

**INVITATION TO BID 13ITB87798K-JAJ**

**Cascade Southwest Regional Library and Kirkwood  
Library Roof Repairs**

**For**

**Facilities and Transportation Department**

**BID DUE DATE AND TIME: May 15, 2013 11:00 A.M.**

**BID ISSUANCE DATE: April 12, 2013**

**PRE-BID CONFERENCE DATE: April 30, 2013**

**PURCHASING CONTACT: James A. Jones**

**E-MAIL: [james.jones@fultoncountyga.gov](mailto:james.jones@fultoncountyga.gov)**

**LOCATION: FULTON COUNTY DEPARTMENT OF PURCHASING &  
CONTRACT COMPLIANCE**

**130 PEACHTREE STREET, S.W., SUITE 1168  
ATLANTA, GA 30303**

## Table of Contents

<u>Section</u>	<u>Title</u>
<b>Division 0 – Bidding and Contract Requirements</b>	
<b>00020</b>	<b>Invitation to Bid</b>
	Description of Project
	Permits
	Rights of Way/Easements
	Bid Documents
	Subcontracting Opportunities
	Term of Contract
	No Contact Provision
	Bid Contact
	Basis of Award
	Pre-Bid Conference
<b>00100</b>	<b>Instructions to Bidders</b>
	A. Contract Documents
	B. Bid Preparation and Execution
	C. Addenda and Interpretations
	D. Site Examination
	E. Bidder's Modification and Withdrawal of Bids
	F. Bid and Contract Security
	G. Right to Reject Bids
	H. Applicable Laws
	I. Examination of Contract Documents
	J. Indemnification and Hold Harmless Agreement
	K. Bid Opening
	L. Determination of Successful Bidder
	M. Georgia Utility Contractors License ( <b><i>not applicable</i></b> )
	N. General Contractors License
	O. Professional Licenses
	P. Wage Clause
	Q. Notice of Award of Contract
	R. Execution of Contract Documents
	S. Joint Venture
	T. Contractors Compliance with Procurement
	U. Georgia Security and Immigration Compliance Act
	V. Bid General Requirements
	Required Bid Submittal Checklist for ITB
<b>00300</b>	<b>Bid Form</b>
<b>00410</b>	<b>Bid Bond</b>
<b>00420</b>	<b>Purchasing Forms &amp; Instructions</b>
	Form A - Non-Collusion Affidavit of Prime Bidder/Offeror
	Form B - Certificate of Acceptance of Request for Bid Requirements
	Form C - Professional License Certifications
	Form C1 – Georgia Utility License Contractors License ( <b><i>not applicable</i></b> )
	Form C2 – Georgia General Contractors License

Form C3 – Georgia Professional License  
Form D - Certification Regarding Debarment  
Form E - Disclosure Form & Questionnaire  
Form F – Georgia Security and Immigration Contractor Affidavit and Agreement  
Form G – Georgia Security and Immigration Subcontractor Affidavit

**00430 Contract Compliance Requirements**

Non-Discrimination in Contracting and Procurement  
Required Forms and EBO Plan  
Exhibit A – Promise of Non-Discrimination  
Exhibit B – Employment Report  
Exhibit C – Schedule of Intended Subcontractor Utilization  
Exhibit D – Letter of Intent to Perform As a Subcontractor or Provide  
Materials or Services  
Exhibit E – Declaration Regarding Subcontracting Practices  
Exhibit F – Joint Venture Disclosure Affidavit  
Exhibit G – Prime Contractor/Subcontractor Utilization Report  
Exhibit H - First Source Jobs Program Agreement  
Equal Business Opportunity Plan (EBO Plan)

**00490 Insurance and Risk Management Provisions**

**00500 Contractual Agreement**

**00610 *Performance Bond Requirements***

**00620 *Payment Bond Requirements***

**00700 *General Conditions***

**00800 Special Conditions**

**Division 1 – General Requirements – Cascade Southwest Regional Library**

**076200 Sheet Metal Flashing and Trim**

**077100 Roof Specialties**

**079200 Joint Sealants**

**Division 1 – General Requirements – Kirkwood Library**

**01010 Summary of Work**

**01312 Project Meetings**

**01320 Schedule of Values**

**01320a References**

**01320b Cutting & Patching**

**01320d Abbreviations, acronyms and definitions**

<b>01011</b>	<b>Unique Requirements</b>
<b>01016</b>	<b>Occupancy</b>
<b>01025</b>	<b>Measurement and Payment</b>
<b>01055</b>	<b>Construction Staking</b>
<b>01060</b>	<b>Regulatory Requirements</b>
<b>01091</b>	<b>Codes and Standards</b>
<b>01200</b>	<b>Project Meetings</b>
<b>01310</b>	<b>Construction Schedules</b>
<b>01320</b>	<b>Construction Photographs</b>
<b>01340</b>	<b>Shop Drawings, Product Data and Samples</b>
<b>01410</b>	<b>Testing Laboratory Services</b>
<b>01510</b>	<b>Temporary Facilities</b>
<b>01540</b>	<b>Job Site Security</b>
<b>01562</b>	<b>Dust Control</b>
<b>01569</b>	<b>Safety in Wastewater Works</b>
<b>01580</b>	<b>Project Identification and Signs</b>
<b>01590</b>	<b>Field Offices</b>
<b>01630</b>	<b>Substitutions and Product Options</b>
<b>01710</b>	<b>Cleaning</b>
<b>01720</b>	<b>Record Documents</b>
<b>01740</b>	<b>Warranties and Bonds</b>

**Division 2 – Sitework**

**Division 3 – Concrete**

**Division 4 – Masonry**

**Division 5 – Metals**

**Division 6 – Wood and Plastic**

**Division 7 – Thermal and Moisture Protection**

**Division 8 – Doors and Windows**

**Division 9 – Finishes**

**Division 10 – Specialties**

**Division 11 – Equipment**

**Division 12 – Furnishings**

**Division 13 – Special Construction**

**Division 14 – Conveying Systems**

**Division 15 – Mechanical**

**Division 16 – Electrical**

**Division 17 – Instrumentation**

**Exhibits**

**Appendices**

## **INVITATION TO BID**

### **13ITB87798K-JAJ CASCADE SOUTHWEST REGIONAL LIBRARY AND KIRKWOOD LIBRARY ROOF REPAIRS**

Sealed Bids for furnishing all materials, labor, tools, equipment and appurtenances necessary for the Cascade Southwest Regional Library and Kirkwood Library Roof Repairs will be received by the Fulton County Department of Purchasing and Contract Compliance at 130 Peachtree Street, S.W. Suite 1168 Atlanta, GA 30303, until 11:00a.m., local time, on Monday, May 15, 2013, and then at said office publicly opened and read aloud.

#### **Description of Project:**

The Project consists of the following major elements: Roofing repairs that require demolition of various roof parts and installation of new materials as well as demolition and repair of interior sheetrock including providing finish painting at two (2) locations. Cascade Southwest Regional Library located at 3665 Cascade Road, Atlanta, GA 30312 and Kirkwood Library located at 11 Kirkwood Road, Atlanta, GA 30317.

#### **Permits: [Required]**

The Contractor will be responsible for all federal, state and local permits required for the project.

#### **Rights of Way/Easements: [Required]**

There are no anticipated rights-of-way or easements required for the project.

#### **Bid Documents:**

The Instructions to Bidders, Bid and Contract Requirements (Bid Form, Bid Bond, Performance Bond, Payment Bond, Contract Agreement), and other Documents (Drawings and/or Specifications) may be examined at the following locations:

Action Blueprint  
2705 Monroe Drive  
Atlanta, Georgia 30324  
(404) 885-1433  
Web site: [action@actiondis.com](mailto:action@actiondis.com)

This document and supporting documents can be downloaded at the Fulton County Website, <http://www.fultoncountyga.gov> under "Bid Opportunities".

The cost for a set of drawing and specifications is \$62.61. The non-refundable payment must be made to **Action Blueprint**.

Payment must be in the form of a company or personal check payable to **Action Blueprint**, checks returned for any reason will result in the bid being deemed non-responsive. Action Blueprint will not take any orders over the telephone. You have an option of email, fax or in person. This amount includes all fees for printing and distribution and will be used to defray a portion of the printing cost that may have been incurred for the tendering of the Project. Partial sets of the bid document will not be issued.

#### **Subcontracting Opportunities:**

Potential prime contractors submitting a bid on this project for Fulton County and are seeking subcontractors and/or suppliers can advertise those subcontracting opportunities on the County's website, <http://www.fultoncountyga.gov> under "Subcontracting Bid Opportunities".

**Term of Contract:**

The Bidder 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 **120** consecutive calendar days from and including said date.

The County will make payments, within **45** days, in response to the Contractor's monthly Applications for Payment, which are accompanied by the Engineer's Certificate for Payment, for work performed to date plus cost of stored materials, less retainage. Payments, Applications for Payment, Certificates for Payment, and retainage shall be in accordance with the provisions of the Contract Documents.

**No Contact Provision**

It is the policy of Fulton County that the evaluation and award process for County contracts shall be free from both actual and perceived impropriety, and that contacts between potential vendors and County officials, elected officials and staff regarding pending awards of County contracts shall be prohibited.

- A. No person, firm, or business entity, however situated or composed, obtaining a copy of or responding to this solicitation, shall initiate or continue any verbal or written communication regarding this solicitation with any County officer, elected official, employee, or designated County representative, between the date of the issuance of this solicitation and the date of the County Manager's recommendation to the Board of Commissioners for award of the subject contract, except as may otherwise be specifically authorized and permitted by the terms and conditions of this solicitation.
- B. All verbal and written communications initiated by such person, firm, or entity regarding this solicitation, if same are authorized and permitted by the terms and conditions of this solicitation, shall be directed to the Purchasing Agent.
- C. Any violation of this prohibition of the initiation or continuation of verbal or written communications with County officers, elected officials, employees, or designated County representatives shall result in a written finding by the Purchasing Agent that the submitted Bid or proposal of the person, firm, or entity in violation is "non-responsive", and same shall not be considered for award.

**Bid Contact**

Information regarding the bid or bid requirements, either procedural or technical, may be obtained by submitting questions in writing to:

Fulton County Department of Purchasing and Contract Compliance  
Attn: James A. Jones, Assistant Purchasing Agent  
Fulton County Public Safety Building  
130 Peachtree Street, S.W. Suite 1168  
Atlanta, GA 30303  
Reference Bid # 13ITB87798K-JAJ

Or [james.jones@fultoncountyga.gov](mailto:james.jones@fultoncountyga.gov)

**Basis of Award**

The Contract, if awarded, will be awarded to the lowest responsive and responsible bidder. No bid may be withdrawn for a period of sixty (60) days after the date of bid opening except as permitted by O.C.G.A., §36-91-41 et seq., as amended. Each Bid must be accompanied by a Bid Bond in accordance with the Bid Bond Requirements provided in the Contract Documents, on a Surety Company's Standard Bid Bond Form acceptable to the County in an amount no less than 5% of the amount bid. The successful bidder will be required to furnish a Performance Bond and Payment Bond, **on or before** the issuance of Notice to Proceed, each in the amount of 100% of the Contract Amount. All other required Contract Documents must be fully completed and executed by the Contractor and his/her Surety, and submitted to the Owner **on or before** the issuance of the Notice to Proceed.

**Pre-Bid Conference**

Date: **April 30, 2013**  
Time: **1:00 P.M.**  
Location: **Cascade Southwest Branch Regional Library  
3665 Cascade Rd. S.W.  
Atlanta, GA 30331**

A mandatory pre-bid conference and site visit will be held at the Cascade Southwest Branch Regional Library 3665 Cascade Road Atlanta, Georgia 30331. Immediately following the Cascade site visit all parties in attendance will proceed to the Kirkwood Library for a site visit. ***Inquiries regarding the solicitation either technical or otherwise may be submitted in writing prior to the pre-bid conference and will be addressed at the pre-bid conference.*** Any additional questions asked at the pre-bid conference must be submitted in written form at the pre-bid conference and will be responded to in the form of an addendum with the County's official responses.

The Pre-bid conference will be conducted for the purpose of explaining the County's bid process, the specifications/technical documents, and to provide non-binding verbal responses to questions concerning these bid specifications and to discuss issues from the bidders' perspective. However, no verbal response provided at the pre-bid conference binds the County. Only those responses to written questions that are responded to by the County in written communications will be official.

**END OF SECTION**

## INSTRUCTIONS TO BIDDERS

### A. Contract Documents

The Contract Documents include the Contract Agreement, Contractor's Bid (including all documentation accompanying the Bid and any post-Bid documentation required by the County prior to the Notice of Award), Bonds, all Special Conditions, General Conditions, Supplementary Conditions, Specifications, Drawings and addenda, together with written amendments, change orders, field orders and the Construction Manager's written interpretations and clarifications issued in accordance with the General Conditions on or after the date of the Contract Agreement.

Shop drawing submittals reviewed in accordance with the General Conditions, geotechnical investigations and soils report and drawings of physical conditions in or relating to existing surface structures at or contiguous to the site are not Contract Documents.

The Contract Documents shall define and describe the complete work to which they relate.

### B. Bid Preparation and Execution

All Bids must be made on the Bid forms contained herein. The original signed Bid with three (3) copies shall be submitted in a sealed envelope, addressed to the Department of Purchasing and Contract Compliance, Fulton County Public Safety Building, 130 Peachtree Street, S.W., Suite 1168 Atlanta, Georgia 30303, and labeled "Bid for **13ITB87798K-JAJ**."

**REQUIRED SUBMITTALS:** The bidder **must complete and execute** the following:

1. Bid Form
2. Acknowledgement of each Addendum
3. Bid Bond
4. Purchasing Forms (See Submittal Check List at end of this Section), fully executed
5. Contract Compliance Forms (See Submittal Check List at end of this Section), fully executed
6. Risk Management Insurance Provisions Form

Any bids received after the stated time and date will not be considered. It shall be the sole responsibility of the bidder to have his/her bid delivered to the Fulton County Department of Purchasing and Contract Compliance for receipt on or before the stated time and date (see Section 00020). If a bid is sent by U.S. Mail, the bidder shall be responsible for its timely delivery to the Purchasing Department. Bids delayed by mail will not be considered, shall not be opened, and arrangements shall be made for their return at the bidder's request and expense.

Bid shall be publicly opened, with only the names and total bid price of the bidders disclosed at the opening.

### C. Addenda and Interpretations

No interpretations of the meaning of the Drawings, Specifications or other pre-bid documents will be made to any Bidder orally.

Bidders requiring clarification or interpretation of the Contract Documents shall make a request in writing, either by mail, hand delivery, e-mail or fax, to the Purchasing Agent at the address below. To be given consideration, requests must be received no later than

2:00 PM, May 6, 2013. The County will not respond to any requests, oral or written, received after this date. Telephone inquiries will not be accepted.

Fulton County Department of Purchasing and Contract Compliance  
Attn: James Jones, Assistant Purchasing Agent  
Fulton County Public Safety Building  
130 Peachtree Street, S.W., 1168  
Atlanta, GA 30303  
Fax: (404) 893-1744  
james.jones@fultoncountyga.gov  
Reference Bid # 13ITB87798K-JAJ

Only communications from firms that are in writing and signed will be recognized by the County as duly authorized expressions on behalf of proposers/bidders. Any and all such interpretations and any supplemental instructions will be in the form of written Addenda to the Contract Documents which, if issued, will be mailed, shipped or faxed to all prospective Bidders (at the respective addresses furnished) prior to the date fixed for the opening of Bids.

Failure of Bidders to receive or acknowledge any Addendum shall not relieve them of any obligation under the Bid. All Addenda shall become part of the Contract Documents.

**D. Site Examination**

**There will be two site visits for this project immediately following the pre-bid conference. The first site visit will be held on April 30, 2013 at 2:00 for the Cascade Branch. Immediately following the Cascade Branch site visit, all Bidders shall proceed to the Kirkwood Branch Library, located at 11 Kirkwood Rd. S.E. Atlanta, 30317, for the second site visit. Bidders are required to attend both site visits.**

**E. Bidder's Modification and Withdrawal of Bids**

A Bidder may modify or withdraw its bid by written request, provided that the request is received by the County prior to the bid due date and time at the address to which bids are to be submitted. Provided further, that in case of an electronic request (i.e. facsimile, e-mail, etc.) a written confirmation thereof over the authorized signature of the Bidder must be received by the County at the address to which original Bids are to be submitted within three (3) calendar days after issue of the electronic message. Following withdrawal of its bid, the Bidder may submit a new bid, providing delivery is affected prior to the established bid opening date and time. **No bid may be withdrawn after bid due date for sixty (60) calendar days.**

**F. Bid and Contract Security**

A Bid Bond for an amount equal to five percent (5%) of the bid amount must accompany each Proposal. The bid bond shall be submitted in a separate, sealed envelope marked "Bid Bond".

**Bids must be accompanied by a bid bond or certified check** in an amount of five percent (5%) of the TOTAL AMOUNT of the base bid. The bid bond or certified check shall apply **ONLY TO THIS BID**. The bid name and contract number must appear on the security instrument. The bond must remain in full force and effect until the Bidder executes the final Contract. Bids not satisfying the bonding requirements of this project will be declared non-responsive.

Any bid bond, performance bond, payment bond, or security deposit required for public works construction contract shall be approved and filed with purchasing agent. At the

option of the County, if the surety named in the bond is other than a surety company authorized by law to do business in this state pursuant to a current certificate of authority to transact surety business by the Commissioner of Insurance, such bond shall not be approved and filed unless such surety is on the United States Department of Treasury's list of approved bond sureties.

A Purchasing Agent shall approve as to form and as to the solvency of the surety any bid bond, performance bond, or payment bond required by this. In the case of a bid bond, such approval shall be obtained prior to acceptance of the bid or proposal. In the case of payment bonds and performance bonds, such approval shall be obtained prior to the execution of the contract.

Whenever, in the judgment of the County:

- (1) Any surety on a bid, performance, or payment bond has become insolvent;
- (2) Any corporation surety is not longer certified or approved by the Commissioner of Insurance to do business in the state; or
- (3) For any cause there are no longer proper or sufficient sureties on any or all the bonds

The County may require the contractor to strengthen any or all of the bonds or to furnish a new or additional bond or bonds within ten days. Thereupon, if so ordered by the County, all work on the contract shall cease unless such new or additional bond or bonds are furnished. If such bond or bonds are not furnished within such time, the County may terminate the contract and complete the same as the agent of and at the expense of the contractor and his or her sureties.

As a condition of responsiveness the bidder must contain a Bid Bond for an amount equal to 5% of the bid amount. The Bid Bond shall be included in a separate envelope marked on the outside "Bid Bond". Checks or letters of credit of any type will not be accepted. A certified cashier's check will be acceptable. Provide a completed and fully executed Bid Bond. When the bidder's package is opened, a purchasing agent will verify the presence of the Bid Bond and remove it from the Proposal Package.

If the bidder withdraws its bid from the competition after the selection of its bid for a reason not authorized by Georgia law, the County will proceed on the Bid Bond, along with any other available remedies.

The Surety of the Bid Bond shall be from a surety company authorized to do business in the State of Georgia, shall be listed in the Department of Treasury Circular 570, and shall have an underwriting limitation in excess of 100% of the bid amount. The Bonds and Surety shall be subject to approval by the County Attorney.

Attorneys-in-fact for bidders who sign bid bonds or contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

#### **G. Right to Reject Bids**

The County reserves the right to reject any or all bids and to waive informalities. No bids will be received after the time set for opening bids. Any unauthorized conditions, limitations or provisions attached to the Bid, except as provided herein, will render it informal and may cause its rejection. Unbalanced bids will be subject to rejection. Any bidder may withdraw his/her bid, either personally or by telegraphic or written request, at any time prior to the scheduled closing time for receipt of bids. Telegraphic or written requests for withdrawal must be in the possession of the County prior to the closing time for receipt of bids.

**H. Applicable Laws**

All applicable laws and regulations of the State of Georgia and ordinances and regulations of Fulton County shall apply. Protestors shall seek resolution of their complaints in the manner provided in the Fulton County Code of Laws §2-324, which is incorporated by reference herein.

**I. Examination of Contract Documents**

Prospective bidders shall examine the contract documents and before submitting a bid, shall make a written request to the County for an interpretation or correction of any ambiguity, in consistency or error therein which could be discovered by a bidder. At the bid opening each bidder shall be presumed to have read and be familiar with the contract documents.

**J. Indemnification and Hold Harmless Agreement**

See Section 00490, Insurance and Risk Management Provisions page 3, Indemnification and Hold Harmless Agreement

**K. Bid Opening**

Bids will be opened in public and read aloud. All bidders are requested to be present at the opening.

**L. Determination of Successful Bidder**

Fulton County desires to complete this work in a timely manner. The Contract will be awarded to the lowest responsive, responsible bidder(s), if awarded.

1. **Responsibility:** The determination of the bidder's responsibility will be made by the County based on whether the bidder meets the following minimum requirements:
  - a. The County reserves the right to reject any bid if the evidence submitted by, or investigation of, the bidder fails to satisfy the County that he/she is properly qualified to carry out the obligations of the Contract.
  - b. Maintains a permanent place of business individually or in conjunction with the prime contractor.
  - c. Has the appropriate and adequate technical experience. Designated Project Manager must be proficient in all aspects of contracted work.
  - d. Has adequate personnel and equipment to do the work expeditiously.
  - e. Has suitable financial means to meet obligations incidental to the work.
2. **Responsiveness:** The determination of responsiveness will be made by the County based on a consideration of whether the bidder has submitted a complete Bid form without irregularities, excisions, special conditions, or alternative bids for any item unless specifically requested in the Bid form.

**M. Georgia Utility Contractors License (NOT APPLICABLE)**

**N. General Contractors License (NOT APPLICABLE)**

Effective July 1, 2008, all general contractors are required to be licensed by the State of Georgia to perform the following work; construction; construction management services; or

design-build services as a prime contractor, joint venture partner, or as a subcontractor to a design professional acting as prime contractor as part of a design-build entity or combination, unless exempted from holding such license pursuant to Georgia law (O.C.G.A. 43-41-17). If exempted, Contractor must submit a copy of their Georgia Department of Transportation Certificate of Qualification with their bid submittal.

Bidders must complete Form C2: Georgia General Contractors License Certification in Section 6, Purchasing Forms. Failure to provide the required license shall deem your bid non-responsive.

**O. Professional Licenses (*APPLICABLE*)**

The State of Georgia requires that the following professions are required by state law to be licensed:

1. Electricians
2. Plumbers
3. Conditioned Air Contractors
4. Low voltage Contractors

Bidders and any sub-contractors performing any of the above described work must provide a copy of their license for the work they will perform on this project. Bidders must complete Form C3: Georgia Professional License Certification in Section 6, Purchasing Forms Failure to provide the required license may deem your bid non-responsive.

**P. Wage Clause**

Pursuant to 102-391, Each Contractor shall agree that in the performance of the Contract he will comply with all lawful agreements, if any, which the Contractor had made with any association, union, or other entity, with respect to wages, salaries, and working conditions, so as not to cause inconvenience, picketing, or work stoppage.

**Q. Notice of Award of Contract**

As soon as possible, and within sixty (60) days after receipt of bids, the County shall notify the successful Bidder of the Award of Contract.

The award shall be made by the Board of Commissioners of Fulton County to the lowest responsive, responsible bidder(s) as soon as possible after receipt of bids, taking into consideration price and the responsiveness to the requirements set forth in the Invitation for Bid. In such case, no claim shall be made by the selected Contractor(s) for loss of profit if the contract is not awarded or awarded for less work than is indicated and for less than the amount of his bid. The total of the awarded contract shall not exceed the available funds allocated for this project.

Should the County require additional time to award the contract, the time may be extended by mutual agreement between the County and the successful bidder. If an Award of Contract has not been made within sixty (60) days from the bid date or within the extension mutually agreed upon, the Bidder may withdraw the Bid without further liability on the part of either party.

Any award made by the Board of Commissioners as a result of this bid will begin from the date of the notice to proceed. The Bidder agrees hereby to commence work under this Contract, with adequate personnel and equipment, on a date to be specified in a written order from the user department. The contract shall become effective on the Contract Date and shall continue in effect until the end of the term of the contract or until the project has

been closed-out unless earlier terminated pursuant to the termination provisions of the contract.

**R. Execution of Contract Documents**

Upon notification of Award of Contract, the County shall furnish the Contractor the conformed copies of Contract Documents for execution by the Contractor and Contractor's surety.

Within ten (10) days after receipt the Contractor shall return all the documents properly executed by the Contractor and the Contractor's surety. Attached to each document shall be an original power-of-attorney for the person executing the bonds for the surety and certificates of insurance for the required insurance coverage.

After receipt of the documents executed by the Contractor and his surety with the power-of-attorney and certificates of insurance, the County shall complete the execution of the documents. Distribution of the completed documents will be made upon completion.

Should the contractor and/or surety fail to execute the documents within the time specified, the County shall have the right to proceed on the Bid Bond accompanying the bid.

If the County fails to execute the documents within the time limit specified, the Contractor shall have the right to withdraw the Contractor's bid without penalty.

Should an extension of any of the time limits stated above be required, this shall be done only by mutual agreement between both parties.

Any agreement or contract resulting from the acceptance of a bid shall be on a County approved document form. The County reserves the right to reject any agreement that does not conform to the Invitation for Bid and any County requirements for agreements and contracts. The County reserves the right to modify the agreement resulting from this bid upon the recommendation of the County Attorney.

**S. Joint Venture**

Any Bidder intending to respond to this solicitation as a joint venture must submit an executed joint venture agreement with its offer. The agreement must designate those persons or entities authorized to execute documents or otherwise bind the joint venture in all transactions with Fulton County, or be accompanied by a document, binding upon the joint venture and its constituent members, making such designation. Offers from joint ventures that do not include these documents will be rejected as being non-responsive.

**T. Contractors Compliance With All Assurances And/Or Promises Made In Response To Procurement**

Should any Bidder submit a response to the County promising to provide a certain level of service for either the scope of work, MFBE participation, or any other matter, including where such promise or assurance is greater than what is required by the procurement documents, and should this response containing the promise or assurance be accepted by the County and made a part of the Contract Documents, then this degree or level of service promised by the bidder relating to the scope of work, MFBE participation, or other matter shall be considered to be a material part of the Agreement between the bidder and the County, such that the bidder's failure to provide the agreed upon degree or level of service or participation shall be a material breach of the Agreement giving the County just cause to terminate the Agreement for cause, pursuant to the General Conditions of the Agreement.

**U. Georgia Security and Immigration Compliance Act**

This Invitation to Bid is subject to the Georgia Security & Immigration Compliance Act. Pursuant to the Georgia Security & Immigration Compliance Act of 2006, as amended on May 11, 2009, bidders and proposers are notified that all bids/proposals for services that are to be physically performed within the State of Georgia must be accompanied by proof of their registration with and continuing and future participation in the E-Verify program established by the United States Department of Homeland Security. A completed affidavit must be submitted on the top of the bid/proposal at the time of submission, prior to the time for opening bids/proposals. Under state law, the County cannot consider any bid/proposal which does not include a completed affidavit. It is not the intent of this notice to provide detailed information or legal advice concerning the Georgia Security & Immigration Compliance Act. All bidders/proposers intending to do business with the County are responsible for independently apprising themselves and complying with the requirements of that law and its effect on County procurements and their participation in those procurements. For additional information on the E-Verify program or to enroll in the program, go to: <https://e-verify.uscis.gov/enroll>.

See Section 00420, Purchasing Forms & Instructions for declarations and affidavits.

#### **V. Bid General Requirements**

The following information pertains to the submission of a Bid to Fulton County, and contains instructions on how Bids must be presented in order to be considered. Listed below are the requirements for all Bidders interested in doing business with Fulton County.

1. The Bid sheets included in this Invitation to Bid ("Bid") must be fully completed and returned with the Bid unless otherwise specified in writing by the Purchasing Department. Type or neatly print the date, company name, and the full legal name and title of the person(s) signing the Bid in the place provided at the bottom of each Bid sheet. Any additional sheets submitted must contain the same signature and Bidder information.
2. All signatures must be executed by person(s) having contracting authority for the Bidder.
3. Absolutely no fax Bids or reproduction Bids will be accepted, except that photocopies may be submitted in addition to the original when multiple copies of the Bid are specifically requested in the solicitation.
4. The envelope in which the Bid response is submitted must be sealed and clearly labeled with the Bid number, project title, due date and time, and the name of the company or individual submitting the proposal. Bids must be received by the opening date and time shown on this Bid in order to be considered. The Purchasing Agent has no obligation to consider Bids which are not in properly marked envelopes. Contract Compliance submittals shall be submitted in a separate sealed envelope or package.
5. The original and the required number of copies of the Bid must be returned to:

Fulton County Purchasing Agent  
Fulton County Department of Purchasing and Contract Compliance  
130 Peachtree Street, S.W., Suite 1168  
Atlanta, Georgia 30303

Any inquiries, questions, clarifications or suggestions regarding this solicitation should be submitted in writing to the Purchasing Contact Person. Contact with any other County personnel in regard to a current solicitation is strictly prohibited in accordance with Fulton County "No Contact Provision" policy outlined in S35 and in Section 00020, Invitation to Bid.

6. Show information and prices in the format requested. Prices are to be quoted F.O.B. Destination, and must include all costs chargeable to the Contractor executing the Contract, including taxes. Unless otherwise provided in the Contract, Fulton County shall have no liability for any cost not included in the price. The Contractor shall provide Fulton County the benefit through a reduction in price of any decrease in the Contractor's costs by reason of any tax exemption based upon Fulton County's status as a tax-exempt entity.
7. All prices Bid must be audited by the Bidder to ensure correctness before the Bid is submitted. The Bidder is solely responsible for the accuracy of information placed on a Bid sheet, including prices. Clerical or mathematical error is insufficient to void a successful Bid but a Bidder may withdraw a sealed Bid prior to opening without a penalty.
8. All prices must be submitted in the format requested and less all trade discounts. When multiple items are being Bid, Bidder must show both the unit price and the total extended price for each item. When applicable, the Bidder must include an additional lump sum Bid for groups or items. In the event a Bidder is offering an additional discount on groups of items, Bidder must indicate the total lump sum Bid for the particular group of items before any extra discount, the amount of extra discount, and the net total for the particular group. In the event of an extension error, unit pricing shall prevail.
9. By submitting a signed Bid, Bidder agrees to accept an award made as a result of that Bid under the terms and conditions spelled out in the Bid documents. In the event of a conflict between the different Bid documents, the County's cover Contract (if used) shall have precedence, followed in order by the Invitation to Bid, Purchase Order, Bid, Contractor's Warranty Agreement, Maintenance Agreement, and/or other Contractor provided agreements.
10. A Bidder may submit only one (1) Bid response for each specific Bid solicitation unless otherwise authorized in the specifications.
11. All prices submitted by the Bidder to Fulton County must be guaranteed by the authorized person(s) against any price increase for the time period designated in the Bid specifications, and Fulton County must be given the benefit of any price decrease occurring during such designated time period.
12. All items Bid must be new. Used, rebuilt and refurbished items will not be considered unless specifically authorized by Fulton County in the written specifications.
13. All Bidders must specify in the Bid response the earliest actual delivery date for each item unless otherwise specified in writing by Fulton County. The delivery date may be a factor in deciding the Bidder's capability to perform.
14. A successful Bidder's delivery ticket(s) and invoice(s) must list each item separately and must show Fulton County's purchase order number as well as the proper department and address to which delivery was made, as listed on the purchase order or in the Bidder's contract with Fulton County.

15. Unless clearly shown as “no substitute” or words to that effect, any items in this invitation to Bid which have been identified, described or referenced by a brand name or trade name are for reference only. Such identification is intended to be descriptive but not restrictive, and is to indicate the general quality and characteristics of products that may be offered. Each item Bid must be individually identified as to whether it is a specified item or an equivalent item by typing or printing after the item(s): The brand name; model or manufacturer’s number, or identification regularly used in the trade. Deviations from the specifications must be clearly and fully listed on the Bid sheet, including photographs or cuts, specifications, and dimensions of the proposed “alternate”. Fulton County is the sole judge of “exact equivalent”, or “alternate”. The factors to be considered are: function, design, materials, construction, workmanship, finishes, operating features, overall quality, local service facilities, warranty terms and service, and other relevant features of item(s) Bid.
16. For all Bids, Fulton County reserves the right to request representative samples. If requested, samples must be delivered at the Bidder’s cost within three (3) business days. Samples are submitted at the risk of the Bidder and may be subjected to destructive tests by Fulton County. Samples must be plainly tagged with Fulton County’s Bid number, item name, manufacturer, and the name of the Bidder.
17. Item(s) Bid must be complete and ready to operate. No obvious omissions of components or necessary parts shall be made even though the specifications may not detail or mention them. Unit(s) must be furnished with factory installed equipment and must be comparable with the basic form, fit, and functional requirements which are all to be included in the base price as well as any other equipment included as standard by the manufacturer or generally provided to the buying public.
18. All successful Bidders must assume full responsibility for all item(s) damaged prior to F.O.B. Destination delivery and agree to hold harmless Fulton County of all responsibility for prosecuting damage claims.
19. All successful Bidders must assume full responsibility for replacement of all defective or damaged goods within thirty (30) days of notice by Fulton County of such defect or damage.
20. All successful Bidders must assume full responsibility for providing or ensuring warranty service on any and all items including goods, materials, or equipment provided to the County with warranty coverage. If a successful Bidder is not the manufacturer, all manufacturers’ warranties must be passed through to Fulton County. The Bidder and not Fulton County is responsible for contacting the manufacturer of the warranty service provided during the warranty period and supervising the completion of the warranty service to the satisfaction of Fulton County.
21. As a successful Bidder providing any equipment which requires fitting and assembly, the Bidder shall be solely responsible for such installation being performed by a manufacturer’s authorized or approved servicer or an experienced worker, utilizing workmanship of the highest caliber. The Bidder must verify all dimensions at the site, shall be responsible for their correctness, and shall be responsible for the availability of replacement parts when specified in writing by Fulton County in the specifications, purchase order, or other contract.
22. A successful Bidder is solely responsible for disposing of all wrappings, crating, and other disposable material upon deliver of item(s).
23. All Bidders are required to be authorized distributors or regularly engaged in the sale or distribution of the type of goods, materials, equipment or services for which the Bidder

is submitting a Bid response in addition, all Bidders are required to provide Fulton County with three (3) written references documenting the successful completion of Bids or contracts for the types of items including goods, materials, equipment, or services for which the Bidder is submitting a Bid response. In instances where a Bidder has never supplied such goods, material, equipment, or services before, the Bidder must submit with the Bid response a statement and supporting documentation demonstrating such expertise, knowledge, or experience to establish the Bidder as a responsible Bidder, capable of meeting the Bid requirements should an award be made. No exceptions to this provision will be made unless authorized in the Bid specifications.

24. Bidders may be required to furnish evidence that they maintain permanent places of business of a type and nature compatible with their Bid proposal, and are in all respects competent and eligible vendors to fulfill the terms of the specifications. Fulton County may make such investigations as it deems necessary to determine the ability of the Bidder to perform such work, and reserves the right to reject any Bidder if evidence fails to indicate that the Bidder is qualified to carry out the obligation of the Contract and to complete the work satisfactorily.
25. All Bidders must comply with all Fulton County Purchasing laws, policies, and procedures, non-discrimination in contracting and procurement ordinances, and relevant state and federal laws including but not limited to compliance with EEOC hiring guidelines and requirements under the Americans with Disabilities Act. Successful Bidder must obtain all permits, licenses, and inspections as required and furnish all labor, materials, insurance, equipment, tools, supervision, and incidentals necessary to accomplish the work in these specifications.
26. If a successful Bidder is unable or unwilling to enter into a Contract with Fulton County subsequent to being granted an award, or who fails to perform in accordance with the Bid specifications the Bidder will be subject to damages and all other relief allowed by law.
27. Successful Bidders contract directly with Fulton County and are the party or parties obligated to perform. Contracts may not be assigned and any failure to perform the Contract in accordance with the specifications will constitute a breach of Contract and may result in a Bidder being found to be "non-responsive" in the future.
28. In case of default by the successful Bidder, Fulton County may procure the articles for services from another source and hold the successful Bidder responsible for any resulting excess cost.
29. The County may award any Bid in whole or in part to one or more vendors or reject all Bids and/or waive any technicalities if it is in the best interests of the County to do so. In the event that all Bids are not rejected, Bids for items including goods, materials, equipment, and services will be awarded to the lowest "responsible" Bidder(s) as determined by Fulton County. Submitting the lowest Bid, as published at the Bid opening, does not constitute an award or the mutual expectation of an award of a Contract and purchase order. For purposes of this notice and the attached Bid sheets, a purchase order is a Contract to provide items including goods, materials, equipment, and services and is intended to have the full force and effect of a Contract. A breach of the terms and conditions of a purchase order constitutes a breach of Contract.
30. Bids for projects that are solicited pursuant to the Georgia Local Government Public Works Construction Law (O.C.G.A. § 36-91-1 et seq.) may withdrawn as follows:

Competitive sealed Bids ("Bid") may not be revoked or withdrawn until 60 days after the time set by the governmental entity for opening of Bids. At the end of this time period,

the Bid will cease to be valid, unless the Bidder provides written notice to the County prior to the scheduled expiration date that the Bid will be extended for a time period specified by the County.

31. In the evaluation of the Bids, any award will be subject to the Bid being:
  - a. Compliant to the specification – meets form, fit, and function requirements stated or implied in the specification.
  - b. Lowest cost to the County over projected useful life.
  - c. Administratively Compliant – Including all required bonds, insurance, established quality of work and general reputation, financial responsibility, relevant experience, and related criteria.
32. All proposals and Bids submitted to Fulton County are subject to the Georgia “Open Records Act”, Official Code of Georgia, Annotated (O.C.G.A.) §50-18-70 et seq.
33. All proposals and Bids submitted to Fulton County involving Utility Contracting are subject to the Georgia law governing licensing of Utility Contractors, O.C.G.A. §43-14-8.2(h). The Utility Contractor License number of the person who will perform the utility work shall be written on the face of the Bid envelope.
34. The apparent silence of this specification, and any supplement thereto, as to details, of the omission from it of a detailed description concerning any point, will be regarded as meaning only the best commercial practices are to prevail. Only materials of the highest quality, correct type, size, and design are to be used. All interpretations of this specification will be made upon the basis of this statement, with Fulton County interpretation to prevail.
35. It is the policy of Fulton County that the evaluation and award process for County contracts shall be free from both actual and perceived impropriety, and that contacts between potential vendors and County officials, elected officials and staff regarding pending awards of County contracts shall be prohibited.
  - a. No person, firm, or business entity, however situated or composed, obtaining a copy of or responding to this solicitation, shall initiate or continue any verbal or written communication regarding this solicitation with any County officer, elected official, employee, or designated County representative, between the date of the issuance of this solicitation and the date of the County Manager’s recommendation to the Board of Commissioners for award of the subject contract, except as may otherwise be specifically authorized and permitted by the terms and conditions of this solicitation.
  - b. All verbal and written communications initiated by such person, firm, or entity regarding this solicitation, if same are authorized and permitted by the terms and conditions of this solicitation, shall be directed to the Purchasing Agent.
  - c. Any violation of this prohibition of the initiation or continuation of verbal or written communications with County officers, elected officials, employees, or designated County representatives shall result in a written finding by the Purchasing Agent that the submitted Bid or proposal of the person, firm, or entity in violation is “non-responsive”, and same shall not be considered for award.
36. Any Bidder intending to respond to this solicitation as a Joint Venture must submit an executed Joint Venture Agreement with this Bid. This agreement must designate those persons or entities authorized to execute documents or otherwise bind the Joint Venture in all transactions with Fulton County, or are accompanied by a document,

binding upon the Joint Venture and its constituent members, making such designation. Bids from Joint Ventures that do not include these documents will be rejected as being “non-responsive”.

37. Any Bidder intending to respond to this solicitation must complete all of the Procurement Affidavit Forms provided in this solicitation. Bids that do not include these completed documents will be rejected as being “non-responsive”.

**Required Bid Submittal Check List for Invitation To Bid (ITB)**

The following submittals shall be completed and submitted with each bid (see table below "Required Bid Submittal Check List."). Please check to make sure that the required submittals are in the envelope before it is sealed. Failure to submit all required submittals may deem your proposal non-responsive.

Submit one (1) Original bid, signed and dated and **three (3) complete** copies of the Original Bid including all required documents.

Item #	Required Bid Submittal Check List	Check (√)
1	Bid Form (Section 00300) – All dollar amounts must be both in writing AND figures and represent prices for the published scope of work without exceptions.	
2	Acknowledgement of each Addendum (acknowledged both on the Bid Form, Section 00300, and on the form included with each addendum).	
3	Bid Bond (Section 00410) (separate envelope if Public Works Construction project)	
4	Purchasing Forms (Section 00420) Form A - Non-Collusion Affidavit of Prime Bidder/Offeror Form B - Certificate of Acceptance of Request for Bid/Proposal Requirements Form C1- Georgia Utility Contractor License <i>(if applicable)</i> Form C2- Georgia General Contractors License <i>(if applicable)</i> Form C3- Georgia Professional Licenses <i>(if applicable)</i> Form D - Certificate Regarding Debarment Form E - Disclosure Form & Questionnaire Form F - Declaration of Employee-Number Categories Form G - Georgia Security and Immigration Contractor Affidavit and Agreement Form H - Georgia Security and Immigration Subcontractor Affidavit	
5	Office of Contract Compliance Requirements (Section 00430) Exhibit A - Promise of Non-Discrimination (for Prime and each Sub) Exhibit B - Employment Record (for Prime and each Sub) Exhibit C - Schedule of Intended Subcontractor Utilization Exhibit D - Letter of Intent to Perform as Subcontractor Exhibit E - Declaration Regarding Subcontractor Practices Exhibit F - Joint Venture Disclosure Affidavit Exhibit G - Prime Contractor/Subcontractor Utilization Report Equal Business Opportunity Plan (EBO Plan)	
6	Risk Management Insurance Provisions Form (Section 00490) and proof of insurance, either letter from insurer or Certificate of Insurance.	
7		
8		
9		

**END OF SECTION**

**BID FORM**

Submitted To: Fulton County Government

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

For: **13ITB**

Submitted on \_\_\_\_\_, 20\_\_.

The undersigned, as Bidder, hereby declares that the only person or persons interested in the Bid as principal or principals is or are named herein and that no other person than herein mentioned has any interest in this Bid or in the Contract to be entered into; that this Bid is made without connection with any other person, company or parties making a Bid; and that it is in all respects fair and in good faith without collusion or fraud.

The Bidder further declares that he has examined the site of the work and informed himself fully in regard to all conditions pertaining to the place where the work is to be done; that he has examined the Drawings and Specifications for the work and contractual documents relative thereto, and has read all instructions to Bidders and General Conditions furnished prior to the openings of bids; that he has satisfied himself relative to the work to be performed.

The Bidder proposes and agrees, if this Bid is accepted, to contract with the Board of Commissioners of Fulton County, Atlanta, Georgia, in the form of contract specified, to furnish all necessary materials, equipment, machinery, tools, apparatus, means of transportation and labor necessary, and to complete the 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 BASE BID IS THE AMOUNT UPON WHICH THE BIDDER WILL BE FORMALLY EVALUATED AND WHICH WILL BE USED TO DETERMINE THE LOWEST RESPONSIBLE BIDDER.

The base bid may not be withdrawn or modified for a period of sixty (60) days following the receipt of bids.

**BASE BID AMOUNT** (Do not include any Bid Alternates)

\$ \_\_\_\_\_  
**(Dollar Amount In Numbers)**

\_\_\_\_\_  
**(Dollar Amount in Words)**

The Bidder 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 **One Hundred and Twenty (120)** consecutive calendar days from NTP issue.

The Bidder declares that he understands that the quantities shown for the unit prices items are subject to either increase or decrease, and that should the quantities of any of the items of work

be increased, the Bidder proposes to do the additional work at the unit prices stated herein; and should the quantities be decreased, the Bidder also understands that payment will be made on the basis of actual quantities at the unit price bid and will make no claim for anticipated profits for any decrease in quantities; and that actual quantities will be determined upon completion of work, at which time adjustments will be made to the contract amount by direct increase or decrease. Bid forms for both sites shall be completed in its entirety. Failure to complete the schedule of bid items forms may cause your firm to be declared non-responsive.

The Bidder furthermore agrees that, in the case of a failure on his part to execute the Contract Agreement and Bonds within ten days after receipt of conformed contract documents for execution, the Bid Bond accompanying his bid and the monies payable thereon shall be paid into the funds of the Owner as liquidated damages for such failure.

Enclosed is a Bid Bond in the approved form, in the sum of:

\_\_\_\_\_ Dollars

(\$ \_\_\_\_\_) according to the conditions of "Instructions to Bidders" and provisions thereof.

The undersigned acknowledges receipt of the following addenda (list by the number and date appearing on each addendum) and thereby affirms that its Bid considers and incorporates any modifications to the originally issued Bidding Documents included therein.

