FULTON COUNTY

Vision

People *Families* *Neighborhoods*

Mission

To serve, protect and govern in concert with local municipalities

Values

People *Customer Services*
Ethics *Resource Management*
Innovation *Equal Opportunity*

PURCHASING DEPARTMENT
REQUEST FOR PROPOSAL NO. 10RFP050310K-NH

DESIGN/BUILD SERVICES FOR THE ADAMSVILLE REGIONAL HEALTH CENTER

VOLUME II OF II

HEALTH & HUMAN SERVICES AGENCY

RFP DUE DATE AND TIME: July 23, 2010 @ 11:00 AM
RFP ISSUANCE DATE: June 21, 2010
PURCHASING CONTACT: Nancy Harrison, APA at (404) 612-4201
E-MAIL: nancy.harrison@fultoncountyga.gov
PRE-PROPOSAL CONFERENCE: July 9, 2010

LOCATION: FULTON COUNTY PURCHASING DEPARTMENT
130 PEACHTREE STREET, S.W., SUITE 1168
ATLANTA, GA 30303

10RFP050310K-NH
DESIGN BUILD SERVICES FOR THE ADAMSVILLE HEALTH CENTER
REQUEST FOR PROPOSALS
TABLE OF CONTENTS

Section/Page

VOLUME I

SECTIONS 1-11

1.0 INTRODUCTION 1-1
- 1.1 Project Description 1-1
- 1.2 Background 1-1
- 1.3 Procurement Process 1-2
- 1.4 Selection Process 1-2
- 1.5 Purchasing/Accessing the RFP 1-2
- 1.6 Subcontracting Opportunities 1-3
- 1.7 Pre-Proposal Conference 1-3
- 1.8 Proposal Due Date 1-3
- 1.9 Delivery Requirements 1-3
- 1.10 Prohibition on Future Contracts 1-4
- 1.11 Contact Person and Inquiries 1-5

2.0 INSTRUCTIONS TO PROPOSERS 2-1
- 2.1 Contract/Definitions 2-1
- 2.2 No Contact During Procurement Process 2-5
- 2.3 Clarification & Addenda 2-6
- 2.4 Term of Contract 2-7
- 2.5 Required Submittals 2-8
- 2.6 Proposal Evaluation 2-8
- 2.7 Disqualification of Proposers 2-8
- 2.8 Reserved Rights 2-8
- 2.9 Applicable Laws 2-9
- 2.10 Georgia Utility Contractor's License 2-9
- 2.11 General Contractor's License 2-9
- 2.12 Professional Licenses 2-9
- 2.13 Insurance and Risk Management Provisions 2-10
- 2.14 Liquidated Damages 2-10
- 2.15 Accuracy of RFP and Related Documents 2-10
- 2.16 Responsibility of Proposer 2-10
- 2.17 Confidential Information 2-12
- 2.18 County Rights and Options 2-12
- 2.19 Cost of Proposal Preparation and Selection Process 2-14
- 2.20 Termination of Negotiation 2-14

Section/Page

2.21 Wage Clause 2-14
2.22 Additional or Supplemental Information 2-15
2.23 Reporting Responsibilities 2-15
2.24 Georgia Security and Immigration Compliance Act 2-15
2.25 Authorization to Transact Business 2-15
2.26 Right to Protest 2-16
2.27 Request for Proposal General Requirements 2-16

3.0 PROPOSAL REQUIREMENTS 3-1
3.1 Submission Requirements 3-1
3.1.1 Proposal Submission Date and Submittal Format 3-1
3.1.2 Number of Copies 3-2
3.2 Overview of Proposal Requirements 3-2
3.3 Scope of Work 3-2
3.4 Technical Proposal Format and Content 3-2
3.5 Cost Proposal Format and Content 3-8

4.0 EVALUATION CRITERIA 4-1
4.1 Proposal Evaluation Criteria 4-1

5.0 PROPOSAL FORMS 5-1
5.1 Introduction 5-1
5.2 Proposal Forms
5.2.1 Form A - Certification Regarding Debarment
5.2.2 Form B - Non-Collusion Affidavit of Bidder/ Offeror
5.2.3 Form C - Certificate of Acceptance of Request for Proposal Requirements
5.2.4 Form D - Disclosure Form and Questionnaire
5.2.5 Form E - Declaration of Employee-Number Categories
5.2.6 Form F - Georgia Security and Immigration Contractor Affidavit/Agreement
5.2.7 Form G - Georgia Security and Immigration Subcontractor Affidavit

6.0 CONTRACT COMPLIANCE REQUIREMENTS 6-1
6.1 Non-Discrimination in Contracting and Procurement
6.2 Required Forms and EBO Plan
6.2.1 Exhibit A - Promise of Non-Discrimination
6.2.2 Exhibit B – Employment Report

Section/Page

6.2.3 Exhibit C – Schedule of Intended Subcontractors
6.2.4 Exhibit D – Letter of Intent to Perform as a Subcontractor or Provide Materials or Service
6.2.5 Exhibit E – Declaration Regarding Subcontracting Practices
6.2.6 Exhibit F – Joint Venture Affidavit
6.2.7 Exhibit G – Prime Contractor/Subcontractor Utilization Report

7.0 INSURANCE AND RISK MANAGEMENT PROVISIONS 7-1

8.0 PROPOSAL BOND 8-1

9.0 PAYMENT AND PEFORMANCE BOND 9-1

10.0 EXHIBITS..... 10-1
Exhibit 1 – Required Submittal Checklist

11.0 APPENDICES 11-1
Appendix 1 – Adamsville Health Center Renovation and Expansion Feasibility Study
Appendix 2 – Parcel Description and Plat

VOLUME II

TECHNICAL SPECIFICATIONS

00 500 Owner- Contractor Agreement Sample Contract
00 700-48 Responsibility for Completion, Time of Completion and Liquidated Damages

Division 1 - General Requirements

01 010 Summary of Work
01 025 Applications for Payment
01 040 Project Coordination
01 045 Cutting, Coring & Patching
01 050 Layout of the Work
01 090 Reference Standards
01 200 Project Meetings

Section/Page

01 310 Scheduling of the Work
01 320 Reports
01 340 Shop Drawings, Product Data & Samples
01 370 Schedule of Values
01 400 Quality Control
01 500 Construction Facilities & Temporary Controls
01 560 Environmental Protection
01 610 Material & Equipment Handling
01 630 Products & Substitutions
01 680 Equipment & Systems Instruction
01 700 Project Closeout
01 710 Final Cleaning
01 720 Project Record Documents
01 730 Operating & Maintenance Data
01 740 Warranties
01 760 Spare Parts & Maintenance Materials
01 800 Safety, Health & Loss Prevention Program Guidelines

Division 2 – Sitework

Division 3 – Concrete

Division 4 – Masonry

Division 5 – Metals

Division 6 – Wood & Plastics

Division 7 – Thermal & Moisture Protection

Division 8 – Doors & Windows

Division 9 – Finishes

Division 10 – Specialties

Division 11 – Equipment

Division 12 – Furnishings

Section/Page

Division 14 – Conveying Systems

Division 15 - Mechanical

Division 16 – Electrical

Division 17 – Special Systems

COST PROPOSAL FORM

OWNER - CONTRACTOR AGREEMENT

10RFP050310K-NH, DESIGN/BUILD SERVICES FOR THE ADAMSVILLE REGIONAL HEALTH CENTER

Contractor: _____ Project No. _____

Address: _____ Telephone: _____

Contact: _____ Facsimile: _____

Project Location: _____

_____

THIS AGREEMENT is effective as of the _____ day of _____, 2010, by and between Fulton County, a political subdivision of the State of Georgia (hereinafter called the "County" or "Owner"), and the [Insert Contractor Name] (hereinafter referred to as "Contractor") in accordance with all provisions of this Agreement, consisting of the following Contract Documents and Exhibits as indicated in the Table of Contents within this Agreement and documents as referenced within the following Exhibits:

Exhibit A – Scope of Services Summary
Exhibit B – General Conditions
Exhibit C – Scope of Work/Technical Requirements
Exhibit D – Cost Detail
Exhibit E – Schedule
Exhibit F – Purchasing Forms
Exhibit G – Contract Compliance Forms
Exhibit H – Payment & Performance Bonds
Exhibit I – Insurance

WITNESSETH: That the said Contractor has agreed, and by these presents does agree with the said County, for and in consideration of a Contract Price of _____($_____) and other good and valuable consideration, and under the penalty expressed on Bonds hereto attached, to furnish all equipment, tools, materials, skill, and labor of every description necessary to carry out and complete in good, firm, and substantial, and workmanlike manner, the Work specified, in strict conformity with the Drawings and the Specifications hereinafter set forth, which Drawings and Specifications together with the bid submittals made by the Contractor, General Conditions, Special Provisions, Detailed Specifications, Exhibits, and this Agreement, shall all form essential parts of this Contract. The Work covered by this Contract includes all Work indicated on Plans and Specifications and listed in the Bid entitled:

Project Number: [INSERT PROJECT #]

[INSERT PROJECT NAME]

1. The Contractor shall commence the Work with adequate force and equipment within 10 days from receipt of Notice to Proceed from the County, and shall complete the work within **[INSERT CONTRACT DURATION]** calendar days from the Notice to Proceed or the date work begins, whichever comes first. The Contractor shall remain responsible for performing, in accordance with the terms of the contract, all work assigned prior to the expiration of the said calendar days allowed for completion of the work even if the work is not completed until after the expiration of such days.

2. For each calendar day that any work remains uncompleted after the time allowed for completion of the work, the Contractor shall pay the County the sum of $ 1500.00 not as a penalty but as liquidated damages, which liquidated damages the County may deduct from any money due the contractor. At the County's convenience and not to it prejudice the County may provide written notice of the commencement of the assessment of liquidated damages.

3. As full compensation for the faithful performance of this Contract, the County shall pay the Contractor in accordance with the General Conditions and the prices stipulated in the Cost Proposal, hereto attached.

4. It is further mutually agreed between the parties hereto that if, at any time after the execution of this Agreement and the Surety Bonds hereto attached for its faithful performance, the County shall deem the surety or sureties upon such bonds to be unsatisfactory, or, if, for any reason, such bonds cease to be adequate to cover the performance of the Work, the Contractor shall, at his expense, within five days after receipt of notice from the County so to do, furnish an additional bond or bonds in such form and amount, and with such surety or sureties as shall be satisfactory to the County. In such event no further payment to the Contractor shall be deemed to be due under this Agreement until such new or additional security for the faithful performance of the Work shall be furnished in manner and form satisfactory to the County.

5. The Contractor hereby assumes the entire responsibility and liability for any and all injury to or death of any and all persons, including the Contractor's agents, servants, and employees, and in addition thereto, for any and all damages to property caused by or resulting from or arising out of any act or omission in connection with this contract or the prosecution of work hereunder, whether caused by the Contractor or the Contractor's agents, Servants, or employees, or by any of the Contractor's subcontractors or suppliers, and the Contractor shall indemnify and hold harmless the County, the Construction Manager, or any of their subcontractors from and against any and all loss and/or expense which they or any of them may suffer or pay as a result of claims or suits due to, because of, or arising out of any and all such injuries, deaths and/or damage, irrespective of County or Construction Manager negligence (except that no party shall be indemnified for their own sole negligence). The Contractor, if requested, shall assume and defend at the Contractor's own expense, any suit, action or other legal proceedings arising there from, and the Contractor hereby agrees to satisfy, pay, and cause to be discharged of record any judgment which may be rendered against the County and the Construction Manager arising there from.

6. In the event of any such loss, expense, damage, or injury, or if any claim or demand for damages as heretofore set forth is made against the County or the Construction Manager, the County may withhold from any payment due or thereafter to become due to the Contractor under the terms of this Contract, an amount sufficient in its judgment to protect and indemnify it and the Construction Manager from any and all claims, expense, loss, damages, or injury; and the County, in its discretion, may require the Contractor to furnish a surety bond satisfactory to the County providing for such protection and indemnity, which bond shall be furnished by the Contractor within five (5) days after written demand has been made therefore. The expense of said Bond shall be borne by the Contractor. **[See General Conditions for similar provisions]**

7. This Contract constitutes the full agreement between the parties, and the Contractor shall not sublet, assign, transfer, pledge, convey, sell or otherwise dispose of the whole or any part of this Contract or his right, title, or interest therein to any person, firm or corporation without the previous consent of the County in writing. Subject to applicable provisions of law, this Contract shall be in full force and effect as a Contract, from the date on which a fully executed and approved counterpart hereof is delivered to the Contractor and shall

remain and continue in full force and effect until after the expiration of any guarantee period and the Contractor and his sureties are finally released by the County.

8. This agreement was approved by the Fulton County Board of Commissioner on [Insert approval date and item number].

9. By executing this Agreement, the undersigned declares and represents that it has reviewed and understands the Contract Documents and has examined the site of the Work and informed itself fully in regard to all conditions pertaining to the place where the Work is to be done, including those conditions affecting the cost of the Work and the delivery, handling and storage of equipment and materials at the place where the Work is to be executed; that the Contractor and its subcontractors have examined and read the Contract Documents; and it has satisfied itself that the Contract Documents are an adequate and acceptable reflection of Work which is required to be performed; that it is willing and able to perform all of the necessary Work based upon the information and representations contained within the Contract Documents; and that it shall perform such necessary Work according to the requirements of the Contract Documents, for the price prescribed, and within the time allotted. The Contractor hereby agrees that no additional information is required to complete the Work within the cost and schedule constraints established and agreed upon within this Agreement.

[SIGNATURES NEXT PAGE]

IN WITNESS THEREOF, the Parties hereto have caused this Contract to be executed by their duly authorized representatives as attested and witnessed and their corporate seals to be hereunto affixed as of the day and year date first above written.

OWNER:

FULTON COUNTY, GEORGIA

John H. Eaves, Commission Chair
Board of Commissioners

ATTEST:

Mark Massey
Clerk to the Commission (Seal)

APPROVED AS TO FORM:

Office of the County Attorney

APPROVED AS TO CONTENT:

[Insert Department Head Name]
[Insert Department Head Title]

CONTRACTOR:

[Insert Contractor COMPANY NAME]

[Insert Name & Title of person authorized to sign contract]

ATTEST:

Secretary/
Assistant Secretary

(Affix Corporate Seal)

END OF SECTION

00700-48 RESPONSIBILITY FOR COMPLETION, TIME OF COMPLETION AND LIQUIDATED DAMAGES

1. Duty to Accelerate

Subject to the other provisions of the Agreement Documents, Contractor shall furnish such manpower, Materials, facilities, and Equipment and shall work such hours, including night shifts, overtime operations and Sunday and holidays, as may be necessary to ensure the prosecution and completion of the Work in accordance with the approved and currently-updated Critical Path Method (CPM) Schedule. If Work actually in place falls behind the currently updated and approved CPM Schedule, and it becomes apparent from the current approved CPM Schedule that the Work will not be completed within the Agreement Time, Contractor agrees that it will, as necessary or as directed by the County, take some or all of the following actions at no additional cost to the County to improve its progress:

(1) Increase manpower in such quantities and crafts as will eliminate, in the judgment of the County, the delay and backlog of Work;

(2) Increase the number of working hours per shift, shifts per working day, working days per week, the amount of equipment or any combination of the foregoing, sufficiently to eliminate in the judgment of the County, the delay and backlog of Work;

(3) Reschedule activities as necessary to eliminate in the judgment of the County the delay and backlog of Work; and

(4) Any other measure required by the schedule requirements of the Special Conditions.

In addition, the County may require Contractor to submit a proposed revised CPM Schedule Recovery Plan demonstrating its program and proposed plan to make up lag in scheduled progress and to ensure completion of the Work within the Agreement Time. If the County finds the proposed plan not acceptable, the County may require Contractor to submit a new and/or revised plan with direction and other input from the County and Engineer.

2. Liquidated Damages

It is understood and agreed that the County will sustain substantial monetary and other injury and damages, including, but not limited to, increased costs, expenses and liabilities in the event of failure by Contractor to perform its Work in accordance with the Completion and any Interim Milestone Date(s) set forth

in the CPM Schedule prepared in accordance with the Special Conditions. Accordingly, should Contractor not complete the Work, or any such portion thereof, within the date(s) required by the CPM Schedule initially approved by the Engineer, as they may be adjusted pursuant to the Agreement Documents, then charges shall be assessed against any money due or that may become due Contractor in accordance with the following schedule:

For Each day of delay in Substantial Completion of the entire Work: $1,500/day

For Each day of delay in Final completion of the entire Work: $1,500/ day

The amount of such charges is hereby agreed upon as fixed liquidated damages due the County after the expiration of the Agreement Date(s) for completion specified in the CPM Schedule for the Work or portions thereof. Contractor and its surety shall be liable for any liquidated damages in excess of the amount due Contractor on the Final Payment.

If the CPM Schedule projects any untimely completion with unexcused delay and the County in good faith believes that retainage will be insufficient to cover the County's damages, Contractor agrees that the County may withhold additional funds to assure the payment of the liquidated damages owed by Contractor.

3. No Penalty

The fixed liquidated damages are not established as a penalty but are calculated and agreed upon in advance by the County and Contractor due to the uncertainty and impossibility of making a determination as to the actual direct, incidental and consequential damages which are incurred by the County as a result of the failure on the part of Contractor to complete he Work within the Agreement Time and completion date(s) specified in the Agreement Documents. Liquidated damages shall start in accordance with the above schedule upon notification to Contractor in writing that all apparent Agreement Time allowed to achieve the relevant completion date has been consumed. Liquidated Damages as they accrue will be deducted from periodic partial payments to the extent they are sufficient to cover the liquidated damages owing; provided that any excess liquidated damages owing over the periodic partial payment amount may be deducted from retainage. Such deduction shall be in addition to the retainage provided for in the Agreement Documents. The remaining amount of liquidated damages owing upon completion will be deducted from any amounts owing as Final Payment to Contractor or his surety. Any excess amount owing as liquidated damages shall be paid upon demand.

TECHNICAL REQUIREMENTS

SECTION 01 010 – SUMMARY OF WORK

1. INTENT

In accordance with the terms and conditions of the Contract, the Design-Build Contractor (DBC) shall perform the work of this Request for Proposal (RFP) for the Fulton County Government as described below.

The services being sought under this Request for Proposals (RFP) are both professional and non-professional in nature. The County is seeking firms with the highest caliber of skills, past performance, reputation, and integrity to design and construct this project. To be considered, proposers must possess and be prepared to provide expertise, resources and personnel experienced in the various phases of planning, design, engineering, and construction. Architects and engineers utilized in the performance of services shall be licensed in the State of Georgia, as shall trade contractors utilized to the extent required by law and applicable codes, standards, and ordinances.

Provide all labor, materials, tools and equipment, and design-build services necessary for the design and construction described herein and those specific tasks as further defined by this request for proposal (RFP).

This project will consist of design and construction of the Adamsville Regional Health Center for Fulton County Health and Human Services Department, Fulton County, Georgia. The Contract will be a Guaranteed Maximum Price (GMP).

The Health Facility will be located on 4 acres of land, South West Atlanta, Fulton County, Georgia.

DBC shall use the Adamsville Health Center 2009 Presentation by HOK as the basis of the design. Additional meetings with representatives of the user group will be required to finalize program requirements, site locations and scope of work.

2. SPACE PROGRAMMING

The Medical Center is anticipated to be at least 20,000 square foot in size and at a minimum must include the following space requirements:

General Reception

Lobby (Main)	715 sq. ft.
Center Manager	100 sq. ft.
Admin Assistant	90 sq. ft.
Greeting Area	
Medical Reception/ Intake	369 sq. ft.
Financial Counseling	150 sq. ft.
Cashier	50 sq. ft.
Service Coordinator	250 sq. ft.
Conference Room	280 sq. ft.
Locker Room	92 sq. ft.
Medical Records Storages Area	200 sq.ft.
4 – Doctor's office	100 sq.ft. (each)
Waiting	180 sq.ft.
12 - Exam	1,200 sq.ft.
Nurse Supervisor	100 sq.ft.
WIC Nutritionist Office	100 sq. ft.
2-10 Physicians/ Health Provider Offices	200 sq. ft.
Doctor	100 sq. ft.
Group Activity	250 sq. ft.

3 -Therapist	100 sq. ft.
Waiting	100 sq. ft.
2-Office	100 sq. ft.
Office	50 sq. ft.
Office	50 sq. ft.
Reception	80
Storage	50
Waiting	100
Computer Lab	500
Classroom General Use	750
Reading Room	500
Break Room	300
Data/IT Equip Room	70
Copier/ Work Area	80
2 - Conference	200
Janitor/ Main. Supply Area	150
3 - Communication	100
3 - Ele.	100
Fire Marshal	75
Generator	150
2 - Janitor	30
Loading	300
4 - Mech	100
Storage	200

3. ADDITIONAL REQUIREMENTS

Build must be energy efficient and green. Building will not have a flat roof or low sloped roof that can create ponding of any kind, Must be built to all applicable Federal, State, local building and life safety codes.

SECTION 01 025 - APPLICATIONS FOR PAYMENT

1. SUBMITTAL AND VALIDATION OF APPLICATIONS FOR PROGRESS PAYMENTS

The County will make payments to the Design/Builder on the basis of a duly certified and approved estimate of the Work completed through the 25th day of each calendar month, as reviewed by the Construction Manager, provided the estimate was submitted in accordance with the following requirements:

A. The Applications for Payment shall be based on a Schedule of Values completed in accordance with Section 01 370 of the Project Manual. Applications for Payment are to serve as certification by the Design/Builder as to the status of the Work.

B. On or prior to the 20th day of each month, the Design/Builder will prepare a preliminary, itemized Application for Payment for work completed and the value of any stored materials, projected through the 25th of the current month, as well as additional information required herein or as the County and Construction Manager may require to verify and approve the amount of payment applied for. The Design/Builder may be requested to review the Application for Payment with the Construction Manager on the jobsite in order to verify work in place or the location of stored materials.

C. After the Construction Manager has advised the Design/Builder of the acceptability of the Application for Payment, and on or before the 25th day of each month, the Design/Builder shall submit to the Construction Manager an itemized, notarized Application for Payment.

D. The Design/Builder shall submit the Application for Payment in four (4) hardcopies on the latest version of *AIA Document G702/CMa, Application and Certificate for Payment – Construction Manager-Advisor Edition* and *AIA Document G703, Continuation Sheet for G702*, and each copy shall display an original signature by a duly authorized agent of the Design/Builder. The application may be generated by the use of a software applications package acceptable to the Construction Manager, and provided that the forms generated are in the format of the standard AIA Documents indicated above. All four copies shall be individually notarized.

E. If the Design/Builder has made Application for Payment as detailed herein, the Construction Manager will confirm the amounts to be paid to the Design/Builder, certify each copy by original signature, retain one signed copy for its project files, and transmit the remaining copies as Certification for Payment to the County.

F. With respect to all costs except design fees, each Application for Payment shall be validated prior to approval of the following month's Application for Payment, using documentation of actual costs and payments disbursed by the Design/Builder, and assuming that the Design/Builder has received payment from the County for the Application to be validated. With each Application for Payment, the Design/Builder shall submit payrolls, petty cash accounts, receipted invoices or invoices with check vouchers attached, and any other evidence required by the Construction Manager or County to demonstrate that cash disbursements already made by the Design/Builder on account of the Cost of the Work equal or exceed progress payments already received by the Design/Builder, less that portion of those payments attributable to the Construction Fee, plus payrolls for the period covered by the present Application for Payment.

G. The Design/Builder shall also submit with each Application for Payment, if requested, additional documentation, including, but not limited to, sworn statements, waivers and releases of liens and claims, including those required of subcontractors of any tier as may be requested by the Construction Manager, reflecting all retainage, previous Applications for Payment, payment for labor and material, payment for materials stored and other documentation and requirements related to Work performed as provided elsewhere in the Contract Documents or as required by the Construction Manager.

H. Applications for Payment shall show the percentage completion of each portion of the Work as of the end of the period covered. The percentage completion of each portion of the Work shall be based only on the value of the Work in place or stored, as approved by the Construction Manager, and not on any greater amount which may have actually been incurred or paid by the Design/Builder for any reason whatsoever, unless previous written authorization has been received from the Construction Manager.

I. Subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

1. That portion of the Design Fee and Guaranteed Maximum Price (GMP) properly allocable to completed Work as described above; ***plus***
2. that portion of the GMP properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation into the Work, or if approved in advance by the Construction Manager, suitably stored at an alternate location; ***plus***
3. that portion of the GMP properly allocable to the Construction Fee, which shall be computed as the rate specified in the Contract times the total of the amounts described in Subparagraphs 1.I.1 and 1.I.2 above, or if the Construction Fee is established as a Fixed Fee, shall be an amount which bears the same ratio to that Fixed Fee as the total of the amounts described in Subparagraphs 1.I.1 and 1.I.2 above bears to the GMP; ***less***
4. Retainage at the specified rate; ***less***
5. The aggregate of previous Applications for Payment; ***less***
6. the shortfall, if any, found by the Construction Manager's or County's review of the documentation required by Paragraph 1.F above for substantiation of prior Applications for Payment, or resulting from errors subsequently discovered in such documentation; ***less***
7. Any amounts for which the Construction Manager has withheld or nullified a Certificate for Payment as provided in Article 9 of the *Owner-Design/Builder Agreement*.

J. The County will withhold ten (10) percent of each progress payment. Retain age release upon Substantial Completion shall be per O.C.G.A. 13-10-2.

K. Late applications will not be accepted for any reason whatsoever. If the Design/Builder is late with its pay application, it will not be processed until the next pay cycle.

L. At no time during the contract will the Design/Builder be allowed to bill for an amount which is in excess of the amount of its contract (design fees plus GMP), including all signed and executed change orders.

M. The Design/Builder may expect payment from the County within thirty (30) days of the Design/Builder's submittal of an Application for Payment. Any follow-up inquiries on the status of payments shall be through the Construction Manager. The Design/Builder is not permitted to contact the County directly with any payment inquiries.

N. No approval of any application for progress payment, nor any progress payment, nor any partial or entire use of occupancy of the Work or the Project by the County, shall constitute an acceptance of any Work not in accordance with the Contract Documents.

2. PAYMENT FOR MATERIALS STORED ON SITE

A. As provided in the Contract Documents, payments will be made on account of materials or equipment not incorporated in the Work, but delivered and suitably stored at the site, provided such materials are stored according to the provisions of the Contract Documents and the satisfaction of the Construction Manager. Provisions for storing materials at the site are described elsewhere in the General Requirements.

B. The Design/Builder shall include with its payment request an itemization of the quantity of such materials, and shall document with invoices, Bills of Sale or other documentation acceptable to the Construction Manager, the cost of said materials. The design/builder must provide proof of payment for the stored material before applying for payment.

3. PAYMENT FOR MATERIALS STORED OFF SITE

There will be no payment for materials stored off the project site.

4. FINAL PAYMENT

A. Final Payment shall not be made until a final accounting of the Cost of the Work has been submitted by the Design/Builder and reviewed by the Construction Manager and the County. A satisfactory accounting of the

Cost of the Work shall be a prerequisite for certification of a final Application for Payment by the Construction Manager and subsequent payment by the County.

B. The same procedural requirements for submittal of progress Applications for Payment shall apply to submittal of the final Application for Payment, except as provided in this Paragraph 4.

C. The amount of the Final Payment shall be calculated as follows:

1. For design, the total sum of the Design Fee included in the contract, less any unused portion of a Reimbursable Expense allowance; ***plus***
2. For construction, the total sum of the Cost of the Work, as substantiated by the Design/Builder's final accounting and including the Construction Fee, but totaling no more than the Guaranteed Maximum Price; ***less***
3. Amounts, if any, for which the County withholds, in whole or in part, a final Certificate for Payment as provided in Article 9 of the *Owner-Design/Builder Agreement*; ***less***
4. The aggregate of previous payments made by the County.

D. The Construction Manager and the County will complete a review of the Design/Builder's final accounting of the Cost of the Work within 30 days after delivery of the final accounting and a final Application for Payment to the Construction Manager by the Design/Builder. If the Construction Manager's and County's review substantiates the final accounting as provided, the Construction Manager shall, within seven (7) days, either certify the final Application for Payment and forward it to the County for payment, or shall notify the Design/Builder and the County in writing of the reasons for withholding certification as provided in Article 9 of the *Owner-Design/Builder Agreement*.

E. If the aggregate of previous payments made by the County should exceed the final amount due the Design/Builder as supported by the final accounting of the Cost of the Work, the Design/Builder shall immediately reimburse the difference to the County.

F. If the review of the final accounting of the Cost of the Work by the Construction Manager and the County determines that the Cost of the Work as claimed by the Design/Builder cannot be substantiated, the Construction Manager will notify the Design/Builder and the County in writing, and then confer with the Design/Builder regarding the amount in dispute. If after conferring there is still an amount in dispute, the Construction Manager shall certify the final Application for Payment for the amount not in dispute and forward it to the County for payment. Resolution of any remaining amount in dispute shall be according to Subparagraph 2.2.10 of the *Owner-Design/Builder Agreement.*

BILL OF SALE OF PERSONAL PROPERTY

KNOW ALL MEN BY THESE PRESENTS,

THAT,

For and in consideration of the sum of _____Dollars ($ _____) and other good and valuable consideration, the receipt of which is hereby acknowledged, _____, the Undersigned ("Seller"), does by these presents BARGAIN AND SELL UNTO FULTON COUNTY, GEORGIA ("Purchaser") the goods and chattels located at _____ as described on the Schedule attached hereto and by this reference made a part hereof (the "Property").

