

Lee County Board Of County Commissioners
Agenda Item Summary

Blue Sheet No. 20020649

1. REQUESTED MOTION:

ACTION REQUESTED: Award Professional Services Agreement for CN-02-10 AERIAL PHOTOGRAPHY & DIGITAL MAPPING SERVICES, to EarthData International of Maryland, LLC, for a total contract amount of \$839,273.45. Also approve transfer from reserves in Capital Improvements for \$50,000.00 and Utilities reserves for \$42,926.00 and transfer from Surface Water Master Plan Project in the amount of \$134,503.00 and amend FY 02-06 CIP.

WHY ACTION IS NECESSARY: Pursuant to the Lee County Contract Manual, approved by the Board on September 25, 2001, the Board is required to approval all Professional Services Agreements over \$50,000.00.

WHAT ACTION ACCOMPLISHES: Consultant will provide any and all professional services to produce aerial photography and digital mapping of Lee County.

2. DEPARTMENTAL CATEGORY:

09 Transportation
 COMMISSION DISTRICT #:

A9B

3. MEETING DATE:

07-02-2002

4. AGENDA:

- CONSENT
- ADMINISTRATIVE
- APPEALS
- PUBLIC
- WALK ON
- TIME REQUIRED:

5. REQUIREMENT/PURPOSE:
 (Specify)

- STATUTE
- ORDINANCE
- ADMIN. CODE AC-4-4
- OTHER

6. REQUESTOR OF INFORMATION:

- A. COMMISSIONER _____
- B. DEPARTMENT Transportation
- C. DIVISION _____
- BY: Scott Gilbertson, Director

7. BACKGROUND:

On February 26, 2002, the Board of County Commissioners approved the ranking of Consultants and authorized negotiations to commence with the number one ranked firm. The ranking was as follows: (1) EarthData International of Maryland, LLC; (2) Surdex Corporation; (3) Sanborn and (4) 3001 Inc.

Contract Negotiations were successful with the number one ranked firm, EarthData International of Maryland, LLC, and required Board approval of the final Professional Services Agreements.

Funds will be available in account: 20404030700.506510 - \$611,764.00; 20404048730.506510 - \$42,926.00 & 20404030100.506510 - \$184,583.

Attachments: 1. Three (3) Professional Services Agreements

8. MANAGEMENT RECOMMENDATIONS:

9. RECOMMENDED APPROVAL:

A Department Director	B Purchasing or Contracts	C Human Resources	D Other	E County Attorney	F Budget Services				G County Manager
					OA	OM	Risk	GC	
<i>6/18/02</i>	<i>[Signature]</i>	N/A		<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>

10. COMMISSION ACTION:

- APPROVED
- DENIED
- DEFERRED
- OTHER

RECEIVED BY
 COUNTY ADMIN.
[Signature]
 COUNTY ADMIN.
 RECORDED TO:
6/20/02
1pm

REC'D.
 by CO. ATTY.
6/19/02
4:35 AM
 CO. ATTY. *6/19/02*
 FORWARDED TO:
[Signature]
4:45 AM

REQUEST FOR TRANSFER OF FUNDS

FUND NAME: LCU Capital Improvements DATE: 06/14/02 BATCH NO. _____

FISCAL YEAR: 01/02 FUND #: 48730 DOC TYPE: YB LEDGER TYPE: BA

TO: Capital Project Water System Projects
 (DIVISION NAME) (PROGRAM NAME)

NOTE: PLEASE LIST THE ACCOUNT NUMBER BELOW IN THE FOLLOWING ORDER:
 FUND #-DEPT/DIV #-PROGRAM #-OBJECT CODE #-SUBFUND #-PROJECT#-COST CENTER #.
 (EXAMPLE: BB5120100100.503450)

ACCOUNT NUMBER	OBJECT NAME	DEBIT
20404048730.506540	Improvement Construction	\$ 42,926
TOTAL TO:		\$ 42,926

FROM: Non-Departmental Reserves
 (DIVISION NAME) (PROGRAM NAME)

ACCOUNT NUMBER	OBJECT NAME	CREDIT
GC5890148730.509910	Reserves for Contingencies	42,926
TOTAL FROM:		\$ 42,926

EXPLANATION:

 6/18/02
 DIVISION DIRECTOR SIGNATURE DATE

DBS: APPROVAL DENIAL

APPROVAL DENIAL

CO. ADMIN.: APPROVAL DENIAL

BCC APPROVAL DATE _____

DEPARTMENT DIRECTOR SIGNATURE DATE

 6-19-02
 OPERATIONS ANALYST SIGNATURE DATE

 6/20/02
 BUDGET OPERATIONS MANAGER SIGNATURE DATE

CO. ADMIN. SIGNATURE DATE

BCC CHAIRMAN SIGNATURE

BA NO: _____ AUTH CODE: _____ TRANS DATE: _____

REQUEST FOR TRANSFER OF FUNDS

FUND NAME: Capital Improvement DATE: 6-18-02 BATCH NO.: _____

FISCAL YEAR: 01-02 FUND NO.: 30100 DOC. TYPE: YB LEDGER TYPE: BA

TO: _____
Capital Projects
(Division Name)
Transportation Projects
(Program Name)

NOTE: Please list the account number below in the following order:
 Business Unit (dept/div, program, fund, subfund); Object Account; Subsidiary; Subledger
 (Example: BB 5120100100.503450)

<u>Account Number</u>	<u>Object Name</u>	<u>DEBIT</u>
20404030100.506540	Improvement Construction	\$134,583

TOTAL TO: \$134,583

FROM: _____
Capital Projects
(Division Name)
Water Resources Projects
(Program Name)

<u>Account Number</u>	<u>Object Name</u>	<u>CREDIT</u>
20098330100.506540	Improvement Construction	\$134,583

TOTAL FROM: \$134,583

EXPLANATION: Provide budget for aerial photography update.



 DIVISION DIRECTOR SIGNATURE/DATE

 DEPARTMENT HEAD SIGNATURE/DATE

DBO: APPROVAL DENIAL _____

 6-19-02

 OPS. ANALYST SIGNATURE DATE

OPS. MGR.: APPROVAL DENIAL _____

 6/20/02

 OPS. MGR. SIGNATURE DATE

CO. MGR.: APPROVAL _____ DENIAL _____

 CO. MANAGER SIGNATURE DATE

BCC APPROVAL DATE: _____

 BCC CHAIRMAN SIGNATURE

BA. NO. _____ AUTH CODE _____ TRANS DATE _____

2102

PROFESSIONAL SERVICES AGREEMENT

This PROFESSIONAL SERVICES AGREEMENT is made and entered into this _____ day of _____; between the Board of County Commissioners of LEE COUNTY, a political subdivision of the STATE OF FLORIDA hereinafter referred to as the "COUNTY", and EarthData International of Maryland, LLC hereinafter referred to as the "CONSULTANT".

WITNESSETH

WHEREAS, the COUNTY desires to obtain the professional Aerial Photography and Mapping Service services of said CONSULTANT to provide and perform professional services as further described hereinafter concerning the Project to be referred to and identified as: _____
Aerial Photography and Digital Mapping Services, and

WHEREAS, the CONSULTANT hereby certifies that CONSULTANT has been granted and possesses valid, current licenses to do business in the State of Florida and in Lee County, Florida, issued by the respective State Boards and Government Agencies responsible for regulating and licensing the professional services to be provided and performed by the CONSULTANT pursuant to this Agreement; and

WHEREAS, the CONSULTANT has reviewed the professional services required pursuant to this Agreement and is qualified, willing and able to provide and perform all such services in accordance with the provisions, conditions and terms hereinafter set forth; and

WHEREAS, the selection and engagement of the CONSULTANT has been made by the COUNTY in accordance with the provisions of the Consultants' Competitive Negotiation Act, Chapter 287.055, Florida Statutes, and in accordance with the provisions of the Lee County Contract Manual for Professional Services as approved and put into effect by the Lee County Board of County Commissioners, April 21, 1993, and as subsequently revised.

NOW, THEREFORE, in consideration of the mutual covenants, terms and provisions contained herein, the parties hereto agree that with the mutual acceptance of this Agreement as indicated hereinafter by the execution of this Agreement by both parties that a Contract shall exist between both parties consisting of:

ARTICLE 1.00 - SCOPE OF PROFESSIONAL SERVICES

CONSULTANT hereby agrees to provide and perform the professional services required and necessary to complete the services and work as set forth in

ARTICLE 1.00 (Continued)

EXHIBIT "A", entitled "SCOPE OF PROFESSIONAL SERVICES", which EXHIBIT "A" is attached hereto and made a part of this Agreement.

ARTICLE 2.00 - DEFINITIONS

The following definition of terms associated with this Agreement is provided to establish a common understanding between both parties to this Agreement as to the intended usage, application, and interpretation of such terms pertaining to this Agreement.

2.01 COUNTY

The term COUNTY shall refer to the Board of County Commissioners of Lee County, a political subdivision of the State of Florida, and any official and/or employees thereof who shall be duly authorized to act on the COUNTY's behalf relative to this Agreement.

2.02 CONSULTANT

The term CONSULTANT shall refer to the individual or firm offering professional services which by execution of this Agreement shall be legally obligated, responsible, and liable for providing and performing any and all of the services, work and materials, including services and/or work of sub-consultants and subcontractors, required under the covenants, terms and provisions contained in this Agreement and any and all Supplemental Agreements or Change Orders thereto.

2.03 PROFESSIONAL SERVICES

The term PROFESSIONAL SERVICES shall refer to all of the services, work, materials and all related professional, technical and administrative activities which are necessary to be provided and performed by the CONSULTANT and its employees and any and all sub-consultants and subcontractors the CONSULTANT may engage to provide, perform and complete the services required pursuant to the covenants, terms and provisions of this Agreement.

2.04 SUB-CONSULTANT

The term SUB-CONSULTANT shall refer to any individual or firm offering professional services which is engaged by the CONSULTANT to assist the CONSULTANT in providing and performing the professional services, work and materials for which the CONSULTANT is contractually obligated, responsible and liable to provide and perform under this Agreement. The COUNTY shall not be a party to, responsible or liable for, or assume any obligation whatever for any Agreement entered into between the CONSULTANT and any SUB-CONSULTANT.

2.05 SUBCONTRACTOR

The term SUBCONTRACTOR shall refer to any individual, company or firm providing other than professional services which is engaged by the CONSULTANT to assist the CONSULTANT in providing and performing services, work and materials for which the CONSULTANT is contractually obligated, responsible, and liable to provide and perform under this Agreement. The COUNTY shall not be a party to, responsible or liable for, or assume any obligation whatever for any Agreement entered into between the CONSULTANT and any SUBCONTRACTOR.

2.06 PROJECT

The term PROJECT shall refer to such facility, system, program or item as described in the summary statement set forth in the Preamble on Page One of this Agreement.

2.07 BASIC SERVICES

The term BASIC SERVICES shall refer to the professional services set forth and required pursuant to this Agreement and as described in further detail in the attached EXHIBIT "A", entitled "SCOPE OF PROFESSIONAL SERVICES", which EXHIBIT "A" is attached hereto and made a part of this Agreement.

2.08 ADDITIONAL SERVICES

The term ADDITIONAL SERVICES shall refer to such professional services as the COUNTY may request and authorize, in writing, the CONSULTANT to provide and perform relative to this Agreement which are not included in the BASIC SERVICES. Additional services shall be authorized by the execution of both parties to this Agreement of either a Supplemental Agreement or a Change Order Agreement.

2.09 SUPPLEMENTAL AGREEMENT

The term SUPPLEMENTAL AGREEMENT shall refer to a written document executed by both parties to this Agreement setting forth and authorizing professional service tasks which were not set forth in and are supplemental to the Scope of Services contained in the initial Professional Services Agreement or other SUPPLEMENTAL AGREEMENTS issued thereto. The SUPPLEMENTAL AGREEMENT, which shall be executed on a Lee County standard form, shall set forth the authorized supplement(s) to the: Scope of the Professional Services tasks, work or materials to be performed or provided by the CONSULTANT; the compensation and method of payment; the schedule or time period for performance and completion; and the guidelines, criteria, or requirements pertaining thereto.

The amount of the change in contract compensation and time set forth in any and all Supplemental Agreements executed and issued under this Agreement shall be understood and agreed by both Parties to this Agreement to be fair, equitable, adequate and complete. The changed

2.09 SUPPLEMENTAL AGREEMENT (Continued)

compensation shall be understood and agreed to be the total of all costs associated with or impacted by the Supplemental Agreements including, but not limited to any and all direct costs, indirect costs and associated costs which may result from or be caused by the Supplemental Agreements, and shall be understood and agreed to include a fair, equitable and adequate adjustment to cover the CONSULTANT's general administrative and overhead costs and profit.

2.10 CHANGE ORDER

The term CHANGE ORDER shall refer to a written document, CHANGE ORDER AGREEMENT, executed by both parties to this Agreement setting forth and authorizing changes to the agreed upon Scope of Professional Services and Tasks, Compensation and Method of Payment, Time and Schedule of Performance, or Project Guidelines and Criteria as such were set forth and agreed to in the initial AGREEMENT, SUPPLEMENTAL AGREEMENTS, SUPPLEMENTAL TASK AUTHORIZATION(S), or previous CHANGE ORDERS issued thereto. The CHANGE ORDER document, which shall be executed on a Lee County standard form, shall set forth the authorized changes to the: scope of professional services, tasks, work or materials to be performed or provided by the CONSULTANT; the compensation and method of payment; the schedule or time period for performance and completion, and the guidelines, criteria and requirements pertaining thereto.

The amount of the change in contract compensation and time set forth in any and all Change Orders executed and issued under this Agreement shall be understood and agreed by both Parties to this Agreement to be fair, equitable, adequate and complete. The changed compensation shall be understood and agreed to be the total of all costs associated with or impacted by the Change Order including, but not limited to any and all direct costs, indirect costs and associated costs which may result from or be caused by the Change Order, and shall be understood and agreed to include a fair, equitable and adequate adjustment to cover the CONSULTANT's general administrative and overhead costs and profit.

In the event the County decides to delete all, or portions, of the Scope of Services, Task(s), or Requirements set forth in the initial Agreement, Supplemental Agreements, Supplemental Task Authorizations or previously authorized Change Orders, the COUNTY may do so by the unilateral issuance of a written Change Order to the CONSULTANT. Such a unilaterally issued Change Order shall set forth, if appropriate, (1) an agreement by both the COUNTY and the CONSULTANT establishing changes in the amount of compensation to be paid the CONSULTANT as a result of the deletion or decrease in services required, or (2) in the absence of such an agreement concerning compensation, the unilaterally issued Change Order shall set forth the basis to be used in subsequently considering, and reaching agreement on change(s) in the compensation to be paid the CONSULTANT. The failure on the part of the CONSULTANT to execute a Change Order issued unilaterally by the COUNTY to effect a deletion or decrease in the services required shall have no effect on, or otherwise prevent the COUNTY from exercising its rights to direct the stated deletion or decrease in the services to be provided or performed by the CONSULTANT.

2.11 SUPPLEMENTAL TASK AUTHORIZATION

The term Supplemental Task Authorization as used refers to a written document executed by both parties to an existing Professional Services Agreement, or Service Provider Agreement, setting forth and authorizing a limited number of Professional Services, tasks, or work. Such Supplemental Task Authorizations are consistent with and have previously been included within the scope of services in the initial Professional Services Agreement, or Service Provider Agreement, for which authorization has not been previously given or budgeted.

2.12 WORK ORDER

The term WORK ORDER shall refer to the written document executed by both parties to this Agreement whereby the COUNTY provides authorization and notification to the CONSULTANT, and the CONSULTANT agrees, to proceed to provide or perform certain professional services, tasks or work for which the Scope of Services and Compensation to be paid the CONSULTANT were set forth and agreed to in the initial AGREEMENT, or other SUPPLEMENTAL AGREEMENTS or CHANGE ORDERS or SUPPLEMENTAL TASK AUTHORIZATIONS thereto, such professional services, tasks or work having previously been excluded and not included in written Notice(s) to Proceed issued by the COUNTY to the CONSULTANT. The WORK ORDER document, which shall be executed on a Lee County standard form, shall provide confirmation of the previously agreed to: scope of professional services, tasks, work or materials to be performed or provided by the CONSULTANT; the compensation and method of payment; the schedule or time period for performance and completion; and the guidelines, criteria and requirements pertaining thereto.

2.13 DEPARTMENT DIRECTOR

The term DEPARTMENT DIRECTOR shall refer to the Director of the Department requesting the service, employed by the Lee County Board of County Commissioners to serve and act on the COUNTY'S behalf, as it relates to this Project. The Chairman of the Board of County Commissioners, or his designated representative, shall act on behalf of the COUNTY to execute any and all SUPPLEMENTAL AGREEMENT(S) or CHANGE ORDER(S) or SUPPLEMENTAL TASK AUTHORIZATION(S) approved by the COUNTY and issued to the CONSULTANT pursuant to this Agreement. The DEPARTMENT DIRECTOR, within the authority conferred by the Board of County Commissioners, acting as the COUNTY'S designated representative shall issue written notification to the CONSULTANT of any and all changes approved by the COUNTY in the CONSULTANT'S: (1) compensation (2) time and/or schedule of service delivery; (3) scope of services; or other change(s) relative to BASIC SERVICES and ADDITIONAL SERVICES pursuant to this Agreement, or SUPPLEMENTAL AGREEMENT(S), WORK ORDER(S), or CHANGE ORDER(S) or SUPPLEMENTAL TASK AUTHORIZATION(S) pertaining thereto. The DEPARTMENT DIRECTOR shall be responsible for acting on the COUNTY'S behalf to administer, coordinate, interpret and otherwise manage the contractual provisions and requirements set forth in this Agreement, CHANGE ORDER(S), SUPPLEMENTAL AGREEMENT(S) or WORK ORDER(S) or SUPPLEMENTAL TASK AUTHORIZATION(S) issued thereunder.