ADDENDUM # _____	DATED _____

**BIDDER:** \_\_\_\_\_

Signed by: \_\_\_\_\_  
[Type or Print Name]

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

Business Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Business Phone: \_\_\_\_\_

Bidder's Contractor License No: \_\_\_\_\_  
[State/County]

License Expiration Date: \_\_\_\_\_

Note: If the Bidder is a corporation, the Bid 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 Bid, as principals, are as follows:

Name	Address
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

**END OF SECTION**

The following form shall be used for submitted Bid Prices:

**Schedule of Bid Items  
 Cascade Library**

No.	COMPONENT DESCRIPTION	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	TOTAL PRICE
1	In 8 separate locations where the existing metal counter flashing meets the brick wall, remove all existing sealants, clean, and seal with new commercial grade urethane sealant and tool neatly into place.	290	lf		
2	At a total of 6 joints in the brick walls (approximately 6 lineal feet each), remove all existing sealants, clean, furnish and install new foam backerod, and seal with new commercial grade urethane sealant and tool neatly into place.	6	ea		
3	At a total of 3 joints in the corner where the existing counter flashing meets the window frame (a total of approximately 18" each), remove all existing sealants, clean, and seal with new commercial grade urethane sealant and tool neatly into place.	3	ea		
4	At the existing joints at the base of the windows (both joints), remove all existing sealants, clean, and seal with new commercial grade urethane sealant and tool neatly into place.	185	lf		
5	At a total of 64 joints in the sides of the window frames (approximately 8" each), remove all existing sealants, clean, and seal with new commercial grade urethane sealant and tool neatly into place.	64	ea		
6	At a total of 32 open laps in the modified bitumen base flashing at the base of the walls, sweep, apply primer, and apply a five-course application of commercial grade flashing mastic and reinforcing membrane. Repair size will be approximately 12" x 18" each.	32	ea		

7	At a total of 10 scupper drains, sweep, apply primer, and apply a five-course application of commercial grade flashing mastic and reinforcing membrane. Repair size will be approximately 18" x 24" each.	10	ea		
8	At a total of 12 roof drains, remove all loose flashing, sweep, apply primer, and apply a three-course application of commercial grade flashing mastic and reinforcing membrane and cap with one ply of modified bitumen (repair size will be approximately 9 square feet each).	12	ea		
9	At a total of 11 end laps in the roof seams on the roof surface, sweep, apply primer, and apply a three-course application of commercial grade flashing mastic and reinforcing membrane and cap with a one ply of modified bitumen (repair size will be approximately 8 square feet each).	11	ea		
10	At the plumbing penetrations, sweep, apply primer, and apply a three-course application of commercial grade flashing mastic and reinforcing membrane and cap with one ply of modified bitumen (repair size will be approximately 4 square feet each).	7	ea		
11	At the joints in the coping metal (approximately 20" wide each), remove all existing sealants, clean, and seal with new commercial grade urethane sealant and tool neatly into place.	114	ea		
12	At the base of the metal roof where it meets the modified bitumen roof surface, remove all existing repairs, remove the existing metal counter flashing, cut out the existing metal roof approximately 8" wide, furnish and install a new metal counter flashing, anchor securely into place, apply primer, and apply a three-course application of commercial grade flashing mastic and reinforcing membrane and cap with one ply of modified bitumen (repair size will be approximately 18" x 50').	50	lf		

13	At the PVC drain pipes in the brick wall (approximately 3.5" wide each), remove all existing sealants, clean and seal with new commercial grade urethane sealant and tool neatly into place.	400	Sq ft		
14	At 1 location at a perimeter wall at the rear of the building at a total of approximately 20 lineal feet, remove the existing coping metal, apply asphalt primer, and apply a three-course application of commercial grade flashing mastic and reinforcing membrane (approximately 18" wide to the wall). Reinstall the existing coping metal upon completion and apply roofing granules to the repaired area.	20	lf		
15	At 1 area of the roof surface over the book depository, furnish and install new wood fiber insulation to level the low area near the drain and anchor securely into place with screws and plates. Sweep the roof surface and apply asphalt primer to the roof surface and to the base flashing at the walls. Effect repairs by using one-ply modified bitumen membrane in cold adhesive reinforced around the perimeter with a three-course application of commercial grade flashing mastic and reinforcing membrane (approximately 6" wide). The base flashing at the walls will receive a three-course application of commercial grade flashing mastic and reinforcing membrane.	150	lf		
16	In 3 separate locations of built-in gutter at a total of approximately 150 lineal feet, cut the existing metal panels approximately 8" wide, remove and dispose of properly, remove the existing EPDM liner and dispose of properly, remove the existing coping metal, flash the gutter and the wall with new TPO membrane flashing and properly, remove the existing coping metal, flash the gutter and the wall with new TPO membrane flashing and fully adhere with bonding adhesive. Furnish and install a new metal counter flashing at the base of the metal roof and anchor securely into place. Reinstall the existing coping metal and anchor securely into place.	150	lf		

17	At 2 scupper drains in the built-in gutter, furnish and install a new TPO-coated metal scupper drain and flash with new TPO membrane flashing.	2	ea		
18	At the round drain pipes (approximately 3.5" wide each), furnish and install a new TPO-coated metal outlet, and tie into the new TPO membrane in the gutter.	9	ea		
19	Upon completion of repairs, apply a uniform application of aluminum roof coating or granules to the repaired areas (as needed)	1	ea		
20	Remove all work-related debris on an ongoing basis and do a thorough cleanup upon job completion.	1	LS		
OWNER CONTROLLED CONTINGENCY					\$ 5,000
<b>TOTAL CASCADE LIBRARY</b>					\$

**Schedule of Bid Items  
 Kirkwood Library**

No.	COMPONENT DESCRIPTION	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	TOTAL PRICE
1	At 3 separate locations at the radius of the dome accent roofs, remove all existing sealants, clean, furnish and install new 24 gauge Kynar finished metal counter flashing and anchor securely in place		LS		
2	At the small holes in the dryvit fascia (approximately 3" wide each), repair with the proper materials to fill all holes smooth to textured dryvit surface. Apply new coating upon completion (color to match as closely as possible).		LS		
3	At the six joints where the metal roof deck meets the dryvit surface, clean, and seal with new commercial grade urethane sealant and tool neatly into place.		LS		

4	Where the perimeter of the radius metal meets the metal roof surface, remove all existing sealants, clean, and seal with new commercial grade urethane sealant and tool neatly into place. Furnish and install new rivets where necessary.		LS		
5	At each joint in the metal flashing at the perimeter of the radius metal (approximately 6" wide), remove all existing sealants, clean, and seal with new commercial grade urethane sealant and tool neatly into place. Furnish and install new rivets where necessary.		LS		
6	Where the perimeter of the radius metal meets the metal flashing, remove all existing sealants, clean, and seal with new commercial grade urethane sealant and tool neatly into place. Furnish and install new rivets where necessary.		LS		
7	At the joints in the ridge cap (approximately 13" wide each), remove all existing sealants, clean, and seal with new commercial grade urethane sealant and tool neatly into place. Furnish and install new rivets where necessary.		LS		
8	At the fasteners in the ridge cap, remove all existing sealants, clean, and seal with new commercial grade urethane sealant and tool neatly into place. Furnish and install new rivets where necessary.		LS		
9	At seams in the closure metal, remove all existing sealants, clean, and seal with new commercial grade urethane sealant and tool nearly into place.		LS		

10	At a total of 3 previously repaired areas, remove all existing sealants, clean, apply metal edge primer, and flash with a three-course application of Seal-O-Flex Pink (solvent based) or equal and polyester reinforcing membrane (repair size will be at least 1 square foot each).		LS		
11	At the perimeter of a scupper drain on the metal roof surface, remove all existing sealants, clean, apply metal edge primer, and flash with a three-course application of Seal-O-Flex Pink (solvent based) and polyester reinforcing membrane.		LS		
12	At plumbing penetrations on the metal roof surface, remove all existing sealants, furnish and install a new metal roof flashing boot, anchor securely into place, and seal with new commercial grade urethane sealant and tool neatly into place.		LS		
13	At joints in the metal counter flashing at the top of the walls (approximately 13" wide), remove all existing sealants, clean, and seal with new commercial grade urethane sealant and tool neatly into place.		LS		
14	At the metal counter flashing at the top of the walls, remove the existing fasteners, furnish and install new gasket fasteners and anchor securely into place.		LS		
15	In 3 separate locations at the base of the metal roof at the radius beneath the counter flashing, furnish and install new foam backerod, seal with new commercial grade urethane sealant, and tool neatly into place.		LS		
16	At 2 small metal penetrations in the metal walls, remove all existing sealants, clean, and seal with new commercial grade urethane sealant and tool neatly into place.		LS		

17	At 2 corners at one scupper drain, sweep, apply asphalt primer, and apply a five-course application of commercial grade flashing mastic and reinforcing membrane (approximately 12" x 18" each).		LS		
18	At 1 electrical box, remove all existing sealants, clean, and seal with new commercial grade urethane sealant and tool neatly into place		LS		
19	At the base flashing at the walls, spud, sweep, and apply a three-course application of commercial grade flashing mastic and reinforcing membrane (approximately 12" wide). Replace all gravel upon completion of work. Apply a new white coating to the base flashing.		LS		
20	At 2 AC curbs at the base flashing, spud, sweep, and apply a three-course application of commercial grade flashing mastic and reinforcing membrane (approximately 12" wide). Replace all gravel upon completion of work. Apply a new white coating to the base flashing.		LS		
21	At the base of 2 AC curbs, remove existing metal counter flashing and dispose of properly. Furnish and install new 24 gauge Kynar finished metal counter flashing and anchor securely into place.		LS		
22	At 1 pipe, spud, sweep, furnish, and install a new 24 gauge Kynar finished metal pitch pan, anchor securely into place, seal properly, apply asphalt primer, and apply a three-course application of commercial grade flashing mastic and reinforcing membrane and cap with one ply of modified bitumen membrane		LS		

23	At the base of the 2 pitch pans, spud, sweep, apply asphalt primer, and apply a three-course application of commercial grade flashing mastic and reinforcing membrane and cap with one-ply of modified bitumen membrane.		LS		
24	At 2 pitch pans, scrape off all loose sealants, clean, apply asphalt primer, and apply a three-course application of commercial grade flashing mastic and reinforcing membrane and crown over the top.		LS		
25	At the base of 2 roof drains, remove all loose flashing, spud, sweep, apply primer, apply a three-course application of commercial grade flashing mastic and reinforcing membrane and cap with one ply of modified bitumen		LS		
26	At the gas line, lightly wire-brush and paint with new yellow safety paint to prevent further corrosion.		LS		
27	All built-up roof repairs will receive an application of white coating or roofing granules upon completion (where needed).		LS		
28	Remove all work-related debris on an ongoing basis and do a thorough cleanup upon job completion.		LS		
OWNER CONTROLLED CONTINGENCY					\$ 5,000
<b>TOTAL KIRKWOOD LIBRARY</b>					<b>\$</b>

<b>TOTAL CASCADE SOUTHWEST REGIONAL &amp; KIRKWOOD LIBRARIES</b>					<b>\$</b>
<i>This amount should be reflected on page 1 as your base bid amount.</i>					

### **BID BOND**

No bid for a contract in Fulton County for work to be done shall be valid for any purpose unless the Contractor shall give a Bid Bond with good and sufficient surety payable to, in favor of, and for the protection of Fulton County. The Bid Bond shall not be less than 5% of the total amount payable by the terms of the Contract. No bid shall be read aloud or considered if a proper bid bond has not been submitted.

Surety companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State of Georgia.

Attestation for the corporation must be by the corporate officer; for a partnership by another partner; for an individual by a notary with the corporate seal.

**BID BOND**  
**13ITB Cascade Southwest Regional Library and Kirkwood Library Roof Repairs**  
**FULTON COUNTY GOVERNMENT**

KNOW ALL MEN BY THESE PRESENTS, THAT WE \_\_\_\_\_  
\_\_\_\_\_  
hereinafter called the PRINCIPAL, and \_\_\_\_\_  
\_\_\_\_\_

hereinafter call the SURETY, a corporation chartered and existing under the laws of the State of \_\_\_\_\_ and duly authorized to transact Surety business in the State of Georgia, are held and firmly bound unto the Fulton County Government (COUNTY), in the penal sum of \_\_\_\_\_ Dollars and Cents (\$ \_\_\_\_\_) good and lawful money of the United States of America, to be paid upon demand of the COUNTY, to which payment well and truly to be made we bind ourselves, our heirs, executors, and administrators and assigns, jointly and severally and firmly by these presents.

WHEREAS the PRINCIPAL has submitted to the COUNTY, for Cascade Southwest Regional Library and Kirkwood Library Roof Repairs, a Bid;

WHEREAS the PRINCIPAL desires to file this Bond in accordance with law:

NOW THEREFORE: The conditions of this obligation are such that if the Bid be accepted, the PRINCIPAL shall within ten (10) calendar days after receipt of written notification from the COUNTY of the award of the Contract execute the Contract in accordance with the Bid and upon the terms, conditions and prices set forth therein, in the form and manner required by the COUNTY, and execute sufficient and satisfactory Performance and Payments Bonds payable to the COUNTY, each in the amount of one hundred percent (100%) of the total contract price, in form and with security satisfactory to said COUNTY, then this obligation to be void; otherwise, to be and remain in full force and virtue in law; and the SURETY shall upon failure of the PRINCIPAL to comply with any or all of the foregoing requirements within the time specified above immediately pay to the COUNTY, upon demand the amount hereof in good and lawful money of the United States of America, not as a penalty, but as liquidated damages.

In the event suit is brought upon this Bond by the COUNTY and judgment is recovered, the SURETY shall pay all costs incurred by the COUNTY in such suit, including attorney's fees to be fixed by the Court.

Enclosed is a Bid Bond in the approved form, in the amount of \_\_\_\_\_  
\_\_\_\_\_ Dollars

(\$\_\_\_\_\_) being in the amount of five percent (5%) of the Contract Sum.  
The money payable on this bond shall be paid to the COUNTY, for the failure of the Bidder to  
execute a Contract within ten (10) days after receipt of the Contract and at the same time furnish  
a Payment Bond and Performance Bond.

(SIGNATURES ON NEXT PAGE)

IN TESTIMONY THEREOF, the PRINCIPAL and SURETY have caused these presents to be duly signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_

ATTEST:

\_\_\_\_\_  
PRINCIPAL

BY \_\_\_\_\_

(SEAL)

**CERTIFICATE AS TO CORPORATE PRINCIPAL**

I, \_\_\_\_\_, certify that I am the Secretary of the Corporation named as principal in the within bond; that \_\_\_\_\_, who signed the said bond of said corporation; that I know this signature, and his/her signature thereto is genuine; and that said bond was duly signed, sealed and attested for in behalf of said Corporation by authority of its governing body.

\_\_\_\_\_  
SECRETARY

(CORPORATE SEAL)

\_\_\_\_\_  
SURETY

BY \_\_\_\_\_

(SEAL)

**END OF SECTION**

## PURCHASING FORMS & INSTRUCTIONS

This section contains the procurement forms that are required to be executed and submitted with the bid package. This section does not contain all forms required to be included with the bid package submittal.

To be deemed responsive to this ITB, Bidders must provide the information requested and complete in detail all Purchasing Forms. The appropriate individual(s) authorized to commit the Bidder to the Project must sign the Purchasing Forms. Bidders should reproduce each Purchasing Form, as required, and complete the appropriate portions of the forms provided in this section.

- Form A: Non-Collusion Affidavit of Prime Bidder/Offeror
- Form B: Certificate of Acceptance of Request for Bid/Proposal Requirements
- Form C: Professional License Certifications (**applicable**)
  - Form C1 – Georgia Utility License Contractor License (**not applicable**)
  - Form C2 – Georgia General Contractors License (**not applicable**)
  - Form C3 – Georgia Professional License (**applicable**)
- Form D: Certification Regarding Debarment
- Form E: Disclosure Form and Questionnaire
- Form F: Georgia Security and Immigration Contractor Affidavit and Agreement
- Form G: Georgia Security and Immigration Subcontractor Affidavit

**FORM A: NON-COLLUSION AFFIDAVIT OF BIDDER/OFFEROR**

**STATE OF GEORGIA**

**COUNTY OF FULTON**

I, \_\_\_\_\_ certify that pursuant to Fulton County Code Section 2-320 (11), this bid or proposal is made without prior understanding, agreement or connection with any corporation, firm or person submitting a bid for the same work, labor or service to be done or the supplies, materials or equipment to be furnished and is in all respects fair and without collusion or fraud. I understand collusive bidding is a violation of state and federal law and can result in fines, prison sentences and civil damages awards. I agree to abide by all conditions of this bid or proposal and certify that I am authorized to sign this bid or proposal for the bidder.

Affiant further states that pursuant to O.C.G.A. Section 36-91-21 (d) and (e), \_\_\_\_\_ has not, by itself or with others, directly or indirectly, prevented or attempted to prevent competition in such bidding or proposals by any means whatsoever. Affiant further states that (s)he has not prevented or endeavored to prevent anyone from making a bid or offer on the project by any means whatever, nor has Affiant caused or induced another to withdraw a bid or offer for the work.

Affiant further states that the said offer of \_\_\_\_\_ is bona fide, and that no one has gone to any supplier and attempted to get such person or company to furnish the materials to the bidder only, or if furnished to any other bidder, that the material shall be at a higher price.

\_\_\_\_\_  
(COMPANY NAME)

\_\_\_\_\_  
(PRESIDENT/VICE PRESIDENT)

Sworn to and subscribed before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
(SECRETARY/ASSISTANT SECRETARY)

(Affix corporate seal here, if a corporation)

Notary Public: \_\_\_\_\_

County: \_\_\_\_\_

Commission Expires: \_\_\_\_\_

**NOTE:**

**IF THE OFFEROR IS A PARTNERSHIP, ALL OF THE PARTNERS AND ANY OFFICER, AGENT, OR OTHER PERSON WHO MAY HAVE REPRESENTED OR ACTED FOR THEM IN BIDDING FOR OR PROCURING THE CONTRACT SHALL ALSO MAKE THIS OATH.**

**IF THE OFFEROR IS A CORPORATION, ALL OFFICERS, AGENTS, OR OTHER PERSONS WHO MAY HAVE ACTED FOR OR REPRESENTED THE CORPORATION IN BIDDING FOR OR PROCURING THE CONTRACT SHALL MAKE THE OATH.**

**FORM B: FULTON COUNTY CERTIFICATE OF ACCEPTANCE OF BID/PROPOSAL  
REQUIREMENTS**

This is to certify that on this day, offeror acknowledges that he/she has read this solicitation document, pages # \_\_\_\_\_ to # \_\_\_\_\_ inclusive, including any addenda # to # \_\_\_\_\_ exhibit(s) # \_\_\_\_\_ to # \_\_\_\_\_, attachment(s) # \_\_\_\_\_ to # \_\_\_\_\_, and/or appendices # to # \_\_\_\_\_ in its entirety, and agrees that no pages or parts of the document have been omitted, that he/she understands, accepts and agrees to fully comply with the requirements therein, and that the undersigned is authorized by the offeror to submit the proposal herein and to legally obligate the offeror thereto.

This is also to certify that the offeror has reviewed the form Fulton County contract included in the solicitation documents and agrees to be bound by its terms, or that the offeror certifies that it is submitting any proposed modification to the contract terms with its proposal. The offeror further certifies that the failure to submit proposed modifications with the proposal waives the offeror's right to submit proposed modifications later. The offeror also acknowledges that the indemnification and insurance provisions of Fulton County's contract included in the solicitation documents are non-negotiable and that proposed modifications to said terms may be reason to declare the offeror's proposal as non-responsive.

Company: \_\_\_\_\_

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

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

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

(Corporate Seal)

**FORM C1: CONTRACTOR'S GEORGIA UTILITY LICENSE CERTIFICATION (N/A)**

Contractor's Name: \_\_\_\_\_

Utility Contractor's Name: \_\_\_\_\_

Expiration Date of License: \_\_\_\_\_

I certify that the above information is true and correct and that the classification noted is applicable to the Bid for this Project.

Signed: \_\_\_\_\_

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

**(ATTACH COPY OF LICENSE)**

**FORM C2: CONTRACTOR'S GEORGIA GENERAL CONTRACTOR'S LICENSE  
CERTIFICATION (N/A)**

Contractor's Name: \_\_\_\_\_

General Contractor's License Number: \_\_\_\_\_

Expiration Date of License: \_\_\_\_\_

I certify that the above information is true and correct and that the classification noted is applicable to the Bid for this Project.

Signed: \_\_\_\_\_

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

**(ATTACH COPY OF LICENSE)**

**FORM C3: GEORGIA PROFESSIONAL LICENSE CERTIFICATION**

**NOTE: Please complete this form for the work your firm will perform on this project.**

Contractor's Name: \_\_\_\_\_

Performing work as: Prime Contractor \_\_\_\_\_ Sub-Contractor \_\_\_\_\_

Professional License Type: \_\_\_\_\_

Professional License Number: \_\_\_\_\_

Expiration Date of License: \_\_\_\_\_

I certify that the above information is true and correct and that the classification noted is applicable to the Bid for this Project.

Signed: \_\_\_\_\_

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

**(ATTACH COPY OF LICENSE)**

### FORM D: CERTIFICATION REGARDING DEBARMENT

- (1) The Offeror certifies that neither it or its subcontractors is presently debarred, suspended, proposed for debarment, declared ineligible, or otherwise excluded from doing business with any government agency. Any such exclusion may cause prohibition of your firm from participating in any procurement by the Fulton County Government.
- (2) If the Offeror is unable to certify to any of the statements in this certification, such Offeror or subcontractor shall attach an explanation to this bid or proposal.

### INSTRUCTIONS FOR CERTIFICATION

By signing and submitting this certification, the Offeror is providing the certification set out below:

- (1) The certification in this clause is a material representation of fact upon which reliance will be placed. If it is later determined that the prospective vendor knowingly rendered a false certification, the Purchasing Agent may pursue all available remedies, including suspension and/or debarment, for withdrawal of award or termination of a contract.
- (2) The prospective Offeror shall provide immediate written notice to the Purchasing Agent if at anytime the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
- (3) Offeror shall be under a continuing duty to immediately inform the Purchasing Agent in writing of any changes, if as a result of such changes, the Offeror certification regarding debarment is affected.

### DEBARMENT ORDINANCE

The following Section 2-322 of Fulton County Code of Laws establishes the procedure for the debarment of contractors.

#### **(a) Authority to suspend.**

After reasonable notice to the entity involved and reasonable opportunity for that entity to be heard, the Purchasing Agent, after consultation with user department, the County Manager and the County Attorney shall have the authority to suspend an entity for cause from consideration for award of county contracts. As used in this section, the term entity means any business entity, individual, firm, contractor, subcontractor or business corporation, partnership, limited liability corporation, firm, contractor, subcontractor or business structured; provided, further, that any such entity shall also be subject to suspension under this section if any of its constituents, members, subcontractors at any tier of such entity's and the entity, or any constituent or member, knew or should have known of the commission of the act. The suspension shall be for a period not to exceed three (3) years unless cause is based on a felony conviction for an offense related or associated with fraudulent contracting or misappropriation of funds wherein the suspension shall not exceed seven (7) years.

#### **(b) Causes for Suspension. The causes for suspension include:**

- (1) Conviction for commission of a criminal offense as an incident to obtain or attempting to obtain a public or private contract or subcontract, or in performance of such contract or subcontract;

- (2) Conviction of state or federal statutes of embezzlement, theft, forgery, bribery, falsification or destruction of records, receiving stolen property or other offense indicating a lack of business integrity or business honesty which currently, seriously and directly affects responsibility as a county contractor.
- (3) Conviction of state or federal anti-trust statutes arising out of the solicitation and submission of bids and proposals;
- (4) Violation of contract provisions, as set forth below, of a character which is regarded by the Purchasing Agent to be so serious as to justify suspension action:
  - a. Failure to perform in accordance with the specifications within a time limit provided in a county contract;
  - b. A recent record of failure to perform or unsatisfactory performance in accordance with the terms of one or more contracts; provided, that failure to perform or unsatisfactory performance caused by acts beyond the control of the contractor shall not be considered to be a basis for suspension;
  - c. Material representation of the composition of the ownership or workforce or business entity certified to the county as a minority business enterprise; or
  - d. Falsification of any documents.
- (5) For violation of the ethical standards set forth in Fulton County Code Chapter 9, Code of Ethics.
- (6) Knowing misrepresentation to the county, of the use which a majority owned contractor intends to make a minority business enterprise (a business entity at least 51 percent of which is owned and controlled by minority persons, as defined in Fulton County Code Chapter 6, Article B, Minority Business Enterprise Affirmative Action Program and certified as such by the County) as a subcontractor or a joint venture partner, in performing work under contract with the County.

Failure to fully and truthfully provide the information required, may result in the disqualification of your bid/proposal from consideration or termination of the Contract, once awarded. This document must be completed and included as a part of the bid/proposal package along with other required documents.

[SIGNATURES ON NEXT PAGE]

Under penalty of perjury, I declare that I have examined this certification and all attachments hereto, if applicable, to the best of my knowledge and belief, and all statements contained hereto are true, correct, and complete.

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_

\_\_\_\_\_  
(Legal Name of Offeror) (Date)

\_\_\_\_\_  
(Signature of Authorized Representative) (Date)

\_\_\_\_\_  
(Title)

**FORM E: DISCLOSURE FORM AND QUESTIONNAIRE**

1. Please provide the names and business addresses of each of the Offeror's firm's officers and directors.

For the purposes of this form, the term "Offeror" means an entity that responds to a solicitation for a County contract by either submitting a proposal in response to a Request for Proposal or a Request for Qualification or a Bid in response to an Invitation to Bid. Describe accurately, fully and completely, their respective relationships with said Offeror, including their ownership interests and their anticipated role in the management and operations of said Offeror.

2. Please describe the general development of said Offeror's business during the past five (5) years, or such shorter period of time that said Offeror has been in business.

3. Please state whether any employee, agent or representative of said Offeror who is or will be directly involved in the subject project has or has ever: (i) directly or indirectly had a business relationship with Fulton County; (ii) directly or indirectly received revenues from Fulton County; or (iii) directly or indirectly receives revenues from the result of conducting business on Fulton County property or pursuant to any contract with Fulton County. Please describe in detail any such relationship.

**LITIGATION DISCLOSURE:**

Failure to fully and truthfully disclose the information required, may result in the disqualification of your bid or proposal from consideration or termination of the Contract, once awarded.

1. Please state whether any of the following events have occurred in the last five (5) years with respect to said Offeror. If any answer is yes, explain fully the following:
  - (a) whether a petition under the federal bankruptcy laws or state insolvency laws was filed by or against said Offeror, or a receiver fiscal agent or similar officer was appointed by a court for the business or property of said Offeror;  
  
Circle One:                    YES                    NO
  - (b) whether Offeror was subject of any order, judgment, or decree not subsequently reversed, suspended or vacated by any court of competent jurisdiction, permanently enjoining said Offeror from engaging in any type of business practice, or otherwise eliminating any type of business practice; and  
  
Circle One:                    YES                    NO
  - (c) whether said Offeror's business was the subject of any civil or criminal proceeding in which there was a final adjudication adverse to said Offeror, which directly arose from activities conducted by the business unit or corporate division of said Offeror which submitted a bid or proposal for the subject project. If so please explain.  
  
Circle One:                    YES                    NO
2. Have you or any member of your firm or team to be assigned to this engagement ever been indicted or convicted of a criminal offense within the last five (5) years?  
  
Circle One:                    YES                    NO
3. Have you or any member of your firm or team been terminated (for cause or otherwise) from any work being performed for Fulton County or any other Federal, State or Local Government?  
  
Circle One:                    YES                    NO
4. Have you or any member of your firm or team been involved in any claim or litigation adverse to Fulton County or any other federal, state or local government, or private entity during the last three (3) years?  
  
Circle One:                    YES                    NO
5. Has any offeror, member of offeror's team, or officer of any of them (with respect to any matter involving the business practices or activities of his or her employer), been notified within the five (5) years preceding the date of this offer that any of them are the target of a criminal investigation, grand jury investigation, or civil enforcement proceeding?  
  
Circle One:                    YES                    NO

If you have answered "YES" to any of the above questions, please indicate the name(s) of the person(s), the nature, and the status and/or outcome of the information, indictment, conviction,

termination, claim or litigation, the name of the court and the file or reference number of the case, as applicable. Any such information should be provided on a separate page, attached to this form and submitted with your proposal.

**NOTE: If any response to any question set forth in this questionnaire has been disclosed in any other document, a response may be made by attaching a copy of such disclosure. (For example, said Offeror's most recent filings with the Securities and Exchange Commission ("SEC") may be provided if they are responsive to certain items within the questionnaire.) However, for purposes of clarity, Offeror should correlate its responses with the exhibits by identifying the exhibit and its relevant text.**

Disclosures must specifically address, completely respond and comply with all information requested and fully answer all questions requested by Fulton County. Such disclosure must be submitted at the time of the bid or proposal submission and included as a part of the bid/proposal submitted for this project. Disclosure is required for Offerors, joint venture partners and first-tier subcontractors.

Failure to provide required disclosure, submit officially signed and notarized documents or respond to any and all information requested/required by Fulton County can result in the bid/proposal declared as non-responsive. This document must be completed and included as a part of the bid/proposal package along with other required documents.

[SIGNATURES ON NEXT PAGE]

Under penalty of perjury, I declare that I have examined this questionnaire and all attachments hereto, if applicable, to the best of my knowledge and belief, and all statements contained hereto are true, correct, and complete.

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_

\_\_\_\_\_  
(Legal Name of Proponent) (Date)

\_\_\_\_\_  
(Signature of Authorized Representative) (Date)

\_\_\_\_\_  
(Title)

**Sworn to and subscribed before me,**

This \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_

\_\_\_\_\_  
(Notary Public) (Seal)

Commission Expires \_\_\_\_\_  
(Date)

**FORM F: GEORGIA SECURITY AND IMMIGRATION CONTRACTOR AFFIDAVIT AND  
AGREEMENT**

**Instructions:**

Contractors must attest to compliance with the requirements of O.C.G.A 13-10-91 and the Georgia Department of Labor Rule 300-10-01-.02 by executing the Contractor Affidavit provided.

STATE OF GEORGIA

COUNTY OF FULTON

FORM F: GEORGIA SECURITY AND IMMIGRATION CONTRACTOR AFFIDAVIT AND AGREEMENT

By executing this affidavit, the undersigned contractor verifies its compliance with O.C.G.A. 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services under a contract with **[insert name of prime contractor]**

\_\_\_\_\_ on behalf of **Fulton County Government** has registered with and is participating in a federal work authorization program\* [any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603], in accordance with the applicability provisions and deadlines established in O.C.G.A. 13-10-91.

The undersigned further agrees that, should it employ or contract with any subcontractor(s) in connection with the physical performance of services to this contract with **Fulton County Government**, contractor will secure from such subcontractor(s) similar verification of compliance with O.C.G.A./ 13-10-91 on the Subcontractor Affidavit provided in Rule 300-10-01-.08 or a substantially similar form. Contractor further agrees to maintain records of such compliance and provide a copy of each such verification to the **Fulton County Government** at the time the subcontractor(s) is retained to perform such service.

\_\_\_\_\_  
EEV/Basic Pilot Program\* User Identification Number

\_\_\_\_\_  
BY: Authorized Officer of Agent  
(Insert Subcontract Name)

\_\_\_\_\_  
Title of Authorized Officer or Agent of Subcontractor

\_\_\_\_\_  
Printed Name of Authorized Officer or Agent

Sworn to and subscribed before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

Notary Public: \_\_\_\_\_

County: \_\_\_\_\_

Commission Expires: \_\_\_\_\_

**NOTE:**

\* As of the effective date of O.C.G.A. 13-10-91, the applicable federal work authorization program is the "EEV/Basic Pilot Program" operated by the U.S. Citizenship and Immigration Services Bureau of the U.S. Department of Homeland Security, in conjunction with the Social Security Administration (SSA).

**FORM G: GEORGIA SECURITY AND IMMIGRATION SUBCONTRACTOR AFFIDAVIT**

**Instructions:**

In the event that your company is awarded the contract for this project, and will be utilizing the services of any subcontractor(s) in connection with the physical performance of services pursuant to this contract, the following affidavit must be completed by such subcontractor(s). Your company must provide a copy of each such affidavit to Fulton County Government, Department of Purchasing & Contract Compliance with the proposal submittal.

All subcontractor affidavit(s) shall become a part of the contract and all subcontractor(s) affidavits shall be maintained by your company and available for inspection by Fulton County Government at any time during the term of the contract. All subcontractor(s) affidavit(s) shall become a part of any contractor/subcontractor agreement(s) entered into by your company.

**STATE OF GEORGIA**

**COUNTY OF FULTON**

**FORM G: GEORGIA SECURITY AND IMMIGRATION SUBCONTRACTOR AFFIDAVIT**

By executing this affidavit, the undersigned subcontractor verifies its compliance with O.C.G.A. 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services under a contract with **[insert name of prime contractor]** behalf of **Fulton County Government**

has registered with and is participating in a federal work authorization program\* [any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603], in accordance with the applicability provisions and deadlines established in O.C.G.A. 13-10-91.

\_\_\_\_\_  
EEV/Basic Pilot Program\* User Identification Number

\_\_\_\_\_  
BY: Authorized Officer of Agent  
(Insert Subcontract Name)

\_\_\_\_\_  
Title of Authorized Officer or Agent of Subcontractor

\_\_\_\_\_  
Printed Name of Authorized Officer or Agent

Sworn to and subscribed before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

Notary Public: \_\_\_\_\_

County: \_\_\_\_\_

Commission Expires: \_\_\_\_\_

**NOTE:**

\* As of the effective date of O.C.G.A. 13-10-91, the applicable federal work authorization program is the "EEV/Basic Pilot Program" operated by the U.S. Citizenship and Immigration Services Bureau of the U.S. Department of Homeland Security, in conjunction with the Social Security Administration (SSA).

## CONTRACT COMPLIANCE REQUIREMENTS

### NON-DISCRIMINATION IN PURCHASING AND CONTRACTING

It is the policy of Fulton County Government that discrimination against businesses by reason of the race, color, gender or national origin of the ownership of any such business is prohibited. Furthermore, it is the policy of the Board of Commissioners ("Board") that Fulton County and all vendors and contractors doing business with Fulton County shall provide to all businesses the opportunity to participate in contracting and procurement paid, in whole or in part, with monetary appropriations of the Board without regard to the race, color, gender or national origin of the ownership of any such business. Similarly, it is the policy of the Board that the contracting and procurement practices of Fulton County should not implicate Fulton County as either an active or passive participant in the discriminatory practices engaged in by private contractors or vendors seeking to obtain contracts with Fulton County.

### Implementation of Equal Employment Opportunity (EEO) Policy

The County effectuates Equal Employment Opportunity thru Policy #800-8, Non-Discrimination in Contracting and Procurement. This policy considers racial and gender workforce availability. The availability of each workgroup is derived from the work force demographics set forth in the 2000 Census EEO file prepared by the United States Department of Commerce for the applicable labor pool normally utilized for the contract.

### Monitoring of EEO Policy

Upon award of a contract with Fulton County, the successful bidder/proposer must complete an Equal Employment Opportunity Report (EEO Report), describing the racial and gender make-up of the firm's work force. If the EEO Report indicates that the firm's demographic composition indicates underutilization of employee's of a particular ethnic group for each job category, the firm will be required to submit an aggressive action plan setting forth steps the firm will take to address the identified underutilization.

### DETERMINATION OF GOOD FAITH EFFORTS

During the course of the project, the Prime Contractor shall demonstrate that they have made all efforts reasonably possible to ensure that Minority and Female Business Enterprises (MFBE) have had a full and fair opportunity to compete and win subcontracts on this project. The Prime Contractor is required to include all outreach attempts that would demonstrate a "Good Faith Effort" in the solicitation of sub-consultants/subcontractors.

Written documentation demonstrating the Prime Contractor's outreach efforts to identify, contact, contract with or utilize Minority or Female owned businesses shall include holding pre-bid conferences, publishing advertisements in general circulation media, trade association publications, minority-focused media, and the County's bid board, as well as other efforts.

Include a list of publications where the advertisement was placed as well as a copy of the advertisement. Advertisement shall include at a minimum, scope of work, project location, location(s) of where plans and specifications may be viewed or obtained and trade or scopes of work for which subcontracts are being solicited.

### EQUAL BUSINESS OPPORTUNITY PLAN (EBO PLAN)

In addition to the proposal submission requirements, each vendor **must** submit an Equal Business Opportunity Plan (EBO Plan) with their bid/proposal. The EBO Plan is designed to enhance the utilization

of a particular racial, gender or ethnic group by a bidder/proposer, contractor, or vendor or by Fulton County. The respondent **must** outline a plan of action to encourage and achieve diversity and equality in the available procurement and contracting opportunities with *this solicitation*.

The EBO Plan **must** identify and include:

1. Potential opportunities within the scope of work of *this solicitation* that will allow for participation of racial, gender or ethnic groups.
2. Efforts that will be made by the bidder/proposer to encourage and solicit minority and female business utilization in *this solicitation*.

Fulton County encourages joint ventures, teaming, partnering and mentor-protégé relationships with minority and female businesses in an effort to achieve contracting and procurement diversity.

**Prompt Payment:** The prime contractor **must** certify in writing and **must** document all subcontractors, sub-consultants and suppliers have been promptly paid for work and materials, (less any retainage by the prime contractor prior to receipt of any further progress payments). In the event the prime contractor is unable to pay subcontractors, sub-consultants or suppliers until it has received a progress payment from Fulton County, the prime contractor shall pay all subcontractors, sub-consultants or suppliers funds due from said progress payment within forty-eight (48) hours of receipt of payment from Fulton County. In no event shall a subcontractor, sub-consultant or supplier be paid later than fifteen (15) days as provided for by state law.

#### REQUIRED FORMS AND EBO PLAN

In order to be compliant with the intent and provisions of the Fulton County Non-Discrimination in Purchasing and Contracting Ordinance (99-0960), bidders/proposers **must** submit the following completed documents. Failure to provide this information **shall** result in the proposal being deemed non-responsive.

- Exhibit A – Promise of Non-Discrimination
- Exhibit B – Employment Report
- Exhibit C – Schedule of Intended Subcontractor Utilization
- Exhibit D – Letter of Intent to Perform as a Subcontractor or Provide Materials or Services
- Exhibit E – Declaration Regarding Subcontractors Practices
- Exhibit F – Joint Venture Disclosure Affidavit
- Equal Business Opportunity Plan (EBO Plan). This document is not a form rather a statement created by the bidder/proposer on its company letter head addressing the EBO Plan requirements.
- Exhibit H – First Source Jobs Program Information, Form 2

The following document must be completed as instructed if awarded the project:

- Exhibit G – Prime Contractor’s Subcontractor Utilization Report
- Exhibit H – First Source Jobs Program Agreement, Form 3

All Contract Compliance documents (Exhibits A – H and EBO Plan) are to be placed in a **separate sealed envelope** clearly marked “Contract Compliance”. The EBO Plan must be submitted on company letterhead. These documents are considered part of and should be submitted with the Technical Proposal.

---

**EXHIBIT A – PROMISE OF NON-DISCRIMINATION**

---

“Know all persons by these presents, that I/We ( \_\_\_\_\_ ),  
Name

\_\_\_\_\_ Title Firm Name  
Hereinafter “Company”, in consideration of the privilege to bid on or obtain contracts funded, in whole or in part, by Fulton County, hereby consent, covenant and agree as follows:

- 1) No person shall be excluded from participation in, denied the benefit of, or otherwise discriminated against on the basis of race, color, national origin or gender in connection with any bid submitted to Fulton County for the performance of any resulting there from,
- 2) That it is and shall be the policy of this Company to provide equal opportunity to all businesses seeking to contract or otherwise interested in contracting with this Company without regard to the race, color, gender or national origin of the ownership of this business,
- 3) That the promises of non-discrimination as made and set forth herein shall be continuing in nature and shall remain in full force and effect without interruption,
- 4) That the promise of non-discrimination as made and set forth herein shall be made a part of, and incorporated by reference into, any contract or portion thereof which this Company may hereafter obtain,
- 5) That the failure of this Company to satisfactorily discharge any of the promises of non-discrimination as made and set forth herein shall constitute a material breach of contract entitling the Board to declare the contract in default and to exercise any and all applicable rights and remedies, including but not limited to cancellation of the contract, termination of the contract, suspension and debarment from future contracting opportunities, and withholding and/or forfeiture of compensation due and owing on a contract; and
- 6) That the bidder shall provide such information as may be required by the Director of Contract Compliance pursuant to Section 4.4 of the Fulton County Non-Discrimination in Purchasing and Contracting Ordinance.

**SIGNATURE:** \_\_\_\_\_

**ADDRESS:** \_\_\_\_\_

\_\_\_\_\_  
**TELEPHONE NUMBER:** \_\_\_\_\_

**EXHIBIT B – EMPLOYMENT REPORT**

The demographic employment make-up for the bidder must be identified and submitted with this bid/proposal. In addition, if subcontractors will be utilized by the bidder/proposer to complete this project, then the demographic employment make-up of the subcontractor(s) must be identified and submitted with this bid.

JOB CATEGORIES	TOTAL EMPLOYED		TOTAL MINORITIES		WHITE (Not Hispanic Origin)		BLACK or AFRICAN AMERICAN (Not of Hispanic Origin)		HISPANIC or LATINO		AMERICAN INDIAN or ALASKAN NATIVE (AIAN)		ASIAN		NATIVE HAWAIIAN or OTHER PACIFIC ISLANDER (NHOP)		TWO or MORE RACES	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
EXECUTIVE/SENIOR LEVEL OFFICIALS and MANAGERS																		
FIRST/MID LEVEL OFFICIALS and MANAGERS																		
PROFESSIONALS																		
TECHNICIANS																		
SALES WORKERS																		
ADMINISTRATIVE SUPPORT WORKERS																		
CRAFT WORKERS																		
OPERATIVES																		
LABORERS & HELPERS																		
SERVICE WORKERS																		
<b>TOTAL</b>																		

FIRMS'S NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

TELEPHONE \_\_\_\_\_

This completed form is for (Check only one):

\_\_\_\_\_ Bidder/Proposer

\_\_\_\_\_ Subcontractor

Submitted by: \_\_\_\_\_

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

**EXHIBIT C - SCHEDULE OF INTENDED SUBCONTRACTOR UTILIZATION**

If the bidder/proposer intends to subcontract any portion of this scope of work/service(s), this form **must be** completed and **submitted with the bid/proposal**. All prime bidders/proposers **must** include Letter(s) of Intent (Exhibit D) in the bid document for all subcontractors who will be utilized under the scope of work/services.

**Prime Bidder/Proposer:** \_\_\_\_\_

**ITB/RFP Number:** \_\_\_\_\_

**Project Name or Description of Work/Service(s):** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

1. My firm, as Prime Bidder/Proposer on this scope of work/service(s) is \_\_\_\_\_ is not \_\_\_\_\_ a minority or female owned and controlled business enterprise. (Please indicate below the portion of work, including, percentage of bid/proposal amount that your firm will carry out directly):

\_\_\_\_\_  
\_\_\_\_\_

2. If the Prime Bidder/Proposer is a Joint Venture, please complete Exhibit F: Joint Venture Disclosure Affidavit and attach a copy of the executed Joint Venture Agreement.

3. Sub-Contractors (including suppliers) to be utilized in the performance of this scope of work/service(s), if awarded, are:

SUBCONTRACTOR NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

PHONE: \_\_\_\_\_

CONTACT PERSON: \_\_\_\_\_

ETHNIC GROUP\*: \_\_\_\_\_ COUNTY CERTIFIED\*\* \_\_\_\_\_

WORK TO BE PERFORMED: \_\_\_\_\_

DOLLAR VALUE OF WORK: \$ \_\_\_\_\_ PERCENTAGE VALUE: \_\_\_\_\_ %

**\*Ethnic Groups: African American (AABE); Asian American (ABE); Hispanic American (HBE); Native American (NABE); White Female American (WFBE); \*\*If yes, please attach copy of recent certification.**

SUBCONTRACTOR NAME: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_

PHONE: \_\_\_\_\_  
CONTACT PERSON: \_\_\_\_\_  
ETHNIC GROUP\*: \_\_\_\_\_ COUNTY CERTIFIED\*\* \_\_\_\_\_  
WORK TO BE PERFORMED: \_\_\_\_\_

DOLLAR VALUE OF WORK: \$ \_\_\_\_\_ PERCENTAGE VALUE: \_\_\_\_\_ %

SUBCONTRACTOR NAME: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_

PHONE: \_\_\_\_\_  
CONTACT PERSON: \_\_\_\_\_  
ETHNIC GROUP\*: \_\_\_\_\_ COUNTY CERTIFIED\*\* \_\_\_\_\_  
WORK TO BE PERFORMED: \_\_\_\_\_

DOLLAR VALUE OF WORK: \$ \_\_\_\_\_ PERCENTAGE VALUE: \_\_\_\_\_ %

SUBCONTRACTOR NAME: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_

PHONE: \_\_\_\_\_  
CONTACT PERSON: \_\_\_\_\_  
ETHNIC GROUP\*: \_\_\_\_\_ COUNTY CERTIFIED\*\* \_\_\_\_\_  
WORK TO BE PERFORMED: \_\_\_\_\_

DOLLAR VALUE OF WORK: \$ \_\_\_\_\_ PERCENTAGE VALUE: \_\_\_\_\_ %

SUBCONTRACTOR NAME: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_

PHONE: \_\_\_\_\_  
CONTACT PERSON: \_\_\_\_\_  
ETHNIC GROUP\*: \_\_\_\_\_ COUNTY CERTIFIED\*\* \_\_\_\_\_  
WORK TO BE PERFORMED: \_\_\_\_\_

DOLLAR VALUE OF WORK: \$ \_\_\_\_\_ PERCENTAGE VALUE: \_\_\_\_\_ %

**\*Ethnic Groups: African American (AABE); Asian American (ABE); Hispanic American (HBE); Native American (NABE); White Female American (WFBE); \*\*If yes, please attach copy of recent certification.**

**Total Dollar Value of Subcontractor Agreements: (\$)**

**Total Percentage Value: (%)**

**CERTIFICATION:** The undersigned certifies that he/she has read, understands and agrees to be bound by the Bid/Proposer provisions, including the accompanying Exhibits and other terms and conditions regarding sub-contractor utilization. The undersigned further certifies that he/she is legally authorized by the Bidder/Proposer to make the statement and representation in this Exhibit and that said statements and representations are true and correct to the best of his/her knowledge and belief. The undersigned understands and agrees that if any of the statements and representations are made by the Bidder/Proposer knowing them to be false, or if there is a failure of the intentions, objectives and commitments set forth herein without prior approval of the County, then in any such event the Contractor's acts or failure to act, as the case may be, shall constitute a material breach of the contract, entitling the County to terminate the Contract for default. The right to so terminate shall be in addition to, and in lieu of, any other rights and remedies the County may have for other defaults under the contract.

**Signature:** \_\_\_\_\_ **Title:** \_\_\_\_\_

**Firm or Corporate Name:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Telephone:** (     ) \_\_\_\_\_

**Fax Number:** (     ) \_\_\_\_\_

**Email Address:** \_\_\_\_\_

**EXHIBIT D**

**LETTER OF INTENT TO PERFORM AS A SUBCONTRACTOR  
 OR  
 PROVIDE MATERIALS OR SERVICES**

This form **must** be completed by **ALL** known subcontractor and submitted with the bid/proposal. The Prime Contractor **must** submit Letters of Intent for **ALL** known subcontractors at time of bid submission.

To: \_\_\_\_\_  
 (Name of Prime Contractor Firm)

From: \_\_\_\_\_  
 (Name of Subcontractor Firm)

ITB/RFP Number: \_\_\_\_\_

Project Name: \_\_\_\_\_

The undersigned is prepared to perform the following described work or provide materials or services in connection with the above project (specify in detail particular work items, materials, or services to be performed or provided):

Description of Work	Project Commence Date	Project Completion Date	Estimated Dollar Amount

\_\_\_\_\_  
 (Prime Bidder)

\_\_\_\_\_  
 (Subcontractor)

Signature \_\_\_\_\_

Signature \_\_\_\_\_

Title \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_

Date \_\_\_\_\_

---

**EXHIBIT E - DECLARATION REGARDING SUBCONTRACTING PRACTICES**

If the bidder/proposer **does not intend to subcontract** any portion of the scope of work services(s), this form **must be** completed and submitted with the bid/proposal.

\_\_\_\_\_ hereby declares that it is my/our intent to  
**(Bidder)**

perform 100% of the work required for \_\_\_\_\_  
**(ITB/RFP Number)**

---

**(Description of Work)**

In making this declaration, the bidder/proposer states the following:

1. That the bidder/proposer does not customarily subcontract elements of this type project, and normally performs and has the capability to perform and will perform **all elements** of the work on this project with his/her own current work forces;
2. If it should become necessary to subcontract some portion of the work at a later date, the bidder/proposer will comply with all requirements of the County's Non-Discrimination Ordinance in providing equal opportunities to all firms to subcontract the work. The determination to subcontract some portion of the work at a later date shall be made in good faith and the County reserves the right to require additional information to substantiate a decision made by the bidder/proposer to subcontract work following the award of the contract. Nothing contained in this provision shall be employed to circumvent the spirit and intent of the County's Non-Discrimination Ordinances;
3. The bidder will provide, upon request, information sufficient for the County to verify Item Number one.

**AUTHORIZED COMPANY REPRESENTATIVE**

Name: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Firm: \_\_\_\_\_

Address: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Fax Number: \_\_\_\_\_

Email Address: \_\_\_\_\_

---

**EXHIBIT F - JOINT VENTURE DISCLOSURE AFFIDAVIT**

**ITB/RFP No.** \_\_\_\_\_

**Project Name** \_\_\_\_\_

This form must be completed and submitted with the bid/proposal if a joint venture approach is to be undertaken.

In order to evaluate the extent of small, minority and female business involvement being proposed by a Bidder/Proposer, certain relevant information must be provided prior to contract award. The information requested below is to clearly identify and explain the extent of small business participation in the proposed joint venture. All items must be properly addressed before the business entity can be evaluated.

**1. Firms:**

- 1) **Name of Business:** \_\_\_\_\_  
**Street Address:** \_\_\_\_\_  
**Telephone No.:** \_\_\_\_\_  
**Nature of Business:** \_\_\_\_\_
  
- 2) **Name of Business:** \_\_\_\_\_  
**Street Address:** \_\_\_\_\_  
**Telephone No.:** \_\_\_\_\_  
**Nature of Business:** \_\_\_\_\_
  
- 3) **Name of Business:** \_\_\_\_\_  
**Street Address:** \_\_\_\_\_  
**Telephone No.:** \_\_\_\_\_  
**Nature of Business:** \_\_\_\_\_

**NAME OF JOINT VENTURE (If applicable):** \_\_\_\_\_

**ADDRESS:** \_\_\_\_\_

\_\_\_\_\_  
**PRINCIPAL OFFICE:** \_\_\_\_\_

**OFFICE PHONE:** \_\_\_\_\_



<u>Name</u>	<u>Race</u>	<u>Sex</u>	<u>Decisions</u>	<u>Field Operation</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

In connection with any work that these firms, as a joint venture, might be authorized to perform in connection with above captioned contract, we each do hereby authorize representatives of the Fulton County Department of Contract Compliance, Departments of Purchasing and Contract Compliance, and Finance, under the direction of the County Manger's Office, to examine, from time to time, the books, records and files to the extent that such relate to this County project.

**WE DO SOLEMNLY DECLARE AND AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE CONTENTS OF THE FOREGOING DOCUMENT ARE TRUE AND CORRECT, AND THAT WE ARE AUTHORIZED, ON BEHALF OF THE ABOVE FIRMS, TO MAKE THIS AFFIDAVIT AND GRANT THE ABOVE PRIVILEGE.**

FOR \_\_\_\_\_  
(Company)

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

\_\_\_\_\_  
(Signature of Affiant)

\_\_\_\_\_  
(Printed Name)

\_\_\_\_\_  
(Company)

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

\_\_\_\_\_  
(Signature of Affiant)

\_\_\_\_\_  
(Printed Name)

State of \_\_\_\_\_:

County of \_\_\_\_\_:

On this \_\_\_\_ day of \_\_\_\_\_, 20\_\_, before me, appeared \_\_\_\_\_, the undersigned officer, personally appeared \_\_\_\_\_ known to me to be the person described in the foregoing Affidavit and acknowledges that he (she) executed the same in the capacity therein stated and for the purpose therein contained.