IN CONSIDERATION OF THE FOREGOING AND THE COVENANTS HEREIN CONTAINED, SELLER AGREES AS FOLLOWS:

1. Seller does hereby covenant and warrant to the Purchaser that Seller is the lawful owner of the Property; that the Property is free from all liens and claims whatsoever; that Seller has good right to sell the same; that Seller will warrant and defend same against the claims and demands of all persons.

2. Seller will provide safe and proper storage for the Property and will cause to be placed conspicuously and securely on the Property a sign or signs which will show that the Property is the Property of the Purchaser.

3. The Property shall be held at Seller's risk, and shall be kept insured, against fire, theft, and all other hazards by Seller at Seller's expense while in its custody or control in an amount equal to the replacement cost thereof, with loss payable to Purchaser. Copies of policies or certificates of such insurance will be furnished to Purchaser.

4. Seller shall indemnify, defend, and hold the Purchaser harmless from and against claims, liabilities, damages, suits, actions, losses, costs or expenses, including reasonable attorneys' fees, arising out of or occasioned by the lost, theft, damage, destruction handling, repair and maintenance of the Property or any part thereof.

5. The Purchaser or his agents shall have the right to inspect the Property at any time during normal business hours at the storage facilities of the Seller. The failure to inspect shall not be deemed a waiver of any of the rights of the Purchaser, and, if the Property is found to be defective, in material or workmanship, stolen or lost, in whole or in part, the Seller shall replace the same at its own cost.

6. The Property shall be subject to removal by Purchaser, at any time, upon Purchaser's instruction.

IN WITNESS WHEREOF, the Undersigned has set _____ hand this _____ day of _____, 20___.

SELLER:

_____

BILL OF SALE OF PERSONAL PROPERTY

ATTEST:

_____

STATE OF _____

COUNTY OF _____

This is to certify that _____ is personally known to me to be the same person whose name subscribed on the foregoing bill of sale appeared before me, _____, a notary public, this _____ day of _____, 19___, and expressly acknowledged to me the execution of said foregoing bill of sale a free and voluntary act, receipt of consideration as recited therein, and that _____ understood the foregoing bill of sale and intended to be legally bound by the same.

NOTARY PUBLIC:

_____

Commission expires on: _____ My

BILL OF SALE OF PERSONAL PROPERTY

Schedule of Stored Materials

This Schedule is an attachment to the Bill of Sale of Personal Property dated _____.

DESIGN/BUILDER'S CERTIFICATE OF QUANTITY AND VALUE OF STORED MATERIAL

This is to certify that the stored materials intended for installation on the _____ (Project Site), for which the Design/Builder or Vendor (Seller) has requested payment tabulated in Column "F" of the Design/Builder's Application for Payment dated _____, and as conveyed by the aforementioned Bill of Sale of Personal Property, are comprised of the items or bulk quantities of goods insured as certified by the attached loss payable clause endorsement to the Seller's insurance policy, as provided by the attached written consent of Surety, and as set forth below in numbered Sections 1 and 2.

This attachment further certifies that, of the items or quantities of materials previously conveyed by Bill(s) of Sale provided prior to the date of the aforementioned Bill of Sale to which this is an attachment, and previously stored at locations other than the Project Site, only the following items or bulk quantities, as set forth in numbered Section 3 below, remain so stored:

Section 1 - MATERIALS PERTAINING TO THE AFOREMENTIONED BILL OF SALE AND STORED AT LOCATIONS OTHER THAN THE CONSTRUCTION PROJECT SITE:

Quantity	Description	Value (before retainage)	Storage Location

SUBTOTAL BEFORE RETAINAGE: _____

BILL OF SALE OF PERSONAL PROPERTY

Schedule of Stored Materials

Section 2 - MATERIALS PERTAINING TO THE AFOREMENTIONED BILL OF SALE AND STORED BUT NOT YET INCORPORATED INTO THE WORK COMPLETE ON THE CONSTRUCTION PROJECT SITE:

Quantity	Description	Value (before retainage)

SUBTOTAL BEFORE RETAINAGE: _____

BILL OF SALE OF PERSONAL PROPERTY

Schedule of Stored Materials

Section 3 - MATERIALS PERTAINING TO PRIOR BILL(S) OF SALE AND STORED AT LOCATIONS OTHER THAN THE CONSTRUCTION PROJECT SITE:

Quantity	Description	Bill of Sale Date	Value (before retainage)	Storage Location

SUBTOTAL BEFORE RETAINAGE: _____

BILL OF SALE OF PERSONAL PROPERTY

Schedule of Stored Materials

In providing this certification, the Seller hereby certifies that he, or his duly authorized agent by whose actions he is legally bound, has actually visited the storage locations listed in numbered Sections 1 and 3, and that he or his agent has verified the quantity of materials so stored, that they are being stored in a reasonably safe manner and that they are physically and clearly identified as being the property of FULTON COUNTY. GEORGIA as represented by the Board of Commissioners.

SO CERTIFYING, the Undersigned has set _____ hand this _____ day of _____, 20___.

SELLER:

_____

END OF SECTION 01 025, APPLICATIONS FOR PAYMENT

SECTION 01 045 – CUTTING, CORING & PATCHING

1. GENERAL

A. "Cutting, Coring and Patching" is hereby defined to include, but not necessarily be limited to, removal, cutting (including excavation), coring, fitting and patching of nominally completed and previously existing Work, as shown or required in order to accommodate the coordination of Work, installation of new Work, to uncover other Work for access or inspection, remove and replace defective Work or Work not conforming to the Contract Documents, or to obtain samples for testing or for similar purposes.

B. For existing buildings, the sizes, dimensions, and elevations shown on the drawings represent measurements which should be regarded as typical dimensions; actual dimensions may and will vary due to prevailing building practices at the time of construction, and building settlement over time.

C. The requirements of this section apply generally to all aspects of the Work, including mechanical, electrical and special systems work, unless otherwise indicated.

D. The Design/Builder shall note that it is its responsibility to coordinate the locations and sizes and to cut or core all openings and penetrations for all trades involved in the Work of this Contract. Any openings and penetrations which may be shown on drawings provided by the County are intended only to assist the Design/Builder in coordinating the major openings and penetrations and are not representative of all openings which will be required to complete the work.

2. QUALITY ASSURANCE

A. The Design/Builder shall not cut, core and patch structural work in a manner resulting in a reduction of load-carrying capacity or load/deflection ratio. Prior to cutting, coring and patching structural work, obtain Construction Manager's approval to proceed with cutting and patching as proposed in a written submittal by the Design/Builder.

B. The Design/Builder's submittal requesting consent to proceed with cutting, coring and patching structural work must include:

1. Identification of the Project
2. Description of the affected Work
3. Necessity for cutting or coring
4. Affects on other Work, and on the structural integrity of the Work
5. Description of the proposed Work, which designates:
   a). Scope of cutting, coring and patching
   b). Subcontractor who will execute the work
   c). Products proposed to be used
   d). Extent of refinishing required
6. Alternates to cutting, coring and patching
7. Designation of the responsibility for the costs associated with the cutting, coring and patching
8. Evidence of review and approval of proposed cutting or coring by Design/Builder's Structural Engineer

C. Prior to performing any cutting, coring and patching as extra work, the Design/Builder shall have submitted a written cost proposal and received written direction from the Construction Manager.

D. The Design/Builder shall be responsible for providing, locating, and installing all embeds necessary for the completion of the Work, so as to avoid unnecessary cutting and patching.

3. OPERATIONAL AND SAFETY LIMITATIONS

A. The Design/Builder shall not cut and patch operational elements and safety-related components in a manner resulting in a reduction of capacities to perform in the manner intended including energy performances, or resulting in decreased operational life, increased maintenance, or decreased safety.

B. The Design/Builder shall not cut, core drill or otherwise penetrate any post-tensioned cast-in-place concrete elements.

4. VISUAL REQUIREMENTS

The Design/Builder shall not cut and patch work which is exposed on the exterior, or exposed on the interior in occupied spaces of the building, in a manner resulting in a reduction of visual qualities, or resulting in substantial evidence of cut and patch work, as judged by the Construction Manager. The Design/Builder shall remove and replace work judged by the Construction Manager to be cut and patched in a visually unsatisfactory manner.

5. MATERIALS

The Design/Builder shall provide materials for cutting and patching which will result in equal or better work than work being cut and patched, in terms of performance characteristics and including visual effect where applicable. The Design/Builder shall comply with requirements, and use materials identical with original materials where feasible and where recognized that satisfactory results can be produced thereby.

6. PREPARATION

A. Inspection of Concealed Conditions (for construction existing prior to this Contract, if applicable) - Prior to beginning installation or preparation of shop drawings for each unit of work involving exposure of existing concealed construction, the Design/Builder shall remove the minimum of finishes, substrates and other existing construction as necessary to expose existing conditions where work is required behind existing surfaces. The Design/Builder shall verify that work can proceed in accordance with the requirements of the Contract Documents. The Design/Builder shall prepare detailed drawings of any existing conditions which differ substantially from conditions indicated or implied by the Contract Documents and the existing construction visible prior to exposure of concealed conditions. Submit drawings and a cost proposal to the Construction Manager a minimum of fourteen (14) calendar days prior to the scheduled installation of work in that area or the preparation of any required submittals relating to the area in question.

B. Inspection of Concealed Conditions (for Work installed under this Contract) – In the event work is required behind existing surfaces previously installed under this Contract, the Design/Builder shall remove the minimum of finishes, substrates and other existing construction as necessary to expose existing conditions where work is required behind existing surfaces. Inspect and assess all conditions affecting the continued performance of the Work, and immediately report any circumstances which could have an adverse effect on the performance of the Work to the Construction Manager.

C. Temporary Support - The Design/Builder shall provide shoring and protection and/or temporary support for work to be cut, to prevent failure. Do not endanger other work.

D. Protection - The Design/Builder shall provide protection of other work during cutting and patching, to prevent damage and provide protection of the Work from adverse weather conditions. The Design/Builder shall not cut or alter work of another contractor without written consent of the Construction Manager.

7. CUTTING AND PATCHING

A. The Design/Builder shall employ skilled tradesmen to perform all cutting, coring and patching and who have experience working with the materials involved. Except as otherwise indicated or approved by the Construction Manager, the Design/Builder shall proceed with cutting and patching at earliest feasible time in each instance, and complete work without delay.

B. The Design/Builder shall cut work by methods least likely to damage work to be retained and work adjoining. Employ the original installing subcontractor to perform cutting and patching for weather-exposed or moisture-resistant elements, and for exterior or interior surfaces exposed to view.

C. In general, where physical cutting action is required, the Design/Builder shall cut work with sawing and grinding tools, not with hammering and chopping tools. Make cuttings to neat, straight lines and only to the size required to accommodate the construction to be installed. Core drill openings through finished concrete work.

D. The Design/Builder shall patch with seams which are durable and as invisible as possible. Comply with specified tolerances for the work. Where feasible, inspect and test patched areas to demonstrate integrity of work.

E. The Design/Builder shall restore exposed finishes of patched areas and extend finish restoration onto retained work adjoining, in a manner which will eliminate evidence of patching and refinishing. Where a patch occurs in a smooth painted surface, the Design/Builder shall extend the final paint coat over entire unbroken surface containing patch, after patched area has received prime and base coats.

F. Wherever existing concrete floors are required to be patched or leveled, and where slabs are chopped out to provide for installation of new concrete floors, and where existing concrete is to be extended, the Design/Builder shall apply concrete bonding agent before placing new concrete. Apply such bonding agent in accordance with the manufacturer's specifications.

END OF SECTION 01 045, CUTTING, CORING & PATCHING

SECTION 01 050 – LAYOUT OF THE WORK

1. PROJECT LAYOUT REQUIREMENTS

A. The Design/Builder shall be responsible to accurately establish and maintain all principal lines, grades, and levels for the Work.

B. Establish a minimum of two permanent bench marks on the site, referenced to data established by survey control points.

C. Establish lines and levels, and locate and lay out by instrumentation and similar appropriate means, the following:

1. Site improvements, including, but not limited to, pavement; stakes for grading, fill and topsoil placement; and utility slopes and invert elevations
2. Grid and axes for structures
3. Building foundations, column locations, and floor elevations
4. Controlling lines and levels required for mechanical, electrical, and other trades

D. Protect and preserve the established control points, monuments, stakes, bench marks, or other datum points. The Design/Builder shall not make any change in location without the written approval of the Construction Manager. Any control points lost or displaced through the neglect of the Design/Builder shall be replaced at no additional cost to the County.

E. Verify the overall and critical dimensions and elevations for the Work prior to commencement of construction. Submit a written statement to the Construction Manager of the acceptance of the location of all existing conditions and previously completed construction, if any, as it relates to the Work of this Contract.

F. Verify all drawing dimensions and existing measurements as the Work progresses at the site. No extra charges shall be allowed for differences between actual field measurements and any dimensions shown on the Design/Builder's Construction Documents or given in the Contract Documents. Do not provide filler pieces or closures without approval from the Construction Manager.

G. Verify and maintain layouts during construction operations, using the same methods as were used to establish original layouts.

H. All Work, and in particular piping, ducts, conduit, and similar items, shall be neatly and carefully laid out to provide the most useful space utilization and the most orderly appearance. Except as otherwise indicated or directed, piping and similar work shall be installed as close to ceilings and walls as conditions reasonably permit. These items shall be located to prevent interference with other work and with the use of the spaces in the manner required by the functions of the space and the County. Valves shall be located in inconspicuous but accessible locations. Before proceeding with any work exposed to view, the Design/Builder shall carefully plan the layout and review any questionable installations with the Construction Manager.

I. Maintain a complete and accurate log of control and survey work as it progresses. Indicate all control point locations, with horizontal and vertical data, on the record drawings submitted at Substantial Completion.

2. QUALITY ASSURANCE / QUALITY CONTROL

A. The Design/Builder shall employ qualified personnel to stake out/locate the reference points as needed to properly locate the Work of the Design/Builder and all subcontractors. Land surveyors and engineers utilized in layout work shall be registered professionals, licensed in the State of Georgia, and acceptable to the Construction Manager.

B. Provide certification by a registered land surveyor or engineer that elevations and locations of improvements are in conformance with the requirements of the Contract Documents.

C. The Design/Builder shall be responsible for transferring all required measurements from the control points to the required locations throughout the Project. If, at any time, the Construction Manager questions the transference of such dimensions, the Design/Builder shall, at no additional cost to the County, verify the transference of questionable dimensions to the Construction Manager.

3. COORDINATION

A. Upon Notice to Proceed, and again prior to commencement of construction, examine the site and the conditions under which the Work is to be installed, and notify the Construction Manager in writing of any discrepancies or conditions detrimental to the proper performance of the Work. The Design/Builder is not to proceed until any such discrepancies or detrimental conditions are corrected.

C. Obtain accurate field dimensions in ample time to permit fabrication of items requiring same, and allow for delivery and installation in time to maintain the project schedule. The Design/Builder and all subcontractors shall cooperate and coordinate in completing the work phases to accommodate the schedule for obtaining dimensions and to prevent fabrication delay. In the event it is impractical to have work in place to permit field dimensions to be taken, the Design/Builder shall guarantee necessary dimensions to fabricators and be responsible to ensure those dimensions will be accurate.

D. The Design/Builder shall furnish approved copies of all relevant information (shop drawings, diagrams, templates, technical data, etc.) to the County or to separate contractors, as required for coordination with any work of the Project by others.

END OF SECTION 01 050, LAYOUT OF THE WORK

SECTION 01 090 – REFERENCE STANDARDS

1. APPLICABILITY OF STANDARDS

A. Where reference is made to standards or specifications published by various organizations ("standards"), the Work shall conform to latest edition of such standards as amended and revised in effect at the date of Contract, unless a specific date is indicated.

B. Where material is designated for certain applications, material shall conform to standards designated in the applicable building code governing the Work. Similarly, unless otherwise specified, installation methods and standards of workmanship shall also conform to standards required by such code. Where no particular material is specified for a certain use, the Design/Builder shall select from choices offered in the governing code.

C. Where a standard does not provide all information necessary for the complete installation of an item, comply with manufacturer's instructions for installation and workmanship.

D. Where specific articles, sections, divisions or headings for standards are not given, such standards shall apply as appropriate. Standards when included in the Contract Documents by abbreviations or otherwise shall form a part of Contract Documents. In the event of conflicts between cited standards and/or the Contract Documents, the more stringent shall govern.

2. ABBREVIATIONS AND ACRONYMS

A. Abbreviations and acronyms used throughout the Contract Documents refer to associations, institutes, societies and other public bodies who publish standards which are readily available to the public, and to the titles of the standards which they publish. Where such abbreviations or acronyms are used in the Contract Documents, they shall mean the recognized name of the trade association, standards-generating organization, authority having jurisdiction, or other entity applicable to the context of the text provision. Refer to the "Encyclopedia of Associations," published by Gale Research Co., available in most libraries.

B. Whenever initials representing such a body are shown, followed by a number or a combination of numerals and letters, reference is to a particular standard to which Design/Builder shall conform. The number or combination of numerals and letters following abbreviation designates the particular standard to be followed.

3. DESIGN/BUILDER'S DUTIES AND RESPONSIBILITIES

The Design/Builder shall be responsible when required by Contract Documents, or upon written request from the Construction Manager, to deliver required proof that materials or workmanship, or both, meet or exceed the requirements of a reference standard.

4. CONFLICTING STANDARDS

Where compliance with two or more standards is specified and where the standards may establish different or conflicting requirements for minimum quantities or quality levels refer requirements that are different but apparently equal and other uncertainties to the Construction Manager for a decision before proceeding.

5. COPIES OF STANDARDS

Each entity engaged in construction on the Project is required to be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents. Where copies of standards are needed to perform a required construction activity, the Design/Builder shall obtain copies directly from the publication source.

END OF SECTION 01 090, REFERENCE STANDARDS

SECTION 01 200 – PROJECT MEETINGS

1. GENERAL

A. The Construction Manager will determine the agenda for and chair the meetings described below and also shall prescribe the format for the documentation of the meetings to be produced by the Design/Builder.

B. Representatives of the Design/Builder and its subconsultants, subcontractors, and suppliers in attendance at any project meeting shall be qualified and authorized to act on behalf of the entity each represents.

C. The Design/Builder shall schedule and administer project meetings throughout progress of Work where specified or required, and shall have the following specific responsibilities:

1. Distribute Construction Manager's agenda for meetings
2. Distribute written notice of each meeting a minimum of four days in advance of meeting date
3. Make physical arrangements for meetings
4. Record minutes, in the format to be provided by the Construction Manager, to include significant proceedings and decisions
5. Reproduce and submit word processed minutes, within four working days after each meeting, to the Construction Manager for approval before further distribution. After approval, distribute copies as follows:

    a. to all participants in the meeting
    b. to all parties affected by decisions made at meeting
    c. to all other parties as may be designated by the County or Construction Manager

D. The County's user department(s) will be active participants in the design and construction process for this project, and their representative(s) shall be invited to all project meetings for which their presence and/or participation is appropriate.

2. PRE-DESIGN/PROGRAM CONFIRMATION MEETINGS

A. Schedule: Meeting shall be held within ten (10) days of Notice to Proceed.

B. Location: Designated by Construction Manager.

C. Attendance:

1. Owner/user group representative(s), as appropriate
2. Program Manager's representative (at its option)
3. Construction Manager' representative
4. Design/Builder's Project Manager, and other representative(s) as appropriate
5. Design/Builder's architects and engineers
6. Major subcontractors
7. Others as appropriate

D. Suggested Minimum Agenda:

1. Introductions of team members
2. Projected design and construction schedules
3. Items to be coordinated before design commences
4. Critical work sequencing
5. Project coordination and designation of responsible personnel
6. Procedures for design issues and decisions
7. Procedures for design submittals and reviews
8. Procedures for maintaining record documents

3. DESIGN PROGRESS MEETINGS

A. Scheduling: Meetings shall be conducted bi-weekly throughout the design phase.

B. Location: Designated by Construction Manager.

C. Attendance:

1. Owner/user group representative(s), as appropriate
2. Program Manager's representative (at its option)
3. Construction Manager' representative
4. Design/Builder's Project Manager, and other representative(s) as appropriate
5. Design/Builder's architects and engineers
6. Others as appropriate

D. Suggested Minimum Agenda:

1. Design progress and schedule
2. Critical issues affecting design progress

4. PRE-CONSTRUCTION MEETING

A. Scheduling: Meetings shall be held at least two weeks prior to any Work commencing on the site.

B. Location: Designated by Construction Manager.

C. Attendance:

1. Owner/user group representative(s), as appropriate
2. Program Manager's representative (at its option)
3. Construction Manager' representative
4. Design/Builder's Project Manager, Superintendent, and other representative(s) as appropriate
5. Design/Builder's architects and engineers
6. Major subcontractors and suppliers
7. Others as appropriate

D. Suggested Minimum Agenda:

1. Discussion of major subcontractors and suppliers
2. Projected construction schedules
3. Critical work sequencing
4. Major equipment deliveries and priorities
5. Project coordination and designation of responsible personnel
6. Procedures and processing of:
   a. Design issues and decisions
   b. Field decisions
   c. Proposal requests
   d. Submittals
   e. Change orders
   f. Applications for payment
7. Adequacy of distribution of Construction Documents
8. Procedures for maintaining record documents
9. Use of premises:
   a. Office, work and storage areas
   b. County's and Construction Manager's requirements
10. Construction facilities, controls and construction aids
11. Temporary utilities
12. Safety and first-aid procedures

13. Security procedures and site access controls
14. Housekeeping procedures
15. Traffic and parking procedures
16. Other administrative procedures

5. CONSTRUCTION PROGRESS MEETINGS

A. Scheduling: Meetings shall be conducted at least bi-weekly throughout the construction phase.

B. Location of the Meetings: Project field office of Contractor or other location designated by Construction Manager.

C. Attendance:

1. Owner/user group representative(s), as appropriate
2. Program Manager's representative (at its option)
3. Construction Manager' representative
4. Design/Builder's Project Manager, Superintendent, and other representative(s) as appropriate
5. Design/Builder's architects and engineers as appropriate to the agenda
6. Subcontractors and suppliers as appropriate to the agenda
7. Others as appropriate

D. Suggested Minimum Agenda:

1. Actual vs. scheduled progress since previous meeting
2. Planned construction activities for the next four weeks
3. Problems with and revisions to construction schedule
4. Review of off-site fabrication and delivery schedules
5. Corrective measures and procedures to regain projected schedule
6. Submittal schedules and expediting
7. Construction Document clarifications
8. Field observations, problems, and conflicts
9. Quality control
10. Actual and potential changes and their impacts
11. Safety issues

6. PRE-INSTALLATION MEETINGS

A. Scheduling: Schedule pre-installation meetings for installation of various aspects of the Work prior to the start of installation, or as otherwise specified in the Project Manual. Do not schedule pre-installation meetings until required submittals have been approved.

B. Location: At jobsite.

C. Meeting Requirements:

1. Prior to installation of work, conduct pre-installation meeting at project site with Design/Builder's superintendent and foreman, primary materials installer, installer of each component of associated work, representative(s) of materials manufacturer(s), inspection and testing agency representative (if any), installers of other work requiring coordination, Construction Manager, and Owner's representative for the purpose of reviewing job mock-up (if any), job conditions, project requirements and procedures to be followed in performing work.

2. At pre-installation meeting, examine areas and conditions under which work is to be performed. Report in writing of conditions detrimental to proper and timely completion of work. Do not proceed with work until unsatisfactory conditions have been corrected. Commencement of work shall constitute acceptance of substrate conditions.

3. At pre-installation meeting, the manufacturer's authorized representative shall inspect storage of job site materials, establish scheduling of initial and final installation of products, and establish the method of preparing written progress reports to Design/Builder (with copy to Construction Manager) of job conditions and installation.

4. At pre-installation meeting, review manufacturer's product data publications and other published instructions for material installation compliance including shop drawings. Shop drawings and submittals shall be reviewed and approved prior to pre-installation meetings. Design/Builder shall provide a set of approved shop drawings and submittals for meeting use.

5. Where manufacturer's representative offers recommendations on material use, such recommendations shall be submitted in writing and substantiated by dated, printed, published product data or material use statement which is complete, definite, and clear, and signed by authorized company official.

6. Meeting Report: Submit copy of pre-installation job meeting report. Include copy of manufacturer's inspection report, manufacturer's recommendations, and any statement of non-compliance as applicable.

7. Pre-Installation meetings shall include, but not be exclusive of the following portions of the Work:

   a. Roof System
   b. Brick/Masonry
   c. Glazing & Skylights
   d. Hollow Metal & Hardware
   e. Applied Wall Systems & Products
   f. Equipment & Systems
   g. Furnishings (prior to ordering)
   h. Voice/Data/Paging System (prior to ordering)
   i. Fire/Security Systems
   j. Combined Mechanical/Electrical/Plumbing & Control Systems

7. INSPECTION TOURS

A. Formal inspection tours shall be made of the job progress for the Owner and any other officials as the occasion warrants and as scheduled by the Construction Manager.

B. If requested by the Construction Manager, the Design/Builder shall be prepared to show and explain work completed and in progress throughout the Project to the inspection parties.

END OF SECTION 01 200, PROJECT MEETINGS

SECTION 01 310 – SCHEDULING OF THE WORK

1. INTRODUCTION

A. This Section describes the design and construction scheduling and progress reporting requirements of the Contract. The primary objectives of the requirements of this Section are:

1. to insure adequate planning and execution of the Work by the Design/Builder;
2. to assist the County and Construction Manager in evaluating the progress of the Work;
3. to provide for optimum coordination by Design/Builder of its subconsultants, trades, subcontractors and suppliers, and of its Work with the work or services provided by the County or any separate contractors; and
4. to permit the timely prediction or detection of events or occurrences which may affect the timely prosecution of the Work.

2. GENERAL SCHEDULING REQUIREMENTS

A. The Work of this Contract shall be planned, scheduled, executed, and reported using the critical path method (CPM). The Design/Builder shall use one of the following software programs to develop its Detailed Design and Construction Schedule:

1. Primavera Project Planner, latest version
2. SureTrak Project Manager, latest version
3. Microsoft Project, latest version (MPX file)

B. The Detailed Design and Construction Schedule, as defined herein, shall represent the Design/Builder's commitment and intended plan for completion of the Work in compliance with the Contract completion date and interim milestone dates specified. The Detailed Design and Construction Schedule shall take into account all foreseeable activities to be accomplished by any separate contractors or the County, and interface dates with utility companies, the County's operations, and others. The Detailed Design and Construction Schedule shall anticipate all necessary manpower and resources to complete the Work within the dates set forth.

C. Once approved by the Construction Manager, the Detailed Design and Construction Schedule will become the Schedule of Record, and will be the basis for coordinating the Work, scheduling the Work, monitoring the Work, reviewing progress payment requests, evaluating time extension requests, and all other objectives listed above. No other schedule will be recognized for this Contract.

D. The Design/Builder is responsible for determining the sequence of activities, the time estimates of the detailed design and construction activities and the means, methods, techniques and procedures to be employed. The Detailed Design and Construction Schedule shall represent the Design/Builder's best judgment of how it will prosecute the Work in compliance with the Contract requirements. The Design/Builder shall ensure that Detailed Design and Construction Schedule is current and accurate and is properly and timely monitored, updated and revised as Project conditions and the Contract Documents may require.

E. When there are separate contractors working concurrently on the Project whose work must interface or be coordinated with the Work of the Design/Builder, the Design/Builder shall coordinate its activities with the activities of the separate contractors, and the Detailed Design and Construction Schedule shall take into account and reflect such work by others.

F. The Design/Builder shall be solely responsible for expediting the delivery of all materials and equipment to be furnished by it so that the progress of construction shall be maintained according to the currently approved Detailed Design and Construction Schedule for the Work. The Design/Builder shall notify the Construction Manager in writing, and in a timely and reasonable manner, whenever the Design/Builder determines or anticipates that the delivery date of any material or equipment to be furnished by the Design/Builder will be later than the delivery date indicated by the currently approved Detailed Design and Construction Schedule, or required consistent with the completion requirements of this Contract, subject to schedule updates as herein provided.

3. DETAILED DESIGN AND CONSTRUCTION SCHEDULE

A. Within two (2) weeks after the Notice to Proceed, the Design/Builder shall submit a Detailed Design and Construction Schedule according to the requirements established herein.

1. For the initial submittal, the Construction Schedule portion will be considered preliminary until such time as design is completed.

2. The Detailed Design and Construction Schedule shall be resubmitted within ten (10) days following the County's approval of the Design/Builder's final Construction Documents, providing the Design/Builder's definitive plan for all construction activities. Should the Work be "fast-tracked," a resubmittal shall be required within ten (10) days following the County's first approval of any portion of the Design/Builder's Construction Documents, and then again similarly for all such partial approvals and the final approval.