2.14 PROJECT MANAGER

The term PROJECT MANAGER shall refer to the person employed or retained by the COUNTY and designated, in writing, to serve and act on the COUNTY'S behalf to provide direct contact and communication between the COUNTY and CONSULTANT with respect to providing information, assistance, guidance, coordination, review, approval and acceptance of the professional services, work and materials to be provided and performed by the CONSULTANT pursuant to this Agreement and such written WORK ORDER(S), SUPPLEMENTAL AGREEMENT(S), SUPPLEMENTAL TASK AUTHORIZATION(S) and CHANGE ORDER(S) as are authorized. The PROJECT MANAGER is not authorized to, and shall not, issue any verbal, or written, request or instruction to the CONSULTANT that would have the effect, or be interpreted to have the effect, of modifying or changing in any way whatever the: (1) Scope of Services to be provided and performed by the CONSULTANT; (2) The time the CONSULTANT is obligated to commence and complete all such services; (3) The amount of compensation the COUNTY is obligated or committed to pay the CONSULTANT. The PROJECT MANAGER shall review and make appropriate recommendations on all requests submitted by the CONSULTANT for payment for services and work provided and performed, and reimbursable costs and expense, as provided for in this Agreement and approved WORK ORDER(S), SUPPLEMENTAL AGREEMENT(S), CHANGE ORDER(S), SUPPLEMENTAL TASK AUTHORIZATION(S) thereto.

2.15 LUMP SUM FEE(S)

Lump Sum Fee(s), hereinafter identified as L.S., are understood and agreed to include all direct and indirect labor costs, personnel related costs, overhead and administrative costs, costs of sub-consultant(s) and/or subcontractor(s), out-of-pocket expenses and costs, professional service fee(s) and any other costs or expenses which may pertain to the services and/or work to be performed, provided and/or furnished by the Consultant as may be required and/or necessary to complete each and every task set forth in the Scope of Professional Services, Exhibit "A", or as may be set forth in subsequent Work Orders, Supplemental Agreements, Supplemental Task Authorizations, and/or Change Orders agreed to in writing by both parties to this Agreement.

2.16 NOT-TO-EXCEED FEE(S)

When all, or any portion, of the CONSULTANT'S compensation to provide and perform the services and work necessary and required pursuant to the Tasks set forth in Agreement Exhibit "A", and any Supplemental Agreements, Change Orders, Supplemental Task Authorizations, and Work Orders authorized thereto, is established to be made on a NOT-TO-EXCEED (N.T.E.) amount basis, it is mutually understood and agreed that such compensation for each completed Task shall be made on the following basis:

For the actual hours necessary, required and expended by the CONSULTANT'S professional and technical personnel, multiplied by the applicable hourly rates for each classification or position as set forth in Attachment No. 1 to Exhibit "B" to the above referenced Agreement and any Supplemental Agreements or Change Orders or Supplemental Task Authorizations authorized thereto; and

2.16 NOT-TO-EXCEED FEE(S) (Continued)

For the actual necessary, required and expended non-personnel reimbursable expenses and costs, multiplied by the applicable "Basis of Charges" for each item as set forth in Attachment No. 2 to Exhibit "B" to the above referenced Agreement and any Supplemental Agreements or Change Orders or Supplemental Task Authorizations authorized thereto; and

For the actual, necessary and required hours, and non-personnel expenses and costs, expended by Sub-Consultants and SubContractors engaged by the CONSULTANT, multiplied by such hourly rates and unit costs as are agreed to by the COUNTY and the CONSULTANT and as are set forth as a part of the above referenced Agreement and any Supplemental Agreements or Change Orders or Supplemental Task Authorizations authorized thereto; and

With the understanding and agreement that the COUNTY shall pay the CONSULTANT for all such costs and expenses within the established Not-to-Exceed amount for each Task or Sub-Task subject to the CONSULTANT presenting an itemized and detailed invoice with appropriate supporting documentation attached thereto to show evidence satisfactory to the COUNTY covering all such costs and expenses; and

With the understanding and agreement that the CONSULTANT'S invoices and all payments to be made for all Not-to-Exceed amounts shall be subject to the review, acceptance and approval of the COUNTY; and

With the understanding and agreement that when the CONSULTANT'S compensation is established on a Not-to-Exceed basis for a specific Task(s) or Sub-Task(s) the total amount of compensation to be paid the CONSULTANT to cover all personnel costs, non-personnel reimbursable expenses and costs, and Sub-Consultant and SubContractor costs for any such specific Task(s) or Sub-Task(s) shall not exceed the amount of the total Not-to-Exceed compensation established and agreed to for each specific Task(s) or Sub-Task(s). In the event the amount of compensation for any Task(s) or Sub-Task(s) to which the CONSULTANT is entitled on the Not-to-Exceed basis set forth above is determined to be necessary, required and actually expended and is determined to be actually less than the Not-to-Exceed amount established for the specific Task or Sub-Task, it is understood and agreed that any unexpended amount under a specific Task or Sub-Task may not be used, applied, transferred, invoiced or paid for services or work provided or performed on any other Task(s) or Sub-Task(s).

ARTICLE 3.00 - OBLIGATIONS OF THE CONSULTANT

The obligations of the CONSULTANT with respect to all the BASIC SERVICES and ADDITIONAL SERVICES authorized pursuant to this Agreement shall include, but not be limited to, the following:

3.01 LICENSES

The CONSULTANT agrees to obtain and maintain throughout the period this Agreement is in effect all such licenses as are required to do business in the State of Florida and in Lee County, Florida, including, but not limited to, licenses required by the respective State Boards and other governmental agencies responsible for regulating and licensing the professional services provided and performed by the CONSULTANT pursuant to this Agreement.

3.02 PERSONNEL

(1) QUALIFIED PERSONNEL

The CONSULTANT agrees when the services to be provided and performed relate to a professional service(s) which, under Florida Statutes, requires a license, certificate of authorization or other form of legal entitlement to practice such services, to employ and/or retain only qualified personnel to be in responsible charge of all BASIC SERVICES and ADDITIONAL SERVICES to be provided pursuant to this Agreement.

(2) CONSULTANT'S PROJECT DIRECTOR

The CONSULTANT agrees to employ and designate, in writing, a qualified and, if required by law, a licensed professional to serve as the CONSULTANT'S Project Director. The CONSULTANT'S Project Director shall be authorized and responsible to act on behalf of the CONSULTANT with respect to directing, coordinating and administering all aspects of the services to be provided and performed under this Agreement thereto. The CONSULTANT'S Project Director shall have full authority to bind and obligate the CONSULTANT on any matter arising under this Agreement unless substitute arrangements have been furnished to the COUNTY in writing. The CONSULTANT agrees that the Project Director shall devote whatever time is required to satisfactorily direct, supervise and manage the services provided and performed by the CONSULTANT throughout the entire period this Agreement is in effect. The person selected by the CONSULTANT to serve as the CONSULTANT'S Project Director shall be subject to the prior approval and acceptance of the COUNTY.

(3) REMOVAL OF PERSONNEL

The CONSULTANT agrees, within thirty (30) calendar days of receipt of a written request from the COUNTY, to promptly remove and replace the CONSULTANT'S Project Director, or any other personnel employed or retained by the CONSULTANT, or personnel of the sub-consultant(s) or subcontractor(s) engaged by the CONSULTANT to provide and/or perform services and/or work pursuant to the requirements of this Agreement, who the COUNTY shall request, in writing, be removed, which request may be made by the COUNTY with or without cause.

3.03 TIMELY ACCOMPLISHMENT OF SERVICES

The timely performance and completion of the required services, work and materials is vitally important to the interests of the COUNTY. Time is of the essence for all of the duties and obligations contained in this Agreement thereto. The COUNTY may suffer damages in the event that the CONSULTANT does not accomplish and complete the required services in a timely manner. The CONSULTANT agrees to employ, engage, retain and/or assign an adequate number of personnel throughout the period of this Agreement so that all BASIC SERVICES and ADDITIONAL SERVICES will be provided, performed and completed in a timely and diligent manner throughout.

3.04 STANDARDS OF PROFESSIONAL SERVICE

The work and/or services to be provided and/or performed by the CONSULTANT and by any Sub-Consultant(s) and/or SubContractor(s) engaged by the CONSULTANT as set forth in the Scope of Professional Services, Exhibit "A", shall be done in accordance with the generally accepted standards of professional practice and in accordance with the laws, rules, regulations, ordinances, codes, policies, standards or other guidelines issued by those governmental agencies which have jurisdiction over all or a portion of this project and which are in effect at the time the COUNTY approves this Agreement, or which may subsequently be changed or revised. Any subsequent change or revision to such laws, rules, regulations, ordinances, codes, policies, standards or other guidelines which requires the CONSULTANT to provide and/or perform work and/or services which are significantly different from that set forth in the Scope of Professional Services, Exhibit "A", shall serve as a basis for the COUNTY to consider the development and issuance of a Change Order to provide for a change to, or Additional Services to the services set forth in the Agreement.

3.05 CORRECTION OF ERRORS, OMISSIONS OR OTHER DEFICIENCIES

(1) RESPONSIBILITY TO CORRECT

The CONSULTANT agrees to be responsible for the professional quality, technical adequacy and accuracy, timely completion, and the coordination of all data, studies, surveys, designs, specifications, calculations, estimates, plans, drawings, construction documents, photographs, reports, memoranda, other documents and instruments, and other services, work and materials performed, provided, and/or furnished by CONSULTANT or by any sub-consultant(s) and/or subcontractor(s) retained or engaged by the CONSULTANT pursuant to this Agreement. The CONSULTANT shall, without additional compensation, correct or revise any errors, omissions or other deficiencies in such data, studies, surveys, designs, specifications, calculations, estimates, plans, drawings, construction documents and instruments, and other services, work and materials resulting from the negligent act, errors or omissions or intentional misconduct of CONSULTANT or any sub-consultant(s) or subcontractor(s) engaged by the CONSULTANT.

(2) COUNTY'S APPROVAL SHALL NOT RELIEVE CONSULTANT OF RESPONSIBILITY

Neither review, approval, or acceptance by the COUNTY of data, studies, surveys, designs, specifications, calculations, estimates, plans, drawings, construction documents, photographs, reports, memoranda, other documents and instruments, and incidental professional services, work and materials furnished hereunder by the CONSULTANT, or any sub-consultant(s) or

(2) COUNTY'S APPROVAL SHALL NOT RELIEVE CONSULTANT OF RESPONSIBILITY
(Continued)

subcontractor(s) engaged by the CONSULTANT, shall in any way relieve CONSULTANT of responsibility for the adequacy, completeness and accuracy of its services, work and materials and the services, work and materials of any and all sub-consultants and/or subcontractors engaged by the CONSULTANT to provide and perform services in connection with this Agreement. Neither the COUNTY'S review, approval or acceptance of, nor payment for, any of the CONSULTANT'S services, work and materials shall be construed to operate as a waiver of any of the COUNTY'S rights under this Agreement, or any cause of action it may have arising out of the performance of this Agreement.

3.06 LIABILITY

(1) CONSULTANT TO HOLD COUNTY HARMLESS

The CONSULTANT shall be liable and agrees to be liable for and shall indemnify and hold the COUNTY harmless for any and all claims, suits, judgements or damages, losses and expenses including court costs and attorney's fees arising out of the CONSULTANT'S errors, omissions, and/or negligence, or those of any and all sub-consultants and/or subcontractors engaged by the CONSULTANT during the providing, performing and furnishing of services, work and materials pursuant to this Agreement and any and all Supplemental Agreements, Change Orders, Supplemental Task Authorizations thereto. The CONSULTANT shall not be liable to nor indemnify the COUNTY for any portions of damages arising out of any error, omission, and/or negligence of the COUNTY, its employees, agents, or representatives or third parties. The CONSULTANT hereby acknowledges that the compensation to be paid the CONSULTANT by the COUNTY as set forth in Agreement Exhibit "B" entitled "COMPENSATION AND METHOD OF PAYMENT" includes compensation as consideration for the indemnification provided herein.

3.07 NOT TO DIVULGE CERTAIN INFORMATION

CONSULTANT agrees, during the term of this Agreement, not to divulge, furnish or make available to any third person, firm, or organization, without COUNTY'S prior written consent, or unless incident to the proper performance of CONSULTANT'S obligations hereunder, or in the course of judicial or legislative proceedings where such information has been properly subpoenaed, any non-public information concerning the services to be rendered by CONSULTANT or any sub-consultant(s) or subcontractor(s) pursuant to this Agreement. CONSULTANT shall require all of its employees, sub-consultant(s) and subcontractor(s) to comply with the provisions of this paragraph.

3.08 CONSULTANT TO REPAIR PROPERTY DAMAGE CAUSED BY THE CONSULTANT

CONSULTANT agrees to promptly repair and/or replace, or cause to have repaired and/or replaced, at its sole cost and expense and in a manner acceptable to and approved by the COUNTY, any property damage arising out of, or caused by, the willful or negligent acts of the CONSULTANT, or of its sub-consultants and/or subcontractors. This CONSULTANT'S obligation under this sub-article does not apply to property damage caused by any other Consultant or Contractor engaged directly by the COUNTY.

The COUNTY reserves the right, should the CONSULTANT fail to make such repairs and/or replacement within a reasonable period of time, to cause such repairs and/or replacement to be made by others and for all costs and expenses associated with having such repairs and/or replacement done to be paid for by the CONSULTANT, or by the CONSULTANT reimbursing the COUNTY for all such costs and expenses.

3.09 RESPONSIBILITY FOR ESTIMATES

- (1) In the event the services required pursuant to this Agreement include the CONSULTANT preparing and submitting to the COUNTY, cost estimates, the CONSULTANT, by exercise of his experience, effort, knowledge and judgment, shall develop such cost estimates as are set forth in, or as may be required under the Agreement and shall be held accountable, responsible and liable for the accuracy, completeness, and correctness of any and all such cost estimates. For purposes of the Liability Provisions of this Article only, the CONSULTANT'S estimate(s) shall be considered valid and effective for a period of six (6) months from the date of the COUNTY'S acceptance of the estimate(s).
- (2) The cost estimates of CONSULTANTS or SUB-CONSULTANTS engaged by CONSULTANTS, for the appraisal or valuation of property or easements, or the estimate of damages or costs associated with the acquisition of property or easements are exempted from the provisions of Article 3.09.
- (3) Cost Estimates
 - (A) ORDER OF MAGNITUDE ESTIMATE

This is an approximate estimate made without detailed architect/engineering data. Examples include, but are not limited to, an estimate from cost-capacity curves, an estimate using scale-up or scale-down factors, and an approximate ratio estimate. This type of estimate shall be accurate within plus fifty percent (50.0%). If the bids, as described above, fail to meet this prescribed accuracy, the cost associated with the preparation and development of the ORDER OF MAGNITUDE ESTIMATE shall be recoverable by the COUNTY.

(B) BUDGET ESTIMATE

Budget in this case applies to the COUNTY'S budget and not to the budget as a project controlled document. A budget is prepared with the use of flowsheets, layouts, and equipment details. This type of estimate shall be accurate within plus twenty-five percent (25.0%). If the bids, as described above, fail to meet this prescribed accuracy, the cost associated with the preparation and development of the BUDGET ESTIMATE shall be recoverable by the COUNTY.

(C) CONSTRUCTION COST ESTIMATE.

A construction cost estimate for purposes of this Agreement is an estimate prepared on the basis of well defined engineering/architectural data and on detailed information set forth in specifications, designs or drawings which are to be used as a basis for obtaining bids or price proposals for constructing the project. This type of estimate shall be accurate within plus or minus ten percent (10%) of the cost of the construction of the project. The accuracy and reliability of a CONSTRUCTION COST ESTIMATE is vital to the COUNTY'S interests because it may be used for such purposes as, but not limited to the following; budgeting, obtaining, allocating or obligating funds for the project; evaluating and determining the reasonableness and acceptableness of bids or price proposals for construction projects; or establishing the assessment amounts for Municipal Service Benefit Units (M.S.B.U.).

In the event the COUNTY solicits and receives bids or price proposals from contractors on a construction project based on specifications, design, drawings and a CONSTRUCTION COST ESTIMATE prepared by the CONSULTANT, and the lowest bid or price proposal, submitted by a responsive and responsible bidder or proposer, which bid or price proposal exceeds the amount of the CONSULTANT'S CONSTRUCTION COST ESTIMATE by more than the percent accuracy set forth hereinabove, the CONSULTANT shall, upon notification by the COUNTY, assume responsibility for and proceed to provide and perform the following service without additional compensation:

The CONSULTANT will, subject to the review and approval of the COUNTY, modify at its expense the specifications, design, drawings and related bidding and contract documents to the extent necessary to reduce the anticipated construction costs so that the re-solicitation of bids or price proposals will realize bids or price proposals being received that are within the range of accuracy established for the CONSTRUCTION COST ESTIMATE prepared by the CONSULTANT. Any such modifications made by the CONSULTANT shall not conflict with the functional or operational requirements established by the COUNTY for the project and set forth in the Agreement or Supplemental Agreement(s) or Change Order(s) or Supplemental Task Authorization(s) issued thereto, nor shall any such modifications conflict with established rules, regulations, requirements or professional standards pertaining to the design, specifications or drawings prepared by the CONSULTANT, nor shall such modifications adversely affect the safe use or operation of the constructed project.

(C) CONSTRUCTION COST ESTIMATE. (Continued)

In the event (1) the CONSULTANT's modification of the design, specifications, drawings and related bidding and contract documents, and (2) the re-solicitation of bids or price proposals do not result in bids or price proposals being received from a responsive and responsible bidder or proposer that are within the established percent accuracy of the CONSULTANT'S CONSTRUCTION COST ESTIMATE, the costs associated with the CONSULTANT's preparation and development of the CONSTRUCTION

COST ESTIMATE shall be recoverable by the COUNTY by an appropriate reduction in the CONSULTANT'S invoice requesting payment for services rendered.

