cut CY	Fill CY	
HAZMAT Considerations				
Site Utilities Availability				
Special Features (Elevated walkways, pedestrian bridges, etc)				

This table is a summary of major project elements documented in the program and design assumption narrative used in the construction cost estimate. Key elements should be added / deleted as appropriate for a specific project.

Construction Cost Estimate

This section should describe the approach used to establish costs for the project. One of the two widely accepted systems for organizing and coding construction work that has been in use since the 1970's is *UniFormat*. The Construction Specifications Institute (CSI) *UniFormat* is a classification system for construction information based on elements and systems. By establishing a limited number of systems (12 in CSI *UniFormat*, such as foundations, substructure, mechanical, etc.), and using key elements (standard or special foundations, plumbing, heating ventilation & air conditioning [HVAC], fire protection, special mechanical, etc.) required within each system, CSI *UniFormat* ensures that the critical task of costing during the development stage of the project is comprehensive and organized. This type of cost estimate is sometimes referred to as "preliminary" or "assembly estimate" and is prepared in the early stages of project development. A detailed design is not available, nor is it required, for a preliminary estimate. However, it is necessary to know the design philosophy or concept for the project. Another CSI format known as *MasterFormat* is not recommend for use in predesign studies as it is more suited for use during design and construction phases.

For these predesign guidelines, CSI *UniFormat* (**Figure 10**) is used to provide the format for the estimate preparation. At a minimum, project descriptions and cost estimates should utilize Levels 1 and 2 of CSI *UniFormat*. The construction cost estimate combines cost estimates from the individual elements in each of the of the 12 system categories of the CSI *UniFormat* Classification system. All assumptions used to develop the individual cost for each element should be explained, (i.e., system "L"-Site Work, element "121" Site Preparation: describe the element along with the number of units and the cost per unit, then the total for the element; or for system "K"-Equipment, element "111"-Fixed Equipment: list all equipment that will be included in construction documents along with the number of units and the cost per unit, then the total for each item followed by a total for the element).

Each system of the CSI *UniFormat* specification (A-Foundations, B-Substructure, C-Superstructure, through L-Site Work) should be compiled in a separate grouping to eliminate confusion. A standard format should be followed which is consistent with the narrative of assumptions, and includes a list of the elements, description of each element, number of units, cost per unit, subtotal, with a total for the system/element at the end of the list. **Figure 12** is an example format for a system/element cost group.

Figure 12
Example - System/Element Cost Detail

E. ROOFING

ELEMENT	DESCRIPTION	UNITS	QTY	COST PER UNIT	SUBTOTAL
5.1- 103	Built-up roof, organic base sheet and 3 plies #15 asphalt felt	SF	25,000	$1.81	$45,250
5.1- 620	Flashing, aluminum fabric	SF	850	$2.28	$1,938
5.7- 101	Roof deck insulation	SF	25,000	$1.11	$27,750
				ELEMENT TOTAL	**$74,938**

A section similar to this should be done for each of the UniFormat systems / elements

After all the individual systems are estimated, the next step is to determine the complete construction cost estimate. Because predesign space and specification assumptions may be revised during actual design, the use of a "design contingency" may be appropriate, generally at a rate not to exceed 10% total cost. Also, it is advisable to include an escalation factor, not to exceed 3% per year, to escalate the construction estimate from current year dollars to the expected construction bid date per the project's schedule. Both of these items should be documented on the Construction Cost Summation sheet (**Figure 13**).

Total Project Cost

Although the construction cost estimate is vital, it is only a portion of the complete cost of the project, known as the total project cost. The total project cost should be presented on a separate page, with supporting back-up material and narrative as appropriate, which totals all aspects and activities of the project in an orderly manner to obtain the complete project cost *(**Figure 14** is an example of a total project cost summation sheet).* It is recommended that a cost engineer or consulting firm assist with the preparation of the total project cost estimate, and in appropriate distribution of costs by the project's phases. The total project cost estimate pulls together the construction cost with architectural and engineering fees, special consultants, land acquisition, and loose equipment, and other directly related project activities and costs to develop the total project cost estimate.

6. OPERATIONS AND MAINTENANCE IMPACTS

The Operations and Maintenance Impacts section defines the potential project impact on the annual operating budget for the agency. Items such as changes in staffing levels anticipated expenses for salaries, operations, maintenance, and utilities should be presented in this section. These estimates should be amounts that are anticipated over present levels of funding for operations and maintenance and staffing. Particular attention should be paid to whether the maintenance and operational services are expected to be performed by agency personnel or will be contracted out to private vendors.

Potential revenue sources and amounts should also be discussed in this section. All revenue sources (parking decks, dormitories, student centers, cafeterias, etc.) should be listed individually and totaled to show the offset of operational expenses.

Although an outside consultant might prepare this section with information provided by the agency, the agency should review the presentation in detail.

7. PROJECT DRAWINGS / DIAGRAMS

The Project Drawings / Diagrams section may contain conceptual (pre-schematic) drawings of the proposed project in enough detail to foster an understanding of the project and show the general location of the project on the site. Site diagrams illustrating site layouts such as site survey, site location, utility location, topography, etc., should also be included in the report. Typical room layouts may be desirable to show how expected occupancy, furniture, and equipment may be accommodated, but detailed floor plans of the entire facility are not recommended in predesign studies due to the limited project development at this stage. Photographs of the proposed site and surrounding area should be included with special attention paid to adjacent structures and any unique existing conditions (i.e., rock outcroppings, creeks, etc.).

Figure 13
Example - Construction Cost Summation Sheet

Total Construction Cost Summation

COMPONENT		TOTAL
A.	Foundations	$182,000
B.	Substructure	$107,000
C.	Superstructure	$1,523,000
D.	Exterior Closure	$813,000
E.	Roofing	$118,000
F.	Interior Construction	$735,000
G.	Conveying Systems	$98,000
H.	Mechanical Systems	$1,345,000
I.	Electrical	$978,000
K.	Fixed Equipment	$59,000
L.	Site Work	$124,000
	Subtotal of Estimated Components	**$6,082,000**
J.	General Conditions, Overhead and Profit at *12%*	$730,000
	Subtotal all *UniFormat* Components	**$6,812,000**
	Design Contingency at 7%	$477,000
	Subtotal Construction Cost [at time of estimate]	**$7,289,000**
	Escalation, 14 months at 3% annual rate	$256,000
	TOTAL CONSTRUCTION COST ESTIMATE ***(Transfer to Total Project Cost)***	**$7,545,000**

Notes:

General Conditions, Overhead and Profit *should not exceed 15%, unless rationale provided.*

Design Contingency *should not exceed 10%, unless rationale provided.*

Escalation *from time of estimate to scheduled bid date at 3% annual rate, per the schedule in the Project Implementation Plan.*

Escalated Cost = (Unescalated Cost) x $(1 + 0.03)^{N/12}$ where N is number of months from estimate date to scheduled bid date.