B. The Detailed Design and Construction Schedule shall consist of a time-scaled, detailed network graphic representation of all activities which are part of the Design/Builder's design and construction plan and an accompanying listing of activity's dependencies and interrelationships. The Detailed Design and Construction Schedule submission shall include, but not be limited to, the following information:

1. Project name
2. Distinct, logical and identifiable subdivisions of Work
3. Activities for all aspects of the Work, with durations not exceeding fourteen (14) calendar days for all activities for which the Design/Builder will perform actual design or construction work. Material procurement, submittals, concrete curing and other similar activities may exceed fourteen (14) calendar days if approved by the Construction Manager. Related activities, each of a duration of five (5) calendar days or less, may be shown as one activity together, if not on the critical path of timely job completion.
4. Outage schedules for existing utility services that will be interrupted during the performance of the Work
5. Acquisition and installation of equipment and materials supplied and/or installed by the County or separate contractors
6. All start dates, milestones, float and completion dates
7. An accounting of the number of workdays anticipated to be lost due to weather. This accounting shall be in accordance with allowable days per month provided in Article 8 of the *Owner-Design/Builder Agreement* (Section 00 500).
8. A tabular report listing all predecessor and successor activities for each activity
9. A legible time scaled network diagram
10. A listing of the project calendar, indicating the anticipated days of work performance
11. A floppy computer disk, in a form and format acceptable to the Construction Manager, of the Detailed Design and Construction Schedule including all required submission information resident in the computer system and containing all of the files associated with the schedule.

C. Activities and milestones to appear on the Detailed Design and Construction Schedule shall include, but not be limited to, preliminary and final design activities, pre-design and program meetings, sitework, structure erection, roof close-in, exterior wall systems, paving, major material fabrication and delivery, shop drawings submittals, bi-weekly progress meetings, furniture delivery and installation, equipment delivery and installation, coordination requirements, mock-up installations and inspections, dates of Substantial and Final Completion, Certificate of Occupancy inspection, systems testing and instruction, and special County reviews and decision points that impact the Work.

D. Schedule Reports: Schedule submissions will contain the following minimum information for each activity:

1. Activity number, description and estimated duration
2. Anticipated start and finish dates
3. Responsibility for activity
4. The cost loading values for each activity.

E. For all major equipment and materials to be fabricated or supplied for the Project, the Detailed Construction Schedule shall show a sequence of activities including:

1. Preparation of shop drawings and sample submissions
2. A reasonable time for review of shop drawings and samples or such time as specified in the Contract Documents
3. Shop fabrication, delivery and storage
4. Erection or installation
5. Testing of equipment and materials.

F. The Design/Builder shall submit, as a part of the data submitted to the Construction Manager, a narrative report indicating the anticipated allocation by the Design/Builder of the following resources and work shifts for each activity which he proposes to be utilized on the Project:

1. labor resources;
2. equipment resources; and
3. whether it proposes the Work to be performed on single, double or triple shifts, and whether it is to be done on a 5, 6 or 7 day work week basis.

G. The Construction Manager shall have the right to require the Design/Builder to modify any portion of the Design/Builder's Detailed Design and Construction Schedule, or Recovery Schedule, as herein required, (including cost loading) with the Design/Builder bearing the expense thereof, which the Construction Manager reasonably determines to be:

1. impractical or unreasonable;
2. based upon erroneous calculations or estimates;
3. not in compliance with other provisions of the Contract Documents;
4. required in order to ensure proper coordination by the Design/Builder of the Work of its subcontractors and with the work or services being provided by any separate contractors;
5. necessary to avoid undue interference with the County's operations or those of any utility companies or adjoining property owners;
6. necessary to ensure completion of the Work by the milestone and completion dates set forth in the Contract Documents;
7. required in order for the Design/Builder to comply with the requirements of this Section or any other requirements of the Contract Documents; or
8. not in accordance with the Design/Builder's actual operations.

5. COST LOADING

A. As part of the submission of the Detailed Design and Construction Schedule, the Design/Builder shall submit a breakdown of the expected value of each of the schedule activities for which payment is required.

B. The cost breakdown of the Detailed Design and Construction Schedule shall have a direct correlation to the Schedule of Values to be used as the basis for Applications for Payment.

6. UPDATING OF DESIGN AND CONSTRUCTION SCHEDULE/PROGRESS REPORTS

A. Not less than seven (7) calendar days before the submission of the monthly progress payment request, or on a date specified by the Construction Manager, the Design/Builder shall arrange for its Project Manager, architect and engineers (if during design), Superintendent and necessary subcontractors and suppliers (if during construction) to attend a monthly schedule meeting with the Construction Manager to review the Design/Builder's report of actual progress. Said report shall set forth up-to-date and accurate progress data, and shall be prepared by the Design/Builder in consultation with all principal subconsultants, subcontractors and suppliers.

B. The progress report of the Design/Builder shall show the activities, or portions of activities, completed during the reporting period, the actual start and finish dates for these activities, remaining duration and/or estimated completion dates for activities currently in progress, and quantities of material installed during the reporting period.

C. The Construction Manager will produce a computerized update worksheet for the Design/Builder to complete as a part of this process.

D. At the monthly schedule meeting a total review of the Project will take place including but not limited to, the following:

1. Current update of the Detailed Design and Construction Schedule
2. Anticipated detailed design and construction activities for the subsequent report period
3. Critical items pending
4. Design/Builder requested changes to the Detailed Design and Construction Schedule.

E. The Design/Builder shall submit a narrative with the progress report which shall include, but not be limited to, a description of problem areas, current and anticipated delaying factors and their impact, explanations of corrective actions taken or planned, any proposed newly planned activities or changes in sequence, and proposed logic for a Recovery Schedule, if required, as further described herein. The report shall also include:

1. A narrative describing actual Work accomplished during the reporting period
2. A list of major construction equipment used on the Project during the reporting period
3. The total number of men by craft actually engaged in the Work during the reporting period, with such total stated separately as to office, supervisory, and field personnel
4. A manpower and equipment forecast for the succeeding thirty (30) days, stating the total number of men by craft, and separately stating such total as to office, supervisory and field personnel
5. A list of Design/Builder supplied materials and equipment, indicating current availability and anticipated job site delivery dates
6. Anticipated changes or additions to Design/Builder's supervisory personnel.

F. As part of the updating process, the Construction Manager will calculate, based upon progress data provided by the Design/Builder and agreed to by the Construction Manager, the value of Work completed based on the sum of the cost loading amounts for all activities, including activities specifically defined for stored materials, less the amount previously paid. Summation of all values of each activity less the appropriate percent of retainage shall be the maximum amount payable to the Design/Builder, provided that the Design/Builder has complied with all requirements of the Contract Documents.

G. No invoice for payment shall be submitted and not payment whatsoever will be made to the Design/Builder until the required narrative reports, as defined herein, have been submitted and the Detailed Design and Construction Schedule has been updated.

7. RECOVERY SCHEDULE

A. Should the updated Detailed Design and Construction Schedule, at any time during the Design/Builder's performance, show, in the sole opinion of the Construction Manager, that the Design/Builder is behind schedule for any milestone or completion date for any location or category of work, the Design/Builder, at the request of the Construction Manager, shall prepare a Recovery Schedule within five (5) days, at no additional cost to the County (unless the County is solely responsible for the event or occurrence which has caused the schedule slippage), explaining and displaying how the Design/Builder intends to reschedule its Work in order to regain compliance with the Detailed Design and Construction Schedule within thirty (30) calendar days.

B. If the Design/Builder believes that all of the time can be recovered within thirty (30) calendar days, the Design/Builder will be permitted to prepare a Recovery Schedule as set forth below. However, if the Design/Builder believes it will take more than thirty (30) days to recover all of the lost time, it shall prepare and submit a request for revision to the Detailed Design and Construction Schedule and comply with all of the requirements of a Schedule Revision as set forth in Paragraph 8 below.

C. The Design/Builder shall prepare and submit to the Construction Manager a one month maximum duration Recovery Schedule, incorporating the best available information from subconsultants, subcontractors and others which will permit a return to the Detailed Design and Construction Schedule at the earliest possible time. The Design/Builder shall prepare a Recovery Schedule to the same level of detail as the Detailed Design and Construction Schedule. The Recovery Schedule shall be prepared in coordination with other separate contractors on the Project.

D. Within two (2) days after submission of the Recovery Schedule to the Construction Manager, the Design/Builder and any of the necessary subconsultants, subcontractors, suppliers, vendors, manufacturers, etc. shall participate in a conference with the Construction Manager to review and evaluate the Recovery Schedule. Within two (2) days of the conference, the Design/Builder shall submit the revisions necessitated by the review for the Construction Manager's review and approval. The Design/Builder shall use the approved Recovery Schedule as its plan for returning to the Detailed Design and Construction Schedule.

E. The Design/Builder shall confer continuously with the Construction Manager to assess the effectiveness of the Recovery Schedule. As a result of these conferences, the Construction Manager will direct the Design/Builder as follows:

1. If the Construction Manager determines the Design/Builder continues behind schedule, the Construction Manager will direct the Design/Builder to prepare a Schedule Revision and comply with all of the requirements of a Schedule Revision as stated herein and the other requirements of the Contract Documents; provided, however, that nothing herein shall limit in any way the rights and remedies of the County and Construction Manager as provided elsewhere in the Contract Documents; or

2. If the Construction Manager determines the Design/Builder has successfully complied with provisions of the Recovery Schedule, the Construction Manager will direct the Design/Builder to return to the use of the approved Detailed Design and Construction Schedule.

F. In carrying out any approved Recovery Schedule, or whenever it becomes apparent that any critical activity completion date may not be met, the Design/Builder shall take any or all of the following minimum actions, as may be required, at no additional cost to the County:

1. Increase manpower to put the Work back on schedule.

2. Increase the number of working hours per shift, shifts per working day, working days per week, amount of construction equipment, or any combination which will place the Work back on schedule.

3. Reschedule activities to achieve maximum practical concurrence and place the Work back on schedule.

G. If the Design/Builder fails to take appropriate action as required by this Paragraph 7 to recover delays in the schedule, the Construction Manager may take action to attempt to put the Work back on schedule and deduct the cost of such action from monies due or to become due the Design/Builder in accordance with the Contract Documents.

8. SCHEDULE REVISIONS

A. Should the Design/Builder desire to or be otherwise required under the Contract Documents to make modifications or changes in its method of operation, its sequence of Work or the duration of the activities in its Construction Schedule, it shall do so in accordance with the requirements of this Paragraph and the Contract Documents. The approved Detailed Design and Construction Schedule may only be revised by written approval of the Construction Manager as provided herein.

B. The Design/Builder shall submit requests for revisions to the Detailed Design and Construction Schedule to the Construction Manager, using a Schedule Revision Form provided by the Construction Manager, together with written rationale for revisions and description of logic for rescheduling work, substantiating that the milestone and completion dates will be met as listed in the Contract Documents. Proposed revisions acceptable to the Construction Manager and County will be approved in writing and incorporated into the Detailed Design and Construction Schedule.

C. Requests for revision will be accompanied by evidence acceptable to the Construction Manager that the Design/Builder's subconsultants, suppliers, subcontractors and sub-subcontractors are in agreement with the proposed revisions.

D. If there are separate contractors on the Project, the approval of the separate contractors shall be obtained to make the proposed schedule revisions. If accepted by the Construction Manager and County, the revisions shall be binding upon the Design/Builder and all separate contractors on the Project.

E. The impact of all change orders to the Contract shall be included in the Detailed Design and Construction Schedule.

9. FLOAT TIME

A. Float or slack time associated with one chain of activities is defined as the amount of time between earliest start date and latest start date or between earliest finish date and latest finish date for such activities, as calculated as part of the currently approved Detailed Design and Construction schedule. Float or slack time shown on the currently approved construction schedule is not for exclusive use or benefit of either the County or the Design/Builder and is available for use by either of them according to whichever first needs the benefit of the float to facilitate the effective use of available resources and to minimize the impact of Project problems, delays, impact, acceleration or changes in the Work which may arise during performance. The Design/Builder specifically agrees that float time may be used by the County or Construction Manager in conjunction with their review activities or to resolve Project problems. The Design/Builder agrees that there will be no basis for any modification of the milestone or completion dates or an extension of the Contract Time, or a claim for additional compensation as a result of any Project problem, delay, impact, acceleration, or change order which only results in the loss of available float on the currently approved construction schedule.

B. Float time shown on any Detailed Design and Construction schedule shall not be used arbitrarily by the Design/Builder in a manner which, in the opinion of the Construction Manager, unnecessarily delays separate contractors from proceeding with their work in a way which is detrimental to the interests of the County.

END OF SECTION 01 310, SCHEDULING OF THE WORK

SECTION 01 320 – REPORTS

1. REPORTS BY THE DESIGN/BUILDER'S ARCHITECTS AND ENGINEERS

A. The Design/Builder's Architects and Engineers of Record shall visit the site at intervals appropriate to the stage of construction (on a weekly basis at a minimum during the performance of construction associated with their respective disciplines) to become familiar with the progress of the Work and to determine in general if the Work is proceeding in accordance with their Construction Documents and the Contract Documents. These professionals shall submit to the Construction Manager, through the Design/Builder, written field observation reports summarizing each site visit.

B. Field observation reports shall be submitted to the Construction Manager within two (2) working days of each site visit.

2. DAILY REPORTS

A. The Design/Builder's Superintendent shall prepare and submit Daily Reports throughout the construction phase of the Work. Daily Reports shall be kept in an orderly manner at the site, available for inspection or review when requested by the Design/Builder's architects and engineers and the Construction Manager. Copies of Daily Reports shall be accumulated and submitted to the Construction Manager on a weekly basis, on a regular day and time to be determined by the Construction Manager. Failure to submit Daily Reports or to comply with the format requirements below is cause for the Construction Manager to retain additional monies due the Design/Builder from the monthly Application(s) for Payment until such time as the reports have been brought up to date by the Design/Builder.

B. Each Daily Report shall include the following information at a minimum:

1. Manpower by subcontractor, trade, and skill level
2. Weather and temperatures (AM and PM)
3. List of visitors to the jobsite
4. Specific work performed with locations
5. Situations or circumstances which could delay the Work or give cause for a time extension or additional cost
6. Instructions requested (and of whom)
7. Materials received
8. Major equipment arrival/departure
9. Total days accrued under the terms of the Contract Documents
10. Accidents and incidents
11. Safety issues
12. Meetings
13. Other significant events at the jobsite

C. The Design/Builder shall take the necessary action required to specifically alert the Construction Manager to items which could result in impacts to the progress of the Work. Such items shall be clearly highlighted in the report.

D. All Daily Reports shall be clearly handwritten or typed. Poor copies, reports in sloppy or illegible handwriting or on wrinkled paper will not be accepted.

END OF SECTION 01 320, REPORTS

1. GENERAL

A. This Section covers provisions for the submittal of shop drawings, product data, and samples prior to construction, and supplements the Owner-Design/Builder Agreement.

B. The Design/Builder is required to make all submittals in accordance with its Construction Documents and the Contract Documents. Individual Technical Specifications prepared by the Design/Builder's architects and engineers shall identify equipment and materials for which submittals are required, including any required by the Contract Documents.

C. Provisions in this Section are mandatory procedures for preparing and submitting shop drawings, product data, and samples.

D. Required shop drawings, product data, and samples shall be coordinated, prepared, and submitted so as not to impact the project schedule. Submittals for interfacing units of work, and different categories of submittals for the same work, shall be coordinated and sequenced so that one will not be delayed by another. Adequate time shall be allowed for review by the Design/Builder's architects and engineers and by the Construction Manager, Program Manager, and/or County, and for possible resubmittal. Delays or impacts due to the Design/Builder's failure to make or process submittals in a timely fashion are solely the responsibility of the Design/Builder. The Design/Builder has an obligation to notify the Construction Manager in a timely manner if the submittal review process, with respect to reviews by the County, Program Manager, and/or Construction Manager, might cause a schedule impact on the required delivery of any materials or fabricated assemblies required to execute the Work.

E. Project delays or delays in the purchasing of materials or equipment occasioned by the requirement for resubmission of shop drawings, product data, and samples initially rejected by the Design/Builder's architects or engineers, or not originally in accordance with the Contract Documents upon review by the Construction Manager, Program Manager, or County, are the Design/Builder's sole responsibility and will not be considered valid justification for time extensions.

F. No portion of the Work requiring the submittal of shop drawings, product data, or samples shall be commenced until each such submittal has been reviewed by the appropriate Design/Builder's architect or engineer, and, if required, the Construction Manager, Program Manager, and/or County, and the action required on the returned submittal does not require a correction and resubmittal (i.e., "No Exceptions Taken" or "Make Corrections Noted," or similar notation); and further, each installer shall have possession of such final reviewed submittal prior to commencing its portion of the Work.

G. The Design/Builder shall be responsible for distribution of all copies of initial and approved submittals required for coordination with others concerned with the Work.

H. Submittals requiring review by the County, the Program Manager, and/or the Construction Manager shall be delivered to the Construction Manager's office, unless directed otherwise by the Construction Manager. Submittals are to be scheduled and submitted to allow adequate time for review.

2. DEFINITIONS

A. "Shop Drawings" are drawings, diagrams, illustrations, schedules, performance charts, manufacturer's data sheets, brochures and other data which are prepared and submitted by the Design/Builder and its subcontractors to illustrate in detail some portion of the Work. The Design/Builder's architect's and engineer's drawings are not acceptable as shop drawings.

B. "Product Data" are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Design/Builder and its subcontractors to illustrate a material, product, or system for some portion of the Work.

C. "Samples" are physical examples prepared for submission by the Design/Builder and its subcontractors to illustrate materials, equipment, or workmanship, and to establish standards by which the work will be judged as complying with the Contract Documents. Mock-ups are a special form of samples, too large or otherwise inconvenient for transmittal in the manner specified. Mock-up requirements are specified elsewhere in the Contract Documents.

3. SUBMITTAL REGISTER

A. Within ten (10) days following the County's approval of the Design/Builder's final Construction Documents, or following each such approval of partial Construction Documents, the Design/Builder shall submit a comprehensive Submittal Register to the Construction Manager, showing all items requiring submission as defined in the Design/Builder's Technical Specifications.

B. No submittals will be reviewed by the Construction Manager, Program Manager, or County until the Submittal Register has been submitted, reviewed, and approved by the Construction Manager as to content and format.

C. The Submittal Register shall be updated by the Design/Builder and resubmitted on a monthly basis, or as otherwise required by the Construction Manager.

D. The initial format of the Submittal Register shall be determined by the Design/Builder. If any aspect is lacking, the Submittal Register shall be reworked and resubmitted in a format as prescribed by and to the level of detail required by the Construction Manager.

E. The Submittal Register shall be organized by Specification Section, and shall be further broken down as submittals from subcontractors will be structured.

F. The Submittal Register shall include all required submittals for test procedures, training programs, operation and maintenance manuals, and any other submittals required by the General Requirements.

G. The Submittal Register shall include the following information at a minimum:

1. Submittal breakdown by Specification Section and Paragraph number.
2. Scheduled date for initial submittal of each item.
3. Number of calendar days required after review to fabricate and deliver the specified item to the jobsite (if applicable).

4. PREPARATION OF SUBMITTALS

A. General Identification: All shop drawings, product data, and samples submitted for review shall have the following identification data, as applicable, contained thereon or permanently affixed thereto.

1. Date of submission and the dates of any previous submissions
2. Project title and location
3. Job number
4. Contract identification
5. Names of the Design/Builder, subcontractor, installer, supplier, and manufacturer
6. Identification of product (brand name, model number), use, and location
7. For each shop drawing: drawing number, drawing title, revision number, and date of drawing and all subsequent revisions
8. Corresponding Specification Section and Paragraph reference from Construction Documents
9. Field dimensions, clearly identified as such
10. Relation to adjacent or critical features of Work or materials
11. Applicable standards, such as ASTM or Federal Specification numbers
12. Identification of deviations from the Contract Documents
13. Identification of revisions from previous submittals (if a resubmittal)
14. Design/Builder's stamp, initialed or signed, and dated
15. Design/Builder's architect's or engineer's stamp (for submission for Construction Manager, Program Manager, and/or County review), with appropriate action indicated, signed or initialed, and dated.

B. Shop Drawing Preparation

1. Provide newly-prepared information with graphics at accurate scale (except as otherwise indicated).

2. Number all sheets consecutively.

3. Indicate all working and erection dimensions. Identify all dimensions based on field measurement.

4. Show arrangements and sectional views.

5. Indicate kinds of materials and finishes, anchoring and fastening details, including information for making connections to other Work. Furnish installation instructions to be followed in the field to achieve manufacturer's designed and planned intentions.

6. Indicate corresponding detail numbers from Construction Documents in addition to numbering systems used on shop drawings.

7. Form:

   a. Up to 11" x 17" in size may be either prints on opaque paper, or reproducible transparency. The use of 8-1/2" x 14" size shall not be acceptable.
   b. Prepare submissions larger than above on reproducible, correctable transparent sheets between 18" x 24" (minimum) and 30" x 45" (maximum) in size.

8. Number of copies to be submitted:

   a. The Design/Builder shall submit one reproducible copy and an appropriate number of opaque copies to its respective architects and engineers for review and internal return distribution.
   b. For shop drawings requiring review by the Construction Manager, Program Manager, and/or County, provide two (2) opaque copies with review stamp by Design/Builder's appropriate architect or engineer.
   c. Copies shall be grouped together such that one set of all copies can be removed immediately without the necessity to remove and resequence the remaining copies.

9. Associated drawings relating to a complete assembly shall be submitted simultaneously to the greatest extent possible, so that each may be checked in relation to each other and the total assembly.

10. Composite Coordination Shop Drawings:

    a. The locations and routing of all mechanical and electrical systems shall be delineated on coordinated composite layout drawings, to be submitted and reviewed by the appropriate Design/Builder's architects and engineers and the Construction Manager according to the procedures above. Such coordination shall consider all other building systems, including structural members and their elevations.

    b. The composite drawings shall accommodate layering of ductwork, plumbing supply, waste, roof drainage and vent piping, fire protection piping, HVAC piping, electrical conduit, control systems conduit, light fixture locations, sprinkler head locations, HVAC ceiling-mounted and wall-mounted air devices, and life-safety system device locations.

    c. Provide plan views of all ceiling plenum spaces, duct and pipe shafts, and mechanical and electrical rooms. Show all ceiling grid patterns and walls. Clearly indicate top and bottom elevations of work, including elevations of wall-mounted devices.

    d. Clearly indicate all penetrations of smoke and fire-rated walls and ceilings. Indicate recommended smoke stop or fire stop method, cross-referenced to Division 7 Specification requirements.

e. Composite drawings shall be 1/4" = 1'-0" minimum scale.

C. Product Data Preparation

1. Product data submittals shall be made by Specification Section. All items within a Specification Section requiring submissions shall be submitted together. If two or more Sections require inter-coordination (e.g. Air Handling Unit and Vibration Isolation, or Emergency Generator and Transfer Switch), they shall be submitted at the same time. Each individual submittal item shall be marked to show the Specification Paragraph number which pertains to that item.

2. Include manufacturer's standard printed recommendations for application and use, compliance with standards, application of labels and seals, notation of field measurements which have been checked, and coordination requirements.

3. Clearly mark each copy to identify pertinent products, brand names, or models, and to indicate which choices and options are applicable to the Work.

4. Modify each copy to delete information which is not applicable to the Work. Supplement standard information to provide information specifically applicable to the Work and to job conditions.

5. Include performance characteristics and capacities.

6. Include dimensions and clearances required.

7. Include wiring or piping diagrams and controls.
8. Form:

   a. Submit all items within a Specification Section in a tabbed binder, with an index.
   b. Submittals for multiple but related Specification Sections may be grouped in the same binder, if adequately indexed and tabbed for easy reference.
   c. If product submittals bound together exceed the capacity of one binder, two or more binders shall be used, and notations shall be made on the covers of each indicating the number of binders in the set and the number of each binder (i.e., 2 of 3).

9. Number of copies to be submitted:

   a. The Design/Builder shall submit an appropriate number of copies to its respective architects and engineers for review and internal review distribution.
   b. For product data requiring review by the Construction Manager, Program Manager, and/or County, provide two (2) copies with review stamp by Design/Builder's appropriate architect or engineer.

D. Sample Preparation

1. Provide samples which are identical with the final condition of proposed materials or products for the Work.

2. Provide "range" samples (not less than three (3) units) where unavoidable variations must be expected, and describe or identify variations between units of each set.

3. Provide a full set of optional samples where selection is required.

4. Provide information with each sample to show generic description, source or product name and manufacturer, limitations, and compliance with standards.

5. Number of samples to be submitted:

   a. The Design/Builder shall submit an appropriate number of samples to its respective architects and engineers for review and internal return distribution.

b. For samples requiring review by the Construction Manager, Program Manager, and/or County, provide three (3) copies with review stamp by Design/Builder's appropriate architect or engineer.

6. Maintain one set of all approved samples at the jobsite, in suitable condition, for quality control comparisons by the Construction Manager. Jobsite quality control samples shall become the property of the County.

7. Returned submittals which are intended or permitted to be incorporated into the Work shall be so indicated in the individual Specification Sections, and shall be in a suitable and undamaged condition at the time of incorporation.

E. Other Submittals

1. Inspection and Test Reports: Classify each as either a "shop drawing" or "product data," depending on whether report is uniquely prepared for the Project or a standard publication of workmanship control testing at point of production, and process accordingly.

2. Letters of Material Certification: Submit for specified materials, items, or equipment, and when requested. Letters of certification shall certify that material or equipment submitted complies with the Construction Documents and shall be submitted with substantiating supporting data (i.e., test reports from approved independent testing laboratory or other approved source). Classify as "product data."

3. Fire Rating and Acoustical Rating Certifications: Submit notarized certifications with shop drawings and material samples which are required to show or have a fire or acoustical rating.

5. TRANSMITTAL

A. Transmit all submittals requiring review by the Construction Manager, Program Manager, and/or County to the Construction Manager.

B. Accompany each submittal to the Construction Manager with a transmittal letter, in duplicate, containing the Project name, Design/Builder's name, contract number and description, and brief description of submittal, including the number of drawing sets, data sets, and/or samples included. Include an outline of deviations, if any, from the requirements of the Construction Documents or Contract Documents, and itemize proposed changes in the Contract Sum or Contract Time, if any. Where no change in the Contract Sum or Contract Time is indicated by the Design/Builder, it shall be concluded that no such change is involved for making the change.

6. DESIGN/BUILDER'S RESPONSIBILITIES

A. The Design/Builder shall prepare and submit all submittals with promptness and in accordance with the project schedule.

B. The Design/Builder shall determine and verify prior to submittal of any shop drawing, product data, or sample, the following:

1. Field measurements
2. Field construction criteria and job conditions
3. Catalog numbers and similar data
4. Conformance with Specifications

C. Any deviation in a submittal from the requirements of the Construction Documents shall be called to the attention of the reviewing party in writing at the time of the submittal, whether it be the appropriate Design/Builder's architect or engineer, or the Construction Manager, Program Manager, or County.

D. The Design/Builder shall affix its stamp, with initials or signature, and date, prior to submittal to its architects and engineers for review, indicating its review and concurrence that the submittal conforms to the Construction Documents.

E. The Design/Builder's architects and engineers shall review and return submittals with promptness and in accordance with the project schedule. The Design/Builder's internal review and return process for each submittal shall not exceed ten (10) working days.

F. The Design/Builder's architects and engineers shall affix their stamps to submittals they have reviewed, with initials or signature, and date, and indicating action to be taken.

G. If revision and resubmission is required of a submittal by the appropriate Design/Builder's architect or engineer, it shall be done with promptness so as to avoid impact to the project schedule.

H. For those submittals requiring review by the Construction Manager, Program Manager, and/or County, transmit same only after the internal review process has been completed by the Design/Builder, including all resubmittals required.

I. For those submittals requiring review by the Construction Manager, Program Manager, and/or County, copies shall include all stamps indicated above, and previous revisions, if any, shall be clouded and noted. Failure to adhere to these requirements will result in the return of the unreviewed submittal to the Design/Builder for resubmittal, with the Design/Builder responsible for any impact to the project schedule resulting therefrom.

7. CONSTRUCTION MANAGER'S, PROGRAM MANAGER'S, AND COUNTY'S RESPONSIBILITIES

A. For those submittals requiring review by the Construction Manager, Program Manager, and/or County, reviews will be performed for compliance to County program requirements and standards only, and will indicate any requirements for revision and resubmittal, or will indicate acceptance.

B. Reviews will be performed with reasonable promptness and in accordance with the project schedule. The Design/Builder shall allow a reasonable time for processing by the reviewing party, in addition to transit time. The reviewing party will endeavor to review and return submittals within five (5) working days.

C. The Construction Manager, Program Manager, and County will coordinate the submittal review process such that if more than one of them requires review of a submittal, it will be done so within the time allotted above.

D. If the Design/Builder has a complaint with either the time required or the information provided by the Construction Manager's, Program Manager's, or County's review, it shall be expressed in writing at the time the submittal is returned. Failure by the Design/Builder to file such complaints at that time will prevent attempting to allege delays or impacts resulting therefrom at a later date. Such complaints must be fully detailed, and if additional information is requested by the Construction Manager, it shall be provided as soon as becomes available, but in no case later than ten (10) days from the return of the submittal in question.