**EXHIBIT – G PRIME CONTRACTOR/SUB-CONTRACTOR UTILIZATION REPORT**

This report **must** be submitted by the **tenth day** of each month, along with a copy of your monthly invoice (schedule of values/payment application) to Contract Compliance. Failure to comply **shall** result in the County commencing proceedings to impose sanctions to the prime contractor, in addition to pursuing any other available legal remedy. Sanctions may include the suspending of any payment or part thereof, termination or cancellation of the contract, and the denial of participation in any future contracts awarded by Fulton County.

<b>REPORTING PERIOD</b>		<b>PROJECT NAME:</b>	
<b>FROM:</b>		<b>PROJECT NUMBER:</b>	
<b>TO:</b>		<b>PROJECT LOCATION:</b>	

<b>PRIME CONTRACTOR</b>		<b>Contract Award Date</b>	<b>Contract Award Amount</b>	<b>Change Order Amount</b>	<b>Contract Period</b>	<b>% Complete to Date</b>
<b>Name:</b>						
<b>Address:</b>						
<b>Telephone #:</b>						

AMOUNT OF REQUISITION THIS PERIOD: \$ \_\_\_\_\_  
 TOTAL AMOUNT REQUISITION TO DATE: \$ \_\_\_\_\_  
 TOTAL AMOUNT REQUISITION TO DATE: \$ \_\_\_\_\_

**SUBCONTRACTOR UTILIZATION** (add additional rows as necessary)

<b>Name of Sub-Contractor</b>	<b>Description of Work</b>	<b>Contract Amount</b>	<b>Amount Paid To Date</b>	<b>Amount Requisition This Period</b>	<b>Contract Period</b>	
					<b>Starting Date</b>	<b>Ending Date</b>
<b>TOTALS</b>						

Executed  
 By: \_\_\_\_\_  
 (Signature) (Printed Name)

Notary: \_\_\_\_\_ Date: \_\_\_\_\_ My Commission Expires: \_\_\_\_\_

---

**Should you have questions regarding any of the documents contained in Section 6, please feel free to contact the Office of Contract Compliance at (404) 612-6300, for further assistance.**

---

**EXHIBIT H**

**FULTON COUNTY FIRST SOURCE JOBS PROGRAM**

**STATEMENT OF POLICY:**

It is the policy of Fulton County Government to provide employment opportunities to the citizens of Fulton County. This policy will apply to all contracts procured through the Department of Purchasing & Contract Compliance valued in excess of \$200,000. The Prime Contractor is expected to utilize the First Source Jobs Program to fill 50% of the entry level jobs which arise as a result of any project funded in whole or in part with County funds with residents of Fulton County.

**PURPOSE:**

The purpose of this policy is to create a pool of employable persons who are residents of Fulton County to be called upon as a source to fill jobs created as a result of any eligible project funded in whole or in part with County funds in order to provide stable economic opportunities for families throughout the County. The First Source Jobs Program will be implemented by the Department of Purchasing & Contract Compliance and the Office of Workforce Development.

**MONITORING POLICY:**

Upon execution of a contract with Fulton County Government, the First Source Jobs Agreement (FSJ Form 2) will become a part of the contract between the bidder/proposer and Fulton County Government. The First Source Jobs Program will be monitored during routine site visits by the Office of Contract Compliance along with the Office of Workforce Development.

**FORM 1**

---

**FULTON COUNTY**

**First Source Jobs Program Information**

**Company Name:** \_\_\_\_\_

**Project Number:** \_\_\_\_\_

**Project Name:** \_\_\_\_\_

**The following entry-level positions will become available as a result of the above referenced contract with Fulton County.**

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_

**Include a job description and all required qualifications for each position listed above.**

**Identify a company representative and contact phone number who will be responsible for coordinating with the First Source Jobs Program:**

**Company Representative:** \_\_\_\_\_

**Phone Number:** \_\_\_\_\_

**Email Address:** \_\_\_\_\_

**FORM 2**

---

**FULTON COUNTY**  
**First Source Jobs Program Agreement**

Awarded Contractor's Name: \_\_\_\_\_

Formal Contract Name: \_\_\_\_\_

RFP/ITB Number: \_\_\_\_\_

Contact Person: \_\_\_\_\_

Contact Phone: \_\_\_\_\_

The contractor listed above agrees to the following:

1. The contractor shall make a good faith effort to fill 50% of the entry level position(s) created by this project using the Fulton County First Source Jobs Program.
2. The contractor shall provide the applicable details of every entry level job in writing within the required form.
3. The contractor shall be expected to present documentation that confirms employment terms to both the employee and Fulton County.

The Office of Contract Compliance will assist with monitoring the participation of First Source Jobs Program employees during routine site visits and report findings to the Office of Workforce Development for confirmation and follow-up. The Office of Workforce Development shall notify the Director of Human Services and the Purchasing Agent of any determination of non-compliance with the requirements of this policy and recommend a resolution or action to be taken.

Upon a determination by the Purchasing Agent and the Director of Human Services that a contractor has failed to comply with any portion of this policy, the County may impose the following:

1. Ten percent (10%) of all future payments under the involved eligible project shall be entitled to be withheld from a contractor that has violated this policy until the contractor complies with the provisions of this policy.

The undersigned agrees to the terms and conditions set forth in this agreement.

Contractor's Official Title: \_\_\_\_\_ Date: \_\_\_\_\_

Contractor's Name: \_\_\_\_\_

Contractor's Signature: \_\_\_\_\_

**FORM 3**

## **Insurance and Risk Management Provisions Regional and Kirkwood Library Roofing Repair Project**

It is Fulton County Government's practice to obtain Certificates of Insurance from our Contractors and Vendors. Insurance must be written by a licensed agent in a company licensed to write insurance in the State of Georgia, with an A.M. Best rating of at least A- VI, subject to final approval by Fulton County. Respondents shall submit with the bid/proposal evidence of insurability satisfactory to Fulton County Government as to form and content. Either of the following forms of evidence is acceptable:

- A letter from an insurance carrier stating that upon your firm/company being the successful Bidder/Respondent that a Certificate of Insurance shall be issued in compliance with the Insurance and Risk Management Provisions outlined below.
- A Certificate of Insurance complying with the Insurance and Risk Management Provisions outlined below (Request for Bid/Proposal number and Project Name, Number and Description must appear on the Certificate of Insurance).
- A combination of a specific policy written with an umbrella policy covering liabilities in excess of the required limits is acceptable to achieve the applicable insurance coverage levels.

Upon award, the Contractor/Vendor must maintain at their expense, insurance with policy limits equal to or greater than the limits described below. Proof of insurance must be provided to Fulton County Government prior to the start of any activities/construction as described in the bid document(s). Any and all Insurance Coverage(s) and Bonds required under the terms and conditions of the contract shall be maintained during the entire length of the contract, including any extensions or renewals thereto, and until all work has been completed to the satisfaction of Fulton County Government.

### **Accordingly the Respondent shall provide a certificate evidencing the following:**

**1. WORKERS COMPENSATION/EMPLOYER'S LIABILITY INSURANCE – STATUTORY (In compliance with the Georgia Workers Compensation Acts, including but not limited to U.S. Longshoremens and Harbor Workers Act and any other State or Federal Acts or Provisions in which jurisdiction may be granted)**

Employer's Liability Insurance	BY ACCIDENT	EACH ACCIDENT	\$500,000
Employer's Liability Insurance	BY DISEASE	POLICY LIMIT	\$500,000
Employer's Liability Insurance	BY DISEASE	EACH EMPLOYEE	\$500,000

**2. COMMERCIAL GENERAL LIABILITY INSURANCE (Including contractual Liability Insurance)**

Bodily Injury and Property Damage Liability (Other than Products/Completed Operations) General Aggregate	Each Occurrence	\$1,000,000
		\$2,000,000
Products\Completed Operation	Aggregate Limit	\$2,000,000
Personal and Advertising Injury	Limits	\$1,000,000
Damage to Rented Premises	Limits	\$100,000

\*\*General Liability Policy to include the following:

- Per Project/Location Aggregate and Completed Operations for 3 Years after final payment.

Cascade and Kirkwood Library Roofing Repairs  
13ITB87798K-JAJ

- Policy to provide evidence of X, C, U coverage.
- Policy to have no exclusion for demolition work.

**3. BUSINESS AUTOMOBILE LIABILITY INSURANCE**

**Combined Single Limits** Each Occurrence \$1,000,000  
(Including operation of non-owned, owned, and hired automobiles).  
\*\*Broadened Pollution Endorsement CA9948 and MCS 90\*\*

**4. UMBRELLA LIABILITY** Per Occurrence/Aggregate \$1,000,000/\$1,000,000

**5. CONTRACTORS POLLUTION LIABILITY** Each Occurrence \$1,000,000

\*Or by endorsement to General Liability Policy for sudden and accidental  
If Pollution provided by General Liability Endorsement and sudden and accidental, Contractor  
Pollution Liability policy would not be a requirement.

**Certificates of Insurance**

Certificates shall state that the policy or policies shall not expire, be cancelled or altered without at least thirty (30) days prior written notice to Fulton County Government. Policies and Certificates of Insurance are to list Fulton County Government as an Additional Insured (except for Workers' Compensation) and shall conform to all terms and conditions (including coverage of the indemnification and hold harmless agreement) contained in the Insurance and Risk Management Provisions. The General Liability Additional Insured language should apply to on-going and completed-operations, using ISO form CG 2010 (11/85 version) or equivalent.

This insurance for the additional insureds shall be as broad as the coverage provided for the named insured Contractor. It shall apply as Primary Insurance before any other insurance or self-insurance, including any deductible, non-contributory, and Waiver of Subrogation provided to the Additional Insureds.

If Fulton County Government shall so request, the Respondent, Contractor or Vendor will furnish the County for its inspection and approval such policies of insurance with all endorsements, or confirmed specimens thereof certified by the insurance company to be true and correct copies.

Additional Insured under the General Liability, Auto Liability, Umbrella Policies (with exception of Workers Compensation and Professional Liability), with no Cross Suits exclusion.

**Important:**

It is understood that **Insurance in no way Limits the Liability of the Contractor/Vendor.**

**USE OF PREMISES**

Contractor/Vendor shall confine its apparatus, the storage of materials and the operations of its workers to limits/requirements indicated by law, ordinance, permits and any restrictions of Fulton County Government and shall not unreasonably encumber the premises with its materials.

**PROTECTION OF PROPERTY**

Contractor/Vendor will adequately protect its own work from damage, will protect Fulton County Government's property from damage or loss and will take all necessary precautions during the progress of the work to protect all persons and the property of others from damage or loss.

Contractor/Vendor shall take all necessary precautions for the safety of employees of the work and shall comply with all applicable provisions of the Federal, State and local safety laws and building codes to prevent accidents or injury to persons on, about, or adjacent to the premises where work is being performed.

Contractor/Vendor shall erect and properly maintain at all times as required by the conditions and progress of the work, all necessary safeguards for the protection of its employees, Fulton County Government employees and the public and shall post all applicable signage and other warning devices to protect against potential hazards for the work being performed.

**INDEMNIFICATION AND HOLD HARMLESS AGREEMENT**

To the fullest extent of the Law, Contractor/Vendor hereby agrees to release, indemnify, defend and hold harmless Fulton County, its Commissioners, officers, employees, subcontractors, successors, assigns and agents, from and against any and all losses (including death), claims, damages, liabilities, costs and expenses (including but not limited to all actions, proceedings, or investigations in respect thereof and any costs of judgments, settlements, court costs, attorney's fees or expenses, regardless of the outcome of any such action, proceeding, or investigation), caused by, relating to, based upon or arising out of any act or omission by Contractor/Vendor, its directors, officers, employees, subcontractors, successors, assigns or agents, or otherwise in connection (directly or indirectly) with its acceptance, or the performance, or nonperformance, of its obligations under these agreements. Such obligations shall not be construed to negate, abridge or otherwise reduce any other rights or obligations of indemnity which would otherwise exist as to any party or person as set forth in this paragraph.

Contractor/Vendor further agrees to protect, defend, indemnify and hold harmless Fulton County, its Commissioners, officers, employees, subcontractors, successors, assigns and agents from and against any and all claims or liability for compensation under the Worker's Compensation Act, Disability Benefits Act, or any other employee benefits act arising out of injuries sustained by any employees of Contractor/Vendor. These indemnities shall not be limited by reason of the listing of any insurance coverage.

CONTRACTOR/VENDOR ACKNOWLEDGES HAVING READ, UNDERSTANDING, AND AGREEING TO COMPLY WITH THIS INDEMNIFICATION AND HOLD HARMLESS AGREEMENT, AND THE REPRESENTATIVE OF THE CONTRACTOR/VENDOR IDENTIFIED BELOW IS AUTHORIZED TO SIGN CONTRACTS ON BEHALF OF THE RESPONDING CONTRACTOR/VENDOR.

COMPANY: \_\_\_\_\_ SIGNATURE: \_\_\_\_\_

Cascade and Kirkwood Library Roofing Repairs  
13ITB87798K-JAJ

NAME: \_\_\_\_\_ TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

**OWNER - CONTRACTOR AGREEMENT**

**[INSERT PROJECT # AND TITLE]**

Contractor: \_\_\_\_\_ Project No. \_\_\_\_\_

Address: \_\_\_\_\_ Telephone: \_\_\_\_\_

Contact: \_\_\_\_\_ Facsimile: \_\_\_\_\_

THIS AGREEMENT is effective as of the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by and between Fulton County, a political subdivision of the State of Georgia (hereinafter called the "County"), and the above named CONTRACTOR in accordance with all provisions of this Construction agreement, consisting of the following Contract Documents:

- Exhibit A: General Conditions
- Exhibit B: Special Conditions (if applicable)
- Exhibit C: Addenda
- Exhibit D: Bid Form
- Exhibit E: Bonds (Bid, Payment & Performance)
- Exhibit F: Scope of Work and Technical Specifications
- Exhibit G: Exhibits
- Exhibit H: Purchasing Forms
- Exhibit I: Office of Contract Compliance Forms
- Exhibit J: Risk Management Insurance Provisions Forms

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 **[INSERT CONTRACT AMOUNT IN WORDS]**, (\$**[INSERT CONTRACT AMOUNT IN NUMBERS]**) 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]**

The Contractor, providing services as an Independent Contractor, shall commence the Work with adequate force and equipment within 10 days from receipt of Notice to Proceed ("NTP") 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. The Contractor shall agree that in the performance of this contract he will comply with all lawful agreements, if any, which the contractor has made with any association, union or other entity, with respect to wages, salaries and working conditions, so as to cause inconvenience, picketing or work stoppage.

*[Insert if applicable 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 \$500.00 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 its prejudice the County may provide written notice of the commencement of the assessment of liquidated damages].*

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 Bid, hereto attached.

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.

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, County's Commissioners, officers, employees, successors, assigns and agents, 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.

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, County's Commissioners, officers, employees, successors, assigns and agents 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]**

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. If any provision of this contract is held to be unenforceable for any reason, the unenforceability thereof shall not affect the remainder of the contract, which shall remain in full force and effect and enforceable in accordance with its terms.

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

[SIGNATURES NEXT PAGE]

SAMPLE CONTRACT

**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:

CONTRACTOR:

**FULTON COUNTY, GEORGIA**

***[Insert Contractor COMPANY NAME]***

\_\_\_\_\_  
John H. Eaves, Commission Chair  
Board of Commissioners

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

ATTEST:

ATTEST:

\_\_\_\_\_  
Mark Massey  
Clerk to the Commission (Seal)

\_\_\_\_\_  
Secretary/  
Assistant Secretary  
  
(Affix Corporate Seal)

APPROVED AS TO FORM:

\_\_\_\_\_  
Office of the County Attorney

APPROVED AS TO CONTENT:

\_\_\_\_\_  
***[Insert Department Head Name]***  
***[Insert Department Head Title]***

END OF SECTION

SAMPLE CONTRACT

**PERFORMANCE BOND**

No contract with Fulton County for work to be done shall be valid for any purpose unless the Contractor provides a Performance Bond with good and sufficient surety payable to, in favor of, and for the protection of Fulton County. The Performance Bond shall be in the amount of 100% of the total contract amount, payable by the terms of the Contract, and shall be written on the following form.

Surety companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business as a surety in Georgia.

Attestation for the corporation must be by the corporate officer; for a partnership by another partner; for an individual by a notary with the corporate seal.

**PERFORMANCE BOND**

**KNOW ALL MEN BY THESE PRESENTS** that \_\_\_\_\_  
(hereinafter called the "Principal") and \_\_\_\_\_  
(hereinafter called the "Surety"), are held and firmly bound unto **FULTON COUNTY**, a political subdivision of the State of Georgia (hereinafter called the "Owner"), its successors and assigns, in the penal sum of \_\_\_\_\_  
[100% of Contract amount], lawful money of the United States of America, for the payment of which the Principal and the Surety bind themselves, their administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

**WHEREAS**, the Principal has entered, or is about to enter, into a certain written contract with the Owner, dated \_\_\_\_\_, which is incorporated herein by reference in its entirety (hereinafter called the "Contract"), for construction-type services of a project known as **Fairburn Hobgood-Palmer Library Roof Replacement**, as more particularly described in the Contract (hereinafter called the "Project");

**NOW, THEREFORE**, the conditions of this obligation are as follows, that if the Principal shall fully and completely perform all the undertakings, covenants, terms, conditions, warranties, and guarantees contained in the Contract, including all modifications, amendments, changes, deletions, additions, and alterations thereto that may hereafter be made, then this obligation shall be void; otherwise it shall remain in full force and effect.

Whenever the Principal shall be, and declared by the Owner to be, in default under the Construction-Type Contract, the Surety shall promptly remedy the default as follows:

1. Complete the Contract in accordance with its terms and conditions; or, at the sole option of the Owner,
2. Obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by the Surety and the Owner of the lowest responsible bidder, arrange for a contract between such bidder and Owner and make available as the work progresses (even though there should be a default or succession of defaults under the Contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the contract price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the penal sum set forth in the first paragraph hereof, as may be adjusted, and the Surety shall make available and pay to the Owner the funds required by this Paragraph prior to the payment of the Owner of the balance of the contract price, or any portion thereof. The term "balance of the contract price," as used in this paragraph, shall mean the total amount payable by the Owner to the Contractor under the Contract, and any amendments thereto, less the amount paid by the Owner to the Contractor; or, at the sole option of the Owner,
3. Allow Owner to complete the work and reimburse the Owner for all reasonable costs incurred in completing the work.

In addition to performing as required in the above paragraphs, the Surety shall indemnify and hold harmless the Owner from any and all losses, liability and damages, claims, judgments, liens, costs and fees of every description, including reasonable attorney's fees, litigation costs and expert witness fees, which the Owner may incur, sustain or suffer by reason of the failure or default on the part of the Principal in the performance of any or all of the terms, provisions, and requirements of the Contract, including any and all amendments and modifications thereto, or

incurred by the Owner in making good any such failure of performance on the part of the Principal.

The Surety shall commence performance of its obligations and undertakings under this Bond promptly and without delay, after written notice from the Owner to the Surety.

The Surety hereby waives notice of any and all modifications, omissions, additions, changes, alterations, extensions of time, changes in payment terms, and any other amendments in or about the Contract, and agrees that the obligations undertaken by this Bond shall not be impaired in any manner by reason of any such modifications, omissions, additions, changes, alterations, extensions of time, change in payment terms, and amendments.

The Surety hereby agrees that this Bond shall be deemed amended automatically and immediately, without formal or separate amendments hereto, upon any amendment to the Contract, so as to bind the Principal and the Surety to the full and faithful performance of the Contract as so amended or modified, and so as to increase the penal sum to the adjusted Contract Price of the Contract.

No right of action shall accrue on this Bond to or for the use of any person, entity or corporation other than the Owner and any other obligee named herein, or their executors, administrators, successors or assigns.

This Bond is intended to comply with O.C.G.A. Section 36-91-1 et seq., and shall be interpreted so; as to comply with; the minimum requirements thereof. However, in the event the express language of this Bond extends protection to; the Owner beyond that contemplated by O.C.G.A. Section 36-91-1 et seq. and O.C.G.A. Section 13-10-1, as amended, or any other statutory law applicable to this Project, then the additional protection shall be enforced in favor of the Owner, whether or not such protection is found in the applicable statutes.

**IN WITNESS WHEREOF** the undersigned have caused this instrument to be executed and their respective corporate seals to be affixed and attested by their duly authorized representatives this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_(SEAL)  
(Principal)

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

Attest:

\_\_\_\_\_  
Secretary

\_\_\_\_\_(SEAL)  
(Surety)

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

Attest:

\_\_\_\_\_  
Secretary

\_\_\_\_\_  
(Address of Surety's Home Office)

\_\_\_\_\_  
(Resident Agent of Surety)

**END OF SECTION**

### **PAYMENT BOND**

No Contract with Fulton County for work to be done shall be valid for any purpose unless the Contractor provides a Payment Bond with good and sufficient surety payable to Fulton County for the use and protection of all sub-contractors and all persons supplying labor, materials, machinery, and equipment in the prosecution of the work provided for in the Contract. The Payment Bond shall be in the amount of 100% of the total contract amount, payable by the terms of the Contract, and shall be written on the following form.

Surety companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State of Georgia.

Attestation for the corporation must be by the corporate officer; for a partnership by another partner; for an individual by a notary with the corporate seal.

## PAYMENT BOND

**KNOW ALL MEN BY THESE PRESENTS** that \_\_\_\_\_  
(hereinafter called the "Principal") and \_\_\_\_\_  
(hereinafter called the "Surety"), are held and firmly bound unto **FULTON COUNTY**, a political subdivision of the State of Georgia (hereinafter called the "Owner"), its successors and assigns as obligee, in the penal sum of \_\_\_\_\_ [100% of Contract amount], lawful money of the United States of America, for the payment of which the Principal and the Surety bind themselves, their administrators, executors, successors and assigns, jointly and severally, firmly by these presents.

**WHEREAS**, the Principal has entered, or is about to enter, into a certain written contract with the Owner, dated \_\_\_\_\_, which is incorporated herein by reference in its entirety (hereinafter called the "Contract"), for construction-type services of a project known as **Cascade Southwest Regional Library and Kirkwood Library Roof Repairs**, as more particularly described in the Contract (hereinafter called the "Project");

**NOW, THEREFORE**, the condition of this obligation is such that if the Principal shall promptly make payment to all persons working on or supplying labor or materials under the Contract, and any amendments thereto, with regard to labor or materials furnished and used in the Project, and with regard to labor or materials furnished but not so used, then this obligation shall be void; but otherwise it shall remain in full force and effect.

1. A "Claimant" shall be defined herein as any subcontractor, person, party, partnership, corporation or the entity furnishing labor, services or materials used, or reasonably required for use, in the performance of the Contract, without regard to whether such labor, services or materials were sold, leased or rented, and without regard to whether such Claimant is or is not in privity of contract with the Principal or any subcontractor performing work on the Project, including, but not limited to, the following labor, services, or materials: water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment directly applicable to the Contract.
2. In the event a Claimant files a lien against the property of the Owner, and the Principal fails or refuses to satisfy or remove it promptly, the Surety shall satisfy or remove the lien promptly upon written notice from the Owner, either by bond or as otherwise provided in the Contract.
3. The Surety hereby waives notice of any and all modifications, omissions, additions, changes, alterations, extensions of time, changes in the payment terms, and any other amendments in or about the Contract and agrees that the obligations undertaken by this Bond shall not be impaired in any manner by reason of any such modifications, omissions, additions, changes, alterations, extensions of time, changes in payment terms, and amendments.
4. The Surety hereby agrees that this Bond shall be deemed amended automatically and immediately, without formal or separate amendments hereto, upon any amendment or modifications to the Contract, so as to bind the Principal and Surety, jointly and severally, to the full payment of any Claimant under the Contract, as amended or modified, provided only that the Surety shall not be liable for more than the penal sum of the Bond, as specified in the first paragraph hereof.
5. This Bond is made for the use and benefit of all persons, firms, and corporations who or which may furnish any materials or perform any labor for or on account of the

- construction-type services to be performed or supplied under the Contract, and any amendments thereto, and they and each of them may sue hereon.
6. No action may be maintained on this Bond after one (1) year from the date the last services, labor, or materials were provided under the Contract by the Claimant prosecuting said action.
  7. This Bond is intended to comply with O.C.G.A. Section 13-10-1, and shall be interpreted so as to comply with the minimum requirements thereof. However, in the event the express language of this Bond extends protection to the Owner beyond that contemplated by O.C.G.A. Section 13-10-1, or any other statutory law applicable to this Project, then the additional protection shall be enforced in favor of the Owner, whether or not such protection is found in the applicable statutes.

**IN WITNESS WHEREOF** the undersigned have caused this instrument to be executed and their respective corporate seals to be affixed and attested by their duly authorized representatives this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_(SEAL)  
(Principal)

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

Attest:

\_\_\_\_\_  
Secretary

\_\_\_\_\_(SEAL)  
(Surety)

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

Attest:

\_\_\_\_\_  
Secretary

\_\_\_\_\_  
(Address of Surety's Home Office)

\_\_\_\_\_  
(Resident Agent of Surety)

**END OF SECTION**

## GENERAL CONDITIONS

### GENERAL CONDITIONS:

#### 00700-1 FAMILIARITY WITH SITE

Execution of this agreement by the Contractor is a representation that the Contractor has visited the site, has become familiar with the local conditions under which the work is to be performed, and has correlated personal observations with the requirements of this agreement.

#### 00700-2 CONTRACT DOCUMENTS

This agreement consists of Owner's invitation for bid, instructions to bidders, bid form, performance bond, payment bond, acknowledgments, the contract, general conditions, special conditions, specifications, plans, drawings, exhibits, addenda, and written change orders.

- A. Notice of Award of Contract:
- B. Execution of Contract Documents

Upon notification of Award of Contract, the Owner shall furnish the Contractor the conformed copies of Contract Documents for execution by the Contractor and the Contractor's surety.

Within ten (10) days after receipt the Contractor shall return all the documents properly executed by the Contractor and the Contractor's surety. Attached to each document shall be an original power-of-attorney for the person executing the bonds for the surety and certificates of insurance for the required insurance coverage.

After receipt of the documents executed by the Contractor and his surety with the power-of-attorney and certificates of insurance, the Owner shall complete the execution of the documents. Distribution of the completed documents will be made upon completion.

Should the Contractor and/or Surety fail to execute the documents within the time specified; the Owner shall have the right to proceed on the Bid Bond accompanying the bid.

If the Owner fails to execute the documents within the time limit specified, the Contractor shall have the right to withdraw the Contractor's bid without penalty.

#### Drawings and Specifications:

The Drawings, Specifications, Contract Documents, and all supplemental documents, are considered essential parts of the Contract, and requirements occurring in one are as binding as though occurring in all. They are intended to define, describe and provide for all Work necessary to complete the Project in an acceptable manner, ready for use, occupancy, or operation by the Owner.

In case of conflict between the Drawings and Specifications, the Specifications shall govern. Figure dimensions on Drawings shall govern over scale dimensions, and detailed Drawings shall govern over general Drawings.

In cases where products or quantities are omitted from the Specifications, the description and quantities shown on the Drawings shall govern.

Any ambiguities or need for clarification of the Drawings or Specifications shall be immediately reported to the Construction Manager in writing. Any such ambiguity or need for clarification shall be handled by the Construction Manager in writing. No clarification of the Drawings and Specifications hereunder by the Construction Manager shall entitle the Contractor to any additional monies unless a Change Order has been processed as provided by "Changes in the Contract" hereof.

Any work done by the Contractor following a discovery of such differing site condition or ambiguity or need for clarification in the Contract Drawings and Specifications prior to a written report to the Construction Manager shall not entitle the Contractor to additional monies and shall be done at the Contractor's risk.

The Construction Manager will furnish the Contractor five (5) copies of the Contract Drawings and the Specifications, one copy of which the Contractor shall have available at all times on the Project site.

### 00700-3 DEFINITIONS

The following terms as used in this agreement are defined as follows to the extent the definitions herein differ or conflict with those in the Instructions for Bidders, Section 00100, the definitions herein shall control.

Alternate bids – the amount stated in the bid or proposal to be added to or deducted from the amount of the base bid or base proposal if the corresponding change in project scope or alternate materials or methods of construction is accepted.

Base bid – the amount of money stated in the bid or proposal as the sum for which the bidder or proposer offers to perform the work.

Change Order - an alteration, addition, or deduction from the original scope of work as defined by the contract documents to address changes or unforeseen conditions necessary for project completion. A written order to the Contractor issued by the County pursuant to Fulton County Policy and Procedures 800-6 for changes in the work within the general scope of the contract documents, adjustment of the contract price, extension of the contract time, or reservation of determination of a time extension.

Construction Manager or Engineer shall mean Director of the Department of Facilities and Transportation; the County authorized representative for this project or his designee.

Contractor shall mean the party of the second part to the Contract Agreement or the authorized and legal representative of such party.

Contract Documents include the Contract Agreement, Contractor's Bid (including all documentation accompanying the Bid and any post-Bid documentation required by the County prior to the Notice of Award), Bonds, all Special

Conditions, General Conditions, Supplementary Conditions, Specifications, Drawings and addenda, together with written amendments, change orders, field orders and the Construction Manager's written interpretations and clarifications issued in accordance with the General Conditions on or after the date of the Contract Agreement.

Shop drawing submittals reviewed in accordance with the General Conditions, geotechnical investigations and soils report and drawings of physical conditions in or relating to existing surface structures at or contiguous to the site are not Contract Documents.

Contract Price - The sum specified in the Agreement to be paid to the Contractor in consideration of the Work.

Contract Time shall mean the number of consecutive calendar days as provided in the Contract Agreement for completion of the Work, to be computed from the date of Notice to Proceed.

Owner or County shall mean Fulton County Government, party of the first part to the Contract Agreement, or its authorized and legal representatives.

Day - A calendar day of twenty-four hours lasting from midnight of one day to midnight the next day.

Design Consultant shall mean the firm or corporation responsible for the detailed design drawings and specifications.

Director - Director of the Department of Facilities and Transportation of Fulton County, Georgia or the designee thereof.

Final Completion shall mean the completion of all work as required in accordance with the terms and conditions of the contract documents.

Liquidated Damages shall mean the amount, stated in the Contract Agreement, which the Contractor agrees to pay to the Owner for each consecutive calendar day beyond the Contract time required to complete the Project or for failing to comply with associated milestones. Liquidated Damages will end upon written notification from the Owner of Final Acceptance of the Project or upon written notification of from the Owner of completion of the milestone.

Notice to Proceed - A written communication issued by the County to the Contractor authorizing it to proceed with the work, establishing the date of commencement and completion of the work, and providing other direction to the Contractor.

Products shall mean materials or equipment permanently incorporated into the work.

Program Manager - Not used in this contract. Delete all references.

Project Manual - The Contract Documents.

Provide shall mean to furnish and install.

Substantial Completion - The date certified by the Construction Manager when all or a part of the work, as established pursuant to General Condition 0700-81, is sufficiently completed in accordance with the requirements of the contract documents so that the identified portion of the work can be utilized for the purposes for which it is intended.

Work or Project - All of the services specified, indicated, shown or contemplated by the contract documents, and furnishing by the Contractor of all materials, equipment, labor, methods, processes, construction and manufacturing materials and equipment, tools, plans, supplies, power, water, transportation and other things necessary to complete such services in accordance with the contract documents to insure a functional and complete facility.

#### 00700-4 CODES

All codes, specifications, and standards referenced in the contract documents shall be the latest editions, amendments and revisions of such referenced standards in effect as of the date of the request for proposals for this contract.

#### 00700-5 REVIEW OF CONTRACT DOCUMENTS

Before making its proposal to the County, and continuously after the execution of the agreement, the Contractor shall carefully study and compare the contract documents and shall at once report to the Construction Manager any error, ambiguity, inconsistency or omission that may be discovered, including any requirement which may be contrary to any law, ordinance, rule, or regulation of any public authority bearing on the performance of the work. By submitting its proposal, the Contractor agrees that the contract documents, along with any supplementary written instructions issued by or through the Construction Manager that have become a part of the contract documents, appear accurate, consistent and complete insofar as can be reasonably determined. If the Contractor has timely reported in writing any error, inconsistency, or omission to the Construction Manager, has properly stopped the affected work until instructed to proceed, and has otherwise followed the instructions of the Construction Manager, the Contractor shall not be liable to the County for any damage resulting from any such error, inconsistency, or omission in the contract documents. The Contractor shall not perform any portion of the work without the contract documents, approved plans, specifications, products and data, or samples for such portion of the work. For purposes of this section "timely" is defined as the time period in which the contractor discovers, or should have discovered, the error, inconsistency, or omission, with the exercise of reasonable diligence.

#### 00700-6 STRICT COMPLIANCE

No observation, inspection, test or approval of the County or Construction Manager shall relieve the Contractor from its obligation to perform the work in strict conformity with the contract documents except as provided in General Condition 00700-48.

### 00700-7 APPLICABLE LAW

All applicable State laws, County ordinances, codes, and rules and regulations of all authorities having jurisdiction over the construction of the project shall apply to this agreement. The Contractor shall comply with the requirements of any Fulton County program concerning non-discrimination in contracting. All work performed within the right of way of the Georgia Department of Transportation and any railroad crossing shall be in accordance with Georgia Department of Transportation regulations, policies and procedures and, where applicable, those of any affected railroad. The Contractor shall comply with all laws, ordinances, codes, rules and regulations bearing on the conduct of the work as specified and the Contractor agrees to indemnify and hold harmless the County, its officers, agents and employees, as well as the Construction Manager and the Program Manager against any claim or liability arising from or based on the violation of any law, ordinance, regulation, order or decree affecting the conduct of the work, whether occasioned by the Contractor, his agents or employees.

### 00700-8 PERMITS, LICENSES AND BONDS

All permits and licenses necessary for the work shall be secured and paid for by the Contractor. If any permit, license or certificate expires or is revoked, terminated, or suspended as a result of any action on the part of the Contractor, the Contractor shall not be entitled to additional compensation or time. The Contractor shall obtain and keep in force at all times performance and payment bonds payable to Fulton County in penal amounts equal to 100% of the Contract price.

### 00700-9 TAXES

- A. The Contractor shall pay all sales, retail, occupational, service, excise, old age benefit and unemployment compensation taxes, consumer, use and other similar taxes, as well as any other taxes or duties on the materials, equipment, and labor for the work provided by the Contractor which are legally enacted by any municipal, county, state or federal authority, department or agency at the time bids are received, whether or not yet effective. The Contractor shall maintain records pertaining to such taxes and levies as well as payment thereof and shall make the same available to the County at all reasonable times for inspection and copying. The Contractor shall apply for any and all tax exemptions which may be applicable and shall timely request from the County such documents and information as may be necessary to obtain such tax exemptions. The County shall have no liability to the Contractor for payment of any tax from which it is exempt.
- B. The Contractor is obligated to comply with all local and State Sales and Use Tax laws. The Contractor shall provide the Owner with documentation to assist the Owner in obtaining sales and/or use tax refunds for eligible machinery and equipment used for the primary purpose of reducing or eliminating air or water pollution as provided for in

Chapter 48-8-3 (36) and (37) of the Official Code of Georgia. All taxes shall be paid by the Contractor. All refunds will accrue to the Owner.

Acceptance of the project as complete and final payment will not be made by the Owner until the Contractor has fully complied with this requirement.

00700-10 DELINQUENT CONTRACTORS

The County shall not pay any claim, debt, demand or account whatsoever to any person firm or corporation who is in arrears to the County for taxes. The County shall be entitled to a counterclaim, backcharge, and offset for any such debt in the amount of taxes in arrears, and no assignment or transfer of such debt after the taxes become due shall affect the right of the County to offset any taxes owed against said debt.

00700-11 LIEN WAIVERS

The Contractor shall furnish the County with evidence that all persons who have performed work or furnished materials pursuant to this agreement have been paid in full prior to submitting its demand for final payment pursuant to this agreement. A final affidavit, Exhibit A, must be completed, and submitted to comply with requirements of 00700-11. In the event that such evidence is not furnished, the County may retain sufficient sums necessary to meet all lawful claims of such laborers and materialmen. The County assumes no obligation nor in any way undertakes to pay such lawful claims from any funds due or that may become due to the Contractor.

00700-12 MEASUREMENT

All items of work to be paid for per unit of measurement shall be subject to inspection, measurement, and confirmation by the Construction Manager.

00700-13 ASSIGNMENT

The Contractor shall not assign any portion of this agreement or moneys due there from (include factoring of receivables) without the prior written consent of the County. The Contractor shall retain personal control and shall provide personal attention to the fulfillment of its obligations pursuant to this agreement. Any assignment without the express written consent of the County shall render this contract voidable at the sole option of the County.

00700-14 FOREIGN CONTRACTORS

In the event that the Contractor is a foreign corporation, partnership, or sole proprietorship, the Contractor hereby irrevocably appoints the Secretary of State of Georgia as its agent for service of all legal process for the purpose of this contract only.

00700-15 INDEMNIFICATION [there are two indemnification clauses, the other is in the Contract Cover Sheet]

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 and the Program 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 or Program 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, the Construction Manager and the Program Manager arising there from.

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 or the Program 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 and the Program 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.

#### 00700-16 SUPERVISION OF WORK AND COORDINATION WITH OTHERS

The Contractor shall supervise and direct the work using the Contractor's best skill and attention. The Contractor shall be solely responsible for all construction methods and procedures and shall coordinate all portions of the work pursuant to the contract subject to the overall coordination of the Construction Manager. All work pursuant to this agreement shall be performed in a skillful and workmanlike manner.

The County reserves the right to perform work related to the Project with the County's own forces and to award separate contracts in connection with other portions of the project, other work on the site under these or similar conditions of the contract, or work which has been extracted from the Contractor's work by the County.

When separate contracts are awarded for different portions of the project or other work on the site, the term "separate contractor" in the Contract Documents in each case shall mean the contractor who executes each separate County Agreement.

The Contractor shall cooperate with the County and separate contractors in arranging the introduction and storage of materials and equipment and execution

of their work, and shall cooperate in coordinating connection of its work with theirs as required by the Contract Documents.

If any part of the Contractor's Work depends for proper execution or results upon the work of the County or any separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Construction Manager any apparent discrepancies or defects in such other work that render it unsuitable for such proper execution and results **within fourteen (14) days** of discovery of such discrepancy or defect. Failure of the Contractor to so report in writing shall constitute an acceptance of the County's or separate contractor's work as fit and proper to receive the Work, except as to any defects which may subsequently become apparent in such work by others.

Any costs caused by defective or untimely work shall be borne by the party responsible therefore.

Should the Contractor wrongfully cause damage to the work or property of the County or to other work or property on the site, including the work of separate contractors, the Contractor shall promptly remedy such damage at the Contractor's expense.

Should the Contractor be caused damage by any other contractor on the Project, by reason of such other contractor's failure to perform properly his contract with the County, no action shall lie against the County or the Construction Manager inasmuch as the parties to this agreement are the only beneficiaries hereof and there are no third party beneficiaries and neither the County nor the Construction Manager shall have liabilities therefore, but the Contractor may assert his claim for damages solely against such other contractor. The Contractor shall not be excused from performance of the contract by reason of any dispute as to damages with any other contractor or third party.

Where the Work of this Contract shall be performed concurrently in the same areas as other construction work, the Contractor shall coordinate with the Construction Manager and the separate contractors in establishing mutually acceptable schedules and procedures that shall permit all jobs to proceed with minimum interference.

If a dispute arises between the Contractor and separate contractors as to their responsibility for cleaning up, the County may clean up and charge the cost thereof to the Contractor or contractors responsible therefore as the County shall determine to be just.

#### 00700-17 ADMINISTRATION OF CONTRACT

The Program Manager and the Construction Manager shall provide administration services as hereinafter described.

For the administration of this Contract, the Construction Manager shall serve as the County's primary representative during design and construction and until final payment to the Contractor is due. The Construction Manager shall advise and consult with the County and the Program Manager. The primary point of contact for the Contractor shall be the Construction Manager. All correspondence from

the Contractor to the County shall be forwarded through the Construction Manager. Likewise, all correspondence and instructions to the Contractor shall be forwarded through the Construction Manager.

The Construction Manager will determine in general that the construction is being performed in accordance with design and engineering requirements, and will endeavor to guard the County against defects and deficiencies in the Work.

The Construction Manager will not be responsible for or have control or charge of construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs in connection with the Work, nor will it be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents. The Construction Manager will not be responsible for or have control or charge over the acts or omissions of the Contractor, its engineers, consultants, subcontractors, or any of their agents or employees, or any other persons performing the Work.

Based on the Construction Manager's observations regarding the Contractor's Applications for Payment, the Construction Manager shall determine the amounts owing to the Contractor, in accordance with the payment terms of the Contract, and shall issue Certificates for Payment in such amount to the County.

The Construction Manager shall render interpretations necessary for the proper execution or progress of the Work. Either party to the Contract may make written requests to the Construction Manager for such interpretations.

Claims, disputes and other matters in question between the Contractor and the County relating to the progress of the Work or the interpretation of the Contract Documents shall be referred to the Construction Manager for interpretation.

All interpretations of the Construction Manager shall be consistent with the intent of and reasonably inferable from the Contract Documents and shall be in writing or in graphic form.

Except as otherwise provided in this Contract, the Construction Manager shall issue a decision on any disagreement concerning a question of fact arising under this Contract. The Construction Manager shall reduce the decision to writing and mail or otherwise furnish a copy thereof to the Contractor. The decision of the Construction Manager shall be final and conclusive unless, within thirty (30) days from the date of receipt of such copy, the Contractor files a written appeal with the Director of Public Works and mails or otherwise furnishes the Construction Manager a copy of such appeal. The decision of the Director of Public Works or the Director's duly authorized representative for the determination of such appeals shall be final and conclusive. Such final decision shall not be pleaded in any suit involving a question of fact arising under this Contract, provided such is not fraudulent, capricious, arbitrary, so grossly erroneous as necessarily implying bad faith, or is not supported by substantial evidence. In connection with any appeal proceeding under this Article, the Contractor shall be afforded an opportunity to be heard and to offer evidence in support of Contractor's appeal. Pending any final decision of a dispute hereunder, the Contractor shall proceed

diligently with the performance of the Contract as directed by the Construction Manager.

The Construction Manager shall have authority to reject Work which does not conform to the Contract Documents. Whenever, in the Construction Manager's opinion, it is considered necessary or advisable for the implementation of the intent of the Contract Documents, the County shall have authority to require special inspection or testing of the Work whether or not such Work be then fabricated, installed or completed. The Contractor shall pay for such special inspection or testing if the Work so inspected or tested is found not to comply with the requirements of the contract; the County shall pay for special inspection and testing if the Work is found to comply with the contract. Neither the Construction Manager's authority to act under this Subparagraph, nor any decision made by the Construction Manager in good faith either to exercise or not to exercise such authority, shall give rise to any duty or responsibility of the Construction Manager to the Contractor, any subcontractor, any of their agents or employees, or any other person performing any of the Work.

The Contractor shall provide such shop drawings, product data, and samples as may be required by the Construction Manager and/or as required by these Contract Documents.

The Construction Manager shall conduct inspections to determine Substantial Completion and Final Completion, and shall receive and forward to the County for review written warranties and related documents required by the Contract Documents and assembled by the Contractor. The Construction Manager shall approve and issue Certificates for Payment upon compliance with Substantial and Final Completion requirements indicated in General Conditions 00700-81, 00700-82, 00700-84 and 00700-85 of this Agreement.

Except as provided in General Condition 00700-48, the Contractor shall not be relieved from the Contractor's obligations to perform the work in accordance with the contract documents by the activities or duties of the County or any of its officers, employees, or agents, including inspections, tests or approvals, required or performed pursuant to this agreement.

#### 00700-18 RESPONSIBILITY FOR ACTS OF EMPLOYEES

The Contractor shall employ only competent and skilled personnel. The Contractor shall, upon demand from the Construction Manager, immediately remove any superintendent, foreman or workman whom the Construction Manager may consider incompetent or undesirable.

The Contractor shall be responsible to the County for the acts and omissions of the Contractor's employees, subcontractors, and agents as well as any other persons performing work pursuant to this agreement for the Contractor.

#### 00700-19 LABOR, MATERIALS, SUPPLIES, AND EQUIPMENT

Unless otherwise provided in this agreement, the Contractor shall make all arrangements with necessary support agencies and utility companies provide and pay for all labor, materials, equipment, tools, construction equipment and

machinery, water, heat, utilities, transportation, and other facilities and services necessary for the execution and completion of the work.

00700-20 DISCIPLINE ON WORK SITE

The Contractor shall enforce strict discipline and good order among its employees and subcontractors at all times during the performance of the work, to include compliance with the Fulton County Drug Free Work Place Policy. The Contractor shall not employ any subcontractor who is not skilled in the task assigned to it. The Construction Manager may, by written notice, require the Contractor to remove from the work any subcontractor or employee deemed by the Construction Manager to be incompetent.

00700-21 HOURS OF OPERATION

All work at the construction site shall be performed during regular business hours of the Fulton County government, except upon the Construction Manager's prior written consent to other work hours. It is further understood that the Contractor's construction schedule is based on a normal 40 hours, five day work week, less Fulton County-recognized holidays. Contractors work schedule shall not violate Fulton County Noise Ordinance by working hours inconsistent with the Fulton County Noise Ordinance. The County's current noise ordinance or other applicable ordinance shall govern. If the Contractor desires to work in excess of this limit, the Contractor shall submit a written request to the Construction Manager, a minimum of five days prior to the desired work date. The Contractor shall be responsible for any additional expenses incurred by the Owner as a result of the extended work hours, including resident inspection overtime. The cost associated with resident inspector overtime shall be deducted from the Contractor monthly payment request.

00700-22 FAMILIARITY WITH WORK CONDITIONS

The Contractor shall take all steps necessary to ascertain the nature and location of the work and the general and local conditions which may affect the work or the cost thereof. The Contractor's failure to fully acquaint itself with the conditions which may affect the work, including, but not limited to conditions relating to transportation, handling, storage of materials, availability of utilities, labor, water, roads, weather, topographic and subsurface conditions, other separate contracts to be entered into by the County relating to the project which may affect the work of the Contractor, applicable provisions of law, and the character and availability of equipment and facilities necessary prior to and during the performance of the work shall not relieve the Contractor of its responsibilities pursuant to this agreement and shall not constitute a basis for an equitable adjustment of the contract terms. The County reserves the right to perform with its own forces or to contract with other entities for other portions of the project work, in which case the Contractor's responsibility to assure its familiarity with work conditions hereunder shall include all coordination with such other contractors and the County necessary to insure that there is no interference between contractors as will delay or hinder any contractor in its prosecution of work on the project. The County assumes no responsibility for any understandings or representations

concerning conditions of the work made by any of its officers, agents, or employees prior to the execution of this agreement.

00700-23 RIGHT OF ENTRY

The County reserves the right to enter the site of the work by such agent, including the Construction Manager, as it may elect for the purpose of inspecting the work or installing such collateral work as the County may desire. The Contractor shall provide safe facilities for such access so that the County and its agents may perform their functions.

00700-24 NOTICES

Any notice, order, instruction, claim or other written communication required pursuant to this agreement shall be deemed to have been delivered or received as follows:

Upon personal delivery to the Contractor, its authorized representative, or the Construction Manager on behalf of the County. Personal delivery may be accomplished by in-person hand delivery or bona fide overnight express service.

Three days after depositing in the United States mail a certified letter addressed to the Contractor or the Construction Manager for the County. For purposes of mailed notices, the County's mailing address shall be 141 Pryor Street, 6th Floor, Atlanta, Georgia 30303, or as the County shall have otherwise notified the Contractor. The Contractor's mailing address shall be the address stated in its proposal or as it shall have most recently notified the Construction Manager in writing.

00700-25 SAFETY

A. SAFETY, HEALTH AND LOSS PREVENTION

The Contractor shall be responsible for implementing a comprehensive project-specific safety, health and loss prevention program and employee substance abuse program for this project. All Sub-Contractors must either implement their own program or follow the Contractor's safety, health and loss prevention program and employee substance abuse program.

The Contractor's safety, health and loss prevention program and employee substance abuse program must meet or exceed all governmental regulations (OSHA, EPA, DOT, State, local), and any other specific Fulton County requirements

B. COUNTY'S SAFETY, HEALTH, AND LOSS PREVENTION PROCESS GUIDELINES AND REQUIREMENTS

The County and its agents reserve the right, but assume no duty, to establish and enforce safety, health, and loss prevention guidelines and to make the appropriate changes in the guidelines, for the protection of persons and property and to review the efficiency of all protective measures taken by the Contractor. The Contractor shall comply with all safety, health, and loss prevention process guidelines and requirements

and changes made by the County or its agent(s). The issuance of any such guidelines or changes by the County or its agent(s) shall not relieve the Contractor of its duties and responsibilities under this Agreement, and the County or its agent(s) shall not thereby assume, nor be deemed to have assumed, any such duties or responsibilities of the Contractor.