Figure 14
Example - Total Project Cost Summation Sheet

Cost Component	COST BY ITEM %	COST BY ITEM Amount	COST BY PHASE Predesign	Property Acq	Design	Construction	Equipment
1) **Predesign**		$	100%				
2) **Property Acquisition**		$		100%			
3) **Total Construction Cost** [TCC] (escalated)		$				100%	
4) **A/E Fees** (% of TCC)	W%	calculated			70%	30%	
5) **Inspection, Testing, Surveys** (% of TCC)	X%	calculated		---	30%	70%	---
6) **Construction Monitoring** [zero $ if GSFIC managed]		$				100%	
7) **Loose Equipment & Furniture**		$					100%
8) **Environmental / Archeological Studies**		$	---	---	100%	---	
9) **Commissioning** (% of TCC)	Y%	calculated			20%	80%	---
10) **Other -**		$		---	---	---	---
11) **Project Contingency** [% of all, except Predesign]	Z%	calculated		Z% of above	Z% of above	Z% of above	Z% of above
TOTAL PROJECT COST							

Total Project Cost Notes [Refer to Figure 3 for a completed example]:

1) **Predesign - Cost of the predesign study.**

2) **Property Acquisition - Use only if non-state owned property is to be acquired as part of project.**

3) **Total Construction Cost - Transferred from the Construction Cost Estimate Summation.**

4) **A/E Fees - For basic design and construction supervision/administration services. Based on a % of the Total Construction Cost. Baseline for costing is 6% for new construction, 7% for renovation projects, with an additional 1% for complex medical/technology facilities. Additional services provided by specialty consultants (e.g., acoustical design, lab consultants, etc.) should be included in Item 10, "Other". Baseline split by phase is 70% during design; 30% during construction.**

5) **Inspection, Testing, Surveys - Baseline is 2% of Total Construction Cost; split 30% during design and 70% during construction.**

6) **Construction Monitoring - Formerly called RE/I on GSFIC managed projects. Use zero $ for GSFIC managed projects; for non-GSFIC managed projects use approximately $4,000/month per construction schedule plus 4 months.**

7) **Loose Equipment & Furniture - Directly related project equipment & furniture [not included in the Total Construction Cost], as identified and estimated in the Program Analysis section.**

8) **Environmental / Archeological Studies - If required; determine appropriate project phase to be conducted.**

9) **Commissioning - Use 1.25% to 2.25% of Total Construction Cost, depending on project complexity, if part of project. Baseline split by phase is 20% during design; 80% during construction.**

10) **Other - Include any other directly related project costs for consultant services, project management, governmental agreements, etc. Requirement and details should be explained in text of predesign report.**

11) **Project Contingency - Baseline is 5% for new construction, 10% for renovation, and 15% for historic restoration projects. Applied to all items except predesign [Items 2 through 10]**

Noted baseline %'s, and % splits by phase, are recommended values for project cost estimating that may be adjusted for specific projects with supporting rationale and justification, and are not intended to represent definitive contractual limitations.

Diagrams of spatial needs of the project requirements including building footprint, massing (location of facilities/objects in immediate area to project), parking, access, circulation and open spaces, landscaped areas, noting special constraints and requirements, should be included.

Functional / bubble diagrams consisting of generalized spaces representing program elements organized in realistic relationships and scaled to show relative size are also useful.

8. APPENDIX

The report should have an Appendix to include a reference list of the codes, standards, guidelines, prior studies, etc., which were used in performing the predesign study. It should also include copies of any supplemental information such as agency space, functional, and performance planning or programming standards and guidelines that were used in the predesign study that will also be relevant for use during design.

Scope or cost information from recently completed agency projects of similar type, size, and configuration that are used for the predesign study should be adequately documented in the Appendix to support its transferability to this project.

V. SPECIAL CONSIDERATIONS FOR RENOVATION/RESTORATION PROJECTS

Renovation and restoration projects may vary widely in their scope, from restoration of a historical landmark to renovation of a building that is only a few years old. The following is intended to represent the primary areas to be addressed unless a section is not applicable.

Condition Assessment

If not recently completed, a condition assessment should be performed on any building to be renovated. This should include a review and evaluation of all engineering systems as well as the exterior materials, windows, roof, interior materials, structural issues and vertical transportation. Photographs are to be used to document specific conditions as needed.

Information such as age of buildings or wings, floor-to-floor heights, construction type, etc., is to be documented. Previous reviews or assessments by review agencies or consultants should be referenced with a summary of the findings. It is not envisioned that new detailed existing conditions drawings will be prepared during predesign, as that activity is generally done early in the design phase. However, there should be sufficient verification of existing drawings to facilitate preparation of the cost estimate.

Site Assessment

Changes in use may bring different needs in terms of access, parking, loading docks, etc. Any such needs are to be identified under the new use and any required changes are to be taken into consideration as part of the predesign effort.

Historically Significant Buildings

State agencies with projects involving historical properties and structures must comply with the Georgia Environmental Policy Act (GEPA) and the State Agency Historic Property Stewardship Program. The *State of Georgia Standards for the Treatment of Historical Properties* is the guide to be used with respect to all such issues. In the case of landmark historic structures, it may be desirable to prepare Historic American Building Survey (HABS) Drawings and a Historic Structures Report (HSR) along with the predesign process, if not previously prepared. To derive benefit related to determining project scope and cost, these activities should be completed prior to, or concurrent with, predesign.

In general terms, the State recognizes four categories of addressing historical buildings:

- Rehabilitation — Retention of historical features of a building while modernizing it for use
- Restoration — Highest level of restoration, return the building to its original condition – generally reserved for very significant buildings
- Preservation — Stabilizing or mothballing the building
- Reconstruction — The re-creation of a building based on photographic or physical evidence

It is anticipated that most proposed projects will fall under the Rehabilitation category. The State Preservation Office should be consulted with respect to any project impacting any eligible or listed property or buildings.

Code Compliance

Existing buildings which are being renovated are likely to have code compliance issues which must be dealt with, such as inadequate sprinklers or fire alarm systems, or rated walls or other systems which may have been compromised over the years, etc. The predesign effort is to document such issues so that the cost of modification can be incorporated into the estimate.

The Safety Fire Division of the Office of the Commissioner of Insurance (State Fire Marshal's Office) is the agency responsible for reviewing construction documents for code compliance and can be consulted during the predesign process if necessary.

Accessibility

Existing buildings that are being renovated are likely to have accessibility issues. The predesign effort is to include a general assessment of the issues particular to the project at hand and identify, in general terms, what will be necessary to bring the project into compliance with the Georgia Accessibility Code (Chapter 120-3-20) and the Americans with Disabilities Act. Issues which are often encountered in older buildings include wheel chair turning radiuses in toilets, 18" on the latch side of doors, heights of work counters and lavatories, door hardware, audio/visual fire alarm devices, etc. Resolving accessibility issues often requires space and access modifications and the costs should be identified.

Hazardous Materials

Hazardous materials may be present in existing buildings for which renovations are being planned. In many cases, information may be available as to the likelihood of such materials.

- Asbestos-Containing Materials: Demolitions and renovations should determine if asbestos-containing materials (ACM) are present. Discovery of ACM later during design or construction can add significant costs and delays. EPA and State regulations require the accreditation of personnel who work in the asbestos field, notification and permit fees for asbestos removal projects.

- Lead-based Paint: Lead-based paint (LBP) is usually an issue for buildings constructed prior to 1978. Contractors must comply with all EPA, OSHA, and state regulations when working with LBP. The disposal of debris with LBP may require analyses for TCLP (Toxicity Characteristic Leaching Procedure) Lead to determine if the waste is hazardous.

VI. OTHER INFORMATION SOURCES

In addition to the guidance provided in this document, there are several sources for information that will be helpful in the preparation of a predesign study and related activities. Of particular relevance are the State of Georgia Code sections concerning predesign, the Georgia Environmental Policy Act (GEPA), the State Agency Historic Property Stewardship Program, the Georgia Accessibility Code, and the Life Safety Code.

Also, several agencies have produced information and guidance material which may be helpful, such as the preplanning [predesign] guidelines issued by the Board of Regents, the space standards issued by the Department of Administrative Services, and the *Georgia Environmental Policy Act Guidelines* and the *State of Georgia Standards for the Treatment of Historical Properties* issued by the Department of Natural Resources.

The Georgia Code is available online at http://www.ganet.org/services/ocode/ocgsearch.htm. Much of the other information is available by contacting the responsible agencies or on their websites.