E. The Construction Manager's, Program Manager's, or County's review of a submittal shall not be construed as an indication that it is correct or suitable, nor that Work represented by a submittal complies with the Construction Documents prepared by the Design/Builder. Further, reviews by the Construction Manager, Program Manager, or County of submittals of details for any material, apparatus, device, etc., will not relieve the Design/Builder from responsibility for furnishing same of proper dimension, size, quantity, and quality to efficiently perform the Work and carry out the requirements and intent of the Construction Documents.

8. RECORD SUBMITTALS

A. At Substantial Completion of the Work, the Design/Builder shall deliver to the Construction Manager one copy of all final, approved submittals for the County's record.

B. Record submittals not in the form of drawing rolls shall be neatly labeled and organized by Specification Section and boxed in a "Banker's Box" or equivalent. Rolls of shop drawings shall be labeled appropriately for easy reference.

END OF SECTION 01 340, SHOP DRAWINGS, PRODUCT DATA & SAMPLES

SECTION 01 370 - SCHEDULE OF VALUES

1. GENERAL SUMMARY

A. Each Application for Payment for Work performed shall be based on a Schedule of Values correlated directly with the most current Guaranteed Maximum Price (GMP), or in the absence of a GMP, with a detailed construction estimate of the Work prepared by the Design/Builder and previously reviewed and accepted by the Construction Manager. The Schedule of Values shall allocate the entire GMP or estimate among the various portions of the Work, except that the Construction Fee shall be shown as a single separate cost item.

B. A preliminary Schedule of Values shall be submitted for review and approval by the Construction Manager at least 14 days prior to the first Application for Payment. Subsequent revisions to the Schedule of Values in order to correlate with progress estimates or the GMP shall be likewise submitted for review and approval prior to later Applications for Payment.

C. Breakdown and Content

The Schedule of Values will be submitted in a format as prescribed by and to the level of detail specified by the Construction Manager.

1. The sum of the parts of the Schedule of Values shall aggregate to the total Contract Sum.

2. The minimum level of breakdown will normally be:

   a. Design and engineering costs

   b. General Conditions line item(s) as required

   c. Construction costs, broken down to directly correlate with the format of the GMP or cost estimate

   d. Stored material projections

3. Schedule of Values items shall have a direct and understandable relation to the Project CPM Schedule.

2. SCHEDULE OF VALUES UTILIZATION

A. Applications for Payment

The Schedule of Values, unless objected to by the Construction Manager, shall be the basis for the Design/Builder's Applications for Payment.

B. Changes to the Schedule of Values

The Construction Manager shall have the right to require the Design/Builder to alter the value or add/delete categories listed on the Schedule of Values at any time for the following reasons:

1. The Schedule of Values appears to be incorrect or unbalanced.

2. A revision to the segregation of values is required due to the Design/Builder revising the sequence of construction or assembly of building components which in turn invalidates the Schedule of Values.
3. Change Orders are issued to the Design/Builder and require incorporation into the Schedule of Values.

C. Stored Materials

The Design/Builder is required to correlate the documentation for payment of stored materials requested in the Application for Payment against the agreed upon breakdown of the Schedule of Values. The Construction

Manager reserves the right to not process the Application for Payment if this correlation has not been submitted in conjunction with the Application.

END OF SECTION 01 370, SCHEDULE OF VALUES

1. GENERAL

A. The Design/Builder's Technical Specifications shall contain specific quality control requirements for the Work, including all inspections and tests required by public authorities having jurisdiction.

B. The Design/Builder shall furnish all labor, materials, tools, equipment and services for quality control of materials, components and systems incorporated or to be incorporated the Work, so as to adequately and acceptably perform the Work as required by the Contract Documents and the Design/Builder's Construction Documents. All testing and inspection not performed independently by the County as described below, whether required by the Contract Documents or the Design/Builder's Construction Documents; by laws, ordinances, rules, regulations, codes or orders of any public authority having jurisdiction; or whether performed by the Design/Builder for qualification of materials or its convenience, shall be at the Design/Builder's expense.

C. The Design/Builder shall be fully responsible for quality control. The Design/Builder shall employ an individual on its staff who shall be primarily responsible for ensuring an acceptable level of quality on the Project. This individual shall not be the Design/Builder's Project Superintendent.

D. The Design/Builder shall completely coordinate its Work internally, with the independent testing and inspection agency, and the Work of any separate contractors. Although such Work may not be specifically indicated in the Contract Documents or in the Design/Builder's Construction Documents, the Design/Builder shall furnish and install all supplementary or miscellaneous items, appurtenances, and devices incidental to or necessary for a sound, secure, and complete installation.

E. At any time during the execution of the Contract, the Construction Manager may notify the Design/Builder that some aspect of quality control is not being correctly performed. If the Design/Builder fails to respond to a request for quality control surveys or reports, or to a second request for proper preparatory work in an area for the purpose of a test or inspection, including a punch list inspection, the Construction Manager or the County may provide this work and deduct the cost of such work from the value of the Contract.

2. COUNTY'S INDEPENDENT TESTING AND INSPECTION AGENCY

A. The County shall procure and pay for the services of a testing and inspection agency registered in Georgia.

B. Services provided by the County's independent testing and inspection agency shall include, at a minimum:

1. Piles (installation observation and monitoring, if piles used)
2. Soils (compaction, moisture content, below pavement, foundations and slabs)
3. Paving (compaction, moisture content)
4. Concrete work (subgrade preparation, reinforcement and concrete)
5. Masonry/reinforced masonry
6. Structural steel connections (bolts and welds)

C. Required qualifications of independent testing and inspection agency:

1. Meet American Council of Independent Laboratories "Recommended Requirements of Independent Laboratory Qualification," latest edition.
2. Meet requirements of ASTM E 329 "Standard Recommended Practice for Inspection and Testing Agencies for Concrete, Steel, and Bituminous Materials as Used in Construction," latest edition.
3. Use testing equipment calibrated, by accredited calibration agency, at reasonable intervals with devices of an accuracy traceable to either NBS Standards or accepted values of natural physical constants.
4. Maintain a full-time registered Engineer on staff to review services.
5. Be able to provide documentation of successful completion of specified testing on projects of comparable size and complexity for a period of not less than ten years.

3. OTHER REQUIRED TESTING AND INSPECTION BY DESIGN/BUILDER

A. The Design/Builder shall be responsible for arranging and paying for all other tests and inspections which may be required, including, but not limited to, the following:

1. Retesting of County-provided tests due to failure
2. Concrete testing for qualification of materials and for Design/Builder's convenience
3. Testing and certifications of conveyances
4. Testing and balancing of mechanical systems
5. Testing and certification of electrical, fire alarm, security, and other special systems

B. The qualification requirements of any separate testing and inspection agency employed by the Design/Builder shall be according to Paragraph 2.C above, as applicable to the work being tested or inspected.

4. JOB CONDITIONS

A. Employment of an independent testing and inspection agency shall not relieve the Design/Builder of its obligation to comply with the Contract Documents.

B. Where operating tests are specified, the Design/Builder shall test its Work as it progresses, at its own expense, and shall make satisfactory preliminary tests in all cases prior to applying for official tests. Tests shall be in the manner specified for the appropriate type of Work.

C. Each test shall be made on the entire system for which such test is required wherever practical. In case it is necessary to test portions of the Work independently, the Design/Builder shall do so without additional compensation. Should defects appear, they shall be corrected by the Design/Builder and the test repeated until the installation is acceptable to the Construction Manager. No Work of any kind shall be covered or enclosed before it has been tested and approved.

5. PROCEDURES AND REPORTS

A. Prior to the start of construction, submit to the Construction Manager a complete list of proposed tests and inspections according to specification section, including those to be performed by the County's independent testing agency.

B Perform, or cause to be performed, all required inspections, sampling and testing of materials and methods of construction, utilizing methods required by the specifications and applicable standards. The Design/Builder's quality assurance specialist shall observe all sampling and testing and shall review all test results.

C. Test procedures:

1. Each test to be performed shall have a test procedure which shall include a detailed description of the specific steps which will be taken by the testing technician.

2. Each test procedure shall be submitted to the Construction Manager for review at least four (4) weeks prior to the time that the Design/Builder wishes or is required to perform the test.

3. No formal acceptance test will be performed without an approved test procedure being utilized.

D. Report each test/inspection/sampling in the form specified below. All reports shall be submitted promptly after completion of the test.

E. Retest all failed materials, components, and systems.

F. Record all test and inspection results and maintain a complete log of the testing and inspection program. This log shall be submitted for the Construction Manager's review upon request.

G. Equipment testing:

1. All pieces of rotating mechanical equipment and electrical equipment shall be formally tested prior to acceptance by the Construction Manager and the County. This requirement will not be waived by temporary or permanent occupancy of some or all parts of the finished construction.

2. The Construction Manager shall have the final determination as to whether or not a piece of equipment shall require a formal acceptance test.

3. No equipment warranty period shall be started until a formal acceptance test has been successfully completed.

4. No final payment for any such equipment shall be made until a formal acceptance test has been successfully completed.

H. Test / inspection procedures and reports shall include the following information at a minimum:

1. Project name and number
2. Project location
3. Applicable specification section and paragraph
4. Type of test or inspection
5. Name of testing/inspecting agency (if used)
6. Name(s) of testing/inspecting personnel
7. Date of test/inspection
8. Record of field conditions encountered, including weather
9. Observations regarding compliance
10. Test method used
11. Results of test/inspection
12. Date of report
13. Signature of testing/inspecting personnel

I. Where test/inspection reports indicate non-compliance, provide report on colored bond paper.

6. INDEPENDENT TESTING AGENCY DUTIES AND LIMITATIONS OF AUTHORITY

A. Provide qualified personnel at site after due notice; cooperate with the Design/Builder and the Construction Manager in performance of services.

B Promptly notify the Construction Manager of irregularities or non-conformance of Work which are observed during performance of services.

C. Attend preconstruction conferences and progress meetings if an as requested by the Construction Manager.

D. An independent testing and inspection agency is not authorized to:

1. Release, revoke, alter, or enlarge on requirements of the Contract Documents or the Design/Builder's Construction Documents.

2. Approve or accept any portion of the Work.

3. Assume any duties of the Design/Builder.

4. Stop the Work.

7. DESIGN/BUILDER'S DUTIES TO INDEPENDENT TESTING AND INSPECTION AGENCY

A. The Design/Builder shall cooperate with testing and inspection agency personnel, and provide access to Work.

B. The Design/Builder shall provide preliminary representative samples of materials to be tested, in required quantities.

C. The Design/Builder shall furnish copies of mill test reports.

D. The Design/Builder shall provide incidental labor and facilities to provide access to work to be tested; to obtain and handle samples at the site or at source of products to be tested; to facilitate tests and inspections; and to store and cure test samples.

E. The Design/Builder shall notify the testing and inspection agency and the Construction Manager of any test or inspection 48 hours in advance to allow for proper coordination.

8. MOCK-UPS

A. Provide mock-ups and testing for Work as required by the Contract Documents and the Design/Builder's Construction Documents. The Design/Builder's individual Technical Specification Sections shall include detailed mock-up and testing requirements.

B. Build mock-ups to be used as specimens for visual inspection or testing. Use the same materials, finishes, details, methods and anchorage system proposed for the respective installations. Simulate actual construction conditions. Provide extra materials as may be required to replace any which fail during tests, except intentional failure tests beyond specified performance requirements.

C. Schedule erection and approval inspections of mockups in the construction schedule.

D. For waterproof or watertight assemblies, assemble and erect complete, with specified attachment and anchorage devices, flashings, seals, and finishes.

E. Correct any deficiencies and repeat tests as may be required to show compliance with the Contract Documents. Incorporate corrective measures into the final system assembly.

F. Remove mock-up and clear area when work of that section is complete, when approved by the County and/or Construction Manager.

G. Mock-ups shall include, but not be limited to, the following. Provide mock-ups for the following work whether or not specified:

1. Masonry
2. Floor finish materials
3. Wall finish materials
4. Millwork

9. PUNCH LIST INSPECTIONS

The preparation of the Work or a portion thereof prior to a punch list inspection shall be solely the Design/Builder's responsibility. The Design/Builder shall first verify, and then certify that the Work for which a punch list inspection is being requested is in such a state that it may be easily punched out for acceptance by the Construction Manager and/or the County. Failure to properly prepare the Work for a punch list inspection shall constitute a failure to perform a quality control duty, and the Construction Manager may take appropriate action as defined in Paragraph 1.E above.

END OF SECTION 01 400, QUALITY CONTROL

1. INTRODUCTION

A. The Design/Builder shall provide all construction facilities and temporary controls throughout the construction period unless otherwise indicated in the Contract Documents.

B. The Design/Builder shall pay all costs for providing, maintaining, and removing all construction facilities and temporary controls unless otherwise indicated in the Contract Documents.

2. QUALITY ASSURANCE

All work specified herein shall be performed in a workmanlike manner and shall be in accordance with applicable codes, OSHA regulations, utility company rules and regulations, and other rules and regulations of any other authorities having jurisdiction.

3. JOB CONDITIONS

A. The Design/Builder shall establish and initiate use of each construction facility or temporary control at the time first reasonably required for proper performance of Work. Terminate use and remove facilities and controls at earliest reasonable time, when no longer needed or when permanent facilities have, with authorized use, replaced the need.

B. The Design/Builder shall install, operate, maintain and protect construction facilities and temporary controls in a manner and at locations which will be safe, non-hazardous, sanitary and protective of persons and property, and free of deleterious effects.

C. Conservation: In compliance with County policy on energy/materials conservation, install and operate construction facilities and temporary controls and perform construction activities in a manner which reasonably will be conservative and avoid waste of energy and materials, including water and electric power.

4. TEMPORARY UTILITIES - GENERAL

A. The Design/Builder shall provide and pay all costs for temporary utilities, including consumption costs. Do not use utilities of any existing, permanent operations at site.

B. Make all temporary connections to utilities and services in locations acceptable to the local authorities having jurisdiction. Furnish all necessary labor and materials, and make all installations in a manner subject to the acceptance of such authorities.

C. Maintain all temporary utility installations connections and remove them when no longer required. Restore the services and sources of supply to proper operating condition.

D. The Design/Builder may extend and use permanent utilities installed for the Project for temporary facilities. Prior to Substantial Completion, remove temporary connections, replace lamps, filters, etc., and restore permanent utilities to specified condition.

E. Metering: Comply with requirements of local utilities for installation of meters for water and electrical power services.

5. TEMPORARY POWER DISTRIBUTION

A. Temporary electrical power service shall be installed and maintained such that power can be secured at any desired point with no more than a 60 foot extension cord.

B. Service shall be sufficient for the following items:

1. Power centers for miscellaneous tools and equipment used in the construction work, each with a minimum of four 20-amp, 120 volt grounding type outlets. Each outlet shall provided with ground fault detecting circuit breaker protection.

2. Adequate lighting for safe working conditions provided and maintained on a 24-hour basis, throughout the building including stairways. At least 0.25 watts of incandescent lighting per square foot for general use must be installed and maintained in all areas where work is in progress. Each lamp must be rated at least 100 watts. Voltage of each socket must be at least 110 volts.

3. Power for any equipment used for temporary heating and ventilation, and for start-up testing of any permanent electric-powered equipment prior to its connection to permanent electrical system.

C. Power for electric welding shall be provided via the temporary electrical system or engine-driven power generator sets. Coordinate all connections for welding equipment with the Construction Manager.

D. Regulatory Agency Requirements:

1. The Design/Builder shall obtain any and all permits required by local authorities having jurisdiction, as applicable to any temporary power work performed.

2. The temporary electrical service shall comply with the National Electrical Code as currently adapted by local authorities, and all other applicable local codes and utility regulations.

E. Materials:

1. The materials may be new or used, but must be adequate in capacity for the purposes intended and must not create unsafe conditions or violate the requirements of applicable codes.

2. Use wire, cable, or busses of appropriate type, sized in accordance with the National Electrical Code for the applied loads. Use only UL-labeled wire and devices.

F. Equipment: Provide appropriate enclosures for the environment in which equipment is placed and used, in compliance with NEMA standards.

G. Installation:

1. Install all work with a neat and orderly appearance.

2. Make the work structurally sound throughout.

3. Maintain the system to give continuous service and to provide safe working conditions.

4. Modify temporary power and lighting installation as job progress requires.

5. Locate work such that interference with storage areas, traffic areas and other work is avoided.

6. Remove all temporary equipment and materials completely upon completion of construction.

7. Repair all damage caused by the installation and restore to satisfactory condition.

6. TEMPORARY LIGHTING

A. Provide task lighting of sufficient level for installation of the Work. If the Construction Manager does not deem the amount of task lighting to be adequate in a given area, the Design/Builder shall immediately increase the amount of task lighting at no additional cost. Verbal direction for the Construction Manager shall be adequate in this situation.

B. Lighting at all interior areas receiving final finishes shall be at uniform levels and generated from the same type and color lamps.

C. Lighting for field offices, storage trailers, shops and outdoor work areas shall be provided by the Design/Builder as necessary.

D. Outdoor area lighting, in excess of any existing streetlight levels, of any site staging areas shall be provided by the Design/Builder. This lighting shall be in the form of dusk-to-dawn mercury vapor fixtures. Lighting shall be of sufficient levels to permit security checks of the areas and provide for minimal access, but not sufficient by

itself for work activity. If the Construction Manager does not deem the amount of area lighting to be adequate in a given area, the Design/Builder shall immediately increase the amount of area lighting at no additional cost.

7. TEMPORARY WATER

A. Water for Construction: Construction water may be provided from available existing water mains or by use of temporary tanks. When connecting to existing water service lines, perform all work according to the requirements of, and obtain any and all permits required by, local authorities having jurisdiction. Remove all temporary installations and equipment upon completion of construction.

B. Drinking Water: Provide drinking water adequate in quantity, quality and locations for all personnel at the project site. Furnish paper drinking cups and waste receptacles at each drinking water dispensing location.

8. TEMPORARY HEAT AND VENTILATION

A. The Design/Builder shall be responsible for providing heating and ventilation where required for satisfactory execution of the Work. Specifically, temporary heating and ventilation is required to:

1. facilitate progress of the Work
2. protect materials from dampness and the adverse effects of low ambient temperatures
3. prevent moisture condensation on surfaces
4. provide suitable temperature and humidity levels for installation and curing of materials

B. Temperature Requirements:

1. Generally, in semi-finished areas, a minimum of 50 degrees F shall be maintained 24 hours per day.
2. During placing, setting, and curing of cementitious materials, temperatures shall be maintained as required by the Design/Builder's Technical Specifications and applicable standards.
3. Seven (7) days prior to, and during, the installation of interior finishes, the minimum temperature shall be 50 degrees F, 24 hours per day, unless noted otherwise in specific sections of the Design/Builder's Technical Specifications.
4. After application of interior finishes and until the permanent HVAC system is operable, the minimum temperature shall be 50 degrees F, 24 hours per day, except as otherwise noted in the specific sections of the Design/Builder Technical Specifications and unless higher temperatures are required for specific activities; then the temperature shall be maintained as per the specific material manufacturer's recommendations.
5. Concrete Work: During the winter months (November through April), the Design/Builder shall provide winter weather protection for all concrete work if required. The heating may be accomplished by use of approved types of portable heaters. The Design/Builder Technical Specifications shall contain specific cold weather requirements for concrete placement and curing, and such requirements shall be followed.

C. Use steam or hot water for temporary heating if and when available. If steam or hot water is not available, use gas from a piped distribution system if and when available. If none of the above sources are available, portable self-contained LP gas or fuel oil heaters may be used, equipped with individual space thermostatic controls.

D. The Design/Builder shall provide heat as required for any work area outside the building confines.

E. Safe Practices for Portable Heaters:

1. Locate heating units so as not to create a hazard to personnel, stored materials, of work of other contractors.
2. Avoid locating heaters in the vicinity of volatile, combustible, or explosive materials.

3. Ventilate areas occupied by personnel to avoid dangerous levels of exhaust gases and consumption of oxygen.

4. Use heating units bearing UL, FM or other approved label(s) appropriate for application.

F. Install all temporary heating and ventilation work in a workmanlike manner, and ensure all work complies with rules and recommendations of involved local utility company, if applicable, as well as OSHA requirements.

9. TEMPORARY FIRE PROTECTION

A. Specific administrative and procedural minimum actions are specified in this Paragraph, as extensions of provisions in the Owner-Design/Builder Agreement and other Contract Documents. These requirements have been included for special purposes as indicated. Nothing in this Paragraph is intended to limit types and amounts of fire protection required, and no omission from this Paragraph will be recognized as an indication by the County or Construction Manager that such temporary activity is not required for successful completion of the Work and compliance with requirements of Contract Documents.

B. Quality Assurance

1. NFPA Code: Comply with NFPA Code 241 "Building Construction and Demolition Operations."

2. The Design/Builder shall also comply with all applicable state, city and local fire codes.

C. The Design/Builder shall take all necessary precautions to guard against all possible fire hazards and to prevent damage to any construction Work, building materials, equipment, field offices, storage sheds and all other property, both public and private, in accordance with all fire protection and prevention laws and codes. The Design/Builder will assume full responsibility for damage caused by fire to construction and building, building materials, equipment and all property, both public and private.

D. The location of the nearest corporation or public fire alarm box and the number of the local fire department shall be conspicuously posted by the Design/Builder in its field office and in the construction area.

C. The Design/Builder's superintendent in charge of the Work shall review the Project at least once a week to make certain that it adheres to the conditions and requirements set forth herein.

D. No open fires shall be permitted. The Design/Builder and its subcontractors will not be allowed to start fires with gasoline, kerosene or other flammable materials. The bulk storage of all flammable liquids shall be located at least 75 feet from any inhabited trailer or office and from the yard storage of flammable building materials. All flammable liquids having a flash point of 100 degrees F or below, which must be brought into any building, shall be confined to the Underwriter's Laboratories' labeled safety cans. Drums containing flammable liquids are to be equipped with approved vent pumps and located per direction of the Construction Manager. Drums with spigots are prohibited for the storage of flammable liquids on the project site.

E. Welding, flame cutting or other operations involving the use of flame, arcs or sparking devices will not be allowed without adequate protection and shielding. All combustible and flammable material shall be removed from the immediate working area. If removal is impossible, all flammable or combustible material shall be protected with a fire blanket or suitable noncombustible shields to prevent spark, flames or hot metal from reaching the flammable or combustible materials. The Design/Builder shall provide the necessary personnel and fire fighting equipment to effectively control incipient fires resulting from welding, flame cutting or other operations involving the use of flame, arcs or sparking devices.

F. Only fire resistant tarpaulins with UL label and flame spread of 15 or less shall be used on this project.

G. Use of only Underwriters Laboratory approved heaters and/or stoves is permitted in field offices or storage sheds and they shall have fire resistive material underneath and at the sides near partitions and walls. Pipe sleeves and covering shall be used where stove pipe runs through wall or roof.

H. Smoking shall be prohibited around concentrations of combustibles and in particularly hazardous areas. Restricted areas must be plainly marked, with signs posted. No smoking rules must be strictly enforced.

I. Fire Extinguishers

1. The Design/Builder shall provide and maintain in working order during construction, an adequate number of fire extinguishers for use by all trades in each area of work. Two (2) fire extinguishers shall also be placed in the vicinity of Design/Builder's construction office.

2. In areas of flammable liquids, asphalt or electrical hazards, extinguishers of the 15 lb. carbon dioxide type or 20 lb. dry chemical type shall be provided.

3. The Design/Builder shall maintain and inspect all fire extinguishers periodically. Fire extinguishers must be mounted in plain view and sealed, so that operation of the fire extinguisher will break the seal. In the event a fire extinguisher is discharged or damaged, it shall be removed from service and be replaced with a charged unit.

4. The Design/Builder shall post warnings and quick instructions at each extinguisher location. The Design/Builder and all of its subcontractors shall instruct their personnel at the project site, at the time of their first arrival, on proper use of extinguishers and other available facilities at the project site.

10. DEWATERING

Maintain the Project site and all Work free of water accumulation. Dewatering activities shall not infringe upon adjacent properties. Comply with all rules and regulations of authorities having jurisdiction and secure any and all permits required.

11. TEMPORARY ENCLOSURES

A. Provide temporary enclosures reasonably required to ensure adequate workmanship and protection from the weather and unsatisfactory ambient conditions for the Work, including those enclosures inside which temporary heat is used.

B. Provide fire-retardant treated lumber and plywood where used for temporary enclosures.

12. TEMPORARY SANITARY FACILITIES

A. Provide and maintain sanitary toilet facilities for use of all personnel at the project site. Either piped (wet) toilet facilities or self-contained chemical toilet units may be used.

B. The number of sanitary facilities required shall be based on the total number of workers employed on the site and shall be in accordance with the provisions of the applicable code. Separate toilet facilities for men and women shall be provided when both sexes are working in any capacity on the project site.

C. All sanitary facilities shall be maintained by the Design/Builder in a safe, clean, and sanitary conditions at all times.

13. CONSTRUCTION TRAFFIC INGRESS TO AND EGRESS FROM SITE

A. Routes to Construction Site: The Design/Builder shall inform and insure compliance of its subcontractors and suppliers regarding the recommended traffic route(s) from major highways to the jobsite. For all traffic off of the jobsite, the Design/Builder shall coordinate with, and obtain any necessary permits from, appropriate authorities having jurisdiction.

B. Construction Site Access: All construction traffic, including deliveries of materials and equipment, shall enter and exit the site only by the routes prescribed on a site access and parking plan submitted by the Design/Builder and approved by the Construction Manager prior to start of construction (see Subparagraph 14.I below).

C. Cleaning: The Design/Builder shall take all precautions necessary to prevent the tracking of mud and debris onto paved roads adjacent to the jobsite. The Design/Builder shall immediately clean any affected area if directed by the Construction Manager. The utilization of wheel wash areas located at all site entrance/exit

points is mandatory for all vehicles leaving the site if the tracking of mud or debris onto adjacent streets would result otherwise.

14. SITE ACCESS ROADS AND PARKING AREAS

A. Provide and maintain vehicular access to and within the site for use by all persons and equipment involved in construction of the Project.

B. New temporary access roads shall be constructed across designated easements from public throroughfares only as allowable by local authority having jurisdiction.

C. Provide adequate access for emergency vehicles.

D. Provide and maintain temporary parking areas for use by construction personnel. Do not use any existing parking lots which may exist at existing facilities on the site unless specific authorization is given by the County. If parking needs exceed onsite capacity, provide offsite parking as necessary, as well as transportation to and from the site if distance dictates.

E. All traffic and parking areas shall be filled, compacted, and graded as necessary to provide suitable support for vehicular traffic under anticipated loadings.

F. Maintain all onsite traffic and parking areas free of excavated materials, construction equipment, construction materials, debris, snow and ice. Provide for surface drainage for all traffic and parking areas, and implement and maintain dewatering if and as necessary.

G. Keep fire hydrants, water control valves, and all other utilities requiring possible access free from obstructions.

H. Provide temporary directional signage as necessary.

I. Prior to the start of construction, submit to the Construction Manager for approval a complete site access/utilization and parking plan, incorporating the requirements described above.

15. STORAGE AREAS

A. The Design/Builder shall be responsible for all onsite and offsite storage of materials and equipment required for the Project. Onsite storage is subject to the review and approval of the Construction Manager.

B. All combustible or flammable materials shall be safely stored in a secured area in strict accordance with regulations, codes, and laws enforced by local, State, or Federal agencies, whichsoever is the most stringent.

C. If the Construction Manager, for good reason, directs that any or all materials stored on the site must be removed, the Design/Builder shall do so within ten (10) days of written notice of same. Stored materials not removed in a timely manner will be removed by the Construction Manager at the Design/Builder's expense.

16. TEMPORARY FIELD OFFICE AND TOOL STORAGE FACILITIES

A. The Design/Builder shall provide a trailer or other suitable temporary building for a field office, which shall contain office space required for the Design/Builder's operations, a conference room of suitable size for regular progress meetings, toilet facilities, and a separate spare office for a County or Construction Manager representative to use when onsite. Ample space shall be provided for storage of all construction documentation. The trailer shall have telephone service for use by the Design/Builder and its subcontractors, and shall also have a working intrusion alarm system. One sign with the Design/Builder's name may be placed on the trailer.

B. The Design/Builder may provide other temporary trailers or buildings for storage and maintenance as required and as space permits.

C. All field office and storage structures shall be placed or constructed in accordance with the regulations of the local Fire Marshal having jurisdiction.

D. Field offices and sheds shall be of suitable design, maintenance, and appearance.

E. The Design/Builder shall provide power and heat to its field office, and to storage sheds if storing climate-sensitive materials or equipment.

F. The Design/Builder shall adequately maintain the designated space designated for its field office and storage sheds, including the removal of weeds, debris, and trash.
G. Temporary field offices and sheds shall not be used for living quarters.

H. If the Construction Manager, for good reason, directs that any or all field offices or storage sheds on the site must be removed, the Design/Builder shall do so within ten (10) days of written notice of same. Structures not removed in a timely manner will be removed by the Construction Manager at the Design/Builder's expense.

17. FIRST AID STATION

The Design/Builder shall provide and maintain at least one unmanned first aid station for its personnel and subcontractors.

