

**AGREEMENT BETWEEN
LAKE COUNTY, FLORIDA AND
DRMP, INC.**

FOR DESIGN OF PHASE ONE OF CITRUS GROVE ROAD

RSQ #15-0040

This is an Agreement between Lake County, Florida, a political subdivision of the State of Florida, herein referred to as the COUNTY, by and through its Board of County Commissioners, and DRMP, Inc., a Florida for profit corporation, its successors and assigns, herein referred to as the CONSULTANT.

WHEREAS, the COUNTY has publicly submitted a Request for Statement of Qualifications (RSQ), #15-0040, for procurement of services under the Consultants' Competitive Negotiation Act, section 287.055, Florida Statutes, following the guidelines set forth under such Act; and

WHEREAS, RSQ #15-0040 was issued and Procurement Services did seek proposals from firms qualified to provide the design of Phase One of Citrus Grove Road located in the City of Minneola, Lake County, Florida, (herein referred to as the PROJECT); and

WHEREAS, the CONSULTANT desires to perform such services subject to the terms of this Agreement; and

WHEREAS, the COUNTY did hold a negotiation meeting in which the COUNTY and the CONSULTANT did reach mutual agreement as to the terms and conditions of such services;

NOW, THEREFORE, IN CONSIDERATION of the mutual terms, understandings, conditions, premises, covenants and payment hereinafter set forth, and intending to be legally bound, the parties hereby agree as follows:

Article 1. Recitals

1.1 The foregoing recitals are true and correct and incorporated herein by reference.

Article 2. Purpose

2.1 The purpose of this Agreement is for the CONSULTANT to provide the design of Phase One of Citrus Grove Road located in the City of Minneola, Lake County, Florida.

Article 3. Scope of Professional Services

3.1 On the terms and conditions set forth in this Agreement, COUNTY hereby engages CONSULTANT to perform the services set forth herein in **Attachment A**, known as the Scope of Services, attached hereto and incorporated herein by reference. The CONSULTANT shall be governed by the Fee Schedule set forth in **Attachment B**, attached hereto and incorporated herein by reference, unless such schedule is amended by mutual, written agreement of each party's project manager. The CONSULTANT hereby agrees that time is of the essence in completing this Project and shall complete all work within thirty-six (36) months of the date the Notice to Proceed is issued.

3.2 This Agreement shall be effective beginning on the date the last party hereto executes it and shall continue for thirty-six (36) months from the issuance of the Notice to Proceed. The COUNTY reserves

the sole right to extend this Agreement for an additional twelve (12) month period at the same pricing structure, scope of services and terms and conditions.

3.3 The CONSULTANT shall coordinate and work with any other consultants retained by the COUNTY. The CONSULTANT acknowledges that nothing herein shall be deemed to preclude the COUNTY from retaining the services of other persons or entities undertaking the same or similar services as those undertaken by the CONSULTANT or from independently developing or acquiring materials or programs that are similar to, or competitive with, the services provided under this Agreement.

3.4 The CONSULTANT shall not enter upon private property for any purpose without obtaining permission and shall be responsible for the preservation of all public and private property, along and adjacent to the work site and shall use every precaution necessary to prevent damage or injury thereto. When or where any direct or indirect damage or injury is done to public or private property by or on account of the work hereunder, or in consequence of the non-execution thereof on the part of the CONSULTANT, the CONSULTANT shall restore, at its own expense, such property to a condition similar or equal to that existing before such damage or injury was done. If the CONSULTANT fails to restore such damaged or injured property, the COUNTY may make such repairs as are necessary and deduct the cost of such repairs from the contract balance.

Article 4. Payment

4.1 Payment shall be made in accordance with the Fee Estimate as attached in **Attachment B**. In no event shall the contract amount exceed \$541,420.21, unless a change order has been executed in accordance with the COUNTY's Purchasing Policy and Procedures. A copy of the COUNTY's Purchasing Policy and Procedures shall be made available to the CONSULTANT upon request.

4.2 Invoices shall be submitted in duplicate to the Department of Procurement Services, P.O. Box 7800, Tavares, Florida 32778. Each invoice shall contain the RSQ number and a detailed description of services and fees.

4.3 The COUNTY shall make payment on all invoices in accordance with the Florida Prompt Payment Act, sections 218.70 through 218.79, Florida Statutes.

4.4 The CONSULTANT shall submit invoices at the end of each month documenting the percent of completion of each task and requesting payment based upon such percent completion.

4.5 Other than the common expenses, travel expenses, administrative and technical support expenses and computer expenses, if any, as set forth in **Attachment B**, attached hereto and incorporated herein by reference. The CONSULTANT shall not be entitled to payment for any expenses, fees, or other costs it may incur at any time and in any connection with its performance hereunder.

4.6 In the event a specific project is to be funded by federal, state, or other local agency monies, the CONSULTANT hereby agrees to comply with all requirements of the funding entity applicable to the use of the monies, including receiving no payment until all required forms are completed and submitted. A copy of the requirements shall be supplied to the CONSULTANT by the COUNTY.

Article 5. County Responsibilities

5.1 The COUNTY shall promptly review the deliverables and other materials submitted by the CONSULTANT and provide direction to the CONSULTANT as needed. COUNTY shall designate one County staff member to act as COUNTY'S Project Administrator and/or Spokesperson.

5.2 The COUNTY shall reimburse CONSULTANT, in accordance with the Fee Schedule listed in Article 4 above for required services timely submitted and approved and accepted by COUNTY in accordance with the terms of this Agreement.

5.3 The COUNTY will provide to the CONSULTANT all necessary and available GIS data, data developed and/or within the possession of the COUNTY, and any other data the COUNTY possesses that would be useful to the CONSULTANT in the completion of the required services.

Article 6. Special Terms and Conditions

6.1 Qualifications. All firms or individuals will be registered with the State of Florida and have obtained at least the minimum thresholds of education and professional experience required by the statutes to perform the work required under this Agreement.

6.2 Termination. This Agreement may be terminated by the COUNTY upon thirty (30) days advance written notice to the other party; but if any work or service/Task hereunder is in progress but not completed as of the date of termination, then this Agreement may be extended upon written approval of the COUNTY until said work or service(s)/Task(s) is completed and accepted.

A. Termination for Convenience. In the event this Agreement is terminated or cancelled upon the request and for the convenience of the COUNTY with the required 30 day advance written notice, the COUNTY shall reimburse the CONSULTANT for actual work satisfactorily completed.

B. Termination for Cause. Termination by COUNTY for cause, default, or negligence on the part of the CONSULTANT shall be excluded from the foregoing provision. Termination costs, if any, shall not apply. The 30-day advance notice requirement is waived in the event of termination for cause.

C. Termination Due to Unavailability of Funds in Succeeding Fiscal Years. When funds are not appropriated or otherwise made available to support continuation of performance in a subsequent fiscal year, this Agreement shall be canceled and the CONSULTANT shall be reimbursed for the reasonable value of any non-recurring costs incurred but not amortized in the price of the supplies or services/Tasks delivered under this Agreement.

6.3 Subletting of Contract. This Agreement shall not be sublet except with the written consent of the COUNTY's Procurement Services Director. No such consent shall be construed as making the COUNTY a party to the subcontract or subjecting the COUNTY to liability of any kind to any subcontractor. No subcontract shall under any circumstances relieve the CONSULTANT of liability and obligations under this Agreement and all transactions with the COUNTY must be through the CONSULTANT.

6.4 Indemnity. The CONSULTANT agrees for good and valuable consideration in the amount of ten dollars (\$10.00) to indemnify and hold harmless the COUNTY, and its officers and employees, from liabilities, damages, losses, and costs, including, but not limited to, reasonable attorneys' fees, to the extent caused by the negligence, recklessness, or intentionally wrongful conduct of the CONSULTANT and other persons employed or utilized by the professional in the performance of the contract.

6.5 Independent Contractor. The CONSULTANT agrees that it shall be acting as an independent contractor and shall not be considered or deemed to be an agent, employee, joint venturer, or partner of the COUNTY. The CONSULTANT shall have no authority to contract for or bind the COUNTY in any manner and shall not represent itself as an agent of the COUNTY or as otherwise authorized to act for or on behalf of the COUNTY. Additionally, the CONSULTANT warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for the CONSULTANT to solicit or secure this Agreement and that it has not paid or agreed to pay any person, company,

corporation, individual, or firm other than a bona fide employee working solely for the CONSULTANT any fee, commission, percentage, gift, or other consideration contingent upon or resulting from the award or making of this Agreement.

6.6 Ownership of Deliverables. The CONSULTANT agrees all Tasks and/or deliverables under this Agreement, and other data generated or developed by the CONSULTANT under this Agreement or furnished by the COUNTY to the CONSULTANT shall be and remain the property of the COUNTY, including any applicable copyrights. The CONSULTANT shall perform any acts that may be deemed necessary or desirable by the COUNTY to evidence more fully transfer of ownership of all Tasks and/or deliverables to the COUNTY. Additionally, the CONSULTANT hereby represents and warrants that it has full right and authority to perform its obligations specified in this Agreement.

6.7 Return of Materials. Upon the request of the COUNTY, but in any event upon termination of this Agreement, the CONSULTANT shall surrender to the COUNTY all memoranda, notes, records, drawings, manuals, computer software, and other documents or materials pertaining to the services hereunder, that were furnished to the CONSULTANT by the COUNTY pursuant to this Agreement.

6.8 NO CLAIM FOR DAMAGES OR ANY CLAIM OTHER THAN FOR AN EXTENSION OF TIME SHALL BE MADE OR ASSERTED AGAINST THE COUNTY BY REASON OF ANY DELAYS. No interruption, interference, inefficiency, suspension or delay in the commencement or progress of the work shall relieve the CONSULTANT of his duty to perform or give rise to any right to damages or additional compensation from the COUNTY. The CONSULTANT expressly acknowledges and agrees that the CONSULTANT shall receive no damages for delay. However, this provision shall not preclude recovery or damages by the CONSULTANT for hindrances or delays due solely to fraud, bad faith or active interference on the part of the COUNTY. Otherwise, CONSULTANT shall be entitled to extensions of the Contract Time as the sole and exclusive remedy for such resulting delay, in accordance with and to the extent specifically provided above. Should the CONSULTANT be obstructed or delayed in the prosecution of or completion of the work as a result of unforeseeable causes beyond the control of the CONSULTANT, the CONSULTANT shall notify the COUNTY in writing within two (2) regular work days after the commencement of such delay, stating the cause or causes thereof, or be deemed to have waived any right which the CONSULTANT may have had to request a time extension.

6.9 Retaining Other Consultants. Nothing herein shall be deemed to preclude the COUNTY from retaining the services of other persons or entities undertaking the same or similar services as those undertaken by the CONSULTANT or from independently developing or acquiring materials or programs that are similar to, or competitive with, the services provided under this Agreement.

6.10 Accuracy. The CONSULTANT is responsible for the professional quality, technical accuracy, timely completion and coordination of all the services furnished hereunder. The CONSULTANT shall, without additional compensation, correct or revise any errors, omissions or other deficiencies in its designs, drawings, reports or other services.

6.11 Codes and Regulations. All work completed under this Agreement shall conform to all applicable federal, state and local statutes, codes, regulations and ordinances.

6.12 Truth in Negotiation Certificate. For all lump-sum or cost-plus fixed fee contracts exceeding One Hundred Ninety Five Thousand dollars (\$195,000.00), the firm awarded the contract must execute a truth in negotiation certificate stating that the wage rates and other factual unit costs are accurate, complete and current, at the time of contracting. Any contract requiring this certificate shall contain a provision that the original contract price and any additions shall be adjusted to exclude any significant sums by which the COUNTY determines the contract price was increased due to inaccurate, incomplete, or non-current wage rates and other factual unit costs. All such contract adjustments shall be made within one (1) year

following the end of the contract. By executing this Agreement, the CONSULTANT has executed this certificate.

6.13 Public Entity Crimes. A person or affiliate who has been placed on the convicted vendor list following a conviction of a public entity crime may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity in excess of the threshold amount provided in Florida Statutes, section 287.017 for Category Two for a period of thirty-six (36) months from the date of being placed on the convicted vendor list.

6.14 Prohibition Against Contingent Fees. The CONSULTANT warrants that they have not employed or retained any company or person, other than a bona fide employee working solely for the CONSULTANT, to solicit or secure this Agreement, and that they have not paid or agreed to pay any person, company, corporation, individual, or firm, other than a bona fide employee working solely for the CONSULTANT any fee, commission, percentage, gift or other consideration contingent upon or resulting from the award or making of this Agreement.

6.15 Right to Audit. The County reserves the right to require the CONSULTANT to submit to an audit by any auditor of the COUNTY'S choosing. The CONSULTANT shall provide access to all of its records, which relate directly or indirectly to this Agreement at its place of business during regular business hours. The CONSULTANT shall retain all records pertaining to this Agreement and upon request make them available to the COUNTY for three (3) years following expiration of the Agreement. The CONSULTANT agrees to provide such assistance as may be necessary to facilitate the review or audit by the COUNTY to ensure compliance with applicable accounting and financial standards.

6.16 Public Records/Copyrights.

A. All electronic files, audio and/or video recordings, and all papers pertaining to any activity performed by the CONSULTANT for or on behalf of the COUNTY shall be the property of the COUNTY and will be turned over to the COUNTY upon request. In accordance with Chapter 119, Florida Statutes, each file and all papers pertaining to any activities performed for or on behalf of the COUNTY are public records available for inspection by any person even if the file or paper resides in the CONSULTANT's office or facility. The CONSULTANT shall maintain the files and papers for not less than five (5) complete calendar years after the Project has been completed or terminated, or in accordance with any grant requirements, whichever is longer. Prior to the close out of this Agreement, the CONSULTANT shall appoint a records custodian to handle any records request and provide the custodian's name and telephone number(s) to the Contracting Officer.

B. Any copyright derived from this Agreement shall belong to the author. The author and the CONSULTANT shall expressly assign to the COUNTY nonexclusive, royalty free rights to use any and all information provided by the CONSULTANT in any deliverable and/or report for the COUNTY's use which may include publishing in the COUNTY documents and distribution as the COUNTY deems to be in the COUNTY's best interests. If anything included in any deliverable limits the rights of the COUNTY to use the information, the deliverable shall be considered defective and not acceptable and the CONSULTANT will not be eligible for any compensation.

C. Pursuant to Section 119.0701, Florida Statutes, the CONSULTANT shall comply with the Florida Public Records' laws, and shall:

1. Keep and maintain public records required by the COUNTY to perform the services identified herein.

2. Upon request from the COUNTY's custodian of public records, provide the COUNTY with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided for by law.

3. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the CONSULTANT does not transfer the records to COUNTY.

4. Upon completion of the contract, transfer, at no cost, to the COUNTY all public records in possession of the CONSULTANT or keep and maintain public records required by the COUNTY to perform the service. If the CONSULTANT transfers all public records to the COUNTY upon completion of the contract, the CONSULTANT shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the CONSULTANT keeps and maintains public records upon completion of the contract, the CONSULTANT shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the COUNTY, upon request from the COUNTY's custodian of public records, in a format that is compatible with the information technology systems of the COUNTY.

IF THE CONSULTANT HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONSULTANT'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT LAKE COUNTY PROCUREMENT SERVICES, 352-343-9839, 315 W. MAIN STREET, TAVARES, FLORIDA 32778, sdugan@lakecountyfl.gov.

6.17 Insurance. The CONSULTANT shall provide and maintain at all times during the term of this Agreement, without cost or expense to the COUNTY, policies of insurance, with a company or companies authorized to do business in the State of Florida, and which are acceptable to the COUNTY, insuring CONSULTANT against any and all claims, demands or causes of action whatsoever, for injuries received or damage to property relating to the performance of duties, services and/or obligations of the CONSULTANT under the terms and provisions of this Agreement. The CONSULTANT is responsible for timely provision of certificate(s) of insurance to the COUNTY at the certificate holder address evidencing conformance with the requirements under this Agreement at all times throughout the term of the Agreement.

Such policies of insurance, and confirming certificates of insurance, shall insure the CONSULTANT in accordance with the following minimum limits:

General Liability insurance on forms no more restrictive than the latest edition of the Occurrence Form Commercial General Liability policy (CG 00 01) of the Insurance Services Office or equivalent without restrictive endorsements, with the following minimum limits and coverage:

Each Occurrence/General Aggregate	\$1,000,000/2,000,000
Products-Completed Operations	\$2,000,000
Personal & Adv. Injury	\$1,000,000
Fire Damage	\$50,000
Medical Expense	\$5,000

Contractual Liability

Included

Automobile liability insurance, including owned, non-owned, and hired autos with the following minimum limits and coverage:

Combined Single Limit	\$1,000,000
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Workers' compensation insurance based on proper reporting of classification codes and payroll amounts in accordance with Chapter 440, Florida Statutes, and/or any other applicable law requiring workers' compensation (Federal, maritime, etc). If not required by law to maintain workers compensation insurance, the CONSULTANT must provide a notarized statement that if he or she is injured; he or she will not hold the COUNTY responsible for any payment or compensation.

Employers Liability insurance with the following minimum limits and coverage:

Each Accident	\$1,000,000
Disease-Each Employee	\$1,000,000
Disease-Policy Limit	\$1,000,000

Professional liability and/or specialty insurance (medical malpractice, engineers, architect, consultant, environmental, pollution, errors and omissions, etc.) insurance as applicable, with minimum limits of \$1,000,000 and annual aggregate of \$2,000,000.

Lake County, a Political Subdivision of the State of Florida, and the Board of County Commissioners, shall be named as additional insured as their interest may appear on all applicable liability insurance policies.

The certificate(s) of insurance shall provide for a minimum of thirty (30) days prior written notice to the COUNTY of any change, cancellation, or nonrenewal of the provided insurance. It is the CONSULTANT's specific responsibility to ensure that any such notice is provided within the stated timeframe to the certificate holder.

If it is not possible for the CONSULTANT to certify compliance, on the certificate of insurance, with all of the above requirements, then the CONSULTANT is required to provide a copy of the actual policy endorsement(s) providing the required coverage and notification provisions.

Certificate(s) of insurance shall identify the applicable solicitation number in the Description of Operations section of the Certificate.

Certificate holder shall be:

LAKE COUNTY, A POLITICAL SUBDIVISION OF THE STATE OF FLORIDA,
AND THE BOARD OF COUNTY COMMISSIONERS.
P.O. BOX 7800
TAVARES, FL 32778-7800

Certificates of insurance shall evidence a waiver of subrogation in favor of the COUNTY, that coverage shall be primary and noncontributory, and that each evidenced policy includes a Cross Liability or Severability of Interests provision, with no requirement of premium payment by the COUNTY.

The CONSULTANT shall be responsible for subconsultants and their insurance. Subconsultants are to provide certificates of insurance to the CONSULTANT evidencing coverage and terms in accordance with the CONSULTANT's requirements.

All self-insured retentions shall appear on the certificate(s) and shall be subject to approval by the COUNTY. At the option of the COUNTY, the insurer shall reduce or eliminate such self-insured retentions or the CONSULTANT or subconsultant shall be required to procure a bond guaranteeing payment of losses and related claims expenses.

The COUNTY shall be exempt from, and in no way liable for, any sums of money, which may represent a deductible or self-insured retention in any insurance policy. The payment of such deductible or self-insured retention shall be the sole responsibility of the CONSULTANT and/or subconsultant providing such insurance.

Failure to obtain and maintain such insurance as set out above will be considered a breach of contract and may result in termination of this Agreement for default.

Neither approval by the COUNTY of any insurance supplied by the CONSULTANT or Subconsultant(s), nor a failure to disapprove that insurance, shall relieve the CONSULTANT or Subconsultant(s) of full responsibility for liability, damages, and accidents as set forth herein.

6.18 Federal and/or State Clauses, Terms, and Conditions.

A. Use of the Federal E-Verify System

The CONSULTANT shall utilize the U.S. Department of Homeland Security's E-Verify system in accordance with the terms governing use of the system to confirm the employment eligibility of:

1. All persons employed by the vendor during the term of the contract to perform employment duties within Lake County; and

2. All persons, including subcontractors, assigned by the vendor to perform work pursuant to the contract.

B. Employment of State Residents:

The CONSULTANT shall give preference to the employment of state residents in the performance of the work on the project if state residents have substantially equal qualifications to those of nonresidents. The term "substantially equal qualifications" refers to a situation wherein the CONSULTANT cannot make a reasonable determination that the qualifications held by one person are better than the qualifications of another person. A vendor required to employ state residents must contact the Department of Economic Opportunity to post the contractor's employment needs in the state's job bank system. However, in work involving the expenditure of federal aid funds, this section may not be enforced in such a manner as to conflict with or be contrary to federal law prescribing a labor preference to honorably discharged soldiers, sailors, or marines, or prohibiting as unlawful any other preference or discrimination among the citizens of the United States.

A copy of the grant providing funding for the work performed under this Agreement is attached and incorporated by reference herein as **Attachment D**. The CONSULTANT is responsible for all requirements assigned to it within the grant document.

C. Indemnification:

The CONSULTANT shall indemnify, defend, save and hold harmless the State of Florida, Department of Transportation and all of its officers, agents, or employees from all suits, actions, claims, demands, liability of any nature whatsoever arising out of, because of, or due to any negligent act or occurrence of omission or commission of the CONSULTANT, its officers, agents or employees.

6.19 Conflict of Interest. The CONSULTANT hereby certifies that no officer, agent, or employee of the COUNTY has any material interest, as defined in Chapter 112, Florida Statutes, either directly or indirectly in the CONSULTANT as a business entity, and that no such person shall have any such interest at any time during the term of this Agreement unless approved in writing by the COUNTY upon consultation with its attorney.

6.20 Key Personnel. The CONSULTANT agrees that each person listed or referenced in the qualifications package shall be available to perform the services described herein for the COUNTY barring illness, accident, or other unforeseeable events of a similar nature in which case the CONSULTANT must be able to promptly provide a qualified replacement. In the event the CONSULTANT desires to substitute personnel, the CONSULTANT shall propose a person with equal or higher qualifications and each replacement person is subject to prior written approval of the COUNTY. In the event the requested substitute is not satisfactory to the COUNTY and the matter cannot be resolved to the satisfaction of the COUNTY, the COUNTY reserves the right to terminate this Agreement.

Article 7. Miscellaneous Provisions

7.1 This Agreement is made under, and in all respects shall be interpreted, construed, and governed by and in accordance with, the laws of the State of Florida. Venue for any legal action resulting from this Agreement shall lie in Lake County, Florida.

7.2 Neither party may assign any rights or obligations under this Agreement to any other party unless specific written permission from the other party is obtained.

7.3 The captions utilized in this Agreement are for the purposes of identification only and do not control or affect the meaning or construction of any of the provisions hereof.

7.4 This Agreement shall be binding upon and shall inure to the benefit of each of the parties and of their respective successors and permitted assigns.

7.5 This Agreement may not be amended, released, discharged, rescinded or abandoned, except by a written instrument duly executed by each of the parties hereto.

7.6 The failure of any party hereto at any time to enforce any of the provisions of this Agreement will in no way constitute or be construed as a waiver of such provision or of any other provision hereof, nor in any way affect the validity of, or the right thereafter to enforce, each and every provision of this Agreement.

7.7 During the term of this Agreement the CONSULTANT assures the COUNTY that it is in compliance with Title VII of the 1964 Civil Rights Act, as amended, and the Florida Civil Rights Act of 1992, in that CONSULTANT does not on the grounds of race, color, national origin, religion, sex, age, disability or marital status, discriminate in any form or manner against CONSULTANT employees or applicants for employment. The CONSULTANT understands and agrees that this Agreement is conditioned upon the veracity of this statement of assurance.

7.8 The CONSULTANT shall at all times comply with all Federal, State and local laws, rules and regulations.

7.9 The invalidity or unenforceability of any particular provision of this Agreement shall not affect the other provisions hereof, and this Agreement shall be construed in all respects as if such invalid or unenforceable provisions were omitted.

7.10 Wherever provision is made in this Agreement for the giving, service or delivery of any notice, statement or other instrument, such notice shall be in writing and shall be deemed to have been duly given, served and delivered, if delivered by hand or mailed by United States registered or certified mail or sent by facsimile, addressed as follows:

If to CONSULTANT:
Kenneth R. Kniel, P.E.
941 Lake Baldwin Lane
Orlando, Florida 32814

If to COUNTY:
County Manager
Lake County Administration Bldg.
Post Office Box 7800
Tavares, Florida 32778-7800

Each party hereto may change its mailing address by giving to the other party hereto, by hand delivery, United States registered or certified mail notice of election to change such address.

Article 8. Scope of Agreement

8.1 This Agreement is intended by the parties hereto to be the final expression of their Agreement, and it constitutes the full and entire understanding between the parties with respect to the subject hereof, notwithstanding any representations, statements, or agreements to the contrary heretofore made.

8.2 This Agreement contains the following Attachments:

Attachment A	Scope of Services
Attachment B	Fee Schedules
Attachment C	Scope of Work
Attachment D	Funding Document

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Agreement between Lake County, Florida and DRMP, Inc. for Design of Phase one of Citrus Grove Road; RSQ #15-0040

IN WITNESS WHEREOF, the parties hereto have made and executed this Agreement on the respective dates under each signature: COUNTY through its Board of County Commissioners, signing by and through its Chair and by CONSULTANT through its duly authorized representative.

CONSULTANT

By: Colette Moss

Printed Name: Colette Moss, P.E.

DRMP, Inc.
Name of Company, Corp, etc.

License #: 48263

This 17th day of May, 2016.

COUNTY

Lake County, Florida

Sean M. Parks

Sean M. Parks, Chairman

This 21 day of June, 2016

ATTEST:

Neil Kelly

Neil Kelly, Clerk of the Board of County Commissioners of Lake County, Florida

Approved as to form and legality:

Melanie Marsh
Melanie Marsh, County Attorney

April 2016

EXHIBIT A

SCOPE OF SERVICES

FOR

Lake County

Citrus Grove Road

Phase 1

April 2016

1	PURPOSE	4
2	PROJECT DESCRIPTION	5
3	PROJECT COMMON and PROJECT GENERAL TASKS	13
4	ROADWAY ANALYSIS	16
5	ROADWAY PLANS	18
6A,B	DRAINAGE ANALYSIS/PLANS	19
7	UTILITIES	22
8	ENVIRONMENTAL PERMITS, COMPLIANCE AND CLEARANCES	26
9	STRUCTURES - SUMMARY AND MISCELLANEOUS TASKS AND DRAWINGS	26
10	STRUCTURES - BRIDGE DEVELOPMENT REPORT (N/A)	31
11	STRUCTURES - TEMPORARY BRIDGE (N/A)	31
12	STRUCTURES - SHORT SPAN CONCRETE BRIDGE(N/A)	31
13	STRUCTURES - MEDIUM SPAN CONCRETE BRIDGE	31
14	STRUCTURES - STRUCTURAL STEEL BRIDGE(N/A)	31
15	STRUCTURES - SEGMENTAL CONCRETE BRIDGE (N/A)	31
16	STRUCTURES - MOVABLE SPAN (N/A)	31
17	STRUCTURES - RETAINING WALL (N/A)	31
18	STRUCTURES - MISCELLANEOUS	31
19	SIGNING AND PAVEMENT MARKING ANALYSIS	32
20	SIGNING AND PAVEMENT MARKING PLANS	33
21	SIGNALIZATION ANALYSIS	33
22	SIGNALIZATION PLANS	35
23	LIGHTING ANALYSIS	36
24	LIGHTING PLANS	36

25	LANDSCAPE ARCHITECTURE ANALYSIS	36
26	LANDSCAPE ARCHITECTURE PLANS	36
27	SURVEY	36
28	PHOTOGRAMMETRY	39
29	MAPPING	39
30	GEOTECHNICAL	46
31	ARCHITECTURE DEVELOPMENT (N/A)	51
32	NOISE BARRIERS IMPACT DESIGN ASSESSMENT IN THE DESIGN PHASE(N/A)	51
33	INTELLIGENT TRANSPORTATION SYSTEMS ANALYSIS (N/A)	51
34	INTELLIGENT TRANSPORTATION SYSTEM PLANS (N/A)	51
35	PROJECT REQUIREMENTS	42
36	INVOICING LIMITS	43

SCOPE OF SERVICES FOR CONSULTING ENGINEERING SERVICES

HIGHWAY AND STRUCTURAL DESIGN

This Exhibit forms an integral part of the agreement between Lake County (hereinafter referred to as the CLIENT) and DRMP (hereinafter referred to as the CONSULTANT) relative to the transportation facility described as follows:

Description: The project entails new alignment of Citrus Grove Road from Grassy Lake Road to Hancock Road. Approximately 4500 feet in length.

1 PURPOSE

The purpose of this Exhibit is to describe the scope of work and the responsibilities of the CONSULTANT and the CLIENT in connection with the design and preparation of a complete set of construction contract plans and special provisions.

The general objective is for the CONSULTANT to prepare a set of plans to be used by the contractor to build the project, and by the CLIENT to ensure the project is built as designed and to specifications.

The Scope of Services establishes which items of work in this contract, and also which of the items of work will be the responsibility of the CONSULTANT or the CLIENT.

All plans and design documents are to be prepared with Standard English values in accordance with applicable Lake County Standards.

The CONSULTANT shall be aware that as a project is developed, certain minor modifications and/or improvements to the original recommendation may be required. The CONSULTANT is to incorporate these minor refinements into the design and will consider this effort to be an anticipated and integral part of the work. This will not be a basis for any supplemental fee request(s). The fee submitted is a lump sum not-to-exceed fee. Items listed as Allowances will be billed on a time and material basis per the approved hourly rates of the continuing service contract. Allowance work cannot begin until a Change Order is executed and issued to the CONSULTANT.

The CONSULTANT shall demonstrate good project management practices while working on this project. These include communication with the CLIENT and others as necessary, management of time and resources, and documentation. The CONSULTANT shall set up and maintain throughout the design of the project a contract file in accordance with CLIENT procedures. It shall be the CONSULTANT's responsibility to utilize the very best engineering judgment, practices, and principles possible during the prosecution of the work commissioned under this contract.

The CLIENT will provide contract administration, management services, and technical reviews of all work associated with the development and preparation of the contract plans.

April 2016

The CLIENT will provide job-specific information and/or functions as outlined in this contract.

The design will not be considered acceptable until approved by LAKE COUNTY.

2 PROJECT DESCRIPTION

The CONSULTANT shall investigate the status of the projects and become familiar with concepts and commitments (typical sections, alignments, etc.) developed from prior studies. If a Preliminary Engineering Report is available from a prior or current Project Development and Environmental (PD&E) study, the CONSULTANT shall use the approved concepts as a basis for the design unless otherwise directed by the CLIENT.

The existing Citrus Grove Road will be a new roadway alignment which will be designed to a 4 lane urban divided facility criteria. The roadway will tie into, both vertically and horizontally, to the existing Citrus Grove Road and to Hancock Road.

2.1 Roadway (Activities 3.0, 4.0, and 5.0)

Public Involvement: N/A

Joint Project Agreements: N/A

Specification Package Preparation: Based on FDOT and LAP Specifications.

Value Engineering: N/A

Plan Type: Separate Plan and Profile Sheets

Limits: *From Grassy Lake Road to North Hancock Road*

Typical Section: *The design will be developed for a 4-lane urban divided facility with two 12-foot lanes and a 4-foot bicycle lane in each direction; curb and gutter and a closed drainage system, a 22-foot median, a utility strip behind the back of curb, a 5-foot concrete sidewalk on the right side and a 12.5-foot multi-use trail on the left side.*

Pavement Design: *3 Pavement Designs; New Mainline Pavement for Citrus Grove Road; Widening for auxiliary lanes on Hancock Road; Extending Citrus Grove Road beyond North Hancock Road*

Access Management Classification: *CLASS 3 (Restrictive). Openings on Citrus Grove Road to be coordinated with LAKE COUNTY.*

Major Intersections/Interchanges: *Hancock Road*

Level of TCP Plans: Level 2

Temporary Signals: None anticipated

Temporary Lighting: None anticipated

Temporary Drainage: Anticipate drainage analysis for flow along temporary barrier wall and temporary drainage structures on MOT plan when next to existing Hancock Road

Variations/Exceptions: None anticipated

Back of Sidewalk Profiles: to be tied to the mainline profile. No Back of Sidewalk Profiles to be provided.

2.2 Drainage (Activity 6.0)

Drainage System: Closed collection system conveyance to stormwater pond. Design collection system and ponds for ultimate 4 lanes.

Ponds: Anticipate one new pond site, and possibly swales within the road right-of-way at two locations: 1) west end for segment ultimately routed to developer's pond, and 2) east end at intersection with Hancock Road.

Local Depression Impact: Analysis of local depression impacts to existing depression from construction of roadway.

Crossdrains: Anticipate two (2) cross drains.

2.3 Utilities Coordination (Activity 7.0)

Duke Energy (Transmission and Distribution), Bright House Networks, Century Link, City of Minneola Water and Sewer, Comcast Cablevision, Lake Apopka Natural Gas District, Level3 Communications, LLC, and Sumter Electric.

2.4 Permits (Activity 8)

Permits are anticipated to be required from the SJRWM.

Assume Mitigation Banking for listed species impacts.

Permit fees are included in the design fee. Mitigation fees are NOT included in the design fees.

2.5 Structures (Activities 9.0 – 18.0)

Retaining Walls: N/A

Miscellaneous: Design strain poles and associated foundations in accordance with Plan Preparation Manual (PPM), Section 29 and Structures Manual Volume 9 FDOT

Modifications to Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals (LTS-5).

2.6 Signing and Pavement Markings (Activity 19.0 & 20.0)

Signing and Pavement Marking from Hancock Road to Phase 2A .

2.7 Signals (Activity 21.0 & 22.0)

Intersections: *A new signal for Citrus Grove road at Hancock road intersection. A box span strain pole system will be designed. A design for the interconnect system (conduit and pull boxes only) for future use will be designed.*

Traffic Data Collection: *Traffic counts and projections will be provided by LAKE COUNTY.*

Traffic Studies: N/A

Count Stations: N/A

2.8 Lighting (Activity 23.0 & 24.0)

Design changes for impact to existing Turnpike lighting system for Hancock Road interchange.

2.9 Landscape Architecture (Activity 25.0 & 26.0) – N/A

2.10 Survey (Activity 27.0)

Design Survey: *Provide complete Topographic & DTM (3D) survey along the alignment of proposed Citrus Grove Road/Hancock Road for approximately 4500 feet. Survey shall be from R/W to R/W and extend to 25 feet beyond earthwork tie-in points on each side.*

Subsurface Utility: *Designate, Survey Designated subsurface utilities within the project limit as stated above.*

Right of Way Survey: *Anticipate (16) Sketches & Legal Descriptions to be prepared for proposed R/W takes, easements, agreements, etc..*

2.11 Photogrammetry (Activity 28.0): N/A

2.12 Mapping (Activity 29.0)

Control Survey Map: N/A

Right-of-Way Map: N/A

Maintenance Map: N/A

Miscellaneous Items: Prepare approximately 16 sketches and descriptions for take and easement parcels.

2.13 Geotechnical (Activity 30.0)

2.14 Architecture (Activity 31.0) N/A

2.15 Noise Barriers (Activity 32.0) N/A

2.16 Intelligent Transportation Systems (Activities 33 and 34) N/A

2.17 Project Schedule

Within ten (10) days after the Notice-To-Proceed, and prior to the CONSULTANT beginning work, the CONSULTANT shall provide a detailed project activity/event schedule for CLIENT and CONSULTANT scheduled activities required to meet the current CLIENT Production Date. The schedule shall be based upon a **14 month Schedule** with a tentative Notice-to-Proceed date of June 1, 2016. The design must be completed and approved by the COUNTY by September 1, 2017. For the purpose of scheduling, the CONSULTANT shall allow for a four week review time for each phase review and other submittals as appropriate.

The schedule shall indicate all required submittals.

All fees and price proposals are to be based on the negotiated schedule of **14 months** for final plans production. No additional costs will be incurred by the CLIENT if the project schedule is met early or if schedule is extended. The project schedule can only be extended upon approval of the COUNTY.

Periodically, throughout the life of the project, the schedule shall be reviewed and, with the approval of the CLIENT, adjusted as necessary to incorporate changes in the work concept and progress to date.

The approved schedule and schedule status report, along with progress and payout curves, shall be submitted with the monthly progress report. The schedule shall be submitted in Suretrak, Primavera, or system-compatible format as well as a PDF electronic file.

2.18 Submittals

The CONSULTANT shall furnish plans and documents as required by the CLIENT to adequately control, coordinate, and approve the plans. The CONSULTANT shall distribute phase submittals as directed by the CLIENT. The CLIENT will determine the specific number of copies required prior to each submittal.