VII. APPENDIX

APPENDIX A

Form A1 -- Example Predesign Study Contract, non-competitive selection (not to exceed $75,000, per OCGA §50-22-7)

Form A2 -- Example Predesign Study Contract, formal selection (no statutory limit per OCGA §50-22-5 or 6)

APPENDIX B

Agency Predesign Checklist

APPENDIX A

Use of Forms: OCGA §50-22-1 *et seq.* is the required procurement method for professional services for all state agencies and authorities, except in emergencies or when existing plans and the original professional firm are to be reused. (See OCGA §50-22-7.) Paragraph 6 of each form document permits assignment to another state agency, such as GSFIC, which accommodates use of other state entities for construction of a project. For questions regarding use of either of the forms, contact the Georgia Department of Law, Real Property, Construction, and Authorities Section.

Form A1 – Sample Predesign Study Contract (not to exceed $75,000 per O.C.G.A §50-22-7)

Use Form A1 for predesign studies where the estimated cost is not more than $75,000 and the firm was selected without advertisement. **Use of this form will require a subsequent qualifications based selection process per OCGA §50-22-5 or 6 to select the future project design team**. The predesign firm will have no expectation of becoming the project architect but will have to compete with other design firms to win the architectural design contract. The advantage to use of this form is that the agency may select the predesign firm and negotiate the contract, without the need for advertisement and a formal selection process. Normally, anticipated funding for such projects is a year or more in the future and there is a need to determine the project program and cost estimate as the basis for funding decisions. The disadvantage is that if the predesign study becomes more costly, the contract, by law, cannot be amended to a cost above $75,000.

Form A2 – Sample Predesign Study Contract (no statutory dollar limit per OCGA §50-22-5 or 6)

Use Form A2 for predesign studies where the estimated predesign cost may exceed $75,000. Since the formal selection process is required for this contract form, the agency retains an option, exercisable at the agency's sole discretion, to contract with the selected predesign firm for further professional services and the architectural design contract. The advantage is that the agency can complete the study without being limited by the statute, and if the agency is satisfied with the predesign firm, can negotiate to have the predesign firm enter a contract as the project architect. **The option to initiate and perform design shall not be exercised until the predesign study is complete and has been approved, and it is also subject to funding approval and availability for the design phase.** The agency must follow the formal qualification and selection process, and must specify in the advertisement that the selection is for a predesign consultant with the possibility that the agency may contract with predesign consultant to become the project architect without further advertising or qualification. The disadvantage is that the initial selection process takes longer, and if the agency is not satisfied with the predesign firm as a project architect, a second formal selection process will have to be undertaken to select the final project architect.

Form A1

PREDESIGN STUDY CONTRACT

For Non-Competitive Process

Pursuant to O.C.G.A. §50-22-7(d)

Not to exceed $75,000

STATE OF GEORGIA
COUNTY OF FULTON

PROJECT NUMBER: _____
PROJECT NAME: _____
PROJECT SITE: _____

THIS CONTRACT made the _____ day of_____, 200___, by and between the _____ whose address is _____, a department in the Executive Branch of state government in the State of Georgia, hereinafter called the Owner, and _____, whose address is _____, hereinafter called the Predesign Firm, for limited predesign work as permitted by O.C.G.A §50-22-7(d) for the above referenced project, hereinafter referred to as the Project, at a cost not in excess of the sum of $75,000.00 (hereinafter called the "Allocation" as more fully set forth in Article 5 below.

WHEREAS, Owner requires a Predesign Study for the Project;

WHEREAS, Predesign Firm possesses the skills and experience to provide the Predesign Study for the Project;

NOW, THEREFORE, Owner and Predesign Firm, in consideration of the mutual benefits and promises flowing to each of the parties agree as follows:

ARTICLE 1

1.1 *The Predesign Firm's Study.* - The Predesign Firm's Study shall consist generally of those items described in "Guidelines for Predesign of Major Capital Projects" published by the Office of Planning and Budget for the State of Georgia and the Georgia State Financing and Investment Commission, April 2001, as amended, hereinafter referred to as the "Guidelines," incorporated by reference herein. Additions and deletions from the Basic Predesign Study and Supplementary Guidelines for the Project are set forth in Exhibit A, attached hereto and incorporated by reference herein. For convenience, a summary of key points of the Guidelines may be attached as Exhibit B.

1.2 *Standards.* - The Predesign Firm shall conform to and be bound by the Guidelines, as amended by Exhibit A, and shall perform the Predesign Study consistent with all applicable laws and codes in effect at the time the predesign phase program and studies are delivered to the Owner. The Predesign Firm is fully responsible for any work performed by its consultants the same as if said work were designed, approved, certified, or accepted by it. The Predesign Firm, by the execution of this agreement, contracts that it is possessed of that degree of care, learning, skill, and ability which is ordinarily possessed by other members of its profession and further contracts that in the performance of the duties herein set forth it will exercise such degree of care, learning, skill, and ability as is ordinarily employed by professionals under similar conditions and like circumstances and shall perform such duties without neglect, and shall not be liable except for failure to exercise such degree of care, learning, skill, and ability.

1.3 *Content.* – The content for the Predesign Study shall generally conform to the content outlined in the Guidelines, except as modified in Exhibit A.

1.4 *Design, Planning, and Estimating.* - The Predesign Firm agrees that in performing the contract for the Project, sound principles of design, planning, and estimating shall not be disregarded.

1.5 *Use of the Predesign Study.* – The Predesign Firm understands, acknowledges and agrees that the study deliverables from this Contract may be utilized and incorporated into a Professional Services Contract for the design and construction of the Project, and that the selection of a firm for that contract will normally be made by a competitive process. Accordingly, the Predesign Firm will receive no preference for selection, and may often not be the selected firm for the Project.

1.6 *Ownership and Copyright.* – All study deliverables, information data, or documents produced hereunder by the Predesign Firm, or its consultants shall be delivered to the Owner, and title thereto shall vest in the Owner regardless of the stage to which the development of the study may have progressed. In addition, the Predesign Firm hereby expressly assigns, transfers and otherwise quitclaims to the Owner, its heirs and assigns forever, all right, title and interest, including all copyrights and all termination/renewal rights is such copyrights and all causes of action accruing under such copyrights, in all studies, study calculations, drawings, specifications, other data, embodiments of such studies, documents or other works of authorship produced hereunder by the Predesign Firm, its consultants, or its employees. The Predesign Firm further warrants that this transfer of copyrights and other rights is valid against the world. Finally, all original study deliverables and other technical data shall be furnished to the Owner without cost whether the project for which they are made be executed or not. The Predesign Firm may make and retain for its use such additional copies as it may desire.

1.7 *Owner's Approvals.* - The Predesign Firm acknowledges and agrees that the Owner does not undertake to approve, or pass upon, or undertake to inquire into the adequacy, fitness, suitability, or correctness of any study conclusions. The Predesign Firm acknowledges and agrees that the approval or acceptance of the study by the Owner is limited to the function of determining whether there has been compliance with instructions issued to the Predesign Firm regarding the Predesign Study to be prepared. The Predesign Firm agrees that no approval of predesign program, study, or study deliverables by any person, body, or agency shall relieve it of the responsibility for the adequacy, fitness, suitability, and correctness of the study prepared in accordance with sound and accepted principles applicable to the study.

ARTICLE 2

2.1 *Fees.* – The Owner shall pay the Predesign Firm a Predesign Fee of $_____ for the Predesign Study, including the responsibilities and obligations set forth in Article 1. The Predesign Fee may be increased by mutual agreement, but shall not exceed the Allocation set forth in Article 5.1 below. Payment shall be as set forth in Article 5.2 below.

2.2 *Reimbursements.* - The Owner will not make reimbursement for any expenses unless the expense to be incurred is requested by the Owner and the Owner approves the expense before the cost is incurred. Transportation, living expenses, reproduction costs, courier services, and long distance telephone charges shall not be reimbursable unless approved in advance in writing by the Owner.