18. SECURITY

A. Neither the County or any of its agents assumes any responsibility for loss, theft or damage to the Work, tools, equipment and/or construction. In the instance of any such loss, theft or damage, the Design/Builder shall be responsible to renew, restore or remedy the Work, tools, equipment and construction in accordance with requirements of the Contract Documents without additional cost to the County.

1. The Design/Builder shall immediately advise the Construction Manager of any theft or damage which may delay the execution of the Work.

2. The Design/Builder shall furnish the Construction Manager with a copy of any theft report filed with appropriate law enforcement agencies.

B. Site parked equipment, operable machinery and hazardous parts of the new construction subject to mischief and accidental operation shall be inaccessible, locked or otherwise made inoperable when left unattended.

C. The Design/Builder shall utilize specific entrances for material deliveries, equipment deliveries, and worker access to the construction site as indicated on its site access/utilization plan and approved by the Construction Manager.

D. The County or Construction Manager, as the Project progresses, may establish additional security policies and procedures. The Design/Builder shall cooperate with the County and/or Construction Manager in implementing such additional procedures.

19. TEMPORARY SIGNAGE

A. Project Sign: The Design/Builder shall construct, erect and maintain one (1) 4 foot by 8 foot project sign of ¾ inch (minimum) exterior grade plywood, given two coats of paint and mounted securely on two 4 inch by 4 inch posts set 30 inches (minimum) into the ground. The sign shall be clearly lettered by one skilled in the sign trade with the facility name, address, County logo, names of County Commissioners, the County Manager and other County representatives, Design/Builder name, major subcontractors' names, and the jobsite telephone number. Locate the project sign as designated by the Construction Manager. Avoid a placement that may inhibit safe entry or exit from the site. Verify sign content with County, through the Construction Manager, prior to procuring and erecting the sign.

B. No other signs or advertising shall be displayed on the premises without the approval of the Construction Manager, other than the posting of required notices and cautionary signage by the Design/Builder, and signage on equipment and trailers to designate ownership.

20. TRASH / DEBRIS DISPOSAL

A. The Design/Builder shall provide dumpsters sufficient to hold site waste from its operations and that of its subcontractors, and shall remove same from the jobsite on a regular basis.

B. Debris such as soil waste, concrete, steel, or other bulky items from excavation and/or demolition work not disposed of in dumpsters shall be removed and disposed off-site by appropriate means. Methods of debris removal and disposal shall be reviewed with the Construction Manager.

21. SITE CLEANING

A. The Design/Builder shall be responsible for the maintenance of a clean, neat and safe project site. The Construction Manager is hereby placing the Design/Builder on notice that failure to clean up on a weekly basis will immediately result in the Construction Manager bringing in labor to perform this task and deducting the cost of such measures from the Contract Sum. The Construction Manager shall be the sole authority which shall determine the amounts to be deducted from the Design/Builder's contract for this type of cleaning.

B. The Design/Builder shall assign at least five (5) percent of his own and his subcontractors' work forces to clean-up activities for at least four (4) hours per week, or as deemed necessary by the Construction Manager.

C. No exceptions to these rules will be allowed. Failure to immediately adhere to all of the Construction Manager's directions in this regard will result in the holdup of Design/Builder's progress payments until compliance with these rules are obtained.

22. MISCELLANEOUS CONSTRUCTION FACILITIES

A. The Design/Builder shall be responsible for providing and maintaining its own scaffolding and for conforming with all safety regulations related thereto.

B. The Construction Manager retains the right to inspect all erected scaffolding, and to request written verification from an inspection agency as to the soundness of erected scaffolding to perform its intended function. However, the Construction Manager assumes no responsibility to do so, or of the results of such inspections.

C. Except as otherwise provided, the Design/Builder shall provide and maintain all necessary temporary stairs, ladders, ramps and runways to facilitate conveyance of men, materials, tools, and equipment for proper execution of the Work.

D. All protection and safety barricades, devices, covers, etc., shall be provided by the Design/Builder as it relates to the safe conduct of his work in accordance with OSHA requirements.

E. The Design/Builder shall maintain safe temporary access to the work as construction progresses.

F. All barriers and barricades shall comply with OSHA or other applicable safety requirements of the Project. All barriers and barricades shall be installed in a manner that will allow for the continued progress of the Work. Installation and removal of barriers, barricades and railings will be monitored by the Construction Manager.

G. If the Design/Builder or any subcontractor, who in the course of its work, creates a hazard, it is responsible for providing, at its own expense, all required protection, including all safety barriers, barricades and perimeter protection as necessary.

H. If any safety protection is required to be temporarily removed during the progress of the Work, it shall be reinstalled at the completion of the specific activity requiring such removal, and in a manner that provides a level of compliance equal to the initial installation.

J. The Design/Builder shall enclose all construction areas in such a manner so as to protect the public from injury and in accordance with authorities having jurisdiction

K. Provide any other types of construction facilities as may be reasonably required for performance of the Work and accommodation of personnel at the project site, including the County's and Construction Manager's personnel.

END OF SECTION 01 500, CONSTRUCTION FACILITIES & TEMPORARY CONTROLS

SECTION 01 560 – ENVIRONMENTAL PROTECTION

1. GENERAL

A. Provide all facilities, establish procedures, and conduct construction activities in a manner which will ensure compliance with the County's environmental requirements and other regulations controlling construction activities at the Project site.

B. Definitions:

1. Sediment: Soil that has been eroded and transported by runoff water.

2. Degradable Debris: Debris which can undergo biodegradation or combustion, or which can be dissolved in or suspended by water.

3. Non-degradable Debris: Inorganic debris which will not disintegrate nor dissolve when exposed to moisture or water.

4. Chemicals: Petroleum or cementious products, bituminous materials, salts, acids, solvents, alkaliec, herbicides and pesticides.

5. Waste: Sewage, including domestic sanitary sewage, garbage and trash resulting from food and food packaging.

2. PRODUCTS

A. General: Products, devices and materials shall be approved by authorities having jurisdiction.

B. Earth Stabilizer: Rye grass seed, hay, straw mulch, chemical stabilizer or any other device approved by authorities having jurisdiction.

C. Hay Bales: Type and size as recommended by environmental protection authorities having jurisdiction.

D. Silt Fence: Type and size as recommended by land disturbance and environmental protection authorities having jurisdiction.

3. ENVIRONMENTAL PROTECTION PROCEDURES

A. General

1. In the means and methods of construction, and in the coordination and control of the Work at the site, establish and enforce ecological preservation standards which avoid pollution of the atmosphere, waterways and vegetation.

2. Conform to laws, ordinances, restrictions, and rules of governmental bodies having enforcement power in regard to site preservation and erosion control.

3. Prevent droppings of petroleum products, cementitious waste and chemical substances on the ground or into storm, sanitary drains or waterways.

4. This Section may be supplemented by notes on drawings relative to environmental protection.

5. In performing sitework, provide and maintain protection during sitework for all existing lawns, trees, curbs, gutters, hydrants, light standards, drives, walks, street signs and buildings not noted for removal. Damaged items shall be repaired or replaced.

6. The Design/Builder shall designate one person, the Superintendent or other, to enforce strict discipline on activities related to generation of wastes, pollution of air/water, generation of noise and similar harmful or deleterious effects which might violate regulations or reasonably irritate persons at or in vicinity of the Project site.

7. Take special precautions when working on floors directly above or below any occupied floors and adjacent to circulation or vehicular circulation. Minimize noise, dust, or other environmental hazards to spaces.

B. Noise Control

1. Provide mufflers on combustion engine powered equipment to minimize noise.

2. Blasting is strictly prohibited without written permission from first the Construction Manager and then all applicable State and Local regulatory agencies.

C. Air Quality Control: Maintain acceptable air quality at all times. Acceptable air quality shall also be maintained in any existing, operating buildings or structures during construction operations that require physical connection to such buildings or structures so as to not interfere with any existing operations.

D. Water Control

1. All pumping, bailing, or well point equipment necessary to keep excavations free from the accumulation of water during the entire progress of the Work shall be the responsibility of the Design/Builder.

2. Keep the building or portions thereof free from water ingress due to construction operations at all times until Final Completion of the Work.

3. Provide all pumping necessary to keep site utility lines, sewers, manholes and meter pit excavations and mass excavation free from water.

4. Dispose of water in such a manner as will not endanger public health or cause damage or expense to public or private property. Abide by the requirements of all public authorities having jurisdiction.

E. Dust Control

1. Effectively confine dust, dirt and noise to the actual construction area(s) until Substantial Completion of the Work.

2. Clean up operations shall be by vacuuming, wet mopping, wet sweeping, or wet power brooming. In sandblasting operations, if any, confine the dust.

3. Use wet-cutting methods for cutting concrete, asphalt, and masonry. Do not shake out bags containing cement, lime, and other dust-causing substances.

4. Do not leave areas of disturbed earth unworked for long periods of time. As the earth is disturbed, continue the work to achieve temporary or permanent earth stabilization promptly.

5. Keep dust down at all times, including non-working days, weekends and holidays. Temporary methods consisting of water sprinkling or similar methods will be permitted to control dust. Use of water will not be permitted when it will result in, or create, hazardous or objectionable conditions such as ice, flooding and pollution.

6. Dust control shall be performed as the work proceeds and whenever a dust nuisance or hazard occurs.

F. Snow and Ice Removal

1. Arrange for removal of snow and ice in and about the premises, as necessary to conform with local regulations on public sidewalks adjacent to the site, and as necessary on and about the site and the Work to permit safe access to continue or perform work.

2. When performing work under exposed conditions, remove snow and ice for the protection and execution of the Work.

G. Controls during Earth Moving

1. Perform earth moving in such phases which minimize the area extent of exposed land.

2. Control the rate of water runoff by diversion ditches, benches, berms and other earth-formed shaping so the rate of flow is retarded and silting minimized. Reshape and restore conditions showing evidence of earth erosion without delay.

3. Stabilize disturbed earth with temporary seeding or temporary mulching, or other effective temporary means, such as a stabilizing sprayed application or anchored netting.

4. Establish and enforce the use of tarpaulin-covered dump trucks and avoid overfilling so that spillage of earth and other matter into highways and streets does not occur.

H. Vermin Control: Control vermin during the construction period. If vermin are encountered, provide extermination arrangements as necessary.

I. Disposal of Debris, Chemicals and Waste

1. Dispose of debris, chemicals, and waste off the site in compliance with Federal, State and local laws and regulations.

2. Collect and contain materials before disposal in an orderly fashion and by means which prevent contamination of air, water and soil.

3. Store chemicals in watertight containers.

4. Degradable debris, not contaminated by chemicals, e.g., leaves, tree limbs, twigs and logs, may be shredded on site and used as mulch. Exclude paper, cementitious waste, and material which could cause contamination of waterways. Non-degradable and degradable debris in excess of the above shall be disposed of off the site.

5. Do not burn materials on the site.

J. Clean-Up and Restoration of the Site

1. Maintain the site in good order through periodic pick up and clean-up of construction waste and wind-borne trash. Dispose of all waste and trash in tightly covered containers and schedule regular removal of trash and waste from the site.

2. Existing sitework damaged during construction shall be restored to good and acceptable condition.

K. Damage from Storms: Secure the site to avoid damage to the Work and stored materials, as well as damage to adjacent property.

END OF SECTION 01 560, ENVIRONMENTAL PROTECTION

1. GENERAL SUMMARY

A. Deliver, handle and store materials and equipment in accordance with manufacturer's recommendations and by methods and means which will prevent damage, deterioration and loss, including theft. Provide delivery/installation coordination to ensure minimum holding or storage times for products recognized to be flammable, hazardous, easily damaged or sensitive to deterioration, theft and other sources of loss.

B. Prior to starting work, the Design/Builder shall meet with the Construction Manager to determine the use of available areas for site offices and storage.

1. The Design/Builder shall confine his equipment, the storage of material and the operations of his workmen to limits indicated by the Contract Documents, laws, ordinances, permits or directions of the Construction Manager.

2. Neat and orderly stockpiling of all materials shall be maintained.

3. Materials which require significant amounts of storage space, as determined by the Construction Manager, shall be brought to the site in quantities no greater than required for two (2) weeks work.

4. Delivery of materials shall be scheduled so as not to encumber the site with items which will not be required for a significant length of time.

C. If at any time it becomes necessary to move material or equipment which have been stored during construction, the Design/Builder, when directed by the Construction Manager, shall move them to another location without charge.

D. The Design/Builder shall not load or permit any part of the site or structures to be loaded with a weight that will endanger its safety.

E. Storage of materials outside the limits of construction, but on the County's property, is strictly prohibited without written permission from the County through the Construction Manager.

F. All costs relating to temporary storage and protection shall be borne by the Design/Builder or subcontractor requiring such storage and protection. The Design/Builder shall retain full responsibility for any form of damage or deterioration to stored materials and any form of damage or deterioration caused by materials to surrounding surfaces.

2. MATERIALS HANDLING PLAN

The Design/Builder shall develop and submit to the Construction Manager for approval, at least ten (10) days prior to the start of construction on the site, a comprehensive materials handling plan. This plan shall take into consideration the following:

A. Control delivery of materials to maintain the construction schedule.

B. Coordination with any separate contractors.

C. The County's operation of adjacent facilities, if any.

D. Provisions for both vertical and horizontal transportation and utilization of material and personnel hoists, if required.

E. Limitations on space available for storage.

F. Requirements for handling and installation of large equipment.

3. VERTICAL TRANSPORTATION

A. The Design/Builder shall be responsible for providing vertical transportation for materials, equipment, and personnel if and as required for multi-story buildings or significant heights. Cranes, hoists, conveyors, and other equipment used for this purpose shall be placed/installed and maintained according to applicable codes and regulations of authorities having jurisdiction.

B. Temporary hoists and permanent elevators used as construction lifts shall be provided with an operator at all times such equipment is in use.

C. The Design/Builder shall cooperate with the County, the Construction Manager and any separate contractors in the event that hoists or elevators are required for use by such entities during the course of the Project.

4. MATERIAL AND EQUIPMENT REMOVAL

A. Any required cranes, hoists, conveyors and other equipment mobilized and utilized by the Design/Builder shall be removed from the site within ten (10) days after completion of the Work.

B. Upon completion of the Work, or sooner if directed by the Construction Manager, the Design/Builder shall remove his temporary structures and sheds and place the areas in a clean and orderly condition.

C. No materials or equipment shall be removed from the site without the permission of the Construction Manager.

5. PASSAGE OF MATERIALS AND EQUIPMENT

A. Establish passage clearances required to deliver and install materials and equipment.

B. In case of insufficient clearance for passage of materials and equipment, deliver and protect such equipment before confining construction is installed.

C. If existing structures, equipment and systems must be removed or altered to provide access for new materials and equipment, engage those skilled in the respective trade to restore structures, equipment and systems to their original condition at no additional cost. Do not alter structure, equipment or systems without written approval of the Construction Manager.

D. In lieu of altering structures to provide passage of materials and equipment, provide materials and equipment that can be disassembled, brought into the building, and reassembled.

END OF SECTION 01 610, MATERIAL & EQUIPMENT HANDLING

1. GENERAL

A. This Section covers mandatory provisions for submission of product information and for substitution procedures, after Contract award.

B. Definitions:

1. "Products" are defined to include purchased items for incorporation into the Work, regardless of whether specifically purchased for this Project or taken from the Design/Builder's stock of previously purchased products.

2. "Materials" are defined as products which must be substantially cut, shaped, worked, mixed, finished, refined or otherwise fabricated, processed, installed or applied to form units of the Work.

3. "Equipment" is defined as a product with operational parts, regardless of whether motorized manually operated, and particularly including products with service connections (wiring, piping, etc.).

4. Definitions in this paragraph are not intended to negate the meaning of other terms used in the Contract Documents, including specialties, systems, finishes, accessories, furnishings, special construction and similar terms which are self-explanatory and have recognized meanings in the construction industry.

C. The requirements of this Section shall apply to products specified in the Contract Documents, and, after approval by the County, the Design/Builder's Construction Documents.

2. INITIAL PRODUCT SUBMISSION

A. As part of the Submittal Register specified in Section 01 340 of the General Requirements, provide a list showing names of products together with the names of manufacturer of each and, where applicable, the name of the installing subcontractor.

B. Only specified products will be reviewed, except as herein below provided for substitutions.

3. PRODUCTS

A. General Product Compliances

1. The compliance requirements for individual products as indicated by the Contract Documents are multiple in nature and may include generic, descriptive, proprietary, performance, prescriptive, compliance with standards, compliance with codes, conformance with graphic details and other similar forms and methods of indicating requirements, compliance with all of same being a requirement.

2. The Design/Builder's options for selection of products are limited by the Contract Document requirements and by governing regulations, and are NOT controlled by industry traditions or procedures experienced by the Design/Builder on previous construction projects. Required procedures for the selection of product options include, but are not limited to, the following:

a) If material specified in the Contract Documents is not available on the current market, alternate materials may be proposed by the Design/Builder through the Construction Manager for County approval.

b) In the Contract Documents where a specific brand, make, or manufacturer is denoted, the intent is that it be considered the standard for establishing the style, type, character and quality level of the article desired, but not as a restriction in the selection process to the specific brand, make or manufacturer named.

c) Alternate brands, make of material, device or equipment which, in the opinion of the County and/or Construction Manager, are recognized as the equal of that specified on the basis of quality, workmanship and economy of operation considerations and are suitable for the purpose intended may qualify for acceptance.

d) Standards, Codes and Regulations: Where only compliance with an imposed standard, code or regulation is required, selection from among products which comply with requirements including those standards, codes and regulations shall be at the Design/Builder's option.

e) Performance Requirements: Provide products which comply with the specific performances specified, and which are recommended by the manufacturer (in published product literature or by individual certification) for the application indicated. Overall performance of a product is implied where the product is specified with only certain performance requirements.

f) Prescriptive Requirements: Provide products which have been produced in accordance with prescriptive requirements, using specified ingredients and components, and complying with specified requirements for mixing, fabricating, curing, finishing, testing and similar operations during the manufacturing process.

3. Visual Matching: Where matching with an established sample is required, final judgment of whether a product proposed by the Design/Builder matches the sample satisfactorily lies with the County. Where no product within the specified cost range is available for a satisfactory match that complies with requirements, comply with the provisions in the Contract Documents related to "Substitutions" and "Change Orders" for the selection of a matching product outside the established cost category or of a product not complying with requirements.

4. Visual Selection: Except as otherwise indicated, where specified product requirements include "...as selected from manufacturer's standard colors, patterns, textures..." or words of similar effect, the selection of manufacturer and basic product (complying with the requirements) is at the option of the Design/Builder with the subsequent selection of color, pattern and texture to be by the County.

B. Quality Assurance

1. Source Limitation: To the greatest extent possible for each unit of work, provide products, materials or equipment of a singular generic kind and from a single source.

2. Compatibility of Options: Where more than one choice is available as options for Design/Builder's selection of a product or material, select an option which is compatible with other products and materials already selected. Total compatibility among options is not assured by limitations within the Contract Documents, but must be provided by the Design/Builder. Compatibility is a basic general requirement of product and material selections.
3. Provide products and materials which are undamaged and unused at the time of installation, and which are complete with accessories, trim, finishes, safety guards and labels, maintenance instructions and other devices and details required for a complete installation and for the intended use and effect.

4. Standard Products: Where available, provide standard products of types which have been produced and used previously and successfully in similar applications on other projects.

5. Continued Availability: Where additional amounts of a product, by the nature of its application, are likely to be needed by the County at a later date for maintenance and repair or replacement work, provide a standard, domestically produced product which is likely to be available to the County at such later date.

6. Warranties and Guarantees: Warranties are in several categories including those indicated in the General Requirements and those to be incorporated into the Design/Builder's Technical Specifications.

C. Certification

1. Certification of compliance with specification performance standards and manufacturers' specifications and directions shall be furnished for any portion of the Work for which specific performance requirements and/or

manufacturers' specifications are listed. The Design/Builder shall be responsible for securing two (2) copies of each certification as required and transmitting same to the Construction Manager.

2. Each item requiring certification shall be so noted and an affidavit must be filed singly to cover each specified material, installation, application and the like.

D. Certification of Compatibility: If requested, the material and equipment manufacturers shall certify in writing that:

1. Other manufacturers' materials and/or equipment coming in contact with their product are compatible with their product in every way and that the intended performance of the system in which their product is incorporated will not be affected as a result of such contact. Also, that a physical breakdown of their product by chemical reaction or otherwise will not occur as a result of such contact.

2. The combination of products by one manufacturer to make up the manufacturer's specified system will contribute to the performance of the system as intended, and will remain operational, reliable and durable. The manufacturer will be the source of routine maintenance and replacement parts.

E. Nameplates: Except as otherwise indicated for required approval labels, and operating data, do not permanently attach or imprint manufacturer's or producer's nameplates or trademarks on exposed surfaces of products which will be exposed to view either in occupied spaces or on the exterior of the Work.

1. Labels: Locate required labels and stamps on a concealed surface or, where required for observation after installation, on an accessible surface which, in occupied spaces, is not conspicuous.

2. Equipment Nameplates: Provide permanent nameplate on each item of service-connected or power operated equipment. Indicate manufacturer, product name, model number, serial number, capacity, speed, ratings and similar essential operating data. Locate nameplates on an easily accessed surface which, in occupied spaces, is not conspicuous.

F. Reuse of Existing Material

1. Except where specified or approved in writing, materials and equipment removed from an existing structure shall not be used in the Work.

2. Where use of existing materials and/or equipment is specified or approved in writing, use special care in removing, handling, storing and reinstallation to assure proper function of same in the completed Work.

4. CONSIDERATION OF SUBSTITUTIONS

A. The requirements for substitutions do not apply to specified Design/Builder options on products and construction methods. Revisions to Contract Documents, where requested by the County, are "changes" and not "substitutions." The Design/Builder's determination of and compliance with governing regulations and orders issued by governing authorities do not constitute "substitutions", nor do they constitute a basis for change orders, except as provided for in the Contract Documents. Otherwise, the Design/Builder's requests for changes in products, materials and methods of construction required by the Contract Documents, or included in the Design/Builder's Construction Documents approved by the County, are considered requests for "substitutions", and are subject to the requirements herein.

B. Substitutions for a specified product will be considered only if the specified product is not obtainable, or if delivery date of all such specified products is such that the scheduled date of Substantial Completion of the Work will be delayed if the specified product remains a requirement. The latter cause shall only be considered if the Construction Manager is notified of this condition within thirty (30) days after County approval of the Design/Builder's Construction Documents, or if after order has been placed, circumstances beyond the Design/Builder's control, such as labor disputes affecting manufacture or delivery of product cause such a delay. Under no circumstances will a substitution be allowed for reasons of potential delay due to Design/Builder's failure to execute timely purchase orders with the vendor or subcontractor, or due to Design/Builder's failure to submit product data or shop drawings in adequate time to allow for review and possible resubmittal prior to the required delivery date.

C. Qualifications: Substitutions will only be considered for the reasons noted above, based upon the Design/Builder's representation that by submitting any Request for Substitution, the Design/Builder:

1. has researched the proposed substitution and has determined that it is equivalent to or superior in all respects to that specified.

2. confirms that the same warranties or bonds apply for the substitution as for the specified product, material, system and/or construction method.

3. has determined by its best judgment and experience that the proposed substitution is either necessary or in the County's best interest.

4. will coordinate the installation of any accepted substitution into the Work, and will make such changes as may be required for the Work to be complete in all respects.

5. waives claims for additional costs caused by the substitution which may subsequently become apparent.

6. has submitted complete cost data which includes all related costs under its Contract.

D. Disqualifications: No consideration will be given to proposed substitutions when:

1. they are indicated or implied on shop drawing submittals without having been formally requested in accord with provisions specified herein.

2. for their implementation they require a major revision in the Work in order that their use may be accommodated.
3. they materially alter the design concept including color or function originally intended by the specified product.

5. SUBMITTAL PROCEDURES ON SUBSTITUTIONS

A. Substitution Request Form: The attached form must be filled out in its entirety and submitted in addition to the submittal information and data noted below. Submit a separate Substitution Request Form for each proposed substitution.

B. Submittals: Submit three (3) copies of each Substitution Request Form and of each of the following related support items:

1. Identify product for which substitution is proposed by description, brand name and catalog number, giving specification section number where specified.

2. Identify in similar manner the proposed substitution and include the manufacturer's name, address and telephone number.

3. Itemize differences between product specified and proposed substitution, including but not limited to physical, color, function and guarantee considerations.

4. Itemize changes in adjacent work occasioned by proposed substitutions.

5. Accompany request with test data from independent laboratory substantiating quality and performance of proposed substitution.

6. Attach manufacturer's complete instructions on storage, handling and installation.

7. Provide list of three projects giving names, addresses and phone numbers of owners, general contractors, and architects where proposed product has been used.

8. State proposed change to the Contract Sum and proposed change to the Contract Time if substitution is accepted and confirmed by Change Order. If the proposed substitution involves a change to the Contract Sum, any change in cost of adjacent or related Work shall be included also.

9. State the number of days (not less than 15) during which the substitution as submitted is subjected to acceptance.

10. Include any cost savings to the County which might result from this substitution.

6. ACCEPTANCE OR REJECTION

A. The Construction Manager has the authority to reject any substitution submittals due to incompleteness or for other good reason.

B. The County will be the sole judge of the acceptability of the proposed substitution.

C. Only the County will have the authority to change the specified standards of quality.

D. The Construction Manager will attain a prompt review from the County of the Request for Substitution which complies with the above provisions.

E. If no exceptions are taken, approval will be granted in writing. If the substitution represents a change to the Contract Documents, the substitution will be confirmed by Change Order.

F. If accepted, the Design/Builder explicitly assumes all liability for the fit and function of all surrounding assemblies, and all interfacing devices.

G. If rejected, the Design/Builder will be promptly notified, and the Design/Builder shall proceed with the Work in accordance with the Contract Documents or the Design/Builder's approved Construction Documents, whichever case applies.

END OF SECTION 01 630, PRODUCTS & SUBSTITUTIONS
follows Substitution Request Form (two pages) attached

SUBSTITUTION REQUEST FORM
For Use Only After Contract Award

(For use by County/CM)

____ Accepted

____ Accepted as Noted
____ Not Accepted
____ Received Too Late

From: _____

To: Construction Managers

Project: _____ **Contract No.** _____

We hereby submit for your consideration the following proposed substitution in lieu of the specified item for the above-named project:

Proposed Substitution: _____
_____

Specified Item: _____
_____

Reference Drawing No(s). _____ Reference Specification Section/Paragraph _____

1. Attach complete information and technical data on any changes to the program, drawings, specifications, or other Contract Documents which the proposed substitution will necessitate for its proper incorporation.

2. Accompany this request with all samples and substantiating data necessary to prove equal quality and performance levels of the proposed substitution to those of the specified item. Clearly mark manufacturer's literature to highlight the indicated equality in performance.

3. Respond to each of the following questions (use additional sheets if necessary):

   A. What is the quality level of the proposed substitution versus that of the specified item?
   _____
   _____

   B. What are significant variations between the proposed substitution and the specified item?
   _____
   _____
   _____

   C. What affect(s) would the proposed substitution have on the operation and maintenance of the completed facility?
   _____
   _____
   _____

   D. Are manufacturer's warranties for the proposed substitution and the specified item the same?
   Yes ____ No ____
   If no, explain: _____
   _____
   _____

SUBSTITUTION REQUEST FORM (continued)
For Use Only After Contract Award

E. What effect would the proposed substitution have on other trades?

_____
_____
_____

F. How would the proposed substitution affect the project schedule?

_____
_____
_____

G. What are accurate comparative cost figures between the proposed substitution and the specified item?

_____
_____
_____

H. What reason(s) justifies this request for a substitution?

_____
_____
_____
_____

The undersigned states and certifies that the function, appearance, and quality of the proposed substitution are equivalent or superior to those of the specified item and assumes the liability for the provision of equal performance of same as a minimum. THIS FORM MUST BE SIGNED.

SIGNATURE: _____ DATE: _____

NAME (type or print): _____

COMPANY: _____

ADDRESS: _____
_____

TELEPHONE: _____

NOTE: Signature shall be by a person having authority to legally bind his/her firm to the above terms. Failure to provide a legally binding signature will result in the retraction of any approval of this proposed substitution.

SECTION 01 680 – EQUIPMENT & SYSTEMS INSTRUCTION

1. GENERAL

A. Furnish all labor, materials, tools, equipment and services for the cleaning up or preparation of all equipment which is required in conjunction with the instruction work to be performed for County personnel.

B. Coordinate additional instruction of County's personnel for any and all items of work of all trades that are incomplete at the time initial instruction sessions are scheduled.

C. Although such work is not specifically indicated, furnish and install all supplementary or miscellaneous items, appurtenances and devices incidental to or necessary for a sound, secure and complete installation, and provide instructions upon the functions of that installation.

D. Provide instruction for all equipment and systems for which operating and maintenance data is required. See General Requirements Section 01 730 for individual details of the operations and maintenance data requirements.

E. Instruction sessions may be combined to some extent between several pieces of similar equipment within the same training session, but only if that combination is defined in the Design/Builder's instruction program submittal and approved by the Construction Manager.