2.19 Provisions for Work

All maps, plans and designs are to be prepared with English values in accordance with applicable current LAKE COUNTY manuals, memorandums, guidelines including but not limited to:.

General

- 29 CFR, Part 1910.1101 – Asbestos Standard for Industry, U.S. Occupational Safety and Health Administration (OSHA)
- 29 CFR, Part 1926, 1101 – Asbestos Standard for Construction, OSHA
- 40 CFR, Part 61, Subpart M - National Emission Standard for Hazardous Air Pollutants (NESHAP), Environmental Protection Agency (EPA)
- 40 CFR, Part 763, Subpart E – Asbestos-Containing Materials in Schools, EPA
- 40 CFR, Part 763, Subpart G – Asbestos Worker Protection, EPA
- Americans with Disabilities Act Accessibility Guidelines (ADAAG)
- Any special instructions from the CLIENT
- Bicycle Facilities Planning and Design Manual,
- CADD Manual
- CADD Production Criteria Handbook
- Ch. 469, F.S. – Asbestos Abatement, Florida Department of Business and Professional Regulation (DBPR)
- Ch. 62257, F.A.C. – Asbestos Program, Florida Department of Environmental Protection (DEP)
- Code of Federal Regulations
- Design Traffic Procedure
- Equivalent Single Axle Load Guidelines
- Florida Administrative Codes
- Florida Department of Business & Professional Regulations Rules
- Florida Department of Environmental Protection Rules
- Florida Department of Transportation Basis of Estimates Manual
- Florida Department of Transportation Design Standards for Design, Construction, Maintenance, and Utility Operations on the State Highway System
- Florida Department of Transportation Handbook for Preparation of Specifications Package
- Florida Department of Transportation Materials Manual
- Florida Department of Transportation Plans Preparation Manual
- Florida Department of Transportation Project Development and Environmental Manual
- Florida Department of Transportation Standard Specifications for Road and Bridge Construction
- Florida Statutes
- Florida’s Level of Service Standards and Guidelines Manual for Planning
- K-Factor Estimation Process
- Manual of Uniform Minimum Standards for Design, Construction, and Maintenance for Streets and Highways
- Model Guide Specifications – Asbestos Abatement and Management in Buildings, National Institute for Building Sciences (NIBS)

- Policy for Geometric Design of Highways and Streets
- Project Traffic Forecasting Guidelines
- Quality Assurance Guidelines
- Rule 5J-17 F.A.C., Standards of Practice for Professional Surveyors and Mappers
- Safety Standards
- Utility Accommodations Guidelines

Permits

- Chapter 373, F.S.
- Bridge Permit Application Guide, COMDT PUB P16591.3B
- Building Permit
- 425-000-005 Asbestos Management Program
- 625-020-020 Asbestos on Bridges

Drainage

- Cross Drain
- Drainage Handbooks
- Drainage Manual
- Erosion and Sediment Control
- Hydrology
- Optional Pipe Materials
- Storm Drain
- Stormwater Management Facility
- Temporary Drainage Handbook

Survey and Mapping

- All applicable Florida Statutes and Administrative Codes
- Applicable Rules, Guidelines Codes and authorities of other Municipal, County, State and Federal Agencies.
- FDOT Aerial Surveying Standards for Transportation Projects Topic 550-020-002
- FDOT Right of Way Mapping Handbook
- FDOT Surveying Procedure Topic 550-030-101
- Florida Department of Transportation Right of Way Procedures Manual
- Florida Department of Transportation Surveying Handbook
- Right of Way Mapping Procedure 550-030-015
- Lake County Surveying Standards

Traffic Operation Manuals

- AASHTO - An Information Guide for Highway Lighting
- AASHTO - Guide for Development of Bicycle Facilities

- American Disabilities Act
- Federal Highway Administration Manual on Uniform Traffic Control Devices (MUTCD)
- Federal Highway Administration Standard Highway Signs Manual
- FHWA - Roundabouts: An Informational Guide
- Florida Department of Transportation - Florida Roundabout Guide
- Florida Department of Transportation Manual on Uniform Traffic Studies (MUTS)
- Florida Department of Transportation Median Handbook
- Florida Department of Transportation Traffic Engineering Manual
- Minimum Specifications for Traffic Control Signal Devices
- National Electric Safety Code
- National Electrical Code

Structures

- AASHTO LRFD Bridge Design Specifications and Interims
- AASHTO LRFD Movable Highway Bridge Design Specifications and Interims
- AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, and Interims.
- AASHTO/-AWS-D1. 5M/D1.5: An American National Standard Bridge Welding Code
- AASHTO Guide Specifications for Structural Design of Sound Barriers
- AASHTO Manual for Condition Evaluation and Load and Resistance Factor Rating (LRFR) of Highway Bridges
- Florida Department of Transportation Structures Manual
- Florida Department of Transportation Structures Design Office Temporary Design Bulletins (available on Florida Department of Transportation Structures web site only)
- Florida Department of Transportation Preferred Details (available on Florida Department of Transportation Structures web site only)

Geotechnical

- FHWA Checklist and Guidelines for Review of Geotechnical Reports and Preliminary Specifications
- Manual of Florida Sampling and Testing Methods
- Soils and Foundation Handbook

Landscape Architecture

- Florida Highway Landscape Guide

Florida Department of Transportation Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways
<http://www.dot.state.fl.us/rddesign/FloridaGreenbook/FloridaGreenbook.pdf>.

FHWA Traffic Detector Handbook

FDOT General Interest Roadway Data Procedure

FHWA Traffic Monitoring Guide

FDOT's Traffic/Polling Equipment Procedures

AISC Manual of Steel Construction, referred to as "AISC Specifications"

American National Standards Institute (ANSI) RP-8-00 Recommended Practice for Roadway Lighting

AASHTO AWS D1.1/ANSI Structural Welding Code – Steel

AASHTO D1.5/AWS D1.5 Bridge Welding Code

Chapter 62-302 Florida Administrative Code - Surface Water Quality Standards

Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) and Guideline Handbook

- Florida Fish and Wildlife Conservation Commission - Standard Manatee Construction Conditions 2005

2.20 Services to be Performed by the CLIENT

- When appropriate the CLIENT will provide project data currently on file.
- Regarding Environmental Permitting Services:
 - Provide general philosophies and guidelines of the CLIENT to be used in the fulfillment of this contract. Objectives, constraints, budgetary limitations, and time constraints will be completely defined by the Project Manager.
 - Provide the appropriate signatures on application forms.
- Provide letters of authorization designating the CONSULTANT as an agent of the CLIENT in accordance with F.S. 327.274.
- Provide phase reviews of plans and engineering documents.
- Provide access for the CONSULTANT to utilize the CLIENT's Information Technology Resources.
- Furnish all CLIENT agreements with Utility Agency Owner (UAO).
- Furnish all certifications necessary for project letting.

- Provide all information that may come to the CLIENT pertaining to future improvements.
- Provide As-Built Plans for the CLIENT's Utilities.
- Provide mailing lists utilized in the PD&E phase.
- Coordinate the lighting improvements shown in the lighting plans with FP&L.
- Furnish traffic volumes for development of signal timings.

3 PROJECT COMMON and PROJECT GENERAL TASKS

Project Common Tasks

Project Common Tasks, as listed below, are work efforts that are applicable to many project activities, 4.0 Roadway Analysis through 32.0 Noise Impact Design Assessment. These tasks are to be included in the project scope in each applicable activity when the described work is to be performed by the CONSULTANT.

Cost Estimates: The CONSULTANT shall be responsible for producing a construction cost estimate and reviewing and updating the cost estimate when scope changes occur and/or at milestones of the project. A Summary of Pay Items sheet shall be prepared with 60, 90, 100 and Bid Review submittals.

Technical Special Provisions: The CONSULTANT shall provide Technical Special Provisions for all items of work not covered by the FDOT Standard Specifications for Road and Bridge Construction and the workbook of implemented modifications.

A Technical Special Provision shall not modify the first nine sections of the Standard Specifications and implemented modifications in any way. All modifications to other sections must be justified to the appropriate CLIENT Project Manager to be included in the project's specifications package, typically as special provisions and not as Technical Special Provisions.

The Technical Special Provisions shall be technical in nature and shall provide a description of work, materials, equipment and specific requirements, method of measurement and basis of payment. Proposed Technical Special Provisions will be submitted to the CLIENT Project Manager initial review at the time of the 90% plans review submission to the CLIENT's Project Manager. This timing will allow for adequate processing time prior to final submittal. The Technical Special Provisions will be reviewed for suitability in accordance with the Handbook for Preparation of Specification Package. All comments will be returned to the CONSULTANT for correction and resolution. Final Technical Special Provisions shall be signed and sealed in accordance with applicable Florida Statutes.

Field Reviews: Includes all trips required to obtain necessary data for all elements of the project.

Technical Meetings: Includes meetings with CLIENT and/or Agency staff, between

disciplines and subconsultants, such as access management meetings, pavement design meetings, local governments, railroad companies, progress review meetings (phase review), and miscellaneous meetings. The CONSULTANT shall prepare, and submit to the CLIENT's Project Manager for review, the meeting minutes for all meetings attended by them.

Quality Assurance/Quality Control: It is the intention of the CLIENT that design CONSULTANTS are held responsible for their work, including plans review. Detailed checking of CONSULTANT plans or assisting in designing portions of the project for the CONSULTANT is not the intent of having external design consultants. The purpose of CONSULTANT plan reviews is to ensure that CONSULTANT plans follow the plan preparation procedures outlined in the FDOT Plans Preparation Manual, that state and federal design criteria are followed with the CLIENT concept, and that the CONSULTANT submittals are complete.

The CONSULTANT shall be responsible for the professional quality, technical accuracy and coordination of all surveys, designs, drawings, specifications and other services furnished by the CONSULTANT under this contract.

The CONSULTANT shall provide a Quality Control Plan, if requested by the CLIENT, that describes the procedures to be utilized to verify, independently check, and review all maps, design drawings, specifications, and other documentation prepared as a part of the contract. The CONSULTANT shall describe how the checking and review processes are to be documented to verify that the required procedures were followed. The Quality Control Plan shall be one specifically designed for this project. The Quality Control Plan may be one utilized by the CONSULTANT as part of their normal operation or it may be one specifically designed for this project. A marked up set of prints from a Quality Control Review indicating the reviewers for each component (structures, roadway, drainage, signals, geotechnical, signing and marking, lighting, surveys, etc.) and a written resolution of comments on a point-by-point basis will be required, if requested by the CLIENT, with each phase submittal. The responsible Professional Engineer, Landscape Architect, or Professional Surveyor & Mapper that performed the Quality Control review will sign a statement certifying that the review was conducted and found to meet required specifications.

The CONSULTANT shall, without additional compensation, correct all errors or deficiencies in the designs, maps, drawings, specifications and/or other services.

Independent Peer Review: *N/A*

Supervision: Includes all efforts required to supervise all technical design activities.

Coordination: Includes all efforts to coordinate with all disciplines of the project to produce a final set of construction documents.

Project General Tasks

Project General Tasks, described in Sections 3.1 through 3.7 below, represent work efforts that are applicable to the project as a whole and not to any one or more specific project activity. The work described in these tasks shall be performed by the CONSULTANT when included in the project scope.

3.1 Public Involvement – N/A

3.1.11 Other Agency Meetings – Anticipate 2 meetings with the County Commissioners; Anticipate 2 meetings with the City; Anticipate 4 meetings with property owners.

3.2 Joint Project Agreements – N/A

3.3 Specifications Package Preparation

The CONSULTANT shall prepare and provide a specifications package prepared in accordance with the CLIENT's Specifications and the FDOT'S Handbook for the Preparation of Specification Packages and associated training. The specifications package shall address all items and areas of work and include any Mandatory Specifications, Modified Special Provisions, and Technical Special Provisions.

Final submittal of the specifications package must occur at least 10 working days prior to the CLIENT's advertisement date. This submittal shall be signed, dated, and sealed in accordance with applicable Florida Statutes.

3.4 Contract Maintenance

Contract maintenance includes project management effort for complete setup and maintenance of files, developing monthly progress reports, schedule updates, work effort to develop and execute subconsultant agreements, etc.

3.5 Value Engineering (Multi-Discipline Team) Review – N/A

3.6 Prime Consultant Project Manager Meetings

Includes only the Prime Consultant Project Manager's time for travel and attendance at Activity Technical Meetings and other meetings listed in the meeting summary for Task 3.6 on tab 3.0 Project General Task of the staff hour forms. Staff hours for other personnel attending Activity Technical Meetings are included in the meeting task for that specific Activity.

3.7 Plans Update – N/A

3.8 Post Design Services – N/A

Post Design Services may include, but not limited to, meetings, construction assistance, plans revisions, shop drawing review, survey services and load ratings. Specific services will be negotiated as necessary as a contract amendment.

3.9 Electronic Delivery

The CONSULTANT will provide submittals in PDF format in addition to paper submittals for anything submitted to the CLIENT. The final drawings including the project survey file will be submitted in AUTOCADD format. (Electronic signing and sealing with PEDDS or Electronic Delivery is not required.)

3.10 Risk Assessment Workshop – N/A

3.11 Railroad, Transit, and /or Airport Coordination – N/A

3.12 Other Project General Tasks

4 ROADWAY ANALYSIS

The CONSULTANT shall analyze and document Roadway Tasks in accordance with all applicable manuals, guidelines, standards, handbooks, procedures, and current design memorandums including the Lake County “*Scope of Work Requirements*”, dated March 20, 2015.

4.1 Typical Section Package – N/A

4.2 Pavement Type Selection Report – N/A

4.3 Pavement Design Package

The CONSULTANT shall review the CLIENT’S standard pavement section for appropriateness for this particular project. (12” stabilized subgrade, 10” limerock, and 2.5” asphalt, 1” friction course)

4.4 Cross Slope Correction – N/A

4.5 Horizontal/Vertical Master Design Files

The CONSULTANT shall design the geometrics using the design standards that are most appropriate with proper consideration given to the design traffic volumes, design speed, capacity and levels of service, functional classification, adjacent land use, design consistency and driver expectancy, aesthetics, pedestrian and bicycle concerns, ADA requirements, elder road user policy, access management, PD&E documents and scope of work.

4.6 Access Management

The CONSULTANT will review the access management with the CLIENT and provide a design memorandum with recommendations to the CLIENT.

4.7 Roundabout Evaluation – N/A

4.8 Roundabout Final Design Analysis – N/A

4.9 Cross Section Design Files

The CONSULTANT shall establish and develop cross section design files in accordance with the CADD manual.

4.10 Traffic Control Analysis

The CONSULTANT shall design a safe and effective Traffic Control Plan to move vehicular and pedestrian traffic during all phases of construction. The design shall include construction phasing of roadways ingress and egress to existing property owners and businesses, routing, signing and pavement markings, and detour quantity tabulations, roadway pavement, drainage structures, ditches, front slopes, back slopes, drop offs within clear zone, and traffic monitoring sites. Special consideration shall be given to the construction of the drainage system when developing the construction phases. Positive drainage must be maintained at all times. The CONSULTANT shall investigate the need for alternate detour roads, and the use of materials such as sheet piling in the analysis. The Traffic Control Plan shall be prepared by a certified designer who has completed training as required by FDOT.

4.11 Master TCP Design Files

The CONSULTANT shall develop master Traffic Control Plan (TCP) files (for Level II and Level III only) showing each phase of the Traffic Control Plan.

4.12 Design Variations and Exceptions – N/A

4.13 Design Report

The CONSULTANT shall prepare all applicable report(s) as listed in the Project Description section of this scope.

The CONSULTANT shall submit to the CLIENT design notes, data, and calculations to document the design conclusions reached during the development of the contract plans.

The design notes, data, and computations shall be recorded on size 8½"x11" sheets, fully titled, numbered, dated, indexed and signed by the designer and the checker. Computer output forms and other oversized sheets shall be folded to 8½"x11" size. The data shall be in a hardback folder for submittal to the CLIENT.

4.14 Quantities

The CONSULTANT shall prepare various summary of quantities sheets. This includes all efforts required to develop supporting documentation, including construction days when required.

4.15 Cost Estimate

4.16 Technical Special Provisions – none anticipated

4.17 Other Roadway Analysis

4.18 Field Reviews

4.19 Protection of Existing Structures

4.20 Technical Meetings

4.21 Quality Assurance/Quality Control

4.22 Independent Peer Review

4.23 Supervision

4.24 Coordination

5 ROADWAY PLANS

The CONSULTANT shall prepare Roadway, Drainage, Traffic Control, Utility Adjustment Sheets, plan sheets, notes, and details. The plans shall include the following sheets necessary to convey the intent and scope of the project for the purposes of construction.

5.1 Key Sheet

5.2 Summary of Pay Items

5.3 Typical Section Sheets

5.4 General Notes/Pay Item Notes

5.5 Summary of Quantities

5.6 Project Layout

5.7 Plan/Profile Sheet – N/A

5.8 Profile Sheet

- 5.9 Plan Sheet**
- 5.10 Special Profile**
- 5.11 Back of Sidewalk Profile Sheet – N/A**
- 5.12 Interchange Layout Sheet – N/A**
- 5.13 Ramp Terminal Details (Plan View) – N/A**
- 5.14 Special Details**
- 5.15 Cross-Section Pattern Sheet – N/A**
- 5.16 Roadway Soil Survey Sheet**
- 5.17 Cross Section Pattern Sheet**
- 5.18 Cross Sections**
- 5.19 Traffic Control Plan Sheets**
- 5.20 Traffic Control Cross Section Sheets – N/A**
- 5.21 Traffic Control Detail Sheets**
- 5.22 Utility Adjustment Sheets**
- 5.23 Selective Clearing and Grubbing**

This information will be shown on pond detail sheets as required.

- 5.24 Project Control Network Sheet – N/A**
- 5.25 Environmental Detail Sheets – N/A**
- 5.26 Utility Verification Sheet (SUE Data)**
- 5.27 Quality Assurance/Quality Control**
- 5.28 Supervision**

6A DRAINAGE ANALYSIS

The CONSULTANT shall analyze and document Drainage Tasks in accordance with all applicable manuals, guidelines, standards, handbooks, procedures, and current design memorandums including the Lake County “*Scope of Work Requirements*”, dated March 20, 2015.

The roadway drainage collection system will consist of curb inlets and storm pipes routed to one new pond. Pond will be designed and constructed to accommodate the ultimate four lane section. Collection systems will be designed to accommodate the ultimate four lane section.

The CONSULTANT shall coordinate fully with the appropriate permitting agencies and the CLIENT's staff. All activities and submittals should be coordinated through the CLIENT's Project Manager. The work will include the engineering analyses for any or all of the following:

6.1 Determine Base Clearance Report - N/A

6.2 Pond Siting Analysis and Report

Evaluate one pond site using a preliminary hydrologic analysis. Document the results and coordination for all of the project's pond site analyses. Prepare report documenting the preferred site and overall stormwater management strategy.

6.3 Design of Cross Drains

Analyze the hydraulic design of two (2) cross drains. Document the design as required. Determine and provide flood data as required.

6.4 Design of Roadway Ditches

Design roadway conveyance ditches for off-site collection on uphill side of alignment. This includes determining ditch cross sections, grades, selecting suitable channel lining, designing the side drain pipes, and documentation.

6.5 Design of Outfalls – N/A

Analyze and document the design of ditch or piped outfalls. *None Anticipated.* (Pond outlet structure included in task 6.6)

6.6 Design of Stormwater Management Facility (Offsite Pond)

Design stormwater management facility to meet requirements for stormwater quality treatment and attenuation. Develop proposed pond layout (shape, contours, slopes, etc.), perform routing calculations, and design the outlet control structure.

6.7 Design of Stormwater Management Facility (Roadside Ditch as Linear Pond or Infield Pond)

Design up two (2) swales within existing road right-of-way. Temporary swale at west end of project may be necessary for stormwater until developer's pond is constructed. Swale at east end of project may be necessary for roadway work around Hancock Road intersection in areas that cannot be hydraulically connected to proposed pond.

6.8 Design of Flood Plain Compensation Area

Analyze impacts of roadway construction on existing depressional area and design proposed pond to offset impacts.

6.9 Design of Storm Drains

Develop a “working drainage map”, determine runoff, inlet locations, and spread. Calculate hydraulic losses (friction, utility conflict and, if necessary, minor losses). Determine Design Tailwater and, if necessary, outlet scour protection.

6.10 Optional Culvert Material

Determine acceptable options for pipe materials. No analysis.

6.11 French Drain Design - N/A

6.12 Drainage Wells - N/A

6.13 Drainage Design Documentation Report

Compile drainage design documentation into report format. Include documentation for all the drainage design tasks and associated meetings and decisions.

6.14 Bridge Hydraulic Report – N/A

6.15 Temporary Drainage Analysis

6.16 Cost Estimate

6.17 Technical Special Provisions – N/A

6.18 Other Drainage Analysis

6.19 Field Reviews

6.20 Technical Meetings

6.21 Quality Assurance/Quality Control

6.22 Independent Peer Review

6.23 Supervision

6.24 Coordination

6B DRAINAGE PLANS

The CONSULTANT shall prepare Drainage plan sheets, notes, and details. The plans shall

include the following sheets necessary to convey the intent and scope of the project for the purposes of construction.

- 6b.1 Drainage Map**
- 6b.2 Bridge Hydraulics Recommendation Sheets - N/A**
- 6b.3 Summary of Drainage Structures**
- 6b.4 Optional Pipe/Culvert Material – N/A**
- 6b.5 Drainage Structure Sheet (Per Structure) – N/A**
- 6b.6 Miscellaneous Drainage Detail Sheets**
- 6b.7 Lateral Ditch Plan/Profile - N/A**
- 6b.8 Lateral Ditch Cross Sections - N/A**
- 6b.9 Retention/Detention Ponds Detail Sheet**
- 6b.10 Retention Pond Cross Sections**
- 6b.11 Erosion Control Plan – N/A**
- 6b.12 SWPPP**
- 6b.13 Quality Assurance/Quality Control**
- 6b.14 Supervision**

7 UTILITIES

UTILITY COORDINATION:

The CONSULTANT shall identify utility facilities and secure agreements, utility work schedules, and plans from the Utility Agency Owners (UAO) ensuring no conflicts exist between utility facilities and the CLIENT's construction project. The CONSULTANT shall certify all utility negotiations have been completed with arrangements made for utility work to be undertaken.

7.1 Kickoff Meeting

Prior to any contact with the UAO(s), the CONSULTANT shall meet with the CLIENT to receive guidance, as may be required, to assure that all necessary coordination will

be accomplished in accordance with CLIENT procedures. CONSULTANT shall bring a copy of the design project work schedule reflecting utility activities.

7.2 Identify Existing UAO(s)

Identify all utilities in the corridor; check with Maintenance for Permits, Sunshine State One Call, Subsurface Utility Engineering (SUE) Report, Design Location Survey, and Existing Plans.

7.3 Make Utility Contacts

First Contact: Send letters and two sets of plans to each utility, one set for the utility office, one set each to construction and maintenance if required. Includes contact by phone for meeting coordination. Request type, size, location, easements, cost for compensable relocation, and justification for any utility exceptions. Include the meeting schedule (if applicable) and the design schedule. Include typical meeting agenda.

Second Contact: At a minimum of 4 weeks prior to the meeting, the CONSULTANT shall transmit two complete sets of Phase II plans to each UAO having facilities located within the project limits, and one set to the CLIENT Offices as required by the District.

Third Contact: Identify agreements and assemble packages. Send agreements, letters and two sets of plans to the UAO(s) including all component sets, one set for the utility office, one set to construction and maintenance if required. Include the design schedule. Not all projects will have all contacts as described above.

7.4 Exception Coordination – N/A

The CONSULTANT shall be responsible for transmitting/coordinating the appropriate design reports including Project Scope and/or the Concept Report (if applicable) to each UAO in order to identify any condition that may require a Utility Exception. The CONSULTANT shall coordinate the processing of design exceptions involving Utilities with the UAO and the CLIENT. Coordinate and process per the UAM.

7.5 Preliminary Utility Meeting

The CONSULTANT shall schedule (time and place), notify participants, and conduct a preliminary utility meeting with all affected UAO(s) for the purpose of presenting the project, review the current design schedule, evaluate the utility information collected, provide follow-up information on compensable interest requests, discuss the utility work by highway contractor option with each utility, and discuss any future design issues that may impact utilities. This is also an opportunity for the UAO(s) to present proposed facilities. The CONSULTANT shall keep accurate minutes and distribute a copy to all attendees.

7.6 Individual/Field Meetings

The CONSULTANT shall meet with each UAO separately throughout the project design duration to provide guidance in the interpretation of plans, review changes to the plans and schedules, optional clearing and grubbing work, and assist in the development of the UAO(s) plans and work schedules. The CONSULTANT is responsible for motivating the UAO to complete and return the necessary documents after each Utility Contact or Meeting.

7.7 Collect and Review Plans and Data from UAO(s)

Make Determinations (Compensable Interest, Easements, Coordinate, Analyze). Ensure information (utility type, material and size) is sent to the designer for inclusion in the plans. Coordinate programming of funds.

7.8 Subordination of Easements Coordination – N/A

The CONSULTANT, if requested by the CLIENT, shall transmit to and secure from the UAO the executed subordination agreements prepared by the appropriate CLIENT office. The CONSULTANT shall coordinate with the DUO the programming of the necessary work program funds to compensate the UAO.

7.9 Utility Design Meeting

At a minimum of 3 weeks prior to the meeting, the CONSULTANT shall transmit two complete sets of Phase II plans to each UAO having facilities located within the project limits, and one set to the CLIENT Offices as required by the District. The CONSULTANT shall schedule (time and place), notify participants, and conduct a Utility meeting with all affected UAO(s). The CONSULTANT shall be prepared to discuss drainage, traffic signalization, maintenance of traffic (construction phasing), review the current design schedule and letting date, evaluate the utility information collected, provide follow-up information on compensable interest requests, discuss the utility work by highway contractor option with each utility, discuss any future design issues that may impact utilities, etc., to the extent that they may have an effect on existing or proposed utility facilities with particular emphasis on drainage and maintenance of traffic with each UAO. The intent of this meeting shall be to identify and resolve conflicts between utilities and proposed construction prior to completion of the plans, including utility adjustment details. Also recommend resolution between known utility conflicts with proposed construction plans as practical. The CONSULTANT shall keep accurate minutes of all meetings and distribute a copy to all attendees.

7.10 Review Utility Markups and Work Schedules and Processing of Schedules and Agreements

Review utility marked up plans individually as they are received for content and coordinate review with the designer. Send color markups and schedules to the appropriate CLIENT office(s) for review and comment if required by the CLIENT. Coordinate

with the CLIENT for execution. Distribute Executed Final Documents. Prepare Work Order for UAO(s). Coordinate programming of funds.

7.11 Utility Coordination/Followup

This includes follow-up, interpreting plans, and assisting and the completion of the UAO(s) work schedule and agreements. Includes phone calls, face-to-face meetings, etc., to motivate and ensure the UAO(s) complete and return the required documents in accordance with the project schedule. Ensure the resolution of all known conflicts. This task can be applied to all phases of the project.

7.12 Utility Constructability Review

Review utility schedules against construction contract time, and phasing for compatibility. Coordinate with and obtain written concurrence from the construction office.

7.13 Additional Utility Services - NA

This includes preparation and coordination of Utility Design Plans when the CLIENT participates in cost of utility work. This item is not usually included in the scope at the time of negotiation. It is normally added as a supplemental agreement when the need is identified.

7.14 Processing Utility Work by Highway Contractor (UWHC) - NA

This includes coordination of utility design effort between the CLIENT and the UAO(s). Determine the CLIENT's cost participation, additional coordination meetings, prepare, negotiate, and process the agreements, review tabulation of quantities, prepare Summary of Pay Items - UWHC, perform UWHC constructability and bidability review, Technical Special Provisions (TSP) review. This does not include utility design effort. This item is not usually included in the scope at the time of negotiation. It is normally added as a supplemental agreement when the need is identified.

7.15 Contract Plans to UAO(s)

This includes transmittal of the contract plans as processed for letting. Transmittals to UAO(s) are by certified mail, return receipt requested.

7.16 Certification/Close-Out

This includes hours for transmitting utility files to the CLIENT and preparation of the Utility Certification Letter. The CONSULTANT shall certify to the appropriate CLIENT representative the following:

All utility negotiations (Full execution of each agreement, approved Utility Work Schedules, technical special provisions written, etc.) have been completed with arrangements made for utility work to be undertaken and completed as required for proper coordination with the physical construction schedule.

OR

An on-site inspection was made and no utility work will be involved.

OR

Plans were sent to the Utility Companies/Agencies and no utility work is required.

7.17 Other Utilities - NA

CLIENT OWNER UTILITY DESIGN: - NA

8 ENVIRONMENTAL PERMITS, COMPLIANCE AND CLEARANCES

The CONSULTANT shall notify the COUNTY and other appropriate personnel in advance of all scheduled meetings with the regulatory agencies to allow a COUNTY representative to attend. The CONSULTANT shall copy in the COUNTY on all permit related correspondence and meetings.

8.1 Preliminary Project Research

The CONSULTANT shall perform preliminary project research and shall be responsible for early identification of and coordination with the appropriate regulatory agencies to assure that design efforts are properly directed toward permit requirements. This task includes coordination and research of the existing permits within the project alignment that will be required to develop the overall permitting strategy.

8.2 Field Work

8.2.1 Pond Site Alternatives – N/A

8.2.2 Establish Wetland Jurisdictional Lines and Assessments

The CONSULTANT shall conduct site visits to confirm the absence of wetlands and surface waters jurisdictional to the state and federal regulatory agencies as required for permit approval.

8.2.3 Species Survey

The CONSULTANT shall conduct a general wildlife survey and species-specific surveys for the right-of-way and proposed new pond site locations.

Gopher Tortoise Survey

The CONSULTANT will conduct a 100% species-specific gopher tortoise survey for the project area in accordance with Florida Fish Wildlife Conservation Commission (FFWCC)'s Gopher Tortoise Permitting Guidelines to identify potential tortoise habitat and determine the number of tortoise burrows within the project area.

Discovered burrows will be flagged in the field and the location documented with a sub-meter accuracy GPS receiver to be included in the FFWCC gopher tortoise relocation permit application.

Florida Scrub Jay

The review of available GIS data indicates the project alignment is located within the U.S. Fish Wildlife Service (USFWS) Florida scrub jay consultation area. In addition, Florida scrub jays have been observed adjacent to project. It is anticipated that a Florida scrub jay survey will be required by USFWS to determine potential impacts as a result of proposed project. The CONSULTANT will perform a species-specific survey for the Florida scrub jay. Survey methodology will be conducted following the USFWS's Florida scrub jay survey guidelines (updated 8/24/07). The surveys will be performed during the recommended survey season from March 1 to October 31, and it will include habitat classifications, systematic transects, and scrub jay call stations.

Sand Skink Surveys

The review of available GIS data indicated the project is located within the USFWS sand skink consultation area, critical habitat (known soils and elevations where sand skinks are likely to occur), and sand skinks have been documented in close proximity to the project. It is anticipated that a sand skink survey in accordance with USFWS's Sand Skink and Blue-tailed Mole Skink Survey Protocol to determine presence will be required. Prior to establishing a more labor-intensive cover board survey, the USFWS recommends that all suitable habitat be surveyed by pedestrian transects to search for opportunistic observations of sand skink tracks. If tracks are observed, presence of skink can be presumed through areas of contiguous suitable habitat, and cover board surveys will not be necessary at those locations. The CONSULTANT will conduct pedestrian surveys through sand skink habitat within the project corridor. If sand skinks are observed during these surveys, skink presence is considered confirmed, and cover board surveys in that habitat area will not be required. This task does not include the initiation of a Section 7 or Section 10 consultation with the USFWS to permit sand skink impacts, nor does it address the creation of a Habitat Conservation Plan, to address mitigation for skink habitat. Fees to perform a sand skink cover board survey, USFWS consultation, permitting, and mitigation, if necessary, will be negotiated under a supplemental agreement.

The CONSULTANT will conduct a general wildlife survey of the entire project corridor. Based on the results of this survey, the CONSULTANT will coordinate with the USFWS to request a concurrence letter stating that the proposed project may affect, but is not likely to adversely affect the eastern indigo snake. If concurrence is obtained from the USFWS, it is anticipated that no additional eastern indigo snake surveys or mitigation will be required for the proposed project. This task does not include the initiation of a Section 7 or Section 10 consultation with the USFWS to permit eastern indigo snake impacts, nor does it address the creation of a Habitat Conservation Plan or Biological Opinion. Fees to perform eastern indigo snake surveys, USFWS consultation, permitting, and mitigation, if necessary, will be negotiated under a supplemental agreement.

8.2.4 Archeological Surveys – N/A

8.3 Agency Verification of Wetland Data

The CONSULTANT will conduct meetings on-site with representatives of the St. Johns River Water Management District (SJRWMD) to review the anticipated wetland limits and potential impacts associated with the proposed development.

8.4 Complete and Submit All Required Permit Applications

8.4.1 Complete and Submit All Required Wetland Permit Applications

The CONSULTANT will prepare the Environmental Resource Permit application for submittal to the SJRWMD necessary to construct this project. The CONSULTANT shall respond up to two (2) requests for additional information by the regulatory agencies concerning the permit application.

The CONSULTANT shall prepare permit applications for CLIENT approval in accordance with the rules and/or regulations of the environmental agency responsible for issuing a specific permit and/or authorization to perform work.

The CONSULTANT will submit all permit applications to SJRWMD, as directed by the CLIENT. The CONSULTANT will be responsible for payment of all permit fees to SJRWMD.

8.4.2 Complete and Submit All Required Species Permit Applications

The CONSULTANT will prepare a FFWCC Gopher Tortoise Conservation Permit application for the excavation and relocation of the species. The CONSULTANT will conduct one on-site meeting with a representative of the FFWCC to verify survey results. Gopher tortoise excavation and mitigation fees are not included in this task. The permit fee is based on the number of gopher tortoise burrows observed; therefore, the permit fee, excavations, relocation effort, and mitigation fee will be negotiated under a supplement agreement. In addition, this task does not include permitting for sand skink or Florida scrub jay impacts and will be negotiated under a separate supplemental agreement, if warranted.

8.5 Prepare Dredge and Fill Sketches – N/A

8.6 Prepare USCG Permit Sketches – N/A

8.7 Prepare Water Management District Right-of-Way Occupancy Permit– N/A

8.8 Prepare Coastal Construction Control Line (CCCL) Permit Application– N/A

8.9 Prepare Tree Permit Information – N/A

8.10 Mitigation Design – N/A

8.11 Mitigation Coordination and Meetings

The CONSULTANT will coordinate with the recipient site within the region to obtain a reservation letter to accept the gopher tortoises that will be relocated.

8.12 Other Environmental Permits - N/A

8.13 Technical support to Department for Environmental Clearances and Reevaluations – N/A

8.13.1 NEPA or SEIR Reevaluation – N/A

8.13.2 Archaeological and Historical Features – N/A

8.13.3 Wetland Impact Analysis – N/A

8.13.4 Essential Fish Habitat – N/A

8.13.5 Wildlife and Habitat Impact Analysis – N/A

8.13.6 Section 7 or Section 10 Consultation – N/A

8.14 Preparation of Environmental Clearances and Reevaluations – N/A

8.14.1 NEPA or SEIR Reevaluation – N/A

8.14.2 Archaeological and Historical Features – N/A

8.14.3 Wetland Impact Analysis – N/A

8.14.4 Essential Fish Habitat – N/A

8.14.5 Wildlife and Habitat Impact Analysis

The CONSULTANT will prepared an Environmental Assessment Report that documents the Florida scrub jay survey results obtained under Task 8.2.3. This report will describe the proposed corridor, detail the existing conditions, observed vegetative communities, habitat mapping, survey methodology, and survey results. If an active scrub jay population is noted within the project corridor, the Client will be provided with recommendations to address the presence of scrub jays in a manner with that will facilitate permit approval by the USFWS. This task does not include the initiation of a Section 7 or Section 10 consultation with the USFWS to permit scrub jay impacts, nor does it address the creation of a Habitat Conservation Plan to address mitigation for scrub jay habitat. Fees to perform USFWS consultation and mitigation, if necessary, will be negotiated under a supplement agreement.

The Environmental Assessment Report will also document the results of the sand skink and blue-tailed mole survey as described under Task 8.2.3. The report will summarize the survey methodology and survey results. A summary table will detail all observations of the survey results and figures will be generated depicting the locations of any sand

skink observations, if skinks or skink tracks are identified. Photo documentation of any positively identified sand skink tracks will be included. This report will provide preliminary estimates for potential mitigation costs to offset any sand skink habitat identified within the project limits, if necessary.