2.3 *Time for Completion.* – Unless modified in Exhibit A, the time for completion of the Predesign Study shall be _____ days. Should Owner-initiated changes in the requirements result in substantial re-work of the Predesign Study, the Owner and Predesign Firm shall mutually negotiate both an additional fee and extension of time, provided that in no event shall the Allocation be exceeded.

ARTICLE 3

3.1 Additional Services. - Payment for special consultants or special studies when requested by the Owner and agreed to by the Owner and Predesign Firm in advance shall be in addition to the payments for Predesign Study defined in Exhibit A.

3.2 *Hourly Rates.* - The hourly rates to be included in the invoices of the Predesign Firm for Additional Services shall be as follows:

(A) For principals of the Predesign Firm and for principals of firms engaged as consultants shall be at a rate of $_____ per hour.

(B) For registered professionals of the Predesign Firm and for registered professionals of the firms engaged as consultants shall be at a rate of $_____ per hour.

(C) For senior drafters (defined as persons with a degree in architecture or in engineering and at least five years of experience but who are not registered professionals) of the Predesign Firm and of the firms engaged as consultants –shall be at a rate of $_____ per hour.

(D) For intern architects and engineers of the Predesign Firm and of the firms engaged as consultants shall be at a rate of $_____ per hour.

(E) For drafters of the Predesign Firm or firms engaged as consultants shall be at a rate of $_____ per hour.

(F) For administrative personnel of the Predesign Firm or firms engaged as consultants shall be at a rate of $_____ per hour.

ARTICLE 4

Separate Contracts. - Unless agreed to in writing by the Owner, the various components of the Project may be awarded under separate contracts, including this Predesign Contract, an Architectural Design Contract, and one or more construction contracts.

ARTICLE 5

5.1 *The Allocation.* -

The Owner and Predesign Firm acknowledge and agree that O.C.G.A. §50-22-1 *et seq.* places a legal and statutory limit on the cost of this Contract. The Owner shall in no event be liable for an amount in excess of the Allocation; to wit:

SEVENTY FIVE THOUSAND DOLLARS ($75,000.00)

nor shall the Predesign Firm be expected to perform work and Additional Services or incur reimbursable expenses, as defined in this contract, which will cost in excess of the Allocation. The Owner shall in no event be liable for any sum, in compensation to the Predesign Firm under this Contract in excess of the Allocation, whether such sum be for the Predesign Study, reimbursements, or Additional Services.

5.2 *Payments.* - The Predesign Firm agrees that:

(A) Statements for Predesign fees for Predesign Study shall be submitted monthly for payment by the Owner and shall be based on the Predesign Firm's good faith estimate of percentage of Study actually complete at the time of the billing, plus any completed Additional Services and reimbursable expense previously approved by the Owner.

(B) Requests for reimbursable expenses shall be submitted and allocated by person to whom the expenses apply, accompanied with copies of receipts and invoices as set forth in the latest rules and regulations promulgated by the State Auditor for travel expenses.

(C) Final payment for Predesign work and Owner-approved Additional Services and reimbursable expenses shall not be due and payable until the Owner has accepted and approved the Predesign Study as complete.

5.3 The Predesign Firm shall make payments to its consultants not more than fifteen (15) working days following receipt of payment from the Owner. Statements of the Predesign Firm for fees subsequent to the first statement must contain a notice that "all consultants have been paid in full to the extent that the Predesign Firm has been paid"

ARTICLE 6

Assignment. -The Predesign Firm hereby agrees that the Owner may, if it wishes to do so, assign this contract to another governmental entity. The Predesign Firm hereby agrees that it shall not assign, or transfer any interest or right in this Contract in whole or in part to any party without the written consent of the Owner in advance.

ARTICLE 7

7.1 *Professional Liability Insurance.* - Within ten days after execution of this Contract and during the entire period of the contract, the Predesign Firm shall maintain professional liability insurance applicable to the work being performed. The Predesign Firm shall file with the Owner a certificate of insurance from an insurance company licensed to do business in the State of Georgia showing evidence of such professional liability insurance (errors and omissions insurance) in limits of not less than $500,000 per claim. Any deductibles and self-insurance retention may not be greater than $50,000.

7.2 *Workers Compensation and General Liability insurance.*-- Within ten days after execution of this Contract and during the entire period of the contract, the Predesign Firm shall maintain Workers Compensation and General liability insurance as provided herein. The Predesign Firm shall file with the Owner a certificate of insurance from an insurance company licensed to do business in the State of Georgia showing evidence of workers compensation insurance meeting statutory requirements and commercial general liability insurance limits of not

less than $1,000,000 per claim and $2,000,000 in the aggregate.

ARTICLE 8

8.1 *Termination for Convenience of the Owner (Without Cause).* - The Owner may at any time, and for any reason or without any reason or cause, terminate this contract by written notice to the Predesign Firm specifying the termination date, provided that in the event of termination under this provision the Owner shall pay to the Predesign Firm all fee properly due (i) for services already properly performed prior to the effective date of the termination and (ii) for all reimbursable expenses properly incurred. In the event of such termination the Predesign Firm shall have no claim in excess of what is allowed in this Article 8.1 for any sum of money, however denominated, as a result of or relating to such termination.

8.2 *Termination For Cause.* - In the event the Predesign Firm through any cause fails to perform any of the terms, covenants, or provisions of this contract on its part to be performed, or if it for any cause fails to make progress in the work hereunder in a reasonable manner or if the conduct of the Predesign Firm impairs or prejudices the interests of the Owner or the Firm violates any of the terms, covenants, or provisions of this contract, the Owner shall have the right to terminate this contract by giving notice in writing of the fact and date of such termination to the Predesign Firm, and all study deliverables and other documents relating to the predesign study shall be surrendered forthwith by the Predesign Firm to the Owner, PROVIDED, HOWEVER: That the Predesign Firm shall have five (5) business days from the date of the notice to cure the defects, and PROVIDED FURTHER: That in such case the Predesign Firm shall receive equitable compensation for such services as agreed between the parties, or, in the event of an inability to agree, shall in the opinion of an independent auditor selected by the Owner and paid for by the Owner to which the Predesign Firm shall have no reasonable objection, to have been satisfactorily performed by the Predesign Firm up to the date of termination of this Contract. The parties agree that the decision of the said auditor in regard to the matters set forth in this Article 8.2 shall be final.

ARTICLE 9

Personal Work. - In contemplation that Predesign work is personal, the Predesign Firm hereby agrees that no material change in the business organization under which the firm shall perform the present contract may be made without written consent of the Owner in advance, and such consent of owner may be credited upon retention of the key staff persons of the Predesign Firm for performance of the work.

ARTICLE 10

10.1 *Modifications To The Predesign Contract.* - The Predesign Firm covenants that no modifications, either written or oral, may be made in the terms and provisions of this Contract without the written consent in advance of the Owner. It is agreed between the Predesign Firm and the Owner that in the absence of such written consent neither any modifications nor any undertaking to modify the contract shall be binding but shall be absolutely null and void.

10.2 *Superseding Of Earlier Agreement And Fees.* - The parties hereto agree that these presents take the place of and supersede entirely any existing contracts, agreements, arrangements, understandings, undertakings, courses of dealing, or customs and practices, either implied or express and whether written or oral, in regard to the Project. This contract represents the entire and integrated agreement between the Owner and the Predesign Firm and may be amended only by written instrument signed by both the Owner and the Predesign Firm.

ARTICLE 11

11.1 *Prohibited Acts.* - The Predesign Firm by execution of this contract warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for it, to solicit or secure this contract and that it has not paid or agreed to pay any person, company, corporation, individual, or firm, other than a bona fide employee working solely for it, any fees, commission, percentage, gift, or other consideration contingent upon or resulting from the award or making of this contract.