For determination of compliance with the accuracy requirement established for the CONSTRUCTION COST ESTIMATE prepared by the CONSULTANT, the amount of the CONSTRUCTION COST ESTIMATE submitted by the CONSULTANT shall be adjusted from the date the CONSTRUCTION COST ESTIMATE was received by the COUNTY until the date bids or price proposals are received by the COUNTY, by applying the percent change in the "20 Cities Cost Index" as published in the ENR (formerly ENGINEERING NEWS-RECORD) a McGraw-Hill, Inc. publication.

If, in response to its solicitation, the COUNTY receives less than three bids or priced proposals for a project, there is the potential that such bids or priced proposals may not be a realistic representation of the costs expected to be associated with the project. If under such circumstances, and if in the professional judgment of the CONSULTANT, the low bid or the low priced proposal received from a responsive bidder or proposer does not realistically represent the costs associated with the project, the CONSULTANT may deem it appropriate to recommend the COUNTY reject any such bid(s) or priced proposal(s). If under such circumstances the COUNTY concurs with the CONSULTANT'S recommendation and rejects the bid(s) or priced proposal(s), the COUNTY will not hold the CONSULTANT responsible to, nor will the COUNTY require the CONSULTANT to, modify the specifications, design, drawings and related bidding and contract documents as set forth hereinbefore.

3.10 PERMITS

The CONSULTANT will be responsible for preparing and submitting all required applications and other supportive information necessary to assist the COUNTY in obtaining all reviews, approvals and permits, with respect to the CONSULTANT'S design, drawings and specifications required by any governmental body having authority over the project. Any fees required for such reviews, approvals or permits will be covered by a check issued by the COUNTY and made payable to the respective governmental body upon the CONSULTANT furnishing the COUNTY satisfactory documentation of such fees. The CONSULTANT will be similarly responsible for preparing and submitting all required applications and other supportive information necessary to assist the COUNTY in obtaining any renewals and/or extensions of reviews, approvals or permits that may be required while this Agreement is in effect. The COUNTY shall, at the CONSULTANT'S request, assist in obtaining required signatures and provide the CONSULTANT with all information known to be available to the COUNTY so as to assist the CONSULTANT in the preparation and submittal of any original, renewal or extension of required reviews, approvals or permits.

3.11 ADDITIONAL SERVICES

Should the COUNTY request the CONSULTANT to provide and perform professional services for this project which are not set forth in EXHIBIT "A", the CONSULTANT agrees to provide and perform such ADDITIONAL SERVICES as may be agreed to in writing by both parties to this Agreement.

Such ADDITIONAL SERVICES shall constitute a continuation of the professional services covered under this Agreement and shall be provided and performed in accordance with the covenants, terms, and provisions set forth in this Agreement thereto.

ADDITIONAL SERVICES shall be administered and authorized as "SUPPLEMENTAL AGREEMENTS", "SUPPLEMENTAL TASK AUTHORIZATIONS" or "CHANGE ORDERS" under the Agreement. The CONSULTANT shall not provide or perform, nor shall the COUNTY incur or accept any obligation to compensate the CONSULTANT for any ADDITIONAL SERVICES unless and until a written "SUPPLEMENTAL AGREEMENT", "SUPPLEMENTAL TASK AUTHORIZATIONS" or "CHANGE ORDER" shall have been agreed to and executed by both parties.

Each such "SUPPLEMENTAL AGREEMENT", "SUPPLEMENTAL TASK AUTHORIZATION" or "CHANGE ORDER" shall set forth a comprehensive, detailed description of: (1) the Scope of the ADDITIONAL SERVICES requested; (2) the basis of compensation; and (3) the period of time and/or schedule for performing and completing said ADDITIONAL SERVICES.

3.12 TRUTH-IN-NEGOTIATIONS CERTIFICATE

The COUNTY may request the CONSULTANT to execute a Truth-in-Negotiations Certificate ("Certificate"), in a form attached as EXHIBIT "F". The Certificate shall state that wage rates and other factual unit costs supporting the compensation are accurate, complete and current at the time this Agreement is executed. The original contract price and any additions thereto shall be adjusted to exclude any significant sums by which the COUNTY determines the contract price was increased due to inaccurate, incomplete or noncurrent wage rates or other factual unit costs.

3.13 COMPLETION OF TASKS

Unless otherwise set forth in the Agreement the CONSULTANT shall be responsible for providing and performing whatever services, work, equipment, material, personnel, supplies, facilities, transportation and administrative support that are necessary and required to complete all of the tasks set forth in Agreement Exhibit "A" entitled "Scope of Professional Services" and Supplemental Agreements, Change Orders, Supplemental Task Authorizations and Work Orders authorized. The compensation to be paid the CONSULTANT as set forth in Agreement Exhibit "B" entitled "Compensation and Method of Payment" and Supplemental Agreements, Change Orders, Supplemental Task Authorizations, and Work Orders authorized thereto shall be understood and agreed to adequately and completely compensate the CONSULTANT for providing and performing whatever services, work, equipment, material, personnel, supplies, facilities, transportation and administrative support that are necessary and required to complete the tasks set forth in Agreement Exhibit "A" and Supplemental Agreements, Change Orders, Supplemental Task Authorizations, and Work Orders authorized thereto as stated above."

3.14 AFFIRMATIVE ACTION BY CONSULTANT WHEN ENGAGING SUB-CONSULTANTS

Florida Statute #287.042(4)(f) establishes that agencies, including Lee County, are encouraged to spend twenty-five (25%) percent of the monies actually spent for contractual services for the purpose of entering into contracts with certified Minority Business Enterprises. Accordingly, the CONSULTANT is encouraged, when selecting or engaging the services of sub-consultants or subcontractors pursuant to this Agreement, to spend twenty-five (25%) percent of the amount of compensation established in this Agreement and in subsequent SUPPLEMENTAL AGREEMENTS, CHANGE ORDERS, SUPPLEMENTAL TASK AUTHORIZATIONS, and WORK ORDERS authorized thereto for the engagement of the services of certified Minority Business Enterprise sub-consultants or subcontractors.

In furtherance of this statutory goal the COUNTY expects the CONSULTANT to take affirmative action towards achieving this goal. "Affirmative Action" as used herein shall constitute a good faith effort by the CONSULTANT to achieve the stated goal of engaging certified Minority Business Enterprise sub-consultants or subcontractors to provide or perform services and/or work pursuant to the SCOPE OF SERVICES required under this Agreement. Efforts taken by the CONSULTANT to assist the COUNTY in meeting this statutory goal must be documented in detail, records of sub-consultants or subcontractors contacted maintained, including negotiation efforts, and written Agreements maintained for services or work awarded to sub-consultants or subcontractors.

The CONSULTANT, upon receipt of a written request by the COUNTY, shall within ten (10) calendar days thereafter submit to the COUNTY copies of records and supporting documentation to show evidence of its affirmative action efforts to achieve the above stated goal.

The CONSULTANT is encouraged to contact the Lee County Department of Equal Opportunity for information and assistance regarding the COUNTY'S Minority Business Enterprise certification program and listing of certified Minority Business Enterprises.

ARTICLE 4.00 - OBLIGATIONS OF THE COUNTY

4.01 DESIGNATION OF PROJECT MANAGER

The COUNTY agrees after the execution of this Agreement to promptly advise the CONSULTANT, in writing, of the person designated to serve and act as the COUNTY'S PROJECT MANAGER pursuant to the provisions of Article 2.13 of this Agreement. Such notification shall be provided to the CONSULTANT by the COUNTY'S DEPARTMENT DIRECTOR.

4.02 AVAILABILITY OF COUNTY INFORMATION

(1) PROJECT GUIDELINES AND CRITERIA

Guidelines to the CONSULTANT regarding requirements the COUNTY has established or suggests relative to the Project including, but not limited to such items as: goals, objectives, constraints, and any special financial, budgeting, space, site, operational, equipment, technical, construction, time and scheduling criteria are set forth in EXHIBIT "E", entitled "PROJECT GUIDELINES AND CRITERIA", which EXHIBIT "E" is attached hereto and made a part of this Agreement.

(2) COUNTY TO PROVIDE PERTINENT REFERENCE MATERIAL

At the CONSULTANT'S request, the COUNTY agrees to provide to the CONSULTANT, at no cost to the CONSULTANT, all pertinent information known to be available to the COUNTY to assist the CONSULTANT in providing and performing the required professional services. Such information may include, but not be limited to: previous reports; plans, drawings and specifications; maps; property, boundary, easement, right-of-way, topographic, reference monuments, control points, plats and related survey data; data prepared or services furnished by others to the COUNTY such as sub-surface investigations, laboratory tests, inspections of natural and man-made materials, property appraisals, studies, designs and reports.

4.03 AVAILABILITY OF COUNTY'S DESIGNATED REPRESENTATIVES

The COUNTY agrees that the DEPARTMENT DIRECTOR and the PROJECT MANAGER shall be available within a reasonable period of time, with reasonable prior notice given by the CONSULTANT, to meet and/or consult with the CONSULTANT on matters pertaining to the services to be provided and performed by the CONSULTANT. The COUNTY further agrees to respond within a reasonable period of time to written requests submitted by the CONSULTANT.

4.04 ACCESS TO COUNTY PROPERTY

The COUNTY agrees, with reasonable prior written notice given by the CONSULTANT, to provide the CONSULTANT with access within a reasonable period of time to COUNTY property, facilities, buildings and structures to enable the CONSULTANT to provide and perform the required professional services and work pursuant to this Agreement. Such rights of access shall not be exercised in such a manner or to such an extent as to impede or interfere with COUNTY operations, or the operations carried on by others under a lease, or other contractual arrangement with the COUNTY, or in such a manner as to adversely affect the public health and safety. Such access may, or may not be, within the CONSULTANT'S normal office and/or field work days and/or work hours.

ARTICLE 5.00 - COMPENSATION AND METHOD OF PAYMENT

5.01 BASIC SERVICES

The COUNTY shall pay the CONSULTANT for all requested and authorized BASIC SERVICES rendered hereunder by the CONSULTANT and completed in accordance with the requirements, provisions, and/or terms of this Agreement and accepted by the COUNTY in accordance with the provisions for compensation and payment of said BASIC SERVICES set forth and prescribed in EXHIBIT "B", entitled "COMPENSATION AND METHOD OF PAYMENT", which EXHIBIT "B" is attached hereto and made a part of this Agreement, or on the basis of such changes to the established compensation as may be mutually agreed to by both parties to this Agreement as evidenced by a written Supplemental Agreement or Change Order executed by both parties.

5.02 ADDITIONAL SERVICES

The COUNTY shall pay the CONSULTANT for all such ADDITIONAL SERVICES as have been requested and authorized by the COUNTY and agreed to, in writing, by both parties to this Agreement and which have been rendered as ADDITIONAL SERVICES by the CONSULTANT and completed in accordance with the requirements, provisions, and/or terms of this Agreement and accepted by the COUNTY in accordance with the provisions for compensation and payment of said ADDITIONAL SERVICES as set forth and prescribed in EXHIBIT "B", entitled "COMPENSATION AND METHOD OF PAYMENT", which EXHIBIT "B" is attached hereto and made a part of this Agreement, or on the basis of such changes to the established compensation as may be mutually agreed to by both parties to this Agreement as evidenced by a written Supplemental Agreement or Change Order or Supplemental Task Authorization executed by both parties.

5.03 METHOD OF PAYMENT

(1) MONTHLY STATEMENTS

The CONSULTANT shall be entitled to submit not more than one invoice statement to the COUNTY each calendar month covering services rendered during the preceding calendar month. The CONSULTANT'S invoice statement(s) shall be itemized to correspond to the basis of compensation as set forth in the Agreement, or SUPPLEMENTAL AGREEMENT(S), CHANGE ORDER(S), SUPPLEMENTAL TASK AUTHORIZATION(S), and/or WORK ORDER(S) thereunder. The CONSULTANT'S invoice statements shall contain a breakdown of charges, description of service(s) and work provided and/or performed, and where appropriate, supportive documentation of charges consistent with the basis of compensation set forth in the Agreement, or in SUPPLEMENTAL AGREEMENT(S), CHANGE ORDER(S), SUPPLEMENTAL TASK AUTHORIZATION(S) and/or WORK ORDER(S) thereunder.

(2) PAYMENT FOR SERVICES PERFORMED

The COUNTY shall pay the CONSULTANT for services performed using either of the following methods, or using a combination thereof:

- (A) The COUNTY shall pay the CONSULTANT on the basis of services completed for tasks set forth in Exhibits "A" and "B", as evidenced by work products such as reports, drawings, specifications, etc., submitted by the CONSULTANT and accepted by the COUNTY. No payments shall be made for CONSULTANT'S Work-in-Progress until service items for which payment amounts have been established and set forth in this Agreement have been completed by the CONSULTANT and accepted by the COUNTY. Whenever an invoice statement covers services for which no work product is required to be furnished by the CONSULTANT to the COUNTY, the COUNTY reserves the right to retain ten percent (10%) of the amount invoiced until such service requirements are fully completed.

(2) PAYMENT FOR SERVICES PERFORMED (Continued)

- (B) The COUNTY shall pay the CONSULTANT for services performed for tasks set forth in Exhibits "A" and "B" on the basis of an invoice statement covering CONSULTANT'S Work-in-Progress expressed as a percentage of the total cost of the service and/or work required for each task invoiced in this manner. All such Work-in-Progress percentages are subject to the review and approval of the COUNTY. The decision of the COUNTY shall be final as to the Work-in-Progress percentages paid. Payment by the COUNTY for tasks on a Work-in-Progress percentage basis shall not be deemed or interpreted in any way to constitute an approval or acceptance by the COUNTY of any such service or Work-in-Progress. The CONSULTANT shall be responsible for correcting, re-doing, modifying or otherwise completing the services and work required for each task before receiving final, full payment whether or not previous Work-in-Progress payments have been made. All tasks to be paid for on a Work-in-Progress percentage basis shall be agreed to by both parties to the Agreement and each task to be paid in this manner shall be identified in Exhibit "B" with the notation (WIPP). Only tasks so identified will be paid on a Work-in-Progress percentage basis. The COUNTY reserves the right to retain ten percent (10%) of the amount invoiced until such service requirements are fully completed.

(3) PAYMENT SCHEDULE

The COUNTY shall issue payment to the CONSULTANT within thirty (30) calendar days after receipt of an invoice statement from the CONSULTANT in an acceptable form and containing the requested breakdown and detailed description and documentation of charges. Should the COUNTY object or take exception to the amount of any CONSULTANT'S invoice statement, the COUNTY shall notify the CONSULTANT of such objection or exception within the thirty (30) calendar day payment period set forth hereinbefore. If such objection or exception remains unresolved at the end of said thirty (30) calendar day period, the COUNTY shall withhold the disputed amount and make payment to the CONSULTANT of the amount not in dispute. Payment of any disputed amount, or adjustments thereto, shall be made within thirty (30) calendar days of the date such disputed amount is resolved by mutual agreement of the parties to this Agreement.

5.04 PAYMENT WHEN SERVICES ARE TERMINATED AT THE CONVENIENCE OF THE COUNTY

In the event of termination of this Agreement at the convenience of the COUNTY, not at the fault of the CONSULTANT, the COUNTY shall compensate the CONSULTANT only for: (1) all services performed prior to the effective date of termination; (2) reimbursable expenses then due; and (3) reasonable expenses incurred by the CONSULTANT in affecting the termination of services and work, and incurred by the submittal to the COUNTY of project drawings, plans, data, and other project documents.

5.05 PAYMENT WHEN SERVICES ARE SUSPENDED

In the event the COUNTY suspends the CONSULTANT'S services and work on all or part of the services required to be provided and performed by the CONSULTANT pursuant to this Agreement, the COUNTY shall compensate the CONSULTANT only for the services performed prior to the effective date of suspension and reimbursable expenses then due and any reasonable expenses incurred or associated with, or as a result of such suspension.

5.06 NON-ENTITLEMENT TO ANTICIPATED FEES IN THE EVENT OF SERVICE TERMINATION, SUSPENSION, ELIMINATION, CANCELLATION AND/OR DECREASE

In the event the services required pursuant to this Agreement are terminated, eliminated, canceled, or decreased due to: (1) termination; (2) suspension in whole or in part; and (3) and/or are modified by the subsequent issuance of SUPPLEMENTAL AGREEMENT(S), SUPPLEMENTAL TASK AUTHORIZATION(S) and/or CHANGE ORDER(S), other than receiving the compensation set forth in Sub-Articles 5.04 and 5.05, the CONSULTANT shall not be entitled to receive compensation for anticipated professional fees, profit, general and administrative overhead expenses or for any other anticipated income or expense which may be associated with the services which are terminated, suspended, eliminated, canceled or decreased.

ARTICLE 6.00 - TIME AND SCHEDULE OF PERFORMANCE

6.01 NOTICE TO PROCEED

Following the execution of this Agreement by both parties, and after the CONSULTANT has complied with the insurance requirements set forth hereinafter, the COUNTY shall issue the CONSULTANT a WRITTEN NOTICE TO PROCEED. Following the issuance of such NOTICE TO PROCEED the CONSULTANT shall be authorized to commence work and the CONSULTANT thereafter shall commence work promptly and shall carry on all such services and work as may be required in a timely and diligent manner to completion.

6.02 TIME OF PERFORMANCE

The CONSULTANT agrees to complete the services required pursuant to this Agreement within the time period(s) for completion of the various phases and/or tasks of the project services set forth and described in this Agreement, as set forth in EXHIBIT "C", entitled "SCHEDULE OF PERFORMANCE, which EXHIBIT "C" is attached hereto and made a part of this Agreement.

Should the CONSULTANT be obstructed or delayed in the prosecution or completion of its obligations under this Agreement as a result of causes beyond the control of the CONSULTANT, or its sub-consultant(s) and/or subcontractor(s), and not due to their fault or neglect, the CONSULTANT shall notify the COUNTY, in writing, within five (5) calendar days after the commencement of such delay, stating the cause(s) thereof and requesting an extension of the CONSULTANT'S time of performance. Upon receipt of the CONSULTANT'S request for an extension of time, the COUNTY shall grant the extension if the COUNTY determines the delay(s) encountered by the CONSULTANT, or its sub-consultant(s) and/or subcontractor(s), is due to unforeseen causes and not attributable to their fault or neglect.