C. COMPLIANCE OF WORK, EQUIPMENT, AND PROCEDURES WITH ALL APPLICABLE LAWS and REGULATIONS

All Work, whether performed by the Contractor or its Sub-Contractors of any tier, or anyone directly or indirectly employed by any of them, and all equipment, appliances, machinery, materials, tools and like items incorporated or used in the Work, shall be in compliance with and conform to:

1. All applicable laws, ordinances, rules, regulations and orders of any public, quasi-public or other governmental authority relating to the safety of persons and their protection against injury, specifically including, but in no event limited to, the Federal Occupational Safety and Health Act of 1970, as amended, and all rules and regulations now or hereafter in effect pursuant to said Act.
2. All rules, regulations, and requirements of the County or its agent(s) and its insurance carriers relating there to. In the event of a conflict or differing requirements the more stringent shall govern.

D. PROTECTION OF THE WORK

1. The Contractor shall, throughout the performance of the Work, maintain adequate and continuous protection of all Work and temporary facilities against loss or damage from whatever cause, shall protect the property of the County and third parties from loss or damage from whatever cause arising out of the performance of the Work, and shall comply with the requirements of the County or its agent(s) and its insurance carriers, and with all applicable laws, codes, rules and regulations, (as same may be amended) with respect to the prevention of loss or damage to property as a result of fire or other hazards.
2. The County or its agent(s) may, but shall not be required to, make periodic inspections of the Project work area. In such event, however, the Contractor shall not be relieved of its aforesaid responsibilities and the County or its agent(s) shall not assume, nor shall it be deemed to have assumed, any responsibility otherwise imposed upon the assurance of Contractor by this Agreement.

E. SAFETY EQUIPMENT

1. The Contractor shall provide to each worker on the Project work area the proper safety equipment for the duties being performed by that worker and will not permit any worker on the Project work area who fails or refuses to use the same. The County or its agent shall

have the right, but not the obligation, to order the removal of a worker from the Project work site for his/her failure to comply with safe practices or substance abuse policies.

**F. EMERGENCIES**

1. In any emergency affecting the safety of persons or property, or in the event of a claimed violation of any federal or state safety or health law or regulation, arising out of or in any way connected with the Work or its performance, the Contractor shall act immediately to prevent threatened damage, injury or loss and to remedy said violation. Failing such action the County or its agent(s) may immediately take whatever steps it deems necessary including, but not limited to, suspending the Work as provided in this Agreement.
2. The County or its agent(s) may offset any and all costs or expenses of whatever nature, including attorneys' fees, paid or incurred by the County or its agent(s) (whether such fees are for in-house counsel or counsel retained by the County or its agent), in taking the steps authorized by Section 00700-25(G) (1) above against any sums then or thereafter due to the Contractor. The Contractor shall defend, indemnify and hold the County, its officers, agents, and employees harmless against any and all costs or expenses caused by or arising from the exercise by the County of its authority to act in an emergency as set out herein. If the Contractor shall be entitled to any additional compensation or extension of time change order on account of emergency work not due to the fault or neglect of the Contractor or its Sub-Contractors, such additional compensation or extension of time shall be determined in accordance with General Condition 00700-52 and General Condition 00700-87 of this Agreement.

**G. SUSPENSION OF THE WORK**

1. Should, in the judgment of the County or its agent(s), the Contractor or any Sub-Contractor fail to provide a safe and healthy work place, the County or its agent shall have the right, but not the obligation, to suspend work in the unsafe areas until deficiencies are corrected. All costs of any nature (including, without limitation, overtime pay, liquidated damages or other costs arising out of delays) resulting from the suspension, by whomsoever incurred, shall be borne by the Contractor.
2. Should the Contractor or any Sub-Contractor fail to provide a safe and healthy work place after being formally notified in writing by the County or its agents of such non-compliance, the contract may be terminated following the termination provision of the contract.

**H. CONTRACTOR'S INDEMNITY OF THE COUNTY FOR CONTRACTOR'S NON-COMPLIANCE WITH SAFETY PROGRAM**

1. The Contractor recognizes that it has sole responsibility to assure its Safety Program is implemented and to assure its construction services are safely provided. The Contractor shall indemnify, defend and hold the County and its agents harmless, from and against any and all liability (whether public or private), penalties (contractual or otherwise), losses, damages, costs, attorneys' fees, expenses, causes of action, claims or judgments resulting, either in whole or in part, from any failure of the Contractor, its Sub-Contractors of any tier or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, to comply with the safety requirements of the contract. The Contractor shall not be relieved of its responsibilities under the safety requirements of the Contract should the County or its agent(s) act or fail to act pursuant to its rights hereunder.
2. The Contractor shall not raise as a defense to its obligation to indemnify under this Subparagraph I any failure of those indemnified hereunder to assure Contractor operates safely, it being understood and agreed that no such failure shall relieve the Contractor from its obligation to assure safe operations or from its obligation to so indemnify. The Contractor also hereby waives any rights it may have to seek contribution, either directly or indirectly, from those indemnified hereunder.
3. In any and all claims against those indemnified hereunder by any employee of the Contractor, any Sub-Contractor of any tier or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under this Subparagraph I shall not be limited in any way as to the amount or type of damages, compensation or benefits payable by or for the Contractor or any Sub-Contractor of any tier under any workers' compensation act, disability benefit or other employee benefit acts.

#### 00700-26 BLASTING AND EXCAVATION

The Contractor acknowledges that it is fully aware of the contents and requirements of O.C.G.A. § 25-9-1 through 25-9-12 concerning blasting and excavation near underground gas pipes and facilities and shall fully comply therewith.

#### 00700-27 HIGH VOLTAGE LINES

The Contractor acknowledges that it is fully aware of the contents and requirements O.C.G.A. § 46-3-30 through 46-3-39 concerning safeguards against contact with high voltage lines, and the Contractor shall fully comply with said provisions.

#### 00700-28 SCAFFOLDING AND STAGING

The Contractor acknowledges that it is the person responsible for employing and directing others to perform labor within the meaning of O.C.G.A. § 34-1-1 and agrees to comply with said provisions.

#### 00700-29 CLEAN-UP

The Contractor shall clean up all refuse, rubbish, scrap materials, and debris caused by its operations to the end that the site of the work shall present a neat, orderly and workmanlike appearance at all times.

#### 00700-30 PROTECTION OF WORK

The Contractor shall be responsible for maintenance and protection of the work, which shall include any County-furnished supplies, material, equipment, until final completion of this agreement and acceptance of the work as defined herein. Any portion of the work suffering injury, damage or loss shall be considered defective and shall be corrected or replaced by the Contractor without additional cost to the County.

#### 00700-31 REJECTED WORK

The Contractor shall promptly remove from the project all work rejected by the Construction Manager for failure to comply with the contract documents and the Contractor shall promptly replace and re-execute the work in accordance with the contract documents and without expense to the County. The Contractor shall also bear the expense of making good all work of other Contractors destroyed or damaged by such removal or replacement.

#### 00700-32 DEFECTIVE WORK

If the Contractor defaults or neglects to carry out any portion of the work in accordance with the contract documents, and fails within three days after receipt of written notice from the Construction Manager to commence and continue correction of such default or neglect with diligence and promptness, the County may, after three days following receipt by the Contractor of an additional written notice and without prejudice to any other remedy the County may have, make good such deficiencies and complete all or any portion of any work through such means as the County may select, including the use of a separate Contractor. In such case, an appropriate change order shall be issued deducting from the payments then or thereafter due the Contractor the cost of correcting such deficiencies. In the event the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the County on demand.

The County may, at its option, accept defective or nonconforming work instead of requiring its removal or correction. In such case, a change order shall be issued reducing the price due the contractor to the extent appropriate and equitable. Such contract price adjustment shall be effected whether or not final payment has been made.

### 00700-33 WARRANTY OF NEW MATERIALS

The Contractor warrants to the County that all materials and equipment furnished under this contract will be new unless otherwise specified, and the Contractor further warrants that all work will be of good quality, free from faults and defects, and in conformance with the contract documents. The warranty set forth in this paragraph shall survive final acceptance of the work.

### 00700-34 CONTRACTOR'S WARRANTY OF THE WORK

If within one year after the date of issuance of the certificate of final payment pursuant to General Condition 84, or within such longer period of time as may be prescribed by law or by the term of any applicable special warranty required by the contract documents, any of the work is found to be defective or not in accordance with the contract documents, the Contractor shall correct such work promptly after receipt of written notice from the Construction Manager to do so. This obligation shall survive both final payment for the work and termination of the contract.

### 00700-35 ASSIGNMENT OF MANUFACTURERS' WARRANTIES

Without limiting the responsibility or liability of the Contractor pursuant to this agreement, all warranties given by manufacturers on materials or equipment incorporated in the work are hereby assigned by the Contractor to the County. If requested, the Contractor shall execute formal assignments of said manufacturer's warranties to the County. All such warranties shall be directly enforceable by the County.

### 00700-36 WARRANTIES IMPLIED BY LAW

The warranties contained in this agreement, as well as those warranties implied by law, shall be deemed cumulative and shall not be deemed alternative or exclusive. No one or more of the warranties contained herein shall be deemed to alter or limit any other.

### 00700-37 STOP WORK ORDERS

In the event that the Contractor fails to correct defective work as required by the contract documents or fails to carry out the work in accordance with contract documents, the Construction Manager, in writing, may order the Contractor to stop work until the cause for such order has been eliminated. This right of the County to stop work shall not give rise to any duty on the part of the County or the Construction Manager to execute this right for the benefit of the Contractor or for any other person or entity.

### 00700-38 TERMINATION FOR CAUSE

If the Contractor is adjudged bankrupt, makes a general assignment for the benefit of creditors, suffers the appointment of a receiver on account of its insolvency, fails to supply sufficient properly skilled workers or materials, fails to make prompt payment to subcontractors or materialmen, disregards laws, ordinances, rules, regulations, or orders of any public authority having jurisdiction, fails to diligently prosecute the work, or is otherwise guilty of a

material violation of this agreement and fails within seven days after receipt of written notice to commence and continue correction of such default, neglect, or violation with diligence and promptness, the County may, after seven days following receipt by the Contractor of an additional written notice and without prejudice to any other remedy the County may have, terminate the employment of the Contractor and take possession of the site as well as all materials, equipment, tools, construction equipment and machinery thereon. The County may finish the work by whatever methods the County deems expedient. In such case, the Contractor shall not be entitled to receive any further payment until the work is completed. If the unpaid balance of the contract price exceeds the cost of completing the work, such excess shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor shall pay the difference to the County on demand. This obligation for payment shall survive the termination of the contract. Termination of this agreement pursuant to this paragraph may result in disqualification of the Contractor from bidding on future County contracts.

00700-39 TERMINATION FOR CONVENIENCE

The County may, at any time upon written notice to the Contractor, terminate the whole or any portion of the work for the convenience of the County. The effective date of the terminations shall be provided in the written notice. Said termination shall be without prejudice to any right or remedy of the County provided herein. In addition, in the event this agreement has been terminated due to the default of the Contractor, and if it is later determined that the Contractor was not in default pursuant to the provisions of this agreement at the time of termination, then such termination shall be considered a termination for convenience pursuant to this paragraph.

00700-40 TERMINATION FOR CONVENIENCE - PAYMENT

If the Contract is terminated for convenience by the Owner as provided in this article, Contractor will be paid compensation for those services actually performed as approved by the Owner or his representative. Partially completed tasks will be compensated for based on a signed statement of completion prepared by the Project Manager and submitted to the Contractor which shall itemize each task element and briefly state what work has been completed and what work remains to be done. Contractor shall also be paid for reasonable costs for the orderly filing and closing of the project.

00700-41 TERMINATION FOR CONVENIENCE - PAYMENT LIMITATIONS

Except for normal spoilage, and except to the extent that the County shall have otherwise expressly assumed the risk of loss, there shall be excluded from the amounts payable to the Contractor the fair value, as determined by the Construction Manager, of property which is destroyed, lost, stolen or damaged so as to become undeliverable to the County or to another buyer.

00700-42 COST TO CURE

If the County terminates for cause the whole or any part of the work pursuant to this agreement, then the County may procure upon such terms and in such

manner as the Construction Manager may deem appropriate, supplies or services similar to those so terminated, and the Contractor shall be liable to the County for any excess costs for such similar supplies or services. The Contractor shall continue the performance of this agreement to the extent not terminated hereunder.

#### 00700-43 ATTORNEY'S FEES

Should the Contractor default pursuant to any of the provisions of this agreement, the Contractor and its surety shall pay to the County such reasonable attorney's fees as the County may expend as a result thereof and all costs, expenses, and filing fees incidental thereto.

#### 00700-44 CONTRACTOR'S RESPONSIBILITIES UPON TERMINATION

After receipt of a notice of termination from the County, and except as otherwise directed by the Construction Manager, the Contractor shall:

1. Stop work under the contract on the date and to the extent specified in the notice of termination;
2. Place no further orders or subcontracts for materials, services or facilities, except as may be necessary for completion of such portion of the work under the agreement as is not terminated;
3. Terminate all orders and subcontracts to the extent that they relate to the performance of work terminated by the notice of termination;
4. Assign to the County in the manner, at the times, and to the extent directed by the Construction Manager, all of the rights, title and interest of the Contractor under the orders and subcontracts so terminated, in which case the County shall have the right, at its discretion, to settle or pay any and all claims arising out of the termination of such orders or subcontracts;
5. Settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts with the approval or ratification of the Construction Manager, to the extent the Construction Manager may require, which approval or ratification shall be final for all purposes;
6. Transfer title and deliver to the entity or entities designated by the Construction Manager, in the manner, at the times, and to the extent, if any, directed by the Construction Manager, and to the extent specifically produced or specifically acquired by the Contractor for the performance of such portion of the work as has been terminated:
  - a. The fabricated or un-fabricated parts, work, and progress, partially completed supplies, and equipment, materials, parts, tools, dies, jigs, and other fixtures, completed work, supplies, and other material produced as a part of or

- acquired in connection with the performance of the work terminated by the notice of termination; and
- b. The completed or partially completed plans, drawings, information, and other property to the work.
7. Use its best efforts to sell in the manner, at the times, to the extent, and at the prices directed or authorized by the Construction Manager, any property described in Section 6 of this paragraph, provided, however, that the Contractor shall not be required to extend credit to any buyer and further provided that the proceeds of any such transfer or disposition shall be applied in reduction of any payments to be made by the County to the Contractor pursuant to this agreement.
  8. Complete performance of such part of the work as shall not have been terminated by the notice of termination; and
  9. Take such action as may be necessary, or as the Construction Manager may direct, for the protection and preservation of the property related to the agreement which is in the possession of the Contractor and in which the County has or may acquire an interest.

#### 00700-45 RECORDS

The Contractor shall preserve and make available to the County all of its records, books, documents and other evidence bearing on the costs and expenses of the Contractor and any subcontractor pursuant to this agreement upon three days advance notice to the Contractor.

#### 00700-46 DEDUCTIONS

In arriving at any amount due the Contractor pursuant to the terms of this agreement, there shall be deducted all liquidated damages, advance payments made to the Contractor applicable to the termination portion of the contract, the amount of any claim which the County may have against the Contractor, the amount determined

By the Construction Manager to be necessary to protect the County against loss due to outstanding potential liens or claims, and the agreed price of any materials acquired or sold by the Contractor and not otherwise recovered by or credited to the County.

#### 00700-47 REIMBURSEMENT OF THE COUNTY

In the event of termination, the Contractor shall refund to the County any amount paid by the County to the Contractor in excess of the costs properly reimbursable to the Contractor.

#### 00700-48 SUSPENSION, INTERRUPTION, DELAY, DAMAGES

The Contractor shall be entitled to only those damages and that relief from termination by the County as specifically set forth in this agreement. The Construction Manager may issue a written order requiring the Contractor to

suspend, delay or interrupt all or any part of the work for such period of time as the County may determine to be appropriate for the convenience of the County. If the performance of the work is interrupted for an unreasonable period of time by an act of the County or any of its officers, agents, employees, contractors, or consultants in the administration of this agreement, an equitable adjustment shall be made for any increase in the Contractor's costs of performance and any increase in the time required for performance of the work necessarily caused by the unreasonable suspension, delay, or interruption. Any equitable adjustment shall be reduced to writing and shall constitute a modification to this agreement. In no event, however, shall an equitable adjustment be made to the extent that performance of this agreement would have been suspended, delayed or interrupted by any other cause, including the fault or negligence of the Contractor. No claim for an equitable adjustment pursuant to this paragraph shall be permitted before the Contractor shall have notified the Construction Manager in writing of the act or failure to act involved, and no claim shall be allowed unless asserted in writing to the Construction Manager within ten days after the termination of such suspension, delay or interruption.

#### 00700-49 COMMENCEMENT AND DURATION OF WORK

The County may issue a Notice to Proceed at any time within 120 days following execution of the contract by the County. The Contractor shall commence work pursuant to this agreement within ten days of mailing or delivery of written notice to proceed. The Contractor shall diligently prosecute the work to completion within the time specified therefore in the Agreement. The capacity of the Contractor's construction and manufacturing equipment and plan, sequence and method of operation and forces employed, including management and supervisory personnel, shall be such as to insure completion of the work within the time specified in the Agreement. The Contractor and County hereby agree that the contract time for completion of the work is reasonable taking into consideration the average climatic conditions prevailing in the locality of the work and anticipated work schedules of other contractors whose activities are in conjunction with or may affect the work under this contract.

#### 00700-50 TIME OF THE ESSENCE

All time limits stated in this agreement are of the essence of this contract.

#### 00700-51 IMPACT DAMAGES

Except as specifically provided pursuant to a stop work order or change order, the Contractor shall not be entitled to payment or compensation of any kind from the County for direct or indirect or impact damages including, but not limited to, costs of acceleration arising because of delay, disruption, interference or hindrance from any cause whatsoever whether such delay, disruption, interference or hindrance is reasonable or unreasonable, foreseeable or unforeseeable, or avoidable, provided, however, that this provision shall not preclude the recovery of damages by the Contractor for hindrances or delays due solely to fraud or bad faith on the part of the County, its agents, or employees.

The Contractor shall be entitled only to extensions in the time required for performance of the work as specifically provided in the contract.

00700-52 DELAY

The Contractor may be entitled to an extension of the contract time, but not an increase in the contract price or damages, for delays arising from unforeseeable causes beyond the control and without the fault or negligence of the Contractor or its subcontractors for labor strikes, acts of God, acts of the public enemy, acts of the state, federal or local government in its sovereign capacity, by acts of another separate contractor, or by an act or neglect of the County.

00700-53 INCLEMENT WEATHER

The Contractor shall not be entitled to an extension of the contract time due to normal inclement weather. Unless the Contractor can substantiate to the satisfaction of the Construction Manager that there was greater than normal inclement weather and that such greater than normal inclement weather actually delayed the work, the Contractor shall not be entitled to an extension of time therefore. The following shall be considered the normal inclement weather days for each month listed, and extensions of time shall be granted in increments of not less than one half day only for inclement weather in excess of the days set out.

January	10 days
February	10 days
March	7 days
April	6 days
May	4 days
June	3 days
July	4 days
August	2 days
September	2 days
October	3 days
November	6 days
December	9 days

00700-54 DELAY - NOTICE AND CLAIM

The Contractor shall not receive an extension of time unless a Notice of Delay is filed with the Construction Manager within ten days of the first instance of such delay, disruption, interference or hindrance and a written Statement of the Claim is filed with the Construction Manager within 20 days of the first such instance. In the event that the Contractor fails to comply with this provision, it waives any claim which it may have for an extension of time pursuant to this agreement.

00700-55 STATEMENT OF CLAIM - CONTENTS

The Statement of Claim referenced in Article 00700-54 shall include specific information concerning the nature of the delay, the date of commencement of the

delay, the construction activities affected by the delay, the person or organization responsible for the delay, the anticipated extent of the delay, and any recommended action to avoid or minimize the delay.

00700-56 WORK BEHIND SCHEDULE, REMEDY BY CONTRACTOR

If the work actually in place falls behind the currently updated and approved schedule, and it becomes apparent from the current schedule that work will not be completed within the contract time, the Contractor agrees that it will, as necessary, or as directed by the Construction Manager, take action at no additional cost to the County to improve the progress of the work, including increasing manpower, increasing the number of working hours per shift or shifts per working day, increasing the amount of equipment at the site, and any other measure reasonably required to complete the work in a timely fashion.

00700-57 DILIGENCE

The Contractor's failure to substantially comply with the requirements of the preceding paragraph may be grounds for determination by the County that the Contractor is failing to prosecute the work with such diligence as will insure its completion within the time specified. In such event, the County shall have the right to furnish, from its own forces or by contract, such additional labor and materials as may be required to comply with the schedule after 48 hours written notice to the Contractor, and the Contractor shall be liable for such costs incurred by the County.

00700-58 SET-OFFS

Any monies due to the Contractor pursuant to the preceding paragraph of this agreement may be deducted by the County against monies due from the County to the Contractor.

00700-59 REMEDIES CUMULATIVE

The remedies of the County under Articles 00700-56, 00700-57, and 00700-58 are in addition to and without prejudice to all of the rights and remedies of the County at law, in equity, or contained in this agreement.

00700-60 TITLE TO MATERIALS

No materials or supplies shall be purchased by the Contractor or by any Subcontractor subject to any chattel mortgage or under a conditional sales contract or other agreement by which any interest is retained by the seller. The Contractor hereby warrants that it has good and marketable title to all materials and supplies used by it in the work, and the Contractor further warrants that all materials and supplies shall be free from all liens, claims, or encumbrances at the time of incorporation in the work.

00700-61 INSPECTION OF MATERIALS

All materials and equipment used in the construction of the project shall be subject to adequate inspection and testing in accordance with accepted standards and in accordance with the requirements of the contract documents.

Additional tests performed after the rejection of materials or equipment shall be at the Contractor's expense.

#### 00700-62 CONSTRUCTION MANAGER'S PRESENCE DURING TESTING

All tests performed by the Contractor shall be witnessed by the Construction Manager unless the requirement therefore is waived in writing. The Construction Manager may perform additional tests on materials previously tested by the Contractor, and the Contractor shall furnish samples for this purpose as requested.

#### 00700-63 MATERIALS INCORPORATED IN WORK

The Contractor shall furnish all materials and equipment to be incorporated in the work. All such materials or equipment shall be new and of the highest quality available. Manufactured materials and equipment shall be obtained from sources which are currently manufacturing such materials, except as otherwise specifically approved by the Construction Manager.

#### 00700-64 STORAGE OF MATERIALS

Materials and equipment to be incorporated in the work shall be stored in such a manner as to preserve their quality and fitness for the work and to facilitate inspection.

#### 00700-65 PAYROLL REPORTS

The Contractor may be required to furnish payroll reports to the Construction Manager as required by the Owner Controlled Insurance Program.

#### 00700-66 CONTRACTORS' REPRESENTATIVE

Before beginning work, the Contractor shall notify the Construction Manager in writing of one person within its organization who shall have complete authority to supervise the work, receive orders from the Construction Manager, and represent the Contractor in all matters arising pursuant to this agreement. The Contractor shall not remove its representative without first designating in writing a new representative. The Contractor's representative shall normally be present at or about the site of work while the work is in progress. When neither the Contractor nor its representative is present at the work site, the superintendent, foreman, or other of the Contractor' employee in charge of the work shall be an authorized representative of the Contractor.

#### 00700-67 SPECIALTY SUB-CONTRACTORS

The Contractor may utilize the services of specialty subcontractors on those parts of the project which, under normal contracting practices, are performed by specialty subcontractors. The Contractor shall not award more than seventy-five percent of the work to subcontractors.

#### 00700-68 INSPECTION BY THE CONSTRUCTION MANAGER

All work pursuant to this agreement shall be subject to inspection by the Construction Manager for conformity with contract drawings and specifications.

The Contractor shall give the Construction Manager reasonable advance notice of operations requiring special inspection of a portion of the work.

00700-69 WORK COVERED PRIOR TO CONSTRUCTION MANAGER'S INSPECTION

In the event that work is covered or completed without the approval of the Construction Manager, and such approval is required by the specifications or required in advance by the Construction Manager, the Contractor shall bear all costs involved in inspection notwithstanding conformance of such portion of the work to the contract drawings and specifications.

00700-70 SCHEDULING OF THE WORK

The work of this contract shall be planned, scheduled, executed, and reported as required by the Contract Documents

.00700-71 PROGRESS ESTIMATES

The Contractor shall prepare a written report for the Construction Manager's approval, on County forms, of the total value of work performed and materials and equipment obtained to the date of submission. Such a report must accompany each request for a progress payment and is subject to review and approval by the Construction Manager. Approval of a progress estimate or tendering of a progress payment shall not be considered an approval or acceptance of any work performed, and all estimates and payments shall be subject to correction in subsequent estimates. Progress payments shall be made for all completed activities and for materials suitably stored on-site.

00700-72 PROGRESS PAYMENTS

Upon approval of each monthly estimate of work performed and materials furnished, the Construction Manager shall approve payment to the Contractor for the estimated value of such work, materials, and equipment, less the amount of all prior payments and any liquidated damages. The Contractor will be paid 100 percent, less retainage, of the cost of materials received and properly stored on-site but not incorporated into the work. Payments for materials or equipment stored on the site shall be conditioned upon submission by the Contractor of bills of sale to establish the County's title to such materials or equipment. The Contractor's request for payment shall provide sufficient detail as to the work completed or materials purchased for which payment is requested to permit meaningful review by the Construction Manager.

00700-73 TIME OF PAYMENT

The Contractor will be paid within 45 days following receipt of an approved Progress Estimate. The Contractor expressly agrees that the payment provisions within this Contract shall supersede the rates of interest, payment periods, and contract and subcontract terms provided for under the Georgia Prompt Pay Act, O.C.G.A. §13-11-1 et seq., and that the rates of interest, payment periods, and contract and subcontract terms provided for under the

Prompt Pay Act shall have no application to this Contract. The County shall not be liable for any late payment interest or penalty.

#### 00700-74 RETAINAGE

The County shall retain from each progress payment ten percent of the estimated value of the work performed until the progress payments, including retainage, total 50 percent of the contract price. If a contract includes two or more projects or assignments that have been separately priced and have separate budgets, and the performances of such projects or assignments are not related to or dependent upon the performance of any other, the 50 per cent limit shall be based upon the price for each individual project or assignment. Thereafter, no further retainage shall be withheld so long as the Contractor is making satisfactory progress to insure completion of the work within the time specified therefore. The County may reinstate the ten percent retainage in the event the Construction Manager determines that the Contractor is not making satisfactory progress to complete the work within the time specified in this agreement or in the event that the Construction Manager provides a specific cause for such withholding. The County may also withhold retainage upon substantial completion of the work as provided in O.C.G.A. §13-10-81(c). Interest may be paid upon the retainage in accordance with Georgia law.

#### 00700-75 PAYMENT OF SUBCONTRACTORS

The Contractor shall promptly pay each subcontractor upon the receipt of payment from the County. Such payment shall be made from the amount paid to the Contractor pursuant to the subcontractor's work. The Contractor shall also maintain the records of the percentage retained from payments to the Contractor pursuant to such subcontractor's work. The Contractor shall procure agreements from each subcontractor requiring each subcontractor to pay their subcontractors, agents and employees in a similar manner. The County reserves the right to inquire of any subcontractor, supplier, materialmen, or subconsultant, the status of any indebtedness of the Contractor. The County further reserves the right to require the Contractor to designate on each instrument of payment exceeding \$400.00 to subcontractors, suppliers, materialmen, and subconsultants that such payment is on account of the work under this Contract.

#### 00700-76 COUNTY'S RESPONSIBILITIES TO SUBCONTRACTORS

Neither the County nor the Construction Manager shall have any obligation to pay any subcontractor except as otherwise required by law.

#### 00700-77 PROGRESS PAYMENTS - ACCEPTANCE OF WORK

Certification of progress payments, as well as the actual payment thereof, shall not constitute the County's acceptance of work performed pursuant to this agreement.

00700-78 PAYMENTS IN TRUST

All sums paid to the Contractor pursuant to this agreement are hereby declared to constitute trust funds in the hands of the contractor to be applied first to the payment of claims of subcontractors, laborers, and suppliers arising out of the work, to claims for utilities furnished and taxes imposed, and to the payment of premiums on surety and other bonds and on insurance for any other application.

00700-79 JOINT PAYMENTS

The County reserves the right to issue any progress payment or final payment by check jointly to the Contractor and any subcontractor or supplier.

00700-80 RIGHT TO WITHHOLD PAYMENT

The Construction Manager may decline to approve payment and may withhold payment in whole or in part to the extent reasonable and necessary to protect the County against loss due to defective work, probable or actual third party claims, the Contractor's failure to pay subcontractors or materialmen, reasonable evidence that the work will not be completed within the contract time or contract price or damage to the County or any other contractor on the project.

00700-81 CERTIFICATE OF SUBSTANTIAL COMPLETION

Upon the Contractor's submission of a request for a certificate of Substantial Completion, the Construction Manager shall inspect the work and determine whether the work is Substantially Complete. If the work is Substantially Complete, the Construction Manager shall issue a certificate of Substantial Completion of the work which shall establish the date of Substantial Completion, shall state the responsibilities of the County and the Contractor for security, maintenance, heat, utilities, damage to the work and insurance, and shall fix the time within which the Contractor shall complete the items submitted by the Contractor as requiring correction or further work. The certificate of substantial completion of the work shall be submitted to the County and the Contractor for their written acceptance of the responsibilities assigned to them pursuant to such certificate.

If in the sole opinion of the Construction Manager, the work is not substantially complete, the Construction Manager shall notify the Contractor of such, in writing, and outline requirements to be met to achieve Substantial Completion.

00700-82 PAYMENT UPON SUBSTANTIAL COMPLETION

Upon Substantial Completion of the work and upon application by the Contractor and approval by the Construction Manager, the County shall make payment reflecting 100% work completed, less value of work remaining as determined by Construction Manager and any authorized retainage.

00700-83 COMMENCEMENT OF WARRANTIES

Warranties required by this agreement shall commence on the date of final completion of the project as determined under Article 00700-84 unless otherwise provided in the certificate of Substantial Completion.

00700-84 FINAL PAYMENT - WAIVER OF CLAIMS, DISPUTE OF FINAL PAYMENT

The acceptance of the Substantial Completion payment shall constitute a waiver of all claims by the Contractor except those previously made in writing and identified by the Contractor as unsettled at the time of application for payment at Substantial Completion and except for the retainage sums due at final acceptance. Following the Construction Manager's issuance of the certificate of Substantial Completion and the Contractor's completion of the work pursuant to this agreement, the Contractor shall forward to the Construction Manager a written notice that the work is ready for final inspection and acceptance. If after inspection the Construction Manager certifies that the work is complete and issues written notification of such to the Contractor, the Contractor shall forward to the Construction Manager a final application for payment. The Construction Manager shall issue a certificate for payment, which shall approve final payment to the Contractor and shall establish the date of final completion.

In the event the Contractor timely disputes the amount of the final payment, the amount due the Contractor shall be deemed by the Contractor and the County to be an unliquidated sum and no interest shall accrue or be payable on the sum finally determined to be due to the Contractor for any period prior to final determination of such sum, whether such determination be by agreement of the Contractor and the County or by final judgment of the proper court in the event of litigation between the County and the Contractor. The Contractor specifically waives and renounces any and all rights it may have under O.C.G.A. §13-6-13 and agrees that in the event suit is brought by the Contractor against the County for any sum claimed by the Contractor under the Contract or for any extra or additional work, no interest shall be awarded on any sum found to be due from the County to the Contractor in the final judgment entered in such suit. All final judgments shall draw interest at the legal rate, as specified by law.

00700-85 DOCUMENTATION OF COMPLETION OF WORK

Neither the final payment nor the remaining retainage shall become due until the Contractor submits the following documents to the Construction Manager:

- a. An affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the work have been paid or otherwise satisfied;
- b. The surety's consent to final payment; and
- c. Any other data reasonably required by the County or Construction Manager establishing payment or satisfaction of all such obligations, including releases, waivers of liens, and documents of satisfaction of debts.

In the event that a subcontractor refuses to furnish a release or waiver as required by the County or Construction Manager, the Contractor may furnish a bond satisfactory to the County to indemnify the County against such loss. In the event that any lien or indebtedness remains unsatisfied after all payments are

made, the contractor shall refund to the County all moneys that the County may become compelled to pay in discharging such lien or other indebtedness, including all costs and reasonable attorney's fees.

#### 00700-86 GOVERNING LAW

Each and every provision of this agreement shall be construed in accordance with and governed by Georgia law. The parties acknowledge that this contract is executed in Fulton County, Georgia and that the contract is to be performed in Fulton County, Georgia. Each party hereby consents to the Fulton Superior Court's sole jurisdiction over any dispute which arises as a result of the execution or performance of this agreement, and each party hereby waives any and all objections to venue in the Fulton Superior Court.

#### 00700-87 CHANGES IN THE WORK

##### A. CHANGE ORDERS

1. A Change Order is a written order to the Contractor signed to show the approval and the authorization of the County, issued after execution of the Contract, authorizing a change in the Work and/or an adjustment in the Contract Sum or the Contract Time. Change Orders shall be written using forms designated by the County with Contractor providing supporting documentation as required by the Construction Manager. The Contract Sum and the Contract Time may be changed only by approved Change Order pursuant to Fulton County Procedure 800-6. The amount payable by the Change Order is payment in full for all direct and indirect costs incurred and related to the work under said Change Order, including but not limited to delays, imports, acceleration, disruption and extended overhead. A Change Order signed by the Contractor indicates the Contractor's agreement therewith, including the adjustment in either or both of the Contract Sum or the Contract Time.
2. The County, without invalidating the Contract, may order changes in the Work within the general scope of the Contract as defined herein. The time allowed for performance of the work and the contract price to be paid to the Contractor may be adjusted accordingly.
3. The cost or credit to the County resulting from a change in the Work shall be determined in one or more of the following ways:
  - a. By mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
  - b. By unit prices stated in the Contract Documents or subsequently agreed upon;

- c. By cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
    - d. By the method provided in Subparagraph A4 below.
4. If none of the methods set forth in Subparagraphs 3a, 3b, or 3c above is agreed upon, the Contractor, provided a written order signed by the Construction Manager is received, shall promptly proceed with the Work involved. The cost of such Work shall then be determined by the Construction Manager on basis of the reasonable expenditures and savings of those performing the Work attributable to the change. The cost of the change shall include only the items listed in Subparagraph 5a below, and in the case of either a decrease or an increase in the Contract Sum, an allowance for overhead and profit in accordance with the schedules set forth in Subparagraphs 5b and 6 below shall be applied to the cost or credit.
  - a. In such case, and also under Subparagraph 3a above, the Contractor shall keep and present, in such form as the Construction Manager may prescribe, an itemized accounting of all actual costs expended, together with appropriate supporting data for inclusion in a Change Order.
  - b. All hourly rate charges shall be submitted to the Construction Manager for prior review and approval. All hourly rate charges shall be properly supported as required by the Construction Manager with certified payrolls, or their acceptable equivalent. When authorized to proceed for a given change and actual expenditures have been made prior to execution of a Change Order for the entire change, such actual expenditures may be summarized monthly, and if approved, incorporated into a Change Order. When both additions and credits covering related Work or substitutions are involved in any one change, the allowance for overhead and profit shall be figured on the basis of the net increase or decrease, if any, with respect to that change.
5. In Subparagraphs 3 and 4 above, the items included in "Cost and Overhead" shall be based on the following schedule:
  - a. Unless otherwise provided in the Contract Documents, "Cost" shall be limited to the following: cost of materials incorporated into the Work, including sales tax and cost of delivery; cost of direct labor (labor cost may include a pro rata share of foreman's account of the change) including social security, old age and unemployment insurance, and fringe benefits required by agreement or custom; workers' or workmen's compensation insurance; rental value of

- equipment and machinery; costs for preparing Shop Drawings.
- b. Unless otherwise provided in the Contract Documents, "Overhead" shall include the following: bond and insurance premiums including increase and decreases from change in the Work, supervision, superintendence, construction parking, wages of timekeepers, watchmen and clerks, small tools, consumable supplies, expendables, incidentals, general office expense, the cost of additional reproduction for the Contractor's subcontractors beyond that agreed upon in the Contract Documents, construction parking, any additional costs of craft supervision by the Contractor's or subcontractors' superintendents, and overhead charges which would be customary and expended regardless of the change in the Work due to other overlapping activities which are included as part of the original Contract, and all other expenses not included in "Cost" above.
  - c. In the event that a change is issued by the County which would require the expenditure of substantial amounts of special supervision (beyond the foreman level) by the Contractor, the Contractor may, at the sole direction of the Construction Manager, be allowed to incorporate these charges into the agreement cost for the change.
6. In Subparagraphs 3 and 4 above, the allowance for overhead and profit combined, included in the total cost or credit to the County, shall be based on the following schedule:
- a. For the Contractor, for any work performed by the Contractor's own forces, ten (10) percent of the cost.
  - b. For the Contractor, for any work performed by a Contractor's subcontractor, five (5) percent of the amount due the subcontractor.
  - c. For each subcontractor or sub-subcontractor involved, for any work performed by that subcontractor's or sub-subcontractor's own forces, ten (10) percent of the cost.
  - d. For each subcontractor, for work performed by a sub-subcontractor, five (5) percent of the amount due to the sub-subcontractor.
  - e. Cost to which overhead and profit is to be applied shall be determined in accordance with Subparagraph 5 above unless modified otherwise.
7. In order to facilitate checking of quotations for extras or credits, all proposals or bids, except those so minor that their propriety can be seen by inspection, shall be accompanied by a complete

itemization of costs, including labor cost, materials and subcontracts. Labor and materials shall be itemized in the manner defined in Subparagraph 4 above. Where major cost items are subcontracts, they shall be itemized also. In no case shall a change be approved without such itemization.

8. No payment shall be made for any changes to the contract that are not included in a fully executed Change Order.

B. CONCEALED, UNKNOWN AND DIFFERING CONDITIONS

1. Should concealed conditions be encountered in the performance of the Work below the surface of the ground, or should concealed or unknown conditions in an existing structure be at variance with the conditions indicated by the Contract Documents, or should unknown physical conditions below the surface of the ground or concealed or unknown conditions in an existing structure of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this Contract, be encountered, the Contract Sum and Contract Time shall be equitably adjusted by Change Order upon request by either party made **within twenty (20) days after the first observance** of the conditions. No such request for equitable adjustment shall be valid unless the Contractor complies with this (20) days notice and Subparagraph C.1. below.
2. The Contractor shall promptly, and before such conditions are disturbed, notify the Construction Manager in writing of any claim of concealed, unknown or differing conditions pursuant to this paragraph. The Construction Manager shall authorize the Engineer to investigate the conditions, and if it is found that such conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performance of any part of the Work under this Contract, whether or not changed as a result of such conditions, an equitable adjustment shall be recommended to the Construction Manager.
3. No claim of the Contractor under this clause shall be allowed unless the Contractor has given the notice required in (a) above, prior to disturbing the condition.
4. No claim by the Contractor for an equitable adjustment shall be allowed if asserted after final payment under this Contract.
5. Any materially differing site condition as between what is shown on the Drawings and Specifications and actually found on site shall be immediately reported to the Construction Manager in writing prior to the commencement of Work at the site. Failure of the Contractor to notify the Construction Manager in writing of the differing site

condition prior to performance of Work at the site shall constitute a waiver of any claim for additional monies. Any Change Order necessitated by the differing site condition shall be processed as provided under "Changes in the Contract".

C. REQUESTS FOR ADDITIONAL COST

1. If the Contractor wishes to request an increase in the Contract Sum, the Contractor shall give the Construction Manager written notice thereof within twenty (20) days after the occurrence of the event, or identification of the conditions, giving rise to such request. This notice shall be give by the Contractor before proceeding to execute the Work, except in an emergency endangering life or property in which case the Contractor shall proceed in accordance with Article 00700-25 and Subparagraph A.4 above. No such request shall be valid unless so made within the twenty (20) days specified above. If the County and the Contractor cannot agree on the amount of the adjustment in the Contract Sum, it shall be determined by the Construction Manager. Any change in the Contract Sum resulting from such claim shall be documented by Change Order.
2. If the Contractor claims that addition cost is involved because of, but not limited to (1) any written interpretation pursuant to General Condition 00700-17 of this Agreement, (2) any order by the County to stop the Work pursuant to Articles 00700-25 and 00700-37 of this Agreement where the Contractor was not at fault, or any such order by the Construction Manager as the County's agent, or (3) any written order for a minor change in the Work issued pursuant to Paragraph D below, the Contractor shall submit a request for an increase in the Contract Sum as provided in Subparagraph C.1 above. No such claim shall be valid unless the Contractor complies with Subparagraph C.1 above and approved by the County pursuant to Change Order Policy 800-6.

D. MINOR CHANGES IN THE WORK

The Construction Manager may order minor changes in the Work not involving an adjustment in the Contract Price, extension of the time allowed for performance of the work and not inconsistent with the intent of the Contract Documents. Such changes shall be effected by a written Change Directive issued by the Construction Manager, and shall be binding on the County and the Contractor. The Contractor shall carry out such written orders promptly.

E. BONDS

If any change order results in an increase in the contract price, the contractor shall increase the penal sum of the performance and payment bonds to equal the increased price.

00700-88 DISAGREEMENT WITH ORDERS FOR CHANGE

Contractor's written acceptance of a Change Order or other order for changes shall constitute his final and binding agreement to the provisions thereof and a waiver of all claims in connection therewith, whether direct or consequential in nature. Should Contractor disagree with any order for changes, he may submit a notice of potential claim to the Construction Manager, at such time as the order is set forth in the form of a Change Order. Disagreement with the provisions of an order for changes shall not relieve Contractor of his obligation under Article 00700-87 of this Agreement.

00700-89 NO WAIVER OF REMEDIES

Exercise by the County of any remedy is not exclusive of any other remedy available to County and shall not constitute a waiver of any such other remedies. Failure of the County to exercise any remedy, including breach of contract remedies, shall not preclude the County from exercising such remedies in similar circumstances in the future.

00700-90 LAND AND RIGHTS-OF-WAY

The owner will provide, as indicated in the Contract Documents and prior to Notice to Proceed, the lands upon which the work is to be done, right-of-way for access thereto, and such other lands which are designated for the use of the Contractor. The Contractor shall confine the Contractor's work and all associated activities to the easements and other areas designated for the Contractor's use. The Contractor shall comply with any limits on construction methods and practices which may be required by easement agreements. If, due to some unforeseen reason, the necessary easements are not obtained, the Contractor shall receive an equitable extension of contract time dependent upon the effect on the critical path of the project schedule or the County may terminate the Contract for its convenience.

00700-91 COORDINATION WITH STATE DEPARTMENT OF TRANSPORTATION

No clearing or grading shall be completed by Contractor within the State Department of Transportation (DOT) area under construction. The Contractor must coordinate his construction scheduling with DOT.

If the Contractor begins work before DOT's completion date, he must obtain the approval of DOT before starting work in the area. The state DOT has the right to stop the Contractor's work the DOT area.

The Contractor shall receive no additional compensation or damages resulting from delay or work stoppage from DOT actions or scheduling.

Contractor shall obtain DOT drawings of the DOT, project area for verification of road geometry, storm drains, etc. from Georgia Department of Transportation or Fulton County. The Contractor is responsible for obtaining any pertinent DOT revisions.

I N D E X

<u>SUBJECT</u>	<u>GENERAL CONDITION ARTICLE #</u>
Administration of Contract	17
Applicable Law	7
Assignment	13
Blasting and Excavation	26
Changes	87, 88
Clean Site	29
Codes	4
Commencement of Work	49
Contract Documents	2
Contractor's Representative	66
Defective Work	31, 32
Definitions	3
Delay	51, 52, 54, 55
Extension of Time	52, 53, 54
Familiarity of Time	1, 22
Final Payment	84
Governing Law	86
High Voltage Lines	27
Inclement Weather	53
Indemnification	15
Inspections	23, 61, 62, 68, 69
Interruption	48
Licenses	8
Liquidated Damages	46, 48
New Materials	33, 63
Notices	24
Payment	72, 73, 75
Payment of Subcontractors	75, 76
Payment Upon Substantial Completion	82, 84

---

Payroll Reports	65
Permits	8
Progress Payments	72, 73, 77, 78, 79, 80
Protection of Work	30, 64
Records Inspection	45
Retainage	11, 74
Safety	25
Scaffolding and Staging	28
Scheduling	70
Service of Process	14
Stop Work Order	37
Subcontractors	67, 76
Substantial Completion	81
Suspension	48
Supervision of Work	16, 66
Surety's Responsibility	17
Taxes	9, 10
Termination for Cause	38, 44, 47
Termination for Convenience	39, 40, 41
Time of the Essence	50
Warranties	33, 34, 35, 36
Work Behind Schedule	56

**EXHIBIT A**  
**FINAL AFFIDAVIT**

TO FULTON COUNTY, GEORGIA

I, \_\_\_\_\_, hereby certify that all suppliers of materials, equipment and service, subcontractors, mechanic, and laborers employed by \_\_\_\_\_ or any of his subcontractors in connection with the design and/or construction of \_\_\_\_\_ at Fulton County have been paid and satisfied in full as of \_\_\_\_\_, 200\_\_\_\_, and that there are no outstanding obligations or claims of any kind for the payment of which Fulton County on the above-named project might be liable, or subject to, in any lawful proceeding at law or in equity.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

Personally appeared before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_. \_\_\_\_\_, who under Oath deposes and says that he is \_\_\_\_\_ of the firm of \_\_\_\_\_, that he has read the above statement and that to the best of his knowledge and belief same is an exact true statement.

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
My Commission expires

END OF SECTION

**SPECIAL CONDITIONS**

**There are no special conditions for this project.**

**DIVISION WORK REQUIREMENTS  
CASCADE SOUTHWEST REGIONAL LIBRARY**

SECTION 076200 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Manufactured reglets with counter flashing.
2. Formed roof-drainage sheet metal fabrications.
3. Formed low-slope roof sheet metal fabrications.
4. Formed steep-slope roof sheet metal fabrications.
5. Formed wall sheet metal fabrications.

1.2 PREINSTALLATION MEETINGS

- A. Pre-installation Conference: Conduct conference at Project site.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.

- B. Shop Drawings: For sheet metal flashing and trim.

1. Include plans, elevations, sections, and attachment details.
2. Distinguish between shop and field assembled work.
3. Include identification of finish for each item.
4. Include pattern of seams and details of termination points, expansion joints and expansion-joint covers, direction of expansion, roof-penetration flashing, and connections to adjoining work.

- C. Samples: For each exposed product and for each color and texture specified.

1.4 INFORMATIONAL SUBMITTALS

- A. Product certificates.

- B. Product test reports.

- C. Sample warranty.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance data.

1.6 QUALITY ASSURANCE

- A. Fabricator Qualifications: Employs skilled workers who custom fabricate sheet metal flashing and trim similar to that required for this Project and whose products have a record of successful in-service performance.

1.7 WARRANTY

- A. Special Warranty on Finishes: Manufacturer agrees to repair finish or replace sheet metal flashing and trim that shows evidence of deterioration of factory-applied finishes within specified warranty period.

- 1. Finish Warranty Period: 10years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. General: Sheet metal flashing and trim assemblies shall withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rattle, leak, or loosen, and shall remain watertight.

- B. Sheet Metal Standard for Flashing and Trim: Comply with SMACNA's "Architectural Sheet Metal Manual" requirements for dimensions and profiles shown unless more stringent requirements are indicated.

- 1. Design Pressure: 15 net psf.

- C. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes.

- 1. Temperature Change: 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces

2.2 SHEET METALS

- A. General: Protect mechanical and other finishes on exposed surfaces from damage by applying strippable, temporary protective film before shipping.

- B. Aluminum Sheet: ASTM B 209 (ASTM B 209M), alloy as standard with manufacturer for finish required, with temper as required to suit forming operations and performance required.

- 1. Color: Match existing metal roofing color.

### 2.3 UNDERLAYMENT MATERIALS

- A. Felt: ASTM D 226/D 226M, Type II (No. 30), asphalt-saturated organic felt; nonperforated.

- B. Synthetic Underlayment: Laminated or reinforced, woven polyethylene or polypropylene, synthetic roofing underlayment; bitumen free; slip resistant; suitable for high temperatures over 220 deg F (111 deg C); and complying with physical requirements of ASTM D 226/D 226M for Type I and Type II felts.