11.2 *Minority Participation Policy.* - It is the policy of the State of Georgia that minority business enterprises shall have the maximum opportunity to participate in the State purchasing and contracting process. Therefore, the State of Georgia encourages all minority business enterprises to compete for, win, and receive contracts for goods, services, and construction. Also, the State encourages all companies to sub-contract portions of any State contract to minority business enterprises. Predesign Firms who utilize qualified minority subcontractors may qualify for a Georgia state income tax deduction for qualified payments made to minority subcontractors. *See* O. C. G. A. §48-7-38.

11.3 *Drug-Free Work Place.* - The Predesign Firm acknowledges that it is fully aware of the contents and requirements of O.G.C.A. §50-21-1 *et seq.* of the Official Code of Georgia. The Predesign Firm by execution of the present contract does hereby certify that it and its

consultants are in compliance with the aforesaid code section.

11.4 *Full Performance.* - The Owner and the Predesign Firm hereby agree to the full performance of the terms, duties, obligations, responsibilities, conditions and stipulations contained herein.

11.5 This Agreement shall be construed and enforced according to the laws of the State of Georgia.

IN WITNESS WHEREOF, the parties have each caused these presents to be duly signed, sealed and delivered by their duly authorized representatives on the day, month and year first above written.

PREDESIGN FIRM: _____

By: _____

Name: _____

[SEAL]

Title: _____

OWNER:

By: _____

Name: _____

[SEAL]

Title: _____

APPROVED (Using Agency): _____

By: _____

Name: _____

[SEAL]

Title: _____

Supplementary Predesign Guidelines
Exhibit A

1.0 Project Background

[Provide brief general narrative about the Project history to date.]

2.0 Modifications to Basic Services

A. In addition to the services required in the Predesign Guidelines (as amended hereinafter) the following services shall be provided by the Predesign Firm:
    1. [List any additional services not specifically included in the *Predesign Guidelines*]
    2.

B. The scope of Basic Services for this Contract does ***not*** include the following:
    1. [Please refer to the attached *Predesign Guidelines* and list any activities to be omitted from the Predesign Firm's Scope of Services for this particular project.]
    2.

3.0 Format for Deliverable Work Products

A. Project Deliverables shall be as follows: All hardcopy color diagrams, black and white diagrams, and map products shall be in 8 ½" x 11" or 11" x 17" format.
B. Final deliverables shall include one clean unbound reproducible copy, four (4) bound copies of all presentation material, including color where appropriate, and one compact disk (CD) in PDF (Adobe Acrobat) format.
C. The final format may be adjusted as agreed upon by the Representative and the Predesign Firm at appropriate times during the study process.

4.0 Predesign Team Consultants

The Predesign Firm shall engage the following consultants to assist it in performing the Basic Services:

A. [List all consultants to be used, grouped by category]

5.0 Coordination of Meetings

During the course of accomplishing the Predesign Basic Services, the following coordination meetings involving the Owner's personnel shall be organized and conducted by the Predesign Firm:

A. [List meetings]

6.0 Information provided by the Owner

A. The following information is being furnished by the Owner for inclusion in the predesign report. The Predesign Firm can rely on the accuracy of this information and has no responsibility other than including it in the proper location in the predesign report.
    1. [List information, e.g. operating and maintenance cost data]
B. The following information is being provided by the Owner to assist the Predesign Firm in the performance of the Contract. The Predesign Firm can rely on the accuracy of this information for the purpose of this contract.
    1. [List information, e.g., plats of boundary line survey]
    2.
C. The following information is being provided by the Owner for review and verification by the Predesign Firm. The Predesign Firm is responsible for determining the current accuracy, correctness, or soundness of this information.
    1. [List information, e.g., previous master plan studies]

Summary
Key Points in Guidelines
Exhibit B

[To be supplied if Exhibit B is used]

Form A2

PREDESIGN STUDY CONTRACT

Pursuant to O.C.G.A. §50-22-1 Qualification Process

(No Statutory Spending Limit)

STATE OF GEORGIA
COUNTY OF FULTON

PROJECT NUMBER:_____
PROJECT NAME: _____
PROJECT SITE: _____

THIS CONTRACT made the _____ day of_____, 200___, by and between the _____ whose address is _____, a department in the Executive Branch of state government in the State of Georgia, hereinafter called the Owner, and _____, whose address is _____, hereinafter called the Predesign Firm, for predesign work for the above referenced project, hereinafter referred to as the Project.

WHEREAS, Owner requires a Predesign Study for the Project; and

WHEREAS, Predesign Firm possesses the skills and experience to provide the Predesign Study for the Project; and

WHEREAS, Owner selected Predesign Firm pursuant to a qualifications-based selection process as required by O.C.G.A. §50-22-5 or 6; and

WHEREAS, Owner desires to have the option, to be exercised in Owner's sole discretion, to engage the Predesign Firm for the provision of professional services to design the Project and serve as Project Architect or Engineer;

NOW, THEREFORE, Owner and Predesign Firm, in consideration of the mutual benefits and promises flowing to each of the parties agree as follows:

ARTICLE 1

1.1 *The Predesign Firm's Study.* - The Predesign Firm's Study shall consist generally of those items described in "Guidelines for Predesign of Major Capital Projects" published by the Office of Planning and Budget for the State of Georgia and the Georgia State Financing and Investment Commission, April 2001, as amended, hereinafter referred to as the "Guidelines," incorporated by reference herein. Additions and deletions from the Basic Predesign Study and Supplementary Guidelines for the Project are set forth in Exhibit A, attached hereto and incorporated by reference herein. For convenience, a summary of key points of the Guidelines may be attached as Exhibit B.

1.2 *Standards.* - The Predesign Firm shall conform to and be bound by the Guidelines, as amended by Exhibit A, and shall perform the Predesign Study consistent with all applicable laws and codes in effect at the time the predesign phase program and studies are delivered to the Owner. The Predesign Firm is fully responsible for any work performed by its consultants the same as if said work were designed, approved, certified, or accepted by it. The Predesign Firm, by the execution of this agreement, contracts that it is possessed of that degree of care, learning, skill, and ability which is ordinarily possessed by other members of its profession and further contracts that in the performance of the duties herein set forth it will exercise such degree of care, learning, skill, and ability as is ordinarily employed by professionals under similar conditions and like circumstances and shall perform such duties without neglect, and shall not be liable except for failure to exercise such degree of care, learning, skill, and ability.

1.3 *Content.* – The content for the Predesign Study shall generally conform to the content outlined in the Guidelines, except as modified in Exhibit A.

1.4 *Design, Planning, and Estimating.* - The Predesign Firm agrees that in performing the contract for the Project, sound principles of design, planning, and estimating shall not be disregarded.

1.5 *Use of the Predesign Study.* – The Predesign Firm understands, acknowledges and agrees that the study deliverables from this Contract may be utilized and incorporated into a Professional Services Contract for the design and construction of the Project, and that the selection of a firm for that contract will normally be made by a competitive process. Accordingly, the Predesign Firm will receive no preference for selection, and may often not be the selected firm for the Project.

1.6 *Ownership and Copyright.* – All study deliverables, information data, or documents produced hereunder by the Predesign Firm, or its consultants shall be delivered to the Owner, and title thereto shall vest in the Owner regardless of the stage to which the development of the study may have progressed. In addition, the Predesign Firm hereby expressly assigns, transfers and otherwise quitclaims to the Owner, its heirs and assigns forever, all right, title and interest, including all copyrights and all termination/renewal rights is such copyrights and all causes of action accruing under such copyrights, in all studies, study calculations, drawings, specifications, other data, embodiments of such studies, documents or other works of authorship produced hereunder by the Predesign Firm, its consultants, or its employees. The Predesign Firm further warrants that this transfer of copyrights and other rights is valid against the world. Finally, all original study deliverables and other technical data shall be furnished to the Owner without cost whether the project for which they are made be executed or not. The Predesign Firm may make and retain for its use such additional copies as it may desire.