6.03 CONSULTANT WORK SCHEDULE

The CONSULTANT shall be required as a condition of this Agreement to prepare and submit to the COUNTY, on a monthly basis, commencing with the issuance of the NOTICE TO PROCEED, a CONSULTANT'S WORK SCHEDULE. The WORK SCHEDULE shall set forth the time and manpower scheduled for all of the various phases and/or tasks required to provide, perform and complete all of the services and work required completion of the various phases and/or tasks of the project services set forth and described in this Agreement, as set forth in EXHIBIT "C", pursuant to this Agreement in such a manner that the CONSULTANT'S planned and actual work progress can be readily determined. The CONSULTANT'S WORK SCHEDULE of planned and actual work progress shall be updated and submitted by the CONSULTANT to the COUNTY on a monthly basis.

6.04 FAILURE TO PERFORM IN A TIMELY MANNER

Should the CONSULTANT fail to commence, provide, perform and/or complete any of the services and work required pursuant to this Agreement in a timely and diligent manner, the COUNTY may consider such failure as justifiable cause to terminate this Agreement. As an alternative to termination, the COUNTY at its option, may, upon written notice to the CONSULTANT, withhold any or all payments due and owing to the CONSULTANT, not to exceed the amount of the compensation for the work in dispute, until such time as the CONSULTANT resumes performance of his obligations in such a manner as to get back on schedule in accordance with the time and schedule of performance requirements set forth in this Agreement, or any WORK ORDER(S), SUPPLEMENTAL AGREEMENT(S), CHANGE ORDER(S), SUPPLEMENTAL TASK AUTHORIZATION(S) issued thereto.

ARTICLE 7.00 - SECURING AGREEMENT

The CONSULTANT warrants that the CONSULTANT has not employed or retained any company or person other than a bona fide, regular, full time employee working for the CONSULTANT to solicit or secure this Agreement and that the CONSULTANT has not paid or agreed to pay any person, company, corporation or firm other than a bona fide employee working solely for the CONSULTANT any fee, commission, percentage, gift or any other consideration contingent upon or resulting from the award or making of this Agreement.

ARTICLE 8.00 - CONFLICT OF INTEREST

The CONSULTANT represents that it presently has no interest and shall acquire no interest, either direct or indirect, which would conflict in any manner with the performance of services required hereunder. The CONSULTANT further agrees that no person having any such interest shall be employed or engaged by the CONSULTANT for said performance.

If CONSULTANT, for itself and on behalf of its subconsultants, is about to engage in representing another client, which it in good faith believes could result in a conflict of interest with the work being performed by CONSULTANT or such sub-consultant under this Agreement, then it will promptly bring such potential conflict of interest to the COUNTY'S attention, in writing. The COUNTY will advise the CONSULTANT, in writing, within ten (10) calendar days as to the period of time required by the COUNTY to determine if such a conflict of interest exists. If the COUNTY determines that there is a conflict of interest, CONSULTANT or such sub-consultant shall decline the representation upon written notice by the COUNTY.

ARTICLE 8.00 - CONFLICT OF INTEREST (Continued)

If the COUNTY determines that there is not such conflict of interest, then the COUNTY shall give its written consent to such representation. If CONSULTANT or sub-consultant accepts such a representation without obtaining the COUNTY'S prior written consent, and if the COUNTY subsequently determines that there is a conflict of interest between such representation and the work being performed by CONSULTANT or such sub-consultant under this Agreement, then the CONSULTANT or such sub-consultant agrees to promptly terminate such representation. CONSULTANT shall require each of such sub-consultants to comply with the provisions of this Section.

Should the CONSULTANT fail to advise or notify the COUNTY as provided hereinabove of representation which could, or does, result in a conflict of interest, or should the CONSULTANT fail to discontinue such representation, the COUNTY may consider such failure as justifiable cause to terminate this Agreement.

ARTICLE 9.00 - ASSIGNMENT, TRANSFER AND SUBCONTRACTS

The CONSULTANT shall not assign or transfer any of its rights, benefits or obligations hereunder, except for transfers that result from: (1) the merger or consolidation of CONSULTANT with a third party; or (2) the disestablishment of the CONSULTANT'S professional practice and the establishment of a successor consultant, or consulting organization. Nor shall the CONSULTANT subcontract any of its service obligations hereunder to third parties, except as otherwise authorized in this Agreement thereto, without prior written approval of the COUNTY. The CONSULTANT shall have the right, subject to the COUNTY'S prior written approval, to employ other persons and/or firms to serve as sub-consultants and/or subcontractors to CONSULTANT in connection with CONSULTANT providing and performing services and work pursuant to the requirements of this Agreement. The COUNTY shall have the right and be entitled to withhold such approval. Such approval shall not be unreasonably withheld.

In providing and performing the services and work required pursuant to this Agreement, CONSULTANT intends to engage the assistance of the sub-consultant(s) and/or subcontractor(s) set forth in EXHIBIT "D", entitled "CONSULTANT'S ASSOCIATED SUB-CONSULTANTS AND SUBCONTRACTORS", which EXHIBIT "D" is attached hereto and made a part of this Agreement.

ARTICLE 10.00 - APPLICABLE LAW

Unless otherwise specified, this Agreement shall be governed by the laws, rules, and regulations of the State of Florida, or the laws, rules, and regulations of the United States when providing services funded by the United States government.

ARTICLE 11.00 - COVENANTS AGAINST DISCRIMINATION

11.01 FOR PROJECTS WITH FUNDS APPROPRIATED FROM GENERAL LEE COUNTY REVENUES

The CONSULTANT for itself, its successors in interest, and assigns as part of the consideration thereof, does hereby covenant and agree that in the furnishing of services to COUNTY hereunder, no person on the grounds of race, color, national origin, handicap, or sex shall be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination. The CONSULTANT shall comply with Lee County's Affirmative Action Plan or state laws in the hiring of sub-consultants. CONSULTANTS who are uncertain of their obligation must obtain a copy of all relevant guidelines concerning Lee County's Affirmative Action Plan from the Lee County Department of Equal Opportunity.

11.02 FOR PROJECTS WITH FUNDS APPROPRIATED EITHER IN PART OR WHOLLY FROM FEDERAL OR STATE SOURCES

The CONSULTANT for itself, its successors in interest, and assigns as part of the consideration thereof, does hereby covenant and agree that in the furnishing of services to COUNTY hereunder, no person on the grounds of race, color, national origin, handicap, or sex shall be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination. The CONSULTANT shall make every effort to comply with any Disadvantaged Business Enterprise goals which have been established for this project. CONSULTANTS who are uncertain of their obligations regarding Disadvantaged Business Enterprises for this project must obtain a copy of all relevant federal or state guidelines from the Lee County Department of Equal Opportunity. The failure of the CONSULTANT to adhere to relevant guidelines shall subject the CONSULTANT to any sanctions which may be imposed upon the COUNTY.

ARTICLE 12.00 - WAIVER OF BREACH

Waiver by either party of a breach of any provision of this Agreement shall not be deemed to be a waiver of any other breach and shall not be construed to be a modification of the terms of this Agreement.

ARTICLE 13.00 - INSURANCE

13.01 INSURANCE COVERAGE TO BE OBTAINED

- (1) The CONSULTANT shall obtain and maintain such insurance as will protect him from: (1) claims under workers' compensation laws, disability benefit laws, or other similar employee benefit laws; (2) claims for damages because of bodily injury, occupational sickness or disease or death of his employees including claims insured by usual personal injury liability coverage; (3) claims for damages because of bodily injury, sickness or disease, or death of any person other than his employees including claims insured by usual personal injury liability coverage; and (4) from claims for injury to or destruction of tangible property including loss or use resulting therefrom; any or all of which claims may arise out of, or result from, the services, work and operations carried out pursuant to and under the requirements of this Agreement, whether such services, work and operations be by the CONSULTANT, its employees, or by any sub-consultant(s), subcontractor(s), or anyone employed by or under the supervision of any of them, or for whose acts any of them may be legally liable.

13.01 INSURANCE COVERAGE TO BE OBTAINED (Continued)

- (2) The insurance protection set forth hereinabove shall be obtained and written for not less than the limits of liability specified hereinafter, or as required by law, whichever is greater.
- (3) The CONSULTANT, throughout the time this Agreement is in effect, shall require and ensure that any and all of its Sub-Consultants and/or SubContractors obtain, have, and maintain the insurance coverages required by law to be provided.
- (4) The CONSULTANT shall obtain, have and maintain during the entire period of this Agreement all such insurance policies as are set forth and required herein.
- (5) In the event that the CONSULTANT engages Sub-Consultants or SubContractors to assist the CONSULTANT in providing or performing services or work pursuant to the requirements of this Agreement, the insurance coverages required under Article 13.03 to be provided by the CONSULTANT shall cover all of the services or work to be provided or performed by all of the Sub-Consultants or SubContractors engaged by the CONSULTANT. However, in the event the services or work of Sub-Consultants or SubContractors engaged by the CONSULTANT is not covered by the CONSULTANT'S INSURANCE POLICY(s), it shall be the responsibility of the CONSULTANT to ensure that all Sub-Consultants or SubContractors have fully complied with the COUNTY insurance requirements for: (1) Worker's Compensation; (2) Comprehensive General Liability; (3) Comprehensive Automobile Liability; or (4) Professional Liability as required and set forth in Agreement Article 13.00.

The services or work to be provided or performed by the following Sub-Consultant(s) or SubContractor(s) identified in Agreement Exhibit "D" are exempted and excluded from the Professional Liability insurance coverage requirements set forth in this Agreement:

Service and/or work to be Provided and/or Performed	Indicate Name of Individual or Firm
-----------------------------------------------------	-------------------------------------

(If none, enter the word "none" in the space below.)

Ground Control:

Foresight Surveyors

13.01 INSURANCE COVERAGE TO BE OBTAINED Continued

- (6) The insurance coverage to be obtained by the CONSULTANT or by Sub-Consultants or SubContractors engaged by the CONSULTANT, as set forth in Agreement Article 13.03 for: (1) Workers' Compensation; (2) Comprehensive General Liability; (3) Comprehensive Automobile Liability; or (4) Professional Liability is understood and agreed to cover any and all of the services or work set forth in Agreement Exhibit "A" and all subsequent Change Order(s), Supplemental Agreement(s), Work Assignment(s), Supplemental Task Authorization(s), or Work Order(s). In the event the COUNTY shall execute and issue a written Change Order(s), or Work Order(s) or Supplemental Task Authorization(s) authorizing the CONSULTANT to provide or perform services or work in addition to those set forth in Agreement Exhibit "A", it is agreed that the COUNTY has the right to change the amount of insurance coverages required to cover the additional services or work. If the additional insurance coverages established exceeds the amount of insurance coverage carried by the CONSULTANT, the compensation established for the Change Order(s), Supplemental Agreement(s), Work Assignment(s), Supplemental Task Authorization(s), or Work Order(s) shall include consideration of any increased premium cost incurred by the CONSULTANT to obtain same.

13.02 CONSULTANT REQUIRED TO FILE INSURANCE CERTIFICATE(S)

- (1) The CONSULTANT shall submit to PUBLIC WORKS ADMINISTRATION, CONTRACTS MANAGEMENT all insurance certificates which are required under this Agreement for review and approval with respect to compliance with the insurance requirements. After approval the COUNTY will execute this Agreement and issue a written Notice to Proceed. The CONSULTANT may then commence with any service or work pursuant to the requirements of this Agreement.
- (2) All such insurance certificates shall be in a form and underwritten by an insurance company(s) acceptable to the COUNTY and licensed in the State of Florida.
- (3) Each Certificate of Insurance submitted to the COUNTY shall be an original and shall be executed by an authorized representative of the insurance company affording coverage.
- (4) Each Certificate of Insurance shall be addressed to the Lee County Board of County Commissioners, Attention: Public Works Administration, Contracts Management, P O Box 398, Fort Myers, Florida 33902-0398.
- (5) Each Certificate of Insurance shall specifically include all of the following:
 - (A) The name and type of policy and coverages provided; and
 - (B) The amount or limit applicable to each coverage provided and the deductible amount, if any, applicable to each type of insurance coverage being provided; and
 - (C) The date of expiration of coverage; and

13.02 CONSULTANT REQUIRED TO FILE INSURANCE CERTIFICATE(S) (Continued)

- (D) The designation of the Lee County Board of County Commissioners both as an additional insured and as a certificate holder. (This requirement is excepted for Professional Liability Insurance and for Workers' Compensation Insurance); and
- (E) A specific reference to this Agreement and the Project to which it pertains. (This requirement may be excepted for Professional Liability Insurance); or

In the event the CONSULTANT has, or expects to enter into an agreement for professional services other than those provided for in this Agreement, the CONSULTANT may elect to submit a certificate of insurance containing the following statement:

"This policy covers the services or work provided or performed by the Named Insured for any and all projects undertaken for Lee County pursuant to one or more written Professional Services Agreements, or written Supplemental Agreements or Supplemental Task Authorizations, or Change Orders thereto, and the limit(s) of liability shown shall not be intended or construed as applying to only one project."

Upon receipt and approval of such a certificate of insurance the COUNTY will administer the insurance required for all such agreements utilizing the single "multi-project" certificate of insurance and a separate certificate of insurance will not be required for each separate agreement.

- (F) The following clause must appear on the Certificate of Insurance:

"Cancellation - Should any of the above described policies be cancelled before the expiration date thereof, the issuing company will endeavor to mail 30 days written notice to the Certificate Holder named."

- (G) A statement indicating any services or work included in or required under Agreement Exhibit "A" Scope of Professional Services that is specifically excluded or exempted from coverage under the provisions, terms, conditions or endorsements of the CONSULTANT'S insurance policy(s). A statement which indicates any and all deductible amounts applicable to each type of insurance coverage required. In the absence of any such statements, the COUNTY will proceed with the understanding, stipulation and condition that there are no deductible amount(s), or exclusions or exemptions to the insurance coverage(s) provided,

- (6) Each Certificate of Insurance shall be issued by an insurance agent and/or agency duly authorized to do so by and on behalf of the insurance company affording the insurance coverage(s) indicated on each Certificate of Insurance.

13.02 CONSULTANT REQUIRED TO FILE INSURANCE CERTIFICATE(S) (Continued)

- (7) If the initial, or any subsequently issued Certificate of Insurance expires prior to the completion of the work or termination of this Agreement, the CONSULTANT shall furnish to the COUNTY renewal or replacement Certificate(s) of Insurance, or Certified Binder(s), not later than fifteen (15) calendar days prior to the date of their expiration. Failure of the CONSULTANT to provide the COUNTY with such renewal certificate(s) shall be considered justification for the COUNTY to terminate this Agreement.
- (8) If any of the insurance coverage(s) required by this Agreement shall reach the date of expiration indicated on the approved Certificate(s) of Insurance without the COUNTY having received satisfactory evidence of renewal or replacement, the CONSULTANT shall automatically and without further notice stop performing all previously authorized services and work. During any time period that the CONSULTANT'S services or work is suspended for failure to comply with the insurance requirements set forth in the Agreement, the CONSULTANT shall not be entitled to any additional compensation or time to provide and perform the required services or work and the COUNTY shall not be required to make payment on any invoices submitted by the CONSULTANT. Upon receipt and approval of renewal or replacement Certificates of Insurance, payment for any such invoices shall be made promptly by the COUNTY.

13.03 - INSURANCE COVERAGES REQUIRED

The CONSULTANT shall obtain and maintain the following insurance coverages as provided hereinbefore, and in the type, amounts and in conformance with the following minimum requirements:

(1) WORKERS' COMPENSATION

Coverage to comply for all employees for statutory limits in compliance with the applicable State and Federal laws. In addition, the policy must include the following:

- (A) Employer's Liability with a minimum limit per accident in accordance with statutory requirements, or a minimum limit of \$100,000 for each accident, whichever limit is greater.
- (B) Notice of Cancellation and/or Restriction - The policy must be endorsed to provide the COUNTY with thirty (30) days prior written notice of cancellation and/or restriction.

(2) COMMERCIAL GENERAL LIABILITY

Coverage must be afforded on a form no more restrictive than the last edition of the Commercial General Liability Policy filed by the Insurance Services Office and must include the following:

- (A) Minimum limits of \$100,000 per occurrence and \$300,000 aggregate for Bodily Injury Liability and a minimum limit of \$100,000 for Property Damage Liability, or a minimum combined single limit of \$300,000.

(2) COMMERCIAL GENERAL LIABILITY (Continued)

- (B) Contractual coverage applicable to this specific Agreement including any hold harmless and/or such indemnification agreement.
- (C) Such additional requirements as are set forth in Article 13.01 and 13.02 hereinabove.

(3) BUSINESS AUTOMOBILE LIABILITY

Coverage must be afforded on a form no more restrictive than the latest edition of the Business Automobile Liability Policy filed by the Insurance Services Office and must include the following:

- (A) Minimum limits of \$100,000 per person and \$300,000 per accident for Bodily Injury Liability and a minimum limit of \$100,000 for Property Damage Liability, or a minimum combined single limit of \$300,000.
- (B) Coverage shall include owned vehicles, hired and leased, or non-owned vehicles.
- (C) Such additional requirements as are set forth in Articles 13.01 and 13.02 hereinabove.

(4) PROFESSIONAL LIABILITY

Coverage must include the following:

- (A) A minimum aggregate limit of _____.
- (B) Such additional requirements as are set forth in Articles 13.01 and 13.02 hereinabove.
- (C) Should the Professional Liability Insurance Policy issued pursuant to the above requirements and limits be written so as to provide an applicable deductible amount, or other exclusion or limitation as to the amount of coverage to be provided within the minimum coverage limits set forth above, the COUNTY shall hold the CONSULTANT responsible and liable for any such difference in the amount of coverage provided by the insurance policy. In the event of any such deductible amount, exclusion or limitation, the CONSULTANT shall be required to provide written documentation that is acceptable to the COUNTY establishing that the CONSULTANT has the financial resources readily available to cover damages, injuries and/or losses which are not covered by the policy's deductible amounts, exclusions and/or limitations as stated above.