8.14.6 Section 7 or Section 10 Consultation – N/A

8.15 Contamination Impact Analysis – N/A

8.16 Asbestos Survey – N/A

8.17 Technical Meetings

8.18 Quality Assurance/Quality Control

8.19 Supervision

8.20 Coordination

9 STRUCTURES - SUMMARY AND MISCELLANEOUS TASKS AND DRAWINGS

The CONSULTANT shall analyze and document Structural Tasks in accordance with all applicable manuals, guidelines, standards, handbooks, procedures, and current design memorandums including the Lake County “*Scope of Work Requirements*”, dated March 20, 2015.

The CONSULTANT shall provide Design Documentation to the CLIENT with each submittal consisting of structural design calculations and other supporting documentation developed during the development of the plans. The design calculations submitted shall adequately address the complete design of all structural elements. These calculations shall be neatly and logically presented on digital media or, at the CLIENT’s request, on 8 ½”x11” paper and all sheets shall be numbered. The final design calculations shall be signed and sealed by a Florida-registered professional engineer. A cover sheet indexing the contents of the calculations shall be included and the engineer shall sign and seal that sheet. All computer programs and parameters used in the design calculations shall include sufficient backup information to facilitate the review task.

9.1 Index of Drawings (N/A)

9.2 Project Layout (N/A)

9.3 General Notes and Bid Item Notes (N/A)

9.4 Miscellaneous Common Details (N/A)

9.5 Incorporate Report of Core Borings

9.6 Existing Bridge Plans (N/A)

- 9.7 Assemble Computation Book and Quantities
- 9.8 Cost Estimate
- 9.9 Technical Special Provisions (N/A)
- 9.10 Field Reviews
- 9.11 Technical Meetings
- 9.12 Quality Assurance/Quality Control
- 9.13 Independent Peer Review (N/A)
- 9.14 Supervision
- 9.15 Coordination
- 10 STRUCTURES - BRIDGE DEVELOPMENT REPORT (N/A)
- 11 STRUCTURES - TEMPORARY BRIDGE (N/A)
- 12 STRUCTURES - SHORT SPAN CONCRETE BRIDGE (N/A)
- 13 STRUCTURES - MEDIUM SPAN CONCRETE BRIDGE (N/A)
- 14 STRUCTURES - STRUCTURAL STEEL BRIDGE (N/A)
- 15 STRUCTURES - SEGMENTAL CONCRETE BRIDGE (N/A)
- 16 STRUCTURES - MOVABLE SPAN (N/A)
- 17 STRUCTURES - RETAINING WALL – N/A
- 18 STRUCTURES - MISCELLANEOUS

The CONSULTANT shall prepare plans for Miscellaneous Structure(s) as specified in Section 2.5.

Strain Poles

Mast Arms (N/A)

Overhead/Cantilever Sign Structure (N/A)

April 2016

High Mast Lighting (N/A)

Sound Barrier Walls (Ground Mount) (N/A)

Special Structures (N/A)

19 SIGNING AND PAVEMENT MARKING ANALYSIS

The CONSULTANT shall analyze and document Signing and Pavement Markings Tasks in accordance with all applicable manuals, guidelines, standards, handbooks, procedures, and current design memorandums including the Lake County “*Scope of Work Requirements*”, dated March 20, 2015.

19.1 Traffic Data Analysis

The CONSULTANT shall review the approved preliminary engineering report, typical section package, traffic technical memorandum and proposed geometric design alignment to identify proposed sign placements and roadway markings.

19.2 No Passing Zone Study - N/A

19.3 Reference and Master Design File

The CONSULTANT shall prepare the Signing & Marking Design file to include all necessary design elements and all associated reference files.

19.4 Multi-Post Sign Support Calculations – N/A

The CONSULTANT shall determine the appropriate column size from the FDOT’s Multi-Post Sign Program(s).

19.5 Sign Panel Design Analysis – N/A

Establish sign layout, letter size and series for non-standard signs.

19.6 Sign Lighting/Electrical Calculations N/A

19.7 Quantities

19.8 Cost Estimates

19.9 Technical Special Provisions - N/A

19.10 Other Signing and Pavement Marking Analysis- N/A

19.11 Field Reviews

19.12 Technical Meetings

19.13 Quality Assurance/Quality Control

19.14 Independent Peer Review

19.15 Supervision

19.16 Coordination

20 SIGNING AND PAVEMENT MARKING PLANS

The CONSULTANT shall prepare a set of Signing and Pavement Marking Plans in accordance with the Plans Preparation Manual that includes the following.

20.1 Key Sheet

20.2 Summary of Pay Items Including CES Input – N/A

20.3 Tabulation of Quantities

20.4 General Notes/Pay Item Note

20.5 Project Layout - N/A

20.6 Plan Sheet

20.7 Typical Details - N/A

20.8 Guide Sign Work Sheet(s) – N/A

20.9 Traffic Monitoring Site - N/A

20.10 Cross Sections – N/A

20.11 Special Service Point Details - N/A

20.12 Special Details - N/A

20.13 Interim Standards - N/A

20.14 Quality Assurance/Quality Control

20.15 Supervision

21 SIGNALIZATION ANALYSIS

The CONSULTANT shall analyze and document Signalization Analysis Tasks in accordance with all applicable manuals, guidelines, standards, handbooks, procedures, and

current design memorandums including the Lake County “*Scope of Work Requirements*”, dated March 20, 2015.

21.1 Traffic Data Collection - N/A

21.2 Traffic Data Analysis

The CONSULTANT shall determine signal operation plan, intersection geometry, local signal timings, pre-emption phasing & timings and intersection analysis run.

21.3 Signal Warrant Study - N/A

21.4 Systems Timings – N/A

21.5 Reference and Master Signalization Design File

The CONSULTANT shall prepare the Signalization Design file to include all necessary design elements and all associated reference files.

21.6 Reference and Master Interconnect Communication Design File

The CONSULTANT shall prepare the Interconnect Communication Design file to include all necessary design elements and all associated reference files.

21.7 Overhead Street Name Sign Design

The CONSULTANT shall design Signal Mounted Overhead Street Name signs.

21.8 Pole Elevation Analysis

21.9 Traffic Signal Operation Report - N/A

21.10 Quantities

21.11 Cost Estimate

21.12 Technical Special Provisions - N/A

21.13 Other Signalization Analysis –N/A

21.14 Field Reviews

The CONSULTANT shall collect information from the maintaining agencies and conduct a field review. The review should include, but is not limited to, the following:

- Existing Signal and Pedestrian Phasing
- Controller Make, Model, Capabilities and Condition/Age
- Condition of Signal Structure(s)
- Type of Detection as Compared With Current District Standards
- Interconnect Media

- Controller Timing Data
- 21.15 Technical Meetings**
- 21.16 Quality Assurance/Quality Control**
- 21.17 Independent Peer Review**
- 21.18 Supervision**
- 21.19 Coordination**

22 SIGNALIZATION PLANS –

The CONSULTANT shall prepare a set of Signalization Plans in accordance with the Plans Preparation Manual, which includes the following.

- 22.1 Key Sheet**
- 22.2 Summary of Pay Items– N/A**
- 22.3 Tabulation of Quantities**
- 22.4 General Notes/Pay Item Notes**
- 22.5 Plan Sheet**
- 22.6 Interconnect Plans – N/A**
- 22.7 Traffic Monitoring Site - N/A**
- 22.8 Guide Sign Worksheet**
- 22.9 Special Details – N/A**
- 22.10 Special Service Point Details - N/A**
- 22.11 Mast Arm/Monotube Tabulation Sheet – N/A**
- 22.12 Strain Pole Schedule**
- 22.13 TCP Signal (Temporary) - N/A**
- 22.14 Temporary Detection Sheet – N/A**
- 22.15 Utility Conflict Sheet**
- 22.16 Interim Standards**

22.17 Quality Assurance/Quality Control

22.18 Supervision

23 LIGHTING ANALYSIS

To be included in the signalization plan. Design changes to existing Turnpike lighting for the Hancock road interchange.

24 LIGHTING PLANS – to be included in the signalization plan.

25 LANDSCAPE ARCHITECTURE ANALYSIS – N/A

26 LANDSCAPE ARCHITECTURE PLANS – N/A

27 SURVEY

The CONSULTANT shall perform survey tasks in accordance with all applicable statutes, manuals, guidelines, standards, handbooks, procedures, and current design memoranda.

The CONSULTANT shall submit all survey notes and computations to document the surveys. All field survey work shall be recorded in approved media and submitted to the CLIENT. Field books submitted to the CLIENT must be of an approved type. The field books shall be certified by the surveyor in responsible charge of work being performed before the final product is submitted.

The survey notes shall include documentation of decisions reached from meetings, telephone conversations or site visits. All like work (such as bench lines, reference points, etc.) shall be recorded contiguously. The CLIENT may not accept field survey radial locations of section corners, platted subdivision lot and block corners, alignment control points, alignment control reference points and certified section corner references. The CLIENT may instead require that these points be surveyed by true line, traverse or parallel offset.

27.1 Horizontal Project Control (HPC)

Establish HPC, for the purpose of establishing horizontal control on the Florida State Plane Coordinate System based on Lake County GIS Control Monuments; may include primary or secondary control points. Includes analysis and processing of all field collected data, and preparation of forms.

27.2 Vertical Project Control (VCP)

Establish vertical control points throughout project at 1000' (feet) intervals (NAVD 1988 Datum). This includes secondary vertical control throughout the project. Vertical

data will be based on Lake County benchmarks or other surrounding published control.

27.3 Alignment and/or Existing Right of Way Lines

Establish the Baseline of Survey for approximately 4500 feet of Citrus Grove Road/Hancock Road from existing plats and county records (if any are available) to support the engineering design efforts.

27.4 Aerial Targets – N/A

27.5 Reference Points

Establish Baseline of Survey references at 1000-foot intervals and at all P.I.'s, P.C.'s & P.T.'s. along Citrus Grove Road. Approximately 6 alignment points to be referenced along the corridor.

27.6 Topography/DTM (3D)

Provide 3D Topographic / DTM Survey R/W to R/W (+25' outside R/W) in the existing and/or proposed right of ways of proposed Citrus Grove and Hancock Roads.

27.7 Planimetric (2D) – N/A

27.8 Roadway Cross Sections/Profiles

500' Check cross-sections to verify DTM.

27.9 Side Street Surveys

Refer to tasks of this document as applicable.

27.10 Underground Utilities

Locate Estimated 1 utility line (Centurylink) along Citrus Grove Road based on field review (3000' x 1 utility = 3000' of designation).

Subsurface utility potholes will be performed to verify utility type & size for utility conflicts identified by the Project Manager. (Approximately 3 utility pot holes for budgeting purposes based on 1 VVH test hole for every 1000' of designation). Mast arms foundations Exploratory Holes will be performed under optional services if needed.

27.11 Outfall Survey – N/A

27.12 Drainage Survey

Locate existing drainage structures within the project limits.

27.13 Bridge Survey (Minor/Major) – N/A

27.14 Channel Survey – N/A

27.15 Pond Site Survey – N/A

27.16 Mitigation Survey – N/A

27.17 Jurisdiction Line Survey – N/A

27.18 Geotechnical Support

Perform 3-dimensional (X,Y,Z) field location, or stakeout, of boring sites established by geotechnical engineer. Includes field edits, analysis and processing of all field collected data and/or reports. Assuming 100 boring locations for budgeting purposes.

27.19 Sectional/Grant Survey

Survey of Section 5, Township 22 South, Range 26 East

27.20 Subdivision Location – N/A

27.21 Maintained R/W - N/A

27.22 Boundary Survey – N/A

27.23 Water Boundary Survey – N/A

27.24 Right of Way Staking / Right of Way Line – N/A

27.25 Right of Way Monumentation – N/A

27.26 Line Cutting

Perform any line cutting necessary to clear vegetation from the line of sight.

27.27 Work Zone Safety

Provide work zone as required by FDOT standards.

27.28 Miscellaneous Surveys – N/A

27.29 Supplemental Surveys

Supplemental survey days and hours are to be approved in advance by CLIENT Project Manager. Refer to tasks of this document, as applicable, to perform surveys not described herein.

27.30 Document Research

Perform research of documentation to support field and office efforts involving surveying and mapping.

27.31 Field Review

Perform verification of the field conditions as related to the collected survey data.

27.32 Technical Meetings

Attend meetings as required and negotiated by the Surveying and Mapping CLIENT.

27.33 Quality Control/Quality Assurance

Establish and implement a QAQC plan. Also includes subconsultant review, response to comments and any resolution meetings if required, preparation of submittals for review, etc.

27.34 Supervision

Perform all activities required to supervise and coordinate project. These activities must be performed by the project supervisor, a Florida P.S.M.

27.35 Coordination

Coordinate survey activities with other disciplines. Unit is based on 3 percent of office support hours from tasks 1 through 28, where applicable.) These activities must be performed by the project supervisor, a Florida P.S.M.

28 PHOTOGRAMMETRY – N/A

29 MAPPING

The CONSULTANT will be responsible for the preparation of sketches and legal descriptions as required for this project in accordance with all applicable DEPARTMENT Manuals, Procedures, Handbooks, District specific requirements, and Florida Statutes. All maps, surveys and legal descriptions will be prepared under the direction of a Florida Professional Surveyor and Mapper (PSM) to CLIENT size and format requirements utilizing CLIENT approved software, and will be designed to provide a high degree of uniformity and maximum readability. The CONSULTANT will submit maps, legal descriptions, quality assurance check prints, checklists, electronic media files and any other documents as required for this project to the CLIENT for review at stages of completion as negotiated.

Master CADD File

The following elements will be added to a master CADD file that will be the basis of sketches and descriptions prepared for acquisition.

29.1 Alignment

29.2 Section and 1/4 Section Lines

29.3 Subdivisions / Property Lines

29.4 Existing Right of Way

29.5 Topography

29.6 Parent Tract Properties and Existing Easements

29.7 Proposed Right of Way Requirements

The ENGINEER OF RECORD (EOR) will provide the proposed requirements. The PSM is responsible for calculating the final geometry. Notification of Final Right of Way Requirements along with the purpose and duration of all easements will be specified in writing.

29.8 Limits of Construction

The limits of construction DGN file as provided by the EOR will be imported or referenced to the master CADD file. Additional labeling will be added as required. The PSM is required to advise the EOR of any noted discrepancies between the limits of construction line and the existing/proposed right of way lines, and for making adjustments as needed when a resolution is determined.

29.9 Jurisdictional/Agency Lines – N/A

Sheet Files

29.10 Control Survey Cover Sheet – N/A

29.11 Control Survey Key Sheet – N/A

29.12 Control Survey Detail Sheet – N/A

29.13 Right of Way Map Cover Sheet – N/A

29.14 Right of Way Map Key Sheet – N/A

29.15 Right of Way Map Detail Sheet – N/A

29.16 Maintenance Map Cover Sheet – N/A

29.17 Maintenance Map Key Sheet – N/A

29.18 Maintenance Map Detail Sheet – N/A

29.19 Reference Point Sheet – N/A

29.20 Project Network Control Sheet – N/A

29.21 Table of Ownerships Sheet – N/A

29.22 Parcel Sketches

Provide Parcel Sketches for proposed take/donation parcels as. This estimate is based on 16 Sketches and Legal Descriptions.

29.23 TIITF Sketches – N/A

29.24 Other Specific Purpose Survey(s) – N/A

29.25 Boundary Survey(s) Map – N/A

29.26 Right of Way Monumentation Map – N/A

29.27 Title Search Map – N/A

29.28 Title Search Report – N/A

29.29 Legal Descriptions

Provide Legal Descriptions for proposed take/donation parcels as. This estimate is based on 16 Sketches and Legal Descriptions.

29.30 Final Map/Plans Comparison

The PSM will perform a comparison of the final right of way maps with the available construction plans to review the correctness of the type of parcel to be acquired and the stations/offsets to the required right of way. The PSM will coordinate with the EOR to resolve any conflicts or discrepancies and provide documentation of the review.

29.31 Field Reviews – N/A

29.32 Technical Meetings

29.33 Quality Assurance/Quality Control

29.34 Supervision

29.35 Coordination

29.36 Supplemental Mapping

30 GEOTECHNICAL – see proposal from Ardaman & Associates

31 ARCHITECTURE DEVELOPMENT ~ Not Applicable

32 NOISE BARRIERS IMPACT DESIGN ASSESSMENT IN THE DESIGN PHASE ~ Not Applicable

33 Intelligent Transportation Systems Analysis ~ Not Applicable

34 Intelligent Transportation System Plans ~ Not Applicable

35 PROJECT REQUIREMENTS

35.1 Liaison Office

The CLIENT and the CONSULTANT will designate a Liaison Office and a Project Manager who shall be the representative of their respective organizations for the Project. While it is expected the CONSULTANT shall seek and receive advice from various state, regional, and local agencies, the final direction on all matters of this project remain with the CLIENT Project Manager.

35.2 Key Personnel

The CONSULTANT's work shall be performed and directed by the key personnel identified in the proposal presentations by the CONSULTANT. Any changes in the indicated personnel shall be subject to review and approval by CLIENT.

35.3 Progress Reporting

The CONSULTANT shall meet with the CLIENT as required and shall provide a written progress and schedule status reports that describe the work performed on each task. Progress and schedule status reports shall be delivered to the DEPARTMENT concurrently with the monthly invoice. The Project Manager will make judgment on whether work of sufficient quality and quantity has been accomplished by comparing the reported percent complete against actual work accomplished.

35.4 Correspondence

Copies of all written correspondence between the CONSULTANT and any party pertaining specifically to this contract shall be provided to the CLIENT for their records within one (1) week of the receipt or mailing of said correspondence.

35.5 Professional Endorsement

The CONSULTANT shall have a Registered Professional Engineer in the State of Florida sign and seal all reports, documents, and plans as required by DEPARTMENT standards.

35.6 Computer Automation

The project will be developed utilizing Computer Aided Drafting and Design (CADD) systems. The CLIENT makes available software to help assure quality and conformance with policy and procedures regarding CADD. It is the responsibility of the CONSULTANT to meet the requirements in the CLIENT's CADD Manual. The CONSULTANT will submit final documents and files as described therein.

35.7 Coordination with Other Consultants

The CONSULTANT is to coordinate his work with any and all adjacent and integral consultants so as to effect complete and homogenous plans and specifications for the project(s) described herein.

35.8 Optional Services

36 INVOICING LIMITS

Payment for the work accomplished will be in accordance with Method of Compensation of this contract. Invoices shall be submitted to the CLIENT, in a format prescribed by the CLIENT. The CLIENT Project Manager and the CONSULTANT shall monitor the cumulative invoiced billings to insure the reasonableness of the billings compared to the project schedule and the work accomplished and accepted by the CLIENT.

The CONSULTANT will provide a list of key events and the associated total percentage of work considered to be complete at each event. This list will be used to control invoicing. Payments will not be made that exceed the percentage of work for any event until those

events have actually occurred and the results are acceptable to the CLIENT.

Project Activity 3: General Tasks

Estimator:

Phase 1 - LAKE COUNTY
0

Representing	Print Name	Signature / Date
Lake County		
DRMP		

NOTE: Signature Block is optional, per District preference

Task No.	Task	Units	No of Units	Hours/ Unit	Total Hours	Comments
3.1	Public Involvement	LS	1	0	0	
3.1.1	Community Awareness Plan	LS	1	0	0	
3.1.2	Notifications	LS	1	0	0	
3.1.3	Prepare Mailing Lists	LS	1	0	0	
3.1.4	Site Selection	LS	1	0	0	
3.1.5	Driveway Modification Letters	LS	1	0	0	
3.1.6	Newsletter	LS	1	0	0	
3.1.7	Renderrings and Fly Throughs	LS	1	0	0	
3.1.8	PowerPoint Presentation	LS	1	0	0	
3.1.9	Public Meeting Preparations	LS	1	0	0	
3.1.10	Public Meeting Attendance/Followup	LS	1	0	0	
3.1.11	Other Agency Meetings	LS	1	80	80	4 meetings with County Commission(2 mtgs) and City (2 mtgs) (2 people at 5 hours each)--> 4*2*5; 4 misc meetings with property owners (2 people at 5 hours each)
3.1.12	Web Site	LS	1	0	0	NA
3.1 Public Involvement Subtotal					80	
3.2	Joint Project Agreements	EA	0	0	0	
3.3	Specifications Package Preparation	LS	1	40	40	Use Lake County Specifications --> 40 hrs : does not include bidding
3.4	Contract Maintenance and EDMS	LS	1	62	62	8 set up + 3 hrs/month at 18 mo
3.5	Value Engineering (Multi-Discipline Team) Review	LS	1	0	0	
3.6	Prime Consultant Project Manager Meetings	LS	1	60	60	See listing below
3.7	Plans Update	LS	1	0	0	

Project Activity 3: General Tasks

Task No.	Task	Units	No of Units	Hours/ Unit	Total Hours	Comments
3.8	Post Design Services	LS	1	0	0	to be negotiated at a later date
3.9	Digital Delivery	LS	1	16	16	only at end of project; sign and seal documents
3.10	Risk Assessment Workshop	LS	1	0	0	
3.11	Railroad, Transit, and/or Airport Coordination	LS	1	0	0	
3.12	Other Project General Tasks	LS	1	16	16	miscellaneous coordination
3. Project Common and Project General Tasks Total					274	

3.6 - List of Project Manager Meetings						Comments
	Units	No of Units	Hours/ Unit	Total Hours		
Roadway Analysis	EA	2	5	10		Includes 1 mtg with Lake County for typical and pavement design, 15% line and grade mtg w/ County.
Drainage	EA	2	5	10		mtg w/ WMD; pond siting mtg w/ County
Utilities	EA	1	0	0		
Environmental	EA	0	0	0		
Structures	EA	0	0	0		
Signaling & Pavement Marking	EA	0	0	0		
Signalization	EA	0	0	0		
Lighting	EA	0	0	0		
Landscape Architecture	EA	0	0	0		
Survey	EA	0	0	0		
Photogrammetry	EA	0	0	0		
ROW & Mapping	EA	0	0	0		
Terrestrial Mobile LIDAR	EA	0	0	0		
Architecture	EA	0	0	0		
Noise Barriers	EA	0	0	0		
ITS Analysis	EA	0	0	0		
Geotechnical	EA	0	0	0		
Progress Meetings	EA	8	0.5	4		Internal meetings with design team - 1 per mo. for 8 mo. --> divide by 2
Phase Reviews	EA	4	5	20		with Lake County
Field Reviews	EA	2	8	16		
Total Project Manager Meetings				19	60	Total PM Meeting Hours carries to Task 3.6 above

- Notes:
1. If the hours per meeting vary in length (hours) enter the average in the hour/unit column.
 2. Do not double count agency meetings between permitting agencies.

Project Activity 3: General Tasks

Task No.	Task	Units	No of Units	Hours/Unit	Total Hours	Comments
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3. Project manager meetings are calculated in each discipline sheet and brought forward to Column D, except for Photogrammetry.

Project Activity 4: Roadway Analysis

Estimator:

Phase 1 - LAKE COUNTY

0

Representing	Print Name	Signature / Date
Lake County		
DRMP		

NOTE: Signature Block is optional, per District preference

Task No.	Task	Units	No of Units	Hours/ Unit	Total Hours	Comments
4.1	Typical Section Package	LS	1	0	0	not required
4.2	Pavement Type Selection Report	LS	1	0	0	not required
4.3	Pavement Design Package	LS	1	24	24	16 hours - 1 pavement design for Citrus Grove Road mainline plus M&R Hancock Road (4 hrs) and add aux lanes to Hancock (4 hrs) = 20 hours
4.4	Cross-Slope Correction	LS	1	0	0	no cross slope correction on Hancock Road
4.5	Horizontal/Vertical Master Design Files	LS	1	330	330	From station 152+00 to station 197+00 --> total length 4500 LF --> 4500/5280 = 0.852 = .85 miles plus 500 feet both legs of Hancock Road and 500 feet on Grassy Lake Road --> 3*500/5280 = 0.284 --> 0.29 miles --> total .85+.29 = 1.14 miles round to 1.15 miles --> 1*300 + 200* 25 = 950
4.6	Access Management	LS	1	4	4	coordination with County on median openings
4.7	Roundabout Evaluation	LS	1	0	0	not required
4.8	Roundabout Final Design Analysis	LS	1	0	0	not required
4.9	Cross Section Design Files	LS	1	231	231	90 hrs/ mile --> 1.15 X 90 X 2 ; add in 1 pond ... 16 hrs/ pond ; 8 hrs for .gen file
4.10	Traffic Control Analysis	LS	1	16	16	Concept
4.11	Master TCP Design Files	LS	1	40.0	40	40 scale - only show 1 phase; at Hancock and along Grassy Lake Road
4.12	Design Variations and Exceptions	LS	1	0	0	none required
4.13	Design Report	LS	1	24	24	design documentation
4.14	Computation Book and Quantities	LS	1	100	100	summary of quantities with all calculations
4.15	Cost Estimate	LS	1	40	40	Provide 5 engineering estimates: initial, 30 %, 60%, 90% and Final: 5 x 8 = 40 hours
4.16	Technical Special Provisions	LS	1	0	0	none anticipated
4.17	Other Roadway Analyses	LS	1	16	16	misc coord with Turnpike and Developer
Roadway Analysis Technical Subtotal					825	

Project Activity 4: Roadway Analysis

Task No.	Task	Units	No of Units	Hours/ Unit	Total Hours	Comments
4.18	Field Reviews	LS	1	32	32	2 people for 2 field reviews
4.19	Protection of Existing Structures	LS	1	30	30	Meetings are listed below
4.20	Technical Meetings	LS	1	63	63	
4.21	Quality Assurance/Quality Control	LS	%	5%	41	
4.22	Independent Peer Review	LS	%	0%	0	
4.23	Supervision	LS	%	5%	41	
Roadway Analysis Nontechnical Subtotal					207	
4.24	Coordination	LS	%	2%	21	
4. Roadway Analysis Total					1053	

Technical Meetings	Units	No of Units	Hours/ Unit	Total Hours	PM Attendance at Meeting Required?	Number
Typical Section	EA	1	4	4	Yes	1
Pavement	EA	0	0	0		0
Access Management	EA	0	0	0	Yes	1
15% Line and Grade	EA	1	4	4		0
Driveways	EA	0	0	0		0
Local Governments (1 city mtg, 2 county mtgs)	EA	3	4	12		0
Work Zone Traffic Control	EA	0	0	0		0
30/60/90/100% Comment Review Meetings	EA	0	0	0		0
Other Meetings (3 property owner mtgs; 3 utility mtgs)	EA	6	4	24		2
Subtotal Project Manager Meetings						44
Progress Meetings (team mtgs)	EA	8	0.5	4	PM attendance at Progress Meetings is manually entered on General Task 3	--
Phase Review Meetings (90, 60, ROW)	EA	3	5	15	PM attendance at Phase Review Meetings is manually entered on General Task 3	--
Total Meetings					Total Project Manager Meetings (carries to Tab 3)	2

Carries to 4.17

Carries to Tab 3

Project Activity 5: Roadway Plans

Estimator:

Phase 1 - LAKE COUNTY

0

Representing	Print Name	Signature / Date
Lake County		
DRMP		

NOTE: Signature Block is optional, per District preference

Task No.	Task	Scale	Units	No. of Units or Sheet	Hours/ Unit or Sheet	Total Hours	Comments
5.1	Key Sheet		Sheet	1	6	6	
5.2	Summary of Pay Items		Sheet	2	12	24	
5.3	Typical Section Sheets						
5.3.1	Typical Sections		EA	1	12	12	New Construction (mainline)
5.3.2	Typical Section Details		EA	2	8	16	Hancock Road Turn lanes, Hancock Road M&R detail, Grassy Lake Road detail, guardrail detail
5.4	General Notes/Pay Item Notes		Sheet	1	8	8	
5.5	Summary of Quantities Sheets		Sheet	9	5	45	summary of: Lump Sum, General Items, TTCP, Temp. Drwy., Erosion, Litter & Mowing, Removal Items, Mailboxes, Earthwork, Turnouts, Pavement, Misc. Asph., Walls, Curb & Gutter, Sidewalk, Fence, Turf, guardrail
5.6	Project Layout		Sheet	1	4	4	
5.7	Plan/Profile Sheet		Sheet	0	0	0	
5.8	Profile Sheet	40	Sheet	11	3	33	Mainline - 8 sheets; 2 shts Hancock Road ; 1 sht Grassy Lake Road
5.9	Plan Sheet	40	Sheet	11	3	33	Mainline - 8 sheets; 2 shts Hancock Road ; 1 sht Grassy Lake Road
5.10	Special Profile		Sheet	1	8	8	at Hancock Road for returns
5.11	Back-of-Sidewalk Profile Sheet		Sheet	0	0	0	NA; sidewalk will follow profile of roadway
5.12	Interchange Layout Sheet		Sheet	0	0	0	
5.13	Ramp Terminal Details (Plan View)		Sheet	0	0	0	
5.14	Intersection Layout Details		Sheet	0	0	0	
5.15	Special Details		EA	1	12	12	misc

Project Activity 5: Roadway Plans

Task No.	Task	Scale	Units	No. of Units or Sheet	Hours/ Unit or Sheet	Total Hours	Comments
5.16	Cross-Section Pattern Sheet(s)		Sheet	1	0	0	
5.17	Roadway Soil Survey Sheet(s)		Sheet	1	1	1	
5.18	Cross Sections		EA	120	0.25	30	every 50 feet
5.19	Temporary Traffic Control Plan Sheets		Sheet	2	12	24	at connection points
5.20	Temporary Traffic Control Cross Section Sheets		EA	4	2	8	2 along Hancock; 2 along Citrus Grove Road - working sections only
5.21	Temporary Traffic Control Detail Sheets		Sheet	2	6	12	General Notes, Phase Notes, Phase Typical Section Sheets
5.22	Utility Adjustment Sheets		Sheet	7	3	21	only along Citrus Grove Road and Hancock Road
5.23	Selective Clearing and Grubbing Sheet(s)		Sheet	0	0	0	
5.24	Project Network Control Sheet(s)		Sheet	1	1	1	
5.25	Environmental Detail Sheets		Sheet	0	0	0	
5.26	Utility Verification Sheet(s) (SUE Data)		Sheet	1	4	4	
Roadway Plans Technical Subtotal						302	
5.27	Quality Assurance/Quality Control		LS	%	5%	15	
5.28	Supervision		LS	%	5%	15	
5. Roadway Plans Total						332	

Project Activity 6a: Drainage Analysis

Estimator:

Phase 1 - LAKE COUNTY

0

Representing	Print Name	Signature / Date
Lake County		
DRMP		

NOTE: Signature Block is optional, per District preference

Task No.	Task	Units	No of Units	Hours/ Unit	Total Hours	Comments
6a	Drainage Map Hydrology	Per Map	0	0	0	
6.1	Base Clearance Report	Per Location	0	0	0	
6.2	Pond Siting Analysis and Report	Per Basin	1	30	30	pond siting with three alternatives for one basin
6.3	Design of Cross Drains	EA	2	10	20	
6.4	Design of Ditches	Per Ditch Mile	0.74	15	13	3,900 feet for off-site collection, plus 1 hour per side drain (2 side drains)
6.5	Design of Outfalls		0	0	0	none anticipated
6.6	Design of Stormwater Management Facility (Offsite or Infield Pond)	EA	1	55	55	
6.7	Design of Stormwater Management Facility (Roadside Ditch as Linear Pond)	Per Cell	2	20	40	swales within roadway right-of-way for 1) segment ultimately routed to developer's pond, and 2) east end of project at intersection.
6.8	Design of Floodplain Compensation	Per Floodplain Basin	1	30	30	analysis for impacts to depression from roadway
6.9	Design of Storm Drains	EA	67	2.5	168	One structure per 65 feet, total 4,350 feet length
6.10	Optional Culvert Material	EA	0	0	0	
6.11	French Drain Systems	Per Cell	0	0	0	
6.12	Drainage Wells	EA	0	0	0	
6.13	Drainage Design Documentation Report	LS	1	50	50	per Lake County requirements
6.14	Bridge Hydraulic Report	EA	0	0	0	

Project Activity 6a: Drainage Analysis

Task No.	Task	Units	No of Units	Hours/ Unit	Total Hours	Comments
6.15	Temporary Drainage Analysis	LS	1	8	8	
6.16	Cost Estimate	LS	1	4	4	four submittals at 30%, 60%, 90%, final
6.17	Technical Special Provisions	LS	1	0	0	
6.18	Other Drainage Analysis	LS	1	0	0	
Drainage Analysis Technical Subtotal					418	
6.19	Field Reviews	LS	1	8	8	1 review at 8 hours
6.20	Technical Meetings	LS	1	24	24	Meetings are listed below
6.21	Environmental Look-Around (ELA) Meeting	LS	1	0	0	
6.22	Quality Assurance/Quality Control	LS	%	5%	21	
6.23	Independent Peer Review	LS	%	0%	0	
6.24	Supervision	LS	%	5%	21	
Drainage Analysis Nontechnical Subtotal					74	
6a. Drainage Analysis Total					502	

Technical Meetings	Units	No of Units	Hours/ Unit	Total Hours	PM Attendance at Meeting Required?	Number
Base Clearance Water Elevation	EA	0	0	0		0
Pond Sifting	EA	0	0	0		1
Agency	EA	1	5	5	yes	1
Local Governments (cities, counties)	EA	1	5	5	yes	0
FDOT Drainage	EA	0	0	0		0
Other Meetings	EA	0	0	0		2
Subtotal Technical Meetings					10	
Progress Meetings (if required)	EA	8	0.5	4	PM attendance at Progress Meetings is manually entered on General Task 3	--
Phase Review Meetings	EA	2	5	10	Assume drainage rep. at 15% and 60% phase review meetings with Lake County.	--
Total Meetings					24	2

Carries to 6.19

Carries to Tab 3

6b. Drainage Plans

Estimator:

Representing	Print Name	Signature / Date
Lake County		
DENMP		

NOTE: Signature Block is optional, per District preference

Task No.	Task	Scale	Units	No. of Units or Sheet	Hours/ Unit or Sheet	Total Hours	Comments
6b.1	Drainage Map (Including Interchanges)		Sheet	2	20	40	1"=200' scale
6b.2	Bridge Hydraulics Recommendation Sheets		Sheet	0	0	0	
6b.3	Summary of Drainage Structures		Sheet	2	20	40	
6b.4	Optional Pipe/Culvert Material		Sheet	0	0	0	
6b.5	Drainage Structure Sheet(s) (Per Structure)		EA	67	1	67	structure information on plan sheet
6b.6	Miscellaneous Drainage Detail Sheets		Sheet	1	16	16	pond outfall details
6b.7	Lateral Ditch Plan/Profile		Sheet	0	0	0	
6b.8	Lateral Ditch Cross Sections		EA	0	0	0	
6b.9	Retention/Retention Ponds Detail Sheet(s)		Sheet	1	32	32	
6b.10	Retention Pond Cross Sections		EA	8	0.5	4	
6b.11	Erosion Control Plan Sheet(s)		Sheet	1	8	8	erosion control details and quantities tabulated on detail sheet
6b.12	SWPPP Sheet(s)		Sheet	2	4	8	
Drainage Plans Technical Subtotal						215	
6b.13	Quality Assurance/Quality Control		LS	%	5%	11	
6b.14	Supervision		LS	%	5%	11	
6. Drainage Plans Total						237	

Project Activity 7: Utilities

Estimator:

Phase 1 - LAKE COUNTY
0

Representing	Print Name	Signature / Date
Lake County		
DRMP		

NOTE: Signature Block is optional, per District preference

Task No.	Task	Units	No of Units	Hours/ Unit	Total Hours	Comments
7.1	Utility Kickoff Meeting	LS	1	5	5	Meeting is listed below
7.2	Identify Existing Utility Agency Owners (UAOC(s))	LS	1	9	9	
7.3	Make Utility Contacts	LS	1	27	27	1 hour per utility --> 9 utilities --> 3 contacts 3x9 = 27
7.4	Exception Processing	LS	1	0	0	
7.5	Preliminary Utility Meeting	LS	1	5	5	Meeting is listed below=
7.6	Individual/Field Meetings	LS	1	30	30	Meetings are listed below
7.7	Collect and Review Plans and Data from UAOC(s)	LS	1	27	27	3 times. Once for initial markups, once for design RGB's and once in response to review of UWS
7.8	Subordination of Easements Coordination	LS	1	0	0	
7.9	Utility Design Meeting	LS	1	12	12	Meeting is listed below
7.10	Review Utility Markups & Work Schedules, and Processing of Schedules & Agreements	LS	1	36	36	4 hours per utility --> 4*9 = 36 hrs
7.11	Utility Coordination/Followup	LS	1	55	55	2 hrs for 7 utilities; 24 hrs for Duke --> 2*7+2*24
7.12	Utility Constructability Review	LS	1	18	18	2 hrs per utilities --> 2*9 = 18 hrs
7.13	Additional Utility Services	LS	1	0	0	
7.14	Processing Utility Work by Highway Contractor (UWHC)	LS	1	0	0	
7.15	Contract Plans to UAOC(s)	LS	1	9	9	
7.16	Certification/Close-Out	LS	1	9	9	
7.17	Other Utilities	LS	1	0	0	
7. Utilities Total					242	

Project Activity 7: Utilities

Technical Meetings	Units	No of Units	Hours/ Unit	Total Hours	PM Attendance at Meeting Required?	Number
Kickoff (see 7.1)	EA	1	5	5	yes	1
Preliminary Meeting (see 7.5)	EA	1	5	5	yes	0
Individual UAO Meetings (see 7.6)	EA	5	5	25	no	0
Field Meetings (see 7.6)	EA	1	5	5	no	0
Design Meeting (see 7.9)	EA	1	12	12	yes	0
Other Meetings (this is automatically added into Utilities Total (cell F22))	EA	0	0	0		0
Total Meetings				52	Total Project Manager Meetings (carries to Tab 3)	1

Carries to Tab 3

Project Activity 8: Environmental Permits

Estimator: GPM

#REF!
#REF!