1.7 *Owner's Approvals.* - The Predesign Firm acknowledges and agrees that the Owner does not undertake to approve, or pass upon, or undertake to inquire into the adequacy, fitness, suitability, or correctness of any study conclusions. The Predesign Firm acknowledges and agrees that the approval or acceptance of the study by the Owner is limited to the function of determining whether there has been compliance with instructions issued to the Predesign Firm regarding the Predesign Study to be prepared. The Predesign Firm agrees that no approval of predesign program, study, or study deliverables by any person, body, or agency shall relieve it of the responsibility for the adequacy, fitness, suitability, and correctness of the study prepared in accordance with sound and accepted principles applicable to the study.

ARTICLE 2

2.1 *Fees.* – The Owner shall pay the Predesign Firm a Predesign Fee of $ _____ for the Predesign Study, including the responsibilities and obligations set forth in Article 1. The Predesign Fee may be increased by mutual agreement if additional services are needed. Payment shall be as set forth in Article 5 below.

2.2 *Reimbursements.* - The Owner will not make reimbursement for any expenses unless the expense to be incurred is requested by the Owner and the Owner approves the expense before the cost is incurred. Transportation, living expenses, reproduction costs, courier services, and long distance telephone charges shall not be reimbursable unless approved in advance in writing by the Owner.

2.3 *Time for Completion.* – Unless modified in Exhibit A, the time for completion of the Predesign Study shall be _____ days. Should Owner-initiated changes in the requirements result in substantial re-work of the Predesign Study, the Owner and Predesign Firm shall mutually negotiate both an additional fee and extension of time.

ARTICLE 3

3.1 Additional Services. - Payment for special consultants or special studies when requested by the Owner and agreed to by the Owner and Predesign Firm in advance shall be in addition to the payments for Predesign Study defined in Exhibit A.

3.2 *Hourly Rates.* - The hourly rates to be included in the invoices of the Predesign Firm for Additional Services shall be as follows:

(A) For principals of the Predesign Firm and for principals of firms engaged as consultants shall be at a rate of $_____ per hour.

(B) For registered professionals of the Predesign Firm and for registered professionals of the firms engaged as consultants shall be at a rate of $_____ per hour.

(C) For senior drafters (defined as persons with a degree in architecture or in engineering and at least five years of experience but who are not registered professionals) of the Predesign Firm and of the firms engaged as consultants –shall be at a rate of $_____ per hour.

(D) For intern architects and engineers of the Predesign Firm and of the firms engaged as consultants shall be at a rate of $_____ per hour.

(E) For drafters of the Predesign Firm or firms engaged as consultants shall be at a rate of $_____ per hour.

(F) For administrative personnel of the Predesign Firm or firms engaged as consultants shall be at a rate of $_____ per hour.

ARTICLE 4

4.1 *Owner's Option for Additional Professional Services.* – Owner reserves the right, which may be exercised in Owner's sole and absolute discretion, without the necessity of further competitive selection processes, including any further process under O.C.G.A. §50-22-1 *et seq.*, to select Predesign Firm as the professional design consultant for the Project and to negotiate a professional services contract or architectural design contract by which the Project may be designed and constructed. Owner is under no obligation to select Predesign Firm for a professional services or architectural design contract for this Project, and may conduct a new qualifications-based selection process as required by O.C.G.A. §50-22-5 or 6. Predesign Firm is entitled to no additional compensation, other than for this predesign study, from Owner should Owner elect not to exercise its option under this paragraph. Owner and Predesign Firm acknowledge and agree that the option shall not be exercised until the Predesign Study is complete and has been approved by the Owner.

4.2 *Separate Contracts.* - Unless agreed to in writing by the Owner, the various components of the Project may be awarded under separate contracts, including this Predesign Contract, an Architectural Design Contract, and one or more construction contracts.

ARTICLE 5

5.1 *Payments.* - The Predesign Firm agrees that:

(A) Invoices for Predesign fees for Predesign Study shall be submitted monthly for payment by the Owner and shall be based on the Predesign Firm's good faith estimate of percentage of Study actually complete at the time of the billing, plus any completed Additional Services and reimbursable expense previously approved by the Owner.

(B) Requests for reimbursable expenses shall be submitted and allocated by person to whom the expenses apply, accompanied with copies of receipts and invoices as set forth in the latest rules and regulations promulgated by the State Auditor for travel expenses.

(C) Final payment for Predesign work and Owner-approved Additional Services and reimbursable expenses shall not be due and payable until the Owner has accepted and approved the Predesign Study as complete.

5.2 The Predesign Firm shall make payments to its consultants not more than fifteen (15) working days following receipt of payment from the Owner. Statements of the Predesign Firm for fees subsequent to the first statement must contain a notice that "all consultants have been paid in full to the extent that the Predesign Firm has been paid"

ARTICLE 6

Assignment. -The Predesign Firm hereby agrees that the Owner may, if it wishes to do so, assign this contract to another governmental entity. The Predesign Firm hereby agrees that it shall not assign, or transfer any interest or right in this Contract in whole or in part to any party without the written consent of the Owner in advance.

ARTICLE 7

7.1 *Professional Liability Insurance.* - Within ten days after execution of this Contract and during the entire period of the contract, the Predesign Firm shall maintain professional liability insurance applicable to the work being performed. The Predesign Firm shall file with the Owner a certificate of insurance from an insurance company licensed to do business in the State of Georgia showing evidence of such professional liability insurance (errors and omissions insurance) in limits of not less than $1,000,000 per claim. Any deductibles and self-insurance retention may not be greater than $25,000.

7.2 *Workers Compensation and General Liability insurance.*-- Within ten days after execution of this Contract and during the entire period of the contract, the Predesign Firm shall maintain Workers Compensation and General liability insurance as provided herein. The Predesign Firm shall file with the Owner a certificate of insurance from an insurance company licensed to do business in the State of Georgia showing evidence of workers compensation insurance meeting statutory requirements and commercial general liability insurance limits of not

less than $1,000,000 per claim and $2,000,000 in the aggregate.

ARTICLE 8

8.1 *Termination for Convenience of the Government (Without Cause).* - The Owner may at any time, and for any reason or without any reason or cause, terminate this contract by written notice to the Predesign Firm specifying the termination date, provided that in the event of termination under this provision the Owner shall pay to the Predesign Firm all fee properly due (i) for services already properly performed prior to the effective date of the termination and (ii) for all reimbursable expenses properly incurred. In the event of such termination the Predesign Firm shall have no claim in excess of what is allowed in this Article 8.1 for any sum of money, however denominated, as a result of or relating to such termination.

8.2 *Termination For Cause.* - In the event the Predesign Firm through any cause fails to perform any of the terms, covenants, or provisions of this contract on its part to be performed, or if it for any cause fails to make progress in the work hereunder in a reasonable manner or if the conduct of the Predesign Firm impairs or prejudices the interests of the Owner or the Firm violates any of the terms, covenants, or provisions of this contract, the Owner shall have the right to terminate this contract by giving notice in writing of the fact and date of such termination to the Predesign Firm, and all study deliverables and other documents relating to the predesign study shall be surrendered forthwith by the Predesign Firm to the Owner, PROVIDED, HOWEVER: That the Predesign Firm shall have five (5) business days from the date of the notice to cure the defects, and PROVIDED FURTHER: That in such case the Predesign Firm shall receive equitable compensation for such services as agreed between the parties, or, in the event of an inability to agree, shall in the opinion of an independent auditor selected by the Owner and paid for by the Owner to which the Predesign Firm shall have no reasonable objection, to have been satisfactorily performed by the Predesign Firm up to the date of termination of this Contract. The parties agree that the decision of the said auditor in regard to the matters set forth in this Article 8.2 shall be final.