- 1. Products: Subject to compliance with requirements, [provide the following] [provide one of the following] [available products that may be incorporated into the Work include, but are not limited to, the following]:

- a. Atlas Roofing Corporation; Summit.
    - b. Engineered Coated Products; Nova-Seal II.
    - c. Kirsch Building Products, LLC; Sharkskin Comp
    - d. SDP Advanced Polymer Products Inc; Palisade.

### 2.4 MISCELLANEOUS MATERIALS

- A. General: Provide materials and types of fasteners, solder, protective coatings, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation and as recommended by manufacturer of primary sheet metal or manufactured item unless otherwise indicated.

- B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads and recommended by manufacturer of primary sheet metal or manufactured item.

- 1. General: Blind fasteners or self-drilling screws, gasketed, with hex-washer head.

- a. Exposed Fasteners: Heads matching color of sheet metal using plastic caps or factory-applied coating. Provide metal-backed EPDM or PVC sealing washers under heads of exposed fasteners bearing on weather side of metal.
    - b. Blind Fasteners: High-strength aluminum or stainless-steel rivets suitable for metal being fastened.
    - c. Spikes and Ferrules: Same material as gutter; with spike with ferrule matching internal gutter width.

- 2. Fasteners for Aluminum Sheet: Aluminum or Series 300 stainless steel.

- C. Sealant Tape: Pressure-sensitive, 100 percent solids, polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch (13 mm) wide and 1/8 inch (3 mm) thick.
- D. Elastomeric Sealant: ASTM C 920, elastomeric polyurethane polymer sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.
- E. Butyl Sealant: ASTM C 1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for hooked-type expansion joints with limited movement.
- F. Bituminous Coating: Cold-applied asphalt emulsion according to ASTM D 1187.
- G. Asphalt Roofing Cement: ASTM D 4586, asbestos free, of consistency required for application.

## 2.5 MANUFACTURED REGLETS

- A. Reglets: Units of type, material, and profile required, formed to provide secure interlocking of separate reglet and counter flashing pieces, and compatible with flashing indicated with factory-mitered and -welded corners and junctions
  - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following] [available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Cheney Flashing Company.
    - b. Fry Reglet Corporation.
    - c. Heckmann Building Products, Inc.
    - d. Hickman, W. P. Company.
    - e. Hohmann & Barnard, Inc.
    - f. Keystone Flashing Company, Inc.
    - g. National Sheet Metal Systems, Inc.
    - h. Sandell Manufacturing.
  - 2. Basis-of-Design Product: Subject to compliance with requirements, comparable product by one of the following:
    - a. Cheney Flashing Company.
    - b. Fry Reglet Corporation.
    - c. Heckmann Building Products, Inc.
    - d. Hickman, W. P. Company.
    - e. Hohmann & Barnard, Inc.
    - f. Keystone Flashing Company, Inc.
    - g. National Sheet Metal Systems, Inc.
    - h. Sandell Manufacturing.
  - 3. Material: Aluminum, 0.024 inch (0.61 mm) thick
  - 4. Finish: Match existing metal roofing color.

## 2.6 FABRICATION, GENERAL

- A. General: Custom fabricate sheet metal flashing and trim to comply with details shown and recommendations in cited sheet metal standard that apply to design, dimensions, geometry, metal thickness, and other characteristics of item required. Fabricate sheet metal flashing and trim in shop to greatest extent possible.

1. Obtain field measurements for accurate fit before shop fabrication.
  2. Form sheet metal flashing and trim to fit substrates without excessive oil canning, buckling, and tool marks; true to line, levels, and slopes; and with exposed edges folded back to form hems.
  3. Conceal fasteners and expansion provisions where possible. Do not use exposed fasteners on faces exposed to view.
- B. Expansion Provisions: Form metal for thermal expansion of exposed flashing and trim.
1. Form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with butyl sealant concealed within joints.
  2. Use lapped expansion joints only where indicated on Drawings.
- C. Sealant Joints: Where movable, nonexpansion-type joints are required, form metal to provide for proper installation of elastomeric sealant according to cited sheet metal standard.
- D. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal.
- E. Fabricate cleats and attachment devices of sizes as recommended by cited sheet metal standard for application, but not less than thickness of metal being secured.
- F. Seams for Aluminum: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with epoxy seam sealer.

## 2.7 LOW-SLOPE ROOF SHEET METAL FABRICATIONS

- A. Roof Edge Flashing (Gravel Stop) and Fascia Cap: Fabricate in minimum 96-inch- (2400-mm-) long, but not exceeding 12-foot- (3.6-m-) long sections. Furnish with 6-inch- (150-mm-) wide, joint cover plates.
1. Fabricate from the Following Materials:
    - a. Copper: 20 oz./sq. ft. (0.68 mm thick).
    - b. Aluminum: 0.050 inch (1.27 mm) thick.
    - c. Stainless Steel: 0.019 inch (0.48 mm) thick.
    - d. Galvanized Steel: 0.028 inch (0.71 mm) thick.
    - e. Aluminum-Zinc Alloy-Coated Steel: 0.028 inch (0.71 mm)] thick.
- B. Copings: Fabricate in minimum 96-inch- (2400-mm-) long, but not exceeding 12-foot- (3.6-m-) long, sections. Fabricate joint plates of same thickness as copings. Furnish with continuous cleats to support edge of external leg and interior leg. Miter corners, fasten and seal watertight.
1. Fabricate from the Following Materials:
    - a. Copper: 24 oz./sq. ft. (0.82 mm thick).
    - b. Aluminum: 0.050 inch (1.27 mm) thick.
    - c. Stainless Steel: 0.025 inch (0.64 mm) thick.

- d. Galvanized Steel: 0.040 inch (1.02 mm) thick.
  - e. Aluminum-Zinc Alloy-Coated Steel: 0.040 inch (1.02 mm) thick.
- C. Base Flashing: Fabricate from the following materials:
- 1. Copper: 20 oz./sq. ft. (0.68 mm thick)
  - 2. Aluminum: 0.040 inch (1.02 mm) thick.
  - 3. Stainless Steel: 0.019 inch (0.48 mm) thick.
  - 4. Galvanized Steel: 0.028 inch (0.71 mm) thick.
  - 5. Aluminum-Zinc Alloy-Coated Steel: 0.028 inch (0.71 mm) thick.
- D. Counter flashing and Flashing Receivers: Fabricate from the following materials:
- 1. Copper: 16 oz./sq. ft. (0.55 mm thick).
  - 2. Aluminum: 0.032 inch (0.81 mm) thick.
  - 3. Stainless Steel: 0.019 inch (0.48 mm) thick.
  - 4. Galvanized Steel: 0.022 inch (0.56 mm) thick.
  - 5. Aluminum-Zinc Alloy-Coated Steel: 0.022 inch (0.56 mm) thick.
- E. Roof-Penetration Flashing: Fabricate from the following materials:
- 1. Copper: 16 oz./sq. ft. (0.55 mm thick).
  - 2. Stainless Steel: 0.019 inch (0.48 mm) thick.
  - 3. Galvanized Steel: 0.028 inch (0.71 mm) thick.
  - 4. Aluminum-Zinc Alloy-Coated Steel: 0.028 inch (0.71 mm) thick.
- F. Roof-Drain Flashing: Fabricate from the following materials:
- 1. Copper: 12 oz./sq. ft. (0.41 mm thick).
  - 2. Stainless Steel: 0.016 inch (0.40 mm) thick.

## 2.8 STEEP-SLOPE ROOF SHEET METAL FABRICATIONS

- A. Apron, Step, Cricket, and Backer Flashing: Fabricate from the following materials:
- 1. Copper: 16 oz./sq. ft. (0.55 mm thick).
  - 2. Aluminum: 0.032 inch (0.81 mm) thick.
  - 3. Stainless Steel: 0.016 inch (0.40 mm) thick.
  - 4. Galvanized Steel: 0.022 inch (0.56 mm) thick.
  - 5. Aluminum-Zinc Alloy-Coated Steel: 0.022 inch (0.56 mm) thick.
- B. Valley Flashing: Fabricate from the following materials:
- 1. Copper: 16 oz./sq. ft. (0.55 mm thick).
  - 2. Stainless Steel: 0.019 inch (0.48 mm) thick.
  - 3. Galvanized Steel: 0.028 inch (0.71 mm) thick.
  - 4. Aluminum-Zinc Alloy-Coated Steel: 0.028 inch (0.71 mm)] thick.
- C. Drip Edges: Fabricate from the following materials:
- 1. Copper: 16 oz./sq. ft. (0.55 mm thick).

2. Aluminum: 0.032 inch (0.81 mm) thick.
3. Stainless Steel: 0.016 inch (0.40 mm) thick.
4. Galvanized Steel: 0.022 inch (0.56 mm) thick.
5. Aluminum-Zinc Alloy-Coated Steel: 0.022 inch (0.56 mm) thick.

D. Eave, Rake, Ridge, and Hip Flashing: Fabricate from the following materials:

1. Copper: 16 oz./sq. ft. (0.55 mm thick).
2. Aluminum: 0.032 inch (0.81 mm) thick.
3. Stainless Steel: 0.016 inch (0.40 mm) thick.
4. Galvanized Steel: 0.022 inch (0.56 mm) thick.
5. Aluminum-Zinc Alloy-Coated Steel: 0.022 inch (0.56 mm) thick.

## 2.9 WALL SHEET METAL FABRICATIONS

A. Through-Wall Flashing: Fabricate continuous flashings in minimum 96-inch- (2400-mm-) long, but not exceeding 12-foot- (3.6-m-) long, sections, under copings, and at shelf angles. Fabricate discontinuous lintel, sill, and similar flashings to extend 6 inches (150 mm) beyond each side of wall openings; and form with 2-inch- (50-mm-) high, end dams. Fabricate from the following materials:

1. Copper: 16 oz./sq. ft. (0.55 mm thick).
2. Stainless Steel: 0.016 inch (0.40 mm) thick.

B. Opening Flashings in Frame Construction: Fabricate head, sill, jamb, and similar flashings to extend 4 inches (100 mm) beyond wall openings. Form head and sill flashing with 2-inch- (50-mm-) high, end dams. Fabricate from the following materials:

1. Copper: 16 oz./sq. ft. (0.55 mm thick).
2. Aluminum: 0.032 inch (0.81 mm) thick.
3. Stainless Steel: 0.016 inch (0.40 mm) thick.
4. Galvanized Steel: 0.022 inch (0.56 mm) thick.
5. Aluminum-Zinc Alloy-Coated Steel: 0.022 inch (0.56 mm) thick.

C. Wall Expansion-Joint Cover: Fabricate from the following materials:

1. Copper: 16 oz./sq. ft. (0.55 mm thick).
2. Aluminum: 0.040 inch (1.02 mm) thick.
3. Stainless Steel: 0.019 inch (0.48 mm) thick.
4. Galvanized Steel: 0.028 inch (0.71 mm) thick.
5. Aluminum-Zinc Alloy-Coated Steel: 0.028 inch (0.71 mm) thick.

## PART 3 - EXECUTION

### 3.1 UNDERLAYMENT INSTALLATION

- A. Felt Underlayment: Install felt underlayment, wrinkle free, using adhesive to minimize use of mechanical fasteners under sheet metal flashing and trim. Apply in shingle fashion to shed water, with lapped joints of not less than 2 inches (50 mm).
- B. Synthetic Underlayment: Install synthetic underlayment, wrinkle free, according to manufacturers' written instructions, and using adhesive where possible to minimize use of mechanical fasteners under sheet metal.
- C. Self-Adhering Sheet Underlayment: Install self-adhering sheet underlayment, wrinkle free. Prime substrate if recommended by underlayment manufacturer. Comply with temperature restrictions of underlayment manufacturer for installation; use primer for installing underlayment at low temperatures. Apply in shingle fashion to shed water, with end laps of not less than 6 inches (150 mm) staggered 24 inches (600 mm) between courses. Overlap side edges not less than 3-1/2 inches (90 mm). Roll laps and edges with roller. Cover underlayment within 14 days.

### 3.2 INSTALLATION, GENERAL

- A. General: Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement. Use fasteners, solder, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.
  - 1. Install sheet metal flashing and trim true to line, levels, and slopes. Provide uniform, neat seams with minimum exposure of solder, welds, and sealant.
  - 2. Install sheet metal flashing and trim to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.
  - 3. Space cleats not more than 12 inches (300 mm) apart. Attach each cleat with at least two fasteners. Bend tabs over fasteners.
  - 4. Install exposed sheet metal flashing and trim with limited oil canning, and free of buckling and tool marks.
  - 5. Torch cutting of sheet metal flashing and trim is not permitted.
- B. Metal Protection: Where dissimilar metals contact each other, or where metal contacts pressure-treated wood or other corrosive substrates, protect against galvanic action or corrosion by painting contact surfaces with bituminous coating or by other permanent separation as recommended by sheet metal manufacturer or cited sheet metal standard.
  - 1. Coat concealed side of uncoated-aluminum sheet metal flashing and trim with bituminous coating where flashing and trim contact wood, ferrous metal, or cementitious construction.
  - 2. Underlayment: Where installing sheet metal flashing and trim directly on cementitious or wood substrates, install underlayment and cover with slip sheet.

- C. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at maximum of 10 feet (3 m) with no joints within 24 inches (600 mm) of corner or intersection.
  - 1. Form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with sealant concealed within joints.
  - 2. Use lapped expansion joints only where indicated on Drawings.
- D. Fasteners: Use fastener sizes that penetrate wood blocking or sheathing not less than 1-1/4 inches (32 mm) for nails and not less than 3/4 inch (19 mm) for wood screws.
- E. Conceal fasteners and expansion provisions where possible in exposed work and locate to minimize possibility of leakage. Cover and seal fasteners and anchors as required for a tight installation.
- F. Seal joints as required for watertight construction. Prepare joints and apply sealants to comply with requirements in Section 079200 "Joint Sealants."
- G. Rivets: Rivet joints in uncoated aluminum where necessary for strength.

### 3.3 ROOF-DRAINAGE SYSTEM INSTALLATION

- A. General: Install sheet metal roof-drainage items to produce complete roof drainage system according to cited sheet metal standard unless otherwise indicated. Coordinate installation of roof perimeter flashing with installation of roof-drainage system.
- B. Parapet Scuppers: Continuously support scupper, set to correct elevation, and seal flanges to interior wall face, over cants or tapered edge strips, and under roofing membrane.
- C. Expansion Joint Covers: Install expansion-joint covers at locations and of configuration indicated. Lap joints minimum of 4 inches (100 mm) in direction of water flow.

### 3.4 ROOF FLASHING INSTALLATION

- A. General: Install sheet metal flashing and trim to comply with performance requirements and cited sheet metal standard. Provide concealed fasteners where possible, and set units true to line, levels, and slopes. Install work with laps, joints, and seams that are permanently watertight and weather resistant.
- B. Roof Edge Flashing: Anchor to resist uplift and outward forces according to recommendations in cited sheet metal standard unless otherwise indicated. Interlock bottom edge of roof edge flashing with continuous cleat anchored to substrate.
- C. Copings: Anchor to resist uplift and outward forces according to recommendations in cited sheet metal standard unless otherwise indicated.
- D. Pipe or Post Counter flashing: Install counter flashing umbrella with close-fitting collar with top edge flared for elastomeric sealant, extending minimum of 4 inches (100 mm) over base flashing. Install stainless-steel draw band and tighten.

- E. Counter flashing: Coordinate installation of counter flashing with installation of base flashing. Insert counter flashing in reglets or receivers and fit tightly to base flashing. Extend counter flashing 4 inches (100 mm) over base flashing. Lap counter flashing joints minimum of 4 inches (100 mm).
- F. Roof-Penetration Flashing: Coordinate installation of roof-penetration flashing with installation of roofing and other items penetrating roof. Seal with elastomeric sealant and clamp flashing to pipes that penetrate roof.

### 3.5 WALL FLASHING INSTALLATION

- A. General: Install sheet metal wall flashing to intercept and exclude penetrating moisture according to cited sheet metal standard unless otherwise indicated. Coordinate installation of wall flashing with installation of wall-opening components such as windows, doors, and louvers.
- B. Reglets: Installation of reglets is specified in Section 077100.
- C. Opening Flashings in Frame Construction: Install continuous head, sill, jamb, and similar flashings to extend 4 inches (100 mm) beyond wall openings.

### 3.6 CLEANING AND PROTECTION

- A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.
- B. Clean and neutralize flux materials. Clean off excess solder.
- C. Clean off excess sealants.
- D. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed unless otherwise indicated in manufacturer's written installation instructions.

END OF SECTION 076200

## SECTION 077100 - ROOF SPECIALTIES

### PART 4 - GENERAL

#### 4.1 SUMMARY

- A. Section Includes:
  - 1. Copings.
  - 2. Roof-edge specialties.
  - 3. Roof-edge drainage systems.
  - 4. Reglets and counter flashings.
- B. Pre-installation Conference: Conduct conference at Project site.

#### 4.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. LEED Submittals:
  - 1. Product Data for Credit MR 4: For products having recycled content, documentation indicating percentages by weight of postconsumer and pre-consumer recycled content. Include statement indicating cost for each product having recycled content.
- C. Shop Drawings: For roof specialties.
  - 1. Include plans, elevations, expansion-joint locations, keyed details, and attachments to other work. Distinguish between plant and field assembled work.
- D. Samples: For each type of roof specialty and for each color and texture specified.

#### 4.3 INFORMATIONAL SUBMITTALS

- A. Product Test Reports: For tests performed by a qualified testing agency.
- B. Sample warranty.

#### 4.4 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For roofing specialties to include in maintenance manuals.

#### 4.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A qualified manufacturer offering products meeting requirements that are FM Approvals listed for specified class.

#### 4.6 WARRANTY

- A. Roofing-System Warranty: Roof specialties are included in warranty provisions.
- B. Special Warranty on Painted Finishes: Manufacturer agrees to repair finish or replace roof specialties that show evidence of deterioration of factory-applied finishes within specified warranty period.
  - 1. Fluoropolymer Finish: Deterioration includes, but is not limited to, the following:
    - a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
    - b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
    - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
  - 2. Finish Warranty Period: 10 years from date of Substantial Completion.

### PART 5 - PRODUCTS

#### 5.1 PERFORMANCE REQUIREMENTS

- A. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes to prevent buckling, opening of joints, hole elongation, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Provide clips that resist rotation and avoid shear stress as a result of thermal movements. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
  - 1. Temperature Change (Range): 120 deg F (67 deg C), ambient; 180 deg F (100 deg C) material surfaces.

#### 5.2 COPINGS

- A. Metal Copings: Manufactured coping system consisting of metal coping cap in section lengths not exceeding 12 feet (3.6 m), concealed anchorage; with corner units, end cap units, and concealed splice plates with finish matching coping caps.
  - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
  - 2. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings comparable product by one of the following:
    - a. Architectural Products Company.

- b. ATAS International, Inc.
  - c. Castle Metal Products.
  - d. Cheney Flashing Company.
  - e. Hickman Company, W. P.
  - f. Merchant & Evans, Inc.
  - g. Metal-Era, Inc.
  - h. Metal-Fab Manufacturing, LLC.
  - i. Perimeter Systems; a division of Southern Aluminum Finishing Company, Inc.
  - j. Petersen Aluminum Corporation.
3. Metallic-Coated Steel Sheet Coping Caps: Zinc-coated (galvanized) steel, nominal 0.028-inch (0.71-mm) thickness.
    - a. Surface: Smooth, flat finish.
    - b. Finish: Three-coat fluoropolymer.
    - c. Color: As indicated by manufacturer's designations.
  4. Formed Aluminum Sheet Coping Caps: Aluminum sheet, 0.040 inch (1.02 mm) thick.
    - a. Surface: Smooth, flat finish.
    - b. Finish: Three-coat fluoropolymer.
  5. Formed Copper Sheet Coping Caps: Copper sheet, 20 oz./sq. ft. (0.68 mm thick).
    - a. Copper Finish: Non-patinated, mill.
  6. Corners: Factory mitered and continuously welded.
  7. Coping-Cap Attachment Method: face leg hooked to continuous cleat with back leg fastener exposed, fabricated from coping-cap material.
    - a. Face-Leg Cleats: Concealed, continuous galvanized-steel sheet.

### 5.3 ROOF-EDGE SPECIALTIES

- A. Canted Roof-Edge Fascia and Gravel Stop: Manufactured, two-piece, roof-edge fascia consisting of compression-clamped metal fascia cover in section lengths not exceeding 12 feet (3.6 m) and a continuous formed galvanized-steel sheet cant, 0.028 inch (0.71 mm) thick, minimum, with extended vertical leg terminating in a drip-edge cleat. Provide matching corner units.
  1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
  2. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
    - a. Architectural Products Company.
    - b. ATAS International, Inc.
    - c. Castle Metal Products.
    - d. Cheney Flashing Company.

- e. Hickman Company, W. P.
  - f. Merchant & Evans, Inc.
  - g. Metal-Era, Inc.
  - h. Metal-Fab Manufacturing, LLC.
  - i. Petersen Aluminum Corporation.
3. Metallic-Coated Steel Sheet Fascia Covers: Zinc-coated (galvanized) steel, nominal 0.028-inch (0.71-mm) thickness.
    - a. Surface: Smooth, flat finish.
    - b. Finish: Three-coat fluoropolymer.
    - c. Color: As indicated by manufacturer's designations.
  4. Formed Aluminum Sheet Fascia Covers: Aluminum sheet, 0.040 inch (1.02 mm) thick.
    - a. Surface: Smooth, flat finish.
    - b. Finish: Three-coat fluoropolymer.
  5. Corners: Factory mitered and continuously welded.
  6. Splice Plates: Concealed, of same material, finish, and shape as fascia cover.
  7. Fascia Accessories: Fascia extenders with continuous hold-down cleats, Wall cap, Soffit trim.
- B. Roof-Edge Fascia: Manufactured, two-piece, roof-edge fascia consisting of snap-on metal fascia cover in section lengths not exceeding 12 feet (3.6 m) and a continuous metal receiver with integral drip-edge cleat to engage fascia cover and secure single-ply roof membrane. Provide matching corner units.
1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
  2. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
    - a. Hickman Company, W. P.
    - b. Metal-Era, Inc.
    - c. Metal-Fab Manufacturing, LLC.
    - d. Perimeter Systems; a division of Southern Aluminum Finishing Company, Inc.
  3. Metallic-Coated Steel Sheet Fascia Covers: Zinc-coated (galvanized) steel, nominal 0.028-inch (0.71-mm) thickness.
    - a. Surface: Smooth, flat finish.
    - b. Finish: Three-coat fluoropolymer.
    - c. Color: As indicated by manufacturer's designations
  4. Formed Aluminum Sheet Fascia Covers: Aluminum sheet, 0.040 inch (1.02 mm) thick.

- a. Surface: Smooth, flat finish.
  - b. Finish: Three-coat fluoropolymer.
5. Corners: Factory mitered and continuously welded.
  6. Splice Plates: Concealed of same material, finish, and shape as fascia cover.
  7. Receiver: Galvanized-steel sheet, nominal 0.040-inch (1.02-mm) thickness.
  8. Fascia Accessories: Fascia extenders with continuous hold-down cleats, Wall cap, Soffit trim
  9. Corners: Factory mitered and continuously welded.
  10. Accessories: Fascia extenders with continuous hold-down cleats, Wall cap, Soffit trim.

#### 5.4 ROOF-EDGE DRAINAGE SYSTEMS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
- B. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
  1. Architectural Products Company.
  2. ATAS International, Inc.
  3. Berger Building Products, Inc.
  4. Castle Metal Products.
  5. Cheney Flashing Company.
  6. CopperCraft by FABRAL; a Euramax company.
  7. Hickman Company, W. P.
  8. Merchant & Evans, Inc.
  9. Metal-Era, Inc.
  10. Metal-Fab Manufacturing, LLC.
  11. Perimeter Systems; a division of Southern Aluminum Finishing Company, Inc.
- C. Zinc-Coated Steel Finish: Three-coat fluoropolymer.
- D. Aluminum Finish: Mill
- E. Copper Finish: Non-patinated, mill.

#### 5.5 REGLETS AND COUNTERFLASHINGS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
- B. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
  1. Castle Metal Products.

2. Cheney Flashing Company.
  3. Fry Reglet Corporation.
  4. Heckmann Building Products Inc.
  5. Hickman Company, W. P.
  6. Keystone Flashing Company, Inc.
  7. Metal-Era, Inc.
  8. Metal-Fab Manufacturing, LLC.
- C. Reglets: Manufactured units formed to provide secure interlocking of separate reglet and counter flashing pieces, from the following exposed metal:
1. Zinc-Coated Steel: Nominal 0.022-inch (0.56-mm) thickness.
  2. Formed Aluminum: 0.024 inch (0.61 mm) thick.
  3. Stainless Steel: 0.019 inch (0.48 mm) thick.
  4. Copper: 16 oz./sq. ft. (0.55 mm thick).
  5. Corners: Factory mitered and continuously welded.
  6. Surface-Mounted Type: Provide reglets with slotted holes for fastening to substrate, with neoprene or other suitable weatherproofing washers, and with channel for sealant at top edge.
  7. Stucco Type, Embedded: Provide reglets with upturned fastening flange and extension leg of length to match thickness of applied finish materials.
- D. Counter flashings: Manufactured units of heights to overlap top edges of base flashings by 4 inches (100 mm) and in lengths not exceeding 12 feet (3.6 m) designed to snap into reglets or through-wall-flashing receiver and compress against base flashings with joints lapped, from the following exposed metal:
1. Zinc-Coated Steel: Nominal 0.022-inch (0.56-mm) thickness.
  2. Formed Aluminum: 0.024 inch (0.61 mm) thick.
  3. Stainless Steel: 0.019 inch (0.48 mm) thick.
  4. Copper: 16 oz./sq. ft. (0.55 mm thick).
- E. Accessories:
1. Flexible-Flashing Retainer: Provide resilient plastic or rubber accessory to secure flexible flashing in reglet where clearance does not permit use of standard metal counter flashing or where reglet is provided separate from metal counter flashing.
  2. Counter flashing Wind-Restraint Clips: Provide clips to be installed before counter flashing to prevent wind uplift of counter flashing lower edge.
- F. Zinc-Coated Steel Finish: Three-coat fluoropolymer
- G. Aluminum Finish: Three-coat fluoropolymer.
- H. Stainless-Steel Finish: No. 2B (bright, cold rolled, unpolished).
- I. Copper Finish: Non-patinated, mill

## 5.6 MATERIALS

- A. Zinc-Coated (Galvanized) Steel Sheet: ASTM A 653/A 653M, G90 (Z275) coating designation.
- B. Aluminum Sheet: ASTM B 209 (ASTM B 209M), alloy as standard with manufacturer for finish required, with temper to suit forming operations and performance required.
- C. Stainless-Steel Sheet: ASTM A 240/A 240M or ASTM A 666, Type 304.
- D. Copper Sheet: ASTM B 370, cold-rolled copper sheet, H00 or H01 temper.

#### 5.7 UNDERLAYMENT MATERIALS

- A. Self-Adhering, High-Temperature Sheet: Minimum 30 to 40 mils (0.76 to 1.0 mm) thick, consisting of slip-resisting polyethylene-film top surface laminated to layer of butyl or SBS-modified asphalt adhesive, with release-paper backing; cold applied. Provide primer when recommended by underlayment manufacturer.
  - 1. Thermal Stability: ASTM D 1970/D 1970M; stable after testing at 240 deg F (116 deg C).
  - 2. Low-Temperature Flexibility: ASTM D 1970/D 1970M; passes after testing at minus 20 deg F (29 deg C).
  - 3. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Carlisle Coatings & Waterproofing; CCW WIP 300HT.
    - b. Grace Construction Products, a unit of W. R. Grace & Co.; [Grace Ice and Water Shield HT] [Ultra].
    - c. Henry Company; Blueskin PE200 HT.
    - d. Metal-Fab Manufacturing, LLC; MetShield.
    - e. Owens Corning; WeatherLock Metal High Temperature Underlayment.
- B. Slip Sheet: Rosin-sized building paper, 3-lb/100 sq. ft. (0.16-kg/sq. m) minimum.

#### 5.8 MISCELLANEOUS MATERIALS

- A. Fasteners: Manufacturer's recommended fasteners, suitable for application and designed to meet performance requirements. Furnish the following unless otherwise indicated:
  - 1. Exposed Penetrating Fasteners: Gasketed screws with hex washer heads matching color of sheet metal.
  - 2. Fasteners for Copper Sheet: Copper, hardware bronze, or passivated Series 300 stainless steel.
  - 3. Fasteners for Aluminum: Aluminum or Series 300 stainless steel.
  - 4. Fasteners for Stainless-Steel Sheet: Series 300 stainless steel.
  - 5. Fasteners for Zinc-Coated (Galvanized) Steel Sheet: Series 300 stainless steel or hot-dip zinc-coated steel according to ASTM A 153/A 153M or ASTM F 2329.
- B. Elastomeric Sealant: ASTM C 920, elastomeric silicone polymer sealant of type, grade, class, and use classifications required by roofing-specialty manufacturer for each application.

- C. Butyl Sealant: ASTM C 1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for hooked-type joints with limited movement.
- D. Bituminous Coating: Cold-applied asphalt emulsion complying with ASTM D 1187/D 1187M.
- E. Asphalt Roofing Cement: ASTM D 4586, asbestos free, of consistency required for application.
- F. Solder for Copper: ASTM B 32, lead-free solder.

## 5.9 FINISHES

### A. Coil-Coated Galvanized-Steel Sheet Finishes:

- 1. High-Performance Organic Finish: Prepare, pretreat, and apply coating to exposed metal surfaces to comply with ASTM A 755/A 755M and coating and resin manufacturers' written instructions.
  - a. Three-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat.

### B. Coil-Coated Aluminum Sheet Finishes:

- 1. High-Performance Organic Finish: Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
  - a. Three-Coat Fluoropolymer: AAMA 2605. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat.
- 2. Clear Anodic Finish: AAMA 611, or thicker.
- 3. Color Anodic Finish: AAMA 611, or thicker.

### C. Copper Sheet Finishes:

- 1. Non-Patinated Finish: Mill finish.
- 2. Pre-Patinated Finish: Chemically treated according to ASTM B 882.

## PART 6 - EXECUTION

### 6.1 UNDERLAYMENT INSTALLATION

- A. Self-Adhering Sheet Underlayment: Apply primer if required by manufacturer. Comply with temperature restrictions of underlayment manufacturer for installation. Apply wrinkle free, in shingle fashion to shed water, and with end laps of not less than 6 inches (152 mm) staggered 24 inches (610 mm) between courses. Overlap side edges

not less than 3-1/2 inches (90 mm). Roll laps with roller. Cover underlayment within 14 days.

1. Apply continuously under copings, roof-edge specialties and reglets and counter flashings.
  2. Coordinate application of self-adhering sheet underlayment under roof specialties with requirements for continuity with adjacent air barrier materials.
- B. Slip Sheet: Install with tape or adhesive for temporary anchorage to minimize use of mechanical fasteners under roof specialties. Apply in shingle fashion to shed water, with lapped joints of not less than 2 inches (50 mm).

## 6.2 INSTALLATION, GENERAL

- A. General: Install roof specialties according to manufacturer's written instructions. Anchor roof specialties securely in place, with provisions for thermal and structural movement. Use fasteners, solder, protective coatings, separators, underlayments, sealants, and other miscellaneous items as required to complete roof-specialty systems.
1. Install roof specialties level, plumb, true to line and elevation; with limited oil-canning and without warping, jogs in alignment, buckling, or tool marks.
  2. Provide uniform, neat seams with minimum exposure of solder and sealant.
  3. Install roof specialties to fit substrates and to result in weather tight performance. Verify shapes and dimensions of surfaces to be covered before manufacture.
  4. Torch cutting of roof specialties is not permitted.
  5. Do not use graphite pencils to mark metal surfaces.
- B. Metal Protection: Protect metals against galvanic action by separating dissimilar metals from contact with each other or with corrosive substrates by painting contact surfaces with bituminous coating or by other permanent separation as recommended by manufacturer.
1. Coat concealed side of uncoated aluminum roof specialties with bituminous coating where in contact with wood, ferrous metal, or cementitious construction.
  2. Bed flanges in thick coat of asphalt roofing cement where required by manufacturers of roof specialties for waterproof performance.
- C. Expansion Provisions: Allow for thermal expansion of exposed roof specialties.
1. Space movement joints at a maximum of 12 feet (3.6 m) with no joints within 18 inches (450 mm) of corners or intersections unless otherwise indicated on Drawings.
  2. When ambient temperature at time of installation is between 40 and 70 deg F (4 and 21 deg C), set joint members for 50 percent movement each way. Adjust setting proportionately for installation at higher ambient temperatures.
- D. Fastener Sizes: Use fasteners of sizes that penetrate wood blocking or sheathing not less than 1-1/4 inches (32 mm) for nails and not less than 3/4 inch (19 mm) for wood screws.
- E. Seal concealed joints with butyl sealant as required by roofing-specialty manufacturer.

- F. Seal joints as required for weather tight construction. Place sealant to be completely concealed in joint. Do not install sealants at temperatures below 40 deg F (4 deg C).
- G. Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter. Pre-tin edges of sheets to be soldered to a width of 1-1/2 inches (38 mm); however, reduce pre-tinning where pre-tinned surface would show in completed Work. Tin edges of uncoated copper sheets using solder for copper. Do not use torches for soldering. Heat surfaces to receive solder and flow solder into joint. Fill joint completely. Completely remove flux and spatter from exposed surfaces.

### 6.3 COPING INSTALLATION

- A. Install cleats, anchor plates, and other anchoring and attachment accessories and devices with concealed fasteners.
- B. Anchor copings with manufacturer's required devices, fasteners, and fastener spacing to meet performance requirements.
  - 1. Interlock face and back leg drip edges of snap-on coping cap into cleated anchor plates anchored to substrate at 30-inch (762-mm) centers.
  - 2. Interlock face-leg drip edge into continuous cleat anchored to substrate at 24-inch (610-mm) centers.

### 6.4 ROOF-EDGE SPECIALITIES INSTALLATION

- A. Install cleats, cants, and other anchoring and attachment accessories and devices with concealed fasteners.
- B. Anchor roof edgings with manufacturer's required devices, fasteners, and fastener spacing to meet performance requirements.

### 6.5 ROOF-EDGE DRAINAGE-SYSTEM INSTALLATION

- A. General: Install components to produce a complete roof-edge drainage system according to manufacturer's written instructions. Coordinate installation of roof perimeter flashing with installation of roof-edge drainage system.

### 6.6 REGLET AND COUNTER FLASHING INSTALLATION

- A. Surface-Mounted Reglets: Install reglets to receive flashings where flashing without embedded reglets is indicated on Drawings. Install at height so that inserted counter flashings overlap 4 inches (100 mm) over top edge of base flashings.
- B. Counter flashings: Insert counter flashings into reglets or other indicated receivers; ensure that counter flashings overlap 4 inches (100 mm) over top edge of base flashings. Lap counter flashing joints a minimum of 4 inches (100 mm) and bed with butyl sealant. Fit counter flashings tightly to base flashings.

6.7 CLEANING AND PROTECTION

- A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.
- B. Clean and neutralize flux materials. Clean off excess solder and sealants.
- C. Remove temporary protective coverings and strippable films as roof specialties are installed.

END OF SECTION 077100

## SECTION 079200 - JOINT SEALANTS

### PART 7 - GENERAL

#### 7.1 SUMMARY

- A. Section Includes:
  - 1. Urethane joint sealants.
  - 2. Preformed joint sealants.

#### 7.2 PRECONSTRUCTION TESTING

- A. Preconstruction Compatibility and Adhesion Testing: Submit to joint-sealant manufacturers eight samples of materials that will contact or affect joint sealants. Use ASTM C 1087 to determine whether priming and other specific joint preparation techniques are required to obtain rapid, optimum adhesion of joint sealants to joint substrates.
- B. Preconstruction Field-Adhesion Testing: Before installing sealants, field test their adhesion to Project joint substrates. Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1 in ASTM C 1193 or Method A, Tail Procedure, in ASTM C 1521.

#### 7.3 ACTION SUBMITTALS

- A. Product Data: For each joint-sealant product indicated.
- B. Samples: For each kind and color of joint sealant required.
- C. Joint-Sealant Schedule: Include the following information:
  - 1. Joint-sealant application, joint location, and designation.
  - 2. Joint-sealant manufacturer and product name.
  - 3. Joint-sealant formulation.
  - 4. Joint-sealant color.

#### 7.4 INFORMATIONAL SUBMITTALS

- A. Product test reports.
- B. Preconstruction compatibility and adhesion test reports.
- C. Preconstruction field-adhesion test reports.
- D. Field-adhesion test reports.
- E. Warranties.

## 7.5 QUALITY ASSURANCE

- A. Testing Agency Qualifications: Qualified according to ASTM C 1021 to conduct the testing indicated.
- B. Pre-installation Conference: Conduct conference at Project site.

## 7.6 WARRANTY

- A. Special Installer's Warranty: Manufacturer's standard form in which Installer agrees to repair or replace joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
  - 1. Warranty Period: Two years from date of Substantial Completion.
- B. Special Manufacturer's Warranty: Manufacturer's standard form in which joint-sealant manufacturer agrees to furnish joint sealants to repair or replace those that do not comply with performance and other requirements specified in this Section within specified warranty period.
  - 1. Warranty Period: Two years from date of Substantial Completion.

## PART 8 - PRODUCTS

### 8.1 MATERIALS, GENERAL

- A. VOC Content of Interior Sealants: Sealants and sealant primers used inside the weatherproofing system shall comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
  - 1. Architectural Sealants: 250 g/L.
  - 2. Sealant Primers for Nonporous Substrates: 250 g/L.
  - 3. Sealant Primers for Porous Substrates: 775 g/L.

### 8.2 URETHANE JOINT SEALANTS

- A. Urethane Joint Sealant: ASTM C 920.
  - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
  - 2. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
    - a. BASF Building Systems.
    - b. Bostik, Inc.
    - c. Lyntal, International, Inc.
    - d. May National Associates, Inc.
    - e. Pacific Polymers International, Inc.

- f. Pecora Corporation.
  - g. Polymeric Systems, Inc.
  - h. Schnee-Morehead, Inc.
  - i. Sika Corporation; Construction Products Division.
  - j. Tremco Incorporated.
3. Type: Single component (S) or multi-component (M).
  4. Grade: Pourable (P) or nonsag (NS).
  5. Class: 100/50
  6. Uses Related to Exposure: Traffic (T).

### 8.3 PREFORMED JOINT SEALANTS

- A. Preformed Foam Joint Sealant: Manufacturer's standard preformed, precompressed, open-cell foam sealant manufactured from urethane foam with minimum density of 10 lb/cu. ft. (160 kg/cu. m) and impregnated with a nondrying, water-repellent agent. Factory produced in precompressed sizes in roll or stick form to fit joint widths indicated; coated on one side with a pressure-sensitive adhesive and covered with protective wrapping.
  1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
  2. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
    - a. Dayton Superior Specialty Chemicals.
    - b. EMSEAL Joint Systems, Ltd.
    - c. Sandell Manufacturing Co.
    - d. Schul International, Inc.
    - e. Willseal USA, LLC.

### 8.4 JOINT SEALANT BACKING

- A. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin) or any of the preceding types, as approved in writing by joint-sealant manufacturer for joint application indicated, and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.
- B. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer.

### 8.5 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials.
- C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

## PART 9 - EXECUTION

### 9.1 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions.
  - 1. Remove laitance and form-release agents from concrete.
  - 2. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.
- B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

### 9.2 INSTALLATION

- A. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- B. Install sealant backings of kind indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
  - 1. Do not leave gaps between ends of sealant backings.
  - 2. Do not stretch, twist, puncture, or tear sealant backings.
  - 3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.
- C. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- D. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
  - 1. Place sealants so they directly contact and fully wet joint substrates.

2. Completely fill recesses in each joint configuration.
  3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- E. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified in subparagraphs below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
1. Remove excess sealant from surfaces adjacent to joints.
  2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
  3. Provide concave joint profile per Figure 8A in ASTM C 1193, unless otherwise indicated.
- F. Acoustical Sealant Installation: Comply with ASTM C 919 and with manufacturer's written recommendations.
- G. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

### 9.3 FIELD QUALITY CONTROL

- A. Field-Adhesion Testing: Field test joint-sealant adhesion to joint substrates as follows:
1. Extent of Testing: Test completed and cured sealant joints as follows:
    - a. Perform 10 tests for the first 1000 feet (300 m) of joint length for each kind of sealant and joint substrate.
    - b. Perform 1 test for each 1000 feet (300 m) of joint length thereafter or 1 test per each floor per elevation.
  2. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1 in ASTM C 1193 or Method A, Tail Procedure, in ASTM C 1521.
- B. Evaluation of Field-Adhesion Test Results: Sealants not evidencing adhesive failure from testing or noncompliance with other indicated requirements will be considered satisfactory. Remove sealants that fail to adhere to joint substrates during testing or to comply with other requirements. Retest failed applications until test results prove sealants comply with indicated requirements.

### 9.4 JOINT-SEALANT SCHEDULE

- A. Joint-Sealant Application: Exterior joints in vertical surfaces and horizontal nontraffic surfaces.
1. Joint Locations:
    - a. Joints in exterior insulation and finish systems.

- b. Joints between metal panels.
    - c. Joints between different materials listed above.
    - d. Perimeter joints between materials listed above and frames of doors and louvers.
    - e. Control and expansion joints in overhead surfaces.
  2. Joint Sealant: Urethane.
  3. Joint Sealant: Preformed foam.
  4. Joint-Sealant Color: As indicated by manufacturer's designations
- B. Joint-Sealant Application: Interior joints in vertical surfaces and horizontal nontraffic surfaces.
  1. Joint Locations:
    - a. Control and expansion joints on exposed interior surfaces of exterior walls.
    - b. Perimeter joints of exterior openings where indicated.
    - c. Vertical joints on exposed surfaces of walls

END OF SECTION 079200

**DIVISION WORK REQUIREMENTS  
KIRKWOOD LIBRARY**

SECTION 01010

SUMMARY OF WORK

PART 1 - GENERAL

1.1 LOCATION OF WORK

- A. The work of this contract is located at 11 Kirkwood Road, Atlanta Georgia, 30317

1.2 DESCRIPTION

- A. Definition: The Work is defined in General Conditions Section 00030
- B. Summary: Major areas of the Work consist of, but are not limited to, the following:

- 1. Exterior:
  - a. Removal and replacing of roofing material and associated architectural metal and flashing.

1.2 PRODUCTS (Not Required)

1.3 EXECUTION (Not Required)

END OF SECTION 01010

## SECTION 01312

### PROJECT MEETINGS

#### 1.1 GENERAL

##### A. SUMMARY

1. Work described: This section defines requirements for project meetings, of such nature as relates to the overall project.
2. Related work described elsewhere: A pre-construction conference relating to a specific trade or specific construction process or sequence is specified in the applicable section.

##### B. CONTRACTOR'S DUTIES

1. Scheduling and notification:
  - a. Notify invited parties of meeting time and place at least 36 hours prior to meeting.
  - b. Coordinate timing of progress meetings with Architect and Owner to coincide with progress of major division of work.
  - c. Make physical arrangements for and preside over meetings.
2. Administration:
  - a. Prepare meeting agenda and distribute to invited parties at least 36 hours prior to meetings.
  - b. Record and promptly distribute copies of minutes of significant proceedings and decision of meetings.
  - c. Prepare and distribute copies of construction progress schedules as originally issued or subsequently approved, marked to show current progress.

##### C. PRE-CONSTRUCTION CONFERENCE

1. Scheduling: A pre-construction conference shall be held at a location to be announced, prior to commencement of the Work.
2. Attendance:
  - a. Owner
  - b. Architect and invited consultants
  - c. Contractor
  - d. Major subcontractors as requested by Owner, Architect and Contractor
  - e. Representatives of separate contractors, when applicable.
3. Minimum agenda:
  - a. Distribute and discuss list of major subcontractors and material suppliers
  - b. Distribute and review insurance submittals
  - c. Distribute tentative construction progress schedule and submittals schedule, with discussion of critical work sequencing.
  - d. Identify and designate responsible personnel.

- e. Process and distribute field decisions, change orders and other Contract Documents
- f. Process required submittals, including shop drawings, samples and product data, and review Contractor's submittal schedules.
- g. Establish procedures for maintaining required Record Document and Maintenance Manuals.
- h. Discuss use of site, including temporary offices, storage areas, erosion control and site use limitations and restrictions.
- i. Discuss material and equipment deliveries, storage, protection and priorities
- j. Discuss security procedures and methods.
- k. Discuss housekeeping procedures and methods.
- l. Discuss special project requirements and conditions.

D. PROGRESS AND COORDINATION MEETINGS:

- 1. Scheduling: Unless otherwise requested by Owner or Architect, a progress and coordination meeting shall be held twice monthly, at a time determined by Owner, at job site.
- 2. Attendance:
  - a. Contractor, represented by Project Manager or Principal.
  - b. Contractor's Project Superintendent
  - c. Subcontractors and material suppliers specifically invited, as applicable to the progress of the Work
  - d. Architect and invited consultants
  - e. Owner
- 3. Minimum agenda:
  - a. Review minutes of previous meeting, with review of follow-up and work progress since previous meeting.
  - b. Review field observations, problems and decisions.
  - c. Identify problems and potential problems affecting project construction or anticipated progress.
  - d. Review problems of materials delivery, off-site fabrication and subcontractor scheduling.
  - e. Develop corrective measures and procedures to regain planned schedule when delays occur.
  - f. Revise construction progress and submittals schedule to reflect actual progress.
  - g. Review details of anticipated construction progress prior to next meeting.
  - h. Review workmanship and maintenance of quality standards.
  - i. Review proposed changes, including effect on construction progress schedule and completion date.

E. PRODUCTS (NOT USED)

F. EXECUTION (NOT USED)

END OF SECTION 01312

## SECTION 01320

### SCHEDULE OF VALUES

#### 1.1 GENERAL

##### A. Description of Work

1. This specification covers the preparation, content and submittal of the schedule of values. The Schedule of Values is an itemized list that establishes the value or cost of each part of the Work. It shall be used as the basis for preparing progress payments.

##### B. Preparation

1. Schedule shall show breakdown of labor, materials equipment and other costs as directed by the Owner.
2. Costs shall be in sufficient detail to indicate separate amounts for each major subsection of the Work. The Contractor may include an item for bond, insurance, temporary facilities and job mobilization.
3. Schedule of Values shall be prepared on 8-1/2-inch by 11-inch white paper.
4. Use the major subsections of the Detailed Scope of Work as the basis for Schedule format. List sub-items of major products or systems as appropriate or when requested by the Owner.
5. When requested by the Owner, support values with data that will substantiate their correctness.
6. The sum of the individual values shown on the Schedule of Values must equal the total Job Order Price.
7. Schedule shall show the purchase and delivery costs for materials and equipment that the Contractor anticipates he shall request payment for prior to their installation.

- C. Submittal: Submit two copies of Schedule, or any other number of copies as directed by the Owner, to the Owner for approval at least 20 days prior to submitting first application for a progress payment.

After review by the Owner, revise and resubmit Schedule as required until it is approved.

#### 1.2 PRODUCTS (Not Used)

#### 1.3 EXECUTION (Not Used)

END OF SECTION 01320

## SECTION 01320a

### REFERENCES

#### 1.1 GENERAL

##### A. Definitions

1. General: Basic Contract definitions are included in the Conditions of the Contract.
2. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
3. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."
4. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
5. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
6. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
7. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
8. "Provide": Furnish and install, complete and ready for the intended use.
9. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

##### B. Industry Standards

1. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
2. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.

3. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
  - a. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

C. Abbreviations And Acronyms

1. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

AA Aluminum Association, Inc. (The) (703) 358-2960

[www.aluminum.org](http://www.aluminum.org)

AAADM American Association of Automatic Door Manufacturers (216) 241-7333

[www.aaadm.com](http://www.aaadm.com)

AABC Associated Air Balance Council (202) 737-02

AAMA American Architectural Manufacturers Association (847) 303-5664

[www.aamanet.org](http://www.aamanet.org)

AASHTO American Association of State Highway and Transportation Officials

(202) 624-5800

[www.transportation.org](http://www.transportation.org)

AATCC American Association of Textile Chemists and Colorists (The) (919) 549-8141

[www.aatcc.org](http://www.aatcc.org)

ABAA Air Barrier Association of America (866) 956-5888

[www.airbarrier.org](http://www.airbarrier.org)

ABMA American Bearing Manufacturers Association (202) 367-1155

[www.abma-dc.org](http://www.abma-dc.org)

ACI ACI International (248) 848-3700

(American Concrete Institute)

[www.aci-int.org](http://www.aci-int.org)

ACPA American Concrete Pipe Association (972) 506-7216

[www.concrete-pipe.org](http://www.concrete-pipe.org)

AEIC Association of Edison Illuminating Companies, Inc. (The) (205) 257-2530

[www.aeic.org](http://www.aeic.org)

AF&PA American Forest & Paper Association (800) 878-8878

[www.afandpa.org](http://www.afandpa.org) (202) 463-2700

AGA American Gas Association (202) 824-7000

[www.aga.org](http://www.aga.org)

AGC Associated General Contractors of America (The) (703) 548-3118

[www.agc.org](http://www.agc.org)

AHA American Hardboard Association

(Now part of CPA)

AHAM Association of Home Appliance Manufacturers (202) 872-5955

[www.aham.org](http://www.aham.org)

AI Asphalt Institute (859) 288-4960  
[www.asphaltinstitute.org](http://www.asphaltinstitute.org)  
AIA American Institute of Architects (The) (800) 242-3837  
[www.aia.org](http://www.aia.org) (202) 626-7300  
AISC American Institute of Steel Construction (800) 644-2400  
[www.aisc.org](http://www.aisc.org) (312) 670-2400  
AISI American Iron and Steel Institute (202) 452-7100  
[www.steel.org](http://www.steel.org)  
AITC American Institute of Timber Construction (303) 792-9559  
[www.aitc-glulam.org](http://www.aitc-glulam.org)  
ALCA Associated Landscape Contractors of America  
(Now PLANET - Professional Landcare Network)  
ALSC American Lumber Standard Committee, Incorporated (301) 972-1700  
[www.alsc.org](http://www.alsc.org)  
AMCA Air Movement and Control Association International, Inc. (847) 394-0150  
[www.amca.org](http://www.amca.org)  
ANSI American National Standards Institute (202) 293-8020  
[www.ansi.org](http://www.ansi.org)  
AOSA Association of Official Seed Analysts, Inc. (405) 780-7372  
[www.aosaseed.com](http://www.aosaseed.com)  
APA Architectural Precast Association (239) 454-6989  
[www.archprecast.org](http://www.archprecast.org)  
APA APA - The Engineered Wood Association (253) 565-6600  
[www.apawood.org](http://www.apawood.org)  
APA EWS APA - The Engineered Wood Association; Engineered Wood Systems  
(See APA - The Engineered Wood Association)  
API American Petroleum Institute (202) 682-8000  
[www.api.org](http://www.api.org)  
ARI Air-Conditioning & Refrigeration Institute (703) 524-8800  
[www.ari.org](http://www.ari.org)  
ARMA Asphalt Roofing Manufacturers Association (202) 207-0917  
[www.asphaltroofing.org](http://www.asphaltroofing.org)  
ASCE American Society of Civil Engineers (800) 548-2723  
[www.asce.org](http://www.asce.org) (703) 295-6300  
ASCE/SEI American Society of Civil Engineers/Structural Engineering Institute  
(See ASCE)  
ASHRAE American Society of Heating, Refrigerating and Air-Conditioning Engineers  
(800) 527-4723  
[www.ashrae.org](http://www.ashrae.org) (404) 636-8400  
ASME ASME International (800) 843-2763  
(The American Society of Mechanical Engineers International) (973) 882-1170  
[www.asme.org](http://www.asme.org)  
ASSE American Society of Sanitary Engineering (440) 835-3040  
[www.asse-plumbing.org](http://www.asse-plumbing.org)  
ASTM ASTM International (610) 832-9585  
EJMA Expansion Joint Manufacturers Association, Inc. (914) 332-0040  
[www.ejma.org](http://www.ejma.org)

ESD ESD Association (315) 339-6937  
www.esda.org  
FIBA Federation Internationale de Basketball 41 22 545 00 00  
(The International Basketball Federation)  
www.fiba.com  
FIVB Federation Internationale de Volleyball 41 21 345 35 35  
(The International Volleyball Federation)  
www.fivb.ch  
FM Approvals FM Approvals (781) 762-4300  
www.fmglobal.com  
FM Global FM Global (401) 275-3000  
(Formerly: FMG - FM Global)  
www.fmglobal.com  
FMRC Factory Mutual Research  
(Now FM Global)  
FRSA Florida Roofing, Sheet Metal & Air Conditioning Contractors  
Association, Inc.  
(407) 671-3772  
www.floridarroof.com  
FSA Fluid Sealing Association (610) 971-4850  
www.fluidsealing.com  
FSC Forest Stewardship Council 49 228 367 66 0  
www.fsc.org  
GA Gypsum Association (202) 289-5440  
www.gypsum.org  
GANA Glass Association of North America (785) 271-0208  
www.glasswebsite.com  
GRI (Now GSI)  
GS Green Seal (202) 872-6400  
www.greenseal.org  
GSI Geosynthetic Institute (610) 522-8440  
www.geosynthetic-institute.org  
HI Hydraulic Institute (888) 786-7744  
www.pumps.org (973) 267-9700  
HI Hydronics Institute (908) 464-8200  
www.gamanet.org  
HMMA Hollow Metal Manufacturers Association  
(Part of NAAMM)  
HPVA Hardwood Plywood & Veneer Association (703) 435-2900  
www.hpva.org  
HPW H. P. White Laboratory, Inc. (410) 838-6550  
www.hpwhite.com  
IAS International Approval Services  
(Now CSA International)  
IBF International Badminton Federation (6-03) 9283-7155  
www.internationalbadminton.org  
ICEA Insulated Cable Engineers Association, Inc. (770) 830-0369  
www.icea.net  
ICRI International Concrete Repair Institute, Inc. (847) 827-0830  
www.icri.org  
IEC International Electrotechnical Commission 41 22 919 02 11

www.iec.ch  
IEEE Institute of Electrical and Electronics Engineers, Inc. (The) (212) 419-7900  
www.ieee.org  
IESNA Illuminating Engineering Society of North America (212) 248-5000  
www.iesna.org  
IEST Institute of Environmental Sciences and Technology (847) 255-1561  
www.iest.org  
IGCC Insulating Glass Certification Council (315) 646-2234  
www.igcc.org  
IGMA Insulating Glass Manufacturers Alliance (613) 233-1510  
www.igmaonline.org  
ILI Indiana Limestone Institute of America, Inc. (812) 275-4426  
www.iliai.com  
ISO International Organization for Standardization 41 22 749 01 11  
www.iso.ch  
Available from ANSI (202) 293-8020  
www.ansi.org  
ISSFA International Solid Surface Fabricators Association (877) 464-7732  
www.issfa.net (702) 567-8150  
ITS Intertek Testing Service NA (972) 238-5591  
www.intertek.com  
ITU International Telecommunication Union  
www.itu.int/home  
KCMA Kitchen Cabinet Manufacturers Association (703) 264-1690  
www.kcma.org  
LMA Laminating Materials Association  
(Now part of CPA)  
LPI Lightning Protection Institute (800) 488-6864  
www.lightning.org  
MBMA Metal Building Manufacturers Association (216) 241-7333  
www.mbma.com  
MFMA Maple Flooring Manufacturers Association, Inc. (847) 480-9138  
www.maplefloor.org  
MFMA Metal Framing Manufacturers Association, Inc. (312) 644-6610  
www.metalframingmfg.org  
MH Material Handling  
(Now MHIA)  
MHIA Material Handling Industry of America (800) 345-1815  
www.mhia.org (704) 676-1190  
MIA Marble Institute of America (440) 250-9222  
www.marble-institute.com  
MPI Master Painters Institute (888) 674-8937  
www.paintinfo.com  
MSS Manufacturers Standardization Society of The Valve and Fittings  
Industry Inc.  
(703) 281-6613  
www.mss-hq.com  
NAAMM National Association of Architectural Metal Manufacturers (312)  
332-0405  
www.naamm.org

NACE NACE International (800) 797-6623  
(National Association of Corrosion Engineers International) (281) 228-6200  
[www.nace.org](http://www.nace.org)  
NADCA National Air Duct Cleaners Association (202) 737-2926  
[www.nadca.com](http://www.nadca.com)  
NAGWS National Association for Girls and Women in Sport (800) 213-7193,  
ext. 453  
[www.aahperd.org/nagws/](http://www.aahperd.org/nagws/)  
NAIMA North American Insulation Manufacturers Association (703) 684-  
0084  
[www.naima.org](http://www.naima.org)  
NBGQA National Building Granite Quarries Association, Inc. (800) 557-2848  
[www.nbgqa.com](http://www.nbgqa.com)  
NCAA National Collegiate Athletic Association (The) (317) 917-6222  
[www.ncaa.org](http://www.ncaa.org)  
NCMA National Concrete Masonry Association (703) 713-1900  
[www.ncma.org](http://www.ncma.org)  
NCPI National Clay Pipe Institute (262) 248-9094  
[www.ncpi.org](http://www.ncpi.org)  
NCTA National Cable & Telecommunications Association (202) 775-3550  
[www.ncta.com](http://www.ncta.com)  
NEBB National Environmental Balancing Bureau (301) 977-3698  
[www.nebb.org](http://www.nebb.org)  
NECA National Electrical Contractors Association (301) 657-3110  
[www.necanet.org](http://www.necanet.org)  
NeLMA Northeastern Lumber Manufacturers' Association (207) 829-6901  
[www.nelma.org](http://www.nelma.org)  
NEMA National Electrical Manufacturers Association (703) 841-3200  
[www.nema.org](http://www.nema.org)  
NETA InterNational Electrical Testing Association (888) 300-6382  
[www.netaworld.org](http://www.netaworld.org) (303) 697-8441  
NFHS National Federation of State High School Associations (317) 972-6900  
[www.nfhs.org](http://www.nfhs.org)  
NFPA NFPA (800) 344-3555  
(National Fire Protection Association) (617) 770-3000  
[www.nfpa.org](http://www.nfpa.org)  
NFRC National Fenestration Rating Council (301) 589-1776  
[www.nfrc.org](http://www.nfrc.org)  
NGA National Glass Association (866) 342-5642  
[www.glass.org](http://www.glass.org) (703) 442-4890  
NHLA National Hardwood Lumber Association (800) 933-0318  
[www.natlhardwood.org](http://www.natlhardwood.org) (901) 377-1818  
NLGA National Lumber Grades Authority (604) 524-2393  
[www.nlga.org](http://www.nlga.org)  
NOFMA NOFMA: The Wood Flooring Manufacturers Association (901) 526-  
5016  
(Formerly: National Oak Flooring Manufacturers Association)  
[www.nofma.com](http://www.nofma.com)  
NRCA National Roofing Contractors Association (800) 323-9545  
[www.nrca.net](http://www.nrca.net) (847) 299-9070  
NRMCA National Ready Mixed Concrete Association (888) 846-7622

www.nrmca.org (301) 587-1400  
NSF NSF International (800) 673-6275  
(National Sanitation Foundation International) (734) 769-8010  
www.nsf.org  
NSSGA National Stone, Sand & Gravel Association (800) 342-1415  
www.nssga.org (703) 525-8788  
NTMA National Terrazzo & Mosaic Association, Inc. (The) (800) 323-9736  
www.ntma.com (540) 751-0930  
NTRMA National Tile Roofing Manufacturers Association  
(Now TRI)  
NWWDA National Wood Window and Door Association  
(Now WDMA)  
OPL Omega Point Laboratories, Inc.  
(Now ITS)  
PCI Precast/Prestressed Concrete Institute (312) 786-0300  
www.pci.org  
PDCA Painting & Decorating Contractors of America (800) 332-7322  
www.pdca.com (314) 514-7322  
PDI Plumbing & Drainage Institute (800) 589-8956  
www.pdionline.org (978) 557-0720  
PGI PVC Geomembrane Institute (217) 333-3929  
<http://pgi-tp.ce.uiuc.edu>  
PLANET Professional Landcare Network (800) 395-2522  
(Formerly: ACLA - Associated Landscape Contractors of  
America)  
(703) 736-9666  
www.landcarenetwork.org  
PTI Post-Tensioning Institute (602) 870-7540  
www.post-tensioning.org  
RCSC Research Council on Structural Connections  
www.boltcouncil.org  
RFCI Resilient Floor Covering Institute (301) 340-8580  
www.rfci.com  
RIS Redwood Inspection Service (888) 225-7339  
www.calredwood.org (415) 382-0662  
SAE SAE International (877) 606-7323  
www.sae.org (724) 776-4841  
SDI Steel Deck Institute (847) 458-4647  
www.sdi.org  
SDI Steel Door Institute (440) 899-0010  
www.steeldoor.org  
SEFA Scientific Equipment and Furniture Association (516) 294-5424  
www.sefalabs.com  
SEI/ASCE Structural Engineering Institute/American Society of Civil  
Engineers  
(See ASCE)  
SGCC Safety Glazing Certification Council (315) 646-2234  
www.sgcc.org  
SIA Security Industry Association (703) 683-2075  
www.siaonline.org  
SIGMA Sealed Insulating Glass Manufacturers Association

(Now IGMA)  
SJI Steel Joist Institute (843) 626-1995  
[www.steeljoist.org](http://www.steeljoist.org)  
SMA Screen Manufacturers Association (561) 533-0991  
[www.smacentral.org](http://www.smacentral.org)  
SMACNA Sheet Metal and Air Conditioning Contractors' (703) 803-2980  
National Association  
[www.smacna.org](http://www.smacna.org)  
SMPTE Society of Motion Picture and Television Engineers (914) 761-1100  
[www.smpte.org](http://www.smpte.org)  
SPFA Spray Polyurethane Foam Alliance (800) 523-6154  
(Formerly: SPI/SPFD - The Society of the Plastics Industry, Inc.;  
Spray Polyurethane Foam Division)  
[www.sprayfoam.org](http://www.sprayfoam.org)  
SPIB Southern Pine Inspection Bureau (The) (850) 434-2611  
[www.spib.org](http://www.spib.org)  
SPRI Single Ply Roofing Industry (781) 647-7026  
[www.spri.org](http://www.spri.org)  
SSINA Specialty Steel Industry of North America (800) 982-0355  
[www.ssina.com](http://www.ssina.com) (202) 342-8630  
SSPC SSPC: The Society for Protective Coatings (877) 281-7772  
[www.sspc.org](http://www.sspc.org) (412) 281-2331  
STI Steel Tank Institute (847) 438-8265  
[www.steeltank.com](http://www.steeltank.com)  
SWI Steel Window Institute (216) 241-7333  
[www.steelwindows.com](http://www.steelwindows.com)  
SWRI Sealant, Waterproofing, & Restoration Institute (816) 472-7974  
[www.swrionline.org](http://www.swrionline.org)  
TCA Tile Council of America, Inc. (864) 646-8453  
[www.tileusa.com](http://www.tileusa.com)  
TIA/EIA Telecommunications Industry Association/Electronic Industries  
Alliance  
(703) 907-7700  
[www.tiaonline.org](http://www.tiaonline.org)  
TMS The Masonry Society (303) 939-9700  
[www.masonrysociety.org](http://www.masonrysociety.org)  
TPI Truss Plate Institute, Inc. (703) 683-1010  
[www.tpinst.org](http://www.tpinst.org)  
TPI Turfgrass Producers International (800) 405-8873  
[www.turfgrassod.org](http://www.turfgrassod.org) (847) 649-5555  
TRI Tile Roofing Institute (312) 670-4177  
[www.tilerroofing.org](http://www.tilerroofing.org)  
UL Underwriters Laboratories Inc. (877) 854-3577  
[www.ul.com](http://www.ul.com) (847) 272-8800  
UNI Uni-Bell PVC Pipe Association (972) 243-3902  
[www.uni-bell.org](http://www.uni-bell.org)  
USAV USA Volleyball (888) 786-5539  
[www.usavolleyball.org](http://www.usavolleyball.org) (719) 228-6800  
USGBC U.S. Green Building Council (202) 828-7422  
[www.usgbc.org](http://www.usgbc.org)  
USITT United States Institute for Theatre Technology, Inc. (800) 938-7488

www.usitt.org (315) 463-6463  
WASTEC Waste Equipment Technology Association (800) 424-2869  
www.wastec.org (202) 244-4700  
WCLIB West Coast Lumber Inspection Bureau (800) 283-1486  
www.wclib.org (503) 639-0651  
WCMA Window Covering Manufacturers Association  
(Now WCSC)  
WCSC Window Covering Safety Council (800) 506-4636  
(Formerly: WCMA - Window Covering Manufacturers  
Association)  
(212) 297-2109  
www.windowcoverings.org  
WDMA Window & Door Manufacturers Association (800) 223-2301  
(Formerly: NWWDA - National Wood Window and Door  
Association)  
(847) 299-5200  
www.wdma.com  
WI Woodwork Institute (Formerly: WIC - Woodwork Institute of (916) 372-  
9943  
California)  
www.wicnet.org  
WIC Woodwork Institute of California  
(Now WI)  
WMMPA Wood Moulding & Millwork Producers Association (800) 550-7889  
www.wmmpa.com (530) 661-9591  
WSRCA Western States Roofing Contractors Association (800) 725-0333  
www.wsrca.com (650) 570-5441  
WWPA Western Wood Products Association (503) 224-3930  
www.wwpa.org

2. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

BOCA BOCA International, Inc.  
(See ICC)  
IAPMO International Association of Plumbing and Mechanical Officials (909)  
472-  
4100  
www.iapmo.org  
ICBO International Conference of Building Officials  
(See ICC)  
ICBO ES ICBO Evaluation Service, Inc.  
(See ICC-ES)  
ICC International Code Council (888) 422-  
7233  
www.iccsafe.org (703) 931-  
4533  
ICC-ES ICC Evaluation Service, Inc. (800) 423-

6587  
www.icc-es.org (562) 699-  
0543  
SBCCI Southern Building Code Congress International, Inc.  
(See ICC)  
UBC Uniform Building Code  
(See ICC)

3. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

CE Army Corps of Engineers  
www.usace.army.mil  
CPSC Consumer Product Safety Commission  
www.cpsc.gov (301) 504-7923  
DOC Department of Commerce (202) 482-2000  
www.commerce.gov  
DOD Department of Defense (215) 697-6257  
http://.dodssp.daps.dla.mil  
DOE Department of Energy (202) 586-9220  
www.energy.gov  
EPA Environmental Protection Agency (202) 272-0167  
www.epa.gov  
FAA Federal Aviation Administration (866) 835-5322  
www.faa.gov  
FCC Federal Communications Commission (888) 225-5322  
www.fcc.gov  
FDA Food and Drug Administration (888) 463-6332  
www.fda.gov  
GSA General Services Administration (800) 488-3111  
www.gsa.gov  
HUD Department of Housing and Urban Development (202) 708-1112  
www.hud.gov  
LBL Lawrence Berkeley National Laboratory (510) 486-4000  
www.lbl.gov  
NCHRP National Cooperative Highway Research Program  
(See TRB)  
NIST National Institute of Standards and Technology (301) 975-6478  
www.nist.gov  
OSHA Occupational Safety & Health Administration (800) 321-6742  
www.osha.gov (202) 693-1999  
PBS Public Building Service  
(See GSA)  
PHS Office of Public Health and Science (202) 690-7694  
www.osophs.dhhs.gov/ophs  
RUS Rural Utilities Service (202) 720-9540  
(See USDA)  
SD State Department (202) 647-4000

[www.state.gov](http://www.state.gov)  
TRB Transportation Research Board (202) 334-2934  
<http://gulliver.trb.org>  
USDA Department of Agriculture (202) 720-2791  
[www.usda.gov](http://www.usda.gov)  
USPS Postal Service (202) 268-2000  
[www.usps.com](http://www.usps.com)

4. Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

ADAAG Americans with Disabilities Act (ADA) (800) 872-2253  
Architectural Barriers Act (ABA) (202) 272-0080  
Accessibility Guidelines for Buildings and Facilities  
Available from Access Board  
[www.access-board.gov](http://www.access-board.gov)  
CFR Code of Federal Regulations (866) 512-1800  
Available from Government Printing Office (202) 512-1800  
[www.gpoaccess.gov/cfr/index.html](http://www.gpoaccess.gov/cfr/index.html)  
DOD Department of Defense Military Specifications and Standards (215) 697-2664  
Available from Department of Defense Single Stock Point  
<http://dodssp.daps.dla.mil>  
DSCC Defense Supply Center Columbus  
(See FS)  
FED-STD Federal Standard  
(See FS)  
FS Federal Specification (215) 697-2664  
Available from Department of Defense Single Stock Point  
<http://dodssp.daps.dla.mil>  
Available from Defense Standardization Program  
[www.dps.dla.mil](http://www.dps.dla.mil)  
Available from General Services Administration (202) 619-8925  
[www.gsa.gov](http://www.gsa.gov)  
Available from National Institute of Building Sciences (202) 289-7800  
[www.wbdg.org/ccb](http://www.wbdg.org/ccb)  
FTMS Federal Test Method Standard (See FS)  
MIL (See MILSPEC)  
MIL-STD (See MILSPEC)  
MILSPEC Military Specification and Standards (215) 697-2664  
Available from Department of Defense Single Stock Point  
<http://dodssp.daps.dla.mil>  
UFAS Uniform Federal Accessibility Standards (800) 872-2253  
Available from Access Board (202) 272-0080  
[www.access-board.gov](http://www.access-board.gov)

5. State Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized

name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

CBHF State of California, Department of Consumer Affairs Bureau of Home Furnishings and Thermal Insulation

(800) 952-5210

[www.dca.ca.gov/bhfti](http://www.dca.ca.gov/bhfti) (916) 574-2041

CCR California Code of Regulations (916) 323-6815

[www.calregs.com](http://www.calregs.com)

CPUC California Public Utilities Commission (415) 703-2782

[www.cpuc.ca.gov](http://www.cpuc.ca.gov)

TFS Texas Forest Service (979) 458-6650

Forest Resource Development

<http://txforestservation.tamu.edu>

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01320a

## SECTION 01320b

### CUTTING AND PATCHING

#### 1.1 GENERAL

##### A. Description Of Work

1. This specification covers the furnishing and installation of materials for cutting and patching. Products shall be as follows or as directed by the Owner. Installation procedures shall be in accordance with the product manufacturer's recommendations. Demolition and removal of materials shall be as required to support the work.

##### B. Summary

1. This Section includes procedural requirements for cutting and patching.

##### C. Definitions

1. Cutting: Removal of in-place construction necessary to permit installation or performance of other Work.
2. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.

##### D. Submittals

1. Cutting and Patching Proposal: Submit a proposal describing procedures at least 10 days before the time cutting and patching will be performed, requesting approval to proceed. Include the following information:
  - a. Extent: Describe cutting and patching, show how they will be performed, and indicate why they cannot be avoided.
  - b. Changes to In-Place Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building's appearance and other significant visual elements.
  - c. Products: List products to be used and firms or entities that will perform the Work.
  - d. Dates: Indicate when cutting and patching will be performed.
  - e. Utility Services and Mechanical/Electrical Systems: List services/systems that cutting and patching procedures will disturb or affect. List services/systems that will be relocated and those that will be temporarily out of service. Indicate how long services/systems will be disrupted.
  - f. Structural Elements: Where cutting and patching involve adding reinforcement to structural elements, submit details and engineering calculations showing integration of reinforcement with original structure.
  - g. the Owner's Approval: Obtain approval of cutting and patching proposal before cutting and patching. Approval does not waive right to later require removal and replacement of unsatisfactory work.

E. Quality Assurance

1. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.
2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. Operating elements include the following:
  - a. Primary operational systems and equipment.
  - b. Air or smoke barriers.
  - c. Fire-suppression systems.
  - d. Mechanical systems piping and ducts.
  - e. Control systems.
  - f. Communication systems.
  - g. Conveying systems.
  - h. Electrical wiring systems.
  - i. Operating systems of special construction in Division 13.
4. Miscellaneous Elements: Do not cut and patch miscellaneous elements or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety. Miscellaneous elements include the following:
  - a. Water, moisture, or vapor barriers.
  - b. Membranes and flashings.
  - c. Exterior curtain-wall construction.
  - d. Equipment supports.
  - e. Piping, ductwork, vessels, and equipment.
  - f. Noise- and vibration-control elements and systems.
5. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
6. Cutting and Patching Conference: Before proceeding, meet at Project site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

F. Warranty

1. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials so as not to void existing warranties.

## 1.2 PRODUCTS

### A. Materials

1. General: Comply with requirements specified in other Sections.
2. In-Place Materials: Use materials identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
  - a. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of in-place materials.

## 1.3 EXECUTION

### A. Preparation

1. Temporary Support: Provide temporary support of Work to be cut.
2. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
3. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
4. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to minimize OR prevent, as directed, interruption to occupied areas.

### B. Performance

1. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
  - a. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
2. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
  - a. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
  - b. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.

- c. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
  - d. Excavating and Backfilling: Comply with requirements in applicable Division 02 where required by cutting and patching operations.
  - e. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
  - f. Proceed with patching after construction operations requiring cutting are complete.
3. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.
- a. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
  - b. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
    - 1) Clean piping, conduit, and similar features before applying paint or other finishing materials.
    - 2) Restore damaged pipe covering to its original condition.
  - c. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
    - 1) Where patching occurs in a painted surface, apply primer and intermediate paint coats over the patch and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.
  - d. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
  - e. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.
4. Cleaning: Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.

END OF SECTION 01320b

SECTION 01320d

ABBREVIATIONS, ACRONYMS, DEFINITIONS, AND SYMBOLS

1.1 GENERAL

A. Description of Work

1. This specification covers abbreviations, acronyms, definitions, and symbols used in the Contract Documents.

B. Unit of Measure Definitions

1. Following is a list of Industry Standard abbreviations.

A Area Square Feet;  
Ampere  
AB Anchor Bolt  
ABC Aggregate Base Course  
ABS Acrylonitrile Butadiene Styrene  
AC Alternating Current;  
Air-Conditioning;  
Asphaltic Concrete;  
Plywood Grade A & C  
ACFM Actual Cubic Feet Per Minute  
ACM Asbestos Containing Material  
ACP Asphaltic Concrete Paving  
ACR Acre  
AD Plywood, Grade A & D  
ADDL Additional  
ADJ Adjustable  
ADMIN Administer; Administration  
AGG Aggregate  
AH Ampere Hours  
AHM Ampere-Hour Meter  
AHU Air Handling Unit  
AIC Amperes Interrupting Capacity  
AL Aluminum  
ALT Alternate  
AMP Ampere  
AMT Amount  
AOT Adjusted Oxygen Transfer  
APP Attactic Polypropylene  
APPROX Approximate  
Apt. Apartment  
ART Articulated  
ASB Asbestos  
ASJ All Surface Jacketing  
Avg. Average  
AWG American Wire Gauge  
BAG Bag

BBL Barrel  
B&B Grade B and Better;  
Balled & Burlapped  
B&S Bell and Spigot  
B&W Black and White  
BC Between Centers  
BCY Bank Cubic Yard  
BDL Bundle  
BD FT Board Feet  
BEV Bevel/Beveled  
BF Board Feet  
BFP Boiler Feed Pump  
BHN Brinell Hardness Number  
BHP Boiler Horsepower;  
Brake Horsepower  
BI Black Iron  
Bit. Bituminous  
Bitum. Bituminous  
Bk. Backed  
Brkrs. Breakers  
Bldg. Building  
BLK Black; Block  
BM Bank Measure; Beam  
BOD Biochemical Oxygen Demand  
BOX Box (each)  
BR Bedroom  
Brg. Bearing  
BRK Brick  
BTFLY VLV Butterfly Valve  
BTR Better (Lumber)  
BTU British Thermal Units  
BTU/HR British Thermal Units per Hour  
BUR Built Up Roof  
BW Butt Weld  
BWG Birmingham Wire Gauge  
BX Interlocked Armored Cable  
C Centigrade; Conductance;  
Conductivity, Hundred  
CA Corrosion Allowance  
Cab. Cabinet  
CAP Capacity  
CB Circuit Breaker  
CC Center to Center  
CCA Chromate Copper Arsenate  
CCF Hundred Cubic Feet  
CCY Compacted Cubic Yard  
cd Candela  
cd/sf Candela per Square Foot  
CF Cubic Foot (Feet)  
CFM Cubic Feet per Minute  
CHG Charge

CHW Chilled Water;  
Commercial Hot Water  
CI Cast Iron  
CIP Cast in Place; Cast Iron Pipe  
CIRC Circulating; Circuit  
CLF Hundred Linear Feet;  
Current Limiting Fuse  
CLP Cross Linked Polyethylene  
cm Centimeter  
CMP Corrugated Metal Pipe  
CMPA Corrugated Metal Pipe - Arched  
CMU Concrete Masonry Unit  
CO Carbon Monoxide  
CO2 Carbon Dioxide  
COL Column  
Comb Combination  
Compr Compressor  
CONC Concrete  
CONSTR Construction  
Cont Continuous; Continued  
Corr Corrugated  
CP Chrome Plated  
CPE Chlorinated Polyethylene  
Cplg. Coupling  
CPM Cycles per Minute  
CPM Critical Path Method  
CPS Centipoise  
CPRSR Compressor  
CPVC Chlorinated Polyvinyl Chloride  
CS Carbon Steel  
CSF Hundred Square Feet  
CSPE ChloroSulphinated Polyethylene  
CSS Cast Semi Steel  
CT Current Transformer  
CTB Cement Treated Base  
CTR Center  
CU FT Cubic Foot  
CU IN Cubic Inch  
CU YD Cubic Yard  
CW Chilled Water; Cold Water  
CWR Chilled Water Return  
CWS Chilled Water Supply  
CWT Hundred Weight  
CY Cubic Yard (27 cu. ft.); Cycle  
CYH Cubic Yards Per Hour  
Cyl Cylinder  
d Penny (nail size)  
D Deep; Depth; Discharge  
Dis. Discharge  
Disch. Discharge  
DB Dry Bulb; Decibel

DBL Double  
DC Direct Current  
DCS Distributed Control System  
DDC Direct Digital Control  
Demob Demobilization  
DF Douglas Fir  
DFT Dry Film Thickness  
DH Double Hung  
DHW Domestic Hot Water  
DI Ductile Iron  
D/P Differential Pressure  
DIA Diameter  
Diam Diameter  
Diag. Diagonal  
Distrib. Distribution  
DL Dead Load; Diesel  
DLH Deep Long Span Bar Joist  
DPST Double Pole, Single Throw  
DS Double Strength  
DSA Double Strength A Quality Glass  
DSB Double Strength B Quality Glass  
DWV Drain, Waste, Vent Piping  
DX Deluxe White, Direct Expansion  
dyn Dyne  
e Eccentricity  
E Electrical Grade (Fiberglass Construction)  
EA Each  
Econ. Economy  
ECR Electrical Grade, Corrosion Resistant  
(Fiberglass Construction)  
EDP Electronic Data Processing  
EDR Equiv. Direct Radiation  
EG Electro Galvanized  
EIFS Exterior Insulation Finish System  
ELEC Electric; Electrical  
Elev. Elevator; Elevating  
EM Electron Microscopy  
EMT Electric Metallic Tubing; Thin Wall Conduit  
Eng. Engine, Engineered  
EPDM Ethylene Propylene Diene Monomer  
EPS Expanded Polystyrene  
EQL Equally  
Equip. Equipment  
ERW Electrical Resistance Welded  
EROPS Enclosed Roll Over Protection System  
ES Energy Saver  
Est. Estimated  
EW Each Way  
EWT Entering Water Temperature  
Excav. Excavation

EXH Exhaust  
Exp. Expansion; Exposure  
EXP JT Expansion Joint  
Ext. Exterior  
F Fahrenheit; Female; Fill  
f Fiber stress  
fc Compressive Stress in Concrete  
fy Minimum Yield Stress of Steel  
f'm Compressive Strength of Masonry  
F&D Flanged-and-Dished  
F&I Furnished and Installed  
Fab. Fabricated  
FAD Free Air Delivery  
FBGS Fiberglass  
FC Footcandles  
FCXP Fan Cooled Explosion Proof  
FDA Food and Drug Administration  
FEP Fluorinated Ethylene Propylene (Teflon)  
FF Flat Face  
Fig. Figure  
Fin. Finished  
FL Full Load  
FLDG Folding  
Fl. Oz. Fluid Ounces  
Flr. Floor  
FM Frequency Modulation;  
Factory Mutual  
Frmg. Framing  
Fndtn. Foundation  
FT Foot, Feet  
FTNG(S) Fitting(s)  
FLG Flange  
FOB Freight on Board  
Fount. Fountain  
FPM Feet Per Minute  
FPS Feet Per Second  
FPT Female Pipe Thread  
FRP Fiberglass Reinforced Plastic  
FS Forged Steel  
FSC Cast Body, Cast Switch Box  
Ftg. Footing  
Ft. Lb. Foot Pound  
Furn. Furniture  
FVNR Full Voltage Non-Reversing  
FXM Female by Male  
G Gravity  
g Gram  
GA Gauge or Gage  
G & A General and Administrative  
GAL Gallon

Gal./Min. Gallon per Minute  
GALV Galvanized  
GBSD Gear Box Sheave Diameter  
Gen. General  
GFCI Ground Fault Circuit Interrupter  
GFR Ground Fault Relay  
GPD Gallons per Day  
GPH Gallon per Hour  
GPM Gallon per Minute  
GR Grade  
Grnd. Ground  
GSF Ground Square Foot  
GVW Gross Vehicle Weight  
H High, Height; High Strength Bar Joist  
HC Handicapped; High Capacity  
HD High Density; Heavy Duty  
HDO High Density Overlay  
HDPE High Density Polyethylene  
Hdr. Header  
Hdw. Hardware  
HEPA High Efficiency Particulate Air  
Hg Mercury  
HIC High Interrupting Capacity  
HM Hollow Metal  
HNDL Handle  
HO High Output; Heel Outlet  
Horiz. Horizontal  
HP High Pressure;Horse Power  
HPF High Pressure Factor  
HPL High Pressure Laminate  
HR Hour  
HRS Hot-Rolled Steel  
HS High Speed; High Strength  
HSC High Short Circuit  
HSLA High Strength Low Alloy  
HT Hospital Tips; Height  
Htg. Heating  
Htrs. Heaters  
HVAC Heating, Ventilating & Air Conditioning  
Hvy. Heavy  
HW Hot Water  
HWR Hot Water Return  
HWS Hot Water Supply  
HWT Hundred Carton Weight  
Hyd. Hydraulic  
Hydr. Hydraulic  
HZ Hertz (cycles)  
I Moment of Inertia  
IC Interrupt Capacity  
ICFM Inlet Cubic Feet per Minute  
ID Inside Diameter

I.D. Identification; Inside Dimension  
IF Inside Frosted  
IMC Intermediate Metal Conduit  
IN Inch  
IN LB Inch Pound  
IN WC Inches Water Column  
Incan. Incandescent  
Incl. Include, Including  
Inst. Install, Installation  
Insul. Insulation, Insulated  
Int. Interior  
INTSCT Intersect  
IP Iron Pipe  
IPS International Pipe Standard  
Iron Pipe Size  
Inches per Second  
IPT Iron Pipe Threaded  
ISP Inlet Steam Pressure  
IW Indirect Waste  
J Joule  
JOB Job  
JOC Job Order Contracting  
JT Joint  
K Thousand; Thousand Pounds;  
Heavy Wall Copper Tubing; Kelvin  
KAH Thousand Amp Hours  
KD Kiln Dried; Knocked Down  
KDAT Kiln Dried After Treatment  
Kip 1000 Pounds  
KO Knockout  
Km Kilometer  
KLF Kips per Linear Foot  
KSF Kips per Square Foot  
KSI Kips per Square Inch  
kA KiloAmp  
kg Kilogram  
kHz Kilohertz  
kJ Kilojoule  
kV Kilovolt  
kVA Kilovolt Ampere (1,000 volt amps)  
KVAR Kilovar (Reactance)  
kW Kilowatt  
kWh Kilowatt Hour  
L Length; Long;  
Medium Wall Copper Tubing  
L&E Labor and Equipment  
LAB Labor  
LAN Lane  
LAT Latitude  
LAV Lavatory  
L.B. Load Bearing; L Conduit Body

LB Pound (Force or Mass)  
LB/HR Pounds per Hour  
LBS Pounds  
LBSF Pounds per Square Foot  
LCD Liquid Crystal Display  
LCL Less Than Carload Lot  
LCY Loose Cubic Yard  
LE Leading Edge; Lead Equivalent  
LED Light Emitting Diode  
LEL Lower Explosive Limit  
LF Linear Foot  
LFD Linear Feet Per Day  
LFTL Lineal Feet Tube Length  
Lge. Large; Long  
LH Labor Hours; Long Span Bar Joist  
LIN Linear  
LL Live Load  
LLD Lamp Lumen Depreciation  
LNG Liquid Natural Gas  
LOA Length Over All  
L-O-L Lateralolet  
LP(G) Liquid Propane (Gas)  
LS Low Speed; Lump Sum  
Lt Light  
Lt Ga Light Gauge  
LTL Less than Truck Load  
Lt Wt Light Weight  
LV Low Voltage  
lm Lumen  
lm/sf Lumen per square foot  
lm/W Lumen per Watt  
m Meter  
m<sup>3</sup>/H Cubic Meters per Hour  
mA Milliampere  
m/S Meters per Second  
M Thousand; Male;  
Light Wall Copper Tubing  
MATL Material  
MAX Maximum  
Mach Machine  
Mag. Str. Magnetic Starter  
Maint. Maintenance  
Mat Material  
Mat'l; Material  
Max. Maximum  
Mb Million Bytes (characters)  
MBF Thousand Board Feet  
MBH Thousand BTU per Hour  
MBtu Thousand British Thermal Units  
MC Metal Clad Cable  
MCF Thousand Cubic Feet

MCM Thousand Circular Mills  
MCP Motor Circuit Protector  
MD Medium Duty  
MDO Medium Density Overlaid  
Med. Medium  
MF Thousand Feet  
MF3 Thousand Cubic Feet  
Mfg. Manufacturing  
Mfrs. Manufacturers  
Mg Milligram  
MG Market Grade  
MGD Million Gallons per Day  
MGPH Thousand Gallons per Hour  
MH Manhole; Manhour; Metal Halide  
MHz MegaHertz  
Mi Mile  
MI Malleable Iron; Mineral Insulated  
MIN Minimum; Minute  
MISC Miscellaneous  
ml Milliliter; Mainline  
MLF Thousand Linear Feet  
mm Millimeter  
MO Month  
Mobil. Mobilization  
Mog. Mogul Base  
MPH Miles Per Hour  
MPT Male Pipe Thread  
MRT Mile Round Trip  
ms Millisecond  
MSD Motor Sheave Diameter  
MSF Thousand Square Feet  
MSY Thousand Square Yards  
MT Mount  
MTD Mounted  
MTG Mounting  
MTR Mill Test Report  
MVA Million Volt Ampere  
MVAR Million Volt Amperes Reactance  
MV Megavolt  
MW Megawatt  
MXM Male by Male  
MYD Thousand Yards  
N Natural; North  
nA Nanoampere  
NA Not Applicable  
NC Normally Closed  
NEHB Bolted Circuit Breaker to 600V  
NDT Non Destructive Testing  
NIOSH National Alloy  
NLB Non-Load Bearing  
NM Non-Metallic Cable

nm Nanometer  
NO Normally Open  
No. Number  
NOM Nominal  
NQOD Combination Plug-on/Bolt-on Circuit  
Breaker to 240V  
NRC Noise Reduction Coefficient  
NPT National Pipe Thread  
NPS Nominal Pipe Size  
NRP Non-Removable Pins  
NRS Non-Rising Stem  
ns Nanosecond  
NTE Note  
NTP National Taper Pipe (Thread)  
nW Nanowatt  
OAL Overall Length  
OB Opposing Blade  
OC On Center  
OD Outside Diameter  
O.D. Outside Dimension  
ODP Open Drip Roof  
ODS Overhead Distribution System  
OEM Original Equipment Manufacturer  
OG Ogee  
OH Overhead  
OH&P Overhead and Profit  
OHL Over Hung Load  
Oper. Operator  
Opng. Opening  
OPR Operating  
Orna. Ornamental  
OSA Outside Air  
OSB Oriented Strand Board  
OS & Y Outside Screw and Yoke  
OUT Outlet or Output (each)  
Ovhd. Overhead  
OWG Oil, Water or Gas  
OWSJ Open Web Steel Joist  
OZ Ounce  
P Pole; Applied Load; Projection  
p Page  
pp Pages  
PAPR Powered Air Purifying Respirator  
PAR Weatherproof Reflector  
PB Push Button  
PC Personal Computer; Piece;  
PCs Pieces  
P.C. Portland Cement; Power Connector  
PCF Pounds per Cubic Foot  
PCM Phase Contrast Microscopy  
PE Professional Engineer; Plain End

Porcelain Enamel; Polyethylene;  
PERF Perforated  
PH Phase  
PI Pressure Injected  
PID Programmable Integral Derivative Controller  
PKG Package  
PL Plate  
PLC Programmable Loop Controller  
PLM Polarized Light Microscopy  
PLTC Power Limited Tray Cable  
PLY Plywood  
PNEU Pneumatic  
PNTD Painted  
POA Priced On Application/Priced On Approval  
PESB Pre-engineered Steel Building  
PPD Pounds Per Day  
PP; PPL Polypropylene  
PPM Parts Per Million  
PPS Polyphenylene Sulfide  
PR Pair  
Prefab. Prefabricated  
Prefin. Prefinished  
PROGEN® Proposal Generator Software for  
Job Order Contracting  
PROP Propelled; Propeller  
PSF Pounds Per Square Foot  
PSI Pounds Per Square Inch  
PSIA Pounds Per Square Inch Atmosphere  
PSIG Pounds Per Square Inch Gauge  
PSP Plastic Sewer Pipe  
PT Power or Potential Transformer  
Pt. Pint  
Ptns. Partitions  
P&T Pressure & Temperature  
PTFE Polytetrafluoroethylene  
Pu Ultimate Load  
PV Photovoltaic  
PVA Polyvinyl Acrylate  
PVC Polyvinyl Chloride  
PVDC Polyvinylidene Chloride  
PVDF Polyvinylidene Fluoride  
PVF Polyvinyl Fluoride  
Pvmt. Pavement  
PVQ Pressure Vessel Quality  
Pwr. Power  
Q Quantity Heat Flow  
QA Quality Assurance  
QC Quality Control; Quick Coupling  
QT Quart  
Quan. Quantity  
Qty. Quantity

R Thermal Resistance  
R/L Random Lengths  
R/W/L Random Widths and Lengths  
RA Return Air; Registered Architect  
RCP Reinforced Concrete Pipe  
Rect. Rectangle  
REINF Reinforced/Reinforcing  
Req'd Required  
RF Raised Face  
RGH Rough  
RGS Rigid Galvanized Steel  
RH Relative Humidity  
RHW Rubber, Heat & Water Resistant;  
Residential Hot Water  
rms Root Mean Square  
RND Round  
ROL Roll (each)  
ROM Room  
ROPS Roll Over Protection System  
ROW Row  
R.O.W. Right of Way  
RPM Revolutions Per Minute  
RR Direct Burial Feeder Conduit  
RS Rapid Start  
RSC Rigid Steel Conduit  
RSR Riser (Per Rise)  
RT Round Trip  
RTD Resistance Temperature Detector  
RTJ Ring Type Joint  
RTRP Reinforced Thermoset Resin Piping  
RVT Reinforced Vinyl Tile  
S Suction; Single Entrance; South  
S1S2E Surfaced 1 side, 2 Edges  
S2S Surfaced 2 Sides  
S4S Surfaced 4 Sides  
Sa Sack  
SA Supply Air  
SBS Styrene Butyl Styrene  
Scaf. Scaffolding  
SCFH Standard Cubic Foot Per Hour  
SCFM Standard Cubic Foot per Minute  
SCH Schedule  
SCR Modular Brick  
SCRD Screwed  
SD Sound Deadening  
SDR Standard Dimension Brick;  
Size To Diameter Ratio  
SE Surfaced Edge; Semi-Elliptical  
SEA Seat  
SER Service Entrance Cable  
SEU Service Entrance Cable

SET Set  
SF Square Foot/Feet  
SFCA Square Feet of Form in Contact with  
Concrete  
SHTS Sheets  
SI Square Inch  
SIS Synthetic Heat-Resistant  
SLDR Solder  
SLH Super Long Span Bar Joist  
SN Solid Neutral  
S-O-L Socketolet  
SP Self-Propelled; Single Pole;  
Space; Standpipe  
Static Pressure (measured in inches of  
water);  
SPDT Single Pole, Double Throw  
SPGR Specific Gravity  
SPWG Static Pressure Water Gauge  
SQ Square;  
Hundred Square Feet (10' x 10' area)  
SQ FT Square Foot/Square Feet  
SQ IN Square Inch  
SQ YD Square Yard  
SS Stainless Steel; Single Strength  
SSB Single Strength B Quality Glass  
SSL Self Sealing Lap  
STC Sound Transmission Class  
STD Standard  
STK Select Tight Knot  
STP Stop (each);  
Standard Temperature & Pressure  
SURF Surface  
STL Steel  
SURF Surface  
SW Seam Weld  
SW Switch  
SWBD Switchboard  
SWS Segmentally Welded Steel  
SWSI Single Width, Single Inlet  
SY Square Yard  
SYN Synthetic  
SYP Southern Yellow Pine  
SYS System  
T Thick; Temperature; Ton  
T&C Threaded and Coupled  
T&G Tongue and Groove  
TBC Tensile Bolt Cloth  
TBE Threaded Both Ends  
TC Terra Cotta  
TDS Total Dissolved Solids  
TEAO Totally Enclosed Air Over

TEFC Totally Enclosed Fan Cooled  
TETC Totally Enclosed Tube Cooled  
TFE Tetrafluoroethylene (Teflon)  
THHN Nylon Jacketed Wire  
THK Thick  
THKNS Thickness  
THW Insulated Strand Wire  
THWN Nylon Jacketed Wire  
TI Titanium  
TL Truckload  
TM Track Mounted  
T-O-L Threadolet  
TON Ton  
Tot. Total  
TPH Tons Per Hour  
Transf. Transformer  
TSHP Total Shaft Horse Power  
T'STAT Thermostat  
TV Television  
TW Thermoplastic Water Resistant Wire  
UA Unequal Angle  
UCI Uniform Construction Index  
UF Underground Feeder  
UHF Ultra High Frequency  
UI United Inch  
UNC Unified Coarse (Threads)  
USP United States Primed  
UTP Unshielded Twisted Pair  
UV Under Voltage  
V Volt  
VA Volt Amperes  
VAV Variable Air Volume  
VCT Vinyl Composition Tile  
Vert. Vertical  
VF Vinyl Faced  
VHF Very High Frequency  
VLF Vertical Linear Foot  
VLV Valve  
Vol. Volume  
VRP Vinyl Reinforced Polyester  
w/ With  
W Watt; Width; Wire; West  
WB Wet Bulb  
WC Water Column; Water Closet  
WF Wide Flange  
WG Water Gauge  
WHM Watthour Meter  
WK Week  
Wldg. Welding  
WOG Water, Oil, Gas  
W-O-L Weldolet

WP Weather Protected  
WR Water Resistant  
WSP Water, Steam, Petroleum  
WT Weight  
WWF Welded Wire Fabric  
X or x By or Times  
XFER Transfer  
XFMR Transformer  
XHD Extra Heavy Duty  
XHHW; XLPE Cross-Linked Polyethylene Wire  
Insulation  
XLP Cross-Linked Polyethylene  
XP Explosion Proof  
Y Wye  
YD Yard  
YR Year

2. Symbols

Δ Delta / per-through or to  
@ at  
% per 100 or percent  
\$ U.S. dollars  
~ Approximate  
Ø Phase  
' feet  
" inches  
# pound or number  
° degree  
< Less Than  
> Greater Than

3. Explanation Of Terms

BTU: Stands for British Thermal Unit. The BTU number indicates the amount of heat required to raise one pound of water by one degree Fahrenheit. What this means is the higher the BTU rating, the higher the heating capacity of a product.

MBH: Equal to 1000 BTUs. Tons (In Reference To Cooling): Unit of measurement for determining cooling capacity. One ton equals 12,000 BTUH.

SEER: Stands for Seasonal Energy Efficiency Ratio. This measures the cooling efficiency in air conditioners or heat pumps. The higher the SEER rating, the more energy-efficient the unit. The government's minimum SEER rating is 10.

4. Calculation Of Board Feet

a. All Lumber Grades Are Presumed To Be 75 Percent Construction And 25 Percent Standard Or Equivalent Grade Unless Otherwise Listed.

Dimensions Are Nominal. Board Foot Is Defined As 1" x 12" x 1' Long; To Calculate BF/LF, Multiply The Size Of The Board Height x Width/12.

1)  $1" \times 2" = 0.167 \text{ BF/LF}$

2)  $1" \times 3" = 0.25 \text{ BF/LF}$

- 3)  $2" \times 3" = 0.5 \text{ BF/LF}$
- 4)  $2" \times 4" = 0.667 \text{ BF/LF}$
- 5)  $2" \times 6" = 1.0 \text{ BF/LF}$
- 6)  $2" \times 8" = 1.333 \text{ BF/LF}$
- 7)  $2" \times 10" = 1.667 \text{ BF/LF}$
- 8)  $2" \times 12" = 2.0 \text{ BF/LF}$
- 9)  $4" \times 4" = 1.333 \text{ BF/LF}$
- 10)  $6" \times 4" = 2.0 \text{ BF/LF}$
- 11)  $6" \times 6" = 3.0 \text{ BF/LF}$
- 12)  $8" \times 8" = 5.333 \text{ BF/LF}$
- 13) etc.