Representing	Print Name	Signature / Date
Lake County		
DRMP		

NOTE: Signature Block is optional, per District preference

Task No.	Task	Units	No. of Units	Hours/ Units	Total Hours	Comments
Environmental Permits, Compliances and Clearances						
8.1	Preliminary Project Research	LS	1	20	20	
Permits						
8.2	Field Work					
8.2.1	Pond Site Alternatives	LS	0	0	0	
8.2.2	Establish Wetland Jurisdictional Lines and Assessments	LS	1	20	20	Conduct a field assessment to assess existing conditions necessary for permitting. Assume no wetland impacts as a result of this project.
8.2.3	Species Surveys	LS	1	180	180	Conduct gopher tortoise, scrub jay, and sand skink surveys consistent with the SOS.
8.2.4	Archeological Surveys	LS	0	0	0	
8.3	Agency Verification of Wetland Data	LS	0	12	12	Agency field meeting consistent with the SOS
8.4 Complete And Submit All Required Permit Applications						
8.4.1	Complete and Submit All Required Wetland Permit Applications	LS	1	165	165	Prepared a SJRWMD ERP application, response to RAI questions, and review permit conditions consistent with the SOS.
8.4.2	Complete and Submit All Required Species Permit Applications	LS	1	35	35	Prepared a FFWCC Gopher Tortoise Relocation Permit application consistent with the SOS.
8.5	Prepare Dredge and Fill Sketches (as needed)	LS	0	0	0	
8.6	Prepare USCG Permit Sketches	LS	0	0	0	
8.7	Prepare Water Management District Right-of-Way Occupancy Permit	LS	0	0	0	
8.8	Prepare Coastal Construction Control Line (CCCL) Permit Application	LS	0	0	0	
8.9	Prepare Tree Permit Information	LS	0	0	0	
8.10	Mitigation Design	LS	0	0	0	

Project Activity 8: Environmental Permits

Task No.	Task	Units	No. of Units	Hours/ Units	Total Hours	Comments
8.11	Mitigation Coordination and Meetings	LS	1	32	32	Coordination with gopher tortoise recipient site.
8.12	Other Environmental Permits	LS	0	0	0	
Environmental Clearances/Reevaluations						
Technical support to Department for Environmental Clearances and Reevaluations (use when consultant provides technical support only)						
8.13	NEPA or SEIR Reevaluation	LS	0	0	0	
8.13.1	Archaeological and Historical Features	LS	0	0	0	
8.13.2	Wetland Impact Analysis	LS	0	0	0	
8.13.3	Essential Fish Habitat	LS	0	0	0	
8.13.4	Wildlife and Habitat Impact Analysis	LS	0	0	0	
8.13.5	Section 7 or Section 10 Consultation	LS	0	0	0	
8.13.6	Preparation of Environmental Clearances and Reevaluations (use when consultant prepares all documents associated with reevaluation)	LS	0	0	0	
8.14.1	NEPA or SEIR Reevaluation	LS	0	0	0	
8.14.2	Archaeological and Historical Features	LS	0	0	0	
8.14.3	Wetland Impact Analysis	LS	0	0	0	
8.14.4	Essential Fish Habitat	LS	0	0	0	
8.14.5	Wildlife and Habitat Impact Analysis	LS	1	85	85	Prepare sand skink and scrub jay reports consistent with the SOS.
8.14.6	Section 7 or Section 10 Consultation	LS	0	0	0	
8.15	Contamination Impact Analysis	LS	0	0	0	
8.16	Asbestos Survey	LS	0	0	0	
Environmental Permits, Compliance, and Clearances/Reevaluations Technical Subtotal					549	
Meetings listed below.						
8.17	Technical Meetings	LS	1	71	71	
8.18	Quality Assurance/Quality Control	LS	%	5%	27	
8.19	Supervision	LS	%	5%	27	
Environmental Permits, Compliance and Clearances Nontechnical Subtotal					125	

Project Activity 8: Environmental Permits

Task No.	Task	Units	No. of Units	Hours/ Units	Total Hours	Comments
8.20	Coordination	LS	%	2%	13	
8. Environmental Permits, Compliance and Clearances Total					687	

Technical Meetings		Units	No of Units	Hours/ Unit	Total Hours	PM Attendance at Meeting Required?	Number
WMID		EA	0	0	8		0
NMFS		EA	0	0	0		0
ACOEUFACE		EA	0	0	0		0
USOG		EA	0	0	0		0
USFWS		EA	0	0	40		0
FFWCC		EA	0	0	8		0
FDOT		EA	0	0	0		0
Other Meetings		EA	3	5	15		0
Subtotal Technical Meetings					71	Subtotal Project Manager Meetings	0
Progress Meetings (if required by FDOT)		EA	0	0	0	PM attendance at Progress Meetings is manually entered on General Task 3	--
Phase Review Meetings		EA	0	0	0	PM attendance at Phase Review Meetings is manually entered on General Task 3	--
Total Meetings					71	Total Project Manager Meetings (Carries to Tab 3)	0

Carries to 8.18

Carries to Tab 3

Project Activity 9: Structures Summary and Miscellaneous Tasks and Drawings

Estimator:

Task No.	Task	Units	Design and Production Staffhours				Comments				
			No. of Units	Hours per Unit	No. of Sheets	Total					
	General Drawings										
9.1	Key Sheet and Index of Drawings	Sheet	0	0	0	0					
9.2	Project Layout	Sheet	0	0	0	0					
9.3	General Notes and Bid Item Notes	Sheet	0	0	0	0					
9.4	Miscellaneous Common Details	Sheet	0	0	0	0					
9.5	Incorporate Report of Core Borings	Sheet	0	0	0	0					
9.6	Existing Bridge Plans	LS	1	0		0					
9.7	Assemble Plan Summary Boxes and Quantities	LS	1	0		0					
9.8	Cost Estimate	LS	1	0		0					
9.9	Technical Special Provisions	LS	1	0		0					
Structures - Summary and Miscellaneous Tasks and Drawings Subtotal					0	0					
Task No.	Task	Total	Task 10	Task 11	Task 12	Task 13	Task 14	Task 15	Task 16	Task 17	Task 18
10-16	Bridge 1	0	0	0	0	0	0	0	0	0	
10-16	Bridge 2	0									
10-16	Bridge 3	0									
10-16	Bridge 4	0								0	
17	Retaining Walls	0									68
18	Miscellaneous Structures	68									68
Structures Technical Subtotal		68	0	0	0	0	0	0	0	0	68
Task No.	Task	Units	No. of Units	Hours per Unit	Total	Comments					

Project Activity 9: Structures Summary and Miscellaneous Tasks and Drawings

9.10	Field Reviews	LS	1	0	0		
9.11	Technical Meetings	LS	1	15	15	Meetings are listed below	
9.12	Quality Assurance/Quality Control	LS	%	5%	3	This should be (5% to 10%) x ("Structures - Summary and Miscellaneous Tasks and Drawings Subtotal, cell G21" + "Structures Technical Subtotal, cell C35")	
9.13	Independent Peer Review	LS	1	0	0		
9.14	Supervision	LS	%	5%	3	This should be (3% to 7%) x ("Structures - Summary and Miscellaneous Tasks and Drawings Subtotal, cell G21" + "Structures Technical Subtotal, cell C35")	
Structures Nontechnical Subtotal					21		
9.15	Coordination	LS	1	12	12	Traffic/Geotech	
9. Structures - Summary and Miscellaneous Tasks and Drawings Nontechnical and Coordination Total					33		
Technical Meetings		Units	No of Units	Hours/ Unit	Total Hours	PM Attendance at Meeting Required?	Number
	BDR Coordination/Review	EA	0	0	0		0
	90/100% Comment Review	EA	0	0	0		0
	Aesthetics Coordination	EA	0	0	0		0
	Regulatory Agency	EA	0	0	0		0
	Local Governments (cities, counties)	EA	1	4	4		0
	Utility Companies	EA	1	4	4		0
	Other Meetings	EA	0	0	0		0
	Subtotal Technical Meetings				8		0
	Progress Meetings (if required by FDOT)	EA	4	0.5	2	PM attendance at Progress Meetings is manually entered on General Task 3	--
	Phase Review Meetings	EA	1	5	5	PM attendance at Phase Review Meetings is manually entered on General Task 3	--
Total Meetings					15	Total Project Manager Meetings (carries to Tab 3)	0

Carries to 9.11

Carries to Tab 3

Project Activity 18: Miscellaneous Structures

Estimator:

Task No.	Task	Unit	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
Concrete Box Culvert							
18.1	Concrete Box Culverts	EA	0	0		0	
18.2	Concrete Box Culverts Extensions	EA Extension	0	0		0	
18.3	Concrete Box Culvert Data Table Plan Sheets	Sheet	0	0	0	0	
18.4	Concrete Box Culvert Special Details Plan Sheets	Sheet	0	0	0	0	
Strain Poles							
18.5	Steel Strain Poles	Initial Config EA Adt Config	0 0 1	0 0 60		0 0 60	4 span square configuration
18.6	Concrete Strain Poles	EA Adt Config	0 0	0 0		0 0	
18.7	Strain Pole Data Table Plan Sheets	Sheet	1	8	1	8	
18.8	Strain Pole Special Details Plan Sheets	Sheet	0	0	0	0	
Mast Arms							
18.9	Mast Arms	EA Design	0	0		0	
18.10	Mast Arms Data Table Plan Sheets	Sheet	0	0	0	0	
18.11	Mast Arm Special Details Plan Sheets	Sheet	0	0	0	0	
Overhead/Cantilever Sign Structures							
18.12	Cantilever Sign Structures	EA Design	0	0		0	
18.13	Overhead Span Sign Structures	EA Design	0	0		0	
18.14	Special (Long Span) Overhead Span Sign Structures	EA Design	0	0		0	
18.15	Monotubes Overhead Sign Structure	EA Design	0	0		0	
18.16	Bridges Mounted Signs (Attached to Support)	EA Design	0	0		0	
18.17	Overhead and Cantilever Sign Structures Data Table Plan Sheets	Sheet	0	0	0	0	
18.18	Overhead and Cantilever Sign Structures Special Details Plan Sheets	Sheet	0	0	0	0	
High Mast Lighting							
18.19	Non-Standard High Mast Lighting Structures	EA Design	0	0		0	
18.20	High Mast Lighting Special Details Plan Sheets	Sheet	0	0	0	0	
Noise Barrier Walls (Ground Mount)							
18.21	Horizontal Wall Geometry	EA Wall	0	0		0	
18.22	Vertical Wall Geometry	EA Wall	0	0		0	
18.23	Summary of Quantities - Aesthetic Requirements	Sheet	0	0	0	0	
18.24	Control Drawings	Sheet	0	0	0	0	
18.25	Design of Noise Barrier Walls Covered by Standards	EA Design	0	0		0	
18.26	Design of Noise Barrier Walls Not Covered by Standards	EA Design	0	0		0	
18.27	Aesthetic Details	LS	1	0		0	
Special Structures							
18.28	Fender System	LS	1	0		0	
18.29	Fender System Access	LS	1	0		0	
18.30	Special Structures	LS	1	0		0	

Project Activity 18: Miscellaneous Structures

18.31 Other Structures	LS	1	0	0	
18: Structures - Miscellaneous Total		1	0	69	

Project Activity 19: Signing and Pavement Marking Analysis

Estimator:

Phase 1 - LAKE COUNTY

0

Representing	Print Name	Signature / Date
Lake County		
DRMP		

NOTE: Signature Block is optional, per District preference

Task No.	Task	Units	No. of Units	Hours/Units	Total Hours	Comments
19.1	Traffic Data Analysis	LS	1	2	2	Proposed geometry review
19.2	No Passing Zone Study	LS	1	0	0	
19.3	Reference and Master Design File	LS	1	78	78	Low range (30 hrs for set up, 38 hrs for miles of project (.95 mile *40hr per mile), 10 hr for 2 intersection (@ Hancock road and Grassy Lake road))
19.4	Multi-Post Sign Support Calculations	EA	1	0	0	
19.5	Sign Panel Design Analysis	EA	1	0	0	
19.6	Sign Lighting/Electrical Calculations	EA	1	0	0	
19.7	Quantities	LS	1	24	24	12 sheets at 2 hrs per sheet
19.8	Cost Estimate	LS	1	15	15	5 submittals at 3 hrs each
19.9	Technical Special Provisions	LS	1	0	0	
19.10	Other Signing and Pavement Marking	LS	1	0	0	
Signing and Pavement Marking Analysis Technical Subtotal					119	
19.11	Field Reviews	LS	1	8	8	2 people 4 hrs
19.12	Technical Meetings	LS	1	18	18	Meetings are listed below
19.13	Quality Assurance/Quality Control	LS	%	5%	6	
19.14	Independent Peer Review	LS	%	0%	0	
19.15	Supervision	LS	%	5%	6	
Signing and Pavement Marking Analysis Nontechnical Subtotal					38	
19.16	Coordination	LS	%	2%	3	
19. Signing and Pavement Marking Analysis Total					160	

Project Activity 19: Signing and Pavement Marking Analysis

Task No.	Task	Units	No. of Units	Hours/ Unit	Total Hours	Comments	Number
Technical Meetings							
	Sign Panel Design	EA	0	0	0		0
	Queue Length Analysis	EA	0	0	0		0
	Local Governments (cities, counties)	EA	1	4	4		0
	Other Meetings	EA	0	0	0		0
	Subtotal Technical Meetings				4	Subtotal Project Manager Meetings	0
	Progress Meetings (if required by FDOT)	EA	8	0.5	4	<i>PM attendance at Progress Meetings is manually entered on General Task 3</i>	--
	Phase Review Meetings	EA	2	5	10	<i>PM attendance at Phase Review Meetings is manually entered on General Task 3</i>	--
	Total Meetings				18	Total Project Manager Meetings (carries to Tab 3)	0

Carries to 19.12

Carries to Tab 3

Project Activity 20: Signing and Pavement Marking Plans

Estimator:

Representing	Print Name	Signature / Date
Lake County		
DRMP		

NOTE: Signature Block is optional, per District preference

Task No.	Task	Scale	Units	No of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
20.1	Key Sheet		Sheet	1	4	1	4	Lake County SPM Key Sheet
20.2	Summary of Pay Items		LS	1	0		0	
20.3	Tabulation of Quantities		Sheet	1	12	1	12	2 tabulation Sheet 12 hr (8hrs for first sheet+ 4hrs for second)
20.4	General Notes/Pay Item Notes		Sheet	1	4	1	4	Lake County Notes
20.5	Project Layout		Sheet	0	0	0	0	
20.6	Plan Sheet	40	Sheet	11	3	11	33	12 sheets (3hr per sheet) 9 sheets for Citrus Grove road + 2 sheets for Hancock road + 1 sheet for Grassy Lake road.
20.7	Typical Details		EA	0	0		0	
20.8	Guide Sign Worksheet(s)		EA	0	0		0	
20.9	Traffic Monitoring Site		EA	0	0		0	
20.10	Cross Sections		EA	0	0		0	
20.11	Special Service Point Details		EA	0	0		0	
20.12	Special Details		LS	1	0		0	
20.13	Interim Standards		LS	1	0		0	
Signing and Pavement Marking Plans Technical Subtotal						14	53	
20.14	Quality Assurance/Quality Control		LS		5%		3	
20.15	Supervision		LS		5%		3	
20. Signing and Pavement Marking Plans Total						14	59	

Project Activity 21: Signalization Analysis

Estimator:

Phase 1 - LAKE COUNTY
0

Representing	Print Name	Signature / Date
Lake County		
DRMP		

NOTE: Signature Block is optional, per District preference

Task No.	Task	Units	No. of Units	Hours/ Units	Total Hours	Comments
21.1	Traffic Data Collection	LS	1	0	0	
21.2	Traffic Data Analysis	PI	1	3	3	1 intersection (3hr per intersection)
21.3	Signal Warrant Study	LS	1	0	0	
21.4	System Timings	LS	1	0	0	
21.5	Reference and Master Signalization Design File	PI	1	25	25	1 Box span design (Citrus Grove road at Hancock) 25 hours
21.6	Reference and Master Interconnect Communication Design File	LS	1	8	8	Layout of Conduit for future signal interconnect. Conduit and pull boxes will only be installed in this project.
21.7	Overhead Street Name Sign Design	EA	2	2	4	2 signs (US 27, Citrus Grove)
21.8	Pole Elevation Analysis	LS	1	2	2	2 hr for first intersection
21.9	Traffic Signal Operation Report	LS	1	0	0	
21.10	Quantities	LS	1	5	5	1 intersection
21.11	Cost Estimate	LS	1	9	9	3 submittals (3hrs per submittal)
21.12	Technical Special Provisions	LS	1	0	0	
21.13	Other Signalization Analysis	LS	1	0	0	
Signalization Analysis Technical Subtotal						56
21.14	Field Reviews	LS	1	8	8	2 people 4 hrs
21.15	Technical Meetings	LS	1	12	12	Meetings are listed below
21.16	Quality Assurance/Quality Control	LS	%	5%	3	
21.17	Independent Peer Review	LS	%	0%	0	
21.18	Supervision	LS	%	5%	3	

Project Activity 21: Signalization Analysis

Signalization Analysis Nontechnical Subtotal	26	
--	----	--

Project Activity 21 : Signalization Analysis

21.19	Coordination	LS	%	2%	2		
21. Signalization Analysis Total							
					84		
Technical Meetings		Units	No of Units	Hours/ Unit	Total Hours	PM Attendance at Meeting Required?	Number
	FDOT Traffic Operations	EA	0	0	0		0
	FDOT Traffic Design	EA	0	0	0		0
	Power Company (service point coordination)	EA	0	0	0		0
	Maintaining Agency (cities, courthouses)	EA	0	0	0		0
	Railroads	EA	0	0	0		0
	Other Meetings	EA	0	0	0		0
	Subtotal Technical Meetings				0	Subtotal Project Manager Meetings	0
	Progress Meetings (if required by FDOT)	EA	4	0.5	2	PM attendance at Progress Meetings is manually entered on General Task 3	--
	Phase Review Meetings	EA	2	5	10	PM attendance at Phase Review Meetings is manually entered on General Task 3	--
	Total Meetings				12	Total Project Manager Meetings (carries to Tab 3)	0

Carries to 21.15

Carries to Tab 3

Project Activity 22: Signalization Plans

Estimator:

Phase 1 - LAKE COUNTY
0

Representing	Print Name	Signature / Date
Lake County		
DRMP		

NOTE: Signature Block is optional, per District preference

Task No.	Task	Scale	Units	No of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments	
22.1	Key Sheet		Sheet	1	4	1	4	Lake County Key Sheet	
22.2	Summary of Pay Items		Sheet	0	0	0	0		
22.3	Tabulation of Quantities		Sheet	1	8	1	8	1 sheet (8hr for first sheet)	
22.4	General Notes/Pay Item Notes		Sheet	1	4	1	4	Lake County Notes	
22.5	Plan Sheet	40	Sheet	1	4	1	4	1 sheet (4 hrs for first sheet)	
22.6	Interconnect Plans		Sheet	0	0	0	0	installed in signing and marking plans	
22.7	Traffic Monitoring Site		EA	0	0		0		
22.8	Guide Sign Worksheet		EA	1	2		2	2 panels (Citrus Grove Road, Hancock Road)	
22.9	Special Details		Sheet	0	0	0	0		
22.10	Special Service Point Details		EA	0	0		0		
22.11	Mast Arm/Monotube Tabulation Sheet		PI	0	0		0		
22.12	Strain Pole Schedule		PI	1	2		2	1 intersection 2 hrs per intersection	
22.13	TCP Signal (Temporary)		EA	0	0		0		
22.14	Temporary Detection Sheet		PI	0	0		0		
22.15	Utility Conflict Sheet	40	Sheet	1	6	1	6	Utility information incorporation 1 intersection (8hr per intersection)	
22.16	Interim Standards		LS	1	0		0		
Signalization Plans Technical Subtotal							5	30	
22.17	Quality Assurance/Quality Control		LS	%	5%		2		
22.18	Supervision		LS	%	5%		2		
22. Signalization Plans Total							5	34	

Project Activity 23: Lighting Analysis

Estimator:

Phase 1 - LAKE COUNTY

0

Representing	Print Name	Signature / Date
Lake County		
DRMP		

NOTE: Signature Block is optional, per District preference

Task No.	Task	Units	No. of Units	Hours/ Units	Total Hours	Comments
23.1	Lighting Justification Report	LS	1	0	0	
23.2	Lighting Design Analysis Report	LS	1	20	20	design of impacts to existing turnpike lighting at the intersection of Hancock road and Citrus Grove Road
23.3	Aeronautical Evaluation	LS	1	0	0	
23.4	Voltage Drop Calculations	LS	1	0	0	
23.5	FDEP Coordination and Report	LS	1	0	0	
23.6	Reference and Master Design Files	LS	1	0	0	
23.7	Temporary Lighting	LS	1	0	0	
23.8	Design Documentation	LS	1	0	0	
23.9	Quantities	LS	1	1	1	To be included in the signal plans (1signal sheet expected)
23.10	Cost Estimate	LS	1	2	2	cost to be included in the signal plans
23.11	Technical Special Provisions	LS	1	0	0	
23.12	Other Lighting Analysis	LS	1	0	0	
Lighting Analysis Technical Subtotal					23	
23.13	Field Reviews	LS	1	0	0	
23.14	Technical Meetings	LS	1	16	16	
23.15	Quality Assurance/Quality Control	LS	%	5%	1	
23.16	Independent Peer Review	LS	%	0%	0	
23.17	Supervision	LS	%	5%	1	
Lighting Analysis Nontechnical Subtotal					18	
23.18	Coordination	LS	%	2%	1	
23. Lighting Analysis Total					42	

Project Activity 23: Lighting Analysis

Technical Meetings	Units	No of Units	Hours/ Unit	Total Hours	PM Attendance at Meeting Required?	Number
FDOT Lighting Design	EA	0	0	0		0
FDOT Traffic Design	EA	0	0	0		0
Power Company (service point coordination)	EA	0	0	0		0
Maintaining Agency (cities, counties)	EA	1	4	4		0
Airport authority	EA	0	0	0		0
FDPEP Lighting (coast areas)	EA	0	0	0		0
Other Meetings	EA	0	0	0		0
Subtotal Technical Meetings				4		0
Progress Meetings (if required by FDOT)	EA	4	0.5	2	PM attendance at Progress Meetings is manually entered on General Task 3	--
Phase Review Meetings	EA	2	5	10	PM attendance at Phase Review Meetings is manually entered on General Task 3	--
Total Meetings				16	Total Project Manager Meetings (carries to Tab 3)	0

Carries to 23.14

Carries to Tab 3

24. Lighting Plans

Estimator:

Representing Lake County	Print Name	Signature / Date
DENMP		

NOTE: Signature Block is optional, per District preference

Task No.	Task	Scale	Units	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
24.1	Key Sheet		Sheet	0	0	0	0	In signalization plans
24.2	Summary of Pay Items Including Designer Interface (TRNSP-ort) Input		Sheet	0	0	0	0	
24.3	Tabulation of Quantities		Sheet	0	0	0	0	
24.4	General Notes/Pay Item Notes		Sheet	1	4	1	4	notes for lighting impacts to be in signalization plans
24.5	Pole Data, Legend and Criteria		Sheet	0	0	0	0	
24.6	Service Point Details		Sheet	0	0	0	0	
24.7	Project Layout		Sheet	0	0	0	0	
24.8	Plan Sheet	40	Sheet	1	4	1	4	to be included in signalization plans
24.9	Special Details		Sheet	0	0	0	0	
24.10	Temporary Lighting Data and Details		Sheet	0	0	0	0	
24.11	Traffic Control Plan Sheets		Sheet	0	0	0	0	
24.12	Interim Standards		LS	1	0	2	8	
			Lighting Plans Technical Subtotal			2	8	
24.13	Quality Assurance/Quality Control		LS	%	5%		1	
24.14	Supervision		LS	%	5%		1	
			24. Lighting Plans Total			2	10	

27. Survey

Estimator: Al Quicke

Phase 1 - LAKE COUNTY
0

Representing	Print Name	Signature / Date
Lake County		
DRMP		

NOTE: Signature Block is optional per District preference

Task No.	Task	Units	No of Units	Field Crew Days/Unit	Crew Days	Field Support Hours / Crew Days	Field Support Hours	Office Support Hours / Crew Days	Office Support Hours	Comments
27.1	Horizontal Project Control (HPC)									
	2-Lane Roadway	Mile	0.95	1.58	1.50	0.50	0.75	3.00	4.50	Primary Horizontal Survey Control tied to Lake County GIS monuments and/or surrounding published control.
	Multi-lane Roadway	Mile			0.00		0.00		0.00	
	Interstate	Mile			0.00		0.00		0.00	
27.2	Vertical PC / Bench Line									
	2-Lane Roadway	Mile	0.95	1.06	1.00	0.50	0.50	4.00	4.00	Primary Vertical Survey Control tied to Lake County GIS monuments and/or surrounding published control.
	Multi-lane Roadway	Mile			0.00		0.00		0.00	
	Interstate	Mile			0.00		0.00		0.00	
27.3	Alignment and Existing RW Lines									
		Mile	0.95	3.17	3.00	0.50	1.50	3.00	9.00	The existing right of way. Stake alignment proposed Citrus Grove Road per design.
27.4	Aerial Targets									
	2-Lane Roadway	EA			0.00		0.00		0.00	n/a
	Multi-lane Roadway	EA			0.00		0.00		0.00	
	Interstate	EA			0.00		0.00		0.00	
27.5	Reference Points									
	2-Lane Roadway	EA	24.00	12.00	2.00	0.50	1.00	3.00	6.00	Reference staked alignments at 1000' intervals and changes in direction.
	Multi-lane Roadway	EA			0.00		0.00		0.00	
	Interstate	EA			0.00		0.00		0.00	
	Reference Points	"B"								
	Non Alignment Points/Approximate	EA			0.00		0.00		0.00	

27. Survey

Task No.	Task	Units	No of Units	Field Crew Days/Unit	Crew Days	Field Support		Office Support		Comments
						Hours / Crew Days	Hours	Hours / Crew Days	Hours	
27.6	Topography/DTM (3D)	Mile	0.95	7.39	7.00	0.50	3.50	3.00	21.00	Estimating 750' per day for 3000 feet of Citrus Grove Road
27.7	Planimetric (2D)	Mile			0.00		0.00		0.00	
27.8	Roadway Cross-Sections/Profiles	Mile	0.95	1.75	1.66	0.50	0.83	3.00	4.97	1000' Check cross-sections to verify DTM
27.9	Side Street Surveys									
27.10	Underground Utilities									
	Designates	Mile/Site	0.57	1.75	1.00	0.50	0.50	2.00	2.00	Locate Estimated 1 utility line (CenturyLink) along Citrus Grove Road based on field review (5000' x 1 utility = 5000' of designation). Assuming 15 VNH test holes for conflict resolution. Including 4 SUE Clearance locations for signal strain poles (5'x5' X clearances)
	Locates	Point	19	0.21	4.00	1.00	4.00	2.00	8.00	
	Survey		25%	5.00	1.25	0.50	0.82	3.00	3.75	
27.11	Outfall Survey	Mile			0.00		0.00		0.00	n/a
27.12	Drainage Survey	EA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Included in 27.10
27.13	Bridge Survey	EA			0.00		0.00		0.00	n/a
	Minor / Major									
27.14	Channel Survey	EA			0.00		0.00		0.00	n/a
27.15	Pond Site Survey	EA			0.00		0.00		0.00	n/a
27.16	Mitigation Survey	Mile			0.00		0.00		0.00	n/a
27.17	Jurisdiction Line Survey	Mile			0.00		0.00		0.00	n/a
27.18	Geotechnical Support	EA	1.00	25	4.00	0.50	2.00	2.00	8.00	assuming 100 borings.

27. Survey

Task No.	Task	Units	No of Units	Field Crew Days/Unit	Crew Days	Field Support Hours / Crew Days	Field Support Hours	Office Support Hours / Crew Days	Office Support Hours	Comments
27.19	Sectional / Grant Survey	Corner	9	0.33	3.00	1.00	3.00	4.00	12.00	Survey of Section 5, T 22S, R28E
		Mile			0.00		0.00		0.00	
27.20	Subdivision Location	Block			0.00		0.00		0.00	n/a
27.21	Maintained RW	Mile			0.00		0.00		0.00	n/a
27.22	Boundary Survey	EA			0.00		0.00		0.00	n/a
27.23	Water Boundary Survey	EA			0.00		0.00		0.00	n/a
27.24	R/W Staking / R/W Line	EA			0.00		0.00		0.00	n/a
		Mile			0.00		0.00		0.00	
27.25	R/W Monumentation	Point			0.00		0.00		0.00	n/a
27.26	Line Cutting	Mile	1.42	3.52	5.00					
27.27	Work Zone Safety		34	0.125	4.30					
27.28	Miscellaneous Surveys				0.00		0.00		0.00	
Survey Subtotal				Crew Days	39	Field Support Hours	18	Office Support Hours	83	
27.29	Supplemental Surveys				39	0	0		0	THE % FOR SUPPLEMENTAL WILL BE DETERMINED AT NEGOTIATIONS. THIS ITEM CAN ONLY BE USED IF AUTHORIZED IN WRITING BY THE DISTRICT SURVEYOR
27.30	Document Research	Units	8.00						8	
27.31	Field Reviews	Units	8.00						8	

27. Survey

Task No.	Task	Units	No of Units	Field Crew Days/Unit	Crew Days	Field Support Hours / Crew Days	Field Support Hours	Office Support Hours / Crew Days	Office Support Hours	Comments	
27.32	Technical Meetings	LS	0.00						0		
27.33	Quality Assurance / Quality Control	LS						5%	4		
27.34	Supervision	LS						5%	6		
27.35	Coordination	LS						2%	2		
27. Survey Total					Crew Days	39	Field Support Hours	18	Office Support Hours	111	

SPLS =
 PLS =
 Office Support =
 Total Hours = 129

Technical Meetings	Units	No of Units	Hours/ Unit	Total Hours	PM Attendance at Meeting Required?	Number
Kickoff Meeting with FDOT	EA	0	0	0		0
Baseline Approval Review	EA	0	0	0		0
Network Control Review	EA	0	0	0		0
Vertical Control Review	EA	0	0	0		0
Local Governments (cities, counties)	EA	0	0	0		0
Final Submittal Review	EA	0	0	0		0
Other Meetings	EA	0	0	0		0
Subtotal Technical Meetings				0	Subtotal PM Meetings	0
Progress Meetings (if required by FDOT)	EA	0	0	0	**	--
Phase Review Meetings	EA	0	0	0	**	--
Total Meetings				0	Total PM Mtgs (carries to Tab 3)	0

Carries to Tab 3
 Carries to Tab 3
 ** Project Manager attendance at progress, phase and field review meetings are manually entered on General Task 3

29. Mapping

Estimator:

Representing	Print Name	Signature / Date
Lake County		
DRMP		

NOTE: Signature Block is optional, per District preference

Task No.	Task	Units	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
	Master CADD File						
29.1	Alignment	Mile	0.57	2		1	
29.2	Section and 1/4 Section Lines	Section	1	2		2	
29.3	Subdivisions / Property Lines	EA	2	0		0	
29.4	Existing RW	Mile	0.57	2		1	
29.5	Topography	Mile	0.57	4		2	
29.6	Parent Tract Properties/Existing Easements	Parcel	5	1		5	
29.7	Proposed RW Requirements	Parcel	5	1		5	
29.8	Limits of Construction	Mile	0.57	1		1	
29.9	Jurisdictional/Agency Lines	Linear Mile	0	0		0	
	Sheet Files						
29.10	Control Survey Cover Sheet	Sheet	0	0		0	
29.11	Control Survey Key Sheet	Sheet	0	0		0	
29.12	Control Survey Detail Sheet	Sheet	0	0		0	
29.13	RW Map Cover Sheet	Sheet	0	0		0	
29.14	RW Map Key Sheet	Sheet	0	0		0	
29.15	RW Map Detail Sheet	Sheet	0	0		0	
29.16	Maintenance Map Cover Sheet	Sheet	0	0		0	
29.17	Maintenance Map Key Sheet	Sheet	0	0		0	
29.18	Maintenance Map Detail Sheet	Sheet	0	0		0	
29.19	Reference Point Sheet	Sheet	0	0		0	
29.20	Project Network Control Sheet	Sheet	0	0		0	
29.21	Table of Ownership Sheet	Sheet	0	0		0	

29. Mapping

Task No.	Task	Units	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
	Miscellaneous						
29.22	Parcel Sketches	Parcel	16	5		80	
29.23	TITF Sketches	Parcel	0	0		0	
29.24	Other Specific Purpose Survey Map	EA	0	0		0	
29.25	Boundary Survey(s) Map	EA	0	0		0	
29.26	R/W Monumentation Map	Sheet	0	0		0	
29.27	Title Search Map	LS	1	1		1	
29.28	Title Search Report	LS	5	1		5	Review Title searches provided.
29.29	Legal Descriptions	Parcel	16	2		32	
29.30	Final Maps/Plans Comparison	Sheet	0	0		0	
	Mapping Technical Subtotal					135	
29.31	Field Reviews	EA	1	0		0	
29.32	Technical Meetings	LS	1	8		8	
29.33	Quality Assurance/Quality Control	EA	%	5%		7	
29.34	Supervision	EA	%	5%		7	
	Mapping Nontechnical Subtotal					22	
29.4	Coordination	LS	%	2%		3	
29.4	Supplemental Mapping	LA	%	0%		0	
	29. Mapping Total					160	
	Technical Meetings	Units	No of Units	Hours/ Unit	Total Hours	PM Attendance at Meeting Required?	Number
	Kickoff meeting	EA	0	0	0		0
	Control map review	EA	0	0	0		0
	45/60/90/final map review	EA	0	0	0		0
	Other meetings	EA	2	4	8		0
	Subtotal Technical Meetings				8		0
	Progress Meetings (if required by FDOT)	EA	0	0	0		0
	Phase Review Meetings	EA	0	0	0		0
	Total Meetings				8	Total Project Manager Meetings (carries to Tab 3)	0

Continued on 29.31

Continued on TAB 3



Ardaman & Associates, Inc.

Geotechnical, Environmental and
Material Control

April 8, 2016
Proposal File No. 16-60-167
Revised April 18, 2016

DRMP
1900 SW 34th Street
Suite 204
Gainesville, Florida 32608

Attention: Mr. Chris Towne, P.E.

Subject: Proposal for Subsurface Soil Exploration and
Geotechnical Engineering Evaluation
Relative to Citrus Grove Road, Phase III (Second County Phase)
Lake County, Florida

Dear Mr. Towne:

As requested, we are pleased to present this proposal for conducting a subsurface soil exploration and geotechnical engineering evaluation for the subject project. Based on our understanding of the project and information provided by you, the project consists of the following elements:

- Approximately 4,500 feet of roadway typically with two lanes in each direction. We have assumed that up to 4 feet of cut and/or fill will be required as part of the roadway mass grading.
- One permanent stormwater retention pond (2.5 acre) and two swales
- Four (4) Strain Poles for Signals.

The scope of our work will include determining if the soil characteristics are suitable to construct the proposed roadway and strain poles. In addition, we will explore the soil stratigraphy in the pond and swale areas and provide results of soil permeability tests. We will also estimate the normal seasonal high groundwater table at the boring locations.