ARTICLE 9

Personal Work. - In contemplation that Predesign work is personal, the Predesign Firm hereby agrees that no material change in the business organization under which the firm shall perform the present contract may be made without written consent of the Owner in advance, and such consent of owner may be credited upon retention of the key staff persons of the Predesign Firm for performance of the work.

ARTICLE 10

10.1 *Modifications To The Predesign Contract.* - The Predesign Firm covenants that no modifications, either written or oral, may be made in the terms and provisions of this Contract without the written consent in advance of the Owner. It is agreed between the Predesign Firm and the Owner that in the absence of such written consent neither any modifications nor any undertaking to modify the contract shall be binding but shall be absolutely null and void.

10.2 *Superseding Of Earlier Agreement And Fees.* - The parties hereto agree that these presents take the place of and supersede entirely any existing contracts, agreements, arrangements, understandings, undertakings, courses of dealing, or customs and practices, either implied or express and whether written or oral, in regard to the Project. This contract represents the entire and integrated agreement between the Owner and the Predesign Firm and may be amended only by written instrument signed by both the Owner and the Predesign Firm.

ARTICLE 11

11.1 *Prohibited Acts.* - The Predesign Firm by execution of this contract warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for it, to solicit or secure this contract and that it has not paid or agreed to pay any person, company, corporation, individual, or firm, other than a bona fide employee working solely for it, any fees, commission, percentage, gift, or other consideration contingent upon or resulting from the award or making of this contract.

11.2 *Minority Participation Policy.* - It is the policy of the State of Georgia that minority business enterprises shall have the maximum opportunity to participate in the State purchasing and contracting process. Therefore, the State of Georgia encourages all minority business enterprises to compete for, win, and receive contracts for goods, services, and construction. Also, the State encourages all companies to sub-contract portions of any State contract to minority business enterprises. Predesign Firms who utilize qualified minority subcontractors may qualify for a Georgia state income tax deduction for qualified payments made to minority subcontractors. *See* O. C. G. A. §48-7-38.

11.3 *Drug-Free Work Place.* - The Predesign Firm acknowledges that it is fully aware of the contents and requirements of O.G.C.A. §50-21-1 *et seq.* of the Official Code of Georgia. The Predesign Firm by execution of the present contract does hereby certify that it and its

consultants are in compliance with the aforesaid code section.

11.4 *Full Performance.* - The Owner and the Predesign Firm hereby agree to the full performance of the terms, duties, obligations, responsibilities, conditions and stipulations contained herein.

11.5 This Agreement shall be construed and enforced according to the laws of the State of Georgia.

IN WITNESS WHEREOF, the parties have each caused these presents to be duly signed, sealed and delivered by their duly authorized representatives on the day, month and year first above written.

PREDESIGN FIRM: _____

By: _____

Name: _____

[SEAL]

Title: _____

OWNER:

By: _____

Name: _____

[SEAL]

Title: _____

APPROVED (Using Agency): _____

By: _____

Name: _____

[SEAL]

Title: _____

Supplementary Predesign Guidelines
Exhibit A

1.0 Project Background

[Provide brief general narrative about the Project history to date.]

2.0 Modifications to Basic Services

A. In addition to the services required in the Predesign Guidelines (as amended hereinafter) the following services shall be provided by the Predesign Firm:

1. [List any additional services not specifically included in the *Predesign Guidelines*]
2.

B. The scope of Basic Services for this Contract does ***not*** include the following:

1. [Please refer to the attached *Predesign Guidelines* and list any activities to be omitted from the Predesign Firm's Scope of Services for this particular project.]
2.

3.0 Format for Deliverable Work Products

A. Project Deliverables shall be as follows: All hardcopy color diagrams, black and white diagrams, and map products shall be in 8 ½" x 11" or 11" x 17" format.

B. Final deliverables shall include one clean unbound reproducible copy, four (4) bound copies of all presentation material, including color where appropriate, and one compact disk (CD) in PDF (Adobe Acrobat) format.

C. The final format may be adjusted as agreed upon by the Representative and the Predesign Firm at appropriate times during the study process.

4.0 Predesign Team Consultants

The Predesign Firm shall engage the following consultants to assist it in performing the Basic Services:

A. [List all consultants to be used, grouped by category]

5.0 Coordination of Meetings

During the course of accomplishing the Predesign Basic Services, the following coordination meetings involving the Owner's personnel shall be organized and conducted by the Predesign Firm:

A. [List meetings]

6.0 Information provided by the Owner

A. The following information is being furnished by the Owner for inclusion in the predesign report. The Predesign Firm can rely on the accuracy of this information and has no responsibility other than including it in the proper location in the predesign report.

1. [List information, e.g. operating and maintenance cost data]

B. The following information is being provided by the Owner to assist the Predesign Firm in the performance of the Contract. The Predesign Firm can rely on the accuracy of this information for the purpose of this contract.

1. [List information, e.g., plats of boundary line survey]
2.

C. The following information is being provided by the Owner for review and verification by the Predesign Firm. The Predesign Firm is responsible for determining the current accuracy, correctness, or soundness of this information.

1. [List information, e.g., previous master plan studies]

Summary
Key Points in Guidelines
Exhibit B

[To be supplied if Exhibit B is used]

APPENDIX B

AGENCY PREDESIGN CHECKLIST

TOPIC	COMPLETE	INCOMPLETE	MISSING OR UNKNOWN	NOT APPLICABLE
GETTING READY				
Does the proposed project support the mission statement and goals of the organization?				
Has a review of existing space been performed to determine if the space needs can be accommodated by renovation or reconfiguration of existing space?				
Has a determination been made as to whether the additional space should be leased or state owned?				
Has the Department of Administrative Services been consulted as to the availability of leased space?				
Has the agency considered co-location with another state agency or local government?				
Has the statewide inventory of buildings been reviewed to determine if existing space is available?				
Has reorganization, reassignment, or privatization been considered in lieu of obtaining additional space?				
Are in-house resources sufficient to perform a predesign study or will additional expertise be required?				
Have funds been identified to pay for the cost of the predesign study?				
If outside consultants are required, was selection done in accordance with OCGA 50-22?				
EXECUTIVE SUMMARY				
Does the executive summary provide the essential high-level information needed to explain and justify the project?				
Does the executive summary include a one-page project implementation plan summary? *(See Figure 3 of the Predesign Guidelines)*				
Does the project implementation plan address the following:				
Management Plan				
Schedule Milestones Addressing:				
Land acquisitions				
Design				
Construction				
Loose equipment and furniture procurement and installation				
Start-up and move-in estimates				
Funding Plan Identifying:				
Approved funding				
Requested funds (pending approval)				
Planned funding actions				
Funding by fiscal year to support project implementation schedule				

TOPIC	COMPLETE	INCOMPLETE	MISSING OR UNKNOWN	NOT APPLICABLE

PROJECT ANALYSIS

Is the project described in sufficient detail to explain it to an uninformed and impartial reader?				
Has the appropriate contact information been included?				
Is there a clear explanation of how the project will assist in meeting and furthering the goals and mission of the agency?				
Is there a clear explanation of the relationship of the proposed project to the agency's strategic and master plans?				
Does the Project Analysis contain a statement of design philosophy that would allow a design professional to determine the intent of the design assumptions?				
Has the operational intent of the building been explained in sufficient detail to allow for estimating the cost of necessary mechanical, electrical, security and other systems?				
Is there a clear explanation of the impact of any existing facilities on the proposed project and vice versa?				
Has the history of the proposed project been sufficiently explained and is the project included in the agency's current five-year plan? If not, has an explanation been provided?				
Has the proposed use of the project been explained as well as the type and quantity of intended users been provided?				
Does the study include a statement of the problem that the proposed project is expected to address?				
Has the proposed solution been described in sufficient detail, including cost, anticipated project milestones and anticipated project completion?				
Have alternatives been considered and is there an explanation as to why they were rejected?				
Is there a listing of other agencies or organizations which could be affected by the project and what that affect is?				
Have other project related issues been considered?				
Has a proposed management plan been provided which addresses the following:				
Management Organization				
Methods of Accomplishment				
Recommended Strategy				
Has a schedule showing significant project milestones and durations been provided?				
Has a project-funding plan been provided?				