ARTICLE 14.00 - DUTIES AND OBLIGATIONS IMPOSED ON THE CONSULTANT

The duties and obligations imposed upon the CONSULTANT by this Agreement and the rights and remedies available hereunder shall be in addition to, and not a limitation of, any otherwise imposed or available by law or statute.

ARTICLE 15.00 - REPRESENTATION OF THE COUNTY

The CONSULTANT in providing and performing the services and work required pursuant to this Agreement thereto shall only represent the COUNTY in the manner and to the extent specifically set forth in writing in this Agreement or thereto, and as provided in any written WORK ORDER(S), SUPPLEMENTAL AGREEMENT(S), SUPPLEMENTAL TASK AUTHORIZATION(S), and CHANGE ORDER(S) issued thereunder.

In the event the CONSULTANT'S services or work involves construction contract administrative support services, the CONSULTANT is not authorized to act on the COUNTY'S behalf, and shall not act on the COUNTY'S behalf, in such a manner as to result in change(s) to (1) the cost or compensation to be paid the construction contractor, or (2) the time for completing the work as required and agreed to in the construction contract, or (3) the scope of the work set forth in the construction contract documents, unless such representation is specifically provided for, set forth and authorized in this Agreement or thereto.

The COUNTY will neither assume nor accept any obligation, commitment, responsibility or liability which may result from representation by the CONSULTANT not specifically provided for and authorized as stated hereinabove.

ARTICLE 16.00 - OWNERSHIP OF DOCUMENTS

All documents such as drawings, tracings, notes, computer files, photographs, plans, specifications, maps, evaluations, reports and other records and data relating to this project, other than working papers, specifically prepared or developed by the CONSULTANT under this Agreement shall be property of the CONSULTANT until the CONSULTANT has been paid for providing and performing the services and work required to produce such documents.

Upon completion or termination of this Agreement, or upon the issuance by the COUNTY of a written Change Order deleting all or portions of the scope of services or task(s) to be provided or performed by the CONSULTANT, all of the above documents, to the extent requested in writing by the COUNTY, shall be delivered by the CONSULTANT to the COUNTY within seven (7) calendar days of the COUNTY making such a request. In the event the COUNTY gives the CONSULTANT a written Notice of Termination of all or part of the services or work required, or upon the issuance to the CONSULTANT by the COUNTY of a written Change Order deleting all or part of the services or work required, the CONSULTANT shall deliver to the COUNTY the requested documents as set forth hereinabove, with the mutual understanding and commitment by the COUNTY that compensation earned or owing to the CONSULTANT for services or work provided or performed by the CONSULTANT prior to the effective date of any such termination or deletion will be paid to the CONSULTANT within thirty (30) calendar days of the date of issuance of the Notice of Termination or Change Order.

The CONSULTANT, at its expense, may make and retain copies of all documents delivered to the COUNTY for reference and internal use. The CONSULTANT shall not, and agrees not to, use any of these documents, and data and information contained therein on any other project or for any other client without the prior expressed written permission of the COUNTY.

ARTICLE 16.00 - OWNERSHIP OF DOCUMENTS (Continued)

Any use by the COUNTY of said documents, and data and information contained therein, obtained by the COUNTY under the provisions of this Agreement for any purpose not within the scope of this Agreement shall be at the risk of the COUNTY, and without liability to the CONSULTANT. The COUNTY shall be liable and agrees to be liable for and shall indemnify, defend and hold the CONSULTANT harmless for any and all claims, suits, judgments or damages, losses and expenses including court costs, expert witness and professional consultation services, and attorneys' fees arising out of the COUNTY'S use of such documents in a manner contrary to the provisions set forth hereinabove. The COUNTY hereby acknowledges receipt of \$10.00 (ten and no hundreds dollars) and other good and valuable consideration from the CONSULTANT which has been paid as specific consideration for the indemnification provided herein.

ARTICLE 17.00 - MAINTENANCE OF RECORDS

The CONSULTANT will keep and maintain adequate records and supporting documentation applicable to all of the services, work, information, expense, costs, invoices and materials provided and performed pursuant to the requirements of this Agreement. Said records and documentation will be retained by the CONSULTANT for a minimum of five (5) years from the date of termination of this Agreement.

The COUNTY and its authorized agents shall, with reasonable prior notice, have the right to audit, inspect and copy all such records and documentation as often as the COUNTY deems necessary during the period of this Agreement, and during the period five (5) years thereafter; provided, however, such activity shall be conducted only during normal business hours and at the expense of the COUNTY, and provided further that to the extent provided by law the COUNTY shall retain all such records confidential.

ARTICLE 18.00 - HEADINGS

The HEADINGS of the Articles, Sections, Exhibits, Attachments, Phases or Tasks as contained in this Agreement are for the purpose of convenience only and shall not be deemed to expand, limit or change the provisions contained in such Articles, Sections, Exhibits, Attachments, Phases or Tasks.

ARTICLE 19.00 - ENTIRE AGREEMENT

This Agreement, including referenced Exhibits and Attachments hereto, constitutes the entire Agreement between the parties hereto and shall supercede, replace and nullify any and all prior agreements or understandings, written or oral, relating to the matters set forth herein, and any such prior agreements or understandings shall have no force or effect whatever on this Agreement.

The following listed documents, which are referred to hereinbefore, are attached to and are acknowledged, understood and agreed to be an integral part of this Agreement:

ARTICLE 19.00 - ENTIRE AGREEMENT (Continued)

- (1) EXHIBIT "A" entitled "Scope of Professional Services"
dated May 17, 2002, ~~2000~~.
- (2) EXHIBIT "B" entitled "Compensation and Method of Payment" dated May 17, 2002, ~~2000~~.
- (3) EXHIBIT "C" entitled "Time and Schedule of Performance"
dated May 17, 2002, ~~2000~~.
- (4) EXHIBIT "D" entitled "Consultant's Associated Sub-Consultant(s) and SubContractor(s)", dated
May 17, 2002, ~~2000~~.
- (5) EXHIBIT "E" entitled "Project Guidelines and Criteria",
dated May 17, 2002, ~~2000~~.
- (6) EXHIBIT "F" entitled "Truth in Negotiation Certificate",
dated May 17, 2002, ~~2000~~.
- (7) EXHIBIT "G" entitled "Insurance". (Containing copies of applicable Certificates of Insurance)

ARTICLE 20.00 - NOTICES AND ADDRESS OF RECORD

20.01 NOTICES BY CONSULTANT TO COUNTY

All notices required and/or made pursuant to this Agreement to be given by the CONSULTANT to the COUNTY shall be in writing and shall be given by the United States Postal Service Department first class mail service, postage prepaid, addressed to the following COUNTY address of record and sent to the attention of the County's Project Manager:

Lee County Board of County Commissioners
Post Office Box 398
Fort Myers, Florida 33902-0398

20.02 NOTICES BY COUNTY TO CONSULTANT

All notices required and/or made pursuant to this Agreement to be given by the COUNTY to the CONSULTANT shall be made in writing and shall be given by the United States Postal Service Department first class mail service, postage prepaid, addressed to the following CONSULTANT'S address of record:

20.02 NOTICES BY COUNTY TO CONSULTANT (Continued)

EarthData International of Maryland, LLC
(CONSULTANT'S Business Name)

45 West Watkins Mill Road, Suite G
(Street/P.O. Box)

Gaithersburg MD 20878
(City) (State) (Zip Code)

Telephone Number: 301-948-8550

Fax Number: 301-963-2064

ATTENTION: Brian A. Wegner
Project Director

20.03 CHANGE OF ADDRESS OF RECORD

Either party may change its address of record by written notice to the other party given in accordance with the requirements of this Article.

ARTICLE 21.00 - TERMINATION

This Agreement may be terminated by the COUNTY at its convenience, or due to the fault of the CONSULTANT, by the COUNTY giving thirty (30) day written notice to the CONSULTANT.

If the CONSULTANT is adjudged bankrupt or insolvent; if it makes a general assignment for the benefit of its creditors; if a trustee or receiver is appointed for the CONSULTANT or for any of its property; if it files a petition to take advantage of any debtor's act or to reorganize under the bankruptcy or similar laws; if it disregards the authority of the COUNTY'S designated representatives; if it otherwise violates any provisions of this Agreement; or for any other just cause, the COUNTY may, without prejudice to any other right or remedy, and after giving the CONSULTANT a thirty (30) calendar day written notice, terminate this Agreement.

In addition to the COUNTY'S contractual right to terminate this Agreement in its entirety as set forth above, the COUNTY may also, at its convenience, stop, suspend, supplement or otherwise change all, or any part of, the Scope of Professional Services as set forth in Exhibit "A", or the Project Guidelines and Criteria as set forth in Exhibit "E", or as such may be established by Supplemental Agreement or Supplemental Task Authorization or Change Order Agreement. The COUNTY shall provide written notice to the CONSULTANT in order to implement a stoppage, suspension, supplement or change.

ARTICLE 24.00 - ACCEPTANCE

Acceptance of this Agreement shall be indicated by the signature of the duly authorized representative of the hereinabove named parties in the space provided hereinafter and being attested and witnessed as indicated.

IN WITNESS WHEREOF, the parties hereto, by their duly authorized representatives, have executed this Agreement effective the day and year first written above.

ATTEST:
CLERK OF CIRCUIT COURT
Charlie Green, Clerk

COUNTY: LEE COUNTY, FLORIDA
BOARD OF COUNTY COMMISSIONERS

BY: _____

BY: _____
Chairman

DATE: _____

APPROVED AS TO FORM

BY: _____
County Attorney's Office

ATTEST:

EarthData International of Maryland, LLC
(CONSULTANT)

Mary C. Smith
(Witness)

BY: [Signature] Jeff Leonard
(Authorized Signature)

Brian D. Wayne
(Witness)

President and General Manager
(Title)

DATE: 17 May '02

CORPORATE SEAL:

SCOPE OF PROFESSIONAL SERVICES

for

AERIAL PHOTOGRAPHY AND DIGITAL MAPPING SERVICES

BASIC SERVICES

Section 1. GENERAL SCOPE STATEMENT

The Consultant shall provide and perform the following professional services, which shall constitute the GENERAL SCOPE of the BASIC SERVICES under the covenants, terms, and provisions of this PROFESSIONAL SERVICES AGREEMENT or SERVICE PROVIDER AGREEMENT:

1.0 General Scope Statement

Lee County, Florida, herein also referred to as the "COUNTY", intends to produce updated digital orthophotos for the entire County as depicted and further defined by the sheet layout in Exhibit I, herein also referred to as "Project Area". These orthophotos will be generated at a scale of 1 inch = 100 feet (1:1,200) photogrammetrically from vertical aerial photography at an average photo scale of 1:7,200. The digital elevation data (DTM) compiled from the 1998 photography will be used for ortho-rectification. The maps and the orthophotos shall conform to the National Map Accuracy Standards.

Also, the COUNTY intends to produce digital orthophotos for all "water" areas of the county as depicted and further defined by the sheet layout in Exhibit II, herein referred to as "Water Area". These orthophotos will be generated at a scale of 1 inch = 1000 feet (1:12,000) photogrammetrically from vertical aerial photography at an average photo scale of 1:40,000. New DTM will be collected for areas that currently do not contain any elevation data.

The County also intends to obtain LIDAR data over an area of 120 square miles. The County will provide a map delineating the exact area that is required. The LIDAR data will be used to produce 2 foot contours over 120 square mile area.

The COUNTY intends to maintain a current digital orthophoto image basemap, with an anticipated update cycle of two years based on economic development and growth. This will require acquisition of new aerial photography and production of digital orthophotography using the new aerial photography and to the maximum extent possible, existing control information.

The COUNTY has entered into a contract with Earth Data International, Gaithersburg, Maryland, herein also referred to as "CONSULTANT" to provide professional services for completion of several tasks required to produce the above map products. A more detailed description of the tasks needed is provided below, and the specific responsibilities of the COUNTY and the CONSULTANT have been outlined.

Section 2. TASKS

Pursuant to the GENERAL SCOPE of the BASIC SERVICES stated herein above, the CONSULTANT shall perform all services and/or work necessary to complete the following task(s) and/or provide the following item(s) which are enumerated to correspond to the task(s) and/or items set forth in EXHIBIT "B" entitled "COMPENSATION AND METHOD OF PAYMENT".

2.0 Tasks

A detailed description of all the tasks is provided. This emphasizes the linkages between various tasks, the sequence in which some of the tasks need to be completed, and the impact of the precision achieved at various intermediate stages of completion on the quality of the final products.

2.1 Task 1 - Aerial Photography of "Project Area"

The aerial photographic coverage of the "Project Area" will be completed at an average photo scale of 1:7,200 (1 inch = 600 feet) by the CONSULTANT. The CONSULTANT will be responsible for the paneling of the existing ground control stations that were used on the 1998 photography. Technical and quality assurance issues related to aerial photography are discussed in Section 3.1 under "Scope of Services".

2.2 Task 2 – Aerial Photography of "Water Area"

The aerial photographic coverage of the "Water Area" will be completed at an average photo scale of 1:40,000 (1 inch = 3,333 feet) by the CONSULTANT. The CONSULTANT will be responsible for the paneling of the existing ground control stations that were used on the 1998 photography. Technical and quality assurance issues related to aerial photography are discussed in Section 3.1 under "Scope of Services".

2.3 Task 3 - Ground Control

The same ground survey control will be used for the 2002 projects as was used on the 1998 project. The original number and the location of the planimetric and height control points were based on FAAT considerations. The CONSULTANT has the responsibility for paneling the control points that were paneled for the 1998 project and using all of the original ground surveyed control that is recoverable.

The control on the 1998 project was in the Florida State Plane Coordinate system. The horizontal datum was North American Datum 1983 (NAD83). The vertical datum was North American Vertical Datum 1988 (NAVD 88). The same projection and datums will be used on this project.

2.4 Task 4 - Fully Analytical Aerial Triangulation of the "Project Area"

The CONSULTANT will carry out fully analytical aerial triangulation for the "Project Area". In order to minimize the need for ground surveyed control, the CONSULTANT will use airborne GPS data collected during the flight mission to supplement the ground control for the adjustment of the aerial triangulation. The conventional approach for aerial triangulation of the photographic blocks covering the islands located at the south-western and the western parts of the project area would have required the establishment of a very large number of ground surveyed control stations. In

addition, such terrain poses significant logistic problems to field survey. Consequently, the CONSULTANT will use both the 1:14,400 and the 1:7,200 photography from 1998 to transfer additional control where needed.

Technical specifications and quality assurance requirements of FAAT are given in Section 3.3 under "Scope of Services".

2.5 Task 5 - Fully Analytical Aerial Triangulation of the "Water Area"

The CONSULTANT will carry out fully analytical aerial triangulation for the "Water Area". In order to minimize the need for ground surveyed control, the CONSULTANT will use airborne GPS data collected during the flight mission to supplement the ground control for the adjustment of aerial triangulation blocks. The conventional approach for aerial triangulation of the photographic blocks covering the islands and the water located at the south-western and the western parts of the project area would have required the establishment of a very large number of ground surveyed control stations. In addition, such terrain poses significant logistic problems to field survey. Consequently, the CONSULTANT will use both the 1:14,400 and the 1:7,200 photography from 1998 to transfer additional control where needed. The aerial triangulation of the "Project Area" and the "Water Area" will utilize common control points to ensure they tie together.

Technical specifications and quality assurance requirements of FAAT are given in Section 3.3 under "Scope of Services".

2.6 Task 6 - Digital Orthophotography for the "Project Area"

The CONSULTANT will produce digital orthophotos covering the "Project Area" using 1:7,200 scale aerial photography. The ortho-rectification will be carried out so that the resulting ortho-images have a 0.5 foot ground pixel size and meet the planimetric National Map Accuracy Standard for 1 inch = 100 foot (1:1,200) map scale. The digital orthophotos will cover the exact tile and project layout as produced from the 1998 photography and depicted in Exhibit I. Technical specifications for ortho-rectification and quality assurance requirements are included in Section 3.5 under "Scope of Services". In support of orthorectification, the CONSULTANT will use the Digital Terrain Model (DTM) from the 1998 photography to rectify the digital orthophotos. New digital elevation data will be collected only in areas where the terrain has changed significantly from the 1998 photography to the 2002 photography. Any new elevation data required will be collected to generate a DTM that satisfies the National Map Accuracy Standards. Technical specifications for Digital Terrain Modeling are included in Section 3.4 under "Scope of Services". Any fees associated with the development of new DTMs caused by significant change will be discussed and approved by the COUNTY in advance of the work commencing.

2.7 Task 7 - Digital Orthophotography for the "Water Area"

The CONSULTANT will produce digital orthophotos covering the "Water Area" using 1:40,000 scale aerial photography. The ortho-rectification will be carried out so that the resulting ortho-images have a 3.0 foot ground pixel size and meet the planimetric National Map Accuracy Standard for 1 inch = 1,000 foot (1:12,000) map scale. The digital orthophotos will cover the tile layout as depicted in Exhibit II. Technical specifications for ortho-rectification and quality assurance requirements are included in Section 3.5 under "Scope of Services". In support of the orthorectification, the CONSULTANT will collect new DTM data for areas that currently do not contain elevation data. The New DTM's along with the existing DTM's from the 1998 photography will be used to rectify the digital orthophotos. Technical specifications for Digital Terrain Modeling are included in Section 3.4 under "Scope of Services".

2.8 Task 8 - Pilot Project Area

The CONSULTANT will demonstrate the suitability of the technical specifications and the procedures used for the project, by completing the tasks for a Pilot study area. The Pilot area will be the same twenty-four (24) tiles that were done for the 1998 project.

The purpose of mapping the Pilot study area is to prototype all procedures and to establish successful protocols to emulate throughout the remainder of the Lee County Digital Mapping Project. While aerial photography collection, ground control development and analytical aerial triangulation may be completed for the entire project prior to the Pilot study, the balance of the project tasks will be conducted only for the extent of the selected area during the Pilot period.