The following summarizes our proposed scope of work and associated fees for conducting the subject exploration.

FIELD EXPLORATION

The field exploration program will include the following:

Description	Number of Borings	Depth Below Ground Surface (feet)
General Roadway	45 Auger	21 @ 5, 15 @ 10, 9 @ 20
Ponds	5 Auger	20
Swales	4 Auger	20
Strain Poles	4 SPT	25

The number of roadway borings is based on a general frequency of one boring per 100 feet of mainline (i.e. as requested by you), typically to 5 feet deep (10 feet deep in cut areas) with a 20-foot deep boring in lieu of a 5-foot deep boring every approximate 500 feet. For ponds, we are proposing two borings per acre of pond size.

The auger borings will be drilled using a 4-inch diameter truck-mounted continuous flight auger or a 3.5-inch diameter manual bucket auger. Each sample will be removed from the auger in the field and then examined and visually classified by our crew chief. Representative portions will be sealed and packaged for transportation to our laboratory for further analysis as required. Water level observations will be made in the boreholes during the drilling operation.

A total of five (5) field permeability tests will be performed at the locations of the proposed retention ponds and swale. The field permeability tests will include installing a solid-walled PVC casing, snugly fit, into a 4-inch diameter auger boring. The bottom of the pipe will be open and raised 1 foot above the bottom of the boring. The bottom 1 foot of the boring will be gravel-packed. The rate water is taken in by the formation is measured and used to calculate permeability. The test will be run as a "constant head" test by maintaining the water level in the casing at ground surface level. If relatively high permeability soils are present, the test will be run as a "falling head" test in which the rate of water drop will be measured.

This proposal includes budget to obtain up to three grab samples of soil for Limerock Bearing Ratio (LBR) testing. This number of tests is based on a general frequency of 3 samples per mile of roadway per stratum (assume 2). The grab samples will be obtained from a typical depth of 6 to 18 inches below the existing ground surface.

LABORATORY TESTING

Routine laboratory visual classification will be performed along with the following specific tests:

- Percent fines
- Sieve Analysis
- Atterberg limits
- Organic Content

We will perform corrosion series tests on selected soil samples obtained from the borings (assumed frequency of 1 test per 1,500 feet of roadway for two assumed strata), and LBR testing on the recovered grab samples of soil.

ENGINEERING REPORT

Data developed during the study will be submitted in written reports upon conclusion of the study. The general level of analysis, report format and report submissions will be per standard FDOT type practice for roadway projects (assuming 30%, 60%, 90%, 100% and final level reports will be required).

We note that relative to the proposed strain poles, although our scope does not include analysis of the foundations, we will discuss whether the encountered soil profile satisfies the minimum requirements used in the standard design for these structures, and if not, provide recommended design soil properties that may be used in the foundation analysis.

COST ESTIMATE

The costs associated with the aforementioned tasks are estimated to be \$37,498.23. A cost estimate breakdown is attached with this proposal (see Attachment 1) together with an FDOT type Staffhour Estimating form (see Attachment 2). We note that unit estimates may vary and additional items may be utilized to meet the project requirements. The final cost will be dependent on the requested services that Ardaman provides and may be lower or higher than the total estimate shown in the attachment. The above estimated cost will not be exceeded without prior authorization.

TERMS AND CONDITIONS

The total cost is based on the unit prices as shown on Attachment 1. This proposal is subject to the following terms and conditions: (1) access to boring locations is to be readily available to our truck-mounted drilling equipment, (2) the proposed number of borings and the boring depths will be adequate, (3) the budgeted number of undisturbed samples and consolidation tests on fine grained soils will suffice, (4) neither maintenance of traffic or permits are required to perform the field work, (5) Ardaman & Associates will not take responsibility for damages to underground structures and/or services that are not located by Sunshine State One-Call, (6) exploration or evaluation of the environmental (ecological or hazardous/toxic material related) condition of the site and subsurface is not included, and (7) this proposed exploration is a relatively shallow exploration and is not intended to be an evaluation for sinkhole potential.

CLOSURE

We appreciate the opportunity to submit this proposal and look forward to working with you on this project. If this proposal meets with your approval, please indicate your acceptance by signing and returning the attached Proposal/Project Acceptance sheet. Please call if you have any questions or require additional information.

Very truly yours,
ARDAMAN & ASSOCIATES, INC.



Colin T. Jewsbury, P.E.
Senior Engineer



Charles H. Cunningham, P.E.
Orlando Branch Manager

CTJ/CHC/nfm
1660-167rev DRMP Citrus Grove Road Phase III.docx (2016PP)

Attachments:

- 1 Computation of Geotechnical Cost
- 2 Staffhour Estimate Form



Ardaman & Associates, Inc.

PROPOSAL/PROJECT ACCEPTANCE AND AGREEMENT

PROJECT INFORMATION:

Project Name Citrus Grove Road, Phase III (Second County Phase)
Project Location Lake County, Florida
Proposal Number and Date 16-60-167 / April 8, 2016 Revised April 18, 2016
Description of Services Subsurface Soil Exploration and Geotechnical Engineering Evaluation
Estimated Fee \$37,498.23

PROPERTY OWNER IDENTIFICATION:

Name _____
Property Identification Number _____
Address _____
City/State _____ Zip Code _____ Phone _____
Attention _____ Title _____

SPECIAL INSTRUCTIONS:

PAYMENT TERMS:

Payment shall be due within 30 days after date of each periodic invoice. Interest at the rate of 18% per annum (or the highest rate allowable by law) shall accrue on all amounts not paid within 30 days after date of invoice. All attorney fees and expenses associated with collection of past due invoices will be paid by Client. Failure to timely pay any invoice shall constitute a waiver of any and all claims against Ardaman & Associates, Inc.

PROPOSAL ACCEPTANCE:

By accepting this Proposal, the Terms and Conditions of this Proposal, including the Terms on this page, and Ardaman & Associates, Inc.'s General Conditions appearing on the following page of this Proposal, are incorporated herein by reference. In the event this Proposal Acceptance was received by facsimile, Client hereby confirms that the above described Proposal, the Terms and Conditions of this Proposal, including the Terms on this page, and Ardaman & Associates, Inc.'s General Conditions have been made available and are incorporated in this agreement.

Accepted this _____ day of _____, 2016

(Print or type individual, firm or corporate body name)

(Signature of authorized representative)

(Print or type name of authorized representative and title)

GENERAL CONDITIONS - FLORIDA

Parties And Scope Of Work – Ardaman & Associates, Inc. (hereinafter referred to as “A&A”) shall include said company, its division, subsidiary, parent or affiliate performing the Work. “Work” means the specific services to be performed by A&A as set forth in A&A’s proposal, the Client’s acceptance thereof, both incorporated herein by this reference, and these General Conditions. “Client” refers to the person or business entity ordering the Work to be done by A&A. If the client is ordering the Work on behalf of a third party, the Client represents and warrants that the Client is the duly authorized agent of said third party for the purpose of ordering and directing said Work. In the event Client is not the authorized agent of said third party, Client agrees that he shall be individually liable hereunder. Further, Client shall disclose any such agency relationship to A&A in writing before the commencement of A&A’s Work hereunder. Client agrees that A&A’s professional duties are specifically limited to the Work as set forth in A&A’s proposal. The Client assumes sole responsibility for determining whether the quantity and the nature of the Work ordered by the Client is adequate and sufficient for the Client’s intended purpose. A&A’s Work is for the exclusive use of client, and its properly disclosed principal. In no event shall A&A have any duty or obligation to any third party. Directing A&A to proceed with the Work shall constitute acceptance of the terms of A&A’s proposal and these General Conditions.

On-Call Services – In the event A&A is retained to perform construction materials testing (“CMT”), including but not limited to proctor and soil density tests, concrete tests, etc., on an On-Call basis such that A&A is not retained to perform continuous observations of construction, Client assumes sole responsibility for determining the location and frequency of sampling and testing. In such On-Call testing, A&A’s test results are only representative of conditions at the test location and elevation, and different conditions may exist at other locations and other elevations. Furthermore, in the event Client fails to properly determine the location or frequency of sampling and testing, under no circumstances will A&A assume any duty by performing its CMT services.

Right-of-Entry – Unless otherwise agreed, Client will furnish right-of-entry on the property for A&A to make the planned borings, surveys, and/or explorations. A&A will take reasonable precautions to minimize damage to the property caused by its equipment and sampling procedures, but the cost of restoration or damage which may result from the planned operations is not included in the contracted amount.

Damage to Existing Man-made Objects – It shall be the responsibility of the Client to disclose the presence and accurate location of all hidden or obscure man-made objects relative to field tests, sampling, or boring locations. Client waives any claim against A&A arising from any damage to existing man-made objects. In addition, Client shall defend, indemnify and hold A&A harmless from any third party claim arising from damage to existing man-made objects.

Warranty and Limitation of Liability - A&A shall perform services for Client in a professional manner, using that degree of care and skill ordinarily exercised by and consistent with the standards of competent consultants practicing in the same or a similar locality as the project. In the event any portion of the services fails to comply with this warranty obligation and A&A is promptly notified in writing prior to one year after completion of such portion of the services, A&A will re-perform such portion of the services, or if re-performance is impracticable, A&A will refund the amount of compensation paid to A&A for such portion of the services. This warranty is in lieu of all other warranties. No other warranty, expressed or implied, including warranties of merchantability and fitness for a particular purpose is made or intended by the proposal for consulting services, by furnishing an oral response of the findings made or by any representations made regarding the services included in this agreement. In no event shall A&A be liable for any special, indirect, incidental, or consequential loss or delay or time-related damages. The remedies set forth herein are exclusive and the total liability pursuant to this Agreement shall not exceed the total fees paid by Client or \$50,000.00, whichever is greater. Client may, upon written request received within five days of Client’s acceptance hereof, increase the limit of A&A’s liability by agreeing to pay A&A an additional sum as agreed in writing prior to the commencement of A&A’s services.

This charge is not to be construed as being a charge for insurance of any type, but is increased consideration for the greater liability involved. **PURSUANT TO §558.0035, FLORIDA STATUTES, CONSULTANT’S INDIVIDUAL EMPLOYEES AND/OR AGENTS MAY NOT BE HELD INDIVIDUALLY LIABLE FOR NEGLIGENCE ARISING OUT OF, CONNECTED WITH, OR RESULTING FROM THEIR SERVICES PROVIDED PURSUANT TO THIS AGREEMENT.**

Sampling or Testing Location – Unless specifically stated to the contrary, the unit fees included in this proposal do not include costs associated with professional land surveying of the site or the accurate horizontal and vertical locations of tests. Field tests or boring locations described in our report or shown on our sketches are based on specific information furnished to us by others or estimates made in the field by our technicians. Such dimensions, depths or elevations should be considered as approximations unless otherwise stated in the report.

Sample Handling and Retention – Generally test samples or specimens are consumed and/or substantially altered during the conduct of tests and A&A, at its sole discretion, will dispose (subject to the following) of any remaining residue immediately upon completion of test unless required in writing by the Client to store or otherwise handle the samples. (a) **NON HAZARDOUS SAMPLES:** At Client’s written request, A&A will maintain preservable test samples and specimens or the residue therefrom for thirty (30) days after submission of A&A’s report to Client free of storage charges. After the initial 30 days and upon written request, A&A will retain test specimens or samples for a mutually acceptable storage charge and period of time. (b) **HAZARDOUS OR POTENTIALLY HAZARDOUS SAMPLES:** In the event that samples contain substances or constituents hazardous or detrimental to human health, safety or the environment as defined by federal, state or local statutes, regulations, or ordinances (“Hazardous Substances” and “Hazardous Constituents”, respectively), A&A will, after completion of testing and at Client’s expense: (i) return such samples to Client; (ii) using a manifest signed by Client as generator, will have such samples transported to a location selected by Client for final disposal. Client agrees to pay all costs associated with the storage, transport, and disposal of such samples. Client recognizes and agrees that A&A is acting as a bailee and at no time does A&A assume title of said waste.

Discovery of Unanticipated Hazardous Materials – Hazardous materials or certain types of hazardous materials may exist at a site where there is no reason to believe they could or should be present. A&A and Client agree that the discovery of unanticipated hazardous materials constitutes a changed condition mandating a renegotiation of the scope of work or termination of services. A&A and Client also agree that the discovery of unanticipated hazardous materials may make it necessary for A&A to take immediate measures to protect health and safety. A&A agrees to notify Client as soon as practicable should unanticipated hazardous materials or suspected hazardous materials be encountered. Client encourages A&A to take any and all measures that, in A&A’s professional opinion, are justified to preserve and protect the health and safety of A&A’s personnel and the public. Client agrees to compensate A&A for the additional cost of working to protect employees’ and the public’s health and safety. In addition, Client waives any claim against A&A arising from A&A’s discovery of unanticipated hazardous materials or suspected hazardous materials.

Indemnification – Client agrees to defend, indemnify and save harmless A&A from all claims, including negligence claims, suits, losses, personal injuries, death and property liability resulting from the actions or inactions of Client, Client’s contractors, representatives, agents and employees.

Legal Jurisdiction – The parties agree that any actions brought to enforce any provision of this Agreement shall only be brought in a court of competent jurisdiction located in Orlando, Orange County, Florida. All causes of action, including but not limited to actions for indemnification, arising out of A&A’s Work shall be deemed to have accrued and the applicable statutes of limitation shall commence to run not later than either the date of substantial completion of the Work for acts or failures to act occurring prior to substantial completion, or the date of issuance of A&A’s final invoice for acts or failures to act occurring after substantial completion of the Work. Each of the parties hereto irrevocably waives any and all right to trial by jury in any legal proceeding arising out of or relating to this agreement.

Force Majeure - A&A shall not be held responsible for any delay or failure in performance caused by fire, flood, explosion, war, strike, embargo, government requirement, civil or military authority, acts of God, act or omission of subcontractors, carrier, clients or other similar causes beyond its control.

Drafting and Severability – This Agreement has been drafted by all Parties hereto and shall not be construed against one Party or in favor of any other Party. In the event that any provision of this Agreement is held invalid, the remainder of this Agreement shall be fully enforceable.

35. Geotechnical

Citrus Grove
0

Estimator: Colin T. Jewsbury, P.E. for Citrus Grove Segment 3, Station +170 to Past +196 (County) (ATTACHMENT 2)
4/18/2016

Task No.	Task	Units	No of Units	Hours/ Unit	Total Hours	Comments
	Roadway					
35.1	Document Collection and Review	LS	1	2	2	
35.2	Develop Detailed Boring Location Plan	LS	1	6	6	
35.3	Stake Borings/Utility Clearance	Boring	54	0.4	22	45 Roadway Auger Borings, 5 Pond Borings, 4 Swale Borings
35.4	Muck Probing	Crew Day	0	0	0	Assume not required
35.5	Coordinate and Develop MOT Plans for Field Investigation	EA	0	0	0	Assume not required
35.6	Drilling Access Permits	Location	0	0	0	Assume not required
35.7	Property Clearances	EA	1	2	2	Assumed
35.8	Groundwater Monitoring	EA	0	0	0	Assume not required
35.9	LBR/Resilient Modulus Sampling	EA	1	12	12	If required
35.10	Coordination of Field Work	100 lf of boring	6.15	0.6	4	21 AB to 5' Rowy, 15 AB to 10' Rowy, 9 AB to 20' Rowy, 5 AB to 20' Pond, 4 AB @ 20' swales.
35.11	Soil and Rock Classification - Roadway	100 lf of boring	6.15	2.2	14	See above
35.12	Design LBR	LS	1	8	8	If required
35.13	Laboratory Data	100 lf of boring	5.15	0.7	4	
35.14	Seasonal High Water Table	Boring	54	0.2	11	
35.15	Parameters for Water Retention Areas	EA	3	2	6	1 permanent pond site, 2 swales
35.16	Delineate Limits of Unsuitable Material	Cross-section	8	0.25	2	Assumed
35.17	Electronic Files for Cross-Sections	100 lf of boring	6.15	1.25	8	
35.18	Embankment Settlement and Stability	Embankment Boring	0	0	0	Handled via SPT borings for walls, below
35.19	Protection of Existing Structures	LS	0	0	0	Assume not required
35.20	Stormwater Volume Recovery and/or Background Seepage Analysis	EA	0	0	0	Assume not required (by drainage engineer)
35.21	Geotechnical Recommendations	LS	1	8	8	
35.22	Pavement Condition Survey and Pavement Evaluation Report	LS	0	0	0	Assume not required

35. Geotechnical

Task No.	Task	Units	No of Units	Hours/ Unit	Total Hours	Comments
35.23	Preliminary Roadway Report	LS	1	10	10	
35.24	Final Report	EA	1	8	8	
35.25	Auger Boring Drafting	100 ft boring	6.15	4	25	
35.26	SPT Boring Drafting	100 ft boring	0	0	0	
Roadway Geotechnical Subtotal					152	
Structures						
35.27	Develop Detailed Boring Location Plan	LS	1	2	2	Strain poles
35.28	Slake Borings/Utility Clearance	Boring	4	0.4	2	4 strain pole borings
35.29	Coordinate and Develop MOT Plans for Field Investigation	EA	0	0	0	Assume not required
35.30	Drilling Access Permits	Location	0	0	0	Assume not required
35.31	Property Clearances	EA	0	0	0	Assume not required
35.32	Collection of Corrosion Samples	EA	0	0	0	Assume not required (obtain from boring samples)
35.33	Coordination of Field Work	100 ft of boring	1	0.6	1	4 SPT to 25' for strain poles
35.34	Soil and Rock Classification - Structures	100 ft of boring	1	2.2	2	
35.35	Tabulation of Laboratory Data	100 ft of boring	1	0.7	1	
35.36	Estimate Design Groundwater Level for Structures	EA	1	0.5	1	
35.37	Selection of Foundation Alternatives (BDR)	Bridge boring	0	0	0	No bridges
35.38	Detailed Analysis of Selected Foundation Alternate(s)	Bridge boring	0	0	0	No bridges
35.39	Bridge Construction and Testing Recommendations	Bridge boring	0	0	0	No bridges
35.40	Lateral Load Analysis (Optional)	Bridge boring	0	0	0	No bridges
35.41	Walls	Wall Boring	0	0	0	No Walls
35.42	Sheet Pile Wall Analysis (Optional)	Wall Boring	0	0	0	Assume not required
35.43	Design Soil Parameters for Signs, Signals, High Mast Lights, and Strain Poles and Geotechnical Recommendations	Boring	4	1	4	Strain poles
35.44	Box Culvert Analysis	EA	0	0	0	Assume not required
35.45	Preliminary Report - BDR	EA	0	0	0	No bridges

35. Geotechnical

Task No.	Task	Units	No of Units	Hours/ Unit	Total Hours	Comments
35.46	Final Report - Bridge and Associated Walls	EA	0	0	0	No bridges
35.47	Final Reports - Signs, Signals, Box Culvert, Walls and High Mast Lights	EA	1	10	10	One report for pole structures
35.48	SPT Boring Drafting	100 lf of boring	1	5	5	
35.49	Other Geotechnical	LS	0	0	0	Assume not required
		Structural Geotechnical Subtotal			28	
		Geotechnical Technical Subtotal			180	
35.50	Technical Special Provisions	EA	0	0	0	Assume not required
35.51	Field Reviews	LS	1	3	3	
35.52	Technical Meetings	LS	1	4	4	Meetings listed below
35.53	Quality Assurance/Quality Control	LS	%	4%	7	
35.54	Supervision	LS	%	4%	7	
		Geotechnical Nontechnical Subtotal			21	
35.55	Coordination	LS	%	3%	6	
		35. Geotechnical Total			207	

Technical Meetings	Units	No of Units	Hours/ Unit	Total Hours	PM Attendance at Meeting Required?	Number
Kickoff Meeting	EA	0	0	0		0
Boring Layout Approval	EA	0	0	0		0
Attend in BDR Review Meeting	EA	0	0	0		0
30/60/90% Submittal Review	EA	0	0	0		0
Other Meetings	EA	1	2	2		0
Subtotal Technical Meetings				2	Subtotal Project Manager Meetings	0
Progress Meetings (if required)	EA	1	2	2	PM attendance at Progress Meetings is manually entered on General Task 3	--
Phase Review Meetings	EA	0	0	0	PM attendance at Phase Review Meetings is manually entered on General Task 3	--
Total Meetings				4	Total Project Manager Meetings (carries to Tab 3)	0

Carries to Tab 3

Carries to 33.18

ATTACHMENT 1; Computation of Geotechnical Cost
ARDAMAN SCOPE ; CITRUS GROVE ROAD, PHASE III (SECOND COUNTY PHASE)

Date: 04/18/2016

Component/Unit Description	Unit of Measure	Unit Price	Unit Quantity	Component Cost		
I. FIELD EXPLORATION:						
1. Crew & Equipment Mobilization:						
a. - Truck-Mounted Equipment	Ea.	\$450.00	1.0	\$450.00		
b. - Track/Bombadier	Ea.	\$9,000.00	0.0	\$0.00		
c. - Mudbug	Ea.	\$550.00	1.0	\$550.00		
d. - Barge	Ea.	\$7,500.00	0.0	\$0.00		
2. Standard Penetration Test Borings(ASTM D-1586):						
Land:	4 Borings to	25 ft.	Strain Po	0 Borings to	0.0 ft.	
	0 Borings to	0 ft.	MSE Walls	0 Borings to	0.0 ft.	
	0 Borings to	0 ft.	MSE Walls	0 Borings to	0.0 ft.	
a. - 0 to 50 ft. depths			LF	\$15.65	100.0	\$1,565.00
b. - 50 to 100 ft. depths			LF	\$19.35	0.0	\$0.00
c. - 100 to 150 ft. depths			LF	\$24.65	0.0	\$0.00
d. - 150 to 200 ft. depths			LF	\$32.50	0.0	\$0.00
e. - 200 to 250 ft. depths			LF	\$37.50	0.0	\$0.00
f. - 250 to 300 ft. depths			LF	\$0.00	0.0	\$0.00
g. - 300 to 350 ft. depths			LF	\$0.00	0.0	\$0.00
h. - 350 to 400 ft. depths			LF	\$0.00	0.0	\$0.00
i. - 400 to 450 ft. depths			LF	\$0.00	0.0	\$0.00
j. - 450 to 500 ft. depths			LF	\$0.00	0.0	\$0.00
Barge/	0 Borings to	0 ft.		0 Borings to	0.0 ft.	
Track:	0 Borings to	0 ft.		0 Borings to	0.0 ft.	
	0 Borings to	0 ft.		0 Borings to	0.0 ft.	
k. - 0 to 50 ft. depths			LF	\$23.50	0.0	\$0.00
l. - 50 to 100 ft. depths			LF	\$29.00	0.0	\$0.00
m. - 100 to 150 ft. depths			LF	\$37.00	0.0	\$0.00
n. - 150 to 200 ft. depths			LF	\$48.75	0.0	\$0.00
o. - 200 to 250 ft. depths			LF	\$56.25	0.0	\$0.00
p. - 250 to 300 ft. depths			LF	\$0.00	0.0	\$0.00
q. - 300 to 350 ft. depths			LF	\$0.00	0.0	\$0.00
r. - 350 to 400 ft. depths			LF	\$0.00	0.0	\$0.00
s. - 400 to 450 ft. depths			LF	\$0.00	0.0	\$0.00
t. - 450 to 500 ft. depths			LF	\$0.00	0.0	\$0.00
3. Rock Coring - HW Barrel(ASTM D-2113):						
Land:						
a. - 0 to 50 ft. depths			LF	\$39.10	0.0	\$0.00
b. - 50 to 100 ft. depths			LF	\$44.50	0.0	\$0.00
c. - 100 to 150 ft. depths			LF	\$50.00	0.0	\$0.00
d. - 150 to 200 ft. depths			LF	\$55.00	0.0	\$0.00
e. - 200 to 250 ft. depths			LF	\$0.00	0.0	\$0.00
f. - 250 to 300 ft. depths			LF	\$0.00	0.0	\$0.00
g. - 300 to 350 ft. depths			LF	\$0.00	0.0	\$0.00
h. - 350 to 400 ft. depths			LF	\$0.00	0.0	\$0.00
i. - 400 to 450 ft. depths			LF	\$0.00	0.0	\$0.00
j. - 450 to 500 ft. depths			LF	\$0.00	0.0	\$0.00
Barge/						
Track:						
k. - 0 to 50 ft. depths			LF	\$58.65	0.0	\$0.00
l. - 50 to 100 ft. depths			LF	\$66.75	0.0	\$0.00
m. - 100 to 150 ft. depths			LF	\$75.00	0.0	\$0.00
n. - 150 to 200 ft. depths			LF	\$82.50	0.0	\$0.00
o. - 200 to 250 ft. depths			LF	\$0.00	0.0	\$0.00
p. - 250 to 300 ft. depths			LF	\$0.00	0.0	\$0.00
q. - 300 to 350 ft. depths			LF	\$0.00	0.0	\$0.00
r. - 350 to 400 ft. depths			LF	\$0.00	0.0	\$0.00

s.	-	400 to 450 ft. depths			LF	\$0.00	0.0	\$0.00
t.	-	450 to 500 ft. depths			LF	\$0.00	0.0	\$0.00

4. Grout Seal Boreholes:

Land:	0	Borings to	0 ft.	0	Borings to	0.0	ft.	
	0	Borings to	0 ft.	0	Borings to	0.0	ft.	
	0	Borings to	0 ft.	0	Borings to	0.0	ft.	
a.	-	0 to 50 ft. depths			LF	\$4.00	0.0	\$0.00
b.	-	50 to 100 ft. depths			LF	\$5.00	0.0	\$0.00
c.	-	100 to 150 ft. depths			LF	\$5.50	0.0	\$0.00
d.	-	150 to 200 ft. depths			LF	\$6.00	0.0	\$0.00
e.	-	200 to 250 ft. depths			LF	\$7.00	0.0	\$0.00
f.	-	250 to 300 ft. depths			LF	\$0.00	0.0	\$0.00
g.	-	300 to 350 ft. depths			LF	\$0.00	0.0	\$0.00
h.	-	350 to 400 ft. depths			LF	\$0.00	0.0	\$0.00
i.	-	400 to 450 ft. depths			LF	\$0.00	0.0	\$0.00
j.	-	450 to 500 ft. depths			LF	\$0.00	0.0	\$0.00

Barge/	0	Borings to	0 ft.	0	Borings to	0.0	ft.
Track:	0	Borings to	0 ft.	0	Borings to	0.0	ft.
	0	Borings to	0 ft.	0	Borings to	0.0	ft.

k.	-	0 to 50 ft. depths			LF	\$6.00	0.0	\$0.00
l.	-	50 to 100 ft. depths			LF	\$7.50	0.0	\$0.00
m.	-	100 to 150 ft. depths			LF	\$8.25	0.0	\$0.00
n.	-	150 to 200 ft. depths			LF	\$9.00	0.0	\$0.00
o.	-	200 to 250 ft. depths			LF	\$10.50	0.0	\$0.00
p.	-	250 to 300 ft. depths			LF	\$0.00	0.0	\$0.00
q.	-	300 to 350 ft. depths			LF	\$0.00	0.0	\$0.00
r.	-	350 to 400 ft. depths			LF	\$0.00	0.0	\$0.00
s.	-	400 to 450 ft. depths			LF	\$0.00	0.0	\$0.00
t.	-	450 to 500 ft. depths			LF	\$0.00	0.0	\$0.00

5. Casing Allowance:

Land:								
a.	-	0 to 50 ft. depths			LF	\$10.00	30.0	\$300.00
b.	-	50 to 100 ft. depths			LF	\$12.10	0.0	\$0.00
c.	-	100 to 150 ft. depths			LF	\$15.35	0.0	\$0.00
d.	-	150 to 200 ft. depths			LF	\$17.00	0.0	\$0.00
e.	-	200 to 250 ft. depths			LF	\$20.00	0.0	\$0.00
f.	-	250 to 300 ft. depths			LF	\$0.00	0.0	\$0.00
g.	-	300 to 350 ft. depths			LF	\$0.00	0.0	\$0.00
h.	-	350 to 400 ft. depths			LF	\$0.00	0.0	\$0.00
i.	-	400 to 450 ft. depths			LF	\$0.00	0.0	\$0.00
j.	-	450 to 500 ft. depths			LF	\$0.00	0.0	\$0.00

Barge/								
Track:								
k.	-	0 to 50 ft. depths			LF	\$15.00	0.0	\$0.00
l.	-	50 to 100 ft. depths			LF	\$18.15	0.0	\$0.00
m.	-	100 to 150 ft. depths			LF	\$23.00	0.0	\$0.00
n.	-	150 to 200 ft. depths			LF	\$25.50	0.0	\$0.00
o.	-	200 to 250 ft. depths			LF	\$30.00	0.0	\$0.00
p.	-	250 to 300 ft. depths			LF	\$0.00	0.0	\$0.00
q.	-	300 to 350 ft. depths			LF	\$0.00	0.0	\$0.00
r.	-	350 to 400 ft. depths			LF	\$0.00	0.0	\$0.00
s.	-	400 to 450 ft. depths			LF	\$0.00	0.0	\$0.00
t.	-	450 to 500 ft. depths			LF	\$0.00	0.0	\$0.00

6. Cone Penetration Test Soundings (ASTM D-3441):

Land:	0	Borings to	0 ft.	0	Borings to	0.0	ft.	
	0	Borings to	0 ft.	0	Borings to	0.0	ft.	
	0	Borings to	0 ft.	0	Borings to	0.0	ft.	
a.	-	0 to 50 ft. depths			LF	\$13.00	0.0	\$0.00
b.	-	50 to 100 ft. depths			LF	\$13.00	0.0	\$0.00
c.	-	100 to 150 ft. depths			LF	\$13.00	0.0	\$0.00
d.	-	150 to 200 ft. depths			LF	\$0.00	0.0	\$0.00

e.	- 200 to 250 ft. depths			LF	\$0.00	0.0	\$0.00
f.	- 250 to 300 ft. depths			LF	\$0.00	0.0	\$0.00
g.	- 300 to 350 ft. depths			LF	\$0.00	0.0	\$0.00
h.	- 350 to 400 ft. depths			LF	\$0.00	0.0	\$0.00
i.	- 400 to 450 ft. depths			LF	\$0.00	0.0	\$0.00
j.	- 450 to 500 ft. depths			LF	\$0.00	0.0	\$0.00
Barge/							
Track:	0	Borings to	0 ft		0	Borings to	0.0 ft
	0	Borings to	0 ft		0	Borings to	0.0 ft
	0	Borings to	0 ft		1	Borings to	0.0 ft
k.	- 0 to 50 ft. depths			LF	\$0.00	0.0	\$0.00
l.	- 50 to 100 ft. depths			LF	\$0.00	0.0	\$0.00
m.	- 100 to 150 ft. depths			LF	\$0.00	0.0	\$0.00
n.	- 150 to 200 ft. depths			LF	\$0.00	0.0	\$0.00
o.	- 200 to 250 ft. depths			LF	\$0.00	0.0	\$0.00
p.	- 250 to 300 ft. depths			LF	\$0.00	0.0	\$0.00
q.	- 300 to 350 ft. depths			LF	\$0.00	0.0	\$0.00
r.	- 350 to 400 ft. depths			LF	\$0.00	0.0	\$0.00
s.	- 400 to 450 ft. depths			LF	\$0.00	0.0	\$0.00
t.	- 450 to 500 ft. depths			LF	\$0.00	0.0	\$0.00
7. Auger Borings(ASTM D-1452):							
	21	Borings to	5 ft	Rdwy			
	15	Borings to	10 ft	Rdwy			
	9	Borings to	20 ft	Rdwy			
	9	Borings to	20 ft.	Pond/Swales			
a.	- 0 to 50 ft. depths			LF	\$14.00	615.0	\$8,610.00
8. Drill Rig and Crew:							
	Land			Hr	\$200.00	8.0	\$1,600.00
	Amphibious/Barge			Hr	\$300.00	0.0	\$0.00
9. Field Permeability Tests:							
				Ea.	\$325.00	5.0	\$1,625.00
10. MOT:							
				Hr	\$300.00	0.0	\$0.00
11. Hand Probing/Wash Borings:							
a.	- 2 person crew			Days	\$120.00	0.0	\$0.00
b.	- 3 person crew			Days	\$180.00	0.0	\$0.00
12. Per Diem for Drill Crew:							
a.	- 2 person crew			Days	\$0.00	0.0	\$0.00
b.	- 3 person crew			Days	\$0.00	0.0	\$0.00
13. Thin-Walled Tube Samples(ASTM D-1587):							
Land:							
a.	- 0 to 50 ft. depths			Ea.	\$174.00	0.0	\$0.00
b.	- 50 to 100 ft. depths			Ea.	\$200.00	0.0	\$0.00
c.	- 100 to 150 ft. depths			Ea.	\$291.00	0.0	\$0.00
d.	- 150 to 200 ft. depths			Ea.	\$371.00	0.0	\$0.00
Barge/							
Track:							
a.	- 0 to 50 ft. depths			Ea.	\$261.00	0.0	\$0.00
b.	- 50 to 100 ft. depths			Ea.	\$300.00	0.0	\$0.00
c.	- 100 to 150 ft. depths			Ea.	\$436.50	0.0	\$0.00
d.	- 150 to 200 ft. depths			Ea.	\$556.50	0.0	\$0.00
14. Site Reconnaissance/Utility Coordination:							
a.	- Engineer Intern			hrs.	\$83.16	10.0	\$831.60
b.	- Senior Engineering Tech.			hrs.	\$68.63	12.0	\$823.56
15. Extra Split Spoon Samples:							
Land:							
a.	- 0 to 50 ft. depths			Ea.	\$31.95	0.0	\$0.00
b.	- 50 to 100 ft. depths			Ea.	\$39.65	0.0	\$0.00
c.	- 100 to 150 ft. depths			Ea.	\$44.70	0.0	\$0.00
d.	- 150 to 200 ft. depths			Ea.	\$55.90	0.0	\$0.00

e.	- 200 to 250 ft. depths			Ea.	\$60.00	0.0	\$0.00
f.	- 250 to 300 ft. depths			Ea.	\$0.00	0.0	\$0.00
g.	- 300 to 350 ft. depths			Ea.	\$0.00	0.0	\$0.00
h.	- 350 to 400 ft. depths			Ea.	\$0.00	0.0	\$0.00
i.	- 400 to 450 ft. depths			Ea.	\$0.00	0.0	\$0.00
j.	- 450 to 500 ft. depths			Ea.	\$0.00	0.0	\$0.00
Barge/Track:							
k.	- 0 to 50 ft. depths			Ea.	\$47.95	0.0	\$0.00
l.	- 50 to 100 ft. depths			Ea.	\$59.50	0.0	\$0.00
m.	- 100 to 150 ft. depths			Ea.	\$67.00	0.0	\$0.00
n.	- 150 to 200 ft. depths			Ea.	\$83.85	0.0	\$0.00
o.	- 200 to 250 ft. depths			Ea.	\$90.00	0.0	\$0.00
p.	- 250 to 300 ft. depths			Ea.	\$0.00	0.0	\$0.00
q.	- 300 to 350 ft. depths			Ea.	\$0.00	0.0	\$0.00
r.	- 350 to 400 ft. depths			Ea.	\$0.00	0.0	\$0.00
s.	- 400 to 450 ft. depths			Ea.	\$0.00	0.0	\$0.00
t.	- 450 to 500 ft. depths			Ea.	\$0.00	0.0	\$0.00
16. Pavement Cores:				Ea.	\$75.00	0.0	\$0.00
17. Double Ring Infil.(ASTM D-3385)				Ea.	\$525.00	0.0	\$0.00
18. Subcontract Earthwork Services:							
a.	- Clay Stabilization Matl.			CY	\$0.00	0.0	\$0.00
b.	- Clean Sand Fill Material			CY	\$0.00	0.0	\$0.00
c.	- Geogrid (Tensar SS2)			SY	\$0.00	0.0	\$0.00
d.	- Removal Wetlands Fill			CY	\$0.00	0.0	\$0.00
e.	- Silt Barrier			LF	\$0.00	0.0	\$0.00
19. Water Sampling:				Ea.	\$25.00	0.0	\$0.00
20. Field Vane Test(ASTM D-2573):				Ea.	\$450.00	0.0	\$0.00
21. Dilatometer Sounding:				Ea.	\$90.00	0.0	\$0.00
22. Monitor Wells - 2 inch (50mm):							
	0 Wells to	0 ft					
	0 Wells to	0 ft					
	0 Wells to	0 ft					
	0 Wells to	0 ft					
a.	- 0 to 50 ft. depths			LF	\$35.00	0.0	\$0.00
23. Concrete Pad and Cover:				Ea.	\$275.00	0.0	\$0.00
24. Deco/Development Time:				Hr	\$110.00	0.0	\$0.00
25. OVA Headspace Analysis, Senior Engineering Technician:				Hr	\$80.00	0.0	\$0.00
26. OVA Equipment Charge:				Days	\$150.00	0.0	\$0.00
27. Riser:				LF	\$0.00	0.0	\$0.00
28. Screen:				LF	\$0.00	0.0	\$0.00
29. Water Sampling for Analytical Lab Work (PCA):				Ea.	\$75.00	0.0	\$0.00
Total for Field Exploration							\$16,355.16
II. LABORATORY TESTING:							
1. Visual Exam./Stratify(ASTM D-2488):							
	- Senior Engineering Tech.			hrs.	\$68.63	14.0	\$960.82
2. Grain Size Analysis:							
a.	- Full Grad. (FM 1-T 88)			Ea.	\$60.00	10.0	\$600.00
b.	- Single Sieve (FM 1-T 88)			Ea.	\$34.00	5.0	\$170.00
3. Hydrometer(FM 1-T 88):				Ea.	\$109.50	0.0	\$0.00