F. One instruction session for each major type of equipment will be required. The Design/Builder shall anticipate that up to ten (10) County employees will participate in any particular instruction session, and shall be prepared to provide the required number of manuals and tools for each session.

G. The Design/Builder shall complete all instruction sessions in an acceptable manner prior to its request to receive a Certificate of Substantial Completion.

2. QUALITY ASSURANCE

Instructors for all sessions shall be member(s) of the installers' staff and authorized representative(s) of component, assembly, or system manufacturer(s). The Design/Builder's Technical Specifications shall contain any additional detailed requirements necessary to provide adequate instruction for individual systems or pieces of equipment.

3. PRESENTATION OF SUBMITTALS

A. No later than ninety (90) days prior to scheduled Substantial Completion of the Work, the Design/Builder shall submit a list of proposed instruction sessions for the entire Project. This list shall be organized by Specification Section and its contents will be subject to the approval of the Construction Manager.

B. After approval of the content of the required instruction program, submit course outlines for each of the approved instruction sessions. Outlines shall be organized by Specification Section, and their contents will also be subject to the approval of the County.

C. After approval of the program content, the Design/Builder shall submit planned course schedules for each of the approved instruction sessions which are to be organized by Specification Section, and the scheduled dates will be subject to the approval of the Construction Manager and representatives of the County.

D. All instruction courses will be planned and scheduled such that the County's participants will utilize copies of the Project Operations and Maintenance Manuals which will have been previously provided. These copies are in addition to the quantities which will have been provided to the County, through the Construction Manager, under General Requirements Section 01 730. The use of draft copies of these manuals will be acceptable only with the prior written approval of the Construction Manager.

E. Submit a separate instruction request/report for each system or type of equipment, subject to the County's approval of availability of personnel.

1. Submit request/report (form attached) with preliminary information indicated, to the Construction Manager at least two (2) weeks prior to first instruction period.

2. After each instruction session, submit three (3) copies of the completed report to the Construction Manager.

4. PREPARATION

A. Do not begin instructions until component, assembly or system has been tested as specified and is in satisfactory operating condition.

B. Prior to instruction sessions, assemble instructional aids, tools, test equipment and any necessary copies of approved Operations and Maintenance Manuals. If the Operations and Maintenance Manuals have not been approved prior to this time, supply draft copies for use in the training courses.

5. INSTRUCTION

A. Provide all instruction as required to ensure understanding of all operating and maintenance procedures by the County's designated personnel.

B. Instruct County's personnel in operation and maintenance of equipment and systems. Provide all necessary instruction to satisfaction of County.

C. Explain use of Operating and Maintenance Manuals.

D. Tour building areas involved and identify:

1. Maintenance points and access.

2 Control locations and equipment.

E. Explain operating sequences:

1. Identify location and show operation of switches, valves, etc., used to start, stop and adjust systems.

2. Explain use of flow diagrams, operating sequences, diagrams, etc.

3. Demonstrate operation through complete cycle(s) and full range of operation in all modes, including testing and adjusting relevant to operation.

F. Explain use of control equipment, including temperature settings, switch modes, available adjustments, reading of gauges, and functions that must be serviced only by authorized factory representative.

G. Explain trouble shooting procedures:

1. Demonstrate commonly occurring problems.

2. Note procedures which must be performed by factory personnel.

H. Explain maintenance procedures and requirements:

1. Point out items requiring periodic maintenance.

2. Demonstrate typical preventive maintenance procedures and recommend typical maintenance intervals.

3. Demonstrate other commonly occurring maintenance procedures not part of preventive maintenance program.

4. Identify maintenance materials to be used.

I. Furnish all tools and/or test equipment required for proper instruction of the County's personnel. Tools and/or test equipment shall be distributed in "sets" with each two participants having a "set" to work with and retain upon completion of the instruction. Each participant shall sign for their tools at the start of the instruction session, and copies of the assignment documents shall be provided to the Construction Manager by the Design/Builder.

END OF SECTION 01 680, EQUIPMENT & SYSTEMS INSTRUCTION
follows Equipment and Systems Instruction Report (one page) attached

EQUIPMENT AND SYSTEMS INSTRUCTION REPORT

PROJECT: _____

SYSTEM OR EQUIPMENT: _____

DESIGN/BUILDER NAME _____ CONTRACT NO. _____

SPECIFICATION SECTION

NOTE: The Contractor's Representative must maintain and complete this report during instruction.

PRELIMINARY INFORMATION

1. To be completed by the Design/Builder:

   A. Proposed dates for instruction period: From _____ to _____
   B. Name of Representative Instructor: _____

   C. Approximate number of hours of training required: _____

2. To be completed by the County:

   A. County's Designated Personnel to receive instruction: (Identify supervisor, if required).

1)	_____	6)	___
2)	_____	7)	___
3)	_____	8)	___
4)	_____	9)	___
5)	_____	10)	___

   B. Training Session Location: _____

_____

RECORD INFORMATION

Instructor's Signature: _____ Date Instruction Completed: _____

Construction Manager's Signature:_____

County's Signature: _____

SPECIAL CONSIDERATIONS / NOTES:

_____

_____

_____

_____

_____

_____

SECTION 01 700 – PROJECT CLOSEOUT

1. GENERAL REQUIREMENTS

A. Comply with requirements for administrative procedures stated in this and other sections of the Project Manual in closing out the Work. Closeout procedures are summarized in this Section.

B. Contract requirements shall be met when design and construction activities have successfully produced, in order, completion of these three closeout stages:

1. Substantial Completion

2. Final Completion

3. Final Payment

C. The Design/Builder shall provide all written notices and supporting documentation as described in Paragraphs 2 and 3 below when requesting Substantial Completion and Final Completion, respectively. Partial submittals of the required documents shall not represent a valid request, and the County and Construction Manager shall not be liable for any delays in the Substantial and Final Completion dates arising therefrom.

2. SUBSTANTIAL COMPLETION

A. Reference the *Owner-Design/Builder Agreement*, Article 9, regarding Substantial Completion.

B. When the Work is substantially complete, the Design/Builder shall submit to the Construction Manager:

1. a written notice that the Work, or designated portion thereof, is substantially complete.

2. an original Certificate of Occupancy for the Project.

3. a list of items to be completed or corrected (hereinafter referred to as a "Punch List"). The Punch List shall include items noted by the Architect and Engineers of Record in each discipline. If either the Architect or any Engineer of Record has no Punch List comments, a statement shall be provided by such entity and attached to the Punch List that an inspection has been made and there are no outstanding work items.

4. a request for a Substantial Completion inspection on a date acceptable to the County and the Construction Manager.

5. Project record documents, operation & maintenance manuals, warranties, and certificates for review and approval.

C. Within a reasonable time after receipt of such notice, the Construction Manager, the Design/Builder, and the County will make a joint inspection to determine the status of completion. County representatives for this inspection shall include, but not be limited to, the user department(s) and the Department of Personnel, Workers Compensation & Office Services Division. The Punch List submitted by the Design/Builder will be reviewed in detail during the inspection, with items added or deleted to indicate Work to be corrected or completed.

D. After completion of the joint inspection described in Paragraph 2.C above, the Construction Manager will consolidate all Punch List comments and transmit them to the County. Within a reasonable amount of time after receipt of such consolidated Punch List, DPB&G shall conduct its own inspection, to include, but not be limited to, the installation and operation of all mechanical, electrical, plumbing, and other building systems. The consolidated Punch List will be reviewed in detail during the inspection, with items added or deleted to indicate Work to be corrected or completed.

E. The County and/or the Construction Manager reserve the right to issue a revised Punch List based on the inspections described in 2.C and 2.D above. The Construction Manager will reproduce and distribute copies of any revised Punch List to the Design/Builder and see that the items requiring correction or completion are given prompt attention by the Design/Builder. Depending on the number and type of items on the Punch List, the Construction Manager may withhold the issuance of the Certificate of Substantial Completion until corrections required by said Punch List are made or all parties are satisfied that they will be made.

F. Should the Construction Manager determine that the Work is not substantially complete:

1. The Construction Manager will promptly notify the Design/Builder in writing, giving the reasons therefore.

2. The Design/Builder shall remedy the deficiencies in the Work, and then send a second written notice of Substantial Completion to the Construction Manager.

G. Paragraphs 2.B through 2.E will be repeated.

H. Should it become necessary to perform more than one (1) reinspection due to the inaccurate claims of the status of completion made by the Design/Builder, the Construction Manager may deduct the costs of such reinspections from the final payment, including but not limited to costs incurred by the Construction Manager, and costs incurred by the Owner for payment of compensation to the Construction Manager, for services performed for the reinspection(s). Also refer to General Requirements Section 01 400, *Quality Control*.

I. When the Construction Manager concurs that the Work is substantially complete, the Construction Manager will:

1. prepare a Certificate of Substantial Completion accompanied by the Design/Builder's Punch List of items to be completed or corrected, as verified and amended by the Construction Manager and the County.

   a. Contract responsibilities are not altered by inclusion or omission of required Work for the Punch List.
   b. The Construction Manager will coordinate with both the County and the Design/Builder to establish each parties' responsibilities with respect to security, maintenance, heat, utilities, damage to the Work, and insurance, all of which shall be clearly delineated on the Certificate of Substantial Completion.

2. sign the Certificate of Substantial Completion and submit it to the County and the Design/Builder for their written acceptance of the responsibilities assigned to them in the Certificate.

3. FINAL COMPLETION

A. Reference the *Owner-Design/Builder Agreement*, Article 9, regarding Final Completion.

B. To attain Final Completion, the Design/Builder shall complete the activities pertaining to Substantial Completion Certificate and complete work on all Punch List items. Only then shall a written request to the Construction Manager for final inspection be submitted.

C. When the Work is complete, the Design/Builder shall submit to the Construction Manager written certification, signed jointly with its Architect and Engineers of Record, that:

1. the Contract Documents have been complied with in their entirety.

2. the Work has been inspected for compliance with Contract Documents.

3. the Work has been completed in accordance with Contract Documents.

4. the Work is completed and ready for final inspection.

D. The Construction Manager, Design/Builder and County will make an inspection to verify the status of completion with reasonable promptness after receipt of such certification.

E. Should the Construction Manager determine that the Work is incomplete or defective:

1. The Construction Manager will promptly notify the Design/Builder in writing, listing the incomplete or defective Work.

2. The Design/Builder shall take immediate steps to remedy the stated deficiencies, and send a second written certification to the Construction Manager that the Work is complete.

F. Paragraphs 3.B through 3.D will be repeated.

G. Should it become necessary to perform more than one (1) reinspection due to failure of the Work to comply with the claims of status of completion made by the Design/Builder, the Construction Manager may deduct the costs of such reinspections from the final payment, including but not limited to costs incurred by the Construction Manager, and costs incurred by the Owner for payment of compensation to the Construction Manager, for services performed for the reinspection(s). Also refer to General Requirements Section 01 400, *Quality Control.*

H. When the Construction Manager finds that the Work is acceptable under the Contract Documents, the Design/Builder will be requested to make a final closeout submittal.

4. DESIGN/BUILDER'S CLOSEOUT SUBMITTALS

The Design/Builder shall provide to the Construction Manager the following documents in the quantity of one original and one copy unless otherwise noted. Note that with the exception of Subparagraphs 4.G, 4.H, 4.J, and 4.K below, submittal for approval shall have already been made prior to Substantial Completion. Submittal under this Paragraph would be for a final submittal should revisions or additional copies be required of previously submitted documentation.

A. Evidence of Compliance with all requirements of governing authorities:

1. Certificate(s) of Occupancy

2. Certificates of Inspection, for Mechanical, Electrical, Plumbing, Fire Protection, and others as may be required.

B. Project Record Documents: Refer to Section 01 720 of the General Requirements.

C. Operation & Maintenance Manuals: Refer to Section 01 730 of the General Requirements.

D. Subcontractor List: A complete listing of all subcontractors and their suppliers, indicating business addresses, telephone numbers, contact names, and items supplied by each.

E. Manufacturer List: A listing of manufacturers of major materials, equipment and systems installed in the Work, and local contact addresses and phone numbers.

F. Warranties: Refer to Section 01 740 of the General Requirements, and individual sections of the Technical Specifications.

G. Payment of Debts and Claims and Consent of Surety: The Design/Builder shall submit adequate evidence that the Design/Builder has paid all obligations to date arising out of the Contract using AIA Document G706. Design/Builder shall also submit AIA Document G707, indicating written consent of its Surety to final payment.

H. Release of Claims and Liens: The Design/Builder and each subcontractor shall also submit AIA Document G706A, indicating that the releases for waivers submitted are complete to the best of its knowledge and information.

I. Final Approvals and Certificates:

1. Plans and Certificates approved by the Fulton County Development Services Department which were maintained at the jobsite shall be amended to show construction changes and resubmitted as required by law.

2. Design/Builders requiring filing shall complete all Fulton County inspections and permits records before Application for Final Payment. Submit all approvals and certificates required by the Specifications, Drawings and applicable codes and regulations of all relevant departments or agencies of Fulton County, State of Georgia, and local authority having jurisdiction.

J. Shop Drawings, Manufacturer's Literature and Test Data (one copy only): The Design/Builder shall submit through the Construction Manager to the County, before final acceptance, all reviewed shop drawings (with all corrections noted), plus sets of all approved catalog cuts, equipment manuals, etc. All materials shall be indexed by Specification section. This submittal shall include a list of each room and its paint manufacturers and/or wall covering number for the County's use.

K. Keys and Maintenance Materials: All keys, maintenance kits or stock, replacement parts or materials, spare construction materials, and equipment required under the Contract Documents shall be delivered or made available to the County. Also refer to Section 01 760 of the General Requirements.

L. No partial submittals of the above items are to be made to the Construction Manager. All items of each category are to be collected by the Design/Builder and delivered at one time to the Construction Manager, together with a letter of transmittal listing all items. Where items are to be delivered to the County's representative, the Design/Builder shall include a copy of the transmittal letter listing all enclosures, signed by the County's representative acknowledging receipt.

END OF SECTION 01 700, PROJECT CLOSEOUT

SECTION 01 710 – FINAL CLEANING

1. RELATED WORK SPECIFIED ELSEWHERE

A. Periodic clean-up during construction - See General Requirements Section 01 500 for additional details of these requirements.

B. The Design/Builder's Technical Specifications shall contain any special cleaning instructions for specific work. Lacking such specific instructions, provide final cleaning on all delivered materials and equipment as specified herein.

2. PRODUCTS

A. The Design/Builder is to use only cleaning materials as recommended by manufacturer of surface to be cleaned.

B. The Design/Builder is to use cleaning materials only on surfaces as recommended by the manufacturer of the cleaning material.

3. EXECUTION

A. At the completion of the Work, the Design/Builder will remove all trash and debris and clean all surfaces associated with his work, and leave the project ready for occupancy by the County.

B. Experienced workmen or professional cleaners only are to be employed for final cleaning.

C. Paved surfaces are to be broomed clean. Other porous surfaces are to be raked clean. All stone and non-porous surfaces shall be wiped clean.

D. All surfaces shall have all stains removed.

E. Electrical work, including lighting fixtures, is to be thoroughly cleaned.

F. Prior to acceptance of any area of the project by the County, the Design/Builder is to notify the Construction Manager as each area becomes ready for inspection. The final clean-up will be inspected by the Construction Manager with the County as required.

G. The Construction Manager will notify the Design/Builder in writing if any clean-up is unacceptable. If the Design/Builder fails to comply after receiving written notice from the Construction Manager, the Construction Manager will perform whatever corrective action is necessary, with the resultant costs to be borne by the Design/Builder.

H. The Design/Builder will maintain cleaning services until the Project or portion thereof is accepted by County.

END OF SECTION 01 710, FINAL CLEANING

SECTION 01 720 – PROJECT RECORD DOCUMENTS

1. GENERAL

A. Definition: Record Documents are defined to include those documents or copies relating directly to performance of the Work. Record Documents show changes in Work in relation to way in which Work was shown and specified by the original approved Construction Documents prepared by the Design/Builder, and show additional information of value to County's records, but not indicated by the original approved Construction Documents. Record Documents include final revised Construction Drawings, marked-up copies of Construction Drawings, Specifications, Field Orders and Change Orders, reviewed copies of Shop Drawings, Product Data and Samples, a final product list, test records, field records for variable and concealed conditions such as excavations and foundations, and miscellaneous record information on Work which is otherwise recorded only schematically or not at all. Certain portions of the Contract Documents or the Design/Builder's Construction Documents may indicate specific Record Document requirements which extend the requirements of this Section.

B. Throughout progress of the Work, maintain and continually update an accurate record of changes in the approved Construction Documents.

C. Provide access to all Record Documents for the County's and Construction Manager's reference and review throughout the progress of the Work.

D. As a condition of Substantial Completion of the Work, the Design/Builder shall deliver Record Documents in print and electronic form to the Construction Manager as provided below.

2. MAINTENANCE OF DOCUMENTS

A. One copy of current Record Documents shall be maintained at the Design/Builder's jobsite office at all times.

B. Delegate responsibility for maintenance of Record Documents to one person.

C. Provide files and racks for suitable storage of documents, and file all documents and samples in a neat and orderly manner.

D. Protect Record Documents from loss in a secure location. Maintain documents in a clean, dry, legible condition, and in good order. Record Documents are not to be used for construction purposes.

3. RECORDING OF CHANGES AND OTHER PERTINENT INFORMATION

A. Record all changes and other pertinent information concurrently with construction progress.

B. Accuracy of Records: Coordinate changes within the Record Documents, making adequate and proper entries on each page of Specifications and each sheet of Drawings and other documents where such entry is required to show change. The accuracy of records shall be such that future searches for maintenance or analysis purposes may reasonably rely on information obtained from the Record Documents.

C. Do not permanently conceal any of the Work until changes or other pertinent information has been recorded on the appropriate Record Documents with dimensions from a permanent reference point.

D. Drawings:

1. Mark the drawing that is most capable of showing actual physical condition, fully and accurately.

2. Where Shop Drawings are marked up, mark cross reference on Contract Drawings at corresponding location.

3. Mark with erasable colored pencil, using separate colors where feasible to distinguish between changes for different categories of Work at same general location.

4. Mark the location of internal utilities and appurtenances concealed in the construction, referenced to visible and accessible features of the structure.

5. Indicate all changes of dimension and detail, whether a field change or a directed change. Note Change Order number, Request for Information number, and/or similar identification associated with the initiation of each specific change.

6. Provide Design/Builder's construction details which may not have been shown on the original approved Construction Documents.

E. Specifications:

1. Legibly mark each Section of the Technical Specifications with the manufacturer, trade name, catalog number, serial number and supplier of each product and item of equipment actually installed in the construction.

2. Indicate all field changes and directed changes. Note Change Order number, Request for Information number, and/or similar identification associated with the initiation of each specific change.

F. Shop Drawings, Product Data and Samples: Maintain as Record Documents. Legibly annotate any changes made after review(s).

G. Label each Record Document "Project Record" in neat, large letters. This label shall appear in the same location on every record drawing.

4. SUBMITTAL OF RECORD DOCUMENTS

A. With its request for Substantial Completion of the Work, the Design/Builder shall furnish one marked-up print set of all Record Drawings and Specifications for review by the Construction Manager.

B. Submittals will be reviewed for adequacy only and returned with comments, if any, to the Contractor.

C. All changes to Record Drawings, including the incorporation of any review comments, shall be made electronically to the CADD drawing files used for the production of the approved Construction Documents. This format shall be compatible with the CADD program used by the County Department of Public Buildings. All changes to Record Specifications, including the incorporation of any review comments, shall be made electronically using word processing software compatible with that used by the County Department of Public Buildings.

D. After incorporation of review comments in the Record Documents, the Design/Builder shall submit the following as a final submittal:

1. Drawings: one (1) mylar reproducible set (full-size, reverse reading, 3 mil thick) and three print sets of final revised drawings, and one disk copy of all revised CADD drawing files.

2. Specifications: two (2) sets of final revised specifications.

3. Shop Drawings, Product Data and Samples: one (1) copy each, except those related to the irrigation system, which shall be two (2) copies.

4. Test records, executed Change Orders, field orders, requests for information, supplemental instructions, and other pertinent documentation: two (2) copies each.

E. The final submittal shall include a transmittal letter containing the date, Project name and number, Design/Builder's name and address, title and number of each Record Document, certification that each document as submitted is complete and accurate, and the signature of the Design/Builder or of its authorized representative.

F. All revisions to and final submittal of Record Documents shall be completed to the acceptance of the Construction Manager and the County prior to Final Completion of the Work and final payment.

END OF SECTION 01 720, PROJECT RECORD DOCUMENTS

SECTION 01 730 – OPERATING & MAINTENANCE DATA

1. GENERAL REQUIREMENTS

A. The Design/Builder shall include specific requirements for instructions, maintenance manuals, and operating data in its Technical Specifications, in order to provide the County with all necessary documentation to adequately maintain and service materials, systems and equipment for the Project.

B. The Design/Builder shall compile all such specified instructions, maintenance manuals and operating data as specified under the appropriate Technical Specification sections, and submit as described below in comprehensive sets of Operation and Maintenance Manuals.

C. Coordinate the compiling and submittal of Operation and Maintenance Manuals with instructions to the County for equipment and systems, as described in General Requirements Section 01 680, *Equipment & Systems Instruction*. All complete Operation and Maintenance Manuals shall be submitted prior to the Design/Builder's request to receive a Certificate of Substantial Completion.

2. SUBMITTAL REQUIREMENTS

A. Develop a sequential program for the development of the Operation and Maintenance Manuals. This program shall provide a step-by-step review of the development of the manuals. The following is an abbreviation of the required sequence of development of the manuals.

1. Submittal of the Table of Contents
2. Submittal of draft sections for County's and Construction Manager's review
3. Submittal of list of proposed attachments and appendices
4. Submittal of initial draft of complete manual
5. Submittal of final copies of all manuals with approved contents

B. After all approvals have been obtained, submit to the Construction Manager four (4) sets of bound, clear and complete instructions for maintenance of materials, finishes, machinery and other items to ensure proper care and reasonable life expectancy thereof.

C. Print or type, in orderly sequence, the required information for each item:

1. Data shall include recommendations for inspection procedures, frequency of maintenance in cleaning, lubricating, type of lubricant, replacement items such as filters, product source locations, and servicing agencies and their phone numbers and additional data, if any, as specified in more detail elsewhere in the specifications.

2. Include data for all finishes, whether painted, coated, fabric, polished and satin finish metals, glass, natural finishes on wood, natural stone, manufactured stone and various masonry finishes to the extent that such finishes occur on the project.

3. For machinery, provide maintenance manuals and include complete parts lists showing the source(s) of genuine replacement parts (with current list prices indicated for same if requested by the County).

D. Bind each set of data in a manageable number of 8 ½" by 11" sturdy three-ring binders, indexed and clearly labeled by Specification Section and item description. Each set shall be indexed and tabbed for the completed manual regardless of its completeness at the time of its submittal.

Additional data will be added behind its tabbed location as received by the Construction Manager. Include an index for the completed set in each binder. Mark identification on both front and spine of each binder.

E. Where the complexity of machinery is such that regular maintenance by a specialty service company is normal, or may be required by law, give notice thereof to the County in writing.

END OF SECTION 01 730, OPERATING & MAINTENANCE DATA

1. GENERAL

A. Unless additional maintenance or performance warranties are required, all the Work shall be warranted by the Design/Builder for one year after the date of Substantial Completion of the Contract.

B. Project warranties submitted by the Design/Builder do not reduce the County's warranty rights provided under State laws and regulations.

C. Where products, materials, equipment, or systems are not properly performing or operating, the warranty shall not be considered in effect until corrective work is provided and the items are properly performing or operating.

D. Warranties shall not include replaceable items such as light bulbs or cleaning materials, or damage by wear, vandalism or unusual climatic phenomenon, except water and air leaks caused by such phenomena.

E. Warranties shall be signed by representatives that are expressly authorized to bind the Design/Builder to the warranties' terms and conditions. This requirement shall also apply to signatures on warranties of subcontractors, installers, manufacturers, and other entities engaged by the Design/Builder which are required by the Contract Documents.

2. DEFINITIONS

A. Warranties on the Work are in several categories, including those of the Owner-Design/Builder Agreement, and including (but not necessarily limited to) the following specific categories related to individual units of Work which may be specified in Division 2 through 17 of the Design/Builder's Technical Specifications if requested by the County:

1. Special Project Warranty (Guarantee): A warranty specifically written and signed by the Design/Builder for a defined portion of the Work; and, where required, countersigned by a subcontractor, installer, manufacturer and/or other entity engaged by the Design/Builder.

2. Specified Product Warranty: A warranty which is required by the Contract Documents, to be provided for a manufactured product incorporated into the Work; regardless of whether the manufacturer has published a similar warranty without regard for specific incorporation of product into the Work, or has written and executed a special project warranty as a direct result of Contract Document requirements.

   The Design/Builder shall issue four (4) copies of a special product warranty if required by the Contract Documents and subsequently called for under the appropriate section of the Design/Builder's Technical Specifications. Examples of items which will require a special product warranty include roofing, waterproofing, certain insulation, caulking, wood and automatic doors, carpet and certain equipment.

3. Coincidental Product Warranty: A warranty which is not specifically required by Contract Documents (other than as specified in this Section), but which is available on a product incorporated into the Work, by virtue of the fact that manufacturer of product has published a warranty in connection with purchases and uses of product without regard for specific applications except as otherwise limited by terms of warranty.

B. Refer to Section 01 010, *Summary of Work*, and/or the outline specifications provided in the Contract Documents for the determination of portions of the Work which are required to be specifically or individually warranted, and for the specific requirements and terms of those warranties (or guarantees).

3. SCOPE OF WARRANTIES

A. Scope: The Design/Builder shall submit to the Construction Manager for transmittal to the County, upon completion of all the Work under the Contract, its written warranty made out to the County and in a form satisfactory to the Construction Manager and the County, warranting all of the Work under the Contract to be free from faulty materials and improper workmanship, and warranting the Work against injury in the proper and usual use thereof. Under the warranty, the Design/Builder shall replace Work as may be found by the County to

be improper or imperfect and to make good all damage caused to other work or materials by the imperfection or removal and replacement of the imperfect Work.

B. Time Limit / Individual Warranties: A specific warranty of the Design/Builder may cover a longer period than that stated above where so stipulated in the Contract Documents. Warranties under service policies and warranties for individual pieces of equipment shall be assigned and delivered to County prior to the date of Final Acceptance, but said individual warranties shall in no way modify or shorten the one year overall warranty to be provided by the Design/Builder.

C. Extended Warranties: Certain extended warranties by the Design/Builder or subcontractors, or maintenance contracts which are longer than one year's duration, may be required by the Contract Documents. At the completion of the Work, all such warranties or maintenance contracts covering materials, workmanship, maintenance, or other items as specified, shall be forwarded in duplicate to the Construction Manager, together with a letter addressed to the County giving a summary of each said warranty as follows:

1. Character of Work covered by warranty

2. Name of subcontractor furnishing warranty

3. Period of warranty

4. Conditions of warranty

D. General Limitations: It is recognized that specific warranties are intended primarily to protect County against failure of the Work to perform as required, and against deficient, defective and faulty materials and workmanship, regardless of sources. Except as otherwise indicated, specific warranties do not cover failures in the Work which result from:

1. unusual and abnormal phenomena of the elements,

2. the County's misuse, maltreatment or improper maintenance of the Work,

3. vandalism after the time of Substantial Completion, or

4. insurrection or acts of aggression, including war.

E. Cost: Design/Builder warranties shall provide for the correction of work performed without additional charge. Any additional expense or damage resulting from imperfect work or the removal or replacement of imperfect work shall also be covered by said Design/Builder warranties.

4. DESIGN/BUILDER OBLIGATIONS

A. Related Damages and Losses: The Design/Builder shall be responsible for the correction of warranted Work which has failed. The Design/Builder shall remove and replace other Work which has been damaged as a result of such failure, or which must be removed and replaced to provide access for correction of warranted Work.

1. Consequential Damages: Except as otherwise indicated or required by governing regulations, special project warranties and product warranties are not extended to cover damage to building contents (other than Work of the Design/Builder) which occurs as a result of failure of warranted Work.

B. Reinstatement of Warranty Period: Except as otherwise indicated, when Work covered by a special project warranty or product warranty has failed and has been corrected by replacement or restoration, reinstate warranty by written endorsement for a period of time equal to original warranty period of time, starting on date of acceptance of replaced or restored Work.

C. Replacement Cost, Obligations: Except as otherwise indicated, costs of replacing or restoring failing warranted units or products is the Design/Builder's obligation, without regard for whether the County has already benefited from use through a portion of anticipated useful service lives.

D. Design/Builder's Procurement Obligations: Do not purchase, subcontract for, or allow others to purchase or subcontract for materials or units of work for the Project where a special project warranty, specified product warranty, certification or similar commitment is required, until it has been determined that entities required to countersign such commitments are willing to do so.

E. Rejection of Warranties: The County reserves the right, at the time of Substantial Completion or thereafter, to reject coincidental product warranties submitted by the Design/Builder, which in the opinion of the County tend to detract from or confuse interpretation of the requirements of the Contract Documents.