It is clearly understood by the CONSULTANT and the COUNTY, that if, as a result of the Pilot study, the COUNTY changes the technical specifications and/or the scope of services and deliverables to be provided by the CONSULTANT, the CONSULTANT will renegotiate fees with the COUNTY for the balance of the project tasks.

2.9 Task 9 – LIDAR Of 120 Square Mile Area To Produce 2 Foot Contours

The CONSULTANT will acquire raw LIDAR data for a 120 square mile area to be defined by the COUNTY. The data will be collected using an AeroScan LIDAR system, and will be flown at a nominal altitude of 8,000' above mean terrain, with a 50-degree field of view. Flight lines will overlap by 30%. There will be 15, 000 laser pulses emitted per second with the opportunity for each pulse to provide up to 5 returns. The nominal post spacing between points will be 4 meters.

The LIDAR data will be processed and yield a DEM with a post spacing of 3 meters that is accurate to 18 cm. The LIDAR DEM will be used to generate 2 foot contours in Florida State Plane Coordinate system. The horizontal datum will be North American Datum 1983 (NAD83). The vertical datum will be North American Vertical Datum 1988 (NAVD 88). This is the same projection and datum that was used for the 1998 project. This will ensure that all data sets will tie together. The final digital files will be delivered to the county in Arc Export format.

2.10 Task 10 – Base Map Update

The COUNTY desires that the digital orthophoto image and topographic base map be maintained and updated to keep pace with economic development to reflect changes to the county's infrastructure and environment. This necessitates a regular update cycle of 2-4 years based on change. Update services may include but are not limited to: acquisition of new aerial photography or other airborne sensor data, scanning, aerotriangulation, development of DTM or surface data via conventional photogrammetric means and/or LIDAR, and orthorectification. To the maximum extent possible, the CONTRACTOR will use existing data sources for control and updating. Fees associated with updates will be determined based on the scope of work desired and the most efficient and appropriate technology available at the time the update is undertaken.

3.0 Description of Tasks and Deliverables

The description of tasks and deliverables to be provided by the CONSULTANT under the Lee County Digital Mapping Project are described separately in respect of each of the tasks outlined in Section 2.

3.1 Aerial Photography

Color aerial photography will be collected to cover the areas depicted in Exhibit I and Exhibit II.

3.1.1 Aerial Photography for "Project Area"

This phase of the project involves the acquisition of new color aerial photography which will support the development of color digital orthophotos at 1"=100'. The scale of the photography will be 1"=600'. There will be approximately 62 flight lines of photography collected with 60% forward overlap. The entire county will be covered with photography at this scale. This photography will be flown with Airborne GPS to support the network of ground control points.

The deliverable for this phase of the project is aerial film.

3.1.2 Aerial Photography for "Water Area"

This phase of the project involves the acquisition of new color aerial photography which will support the development of color digital orthophotos at 1"=1,000'. The scale of the photography will be 1"=3,333'. There will be approximately 7 flight lines of photography collected with 60% forward overlap. The water areas of the county, as depicted in Exhibit II, will be covered with photography at this scale. This photography will be flown with Airborne GPS to support the network of ground control points.

The deliverable for this phase of the project is aerial film.

3.2 Ground Control

Analytical photogrammetric data processing techniques provide highly precise internal precision, but the achievable external precision is completely dependent on that of the object space control used. For a large photogrammetric mapping project such as the Lee County Aerial Photography and Digital Photogrammetric Mapping Project, the accuracy of the final map products will be based directly on the accuracy of the densified control established through analytical aerial triangulation. The accuracy and the reliability of the FAAT, which is to be carried out by the CONSULTANT, will be directly dependent on the accuracy and the reliability of the ground surveyed control. The same ground control used on the 1998 project, which was accurate and acceptable, will be used for this project.

3.2.1 Planimetric Accuracy of Ground Control

The ortho-rectification must produce map products that meet the National Map Accuracy Standard (NMAS) for 1 inch = 100 feet (1:1,200) map scale. This states that the "circular map accuracy standard" (CMAS) – which corresponds to 90% circular map error - of 1/30th inch at map scale. For the map scale of 1 inch = 100 feet, this limiting CMAS amounts to 40 inch or 3.33 feet on the ground. It is given that:

$$\text{CMAS} = 2.146 \text{ (Standard error in X- or Y-coordinate on ground)}$$

Consequently, the standard error in X- or Y-coordinate, as measured on the map should not exceed $3.33/2.146 = 1.55$ ft.

The control points used for orienting individual models on analytical plotter must have accuracy 2 to 3 times better than the limiting mapping accuracy. Using a factor of 2.5 would indicate that the accuracy of the planimetric control derived through aerial triangulation should not be lower than $1.55/2.5 = 0.62$ ft. This corresponds to an accuracy of about 1/6,000 of the flying height of

3,600 ft. for the photo scale used, and is easily achievable through FAAT.

The ground-surveyed control for adjusting the aerial triangulation blocks should be 2 to 3 times more accurate than the desired FAAT accuracy. Using a factor of 2, the standard error (1-sigma level) in each of the X- and Y-coordinate of any ground control point should not exceed 0.3 ft. (or about 10 cm). The control used in 1998 met this accuracy standard and will be acceptable to use for this project.

3.2.2 Height Accuracy of Ground Control

The digital terrain data generated from stereo-models has to meet the NMAS for mapping with 2-ft contour interval. This standard states that 90% of the points on the map must not have height error exceeding one-half the C.I. For this project, this 90% height error corresponds to 1.0 ft. It is given that:

$$E90 \text{ (one-dimensional 90\% error)} = 1.645 \text{ (Standard error)}$$

Therefore, the standard error in height obtained from map should not exceed $1/1.645 = 0.61$ ft. Which is about one-third of the C.I. A height accuracy of points established through FAAT of the order of $1/10,000$ of the flying height above the terrain is routinely achievable, which is 0.36 ft. for this project. This is sufficiently accurate to level individual models on stereo plotters to meet the NMAS. The DTM data generated in 1998 met and conformed to NMAS.

3.2.3 Airborne GPS Control

In order to minimize the overall need for ground control for the project, and specifically to minimize any problems related to the large areas of water within the project areas, the CONSULTANT will collect airborne kinematic GPS data for all of the aerial photography. The camera locations interpolated from the airborne antenna positions are planned to have positional accuracy better than 10 cm. By providing two control points in each model, the airborne GPS data provides significant geometric strength to the AT blocks, especially in controlling height deformations in the block. In view of the crucial role of the airborne GPS data in this project, the CONSULTANT has implemented extensive QA procedures to assure the reliability of such data. All flight missions will be flown while occupying a base station on the ground. The kinematic GPS antenna position will be computed separately from the base station to achieve 100 percent redundancy and independent check for the computed camera positions.

3.3 Fully Analytical Aerial Triangulation (FAAT)

FAAT will be used to densify and extend the existing ground control network. The FAAT will be carried out using digital photogrammetric workstations. Softcopy photogrammetric technology for aerotriangulation adds considerable efficiencies to the production process through algorithms that support automated point selection for pass and tie points. The softcopy workflow for aerotriangulation provides the operator with dynamic tools to measure the accuracy of the triangulation adjustment as points are checked and positioned, eliminating the need to revisit the control network to locate inaccuracies during final adjustment. The processes used to perform the aerotriangulation are described below.

3.3.1 Project Setup

A directory tree structure for the project is established on the each of the workstations that will be used for completion of the triangulation adjustment, and a new block is created for the first strip of frames to be measured. The criteria used for establishment of the directory structure and file-naming conventions will be duplicated on all workstations used for the project to avoid confusion

or errors due to inconsistencies in labeling or naming. The block will be defined using both the relevant camera information obtained from the USGS camera calibration report for the aerial camera and the date of photography. The raster files are rotated to the correct orientation for mensuration on the softcopy workstation. The rotation of the raster files is necessary to accommodate different flight directions from one strip to the next.

The technician verifies that the datum and units of measurement for the supplied control are consistent with the project requirements. The units for this project are Florida State Plane Coordinate System, NAD 83, and NAVD 88 in feet.

3.3.2 Interior Orientation

The photogrammetric technician performs an automatic interior orientation for the frames in the block. The softcopy system has the ability to set up predefined fiducial templates for the aerial camera(s) used for the project. Using the template that is predefined in the block parameter setup, the software identifies and measures the eight fiducial positions for all the frames. Upon completion, the results are reviewed against the tolerance threshold. Any problem that occurs during the automatic interior orientation will cause the software to reject the frame and identify it as a potential problem. The operator then has the option to measure the fiducials manually.

3.3.3 Point Selection and Measurement

The operator starts the point selection routine, which performs an automated selection of, pass and tie points. The operator visits these locations and accepts or refines the interpolated locations. The interpolation tool can be turned on and off by the operator dependent on the type of land cover in the triangulation block. Factors that influence the settings include the amount of contrast and the sharpness of features present on the photography. The operator sets the search pattern, but the routine normally identifies and selects 40-50 points in each stereomodel. The team performs a two-way transfer where the tie points from one strip are transferred to the adjacent strip and vice versa. This process strengthens the final bundle adjustment.

3.3.4 Preliminary Adjustment

A preliminary adjustment is run to identify pass points that have high residuals. This process can be accomplished for each flight line or partial flight line to ensure that the network has sufficient levels of accuracy as points are selected. These points are visited and the cause for the inaccuracy is identified and rectified. This process also identifies any gaps where the point selection routine failed to establish a point. The operator interactively sets any missing points.

3.3.5 Final Adjustment

The control and pass-point measurement data are exported to the software, which is used for the final adjustment. This package must be able to incorporate airborne GPS as a part of the control network. The program creates a results file with the RMSE results for all points within the block and their relation to one another. The photogrammetrist performing the adjustments will then use their experience to determine what course of action to take for any point falling outside specifications. This may involve removing the point from the adjustment, as long as this does not affect the overall structure of the network.

In a case where the point is essential to the adjustment, it may be necessary to reload the pertinent image files and re-read the point. The bundle adjustment is run through the software several times. The photogrammetrist increases the accuracy parameters for each subsequent iteration so, when the final adjustment is run, the RMSE for the adjustment meets the accepted standards of 1:10,000 of the flying height for the horizontal position (X and Y) and 1:9,000 or better

of the flying height in elevation (Z). The errors will be expressed as a ratio fraction of the flying height using a one-sigma (95%) confidence level.

The accuracy of the final solution is verified by running the final adjustment, placing no constraints on the QC points. The RMSE values for these points must fall within the tolerances above for the solution to be acceptable.

The final adjustment generates a .RES file and a .COR file. The .RES file has all the results from the adjustment with the RMSE values for each point measured. The .COR file contains the adjusted X, Y, Z coordinates for all the measured points.

3.3.6 Quality Assurance

The simultaneous bundle adjustment of aerial photographic blocks has become a well-established and reliable technique for the densification of ground-surveyed control. Fully analytical aerial triangulation routinely provides accuracy in the range of 1/10,000 of the average flying height above the terrain. The quality of the aerial triangulation procedure and the resulting data can be monitored in two ways. The best measure for the internal quality is an analysis and control on the computational residuals obtained at different intermediate stages of the aerial triangulation process. The best measure for the external precision is to compare the three-dimensional positional coordinates of some paneled points derived through the aerial triangulation procedure with their field-surveyed values.

The following limiting precision and residual values are specified for monitoring the quality of the aerial triangulation data reduction and adjustment procedure:

Maximum coordinate residual at fiducials during interior orientation	10 micrometer
Max. y-parallax at any model point during relative orientation	15 micrometer
RMS of residuals in Northing, Easting and Elevation at the control points. Average standard error in computed Northing, Easting and Elevation of pass points.	Not greater than 1:10,000 of the flying height above mean terrain level
Max. residual in Northing, Easting or Elevation at any control point. Max. standard error in Northing, Easting and Elevation of pass point.	Not greater than 2.5 times the RMS value for control point residuals.
R.M.S. of residuals at the tie points.	Not greater than 1:20,000 of flying height above mean terrain level
Max. residual at any tie point.	Not greater than 2.5 times The R.M.S. values for tie point residual.
Average adjustment correction to photo-coordinates in a	+/- 10 micrometers

block.

Max. adjustment correction
to any photo-coordinate
value.

+/- 20 micrometer

3.3.7 Aerial Triangulation Report

Immediately upon completion of all aerial triangulation work the CONSULTANT will prepare an aerial triangulation report for submission to the COUNTY. The COUNTY, if satisfied, will accord approval of the report in 5 working days. If the COUNTY is not satisfied, the CONSULTANT will be provided detailed information about the reasons for non-acceptance of the report within 5 working days. The CONSULTANT will review the aerial triangulation process, rectify any discrepancies in the aerial triangulation process and will resubmit the report. The report will include the following:

3.3.7.1 Narrative

The report will include a brief narrative outlining procedures, equipment and programs used. Also included in the narrative shall be:

- A listing of all field control points thrown out of the analytical computations prior to the final run.
- A full description of any codes utilized in the computations.
- A full description of significant misfits encountered at control points and the steps taken to analyze such misfits and to rectify the discrepancies.

3.3.7.2 Graphic Layout

The limits of the analytical triangulation block will be indicated on a plot. Also, the plot will contain the control points used in the adjustment and the location of the pass points and tie points.

3.3.7.3 Aerial Triangulation Computations

Computations will include ground control data, corrections applied to ground control (adjustment residuals at the control points), triangulated ground points, and triangulated point image residuals.

Computed coordinates of all control points, pass points, and drop points (derived from other photography) should be labeled on a computer printout with their field and/or computer designations. The printout will include:

- Project name, CONSULTANT name, date of computation, the name of the analytical program that was used to perform the computation and the block or sub-block designation.
- Root-mean-square (RMS) summaries will be given for bundle adjustment, photographic measurement residuals or strip tie point residuals and misclosure at control points.

3.4 Digital Terrain Modeling

The existing countywide DTM's will be used to rectify the digital orthophotos. In areas where there is no DTM data or in areas where the ground has changed significantly since the 1998 photography, new DTM's will be collected.

Using photogrammetric compilation techniques, the CONSULTANT will generate an intense array of horizontal and vertical coordinates (mass points). The density of the array will vary

proportionally with the range of terrain variation. Where the terrain changes rapidly, the points collected should be dense; where the ground is relatively flat, fewer points may be collected.

Wherever the change in terrain is in a linear form, such as along a stream bed, a road edge, on a ridge line, at a retaining wall, or at a lake shoreline, a break line, which is a series of three-dimensional points, will be collected to capture the form of the terrain. Such break line data capture along linear features is essential to assure that they will appear straight and unwavering in digital orthophotos.

The combination of mass points and three-dimensional breaklines will ensure accurate and efficient development of DTM's. The entire network of collected points should be captured and stored on a per stereo model basis and should be merged with adjacent models to create a Triangulated Irregular Network (TIN) array.

3.5 Digital Orthophotography

The CONSULTANT will produce color digital orthophotos covering the "Project Area" from 1:7,200 scale scanned aerial photography as identified in Exhibit I and color digital orthophotos covering the "Water Areas" from 1:40,000 scale scanned aerial photography as identified in Exhibit II. A digital orthophoto is a digital image that has the properties of orthographic projection. It is derived from a digitized perspective aerial photograph by differential rectification so that image displacements caused by camera tilt and terrain relief are removed.

The digital orthophotos for the "Project Area" will have a 0.5' ground pixel size and are required to meet the planimetric National Map Accuracy Standard for 1" = 100' map scale and the digital orthophotos for the "Water Areas" will have a 3.0' ground pixel size and are required to meet the planimetric National Map Accuracy Standard for 1"=1,000' map scale. The orthophoto production will be carried out in accordance with the following specifications in order to achieve desired image quality and positional accuracy.

3.5.1 Scanning Aerial Photography

The digital images used for ortho-rectification will be produced by scanning the aerial film negatives on a precision scanner. The scanner must not physically come in contact with the film while it is in motion in order to eliminate any possibility of causing scratches on the image.

The scanner used for scanning of aerial imagery must be calibrated using glass grid plate. The calibration results should show that the scanner maintains a geometric accuracy of less than 5 micrometer RMSE.

The aerial negatives will be scanned with a scan resolution of 21 micrometers, which for the negative scale of 1"=600' will result in a ground pixel size of 0.5 foot and for the negative scale of 1"=3,333' will result in a ground pixel size of 3.0'.

A sample scan will be provided to the COUNTY by the CONSULTANT for the COUNTY'S review and acceptance of the scan's quality.

3.5.2 Image Rectification

The process of differential rectification of digital images has, to a large extent, been automated on soft copy plotters. However, the following input data is required:

1. Digital image of an aerial negative.

2. Camera calibration data including the calibrated focal length, the fiducial coordinates, and lens distortion parameters.
3. Photo control coordinates and the exterior orientation parameters for the imaged photo resulting from analytical aerial triangulation.
4. Digital terrain model encompassing the area covered by the image.

The geometric accuracy of the resulting orthophoto is dependent on the geometric accuracy of the input data. For the Lee County project, the input data should meet the following specifications.

3.5.2.1 Image Orientation

The interior orientation of each digital image frame will be performed by measuring camera fiducials on all frames. All eight fiducials will be measured if clearly visible in the image, but as a minimum, four corner fiducials must be measured.

The results of an affine two-dimensional coordinate transformation should yield an RMSE of less than 20 micrometers.

The image coordinates should be refined and corrections for lens distortion, earth curvature and atmospheric refraction should be applied.

3.5.2.2 Camera Orientation

The simultaneous bundle adjustment solution of aerial triangulation blocks results in the output of the adjusted values for the spatial location and the orientation angles of the camera for each photo. This data can be directly used as input for rectification of scanned images of aerial negatives, and the absolute orientation of digital models is not required.

In order to assure that any significant localized errors have not been distributed during bundle adjustment (especially in case of large blocks), it is required that following the bundle adjustment, a space resection solution be performed, separately for each image, based on the final adjusted coordinate data for all the control and pass points imaged on the photo. The results of such a solution should yield an RMSE of less than 15 micrometers.