4. Organic Content(FM 1-T 267):	Ea.	\$32.50	4.0	\$130.00
5. Atterberg Limits(FM 1-T 89/90):	Ea.	\$104.00	5.0	\$520.00
6. Natural Moisture (FM 1-T 265):	Ea.	\$14.25	9.0	\$128.25
7. Unit Weight Determination:	Ea.	\$61.00	0.0	\$0.00
8. Consolidation Test(FM 1-T 216):	Ea.	\$620.00	0.0	\$0.00
9. Permeability(FM 1-T 215/5-513):	Ea.	\$220.00	0.0	\$0.00
10. Corrosion Series: (pH, Sulfate, Chloride, Resistivity)	Ea.	\$180.00	3.0	\$540.00
11. Triaxial/point(FM 1-T 234):	Ea.	\$400.00	0.0	\$0.00
12. Unconfined Comp.(ASTM D-2166):	Ea.	\$91.00	0.0	\$0.00
13. Limerock Bearing Ratio(FM5-515):	Ea.	\$375.00	3.0	\$1,125.00
14. Specific Gravity(FM 1-T 100):	Ea.	\$97.00	0.0	\$0.00
15. Bitumen Extraction(FM 1-T 164):	Ea.	\$95.00	0.0	\$0.00
16. Bitumen Gradation(FM 1-T 30):	Ea.	\$80.00	0.0	\$0.00
17. Direct Shear(ASTM D-3080):	Ea.	\$295.00	0.0	\$0.00
18. Shrinkage Factor(FM 1-T 092):	Ea.	\$86.50	0.0	\$0.00
19. Swell Potential(ASTM D-4546):	Ea.	\$80.00	0.0	\$0.00
20. Compaction(FM 5-525/521):	Ea.	\$100.00	0.0	\$0.00
21. Min./Max. Den.(ASTM D-4254/53):	Ea.	\$104.50	0.0	\$0.00
22. Unconfined - Rock(ASTM D-2938):	Ea.	\$91.00	0.0	\$0.00
23. Splitting Tensile(ASTM D-3967):	Ea.	\$120.00	0.0	\$0.00
24. Kerosene Analysis Group:	Ea.	\$0.00	0.0	\$0.00
Total for Laboratory Testing				\$4,174.07
III. ENGINEERING AND TECHNICAL SERVICES:				
1. Chief Engineer:	hrs.	\$185.00	3.0	\$555.00
2. Senior Engineer:	hrs.	\$158.00	40.0	\$6,320.00
3. Project Engineer:	hrs.	N/A	0.0	\$0.00
4. Engineering Intern:	hrs.	\$90.00	80.0	\$7,200.00
5. CADD Operator:	hrs.	\$64.00	30.0	\$1,920.00
6. Senior Engineering Technician:	hrs.	\$58.00	8.0	\$464.00
7. Secretarial:	hrs.	\$51.00	10.0	\$510.00
Total for Engineering and Technical Services				\$16,969.00
Check:	207			
	207			
Grand Total this Proposal				\$37,498.23

Exhibit B

ESTIMATE OF WORK EFFORT AND COST - PRIME CONSULTANT

Name of Project: **Phase 1 - LAKE COUNTY**
 County: **LAKE COUNTY**
 PPN: **0**
 FAP No.: **10/1900**

Phase 1 - LAKE COUNTY
 LAKE COUNTY
 0

Consultant Name: **DRMP**
 Consultant No.: **enter consultant proj. number**
 Date: **4/18/2016**
 Estimator: **C. Towns / C. Mays**

Staff Classification	Total Staff Hours From SH Summary	Department Manager / PM	Senior Project Manager #	Engineer VII	Engineer VI	Engineer IV	Engineer II	Environmental Scientist III	Senior Ecologist	PSM V	PSM IV	Survey Technician IV	Survey Admin Support III	SH By Activity	Salary Cost By Activity	Average Rate Per Hour
3. Project General and Project Common Tasks	274	151	14	8	41	41	0	0	0	0	0	0	0	19	\$45,110	\$164.64
4. Reaching Analysis	1,053	53	53	32	105	421	316	0	0	0	0	0	74	274	\$108,570	\$103.01
5. Reaching Plans	332	17	17	10	30	138	100	0	0	0	0	0	23	1054	\$34,350	\$103.15
6a. Drainage Analysis	502	25	25	15	50	201	151	0	0	0	0	0	35	502	\$31,655	\$102.30
6b. Drainage Plans	297	12	12	7	24	95	71	0	0	0	0	0	17	228	\$24,515	\$103.00
7. Utilities	242	12	12	0	36	97	73	0	0	0	0	0	12	242	\$24,980	\$103.14
8. Environmental Permits, Compliance & Clearances	697	34	34	0	0	0	0	369	275	0	0	0	34	696	\$77,655	\$113.20
9. Structures - Misc. Tanks, Dumps, Non-Tech	33	2	2	1	3	13	10	0	0	0	0	0	2	33	\$3,465	\$105.00
10. Structures - Bridge Development Report	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$105.00
11. Structures - Temporary Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$105.00
12. Structures - Short Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$105.00
13. Structures - Median Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$105.00
14. Structures - Structural Steel Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$105.00
15. Structures - Segmental Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$105.00
16. Structures - movable Span	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$105.00
17. Structures - Retaining Walls	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$105.00
18. Structures - Miscellaneous	68	3	3	2	7	27	20	0	0	0	0	0	0	5	\$7,830	\$101.34
19. Signing & Pavement Marking Analysis	160	8	8	5	18	64	48	0	0	0	0	0	11	160	\$16,465	\$103.03
20. Signing & Pavement Marking Plans	59	3	3	2	6	24	18	0	0	0	0	0	4	59	\$5,150	\$103.17
21. Signalization Plans	84	4	4	3	8	34	25	0	0	0	0	0	5	84	\$8,620	\$102.82
22. Signalization Plans	34	2	2	1	3	14	10	0	0	0	0	0	2	34	\$3,560	\$104.71
23. Lighting Analysis	42	2	2	1	4	17	13	0	0	0	0	0	3	42	\$4,285	\$102.02
24. Lighting Plans	10	1	1	0	1	4	3	0	0	0	0	0	1	11	\$1,200	\$109.09
25. Landscape Architectural Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$105.00
26. Landscape Architectural Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$105.00
27. Survey (Field & Office Support)	129	6	6	0	0	0	0	0	0	0	0	0	6	128	\$15,910	\$124.30
28. Photogrammetry	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$105.00
29. Mapping	160	8	8	0	0	0	0	0	0	0	0	0	8	160	\$19,660	\$124.75
30. Terrestrial Mobile LIDAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$105.00
31. Architecture Development	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$105.00
32. Noise Barriers Impact Design Assessment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$105.00
33. Intelligent Transportation Systems Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$105.00
34. Intelligent Transportation Systems Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$105.00
35. Geotechnical	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	\$105.00
Total Staff Hours	4,108	343	192	87	337	1,185	858	309	275	14	101	145	282	4,108	\$453,320.00	\$110.35
Total Staff Cost		\$72,030.00	\$32,640.00	\$11,745.00	\$38,735.00	\$12,575.00	\$72,930.00	\$29,385.00	\$33,000.00	\$180.00	\$15,655.00	\$3,775.00	\$18,240.00		\$453,320.00	

Notes:
 1. This sheet to be used by Prime Consultant to calculate the Grand Total fee.
 2. Manually enter fee from each subcontractor. Unread subcontractor rows may be hidden.

Survey Field Days by Subcontractor	4 - Person Crew:
Subcontractor: Sub 3	39
Subcontractor: Sub 4	0
Subcontractor: Sub 5	0
Subcontractor: Sub 6	0
Subcontractor: Sub 7	0
Subcontractor: Sub 8	0
Subcontractor: Sub 9	0
Subcontractor: Sub 10	0
Subcontractor: Sub 11	0
Subcontractor: Sub 12	0

SALARY RELATED COSTS:
 OVERHEAD: 0%
 OPERATING MARGIN: 0%
 FCMA (Facilities Capital Cost Money): 0.00%
 EXPENSES:
 Survey (Field - if by Prime) 39 days @ \$1,200.00 / day = \$47,400.00
 SUBTOTAL ESTIMATED FEE: \$500,871.98
 Subcontractor: Ardman & Associates, Inc. \$37,458.23
 Subcontractor: Tite search (5 parcels @ \$650 ea) \$3,225.00
 Subcontractor: Sub 3 \$0.00
 Subcontractor: Sub 4 \$0.00
 Subcontractor: Sub 5 \$0.00
 Subcontractor: Sub 6 \$0.00
 Subcontractor: Sub 7 \$0.00
 Subcontractor: Sub 8 \$0.00
 Subcontractor: Sub 9 \$0.00
 Subcontractor: Sub 10 \$0.00
 Subcontractor: Sub 11 \$0.00
 Subcontractor: Sub 12 \$0.00
SUBTOTAL ESTIMATED FEE: \$541,420.21
 Geotechnical Field and Lab Testing \$541,420.21
SUBTOTAL ESTIMATED FEE: \$0.00
 Optional Services \$0.00
GRAND TOTAL ESTIMATED FEE: \$541,420.21

- Notes:
1. This worksheet provides the distribution of a firm's total staff hours for a project.
 2. Percentages for staff hour distribution by classification are entered below in rows 63 to 96 of this sheet.
 3. Total Staff Hours (column O) may not match staff hours from Summary worksheet (column B) due to rounding. Staff hours calculated for employee classifications are to be adjusted so totals in columns B and O match.
 4. Formulas under "Total Staff Hours Range" (columns O & P) may be adjusted to provide desired range.

Field Survey Estimate:

39 4-man crew days

FIRM TOTAL

4,108 4,517

ESTIMATE OF WORK EFFORT FOR TECHNICAL PROPOSALS - FIRM TOTAL

Financial Project Number:

11011900

Project Name Phase 1 - LAKE COUNTY

FAP Number:

0

Date: 4/19/2016

Name of Consultant: DRMP

Staff Hour Distribution Percentages - Firm Total	Staff Hour Distribution Percentages - Firm Total										Survey Admin Support III	Total		
	Hours from Summary sheet Firm Total	Department Manager / P.M.	Senior Project Manager III	Engineer VIII	Engineer VI	Engineer IV	Engineer II	Environmental Scientist III	Senior Ecologist	PSM V			PSM IV	Survey Technician IV
3. Project General and Project Common Tasks	274	55.0%	5.0%	3.0%	15.0%	15.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.0%	100.00%
4. Roadway Analysis	1053	5.0%	5.0%	3.0%	10.0%	40.0%	30.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.0%	100.00%
5. Roadway Plans	332	5.0%	5.0%	3.0%	10.0%	40.0%	30.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.0%	100.00%
6a. Drainage Analysis	502	5.0%	5.0%	3.0%	10.0%	40.0%	30.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.0%	100.00%
6b. Drainage Plans	237	5.0%	5.0%	3.0%	10.0%	40.0%	30.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	100.00%
7. Utilities	242	5.0%	5.0%	3.0%	15.0%	40.0%	30.0%	0.0%	45.0%	40.0%	0.0%	0.0%	5.0%	100.00%
8. Environmental Permits, Compliance & Clearances	687	5.0%	5.0%	3.0%	10.0%	40.0%	30.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.0%	100.00%
9. Structures - Misc. Tasks, Dwg. Non-Tech	33	5.0%	5.0%	3.0%	10.0%	40.0%	30.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.0%	100.00%
10. Structures - Bridge Development Report	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
11. Structures - Temporary Bridge	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
12. Structures - Short Span Concrete Bridge	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
13. Structures - Short Span Concrete Bridge	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
14. Structures - Structural Steel Bridge	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
15. Structures - Segmental Concrete Bridge	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
16. Structures - Movable Span	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
17. Structures - Retaining Walls	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
18. Structures - Miscellaneous	68	5.0%	5.0%	3.0%	10.0%	40.0%	30.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.0%	100.00%
19. Signing & Pavement Marking Analysis	160	5.0%	5.0%	3.0%	10.0%	40.0%	30.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.0%	100.00%
20. Signing & Pavement Marking Plans	59	5.0%	5.0%	3.0%	10.0%	40.0%	30.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.0%	100.00%
21. Signalization Analysis	84	5.0%	5.0%	3.0%	10.0%	40.0%	30.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.0%	100.00%
22. Signalization Plans	34	5.0%	5.0%	3.0%	10.0%	40.0%	30.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.0%	100.00%
23. Lighting Analysis	42	5.0%	5.0%	3.0%	10.0%	40.0%	30.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.0%	100.00%
24. Lighting Plans	10	5.0%	5.0%	3.0%	10.0%	40.0%	30.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
25. Landscape Architecture Analysis	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
26. Landscape Architecture Plans	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
27. Survey (Field & Office Support)	129,448,325	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	35.0%	50.0%	5.0%	100.00%
28. Photogrammetry	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
29. Mapping	160	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	35.0%	50.0%	5.0%	100.00%
30. Terrestrial Mobile LIDAR	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
31. Architectural Development	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
32. Noise Barriers Impact Design Assessment	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
33. Intelligent Transportation Systems Analysis	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
34. Intelligent Transportation Systems Plans	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%
35. Geotechnical	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.00%

Project Activity 3: General Tasks

Phase 1 - LAKE COUNTY

Estimator:

Representing	Print Name	Signature / Date
Lake County		
DRMP		

NOTE: Signature Block is optional, per District preference

Task No.	Task	Units	No of Units	Hours/ Unit	Total Hours	Comments
3.1	Public Involvement	LS	1	0	0	
3.1.1	Community Awareness Plan	LS	1	0	0	
3.1.2	Notifications	LS	1	0	0	
3.1.3	Prepare Mailing Lists	LS	1	0	0	
3.1.4	Site Selection	LS	1	0	0	
3.1.5	Driveway Modification Letters	LS	1	0	0	
3.1.6	Newsletter	LS	1	0	0	
3.1.7	Renderings and Fly Throughs	LS	1	0	0	
3.1.8	PowerPoint Presentation	LS	1	0	0	
3.1.9	Public Meeting Preparations	LS	1	0	0	
3.1.10	Public Meeting Attendance/Followup	LS	1	80	80	4 meetings with County Commission(2 mtgs) and City (2 mtgs) (2 people at 5 hours each)--> 4*2*5; 4 misc meetings with property owners (2 people at 5 hours each)
3.1.11	Other Agency Meetings	LS	1	0	0	NA
3.1.12	Web Site	LS	1	0	0	
3.1 Public Involvement Subtotal					80	
3.2	Joint Project Agreements	EA	0	0	0	
3.3	Specifications Package Preparation	LS	1	40	40	Use Lake County Specifications --> 40 hrs : does not include bidding
3.4	Contract Maintenance and EDMS	LS	1	62	62	8 set up + 3 hrs/month at 18 mo
3.5	Value Engineering (Multi-Discipline Team) Review	LS	1	0	0	
3.6	Prime Consultant Project Manager Meetings	LS	1	60	60	See listing below
3.7	Plans Update	LS	1	0	0	

Project Activity 3: General Tasks

Task No.	Task	Units	No of Units	Hours/ Unit	Total Hours	Comments
3.8	Post Design Services	LS	1	0	0	to be negotiated at a later date
3.9	Digital Delivery	LS	1	16	16	only at end of project; sign and seal documents
3.10	Risk Assessment Workshop	LS	1	0	0	
3.11	Railroad, Transit, and/or Airport Coordination	LS	1	0	0	
3.12	Other Project General Tasks	LS	1	16	16	miscellaneous coordination
3. Project Common and Project General Tasks Total					274	

3.6 - List of Project Manager Meetings	Units	No of Units	Hours/ Unit	Total Hours	Comments	
Roadway Analysis	EA	2	5	10	includes 1 mtg with Lake County for typical and pavement design, 15% line and grade mtg w/ County;	
Drainage	EA	2	5	10	mtg w/ WMD; pond siting mtg w/ County	
Utilities	EA	1	0	0		
Environmental	EA	0	0	0		
Structures	EA	0	0	0		
Signing & Pavement Marking	EA	0	0	0		
Signalization	EA	0	0	0		
Lighting	EA	0	0	0		
Landscape Architecture	EA	0	0	0		
Survey	EA	0	0	0		
Photogrammetry	EA	0	0	0		
ROW & Mapping	EA	0	0	0		
Terrestrial Mobile LIDAR	EA	0	0	0		
Architecture	EA	0	0	0		
Noise Barriers	EA	0	0	0		
ITS Analysis	EA	0	0	0		
Geotechnical	EA	8	0.5	4	internal meetings with design team - 1 per mo. for 8 mo. --> divide by 2	
Progress Meetings	EA	4	5	20	with Lake County	
Phase Reviews	EA	2	8	16		
Field Reviews	EA	2	8	16		
Total Project Manager Meetings					60	Total PM Meeting Hours carries to Task 3.6 above

- Notes:**
1. If the hours per meeting vary in length (hours) enter the average in the hour/unit column.
 2. Do not double count agency meetings between permitting agencies.

Project Activity 3: General Tasks

Task No.	Task	Units	No of Units	Hours/ Unit	Total Hours	Comments
----------	------	-------	-------------	-------------	-------------	----------

3. Project manager meetings are calculated in each discipline sheet and brought forward to Column D, except for Photogrammetry.

Project Activity 4: Roadway Analysis

Estimator:

Phase 1 - LAKE COUNTY

0

Representing	Print Name	Signature / Date
Lake County		
DRMP		

NOTE: Signature Block is optional, per District preference

Task No.	Task	Units	No of Units	Hours/ Unit	Total Hours	Comments
4.1	Typical Section Package	LS	1	0	0	not required
4.2	Pavement Type Selection Report	LS	1	0	0	not required
4.3	Pavement Design Package	LS	1	24	24	16 hours - 1 pavement design for Citrus Grove Road mainline plus M&R Hancock Road (4 hrs) and add aux lanes to Hancock (4 hrs) = 20 hours
4.4	Cross-Slope Correction	LS	1	0	0	no cross slope correction on Hancock Road
4.5	Horizontal /Vertical Master Design Files	LS	1	330	330	From station 152+00 to station 197+00 --> total length 4500 LF --> 4500/5280 = 0.852 = .85 miles plus 500 feet both legs of Hancock Road and 500 feet on Grassy Lake Road --> 3500/5280 = 0.284 --> 0.29 miles --> total .85+.29 = 1.14 miles round to 1.15 miles --> 1'300 + 200' .25 = 950
4.6	Access Management	LS	1	4	4	coordination with County on median openings
4.7	Roundabout Evaluation	LS	1	0	0	not required
4.8	Roundabout Final Design Analysis	LS	1	0	0	not required
4.9	Cross Section Design Files	LS	1	231	231	90 hrs/ mile --> 1.15 X 90 X 2 : add in 1 pond ... 16 hrs/ pond ; 8 hrs for .gen file
4.10	Traffic Control Analysis	LS	1	16	16	Concept
4.11	Master TCP Design Files	LS	1	40.0	40	40 scale - only show 1 phase: at Hancock and along Grassy Lake Road
4.12	Design Variations and Exceptions	LS	1	0	0	none required
4.13	Design Report	LS	1	24	24	design documentation
4.14	Computation Book and Quantities	LS	1	100	100	summary of quantities with all calculations
4.15	Cost Estimate	LS	1	40	40	Provide 5 engineering estimates: Initial, 30 %, 60%, 90% and Final: 5 x 8 = 40 hours
4.16	Technical Special Provisions	LS	1	0	0	none anticipated
4.17	Other Roadway Analyses	LS	1	16	16	misc coord with Turnpike and Developer
Roadway Analysis Technical Subtotal					825	

Project Activity 4: Roadway Analysis

Task No.	Task	Units	No of Units	Hours/ Unit	Total Hours	Comments
4.18	Field Reviews	LS	1	32	32	2 people for 2 field reviews
4.19	Protection of Existing Structures	LS	1	30	30	
4.20	Technical Meetings	LS	1	63	63	Meetings are listed below
4.21	Quality Assurance/Quality Control	LS	%	5%	41	
4.22	Independent Peer Review	LS	%	0%	0	
4.23	Supervision	LS	%	5%	41	
Roadway Analysis Nontechnical Subtotal					207	
4.24	Coordination	LS	%	2%	21	
4. Roadway Analysis Total					1053	

Technical Meetings	Units	No of Units	Hours/ Unit	Total Hours	PM Attendance at Meeting Required?	Number
Typical Section	EA	1	4	4	yes	1
Pavement	EA	0	0	0		0
Access Management	EA	0	0	0		0
15% Line and Grade	EA	1	4	4	yes	1
Driveways	EA	0	0	0		0
Local Governments (1 city mtg, 2 county mtgs)	EA	3	4	12		0
Work Zone Traffic Control	EA	0	0	0		0
30/60/90/100% Comment Review Meetings	EA	0	0	0		0
Other Meetings (3 property owner mtgs, 3 utility mtgs)	EA	6	4	24		0
Subtotal Technical Meetings						44
Progress Meetings (team mtgs)	EA	8	0.5	4	PM attendance at Progress Meetings is manually entered on General Task 3	--
Phase Review Meetings (30, 60, ROW)	EA	3	5	15	PM attendance at Phase Review Meetings is manually entered on General Task 3	--
Total Meetings						63
Total Project Manager Meetings (carries to Tab 3)						2

Carries to 4.17

Carries to Tab 3

Project Activity 5: Roadway Plans

Estimator:

Phase 1 - LAKE COUNTY

0

Representing	Print Name	Signature / Date
Lake County		
DRMP		

NOTE: Signature Block is optional, per District preference

Task No.	Task	Scale	Units	No. of Units or Sheet	Hours/ Unit or Sheet	Total Hours	Comments
5.1	Key Sheet		Sheet	1	6	6	
5.2	Summary of Pay Items		Sheet	2	12	24	
5.3	Typical Section Sheets						
5.3.1	Typical Sections		EA	1	12	12	New Construction (mainline)
5.3.2	Typical Section Details		EA	2	8	16	Hancock Road turn lanes, Hancock Road M&R detail, Grassy Lake Road detail, guardrail detail
5.4	General Notes/Pay Item Notes		Sheet	1	8	8	
5.5	Summary of Quantities Sheets		Sheet	9	5	45	summary of: Lump Sum, General Items, TTCP, Temp. Drwy., Erosion, Litter & Mowing, Removal Items, Mailboxes, Earthwork, Turnouts, Pavement, Misc. Asphn., Walls, Curb & Gutter, Sidewalk, Fence, Turf, guardrail
5.6	Project Layout		Sheet	1	4	4	
5.7	Plan/Profile Sheet		Sheet	0	0	0	
5.8	Profile Sheet	40	Sheet	11	3	33	Mainline - 8 sheets; 2 shts Hancock Road ; 1 sht Grassy Lake Road
5.9	Plan Sheet	40	Sheet	11	3	33	Mainline - 8 sheets; 2 shts Hancock Road ; 1 sht Grassy Lake Road
5.10	Special Profile		Sheet	1	8	8	at Hancock Road for returns
5.11	Back-of-Sidewalk Profile Sheet		Sheet	0	0	0	NA; sidewalk will follow profile of roadway
5.12	Interchange Layout Sheet		Sheet	0	0	0	
5.13	Ramp Terminal Details (Plan View)		Sheet	0	0	0	
5.14	Intersection Layout Details		Sheet	0	0	0	
5.15	Special Details		EA	1	12	12	misc

Project Activity 5: Roadway Plans

Task No.	Task	Scale	Units	No. of Units or Sheet	Hours/ Unit or Sheet	Total Hours	Comments
5.16	Cross-Section Pattern Sheet(s)		Sheet	1	0	0	
5.17	Roadway Soil Survey Sheet(s)		Sheet	1	1	1	
5.18	Cross Sections		EA	120	0.25	30	every 50 feet
5.19	Temporary Traffic Control Plan Sheets		Sheet	2	12	24	at connection points
5.20	Temporary Traffic Control Cross Section Sheets		EA	4	2	8	2 along Hancock- 2 along Citrus Grove Road - working sections only
5.21	Temporary Traffic Control Detail Sheets		Sheet	2	6	12	General Notes, Phase Notes, Phase Typical Section Sheets
5.22	Utility Adjustment Sheets		Sheet	7	3	21	only along Citrus Grove Road and Hancock Road
5.23	Selective Clearing and Grubbing Sheet(s)		Sheet	0	0	0	
5.24	Project Network Control Sheet(s)		Sheet	1	1	1	
5.25	Environmental Detail Sheets		Sheet	0	0	0	
5.26	Utility Verification Sheet(s) (SUE Data)		Sheet	1	4	4	
Roadway Plans Technical Subtotal						302	
5.27	Quality Assurance/Quality Control		LS	%	5%	15	
5.28	Supervision		LS	%	5%	15	
5. Roadway Plans Total						332	

Project Activity 6a: Drainage Analysis

Phase 1 - LAKE COUNTY

Estimator:

0

Representing	Print Name	Signature / Date
Lake County		
DRMP		

NOTE: Signature Block is optional, per District preference

Task No.	Task	Units	No of Units	Hours/ Unit	Total Hours	Comments
6a	Drainage Map Hydrology	Per Map	0	0	0	
6.1	Base Clearance Report	Per Location	0	0	0	
6.2	Pond Siting Analysis and Report	Per Basin	1	30	30	pond siting with three alternatives for one basin
6.3	Design of Cross Drains	EA	2	10	20	
6.4	Design of Ditches	Per Ditch Mile	0.74	15	13	3,900 feet for off-site collection, plus 1 hour per side drain (2 side drains)
6.5	Design of Outfalls		0	0	0	none anticipated
6.6	Design of Stormwater Management Facility (Onsite or Infield Pond)	EA	1	55	55	
6.7	Design of Stormwater Management Facility (Roadside Ditch as Linear Pond)	Per Cell	2	20	40	swales within roadway right-of-way for 1) segment ultimately routed to developer's pond, and 2) east end of project at intersection.
6.8	Design of Floodplain Compensation	Per Floodplain Basin	1	30	30	analysis for impacts to depression from roadway
6.9	Design of Storm Drains	EA	67	2.5	168	One structure per 65 feet, total 4,350 feet length
6.10	Optional Culvert Material	EA	0	0	0	
6.11	French Drain Systems	Per Cell	0	0	0	
6.12	Drainage Wells	EA	0	0	0	
6.13	Drainage Design Documentation Report	LS	1	50	50	per Lake County requirements
6.14	Bridge Hydraulic Report	EA	0	0	0	

Project Activity 6a: Drainage Analysis

Task No.	Task	Units	No of Units	Hours/ Unit	Total Hours	Comments
6.15	Temporary Drainage Analysis	LS	1	8	8	
6.16	Cost Estimate	LS	1	4	4	four submittals at 30%, 50%, 90%, final
6.17	Technical Special Provisions	LS	1	0	0	
6.18	Other Drainage Analysis	LS	1	0	0	
Drainage Analysis Technical Subtotal					418	
6.19	Field Reviews	LS	1	8	8	1 review at 8 hours
6.20	Technical Meetings	LS	1	24	24	Meetings are listed below
6.21	Environmental Look-Around (ELA) Meeting	LS	1	0	0	
6.22	Quality Assurance/Quality Control	LS	%	5%	21	
6.23	Independent Peer Review	LS	%	0%	0	
6.24	Supervision	LS	%	5%	21	
Drainage Analysis Nontechnical Subtotal					74	
6.25	Coordination	LS	%	2%	10	
6a Drainage Analysis Total					502	

Technical Meetings	Units	No of Units	Hours/ Unit	Total Hours	PM Attendance at Meeting Required?	Number
Base Clearance Water Elevation	EA	0	0	0		0
Pond Siting	EA	0	0	0		0
Agency	EA	1	5	5	yes	1
Local Governments (cities, counties)	EA	1	5	5	yes	1
FDOT Drainage	EA	0	0	0		0
Other Meetings	EA	0	0	0		0
Subtotal Technical Meetings				10		2
Progress Meetings (if required)	EA	8	0.5	4	PM attendance at Progress Meetings is manually entered on General Task 3	--
Phase Review Meetings	EA	2	5	10	Assume drainage rep. at 15% and 80% phase review meetings with Lake County.	--
Total Meetings				24	Total Project Manager Meetings (carries to Tab 3)	2

Carries to 6.19

Carries to Tab 3

6b. Drainage Plans

Estimator:

Phase 1 - LAKE COUNTY
0

Representing	Print Name	Signature / Date
Lake County		
DRMP		

NOTE: Signature Block is optional, per District preference

Task No.	Task	Scale	Units	No. of Units or Sheet	Hours/ Unit or Sheet	Total Hours	Comments
6b.1	Drainage Map (Including Interchanges)		Sheet	2	20	40	1"=200' scale
6b.2	Bridge Hydraulics Recommendation Sheets		Sheet	0	0	0	
6b.3	Summary of Drainage Structures		Sheet	2	20	40	
6b.4	Optional Pipe/Culvert Material		Sheet	0	0	0	
6b.5	Drainage Structure Sheet(s) (Per Structure)		EA	67	1	67	structure information on plan sheet
6b.6	Miscellaneous Drainage Detail Sheets		Sheet	1	16	16	pond outfall details
6b.7	Lateral Ditch Plan/Profile		Sheet	0	0	0	
6b.8	Lateral Ditch Cross Sections		EA	0	0	0	
6b.9	Retention/Detention Ponds Detail Sheet(s)		Sheet	1	32	32	
6b.10	Retention Pond Cross Sections		EA	8	0.5	4	
6b.11	Erosion Control Plan Sheet(s)		Sheet	1	8	8	erosion control details and quantities tabulated on detail sheet
6b.12	SWPPP Sheet(s)		Sheet	2	4	8	
Drainage Plans Technical Subtotal						215	
6b.13	Quality Assurance/Quality Control		LS	%	5%	11	
6b.14	Supervision		LS	%	5%	11	
6. Drainage Plans Total						237	

Project Activity 7: Utilities

Estimator:

Phase 1 - LAKE COUNTY
0

Representing	Print Name	Signature / Date
Lake County		
DRMP		

NOTE: Signature Block is optional, per District preference

Task No.	Task	Units	No of Units	Hours/ Unit	Total Hours	Comments
7.1	Utility Kickoff Meeting	LS	1	5	5	Meeting is listed below
7.2	Identify Existing Utility Agency Owners (UAO(s))	LS	1	9	9	
7.3	Make Utility Contacts	LS	1	27	27	1 hour per utility --> 9 utilities --> 3 contacts 3x9 = 27
7.4	Exception Processing	LS	1	0	0	
7.5	Preliminary Utility Meeting	LS	1	5	5	Meeting is listed below--
7.6	Individual/Field Meetings	LS	1	30	30	Meetings are listed below
7.7	Collect and Review Plans and Data from UAO(s)	LS	1	27	27	3 times. Once for initial markups, once for design RGB's and once in response to review of UWS
7.8	Subordination of Easements Coordination	LS	1	0	0	
7.9	Utility Design Meeting	LS	1	12	12	Meeting is listed below
7.10	Review Utility Markups & Work Schedules, and Processing of Schedules & Agreements	LS	1	36	36	4 hours per utility --> 4*9 = 36 hrs
7.11	Utility Coordination/Followup	LS	1	55	55	2 hrs for 7 utilities: 24 hrs for Duke --> 2*7+2*24
7.12	Utility Constructability Review	LS	1	18	18	2 hrs per utilities --> 2*9 = 18 hrs
7.13	Additional Utility Services	LS	1	0	0	
7.14	Processing Utility Work by Highway Contractor (UWHC)	LS	1	0	0	
7.15	Contract Plans to UAO(s)	LS	1	9	9	
7.16	Certification/Close-Out	LS	1	9	9	
7.17	Other Utilities	LS	1	0	0	
7. Utilities Total					242	

Project Activity 7: Utilities

Technical Meetings	Units	No of Units	Hours/ Unit	Total Hours	PM Attendance at Meeting Required?	Number
Kickoff (see 7.1)	EA	1	5	5	yes	1
Preliminary Meeting (see 7.5)	EA	1	5	5	yes	0
Individual UAO Meetings (see 7.6)	EA	5	5	25	no	0
Field Meetings (see 7.6)	EA	1	5	5	no	0
Design Meeting (see 7.9)	EA	1	12	12	yes	0
Other Meetings (this is automatically added into Utilities Total (cell F22))	EA	0	0	0		
Total Meetings				52	Total Project Manager Meetings (carries to Tab 3)	1

Carries to Tab 3

Project Activity 8: Environmental Permits

Estimator: GPM

#REF!
#REF!