- b. To Calculate Board Feet;
  - 1) For most lumber: Thickness (inches) x width (inches) x length (feet) divided by 12 = board feet.
  - 2) For small pieces: Thickness (inches) x width (inches) x length (inches) divided by 144 = board feet.

1.2 PRODUCTS (Not Used)

1.3 EXECUTION (Not Used)

END OF SECTION 01320d

## SECTION 01326

### CONSTRUCTION SCHEDULING

#### 1.1 GENERAL

##### A. SUMMARY

1. This section covers provision for construction schedules and supplements provisions of the General Conditions.

##### B. FORM OF SCHEDULES:

1. Prepare in form of "Critical Path Method" schedule for all portions of the Work
  - a. Provide separate horizontal breakdown of each trade or operation
  - b. Order: Chronological order of beginning of each item of work
  - c. Identify each item of work:
    - 1) By major specification section number
    - 2) By logically grouped activities
  - d. Horizontal time scale: Identify first work day of each week
  - e. Scale and spacing: Allow space for updating

##### C. CONTENT OF SCHEDULES:

1. Provide complete sequence of construction by activity:
  - a. Shop drawings, product data and samples:
    - 1) Submittal data
    - 2) Status of each submittal relative to Contractor's Submittal Schedule
  - b. Decision Dates for selection of finishes
  - c. Product procurement and delivery dates
  - d. Dates for beginning and completion of each element of construction
2. Show projected percentage of completion for each element of construction.
3. Provide sub-schedules to define critical portions of work.

##### D. UPDATING:

1. Show all changes since previous submittal of updated schedule.
2. Indicate progress of each activity, show completion dates. Include the following:
  - a. Major changes in scope
  - b. Activities modified since previous updating
  - c. Revised projections due to changes
  - d. Other identifiable changes
3. Provide narrative report, including:
  - a. Discussion of problem areas, including current and anticipated delay factors and their impact
  - b. Corrective action taken, or proposed, and its effect.
  - c. Description of revisions:

- 1) Effect on schedule to change scope
- 2) Revision in duration of activities
- 3) Other changes that may affect schedule

E. SUBMITTALS:

1. Submit initial schedule at least five (5) calendar days prior to re-construction conference
2. Submit updated schedules accurately depicting progress to first day of each month
3. Submit one reproducible transparency for Architect's information.
4. Distribute reviewed schedules to:
  - a. Owner
  - b. Job site file
  - c. Subcontractors
  - d. Architect

F. PRODUCTS (NOT USED)

F. EXECUTION (NOT USED)

END OF SECTION 01326

## SECTION 01330

### SUBMITTALS

#### 1.1 GENERAL

##### A. SUMMARY

1. Definitions:
  - a. Submittals: General term including samples, shop drawings and product data, as applicable.
  - b. Shop drawings: Drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.
  - c. Product data: Illustrations, stand schedules, performance charts, instruction, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the work.
  - d. Samples: Physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.
2. Shop Drawings, product data, samples and similar submittals are not Contract Documents. The purpose of their submittal is to demonstrate for those portions of the Work for which submittals are required the way the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents.
3. General provisions:
  - a. Provisions in this section are mandatory procedures for preparing and submitting samples, shop drawings and product data
  - b. Submittals shall be in orderly sequence and times to cause no delay in the Work.
  - c. Job delays occasioned by requirement of resubmission of samples, shop drawings, and product data not in accord with Contract Documents are Contractor's responsibility and will not be considered valid justification for extension of Contract time.
  - d. Commence no portion of work requiring submittals until submittal has been approved and stamped by Architect.
4. Informational Submittals: (FIO - Submittals required to be submitted "For Architect's Information Only")

FIO are required to demonstrate that Work complies with performance requirements of Contract Documents.

  - a. Calculations, certifications and test reports are submitted for record purposes and Architect's information only and will not be approved by Architect.
    - 1) Include calculations and required information if not completely covered by load tables and products data.
  - b. Information Submittals, if acceptable to Architect, will not be returned to Contractor.
  - c. Submittals may be rejected for not complying with requirements.

C. SUBMITTAL SCHEDULE:

1. At least five (5) days prior to date of pre-construction conference, submit a list of all required submittals, by specification section. Indicate timing for submission of required submittals and relation to construction sequence.
2. During course of the Work, maintain an updated submittal schedule showing status of all submittals. Provide copies for Architect's information at project meetings and at other times when requested.

D. SAMPLE PREPARATION:

1. Prepare samples in sizes, shapes and finishes in accord with provision of individual specification sections.
2. Samples submitted for color, sheen or texture selection for approval shall be actual samples of the required material. Where a range of color, sheen or texture is anticipated or proposed, samples shall indicate full range proposed, from which Architect may select the exact range to be provided.
3. Samples furnished under this section are not to be confused with full size, on-the-site "mock-ups" or "sample panels" called for in some specification sections.
4. The number of samples submitted shall be the number required by Contractor, plus one which will be retained by Architect, unless otherwise indicated.
5. Attach a tag to each sample, sized to accept Contractor's and Architect's stamps. Samples submitted to Architect shall have tag stamped with Contractor's stamp and appropriate action shall be indicated thereon.

E. SHOP DRAWING PREPARATION:

1. Drawings shall conform to the following requirements:
  - a. Number drawings consecutively
  - b. Indicate working and erection dimensions and relationships to adjacent work
  - c. Show arrangements and sectional views, where applicable.
  - d. Indicate material, gauges, thicknesses, finishes and characteristics
  - e. Indicate anchoring and fastening details, including information for making connections to adjacent work
  - f. Contract documents prepared by the Architect and his consultants will not be acceptable as shop drawing submittals
2. Form: Submit three blue and black line bond prints of shop drawings.

F. PRODUCT DATA PREPARATION:

1. Include product manufacturer's standard printed material, dated, with product description and installation instructions indicated. Product data may also contain test and performance data, illustrations and special details.

2. Form: Number of copies submitted shall be the number require by Contractor, plus two which will be retained by Architect.
3. Identify each product data item with specification section and paragraph number. Data not related to this project shall be deleted from manufacturer's standard product data.

G. INFORMATIONAL SUBMITTALS (FIO):

1. General: prepare and submit Informational submittals require by other Specification Sections.
  - a. Number of Copies: Submit three (3) copies of each submittal, unless otherwise indicated. Architect will not return copies.
  - b. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
  - c. Test and Inspection Reports: Test and inspection reports shall be signed by the individual responsible for conducting the test and/or inspection.
2. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of Architects and Owners, and other information specified.
3. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements.
4. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements. Submit record of Welding Procedure Specifications (WPS) and Procedure Qualification Record (PDQ) on AWS forms. Include names of firms and personnel certified.
5. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements, and where required, is authorized for this specific Project.
6. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that Manufacturer complies with requirements. Include evidence of manufacturing experience where required.
7. Material Certificates: Prepare written statements on manufacturer's letterhead certifying that material complies with requirements
8. Material Test Reports: Prepare reports written by qualified testing agency, on agency's standard form, indicating and interpreting test results of material for compliance with requirements.
9. Preconstruction Test Reports: Prepare reports written by qualified testing agency, on agency's standard form, indicating and interpreting test results of tests performed prior to, for compliance with performance requirements.

10. Compatibility Test Reports: Prepare reports written by qualified testing agency, on agency's standard form, indicating and interpreting test results of compatibility tests performed prior to installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
11. Field Test Reports: Prepare reports written by qualified testing agency, on agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements.
12. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with requirements. Base reports on evaluation of test performed by manufacturer and witnessed by qualified testing agency, or on comprehensive tests performed by qualified testing agency,
13. Research/Evaluation Reports: Prepare written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following:
  - a. Name of evaluation organization'
  - b. Date of evaluation
  - c. Time period when report is in effect
  - d. Product and manufacturer's names
  - e. Description of product
  - f. Test procedures and results
  - g. Limitations of use
14. Maintenance Data: Prepare written and graphic instructions and procedures for operation and normal maintenance of products and equipment. Comply with requirements in Closeout Submittals Section.
15. Design Data: Prepare written and graphic information, including but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.
16. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer. Include the following, as applicable:
  - a. Preparation of substrates
  - b. Required substrate tolerances
  - c. Sequence of installation or erection
  - d. Required installation tolerances
  - e. Required adjustments
  - f. Recommendation for cleaning and protection

17. Manufacturer's Field Reports: Prepare written information documenting factory-authorized service representative's tests and inspections. Include the following, as applicable:
  - a. Name, address, and telephone number of factory-authorized service representative making report
  - b. Statement on condition of substrates and their acceptability for installation of product
  - c. Statement that products at Project site comply with requirements.
  - d. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken
  - e. Results of operational and other tests and a statement of whether observed performance complies with requirements.
  - f. Statement whether conditions, products, and installation will affect warranty
  - g. Other required items indicated in individual Specification Sections.
18. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.

H. CONTRACTOR'S REVIEW:

1. Review for compliance with the Contract Documents, stamp with approval and submit to the Architect drawings, product data, samples and similar submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors. Submittals not marked as reviewed for compliance with the Contract Documents or which are not required by the Contract Documents may be returned by the Architect without action.
2. By approving and submitting submittals, Contractor represents that he has determined and verified materials, field measurements, and field construction criteria related thereto, or will do so, and has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.
3. The Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's approval of shop drawings, product data, samples or similar submittals unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submittal and the Architect has given written approval to the specific deviation.
4. The Contractor shall direct specific attention, in writing or on resubmitted shop drawings, product data, samples or similar submittals, to revisions other than those requested by the Architect on previous submittals.
5. When professional certification of performance criteria of materials, systems or equipment is required by the Contract Documents, the Architect shall be entitled to rely upon the accuracy and completeness of such calculations and certifications.

6. Where work is indicate “By Others” Contractor shall indicate responsibility for providing and coordinating such work, whether by Subcontractors or under separate contracts.
7. Contractor agrees that submittals processed by Architect are not Construction Change Directives or Change Orders; that purpose of submittals by Contractor is to demonstrate that Contractor understands design concept; that he demonstrates his understanding by indicating which equipment and material he intends to furnish and install and by detailing fabrication and installation methods he intends to use.
8. Contractor represents by submitting samples, shop drawings and product data that he has complied with provision herein specified. Submissions made without Contractor’s approval indicated thereon will be returned without being reviewed for compliance with this requirement.
9. Date each submittal and indicate name of Project, Architect, Contractor, Subcontractor, as applicable, description or name of equipment, material or product, and identify location at which it is to be used in the Work.
10. Accompany submittal with transmittal letter containing project name, Contractor’s name, number of samples or drawings, titles and other pertinent data. Transmittal shall outline deviations, if any, in submittals from requirements of Contract Documents.
11. Perform no portion of the Work requiring submittal and review of submittals until the respective submittal has been approved and stamped by the Architect. Such work shall be in accord with submittals bearing the Architect’s stamp.

I. ARCHITECT’S REVIEW AND APPROVAL:

1. Architect will review each submittal, mark it with appropriate action, and return it to Contractor with reasonable promptness, except where it must be held for coordination and the Contractor is so advised. Submittals will be marked by Architect as follows:
  - a. “Approved” indicates the submittal has been reviewed for conformance with design and no exceptions are taken. Proceed with the work.
  - b. “Approved as Noted” indicates Contractor may proceed with the work as noted. All submittals must be “Approved” or “Approved as Noted” before issued for field use.
  - c. “Revise and Resubmit” or “Not Approved” indicates submittal to be revised and resubmitted for review prior to proceeding with the work or that submittal does not comply with Contract Documents.
2. Architect’s review, approval or other appropriate action is only for checking for conformance with information given and the design concept expressed in the Contract Documents. Architect’s approval of a specific item shall not indicate approval of an assembly in which the item is a component.
3. Architect’s review of Contractor’s submittals shall not be relieve Contractor of responsibility for deviation from requirements of the Contract Documents unless Contractor has informed the Architect in writing of such deviation at the time of

submission and Architect to the specific deviation. Architect's review shall not relieve Contractor from responsibility for errors or omissions in submittals.

4. Submittals required to be submitted "For Architect's Information Only" (FOI) are required to demonstrate that the Work complies with performance requirements of the Contract Documents. Such submittals, if acceptable to Architect, will not be returned to Contractor.
5. Architect will return one reproducible copy of reviewed shop drawings for printing and distribution by Contractor.

J. RESUBMISSION:

1. Make corrections and changes indicated for unapproved submittals, and resubmit in same manner as specified above until Architect's approval is obtained.
2. On re-submittal transmittal, direct specific attention to revisions other than corrections requested by Architect on previous submittals, if any.

K. DISTRIBUTION:

1. Contractor is responsible for obtaining and distributing copies of submittals to his subcontractors and material suppliers after, as well as before, final approval. Prints of reviewed shop drawings shall be made from transparencies which carry the Architect's appropriate stamp.
2. For duration of project, Contractor shall maintain a file of approved submittals which shall be delivered to Owner as a part of project closeout documents.

L. PRODUCTS (NOT USED)

M. EXECUTION (NOT USED)

END OF SECTION 01330

## SECTION 01510

### CONSTRUCTION WASTE MANAGEMENT

#### 1.1 GENERAL

##### A. Summary

1. This Section includes administrative and procedural requirements for the following:
  - a. Salvaging nonhazardous demolition and construction waste.
  - b. Recycling nonhazardous demolition and construction waste.
  - c. Disposing of nonhazardous demolition and construction waste.

##### B. Definitions

1. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
2. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.
3. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
4. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.
5. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.
6. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

##### C. Performance Goals or Requirements:

1. General: Develop waste management plan that results in end-of-Project rates for salvage/recycling of 75, percent by weight of total waste generated by the Work.
2. Salvage/Recycle Goals: Owner has established minimum goals for the following materials:
  - a. Demolition Waste:
    - 1) Asphaltic concrete paving.
    - 2) Concrete.
    - 3) Concrete reinforcing steel.
    - 4) Brick.
    - 5) Concrete masonry units.
    - 6) Wood studs.

- 7) Wood joists.
- 8) Plywood and oriented strand board.
- 9) Wood paneling.
- 10) Wood trim.
- 11) Structural and miscellaneous steel.
- 12) Rough hardware.
- 13) Roofing.
- 14) Insulation.
- 15) Doors and frames.
- 16) Door hardware.
- 17) Windows.
- 18) Glazing.
- 19) Metal studs.
- 20) Gypsum board.
- 21) Acoustical tile and panels.
- 22) Carpet.
- 23) Carpet pad.
- 24) Demountable partitions.
- 25) Equipment.
- 26) Cabinets.
- 27) Plumbing fixtures.
- 28) Piping.
- 29) Supports and hangers.
- 30) Valves.
- 31) Sprinklers.
- 32) Mechanical equipment.
- 33) Refrigerants.
- 34) Electrical conduit.
- 35) Copper wiring.
- 36) Lighting fixtures.
- 37) Lamps.
- 38) Ballasts.
- 39) Electrical devices.
- 40) Switchgear and panelboards.
- 41) Transformers.
- b. Construction Waste:
  - 1) Site-clearing waste.
  - 2) Masonry and CMU.
  - 3) Lumber.
  - 4) Wood sheet materials.
  - 5) Wood trim.
  - 6) Metals.
  - 7) Roofing.
  - 8) Insulation.
  - 9) Carpet and pad.
  - 10) Gypsum board.
  - 11) Piping.
  - 12) Electrical conduit.
  - 13) Packaging: Regardless of salvage/recycle goal indicated above, salvage or recycle 100 percent of the following uncontaminated packaging materials:

- a) Paper.
- b) Cardboard.
- c) Boxes.
- d) Plastic sheet and film.
- e) Polystyrene packaging.
- f) Wood crates.
- g) Plastic pails.

D. Submittals

1. Waste Management Plan: Submit 3 copies of plan within 7 days of date established for commencement of the Work.
2. Waste Reduction Progress Reports: Concurrent with each Application for Payment, submit three copies of report. Include separate reports for demolition and construction waste. Include the following information:
  - a. Material category.
  - b. Generation point of waste.
  - c. Total quantity of waste in tons.
  - d. Quantity of waste salvaged, both estimated and actual in tons.
  - e. Quantity of waste recycled, both estimated and actual in tons.
  - f. Total quantity of waste recovered (salvaged plus recycled) in tons.
  - g. Total quantity of waste recovered (salvaged plus recycled) as a percentage of total waste.
3. Waste Reduction Calculations: Before request for Substantial Completion, submit three copies of calculated end-of-Project rates for salvage, recycling, and disposal as a percentage of total waste generated by the Work.
4. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.
5. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.
6. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
7. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
8. Qualification Data: For Waste Management Coordinator and refrigerant recovery technician.
9. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.

E. Quality Assurance

1. Refrigerant Recovery Technician Qualifications: Certified by EPA-approved certification program.
2. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.
3. Waste Management Conference: Conduct conference at Project site. Review methods and procedures related to waste management including, but not limited to, the following:
  - a. Review and discuss waste management plan including responsibilities of Waste Management Coordinator.
  - b. Review requirements for documenting quantities of each type of waste and its disposition.
  - c. Review and finalize procedures for materials separation and verify availability of containers and bins needed to avoid delays.
  - d. Review procedures for periodic waste collection and transportation to recycling and disposal facilities.
  - e. Review waste management requirements for each trade.

F. Waste Management Plan

1. General: Develop plan consisting of waste identification, waste reduction work plan, and cost/revenue analysis. Include separate sections in plan for demolition and construction waste if Project requires selective demolition or building demolition. Indicate quantities by weight or volume, but use same units of measure throughout waste management plan.
2. Waste Identification: Indicate anticipated types and quantities of demolition, site-clearing, and construction waste generated by the Work. Include estimated quantities and assumptions for estimates.
3. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.
  - a. Salvaged Materials for Reuse: For materials that will be salvaged and reused in this Project, describe methods for preparing salvaged materials before incorporation into the Work.
  - b. Salvaged Materials for Sale: For materials that will be sold to individuals and organizations, include list of their names, addresses, and telephone numbers.
  - c. Salvaged Materials for Donation: For materials that will be donated to individuals and organizations, include list of their names, addresses, and telephone numbers.
  - d. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.

- e. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
  - f. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location on Project site where materials separation will be located.
4. Cost/Revenue Analysis: Indicate total cost of waste disposal as if there was no waste management plan and net additional cost or net savings resulting from implementing waste management plan. Include the following:
- a. Total quantity of waste.
  - b. Estimated cost of disposal (cost per unit). Include hauling and tipping fees and cost of collection containers for each type of waste.
  - c. Total cost of disposal (with no waste management).
  - d. Revenue from salvaged materials.
  - e. Revenue from recycled materials.
  - f. Savings in hauling and tipping fees by donating materials.
  - g. Savings in hauling and tipping fees that are avoided.
  - h. Handling and transportation costs. Include cost of collection containers for each type of waste.
  - i. Net additional cost or net savings from waste management plan.

## 1.2 PRODUCTS (Not Used)

### 1.3 EXECUTION

#### A. Plan Implementation

- 1. General: Implement waste management plan as approved by the Owner. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.
  - a. Comply with Division 01 Section "Temporary Facilities And Controls" for operation, termination, and removal requirements.
- 2. Waste Management Coordinator: Engage a waste management coordinator to be responsible for implementing, monitoring, and reporting status of waste management work plan. Coordinator shall be present at Project site full time for duration of Project.
- 3. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work occurring at Project site.
  - a. Distribute waste management plan to everyone concerned within three days of submittal return.
  - b. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.

4. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
    - a. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.
    - b. Comply with Division 01 Section "Temporary Facilities And Controls" for controlling dust and dirt, environmental protection, and noise control.
- B. Salvaging Demolition Waste
1. Salvaged Items for Reuse in the Work:
    - a. Clean salvaged items.
    - b. Pack or crate items after cleaning. Identify contents of containers.
    - c. Store items in a secure area until installation.
    - d. Protect items from damage during transport and storage.
    - e. Install salvaged items to comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make items functional for use indicated.
  2. Salvaged Items for Sale and Donation: Permitted as directed, on Project site.
  3. Salvaged Items for Owner's Use:
    - a. Clean salvaged items.
    - b. Pack or crate items after cleaning. Identify contents of containers.
    - c. Store items in a secure area until delivery to Owner.
    - d. Transport items to off-site as designated by the Owner.
    - e. Protect items from damage during transport and storage.
  4. Doors and Hardware: Brace open end of door frames. Except for removing door closers, leave door hardware attached to doors.
- C. Recycling Demolition And Construction Waste, General
1. General: Recycle paper and beverage containers used by on-site workers.
  2. Recycling Receivers and Processors: Provide a list of proposed recycling receiver companies planned to be contracted with.
  3. Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for recycling waste materials shall accrue to Owner.
  4. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separaterecyclable waste by type at Project site to the maximum extent practical.
    - a. Provide appropriately marked containers or bins for controlling recyclable waste until they are removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.

- 1) Inspect containers and bins for contamination and remove contaminated materials if found.
- b. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
- c. Stockpile materials away from construction area. Do not store within drip line of remaining trees.
- d. Store components off the ground and protect from the weather.
- e. Remove recyclable waste off Owner's property and transport to recycling receiver or processor.

D. Recycling Demolition Waste

1. Asphaltic Concrete Paving: Grind asphalt to maximum 1-1/2-inch (38-mm) size.
  - a. Crush asphaltic concrete paving and screen to comply with requirements in Division 02 Section "Earthwork" for use as general fill.
2. Asphaltic Concrete Paving: Break up and transport paving to asphalt-recycling facility.
3. Concrete: Remove reinforcement and other metals from concrete and sort with other metals.
  - a. Pulverize concrete to maximum 1-1/2-inch.
  - b. Crush concrete and screen to comply with requirements in Division 02 Section "Earthwork" for use as satisfactory soil for fill or subbase.
4. Masonry: Remove metal reinforcement, anchors, and ties from masonry and sort with other metals.
  - a. Pulverize masonry to an as directed, size.
    - 1) Crush masonry and screen to comply with requirements in Division 02 Section "Earthwork" for use as general fill.
5. Wood Materials: Sort and stack members according to size, type, and length. Separate lumber, engineered wood products, panel products, and treated wood materials.
6. Metals: Separate metals by type.
  - a. Structural Steel: Stack members according to size, type of member, and length.
  - b. Remove and dispose of bolts, nuts, washers, and other rough hardware.
7. Gypsum Board: Stack large clean pieces on wood pallets and store in a dry location. Remove edge trim and sort with other metals. Remove and dispose of fasteners.
8. Acoustical Ceiling Panels and Tile: Stack large clean pieces on wood pallets and store in a dry location.
  - a. Separate suspension system, trim, and other metals from panels and tile and sort with other metals.

10. Carpet and Pad: Roll large pieces tightly after removing debris, trash, adhesive, and tack strips.
    - a. Store clean, dry carpet and pad in a closed container or trailer provided by Carpet Reclamation Agency or carpet recycler.
  11. Equipment: Drain tanks, piping, and fixtures. Seal openings with caps or plugs. Protect equipment from exposure to weather.
  12. Plumbing Fixtures: Separate by type and size.
  13. Piping: Reduce piping to straight lengths and store by type and size. Separate supports, hangers, valves, sprinklers, and other components by type and size.
  14. Lighting Fixtures: Separate lamps by type and protect from breakage.
  15. Electrical Devices: Separate switches, receptacles, switchgear, transformers, meters, panelboards, circuit breakers, and other devices by type.
  16. Conduit: Reduce conduit to straight lengths and store by type and size.
- E. Recycling Construction Waste
1. Packaging:
    - a. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
    - b. Polystyrene Packaging: Separate and bag materials.
    - c. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
    - d. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.
  2. Site-Clearing Wastes: Chip brush, branches, and trees on-site.
    - a. Comply with requirements in Division 02 Section "Exterior Plants" for use of chipped organic waste as organic mulch.
  3. Wood Materials:
    - a. Clean Cut-Offs of Lumber: Grind or chip into small pieces.
    - b. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.
  4. Gypsum Board: Stack large clean pieces on wood pallets and store in a dry location.
    - a. Clean Gypsum Board: Grind scraps of clean gypsum board using small mobile chipper or hammer mill. Screen out paper after grinding.
      - 1) Comply with requirements in Division 02 Section "Exterior Plants" for use of clean ground gypsum board as inorganic soil amendment.
- F. Disposal of Waste

1. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
  - a. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
  - b. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
2. Burning: Do not burn waste materials.
3. Disposal: Transport waste materials off Owner's property and legally dispose of them.

END OF SECTION 01510

## SECTION 01710

### SELECTIVE DEMOLITION

#### 1.1 GENERAL

##### A. Description of Work

1. This specification covers the furnishing and installation of materials for selective demolition. Products shall be as follows or as directed by the Owner. Installation procedures shall be in accordance with the product manufacturer's recommendations. Demolition and removal of materials shall be as required to support the work.

##### B. Summary

1. This Section includes the following:
  - a. Demolition and removal of selected portions of building or structure.
  - b. Demolition and removal of selected site elements.
  - c. Salvage of existing items to be reused or recycled.
  - d. Asbestos abatement and encapsulation.
  - e. Lead paint abatement and encapsulation.

##### C. Definitions

1. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.
2. Remove and Salvage: Detach items from existing construction and deliver them to Owner ready for reuse, as directed.
3. Remove and Reinstall: Detach items from existing construction, prepare them for reuse, and reinstall them where indicated.
4. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

##### D. Materials Ownership

1. Historic items, relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, antiques, and other items of interest or value to Owner that may be encountered during selective demolition remain Owner's property. Carefully remove and salvage each item or object in a manner to prevent damage and deliver promptly to Owner.
  - a. Coordinate with the Owner who will establish special procedures for removal and salvage.

##### E. Submittals

1. Qualification Data: For demolition firm, professional engineer, refrigerant recovery technician, as directed.
  2. Schedule of Selective Demolition Activities: Indicate the following:
    - a. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity.
    - b. Interruption of utility services. Indicate how long utility services will be interrupted.
    - c. Coordination for shutoff, capping, and continuation of utility services.
    - d. Use of elevator and stairs.
    - e. Locations of proposed dust and noise-control temporary partitions.
    - f. Means of protection for items to remain and items in path of waste removal from building.
  3. Inventory: After selective demolition is complete, submit a list of items that have been removed and salvaged.
  4. Predemolition Photographs or Videotapes: Show existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by selective demolition operations. Submit before Work begins.
  5. Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.
    - a. Comply with submittal requirements in Division 01 Section "Construction Waste Management".
- F. Quality Assurance
1. Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project.
  2. Refrigerant Recovery Technician Qualifications: Certified by an EPA-approved certification program.
  3. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
  5. Standards: Comply with ANSI A10.6 and NFPA 241.
  6. Predemolition Conference: Conduct conference at Project site. Review methods and procedures related to selective demolition including, but not limited to, the following:
    - a. Inspect and discuss condition of construction to be selectively demolished.
    - b. Review structural load limitations of existing structure.
    - c. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
    - d. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.

- e. Review areas where existing construction is to remain and requires protection.

G. Project Conditions

1. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
  - a. Before selective demolition, Owner will indicate items to be salvaged.
2. Notify the Owner of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
3. Hazardous Materials are present in construction and are to be selectively demolished.
4. A report on the presence of hazardous materials by Corporate Environmental Risk Management dated February 20, 2009, C.E.R.M. Project No. 11-0964-035 is part of this contract and is on file for review and use. Examine report to become aware of locations where hazardous materials are present.
5. Storage or sale of removed items or materials on-site is not permitted.
6. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

H. Warranty

1. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials so as not to void existing warranties.

**2.1 PRODUCTS (Not Used)**

**3.1 EXECUTION**

A. Utility Services and Mechanical/Electrical Systems

1. Existing Services/Systems: Maintain services/systems indicated to remain and protect them against damage during selective demolition operations.
2. Service/System Requirements: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
  - a. the Owner will arrange to shut off indicated services/systems when requested by Contractor.
  - b. Arrange to shut off indicated utilities with utility companies.
  - c. If services/systems are required to be removed, relocated, or abandoned, before proceeding with selective demolition provide temporary

services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.

- d. Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit after bypassing.
  - 1) Where entire wall is to be removed, existing services/systems may be removed with removal of the wall.

B. Preparation

1. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
2. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
  - a. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
  - b. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
  - c. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
  - d. Cover and protect furniture, furnishings, and equipment that have not been removed.
  - e. Comply with requirements for temporary enclosures, dust control, heating, and cooling.
3. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
  - a. Strengthen or add new supports when required during progress of selective demolition.

C. Selective Demolition, General

1. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
  - a. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
  - b. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
  - c. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.

- d. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
  - e. Maintain adequate ventilation when using cutting torches.
  - f. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
  - g. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
  - h. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
  - i. Dispose of demolished items and materials promptly. Comply with requirements in Division 01 Section "Construction Waste Management".
2. Reuse of Building Elements: Project has been designed to result in end-of-Project rates for reuse of building elements as follows. Do not demolish building elements beyond what is indicated on Drawings without the Owner's approval.
  3. Removed and Salvaged Items:
    - a. Clean salvaged items.
    - b. Pack or crate items after cleaning. Identify contents of containers.
    - c. Store items in a secure area until delivery to Owner.
    - d. Transport items to Owner's storage area designated by Owner as directed.
    - e. Protect items from damage during transport and storage.
  4. Removed and Reinstalled Items:
    - a. Clean and repair items to functional condition adequate for intended reuse. Paint equipment to match new equipment.
    - b. Pack or crate items after cleaning and repairing. Identify contents of containers.
    - c. Protect items from damage during transport and storage.
    - d. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.
  5. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by the Owner, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.
- D. Selective Demolition Procedures for Specific Materials
1. Concrete: Demolish in sections. Cut concrete full depth at junctures with construction to remain and at regular intervals, using power-driven saw, then remove concrete between saw cuts.
  2. Masonry: Demolish in small sections. Cut masonry at junctures with construction to remain, using power-driven saw, then remove masonry between saw cuts.

3. Resilient Floor Coverings: Remove floor coverings and adhesive according to recommendations in RFCI-WP and its Addendum.
    - a. Remove residual adhesive and prepare substrate for new floor coverings by one of the methods recommended by RFCI.
  4. Air-Conditioning Equipment: Remove equipment without releasing refrigerants.
- E. Disposal of Demolished Materials
1. General: Except for items or materials indicated to be recycled, reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.
    - a. Do not allow demolished materials to accumulate on-site.
    - b. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
    - c. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
    - d. Comply with requirements specified in Division 01 Section "Construction Waste Management".
  2. Burning: Do not burn demolished materials.
  3. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

END OF SECTION 01710

## SECTION 076200 - SHEET METAL FLASHING AND TRIM

### PART 10 - GENERAL

#### 10.1 SUMMARY

A. Section Includes:

1. Manufactured reglets with counter flashing.
2. Formed roof-drainage sheet metal fabrications.
3. Formed low-slope roof sheet metal fabrications.
4. Formed steep-slope roof sheet metal fabrications.
5. Formed wall sheet metal fabrications.

#### 10.2 PREINSTALLATION MEETINGS

- A. Pre-installation Conference: Conduct conference at Project site.

#### 10.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.

- B. Shop Drawings: For sheet metal flashing and trim.

1. Include plans, elevations, sections, and attachment details.
2. Distinguish between shop and field assembled work.
3. Include identification of finish for each item.
4. Include pattern of seams and details of termination points, expansion joints and expansion-joint covers, direction of expansion, roof-penetration flashing, and connections to adjoining work.

- C. Samples: For each exposed product and for each color and texture specified.

#### 10.4 INFORMATIONAL SUBMITTALS

- A. Product certificates.

- B. Product test reports.

- C. Sample warranty.

#### 10.5 CLOSEOUT SUBMITTALS

- A. Maintenance data.

## 10.6 QUALITY ASSURANCE

- A. Fabricator Qualifications: Employs skilled workers who custom fabricate sheet metal flashing and trim similar to that required for this Project and whose products have a record of successful in-service performance.

## 10.7 WARRANTY

- A. Special Warranty on Finishes: Manufacturer agrees to repair finish or replace sheet metal flashing and trim that shows evidence of deterioration of factory-applied finishes within specified warranty period.
  - 1. Finish Warranty Period: 10years from date of Substantial Completion.

## PART 11 - PRODUCTS

### 11.1 PERFORMANCE REQUIREMENTS

- A. General: Sheet metal flashing and trim assemblies shall withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rattle, leak, or loosen, and shall remain watertight.
- B. Sheet Metal Standard for Flashing and Trim: Comply with SMACNA's "Architectural Sheet Metal Manual" requirements for dimensions and profiles shown unless more stringent requirements are indicated.
  - 1. Design Pressure: 15 net psf.
- C. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes.
  - 1. Temperature Change: 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces

### 11.2 SHEET METALS

- A. General: Protect mechanical and other finishes on exposed surfaces from damage by applying strippable, temporary protective film before shipping.
- B. Aluminum Sheet: ASTM B 209 (ASTM B 209M), alloy as standard with manufacturer for finish required, with temper as required to suit forming operations and performance required.
  - 1. Color: Match existing metal roofing color.

### 11.3 UNDERLAYMENT MATERIALS

- A. Felt: ASTM D 226/D 226M, Type II (No. 30), asphalt-saturated organic felt; nonperforated.
- B. Synthetic Underlayment: Laminated or reinforced, woven polyethylene or polypropylene, synthetic roofing underlayment; bitumen free; slip resistant; suitable for high temperatures over 220 deg F (111 deg C); and complying with physical requirements of ASTM D 226/D 226M for Type I and Type II felts.
  - 1. Products: Subject to compliance with requirements, [provide the following] [provide one of the following] [available products that may be incorporated into the Work include, but are not limited to, the following]:
    - a. Atlas Roofing Corporation; Summit.
    - b. Engineered Coated Products; Nova-Seal II.
    - c. Kirsch Building Products, LLC; Sharkskin Comp
    - d. SDP Advanced Polymer Products Inc; Palisade.

### 11.4 MISCELLANEOUS MATERIALS

- A. General: Provide materials and types of fasteners, solder, protective coatings, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation and as recommended by manufacturer of primary sheet metal or manufactured item unless otherwise indicated.
- B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads and recommended by manufacturer of primary sheet metal or manufactured item.
  - 1. General: Blind fasteners or self-drilling screws, gasketed, with hex-washer head.
    - a. Exposed Fasteners: Heads matching color of sheet metal using plastic caps or factory-applied coating. Provide metal-backed EPDM or PVC sealing washers under heads of exposed fasteners bearing on weather side of metal.
    - b. Blind Fasteners: High-strength aluminum or stainless-steel rivets suitable for metal being fastened.
    - c. Spikes and Ferrules: Same material as gutter; with spike with ferrule matching internal gutter width.
  - 2. Fasteners for Aluminum Sheet: Aluminum or Series 300 stainless steel.
- C. Sealant Tape: Pressure-sensitive, 100 percent solids, polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch (13 mm) wide and 1/8 inch (3 mm) thick.
- D. Elastomeric Sealant: ASTM C 920, elastomeric polyurethane polymer sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.

- E. Butyl Sealant: ASTM C 1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for hooked-type expansion joints with limited movement.
- F. Bituminous Coating: Cold-applied asphalt emulsion according to ASTM D 1187.
- G. Asphalt Roofing Cement: ASTM D 4586, asbestos free, of consistency required for application.

#### 11.5 MANUFACTURED REGLETS

- A. Reglets: Units of type, material, and profile required, formed to provide secure interlocking of separate reglet and counter flashing pieces, and compatible with flashing indicated with factory-mitered and -welded corners and junctions
  - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following] [available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Cheney Flashing Company.
    - b. Fry Reglet Corporation.
    - c. Heckmann Building Products, Inc.
    - d. Hickman, W. P. Company.
    - e. Hohmann & Barnard, Inc.
    - f. Keystone Flashing Company, Inc.
    - g. National Sheet Metal Systems, Inc.
    - h. Sandell Manufacturing.
  - 2. Basis-of-Design Product: Subject to compliance with requirements, comparable product by one of the following:
    - a. Cheney Flashing Company.
    - b. Fry Reglet Corporation.
    - c. Heckmann Building Products, Inc.
    - d. Hickman, W. P. Company.
    - e. Hohmann & Barnard, Inc.
    - f. Keystone Flashing Company, Inc.
    - g. National Sheet Metal Systems, Inc.
    - h. Sandell Manufacturing.
  - 3. Material: Aluminum, 0.024 inch (0.61 mm) thick
  - 4. Finish: Match existing metal roofing color.

#### 11.6 FABRICATION, GENERAL

- A. General: Custom fabricate sheet metal flashing and trim to comply with details shown and recommendations in cited sheet metal standard that apply to design, dimensions, geometry, metal thickness, and other characteristics of item required. Fabricate sheet metal flashing and trim in shop to greatest extent possible.
  - 1. Obtain field measurements for accurate fit before shop fabrication.
  - 2. Form sheet metal flashing and trim to fit substrates without excessive oil canning, buckling, and tool marks; true to line, levels, and slopes; and with exposed edges folded back to form hems.
  - 3. Conceal fasteners and expansion provisions where possible. Do not use exposed fasteners on faces exposed to view.
- B. Expansion Provisions: Form metal for thermal expansion of exposed flashing and trim.

1. Form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with butyl sealant concealed within joints.
  2. Use lapped expansion joints only where indicated on Drawings.
- C. Sealant Joints: Where movable, nonexpansion-type joints are required, form metal to provide for proper installation of elastomeric sealant according to cited sheet metal standard.
- D. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal.
- E. Fabricate cleats and attachment devices of sizes as recommended by cited sheet metal standard for application, but not less than thickness of metal being secured.
- F. Seams for Aluminum: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with epoxy seam sealer.

#### 11.7 LOW-SLOPE ROOF SHEET METAL FABRICATIONS

- A. Roof Edge Flashing (Gravel Stop) and Fascia Cap: Fabricate in minimum 96-inch- (2400-mm-) long, but not exceeding 12-foot- (3.6-m-) long sections. Furnish with 6-inch- (150-mm-) wide, joint cover plates.
1. Fabricate from the Following Materials:
    - a. Copper: 20 oz./sq. ft. (0.68 mm thick).
    - b. Aluminum: 0.050 inch (1.27 mm) thick.
    - c. Stainless Steel: 0.019 inch (0.48 mm) thick.
    - d. Galvanized Steel: 0.028 inch (0.71 mm) thick.
    - e. Aluminum-Zinc Alloy-Coated Steel: 0.028 inch (0.71 mm)] thick.
- B. Copings: Fabricate in minimum 96-inch- (2400-mm-) long, but not exceeding 12-foot- (3.6-m-) long, sections. Fabricate joint plates of same thickness as copings. Furnish with continuous cleats to support edge of external leg and interior leg. Miter corners, fasten and seal watertight.
1. Fabricate from the Following Materials:
    - a. Copper: 24 oz./sq. ft. (0.82 mm thick).
    - b. Aluminum: 0.050 inch (1.27 mm) thick.
    - c. Stainless Steel: 0.025 inch (0.64 mm) thick.
    - d. Galvanized Steel: 0.040 inch (1.02 mm) thick.
    - e. Aluminum-Zinc Alloy-Coated Steel: 0.040 inch (1.02 mm) thick.
- C. Base Flashing: Fabricate from the following materials:
1. Copper: 20 oz./sq. ft. (0.68 mm thick)
  2. Aluminum: 0.040 inch (1.02 mm) thick.
  3. Stainless Steel: 0.019 inch (0.48 mm) thick.
  4. Galvanized Steel: 0.028 inch (0.71 mm) thick.
  5. Aluminum-Zinc Alloy-Coated Steel: 0.028 inch (0.71 mm) thick.

D. Counter flashing and Flashing Receivers: Fabricate from the following materials:

1. Copper: 16 oz./sq. ft. (0.55 mm thick).
2. Aluminum: 0.032 inch (0.81 mm) thick.
3. Stainless Steel: 0.019 inch (0.48 mm) thick.
4. Galvanized Steel: 0.022 inch (0.56 mm) thick.
5. Aluminum-Zinc Alloy-Coated Steel: 0.022 inch (0.56 mm) thick.

E. Roof-Penetration Flashing: Fabricate from the following materials:

1. Copper: 16 oz./sq. ft. (0.55 mm thick).
2. Stainless Steel: 0.019 inch (0.48 mm) thick.
3. Galvanized Steel: 0.028 inch (0.71 mm) thick.
4. Aluminum-Zinc Alloy-Coated Steel: 0.028 inch (0.71 mm) thick.

F. Roof-Drain Flashing: Fabricate from the following materials:

1. Copper: 12 oz./sq. ft. (0.41 mm thick).
2. Stainless Steel: 0.016 inch (0.40 mm) thick.

## 11.8 STEEP-SLOPE ROOF SHEET METAL FABRICATIONS

A. Apron, Step, Cricket, and Backer Flashing: Fabricate from the following materials:

1. Copper: 16 oz./sq. ft. (0.55 mm thick).
2. Aluminum: 0.032 inch (0.81 mm) thick.
3. Stainless Steel: 0.016 inch (0.40 mm) thick.
4. Galvanized Steel: 0.022 inch (0.56 mm) thick.
5. Aluminum-Zinc Alloy-Coated Steel: 0.022 inch (0.56 mm) thick.

B. Valley Flashing: Fabricate from the following materials:

1. Copper: 16 oz./sq. ft. (0.55 mm thick).
2. Stainless Steel: 0.019 inch (0.48 mm) thick.
3. Galvanized Steel: 0.028 inch (0.71 mm) thick.
4. Aluminum-Zinc Alloy-Coated Steel: 0.028 inch (0.71 mm)] thick.

C. Drip Edges: Fabricate from the following materials:

1. Copper: 16 oz./sq. ft. (0.55 mm thick).
2. Aluminum: 0.032 inch (0.81 mm) thick.
3. Stainless Steel: 0.016 inch (0.40 mm) thick.
4. Galvanized Steel: 0.022 inch (0.56 mm) thick.
5. Aluminum-Zinc Alloy-Coated Steel: 0.022 inch (0.56 mm) thick.

D. Eave, Rake, Ridge, and Hip Flashing: Fabricate from the following materials:

1. Copper: 16 oz./sq. ft. (0.55 mm thick).
2. Aluminum: 0.032 inch (0.81 mm) thick.
3. Stainless Steel: 0.016 inch (0.40 mm) thick.

4. Galvanized Steel: 0.022 inch (0.56 mm) thick.
5. Aluminum-Zinc Alloy-Coated Steel: 0.022 inch (0.56 mm) thick.

## 11.9 WALL SHEET METAL FABRICATIONS

- A. Through-Wall Flashing: Fabricate continuous flashings in minimum 96-inch- (2400-mm-) long, but not exceeding 12-foot- (3.6-m-) long, sections, under copings, and at shelf angles. Fabricate discontinuous lintel, sill, and similar flashings to extend 6 inches (150 mm) beyond each side of wall openings; and form with 2-inch- (50-mm-) high, end dams. Fabricate from the following materials:
1. Copper: 16 oz./sq. ft. (0.55 mm thick).
  2. Stainless Steel: 0.016 inch (0.40 mm) thick.
- B. Opening Flashings in Frame Construction: Fabricate head, sill, jamb, and similar flashings to extend 4 inches (100 mm) beyond wall openings. Form head and sill flashing with 2-inch- (50-mm-) high, end dams. Fabricate from the following materials:
1. Copper: 16 oz./sq. ft. (0.55 mm thick).
  2. Aluminum: 0.032 inch (0.81 mm) thick.
  3. Stainless Steel: 0.016 inch (0.40 mm) thick.
  4. Galvanized Steel: 0.022 inch (0.56 mm) thick.
  5. Aluminum-Zinc Alloy-Coated Steel: 0.022 inch (0.56 mm) thick.
- C. Wall Expansion-Joint Cover: Fabricate from the following materials:
1. Copper: 16 oz./sq. ft. (0.55 mm thick).
  2. Aluminum: 0.040 inch (1.02 mm) thick.
  3. Stainless Steel: 0.019 inch (0.48 mm) thick.
  4. Galvanized Steel: 0.028 inch (0.71 mm) thick.
  5. Aluminum-Zinc Alloy-Coated Steel: 0.028 inch (0.71 mm) thick.

## PART 12 - EXECUTION

### 12.1 UNDERLAYMENT INSTALLATION

- A. Felt Underlayment: Install felt underlayment, wrinkle free, using adhesive to minimize use of mechanical fasteners under sheet metal flashing and trim. Apply in shingle fashion to shed water, with lapped joints of not less than 2 inches (50 mm).
- B. Synthetic Underlayment: Install synthetic underlayment, wrinkle free, according to manufacturers' written instructions, and using adhesive where possible to minimize use of mechanical fasteners under sheet metal.
- C. Self-Adhering Sheet Underlayment: Install self-adhering sheet underlayment, wrinkle free. Prime substrate if recommended by underlayment manufacturer. Comply with temperature restrictions of underlayment manufacturer for installation; use primer for installing underlayment at low temperatures. Apply in shingle fashion to shed water, with end laps of not

less than 6 inches (150 mm) staggered 24 inches (600 mm) between courses. Overlap side edges not less than 3-1/2 inches (90 mm). Roll laps and edges with roller. Cover underlayment within 14 days.

## 12.2 INSTALLATION, GENERAL

- A. General: Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement. Use fasteners, solder, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.
  - 1. Install sheet metal flashing and trim true to line, levels, and slopes. Provide uniform, neat seams with minimum exposure of solder, welds, and sealant.
  - 2. Install sheet metal flashing and trim to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.
  - 3. Space cleats not more than 12 inches (300 mm) apart. Attach each cleat with at least two fasteners. Bend tabs over fasteners.
  - 4. Install exposed sheet metal flashing and trim with limited oil canning, and free of buckling and tool marks.
  - 5. Torch cutting of sheet metal flashing and trim is not permitted.
- B. Metal Protection: Where dissimilar metals contact each other, or where metal contacts pressure-treated wood or other corrosive substrates, protect against galvanic action or corrosion by painting contact surfaces with bituminous coating or by other permanent separation as recommended by sheet metal manufacturer or cited sheet metal standard.
  - 1. Coat concealed side of uncoated-aluminum sheet metal flashing and trim with bituminous coating where flashing and trim contact wood, ferrous metal, or cementitious construction.
  - 2. Underlayment: Where installing sheet metal flashing and trim directly on cementitious or wood substrates, install underlayment and cover with slip sheet.
- C. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at maximum of 10 feet (3 m) with no joints within 24 inches (600 mm) of corner or intersection.
  - 1. Form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with sealant concealed within joints.
  - 2. Use lapped expansion joints only where indicated on Drawings.
- D. Fasteners: Use fastener sizes that penetrate wood blocking or sheathing not less than 1-1/4 inches (32 mm) for nails and not less than 3/4 inch (19 mm) for wood screws.
- E. Conceal fasteners and expansion provisions where possible in exposed work and locate to minimize possibility of leakage. Cover and seal fasteners and anchors as required for a tight installation.
- F. Seal joints as required for watertight construction. Prepare joints and apply sealants to comply with requirements in Section 079200 "Joint Sealants."

- G. Rivets: Rivet joints in uncoated aluminum where necessary for strength.

### 12.3 ROOF-DRAINAGE SYSTEM INSTALLATION

- A. General: Install sheet metal roof-drainage items to produce complete roof drainage system according to cited sheet metal standard unless otherwise indicated. Coordinate installation of roof perimeter flashing with installation of roof-drainage system.
- B. Parapet Scuppers: Continuously support scupper, set to correct elevation, and seal flanges to interior wall face, over cants or tapered edge strips, and under roofing membrane.
- C. Expansion Joint Covers: Install expansion-joint covers at locations and of configuration indicated. Lap joints minimum of 4 inches (100 mm) in direction of water flow.

### 12.4 ROOF FLASHING INSTALLATION

- A. General: Install sheet metal flashing and trim to comply with performance requirements and cited sheet metal standard. Provide concealed fasteners where possible, and set units true to line, levels, and slopes. Install work with laps, joints, and seams that are permanently watertight and weather resistant.
- B. Roof Edge Flashing: Anchor to resist uplift and outward forces according to recommendations in cited sheet metal standard unless otherwise indicated. Interlock bottom edge of roof edge flashing with continuous cleat anchored to substrate.
- C. Copings: Anchor to resist uplift and outward forces according to recommendations in cited sheet metal standard unless otherwise indicated.
- D. Pipe or Post Counter flashing: Install counter flashing umbrella with close-fitting collar with top edge flared for elastomeric sealant, extending minimum of 4 inches (100 mm) over base flashing. Install stainless-steel draw band and tighten.
- E. Counter flashing: Coordinate installation of counter flashing with installation of base flashing. Insert counter flashing in reglets or receivers and fit tightly to base flashing. Extend counter flashing 4 inches (100 mm) over base flashing. Lap counter flashing joints minimum of 4 inches (100 mm).
- F. Roof-Penetration Flashing: Coordinate installation of roof-penetration flashing with installation of roofing and other items penetrating roof. Seal with elastomeric sealant and clamp flashing to pipes that penetrate roof.