5. TRANSFER OF WARRANTIES TO OWNER

A. Format: The warranties shall cover all the Work done under this Contract. All Design/Builder warranties shall bear the endorsement of the Construction Manager in writing, as per the attached format on the following page:

FORMAT FOR THE TRANSFER OF WARRANTIES TO OWNER

TO: Fulton County Board of Commissioners

c/o: Construction Managers

Re: *(Work Covered in Warranty)* _____

Project: _____

Name of Design/Builder: _____

Address of Design/Builder: _____
_____
_____

Dear County's Representative,

The undersigned warrants to the County that he will be responsible for all faulty or defective materials, equipment and workmanship, in the Work or portion thereof as referenced above, and that he will remedy any defects due thereto and pay for all damage to other work resulting there from which shall appear within a period of _____(____) year(s) from the date of Substantial Completion, as defined in the Contract Documents.

(Add additional conditions of warranty as noted in various technical sections of the Specifications.)

During the warranty period, upon written notice from County, the undersigned shall proceed with due diligence at the undersigned's sole expense to remove and replace properly any defective materials and equipment or perform any labor necessary to correct any such defect in the above. In case that the undersigned fails to remedy such defects, then the County may furnish such materials and equipment or labor as are necessary to correct the work, and the undersigned agrees to reimburse the County for any expense therefore promptly and fully.

Signed: _____ ** Date: _____

Type/Print Name: _____

Witness: _____ **

Construction Manager endorsement of the above-noted warranty:

Signed: _____ Date: _____

** *Signatures must be notarized.*

END OF SECTION 01 740, WARRANTIES

SECTION 01 760 – SPARE PARTS & MAINTENANCE MATERIALS

1. GENERAL

A. The Design/Builder's Technical Specifications shall provide requirements to furnish all labor, materials, tools, equipment and services for the provision of spare parts and maintenance materials as required in conjunction with all of the Work performed.

B. In general, provide spare parts for equipment in quantities to adequately maintain the completed facility for a period of one year from Substantial Completion.

C. Minimum requirements for maintenance materials ("attic stock") shall be as follows:

1. Resilient floor tile: one unopened carton from same run for each 1,000 SF tile surface installed for each color or pattern.

2. Resilient base: 20 LF from same run for each 1,000 SF of floor finish (including carpet) or portion thereof for each color.

3. Carpet: 6% excess for each type and color.

4. Acoustic ceiling: 1% excess of each tile type and suspension grid system.

5. Paint: Two gallons of each final coat type and color, matching exactly the installed product, together with ingredients required to achieve final results and a description of required undercoats.

6. Stain: Two gallons of touch-up material for each stain, together with a description of ingredients and complete set-by-step instructions on how installed finish was achieved.

2. PACKAGING AND LABELING

A. Package all parts and materials in sturdy boxes suitable in size to accommodate the quantity of items being packaged.

B. All boxes shall have a single, standardized label which shall provide locations to write or type all necessary information. This label shall include the Project name, and shall be large enough so as to be easily read from a distance of several feet. The following information shall be included on each label:

1. Manufacturer's name, part or trade name and stock number.

2. The piece of equipment or finish for which the part or material is to be used.

3. Name, address and phone number of the closest supplier.

3. DELIVERY

A. Spare parts and maintenance materials shall be submitted directly to the County, with a letter of transmittal which shall itemize all items being submitted, and which shall be signed by an representative of the County as acknowledgement of receipt.

B. Delivery of all parts and materials shall take place at a single time, unless previous approval is obtained from the Construction Manager. The time and location(s) of delivery shall be as determined by the County.

C. A copy of all signed letters of transmittal shall be provided to the Construction Manager.

D. The Design/Builder shall be responsible for the safe storage of all parts and materials until the designated time of inventory and acceptance by the County.

END OF SECTION 01 760, SPARE PARTS & MAINTENANCE MATERIALS

SECTION 01 800 – SAFETY, HEALTH & LOSS PREVENTION PROGRAM GUIDELINES

1. GENERAL

A. The guidelines and requirements described in this Section shall be used in the Design/Builder's preparation and submittal of its Project-specific Safety Program, and followed as minimum requirements during execution of the Work. Reference Article 10 of the *Owner-Design/Builder Agreement* (Section 00 500) for additional information.

B. SAFETY POLICY STATEMENT

It is the policy of Fulton County to establish a comprehensive accident and loss prevention process for all Capital Projects implemented by Fulton County or its agents.

The goals of this comprehensive accident and loss prevention process are as follows:

- To prevent personal injury, property damage, and injury to the public.
- To implement safety and loss prevention processes as critical elements in the complete design and build process.
- To establish a proactive safety and health process that complies with all laws, regulations, consensus standards, and good management practices.
- To have contractors partner with Fulton County in the implementation of a Safety and Loss Prevention Process and Owner-Controlled Insurance Program to minimize loss potential and to minimize risk.

Fulton County requires safety, health and loss prevention requirements and expectations to be included in the project design, in the invitation for bid, in bid award and project meetings, and in the post job evaluations. The Design/Builder will be required to formalize the safety, health and loss prevention requirements, implement these requirements, and develop a management system to ensure compliance following the safety and health process outlined in this document and as required by other portions of the Contract Documents.

The Design/Builder and other entities placed under contract with Fulton County will be obligated to adhere to this Policy. The safety and health of the Design/Builder's employees, sub-contractors, and the public are the sole responsibility of the Design/Builder. The County may use and direct Program and Construction Management Agents to implement and enforce this policy. Failure of the Design/Builder to comply with this policy or any Safety related obligations may be grounds for contract termination.

2. FULTON COUNTY CONSTRUCTION SAFETY MANAGEMENT SYSTEM RESPONSIBILITIES

A. Fulton County Management

The County Manager is responsible for the overall management of the Capital Projects Program and for oversight of a safety, health, and loss prevention management system that meets Fulton County policies, federal, state and local regulatory requirements, good management practices and the direction of the Board of Commissioners.

B. Program Management and Construction Management

The Program Manager and Construction Manager are responsible for the implementation of a safety, health, and loss prevention management system that meets Fulton County policies, federal, state and local regulatory requirements, good management practices and the direction of the Board of Commissioners. This management system will define responsibilities and safety, health and loss prevention requirements and expectations, and implement policies, procedures and guidelines to minimize loss potential.

1. The *Construction Manager's Safety Director* is responsible for:

a. The development of a safety, health, and loss prevention management system that meets Fulton County policies, federal, state and local regulatory requirements, good management practices and the direction of the Board of Commissioners;
b. The development of specific safety, health and loss prevention requirements and guidelines to assure contractor safety and minimize loss potential;
c. The development of safety systems to review contractor safety requirements in the bid specifications and the contract, to review contractor written safety programs for consistency with safety requirements, to audit contractor safety performance, and to evaluate contractor safety performance;
d. The development of a system to track contractor safety performance, to provide incident and safety audit results, and to provide loss and risk potential information;
e. The auditing of construction projects and contractor safety programs;
f. Assisting the Construction Manager's project managers in implementing the safety management system and safety requirements;
g. Assisting the Construction Manager's project managers in providing safety and health assistance and consultation to contractors;
h. Assisting the Construction Manager's project managers and contractors with accident and incident investigation as required by the safety, health and loss prevention procedure.

2. The *Construction Manager's Project Manager* is responsible for:

a. Communicating safety, health and loss prevention requirements and expectations to the Design/Builder;
b. The development of bid documents that include safety, health, and loss prevention requirements and expectations;
c. Working with the Construction Manager's Safety Director to develop safety requirements and procedures for major new projects or projects with increased risk potential and identify any unusual hazards or non-routine safety and health requirements;
d. Holding regular meetings with the Design/Builder to discuss safety and any safety related recommendations;
e. Conducting regular, planned safety audits of the Design/Builder's work site and activities;
f. Providing assistance and consultation to the Design/Builder in the safety and loss prevention efforts in coordination with the Construction Manager's Safety Director;
g. Coordinating the investigation of accidents and incidents with the Design/Builder, the Construction Manager's Safety Director and the OCIP representative as required by the safety, health and loss prevention procedures. All serious accidents that involve lost time, fatality, three or more employees being hospitalized, or general public liability require Construction Management representation on the investigation team and its review of the investigation report and recommendations;
h. Discussing project safety, health and loss prevention performance with the Design/Builder during the project and reviewing that performance with the Design/Builder at the end of the project.

C. Owner-Controlled Insurance Program (OCIP) Administrator

The Owner-Controlled Insurance Program (OCIP) Administrator is responsible for:

1. Coordinating with the insurance carrier, Fulton County Management, the Construction Manager's Project Manager and the Construction Manager's Safety Director in the management of claims and losses, in the management of contractor safety services, and with safety and loss prevention issues;
2. Assisting Fulton County Management, the Construction Manager's Project Manager and the Construction Manager's Safety Director in coordinating the efficient management and investigation of major claims and potential losses;
3. Assisting the Construction Manager's Project Manager and the Construction Manager's Safety Director in addressing major safety, health and loss prevention problems with contractors;
4. Providing loss and claims analysis to Fulton County Management, the Program Manager and Construction Manager on a periodic basis;
5. Assisting the Construction Manager's Project Manager and the Construction Manager's Safety Director in meetings with contractors to discuss safety, health and loss prevention issues;
6. Notifying Fulton County Management, the Program Manager and Construction Manager of major losses or potential losses as soon as the loss is identified;

7. Reviewing insurance requirements and identifying any additional insurance requirements for unusual or major projects:
8. Conducting regular, planned safety audits of the Design/Builder's work site and activities.

D. Design/Builder

The Design/Builder is responsible for:

1. Implementing a safety, health and loss prevention process and program that meets or exceeds all the requirements in the Contract Documents and the safety, health and loss prevention guidelines referenced in the Contract Documents;
2. Reporting all accidents, incidents and near misses as required in the safety guidelines;
3. Coordinating the investigation of major accidents and incidents with the Construction Manager;
4. Designating an employee on the site to be responsible for the Design/Builder's safety program;
5. Implementing corrective action plans to address safety, health and loss prevention findings identified on the work site.

3. DESIGN/BUILDER SAFETY AND HEALTH MANAGEMENT PROCESS

A. Policy

Fulton County has developed a safety, health and loss prevention management system to identify, control and mitigate injuries, illnesses, and loss potential. The Design/Builder is responsible for implementing this process for the Project and for all subcontractors utilized on the Project.

B. References

1. Occupational Safety and Health Regulations (OSHA) 29CFR1910 and 29CFR1926
2. Environmental Protection Agency Regulations (EPA) 40CFR
3. Fulton County Safety, Health and Loss Prevention Guidelines
4. Georgia Department of Transportation Regulations and Requirements
5. US Department of Transportation Requirements
6. Manual of Uniform Traffic Control Devices for Streets and Highways (ANSI D6.1)
7. Georgia Department of Natural Resources Environmental Protection Division Regulations

C. Responsibility

The Design/Builder has the ultimate responsibility for the safety and health of its employees on the Project, all subcontractors, and the general public. Nothing contained herein shall relieve the Design/Builder or any subcontractor of such responsibility or liability.

D. Procedure

1. The Design/Builder and each subcontractor must implement a written safety, health and loss prevention process and program following the guidelines that includes safety pre-planning, and that follows the guidelines contained in this document and any other relevant portions of the Contract Documents. This program must be approved by Fulton County or its representatives before work can begin.
2. The Design/Builder and each subcontractor must implement a drug and alcohol policy following the guidelines contained in this document and any other relevant portions of the Contract Documents. This program must be approved by Fulton County or its representatives before work can begin.
3. The Design/Builder must designate a person responsible for site safety. Each subcontractor should also designate a person responsible for site safety.
4. The Design/Builder is responsible for reporting ***all*** accidents and incidents that occur on the Project to the Construction Manager within one (1) business day. The Design/Builder must report all serious accidents, fatalities, property loss in excess of $5,000, and incidents involving the general public to the Construction Manager immediately and coordinate their investigation.
5. The Design/Builder is responsible for providing all necessary safety supplies and personal protective equipment required to protect its employees, subcontractors, and the general public.

E. Drug and Alcohol Policy

The Design/Builder and each subcontractor must implement a drug and alcohol policy in order to maintain a safe and efficient work environment. This policy must include the following elements:

1. Written policy that includes as a minimum use, transportation, sale and possession of these materials
2. Disciplinary action plan for violations
3. Any treatment or reinstatement/re-employment options
4. Drug and alcohol testing schedule that includes pre-employment tests, periodic tests for safety sensitive or critical jobs, and tests for cause

Note: AGC, ABC and/or Fulton County programs may be used as guidance documents.

F. Other Controlled Items

The Design/Builder and each subcontractor will be required to include a prohibition against the use, possession, concealment, transportation, promotion or sale of the following controlled items:

1. Firearms, weapons, and ammunition
2. Switchblades
3. Unauthorized explosives including fireworks
4. Stolen property or contraband

G. Emergency Procedures/Guidelines

1. The Design/Builder will be required to establish site-specific emergency procedures to manage emergencies that may occur at any time in the following categories:

   a. Fire
   b. Employee injury
   c. Pedestrian injury due to work activity of any kind
   d. Property damage and damage to various utilities (i.e., electrical, gas, sewerage, water, telephone or public roadways)
   e. Public demonstrations
   f. Bomb threats
   g. Flood, wind, lightning, hail

2. These Emergency Procedures will be made part of the Design/Builder's Safety Program submittal and should include but not be limited to the following elements:

   a. A list of emergency phone numbers posted at the job site, along with information to be transmitted in such emergencies
   b. An incident command structure defining duties and responsibilities
   c. A system to train supervisors and employees on this emergency plan
   d. Procedures on how to handle emergencies including access to the site by emergency responders, accounting for workers, and securing the area
   e. Procedures on media releases. These releases must be coordinated through Fulton County in coordination with the Construction Manager.
   f. A plan that addresses serious incidents that includes notification of Fulton County, in coordination with the Construction Manager, as soon as possible
   g. A review and updating frequency that includes forwarding a copy to Fulton County via the Construction Manager

H. Accident and Incident Investigation and Reporting

1. The Design/Builder is responsible for investigating all accidents and incidents within one (1) business day, and investigating all accidents, incidents, and near misses that occur on the project site. The Design/Builder must coordinate the investigation of all lost time or restricted work accidents, fatalities, property loss in excess of $5,000, and all incidents involving the general public with the insurance carrier. The Construction Manager's project manager, as well as the safety staffs of the Construction Manager and

the OCIP Administrator, may participate in the investigation process to provide information and assure that a thorough investigation was conducted.

2. The Design/Builder will maintain a log of all injuries that occur on the jobsite. This log will be current and available for review by Fulton County or its representatives.
3. For any major incidents such as fires, explosions, fatalities, etc., the Design/Builder must notify the Construction Manager or its designee immediately and must coordinate any releases to the news media through Fulton County in coordination with the Construction Manager.
4. A written accident investigation report containing the following information as a minimum must be forwarded to the Construction Manager within 48 hours:

   a. Company Name
   b. Location
   c. Date and time of incident
   d. Description of incident
   e. Names of all parties involved and all witnesses
   f. Corrective action(s) taken to prevent recurrence
   g. If the incident involves injury or illness, the following information must be provided:
      (1) A medical description of the injury or illness
      (2) OSHA recordability status, i.e. first aid, medical treatment, lost time, days of restricted work
      (3) If the public is involved, information about treatment and treatment location
   h. Any pictures, site drawings, etc. if they assist in describing the incident.

   If the investigation cannot be completed within 48 hours, a preliminary report marked as such shall be forwarded and the report completed and forwarded as soon as possible.

I. Job Safety Analysis

1. The Design/Builder and each subcontractor must implement a procedure to pre-plan safety into the project by conducting a written job safety analysis or job hazard analysis for all project work tasks, prior to beginning each task.
2. The job safety analysis should follow National Safety Council, AGC, or other recognized guidelines and address all safety and health hazards for the work, identify personal protective and other safety equipment required, identify potential hazards to the general public if applicable, and identify any safety equipment, training, or controls that must be implemented prior to starting the work. A sample form is included at the end of this Section as Exhibit A.
3. A jobsite file must be maintained for all job safety analysis forms.

J. Safety and Health Compliance Auditing

1. Design/Builder Self Auditing Requirements

   a. The Design/Builder and each subcontractor must implement a procedure to assure that written safety and health audits or inspections are conducted at least bi-weekly (every 2 weeks). A safety checklist used by Fulton County and the Construction Manager is found at the end of this Section as Exhibit B. The Design/Builder may use this checklist or an equivalent one approved by the Construction Manager.
   b. Each written safety audit must be filed on the site and a copy forwarded to the Construction Manager. This audit will be routed to safety for review and comment and then filed in the project files.

2. Safety and Health Auditing by Project Management

   a. The Construction Manager's Project Manager is required to conduct a bi-weekly safety and health audit for the Project using the checklist referenced above. This audit will be written and a copy given to the Design/Builder.
   b. The Construction Manager's Project Inspectors and Safety staff, and the insurance carrier, will conduct periodic safety and health audits to review site safety using the checklist referenced above. These audits will be written and a copy given to the Design/Builder.
   c. Periodically the insurance carrier and the Construction Manager's Safety staff will audit the quality of the Design/Builder's safety program and employee training program. These audits will be written and a copy given to the Design/Builder.

d. Copies of all audits described above shall be routed to the Construction Manager's Project Manager and Safety Director, and to the insurance carrier, for review and comment. Copies of all audits shall also be placed in the project files.

3. Inspections by Regulatory Agencies

a. The Design/Builder will notify the Construction Manager whenever an OSHA compliance officer, health inspector, or EPA or Georgia Environmental Protection Division representative arrives at the project site to conduct an inspection.
b. The Design/Builder is required to forward a copy of all regulatory citations, notice of violations, or similar for this project to the Construction Manager. Copies will be forwarded to the insurance carrier.
c. These records will be reviewed by the Construction Manager and included in the project files.

4. Safety Inspection and Audit Follow-up

a. Every safety audit or regulatory inspection conducted per the requirements above will be reviewed by the Construction Manager's Safety Director and/or insurance company's loss control staff. This review will identify serious and repeat safety items, look at trends, identify risks and potential losses, and site safety and loss prevention activities. A periodic report will be provided to the Design/Builder summarizing audit findings.
b. After this review, the Construction Manager's Safety Director and/or insurance company's loss control staff will discuss the findings with the Construction Manger's Project Manager and will identify areas needing improvement.
c. The Construction Manger's Project Manager will forward a copy of the audit and any areas identified as needing improvement to the Design/Builder's senior management.
d. For findings that indicate major loss potential or serious concerns about site safety, the areas identified as needing improvement and the overall Design/Builder's performance will be reviewed in a meeting with the OCIP Administrator, the Construction Manager, the insurance company's loss control staff, and other Fulton County representatives as appropriate. A written action plan to address the Design/Builder's performance issues will be developed.
e. The Construction Manager's Project Manager will meet the Design/Builder's senior management to discuss the findings, contract requirements, and their plans to address the findings.
f. The number and frequency of safety audits and site visits by the Construction Manager's representatives, the insurance carrier, and Fulton County will be increased until improvements are noted.

K. Safety Meetings

1. The Design/Builder will conduct weekly safety meetings with all contractor and subcontractor employees on the site.
2. The Design/Builder will keep safety meeting records that include meeting topic(s), outline of items discussed, and attendance and sign in sheet. At this meeting any accidents or audit findings from the previous week will be discussed.
3. The Design/Builder will maintain a job site file that contains copies of the safety meeting records.

L. Training, Inspection and Certification

1. Employee Training

a. The Design/Builder must be able to document the required training for all Design/Builder and subcontractor employees and competent persons working on the site including any required craft training.
b. The Design/Builder must be able to document that all employees operating mobile equipment or cranes have met or exceeded training and licensing requirements.
c. The Design/Builder must be able to document that all scaffolds are erected under the direction of a competent scaffold builder, that all users are properly trained, and that the scaffold is inspected daily.

2. Equipment Certification and Inspection

   a. The Design/Builder must be able to document that all cranes and mobile equipment used on the job site have current inspections and certifications.
   b. The Design/Builder must assure that required daily and weekly equipment inspections are performed and documented in writing per governmental regulations and the requirements of this policy.
   c. The Design/Builder must maintain a job site file for these required inspections and certifications.
   d. Equipment identified as having safety problems or not meeting standards or codes shall not be used until those identified items have been corrected.

M. Safety and Health Program Elements

Note: Based on the Design/Builder's work activities and scope of work, some program elements may not be applicable and therefore do not have to be implemented. Core elements are marked with an asterisk (*).

1. Return to Work Policy*

   The Design/Builder and each subcontractor will be required to establish a transitional work program for employees injured at work, which provides modified duty within the employee's physical limitations.

2. Fire Prevention Program*

   The Design/Builder and each subcontractor will be required to submit a temporary fire protection plan to be in effect for the duration of the contract. This plan must be submitted as part of the Design/Builder's safety program submittal. It must include provisions for fire protection systems and equipment, as identified in OSHA Safety and Health for Construction 1926, Sub-Part F, Fire Protection and Prevention.

3. Hazard Communication (HAZCOM)*

   The Design/Builder and each subcontractor shall have a written HAZCOM Program. The program shall meet OSHA 1926 Requirements and provide for training so that all employees will be able to:

   a. Understand the program and identify hazardous chemicals with which they work;
   b. Understand product warning labels;
   c. Know the location of the Material Safety Data Sheets (MSDS) for all potentially hazardous products brought onto or used on the job site and maintained at the job site.

4. Personal Protective Equipment (PPE)*

   All Design/Builder and subcontractor employees and other site visitors will be required to wear the PPE necessary to accomplish the work in a safe manner. PPE required will vary from job to job and must be based on a written hazard assessment. A list of general PPE that may need to be provided is identified below:

   a. Hard hats shall be worn at all times on the project site.
   b. Hearing protection for operations that create noise in excess of 85 dBA is required.
   c. Eye protection is required for operations that may produce flying debris, handling chemicals or welding and burning
   d. Work boots or work shoes made of leather are required. No open toed shoes or canvas shoes are allowed.
   e. Shirts with sleeves are required. Tank tops and mesh shirt are not allowed.
   f. Full body safety harnesses with shock absorbing lanyards for fall protection are required.
   g. Full body and chemical splash protection is required when handling hazardous chemicals.
   h. Respirators are required when employees may be exposed to dust and/or chemicals in excess of the recognized standards

5. Confined Space Entry

If the Design/Builder's work involves confined spaces, it will be required to establish a confined space entry program that meets OSHA requirements. This program must include but is not limited to the following elements.

a. Confined space identification
b. Environmental testing
c. Rescue
d. Communication with employees in the confined space
e. Employee training
f. Permit system for entry

6. Excavations

If the Design/Builder must make a cut, cavity, trench or depression in an earth surface formed by earth removal, it must comply with the OSHA Regulations on trenching and excavations. A competent person must be assigned for each excavation. Requirements include but are not limited to:

a. Employee training
b. Daily inspections
c. Soil testing
d. Protective or support systems

7. Electrical Tools, Equipment, and Systems*

a. The Design/Builder must implement an Assured Grounding Program or use Ground Fault Interrupter Circuit devices on all electrical tools and extension cords.
b. All electrical work must be performed in accordance with the National Electric Code (NEC) and OSHA.
c. All electrical tools and extension cords must be in good repair and the Design/Builder must establish a written inspection program for all electrical tools. The frequency of inspection shall be at least monthly.

8. Lockout/Tagout Procedure

The Design/Builder and its subcontractors will be required to implement a written Lockout/Tagout procedure that meets OSHA requirements if their work requires energy isolation. Program elements include but are not limited to the following:

a. Energy isolation lists for each piece of equipment
b. Employee training
c. Individually keyed locks and danger tags
d. Written procedure that assigns responsibilities

9. Fall Protection*

The Design/Builder and each subcontractor must implement a written Fall Protection Plan that meets or exceeds OSHA 1926. <u>The project goal is 100% fall protection.</u> The plan must address the following items:

a. Only full body harnesses with shock absorbing lanyards and double locking hooks shall be used.
b. Falls should be limited to less than 6 feet if possible.
c. A fall protection plan is required for work above 6 feet not protected by standard handrail systems.
d. Fall protection systems must be planned into the job and must be design to handle loads and forces expected.
e. Employee training and enforcement of these requirements are mandatory to assure an effective program.

10. Scaffolding*

All scaffolds and work platforms shall be constructed to meet the requirements of OSHA 1926.451 and ANSI A10.8. Some program elements include but are not limited to:

a. User training for all employees who may use scaffolds.
b. Scaffolding is to be designed and erected by competent person(s) following manufacturer's guidelines. Employees must use fall protection when erecting scaffolding.
c. Daily inspection by competent person. Should implement tag system to document inspection.
d. Must have engineering approval for scaffolds above 100 feet in height.
e. Must be able to document competent person credentials.
f. Scaffolds must have proper egress (ladder/stairs) and should have guardrails, complete deck, toe boards and netting if anything can fall on people below. If guardrails or decking are not complete, fall protection must be used.

11. Cranes and Other Lifting Devices

a. Cranes shall be operated in accordance with the applicable OSHA and ANSI/ASME standards by trained and experience operators.
b. The Design/Builder is responsible for ensuring that the crane is properly sized for the job and that all required inspections and maintenance required by OSHA and ANSI/ASME standards have been conducted.
c. All cranes should have anti-two block devices installed and operational. Cranes lifting employees in personnel baskets must have an anti-two block device to stops the crane if this condition occurs (positive acting).
d. Tag lines are required to secure materials while being moved or handled by cranes.
e. All cranes working in the vicinity of overhead power lines shall be grounded and be equipped with proximity guards.
f. A lift plan must be submitted for all lifts that exceed 20,000 pounds or 75% of the crane's lift capacity. This plan must be reviewed and approved by the Construction Manager.
g. Slings, hooks, and other lifting devices must be inspected on regular basis and stored properly.

12. Use of Personnel Baskets

a. Personnel baskets should only be used as the last practical means after documenting that all other means are unacceptable.
b. The personnel basket must be manufactured, tested, and used in accordance with OSHA 1926.550. The crane lifting the basket must also meet OSHA requirements.

13. Personal Lifts with articulating booms (JLG) and Scissor Lifts

a. Operators must be trained in the safe operation of the lift including daily inspection procedures prior to use.
b. Operators of JLG lifts must wear a full body harness with shock absorbing lanyard and be tied off while the lift is operation. Operators in a scissor lift must be use fall protection anytime the handrail system removed or altered.

14. Ladders*

a. Ladders are acceptable means of access when used in compliance with OSHA 1926.1053.
b. Ladders must be in good repair, have safety feet and be inspected.
c. Extension ladders must be either held by an employee on the ground or tied off at the top.
d. Home-made ladders not meeting OSHA requirements should not be used.
e. Non-conducting ladders are required for electrical work.
f. Fall protection is encouraged for employees working on ladders especially if they will be leaning and turning in their work activities.

15. Design/Builder's Tools and Equipment*

All tools and equipment used on the Project must be in a safe operating condition, with all guards in place, and must meet or exceed all governmental regulations (OSHA,EPA,DOT, etc.). Tools and equipment must be maintained, inspected, tested, and used in accordance with OSHA regulations.

16. Compressed Gas Cylinders*

    a. Compressed gas cylinders must be used, stored, and transported in accordance with OSHA requirements, DOT requirements, and Compressed Gas Association standards.
    b. Fuel and oxygen cylinders must be store separately or separated by a ½ hour-rated fire wall.
    c. Compressed gas cylinders are not allowed inside confined spaces.

17. Welding, Burning, and Cutting*

    a. The Design/Builder's program must meet or exceed OSHA and NFPA requirements.
    b. All flammables must be removed from work area and a fire watch posted in area until 30 minutes after the job is completed.
    c. At a minimum, a 10 lb. ABC rated fire extinguisher must be available in the immediate work area.
    d. Regulators must be in good working order and must have anti-flash back and check valves.
    e. Welding shields and burning goggles must be used.

18. Sanitation and Housekeeping*

    a. The project site shall have an adequate number of portable toilets and hand washing facilities.
    b. The project site must establish a housekeeping plan that includes daily site clean up and trash and debris removal.

19. Hearing Conservation*

    The Design/Builder and each subcontractor who has employees exposed to noise levels exceeding 85 dBA must establish a hearing conservation program that meets or exceeds OSHA requirements. Minimum program elements include audiometric testing, noise monitoring, use of hearing protectors, and employee training.

20. Respiratory Protection

    The Design/Builder and each subcontractor who has employees who wear respiratory protection must implement a respiratory protection program that meets or exceeds OSHA requirements. Minimum program elements include risk-based respirator selection, medical surveillance, employee training, respirator fit testing, and written operating procedures.

N. Specialized Safety Program Elements

Special elements shall be included in the Design/Builder's overall safety program if any of the following are included in or required by the Design/Builder's scope of work or jobsite conditions. Such elements shall indicate compliance with all regulatory and contractual requirements applicable.

1. Asbestos removal
2. Lead-based paint removal
3. Exposure assessment and employee monitoring (industrial hygiene)
4. Hazardous waste operations and training
5. Working around overhead power lines
6. Locating underground utilities
7. Dust control
8. Guarding for floor holes and roof openings
9. Heavy equipment, truck and earth moving equipment requirements
10. Environmental requirements

O. Road and Transportation Safety Requirements

The Design/Builder shall implement the following into its safety program if and as necessary to perform the Work and maintain vehicular and pedestrian traffic safety during performance of the Work, whether required by contract or by any authority having jurisdiction.