Representing	Print Name	Signature / Date
Lake County		
DRMP		

NOTE: Signature Block is optional, per District preference

Task No.	Task	Units	No. of Units	Hours/ Units	Total Hours	Comments
Environmental Permits, Compliances and Clearances						
8.1	Preliminary Project Research	LS	1	20	20	
Permits						
8.2	Field Work					
8.2.1	Pond Site Alternatives	LS	0	0	0	
8.2.2	Establish Wetland Jurisdictional Lines and Assessments	LS	1	20	20	Conduct a field assessment to assess existing conditions necessary for permitting. Assume no wetland impacts as a result of this project.
8.2.3	Species Surveys	LS	1	180	180	Conduct gopher tortoise, scrub jay, and sand skink surveys consistent with the SOS.
8.2.4	Archaeological Surveys	LS	0	0	0	
8.3	Agency Verification of Wetland Data	LS	0	12	12	Agency field meeting consistent with the SOS
8.4 Complete And Submit All Required Permit Applications						
8.4.1	Complete and Submit All Required Wetland Permit Applications	LS	1	165	165	Prepared a SJRWMD ERP application, response to RAI questions, and review permit conditions consistent with the SOS.
8.4.2	Complete and Submit All Required Species Permit Applications	LS	1	35	35	Prepared a FPWCC Gopher Tortoise Relocation Permit application consistent with the SOS.
8.5	Prepare Dredge and Fill Sketches (as needed)	LS	0	0	0	
8.6	Prepare USCG Permit Sketches	LS	0	0	0	
8.7	Prepare Water Management District Flight-of-Way Occupancy Permit	LS	0	0	0	
8.8	Prepare Coastal Construction Control Line (CCCL) Permit Application	LS	0	0	0	
8.9	Prepare Tree Permit Information	LS	0	0	0	
8.10	Mitigation Design	LS	0	0	0	

Project Activity 8: Environmental Permits

Task No.	Task	Units	No. of Units	Hours/ Units	Total Hours	Comments
8.1.1	Mitigation Coordination and Meetings	LS	1	32	32	Coordination with gopher tortoise recipient site.
8.1.2	Other Environmental Permits	LS	0	0	0	
Environmental Clearances/Reevaluations						
8.1.3	Technical support to Department for Environmental Clearances and Reevaluations (use when consultant provides technical support only)					
8.1.3.1	NEPA or SEIR Reevaluation	LS	0	0	0	
8.1.3.2	Archaeological and Historical Features	LS	0	0	0	
8.1.3.3	Wetland Impact Analysis	LS	0	0	0	
8.1.3.4	Essential Fish Habitat	LS	0	0	0	
8.1.3.5	Wildlife and Habitat Impact Analysis	LS	0	0	0	
8.1.3.6	Section 7 or Section 10 Consultation	LS	0	0	0	
8.1.4	Preparation of Environmental Clearances and Reevaluations (use when consultant prepares all documents associated with reevaluation)					
8.1.4.1	NEPA or SEIR Reevaluation	LS	0	0	0	
8.1.4.2	Archaeological and Historical Features	LS	0	0	0	
8.1.4.3	Wetland Impact Analysis	LS	0	0	0	
8.1.4.4	Essential Fish Habitat	LS	0	0	0	
8.1.4.5	Wildlife and Habitat Impact Analysis	LS	1	85	85	Prepare sand skink and scrub jay reports consistent with the SOS.
8.1.4.6	Section 7 or Section 10 Consultation	LS	0	0	0	
8.1.5	Contamination Impact Analysis	LS	0	0	0	
8.1.6	Asbestos Survey	LS	0	0	0	
Environmental Permits, Compliance, and Clearances/Reevaluations Technical Subtotal						549
8.1.7	Technical Meetings	LS	1	71	71	Meetings listed below.
8.1.8	Quality Assurance/Quality Control	LS	%	5%	27	
8.1.9	Supervision	LS	%	5%	27	
Environmental Permits, Compliance and Clearances Nontechnical Subtotal						125

Project Activity 8: Environmental Permits

Task No.	Task	Units	No. of Units	Hours/ Units	Total Hours	Comments
8.20	Coordination	LS	%	2%	13	
8. Environmental Permits, Compliance and Clearances Total					687	

Technical Meetings					Total Hours	PM Attendance at Meeting Required?	Number
WMD	EA	0	0	8			0
NMFS	EA	0	0	0			0
ACOEUSACE	EA	0	0	0			0
USCG	EA	0	0	0			0
USFWS	EA	0	0	40			0
FFWCC	EA	0	0	8			0
FDOT	EA	0	0	0			0
Other Meetings	EA	3	5	15			0
Subtotal Technical Meetings					71	Subtotal Project Manager Meetings	0
Progress Meetings (if required by FDOT)					0	PM attendance at Progress Meetings is manually entered on General Task 3	--
Phase Review Meetings					0	PM attendance at Phase Review Meetings is manually entered on General Task 3	--
Total Meetings					71	Total Project Manager Meetings (carries to Tab 3)	0

Carries to 8.18

Carries to Tab 3

Project Activity 9: Structures Summary and Miscellaneous Tasks and Drawings

Estimator:

Task No.	Task	Units	Design and Production Staffhours					Comments			
			No. of Units	Hours per Unit	No. of Sheets	Total					
General Drawings											
9.1	Key Sheet and Index of Drawings	Sheet	0	0	0	0					
9.2	Project Layout	Sheet	0	0	0	0					
9.3	General Notes and Bid Item Notes	Sheet	0	0	0	0					
9.4	Miscellaneous Common Details	Sheet	0	0	0	0					
9.5	Incorporate Report of Core Borings	Sheet	0	0	0	0					
9.6	Existing Bridge Plans	LS	1	0		0					
9.7	Assemble Plan Summary Boxes and Quantities	LS	1	0		0					
9.8	Cost Estimate	LS	1	0		0					
9.9	Technical Special Provisions	LS	1	0		0					
Structures - Summary and Miscellaneous Tasks and Drawings Subtotal					0	0					
Task No.	Task	Total	Task 10	Task 11	Task 12	Task 13	Task 14	Task 15	Task 16	Task 17	Task 18
10-16	Bridge 1	0	0	0	0	0	0	0	0		
10-16	Bridge 2	0									
10-16	Bridge 3	0									
10-16	Bridge 4	0									
17	Retaining Walls	0								0	
18	Miscellaneous Structures	68									68
Structures Technical Subtotal		68	0	0	0	0	0	0	0	0	68
Task No.	Task	Units	No. of Units	Hours per Unit	Total	Comments					

Project Activity 9: Structures Summary and Miscellaneous Tasks and Drawings

9.10	Field Reviews	LS	1	0	0					
9.11	Technical Meetings	LS	1	15	15		Meetings are listed below			
9.12	Quality Assurance/Quality Control	LS	%	5%	3		This should be (5% to 10%) x ("Structures - Summary and Miscellaneous Tasks and Drawings Subtotal, cell G21" + "Structures Technical Subtotal, cell C35")			
9.13	Independent Peer Review	LS	1	0	0		This should be (3% to 7%) x ("Structures - Summary and Miscellaneous Tasks and Drawings Subtotal, cell G21" + "Structures Technical Subtotal, cell C35")			
9.14	Supervision	LS	%	5%	3					
Structures Nontechnical Subtotal					21					
9.15	Coordination	LS	1	12	12		Traffic/Geotech			
9. Structures - Summary and Miscellaneous Tasks and Drawings Nontechnical and Coordination Total					33					
Technical Meetings		Units	No of Units	Hours/ Unit	Total Hours	PM Attendance at Meeting Required?	Number			
	BDR Coordination/Review	EA	0	0	0		0			
	90/100% Comment Review	EA	0	0	0		0			
	Aesthetics Coordination	EA	0	0	0		0			
	Regulatory Agency	EA	0	0	0		0			
	Local Governments (cities, counties)	EA	1	4	4		0			
	Utility Companies	EA	1	4	4		0			
	Other Meetings	EA	0	0	0		0			
Subtotal Technical Meetings					8					
	Progress Meetings (if required by FDOT)	EA	4	0.5	2	PM attendance at Progress Meetings is manually entered on General Task 3	--			
	Phase Review Meetings	EA	1	5	5	PM attendance at Phase Review Meetings is manually entered on General Task 3	--			
Total Meetings					15	Total Project Manager Meetings (carries to Tab 3)	0			

Carries to 9.11

Carries to Tab 3

Project Activity 18. Miscellaneous Structures

Estimator:

Task No.	Task	Unit	No. of Units	Hour/ Unit	No. of Sheets	Total Hours	Comments
Concrete Box Culvert							
18.1	Concrete Box Culverts	EA	0	0		0	
18.2	Concrete Box Culverts Extensions	EA Extension	0	0		0	
18.3	Concrete Box Culvert Data Table Plan Sheets	Sheet	0	0	0	0	
18.4	Concrete Box Culvert Special Details Plan Sheets	Sheet	0	0	0	0	
Strain Poles							
18.5	Steel Strain Poles	Initial Corrig	0	0		0	
		EA Add'l Corrig	0	0		0	
		Initial Corrig	1	60		60	4 span square configuration
18.6	Concrete Strain Poles	EA Add'l Corrig	0	0		0	
		Sheet	1	8	1	8	
18.7	Strain Pole Data Table Plan Sheets	Sheet	0	0	0	0	
18.8	Strain Pole Special Details Plan Sheets	Sheet	0	0	0	0	
Mast Arms							
18.9	Mast Arms	EA Design	0	0		0	
		Sheet	0	0	0	0	
18.10	Mast Arms Data Table Plan Sheets	Sheet	0	0	0	0	
18.11	Mast Arm Special Details Plan Sheets	Sheet	0	0	0	0	
Overhead/Cantilever Sign Structures							
18.12	Cantilever Sign Structures	EA Design	0	0		0	
		EA Design	0	0		0	
18.13	Overhead Span Sign Structures	EA Design	0	0		0	
18.14	Special (Long Span) Overhead Span Sign Structures	EA Design	0	0		0	
18.15	Monorails Overhead Sign Structure	EA Design	0	0		0	
18.16	Bridge Mounted Signs (Attached to Supports)	EA Design	0	0		0	
18.17	Overhead and Cantilever Sign Structures Data Table Plan Sheets	Sheet	0	0	0	0	
18.18	Overhead and Cantilever Sign Structures Special Details Plan Sheets	Sheet	0	0	0	0	
High Mast Lighting							
18.19	Non-Standard High Mast Lighting Structures	EA Design	0	0		0	
18.20	High Mast Lighting Special Details Plan Sheets	Sheet	0	0	0	0	
Noise Barrier Walls (Ground Mount)							
18.21	Horizontal Wall Geometry	EA Wall	0	0		0	
		EA Wall	0	0		0	
18.22	Vertical Wall Geometry	Sheet	0	0	0	0	
18.23	Summary of Quantities - Aesthetic Requirements	Sheet	0	0	0	0	
18.24	Control Drawings	Sheet	0	0	0	0	
18.25	Design of Noise Barrier Walls Covered by Standards	EA Design	0	0		0	
18.26	Design of Noise Barrier Walls Not Covered by Standards	EA Design	0	0		0	
18.27	Aesthetic Details	LS	1	0		0	
Special Structures							
18.28	Fender System	LS	1	0		0	
18.29	Fender System Access	LS	1	0		0	
18.30	Special Structures	LS	1	0		0	

Project Activity 18: Miscellaneous Structures

18.31	Other Structures	US	1	0		0	
		18. Structures - Miscellaneous Total	1	0	1	69	

Project Activity 19: Signaling and Pavement Marking Analysis

Estimator:

Phase 1 - LAKE COUNTY

0

	Representing	Print Name	Signature / Date
	Lake County		
	DRMP		

NOTE: Signature Block is optional, per District preference

Task No.	Task	Units	No. of Units	Hours/Units	Total Hours	Comments
19.1	Traffic Data Analysis	LS	1	2	2	Proposed geometry review
19.2	No Passing Zone Study	LS	1	0	0	
19.3	Reference and Master Design File	LS	1	78	78	Low range (30 hrs for set up, 38 hrs for miles of project (.95 mile * 40hr per mile), 10 hr for 2 intersection (@ Hancock road and Grassy Lake road))
19.4	Multi-Post Sign Support Calculations	EA	1	0	0	
19.5	Sign Panel Design Analysis	EA	1	0	0	
19.6	Sign Lighting/Electrical Calculations	EA	1	0	0	
19.7	Quantities	LS	1	24	24	12 sheets at 2 hrs per sheet
19.8	Cost Estimate	LS	1	15	15	5 submittals at 3 hrs each
19.9	Technical Special Provisions	LS	1	0	0	
19.10	Other Signing and Pavement Marking	LS	1	0	0	
Signaling and Pavement Marking Analysis Technical Subtotal					119	
19.11	Field Reviews	LS	1	8	8	2 people 4 hrs
19.12	Technical Meetings	LS	1	18	18	Meetings are listed below
19.13	Quality Assurance/Quality Control	LS	%	5%	6	
19.14	Independent Peer Review	LS	%	0%	0	
19.15	Supervision	LS	%	5%	6	
Signaling and Pavement Marking Analysis Nontechnical Subtotal					38	
19.16	Coordination	LS	%	2%	3	
19. Signaling and Pavement Marking Analysis Total					160	

Project Activity 19: Signaling and Pavement Marking Analysis

Task No.	Task	Units	No. of Units	Hours/ Units	Total Hours	Comments	Number
Technical Meetings							
	Sign Panel Design	EA	0	0	0		0
	Queue Length Analysis	EA	0	0	0		0
	Local Governments (cities, counties)	EA	1	4	4		0
	Other Meetings	EA	0	0	0		0
	Subtotal Technical Meetings				4	Subtotal Project Manager Meetings	0
	Progress Meetings (if required by FDOT)	EA	8	0.5	4	PM attendance at Progress Meetings is manually entered on General Task 3	--
	Phase Review Meetings	EA	2	5	10	PM attendance at Phase Review Meetings is manually entered on General Task 3	--
	Total Meetings				18	Total Project Manager Meetings (carries to Tab 3)	0

Critical to 19.12

Critical to Tab 3

Project Activity 20: Signing and Pavement Marking Plans

Estimator:

Phase 1 - LAKE COUNTY

0

Representing	Print Name	Signature / Date
Lake County		
DRMP		

NOTE: Signature Block is optional, per District preference

Task No.	Task	Scale	Units	No of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
20.1	Key Sheet		Sheet	1	4	1	4	Lake County SPM Key Sheet
20.2	Summary of Pay Items		LS	1	0		0	
20.3	Tabulation of Quantities		Sheet	1	12	1	12	2 tabulation Sheet 12 hr (8hrs for first sheet+ 4hrs for second)
20.4	General Notes/Pay Item Notes		Sheet	1	4	1	4	Lake County Notes
20.5	Project Layout		Sheet	0	0	0	0	
20.6	Plan Sheet	40	Sheet	11	3	11	33	12 sheets (3hr per sheet) 9 sheets for Citrus Grove road + 2 sheets for Hancock road + 1 sheet for Grassy Lake road.
20.7	Typical Details		EA	0	0		0	
20.8	Guide Sign Worksheet(s)		EA	0	0		0	
20.9	Traffic Monitoring Site		EA	0	0		0	
20.10	Cross Sections		EA	0	0		0	
20.11	Special Service Point Details		EA	0	0		0	
20.12	Special Details		LS	1	0		0	
20.13	Interim Standards		LS	1	0		0	
Signing and Pavement Marking Plans Technical Subtotal						14	53	
20.14	Quality Assurance/Quality Control		LS	%	5%		3	
20.15	Supervision		LS	%	5%		3	
20. Signing and Pavement Marking Plans Total						14	59	

Project Activity 21: Signalization Analysis

Estimator:

Representing	Print Name	Signature / Date
Lake County		
DRMP		

NOTE: Signature Block is optional, per District preference

Task No.	Task	Units	No. of Units	Hours/ Units	Total Hours	Comments
21.1	Traffic Data Collection	LS	1	0	0	
21.2	Traffic Data Analysis	PI	1	3	3	1 intersection (3hr per intersection)
21.3	Signal Warrant Study	LS	1	0	0	
21.4	System Timings	LS	1	0	0	
21.5	Reference and Master Signalization Design File	PI	1	25	25	1 Box span design (Citrus Grove road at Hancock) 25 hours
21.6	Reference and Master Interconnect Communication Design File	LS	1	8	8	Layout of Conduit for future signal interconnect. Conduit and pull boxes will only be installed in this project.
21.7	Overhead Street Name Sign Design	EA	2	2	4	2 signs (US 27, Citrus Grove)
21.8	Pole Elevation Analysis	LS	1	2	2	2 hr for first intersection
21.9	Traffic Signal Operation Report	LS	1	0	0	
21.10	Quantities	LS	1	5	5	1 intersection
21.11	Cost Estimate	LS	1	9	9	3 submittals (3hrs per submittal)
21.12	Technical Special Provisions	LS	1	0	0	
21.13	Other Signalization Analysis	LS	1	0	0	
Signalization Analysis Technical Subtotal					56	
21.14	Field Reviews	LS	1	8	8	2 people 4 hrs
21.15	Technical Meetings	LS	1	12	12	Meetings are listed below
21.16	Quality Assurance/Quality Control	LS	%	5%	3	
21.17	Independent Peer Review	LS	%	0%	0	
21.18	Supervision	LS	%	5%	3	

Project Activity 21 : Signalization Analysis

Signalization Analysis Nontechnical Subtotal	26	
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Project Activity 21: Signalization Analysis

21.19	Coordination	LS	%	2%	2	
21. Signalization Analysis Total					84	
Technical Meetings		Units	No of Units	Hours/ Unit	Total Hours	PM Attendance at Meeting Required?
	FDOT Traffic Operations	EA	0	0	0	0
	FDOT Traffic Design	EA	0	0	0	0
	Power Company (service point coordination)	EA	0	0	0	0
	Maintaining Agency (cities, counties)	EA	0	0	0	0
	Railroads	EA	0	0	0	0
	Other Meetings	EA	0	0	0	0
Subtotal Technical Meetings					0	Subtotal Project Manager Meetings
	Progress Meetings (if required by FDOT)	EA	4	0.5	2	PM attendance at Progress Meetings is manually entered on General Task 3
	Phase Review Meetings	EA	2	5	10	PM attendance at Phase Review Meetings is manually entered on General Task 3
Total Meetings					12	Total Project Manager Meetings (carries to Tab 3)

Carries to 21.15

Carries to Tab 3

Project Activity 22: Signalization Plans

Estimator:

Phase 1 - LAKE COUNTY

0

Representing	Print Name	Signature / Date
Lake County		
DRMP		

NOTE: Signature Block is optional, per District preference

Task No.	Task	Scale	Units	No of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments	
22.1	Key Sheet		Sheet	1	4	1	4	Lake County Key Sheet	
22.2	Summary of Pay Items		Sheet	0	0	0	0		
22.3	Tabulation of Quantities		Sheet	1	8	1	8	1 sheet (8hr for first sheet)	
22.4	General Notes/Pay Item Notes		Sheet	1	4	1	4	Lake County Notes	
22.5	Plan Sheet	40	Sheet	1	4	1	4	1 sheet (4 hrs for first sheet)	
22.6	Interconnect Plans		Sheet	0	0	0	0	Installed in signing and marking plans	
22.7	Traffic Monitoring Site		EA	0	0		0		
22.8	Guide Sign Worksheet		EA	1	2		2	2 panels (Citrus Grove Road, Hancock Road)	
22.9	Special Details		Sheet	0	0	0	0		
22.10	Special Service Point Details		EA	0	0		0		
22.11	Mast Arm/Monopole Tabulation Sheet		PI	0	0		0		
22.12	Strain Pole Schedule		PI	1	2		2	1 intersection 2 hrs per intersection	
22.13	TCP Signal (Temporary)		EA	0	0		0		
22.14	Temporary Detection Sheet		PI	0	0		0		
22.15	Utility Conflict Sheet	40	Sheet	1	6	1	6	Utility information incorporation 1 Intersection (6hr per intersection)	
22.16	Interim Standards		LS	1	0		0		
Signalization Plans Technical Subtotal							5	30	
22.17	Quality Assurance/Quality Control		LS	%	5%		2		
22.18	Supervision		LS	%	5%		2		
22 Signalization Plans Total							5	34	

Project Activity 23: Lighting Analysis

Estimator:

Phase 1 - LAKE COUNTY

0

Representing	Print Name	Signature / Date
Lake County		
DRMP		

NOTE: Signature Block is optional, per District preference

Task No.	Task	Units	No. of Units	Hours/ Units	Total Hours	Comments
23.1	Lighting Justification Report	LS	1	0	0	
23.2	Lighting Design Analysis Report	LS	1	20	20	design of impacts to existing turnpike lighting at the intersection of Hancock road and Citrus Grove Road
23.3	Aeronautical Evaluation	LS	1	0	0	
23.4	Voltage Drop Calculations	LS	1	0	0	
23.5	FDEP Coordination and Report	LS	1	0	0	
23.6	Reference and Master Design Files	LS	1	0	0	
23.7	Temporary Lighting	LS	1	0	0	
23.8	Design Documentation	LS	1	0	0	
23.9	Quantities	LS	1	1	1	To be included in the signal plans (1signal sheet expected)
23.10	Cost Estimate	LS	1	2	2	cost to be included in the signal plans
23.11	Technical Special Provisions	LS	1	0	0	
23.12	Other Lighting Analysis	LS	1	0	0	
Lighting Analysis Technical Subtotal					23	
23.13	Field Reviews	LS	1	0	0	
23.14	Technical Meetings	LS	1	16	16	
23.15	Quality Assurance/Quality Control	LS	%	5%	1	
23.16	Independent Peer Review	LS	%	0%	0	
23.17	Supervision	LS	%	5%	1	
Lighting Analysis Nontechnical Subtotal					18	
23. Lighting Analysis Total					42	
23.18	Coordination	LS	%	2%	1	

Project Activity 23: Lighting Analysis

Technical Meetings	Units	No of Units	Hours/ Unit	Total Hours	PM Attendance at Meeting Required?	Number
FDOT Lighting Design	EA	0	0	0		0
FDOT Traffic Design	EA	0	0	0		0
Power Company (service point coordination)	EA	0	0	0		0
Maintaining Agency (cities, counties)	EA	1	4	4		0
Airport authority	EA	0	0	0		0
FDEP Lighting (coast areas)	EA	0	0	0		0
Other Meetings	EA	0	0	0		0
Subtotal Technical Meetings				4	Subtotal Project Manager Meetings	0
Progress Meetings (if required by FDOT)	EA	4	0.5	2	PM attendance at Progress Meetings is manually entered on General Task 3	--
Phase Review Meetings	EA	2	5	10	PM attendance at Phase Review Meetings is manually entered on General Task 3	--
Total Meetings				16	Total Project Manager Meetings (carries to Tab 3)	0

Copies to 23.14

Copies to TAB 3

24. Lighting Plans

Estimator:

Phase 1 - LAKE COUNTY
0

Representing	Print Name	Signature / Date
Lake County		
DRMP		

NOTE: Signature Block is optional, per District preference

Task No.	Task	Scale	Units	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
24.1	Key Sheet		Sheet	0	0	0	0	In signalization plans
24.2	Summary of Pay Items Including Designer Interface (TRNS-Port) Input		Sheet	0	0	0	0	
24.3	Tabulation of Quantities		Sheet	0	0	0	0	
24.4	General Notes/Pay Item Notes		Sheet	1	4	1	4	notes for lighting impacts to be in signalization plans
24.5	Pole Data, Legend and Criteria		Sheet	0	0	0	0	
24.6	Service Point Details		Sheet	0	0	0	0	
24.7	Project Layout		Sheet	0	0	0	0	
24.8	Plan Sheet	40	Sheet	1	4	1	4	to be included in signalization plans
24.9	Special Details		Sheet	0	0	0	0	
24.10	Temporary Lighting Data and Details		Sheet	0	0	0	0	
24.11	Traffic Control Plan Sheets		Sheet	0	0	0	0	
24.12	Interim Standards		LS	1	0		0	
			Lighting Plans Technical Subtotal			2	8	
24.13	Quality Assurance/Quality Control		LS	%	5%		1	
24.14	Supervision		LS	%	5%		1	
			24. Lighting Plans Total			2	10	

27. SURVEY

Estimator: Al Quicke

Phase 1 - LAKE COUNTY
0

Representing	Print Name	Signature / Date
Lake County		
DRMP		

NOTE: Signature Block is optional, per District preference

Task No.	Task	Units	No of Units	Field Crew Days/Unit	Crew Days	Field Support Hours / Crew Days	Field Support Hours	Office Support Hours / Crew Days	Office Support Hours	Comments
27.1	Horizontal Project Control (HPC)									
	2-Lane Roadway	Mile	0.95	1.58	1.50	0.50	0.75	3.00	4.50	Primary Horizontal Survey Control tied to Lake County GIS monuments and/or surrounding published control.
	Multi-lane Roadway	Mile			0.00		0.00		0.00	
	Interstate	Mile			0.00		0.00		0.00	
27.2	Vertical PC / Bench Line									
	2-Lane Roadway	Mile	0.95	1.06	1.00	0.50	0.50	4.00	4.00	Primary Vertical Survey Control tied to Lake County GIS monuments and/or surrounding published control.
	Multi-lane Roadway	Mile			0.00		0.00		0.00	
	Interstate	Mile			0.00		0.00		0.00	
27.3	Alignment and Existing RW Lines									
		Mile	0.95	3.17	3.00	0.50	1.50	3.00	9.00	The existing right of way. Stake alignment proposed Cirrus Grove Road per design.
27.4	Aerial Targets									
	2-Lane Roadway	EA		Units/Day	0.00		0.00		0.00	n/a
	Multi-lane Roadway	EA			0.00		0.00		0.00	
	Interstate	EA			0.00		0.00		0.00	
27.5	Reference Points									
	2-Lane Roadway	EA	24.00	12.00	2.00	0.50	1.00	3.00	6.00	Reference staked alignments at 1000' intervals and changes in direction.
	Multi-lane Roadway	EA			0.00		0.00		0.00	
	Interstate	EA			0.00		0.00		0.00	
	Reference Points	"B"		Units/Day						
	Non Alignment Points/Approximate	EA			0.00		0.00		0.00	

27. Survey

Task No.	Task	Units	No of Units	Field Crew Days/Unit	Crew Days	Field Support Hours / Crew Days	Field Support Hours	Office Support Hours / Crew Days	Office Support Hours	Comments
27.6	Topography/DTM (3D)	Mile	0.95	7.39	7.00	0.50	3.50	3.00	21.00	Estimating 750' per day for 3000 feet of Citrus Grove Road
27.7	Planimetric (2D)	Mile			0.00		0.00		0.00	
27.8	Roadway Cross-Sections/Profiles	Mile	0.95	1.75	1.66	0.50	0.83	3.00	4.97	1000' Check cross-sections to verify DTM
27.9	Side Street Surveys									
27.10	Underground Utilities	Mile/Site	0.57	1.75	1.00	0.50	0.50	2.00	2.00	Locate Estimated 1 utility line (CenturyLink) along Citrus Grove Road based on field review (5000' x 1 utility = 5000' of designation. Assuming 15 VVH test holes for conflict resolution. Including 4 SUE Clearance locations for signal strain poles (5'x5' "X" clearances)
	Designates	Point	19	0.21	4.00	1.00	4.00	2.00	8.00	
	Locates Survey		25%	5.00	1.25	0.50	0.62	3.00	3.75	
27.11	Outfall Survey	Mile			0.00		0.00		0.00	n/a
27.12	Drainage Survey	EA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Included in 27.10
27.13	Bridge Survey	EA			0.00		0.00		0.00	na
	Minor / Major									
27.14	Channel Survey	EA			0.00		0.00		0.00	na
27.15	Pond Site Survey	EA			0.00		0.00		0.00	na
27.16	Mitigation Survey	Mile			0.00		0.00		0.00	na
27.17	Jurisdiction Line Survey	Mile			0.00		0.00		0.00	na
27.18	Geotechnical Support	EA	100	25	4.00	0.50	2.00	2.00	8.00	assuming 100 borings.

27. Survey

Task No.	Task	Units	No of Units	Field Crew Days/Unit	Crew Days	Field Support Hours / Crew Days	Field Support Hours	Office Support Hours / Crew Days	Office Support Hours	Comments
27.19	Sectional / Grant Survey	Corner	9	0.33	3.00	1.00	3.00	4.00	12.00	Survey of Section 5, T 22S, R26E
		Mile			0.00		0.00		0.00	
27.20	Subdivision Location	Block			0.00		0.00		0.00	n/a
27.21	Maintained RW	Mile			0.00		0.00		0.00	n/a
27.22	Boundary Survey	EA			0.00		0.00		0.00	n/a
27.23	Water Boundary Survey	EA			0.00		0.00		0.00	n/a
27.24	RW Staking / RW Line	EA			0.00		0.00		0.00	n/a
27.25	RW Monumentation	Point			0.00		0.00		0.00	n/a
27.26	Line Cutting	Mile	1.42	3.52	5.00					
27.27	Work Zone Safety		34	0.125	4.30					
27.28	Miscellaneous Surveys				0.00		0.00		0.00	
Survey Subtotal				Crew Days	39	Field Support Hours	18	Office Support Hours	83	
27.29	Supplemental Surveys			39	0		0		0	THE % FOR SUPPLEMENTAL WILL BE DETERMINED AT NEGOTIATIONS. THIS ITEM CAN ONLY BE USED IF AUTHORIZED IN WRITING BY THE DISTRICT SURVEYOR
27.30	Document Research	Units	8.00						8	
27.31	Field Reviews	Units	8.00						8	

27. Survey

Task No.	Task	Units	No of Units	Field Crew Days/Unit	Crew Days	Field Support	Field Support	Office Support	Office Support	Comments	
						Hours / Crew Days	Hours	Hours / Crew Days	Hours		
27.32	Technical Meetings	LS	0.00						0		
27.33	Quality Assurance / Quality Control	LS					5%		4		
27.34	Supervision	LS					5%		6		
27.35	Coordination	LS					2%		2		
27. Survey Total					Crew Days	39	Field Support Hours	18	Office Support Hours	111	

SPLS =
 PLS =
 Office Support = 129
 Total Hours =

Technical Meetings	Units	No of Units	Hours/ Unit	Total Hours	PM Attendance at Meeting Required?	Number
Kickoff Meeting with FDOT	EA	0	0	0		0
Baseline Approval Review	EA	0	0	0		0
Network Control Review	EA	0	0	0		0
Vertical Control Review	EA	0	0	0		0
Local Governments (cities, counties)	EA	0	0	0		0
Final Submittal Review	EA	0	0	0		0
Other Meetings	EA	0	0	0		0
Subtotal Technical Meetings				0	Subtotal PM Meetings	0
Progress Meetings (if required by FDOT)	EA	0	0	0	**	**
Phase Review Meetings	EA	0	0	0	**	**
Total Meetings				0	Total PM Mtgs (carries to Tab 3)	0

** Project Manager attendance at progress, phase and field review meetings are manually entered on General Task 3

29. Mapping

Estimator:

Phase 1 - LAKE COUNTY
0

Representing	Print Name	Signature / Date
Lake County		
DRMP		

NOTE: Signature Block is optional, per District preference

Task No.	Task	Units	No. of Units	Hours/Unit	No. of Sheets	Total Hours	Comments
	Master CADD File						
29.1	Alignment	Mile	0.57	2		1	
29.2	Section and 1/4 Section Lines	Section	1	2		2	
29.3	Subdivisions / Property Lines	EA	2	0		0	
29.4	Existing RW	Mile	0.57	2		1	
29.5	Topography	Mile	0.57	4		2	
29.6	Parent Tract Properties/Existing Easements	Parcel	5	1		5	
29.7	Proposed RW Requirements	Parcel	5	1		5	
29.8	Limits of Construction	Mile	0.57	1		1	
29.9	Jurisdictional/Agency Lines	Linear Mile	0	0		0	
	Sheet Files						
29.10	Control Survey Cover Sheet	Sheet	0	0		0	
29.11	Control Survey Key Sheet	Sheet	0	0		0	
29.12	Control Survey Detail Sheet	Sheet	0	0		0	
29.13	R/W Map Cover Sheet	Sheet	0	0		0	
29.14	R/W Map Key Sheet	Sheet	0	0		0	
29.15	R/W Map Detail Sheet	Sheet	0	0		0	
29.16	Maintenance Map Cover Sheet	Sheet	0	0		0	
29.17	Maintenance Map Key Sheet	Sheet	0	0		0	
29.18	Maintenance Map Detail Sheet	Sheet	0	0		0	
29.19	Reference Point Sheet	Sheet	0	0		0	
29.20	Project Network Control Sheet	Sheet	0	0		0	
29.21	Table of Ownerships Sheet	Sheet	0	0		0	

29. Mapping

Task No.	Task	Units	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments	Number
	Miscellaneous							
29.22	Parcel Sketches	Parcel	15	5		80		
29.23	TITF Sketches	Parcel	0	0		0		
29.24	Other Specific Purpose Survey Map	EA	0	0		0		
29.25	Boundary Survey(s) Map	EA	0	0		0		
29.26	R/W Monumentation Map	Sheet	0	0		0		
29.27	Title Search Map	LS	1	1		1		
29.28	Title Search Report	LS	5	1		5	Review Title searches provided.	
29.29	Legal Descriptions	Parcel	15	2		32		
29.30	Final Maps/Plans Comparison	Sheet	0	0		0		
	Mapping Technical Subtotal					135		
29.31	Field Reviews	EA	1	0		0		
29.32	Technical Meetings	LS	1	8		8		
29.33	Quality Assurance/Quality Control	EA	%	5%		7		
29.34	Supervision	EA	%	5%		7		
	Mapping Nontechnical Subtotal					22		
29.4	Coordination	LS	%	2%		3		
29.4	Supplemental Mapping	LA	%	0%		0		
	29. Mapping Total					160		
	Technical Meetings	Units	No of Units	Hours/ Unit	Total Hours	PM Attendance at Meeting Required?	Number	
	Kickoff meeting	EA	0	0	0		0	
	Control map review	EA	0	0	0		0	
	45/60/90/final map review	EA	0	0	0		0	
	Other meetings	EA	2	4	8		0	
	Subtotal Technical Meetings				8		0	
	Progress Meetings (if required by FDOT)	EA	0	0	0		0	
	Phase Review Meetings	EA	0	0	0		0	
	Total Meetings				8	Total Project Manager Meetings (carries to Tab 3)	0	

Chart 19 29.33

Chart 19 Tab 3



Ardaman & Associates, Inc.

Geotechnical, Environmental and
Materials Consultants

April 8, 2016

Proposal File No. 16-60-167

Revised April 18, 2016

DRMP

1900 SW 34th Street

Suite 204

Gainesville, Florida 32608

Attention: Mr. Chris Towne, P.E.

Subject: Proposal for Subsurface Soil Exploration and
Geotechnical Engineering Evaluation
Relative to Citrus Grove Road, Phase III (Second County Phase)
Lake County, Florida

Dear Mr. Towne:

As requested, we are pleased to present this proposal for conducting a subsurface soil exploration and geotechnical engineering evaluation for the subject project. Based on our understanding of the project and information provided by you, the project consists of the following elements:

- Approximately 4,500 feet of roadway typically with two lanes in each direction. We have assumed that up to 4 feet of cut and/or fill will be required as part of the roadway mass grading.
- One permanent stormwater retention pond (2.5 acre) and two swales
- Four (4) Strain Poles for Signals.

The scope of our work will include determining if the soil characteristics are suitable to construct the proposed roadway and strain poles. In addition, we will explore the soil stratigraphy in the pond and swale areas and provide results of soil permeability tests. We will also estimate the normal seasonal high groundwater table at the boring locations.

The following summarizes our proposed scope of work and associated fees for conducting the subject exploration.

FIELD EXPLORATION

The field exploration program will include the following:

Description	Number of Borings	Depth Below Ground Surface (feet)
General Roadway	45 Auger	21 @ 5, 15 @ 10, 9 @ 20
Ponds	5 Auger	20
Swales	4 Auger	20
Strain Poles	4 SPT	25

The number of roadway borings is based on a general frequency of one boring per 100 feet of mainline (i.e. as requested by you), typically to 5 feet deep (10 feet deep in cut areas) with a 20-foot deep boring in lieu of a 5-foot deep boring every approximate 500 feet. For ponds, we are proposing two borings per acre of pond size.

The auger borings will be drilled using a 4-inch diameter truck-mounted continuous flight auger or a 3.5-inch diameter manual bucket auger. Each sample will be removed from the auger in the field and then examined and visually classified by our crew chief. Representative portions will be sealed and packaged for transportation to our laboratory for further analysis as required. Water level observations will be made in the boreholes during the drilling operation.

A total of five (5) field permeability tests will be performed at the locations of the proposed retention ponds and swale. The field permeability tests will include installing a solid-walled PVC casing, snugly fit, into a 4-inch diameter auger boring. The bottom of the pipe will be open and raised 1 foot above the bottom of the boring. The bottom 1 foot of the boring will be gravel-packed. The rate water is taken in by the formation is measured and used to calculate permeability. The test will be run as a "constant head" test by maintaining the water level in the casing at ground surface level. If relatively high permeability soils are present, the test will be run as a "falling head" test in which the rate of water drop will be measured.

This proposal includes budget to obtain up to three grab samples of soil for Limerock Bearing Ratio (LBR) testing. This number of tests is based on a general frequency of 3 samples per mile of roadway per stratum (assume 2). The grab samples will be obtained from a typical depth of 6 to 18 inches below the existing ground surface.

LABORATORY TESTING

Routine laboratory visual classification will be performed along with the following specific tests:

- Percent fines
- Sieve Analysis
- Atterberg limits
- Organic Content

We will perform corrosion series tests on selected soil samples obtained from the borings (assumed frequency of 1 test per 1,500 feet of roadway for two assumed strata), and LBR testing on the recovered grab samples of soil.

ENGINEERING REPORT

Data developed during the study will be submitted in written reports upon conclusion of the study. The general level of analysis, report format and report submissions will be per standard FDOT type practice for roadway projects (assuming 30%, 60%, 90%, 100% and final level reports will be required).

We note that relative to the proposed strain poles, although our scope does not include analysis of the foundations, we will discuss whether the encountered soil profile satisfies the minimum requirements used in the standard design for these structures, and if not, provide recommended design soil properties that may be used in the foundation analysis.

COST ESTIMATE

The costs associated with the aforementioned tasks are estimated to be \$37,498.23. A cost estimate breakdown is attached with this proposal (see Attachment 1) together with an FDOT type Staffhour Estimating form (see Attachment 2). We note that unit estimates may vary and additional items may be utilized to meet the project requirements. The final cost will be dependent on the requested services that Ardaman provides and may be lower or higher than the total estimate shown in the attachment. The above estimated cost will not be exceeded without prior authorization.

TERMS AND CONDITIONS

The total cost is based on the unit prices as shown on Attachment 1. This proposal is subject to the following terms and conditions: (1) access to boring locations is to be readily available to our truck-mounted drilling equipment, (2) the proposed number of borings and the boring depths will be adequate, (3) the budgeted number of undisturbed samples and consolidation tests on fine grained soils will suffice, (4) neither maintenance of traffic or permits are required to perform the field work, (5) Ardaman & Associates will not take responsibility for damages to underground structures and/or services that are not located by Sunshine State One-Call, (6) exploration or evaluation of the environmental (ecological or hazardous/toxic material related) condition of the site and subsurface is not included, and (7) this proposed exploration is a relatively shallow exploration and is not intended to be an evaluation for sinkhole potential.

CLOSURE

We appreciate the opportunity to submit this proposal and look forward to working with you on this project. If this proposal meets with your approval, please indicate your acceptance by signing and returning the attached Proposal/Project Acceptance sheet. Please call if you have any questions or require additional information.

Very truly yours,
ARDAMAN & ASSOCIATES, INC.