3.5.2.3 Digital Terrain Model Data

In order to rectify an aerial image and create a digital orthophoto a DTM is required. This DTM should meet the accuracy specifications for mapping for the final scale of the orthophoto desired, which for this project is 1"=100' and 1"=1,000'.

Photogrammetrically compiled DTMs are made up of ground based aerial triangulated control, spot heights, break lines, and mass points. All have slightly different levels of height accuracy. With the creation of a mathematical surface, as is the case with a TIN model, some additional height errors may occur, especially for image areas which fall in the middle of a TIN facet.

The elevation inaccuracies contained in a DTM are transferred to the resulting digital orthophoto as positional error in the orthophoto. As orthophoto planimetry gets closer to what was the edge of the original aerial frame, the more the accuracy of rectification is dependant on the accuracy of the DTM. For wide-angle (6 inch) vertical photography, orthophoto planimetric errors may approach the DTM height errors near the edges of the aerial frame. The limiting standard error in height is 0.61 ft. for the digital topographic data being used in this project. This will not result in a

positional error in orthophoto images exceeding 0.6 ft., which is well below the specified positional accuracy under NMAS for 1 inch = 100 ft. scale. In fact, errors in elevation data up to twice this amount could be tolerated for image rectification.

3.5.2.4 Image Resampling

Resampling of the image data is an essential step in the image rectification process. Most rectification software systems offer the option to resample data by using the nearest neighbor, bilinear, cubic convolution, or other more complex algorithms. Nearest neighbor is the fastest process since it uses only an input pixel to be assigned to the output pixel value. Therefore it produces results, which are not visually pleasing as the other two methods. Bilinear interpolation uses 4 input pixels for the output pixel values; hence it is more computationally demanding than nearest neighbor and produces a better result. Cubic convolution assigns values to output pixels in the same manner as bilinear interpolation, except that 16 input pixels are used to determine the value of the output pixel value. Cubic convolution produces the best result among the three interpolation methods. The CONSULTANT on this project will use only cubic convolution.

3.5.3 Digital Orthophoto Products

A digital orthophoto is primarily designed to serve as a visual map product. While it must conform to the specified geometric accuracy standards, its image quality and aesthetically pleasing appearance are also important attributes. Some of the visual quality issues are to be considered while planning aerial photo coverage in the light of the nature of the terrain. The project area is covered with several large and small water features and sun reflections may cause serious tonal variations in some of the exposures.

The ortho-rectified images covering the project area will constitute one continuous image database for the GIS of the COUNTY. This image database will be organized in 3,000 ft. by 3,000 ft. files that correspond to the digital map sheet size. The CONSULTANT will use aerial negatives for generating ortho-rectified image data. This should result in fairly uniform tonal values within each image tile.

A visual inspection should be done of all the images for image completeness and to ensure that no gaps exist in the image area. In addition, areas of concern are imagery of inconsistent tone relative to the surrounding imagery, areas of apparently smeared or blurred imagery; some of this may be caused by spikes in the DTM, which should be fixed. In the case of large areas of image smearing, an overlapping aerial image, more closely centered over the smeared area may be rectified and mosaicked into the final tile. Adjacent tiles have to be edgematched.

The standard format or area of coverage of a digital orthophoto will be in a modular sheet layout based on Florida State Plane Coordinates (NAD83 datum). The normal orientation of data is by lines (rows) and samples (Columns).

The deliverables for this phase of the project are digital files of each 3,000 ft. by 3,000 ft. orthophoto image tile in .TIFF with a header on CDROM.

3.5.4 Orthophoto Acceptance Criteria

3.5.4.1 Geometric Acceptance Criteria

No mismatch at tile matches shall be in excess of National Map Accuracy Standards.

3.5.4.2 Radiometric Acceptance Criteria

Every reasonable effort shall be made to insure the radiometric mismatches at tile joins are minimized. However, it is recognized that a truly "seamless" image database is impossible to achieve without compromising the integrity of the data. In particular, areas that are radiometrically skewed do to large water bodies or reflective glare and are not represented by a normal histogram will not match radiometrically to the adjacent sheet. While acknowledging these limitations, the images shall preserve the clarity and detail of the original negatives to the maximum extent possible.

To achieve consistent tones on adjacent images, radiometric corrections of the orthophoto images shall be performed. The delivered images will be free of scanned lines, double exposures, out-of-focus images, mismatched imagery and inconsistencies in tone and density from one image to an adjacent image that may interfere with the interpretability of ground or that are aesthetically objectionable. The parameters outlined in Attachment A shall serve as the initial criteria for taking action to correct any deficiencies in any of the images.

3.5.4.3 Quality Assurance and Reporting

Included, as Attachment A, is a sample quality assurance report that shall be utilized for documenting both the geometric and radiometric quality of the orthophoto data. Criteria that will be used for acceptance of the imagery are outlined in this form. All quality checks shall be done at map scale.

3.6 LIDAR data collection and 2' contour generation

3.6.1 LIDAR Acquisition

The CONSULTANT will plan and execute an acquisition mission to acquire LIDAR data to cover a 120 square mile area to be defined by the COUNTY. The acquisition mission for LIDAR collection will be accomplished at an altitude of 8,000', which will yield a DEM with a post spacing of 3 meters and a vertical accuracy of 18 cm.

3.6.2 LIDAR Data Processing and Quality Control

The CONSULTANT has developed a unique method for processing LIDAR data to identify, classify, and attribute elevation points falling on vegetation, buildings, and other above-ground structures. The advantage of this approach is the creation of a DEM file that has an array of thematic elements where all points are maintained in the file and can be selectively queried by the user. The processed DEM file is, at once, both the reflective and bare-ground surfaces. The suite of applications used in LIDAR processing has the ability to manage and process large amounts of elevation point data in batch mode. The following is a step-by-step description of the vegetation classification process:

- Step 1** The technician performs a visual inspection of the data to verify that the flight lines overlap correctly, that there are no voids, and that the data covers the project area. The technician selects a series of areas in the dataset where adjacent flight lines overlap to be processed. These overlapping areas are merged, and a routine is run to identify systematic distortion.
- Step 2** Systematic distortions highlighted in step 1 are removed and the data is re-checked. Correction and adjustment can involve application of angular deflection or compensation for curvature of the ground surface that can be introduced crossing from one type of land cover to another.
- Step 3** The LIDAR data for each flight line is processed in batch mode through the classification algorithm. Points are initially classified into three categories: ground, above-ground, and

noise. This initial processing run correctly classifies 75% of all points.

- Step 4** Flight lines are merged together and the dataset is clipped to the final extents. Excess points falling in the overlap areas between flight lines can be clipped or the points can be retained depending on the client's preference.
- Step 5** The data is re-processed and points falling on structures, water, and vegetation are classified. The technician extracts the reflective and bare-ground surfaces as separate thematic layers.
- Step 6** The technician reformats the data into final format. During the re-formatting, the post spacing of the points is gridded to a regular post spacing of 3 meters. The process of reformatting will fill void areas that are created when points classified as structures and vegetation are not displayed.
- Step 7** The data is re-displayed using a proprietary viewing/editing package developed by the CONSULTANT, and colors are assigned to different ranges of elevation. The clipped datasets are re-inspected to verify the accuracy of the edge match and that there are no isolated points falling above or below the average surface.
- Step 8** The data is translated into an ARC/INFO compatible TIN. The processed LIDAR data can be clipped to a manageable tile size for ease of processing. The tile layout will be designed during project planning.

3.6.3 Conversion of LIDAR DEM Data to Topographic Mapping

The following is a detailed description of the steps required to generate contour information from the bare-ground LIDAR data. Digital files containing the contours are created using the TerraModel environment and edited using MicroStation combined with CADMAP. Following are the steps used to edit the contour files and to create the final ARC/INFO coverages. In order to maintain consistency within the county, it is recommended that the contour data be produced referenced to the Florida State Plane Coordinate System NAD83/NAVD88 as was used to produce the data for the 1998 project.

- Step 1** The bare-ground LIDAR data files are imported into the TerraModel environment. The technician sets the required project datum and projection and creates a TIN (triangulated irregular network). Using the TIN as the input, the technician creates the contours through a dialog menu that sets the contour interval and the levels in the CAD file where the different components of the topographic mapping will be assigned.

Contour data is imported into the MicroStation environment for interactive editing prior to the creation of GIS compatible data in the ARC/INFO environment.

- Step 2** In MicroStation, the contours are merged into a project-wide file using the CMMERGE routine. Global adjustments are carried out to this file to ensure that line weights, patterns, and layer assignments are consistent throughout the dataset. The editor runs the CADMAP application BATJOIN to snap contour lines together within pre-set tolerances. Endpoint processor is run on the dataset to highlight any dangling nodes. These are flagged and edited interactively. The editor will also interactively snap any lines where the gap fell below tolerance. Locations for annotation on index contours are defined using the ILTEXT and TRIMTXT commands in CADMAP. Once interactive editing is complete, the editor runs an in-house developed routine CVTL to convert arcs to line strings. Finally, complex shapes are exploded using the DROP command. The

data is copied back to the correct network location and is ready for conversion to the ARC/INFO environment.

Step 3 Contour files, spot elevation files, and annotation are translated to the appropriate ARC/INFO coverage. The translation procedures ensure that all codes fall within the range of possible domain values. Illogical coding is immediately flagged. This step applies to the translation of all topographic information.

Step 4 In an interactive session, using ARCEDIT all the associated layers are verified by an editor. Verification consists of checking spatial and attribute data. In this session, numerous topological inconsistencies are highlighted, for example, dangling arcs, missing label points, etc. Identification of missing features or features with incorrect shape can also easily be identified through use of the orthophotos that reside in the image catalog.

Step 5 The editor runs a series of proprietary AML routines to verify that the contour coverage is fully compliant with the database design. These AML routines include QC_DATAEDGE.aml and QC_ATTREGE.aml to verify edge match and attribute consistency at file boundaries. QC_DANGINT.aml displays intersections of features within a dataset, which, in the case of contours, is not permissible. This routine also checks for and identifies any terminal nodes that are not connected to any other feature.

Step 6 The final contour data is sent to the County in Arc Export format.

3.7 Deliverables

3.7.1 Deliverables by the CONSULTANT

3.7.1.1 Aerial Photography

All aerial film when the project is complete and accepted.

3.7.1.2 Aerotriangulation

Aerotriangulation Report to include:

- Narrative outlining the procedures utilized.
- A listing of all field control points thrown out of the analytical computations prior to the final run.
- A full description of any codes utilized in the computations.
- A full description of significant misfits encountered at control points and the steps taken to analyze such misfits and to rectify the discrepancies.
- An RMSE summary
- A list containing the coordinates of all control and pass point used.
- A graphic of the limits of all analytical triangulation block with all control and pass points identified with the appropriate designator.

3.7.1.3 Image Map Products

- a) Sample scan
- b) Digital files of each 3,000 ft. by 3,000 ft. orthophoto image tile in .TIFF with a header on CDROM

3.7.1.4 2 Foot Contours from LIDAR Dataset

Digital files in ARC Export format.

**ATTACHMENT A TO EXHIBIT "S/COA-A" FOR CN-02-10
AERIAL PHOTOGRAPHY AND DIGITAL MAPPING SERVICES
LEE COUNTY DIGITAL MAPPING PROJECT
DIGITAL ORTHOPHOTO
QUALITY CONTROL EVALUATION AND ACCEPTANCE CRITERIA**

The following outlines the criteria that will be used to evaluate each digital orthophoto map sheet produced. Map sheets will be "scored" in each of the various categories with a (P)ass (F)ail on 1-5 as indicated below and acceptance will be based on an average score. Also attached are copies of the "Evaluation Matrix" on which these scores will be compiled and the "Orthophoto Quality Report Form" which indicates the location of various deficiencies with the map sheet

NOTE: All evaluations will be carried out on screen at the Lee County Digital Mapping Project map scale of 1" = 100' (Ground Pixel Resolution = 0.5 Ft.).

Rating Categories

Absolute Accuracy

- P The ortho meets National Map Accuracy specifications.
- F The ortho does not meet National Map Accuracy specifications.

Edge Matching Accuracy

- P Any mismatch along adjacent map sheet edges is less than ± 2.5 Ft. (for up to 90% of any edge)
- P Any mismatch along adjacent map sheet edges is greater than ± 2.5 Ft (for up to 10% of any edge)
- F Any mismatch along adjacent map sheet edges is greater than 2.5 Ft (for more than 10% of any edge)

Lint, Misc. Blemishes, Artifacts

1. There are more than 15 per map sheet or any single blemish is greater than or equal to 100 pixels.
2. There are 10 to 14 per map sheet or any single blemish is larger than 80 pixels.
3. There are 5 to 9 per map sheet or any single blemish is larger than 70 pixels.
4. There are less than 5 per map sheet or any single blemish is larger than 60 pixels.
5. There are no visible blemishes.

NOTE: Any lint, blemishes, artifacts that are clearly visible on screen at map scale and obscure detail will be corrected by pixel edit process.

Pressure Scratches

1. There are more than 10 pressure scratches per map sheet or the greatest average width of any single scratch is greater than 6 pixels.
2. There are 5 to 10 pressure scratches per map sheet and the greatest average width is less than 6 pixels.
3. There are less than 5 pressure scratches per map sheet and the greatest average width is less than 5 pixels.
4. There are less than 5 pressure scratches per map sheet and the greatest average width is less than 4 pixels.
5. No pressure scratches are evident.

Scratches

1. There are more than 15 scratches in the image and the average scratch width (ASW) is greater than 5 pixels and the average scratch length (ASL) is greater than 50 pixels.
2. There are 10 to 15 scratches in the image with an ASW less than or equal to 5 pixels and an ASL less than 50 pixels.
3. There are 5 to 10 scratches in the image with and ASW less than or equal to 5 pixels and an ASL less than 50 pixels.
4. There are less than 5 scratches in the image with an ASW less than or equal to 5 pixels and an ASL less than 50 pixels.
5. No scratches are evident.

NOTE: Any scratches that are clearly visible on screen at map scale, and obscure detail, will be corrected by pixel edit process.

Shadows

1. There is no gray scale variance in all shadow areas.
2. There is a variance of less than 10 values of gray in all shadow areas.
3. There is enough variance in 70% of shadow areas to interpret ground features.
4. There is enough variance in 80% of shadow areas to interpret ground features.
5. There is enough variance in 90% of shadow areas to interpret ground features.

NOTE: Readings will be taken in areas greater than 10 pixels x 10 pixels in size.

Bright Areas

1. There is no gray scale variance in all bright areas.
2. There are 10 to 25 areas of high reflectivity with less than 10 values of gray in all bright areas.
3. There are 5 to 10 areas of high reflectivity with moderate to poor interpretability in the brightest areas.
4. There are less than 5 areas of high reflectivity with good to moderate interpretability in the brightest areas.
5. There are no areas of high reflectivity and there is normal detail in brightest areas.

NOTE: Readings will be taken in areas greater than 10 pixels x 10 pixels in size.

Contrast

1. The image has extreme contrast with less than 60% of the gray scale used (153 values

of gray).

2. The image uses between 60 and 70% of the gray scale (153 to 180 values of gray).
3. The image uses between 70 and 80% of the gray scale (180 to 205 values of gray).
4. The image uses between 80 and 90% of the gray scale (205 to 230 values of gray).
5. The image has excellent detail with more than 90% of the gray scale used.

NOTE: Readings will be taken in areas greater than 10 pixels x 10 pixels in size.

Mosaicking

1. There are significant radiometric seams between and within flightline. Gray scale variance at seam is 20% of the gray scale (50 values of gray).
2. There are measurable radiometric seams within or between flightlines with the variance at the seam between 15 and 20% of the gray scale (38 to 50 values of gray).
3. There are measurable radiometric seams within or between flightlines with the variance at the seam between 10 and 15% of the gray scale (26 to 38 values of gray).
4. There are measurable radiometric seams within or between flightlines with the variance at the seam between 5 and 10% of the gray scale (13 to 26 values of gray).
5. There are no measurable radiometric seams within or between flightlines.

NOTE: Evaluation of mosaicking requires review of 10 pixels on each side of the seam line.

Evaluation and Acceptance Criteria

1. Each map sheet will be evaluated and given a score of P/F or 1-5 as appropriate on the Evaluation Matrix.
2. Blemishes, mismatch, and edge match situations will be reported on the Orthophoto Quality Report Form.
3. An F in any category will cause for rejection of that map sheet.
4. In any category a score of less than 3.0 will be cause for rejection of that map sheet.
5. An average score greater than or equal to 3.0 will constitute acceptance of that map sheet.

LEE COUNTY DIGITAL MAPPING PROJECT
 3.7.1.4.1.1.1 DIGITAL ORTHOPHOTO EVALUATION MATRIX

DIGITAL ORTHOPHOTO ACCEPTANCE MODEL

Quality Issue	Rating (1 - 5)					Points	
	P/F	1	2	3	4		5
Absolute Accuracy							
Edge Matching Accuracy							
Lint, Misc. Blemishes, Artifacts							
Pressure Scratches							
Scratches							
Shadows							
Bright Areas							
Contrast							
Mosaicking							
Other							
TOTAL							
AVERAGE SCORE							
COMMENTS:							

EarthData Inspection by: _____ Date: ____

Lee County Inspection by: _____ Date: _____

*** NOTE: Shaded areas are for P/F, all other categories will be scored.**

*** NOTE: Any categories scored with a 1 will be an immediate fail.**

*** NOTE: All EarthData markings will be made in Black.
 All edits by Lee County will be made in Red.**

3.8 For Client use Only
<input type="checkbox"/> Accept <input type="checkbox"/> Reject

LEE COUNTY DIGITAL MAPPING PROJECT
DIGITAL ORTHOPHOTO QUALITY REPORT FORM

SHEET # _____

EXPOSURE #'s _____

EARTHDATA PROJECT # _____

REVIEWED BY: _____

Edge Match Alignment
 P F P F

Edge Match

P

F

Alignment

P

F

Edge Match

P

F

Alignment

P

F

Edge Match

P F

Alignment

P F

This grid represents 750 N x 750 E foot cells. Evaluation and revisions will be completed on the screen at map scale. Draw arrows from the words "Edgемatch" and "Alignment" to locate problems along each side. Draw lines on the grid to show approximate location and extent of scratches. Draw circles to approximate the location of dirt, lint, or other defects. Total scoring for the sheet will be completed on the back of this form.