1. Barricades and cones
2. Traffic and warning signs
3. Traffic control devices
4. Equipment and materials storage
5. Reflective clothing and other personal protective equipment
6. Excavation and road hole protection
7. Erosion protection

P. Additional Requirements to Protect the General Public

Based on the Design/Builder's scope of work and specific work activities or location, the Design/Builder may be required to implement the following into its safety program to protect the general public:

1. Fencing and other measures for site security
2. Warning, direction and no trespassing signs
3. Alternate public walkways
4. Protection of the public from overhead and other construction hazards
5. Site traffic control
6. Barricading off hazardous areas and open pits and holes

Q. Project Closure and Evaluation

1. After the Project has been completed and accepted by the Construction Manager and Fulton County, the Construction Manager will complete the contractor evaluation form attached as Exhibit C. This form will be reviewed with the Design/Builder and then one copy forwarded to the County and another filed in the project files.
2. For contractor evaluations that are scored 4 or less in any one category, a formal meeting with the County representative and the Design/Builder should be held. Based on the results of this meeting and the corrective actions necessary, the County will determine if the Design/Builder will be awarded any additional work.

P. Reporting and Record Keeping

1. Reporting

   a. All audit and inspection reports and safety observations will be input into the safety and loss prevention information database.
   b. Periodic safety and loss prevention reports, reviewing and analyzing accidents and incidents, reviewing safety audits and findings, and analyzing and reporting risk potential will be developed and distributed.

2. Record Keeping

   a. All audit reports, inspections, and safety observations will be included in the permanent project files by project number and title and by contractor.
   b. Any regulatory citation, notice of violation, or other non-compliance issued by a federal, state, county or city regulatory agency will be included in the permanent project files by project number and title and by contractor.
   c. Project records and files will be maintained for at least 20 years.

END OF SECTION 01 800, SAFETY, HEALTH & LOSS PREVENTION PROGRAM GUIDELINES

FULTON COUNTY CAPITAL PROJECTS PROGRAM
Job Safety Analysis / Job Pre-Planning Worksheet

Job Name and #:		**Completed By:**	
Date:		**Phase/Operation:**	
Task	**Hazard**		**Control**

PRE-OPERATIONAL PLANNING
FACT FINDING GUIDE - GL

I. Evaluate present conditions at job site to determine items which could lead to liability claims during work and after completion of the project.

A. PRESENT OCCUPANCY OR USE OF THE SITE

- Demolition to be done?
- Structures will remain (condition)?

B. HISTORY OF THE SITE

- For what was the site used before?
- Underground tanks?
- Underground utilities?

C. GEOLOGY OF THE SITE

- Rock to be blasted?
- Water to be removed/diverted?
- Fill needed? (where and how obtained?)
- Excavation needed? (where and how disposed of?)

II. Evaluate controls needed in reference to site security and public protection.

A. FENCING NEEDED?

B. ACCESS/GATES

- Can traffic be routed past office or checkpoint?
- "Non-Vendor" visitors escorted?
- Gate lockable after hours?
- "Hard Hat" signs at entrance?
- Dirt removal/tarping area at exit?
- Readymix chute wash area?

C. PEDESTRIANS

- Sidewalk maintained outside fence?
- Covered sidewalk needed?
- Special access requirements for neighboring occupants?
- Special after-hours considerations?

D. ENVIRONMENTAL

- Dust control?
- Silt control?
- Mud control on streets?
- Vibration control?

E. UTILITIES

- Underground utilities located?
- Overhead power lines in work area relocated, removed, or de-energized?
- Temporary power service away from high traffic areas?

F. SUBCONTRACTORS

- Method to secure proof of adequate insurance coverage in place?
- List of hazardous materials obtained?
- List of hazardous materials provided?
- Responsibilities established
  * Job site safety meetings
  * Materials delivery
  * Debris removal
  * Access to site
  * Weekly subcontractors' meetings
  * Schedule of safety inspections
  * Emergency Procedures

G. MATERIALS HANDLING

- Crane selection criteria established
  * Maximum weight to be handled
  * Maximum lifting height
  * Maximum horizontal reach needed
  * Amount of travel needed
  * Swing radius available
  * Set-up area available
  * Ground bearing capacity
  * Approximate frequency of lifts

- Crane operations responsibilities established
  * Triangle or leasing company crane to be used?
  * Operator trained and experienced on specific machine?
  * Operator can accurately read and interpret machine load chart?
  * Critical lift identified (75% of net capacity)?
  * Machine fully inspected by a qualified outside agency?
  * Rigging hardware properly selected?
  * Inspecting and maintaining the crane per owner/manufacturer specifications?

III. Start Up.

A. ELECTRICAL

- Temporary Power
  * Underground service possible?
  * Maintenance responsibilities established?
  * Main circuit panel barricaded?
  * Lighting planned?

- Circuit Protection
  * Ground fault circuit interrupt protection?
  * Assured grounding conductor program?
  * Responsibilities established?

B. FIRE PROTECTION

- ABC extinguishers adequately distributed?
- Properly sized?
- Maintenance of fire extinguishers?
- Stand pipe/hydrant available? Adequate?
- Housekeeping checks/inspections?

C. FALL PROTECTION

- Critical Job Phases Identified?
  * Critical exposures identified by phase? (e.g. "Worker falls into basement excavation")
  * Scheduled start dates for critical phases?

- General Fall Protection Procedures
  * Perimeters
  * Floor openings
  * Working deck
  * Work area access
  * Ladders
  * Elevator hatchways

D. PERSONAL PROTECTIVE EQUIPMENT

- General
  * Hard hats
  * Work shoes

- Specific by Task

E. HAZARD COMMUNICATION PROGRAM ESTABLISHED AND EMPLOYEES TRAINED

F. CONFINED SPACE ENTRY

- Procedures established and task(s) identified requiring use of procedures?

G. TRENCHING

- Procedures established and task(s) requiring procedures identified?

H. PHASE PRE-PLANNING

- Job schedules established?
- Agreed upon target dates for meeting?
- Follow up system

FULTON COUNTY CAPITAL PROJECTS PROGRAM
Facilities Safety Inspection Checklist

Name of Contractor(s):				Date(s):	
Names of subcontractors:				Location	
Project Name				Project #	
Contact Person:		Project Manager:		Project Safety/Inspector	

Instructions:
This list is intended to be used only as a reminder. EHS issues and conditions both on this checklist and not on this checklist should also be corrected or eliminated
as soon as possible. RATINGS: Yes-# of Safe Observations No-# of Unsafe Observations N/A-Not Applicable X-Not Evaluated

Subject	Description	# of Obser.	Yes	No	Contractor or Sub
Work	3.1 Ladders for access to working decks extend 3' above landing and secured against slipping?				
At Heights	3.2 Workers on horizontal, elevated, walking/working surfaces protected by: Full body harness with lanyard or standard guardrail (top rail 42" above working				
Over 6'	3.3 Workers using full-body harness and lanyard are tied-off to attachment points above waist level?				
	12.1 Ladders provided and tied -off for roof access?				
Roofing	12.2 Holes in roof covered, secured, and marked?				
	12.3 Standard railing or warning line system used?				
	12.4 If warning line system used, a full-time monitor is identified?				
	14.I Written fall protection plan is available?				
Steel	14.2 Full body harness worn and tied off when above 6 feet?				
Erection	14.3 Ladder access provided and used? Must extend 3 ft above landing.				
	14.4 Two bolts are used at all connections?				
	5.1 All four feet of the ladder rest on the same level floor surface?				
Working	5.2 The ladder is the only thing inside a 6' diameter circle measured from the center point of the ladder, on the floor?				
From	5.3 Both Spreaders are extended and locked?				
Ladders	5.4 The workers' feet are no higher than the 3rd step down from the top of the ladder?				
	5.5 The workers' belt buckle remains between lines formed by the side rails of the ladder?				
	5.6 The worker faces the ladder at all times when climbing and working from the ladder?				
	5.7 The ladder is placed for use a distance away from wall opening and floor perimeters and openings equal to the working height of the ladder?				
	1.1 Subcontractor responsible for scaffolding has an identified competent person on site?				
Work	1.2 Standard railing is in place on scaffolding 6ft or greater, consisting of 42" top rails, 21" mid-rails and toeboards?				
From	1.3 Ladder access or approved built-in ladders provided and secured?				
Scaffolds	1.4 Cross bracing in place 100% of the time?				
	1.5 Decking is the full width of the scaffold (no greater than 1" openings)?				
	1.6 Decking is scaffold grade lumber with no cracks?				

	1.7 Screw jacks, base plates, and mud sills in place?				
	1.8 Fall protection plan is in place for erecting and dismantling scaffolds?				
	1.9 Scaffold is secured every 26ft vertically and every 30ft horizontally.				
	1.10 Workers in lifts with articulating booms (example: JLG lifts) are tied-off with full-body harnesses and lanyards?				
	1.11 Scissors lifts and boom lifts are set up on level, stable ground?				
	1.12 Employees keep both feet on the lift platform floor?				

Subject	Description	# of Obser.	Yes	No	Contractor or Sub
	4.1 Overhead power lines identified and protected?				
Electrical	4.2 GFCI's used on temporary supply and electrical tools?				
Work	4.3 Electrical panel doors are closed and electrical room doors locked?				
	4.4 Grounding prongs are in place on tools (equipped by manufacturer) and on extension cord?				
	4.5 Power extension cords are free of splices and breaks in insulation?				
	2.1 Occupied trenches 5 ft. or deeper are protected from collapse by sloping, shoring or trench shields or boxes.				
	2.2 If sloping used, angle of repose conforms with soil classification designated by competent person or PE. (Type A=3/4:1 Type B=1:1 Type C=11/2:1)				
Excavations	2.3 Excavations 20 ft or deeper designed/engineered by PE.				
	2.4 Spoil material/over burden stored away from edge of trench at least 2 ft.				
	2.5 Maximum travel distance to access ladder or ramp is 25 ft.				
	2.6 Access ladder extends at least 3 ft above top or bank, trench shield, etc.				
	2.7 Workers face ladder and use both hands for climbing				
	2.8 Competent person on site during work in occupied trenches.				
	2.9 Excavations protected with covers, barricades, guardrails, safety tape from pedestrians or traffic exposure. Contractor can describe procedures to protect over night.				
	11.1 Operators wearing seat belts on equipment provided with ROPS				
Heavy	11.2 Underground utilities have been located.				
Equipment	11.3 No equipment operating within 10 ft of overhead power lines.				
Earth	11.4 Back up alarms operational				
Moving	11.5 Operators use ***three point stance*** when mounting and dismounting equipment				
	11.6 Hydraulic powered attachments are in zero energy state when equipment is parked				
Cranes	6.1 Over head power lines identified and protected or guarded				
and	6.2 Swing radius guarded/marked/barricaded (Protection from being hit/struck)				
Equipment	6.3 Records of annual certification and daily inspection available on site.				
	6.4 Load charts and hand signals posted on crane				
	6.5 Tag lines used for loads.				
	6.6 Outriggers used on equipment when available.				
	15.l Materials are stored on dunnage to allow slings to be placed around them for lifting, or for hand placement if manual lifting will be required?				
Manual	15.2 Materials are laid out with aisles so that workers do not have to reach more than 12" to grasp objects to be lifted?				
Material	15.3 Workers bring objects into contact with their bodies before lifting?				
Handling	15.4 Workers square up when lifting and lowering loads?				
	15.5 Workers move their feet to change the direction of a load instead of twisting their trunk?				
	15.6 Workers get help when handling objects which weigh more than 51 pounds or is greater than 36" in width or length?				

	15.7 Workers can answer the question: What manual handling safety topic was covered in a safety meeting within the last 31 days?				
	10.1 Site fenced or entrance secured and locked or barricaded				
Public and	10.2 Warning signs in place No trespassing, construction site, etc.				
Property	10.3 Pedestrian walkways and walking paths identified and marked.				
Protection	10.4 Public protected from falling objects from site				
	10.5 Signs, barricades, etc. in place to direct traffic around site				
	10.6 No unauthorized visitors allowed on the site. (Children are not allowed on site)				

Subject	Description	# of Obser.	Yes	No	Contractor or Sub
	9.1 Signs posted warning of workers and flaggers ahead.				
Road and	9.2 Materials and equipment storage protected, out of traffic area				
Streets	9.3 Excavations and/or road holes barricaded or covered				
	9.4 Work area is defined by cones, barricades, or barrels.				
	9.5 Trained flaggers are on site and have documentation of certification.				
	9.6 Refelective traffic vests and hard hats are worn by all employees on the site.				
	9.7 Boom trucks/equipment are barricaded with cones, signs, etc. to protect from traffic.				
Confined	13.1 Written permit system used for confined space entry.				
Space	13.2 Designated confined space competent person on site during work.				
Entry	13.3 Operative air monitor(gas testing meter) available on site with current calibration date (Typically calibrated within the last 30 days.)				
	13.4 Workers in confined spaces are wearing safety harness when required.				
	13.5 Attendant present at entrance at all times space is occupied.				
	13.6 Attendant maintains constant line of sight or voice communication with workers in the confined space.				
	13.7 Written confined space rescue plan for the site and operations is available and implemented. Employees are trained!				
	13.8 Necessary rescue equipment identified as needed for exposures is available at the entrance to the confined space. (SCBA, tripod and rope, etc.)				
	13.9 Copies of completed permits and air monitoring data are available on site.				
General	8.1 Guards in place on power tools. Power cords in good shape	***Please check these general safety items during your site activities. Note any problems in comments below.***			
Safety	8.2 Proper PPE for job. Hard hats, safety glasses, face shields, work boots and proper clothing worn. Any other PPE needed? Ear plugs?				
Items	8.3 Compressed gas cylinders capped and secured				
	8.4 Flammable liquids stored properly; No smoking signs posted				
	8.5 Welding and burning areas fre e of fire hazards, fire watch, fire extinguisher				
	8.6 GFCIs used on all electrical tools and equipment.				

Comments	

FULTON COUNTY CAPITAL PROJECTS PROGRAM
Contractor Performance Evaluation

Note: **Please complete an evaluation form for each sub-contractor as well as the General Contractor.**

Contractor:				Project Title:	
Project No.:				Location:	
Date Project Completed:	Evaluated by:			Date of Evaluation	
Project Description:					
Type of Contract (circle one)	MAINTENANCE	ROADS	CONSTRUCTION	SPECIAL REPAIRS	OTHER
Type of Work (Check all that apply)	Civil ☐	Electrical ☐	Mechanical ☐	Equipment ☐	Piping ☐
	Roads ☐	Other ☐			

Rate Applicable Categories ***SAFETY***	POOR 1	Check One Box 2	3	4	5	6	7	8	9	EXCELLENT 10
1. Injury/Illness Performance	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
2. Safety and Health Programs	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
3. Adhere to Site Safety/Health Rules	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
4. Housekeeping	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
OPERATIONS										
5. Equipment	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
6. Key Field Personnel	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
7. Execution of Work	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
8. Quality of Craft Labor	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
9. Project Manager	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
10. Cost Within Expectations	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
11. Schedule	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
12. Labor Relations	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
13. Service	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
14. Overall General Performance	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Do you recommend contractor for further work? (Check One Box)	Yes ☐	No ☐

Comments:

Note: **Ratings of 4 or less in any category require a formal meeting with the contractor(s) and Project Management. Meeting minutes and recommendations must be documented.**

Contractor Evaluation Definitions

1. INJURY/ILLNESS PERFORMANCE:
- Number of incidents observed and reported
- OSHA 200 Log Summary verification at completion of job
- Contractor's participation in accident investigations
- Contractor's prequalification status

2. SAFETY AND HEALTH PROGRAMS:
- On site safety officer
- Written safety program
- Substance abuse program/testing in place
- Safety training for supervision
- Weekly toolbox meetings

3. ADHERE TO SITE SAFETY/HEALTH RULES:
- Compliance to plant safety and health rules
- Adherence to contract provisions for new-hire orientation
- Compliance with site permits
- Compliance with industrial hygiene requirements
- Response to safety requests
- MSDS Requirements
- Compliance with safety and health requirements

4. HOUSEKEEPING:
- Monthly housekeeping inspection results
- Overall site housekeeping practices
- Response to housekeeping requests

5. EQUIPMENT:
- Condition of contractor tools and equipment by site and OSHA standards
- Contractor's knowledge and proper use of equipment
- Availability of tools and equipment furnished

6. KEY FIELD PERSONNEL:
- Quality of first and second line supervision
- Competence of main office staff and management

7. EXECUTION OF WORK:
- Contractor's planning of work
- Contractor's cooperation in handling change orders
- Contractor's efforts to eliminate non-productive time
- Relationship with other site contractors

8. QUALITY OF CRAFT LABOR:
- Contractor's field personnel
- Workmanship
- Contractor's ability to obtain qualified personnel

9. PROJECT MANAGEMENT:
- Contractor's efforts to use efficient crew size
- Control of subcontractors
- Use of National Maintenance Agreement

10. COST WITHIN EXPECTATIONS:
- Contractor's cost program
- Contractor's reasonableness in extra charges

11. SCHEDULE:
- Contractor's scheduling techniques
- Contractor's adherence to schedule requirements

12. LABOR RELATIONS:
- Contractor's ability to anticipate problems
- Contractor's relationship with building trades
- Contractor's efforts in exercising management rights

13. SERVICE:
- Advises of potential problems
- Reliability in dealings
- Efficiency in handling paperwork
- Readiness to accept responsibility
- Response to site requests for action by field supervision, at home office management

14. OVERALL GENERAL PERFORMANCE:
- Were there liens filed against the contractor
- Did contractor complete the work
- Did contractor start and complete work when we wanted

The County anticipates that the following Preliminary Specifications will be needed as a guide for development of proposals and to demonstrate the design intent for the Project, which shall be maintained in the final design produced under the Contract. These Preliminary Specifications will be used to develop a final list of Specifications, to be included with associated drawings that will be developed during the Design Phase of the project. The final list will be made part of the Contract Documents. However, variations and/or adjustments to the Preliminary Specifications by the Design/Builder are anticipated to accommodate the remaining development of the design intent, code and permitting requirements, accessibility clearances, job conditions, and structural and engineering conditions, such that complete Construction Documents are produced.

Division 02 - Sitework

02 110	Erosion Control
02 120	Clearing & Grubbing
02 210	Excavation
02 220	Embankment
02 231	Tree Protection & Trimming
02 240	Subgrade
02 250	Trenching & Backfilling
02 280	Soil Treatment
02 316	Pressure Grouted Auger Piles
02 510	Paving & Curbing
02 640	Water Appurtenances
02 660	Water Mains
02 710	Storm Sewers
02 720	Sanitary Sewers
02 730	Foundation Drainage System
02 750	Manholes
02 780	Unit Pavers
02 813	Lawn Irrigation Piping
02 830	Chain Link Fences & Gates
02 835	Decorative Security Fences & Gates
02 930	Lawns & Grasses
02 955	Trees & Shrubs

Division 03 - Concrete

03 100	Concrete Formwork
03 200	Concrete Reinforcement
03 300	Cast-In-Place Concrete
03 350	Concrete Finishes
03 420	Post-Tensioned Concrete
03 450	Architectural Precast Concrete
03 455	Glass Fiber Reinforced Precast Concrete (GFRC)

Division 04 - Masonry

04 100	Mortar & Masonry Grout
04 110	Cement Grout For Reinforced Masonry
04 150	Masonry Accessories
04 210	Brick Masonry
04 220	Concrete Unit Masonry

Division 05 - Metals

05 100	Structural Steel
05 200	Steel Joists
05 300	Metal Deck
05 400	Cold Formed Metal Framing
05 500	Metal Fabrications
05 510	Metal Stairs, Ladders & Railings
05 720	Ornamental Railings

Division 06 - Wood & Plastics

06 100	Rough Carpentry
06 200	Finish Carpentry & Millwork
06 400	Architectural Woodwork

Division 07 - Thermal & Moisture Protection

07 110	Membrane Waterproofing
07 140	Elevator Pit Waterproofing
07 150	Dampproofing
07 180	Water-Repellent Coating
07 190	Vapor Retarder
07 210	Building Insulation
07 270	Firestopping
07 412	Preformed Metal Roofing
07 525	Modified Bitumen Roof Membrane System
07 570	Pedestrian Traffic Topping
07 600	Flashing & Sheet Metal
07 650	Through-Wall Flashing
07 920	Sealants & Caulking

Division 08 - Doors & Windows

08 110	Steel Doors & Frames
08 200	Wood Doors
08 305	Access Doors
08 330	Coiling Doors, Shutters & Grilles
08 342	Folding Sallyport Doors
08 410	Aluminum Entrances & Storefronts
08 460	Automatic Entrance Doors
08 710	Door Hardware
08 800	Glass & Glazing
08 900	Curtain Wall System

Division 09 - Finishes

09 260	Gypsum Wallboard Systems
09 300	Tile
09 500	Acoustical Wall Panels
09 510	Acoustical Ceilings
09 513	Linear Metal Ceilings
09 650	Resilient Flooring
09 680	Carpet Tile
09 836	Polychromatic Coating
09 900	Painting

09 950 Wallcoverings
09 999 Finish Schedule & Notes

Division 10 - Specialties

10 100	Visual Display Boards
10 170	Plastic Toilet Partitions
10 210	Extruded Aluminum Louvers
10 350	Flagpoles
10 400	Signage
10 505	Metal Lockers
10 522	Fire Extinguishers, Cabinets & Accessories
10 650	Operable Partitions
10 800	Toilet Accessories
10 990	Miscellaneous Building Specialties

Division 11 - Equipment

11 130	Audio-Visual Systems & Equipment
11 150	Parking Equipment
11 190	Security Equipment & Accessories
11 400	Food Service Equipment
11 410	Walk-In Cold Storage & Refrigeration

Division 12 - Furnishings

12 000	Generic Furniture Specifications
12 512	Blinds
12 574	Outdoor Furniture
12 670	Entrance Mats

Division 14 - Conveying Systems

14 208	Geared Traction Elevators

Division 15 - Mechanical

15 001	Mechanical General
15 003	Identification Of Piping, Valves & Equipment
15 090	Pumps For HVAC Systems
15 100	Valves For HVAC Systems
15 110	Piping Specialties
15 160	Cleaning Of And Chemical Treatment For HVAC Piping Systems
15 200	Electric Heating Equipment
15 201	Vibration & Seismic Isolation
15 251	Piping For HVAC Systems
15 255	Pipe Hangers & Supports
15 310	Automatic Sprinkler System
15 400	Plumbing
15 531	Fans
15 610	Cooling Tower
15 650	Ductwork
15 651	Registers, Grilles & Diffusers
15 652	Variable Air Volume Devices

15 661	Roof Mounted Air Hoods & Equipment Curbs & Rails
15 701	Modular Air Handling Units
15 702	Variable Frequency Drives
15 800	Mechanical Systems Insulation
15 901	Temperature Control & Building Automation System
15 984	Centrifugal Chiller
15 997	Test & Balance Services For Total System Balance

Division 16 - Electrical

16 050	Basic Electrical Methods & Requirements
16 051	Electrical System Protective Device Study
16 110	Raceways
16 113	Underfloor Ducts
16 120	Wire & Cable
16 140	Wire Connections & Connecting Devices
16 143	Wiring Devices
16 195	Electrical Identification
16 345	Switchboards
16 443	Safety Switches
16 450	Grounding
16 460	Transformers (General Purpose)
16 470	Panelboards (Lighting & Appliance)
16 471	Low Voltage Power (Distribution) Panelboards
16 475	Overcurrent Protective Devices
16 481	Low Voltage Motor Controllers
16 496	Low Voltage Automatic Transfer Switches
16 502	Ballasts & Accessories
16 510	Interior Lighting Fixtures
16 520	Site Lighting
16 620	Standby Power Generator Systems
16 670	Lightning Protection System
16 671	Transient Voltage Surge Suppressors

Division 17 - Special Systems

17 020	Systems General
17 220	Locking Control System
17 222	Programmable Logic Controller
17 260	Access Control System
17 280	Passive Duress System
17 300	Closed Circuit Television System
17 340	Television Signal Distribution System
17 420	Fire Alarm System
17 510	Public Address System
17 520	Intercom System
17 600	Metal Detection & X-Ray Screening Machine System
17 700	Courtroom Sound Reinforcement System
17 750	Lightning Surge Protection
17 900	Wiring Methods
17 910	Telephone & Data Distribution System
17 920	Administrative Intercom System
17 930	Perimeter Security System

COST PROPOSAL FORM

COST PROPOSAL FORM

Submitted To: Fulton County Government

Submitted By: _____

For: **10RFP050310K-NH, DESIGN/BUILD SERVICES FOR THE ADAMSVILLE REGIONAL HEALTH CENTER**

Submitted on _____, 2010

In response to the Request for Proposal, the undersigned, hereby proposes to furnish all design and construction services, labor, technical and professional services, materials, supplies, equipment, Design-Builder Fees, Architectural and Engineering Fees, and General Conditions Fees for the satisfactory completion of the Project for a cost not to exceed **Six million seven hundred fifty thousand dollars ($6,750,000.00)**, which amount is hereinafter called the Owner's Available Funds.

We propose to furnish all design, architecture, engineering and construction services called for by the Proposal Documents for the following lump sum fees:

1. Design-Builder's Fee $_____
2. Architectural and Engineering Services Fee $_____
3. General Conditions Fee $_____

$_____
(Dollar Amount In Numbers of lines 1 - 3)

_____
(Dollar Amount In Words of lines 1 - 3)

For Changes in the Work beyond those contemplated by the Proposal Documents, we propose a Design-Builder's Fee of _____ percent (%) of the actual costs reimbursable to the Design-Builder, as defined by the Proposal Documents, and an Architectural and Engineering Services Fee of _____ percent (%) of the actual costs reimbursable to the Design-Builder, as defined by the Proposal Documents.

The undersigned agrees that this Cost Proposal constitutes a firm offer to the Fulton County Government ("County"), which cannot be withdrawn for sixty (60) calendar days from and after the due date or until a Contract for the Work is executed by the undersigned and the County, whichever is earlier. If necessary, the period of time specified may be extended by written agreement between the County and the Proposer or Proposers concerned.

The undersigned declares that the only person or persons interested in the Proposal as principal or principals is or are named herein and that no other person than herein mentioned has any interest in this Proposal or in the Contract to be entered into; that this Proposal is made without connection with any other person, company or parties making a Proposal; and that it is in all respects fair and in good faith without collusion or fraud.

The undersigned further declares that it has examined and is fully familiar with all of the provisions of the Technical Documents and any addenda; that it has carefully checked all of the words and figures shown in its Cost Proposal; that it has carefully reviewed the accuracy of all

statements in this Proposal and attachments; and that it has by careful examination of the Proposal Documents and any addenda and by examination of the actual site conditions, satisfied itself as to the nature and locate of all work, the general and local conditions to be encountered in the performance of any work, the requirements of the undersigned hereby agrees that the County, its departments and agencies and their representatives shall not be responsible for any errors or omissions on the part of the undersigned in preparing this Proposal.

If awarded a Contract, the undersigned agrees that, in the case of a failure on his part to execute the Contract Agreement and Bonds within ten (10) days after receipt of conformed contract documents for execution, the Proposal Bond accompanying the proposal and the monies payable thereon shall be paid into the funds of the Owner as liquidated damages for such failure.

Enclosed is a Proposal Bond in the approved form, in the sum of ($_____)

_____ Dollars according to the conditions of "Instructions to Proposers" and provisions thereof.

The Proposer proposes and agrees, if this Proposal is accepted, to contract with the Board of Commissioners of Fulton County, Atlanta, Georgia, in the form of contact specified, to furnish all necessary materials, equipment, machinery, tools, apparatus, means of transportation and labor necessary, and to complete the design and construction of the work in full and complete accordance with the shown, noted, and reasonably intended requirements of the Specifications and Contract Documents to the full and entire satisfaction of the Board of Commissioners of Fulton County, Atlanta, Georgia, with a definite understanding that no money will be allowed for extra work except as set forth in the attached General Conditions and Contract Documents for the following prices.

The Proposer agrees hereby to commence work under this Contract, with adequate personnel and equipment, on a date to be specified in a written order of the Contracting Officer and to fully complete all work under this Contract within **275** consecutive calendar days from and including said date.

The undersigned acknowledges receipt of the following addenda (list by the number and date appearing on each addendum) and thereby affirms that its Proposal considers and incorporates any modifications to the originally issued Solicitation Documents included therein.

ADDENDUM # _____DATED _____

ADDENDUM # _____DATED _____

ADDENDUM # _____DATED _____

ADDENDUM # _____DATED _____

PROPOSER: _____

By: _____
[Name Typed or Printed]

_____
[Name Signed]

Title: _____

Business Address: _____

_____

_____

Business Phone: _____

Bidder's Contractor License No: _____
[State/County]

License Expiration Date: _____

Note: If the Proposer is a corporation, the Proposal shall be signed by an officer of the corporation; if a partnership, it shall be signed by a partner. If signed by others, authority for signature shall be attached.

The full name and addresses of persons or parties interested in the foregoing Proposal, as principals, are as follows:

Name	Address

END OF SECTION