Colin T. Jewsbury, P.E.
Senior Engineer

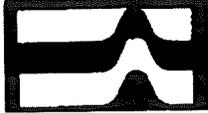


Charles H. Cunningham, P.E.
Orlando Branch Manager

CTJ/CHC/nfm
1660-167rev DRMP Citrus Grove Road Phase III.docx (2016PP)

Attachments:

- 1 Computation of Geotechnical Cost
- 2 Staffhour Estimate Form



Ardaman & Associates, Inc.

PROPOSAL/PROJECT ACCEPTANCE AND AGREEMENT

PROJECT INFORMATION:

Project Name Citrus Grove Road, Phase III (Second County Phase)
Project Location Lake County, Florida
Proposal Number and Date 16-60-167 / April 8, 2016 Revised April 18, 2016
Description of Services Subsurface Soil Exploration and Geotechnical Engineering Evaluation
Estimated Fee \$37,498.23

PROPERTY OWNER IDENTIFICATION:

Name _____
Property Identification Number _____
Address _____
City/State _____ Zip Code _____ Phone _____
Attention _____ Title _____

SPECIAL INSTRUCTIONS:

PAYMENT TERMS:

Payment shall be due within 30 days after date of each periodic invoice. Interest at the rate of 18% per annum (or the highest rate allowable by law) shall accrue on all amounts not paid within 30 days after date of invoice. All attorney fees and expenses associated with collection of past due invoices will be paid by Client. Failure to timely pay any invoice shall constitute a waiver of any and all claims against Ardaman & Associates, Inc.

PROPOSAL ACCEPTANCE:

By accepting this Proposal, the Terms and Conditions of this Proposal, including the Terms on this page, and Ardaman & Associates, Inc.'s General Conditions appearing on the following page of this Proposal, are incorporated herein by reference. In the event this Proposal Acceptance was received by facsimile, Client hereby confirms that the above described Proposal, the Terms and Conditions of this Proposal, including the Terms on this page, and Ardaman & Associates, Inc.'s General Conditions have been made available and are incorporated in this agreement.

Accepted this _____ day of _____, 2016

(Print or type individual, firm or corporate body name)

(Signature of authorized representative)

(Print or type name of authorized representative and title)

GENERAL CONDITIONS - FLORIDA

Parties And Scope Of Work – Ardaman & Associates, Inc. (hereinafter referred to as “A&A”) shall include said company, its division, subsidiary, parent or affiliate performing the Work. “Work” means the specific services to be performed by A&A as set forth in A&A’s proposal, the Client’s acceptance thereof, both incorporated herein by this reference, and these General Conditions. “Client” refers to the person or business entity ordering the Work to be done by A&A. If the client is ordering the Work on behalf of a third party, the Client represents and warrants that the Client is the duly authorized agent of said third party for the purpose of ordering and directing said Work. In the event Client is not the authorized agent of said third party, Client agrees that he shall be individually liable hereunder. Further, Client shall disclose any such agency relationship to A&A in writing before the commencement of A&A’s Work hereunder. Client agrees that A&A’s professional duties are specifically limited to the Work as set forth in A&A’s proposal. The Client assumes sole responsibility for determining whether the quantity and the nature of the Work ordered by the Client is adequate and sufficient for the Client’s intended purpose. A&A’s Work is for the exclusive use of client, and its properly disclosed principal. In no event shall A&A have any duty or obligation to any third party. Directing A&A to proceed with the Work shall constitute acceptance of the terms of A&A’s proposal and these General Conditions.

On-Call Services – In the event A&A is retained to perform construction materials testing (“CMT”), including but not limited to proctor and soil density tests, concrete tests, etc., on an On-Call basis such that A&A is not retained to perform continuous observations of construction, Client assumes sole responsibility for determining the location and frequency of sampling and testing. In such On-Call testing, A&A’s test results are only representative of conditions at the test location and elevation, and different conditions may exist at other locations and other elevations. Furthermore, in the event Client fails to properly determine the location or frequency of sampling and testing, under no circumstances will A&A assume any duty by performing its CMT services.

Right-of-Entry – Unless otherwise agreed, Client will furnish right-of-entry on the property for A&A to make the planned borings, surveys, and/or explorations. A&A will take reasonable precautions to minimize damage to the property caused by its equipment and sampling procedures, but the cost of restoration or damage which may result from the planned operations is not included in the contracted amount.

Damage to Existing Man-made Objects – It shall be the responsibility of the Client to disclose the presence and accurate location of all hidden or obscure man-made objects relative to field tests, sampling, or boring locations. Client waives any claim against A&A arising from any damage to existing man-made objects. In addition, Client shall defend, indemnify and hold A&A harmless from any third party claim arising from damage to existing man-made objects.

Warranty and Limitation of Liability - A&A shall perform services for Client in a professional manner, using that degree of care and skill ordinarily exercised by and consistent with the standards of competent consultants practicing in the same or a similar locality as the project. In the event any portion of the services fails to comply with this warranty obligation and A&A is promptly notified in writing prior to one year after completion of such portion of the services, A&A will re-perform such portion of the services, or if re-performance is impracticable, A&A will refund the amount of compensation paid to A&A for such portion of the services. This warranty is in lieu of all other warranties. No other warranty, expressed or implied, including warranties of merchantability and fitness for a particular purpose is made or intended by the proposal for consulting services, by furnishing an oral response of the findings made or by any representations made regarding the services included in this agreement. In no event shall A&A be liable for any special, indirect, incidental, or consequential loss or delay or time-related damages. The remedies set forth herein are exclusive and the total liability of consultant whether in contract, tort (including negligence whether sole or concurrent), or otherwise arising out of, connected with or resulting from the services provided pursuant to this Agreement shall not exceed the total fees paid by Client or \$50,000.00, whichever is greater. Client may, upon written request received within five days of Client’s acceptance hereof, increase the limit of A&A’s liability by agreeing to pay A&A an additional sum as agreed in writing prior to the commencement of A&A’s services.

This charge is not to be construed as being a charge for insurance of any type, but is increased consideration for the greater liability involved. **PURSUANT TO §558.0035, FLORIDA STATUTES, CONSULTANT’S INDIVIDUAL EMPLOYEES AND/OR AGENTS MAY NOT BE HELD INDIVIDUALLY LIABLE FOR NEGLIGENCE ARISING OUT OF, CONNECTED WITH, OR RESULTING FROM THEIR SERVICES PROVIDED PURSUANT TO THIS AGREEMENT.**

Sampling or Testing Location – Unless specifically stated to the contrary, the unit fees included in this proposal do not include costs associated with professional land surveying of the site or the accurate horizontal and vertical locations of tests. Field tests or boring locations described in our report or shown on our sketches are based on specific information furnished to us by others or estimates made in the field by our technicians. Such dimensions, depths or elevations should be considered as approximations unless otherwise stated in the report.

Sample Handling and Retention – Generally test samples or specimens are consumed and/or substantially altered during the conduct of tests and A&A, at its sole discretion, will dispose (subject to the following) of any remaining residue immediately upon completion of test unless required in writing by the Client to store or otherwise handle the samples. (a) **NON HAZARDOUS SAMPLES:** At Client’s written request, A&A will maintain preservable test samples and specimens or the residue therefrom for thirty (30) days after submission of A&A’s report to Client free of storage charges. After the initial 30 days and upon written request, A&A will retain test specimens or samples for a mutually acceptable storage charge and period of time. (b) **HAZARDOUS OR POTENTIALLY HAZARDOUS SAMPLES:** In the event that samples contain substances or constituents hazardous or detrimental to human health, safety or the environment as defined by federal, state or local statutes, regulations, or ordinances (“Hazardous Substances” and “Hazardous Constituents”, respectively), A&A will, after completion of testing and at Client’s expense: (i) return such samples to Client; (ii) using a manifest signed by Client as generator, will have such samples transported to a location selected by Client for final disposal. Client agrees to pay all costs associated with the storage, transport, and disposal of such samples. Client recognizes and agrees that A&A is acting as a bailee and at no time does A&A assume title of said waste.

Discovery of Unanticipated Hazardous Materials – Hazardous materials or certain types of hazardous materials may exist at a site where there is no reason to believe they could or should be present. A&A and Client agree that the discovery of unanticipated hazardous materials constitutes a changed condition mandating a renegotiation of the scope of work or termination of services. A&A and Client also agree that the discovery of unanticipated hazardous materials may make it necessary for A&A to take immediate measures to protect health and safety. A&A agrees to notify Client as soon as practicable should unanticipated hazardous materials or suspected hazardous materials be encountered. Client encourages A&A to take any and all measures that, in A&A’s professional opinion, are justified to preserve and protect the health and safety of A&A’s personnel and the public. Client agrees to compensate A&A for the additional cost of working to protect employees’ and the public’s health and safety. In addition, Client waives any claim against A&A arising from A&A’s discovery of unanticipated hazardous materials or suspected hazardous materials.

Indemnification – Client agrees to defend, indemnify and save harmless A&A from all claims, including negligence claims, suits, losses, personal injuries, death and property liability resulting from the actions or inactions of Client, Client’s contractors, representatives, agents and employees.

Legal Jurisdiction – The parties agree that any actions brought to enforce any provision of this Agreement shall only be brought in a court of competent jurisdiction located in Orlando, Orange County, Florida. All causes of action, including but not limited to actions for indemnification, arising out of A&A’s Work shall be deemed to have accrued and the applicable statutes of limitation shall commence to run not later than either the date of substantial completion of the Work for acts or failures to act occurring prior to substantial completion, or the date of issuance of A&A’s final invoice for acts or failures to act occurring after substantial completion of the Work. Each of the parties hereto irrevocably waives any and all right to trial by jury in any legal proceeding arising out of or relating to this agreement.

Force Majeure - A&A shall not be held responsible for any delay or failure in performance caused by fire, flood, explosion, war, strike, embargo, government requirement, civil or military authority, acts of God, act or omission of subcontractors, carrier, clients or other similar causes beyond its control.

Drafting and Severability – This Agreement has been drafted by all Parties hereto and shall not be construed against one Party or in favor of any other Party. In the event that any provision of this Agreement is held invalid, the remainder of this Agreement shall be fully enforceable.

35. Geotechnical

Citrus Grove
0

Estimator: Colin T. Jewsbury, P.E. for Citrus Grove Segment 3, Station +170 to Past +196 (County) (ATTACHMENT 2)
4/18/2016

Task No.	Task	Units	No of Units	Hours/Unit	Total Hours	Comments
	Roadway					
35.1	Document Collection and Review	LS	1	2	2	
35.2	Develop Detailed Boring Location Plan	LS	1	6	6	
35.3	Stake Borings/Utility Clearance	Boring	54	0.4	22	45 Roadway Auger Borings, 5 Pond Borings, 4 Swale Borings
35.4	Muck Probing	Crew Day	0	0	0	Assume not required
35.5	Coordinate and Develop MOT Plans for Field Investigation	EA	0	0	0	Assume not required
35.6	Drilling Access Permits	Location	0	0	0	Assume not required
35.7	Property Clearances	EA	1	2	2	Assumed
35.8	Groundwater Monitoring	EA	0	0	0	Assume not required
35.9	LBR/Resilient Modulus Sampling	EA	1	12	12	If required
35.10	Coordination of Field Work	100 lf of boring	6.15	0.6	4	21 AB to 5' Rdwy, 15 AB to 10' Rdwy, 9 AB to 20' Rdwy, 5 AB to 20' Pond, 4 AB @ 20' swales.
35.11	Soil and Rock Classification - Roadway	100 lf of boring	6.15	2.2	14	See above
35.12	Design LBR	LS	1	8	8	If required
35.13	Laboratory Data	100 lf of boring	6.15	0.7	4	
35.14	Seasonal High Water Table	Boring	54	0.2	11	
35.15	Parameters for Water Retention Areas	EA	3	2	6	1 permanent pond site, 2 swales
35.16	Delineate Limits of Unsuitable Material	Cross-section	8	0.25	2	Assumed
35.17	Electronic Files for Cross-Sections	100 lf of boring	6.15	1.25	8	
35.18	Embankment Settlement and Stability	Embankment Boring	0	0	0	Handled via SPT borings for walls, below
35.19	Protection of Existing Structures	LS	0	0	0	Assume not required
35.20	Stormwater Volume Recovery and/or Background Seepage Analysis	EA	0	0	0	Assume not required (by drainage engineer)
35.21	Geotechnical Recommendations	LS	1	8	8	
35.22	Pavement Condition Survey and Pavement Evaluation Report	LS	0	0	0	Assume not required

35. Geotechnical

Task No.	Task	Units	No of Units	Hours/ Unit	Total Hours	Comments
35.23	Preliminary Roadway Report	LS	1	10	10	
35.24	Final Report	EA	1	8	8	
35.25	Auger Boring Drafting	100 lf boring	6.15	4	25	
35.26	SPT Boring Drafting	100 lf boring	0	0	0	
Roadway Geotechnical Subtotal					152	
Structures						
35.27	Develop Detailed Boring Location Plan	LS	1	2	2	Strain poles
35.28	Stake Borings/Utility Clearance	Boring	4	0.4	2	4 strain pole borings
35.29	Coordinate and Develop MOT Plans for Field Investigation	EA	0	0	0	Assume not required
35.30	Drilling Access Permits	Location	0	0	0	Assume not required
35.31	Property Clearances	EA	0	0	0	Assume not required
35.32	Collection of Corrosion Samples	EA	0	0	0	Assume not required (obtain from boring samples)
35.33	Coordination of Field Work	100 lf of boring	1	0.6	1	4 SPT to 25' for strain poles
35.34	Soil and Rock Classification - Structures	100 lf of boring	1	2.2	2	
35.35	Tabulation of Laboratory Data	100 lf of boring	1	0.7	1	
35.36	Estimate Design Groundwater Level for Structures	EA	1	0.5	1	
35.37	Selection of Foundation Alternatives (BDR)	Bridge boring	0	0	0	No bridges
35.38	Detailed Analysis of Selected Foundation Alternate(s)	Bridge boring	0	0	0	No bridges
35.39	Bridge Construction and Testing Recommendations	Bridge boring	0	0	0	No bridges
35.40	Lateral Load Analysis (Optional)	Bridge boring	0	0	0	No bridges
35.41	Walls	Wall Boring	0	0	0	No Walls
35.42	Sheet Pile Wall Analysis (Optional)	Wall Boring	0	0	0	Assume not required
35.43	Design Soil Parameters for Signs, Signals, High Mast Lights, and Strain Poles and Geotechnical Recommendations	Boring	4	1	4	Strain poles
35.44	Box Culvert Analysis	EA	0	0	0	Assume not required
35.45	Preliminary Report - BDR	EA	0	0	0	No bridges

35. Geotechnical

Task No.	Task	Units	No of Units	Hours/ Unit	Total Hours	Comments
35.46	Final Report - Bridge and Associated Walls	EA	0	0	0	No bridges
35.47	Final Reports - Signs, Signals, Box Culvert, Walls and High Mast Lights	EA	1	10	10	One report for pole structures
35.48	SPT Boring Drafting	100 lf of boring	1	5	5	
35.49	Other Geotechnical	LS	0	0	0	Assume not required
		Structural Geotechnical Subtotal			28	
		Geotechnical Technical Subtotal			180	
	Technical Special Provisions	EA	0	0	0	Assume not required
35.51	Field Reviews	LS	1	3	3	
35.52	Technical Meetings	LS	1	4	4	Meetings listed below
35.53	Quality Assurance/Quality Control	LS	%	4%	7	
35.54	Supervision	LS	%	4%	7	
		Geotechnical Nontechnical Subtotal			21	
35.55	Coordination	LS	%	3%	6	
		35. Geotechnical Total			207	

Technical Meetings	Units	No of Units	Hours/ Unit	Total Hours	PM Attendance at Meeting Required?	Number
Kickoff Meeting	EA	0	0	0		0
Boring Layout Approval	EA	0	0	0		0
Attend in BDR Review Meeting	EA	0	0	0		0
30/60/90% Submittal Review	EA	0	0	0		0
Other Meetings	EA	1	2	2		0
Subtotal Technical Meetings				2	Subtotal Project Manager Meetings	0
Progress Meetings (if required)	EA	1	2	2	PM attendance at Progress Meetings is manually entered on General Task 3	--
Phase Review Meetings	EA	0	0	0	PM attendance at Phase Review Meetings is manually entered on General Task 3	--
Total Meetings				4	Total Project Manager Meetings (carries to Tab 3)	0

Carries to Tab 3

Carries to 33.18

ATTACHMENT 1; Computation of Geotechnical Cost
ARDAMAN SCOPE; CITRUS GROVE ROAD, PHASE III (SECOND COUNTY PHASE)

Date: 04/18/2016

Component/Unit Description	Unit of Measure	Unit Price	Unit Quantity	Component Cost	
I. FIELD EXPLORATION:					
1. Crew & Equipment Mobilization:					
a. - Truck-Mounted Equipment	Ea.	\$450.00	1.0	\$450.00	
b. - Track/Bombadier	Ea.	\$9,000.00	0.0	\$0.00	
c. - Mudbug	Ea.	\$550.00	1.0	\$550.00	
d. - Barge	Ea.	\$7,500.00	0.0	\$0.00	
2. Standard Penetration Test Borings(ASTM D-1586):					
Land:	4 Borings to	25 ft.	Strain Po	0 Borings to	0.0 ft.
	0 Borings to	0 ft.	MSE Walls	0 Borings to	0.0 ft.
	0 Borings to	0 ft.	MSE Walls	0 Borings to	0.0 ft.
a. - 0 to 50 ft. depths	LF	\$15.65	100.0	\$1,565.00	
b. - 50 to 100 ft. depths	LF	\$19.35	0.0	\$0.00	
c. - 100 to 150 ft. depths	LF	\$24.65	0.0	\$0.00	
d. - 150 to 200 ft. depths	LF	\$32.50	0.0	\$0.00	
e. - 200 to 250 ft. depths	LF	\$37.50	0.0	\$0.00	
f. - 250 to 300 ft. depths	LF	\$0.00	0.0	\$0.00	
g. - 300 to 350 ft. depths	LF	\$0.00	0.0	\$0.00	
h. - 350 to 400 ft. depths	LF	\$0.00	0.0	\$0.00	
i. - 400 to 450 ft. depths	LF	\$0.00	0.0	\$0.00	
j. - 450 to 500 ft. depths	LF	\$0.00	0.0	\$0.00	
Barge/	0 Borings to	0 ft.	0 Borings to	0.0 ft.	
Track:	0 Borings to	0 ft.	0 Borings to	0.0 ft.	
	0 Borings to	0 ft.	0 Borings to	0.0 ft.	
k. - 0 to 50 ft. depths	LF	\$23.50	0.0	\$0.00	
l. - 50 to 100 ft. depths	LF	\$29.00	0.0	\$0.00	
m. - 100 to 150 ft. depths	LF	\$37.00	0.0	\$0.00	
n. - 150 to 200 ft. depths	LF	\$48.75	0.0	\$0.00	
o. - 200 to 250 ft. depths	LF	\$56.25	0.0	\$0.00	
p. - 250 to 300 ft. depths	LF	\$0.00	0.0	\$0.00	
q. - 300 to 350 ft. depths	LF	\$0.00	0.0	\$0.00	
r. - 350 to 400 ft. depths	LF	\$0.00	0.0	\$0.00	
s. - 400 to 450 ft. depths	LF	\$0.00	0.0	\$0.00	
t. - 450 to 500 ft. depths	LF	\$0.00	0.0	\$0.00	
3. Rock Coring - HW Barrel(ASTM D-2113):					
Land:					
a. - 0 to 50 ft. depths	LF	\$39.10	0.0	\$0.00	
b. - 50 to 100 ft. depths	LF	\$44.50	0.0	\$0.00	
c. - 100 to 150 ft. depths	LF	\$50.00	0.0	\$0.00	
d. - 150 to 200 ft. depths	LF	\$55.00	0.0	\$0.00	
e. - 200 to 250 ft. depths	LF	\$0.00	0.0	\$0.00	
f. - 250 to 300 ft. depths	LF	\$0.00	0.0	\$0.00	
g. - 300 to 350 ft. depths	LF	\$0.00	0.0	\$0.00	
h. - 350 to 400 ft. depths	LF	\$0.00	0.0	\$0.00	
i. - 400 to 450 ft. depths	LF	\$0.00	0.0	\$0.00	
j. - 450 to 500 ft. depths	LF	\$0.00	0.0	\$0.00	
Barge/					
Track:					
k. - 0 to 50 ft. depths	LF	\$58.65	0.0	\$0.00	
l. - 50 to 100 ft. depths	LF	\$66.75	0.0	\$0.00	
m. - 100 to 150 ft. depths	LF	\$75.00	0.0	\$0.00	
n. - 150 to 200 ft. depths	LF	\$82.50	0.0	\$0.00	
o. - 200 to 250 ft. depths	LF	\$0.00	0.0	\$0.00	
p. - 250 to 300 ft. depths	LF	\$0.00	0.0	\$0.00	
q. - 300 to 350 ft. depths	LF	\$0.00	0.0	\$0.00	
r. - 350 to 400 ft. depths	LF	\$0.00	0.0	\$0.00	

s.	-	400 to 450 ft. depths			LF	\$0.00	0.0	\$0.00
t.	-	450 to 500 ft. depths			LF	\$0.00	0.0	\$0.00
4. Grout Seal Boreholes:								
Land:	0	Borings to	0 ft.	0	Borings to	0.0	ft.	
	0	Borings to	0 ft.	0	Borings to	0.0	ft.	
	0	Borings to	0 ft.	0	Borings to	0.0	ft.	
a.	-	0 to 50 ft. depths			LF	\$4.00	0.0	\$0.00
b.	-	50 to 100 ft. depths			LF	\$5.00	0.0	\$0.00
c.	-	100 to 150 ft. depths			LF	\$5.50	0.0	\$0.00
d.	-	150 to 200 ft. depths			LF	\$6.00	0.0	\$0.00
e.	-	200 to 250 ft. depths			LF	\$7.00	0.0	\$0.00
f.	-	250 to 300 ft. depths			LF	\$0.00	0.0	\$0.00
g.	-	300 to 350 ft. depths			LF	\$0.00	0.0	\$0.00
h.	-	350 to 400 ft. depths			LF	\$0.00	0.0	\$0.00
i.	-	400 to 450 ft. depths			LF	\$0.00	0.0	\$0.00
j.	-	450 to 500 ft. depths			LF	\$0.00	0.0	\$0.00
Barge/	0	Borings to	0 ft.	0	Borings to	0.0	ft.	
Track:	0	Borings to	0 ft.	0	Borings to	0.0	ft.	
	0	Borings to	0 ft.	0	Borings to	0.0	ft.	
k.	-	0 to 50 ft. depths			LF	\$6.00	0.0	\$0.00
l.	-	50 to 100 ft. depths			LF	\$7.50	0.0	\$0.00
m.	-	100 to 150 ft. depths			LF	\$8.25	0.0	\$0.00
n.	-	150 to 200 ft. depths			LF	\$9.00	0.0	\$0.00
o.	-	200 to 250 ft. depths			LF	\$10.50	0.0	\$0.00
p.	-	250 to 300 ft. depths			LF	\$0.00	0.0	\$0.00
q.	-	300 to 350 ft. depths			LF	\$0.00	0.0	\$0.00
r.	-	350 to 400 ft. depths			LF	\$0.00	0.0	\$0.00
s.	-	400 to 450 ft. depths			LF	\$0.00	0.0	\$0.00
t.	-	450 to 500 ft. depths			LF	\$0.00	0.0	\$0.00
5. Casing Allowance:								
Land:								
a.	-	0 to 50 ft. depths			LF	\$10.00	30.0	\$300.00
b.	-	50 to 100 ft. depths			LF	\$12.10	0.0	\$0.00
c.	-	100 to 150 ft. depths			LF	\$15.35	0.0	\$0.00
d.	-	150 to 200 ft. depths			LF	\$17.00	0.0	\$0.00
e.	-	200 to 250 ft. depths			LF	\$20.00	0.0	\$0.00
f.	-	250 to 300 ft. depths			LF	\$0.00	0.0	\$0.00
g.	-	300 to 350 ft. depths			LF	\$0.00	0.0	\$0.00
h.	-	350 to 400 ft. depths			LF	\$0.00	0.0	\$0.00
i.	-	400 to 450 ft. depths			LF	\$0.00	0.0	\$0.00
j.	-	450 to 500 ft. depths			LF	\$0.00	0.0	\$0.00
Barge/								
Track:								
k.	-	0 to 50 ft. depths			LF	\$15.00	0.0	\$0.00
l.	-	50 to 100 ft. depths			LF	\$18.15	0.0	\$0.00
m.	-	100 to 150 ft. depths			LF	\$23.00	0.0	\$0.00
n.	-	150 to 200 ft. depths			LF	\$25.50	0.0	\$0.00
o.	-	200 to 250 ft. depths			LF	\$30.00	0.0	\$0.00
p.	-	250 to 300 ft. depths			LF	\$0.00	0.0	\$0.00
q.	-	300 to 350 ft. depths			LF	\$0.00	0.0	\$0.00
r.	-	350 to 400 ft. depths			LF	\$0.00	0.0	\$0.00
s.	-	400 to 450 ft. depths			LF	\$0.00	0.0	\$0.00
t.	-	450 to 500 ft. depths			LF	\$0.00	0.0	\$0.00
6. Cone Penetration Test Soundings(ASTM D-3441):								
Land:	0	Borings to	0 ft	0	Borings to	0.0	ft	
	0	Borings to	0 ft	0	Borings to	0.0	ft	
	0	Borings to	0 ft	0	Borings to	0.0	ft	
a.	-	0 to 50 ft. depths			LF	\$13.00	0.0	\$0.00
b.	-	50 to 100 ft. depths			LF	\$13.00	0.0	\$0.00
c.	-	100 to 150 ft. depths			LF	\$13.00	0.0	\$0.00
d.	-	150 to 200 ft. depths			LF	\$0.00	0.0	\$0.00

e.	- 200 to 250 ft. depths			LF	\$0.00	0.0	\$0.00
f.	- 250 to 300 ft. depths			LF	\$0.00	0.0	\$0.00
g.	- 300 to 350 ft. depths			LF	\$0.00	0.0	\$0.00
h.	- 350 to 400 ft. depths			LF	\$0.00	0.0	\$0.00
i.	- 400 to 450 ft. depths			LF	\$0.00	0.0	\$0.00
j.	- 450 to 500 ft. depths			LF	\$0.00	0.0	\$0.00
Barge/							
Track:	0 Borings to	0 ft		0 Borings to	0.0 ft		
	0 Borings to	0 ft		0 Borings to	0.0 ft		
	0 Borings to	0 ft		1 Borings to	0.0 ft		
k.	- 0 to 50 ft. depths			LF	\$0.00	0.0	\$0.00
l.	- 50 to 100 ft. depths			LF	\$0.00	0.0	\$0.00
m.	- 100 to 150 ft. depths			LF	\$0.00	0.0	\$0.00
n.	- 150 to 200 ft. depths			LF	\$0.00	0.0	\$0.00
o.	- 200 to 250 ft. depths			LF	\$0.00	0.0	\$0.00
p.	- 250 to 300 ft. depths			LF	\$0.00	0.0	\$0.00
q.	- 300 to 350 ft. depths			LF	\$0.00	0.0	\$0.00
r.	- 350 to 400 ft. depths			LF	\$0.00	0.0	\$0.00
s.	- 400 to 450 ft. depths			LF	\$0.00	0.0	\$0.00
t.	- 450 to 500 ft. depths			LF	\$0.00	0.0	\$0.00
7. Auger Borings(ASTM D-1452):							
	21 Borings to	5 ft	Rdwy				
	15 Borings to	10 ft	Rdwy				
	9 Borings to	20 ft	Rdwy				
	9 Borings to	20 ft	Pond/Swales				
a.	- 0 to 50 ft. depths			LF	\$14.00	615.0	\$8,610.00
8. Drill Rig and Crew:							
	Land			Hr	\$200.00	8.0	\$1,600.00
	Amphibious/Barge			Hr	\$300.00	0.0	\$0.00
9. Field Permeability Tests:							
				Ea.	\$325.00	5.0	\$1,625.00
10. MOT:							
				Hr	\$300.00	0.0	\$0.00
11. Hand Probing/Wash Borings:							
a.	- 2 person crew			Days	\$120.00	0.0	\$0.00
b.	- 3 person crew			Days	\$180.00	0.0	\$0.00
12. Per Diem for Drill Crew:							
a.	- 2 person crew			Days	\$0.00	0.0	\$0.00
b.	- 3 person crew			Days	\$0.00	0.0	\$0.00
13. Thin-Walled Tube Samples(ASTM D-1587):							
Land:							
a.	- 0 to 50 ft. depths			Ea.	\$174.00	0.0	\$0.00
b.	- 50 to 100 ft. depths			Ea.	\$200.00	0.0	\$0.00
c.	- 100 to 150 ft. depths			Ea.	\$291.00	0.0	\$0.00
d.	- 150 to 200 ft. depths			Ea.	\$371.00	0.0	\$0.00
Barge/							
Track:							
a.	- 0 to 50 ft. depths			Ea.	\$261.00	0.0	\$0.00
b.	- 50 to 100 ft. depths			Ea.	\$300.00	0.0	\$0.00
c.	- 100 to 150 ft. depths			Ea.	\$436.50	0.0	\$0.00
d.	- 150 to 200 ft. depths			Ea.	\$556.50	0.0	\$0.00
14. Site Reconnaissance/Utility Coordination:							
a.	- Engineer Intern			hrs.	\$83.16	10.0	\$831.60
b.	- Senior Engineering Tech.			hrs.	\$68.63	12.0	\$823.56
15. Extra Split Spoon Samples:							
Land:							
a.	- 0 to 50 ft. depths			Ea.	\$31.95	0.0	\$0.00
b.	- 50 to 100 ft. depths			Ea.	\$39.65	0.0	\$0.00
c.	- 100 to 150 ft. depths			Ea.	\$44.70	0.0	\$0.00
d.	- 150 to 200 ft. depths			Ea.	\$55.90	0.0	\$0.00

e.	- 200 to 250 ft. depths			Ea.	\$60.00	0.0	\$0.00
f.	- 250 to 300 ft. depths			Ea.	\$0.00	0.0	\$0.00
g.	- 300 to 350 ft. depths			Ea.	\$0.00	0.0	\$0.00
h.	- 350 to 400 ft. depths			Ea.	\$0.00	0.0	\$0.00
i.	- 400 to 450 ft. depths			Ea.	\$0.00	0.0	\$0.00
j.	- 450 to 500 ft. depths			Ea.	\$0.00	0.0	\$0.00
Barge/Track:							
k.	- 0 to 50 ft. depths			Ea.	\$47.95	0.0	\$0.00
l.	- 50 to 100 ft. depths			Ea.	\$59.50	0.0	\$0.00
m.	- 100 to 150 ft. depths			Ea.	\$67.00	0.0	\$0.00
n.	- 150 to 200 ft. depths			Ea.	\$83.85	0.0	\$0.00
o.	- 200 to 250 ft. depths			Ea.	\$90.00	0.0	\$0.00
p.	- 250 to 300 ft. depths			Ea.	\$0.00	0.0	\$0.00
q.	- 300 to 350 ft. depths			Ea.	\$0.00	0.0	\$0.00
r.	- 350 to 400 ft. depths			Ea.	\$0.00	0.0	\$0.00
s.	- 400 to 450 ft. depths			Ea.	\$0.00	0.0	\$0.00
t.	- 450 to 500 ft. depths			Ea.	\$0.00	0.0	\$0.00
16. Pavement Cores:				Ea.	\$75.00	0.0	\$0.00
17. Double Ring Infil.(ASTM D-3385)				Ea.	\$525.00	0.0	\$0.00
18. Subcontract Earthwork Services:							
a.	- Clay Stabilization Matl.			CY	\$0.00	0.0	\$0.00
b.	- Clean Sand Fill Material			CY	\$0.00	0.0	\$0.00
c.	- Geogrid (Tensar SS2)			SY	\$0.00	0.0	\$0.00
d.	- Removal Wetlands Fill			CY	\$0.00	0.0	\$0.00
e.	- Silt Barrier			LF	\$0.00	0.0	\$0.00
19. Water Sampling:				Ea.	\$25.00	0.0	\$0.00
20. Field Vane Test(ASTM D-2573):				Ea.	\$450.00	0.0	\$0.00
21. Dilatometer Sounding:				Ea.	\$90.00	0.0	\$0.00
22. Monitor Wells - 2 inch (50mm):							
	0 Wells to	0 ft					
	0 Wells to	0 ft					
	0 Wells to	0 ft					
	0 Wells to	0 ft					
a.	- 0 to 50 ft. depths			LF	\$35.00	0.0	\$0.00
23. Concrete Pad and Cover:				Ea.	\$275.00	0.0	\$0.00
24. Deco/Development Time:				Hr	\$110.00	0.0	\$0.00
25. OVA Headspace Analysis, Senior Engineering Technician:				Hr	\$80.00	0.0	\$0.00
26. OVA Equipment Charge:				Days	\$150.00	0.0	\$0.00
27. Riser:				LF	\$0.00	0.0	\$0.00
28. Screen:				LF	\$0.00	0.0	\$0.00
29. Water Sampling for Analytical Lab Work (PCA):				Ea.	\$75.00	0.0	\$0.00
Total for Field Exploration							\$16,355.16
II. LABORATORY TESTING:							
1. Visual Exam./Stratify(ASTM D-2488):							
	Senior Engineering Tech.			hrs.	\$68.63	14.0	\$960.82
2. Grain Size Analysis:							
a.	- Full Grad. (FM 1-T 88)			Ea.	\$60.00	10.0	\$600.00
b.	- Single Sieve (FM 1-T 88)			Ea.	\$34.00	5.0	\$170.00
3. Hydrometer(FM 1-T 88):				Ea.	\$109.50	0.0	\$0.00

4. Organic Content(FM 1-T 267):	Ea.	\$32.50	4.0	\$130.00
5. Atterberg Limits(FM 1-T 89/90):	Ea.	\$104.00	5.0	\$520.00
6. Natural Moisture (FM 1-T 265):	Ea.	\$14.25	9.0	\$128.25
7. Unit Weight Determination:	Ea.	\$61.00	0.0	\$0.00
8. Consolidation Test(FM 1-T 216):	Ea.	\$620.00	0.0	\$0.00
9. Permeability(FM 1-T 215/5-513):	Ea.	\$220.00	0.0	\$0.00
10. Corrosion Series: (pH, Sulfate, Chloride, Resistivity)	Ea.	\$180.00	3.0	\$540.00
11. Triaxial/point(FM 1-T 234):	Ea.	\$400.00	0.0	\$0.00
12. Unconfined Comp.(ASTM D-2166):	Ea.	\$91.00	0.0	\$0.00
13. Limerock Bearing Ratio(FM5-515):	Ea.	\$375.00	3.0	\$1,125.00
14. Specific Gravity(FM 1-T 100):	Ea.	\$97.00	0.0	\$0.00
15. Bitumen Extraction(FM 1-T 164):	Ea.	\$95.00	0.0	\$0.00
16. Bitumen Gradation(FM 1-T 30):	Ea.	\$80.00	0.0	\$0.00
17. Direct Shear(ASTM D-3080):	Ea.	\$295.00	0.0	\$0.00
18. Shrinkage Factor(FM 1-T 092):	Ea.	\$86.50	0.0	\$0.00
19. Swell Potential(ASTM D-4546):	Ea.	\$80.00	0.0	\$0.00
20. Compaction(FM 5-525/521):	Ea.	\$100.00	0.0	\$0.00
21. Min./Max. Den.(ASTM D-4254/53):	Ea.	\$104.50	0.0	\$0.00
22. Unconfined - Rock(ASTM D-2938):	Ea.	\$91.00	0.0	\$0.00
23. Splitting Tensile(ASTM D-3967):	Ea.	\$120.00	0.0	\$0.00
24. Kerosene Analysis Group:	Ea.	\$0.00	0.0	\$0.00
Total for Laboratory Testing				\$4,174.07
III. ENGINEERING AND TECHNICAL SERVICES:				
1. Chief Engineer:	hrs.	\$185.00	3.0	\$555.00
2. Senior Engineer:	hrs.	\$158.00	40.0	\$6,320.00
3. Project Engineer:	hrs.	N/A	0.0	\$0.00
4. Engineering Intern:	hrs.	\$90.00	80.0	\$7,200.00
5. CADD Operator:	hrs.	\$64.00	30.0	\$1,920.00
6. Senior Engineering Technician:	hrs.	\$58.00	8.0	\$464.00
7. Secretarial:	hrs.	\$51.00	10.0	\$510.00
Check: 207	Total for Engineering and Technical Services			\$16,969.00
207	Grand Total this Proposal			\$37,498.23