### 12.5 WALL FLASHING INSTALLATION

- A. General: Install sheet metal wall flashing to intercept and exclude penetrating moisture according to cited sheet metal standard unless otherwise indicated. Coordinate installation of wall flashing with installation of wall-opening components such as windows, doors, and louvers.
- B. Reglets: Installation of reglets is specified in Section 077100.

- C. Opening Flashings in Frame Construction: Install continuous head, sill, jamb, and similar flashings to extend 4 inches (100 mm) beyond wall openings.

#### 12.6 CLEANING AND PROTECTION

- A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.
- B. Clean and neutralize flux materials. Clean off excess solder.
- C. Clean off excess sealants.
- D. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed unless otherwise indicated in manufacturer's written installation instructions.

END OF SECTION 076200

## SECTION 077100 - ROOF SPECIALTIES

## PART 13 - GENERAL

## 13.1 SUMMARY

- A. Section Includes:
  - 1. Copings.
  - 2. Roof-edge specialties.
  - 3. Roof-edge drainage systems.
  - 4. Reglets and counter flashings.
- B. Pre-installation Conference: Conduct conference at Project site.

## 13.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. LEED Submittals:
  - 1. Product Data for Credit MR 4: For products having recycled content, documentation indicating percentages by weight of postconsumer and preconsumer recycled content. Include statement indicating cost for each product having recycled content.
- C. Shop Drawings: For roof specialties.
  - 1. Include plans, elevations, expansion-joint locations, keyed details, and attachments to other work. Distinguish between plant and field assembled work.
- D. Samples: For each type of roof specialty and for each color and texture specified.

## 13.3 INFORMATIONAL SUBMITTALS

- A. Product Test Reports: For tests performed by a qualified testing agency.
- B. Sample warranty.

## 13.4 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For roofing specialties to include in maintenance manuals.

## 13.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A qualified manufacturer offering products meeting requirements that are FM Approvals listed for specified class.

### 13.6 WARRANTY

- A. Roofing-System Warranty: Roof specialties are included in warranty provisions.
- B. Special Warranty on Painted Finishes: Manufacturer agrees to repair finish or replace roof specialties that show evidence of deterioration of factory-applied finishes within specified warranty period.
  - 1. Fluoropolymer Finish: Deterioration includes, but is not limited to, the following:
    - a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
    - b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
    - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
  - 2. Finish Warranty Period: 10 years from date of Substantial Completion.

## PART 14 - PRODUCTS

### 14.1 PERFORMANCE REQUIREMENTS

- A. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes to prevent buckling, opening of joints, hole elongation, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Provide clips that resist rotation and avoid shear stress as a result of thermal movements. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
  - 1. Temperature Change (Range): 120 deg F (67 deg C), ambient; 180 deg F (100 deg C) material surfaces.

### 14.2 COPINGS

- A. Metal Copings: Manufactured coping system consisting of metal coping cap in section lengths not exceeding 12 feet (3.6 m), concealed anchorage; with corner units, end cap units, and concealed splice plates with finish matching coping caps.
  - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
  - 2. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings comparable product by one of the following:
    - a. Architectural Products Company.
    - b. ATAS International, Inc.
    - c. Castle Metal Products.
    - d. Cheney Flashing Company.

- e. Hickman Company, W. P.
  - f. Merchant & Evans, Inc.
  - g. Metal-Era, Inc.
  - h. Metal-Fab Manufacturing, LLC.
  - i. Perimeter Systems; a division of Southern Aluminum Finishing Company, Inc.
  - j. Petersen Aluminum Corporation.
3. Metallic-Coated Steel Sheet Coping Caps: Zinc-coated (galvanized) steel, nominal 0.028-inch (0.71-mm) thickness.
    - a. Surface: Smooth, flat finish.
    - b. Finish: Three-coat fluoropolymer.
    - c. Color: As indicated by manufacturer's designations.
  4. Formed Aluminum Sheet Coping Caps: Aluminum sheet, 0.040 inch (1.02 mm) thick.
    - a. Surface: Smooth, flat finish.
    - b. Finish: Three-coat fluoropolymer.
  5. Formed Copper Sheet Coping Caps: Copper sheet, 20 oz./sq. ft. (0.68 mm thick).
    - a. Copper Finish: Non-patinated, mill.
  6. Corners: Factory mitered and continuously welded.
  7. Coping-Cap Attachment Method: face leg hooked to continuous cleat with back leg fastener exposed, fabricated from coping-cap material.
    - a. Face-Leg Cleats: Concealed, continuous galvanized-steel sheet.

#### 14.3 ROOF-EDGE SPECIALTIES

- A. Canted Roof-Edge Fascia and Gravel Stop: Manufactured, two-piece, roof-edge fascia consisting of compression-clamped metal fascia cover in section lengths not exceeding 12 feet (3.6 m) and a continuous formed galvanized-steel sheet cant, 0.028 inch (0.71 mm) thick, minimum, with extended vertical leg terminating in a drip-edge cleat. Provide matching corner units.
  1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
  2. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
    - a. Architectural Products Company.
    - b. ATAS International, Inc.
    - c. Castle Metal Products.
    - d. Cheney Flashing Company.
    - e. Hickman Company, W. P.
    - f. Merchant & Evans, Inc.
    - g. Metal-Era, Inc.
    - h. Metal-Fab Manufacturing, LLC.

- i. Petersen Aluminum Corporation.
  3. Metallic-Coated Steel Sheet Fascia Covers: Zinc-coated (galvanized) steel, nominal 0.028-inch (0.71-mm) thickness.
    - a. Surface: Smooth, flat finish.
    - b. Finish: Three-coat fluoropolymer.
    - c. Color: As indicated by manufacturer's designations.
  4. Formed Aluminum Sheet Fascia Covers: Aluminum sheet, 0.040 inch (1.02 mm) thick.
    - a. Surface: Smooth, flat finish.
    - b. Finish: Three-coat fluoropolymer.
  5. Corners: Factory mitered and continuously welded.
  6. Splice Plates: Concealed, of same material, finish, and shape as fascia cover.
  7. Fascia Accessories: Fascia extenders with continuous hold-down cleats, Wall cap, Soffit trim.
- B. Roof-Edge Fascia: Manufactured, two-piece, roof-edge fascia consisting of snap-on metal fascia cover in section lengths not exceeding 12 feet (3.6 m) and a continuous metal receiver with integral drip-edge cleat to engage fascia cover and secure single-ply roof membrane. Provide matching corner units.
1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
  2. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
    - a. Hickman Company, W. P.
    - b. Metal-Era, Inc.
    - c. Metal-Fab Manufacturing, LLC.
    - d. Perimeter Systems; a division of Southern Aluminum Finishing Company, Inc.
  3. Metallic-Coated Steel Sheet Fascia Covers: Zinc-coated (galvanized) steel, nominal 0.028-inch (0.71-mm) thickness.
    - a. Surface: Smooth, flat finish.
    - b. Finish: Three-coat fluoropolymer.
    - c. Color: As indicated by manufacturer's designations
  4. Formed Aluminum Sheet Fascia Covers: Aluminum sheet, 0.040 inch (1.02 mm) thick.
    - a. Surface: Smooth, flat finish.
    - b. Finish: Three-coat fluoropolymer.
  5. Corners: Factory mitered and continuously welded.
  6. Splice Plates: Concealed of same material, finish, and shape as fascia cover.

7. Receiver: Galvanized-steel sheet, nominal 0.040-inch (1.02-mm) thickness.
8. Fascia Accessories: Fascia extenders with continuous hold-down cleats, Wall cap, Soffit trim
9. Corners: Factory mitered and continuously welded.
10. Accessories: Fascia extenders with continuous hold-down cleats, Wall cap, Soffit trim.

#### 14.4 ROOF-EDGE DRAINAGE SYSTEMS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
- B. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
  1. Architectural Products Company.
  2. ATAS International, Inc.
  3. Berger Building Products, Inc.
  4. Castle Metal Products.
  5. Cheney Flashing Company.
  6. CopperCraft by FABRAL; a Euramax company.
  7. Hickman Company, W. P.
  8. Merchant & Evans, Inc.
  9. Metal-Era, Inc.
  10. Metal-Fab Manufacturing, LLC.
  11. Perimeter Systems; a division of Southern Aluminum Finishing Company, Inc.
- C. Zinc-Coated Steel Finish: Three-coat fluoropolymer.
- D. Aluminum Finish: Mill
- E. Copper Finish: Non-patinated, mill.

#### 14.5 REGLETS AND COUNTERFLASHINGS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
- B. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
  1. Castle Metal Products.
  2. Cheney Flashing Company.
  3. Fry Reglet Corporation.
  4. Heckmann Building Products Inc.
  5. Hickman Company, W. P.
  6. Keystone Flashing Company, Inc.
  7. Metal-Era, Inc.
  8. Metal-Fab Manufacturing, LLC.

- C. Reglets: Manufactured units formed to provide secure interlocking of separate reglet and counter flashing pieces, from the following exposed metal:
1. Zinc-Coated Steel: Nominal 0.022-inch (0.56-mm) thickness.
  2. Formed Aluminum: 0.024 inch (0.61 mm) thick.
  3. Stainless Steel: 0.019 inch (0.48 mm) thick.
  4. Copper: 16 oz./sq. ft. (0.55 mm thick).
  5. Corners: Factory mitered and continuously welded.
  6. Surface-Mounted Type: Provide reglets with slotted holes for fastening to substrate, with neoprene or other suitable weatherproofing washers, and with channel for sealant at top edge.
  7. Stucco Type, Embedded: Provide reglets with upturned fastening flange and extension leg of length to match thickness of applied finish materials.
- D. Counter flashings: Manufactured units of heights to overlap top edges of base flashings by 4 inches (100 mm) and in lengths not exceeding 12 feet (3.6 m) designed to snap into reglets or through-wall-flashing receiver and compress against base flashings with joints lapped, from the following exposed metal:
1. Zinc-Coated Steel: Nominal 0.022-inch (0.56-mm) thickness.
  2. Formed Aluminum: 0.024 inch (0.61 mm) thick.
  3. Stainless Steel: 0.019 inch (0.48 mm) thick.
  4. Copper: 16 oz./sq. ft. (0.55 mm thick).
- E. Accessories:
1. Flexible-Flashing Retainer: Provide resilient plastic or rubber accessory to secure flexible flashing in reglet where clearance does not permit use of standard metal counter flashing or where reglet is provided separate from metal counter flashing.
  2. Counter flashing Wind-Restraint Clips: Provide clips to be installed before counter flashing to prevent wind uplift of counter flashing lower edge.
- F. Zinc-Coated Steel Finish: Three-coat fluoropolymer
- G. Aluminum Finish: Three-coat fluoropolymer.
- H. Stainless-Steel Finish: No. 2B (bright, cold rolled, unpolished).
- I. Copper Finish: Non-patinated, mill

#### 14.6 MATERIALS

- A. Zinc-Coated (Galvanized) Steel Sheet: ASTM A 653/A 653M, G90 (Z275) coating designation.
- B. Aluminum Sheet: ASTM B 209 (ASTM B 209M), alloy as standard with manufacturer for finish required, with temper to suit forming operations and performance required.
- C. Stainless-Steel Sheet: ASTM A 240/A 240M or ASTM A 666, Type 304.
- D. Copper Sheet: ASTM B 370, cold-rolled copper sheet, H00 or H01 temper.

## 14.7 UNDERLAYMENT MATERIALS

- A. Self-Adhering, High-Temperature Sheet: Minimum 30 to 40 mils (0.76 to 1.0 mm) thick, consisting of slip-resisting polyethylene-film top surface laminated to layer of butyl or SBS-modified asphalt adhesive, with release-paper backing; cold applied. Provide primer when recommended by underlayment manufacturer.
1. Thermal Stability: ASTM D 1970/D 1970M; stable after testing at 240 deg F (116 deg C).
  2. Low-Temperature Flexibility: ASTM D 1970/D 1970M; passes after testing at minus 20 deg F (29 deg C).
  3. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Carlisle Coatings & Waterproofing; CCW WIP 300HT.
    - b. Grace Construction Products, a unit of W. R. Grace & Co.; [Grace Ice and Water Shield HT] [Ultra].
    - c. Henry Company; Blueskin PE200 HT.
    - d. Metal-Fab Manufacturing, LLC; MetShield.
    - e. Owens Corning; WeatherLock Metal High Temperature Underlayment.
- B. Slip Sheet: Rosin-sized building paper, 3-lb/100 sq. ft. (0.16-kg/sq. m) minimum.

## 14.8 MISCELLANEOUS MATERIALS

- A. Fasteners: Manufacturer's recommended fasteners, suitable for application and designed to meet performance requirements. Furnish the following unless otherwise indicated:
1. Exposed Penetrating Fasteners: Gasketed screws with hex washer heads matching color of sheet metal.
  2. Fasteners for Copper Sheet: Copper, hardware bronze, or passivated Series 300 stainless steel.
  3. Fasteners for Aluminum: Aluminum or Series 300 stainless steel.
  4. Fasteners for Stainless-Steel Sheet: Series 300 stainless steel.
  5. Fasteners for Zinc-Coated (Galvanized) Steel Sheet: Series 300 stainless steel or hot-dip zinc-coated steel according to ASTM A 153/A 153M or ASTM F 2329.
- B. Elastomeric Sealant: ASTM C 920, elastomeric silicone polymer sealant of type, grade, class, and use classifications required by roofing-specialty manufacturer for each application.
- C. Butyl Sealant: ASTM C 1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for hooked-type joints with limited movement.
- D. Bituminous Coating: Cold-applied asphalt emulsion complying with ASTM D 1187/D 1187M.
- E. Asphalt Roofing Cement: ASTM D 4586, asbestos free, of consistency required for application.
- F. Solder for Copper: ASTM B 32, lead-free solder.

## 14.9 FINISHES

## A. Coil-Coated Galvanized-Steel Sheet Finishes:

1. High-Performance Organic Finish: Prepare, pretreat, and apply coating to exposed metal surfaces to comply with ASTM A 755/A 755M and coating and resin manufacturers' written instructions.
  - a. Three-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat.

## B. Coil-Coated Aluminum Sheet Finishes:

1. High-Performance Organic Finish: Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
  - a. Three-Coat Fluoropolymer: AAMA 2605. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat.
2. Clear Anodic Finish: AAMA 611, or thicker.
3. Color Anodic Finish: AAMA 611, or thicker.

## C. Copper Sheet Finishes:

1. Non-Patinated Finish: Mill finish.
2. Pre-Patinated Finish: Chemically treated according to ASTM B 882.

## PART 15 - EXECUTION

## 15.1 UNDERLAYMENT INSTALLATION

- A. Self-Adhering Sheet Underlayment: Apply primer if required by manufacturer. Comply with temperature restrictions of underlayment manufacturer for installation. Apply wrinkle free, in shingle fashion to shed water, and with end laps of not less than 6 inches (152 mm) staggered 24 inches (610 mm) between courses. Overlap side edges not less than 3-1/2 inches (90 mm). Roll laps with roller. Cover underlayment within 14 days.
  1. Apply continuously under copings, roof-edge specialties and reglets and counter flashings.
  2. Coordinate application of self-adhering sheet underlayment under roof specialties with requirements for continuity with adjacent air barrier materials.
- B. Slip Sheet: Install with tape or adhesive for temporary anchorage to minimize use of mechanical fasteners under roof specialties. Apply in shingle fashion to shed water, with lapped joints of not less than 2 inches (50 mm).

## 15.2 INSTALLATION, GENERAL

- A. General: Install roof specialties according to manufacturer's written instructions. Anchor roof specialties securely in place, with provisions for thermal and structural movement. Use

fasteners, solder, protective coatings, separators, underlayments, sealants, and other miscellaneous items as required to complete roof-specialty systems.

1. Install roof specialties level, plumb, true to line and elevation; with limited oil-canning and without warping, jogs in alignment, buckling, or tool marks.
2. Provide uniform, neat seams with minimum exposure of solder and sealant.
3. Install roof specialties to fit substrates and to result in weather tight performance. Verify shapes and dimensions of surfaces to be covered before manufacture.
4. Torch cutting of roof specialties is not permitted.
5. Do not use graphite pencils to mark metal surfaces.

B. Metal Protection: Protect metals against galvanic action by separating dissimilar metals from contact with each other or with corrosive substrates by painting contact surfaces with bituminous coating or by other permanent separation as recommended by manufacturer.

1. Coat concealed side of uncoated aluminum roof specialties with bituminous coating where in contact with wood, ferrous metal, or cementitious construction.
2. Bed flanges in thick coat of asphalt roofing cement where required by manufacturers of roof specialties for waterproof performance.

C. Expansion Provisions: Allow for thermal expansion of exposed roof specialties.

1. Space movement joints at a maximum of 12 feet (3.6 m) with no joints within 18 inches (450 mm) of corners or intersections unless otherwise indicated on Drawings.
2. When ambient temperature at time of installation is between 40 and 70 deg F (4 and 21 deg C), set joint members for 50 percent movement each way. Adjust setting proportionately for installation at higher ambient temperatures.

D. Fastener Sizes: Use fasteners of sizes that penetrate wood blocking or sheathing not less than 1-1/4 inches (32 mm) for nails and not less than 3/4 inch (19 mm) for wood screws.

E. Seal concealed joints with butyl sealant as required by roofing-specialty manufacturer.

F. Seal joints as required for weather tight construction. Place sealant to be completely concealed in joint. Do not install sealants at temperatures below 40 deg F (4 deg C).

G. Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter. Pre-tin edges of sheets to be soldered to a width of 1-1/2 inches (38 mm); however, reduce pre-tinning where pre-tinned surface would show in completed Work. Tin edges of uncoated copper sheets using solder for copper. Do not use torches for soldering. Heat surfaces to receive solder and flow solder into joint. Fill joint completely. Completely remove flux and spatter from exposed surfaces.

### 15.3 COPING INSTALLATION

A. Install cleats, anchor plates, and other anchoring and attachment accessories and devices with concealed fasteners.

B. Anchor copings with manufacturer's required devices, fasteners, and fastener spacing to meet performance requirements.

1. Interlock face and back leg drip edges of snap-on coping cap into cleated anchor plates anchored to substrate at 30-inch (762-mm) centers.
2. Interlock face-leg drip edge into continuous cleat anchored to substrate at 24-inch (610-mm) centers.

#### 15.4 ROOF-EDGE SPECIALITIES INSTALLATION

- A. Install cleats, cants, and other anchoring and attachment accessories and devices with concealed fasteners.
- B. Anchor roof edgings with manufacturer's required devices, fasteners, and fastener spacing to meet performance requirements.

#### 15.5 ROOF-EDGE DRAINAGE-SYSTEM INSTALLATION

- A. General: Install components to produce a complete roof-edge drainage system according to manufacturer's written instructions. Coordinate installation of roof perimeter flashing with installation of roof-edge drainage system.

#### 15.6 REGLET AND COUNTER FLASHING INSTALLATION

- A. Surface-Mounted Reglets: Install reglets to receive flashings where flashing without embedded reglets is indicated on Drawings. Install at height so that inserted counter flashings overlap 4 inches (100 mm) over top edge of base flashings.
- B. Counter flashings: Insert counter flashings into reglets or other indicated receivers; ensure that counter flashings overlap 4 inches (100 mm) over top edge of base flashings. Lap counter flashing joints a minimum of 4 inches (100 mm) and bed with butyl sealant. Fit counter flashings tightly to base flashings.

#### 15.7 CLEANING AND PROTECTION

- A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.
- B. Clean and neutralize flux materials. Clean off excess solder and sealants.
- C. Remove temporary protective coverings and strippable films as roof specialties are installed.

END OF SECTION 077100

## SECTION 079200 - JOINT SEALANTS

## GENERAL

## 15.8 SUMMARY

- A. Section Includes:
  - 1. Urethane joint sealants.
  - 2. Preformed joint sealants.

## 15.9 PRECONSTRUCTION TESTING

- A. Preconstruction Compatibility and Adhesion Testing: Submit to joint-sealant manufacturers eight samples of materials that will contact or affect joint sealants. Use ASTM C 1087 to determine whether priming and other specific joint preparation techniques are required to obtain rapid, optimum adhesion of joint sealants to joint substrates.
- B. Preconstruction Field-Adhesion Testing: Before installing sealants, field test their adhesion to Project joint substrates. Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1 in ASTM C 1193 or Method A, Tail Procedure, in ASTM C 1521.

## 15.10 ACTION SUBMITTALS

- A. Product Data: For each joint-sealant product indicated.
- B. Samples: For each kind and color of joint sealant required.
- C. Joint-Sealant Schedule: Include the following information:
  - 1. Joint-sealant application, joint location, and designation.
  - 2. Joint-sealant manufacturer and product name.
  - 3. Joint-sealant formulation.
  - 4. Joint-sealant color.

## 15.11 INFORMATIONAL SUBMITTALS

- A. Product test reports.
- B. Preconstruction compatibility and adhesion test reports.
- C. Preconstruction field-adhesion test reports.
- D. Field-adhesion test reports.
- E. Warranties.

## 15.12 QUALITY ASSURANCE

- A. Testing Agency Qualifications: Qualified according to ASTM C 1021 to conduct the testing indicated.
- B. Pre-installation Conference: Conduct conference at Project site.

## 15.13 WARRANTY

- A. Special Installer's Warranty: Manufacturer's standard form in which Installer agrees to repair or replace joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
  - 1. Warranty Period: Two years from date of Substantial Completion.
- B. Special Manufacturer's Warranty: Manufacturer's standard form in which joint-sealant manufacturer agrees to furnish joint sealants to repair or replace those that do not comply with performance and other requirements specified in this Section within specified warranty period.
  - 1. Warranty Period: Two years from date of Substantial Completion.

## PRODUCTS

## 15.14 MATERIALS, GENERAL

- A. VOC Content of Interior Sealants: Sealants and sealant primers used inside the weatherproofing system shall comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
  - 1. Architectural Sealants: 250 g/L.
  - 2. Sealant Primers for Nonporous Substrates: 250 g/L.
  - 3. Sealant Primers for Porous Substrates: 775 g/L.

## 15.15 URETHANE JOINT SEALANTS

- A. Urethane Joint Sealant: ASTM C 920.
  - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
  - 2. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
    - a. BASF Building Systems.
    - b. Bostik, Inc.
    - c. Lyntal, International, Inc.
    - d. May National Associates, Inc.
    - e. Pacific Polymers International, Inc.

- f. Pecora Corporation.
  - g. Polymeric Systems, Inc.
  - h. Schnee-Morehead, Inc.
  - i. Sika Corporation; Construction Products Division.
  - j. Tremco Incorporated.
3. Type: Single component (S) or multi-component (M).
  4. Grade: Pourable (P) or nonsag (NS).
  5. Class: 100/50
  6. Uses Related to Exposure: Traffic (T).

#### 15.16 PREFORMED JOINT SEALANTS

- A. Preformed Foam Joint Sealant: Manufacturer's standard preformed, precompressed, open-cell foam sealant manufactured from urethane foam with minimum density of 10 lb/cu. ft. (160 kg/cu. m) and impregnated with a nondrying, water-repellent agent. Factory produced in precompressed sizes in roll or stick form to fit joint widths indicated; coated on one side with a pressure-sensitive adhesive and covered with protective wrapping.
  1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
  2. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
    - a. Dayton Superior Specialty Chemicals.
    - b. EMSEAL Joint Systems, Ltd.
    - c. Sandell Manufacturing Co.
    - d. Schul International, Inc.
    - e. Willseal USA, LLC.

#### 15.17 JOINT SEALANT BACKING

- A. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin) or any of the preceding types, as approved in writing by joint-sealant manufacturer for joint application indicated, and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.
- B. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer.

#### 15.18 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials.
- C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

## EXECUTION

### 15.19 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions.
  - 1. Remove laitance and form-release agents from concrete.
  - 2. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.
- B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

### 15.20 INSTALLATION

- A. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- B. Install sealant backings of kind indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
  - 1. Do not leave gaps between ends of sealant backings.
  - 2. Do not stretch, twist, puncture, or tear sealant backings.
  - 3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.
- C. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- D. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
  - 1. Place sealants so they directly contact and fully wet joint substrates.

2. Completely fill recesses in each joint configuration.
  3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- E. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified in subparagraphs below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
1. Remove excess sealant from surfaces adjacent to joints.
  2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
  3. Provide concave joint profile per Figure 8A in ASTM C 1193, unless otherwise indicated.
- F. Acoustical Sealant Installation: Comply with ASTM C 919 and with manufacturer's written recommendations.
- G. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

#### 15.21 FIELD QUALITY CONTROL

- A. Field-Adhesion Testing: Field test joint-sealant adhesion to joint substrates as follows:
1. Extent of Testing: Test completed and cured sealant joints as follows:
    - a. Perform 10 tests for the first 1000 feet (300 m) of joint length for each kind of sealant and joint substrate.
    - b. Perform 1 test for each 1000 feet (300 m) of joint length thereafter or 1 test per each floor per elevation.
  2. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1 in ASTM C 1193 or Method A, Tail Procedure, in ASTM C 1521.
- B. Evaluation of Field-Adhesion Test Results: Sealants not evidencing adhesive failure from testing or noncompliance with other indicated requirements will be considered satisfactory. Remove sealants that fail to adhere to joint substrates during testing or to comply with other requirements. Retest failed applications until test results prove sealants comply with indicated requirements.

#### 15.22 JOINT-SEALANT SCHEDULE

- A. Joint-Sealant Application: Exterior joints in vertical surfaces and horizontal nontraffic surfaces.
1. Joint Locations:
    - a. Joints in exterior insulation and finish systems.

- b. Joints between metal panels.
    - c. Joints between different materials listed above.
    - d. Perimeter joints between materials listed above and frames of doors and louvers.
    - e. Control and expansion joints in overhead surfaces.
  2. Joint Sealant: Urethane.
  3. Joint Sealant: Preformed foam.
  4. Joint-Sealant Color: As indicated by manufacturer's designations
- B. Joint-Sealant Application: Interior joints in vertical surfaces and horizontal nontraffic surfaces.
  1. Joint Locations:
    - a. Control and expansion joints on exposed interior surfaces of exterior walls.
    - b. Perimeter joints of exterior openings where indicated.
    - c. Vertical joints on exposed surfaces of walls

END OF SECTION 079200

## EXHIBITS





# PHOTO JOURNAL

Roof Survey  
Shaw Environmental Group  
3665 Cascade Road  
Atlanta, GA



Item #1 - Existing sealants at metal counterflashing to be removed, cleaned, & sealed with new commercial grade urethane sealant - typical of approx. 290 lineal feet in 8 separate locations



Item #2 - Existing sealants at wall joint to be removed, cleaned, new foam backerod installed, & sealed with new commercial grade urethane sealant - typical of approx. 36 lineal feet in 6 separate locations



Item #3 - Existing sealants at metal counterflashing at wall to be removed, cleaned, & sealed with new commercial grade urethane sealant - typical of approx. 18" each in 3 separate locations





Item #4 - Existing sealants at the base of window frame (both joints) to be removed, cleaned, & sealed with new commercial grade urethane sealant - typical of a total of approx. 185 lineal feet



Item #5 - Existing sealants at the joints in the sides of the window frame to be removed, cleaned, & sealed with new commercial grade urethane sealant - typical of 64 joints approx. 8" each



Item #6 - Open lap in the modified bitumen base flashing at wall to be primed & receive a five-course of commercial grade flashing mastic & reinforcing membrane - typical of 32 areas





Item #7 - Open lap in the modified bitumen base flashing at scupper drain to be primed & receive a five-course of commercial grade flashing mastic & reinforcing membrane - typical of 10 areas



Item #8 - Base flashing at roof drain to be primed & receive a three-course of commercial grade flashing mastic & reinforcing membrane capped with one ply of modified bitumen membrane - typical of 12 areas



Item #9 - Open end lap in roof surface to be primed & receive a three-course of commercial grade flashing mastic & reinforcing membrane capped with one ply of modified bitumen membrane - typical of 11 areas





Item #10 - Base flashing at lead boot to be primed & receive a three-course of commercial grade flashing mastic & reinforcing membrane capped with one ply of modified bitumen membrane - typical of 7 areas



Item #11 - Existing sealants at coping metal joint to be removed, cleaned, & sealed with new commercial grade urethane sealant - typical of approx. 20" wide each in 114 separate locations



Item #12 - Base of metal roof to be cut, counterflashed, primed, & to receive a three-course of commercial grade flashing mastic & reinforcing membrane capped with one ply of modified bitumen membrane





Item #13 - PVC drain pipe to have all existing sealants removed, cleaned, & sealed with new commercial grade urethane sealant tooled neatly into place - typical of 9 areas



Item #14 - Coping metal to be removed, wall to receive a three-course of commercial grade flashing mastic & reinforcing membrane & coping metal re-installed - typical of approx. 20 lineal feet

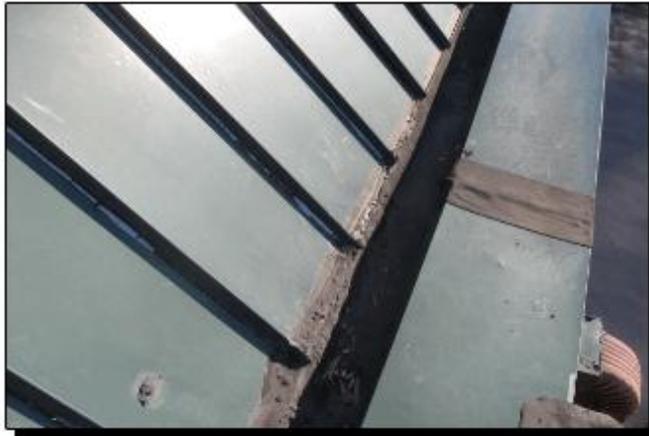


Item #15 - Roof surface to be primed & receive one ply of modified bitumen membrane in cold adhesive - walls to receive a three-course of commercial grade flashing mastic & reinforcing membrane - approx. 400 square feet





Item #16 - Metal panel to be cut, coping to be removed, EPDM liner removed, new TPO membrane installed in gutter & over the wall - new 24 gauge Kynar finished metal counterflashing installed & coping reinstated - total of approx. 150 lineal feet in 3 separate areas



Item #17 - Scupper drain to be replaced with a new TPO coated metal scupper drain flashed with new TPO membrane flashing - typical of 2 areas



Item #18 - Drain pipe in gutter to receive a new TPO-coated metal outlet & tied into the new TPO membrane in the gutter - typical of 9 areas





Overview of the damage to the interior of the building as a result of the leaking built-in gutter - typical



Close-up of the damage to the interior of the building as a result of the leaking built-in gutter - typical



Close-up of the damage to the interior of the building as a result of the leaking built-in gutter - typical





### ROOF SURVEY FORM

TO: Mr. Joe Colella DATE: 11/26/12  
Shaw Environmental & Infrastructure Group BUILDING Cascade Regional Library  
11560 Great Oaks Way 3665 Cascade Road  
Alpharetta, GA 30022 Atlanta, GA 30331

<b>EXISTING ROOF:</b>	Metal Roof - 5,000 SF Modified Roof- 23,700 SF	<b>Core Cut Analysis:</b>	Wet on all Flat Roof Areas
<b>Built-up</b> <input checked="" type="checkbox"/> <b>M/S-P/</b> <b>Other:</b>	Metal + White Modified 3 Roofs on this Building	Gravel: <input type="checkbox"/> Smooth Surface: <input checked="" type="checkbox"/>	<b>Type:</b> White Granulated
<b>Insulation</b> <input checked="" type="checkbox"/> <b>Type:</b>	2.3" Isocyanurate 6" Thick 1.0" Perlite .5" Wood Fiber	<b>Deck Type:</b> Steel	
<b>Approximate Age:</b>	1- 5 Years <input type="checkbox"/>	6 - 10 Years <input type="checkbox"/>	10 + Years <input checked="" type="checkbox"/>

**Brief Description of Repair / Reroof Work Needed:**

- 01.** In 8 separate locations at a total of approximately 290 lineal feet where the existing metal counter flashing meets the brick wall, remove all existing sealants, clean, and seal with new commercial grade urethane sealant and tool neatly into place.
- 02.** At a total of 6 joints in the brick walls (approximately 6 lineal feet each), remove all existing sealants, clean, furnish and install new foam backerrod, and seal with new commercial grade urethane sealant and tool neatly into place.
- 03.** At a total of 3 joints in the corner where the existing counter flashing meets the window frame (a total of approximately 18" each), remove all existing sealants, clean, and seal with new commercial grade urethane sealant and tool neatly into place.
- 04.** At a total of approximately 185' lineal feet at the existing joints at the base of the windows (both joints), remove all existing sealants, clean, and seal with new commercial grade urethane sealant and tool neatly into place.
- 05.** At a total of 64 joints in the sides of the window frames (approximately 8" each), remove all existing sealants, clean, and seal with new commercial grade urethane sealant and tool neatly into place.
- 06.** At a total of 32 open laps in the modified bitumen base flashing at the base of the walls, sweep, apply primer, and apply a five-course application of commercial grade flashing mastic and reinforcing membrane. Repair size will be approximately 12" x 18" each.
- 07.** At a total of 10 scupper drains, sweep, apply primer, and apply a five-course application of commercial grade flashing mastic and reinforcing membrane. Repair size will be approximately 18" x 24" each.
- 08.** At a total of 12 roof drains, remove all loose flashing, sweep, apply primer, and apply a three-course application of commercial grade flashing mastic and reinforcing membrane and cap with one ply of modified bitumen (repair size will be approximately 9 square feet each).
- 09.** At a total of 11 end laps in the roof seams on the roof surface, sweep, apply primer, and apply a three-course application of commercial grade flashing mastic and reinforcing membrane and cap with a one ply of modified bitumen (repair size will be approximately 8 square feet each).
- 10.** At a total of 7 plumbing penetrations, sweep, apply primer, and apply a three-course application of commercial grade flashing mastic and reinforcing membrane and cap with one ply of modified bitumen (repair size will be approximately 4 square feet each).
- 11.** At a total of 114 joints in the coping metal (approximately 20" wide each), remove all existing sealants, clean, and seal with new commercial grade urethane sealant and tool neatly into place.



## ROOF SURVEY FORM

12. At the base of the metal roof where it meets the modified bitumen roof surface (total of approximately 50 lineal feet), remove all existing repairs, remove the existing metal counter flashing, cut out the existing metal roof approximately 8" wide, furnish and install a new metal counter flashing, anchor securely into place, apply primer, and apply a three-course application of commercial grade flashing mastic and reinforcing membrane and cap with one ply of modified bitumen (repair size will be approximately 18" x 50').
13. At a total of 9 PVC drain pipes in the brick wall (approximately 3.5" wide each), remove all existing sealants, clean and seal with new commercial grade urethane sealant and tool neatly into place.
14. At 1 location at a perimeter wall at the rear of the building at a total of approximately 20 lineal feet, remove the existing coping metal, apply asphalt primer, and apply a three-course application of commercial grade flashing mastic and reinforcing membrane (approximately 18" wide to the wall). Reinstall the existing coping metal upon completion and apply roofing granules to the repaired area.
15. At 1 area of the roof surface over the book depository (total of approximately 400 square feet), furnish and install new wood fiber insulation to level the low area near the drain and anchor securely into place with screws and plates. Sweep the roof surface and apply asphalt primer to the roof surface and to the base flashing at the walls. Effect repairs by using one-ply modified bitumen membrane in cold adhesive reinforced around the perimeter with a three-course application of commercial grade flashing mastic and reinforcing membrane (approximately 6" wide). The base flashing at the walls will receive a three-course application of commercial grade flashing mastic and reinforcing membrane.
16. In 3 separate locations of built-in gutter at a total of approximately 150 lineal feet, cut the existing metal panels approximately 8" wide, remove and dispose of properly, remove the existing EPDM liner and dispose of properly, remove the existing coping metal, flash the gutter and the wall with new TPO membrane flashing and fully adhere with bonding adhesive. Furnish and install a new metal counter flashing at the base of the metal roof and anchor securely into place. Reinstall the existing coping metal and anchor securely into place.
17. At 2 scupper drains in the built-in gutter, furnish and install a new TPO-coated metal scupper drain and flash with new TPO membrane flashing.
18. At a total of 9 round drain pipes (approximately 3.5" wide each), furnish and install a new TPO-coated metal outlet, and tie into the new TPO membrane in the gutter.
19. On completion of repairs, apply a uniform application of aluminum roof coating or granules to the repaired areas (as needed).
20. Remove all work-related debris on an ongoing basis and do a thorough cleanup upon job completion.

→ \$ 36,622.00 - Cost for all Remedial Repair Work

Anticipated Life: Reroof Now  1 to 2 Years  3 to 6 Years  7+ Years

Note The flat roofs on this facility need to be replaced as soon as possible. The suggested roof repairs will help the roof last as long as possible but due to the condition of the roof it will probably continue to leak.

SEE ATTACHED DIAGRAM





# PHOTO JOURNAL

Roof Survey  
Shaw Environmental Group  
11 Kirkwood Road  
Atlanta, GA



Item #1 - Radius to have all existing sealants removed & to receive a new 24 gauge Kynar finished metal counterflashing (radiused) anchored securely into place - typical of approx. 55 lineal feet in 3 areas



Item #2 - Holes in the face of the dryvit surface to be repaired with the proper dryvit materials - coating on dryvit to be re-applied upon the completion of work - typical of approx. 20 areas



Item #3 - Joint at the base of the dryvit surface at the metal roof to have all existing sealants removed, cleaned, & sealed with new commercial grade urethane sealant - typical of approx. 18 lineal feet total in 6 areas





Item #4 - Joint at the metal surface & at the barrel roof to have all existing sealants removed, cleaned, & sealed with new commercial grade urethane sealant - typical of approx. 190 lineal feet total in 3 areas



Item #5 - Joint in the metal counterflashing at the metal roof to have all existing sealants removed, cleaned, & sealed with new commercial grade urethane sealant - typical of a total of 48 joints in 3 areas



Item #6 - Joint at the base of the barrel roof & the metal counterflashing to have all existing sealants removed, cleaned, & sealed with new commercial grade urethane sealant - typical of approx. 190 lineal feet total in 3 areas





Item #7 - Joint in metal ridge cap to have all existing sealants removed, cleaned, & sealed with new commercial grade urethane sealant - typical of 13 areas



Item #8 - Fastener in metal ridge cap to have all existing sealants removed, cleaned, & sealed with new commercial grade urethane sealant - typical of approx. 100 fasteners



Item #9 - Joint in closure metal to have all existing sealants removed, cleaned, & sealed with new commercial grade urethane sealant - typical of approx. 29 lineal feet in 2 areas





Item #10 - Previously repaired area to have all existing sealants removed, cleaned, & flashed with a three-course of Sealoflex Pink & polyester reinforcing membrane - total of 3 areas



Item #11 - Scupper drain to have all existing sealants removed, cleaned, & flashed with a three-course of Sealoflex Pink & polyester reinforcing membrane - approx. 18" x 48"



Item # 12 - Plumbing penetration to have all existing sealants removed, cleaned, a new metal flashing boot installed, anchored securely into place, & sealed with new commercial grade urethane sealant - typical of 3 areas





Item #13 - Joint in metal counterflashing to have all existing sealants removed, cleaned, & sealed with new commercial grade urethane sealant - typical of 18 areas



Item #14 - Fastener in the metal counterflashing to be removed & replaced with a new fastener anchored securely into place - typical of approx. 100 fasteners



Item #15 - Gap at the metal counterflashing at the metal roof to receive new foam backerod & sealed with new commercial grade urethane sealant - typical of 3 areas





Item #16 - Penetration in wall to have all existing sealants removed, cleaned, & sealed with new commercial grade urethane sealant - typical of 2 areas



Item #17 - Corner of scupper drain to receive a five-course of commercial grade flashing mastic & reinforcing membrane - typical of 2 areas



Item #18 - Electrical box to have all existing sealants removed, cleaned, & sealed with new commercial grade urethane sealant





Item #19 - Base of wall to be spud, swept, & to receive a three-course of commercial grade flashing mastic & reinforcing membrane & coated upon completion - typical of approx. 150 lineal feet



Item #20 - Base of curb to be spud, swept, & to receive a three-course of commercial grade flashing mastic & reinforcing membrane & coated upon completion - typical of a total of approx. 60 lineal feet in 2 areas



Item #21 - Base of curb to have existing counterflashing removed & to receive new 24 gauge Kynar finished metal counterflashing anchored securely into place - typical of a total of approx. 60 lineal feet in 2 areas





Item #22 - Base flashing at penetration to have a new pitch pan installed, primed, & to receive a three-course of commercial grade flashing mastic & reinforcing membrane capped with one ply of modified bitumen



Item #23 - Base flashing at pitch pan to be primed & receive a three-course of commercial grade flashing mastic & reinforcing membrane capped with one ply of modified bitumen membrane - typical of 2 areas



Item #24 - Pitch pan to have loose & peeling sealants removed & to receive a three-course of commercial grade flashing mastic & reinforcing membrane crowned over the top - typical of 2 areas





Item #25 - Base flashing at drain to be primed & receive a three-course of commercial grade flashing mastic & reinforcing membrane capped with one ply of modified bitumen membrane - typical of 2 areas



Item #26 - Gas line to be lightly wire-brushed & painted with safety yellow paint - typical of approx. 60 lineal feet



Overview of roof access to the built-up roof surface from the interior of the building





**ROOF SURVEY FORM**

TO: Mr. Joe Colella DATE: 11/26/12  
Shaw Environmental & Infrastructure Group BUILDING: Kirkwood Library  
11560 Great Oaks Way 11 Kirkwood Road  
Alpharetta, GA 30022 Atlanta, GA 30317

<b>EXISTING ROOF:</b>	Metal Roof - 7750 SF Built-Up Roof - 1240 SF	<b>Core Cut Analysis:</b> Dry	
<b>Built-up/MB/S-P/ Other:</b>	Metal Roof 3 Ply Built-Up Roof	Gravel: <input checked="" type="checkbox"/> Type: Granite Smooth Surface: <input type="checkbox"/>	
<b>Insulation</b> <input checked="" type="checkbox"/>	<b>Type:</b> 4.0" Isocyanurate 1.5" Perlite	<b>Deck Type:</b> Steel	
<b>Approximate Age:</b>	1 - 5 Years <input type="checkbox"/> 6 - 10 Years <input type="checkbox"/> 10 + Years <input checked="" type="checkbox"/>		

**Brief Description of Repair / Reroof Work Needed:**

01. At 3 separate locations at the radius of the dome accent roofs (approximately a total of 19 lineal feet each), remove all existing sealants, clean, furnish and install new 24 gauge Kynar finished metal counter flashing and anchor securely into place.
02. At a total of 20 small holes in the dryvit fascia (approximately 3" wide each), repair with the proper materials to fill all holes smooth to textured dryvit surface. Apply new coating upon completion (color to match as closely as possible).
03. At a total of 6 joints where the metal roof deck meets the dryvit surface (approximately 3' lineal feet each), clean, and seal with new commercial grade urethane sealant and tool neatly into place.
04. At a total of approximately 190 lineal feet where the perimeter of the radius metal meets the metal roof surface, remove all existing sealants, clean, and seal with new commercial grade urethane sealant and tool neatly into place. Furnish and install new rivets where necessary.
05. At a total of approximately 48 joints in the metal flashing at the perimeter of the radius metal (approximately 6" wide), remove all existing sealants, clean, and seal with new commercial grade urethane sealant and tool neatly into place. Furnish and install new rivets where necessary.
06. At a total of approximately 190 lineal feet where the perimeter of the radius metal meet the metal flashing, remove all existing sealants, clean, and seal with new commercial grade urethane sealant and tool neatly into place. Furnish and install new rivets where necessary.
07. At a total of 13 joints in the ridge cap (approximately 13" wide each), remove all existing sealants, clean, and seal with new commercial grade urethane sealant and tool neatly into place. Furnish and install new rivets where necessary.
08. At a total of approximately 100 fasteners in the ridge cap, remove all existing sealants, clean, and seal with new commercial grade urethane sealant and tool neatly into place. Furnish and install new rivets where necessary.
09. At 2 seams in the closure metal (a total of approximately 29 lineal feet) remove all existing sealants, clean, and seal with new commercial grade urethane sealant and tool nearly into place.
10. At a total of 3 previously repaired areas, remove all existing sealants, clean, apply metal edge primer, and flash with a three-course application of Seal-O-Flex Pink (solvent based) and polyester reinforcing membrane (repair size will be approximately 1 square foot each).
11. At the perimeter of 1 scupper drain on the metal roof surface (approximately 18" x 48"), remove all existing sealants, clean, apply metal edge primer, and flash with a three-course application of Seal-O-Flex Pink (solvent based) and polyester reinforcing membrane.
12. At a total of 3 plumbing penetrations on the metal roof surface, remove all existing sealants, furnish and install a new metal roof flashing boot, anchor securely into place, and seal with new commercial grade urethane sealant and tool neatly into place.
13. At a total of 18 joints in the metal counter flashing at the top of the walls (approximately 13" wide), remove all existing sealants, clean, and seal with new commercial grade urethane sealant and tool neatly into place.



### ROOF SURVEY FORM

- 14. At the metal counter flashing at the top of the walls, remove the existing fasteners, furnish and install approximately 100 new gasket fasteners and anchor securely into place
- 15. In 3 separate locations at the base of the metal roof at the radius beneath the counter flashing (a total of approximately 10 lineal feet each), furnish and install new foam backerrod, seal with new commercial grade urethane sealant, and tool neatly into place.
- 16. At 2 small metal penetrations in the metal walls, remove all existing sealants, clean, and seal with new commercial grade urethane sealant and tool neatly into place.
- 17. At 2 corners at one scupper drain, sweep, apply asphalt primer, and apply a five-course application of commercial grade flashing mastic and reinforcing membrane (approximately 12" x 18" each).
- 18. At 1 electrical box, remove all existing sealants, clean, and seal with new commercial grade urethane sealant and tool neatly into place
- 19. At the base flashing at the walls, spud, sweep, and apply a three-course application of commercial grade flashing mastic and reinforcing membrane (approximately 12" wide). Replace all gravel upon completion of work. Apply a new white coating to the base flashing (approximately 12" wide x 150 lineal feet).
- 20. At 2 AC curbs at the base flashing, spud, sweep, and apply a three-course application of commercial grade flashing mastic and reinforcing membrane (approximately 12" wide). Replace all gravel upon completion of work. Apply a new white coating to the base flashing (approximately 12" wide x 60 lineal feet).
- 21. At the base of 2 AC curbs, remove existing metal counter flashing and dispose of properly. Furnish and install new 24 gauge Kynar finished metal counter flashing and anchor securely into place (total of approximately 60 lineal feet).
- 22. At 1 pipe, spud, sweep, furnish, and install a new 24 gauge Kynar finished metal pitch pan, anchor securely into place, seal properly, apply asphalt primer, and apply a three-course application of commercial grade flashing mastic and reinforcing membrane and cap with one ply of modified bitumen membrane (repair size will be approximately 4 square feet).
- 23. At the base of the 2 pitch pans, spud, sweep, apply asphalt primer, and apply a three-course application of commercial grade flashing mastic and reinforcing membrane and cap with one-ply of modified bitumen membrane (repair size will be approximately 4 square feet each).
- 24. At 2 pitch pans, scrape off all loose sealants, clean, apply asphalt primer, and apply a three-course application of commercial grade flashing mastic and reinforcing membrane and crown over the top.
- 25. At the base of 2 roof drains, remove all loose flashing, spud, sweep, apply primer, apply a three-course application of commercial grade flashing mastic and reinforcing membrane and cap with one ply of modified bitumen (repair size will be approximately 9 square feet each).
- 26. At approximately 60 lineal feet of gas line, lightly wire-brush and paint with new yellow safety paint to prevent further corrosion.
- 27. All built-up roof repairs will receive an application of white coating or roofing granules upon completion (where needed).
- 28. Remove all work-related debris on an ongoing basis and do a thorough cleanup upon job completion.

\*\*\* *Please Note: There are several ceiling tiles that have been replaced under the AC unit on the South end of the building. This leak appears to be a condensation leak from inside this unit. Please have a service technician check the inside of this unit.*

Anticipated Life: Reroof Now  1 to 3 Years  3 to 5 Years  6+ Years

Note The recommended repair work will help this roof system last as long as possible with fewer crisis roof leaks.

SEE ATTACHED DIAGRAM