PROGRAM ANALYSIS

Have the DOAS or Agency Space Guidelines been followed? If not, has an explanation and justification been provided?				
Have the basic elements of the program been identified?				
Have the owner and users been identified and consulted?				

TOPIC	COMPLETE	INCOMPLETE	MISSING OR UNKNOWN	NOT APPLICABLE
Have external requirements and standards been considered?				
Has an experienced programmer been selected?				
Has a space requirement information outline been prepared?				
Has existing equipment that will be relocated and reused been identified?				
Has the amount of contact with the general public been considered?				
Have Room/Space Data Sheets been prepared for all rooms/spaces? *(See Figure 5 of the Predesign Guidelines)*				
Has the total gross space required for the project been computed allowing for sufficient circulation and construction requirements? *(See Figure 7 of the Predesign Guidelines)*				
Is a copy of this computation included in the study?				
Have space relationship matrices been prepared for spaces? *(See Figure 8 of the Predesign Guidelines)*				
Have special performance requirements such as the following been considered:				
Telecommunications				
Special HVAC				
Adequate existing utilities				
Under/Above ground storage tanks				
Hazardous material handling/storage				
Voice/Data/Audio				
Visual				
Zoning				
Environmental Issues				
Symbolic or Aesthetic Goals				
Acoustical or Sound Separation Requirements				
Lighting Requirements				
Historical Districts or Landmark Building Status				
System Compatibility Issues (existing equip.)				
Security Requirements				
Shipping and Receiving				
Waste and Refuse Removal				
Vehicle/pedestrian access and circulation				
Parking and basis for sizing				
Access to public transportation.				
Food Service Operations				
Codes and Regulations				
Does the study include design measures and features that allow for future growth?				
Have elements subject to probable change, both in the short and long term, been clearly identified?				

TOPIC	COMPLETE	INCOMPLETE	MISSING OR UNKNOWN	NOT APPLICABLE
Is there a clear indication where expansion, contraction, or alteration should be provided in design?				
Have technology and space needs that may change (mechanical and electrical systems, labs, computers) been noted?				
Have loose equipment and furniture needs been included in the room data sheets and summary?				
Has the loose equipment and furniture cost estimate been prepared and included in the study? *(See Figure 9 of the Predesign Guidleines)*				
Has the need for the following fixed equipment been considered and addressed:				
Floor covering				
Walk-in freezers				
Ovens				
Laboratory equipment				
Blinds				
Voice and data communications infrastructure				
Built in cabinets				
Built in laboratory or shop equipment				
Fixtures				
Other				
Will existing equipment be relocated? If so, has provision been made for the following:				
Time and dollars cost				
Effect on existing staff while equipment is unavailable				
Does the study provided the planning factors and quantify the exterior space program requirements for the following:				
Parking				
Access and circulation roads				
Sidewalks				
Entrance plazas				
Lighting				
Fencing				
Landscaping				
Signage				

SITE ANALYSIS

Has a site been selected or identified?				
Has ownership been established?				
Has the cost of any purchase of property (including easements) been addressed?				
Has an evaluation of the site been performed to determine existing conditions considering:				
Geotechnical Reports				
Land Surveys				
Utility Surveys				

TOPIC	COMPLETE	INCOMPLETE	MISSING OR UNKNOWN	NOT APPLICABLE
Has an evaluation of the site been performed to determine if it meets requirements considering:				
Cultural Factors				
State Agency Stewardship of Historic Properties (OCGA 12-3-55 and 56)				
Site History (Previous uses of the site)				
Native American Graves Protection and Repatriation Act				
Land use, verification of property ownership				
Economic Value				
Physical Issues				
Topography				
Categorization of existing conditions				
Existing information to determine risk of construction on site				
Geo-technical/Soils				
Categorization of soils in area				
Limited soil borings and soils investigation				
Preliminary determination of soil bearing capacity				
Surface, storm water, or groundwater characteristics				
Has an evaluation of the site been performed to determine if it meets all elements of the program considering:				
Building Foot Print				
Site Coverage of the Building				
Total Gross Area of the Building				
Soil Suitability				
Configuration of the building				
Degree of Earthwork and Grading for the Project				
Vehicle access, parking, circulation, and delivery				
Circulation and Open Space Requirements				
Special Constraints and Requirements:				
Utility Easements				
Set Backs				
Right-of-ways				
Retention/Detention Ponds				
Flood Plain Area				
Environmental				
Historical/Archeological				
Ecological Preserves				
Access Issues:				
Site Accessibility				
Traffic Flow				
Required improvements				
Right-of-ways				

TOPIC	COMPLETE	INCOMPLETE	MISSING OR UNKNOWN	NOT APPLICABLE
Additional land to provide access				
Utilities:				
Water				
Gas				
Telephone				
Electrical				
Sewage				
Cable				

PROJECT COST ESTIMATE

Is there a clear narrative description of the design assumptions and features used for costing?				
Does the study include a concise summary of the key cost estimate design assumptions and features? *(See Figure 11 of the Predesign Guidelines)*				
Has the construction cost estimate been prepared using R. S. Means or some other recognized system for cost development?				
Has the Construction Cost estimate been prepared using the CSI *Uniformat*?				
Are System / Element Cost Sections provided? (All assumptions used to develop the individual cost for each element should be noted and explained)				
Has a design contingency been included in the Construction Cost estimate? *(See Figure 12 of the Predesign Guidelines)*				
Has there been allowance for escalation in the Construction Cost estimate? *(See Figure 12 of Predesign Guidelines)*				
Has the need for building commissioning or other special consultants been considered?				
Has a Total Project Cost estimate been prepared and included? *(See Figure 13 of the Predesign Guidelines)*				

OPERATIONS AND MAINTENANCE IMPACTS

Has the potential impact on the agency's operating budget been considered?				
Will additional staff be required?				
Has potential project revenue been calculated?				

PROJECT DRAWINGS/DIAGRAMS

Have relevant drawings/diagrams been included:				
Conceptual Drawings				
Site Diagrams				
Typical Room Layouts				
Photographs of the Proposed Site				
Building Foot Print				
Parking				
Access Circulation				
Open Spaces				
Functional /Bubble Diagram				

TOPIC	COMPLETE	INCOMPLETE	MISSING OR UNKNOWN	NOT APPLICABLE
APPENDIX				
Has an appendix been included providing a list of codes, standards, guidelines, prior studies, *etc.*, used in the preparation of the study?				
Has scope or cost information from recently completed agency projects been provided?				
SPECIAL CONSIDERATIONS FOR RENOVATIONS/RESTORATION PROJECTS				
Have the issues related to renovation/restoration been considered and documented?				
OTHER RELEVANT DOCUMENTS				
Has a review of relevant code sections been performed to determine if any action or studies are required by law?				
Has the study been prepared in accordance with the Predesign Guidelines and other agency requirements?				
Has the agency reviewed and approved that the study has been performed in accordance with the predesign guidelines and that the agency concurs with the information, findings, and recommendations contained in the study?				

This checklist is provided as a tool for agency use in reviewing the predesign report for sufficiency and completeness. It is <u>not</u> a required section of the predesign report.