COMPENSATION AND METHOD OF PAYMENT

for

AERIAL PHOTOGRAPHY AND DIGITAL MAPPING SERVICES

Section 1. BASIC SERVICES/TASK(S)

The COUNTY shall compensate the CONSULTANT for providing and performing the Task(s) set forth and enumerated in EXHIBIT "A", entitled "SCOPE OF PROFESSIONAL SERVICES", as follows:

NOTE: A Lump Sum (L.S.) or Not-to-Exceed (N.T.E.) amount of compensation to be paid the CONSULTANT should be established and set forth below for each task or sub-task described and authorized in Exhibit "A". In accordance with Agreement Article 5.02(2) "Method of Payment", tasks to be paid on a Work-in-Progress payment basis should be identified (WIPP).

Task Number	Task Title	Amount of Compensation	Indicate Basis of Compensation LS or NTE	If Applicable Indicate (W.I.P.P.)
2.1 Task 1	Aerial Photography of "Project Area"	\$149,634.27	LS	W.I.P.P.
2.2 Task 2	Aerial Photography of "Water Area"	\$15,621.75	LS	W.I.P.P.
2.3 Task 3	Ground Control	\$35,190.00	LS	W.I.P.P.
2.4 Task 4	Fully Analytical Aerial Triangulation of the "Project Area"	\$104,067.07	LS	W.I.P.P.
2.5 Task 5	Fully Analytical Aerial Triangulation of the "Water Area"	\$5,563.41	LS	W.I.P.P.
2.6 Task 6	Digital Orthophotography for the "Project Area"	\$397,175.20	LS	W.I.P.P.
2.7 Task 7	Digital Orthophotography for the "Water Area"	\$32,364.75	LS	W.I.P.P.
2.8 Task 8	Pilot Project Area	\$8,000.00	LS	W.I.P.P.
2.9 Task 9	LIDAR Of 120 Square Mile Area To Produce 2 Foot Contours	\$91,657.00	LS	W.I.P.P.
2.10 Task 10	Base Map Update	Task and fees to be negotiated at a later date		
TOTAL		\$839,273.45		

(Unless list is continued on next page)

Section 2. ADDITIONAL SERVICES

The COUNTY shall compensate the CONSULTANT for such ADDITIONAL SERVICES as are requested and authorized in writing for such amounts or on such a basis as may be mutually agreed to in writing by both parties to this Agreement. The basis and/or amount of compensation to be paid the CONSULTANT for ADDITIONAL SERVICES requested and authorized in writing by the COUNTY shall be as set forth in Article 3.11 of this Agreement.

Should it be mutually agreed to base compensation for ADDITIONAL SERVICES on an hourly rate charge basis for each involved professional and technical employee's wage rate classification, the applicable hourly rates to be charged are as set forth and contained in ATTACHMENT NO. 1 hereto dated _____, entitled "CONSULTANT'S PERSONNEL HOURLY RATE SCHEDULE".

Section 3. REIMBURSABLE EXPENSES AND COSTS

When the CONSULTANT'S compensation and method of payment is based on an hourly rate for professional and/or technical personnel, the CONSULTANT shall, in addition to such hourly rates as are set forth in Attachment No. 1 hereto, be entitled to reimbursement of out-of-pocket, non-personnel expenses and costs as set forth in ATTACHMENT NO. 2 hereto dated _____, entitled "NON-PERSONNEL REIMBURSABLE EXPENSES AND COSTS".

CONSULTANT'S PERSONNEL HOURLY RATE SCHEDULE ***

for

AERIAL PHOTOGRAPHY AND DIGITAL MAPPING SERVICES

CONSULTANT OR SUB-CONSULTANT NAME

(A separate Attachment No. 1 should be included for each Sub-Consultant)

(1) Project Position or Classification (Function to be Performed)	(2) Current Direct* Payroll Average Hourly Rate	(3) Multiplier**	(4) Hourly Rate To Be Charged (Column 2x3)
Project Manager	34.34	2.66	91.34
Chief Photogrammetrist	28.35	2.66	75.41
Photogrammetrist	20.61	2.66	54.82
Softcopy Technician	19.54	2.66	51.98
Computer Operator	33.60	2.66	89.38
Airborne GPS Ground Engineer	30.29	2.66	80.57
Aerial Photo Pilot	27.71	2.66	73.71
Aerial Photographer	26.16	2.66	69.58
Cartographic/GIS Technician	15.83	2.66	42.11
Photo Interpreter	24.23	2.66	64.45

*NOTE: Direct Payroll hourly rate means the actual gross hourly wage paid.

**NOTE: Indicate applicable multiplier for indirect personnel costs, general administrative and overhead costs, and profit.

***NOTE: A separate personnel hourly rate schedule should also be attached for each Sub-Consultant listed in Exhibit "D".

*Note that these direct labor rates and overhead on direct labor and G/A combined (155.0%) are based on audited Government rates used on EarthData's Indefinite Delivery Contract, DACW65-00-R-0038 for the US Army Corp of Engineers, Norfolk District and Indefinite Delivery Contract DACW-43-96-D-0525 for the US Army Corps of Engineers, St. Louis District. For confirmation of rates, please feel free to contact Mr. Tom Szelest, Norfolk District Contracting Officer, at 757-441-7700 and Mr. Dennis Morgan, St. Louis District Contracting Officer, at 314-331-8373. Included with the combined overhead + G/A is the standard profit rate of 12.0% used on most Federal contracts.

ITEM	BASIS OF CHARGE
Aircraft with crew per mile	\$4.06 + 12%
Increases in altitude (each):	
8,000' – 11,000'	\$293.58 + 12%
11,001' – 17,900'	\$1,100.94 + 12%
17,901' – and above	\$1,688.09 + 12%
Altitude changes, same mission/each	\$146.79 + 12%
Flight lines, greater than 1/line/mile	\$7.39 + 12%
Clearance/mission/each	\$110.11 + 12%
Black and white film and processing, per exposure	\$3.20 + 12%
Color film and processing per exposure	\$8.69 + 12%
Color infrared film and processing per exposure	\$10.63 + 12%
Black and white contact prints, each	\$4.15 + 12%
Color contact prints, each	\$6.05 + 12%
Color infrared contact prints, each	\$8.31 + 12%
Black and white diapositives, each	\$9.49 + 12%
Color diapositives, each	\$11.87 + 12%
Color infrared diapositives, each	\$17.80 + 12%
Black and white enlargements, per sq ft	\$9.23 + 12%
Color enlargements, per sq ft	\$13.87 + 12%
Color infrared enlargements, per sq ft	\$17.43 + 12%
CADD Workstation, per hour	\$25.62 + 12%
BC2 Analytical Plotting System, per hour	\$38.62 + 12%
SCAI (High Resolution) Scanner Workstation	\$68.25 + 12%
Digital Photogrammetric Workstation, per hour	\$65.10 + 12%
HP LaserJet Plotter, per hour	\$41.86 + 12%
Mylar, per linear foot	\$1.71 + 12%
Glossy Paper, per linear foot	\$1.77 + 12%
Bond Paper, per linear foot	\$0.30 + 12%
Magnetic Tape, 8mm, each	\$21.13 + 12%
CD ROM, each	\$2.25 + 12%

EXHIBIT C

Date: 05/17/02

TIME AND SCHEDULE OF PERFORMANCE

for

AERIAL PHOTOGRAPHY AND DIGITAL MAPPING SERVICES

This EXHIBIT C establishes times of completion for the various phases and tasks required to provide and perform the services and work set forth in EXHIBIT "A" of this Agreement. The times and schedule of performance set forth hereinafter is established pursuant to Article 6.00 of this Agreement.

Phase and/or Task Reference As Enumerated in EXHIBIT "A"	NAME OR TITLE OF Phase and/Task	Number Of Calendar Days For Completion Of Each Phase And/or Task	Cumulative Number Of Calendar Days For Completion From Date of Notice to Proceed
2.1 Task 1	Aerial Photography of "Project Area"	30 days – weather permitting	45 days – weather permitting
2.2 Task 2	Aerial Photography of "Water Area"	10 days – weather permitting * Note: this may not be able to be flown until the fall of 2002	25 days – weather permitting
2.3 Task 3	Ground Control	15 days	15 days
2.4 Task 4	Fully Analytical Aerial Triangulation of the "Project Area"	90 days from completion of Task 1	135 days
2.5 Task 5	Fully Analytical Aerial Triangulation of the "Water Area"	30 days from completion of Task 2	55 days
2.6 Task 6	Digital Orthophotography for the "Project Area"	135 days from completion of Task 4	270 days
2.7 Task 7	Digital Orthophotography for the "Water Area"	60 days from completion of Task 5	115 days
2.8 Task 8	Pilot Project Area	60 days from completion of Task 1	110 days
2.9 Task 9	LIDAR Of 340 Square Mile Area To Produce 2 Foot Contours	90 days from completion of LIDAR acquisition	
2.10 Task 10	Base Map Update	Task and schedule will be negotiated at a later date	

CONSULTANT'S ASSOCIATED SUB-CONSULTANT(S) AND SUBCONTRACTOR(S)

for

AERIAL PHOTOGRAPHY AND DIGITAL MAPPING SERVICES

CONSULTANT has identified the following sub-Consultant(s) and/or SubContractor(s) which may be engaged to assist the CONSULTANT in providing and performing services and work on this Project:

(If none, enter the word "none" in the space below.)

Service and/or Work to be Provided or Performed	Name and Address of Individual or Firm	Disadvantaged, Minority or Women Business Enterprise. (If Yes, Indicate Type)			Sub-Consultant Services are Exempted from Prime Consultant's Insurance Coverage	
		Yes	No	Type	Yes	No
Ground Control	Foresight Surveyors 14561-B 58 th Street Clearwater, FL 33760	X			X	

PROJECT GUIDELINES AND CRITERIA

for

AERIAL PHOTOGRAPHY AND DIGITAL MAPPING SERVICES

The COUNTY has established the following Guidelines, Criteria, Goals, Objectives, Constraints, Schedule, Budget and/or Requirements, which shall serve as a guide to the CONSULTANT in performing the professional services and work to be provided pursuant to this Agreement:

(If none, enter the word "none" in the space below)

Item No. 1

None

DATE: 05/17/02

TRUTH IN NEGOTIATION CERTIFICATE

This Certificate is executed and given by the undersigned as a condition precedent to entering into a Professional Services Agreement with the Lee County Board of County Commissioners for the project known as: Aerial Photography and Digital Mapping Services

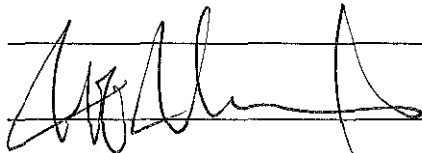
Before me, the undersigned authority personally appeared, who having personal knowledge as to the facts and statements contained herein after being duly sworn, deposes and states under oath that:

1. This Certificate shall be attached to and constitute an integral part of the above said Professional Services Agreement as provided in Article 3.11.
2. The undersigned hereby certifies that the wage rates and other factual unit costs supporting the compensation on which this Professional Services Agreement is established are accurate, complete, and current on the date set forth here-in-above.
3. The truth of statements made herein may be relied upon by the County and the undersigned is fully advised of the legal effect and obligations imposed upon him by the execution of this instrument under oath.

Executed on behalf of the Party to the Professional Services Agreement referred to as the CONSULTANT, doing business as:

EarthData International of Maryland, LLC.

BY:



TITLE: Jeff Leonard, President and General Manager

The foregoing instrument was signed and acknowledged before me this 17 day of May, 2002, by Jeff Leonard who has produced MD Drivers License L-563-398-373-858 as identification.
(Print or Type Name) (Type of Identification and Number)

Karen S Crawford
Notary Public Signature

Karen S Crawford
Printed Name of Notary Public

10/21/02
Notary Commission Number/Expiration

CMO:
00/00/00


ACORD CERTIFICATE OF LIABILITY INSURANCE		DATE (MM/DD/YY) 4/12/02
PRODUCER Riggs, Counselman, Michaels & Downes, Inc. 555 Fairmount Avenue Baltimore, MD 21286	410-339-7263	THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.
INSURED EarthData Intl of MD, LLC 45 West Watkins Mill Road Gaithersburg MD 20878	INSURERS AFFORDING COVERAGE	
		INSURER A: Federal Insurance Company INSURER B: INSURER C: INSURER D: INSURER E:

COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSTR. NO.	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS
A	GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY CLAIMS MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PER OCC. <input type="checkbox"/> LOC	35294698	3/01/02	3/01/03	EACH OCCURRENCE \$ 1000000 FIRE DAMAGE (Any one fire) \$ 1000000 MED EXP (Any one person) \$ 10000 PERSONAL & ADJ INJURY \$ 1000000 GENERAL AGGREGATE \$ 2000000 PRODUCTS - COMPAD/ AGG \$ 2000000
A	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO ALL OWNED AUTOS SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS GARAGE LIABILITY <input type="checkbox"/> ANY AUTO	73198692	3/01/02	3/01/03	COMBINED SINGLE LIMIT (Per accident) \$ 1000000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ AUTO ONLY - EA ACCIDENT \$ OTHER THAN AUTO ONLY: EA ACC \$ AGG \$
A	EXCESS LIABILITY <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE DEDUCTIBLE <input checked="" type="checkbox"/> RETENTION \$ 0	79704221	3/01/02	3/01/03	EACH OCCURRENCE \$ 2000000 AGGREGATE \$ 2000000
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY	71638642	3/01/02	3/01/03	WC STATUTORY LIMITS <input type="checkbox"/> OTH. LEB <input type="checkbox"/> E.L. EACH ACCIDENT \$ 1000000 E.L. DISEASE - FA EMPLOYEE \$ 1000000 E.L. DISEASE - POLICY LIMIT \$ 1000000
A	OTHER Computer Software Services F&O	35294698	3/01/02	3/01/03	\$2,000,000 Ea.Clm \$2,000,000 Agg. (\$50,000 Ded.)

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/EXCLUSIONS ADDED BY ENDORSEMENT/SPECIAL PROVISIONS
 SEE ATTACHED

CERTIFICATE HOLDER LEE COUNTY BOARD OF COUNTY COMMISSIONERS/ATT: RISK MGMT P.O. BOX 398 FORT MYERS, FL 33902-0398	ADDITIONAL INSURED, INSURER LETTER	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL <u>30</u> DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES. AUTHORIZED REPRESENTATIVE 
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IMPORTANT

If the certificate holder is an **ADDITIONAL INSURED**, the policy(ies) must be endorsed. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

If **SUBROGATION IS WAIVED**, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

DISCLAIMER

The Certificate of Insurance on the reverse side of this form does not constitute a contract between the issuing insurer(s), authorized representative or producer, and the certificate holder, nor does it affirmatively or negatively amend, extend or alter the coverage afforded by the policies listed thereon.

C E R T I F I C A T E A T T A C H M E N T

Riggs, Counselman, Michaels & Downes, Inc.
555 Fairmount Avenue
Baltimore, MD 21286

Named Insured: EarthData International of MD, LLC
45 West Watkins Mill Road
Gaithersburg, MD 20878

Certificate Holder: Lee County, Florida
Department of Public Works

Issuing Carrier: Associated Aviation Underwriters

Aviation Liability GW605625 12/4/01 12/4/02 \$10,000,000 Limit

Description of Operations/Locations/Vehicles/Restrictions/Special
Items:

THE CANCELLATION PROVISION OF THIS CERTIFICATE OF INSURANCE IS
MODIFIED AS FOLLOWS: SHOULD ANY OF THE DESCRIBED POLICIES BE
CANCELED BEFORE THE EXPIRATION DATE THEREOF, FOR REASONS OF
NON-PAYMENT OF PREMIUM, THE NUMBER OF DAYS NOTICE IS AMENDED TO
TEN (10).

IT IS AGREED THAT THE CERTIFICATE HOLDER IS INCLUDED AS AN
ADDITIONAL INSURED AS RESPECTS GENERAL LIABILITY COVERAGE, BUT
SOLELY IN REGARDS TO LIABILITY ARISING FROM THE NAMED INSURED'S
OPERATIONS AND/OR WORK BEING PERFORMED BY THE NAMED INSURED
IN CONNECTION WITH THE PROJECT DESCRIBED HEREIN, A.T.I.M.A.:

RE: AERIAL PHOTOGRAPHY AND MAPPING SERVICES - SOLICITATION
#CN-98-04 AND OTHER SERVICES OR WORK PROVIDED OR PERFORMED BY
THE NAMED INSURED FOR ANY AND ALL PROJECTS UNDERTAKEN FOR LEE COUNTY
PURSUANT TO ONE OR MORE WRITTEN PROFESSIONAL SERVICE AGREEMENTS,
OR WRITTEN SUPPLEMENTAL ORDERS THERETO.

THE GENERAL LIABILITY GENERAL AGGREGATE APPLIES PER PROJECT/PER
LOCATION.

202795LEE
RCM&D
555 FAIRMOUNT AVENUE
BALTIMORE, MD 21286

Date: 05/17/02

AMENDMENT TO ARTICLES

for

AERIAL PHOTOGRAPHY AND DIGITAL MAPPING SERVICES

For amending (i.e., changing, deleting from or adding to) the articles.

(NOTE: Each Article to be amended should be set forth and described in such a manner as to clearly indicate what the proposed changes, deletions or additions are with respect to the present Article provisions, and should set forth the wording of the Article resulting from the Amendment. The following identification system should be followed: Indicate additional (new) words or phrases by inserting the words in the text and then underline, (i.e., Months) and indicated words or phrases in the text to be deleted by striking over (i.e. weeks).

THE PROVISIONS HEREBY SUPERCEDE ANY PROVISIONS TO THE CONTRARY CONTAINED ELSEWHERE IN THE ARTICLES OR EXHIBITS.

AMENDMENT NO.

ARTICLE No. _____ is hereby amended as follows: