Agenda Item #: 3-C-11

PALM BEACH COUNTY
BOARD OF COUNTY COMMISSIONERS

AGENDA ITEM SUMMARY

Meeting Date:	**January 15, 2008**	**[x]**	**Consent**	**[ ]**	**Regular**
		[ ]	**Workshop**	**[ ]**	**Public Hearing**
Department:					
Submitted By:	**Engineering & Public Works Department**				
Submitted For:	**Roadway Production Division**				

Project No. : 2003502

I. EXECUTIVE BRIEF

Motion and Title: Staff recommends motion to approve: An Agreement in the amount of $2,531,474.98 with E. C. Driver & Associates, Inc., for professional services.

Summary: This Agreement will provide the professional services necessary for the preparation of design plans and construction bid documents for Ocean Avenue (Lantana) Bridge over the Intracoastal Waterway (Project).

District: 4 (MRE)

Background and Justification: On July 26, 2007, the Consultant's Competitive Negotiations Act (CCNA) Selection Committee selected E. C. Driver & Associates, Inc., and, in accordance with PPM No. CW-O-048, the Board of County Commissioners (Board) was notified of the selection on July 30, 2007. Palm Beach County now desires E. C. Driver & Associates., Inc., to provide the professional services necessary for the preparation of design plans and construction bid documents for a new bridge with movable span to replace the existing bridge (Bridge No. 930094) for the Project. The Small Business Enterprise (SBE) goal for the Project is 15.00%. The SBE participation committed for the Project by E. C. Driver & Associates, Inc., is 18.00% overall. The fee, as detailed in Exhibit "B" of the attached Agreement, has been negotiated as just and reasonable compensation as follows:

Basic Services (Lump Sum)	$ 2,145,524.30	(Final plan design for new replacement bridge).
Reimbursable Expenses (Not to exceed)...	$ 385,950.68	(Design Survey and Geotechnical).
Total:	$2,531,474.98	

After reviewing the attached Agreement and finding it in proper order, staff recommends the Board's approval.

Attachments:
1. Location Map
2. Agreement with Exhibits and Certificate of Insurance (2)
3. Project Work Schedule

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Recommended by: _____ 12/17/07
Division Director **Date**

Approved By: _____ 12/27/07
County Engineer **Date**

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II. FISCAL IMPACT ANALYSIS

A. Five Year Summary of Fiscal Impact:

Fiscal Years	2008	2009	2010	2011	2012
Capital Expenditures	$2,913,049	-0-	-0-	-0-	-0-
Operating Costs	-0-	-0-	-0-	-0-	-0-
External Revenues	-0-	-0-	-0-	-0-	-0-
Program Income (County)	-0-	-0-	-0-	-0-	-0-
In-Kind Match (County)	-0-	-0-	-0-	-0-	-0-
NET FISCAL IMPACT	$2,913,049	-0-	-0-	-0-	-0-
# ADDITIONAL FTE POSITIONS (Cumulative)					

Is Item Included in Current Budget? Yes X No ___

Budget Acct No.: Fund 3500 **Dept.** 361 **Unit** 1001-01 **Object** 6505 **Program**

B. Recommended Sources of Funds/Summary of Fiscal Impact:

Transportation Improvement Fund
Intracoastal Waterways
Ocean Ave (Lantana) Bridge Over Intracoastal Waterway

Authorization - Basic Services	$2,145,524.30
- Reimbursables	$ 385,950.68
Consultant Authorization	$2,531,474.98
Contingency	$ 126,574.02
Staff Costs-Roadway	$ 105,000.00
-Eng Services	$ 35,000.00
-ROW	$ 35,000.00
-Traffic	$ 80,000.00
Fiscal Impact	$2,913,049.00

C. Departmental Fiscal Review: R. D. Ward 12/13/07

III. REVIEW COMMENTS

A. OFMB Fiscal and/or Contract Dev. and Control Comments:

1.4.08
OFMB
1.2.08 SV 1/2/08 12/28

1/8/08
Contract Dev. and Control
1/8/08

B. Approved as to Form and Legal Sufficiency:

Paul F. 1/10/08
Assistant County Attorney

C. Other Department Review:

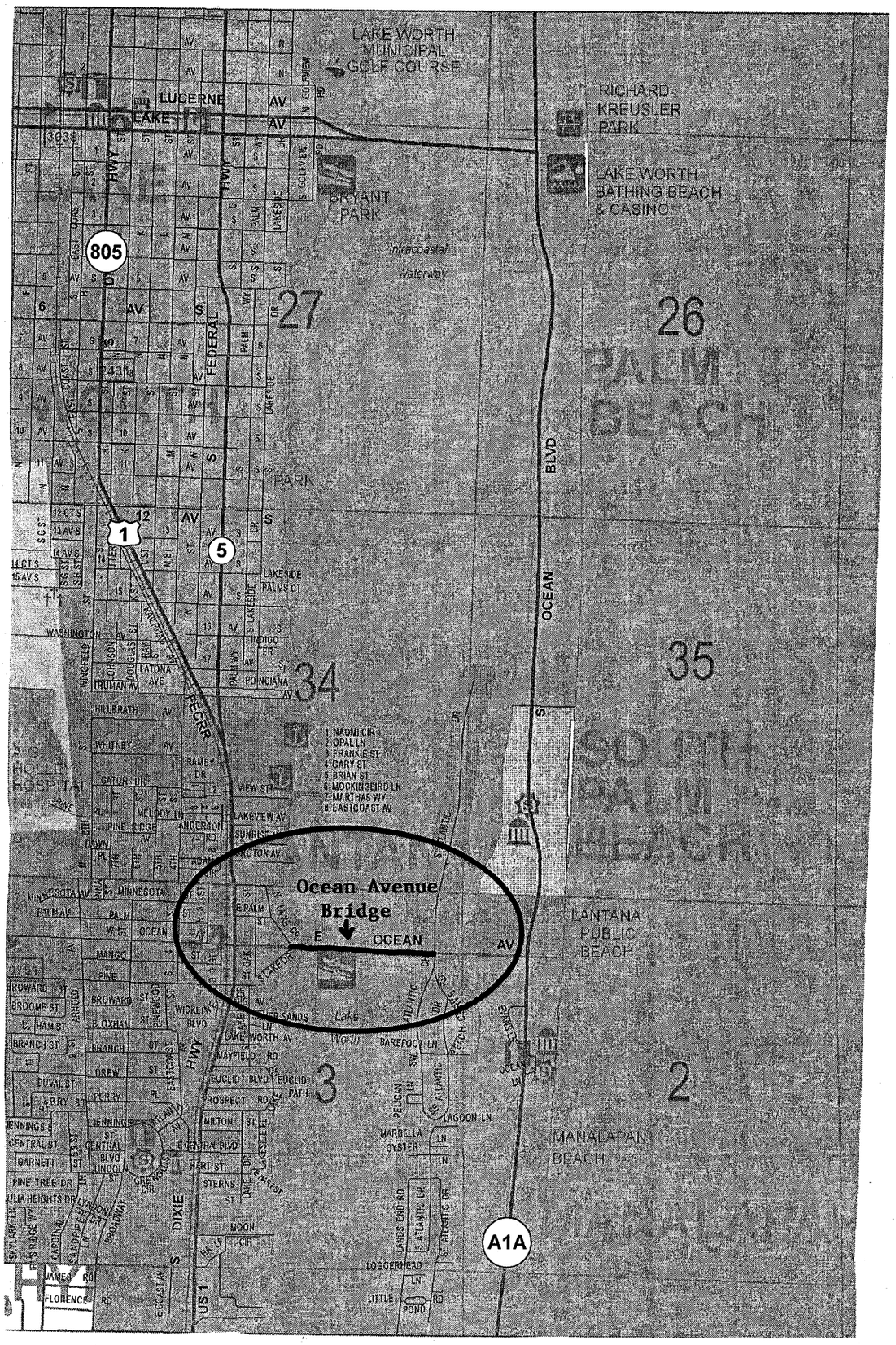
Department Director

This summary is not to be used as a basis for payment.

ATTACHMENT NO. 1

PROJECT LOCATION

PROJECT NO. 2003502
OCEAN AVENUE (LANTANA) BRIDGE
OVER INTRACOASTAL WATERWAY



LOCATION SKETCH

STANDARD FORM OF AGREEMENT
BETWEEN
PALM BEACH COUNTY AND CONSULTANT
FOR
PROFESSIONAL SERVICES

This is an **Agreement** made as of _____, 2008 between **Palm Beach County, Florida (COUNTY)** and **E. C. Driver & Associates, Inc., (CONSULTANT)**, an engineering firm having an office and a place of business at 150 E. Palmetto Park Road, Suite 400, Boca Raton, Florida 33432, and having Federal Tax I.D. #59-2375705. The **COUNTY** intends to construct a new bridge with movable span to replace the existing Bascule Bridge (Bridge No. 930094) on **Ocean Avenue (Lantana) Bridge over the Intracoastal Waterway, Project No. 2003502** (hereinafter called the **PROJECT**).

The **COUNTY** and **CONSULTANT** in consideration of their mutual covenants herein agree in respect of the performance of professional engineering services by **CONSULTANT** and the payment for those services by **COUNTY** as set forth below.

SECTION 1 - **BASIC SERVICES OF CONSULTANT**

1.1 General

1.1.1 The **CONSULTANT** shall perform professional design services in connection with the **PROJECT** as hereinafter stated which shall include normal civil engineering services, more particularly described in Exhibit "A" (Scope of Services).

1.1.2 The **CONSULTANT** shall prepare all plans in accordance with Palm Beach County Thoroughfare Design Procedures, current standards adopted by AASHTO, and the Florida Department of Transportation Manual of Uniform Minimum Standards, and all other applicable professional and technical standards. Plans shall be based on the North American Datum of 1983 (NAD 83) 1990 Adjustment and the North American Vertical Datum of 1988 (NAVD 88). They shall be accurate, legible, complete in design, drawn to scale, and shall be suitable for bidding purposes, unless otherwise stated in Exhibit "A".

1.1.3. The **CONSULTANT** has, during the selection and negotiation process which has preceded this agreement, represented to the **COUNTY** that the **CONSULTANT** is possessed of that level of skill, knowledge, experience and expertise that is commensurate with engineering firms of national repute in the areas of practice required for this project. The **CONSULTANT** acknowledges that the **COUNTY** has relied on the **CONSULTANT'S** representations of skill, knowledge, experience and expertise. By executing this contract, the **CONSULTANT** agrees that the **CONSULTANT** will exercise that degree of care, knowledge, skill and ability as other engineering firms possessing the degree of skill, knowledge, experience and expertise which the **CONSULTANT** has claimed. The **CONSULTANT** shall perform such duties as may be assigned without neglect. The **CONSULTANT** accepts the relationship of trust and confidence established by this Agreement, and covenants with the **COUNTY** to cooperate with the **COUNTY** and to utilize the **CONSULTANT'S** skill, efforts and judgment commensurate with engineering firms of national repute in the areas of practice required for this project. The **CONSULTANT** agrees to perform each assignment in an efficient and economical manner consistent with the **COUNTY'S** interests and consistent with the **COUNTY'S** stated objectives and recognized professional engineering standards.

The **CONSULTANT** further contracts with the **COUNTY** to furnish its professional skill and judgment with due care in accordance with applicable Federal, State and local laws, codes and regulations as amended and supplemented which are in effect on the date of this Agreement first written. It is specifically understood that the Accessibility provisions of the Americans With Disabilities Act (ADA) shall be complied with and incorporated into the project.

1.1.4 Prior to commencement of design, the **CONSULTANT** shall become familiar with the needs of **COUNTY** Microstation standards, obtain any seed or Microstation files, CADD standards, and standard sheets so that Microstation deliverables can be utilized by the **COUNTY. CONSULTANT** shall submit electronic files (in Microstation compatible format and Adobe PDF format) of the design, survey, and any related data used for the project, with the final document(s) submittal, or when otherwise directed by **COUNTY**.

1.1.5 The **CONSULTANT** shall provide to the **COUNTY** all cost summaries/estimates and "Summary of Pay Items" on disk and/or electronic file (as requested). The **CONSULTANT** shall apply descriptions to the pay items as called out in the **COUNTY'S** "Standard Nomenclature" listing, which is available from Roadway Production.

SECTION 2 - **ADDITIONAL SERVICES OF CONSULTANT**

2.1 Services Requiring Authorization in Advance

If authorized in writing by the **COUNTY'S** authorized representative, the **CONSULTANT** shall furnish or obtain from others Additional Services of the types listed in paragraphs 2.1.1 through 2.1.9 inclusive. These services are not included as part of Basic Services except to the extent provided otherwise in the Fee Summary, Exhibit "B". These will be paid for by the **COUNTY**, only when specifically authorized and in accordance with Section 5.

2.1.1. Preparation of applications and supporting documents for governmental grants, loans or advances in connection with the **PROJECT**.

2.1.2. Services to make measured drawings of or to investigate existing conditions or facilities, or to verify the accuracy of drawings or other information furnished by the **COUNTY**.

2.1.3. Services resulting from significant changes in the general scope, extent or character of the **PROJECT** or its design including, but not limited to, changes in size, complexity, the **COUNTY'S** schedule, character of construction or method of financing; and revising previously accepted studies, reports, design documents or contract documents when such revisions are required by changes in laws, rules, regulations, ordinances, codes or orders enacted subsequent to the preparation of such studies, reports or documents, or are due to any other causes beyond the **CONSULTANT'S** control.

2.1.4. Preparing documents for alternate bids requested by the **COUNTY** for contractor(s) work which is not executed or documents for out-of-sequence work.

2.1.5. Furnishing the services of special consultants for other than the services included in Exhibit "A".

2.1.6. Services during out-of-town travel required of the **CONSULTANT** other than visits to the site or the **COUNTY'S** office as required by Section 1.

2.1.7. Assistance in connection with bid protests, rebidding or renegotiating contracts for construction, materials, equipment or services.

2.1.8. Preparing to serve or serving as a consultant or witness for the **COUNTY** in any litigation or other legal proceeding involving the **PROJECT**.

2.1.9. Additional services in connection with the **PROJECT**, including services which are to be furnished by the **COUNTY** in accordance with Article 3, and services not otherwise provided for in this Agreement.

SECTION 3 - **COUNTY'S RESPONSIBILITY**

The **COUNTY** shall do the following in a timely manner so as not to delay the services of the **CONSULTANT**.

3.1. Designate in writing a person to act as the **COUNTY'S** representative with respect to the services to be rendered under this Agreement. Such person shall have complete authority to transmit instructions, receive information, interpret and define the **COUNTY** policies and decisions with respect to the **CONSULTANT'S** services for the **PROJECT**.

3.2. Provide all criteria and full information as to the **COUNTY'S** requirements for the **PROJECT**, including design objectives and constraints, space, capacity and performance requirements, flexibility and expendability, and any budgetary limitations; and furnish copies of all design and construction standards which the **COUNTY** will require to be included in the drawings and specifications.

3.3. Assist the **CONSULTANT** by placing at the **CONSULTANT'S** disposal all available information pertinent to the **PROJECT** including previous reports and any other data relative to design or construction of the **PROJECT**.

3.4. Furnish to the **CONSULTANT** the items listed in Exhibit "A".

3.5. Arrange for access to and make all provisions for the **CONSULTANT** to enter upon public and private property as reasonably required for the **CONSULTANT** to perform services under this Agreement.

3.6. Examine all studies, reports, sketches, drawings, specifications, proposals and other documents presented by the **CONSULTANT**, obtain advice of an attorney, insurance counselor and other consultants as the **COUNTY** deems appropriate for such examination and render in writing decisions pertaining thereto within a reasonable time so as not to delay the services of the **CONSULTANT.**

3.7. Furnish approvals and permits from all governmental authorities having jurisdiction over the **PROJECT** and such approvals and consents from others as may be necessary for completion of the **PROJECT**.

3.8. Providing such legal, accounting, independent cost estimating and insurance counseling services as may be required for the **PROJECT**, and such auditing service as **COUNTY** may require to ascertain how or for what purpose any contractor has used the monies paid to him.

3.9. Attend the pre-bid conference, bid opening, preconstruction conferences, construction progress and other job related meetings and substantial completion inspections and final payment inspections.

3.10. Give prompt written notice to the **CONSULTANT** whenever the **COUNTY** observes or otherwise becomes aware of any development that affects the scope or timing of the **CONSULTANT'S** services, or any defect or non-conformance in the work of any contractor.

3.11. Furnish, or direct the **CONSULTANT** to provide, Additional Services as stipulated in paragraph 2.1 of this Agreement or other services as required.

3.12. Bear all costs incident to compliance with the requirements of this Section 3.

SECTION 4 - **PERIODS OF SERVICE**

4.1. The **COUNTY** will issue a written **"NOTICE TO PROCEED"** to the **CONSULTANT** within sixty (60) days of contract execution by the **COUNTY**. The **CONSULTANT** will immediately commence work on the **PROJECT** and all schedule dates shall be determined from the date of the **"NOTICE TO PROCEED"**. Final completion of all work under this Agreement shall be in accordance with the schedule, or as otherwise approved in writing by the **COUNTY**.

SECTION 5 - **PAYMENTS TO CONSULTANT**

5.1. Methods of Payment for Services and Expenses of the **CONSULTANT.**

5.1.1. Basic Services: The **COUNTY** will pay the **CONSULTANT** the lump sum of **$2,145,524.30** for completion of the Basic Services set forth in Exhibits "A" and "B".

5.1.2. Additional Services: To the extent that additional services under Section 2 hereof are specifically authorized in writing by the **COUNTY'S** representative, the **COUNTY** will pay for such additional services in accordance with the following:

5.1.2.1. Actual Salary costs times a factor of **3.0** for services rendered by principals and employees assigned to the **PROJECT** plus all reimbursable expenses.

5.1.2.2. For services rendered by the **CONSULTANT'S** principals and employees as consultants or witnesses in any litigation, arbitration or other legal or administrative proceeding in accordance with Paragraph 2.1.8. at the rate of **$800.00** per day or any portion thereof (but compensation for time spent in preparing to appear in any such litigation, arbitration or proceeding will be on the basis provided in Paragraph 5.1.2.1).

5.1.3. Reimbursable Expenses: The **COUNTY** will pay the **CONSULTANT** the actual costs of all reimbursable expenses incurred in the provision of these services when authorized in writing by the **COUNTY**. These expenses will not exceed **$385,950.68** without additional authorization from the **COUNTY**.

5.1.4 Optional Services: The **COUNTY** will pay the **CONSULTANT** for completion of the Optional Services set forth in Exhibits "A" and "B" when the provision of each service is specifically authorized in writing by the **COUNTY.** These expenses will not exceed **$0.00** without additional authorization from the **COUNTY**.

5.1.5. The terms "Salary Costs" and "Reimbursable Expenses" have the meanings assigned to them in Paragraph 5.4.

5.1.6. Additional services and reimbursable expenses authorizations shall be issued in accordance with Board policy per Resolution Number R-89-633 adopted April 4, 1989.

5.2. **Payments**

5.2.1. Progress payments to the **CONSULTANT** shall be due and payable monthly in proportion to the percentage of engineering services approved and accepted by the **COUNTY** based on said lump sum fee until 90% of the project is completed. There will be no additional payments for Basic Services until all services are completed and accepted by the **COUNTY** (including permits).

5.2.2. Final payment shall be due and payable to the **CONSULTANT** upon satisfactory completion of the services described in this Agreement and approval and acceptance of the plans by the **COUNTY**.

5.3. **Other Provisions Concerning Payments**

5.3.1. If this Agreement is terminated prior to its completion other than due to default on the part of the **CONSULTANT**, the **CONSULTANT** shall be paid for Basic Services called for under Section 1 an amount equal to the percentage complete at the time of termination, times the lump sum fee stated in Section 5. Further, the **CONSULTANT** shall be paid for the completed portion of additional services authorized under Section 2, in accordance with Paragraph 5.1.2.

5.3.2. Records of the **CONSULTANT'S** Salary Costs pertinent to the **CONSULTANT'S** compensation under this Agreement will be kept in accordance with generally accepted accounting practices. Copies will be made available to the **COUNTY** on request prior to final payment for the **CONSULTANT'S** services.

5.4. **Definitions**

5.4.1. The Salary Costs used as a basis for payment shall mean the actual salaries and wages paid to principals and employees engaged on the **PROJECT**. Time spent on this **PROJECT** by stenographers, typists and clerk skills shall not be charged to the **PROJECT** nor shall any fringe benefits such as social security contributions, unemployment, excise and payroll taxes, workman's compensation, etc., be included in the Salary Costs.

5.4.2. Reimbursable Expenses shall mean the actual expenses of soils testing, printing and similar **PROJECT** related items when authorized by the **COUNTY**.

SECTION 6 - **CONSTRUCTION COST AND OPINIONS OF COST**

6.1. **Opinions of Cost**

Since **CONSULTANT** has no control over the cost of labor, materials, equipment or services furnished by others, or over the contractor(s)' methods of determining prices, or over competitive bidding or market conditions, the **CONSULTANT'S** opinions of probable construction cost provided for herein are to be made on the basis of the **CONSULTANT'S** experience and qualifications and represent the **CONSULTANT'S** best judgment as an experienced and qualified professional engineer, familiar with the construction industry; but the **CONSULTANT** cannot and does not guarantee that proposals, bids or actual construction costs will not vary from opinions of probable cost prepared by the **CONSULTANT**. If prior to the Bidding or Negotiating Phase, the **COUNTY** wishes greater assurance as to construction costs, the **COUNTY** shall employ an independent cost estimator.

SECTION 7 - **GENERAL CONSIDERATION**

7.1. **Termination**

This Agreement may be canceled by the **CONSULTANT** upon thirty (30) days prior written notice to the **COUNTY** if, through no fault of the **CONSULTANT**, the **COUNTY** fails to cure any material default by the **COUNTY** in its performance of the terms of this Agreement. This Agreement may also be terminated, in whole or in part, by the **COUNTY**, with or without cause, immediately upon written notice to the **CONSULTANT**. Unless the **CONSULTANT** is in breach of this Agreement, the **CONSULTANT** shall be paid for services rendered to the **COUNTY'S** satisfaction through the date of cancellation or termination. In the event of cancellation by the **CONSULTANT** or termination by the **COUNTY**, **CONSULTANT** agrees to waive and make no claim for lost profits or other consequential damages. After receipt of a Termination Notice and except as otherwise directed by the **COUNTY**, the **CONSULTANT** shall:

A. Stop work on the date and to the extent specified.

B. Terminate and settle all orders and subcontracts relating to the performance of the terminated work.

C. Transfer all work in process, completed work, and other materials related to the terminated work to the **COUNTY**.

D. Continue and complete all parts of the work that have not been terminated.

Should a termination for breach later be declared wrongful, said termination shall be considered and treated as a termination without cause.

7.2. **DISCLOSURE AND OWNERSHIP OF DOCUMENTS**

7.2.1. Upon completion and acceptance of the final work, the **CONSULTANT** shall furnish to the **COUNTY** the original drawings, field notes and all documents and materials prepared by and for the **COUNTY** under this Agreement. The **CONSULTANT** may keep a reproducible set of the original drawings and shall keep all other data collected during the provision of the services. The **COUNTY** may, at its expense, obtain copies of any data which the **CONSULTANT** has accumulated in the process of providing the services on this project tasks. Any reuse without written verification or adaptation by the **CONSULTANT** for the specific purpose intended will be at the **COUNTY'S** sole risk and without liability or legal exposure to the **CONSULTANT.**

7.2.2. All written and oral information not in the public domain or not previously known, and all information and data obtained, developed, or supplied by the **COUNTY** or at its expense will be kept confidential by the **CONSULTANT** and will not be disclosed to any other party, directly or indirectly, without the **COUNTY'S** prior written consent unless required by a lawful order. All drawings, maps, sketches, programs, data base, reports and other data developed or purchased under this Agreement at the **COUNTY'S** expense shall be, and remain, the **COUNTY'S** property, and may be reproduced and reused at the discretion of the **COUNTY.**

7.2.3. The **COUNTY** and the **CONSULTANT** shall comply with the provisions of Chapter 119, Florida Statutes (Public Records Law).

7.2.4. All covenants, agreements, representations and warranties made herein, or otherwise made in writing by any party pursuant hereto, including but not limited to any representations made herein relating to disclosure or ownership of documents, shall survive the execution and delivery of this Agreement and the consummation of the transactions contemplated hereby.

7.3 **Reuse of Documents**

Notwithstanding any breach of this Agreement by either party nor the status of payment to the **CONSULTANT,** nor the **COUNTY'S** exercise of its rights of termination, it is hereby agreed between the parties that copies of any and all property, work product, documentation, reports, computer systems and software, schedules, graphs, outlines, books, manuals, logs, files, deliverables, photographs, videos, tape recordings or data relating to this Project which have been created as a part of the **CONSULTANT'S** services, or authorized by the **COUNTY** as a reimbursable expense, whether generated directly by the **CONSULTANT,** or by or in conjunction or consultation with any other party whether or not a party to this Agreement, whether or not in privity of contract with the **COUNTY** or **CONSULTANT**, and wherever located shall be the property of the **COUNTY**.

7.4. **Insurance**

CONSULTANT shall, at its sole expense, agree to maintain in full force and effect at all times during the life of this Contract, insurance coverages and limits (including endorsements), as described herein. **CONSULTANT** shall agree to provide the **COUNTY** with at least ten (10) day prior notice of any cancellation, non-renewal or material change to the insurance coverages. The requirements contained herein, as well as **COUNTY'S** review or acceptance of insurance maintained by **CONSULTANT** are not intended to and shall not in any manner limit or qualify the liabilities and obligations assumed by **CONSULTANT** under the contract.

7.4.1 **Commercial General Liability**

CONSULTANT shall maintain Commercial General Liability at a limit of liability not less than **$1,000,000** Each Occurrence. Coverage shall not contain any endorsement excluding Contractual Liability or Cross Liability unless granted in writing by County's Risk Management Department. **CONSULTANT** shall provide this coverage on a primary basis.

7.4.2. **Business Automobile Liability**

CONSULTANT shall maintain Business Automobile Liability at a limit of liability not less than **$1,000,000** Each Accident for all owned, non-owned and hired automobiles. In the event **CONSULTANT** doesn't own any automobiles, the Business Auto Liability requirement shall be amended allowing **CONSULTANT** to agree to maintain only Hired & Non-Owned Auto Liability. This amended requirement may be satisfied by way of endorsement to the Commercial General Liability, or separate Business Auto coverage form. **CONSULTANT** shall provide this coverage on a primary basis.

7.4.3. **Worker's Compensation Insurance & Employers Liability**

CONSULTANT shall maintain Worker's Compensation & Employers Liability in accordance with Florida Statute Chapter 440. **CONSULTANT** shall provide this coverage on a primary basis.

7.4.4. **Professional Liability**

CONSULTANT shall maintain Professional Liability, or equivalent Errors & Omissions Liability at a limit of liability not less than **$1,000,000** Each Claim. When a self-insured retention (SIR) or deductible exceeds **$40,000**, **COUNTY** reserves the right, but not the obligation, to review and request a copy of **CONSULTANT'S** most recent annual report or audited financial statement. For policies written on a "Claims-Made" basis, **CONSULTANT** shall maintain a Retroactive Date prior to or equal to the effective date of this Contract. The Certificate of Insurance providing evidence of the purchase of this coverage shall clearly indicate whether coverage is provided on an "occurrence" or "claims - made" form. If coverage is provided on a "claims - made" form the Certificate of Insurance must also clearly indicate the "retroactive date" of coverage. In the event the policy is canceled, non-renewed, switched to an Occurrence Form, retroactive date advanced, or any other event triggering the right to purchase a Supplement Extended Reporting Period (SERP) during the life of this Contract, **CONSULTANT** shall purchase a SERP with a minimum reporting period not less than 3 years. **CONSULTANT** shall provide this coverage on a primary basis.

7.4.5. **Additional Insured**

CONSULTANT shall endorse the **COUNTY** as an Additional Insured with a CG 2026 Additional Insured - Designated Person or Organization endorsement, or its equivalent, to the Commercial General Liability. The Additional Insured endorsement shall read "Palm Beach County Board of County Commissioners, a Political Subdivision of the State of Florida, its Officers, Employees and Agents." **CONSULTANT** shall provide the Additional Insured endorsements coverage on a primary basis.

7.4.6. **Waiver of Subrogation**

CONSULTANT hereby waives any and all rights of Subrogation against the County, its officers, employees and agents for each required policy. When required by the insurer, or should a policy condition not permit an insured to enter into a pre-loss agreement to waive subrogation without an endorsement, then **CONSULTANT** shall agree to notify the insurer and request the policy be endorsed with a Waiver of Transfer of rights of Recovery Against Others, or its equivalent. This Waiver of Subrogation requirement shall not apply to any policy, which a condition to the policy specifically prohibits such an endorsement, or voids coverage should **CONSULTANT** enter into such an agreement on a pre-loss basis.

7.4.7. **Certificate(s) of Insurance**

Prior to execution of this Contract, **CONSULTANT** shall deliver to the **COUNTY** a Certificate(s) of Insurance evidencing that all types and amounts of insurance coverages required by this Contract have been obtained and are in full force and effect. Such Certificate(s) of Insurance shall include a minimum ten **(10)** day endeavor to notify due to cancellation or non-renewal of coverage. The certificate of insurance shall be issued to

Palm Beach County
c/o Department of Engineering & Public Works
2300 N. Jog Road, 3rd Floor
West Palm Beach, FL 33411-2745

7.4.8 **Umbrella or Excess Liability**

If necessary, **CONSULTANT** may satisfy the minimum limits required above for either Commercial General Liability, Business Auto Liability, and Employer's Liability coverage under Umbrella or Excess Liability. The Umbrella or Excess Liability shall have an Aggregate limit not less than the highest "Each Occurrence" limit for either Commercial General Liability, Business Auto Liability, or Employer's Liability. The **COUNTY** shall be specifically endorsed as an "Additional Insured" on the Umbrella or Excess Liability, unless the Certificate of Insurance notes the Umbrella or Excess Liability provides coverage on a "Follow-Form" basis.

7.4.9 **Right to Review**

COUNTY, by and through its Risk Management Department, in cooperation with the contracting/monitoring department, reserves the right to review, modify, reject or accept any required policies of insurance, including limits, coverages, or endorsements, herein from time to time throughout the term of this Contract. **COUNTY** reserves the right, but not the obligation, to review and reject any insurer providing coverage because of its poor financial condition or failure to operate legally.

7.5. **Indemnification**

CONSULTANT shall 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 CONSULTANT in the performance of the contract.

7.6. **Controlling Law and Venue**

This Agreement is to be governed by the laws of the State of Florida. The parties agree that venue for any action which in any way arises out of this Agreement shall only be in a state court of competent jurisdiction located in Palm Beach County, Florida.

7.7. **Successors and Assigns**

7.7.1. The **COUNTY** and the **CONSULTANT** each binds itself and the partners, successors, executors, administrators and assigns to the other party and to the partners, successors, executors, administrators and assigns of such other party, in respect to all covenants of this Agreement. Except as above, neither the **COUNTY** nor the **CONSULTANT** shall assign, sublet, convey or transfer its interest in this Agreement without the prior written consent or the other. Nothing herein shall be construed as creating any personal liability on the part of any officer or agent of the **COUNTY**, nor shall it be construed as giving any rights or benefits hereunder to anyone other than the **COUNTY** and the **CONSULTANT.**

7.7.2. Neither the **COUNTY** nor the **CONSULTANT** shall assign, sublet or transfer any rights under or interest in (including, but without limitation, monies that may become due or monies that are due) this Agreement without the written consent of the other, except to the extent that any assignment, subletting or transfer is mandated by law or the effect of this limitation may be restricted by law. Unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Agreement. Nothing contained in this paragraph shall prevent the **CONSULTANT** from employing such independent professional associates and consultants as the **CONSULTANT** may deem appropriate to assist in the performance of services hereunder.

7.7.3. Nothing under this Agreement shall be construed to give any rights or benefits in this Agreement to anyone other than the **COUNTY** and the **CONSULTANT**, and all duties and responsibilities undertaken pursuant to this Agreement will be for the sole and exclusive benefit of the **COUNTY** and the **CONSULTANT** and not for the benefit of any other party.

7.8 **Subcontracting**

The **COUNTY** reserves the right to accept the use of a subcontractor or to reject the selection of a particular subcontractor and to inspect all facilities of any subcontractors in order to make a determination as to the capability of the subcontractor to perform properly under this Agreement. The **CONSULTANT** is encouraged to seek small business enterprises for participation in subcontracting opportunities. If a subcontractor fails to perform or make progress, as required by this Agreement, and it is necessary to replace the subcontractor to complete the work in a timely fashion, the **CONSULTANT** shall promptly do so, subject to acceptance of the new subcontractor by the **COUNTY**.

In accordance with Palm Beach County Small Business Enterprise (SBE) Ordinance #2002-064, as amended from time to time, the annual goal for SBE participation for Professional Services is **15.00%.** The **CONSULTANT** has committed to **18.00%** for this Project.

The **CONSULTANT** agrees to abide by all provisions of the SBE Ordinance and understands that failure to comply with any of the requirements will be considered a breach of contract.

The **CONSULTANT** has provided Exhibit "D" (Participation for SBE Consultants) and Exhibit "E" (Letter's of Intent) attached hereto indicating the specific participation.

The **CONSULTANT** understands that each SBE firm utilized on this Agreement must be certified by Palm Beach County in order to be counted toward the contract goal.

The **CONSULTANT** understands that it is the responsibility of the County Department letting the Agreement and the SBE Office to monitor compliance with the SBE Ordinance requirements. In that regard, the **CONSULTANT** agrees to furnish progress payment reports, with each billing, to both parties on the progress of the SBE participation for this Agreement.

The **CONSULTANT** further agrees to provide the SBE Office with a copy of the **CONSULTANT'S** agreement with the SBE subcontractor or any other related documentation upon request.

The **CONSULTANT** understands the requirements to comply with the tasks and proportionate dollar amounts throughout the term of the Agreement as it relates to the use of SBE firms. Any SBE's which, for any reason, no longer remain associated with the Project shall be replaced by the **CONSULTANT** with other certified SBE's, unless approval to the contrary is granted by the **COUNTY**.

The **CONSULTANT** understands that he/she is prohibited from making any agreements with the SBE in which the SBE promises not to provide subconsultant quotations to other bidders or potential bidders.

The **CONSULTANT** agrees to maintain all relevant records and information necessary to document compliance with the SBE Ordinances, and will allow the **COUNTY** to inspect such records.

The **CONSULTANT** shall certify in writing that all subcontractors, subconsultants and suppliers have been paid for work and materials from previous progress payments received, less any retainage, by the CONSULTANT prior to receipt of any further progress payments. During the term of the Agreement and upon completion of the Agreement, the **COUNTY** may request documentation to certify payment to subcontractors, subconsultants or suppliers. This provision in no way creates any contractual relationship between any subcontractor, subconsultant, or supplier and the **COUNTY** or any liability on the **COUNTY** for the **CONSULTANT'S** failure to make timely payment to the subcontractor, subconsultant or supplier.

7.9. **Personnel**

The **CONSULTANT** represents that it has, or will secure at its own expense, all necessary personnel required to perform the services under this Agreement.

Such personnel shall not be employees of or have any contractual relationship with the **COUNTY.** All of the services required herein shall be performed by the **CONSULTANT** or under its supervision, and all personnel engaged in performing the services shall be fully qualified and, if required, authorized or permitted under state and local law to perform such services.

The **CONSULTANT** warrants that all services shall be performed by competent personnel in accordance with all applicable national, federal, state, and local professional and technical standards.

7.10. **Availability of Funds**

The **COUNTY'S** performance and obligation to pay under this Agreement is contingent upon an annual appropriation for its purpose by the Board of County Commissioners.

7.11. **Conflict of Interest**

The **CONSULTANT** represents that it presently has no interest and shall acquire no interest, either direct or indirect, which would conflict in any manner with the performance or services required hereunder, as provided for in Chapter 112, Part III, Florida Statutes. The **CONSULTANT** further represents that no person having any interest shall be employed for said performance.

The **CONSULTANT** shall promptly notify the **COUNTY'S** representative, in writing, by certified mail, of all potential conflicts of interest for any prospective business association, interest or other circumstance which may influence or appear to influence the **CONSULTANT'S** judgment or quality of services being provided hereunder. Such written notification shall identify the prospective business association, interest or circumstance, the nature of work that the **CONSULTANT** may undertake and request an opinion of the **COUNTY** as to whether the association, interest or circumstance would, in the opinion of the **COUNTY,** constitute a conflict of interest if entered into by the **CONSULTANT.**

The **COUNTY** agrees to notify the **CONSULTANT** of its opinion by certified mail within thirty (30) days of receipt of notification by the **CONSULTANT.** If, in the opinion of the **COUNTY,** the prospective business association, interest or circumstance would not constitute a conflict of interest by the **CONSULTANT,** the **COUNTY** shall so state in the notification and the **CONSULTANT** shall, at its option, enter into said association, interest or circumstance and it shall be deemed not in conflict of interest with respect to services provided to the **COUNTY** by the **CONSULTANT** under the terms of this Agreement.

7.12. **Independent Contractor Relationship**

The **CONSULTANT** and subconsultants are, and shall be, in the performance of all work services and activities under this Agreement, Independent Contractors, and not employees, agents, or servants of the **COUNTY.** The **CONSULTANT** does not have the power or authority to bind the **COUNTY** in any promise, agreement or representation other than specifically provided for in this Agreement. The **CONSULTANT** shall be responsible to the **COUNTY** for all the work or services performed by the **CONSULTANT** or any person or firm engaged as a subcontractor to perform work in fulfillment of this Agreement.

7.13. **Access and Audits**

The **CONSULTANT** shall maintain adequate records to justify all charges, expenses, and costs incurred in estimating and performing the work for at least three (3) years after completion of this Agreement. The **COUNTY** shall have access to such books, records, and documents as required in this section for the purpose of inspection or audit during normal business hours, at the **CONSULTANT'S** place of business.

7.14 **Severability**

If any term or provision of this Agreement, or the application thereof to any person or circumstances shall, to any extent, be held invalid or unenforceable, the remainder of this Agreement, or the application of such terms or provisions, to persons or circumstances other than those as to which it is held invalid or unenforceable, shall not be affected, and every other term and provision of this Agreement shall be deemed valid and enforceable to the extent permitted by law.

7.15 **Entirety of Contractual Agreement**

The **COUNTY** and the **CONSULTANT** agree that this Contract sets forth the entire agreement between the parties, and that there are no promises or understandings other than those stated herein. None of the provisions, terms and conditions contained in this Contract may be added to, modified, superseded or otherwise altered, except by written instrument executed by the parties hereto.

During the term of this Contract, the **COUNTY** may require professional services that are the same or similar to those described in this agreement. The **COUNTY** may, at its sole discretion, obtain said services in accordance with the State of Florida Consultants Competitive Negotiation Act. If the **COUNTY** so elects, it is mutually understood that the relationship between the **CONSULTANT** and the **COUNTY** under this Contract shall be considered as neither barring the **CONSULTANT** from, nor granting special consideration to the **CONSULTANT,** in participating in the selection process for a consultant to provide such additional services.

SECTION 8 - **SPECIAL PROVISIONS, EXHIBITS AND SCHEDULES**

8.1 Federal & State Tax

The **CONSULTANT** shall be responsible for payment of its own and its share of its employees' payroll, payroll taxes, and benefits with respect to this Agreement.

8.2. The following Exhibits are attached to and made a part of this Agreement.

8.2.1. Exhibit A: Scope of Services

8.2.2. Exhibit B: Fee Summary

8.2.3. Exhibit C: Truth in Negotiation, Prohibition Against Contingent Fees & Public Entity Crimes Statements, Conflict of Interest Disclosure Form, Disclosure of Ownership Interests Form (if applicable).

8.2.4. Exhibit D: Participation for SBE Consultants

8.2.5. Exhibit E: Letters of Intent to Perform as an SBE and/or M/WBE (if applicable).

8.3. This Agreement (consisting of pages 1 to 13, inclusive), together with the Exhibits and Schedules identified above constitute the entire Agreement between the **COUNTY** and the **CONSULTANT** and supersedes all prior written or oral understandings. This Agreement and said Exhibits may only be amended, supplemented, modified or canceled by a duly executed written instrument.

SECTION 9 - **CRIMINAL HISTORY RECORDS CHECK**

The CONSULTANT shall comply with the provisions of Ordinance 2003-030, the Criminal History Records Check Ordinance ("Ordinance"), if CONSULTANT'S employees or subcontractors are required under this contract to enter a "critical facility" as identified in Resolution R-2003-1274. The CONSULTANT acknowledges and agrees that all employees and subcontractors who are to enter a "critical facility" will be subject to a fingerprint based criminal history records check. Although COUNTY agrees to pay for all applicable FDLE/FBI fees required for criminal history record checks, the CONSULTANT shall be solely responsible for the financial, schedule, and staffing implications associated in complying with Ordinance 2003-030.

SECTION 10 - **REGULATIONS; LICENSING REQUIREMENTS**

The CONSULTANT shall comply with all laws, ordinances and regulations applicable to the services contemplated herein, to include those applicable to conflict of interest and collusion. CONSULTANT is presumed to be familiar with all federal, state and local laws, ordinances, codes and regulations that may in any way affect the services offered.

IN WITNESS WHEREOF, the parties have made and executed this Agreement as of the day and year first above written.

OWNER:
Palm Beach County, Florida
BY ITS BOARD OF COMMISSIONERS:

BY:_____
Addie L. Greene, Chairperson

S E A L

ATTEST:
Sharon R. Bock, Clerk & Comptroller
Circuit Court

BY:_____
(Deputy Clerk)

APPROVED AS TO TERMS
AND CONDITIONS:

BY:_____

APPROVED AS TO FORM &
LEGAL SUFFICIENCY:

BY:_____
Assistant County Attorney

CONSULTANT:
E. C. Driver & Associates, Inc.

BY:_____
Luis Costa, P.E.,
Vice President

CORPORATE SEAL

ATTEST WITNESS:

BY: Mario Echagarrua
(Print Name)

_____
(Signature)

BY: ROGER WALKER
(Print Name)

_____
(Signature)

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EXHIBIT "A"

EXHIBIT A

SCOPE OF SERVICES

FOR

PBC PROJECT NO. 2003502

OCEAN AVENUE BRIDGE OVER THE INTRACOASTAL IN LANTANA

PALM BEACH COUNTY

SCOPE OF SERVICES FOR CONSULTING ENGINEERING SERVICES HIGHWAY AND BRIDGE/STRUCTURAL DESIGN

This Exhibit forms an integral part of the agreement between the Board of County Commissioners of Palm Beach County (hereinafter referred to as the COUNTY) and E.C. Driver and Associates, Inc., (hereinafter referred to as the CONSULTANT) relative to the transportation facility described as follows:

PBC Project No.	2003502
Description:	Ocean Avenue Bridge over the Atlantic Intracoastal Replacement
Bridge No.:	***930094***

1 PURPOSE

The purpose of this Exhibit is to describe the scope of work and the responsibilities of the CONSULTANT and the COUNTY in connection with the design and preparation of a complete set of construction contract plans and special provisions, if necessary, for Roadway and Bridge improvements to the transportation facility described herein. The existing Ocean Avenue Bridge over the Atlantic Intracoastal Waterway shall be replaced by a new bridge which accommodates the U.S. Coast Guard navigational guide clearances for this section of the intracoastal (21-foot vertical clearance from the mean high water mark to the bottom of the superstructure at the fender system; 125-foot horizontal clearance from fender to fender).

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 COUNTY to ensure the project is built as designed and to specifications. Elements of work shall include roadways, structures, geotechnical activities, surveys, drainage, signing and pavement markings, lighting, utility relocation coordination, cost estimates, environmental permits, quantity computation books, and all necessary incidental items for a complete project.

The Scope of Services establishes which items of work described in the Florida Department of Transportation (FDOT) Plans Preparation Manual and other pertinent manuals to accomplish the work are specifically included in this contract, and also which of the items of work will be the responsibility of the CONSULTANT or the COUNTY.

All plans and design documents are to be prepared with Standard English values in

accordance with all applicable COUNTY manuals and guidelines. Where the COUNTY does not have applicable published manuals or guidelines, work is to be performed in accordance with the applicable Florida Department of Transportation manuals and guidelines. Where a conflict exists, the COUNTY documents will govern.

The CONSULTANT shall demonstrate good project management practices while working on this project. These include communication with the COUNTY 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 COUNTY procedures. It shall be the CONSULTANT's responsibility to utilize standard industry practice in applying engineering judgment, practices, and principles during the prosecution of the work commissioned under this contract.

The COUNTY will provide contract administration, management services, and technical reviews of all work associated with the development and preparation of the contract plans. The COUNTY will provide job-specific information and/or functions as outlined in this contract.

2 PROJECT DESCRIPTION

The CONSULTANT shall investigate the status of the project and become familiar with concepts and commitments (typical sections, alignments, etc.) developed from prior studies. The CONSULTANT shall use the approved concepts of the Preliminary Engineering Report dated July, 2005 as a basis for the design unless otherwise directed by the COUNTY.

The Scope of Services for this project includes Final Design Services for a new Bridge with a movable span to replace the existing Bascule Bridge (Bridge No. 930094). The new bridge will accommodate the U.S. Coast Guard navigational guide clearances for this section of the intracoastal (21-foot vertical clearance from the mean high water mark to the bottom of the superstructure at the fender system; 125-foot horizontal clearance from fender to fender). The new bridge will be designed to follow the existing centerline horizontal alignment.

Design services will include a replacement bridge with a movable span, approach roadway, surveying, drainage, geotechnical studies and architectural work related to the bridge control house. In addition to design, the services will include public involvement, preparation of permit applications, utility coordination and overall project management.

The limits of the construction project are to be established during design and will be as required to transition from the new bridge section to the existing roadway. Approximate limits are as described in the Preliminary Engineering Report dated July, 2005 for the

Existing Alignment Alternative.

The CONSULTANT shall incorporate the following into the design of this facility:

2.1 Roadway (Activities 3.0, 4.0, and 5.0 as described in the FDOT Staffhour Basis Form)

Public Involvement: The Public Involvement Plan will include 2 Public/Agency Workshops and 6 individual meetings/presentations to miscellaneous key stakeholders.

Joint Project Agreements: None expected.

Value Engineering: Not Applicable.

Plan Type: Plan/profile 40 scale (11" x 17" CADD generated sheets)

Typical Section(s): Undivided Bascule Bridge, Undivided Fixed Bridge Approaches, Undivided Roadway Approaches.

Pavement Design: County Standard Pavement Design.

Access Management Classification: Not applicable.

Major Intersections/Interchanges: Lake Drive, N. Atlantic Drive.

Level of TCP Plans: Not Applicable, Bridge will be closed to vehicular traffic during construction.

Temporary Signals: Not applicable.

Temporary Lighting: Not applicable.

Temporary Drainage: Not applicable.

Limits: Ocean Avenue from Lake Drive to N. Atlantic Drive. Exact limits will be determined during the Final Design.

Variations/Exceptions: No variations or exceptions are anticipated.

Back of Sidewalk Profiles: Not required.

2.2 Drainage (Activity 6.0)

Expected drainage systems will be closed drainage with the use of alternative underground treatment facilities to provide water quality treatment. Because of the tidal nature of the receiving body of water, no water quantity treatment will be required. No pond sites are to be studied.

2.3 Utilities (Activity 7.0)

Known utility owners within the project limits include:

Town of Lantana (water and sewer)

Florida Power and Light (submarine and overhead power lines)

Bellsouth (submarine, underground and overhead communication lines)

Adelphia Cable (CATV).

2.4 Environmental Permits (Activity 8)

Expected permit requirements include:

South Florida Water Management District (SFWMD) Environmental Resource Permit.

United States Coast Guard (USCG) Bridge Permit.

United States Army Corps of Engineers (USACOE) Dredge and Fill Permit

Palm Beach County Environmental Resources Management (ERM) Permit

The COUNTY will be responsible for mitigation costs if necessary. Mitigation plans are not included with this project.

2.5 Structures (Activities 9.0 – 18.0)

Bridge(s): For each bridge describe the typical section, location, length, and other pertinent information to define the scope of the proposed bridge work.

Type of Bridge Structure Work:

Bridge Length approximately = 815 feet

Double-Leaf Bascule Main Span, Prestressed Concrete Beam or Flat Slab approach spans.

Walls: Retaining walls are anticipated at the bridge ends to minimize right of way impacts.

Miscellaneous:

Mast arms for movable bridge signals

2.6 Signing and Pavement Markings (Activity 19.0 & 20.0)

Signing and pavement markings as required by Palm Beach County Standard Drawings, the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD) and Americans with Disabilities Act of 1990 (ADA) throughout the project limits. No sign structures are anticipated.

2.8 Lighting (Activity 23.0 & 24.0)

Roadway lighting for the length of the construction project. Decorative lighting may be requested by the Town of Lantana.

Lighting Analysis Report

2.10 Survey (Activity 27.0)

Design Survey: A limited survey was performed during the preliminary engineering phase. This survey will be complemented with a survey update, as well as additional data not collected in the original survey required for Final Design.

Subsurface Utility: The Consultant will obtain verified (x, y & z planes) underground utility locations at all potential conflict locations. An estimated 20 test holes are anticipated.

Subacqueous Utility: The Consultant will locate underwater utility lines which may be in conflict with the proposed bridge foundations or with the proposed fender system piles.

Right of Way Survey/Mapping: Existing right of way was defined during the preliminary engineering. Additional services required during the Final Design may include parcel sketches and legal descriptions for both permanent takes and temporary construction easements. No right of way impacts are anticipated from the Existing Alignment Alternative. These services will be included under Optional Services.

2.11 Photogrammetry (Activity 28.0) (This activity was performed during the Preliminary Engineering phase. If more current aerial photography is required, the County will provide)

2.13 Geotechnical (Activity 30.0)

The Consultant shall perform the geotechnical activities necessary for this project. The Consultant shall provide the County with copies of all reports and laboratory test results. General descriptions of geotechnical activities are described in Sections 30.1 through 30.52. Specific geotechnical activities to be performed for this contract consist of the following:

Geotechnical Roadway Soil Survey

10 Borings at 5 feet each,
Laboratory testing appropriate for the project.

Embankment (High Fill) – Not Applicable

Stormwater Planning

4 Permeability/Infiltration tests to support French drain design,
Laboratory testing appropriate for the project.

Miscellaneous Structures
4 (2 each side) borings to a depth of 30 feet for light poles and/or retaining walls.

Bridge Structure

16 SPT bridge borings to depths of 80 feet below existing grades/water surface,
Laboratory testing appropriate for the project.

2.14 Architecture

Develop design for control house. Develop preliminary and final plans for control house, including HVAC, electrical, lighting and plumbing. Develop architectural concepts for the overall bridge style. This is to be coordinated during the public involvement phase in order to obtain consensus on the bridge style.

2.15 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 COUNTY and CONSULTANT activities required to meet the current COUNTY Production Date. The schedule shall indicate all required submittals.

For purposes of scheduling, the CONSULTANT shall allow for the following COUNTY work activity and submittal review times, when applicable:

Work Activity/Submittal Review	County Review Time (weeks)
Roadway Plans Review	
Typical Section and Master Plan Submittal	3
35% Roadway Submittal	3
65% Roadway Submittal	3
96% Roadway Submittal	3
100% Roadway Submittal	3
Final Plans Submittal	NA
Structures Plans Review	
Bridge Hydraulics Report (BHR) Submittal	4
Bridge Development Report (BDR) Review	4
35% Bridge Submittal	4
65% Bridge Submittal	4
96% Bridge Submittal	4
100% Bridge Submittal	4
Final Plans Submittal	NA

2.16 Submittals

The CONSULTANT shall furnish plans and documents as required by the COUNTY to adequately control, coordinate, and approve the plans.

The CONSULTANT shall provide copies of the required plans and documents as listed below. These are the anticipated printing requirements for the project. This tabulation will be used for estimating purposes. The Project Manager will determine the specific number of copies required prior to each submittal.

Engineering Documents
(Documents and number of copies to be determined by COUNTY preference.)

Document	No. of Copies Required
Roadway Design	
Typical Section Package	2
Master Plan	3
Design Documentation	2
Computation Book	2
Technical Special Provisions	2
Bridge Submittals	
35% Plans	6
65% Plans	6
96% Plans	6
100% Plans	6
Roadway Submittals	
35% Plans	6
65% Plans	6

Engineering Documents
(Documents and number of copies to be determined by COUNTY preference.)

Document	No. of Copies Required
96% Plans	6
100% Plans	
Drainage	
Preliminary Bridge Hydraulics Report	2
Final Bridge Hydraulics Report	2
Drainage Design Documentation Report	2
Bridge/Structural	
Bridge Development Report / Preliminary Plans	2/6
Geotechnical	
Roadway Report – Preliminary	2
Roadway Report – Final	2
Structures Report - Phase I	2
Structures Report - Phase II	2
Structures Report – BDR	2

2.17 Provisions for Work

All maps, plans and designs are to be prepared with English values in accordance with all applicable current specifications, manuals, memorandums, guidelines and other documents listed below:.

General

- Florida Statutes

- Florida Administrative Codes
- Florida Department of Transportation Project Development and Environmental Manual
- Florida Department of Transportation Plans Preparation Manual
- Florida Department of Transportation Standard Specifications for Road and Bridge Construction
- Florida Department of Transportation Handbook for Preparation of Specifications Package
- Florida Department of Transportation Design Standards for Design, Construction, Maintenance, and Utility Operations on the State Highway System
- Manual of Uniform Minimum Standards for Design, Construction, and Maintenance for Streets and Highways
- Bicycle Facilities Planning and Design Manual, Rev. Ed. 1982
- CADD Production Criteria Handbook
- CADD Manual
- Florida's Level of Service Standards and Guidelines Manual for Planning
- Equivalent Single Axle Load Guidelines
- Design Traffic Procedure
- K-Factor Estimation Process
- Project Traffic Forecasting Guidelines
- Florida Department of Transportation Basis of Estimates Manual
- Quality Assurance Guidelines
- Safety Standards
- Rule 61G17-6, F.A.C., Minimum Technical Standards for Professional Surveyors and Mappers
- Department of Environmental Protection Rules Governing Mean High Water and Jurisdictional Line Surveys
- Any special instructions from the COUNTY
- Utility Accommodations Guidelines
- Policy for Geometric Design of Highways and Streets
- Florida Department of Transportation Materials Manual
- Americans with Disabilities Act Accessibility Guidelines (ADAAG)
- 40 CFR, Part 61, Subpart M - National Emission Standard for Hazardous Air Polutants (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
- 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

- Ch. 62257, F.A.C. – Asbestos Program, Florida Department of Environmental Protection (DEP)
- Ch. 469, F.S. – Asbestos Abatement, Florida Department of Business and Professional Regulation (DBPR)
- Model Guide Specifications – Asbestos Abatement and Management in Buildings, National Institute for Building Sciences (NIBS)

Permits

- Chapter 373, F.S.
- Bridge Permit Application Guide, COMDT PUB P16591.3B
- Building Permit

Drainage

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

Survey

- Location Survey Manual
- Highway Field Survey Specifications
- Automated Survey Data Gathering
- Outline Specifications for Aerial Surveys and Photogrammetry for Transportation Projects
- Standards for Consultant-Submitted G.P.S. Static Control Projects
- EFB User Guide
- Chapter 472, F.S.
- Chapter 177, F.S.
- FDEP Bureau of Surveying and Mapping

Traffic Operation Manuals

- American Disabilities Act
- AASHTO - Guide for Development of Bicycle Facilities

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

Mapping

- Right-of-Way Mapping
- Florida Department of Transportation Right-of-Way Handbook
- Florida Department of Transportation Right-of-Way Manual

Structures

- AASHTO LRFD Bridge 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, dated 1994
- AASHTO/-AWS-D1. 5M/D1.5: An American National Standard Bridge Welding Code
- Florida Department of Transportation Structures Manual
- Florida Department of Transportation Structures Standard and Semi-Standard Drawings
- 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)
- Florida Department of Transportation - New Directions For Florida Post-Tensioned Bridges Volumes 1-5
- Florida Department of Transportation Bridge Load Rating Permitting And Posting Manual

Geotechnical

- Soils and Foundation Handbook
- Manual of Florida Sampling and Testing Methods

Landscape Architecture

- Florida Highway Landscape Guide

Architectural

- Building Codes
  - Florida Building Code
- Accessibility for Persons with Disabilities
  - Florida Accessibility Code for Building Construction
  - Chapter 13D-1, FAC
  - Section 255.21 and Chapter 553, Part V, F.S.
  - ANSI A117.1 - 1986
  - Titles II and III, Americans With Disabilities Act (ADA), Public Law 101-336; and the ADA Accessibility Guidelines (ADAAG)
- Fire Codes and Rules
  - NFPA 70 National Electrical Code (latest issue)
  - NFPA 101 Life Safety Code (latest issue)
  - NFPA 10 Standard for Portable Fire Extinguisher (latest issue)
  - NFPA 11 Standard for Low-Expansion Foam System (latest issue)
  - NFPA 11A Standard for High- and Medium-Expansion Foam System (latest issue)
  - NFPA 12 Standard for Carbon Dioxide Extinguishing System (latest issue)
  - NFPA 13 Installation of Sprinkler System (latest issue)
  - NFPA 30 Flammable and Combustible Liquids Cod (latest issue)
  - NFPA 54 National Gas Fuel Cod (latest issue)
  - NFPA 58 LP-Gas Cod (latest issue)

Florida Fire Prevention Code as adopted by the State Fire Marshal

Consult with the Florida State Fire Marshal's office for other frequently used

codes.

- Energy Conservation
  - Rule 13D-10, FAC, Rules for Construction and Leases of State-Owned Buildings to Ensure Energy Conservation
  - Section 255.251, F.S., Florida Energy Conservation Act of 1974
  - Section 255.255, F.S., Life-Cycle Costs
- Glass
  - Chapter 553, F.S., Part III, Glass
- Elevators
  - Chapter 7C-5, Florida Elevator Code
  - Chapter 399, F.S., Elevators
- Flood Plain Management Criteria
  - Section 255.25, F.S., Approval Required Prior to Construction or Lease of Buildings
  - Rules of the Federal Emergency Management Agency (FEMA)
- Extinguishing Systems
  - NFPA 10 Fire Extinguishers
  - NFPA 13 Sprinkler
  - NFPA 14 Standpipe and Hose System
  - NFPA 17 Dry Chemical
  - NFPA 20 Centrifugal Fire Pump
  - NFPA 24 Private Fire Service Mains
  - NFPA 200 Standard on Clean Agent Fire Extinguishing Systems
- Detection and Fire Alarm Systems
  - NFPA 70 Electrical Code
  - NFPA 72 Standard for the Installation, Maintenance and Use of Local Protective Signaling Systems
  - NFPA 72E Automatic Fire Detectors
  - NFPA 72H Testing Procedures for Remote Station and Proprietary Systems

- NFPA 72G Installation, Maintenance, and Use of Notification Appliances
- NFPA 74 Household Fire Warning Equipment
- NFPA 75 Protection of Electronic Computer Equipment

- Mechanical Systems

  - NFPA 90A Air Conditioning and Ventilating Systems
  - NFPA 92A Smoke Control Systems
  - NFPA 96 Removal of Smoke and Grease-Laden Vapors from Commercial Cooking Equipment
  - NFPA 204M Smoke and Heating Venting

- Miscellaneous Systems

  - NFPA 45 Laboratories Using Chemicals
  - NFPA 80 Fire Doors and Windows
  - NFPA 88A Parking Structures
  - NFPA 105 Smoke and Draft-Control Door Assemblies
  - NFPA 110 Emergency and Standby Power Systems
  - NFPA 220 Types of Building Construction
  - NFPA 241 Safeguard Construction, Alteration, and Operations
  - SFM F.A.C. 4A-47 Elevators
  - SFM 4A-51 Boilers

- Other

  - Chapter 10D-6 FAC On Site Sewage Disposal Systems (Septic Tanks)
  - Chapter 17-6.070 FAC Wastewater Facilities (Treatment Plants)
  - Chapter 17-761 FAC Underground Storage Tank Rules

These documents are revised periodically by the responsible agencies and adopted by authorities having jurisdiction on building projects. The design consultant and the project manager are advised to obtain applicable versions of these documents from the responsible agency prior to use.

- American Concrete Institute
- American Institute of Architects - Architect's Handbook of Professional Practice
- American Society for Testing and Materials - ASTM Standards
- Southern Building Code Congress International - Standard Building Codes

- Brick Institute of America
- DMS - Standards for Design of State Facilities
- Florida Concrete Products Association
- Florida Department of Transportation - Standard Specifications for Road and Bridge Construction
- Florida Department of Transportation - Plans Preparation Manual
- Florida Department of Transportation - Roadway and Traffic Design Standards
- Florida Department of Transportation - Structures Standard Drawings
- Florida Department of Transportation - ADA/Accessibility Procedure
- Florida Department of Transportation - Fixed Capital Outlay Program
- Florida Department of Transportation - Building Code Compliance Procedure
- Florida Department of Transportation - Asbestos Management Program Procedure
- Florida Department of Transportation – Design Build Procurement and Administration
- National Concrete Masonry Association
- National Electrical Code (current edition)
- National Fire Protection Association - Life Safety Code (current edition)
- Portland Cement Association - Concrete Masonry Handbook
- South Florida Building Code

2.18 Services to be Performed by the COUNTY

When appropriate the COUNTY will provide those services and materials as set forth below:

Furnish standard COUNTY monuments for the bench line.
Regarding Environmental Permitting Services:

- Approve all contacts with environmental agencies.
- Provide general philosophies and guidelines of the COUNTY 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 phase reviews of roadway, structural, mechanical and electrical plans.
Furnish all future information that may come to the COUNTY during the term of the CONSULTANT's Agreement, which in the opinion of the COUNTY is necessary for the prosecution of the work.

Furnish available traffic and planning data.
Furnish all approved utility relocations.
Provide acquisition of any necessary title searches.
Provide project data currently on file.
Provide engineering standards and review services.
Provide all available information in the possession of the COUNTY pertaining to utility companies whose facilities may be affected by the proposed construction.
Provide all future information that may come to the COUNTY pertaining to subdivision plans so that the CONSULTANT may take advantage of additional areas that can be utilized as part of the existing right-of-way.
Provide existing right-of-way maps.
Design Reports

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 Assesment. 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 shall be prepared with all required Phase II, III, and IV Plans submittals.

Technical Special Provisions: The CONSULTANT shall provide Technical Special Provisions for all items of work not covered by the 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 County 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 COUNTY for initial review at the time of the Phase III plans review submission. This timing will allow for adequate processing time prior to final submittal. 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.

The CONSULTANT shall contact the COUNTY for details of the current format to be used before starting preparations of Technical Special Provisions.

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

Technical Meetings: Includes meetings with COUNTY 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.

Quality Assurance/Quality Control: It is the intention of the COUNTY 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 COUNTY concept, and that the CONSULTANT submittals are complete.

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

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

Independent Peer Review: When directed by the COUNTY, a subconsultant shall perform Independent Peer Reviews.

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

Public involvement is an important aspect of the project development process. Public involvement includes communicating to interested persons, groups, and government organizations information regarding the development of the project.

Public Involvement tasks include the following:

Maintain Mailing List (NA)

Public Meetings

The CONSULTANT shall prepare displays or graphics for use during public information meetings. These shall include typical sections, aerial photographs, renderings, charts, and graphs, as needed. Printed displays or computerized (Powerpoint) graphics may be used.

At the discretion of the COUNTY, the CONSULTANT shall conduct or assist in the presentations to special interest groups.

All public meetings for this project shall be held at locations approved by the COUNTY. The Consultant is responsible for identification and inspection of the meeting site prior to the meeting.

Meeting equipment setup and tear down shall be handled by the CONSULTANT. The CONSULTANT will not be responsible for meeting notification or advertisement. It is assumed that the COUNTY or Town of Lantana will notify the public of any scheduled public meetings.

Public/Agency Workshops

Two Public Information Meetings are anticipated to be held. Informational graphics and information will be displayed. The CONSULTANT will provide sufficient knowledgeable staff to address questions from the public. The consultant will prepare "comment forms" to allow the public to submit comments and questions in writing. A one-page handout will be prepared and available at the meeting. No formal presentation will be made.

A briefing of CONSULTANT and COUNTY personnel (who will be on hand during the meeting) shall be performed by the CONSULTANT approximately one week prior to the Workshop to ensure the staff is up to date on the project and understands the Project well

enough to discuss it with the public and to answer questions. (This meeting could be combined with the second rehearsal.)

Small Group/ Local Government Meetings

Up to six meetings with the key Stakeholders are anticipated. For small group meetings, the Consultant will attend the meetings, bring copies of graphics prepared for the public meetings, and be prepared to answer questions. No formal presentation will be made.

Collect and Respond to Public Input

The CONSULTANT will maintain a file of public comments received throughout the life of the project. The consultant will prepare responses to public comments for the COUNTY's review and distribution.

3.2 Joint Project Agreements (Not applicable to this project)

3.3 Specifications Package Preparation

The CONSULTANT shall prepare and provide a complete specifications package, including applicable Technical Special Provisions, for items and areas of work.

3.4 Contract Maintenance

3.5 Value Engineering (Multi-Discipline Team) Review (Not applicable to this project)

3.6 Prime Project Manager Meetings

Includes only the Prime 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.

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.

4.1 Typical Section Package

The CONSULTANT shall provide a Typical Section Package for approval prior to the 35% plans submittal date.

4.2 Pavement Design Package

Not applicable. The County standard pavement design shall be used.

4.3 Access Management

Not applicable to this project.

4.4 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.

4.5 Cross Section Design Files

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

4.6 Traffic Control Analysis

The proposed bridge is to be constructed along the existing alignment, therefore, vehicular traffic for this intracoastal crossing will be closed during construction. The CONSULTANT shall develop a traffic detour scheme that is coordinated with all adjacent municipalities. Provisions for temporary emergency facilities and vehicle access will be considered in this plan.

4.7 Master TCP Design Files

NA

4.8 Design Variations and Exceptions

Not applicable to this project.

4.9 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 COUNTY 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 COUNTY.

4.10 Computation Book and Quantities

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

4.11 Cost Estimate

The CONSULTANT shall prepare an Engineer's Estimate of Probable Construction Cost for the project. This estimate is to be prepared prior to the 65% plans submittal and is to be updated prior to each subsequent submittal.

4.12 Technical Special Provisions

The CONSULTANT shall prepare all Technical Special Provisions as specifically needed for the project.

4.13 Other Roadway Analysis (Not applicable to this project)

4.14 Field Reviews

4.15 Technical Meetings

4.16 Quality Assurance/Quality Control (NA)

4.17 Independent Peer Review (Not applicable to this project)

4.18 Supervision (NA)

4.19 Coordination (NA)

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 Including Quantity Input

5.3 Drainage Map

5.4 Interchange Drainage Map (Not applicable to this project)

5.5 Typical Section Sheets

5.6 General Notes/Pay Item Notes

5.7 Summary of Quantities

5.8 Box Culvert Data Sheet (Not applicable to this project)

5.9 Bridge Hydraulics Recommendation Sheets (NA)

5.10 Summary of Drainage Structures (NA)

5.11 Optional Pipe/Culvert Material (Not applicable to this project)

5.12 Project Layout

5.13 Plan/Profile Sheet (NA)

5.14 Profile Sheet

5.15 Plan Sheet

5.16 Special Profile

5.17 Back of Sidewalk Profile Sheet (NA)

5.18 Interchange Layout Sheet (Not applicable to this project)

5.19 Ramp Terminal Details (Plan View) (Not applicable to this project)

5.20 **Intersection Layout Details (Not applicable to this project)**

5.21 **Miscellaneous Detail Sheets**

5.22 **Drainage Structure Sheet**

5.23 **Miscellaneous Drainage Detail Sheets**

5.24 **Lateral Ditch Plan/Profile (NA)**

5.25 **Lateral Ditch Cross Sections (NA)**

5.26 **Retention/Detention Ponds Detail Sheet (Not applicable to this project)**

5.27 **Retention Pond Cross Sections (Not applicable to this project)**

5.28 **Cross-Section Pattern Sheet (NA)**

5.29 **Roadway Soil Survey Sheet**

5.30 **Cross Sections**

5.31 **Traffic Control Plan Sheets (NA)**

5.32 **Traffic Control Cross Section Sheets (NA)**

5.33 **Traffic Control Detail Sheets (NA)**

5.34 **Utility Adjustment Sheets (NA)**

5.35 **Selective Clearing and Grubbing (NA)**

5.36 **Erosion Control Plan (NA)**

5.37 **SWPPP (NA)**

5.38 **Project Control Network Sheet (References and Benchmarks will be required)**

5.39 **Interim Standards**

5.40 **Utility Verification Sheet (SUE Data) (Not applicable to this project)**

5.41 **Quality Assurance/Quality Control (NA)**

5.42 Supervision (NA)

6 DRAINAGE ANALYSIS

The CONSULTANT shall analyze and document Drainage Tasks in accordance with all applicable manuals, guidelines, standards, handbooks, procedures, and current design memorandums.

The CONSULTANT shall be responsible for designing a drainage and stormwater management system. All design work shall comply with the requirements of the appropriate regulatory agencies.

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

6.1 Determine Base Clearance Water Elevation

Not applicable; project will tie into existing road profile within approx. 700' of the beginning and end bridge.

6.2 Pond Siting Analysis and Report (Not applicable to this project)

6.3 Design of Cross Drains

Not applicable. No cross drains are proposed for this project.

6.4 Design of Roadway Ditches

Design gutters, slot drains, or swales to convey roadway approach drainage into the existing drainage system. No additional treatment or attenuation is anticipated.

6.5 Design of Outfalls

Design four stormceptors, one at each of the bridge approach corners, to treat bridge runoff. Existing outfalls will be utilized for roadway approaches.

6.6 Design of Stormwater Management Facility (Offsite Pond) (Not applicable to this project)

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

Not applicable.

6.8 Design of Flood Plain Compensation Area

Not applicable to this project.

6.9 Design of Storm Drains

The CONSULTANT shall design a closed drainage system to collect and convey storm runoff to the designated outfalls..

6.10 Optional Culvert Material

Not applicable to this project.

6.11 French Drain Design

The Consultant shall design a stormwater quality treatment system which may consist of French Drains, Stormceptors, or other methods in order to secure the required environmental permits for the project.

6.12 Drainage Wells (Not applicable to this project)

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, except the Bridge Hydraulics Report.

6.14 Bridge Hydraulic Report

Calculate hydrology, hydraulics, scour, and deck drainage. Prepare report and the information for the Bridge Hydraulics Recommendation Sheet.

Temporary Drainage Analysis

Not applicable to this project

6.16 Cost Estimate (Not Applicable to this project)

6.17 Technical Special Provisions

As applicable.

6.18 Other Drainage Analysis (Not Applicable to this project)

6.19 Field Reviews

6.20 Technical Meetings

6.21 Quality Assurance/Quality Control (NA)

6.22 Independent Peer Review (Not applicable to this project)

6.23 Supervision (NA)

6.24 Coordination (NA)

7 Utility Coordination

The CONSULTANT will assist the COUNTY in the utility coordination effort. The COUNTY will initiate utility contacts, the CONSULTANT will attend utility coordination meetings, plot utility information on the plans and adjust the design as necessary and possible to minimize conflicts. The CONSULTANT will also coordinate any required utility verification survey with the utility companies.

8 ENVIRONMENTAL PERMITS

The CONSULTANT shall notify the COUNTY Project Manager, Environmental Permit Coordinator 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 Project Manager and the Environmental Permit Coordinator 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.

8.2 Establish Wetland Jurisdictional Lines

The CONSULTANT shall collect all data and information necessary to determine the boundaries of wetlands and surface waters defined by the rules or regulations of each agency processing or reviewing a permit application necessary to construct a COUNTY project.

The CONSULTANT shall be responsible for, but not limited to, the following activities:

Determine the jurisdictional boundaries of wetlands and surface waters as defined by rules or regulations of any other permitting authority that is processing a COUNTY permit application.
Acquire written verification of jurisdictional lines from the appropriate environmental agencies.
Prepare surveys of **sea grass** beds within the project limits. Sea grass bed surveys will be prepared annually during the growth season. Two surveys are anticipated.

Prepare a written assessment of the current condition and relative value of the function being performed by wetlands and surface waters. Prepare data in tabular form which includes the ID number for each wetland impacted, size of wetland to be impacted, type of impact and identify any wetland within the project limits that will not be impacted by the project.

8.4 Agency Verification of Wetland Data (NA)

8.5 Complete and Submit All Required Permit Applications

The CONSULTANT shall prepare permit packages as identified in the Project Description section.

The CONSULTANT shall collect all of the data and information necessary to obtain the environmental permits required to construct a project.

The CONSULTANT shall prepare each permit application for COUNTY 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 following permits are anticipated for this project:

South Florida Water Management District Environmental Resource Permit (Standard General or Individual).

U.S. Army Corps of Engineers Nationwide Permit (or combination of Nationwide Permits)

Florida Department of Environmental Protection (FDEP)/Environmental Protection Agency (EPA) National Pollutant Discharge Elimination System (NPDES)Permit.

U.S. Coast Guard (USCG) Bridge Permit

Palm Beach County Environmental Resources Management (ERM) Tree Permit

FDEP Sovereign Submerged Lands Easement (SSL)

8.6 Prepare Dredge and Fill Sketches

The Consultant will prepare dredge and fill sketches to be submitted as part of the SFWMD & COE ERP application package.

8.7 Prepare USCG Permit Sketches

The Consultant will prepare sketches as required to be submitted to the USCG with the permit application.

8.8 Prepare Easement Sketches

8.9 Prepare Right-of-Way Occupancy Sketches (Not applicable for this project)

8.10 Prepare Coastal Construction Control Line (CCCL) Permit Sketches (NA)

8.11 Prepare Tree Permit Information (PBC ERM)

8.12 Mitigation Coordination and Meetings

The CONSULTANT will attend coordination meetings and provide project information to the COUNTY.

8.13 Mitigation Design

Mitigation, if required for this project, will be considered as additional services to be added through a supplemental agreement.

8.14 Environmental Clearances (Not applicable for this project)

8.15 Other Environmental Permits (Not applicable for this project)

8.16 Technical Meetings

8.17 Quality Assurance/Quality Control (NA)

8.18 Supervision (NA)

8.19 Coordination (NA)

9 STRUCTURES - SUMMARY AND MISCELLANEOUS TASKS AND DRAWINGS

The CONSULTANT shall analyze and design structures in accordance with applicable provisions as defined in Section 2.17, Provisions for Work. Individual tasks identified in Sections 9 through 18 are defined in the Staff Hour Estimation Handbook and within the provision defined in Section 2.17, Provisions for Work. Contract documents shall display economical solutions for the given conditions.

The CONSULTANT shall provide Design Documentation to the COUNTY 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 the structural elements. These calculations shall be neatly and logically presented on 8½"x11" paper (where possible) and 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

9.2 Project Layout (Not applicable for this project)

9.3 General Notes and Bid Item Notes

9.4 Reference Florida Department of Transportation Standards

9.5 Incorporate Report of Core Borings

9.6 Existing Bridge Plans

Incorporate existing bridge plans into the contract set for information only. Existing plans are to be provided by the COUNTY.

9.7 Computation Book and Quantities

9.8 Cost Estimate

9.9 Technical Special Provisions

9.10 Field Reviews

9.11 Technical Meetings

9.12 Quality Assurance/Quality Control (NA)

9.13 Independent Peer Review (Not applicable for this project)

9.14 Supervision (NA)

9.15 Coordination (NA)

10 STRUCTURES - BRIDGE DEVELOPMENT REPORT

The Consultant shall prepare a Bridge Development Report (BDR). The BDR shall be submitted as part of the Phase I Roadway Submittal, General Requirements.

General Requirements

10.1 Bridge Geometry

Bridge geometry will include movable span clearance diagrams and bridge tenders visibility study.

10.2 Ship Impact Data Collection

Vessel data is to be obtained from the FDOT pass point data.

10.3 Ship Impact Criteria

Conduct vessel impact analysis of proposed bascule and approach piers and existing bascule piers to determine ship impact design criteria.

Superstructure Alternatives

10.4 Short-Span Concrete

10.5 Medium-Span Concrete

10.6 Long Span Concrete (Not applicable for this project)

10.7 Structural Steel (Not applicable for this project)

Foundation and Substructure Alternatives

10.8 Pier/Bent Types

Approach substructures will consist of pile bents or reinforced concrete piers. The bascule piers will be of reinforced concrete.

10.9 Shallow Foundations

No shallow foundation types are anticipated for the bridge.

10.10 Deep Foundations

Evaluate pile and drilled shaft foundations for end bents (or abutments), intermediate piers, rest pier and bascule pier.

Movable Span

10.11 Data Collection and Design Criteria

Perform field investigations of the existing bridge to determine the presence of potentially hazardous materials in the structural steel coating system, control house caulking, control house flooring, and electrical equipment insulation. Provide a hazardous materials report with recommendations on handling and disposal of hazardous materials.

10.12 Movable Span Geometrics and Clearances

Design a double-leaf trunnion bascule that provides 125 feet of horizontal clearance and 21 feet of vertical clearance in the closed position.

10.13 Deck System Evaluation

Evaluate closed and open deck systems on the movable span.

10.14 Framing Plan Development

10.15 Main Girder Preliminary Design

10.16 Conceptual Span Balance/Counterweight

10.17 Support System Development

10.18 Drive Power Calculations

10.19 Drive System Development

10.20 Power and Control Development

10.21 Conceptual Pier Design

10.22 Foundation Analysis (FL PIER)

10.23 Tender Visibility Study

Other BDR Issues

10.24 Aesthetics

Prepare bridge aesthetic guidelines for review by the COUNTY and presentation at public workshops. It is anticipated that aesthetic studies will be limited to bridge finishes and colors, the pedestrian railings, MSE walls and the bridge tender's control house. No special aesthetic treatments of approach structures or piers is anticipated.

10.25 TCP/Staged Construction Requirements

10.26 Constructability Requirements

10.27 Abutment Slope/Wall Evaluation (Not applicable for this project)

10.28 Quantity and Cost Estimates

10.29 Quantity and Cost Estimates - Movable Span

10.30 Wall Type Justification (Not applicable for this project)

Report Preparation

10.31 Exhibits (Not applicable for this project)

10.32 Exhibits - Movable Span (Not applicable for this project)

10.33 Report Preparation

10.34 Report Preparation - Movable Span

10.35 BDR Submittal Package

Submit 35 percent bridge plans with the BDR.

Preliminary Plans

10.36 General Notes Sheets

10.37 Plan and Elevation Sheets

10.38 Construction Staging

10.39 Superstructure Section Sheets

10.40 Substructure Section Sheets

10.41 Movable Span - General Notes Sheets

10.42 Movable Span - Plan and Elevation Sheets

10.43 Movable Span - Clearance Diagram

10.44 Movable Span - Bascule Pier Layouts

10.45 Movable Span - Bascule Leaf Section

10.46 Movable Span - Bascule Leaf Framing Plan

10.47 Movable Span - Machinery Layouts

10.48 Movable Span - Control Logic Diagram

11 STRUCTURES - TEMPORARY BRIDGE

(Not applicable to this project)

12 STRUCTURES - SHORT SPAN CONCRETE BRIDGE

The CONSULTANT shall prepare plans for Short Span Concrete Bridge(s) at the location(s) specified in Section 2.5.

General Layout Design and Plans

12.1 Overall Bridge Final Geometry

12.2 Expansion/Contraction Analysis

12.3 General Plan and Elevation

12.4 Construction Staging

12.5 Approach Slab Plan and Details

12.6 Miscellaneous Details

End Bent Design and Plans

12.7 End Bent Geometry

12.8 End Bent Structural Design

12.9 End Bent Plan and Elevation

12.10 End Bent Details

Intermediate End Bent Design and Plans

12.11 Bent Geometry

12.12 Bent Stability Analysis

12.13 Bent Structural Design

12.14 Bent Plan and Elevation

12.15 Bent Details

Miscellaneous Substructure Design and Plans

12.16 Foundation Layout

Superstructure Design and Plans

12.17 Finish Grade Elevation Calculation

12.18 Finish Grade Elevations

Cast-In-Place Slab Bridges

Prestressed Slab Unit Bridges

12.22 Prestressed Slab Unit Design

12.23 Prestressed Slab Unit Layout

12.24 Prestressed Slab Unit Details and Schedule

12.25 Deck Topping Reinforcing Layout

12.26 Superstructure Sections and Details

Reinforcing Bar Lists

12.27 Reinforcing Bar List

Load Rating

12.28 Load Ratings

Perform load rating calculations and prepare a load rating report following FDOT guidelines.

13 STRUCTURES - MEDIUM SPAN CONCRETE BRIDGE and tasks 13.1 – 13. 53 are not applicable for this project.

14 STRUCTURES - STRUCTURAL STEEL BRIDGE and tasks 14.1 – 14. 61 are not applicable for this project.

15 STRUCTURES - SEGMENTAL CONCRETE BRIDGE and tasks 15.1 - 15.78 are not applicable for this project.

16 STRUCTURES - MOVABLE SPAN

The CONSULTANT shall prepare plans for a Movable Span at the location(s) specified in Section 2.5.

Final Design Bascule Pier

16.1 Pier Deck

16.2 Leaf/Pier Clearance Diagrams

16.3 Load Show Columns

16.4 Trunnion Columns

16.5 Foundations

16.6 Footing

16.7 Seal

16.8 Back Wall

16.9 Bascule Pier Deck Elevations

Bascule Pier Dimensions - Detailing

16.10 Pier Plan Views

16.11 Pier Elevations Views

16.12 Pier Sections

Bascule Pier Reinforcing Details

16.13 Pier Reinforcing

Bascule Pier Miscellaneous Details

16.14 Pier Barrier Details

16.15 Stair Details

16.16 Handrail Details

16.17 Ladder and Hatch Details

16.18 Pier Equipment

16.19 Bascule Pier Notes and Summary of Quantities

16.20 Miscellaneous Details

Bascule Leaf Design

16.21 Deck Design

Bascule deck will consist of an open steel grid deck with lightweight concrete fill over the structural supports, machinery, and in wheel paths.

16.22 Sidewalk Design

16.23 Stringer Design

16.24 Typical Floorbeam Design

16.25 End Floorbeam Design

16.26 Deep Floorbeam Design

16.27 Sidewalk Bracket Design

16.28 Roadway Bracket Design (Not applicable for this project)

16.29 Main Girder Influence Lines

16.30 Main Girder Design

16.31 Trunnion Girder Design

16.32 Main Girder Camber Data

16.33 Leaf Lateral Bracing Design

16.34 Counterweight Design

16.35 Live Load Shoe Design

16.36 Barrier Design

16.37 Deck Elevations

16.38 Balance Calculations

Bascule Leaf Detailing

16.39	**Bascule GP&E**
16.40	**Bascule Leaf Notes**
16.41	**Framing Plan**
16.42	**Flooring Plan and Details**
16.43	**Typical Section and Finish Grade Elevations**
16.44	**Girder Elevation**
16.45	**Girder Details**
16.46	**Camber Layout**
16.47	**Floor Beams**
16.48	**Counterweight Girder/Box**
16.49	**Trunnion Girder**
16.50	**Cylinder Girder**
16.51	**Lateral Bracing Details**
16.52	**Counterweight Bracing Details**
16.53	**Joint Details**
16.54	**Traffic Barrier Details**
16.55	**Pedestrian Rail and Support Details**
16.56	**Curb and Sidewalk Details**
16.57	**Barrier and Sidewalk Bracket Details**
16.58	**Counterweight Details**
16.59	**Stress Table or Influence Lines**

Mechanical Design

16.60 Final Power Requirements

16.61 Trunnion Assembly

Trunnion assemblies will be of the simple trunnion design (i.e. a bearing on either side of each bascule girder).

16.62 Span Locks

16.63 Sump Pumps

16.64 Drive Shafts, Couplings, Keys, Bearings and Supports

16.65 Rack & Pinion, Bearings and Supports

16.66 Drive Train

Drive machinery will consist of a electric motor driven mechanical drive train with a central differential reducer and secondary reducers and a rack and pinion.

16.67 Motor Brakes & Machinery Brakes

Hydraulic Drive Design

16.68 Hydraulic Drive (Not applicable to this project)

Machinery Detailing

16.69 Machinery Layout

16.70 Machinery Elevation

16.71 Machinery Section

16.72 Trunnion Assembly

16.73 Drive Details

16.74 Span Locks

Electrical Design

16.75 Load Analysis

16.76 Power Distribution

16.77 Drive Equipment

Bascule bridge drive will be a solid state variable speed AC drive. Two redundant drives will be designed for each bascule leaf.

16.78 Bridge Controls

Relay logic control system without a PLC.

16.79 Grounding

16.80 Lightning and Surge Suppression

16.81 Pier Lighting

Electrical Detailing

16.82 Electrical Plan and Elevation

16.83 Electrical Symbols and Abbreviations

16.84 Single/Three Line Diagram

16.85 Panel Board and Light Fixture Schedules

16.86 Wire and Conduit Schedules and Diagrams

16.87 Control Desk/Panel Layout

16.88 Control Schematics

16.89 PLC Logic (NA)

16.90 Communication System

16.91 Navigation Lighting Details

16.92 Pedestrian Gate, Traffic Gate, and Barrier Details

16.93 Submarine Cable

16.94 Miscellaneous Details

Control House

16.95 Architectural Design

16.96 Architectural Details

16.97 Structural Design

16.98 Structural Details

16.99 HVAC/Plumbing Design

16.100 HVAC/Plumbing/Electrical Cables

Reinforcing Bar Lists

16.101 Reinforcing Bar List

Miscellaneous Tasks

16.102 Load Ratings

Perform load rating calculations and prepare a load rating report following FDOT guidelines.

17 STRUCTURES - RETAINING WALL

The CONSULTANT shall prepare plans for Retaining Wall(s) as specified in Section 2.5.

General Requirements

17.1 Key Sheet

17.2 Horizontal Wall Geometry

Permanent Proprietary Walls

17.3 Vertical Wall Geometry

17.4 Semi-Standard Drawings

17.5 Wall Plan and Elevations (Control Drawings)

17.6 Details

<u>Temporary Proprietary Walls</u> and tasks 17.7 – 17.10 are not applicable for this project.

<u>Cast-In-Place Retaining Walls</u> and tasks 17.11 – 17.16 are not applicable for this project.

Other Retaining Walls and tasks 17.17 - 17.21 are not applicable for this project.

17.17 Design

17.18 Vertical Wall Geometry

17.19 General Notes, Tables and Miscellaneous Details

17.20 Wall Plan and Elevations

17.21 Details

18 STRUCTURES - MISCELLANEOUS

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

<u>Concrete Box Culverts</u> and tasks 18.1 – 18.2 are not applicable for this project.

<u>Strain Poles</u> and tasks 18.3 – 18.4 are not applicable for this project.

Mast Arms

18.5 Mast Arms

Design and detail mast arm structures for the movable bridge signals.

<u>Overhead/Cantilever Sign Structure</u> and tasks 18.5 – 18.10 are not applicable for this project.

18.6 Cantilever Sign Structures (Not applicable for this project)

18.7 Overhead Span Sign Structures (Not applicable for this project)

18.8 Special (Long Span) Overhead Sign Structures (Not applicable for this project)

18.9 Monotube Overhead Sign Structure (Not applicable for this project)

18.10 Bridge Mounted Signs (Attached to Superstructure) (Not applicable for this project)

<u>High Mast Light Foundations</u> and task 18.11 is not applicable for this project.

<u>Sound Barrier Walls (Ground Mount)</u> and tasks 18.12 – 18.18 are not applicable for this project.

<u>Sound Barrier Walls (Ground Mount)</u> and tasks 18.12 – 18.18 are not applicable for this project.

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.

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. Perform queue analysis.

19.2 No Passing Zone Study (Not applicable for this project)

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 (Not applicable for this project)

19.5 Sign Panel Design Analysis (Not applicable for this project)

19.6 Sign Lighting/Electrical Calculations (Not applicable for this project)

19.7 Quantities

19.8 Computation Book

19.9 Cost Estimates

19.10 Technical Special Provisions

19.11 Other Signing and Pavement Marking Analysis

19.12 Field Reviews

19.13 Technical Meetings

19.14 Quality Assurance/Quality Control (NA)

19.15 Independent Peer Review (Not applicable for this project)

19.16 Supervision (NA)

19.17 Coordination (NA)

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

20.3 Tabulation of Quantities

20.4 General Notes/Pay Item Notes

20.5 Project Layout

20.6 Plan Sheet

20.7 Typical Details

20.8 Guide Sign Work Sheet(s)

20.9 Traffic Monitoring Site (Not applicable for this project)

20.10 Cross Sections (Not applicable for this project)

20.11 Special Service Point Details (Not applicable for this project)

20.12 Special Details (Not applicable for this project)

20.13 Interim Standards

20.14 Quality Assurance/Quality Control

20.15 Supervision

21 SIGNALIZATION ANALYSIS and tasks 21.1 – 21.18 are not applicable for this project.

22 SIGNALIZATION PLANS and tasks 22.1 – 22.18 are not applicable for this project.

23 LIGHTING ANALYSIS

The CONSULTANT shall analyze and document Lighting Tasks in accordance with all applicable manuals, guidelines, standards, handbooks, procedures, and current design memorandums.

23.2 Lighting Design Analysis Report

The CONSULTANT shall prepare a Lighting Design Analysis Report. The report shall be submitted under a separate cover prior to the 65% plans submittal.

The report shall include the Lighting Design Criteria that will be used, as well as the type of proposed equipment to be used. Illuminance level calculations shall be performed using the AGI 32 software.

23.3 Aeronautical Evaluation (Not applicable for this project)

23.4 Voltage Drop Calculations

The CONSULTANT shall submit voltage drop calculations showing the equation or equations used along with the number of luminaries per circuit, the length of each circuit, the size conductor or conductors used and their ohm resistance values. The voltage drop incurred on each circuit (total volts and percentage of drop) shall be calculated, and all work

necessary to calculate the voltage drop values for each circuit should be presented in such a manner as to be duplicated by the COUNTY.

Load analysis calculations shall be submitted for each branch circuit breaker and main breaker.

23.5 FDEP Coordination and Report

23.6 Reference and Master Design Files

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

23.7 Temporary Lighting

Not applicable to this project.

23.9 Quantities

23.10 Cost Estimate

23.11 Technical Special Provisions

23.12 Other Lighting Analysis (Not applicable for this project)

23.13 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 Lighting Equipment
Load Center, Capabilities and Condition/Age
Condition of Lighting Structure(s)

23.14 Technical Meetings

23.15 Quality Assurance/Quality Control (NA)

23.16 Independent Peer Review (Not applicable for this project)

23.17 Supervision (NA)

23.18 Coordination (NA)

24 LIGHTING PLANS

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

24.1 Key Sheet

24.2 Summary of Pay Item Sheet Including Trns*port Input

24.3 Tabulation of Quantities

24.4 General Notes/Pay Item Notes

24.5 Pole Data and Legend & Criteria

24.6 Service Point Details

24.7 Project Layout

24.8 Plan Sheet

24.9 Special Details

24.10 Temporary Lighting Data and Details

24.11 Traffic Control Plan Sheets (Not applicable for this project)

24.12 Interim Standards

24.13 Quality Assurance/Quality Control (NA)

24.14 Supervision (NA)

25 LANDSCAPE ARCHITECTURE ANALYSIS and tasks 25.1 – 25.14 are not applicable for this project.

26 LANDSCAPE ARCHITECTURE PLANS and tasks 26.1 – 26.15 are not applicable for this project.

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 COUNTY. Field books submitted to the COUNTY 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 COUNTY 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 COUNTY may instead require that these points be surveyed by true line, traverse or parallel offset.

27.1 Horizontal Project Network Control (HPNC)

Establish or recover HPNC, for the purpose of establishing horizontal control on the Florida State Plane Coordinate System; may include primary or secondary control points. Includes analysis and processing of all field collected data.

27.2 Vertical Project Network Control (VPNC)

Establish VPNC, for the purpose of establishing vertical control on NAVD 1988 datum; may include primary or secondary vertical control points. Includes analysis and processing of all field collected data. Set Bench marks at 1000 foot intervals.

27.3 Alignment and/or Existing Right of Way Lines

Establish, recover or re-establish project alignment. Also includes analysis and processing of all field collected data, existing maps, and/or reports for identifying mainline, ramp,

offset, or secondary alignments. Depict alignment and/or existing R/W lines (in required format) per COUNTY R/W Maps, platted or dedicated rights of way.

27.4 Aerial Targets

Not applicable for this project.

27.5 Reference Points

Reference HPNC points, project alignment, and vertical control points as required.

27.6 Topography (2D)

Not applicable for this project.

27.7 Digital Terrain Model (DTM)

Locate all above ground features and improvements for the limits of the project by collecting the required data for the purpose of creating a DTM with sufficient density. Shoot all break lines, high and low points. Effort includes field edits, analysis and processing of all field collected data, existing maps, and/or reports.

27.8 Roadway Cross Sections/Profiles

Not applicable for this project.

27.9 Side Street Surveys

Included in 27.7.

27.10 Underground Utilities

Above ground visible utility locations are included in 27.7.

27.11 Outfall Survey

Not applicable for this project.

27.12 Drainage Survey

Locate underground data (XYZ, pipe size, type, condition and flow line) that relates to above ground data. Includes field edits, analysis and processing of all field collected data, existing maps, and/or reports.

27.13 Bridge Survey

Locate required above ground features and improvements for the limits of the bridge. Includes field edits, analysis and processing of all field collected data, existing maps, and/or reports. Show typical information in a field book.

27.14 Channel Survey

Locate all topographic features and improvements for the limits of the project by collecting the required data for the purpose of a D.E.M. Survey with sufficient density of shots. Shoot all break lines, high and low points. Includes field edits, analysis and processing of all field collected data, maps, and/or reports.

27.15 Pond Site Survey (Not applicable for this project)

27.16 Mitigation Survey (Not applicable for this project)

27.17 Jurisdiction Line Survey

Perform field location (2-dimensional) of jurisdiction limits as defined by respective authorities, also includes field edits, analysis and processing of all field collected data, preparation of reports.

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.

27.19 Sectional/Grant Survey (Not applicable for this project)

27.20 Subdivision Location (Not applicable for this project)

27.21 Maintained R/W (Not applicable for this project)

27.22 Boundary Survey (Not applicable for this project)

27.23 Water Boundary Survey (Not applicable for this project)

27.24 Right of Way Staking

Perform field staking and calculations of existing/proposed R/W lines for on-site review purposes.

27.25 Right of Way Monumentation

Not applicable for this project.

27.26 Line Cutting

Not applicable for this project.

27.27 Work Zone Safety

Provide work zone as required by FDOT standards.

27.28 Miscellaneous Surveys

Not applicable for this project.

27.29 Supplemental Surveys

Not applicable for this project.

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 Department.

27.33 Quality Control/Quality Assurance (NA)

27.34 Supervision (NA)

27.35 Coordination (NA)

28 PHOTOGRAMMETRY and tasks 28.1 through 28.25 are not applicable to this project.

29 MAPPING and tasks 29.1 – 29.35 are not applicable for this project.

30 GEOTECHNICAL

The CONSULTANT shall, for each project, be responsible for a complete geotechnical investigation. All work performed by the CONSULTANT shall be in accordance with FDOT standards, or as otherwise directed by the COUNTY. The COUNTY will make interpretations and changes regarding geotechnical standards, policies and procedures and provide guidance to the CONSULTANT.

Prior to beginning each phase of investigation and after the Notice to Proceed is given, the CONSULTANT shall submit investigation plan for approval and meet with the COUNTY's Geotechnical Engineer or representative to review the project scope and COUNTY requirements. The investigation plan shall include, but not be limited to, the proposed boring locations and depths, and all existing geotechnical information from available sources to generally describe the surface and subsurface conditions of the project site. Additional meetings may be required to plan any additional field efforts, review plans, resolve plans/report comments, resolve responses to comments, and/or any other meetings necessary to facilitate the project.

The CONSULTANT shall notify the COUNTY in adequate time to schedule a representative to attend all related meetings and field activities.

30.1 Document Collection and Review

CONSULTANT will review printed literature including topographic maps, county agricultural maps, aerial photography (including historic photos), ground water resources, geology bulletins, potentiometric maps, pile driving records, historic construction records and other geotechnical related resources. Prior to field reconnaissance, CONSULTANT shall review U.S.G.S., S.C.S. and potentiometric maps, and identify areas with problematic soil and groundwater conditions.

Roadway

The CONSULTANT shall be responsible for coordination of all geotechnical related fieldwork activities. The CONSULTANT shall retain all samples until acceptance of Final plans. Rock cores shall be retained as directed in writing by the County's Project Manager.

Obtain pavement cores as directed in writing by the County's Project Manager.

If required by the County's Project Manager, a preliminary roadway exploration shall be performed before the Phase I plans submittal. The preliminary roadway exploration will be performed and results provided to the Engineer of Record to assist in setting roadway grades and locating potential problem areas. The preliminary roadway exploration shall be performed as directed in writing by the County's Project Manager.

CONSULTANT shall perform specialized field-testing as required by project needs and as directed in writing by the County's Project Manager.

All laboratory testing and classification will be performed in accordance with applicable FDOT standards, ASTM Standards or AASHTO Standards, unless otherwise specified in the Contract Documents.

30.2 Detailed Boring Location Plan (Not applicable for this project)

30.3 Stake Borings/Utility Clearance

Stake borings and obtain utility clearance.

30.4 MOT Plans for Field Investigation

Coordinate and develop Maintenance of Traffic (MOT) plan. All work zone traffic control will be performed in accordance with the FDOT's Roadway and Traffic Design Standards Index 600 series.

30.5 Drilling Access Permits

Obtain all State, County, City, and Water Management District permits for performing geotechnical borings, as needed.

30.6 Property Clearances

Notify property tenants in person of drilling and field activities, if applicable. Written notification to property owners/tenants is the responsibility of the COUNTY's Project Manager.

30.7 Groundwater Monitoring (Not applicable for this project)

30.8 LBR Sampling

Not applicable to this project.

30.9 Coordination of Field Work

Coordinate all field work required to provide geotechnical data for the project.

30.10 Soil and Rock Classification - Roadway

Refine soil profiles recorded in the field, based on results of laboratory testing.

30.11 Design LBR

Not applicable for this project.

30.12 Laboratory Data

Tabulate laboratory test results for inclusion in the geotechnical report, the report of tests sheet (Roadway Soil Survey Sheet), and for any necessary calculations and analyses.

30.13 Seasonal High Water Table

Review the encountered ground water levels and estimate seasonal high ground water levels. Estimate seasonal low ground water levels, if requested.

30.14 Parameters for Water Retention Areas (Not applicable for this project)

30.15 Limits of Unsuitable Material

Delineate limits of unsuitable material(s) in both horizontal and vertical directions. Assist the Engineer of Record with detailing these limits on the cross-sections. If requested, prepare a plan view of the limits of unsuitable material.

30.16 ASCII Files for Cross-Sections

Create ASCII files of boring data for cross-sections.

30.17 Embankment Settlement and Stability (Not applicable for this project)

30.18 Stormwater Volume Recovery and/or Background Seepage Analysis (Not applicable for this project)

30.19 Geotechnical Recommendations

Provide geotechnical recommendations regarding the proposed roadway construction project including the following: description of the site/alignment, design recommendations and discussion of any special considerations (i.e. removal of unsuitable material,

consolidation of weak soils, estimated settlement time/amount, groundwater control, high groundwater conditions relative to pavement base, etc.) Evaluate and recommend types of geosynthetics and properties for various applications, as required.

30.20 Preliminary Roadway Report and Pavement Evaluation Report

If a preliminary roadway investigation is performed, a preliminary roadway report shall be submitted before the Phase I plans submittal. The purpose of the preliminary roadway report will be to assist in setting road grades and locating potential problems.

Copies of U.S.G.S. and S.C.S. maps with project limits shown.
A report of tests sheet that summarizes the laboratory test results, the soil stratification (i.e. soils grouped into layers of similar materials) and construction recommendations relative to Standard Indices 500 and 505.
Results of all tasks discussed in the previous section (Data Interpretation and Analysis).
An appendix that contains stratified soil boring profiles, laboratory test data sheets, sample embankment settlement and stability calculations, design LBR calculation/graphs, and other pertinent calculations.
The CONSULTANT will respond in writing to any changes and/or comments from the COUNTY and submit any responses and revised reports.

If a pavement evaluation is performed, the evaluation and report submittal shall be in accordance with Section 3.4 of the Materials Manual: Pavement Coring and Evaluation.

30.21 Final Report

The Final Roadway Report shall include the following:

Copies of U.S.G.S. and S.C.S. maps with project limits shown.
A report of tests sheet that summarizes the laboratory test results, the soil stratification (i.e. soils grouped into layers of similar materials) and construction recommendations relative to Standard Indices 500 and 505.
Results of all tasks discussed in the previous section (Data Interpretation and Analysis).
An appendix that contains stratified soil boring profiles, laboratory test data sheets, sample embankment settlement and stability calculations, design LBR calculation/graphs, and other pertinent calculations.
The CONSULTANT will respond in writing to any changes and/or comments from the COUNTY and submit any responses and revised reports.

30.22 Auger Boring Drafting

Draft auger borings as directed by the COUNTY.

30.23 SPT Boring Drafting

Draft SPT borings as directed by the COUNTY.

Structures

The CONSULTANT shall be responsible for coordination of all geotechnical related fieldwork activities. The CONSULTANT shall retain all samples until acceptance of Phase IV plans. Rock cores shall be retained as directed in writing by the County's Project Manager.

CONSULTANT shall perform specialized field-testing as required by needs of project and as directed in writing by the County's Project Manager.

All laboratory testing and classification will be performed in accordance with applicable FDOT standards, ASTM Standards or AASHTO Standards, unless otherwise specified in the Contract Documents.

The staff hour tasks for high embankment fills and structural foundations for bridges, box culverts, walls, high-mast lighting, overhead signs, mast arm signals, strain poles, buildings, and other structures include the following:

30.24 Detailed Boring Location Plan

Develop a detailed boring location plan. Meet with the COUNTY's Project Manager for boring plan approval. If the drilling program expects to encounter artesian conditions, the CONSULTANT shall submit a methodology(s) for plugging the borehole to the COUNTY for approval prior to commencing with the boring program.

30.25 Stake Borings/Utility Clearance

Stake borings and obtain utility clearance.

30.26 MOT Plans for Field Investigation

Coordinate and develop MOT plan. All work zone traffic control will be performed in accordance with the FDOT's Roadway and Traffic Design Standards Index 600 series.

30.27 Drilling Access Permits

Obtain all State, County, City, and Water Management District permits for performing geotechnical borings, as needed.

30.28 Property Clearances

Notify property tenants in person of drilling and field activities, if applicable. Written notification to property owners/tenants is the responsibility of the COUNTY's Project Manager.

30.29 Collection of Corrosion Samples

Collect corrosion samples for determination of environmental classifications.

30.30 Coordination of Field Work

Coordinate all field work required to provide geotechnical data for the project.

30.31 Soil and Rock Classification - Structures

Soil profiles recorded in the field should be refined based on the results of laboratory testing.

30.32 Tabulation of Laboratory Data

Laboratory test results should be tabulated for inclusion in the geotechnical report and for the necessary calculations and analyses.

30.33 Design Groundwater Level for Structures

Review encountered groundwater levels, estimate seasonal high groundwater levels, and evaluate groundwater levels for structure design.

30.34 Selection of Foundation Alternatives (BDR)

Evaluation and selection of foundation alternative, including the following:

Prestressed concrete piling - various sizes
Drilled Shafts

Foundation analyses shall be performed using approved FDOT methods. Assist in selection of the most economical, feasible foundation alternative.

30.35 Detailed Analysis of Selected Foundation Alternate(s)

Detailed analysis and basis for the selected foundation alternative. Foundation analyses shall be performed using approved FDOT methods and shall include:

For pile and drilled shaft foundations, provide graphs of ultimate axial soil resistance versus tip elevations. Calculate scour resistance and/or downdrag (negative skin friction), if applicable.
CONSULTANT shall assist the Engineer of Record in preparing the Pile Data Table (including test pile lengths, scour resistance, downdrag, minimum tip elevation, etc.)
Provide the design soil profile(s), which include the soil model/type of each layer and all soil-engineering properties required for the Engineer of Record to run the FBPier computer program. Review lateral analysis of selected foundation for geotechnical compatibility.
Shallow foundation bearing capacity (including soil bearing capacity, minimum footing width, and minimum embedment depth).
Estimated maximum driving resistance anticipated for pile foundations.
Provide settlement analysis.

30.36 Bridge Construction and Testing Recommendations

Provide construction and testing recommendations including potential constructability problems.

30.37 Lateral Load Analysis (Optional)

Perform lateral load analyses as required for vessel collision design.

30.38 Walls

Provide the design soil profile(s), which include the soil model/type of each layer and all soil engineering properties required by the Engineer of Record for conventional wall analyses and recommendations. Review wall design for geotechnical compatibility and constructability.

Evaluate the external stability of conventional retaining walls and retained earth wall systems. For retained earth wall systems, calculate and provide minimum soil reinforcement lengths versus wall heights, and soil parameters assumed in analysis. Estimate differential and total (long term and short term) settlements.

Provide wall construction recommendations.

30.39 Sheet Pile Wall Analysis (Optional)

Analyze sheet pile walls as directed by the COUNTY.

30.40 Soil Parameters for Signs, Signals, High Mast Lights, and Strain Poles and Geotechnical Recommendations (Not applicable for this project)

30.41 Box Culvert Analysis (Not applicable for this project)

30.42 Preliminary Report - BDR

The preliminary structures report shall contain the following discussions as appropriate for the assigned project:

Copies of U.S.G.S. and S.C.S. maps with project limits shown.
Summary of structure background data, SCS, USGS, geologic and potentiometric data.
The results of all tasks discussed in the previous section (Data Interpretation and Analysis).
Recommendations for foundation installation, or other site preparation soils-related construction considerations with plan sheets as necessary.
Any special provisions required for construction that are not addressed in the FDOT's Standard specification.
An Appendix which includes SPT and CPT boring/sounding profiles, data from any specialized field tests, engineering analysis, notes/sample calculations, sheets showing ultimate bearing capacity curves versus elevation for piles and drilled shafts, a complete FHWA check list, pile driving records (if available), and any other pertinent information.

30.43 Final Report - Bridge and Associated Walls

The final structures report shall include the following:

Copies of U.S.G.S. and S.C.S. maps with project limits shown.
Summary of structure background data, SCS, USGS, geologic and potentiometric data.
The results of all tasks discussed in the previous section (Data Interpretation and Analysis).
Recommendations for foundation installation, or other site preparation soils-related construction considerations with plan sheets as necessary.
Any special provisions required for construction that are not addressed in the FDOT's Standard specification.
An Appendix which includes SPT and CPT boring/sounding profiles, data from any specialized field tests, engineering analysis, notes/sample calculations, sheets showing ultimate bearing capacity curves versus elevation for piles and drilled shafts, a complete FHWA check list, pile driving records (if available), and any other

pertinent information.

30.44 Final Reports - Signs, Signals, Box Culvert, Walls, and High Mast Lights

The final reports shall include the following:

Copies of U.S.G.S. and S.C.S. maps with project limits shown.
Summary of structure background data, SCS, USGS, geologic and potentiometric data.
The results of all tasks discussed in the previous section (Data Interpretation and Analysis).
Recommendations for foundation installation, or other site preparation soils-related construction considerations with plan sheets as necessary.
Any special provisions required for construction that are not addressed in the FDOT's Standard specification.
An Appendix which includes SPT and CPT boring/sounding profiles, data from any specialized field tests, engineering analysis, notes/sample calculations, sheets showing ultimate bearing capacity curves versus elevation for piles and drilled shafts, a complete FHWA check list, pile driving records (if available), and any other pertinent information.

Final reports will incorporate comments from the COUNTY and contain any additional field or laboratory test results, recommended foundation alternatives along with design parameters and special provisions for the contract plans. These reports will be submitted to the County's Project Manager for review prior to project completion. After review by the County's Project Manager, the reports will be submitted to the County's Project Manager in final form and will include the following:

All original plan sheets (11" x 17")
One set of all plan and specification documents, in electronic format, according to COUNTY requirements
Two sets of record prints
Six sets of any special provisions
All reference and support documentation used in preparation of contract plans package

Additional final reports (up to four), aside from stated above, may be needed and requested for the COUNTY's Project Manager and other disciplines.

The final reports, special provisions, as well as record prints, will be signed and sealed by a Professional Engineer registered in the State of Florida.

Draft the detailed boring/sounding standard sheet, including environmental classification, results of laboratory testing, and specialized construction requirements, for inclusion in final plans.

30.45 Drafting

Prepare a complete set of drawings to include all SPT borings, auger borings and other pertinent soils information in the plans. Include these drawings in the Final Geotechnical Report. Draft borings, location map, S.C.S. map and U.S.D.A. map as directed by the COUNTY. Soil symbols must be consistent with those presented in the latest Florida Department of Transportation Soils and Foundations Handbook.

30.46 Other Geotechnical

Define

30.47 Technical Special Provisions

30.48 Field Reviews

Identify and note surface soil and rock conditions, surface water conditions and locations, and preliminary utility conflicts. Observe and note nearby structures and foundation types.

30.49 Technical Meetings

30.50 Quality Assurance/Quality Control (NA)

30.51 Supervision (NA)

30.52 Coordination (NA)

30.53 Optional Preliminary Contamination Assessment

When required, all work shall be performed in accordance with current Florida Department of Environmental Regulation (DER) and Federal OSHA and EPA standards. The following work shall be included, but not limited to:

A minimum of four borings will be required per site.
Soil gas analysis will be required by use of a flame ionization detector; e.g. Organic Vapor Analyzer (OVA).
Installation of monitoring wells may be required.
Water sampling and laboratory analysis may be required. The State of Florida Department of Health shall certify the laboratory performing the analysis.

Four copies of the draft PCA report will be required for review and comment by the COUNTY. After comments have been addressed, six signed and sealed copies of the final PCA report shall be submitted to the COUNTY. Copies of all documents will be additionally transmitted to the COUNTY in electronic format in accordance with the COUNTY's current standards.

31 ARCHITECTURE DEVELOPMENT and tasks 31.1 – 31.55 are not applicable for this project.

32 NOISE IMPACT DESIGN ASSESSMENT (Not applicable for this project)

33 PROJECT REQUIREMENTS (Not applicable for this project)

34 INVOICING LIMITS

Payment for the work accomplished will be in accordance with Method of Compensation of this contract. Invoices shall be submitted to the COUNTY, in a format prescribed by the COUNTY. The COUNTY 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 COUNTY.

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 COUNTY.

35 OPTIONAL SERIVICES

The COUNTY may request the CONSULTANT to provide optional services including those listed below.

Revising Plans for Federal Funds

Should the COUNTY obtain Federal Funding for construction of the project, the CONSULTANT may be tasked with making revisions to the design, plans, and specifications to incorporate Federal requirements.

Post Design Services

These services are intended to address changed conditions that occur following acceptance of final plans. The CONSULTANT will provide to the COUNTY additional services as required to satisfactorily complete construction. These services are intended to deal with changed conditions or services not covered and is not intended for instances of CONSULTANT errors and/or omissions.

Construction Assistance

The CONSULTANT will provide to the COUNTY, qualified representation during the construction phase to deal with issues concerning the intent and interpretation of the construction contract plans and documents prepared in the work. Should changed conditions be encountered in the field and when requested by the COUNTY, the CONSULTANT will respond in a timely manner with suitable engineering solutions which take into account the changed conditions.

On site appearance of the CONSULTANT will be made during construction at the request of the COUNTY or its designated representatives.

From time to time during construction, the CONSULTANT may be requested by the COUNTY or its designated representative to review contractor-proposed field changes or to respond with a recommended solution to remedy particular field situations not covered by the plans and specifications.

Expert Witness Testimony

The CONSULTANT will serve as an expert witness in legal proceedings if required by the COUNTY. The fee(s) for these services will be established if, and when, said services are required.

Review of Shop Drawings

Shop Drawings will be performed in accordance with the FDOT Structures Design Guidelines. The CONSULTANT will review Contractor submittals including shop drawings, requests for information, and non-conformance reports.

Construction Engineering Inspection

When requested by the COUNTY, the CONSULTANT will provide construction contract administration or construction engineering inspection services.

EXHIBIT "B"

ESTIMATE OF WORK EFFORT AND COST - PRIME CONSULTANT

Name of Project: **Ocean Avenue Bascule Bridge Replacement**
County: Palm Beach
FPN: NA
FAP No.: NA

Consultant Name: **E.C. Driver & Associates, Inc.**
Consultant No.: NA
Date: 11/16/07
Estimator: Jim Phillips, P.E., Luis Costa, P.E.

Staff Classification	Total Staff Hours From "SH Summary -	Project Manager	Senior Engineer	Project Engineer	Engineer	Engineer Intern	Environmental Specialist	Senior Planner	Planner	Senior CADD Tech.	NA	Salary Cost By Activity	Average Rate Per Task
		$73.33	$50.72	$43.17	$32.44	$27.24	$43.00	$43.00	$18.00	$32.32	$0.00		
3. Project General Tasks	400	40	60	80	80	80	20	20	20	0	0	$16,284.40	$40.71
4. Roadway Analysis	844	84	127	169	211	211	42	0	0	0	0	$34,295.37	$40.63
5. Roadway Plans	418	42	63	84	105	105	19	0	0	0	0	$16,984.90	$40.63
6. Drainage Analysis	992	99	149	198	248	248	50	0	0	0	0	$40,315.25	$40.64
7. Utilities	120	12	18	24	30	30	6	0	0	0	0	$4,877.40	$40.65
8. Environmental Permits	144	14	22	29	29	29	7	7	7	0	0	$5,853.11	$40.65
9. Structures - Misc. Tasks, Dwgs, Non-Te	518	26	104	130	104	104	0	0	0	50	0	$20,616.28	$39.80
10. Structures - BDR	1,720	138	396	378	344	206	0	52	34	172	0	$71,700.76	$41.69
13. Structures - Medium Span Concrete	1,224	61	245	306	245	220	0	0	0	147	0	$48,801.19	NA
16. Structures - Movable Span	7,923	634	1,743	1,981	1,426	1,347	0	0	0	792	0	$328,965.11	$41.52
17. Structures - Retaining Walls	192	10	38	48	38	35	0	0	0	23	0	$7,662.30	$39.91
18. Structures - Miscellaneous	180	9	36	45	36	32	0	0	0	22	0	$7,179.10	$39.88
19. Signing & Marking Analysis	120	12	18	24	30	36	0	0	0	0	0	$4,782.84	$39.86
20. Signing & Marking Plans	0	0	0	0	0	0	0	0	0	0	0	$0.00	#DIV/0!
23. Lighting Analysis	378	38	57	76	95	112	0	0	0	0	0	$15,091.18	$39.92
24. Lighting Plans	124	12	19	25	31	37	0	0	0	0	0	$4,936.41	$39.81
Total Staff Hours	15,297	1,231	3,095	3,597	3,052	2,832	144	79	61	1,206	0		
Total Staff Cost		$90,269.23	$156,978.40	$155,282.49	$99,006.88	$77,143.68	$6,192.00	$3,397.00	$1,098.00	$38,977.92	$0.00	**$628,345.60**	**$41.08**

Check = $628,345.60

Form Revised 3/28/05

SALARY RELATED COSTS:		$628,345.60
EC Driver Fee (@3.0 multiplier)		$1,885,036.80
EXPENSES (see attached summary):		$4,274.58
SUBTOTAL ESTIMATED FEE:		**$1,889,311.38**
Subconsultant: Brown & Phillips, Inc. (Design Survey)	(DBE)	$126,760.00
Subconsultant: Scheda Ecological, Inc. (Environmental Service	(DBE)	$103,277.50
Subconsultant: BEA International, Inc. (Bridge Architecture)		$157,210.00
Subconsultant: Tierra, Inc. (Geotechnical Services)	(DBE)	$254,916.10
Optional Services		$0.00
GRAND TOTAL ESTIMATED FEE:		**$2,531,474.98**

* 3% multiplier

DIRECT EXPENSE ESTIMATE

ECDriver
Consulting Engineers

CLIENT:	Palm Beach County	PROJECT NAME:	Ocean Avenue in Lantana over the AICWW
Palm Beach County Project No.	2003502S	LIMITS - FROM:	NA
TYPE PROJECT:	Conceptual Study	LIMITS - TO:	NA
PROJECT MANAGER:	Luis Costa, P.E.	COUNTY:	Palm Beach

Travel: (From Tampa, Fl.)											
To Project for Technical Field Review:	(Meal per Diem	0	trips x	2	person x	1	days/per trip x	$21.00	per diem	=	$0.00
	POV	0	trips x	50	miles x	$0.29	per mile			=	$0.00
	(Hotel)	0	trips x	2	person x	1	night/per trip x	$75.00	per diem	=	$0.00
	(Air Travel)	0	trips x	2	person x	$151.00	Per Ticket			=	$0.00
	(Car Rental)	0	trips x	1	days/per trip	$50.25	daily rate+tax			=	$0.00
		0									
To Palm Beach County Engineering	(Meal per Diem	0	trips x	2	person x	1	days/per trip x	$21.00	per diem	=	$0.00
	POV	0	trips x	0	miles x	$0.29	per mile			=	$0.00
	(Hotel)	0	trips x		person x	1	night/per trip x	$75.00	per diem	=	$0.00
	(Car Rental)	0	trips x	2	days/per trip	$29.91	daily rate+tax			=	$0.00
	(Air Travel)	0	trips x	2	person x	$151.00	Per Ticket			=	$0.00
Travel: (From Boca Raton, FL)											
To Project (Field Reviews)	(Meal per Diem	0	trips x	1	person x	1	days/per trip x	$0.00	per diem	=	$0.00
	POV	0	trips x	40	miles x	$0.29	per mile			=	$0.00
	(Hotel)	0	trips x	0	person x	0	night/per trip x	$0.00	per diem	=	$0.00
	(Car Rental)	0	trips x	0	days/per trip	$50.25	daily rate+tax			=	$0.00
		0									
To Palm Beach County Engineering	(Meal per Diem	0	trips x	1	person x	1	days/per trip x	$21.00	per diem	=	$0.00
	POV	0	trips x	50	miles x	$0.29	per mile			=	$0.00
	(Hotel)	0	trips x	0	person x	0	night/per trip x	$0.00	per diem	=	$0.00
	(Car Rental)	0	trips x	0	days/per trip	$50.00	daily rate+tax			=	$0.00
	(Air Travel)	0	trips x	0	person x	$0.00	Per Ticket			=	$0.00
										Sub-total	$0.00
Reproduction (See Summary Sheet)										Sub-total	$1,769.58

Miscellaneous Public Involvement & Environmental Costs						
Public Hearing Transcript	____	pages	x	$3.65	per page	$0.00
Table Rental	____	each	x	$10.00	per each	$0.00
Facility Rental (Utilize the nearest public facility)	____	days	x	$750.00	per day	$0.00
Court Reporter (Based on 6 hours)	____	each	x	$200.00	per each	$0.00
Newspaper Advertisement	2	days	x	$940.00	per day (Sunday 1/4 page ad)	$1,880.00
Off-Duty Police Officer (Based on 6 hours)	____	each	x	$0.00	per each	$0.00
Aerial Photography (Oblique Views)	1	each	x	$500.00	per each	$500.00
Aerial Video	____	each	x	$0.00	per each	$0.00
Radius Search for Contamination	1	each	x	$125.00		$125.00
	____					
					Sub-total	$2,505.00
						$4,274.58

EXPENSE CERTIFICATION:

I hereby certify that the expense items contained in this price proposal are direct costs, and are not included in the overhead percent.

Luis Costa / Branch Office Manager

DATE: 5-Nov-07
TIME: 05:00 PM

ECDrive
Consulting Engineers

REPRODUCTION SUMMARY SHEET - PLANS, DOCUMENTS AND GRAPHICS

CLIENT : Palm Beach County
FM. No. 2003502S
TYPE PROJECT Conceptual Study
PROJECT MANAGER: Luis Costa, P.E.

PROJECT NAME: Ocean Avenue in Lantana over the AICWW
LIMITS - FROM: NA
LIMITS - TO: NA
COUNTY: Palm Beach

DOCUMENT TITLE / EVENT	NUMBER OF COPIES	NUMBER OF SUBMITTALS	TOTAL NUMBER OF PAGES (8 1/2" x 11")	UNIT COST	COST	TOTAL NUMBER OF PAGES (11" x 17")	UNIT COST	COST	COLOR GRAPHICS PER COPY 8 1/2" X 11"	UNIT COST @ $0.75	COLOR GRAPHICS PER COPY 11" X 17"	UNIT COST @ $1.50	FOAMCORE BOARDS & DRYMOUNT (30"x40")	UNIT COST @ $25.00	SPIRAL BINDING $2.50	TOTAL COST
Draft Engineering Report	3	2	150	$0.08	$24.00	50	$0.25	$25.00	50	$112.50	40	$180.00		$0.00	$7.50	$349.00
Final Engineering Report	3	1	150	$0.08	$12.00	50	$0.25	$12.50	50	$112.50	40	$180.00		$0.00	$7.50	$324.50
Typical Section Package	3	2		$0.08	$0.00	5	$0.25	$2.50	0	$0.00		$0.00		$0.00	$7.50	$10.00
Conceptual Design Plans	3	2		$0.08	$0.00	60	$0.25	$30.00	0	$0.00	40	$180.00		$0.00	$7.50	$217.50
Conceptual Design Roadway and Bridge Plans (Preferred Alternative)	3	1		$0.08	$0.00	30	$0.25	$7.50	0	$0.00	20	$90.00		$0.00	$7.50	$105.00
																$0.00
Public Involvement Plan	3	1	4	$0.08	$0.32		$0.25	$0.00	0	$0.00		$0.00		$0.00	$7.50	$7.82
				$0.08	$0.00		$0.25	$0.00	0	$0.00		$0.00		$0.00	$0.00	$0.00
Draft Environmental Impact Report	3	1	20	$0.08	$1.60	2	$0.25	$0.50	2	$4.50	5	$22.50		$0.00	$7.50	$36.60
Final Environmental Impact Report	3	1	20	$0.08	$1.60	2	$0.25	$0.50	2	$4.50	5	$22.50		$0.00	$7.50	$36.60
Wildlife Technical Memorandum	3	2	4	$0.08	$0.64		$0.25	$0.00	0	$0.00		$0.00		$0.00	$7.50	$8.14
Wetlands Technical Memorandum	3	2	4	$0.08	$0.64		$0.25	$0.00	0	$0.00		$0.00		$0.00	$7.50	$8.14
Cultural Resource Technical Memo	3	2	4	$0.08	$0.64		$0.25	$0.00	0	$0.00		$0.00		$0.00	$7.50	$8.14
Contamination Technical Memo.	3	2	4	$0.08	$0.64		$0.25	$0.00	0	$0.00		$0.00		$0.00	$7.50	$8.14
																$0.00
General Correspondence	0	1	5,000	$0.08	$400.00		$0.25	$0.00	0	$0.00	0	$0.00		$0.00	$0.00	$400.00
																$0.00
Alternatives Public Workshop													10	$250.00	$0.00	$250.00
TOTAL:	36	20				199	4	$78.50	104	$234.00	150	$675.00	10	$250.00	$90.00	$1,769.58

Luis Costa / Branch Office Manager

DATE: 6-Nov-07
TIME: 08:32 AM

Project Activity: General Tasks

Estimator:

Form Revised 6/6/05

Ocean Avenue Bascule Bridge Replacement
NA

Task No.	Task	Units	No of Units	Hours / Unit	Total Hours	Comments
3.1	Public Involvement	LS	1	304	304	Public Involvement Plan (8 hrs); **1** Public Workshop at (40 hours exhibit preparation), attendance (2 people at 8 hrs each), Venue coordination (4 hours if held at Lantana Town Hall). No hours for public notification, newspaper ads, etc. (assume Town of Lantana notifies the public). Project Powerpoint (40 hours). 6 Key stakeholder meetings at 30 hours each (includes preparation, attendance and follow up for 2 staff members)
3.2	Joint Project Agreements	EA			0	
3.3	Specifications Package Preparation	LS			0	None for roadway, bridge TSP's included in structural staffhours
3.4	Contract Maintenance	LS	0	0	0	Progress Reports, invoice preparation, CADD, correspondence file management 6 hr/mo x 24 months
3.5	Value Engineering (Multi-discipline Team) Review	LS			0	
3.6	Prime Consultant Project Manager Meetings (Client Coordination)	LS	1	96	96	
3.7	Other Project General	LS			0	
				3. General Tasks Total	**400**	

Project Activity - Roadway Analysis

Estimator:

Form Revised 6/6/05

Ocean Avenue Bascule Bridge Replacement

NA

Task No.	Task	Units	No of Units	Hours / Unit	Total Hours	Comments
4.1	Typical Section Package	LS	1	48	48	Typical Section submittal (4 typical sections at 12 hours each) (2 Roadway approaches, fixed bridge, movable span
4.2	Pavement Design Package	LS			0	NA
4.3	Access Management	LS			0	
4.4	Horizontal /Vertical Master Design Files	LS	1	240	240	**includes bridge profile**
4.5	Cross Section Design Files	LS	1	0	0	included in 5.3
4.6	Traffic Control Analysis	LS	1	40	40	Detour analysis and design hours only
4.7	Master TCP Design Files	LS			0	NA
4.8	Design Variations and Exceptions	LS			0	NA
4.9	Design Report	LS	1	0	0	Not required
4.10	Computation Book & Quantities	LS	1	120	120	
4.11	Cost Estimate	LS	4	24	96	Engineer's Estimate of Probable Construction Cost (@35%, 65%, 96% & Final)
4.12	Technical Special Provisions	LS			0	
4.13	Other Roadway Analysis	LS	1	92	92	TCE analysis, driveway profiles
Roadway Analysis Technical Subtotal					**636**	
4.14	Field Reviews	LS	8	8	64	2 people @ 4 hours each
4.15	Technical Meetings	LS	12	12	144	2 people @ 6 hours each (includes prep time, attendance & minutes)
4.16	Quality Assurance/Quality Control	LS	%	0.0%	0	
4.17	Independent Peer Review	LS	%	0%	0	
4.18	Supervision	LS	%	0.0%	0	
Roadway Analysis Nontechnical Subtotal					**208**	
4.19	Coordination	LS	%	0%	0	
4. Roadway Analysis Total					**844**	

Project Activity - Roadway Plans

Estimator:

Ocean Avenue Bascule Bridge Replacement
NA

Task No.	Task	Scale	Units	No. of Units	Hours / Unit	No. of Sheets	Total Hours	Comments
5.1	Key Sheet		Sheet	1	12		12	
5.2	Summary of Pay Items-including Quantity Input		Sheet	1	24		24	
5.3	Drainage Map		Sheet	1	48		48	
5.4	Interchange Drainage Map		Sheet				0	
5.5	Typical Section Sheets		Sheet	0	0		0	**included in 4.1**
5.6	General Notes/Pay Item notes		Sheet	1	16		16	
5.7	Summary of Quantities		Sheet	1	24		24	
5.8	Box Culvert Data Sheet		Sheet				0	
5.9	Bridge Hydraulics Recommendation Sheets		Sheet				0	NA as per scope meeting
5.10	Summary of Drainage Structures		Sheet				0	NA as per scope meeting
5.11	Optional Pipe/ Culvert Material		Sheet				0	
5.12	Project Layout		Sheet				0	
5.13	Plan/Profile Sheet		Sheet				0	
5.14	Profile Sheet		Sheet	5	6		30	
5.15	Plan Sheet		Sheet	5	6		30	
5.16	Special Profile		Sheet				0	
5.17	Back of Sidewalk Profile Sheet		Sheet				0	NA as per scope meeting
5.18	Interchange Layout Sheet		Sheet				0	
5.19	Ramp Terminal Details (Plan View)		Sheet				0	
5.20	Intersection Layout Details		Sheet				0	
5.21	Miscellaneous Detail Sheets		Sheet	1	24		24	
5.22	Drainage Structure Sheet (per Structure)		EA	20	4		80	
5.23	Miscellaneous Drainage Detail Sheets		Sheet	1	24		24	

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Project Activit[illegible] Roadway Plans

Task No.	Task	Scale	Units	No. of Units	Hours / Unit	No. of Sheets	Total Hours	Comments
5.24	Lateral Ditch Plan/Profile		Sheet				0	
5.25	Lateral Ditch Cross sections		EA				0	
5.26	Retention/Detention Ponds Detail Sheet		Sheet				0	
5.27	Retention Pond Cross Sections		EA				0	
5.28	Cross-section Pattern Sheet		Sheet				0	
5.29	Roadway Soil Survey Sheet		Sheet	1	9		9	1 hrs to coordinate with Tierra; 8 hours for soil boring data in roadway cross sections
5.30	Cross Sections		EA	20	4		80	50-foot spacing
5.31	Traffic Control Plan Sheets		Sheet				0	
5.32	Traffic Control Cross Section Sheets		EA				0	
5.33	Traffic Control Detail Sheets		Sheet	2	8		16	Detour details only
5.34	Utility Adjustment Sheets		Sheet				0	NA as per scope meeting
5.35	Selective Clearing and Grubbing		Sheet				0	
5.36	Erosion Control Plan		Sheet	0	0		0	**to be prepared by contractor**
5.37	SWPPP		Sheet	0	0		0	**to be prepared by contractor**
5.38	Project Control Network Sheet		Sheet	1	1		1	Provided by Erdman Anthony
5.39	Interim Standards		LS				0	
5.40	Utility Verification Sheet (SUE data)		Sheet				0	NA as per scope meeting
Roadway Plans Technical Subtotal						**0**	**418**	
5.41	Quality Assurance/Quality Control		LS	%	0.0%		0	
5.42	Supervision		LS	%	0.0%		0	
5. Roadway Plans Total						**0**	**418**	

Project Activity - Drainage Analysis

Estimator:

Form Revised 6/6/05

Ocean Avenue Bascule Bridge Replacement

NA

Task No.	Task	Units	No of Units	Hours / Unit	Total Hours	Comments
6.1	Determine Base Clearance Water Elevation	Per Location	1	24	24	
6.2	Pond Siting Analysis and Report	Per Basin	0	0	0	NA
6.3	Design of Cross Drains	EA	0	0	0	NA
6.4	Design of Roadway Ditches	Per Ditch Mile	0	0	0	
6.5	Design of Outfalls	EA	2	12	24	
6.6	Design of Stormwater Management Facility (Offsite Pond)	EA	0	0	0	
6.7	Design of Stormwater Management Facility (Roadside Ditch as Linear Pond)	Per System	0	0	0	
6.8	Design of Flood Plain Compensation Area	Per Encroachment	0	0	0	
6.9	Design of Storm Drains	EA	20	4	80	
6.10	Optional Culvert Material	LS	0	0	0	
6.11	French Drain Systems	Per 1000 Feet of French Drain	1	24	24	
6.12	Drainage Wells	EA	0	0	0	
6.13	Drainage Design Documentation Report	LS	1	80	80	

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Project Activity - Drainage Analysis

Task No.	Task	Units	No of Units	Hours / Unit	Total Hours	Comments
6.14	Preparation of Bridge Hydraulic Report	EA	1	720	720	**TASK 1 (80 hours):** Includes inspection of the basin limits, verification and Limits of Hydraulic Model, downloading of existing topographic & bathymetric survey and research of the existing hydraulic grade controls. **TASK 2 (600 hours):** Includes a 2-d analysis using SMS's pre- and post- processor and USACOE RMA-2 hydraulic program. **TASK 3 (40 hours):** Includes obtaing the results from RMA-2 and performing scour calculation in accordcance with FHWA's HEC-18. **TASK 4 (80 hours):** Includes writing report and if required, risk analysis, economic analysis of alternate solutions.
6.15	Temporary Drainage Analysis	LS	1	0	0	
6.16	Cost Estimate	LS	1	0	0	
6.17	Technical Special Provisions	LS	1	0	0	

Project Activity 7: Utilities

Estimator:

Ocean Avenue Bascule Bridge Replacement

Form Revised 6/6/05

NA

Task No.	TASK	Units	No of Units	Hours / Unit	Total Hours	Comments
7.1	Kickoff Meeting	LS	1		0	
7.2	Identify Existing UAOs	LS	1	12	12	4 known Utility Companies
7.3	Make Utility Contacts	LS	1	4	4	
7.4	Exception Coordination	LS	1		0	
7.5	Preliminary Utility Meeting	LS	1	12	12	2 people @ 6hours each
7.6	Individual/Field Meetings	LS	1	32	32	(2 people @ 4 hours each) x 4
7.7	Collect and Review Plans and Data from UAO(s)	LS	1	4	4	
7.8	Subordination of Easements Coordination	LS	1		0	
7.9	Utility Design Meeting	LS	1	12	12	2 people @ 6hours each
7.10	Review Utility Markups, Work Schedules, Processing of Schedules and Agreements	LS	1	16	16	2 hrs per document x 2 documents x 4 companies
7.11	Utility Coordination / Followup	LS	1		0	To be performed by PBC
7.12	Utility Constructability Review & Meeting	LS	1	24	24	
7.13	Additional Utility Services	LS	1	0	0	
7.14	Processing Utility Work by Highway Contractor (UWHC)	LS	1		0	
7.15	Contract Plans to UAO(s)	LS	1	4	4	
7.16	Certification/Close-out	LS	1		0	NA
7.17	Other Utility	LS	1		0	
				7. Utilities Total	**120**	

Project Activity 8 ronmental Permits

Estimator:

Form Revised 6/6/05

Ocean Avenue Bascule Bridge Replacement
NA

Task No.	Task	Units	No. of Units	Hours/ Units	Total Hours	Comments
8.1	Preliminary Project Research	LS	1	8	8	Coordination with SCHEDA
8.2	Complete Permit Involvement Form	LS	1		0	NA
8.3	Establish Wetland Jurisdictional Lines	LS	1	24	0	Coordination w/ SCHEDA (CADD Files, exhibits etc.)
8.4	Agency Verification of Wetland Data	LS	1	0	0	SCHEDA
8.5	Complete And Submit All Required Permit Applications	LS	1	24	0	Coordination w/ SCHEDA
8.6	Prepare Dredge and Fill Sketches	LS	1	24	24	**EC DRIVER will prepare for SCHEDA to submit**
8.7	Prepare USCG Permit Sketches	LS	1	40	40	**EC DRIVER will prepare for SCHEDA to submit**
8.8	Prepare Easement Sketches	LS	1	16	16	**(DEP) EC DRIVER will prepare for SCHEDA to submit**
8.9	Prepare R/W Occupancy Sketches	LS	1		0	
8.10	Prepare Coastal Construction Control Line (CCCL) Permit Sketches	LS	1		0	NA
8.11	Prepare Tree Permit Information	LS	1		0	
8.12	Mitigation Coordination and Meetings	LS	1	24	24	PBC ERM, SFWMD
8.13	Mitigation Design	LS	1		0	NA
8.14	Environmental Clearances	LS	1		0	
8.15	Other Environmental	LS	1		0	
	Environmental Permits Technical Subtotal				**112**	
8.16	Technical Meetings	LS	1		32	see below
8.17	Quality Assurance/Quality Control	LS	%	0.0%	0	
8.18	Supervision	LS	%	0.0%	0	
	Environmental Permits Nontechnical SubTotal				**32**	
8.19	Coordination	LS	%	0%	0	
	8. Environmental Permits Total				**144**	

Technical Meetings

WMD	EA	0	0	0	**not required**
ACOE	EA	1	4	4	Project Manager attendance required
USCG	EA	2	6	12	
PBC ERM	EA	2	4	8	
DEP	EA	1	8	8	
FDOT	EA	0	0	0	
Other meetings	EA	0	0	0	
Technical meetings				**32**	

Project Activity 9: Structures Summary and Miscellaneous Tasks and Drawings

Estimator: G. Patton
Form Revised 6/6/05

Ocean Avenue Bascule Bridge Replacement
NA

Task No.	Task	Units	Design and Production Staffhours				Comments
			No. of Units	Hours per Unit	No. of Sheets	Total	
	General Drawings						
9.1	Index of Drawings	sheet	3	8	3	24	
9.2	Project Layout	sheet	0	0	0	0	
9.3	General Notes and Bid Item Notes	sheet	3	20	3	60	
9.4	Incorporate FDOT Standards	sheet	0	0	0	0	
9.5	Incorporate Report of Core Borings	sheet	3	2	3	6	
9.6	Existing Bridge Plans	LS	1	12		12	
9.7	Computation Book and Quantities	LS	1	100		100	
9.8	Cost Estimate	LS	1	40		40	
9.9	Technical Special Provisions	LS	1	180		180	Movable Span TSPs (Elec./Mech./Arch.)
	Structures - Miscellaneous Tasks & Drawings Subtotal				9	422	

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	10867	1720	0	0	1224	0	0	7923		
10-16	Bridge 2	0									
10-16	Bridge 3	0									
17	Retaining Walls	192								192	
18	Miscellaneous Structures	180									180
	Structures Technical Subtotals	11239	1720	0	0	1224	0	0	7923	192	180

Task No.	Task	Units	No. of Units	Hours per Unit	Total	Comments
9.10	Field Reviews	LS	1	32	32	
9.11	Technical Meetings	LS	1	64	64	Meetings are listed below
9.12	Quality Assurance / Quality Control	LS	%	0%	0	
9.13	Independent Peer Review	LS	%	0%	0	
9.14	Supervison	LS	%	0%	0	
	Structures Non-Technical Subtotal				96	
9.15	Coordination	LS	%	0%	0	
	9. Structures - Miscellaneous Tasks & Drawings, Non-Technical, & Coordination Total				518	

Technical Meetings

BDR coordination / review	EA	1	16	16
90/100% comment review	EA	1	16	16
Aesthetics coordination	EA	1	16	16
Regulatory agency	EA	1	16	16
Local governments (cities, counties)	EA	0	0	0
Utility companies	EA	0	0	0
Other meetings	EA	0	0	0
Subtotal technical meetings				**64**

Project Activity 10: BDR

Estimator:
Bridge Identfier (Number or Name): Ocean Avenue Bascule Bridge Replacement
NA

Task No.	Task	Units	No of Units	Hours / Unit	No. of Sheets	Total Hours	Comments
	General Requirement						
10.1	Bridge Geometry	LS	1	20		20	
10.2	Ship Impact Data Collection	LS	1	8		8	
10.3	Ship Impact Criteria	EA	1	24		24	
	Superstructure Alternatives						
10.4	Short Span Concrete	EA	0	0		0	
10.5	Medium Span Concrete	EA	2	24		48	AASHTO Beams, Fixity/Expansion/Continuity
10.6	Long Span Concrete	EA	0	0		0	
10.7	Structural Steel	EA	0	0		0	
	Foundation & Substructure Alternatives						
10.8	Pier/Bent Types	EA	2	24		48	Wall Pier, Drilled Shaft Bent
10.9	Shallow Foundations	EA	0	0		0	
10.10	Deep Foundations	EA	0	0		0	
	Movable Span						
10.11	Data Collection & Design Criteria	LS	1	24		24	
10.12	Movable Span Geometrics and Clearances	LS	1	32		32	
10.13	Deck System Evaluation	LS	1	16		16	
10.14	Framing Plan Development	LS	1	16		16	
10.15	Main Girder Preliminary Design	LS	1	64		64	Through Girder
10.16	Conceptual Span Balance/Counterweight	LS	1	32		32	Steel Counterweight Box w/Steel and Concrete Ballast
10.17	Support System Development	LS	1	24		24	
10.18	Drive Power Calculations	LS	1	24		24	
10.19	Drive System Development	LS	1	40		40	
10.20	Power and Control Development	LS	1	32		32	
10.21	Conceptual Pier Design	LS	1	64		64	

516

Project Activity 10: BDR

Task No.	Task	Units	No of Units	Hours / Unit	No. of Sheets	Total Hours	Comments
10.22	Foundation Analysis (FL Pier)	LS	1	64		64	
10.23	Tender Visibility Study	LS	1	16		16	
	Other BDR Issues						
10.24	Aesthetics	LS	1	32		32	Develop Alternatives, Coordinate w/ Architect
10.25	TCP/Staged Construction Requirements	LS	1	4		4	
10.26	Constructibility Requirements	LS	1	16		16	Potential Seagrass Impacts
10.27	Abutment Slope/Wall Evaluation	LS	1	8		8	Bulkheads, Slope Protection
10.28	Quantity and Cost Estimates	EA	1	24		24	
10.29	Quantity and Cost Estimates (Movable Span)	LS	1	56		56	
10.30	Wall Type Justification	LS	1	16		16	Bulkheads
	Report Preparation						
10.31	Exhibits	EA	4	24		96	
10.32	Exhibits (Movable Span)	EA	8	21		168	
10.33	Report Preparation	LS	1	20		20	
10.34	Report Preparation (Movable Span)	LS	1	60		60	
10.35	BDR Submittal Package	LS	1	16		16	
	BDR Subtotal					**1112**	
	Add the following hours if Plans are included with the BDR submittal						
10.36	General Notes Sheets	Sheet	2	16	2	32	
10.37	Plan and Elevation Sheets	Sheet	2	32	2	64	
10.38	Construction Staging	Sheet	0	0	0	0	
10.39	Superstructure Section Sheets	Sheet	1	12	1	12	
10.40	Substructure Sections Sheets	Sheet	2	12	2	24	
10.41	General Notes Sheets (Movable Span)	Sheet	3	12	3	36	Bascule Leaf, Mechanical, Electrical
10.42	Plan and Elevation Sheets (Movable Span)	Sheet	1	24	1	24	
10.43	Clearance Diagram (Movable Span)	Sheet	1	24	1	24	
10.44	Bascule Pier Layouts (Movable Span)	Sheet	8	20	8	160	

Project Activity 10: BDR

Task No.	Task	Units	No of Units	Hours / Unit	No. of Sheets	Total Hours	Comments
10.45	Bascule Leaf Section (Movable Span)	Sheet	4	24	4	96	
10.46	Bascule Leaf Framing Plan (Movable Span)	Sheet	1	24	1	24	
10.47	Machinery Layouts (Movable Span)	Sheet	2	24	2	48	
10.48	Control Logic Diagram (Movable Span)	Sheet	4	16	4	64	
35% Plans Subtotal					**31**	**608**	
10. Structures-BDR Total					**31**	**1720**	

Project Activity 13: Structures- Medium Span Concrete

Estimator:
Bridge Identfier (Number or Name): Ocean Avenue Bascule Bridge Replacement
NA

Task No.	Task	Units	No. of Units	Hours / Unit	No. of Sheets	Total Hours	Comments
General Layout Design and Plans							
13.1	Overall Bridge Final Geometry	LS	1	16		16	Approach Span Geometry
13.2	Expansion/Contraction Analysis	EA Unit	2	16		32	
13.3	General Plan and Elevation	Sheet	2	32	2	64	Update preliminary
13.4	Construction Staging	Sheet	0	0	0	0	
13.5	Approach Slab Plan and Details	Sheet	1	16	1	16	
13.6	Miscellaneous Details	Sheet	0	0	0	0	Traffic Gate and Signal, Light Pole Support Details
End Bent Design and Plans							
13.7	End Bent Geometry	EA	2	12		24	
13.8	Wingwall Design and Geometry	EA Bent	2	12		24	
13.9	End Bent Structural Design	EA	2	40		80	
13.10	End Bent Plan and Elevation	Sheet	2	20	2	40	
13.11	End Bent Details	Sheet	2	16	2	32	
Intermediate Bent Design and Plans							
13.12	Bent Geometry	EA bent	0	0		0	
13.13	Bent Stability Analysis	EA Design	0	0		0	
13.14	Bent Structural Design	EA Design	0	0		0	
13.15	Bent Plan and Elevation	Sheet	0	0	0	0	
13.16	Bent Details	Sheet	0	0	0	0	

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Project Activity 13: Structures- Medium Span Concrete

Task No.	Task	Units	No. of Units	Hours / Unit	No. of Sheets	Total Hours	Comments
Pier Design and Plans							
13.17	Pier Geometry	EA Pier	4	12		48	
13.18	Pier Stability Analysis	EA Design	1	80		80	
13.19	Pier Structural Design	EA Design	1	80		80	
13.20	Pier Plan and Elevation	Sheet	4	24	4	96	
13.21	Pier Details	Sheet	2	24	2	48	Support Pedestals, Shear Blocks
Misc. Substructure Design and Plans							
13.22	Foundation Layout	Sheet	2	20	2	40	
13.23	Fender System	LS	1	80		80	Plastic Marine Lumber w/ Vessel Collision Analysis
Superstructure Deck Design and Plans							
13.24	Finish Grade Elevation (FGE) Calculation	LS	1	16		16	
13.25	Finish Grade Elevations	Sheet	2	16	2	32	Approach Span Elevations
13.26	Bridge Deck Design	EA Section	1	24		24	
13.27	Bridge Deck Reinforcing and Concrete Quantities	EA Unit	2	12		24	
13.28	Diaphragm design/ jacking loads	EA Section	1	24		24	
13.29	Superstructure Plan	Sheet	4	24	4	96	
13.30	Superstructure Section	Sheet	1	20	1	20	
13.31	Miscellaneous Superstructure Details	Sheet	2	24	2	48	Composite Neoprene Bearings, Expansion Joints, Jacking Details, Diaphragms
Reinforcing Bar Lists							
13.32	Reinforcing Bar List	Sheet	4	8	4	32	

788

Project Activity 13: Structures- Medium Span Concrete

Task No.	Task	Units	No. of Units	Hours / Unit	No. of Sheets	Total Hours	Comments
Continuous Concrete Girder Design							
Longitudinal Analysis							
13.33	Section Properties	LS	1	0		0	
13.34	Material Properties	LS	1	0		0	
13.35	Construction Sequence	EA Unit	0	0		0	
13.36	Tendon Layouts	EA Unit	0	0		0	
13.37	Live Load Analysis	EA Unit	0	0		0	
13.38	Temperature Gradient	EA Unit	0	0		0	
13.39	Time Dependent Analysis	EA Unit	0	0		0	
13.40	Stress Summary	EA Unit	0	0		0	
13.41	Ultimate Moments	EA Unit	0	0		0	
13.42	Ultimate Shear	EA Unit	0	0		0	
13.43	Construction Loading	EA Unit	0	0		0	
13.44	Framing Plan	Sheet	0	0	0	0	
13.45	Girder Elevation, including Grouting Plan and Vent Locations	Sheet	0	0	0	0	
13.46	Girder Details	Sheet	0	0	0	0	
13.47	Structural Steel Details	Sheet	0	0	0	0	
13.48	Splice Details	Sheet	0	0	0	0	
13.49	Girder Deflections and Camber	Sheet	0	0	0	0	

Project Activity 13: Structures- Medium Span Concrete

Task No.	Task	Units	No. of Units	Hours / Unit	No. of Sheets	Total Hours	Comments
Simple Span Concrete Design							
13.50	Prestressed Beam	EA Beam	4	8		32	
13.51	Prestressed Beam Schedules	Sheet	1	12	1	12	
13.52	Framing Plan	Sheet	0	0	0	0	
Load Rating							
13.53	Load Rating	EA Unit	2	32		64	
13. Structures-Medium Span Concrete Total					**29**	**1224**	

Project Activity 16: Structures- Movable Span

Estimator:
Bridge Identfier (Number or Name): Ocean Avenue Bascule Bridge Replacement
NA

Task No.	Task	Unit	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
Final Design Bascule Pier							
16.1	Pier Deck	LS	1	40		40	
16.2	Leaf / Pier Clearance Diagrams	EA	3	16		48	
16.3	Load Shoe Columns	LS	1	16		16	
16.4	Trunnion Columns	LS	1	32		32	
16.5	Foundations	LS	2	80		160	Bascule Piers and Independent Control Tower
16.6	Footing	LS	2	24		48	Bascule Piers and Independent Control Tower
16.7	Seal	LS	2	12		24	Bascule Piers and Independent Control Tower
16.8	Back Wall (Approach Span Bearings) Closed piers only.	LS	1	24		24	
16.9	Bascule Pier Deck Elevations	EA Pier	2	16		32	
Bascule Pier Dimensions - Detailing							
16.10	Pier Plan Views	Sheet	8	24	8	192	Bascule Piers and Independent Control Tower
16.11	Pier Elevation Views	Sheet	6	24	6	144	Bascule Piers and Independent Control Tower
16.12	Pier Sections	Sheet	8	24	8	192	Bascule Piers and Independent Control Tower
Bascule Pier Reinforcing Details							
16.13	Pier Reinforcing	Sheet	33	32	33	1056	Bascule Piers and Independent Control Tower

2,008

Project Activity 16: Structures- Movable Span

Task No.	Task	Unit	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
Bascule Pier Miscellaneous Details							
16.14	Pier Barrier Details	Sheet	1	24	1	24	
16.15	Stair Details	Sheet	1	24	1	24	Conc Filled Metal Pan Stairs
16.16	Handrail Details	Sheet	1	24	1	24	**Pipe Safety Railings**
16.17	Ladder & Hatch Details	Sheet	2	24	2	48	
16.18	Pier Equipment	Sheet	1	24	1	24	
16.19	Bascule Pier Notes & Summary of Quantities	Sheet	4	12	4	48	Includes Pour Nos./Sequence
16.20	Miscellaneous Details	Sheet	3	32	3	96	Pier Deck Steel Framing, Rear Joint Assembly
Bascule Leaf Design							
16.21	Deck Design	LS	1	48		48	Steel Open and Concrete Filled Deck
16.22	Sidewalk Design	LS	1	24		24	Aluminum Flooring
16.23	Stringer Design	LS	1	32		32	
16.24	Typical Floorbeam Design	LS	1	24		24	
16.25	End Floorbeam Design	LS	1	24		24	
16.26	Deep Floorbeam Design	LS	1	24		24	
16.27	Sidewalk Bracket Design	LS	1	24		24	
16.28	Roadway Bracket Design	LS	1	0		0	
16.29	Main Girder Influence Lines	LS	1	40		40	
16.30	Main Girder Design	LS	1	96		96	Through Girders
16.31	Trunnion Girder Design	LS	1	0		0	Simple Trunnions
16.32	Main Girder Camber Data	LS	1	24		24	
16.33	Leaf Lateral Bracing Design	LS	1	48		48	Includes Main and Sidewalk Bracket Bracing

696

Project Activity 16: Structures- Movable Span

Task No.	Task	Unit	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
16.34	Counterweight Design	LS	1	240		240	Steel Counterweight Box
16.35	Live Load Shoe Design	LS	1	8		8	
16.36	Barrier Design	LS	1	80		80	TL-4 Vehicular Load, Includes Span Lock Housing
16.37	Deck Elevations	LS	1	12		12	
16.38	Balance Calculations	LS	1	100		100	Includes Steel Ballast
	Bascule Leaf Detailing						
16.39	Bascule GP&E	Sheet	1	24	1	24	
16.40	Bascule Leaf Notes	Sheet	1	24	1	24	
16.41	Framing Plan	Sheet	1	32	1	32	
16.42	Flooring Plan & Details	Sheet	3	24	3	72	Steel Open Grid, Conc Filled Grid
16.43	Typical Section & Finish Grade Elevations	Sheet	2	16	2	32	
16.44	Girder Elevation	Sheet	2	32	2	64	Through Girders
16.45	Girder Details	Sheet	2	32	2	64	
16.46	Camber Layout	Sheet	1	16	1	16	
16.47	Floor Beams	Sheet	3	24	3	72	End, Typical and Deep Floorbeams
16.48	Counterweight Girder/Box	Sheet	3	32	3	96	Steel Counterweight Box
16.49	Trunnion Girder	Sheet	0	0	0	0	Simple Trunnions
16.50	Cylinder Girder	Sheet	0	0	0	0	Rack and Pinion Drive
16.51	Lateral Bracing Details	Sheet	4	24	4	96	Main Lateral Bracing
16.52	Counterweight Bracing Details	Sheet	0	0	0	0	Steel Counterweight Box
16.53	Joint Details	Sheet	0	0	0	0	Addressed in Flloring Details
16.54	Traffic Barrier Details	Sheet	2	32	2	64	Includes Span Lock Housing

1,096

Project Activity 16: Structures- Movable Span

Task No.	Task	Unit	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
16.55	Pedestrian Rail and Support Details	Sheet	1	32	1	32	
16.56	Curb and Sidewalk Details	Sheet	3	24	3	72	Alum Flooring, Steel Supports
16.57	Barrier & Sidewalk Bracket Details	Sheet	4	16	4	64	Includes Brackets and Bracing
16.58	Counterweight Details	Sheet	2	24	2	48	Details, Balance Table
16.59	Stress Table or Influence Lines	Sheet	0	0	0	0	
	Mechanical Design						
16.60	Final Power Requirements	LS	1	34		34	
16.61	Trunnion Assembly	LS	1	200		200	
16.62	Span Locks	LS	1	70		70	
16.63	Sump Pumps	LS	1	16		16	
	Mechanical Drive Design						
16.64	Drive Shafts, Couplings, Keys, Bearings and Supports	LS	1	52		52	
16.65	Rack & Pinion, Bearings and Supports	LS	1	220		220	
16.66	Drive Train	LS	1	112		112	
16.67	Motor Brakes & Machinery Brakes	LS	1	70		70	
	Hydraulic Drive Design						
16.68	Hydraulic Drive	LS	1	0		0	Mechanical Drive assumed
	Machinery Detailing						
16.69	Machinery Layout	Sheet	1	24	1	24	
16.70	Machinery Elevation	Sheet	2	32	2	64	Machinery Elevation, Live Load Shoe Elevation
16.71	Machinery Section	Sheet	3	32	3	96	Machinery Section, Machinery Notes, Machinery Tables
16.72	Trunnion Assembly	Sheet	7	38	7	266	Trunnion, Hub, Support, Assembly, View, 2 Bearings

1,440

Project Activity 16: Structures- Movable Span

Task No.	Task	Unit	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
16.73	Drive Details	Sheet	8	38	8	304	Rack, Rack Frame, Pinion, 4 Supports, Bearings
16.74	Span Locks	Sheet	4	36	4	144	Assembly, 2 Details, Hydraulic Schematic
	Electrical Design						
16.75	Load Analysis	LS	1	40		40	short circuit & voltage drop
16.76	Power Distribution	LS	1	140		140	MCC, generator set sizing
16.77	Drive Equipment	LS	1	40		40	
16.78	Bridge Controls	LS	1	240		240	
16.79	Grounding	LS	1	33		33	
16.80	Lightning & Surge Suppression	LS	1	44		44	
16.81	Pier Lighting	LS	1	44		44	includes lighting panels
	Electrical Detailing						
16.82	Electrical Plan & Elevation	Sheet	2	12	2	24	EGP&E & E Notes
16.83	Electrical Symbols and Abbreviations	Sheet	1	12	1	12	
16.84	Single/Three Line Diagram	Sheet	1	32	1	32	
16.85	Panelboard and Light Fixture Schedules	Sheet	2	12	2	24	Includes Schedules & Sequence Diagrams
16.86	Wire and Conduit Schedules and Diagrams	Sheet	9	32	9	288	1 @ Riser, 3 @ Conduit Schedules, 3 @ pier layout, 2 @ house
16.87	Control Desk/Panel Layout	Sheet	3	26	3	78	
16.88	Control Schematics	Sheet	9	30	9	270	
16.89	PLC Logic	Sheet	0	0	0	0	assume relay logic
16.90	Communication System	Sheet	1	24	1	24	
16.91	Navigation Lighting Details	Sheet	1	12	1	12	

1,793

Project Activity 16: Structures- Movable Span

Task No.	Task	Unit	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
16.92	Pedestrian Gate, Traffic Gate and Barrier Details	Sheet	1	12	1	12	
16.93	Submarine Cable	Sheet	1	20	1	20	
16.94	Miscellaneous Details	Sheet	3	30	3	90	Includes Grounding Riser, Lightning Prot. Details & Misc.
	Control House						
16.95	Architectural Design	LS	1	0		0	By Others
16.96	Architectural Details	Sheet	0	0	0	0	By Others
16.97	Structural Design	LS	1	200		200	
16.98	Structural Details	Sheet	5	40	5	200	
16.99	HVAC/Plumbing Design	LS	1	60		60	
16.100	HVAC/Plumbing/Electrical Details	Sheet	4	26	4	104	
	Reinforcing Bar Lists						
16.101	Reinforcing Bar List	Sheet	7	12	7	84	
	Load Rating						
16.102	Load Rating	LS	1	120		120	
	16. Movable Span Total				**178**	**7923**	

Project Activity - Retaining Walls

Estimator:

Ocean Avenue Bascule Bridge Replacement
NA

Task No.	Task	Unit	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
	General Requirements						
17.1	Key Sheet	Sheet	0	0	0	0	
17.2	Horizontal Wall Geometry	Per Wall	4	8		32	
	Permanent Proprietary Walls						
17.3	Vertical Wall Geometry	Per Wall	0	0		0	
17.4	Semi-Standard Drawings	Sheet	0	0	0	0	
17.5	Wall Plan and Elevations (Control Drawings)	Sheet	0	0	0	0	
17.6	Details	Sheet	0	0	0	0	
	Temporary Proprietary Walls						
17.7	Vertical Wall Geometry	Per Wall	0	0		0	
17.8	Semi-Standard Drawings	Sheet	0	0	0	0	
17.9	Wall Plan and Elevations (Control Drawings)	Sheet	0	0	0	0	
17.10	Details	Sheet	0	0	0	0	
	Cast in Place Retaining Walls						
17.11	Design	EA Design	0	0		0	
17.12	Vertical Wall Geometry	EA Wall	0	0		0	
17.13	General Notes	Sheet	0	0	0	0	
17.14	Wall Plan and Elevations (Control Drawings)	Sheet	0	0	0	0	
17.15	Sections and Details	Sheet	0	0	0	0	
17.16	Reinforcing Bar List	Sheet	0	0	0	0	

Project Activity: Retaining Walls

Task No.	Task	Unit	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
Other Retaining Walls							
17.17	Design	EA Design	2	32		64	Concrete Sheet Pile Bulkheads - Ea. End
17.18	Vertical Wall Geometry	EA Wall	4	4		16	
17.19	General Notes, Tables & Misc. Details	Sheet	1	16	1	16	
17.20	Wall Plan and Elevations	Sheet	2	16	2	32	
17.21	Details	Sheet	2	16	2	32	
17. Retaining Walls Total					**5**	**192**	

Project Activity 18: Miscellaneous Structures

Estimator:

Form Revised 3/28/05

Ocean Avenue Bascule Bridge Replacement

NA

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	0	0		0	
			Strain Poles				
18.3	Steel Strain Poles	Initial Config	0	0		0	
		EA Add'l Config	0	0		0	
18.4	Concrete Strain Poles	Initial Config	0	0		0	
		EA Add'l Config	0	0		0	
			Mast Arms				
18.5	Mast Arms	EA Pole	2	16		32	Movable Bridge Signals
			Overhead & Cantilever Sign Structures				
18.6	Cantilever Sign Structures	EA	0	0		0	
18.7	Overhead Span Sign Structures	EA	0	0		0	
18.8	Special (longspan) Overhead Span Sign Structures	EA	0	0		0	
18.9	Monotube Overhead Sign Structure	EA	0	0		0	
18.10	Bridge Mounted Signs (Attached to Superstr.)	EA	0	0		0	
			High Mast Lighting Fixtures				
18.11	High Mast Lighting Structures	EA	0	0		0	
			Sound Barrier Walls (Ground Mount)				
18.12	Horizontal Wall Geometry	EA Wall	0	0		0	
18.13	Vertical Wall Geometry	EA 500 feet of Wall	0	0		0	
18.14	Semi-Standard Drawings	Sheet	0	0		0	
18.15	Control Drawings	Sheet	0	0		0	

Project Activity 18: Miscellaneous Structures

18.16	Design for Wall Height Covered by Standards	EA Design	0	0		0	
18.17	Design for Wall Height Not Covered by Standards	EA Design	0	0		0	
18.18	Aesthetic Details	EA	0	0		0	
	Special Structures						
18.19	Special Structures	LS	0	0	0	0	
18.20	Other Structures	LS	1	148	5	148	Fender System
	18. Miscellaneous Structures Total				**5**	**180**	

Project Activity 19: Signing and Pavement Marking Analysis

Estimator:

Form Revised 6/6/05

Ocean Avenue Bascule Bridge Replacement

NA

Task No.	Task	Units	No. of Units	Hours/ Units	Total Hours	Comments
19.1	Traffic Data Analysis	LS	1		0	
19.2	No Passing Zone Study	LS	1		0	
19.3	Reference and Master Design File	LS	1	60	60	30 hr. setup + 14 hrs (first mile) + 16hr.(1 signalized intersection)
19.4	Multi Post Sign Support Calculations	EA	0		0	
19.5	Sign Panel Design Analysis	EA	0	0	0	4 estimated guide signs
19.6	Sign Lighting/Electrical Calculations	EA	0		0	
19.7	Quantities	LS	1	20	20	5 plan sheets x 4hrs each
19.8	Computation Book	LS	1		0	
19.9	Cost Estimate	LS	1		0	
19.10	Technical Special Provisions	LS	1		0	
19.11	Other Signing and Pavement Marking	LS	1	16	16	Existing sign inventory
Signing & Pavement Marking Analysis Technical Subtotal					**96**	

Project Activity 19: Signing & Pavement Marking Analysis

Task No.	Task	Units	No. of Units	Hours/ Units	Total Hours	Comments
19.12	Field Reviews	LS	2	8	16	2 people @ 4 hours each
19.13	Technical Meetings	LS	1	8	8	2 people @ 4 hours each
19.14	Quality Assurance/Quality Control	LS	%	0.0%	0	
19.15	Independent Peer Review	LS	%	0%	0	
19.16	Supervision	LS	%	0.0%	0	
Signing & Pavement Marking Analysis Nontechnical Subtotal					**24**	
19.17	Coordination	LS	%	0%	0	
19. Signing & Pavement Marking Analysis Total					**120**	

Project Activity: Lighting Analysis

Estimator:

Ocean Avenue Bascule Bridge Replacement

Form Revised 6/6/05

NA

Task No.	Task	Units	No. of Units	Hours/ Units	Total Hours	Comments
23.1	Lighting Justification Report	LS	1	0	0	Existing lighting - no need for justification
23.2	Lighting Analysis Report	LS	1	120	120	document design criteria, existing conditions, lighting type alternatives, illuminance calculations, photometric curves
23.3	Aeronautical Evaluation	LS	1	0	0	
23.4	Voltage Drop Calculations	LS	1	40	40	
23.5	FDEP Coordination & Report	LS	1	0	0	No sea turtle impacts.
23.6	Reference and Master Design Files	LS	1	100	100	As negotiated
23.7	Temporary Lighting	LS	1	0	0	
23.8	Design Documentation	LS	1	0	0	included in lighting report
23.9	Quantities	EA	5	4	20	
23.10	Cost Estimate	LS	1	0	0	
23.11	Technical Special Provisions	LS	1	0	0	assume none
23.12	Other Lighting	LS	1	66	66	Barrier and Accent Lighting
Lighting Analysis Technical Subtotal					**346**	
23.13	Field Reviews	LS	1	8	8	2 people @ 4 hours each
23.14	Technical Meetings	LS	1	24	24	
23.15	Quality Assurance/Quality Control	LS	%	0.0%	0	
23.16	Independent Peer Review	LS	%	0%	0	
23.17	Supervision	LS	%	0.0%	0	
Lighting Analysis Nontechnical Subtotal					**32**	
23.18	Coordination	LS	%	0%	0	
23. Lighting Analysis Total					**378**	

Technical Meetings

FDOT Lighting Design	EA	0	0	0	2 people @ 4 hours each
FDOT Traffic Design	EA	0	0	0	
Power company (service point coordination)	EA	1	8	8	
Maintaining agency (cities, counties)	EA	2	8	16	
Airport authority	EA	0	0	0	
FDEP lighting (coast areas)	EA	0	0	0	
Other meetings	EA	0	0	0	
Subtotal technical meetings				**24**	
Progress Meetings	EA	0	0	0	
Phase Review Meetings	EA	0	0	0	
Total Meetings				**24**	

Project Activity 24: Lighting Plans

Estimator:

Ocean Avenue Bascule Bridge Replacement
NA

Task No.	Task	Scale	Units	No. of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
24.1	Key Sheet		Sheet	1	8	1	8	
24.2	Summary of Pay Items - including CES Input		Sheet	1	0	1	0	
24.3	Tabulation of Quantities		Sheet	1	12	1	12	
24.4	General Notes/Pay Item notes		Sheet	1	12	1	12	
24.5	Pole Data, Legend & Criteria		Sheet	1	20	1	20	
24.6	Service Point Details		Sheet	1	16	1	16	
24.7	Project Layout		Sheet	0	0	0	0	N/A
24.8	Plan Sheet		Sheet	5	4	5	20	
24.9	Special Details		Sheet	2	18	2	36	Barrier and Decorative Light Details
24.10	Temporary Lighting Data & 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						**13**	**124**	
24.13	Quality Assurance/Quality Control		LS	%	0%		0	
24.14	Supervision		LS	%	0%		0	
24. Lighting Plans Total						**13**	**124**	

Scheda Ecological, Inc.

ESTIMATE OF WORK EFFORT AND COST - SUBCONSULTANT

Name of Project:	PBC Ocean Ave Bridge over the Intracoastal in Lantana	Consult. Name:	Scheda Ecological Associates
County:	Palm Beach	SEA Proposal	1150.20.P
FPN:	PBC Project No. 2003502	Date:	10/17/2007
FAP No.:	N/A	Estimator:	S. Scheda

Staff Classification	Total Staff Hours From "SH Summary - Firm"	Chief Scientist	Senior Scientist	Scientist	GIS Anyalst	Staff Classification 9	Staff Classification 12	SH By Activity	Salary Cost By Activity	Average Rate Per Task
		$130.00	$110.00	$75.00	$70.00	$0.00	$0.00			
Enviornmental Permits	1,014	50	360	514	90	0	0	1,014	$90,950.00	$89.69
Total Staff Hours	1,014	50	360	514	90	0	0	1,014		
Total Staff Cost		$6,500.00	$39,600.00	$38,550.00	$6,300.00	$0.00	$0.00		$90,950.00	$89.69

Check = $90,950.00

Notes:

1. This sheet to be used by Subconsultant to calculate its fee.
2. Includes Scheda direct and indirect expenses
3. Scheda will attend all meetings regarding environmental permitting issues team progress meetings

Specialized Expenses:

Boat (6 days @ $250/day)	$ 1,500.00
GPS (6 days @ $100/day)	$ 600.00
SFWMD ERP Application	$ 5,000.00
PBC Tree Removal Permit Application	$ 680.00
USCG Bridge Permit	$ -
USACE Section 404 Permit	$ -
Total	**$ 7,780.00**

SALARY RELATED COSTS:		$ 90,950.00
OVERHEAD:	0%	$ -
SUBTOTAL:		**$ 90,950.00**
OPERATING M.	0%	$ -
EXPENSES:		
Standard Expense Rate on Labor (5%)		$ 4,547.50
Specialized Expenses (see table for detail)		$ 7,780.00
SUBTOTAL ESTIMATED FEE:		**$ 103,277.50**
Optional Services		$ -
GRAND TOTAL ESTIMATED FEE:		**$ 103,277.50**

Estimator: Wendy Sotera
Revised by: Sandy Scheda 10/17/07

Ocean Avenue Bridge Over The Intracoastal in Lantana
PBC Project No. 2003502

Task No.	Task	Units	No. of Units	Hours/ Units	Total Hours	Comments
8.1	Preliminary Project Research	LS	1	24	24	review historic data; create field maps
8.2	Establish Wetland Jurisdictional Lines	LS	1	160	160	Two events - 2008 and 2009. Seagrass survey 3 day (3 people) Determine seagrass and mangrove impacts coordinate with agencies (SFWMD, ERM, possible USACE), travel, boat launch
8.3	Missing from SOW					
8.4	Agency Verification of Wetland Data	LS	1	24	24	
8.5	Complete And Submit All Required Permit Applications	LS	1	600	600	4 permits anticipated (SFWMD ERP; USCG Bridge Permit; USACE Dredge and Fill; ERM) - EC Driver with provide Scheda with all engineering documents and sketches.Scheda will act as the lead on all permitting issues as related to Environmental. Scheda will attend all project meetings. Address one RAI event for each listed permit agency.EC Driver will supply Scheda will all engineering responses.
8.6	Prepare Dredge and Fill Sketches	LS	1	0	0	EC Driver will prepare for Scheda to submit
8.7	Prepare USCG Permit Sketches	LS	1	0	0	EC Driver will prepare for Scheda to submit
8.8	Prepare Easement Sketches	LS	1	0	0	EC Driver will prepare for Scheda to submit
8.9	Prepare SWPPP Sketches	LS	1	0	0	Not applicable for this project
8.10	Prepare Coastal Construction Control Line (CCCL) Permit Sketches	LS	1	0	0	N/A
8.11	Prepare Tree Permit Information	LS	1	4	4	Coordination with ERM
8.12	Mitigation Coordination and Meetings	LS	1	40	40	If a mitigation plan is required for wetland impacts related to this project, this will be considered optional services.
8.13	Mitigation Design	LS	1	0	0	Not applicable for this project
8.14	Environmental Clearances	LS	1	0	0	Not applicable for this project
8.15	Other Environmental	LS	1	90	90	Scope states that this item will not be applicable for the project, however there will be some level of effort required for wildlife and habitat related impacts for the permit submittal. Therefore, some manhours were included here. It is anticipated that these hours will be used for protected species data collection and documentation, working though protected species related permitting issues, and the essential fish habitat assessment.
	Environmental Permits Technical Subtotal				**942**	
8.16	Technical Meetings	LS	1	72	72	*Meetings are listed below*
8.17	Quality Assurance/Quality Control	LS	%	0%	0	
8.18	Supervision	LS	%	0%	0	
	Environmental Permits No technical SubTotal				**72**	
8.19	Coordination	LS	%	0%	0	
	8. Environmental Permits Total				**1014**	

8.16 Technical Meetings

					2 people 4 hours each
WMD	EA	2	8	16	
ACOE	EA	1	8	8	
USCG	EA	2	8	16	
USFWS	EA	2	8	16	
FFWCC	EA	1	8	8	
FDOT	EA	0	0	0	
Other meeting	EA	0	0	0	
Subtotal technical meetings				**64**	
Progress Mee	EA	0	4	4	
Phase Review	EA	0	4	4	
Total Meetings				**72**	

Carries to 8.16

8.5 Complete and Submit All Required Permit Applications

USCG Bridge Permit Application	
Draft Permit Application	120
Revise per EC Driver & PBC comments	24
RAI 1	40
Permit follow-up coordination/review draft permit	16
USACE Section 404 Permit Application	
Draft Permit Application	80
Revise per PBC comments	16
RAI 1	36
Permit follow-up coordination/review draft permit	16
SFWMD ERP Application	
Draft Permit Application	120
Revise per EC Driver & PBC comments	24
RAI 1	50
Permit follow-up coordination/review draft permit	16
PBC Tree Removal Permit Application	
Draft Permit Application	24
Revise per EC Driver & PBC comments	12
RAI 1	4
Permit follow-up coordination/review draft permit	2
Total	**600**

Brown & Phillips, Inc.

BROWN & PHILLIPS, Inc.
PROFESSIONAL SURVEYING SERVICES

November 5, 2007

Mr. Luis Costa
EC Driver & Associates, Inc.
150 E. Palmetto Park Rd., Ste. 400
Boca Raton, FL 33432

Re: Ocean Avenue Bridge over the Intracoastal in Lantana
(Lake Drive to Atlantic Drive West)

Dear Mr. Costa:

Thank you for the opportunity to provide you with the following services for the subject site. This proposal is based on documentation and information provided by your office. We will review any title work supplied by you. The scope of services is as follows:

SCOPE OF SERVICES

I. HORIZONTAL PROJECT NETWORK CONTROL

Using the information supplied by Palm Beach County, we will establish the Right-of-Way for Ocean Avenue including any submerged land leases provided by PBCo. A traverse will be run through the route and all found monumentation will be tied in. The survey will be oriented to Palm Beach County horizontal and vertical control. The Palm Beach County Survey Department will supply all the sectional control information along the proposed route.

The limits of the survey are from Lake Drive easterly approximately 2,200' to Atlantic Drive West.

II. VERTICAL PROJECT NETWORK CONTROL

A level run will be performed along the route using the existing Palm Beach County benchmarks. Temporary benchmarks will be set along the route, not exceeding 600 feet apart, so that we will have at least one benchmark per plan sheet. All benchmarks will be set outside of the proposed right of way.

III. BASELINE LAYOUT

We will lay out the baseline at 100-foot intervals setting appropriate points at each station. The baseline will be laid out within the limits of the ½ mile route. These baseline points will be used in the topographic and cross section phase to locate features and facilitate checks.

IV. REFERENCE POINTS

We will reference the baseline at intervals not exceeding 1400 feet along the route. These points will be used to replace disturbed baseline stations. We propose to set three references.

V. TOPOGRAPHIC SURVEY AND DIGITAL TERRAIN MODEL

A topographic survey will be performed along the route. This survey will tie in all visible features such as, but not limited to, signs, light poles, guardrails, bridge piers, utility sites and water hazards. These locations will show all features within the corridor from right of way to right of way extending to 10 feet outside the proposed right of way if provided. We will also obtain enough elevation along the route to create a complete DTM for the entire project, after determination of the final roadway alignment.

VI. SECTION TIES AND PROPERTY TIES

We will tie in section corners and property corners along the route to check the present alignment of Ocean Avenue. We will try to locate as many corners as possible to positively establish the current right of ways.

VII. UNDERGROUND UTILITIES

We will locate or set points (up to 30) for any necessary soil borings along the route. These points will be determined by others and supplied to Brown & Phillips, Inc. Brown & Phillips, Inc will locate any underground utilities that are marked in the field.

VIII. DRAINAGE ASBUILTS

We will attempt to get drainage asbuilt information on all the pipes leading out of any structures found. We will show invert elevations, pipe sizes and materials for all pipes located including outfall pipes.

IX. OCEAN AVENUE BRIDGE SURVEY & SOUNDINGS

We will do a detailed drawing of the ends of the existing structure and obtain elevations and locations. No elevations or locations are proposed for the actual bridge span except for a few spot checks. We will measure elevations of abutments, bridge piers and obtain soundings across the Intracoastal Waterway. We will perform soundings along each side of the bridge and also at 100' stations north and south of the bridge for 400'. This will be a total of 8 cross sections (4 on each side of the existing bridge).

X. JURISDICTION LINE SURVEY

We will locate the wetland areas that are marked in the field by the environmental engineers. This will be done at the east end of the bridge with the limits being from the dock just north of the bridge to the dock just south of the bridge. We will also stake out and locate the MHWL for this area. A survey will be prepared showing the wetlands located and the relationship of the MHWL. At the west end of the bridge we will locate the concrete bulkhead from the bridge southerly to the boat ramp, and northerly around to the area next to the condo pool. After review of the wetland by the governmental agencies, we may need to make a second trip to restake the MHWL, so a fee for this optional task is included in this proposal.

XI. RIGHT OF WAY STAKING

We will allow up to the time shown on Attachment 'A' for staking of existing or proposed right of way lines for on-site review.

XII. PARCEL SKETCHES AND LEGAL DESCRIPTIONS

We will prepare legal descriptions and sketches for each parcel from which right-of-way and easements are being acquired. These sketches will be based on record ownership data and record plats provided by Palm Beach County. All sketches will be consistent with the requirements of Palm Beach County and Florida Minimum Technical Standards. We have estimated twenty (20) parcels for this project at $450.00 each totaling $9,000.00.

XIII. CLOSURE

A drawing will be produced which will show all the features located. We propose to provide EC Driver with an AutoCAD file in the version requested. Any additional work will be done on an hourly basis as approved by you. The proposed cost for this project is $126,760.00 ($36,903.00 for Survey + $9,000.00 for Legal & Sketches + $75,500.00 for Reimbursable (per Attachment 'B') + $3,775.00 for Management of Reimbursable Work + $1,582.00 for Optional Work). Please do not hesitate to call me with any questions you might have regarding this proposal. We look forward to working with you on this project.

Sincerely,

Brown & Phillips, Inc.

John E. Phillips III, P.L.S.
Principal

JEP/kk

Accepted This _____ Day Of _____, 2007.

EC Driver

By: _____

Print Name: _____

ATTACHMENT "A"

Ocean Avenue Bridge over the Intracoastal in Lantana
(Lake Drive to Atlantic Drive West)

Description: Roadway Survey
Size: 2,200' +/-
Date of Proposal: November 5, 2007

TASK	3 MAN FIELD	CADD TECH	SURVEY TECH	PLS	COMMENTS
Horizontal Project Network Control	14		25	12	Establish control and right of way
Vertical Project Network Control	12		3		Set benchmarks
Baseline Alignment	10		3	1	Layout baseline 100' stations
Reference Points	4		1		Set 3 references
Section & Property Ties	6		2	1	
Topo, Cross Sections & Digital Terrain Model (no cross section on bridge)	42	25	24	13	Shoot break line, high & low pts. Prepare TIN file
Underground Utilities	10	10	5	1	30 test holes to be located, some in water
Asbuilts	10		5	1	Asbuilt Drainage Structure
Bridge Survey Detail	12	3	2	2	Approach slab back-bulkhead; checks to verify bridge
Channel Survey & Soundings	25	5	4	2	
Jurisdiction Line Survey MHWL	36	14	8	4	Locate flagged wetlands & prepare survey; MHWL
Right of Way Staking	20		5	2	Stake r/w for onsite review
Total Hours	201	57	87	39	
Rate/Hour	$117.00	$66.00	$64.00	$104.00	
Sub-total	$23,517.00	$3,762.00	$5,568.00	$4,056.00	
Total Price			$ 36,903.00		

REIMBURSABLES: Upland/Submerged Utility Location with water locates $75,500.00 (up to 30 locations, per Attachment 'B')

OPTIONAL:
2nd Jurisdictional Wetland Trip to Re-stake MHWL:
10 hrs. for Crew, 4hrs. for Survey Tech & 1.5 hr. for PLS = $1,582.00

ATTACHMENT 'B'

4640 Lipscomb Street,Suite 12
Palm Bay, Florida 32905
Phone: 321-984-7268
Facsimile: 321-984-7270

SEA Diversified, Inc.
1200 NW 17th Avenue, Suite 3
Delray Beach, Florida 33445
Phone: 561-243-4920 Facsimile: 561-243-4957

November 05, 2007

Forwarded via E-Mail

11-02-07
Mr. Luis Costa, P.E.
E.C. Drivers and Associates.
150 E. Palmetto Park Rd., Suite 400
Boca Raton, Florida 33432

Re: Proposal / Agreement for Professional Services - Revised
Upland / Submerged Utility Location
Bathymetric, Side Scan Sonar, Magnetometer and Dive Operations
Ocean Avenue Bridge, Lantana, Florida
Sea Diversified P.N. 07-1225

Dear Mr. Costa:

In accordance with our discussions, Sea Diversified, Inc. (SDI) is pleased to provide the following revised proposal for professional surveying services pertaining to the referenced project. The scope of work shall include magnetometer study and underwater diver operations pertaining to the location and identification of the reported utilities crossing the Intracoastal Waterway (ICWW) adjacent to the Ocean Avenue Bridge in Lantana, Florida. Based upon the information provided by your office, reported subaqueous utilities include the following:

North Side of Bridge:

- (1) Cable TV
- (2) City watermains

South Side of Bridge:

- (1) FPL cable
- (2) Bellsouth cables
- (1) City Sanitary Forcemain

The location of submerged utility lines shall be approached in two (2) phases. The first phase shall encompass the use of remote sensing equipment to identify the presence and approximate location of each referenced utility. This shall include a towed magnetometer sensor integrated with topside navigation/ data acquisition system. It is expected that this sensor will detect all referenced utilities enabling SDI to chart their approximate horizontal location. It is noted that the magnetometer will detect items of ferrous composition or comprised of ferrous components such as cables with steel armoring and steel pipelines. Cables without armoring may not be detected using this sensor. It is also noted that cables or pipelines lying in close proximity to each other may be difficult to distinguish and track separately. If this is encountered, we may be capable of identifying and mapping only a corridor of apparent cables or pipelines without a specific description of the actual utilities.

Using the results of the magnetometer survey, divers will be deployed to electronically track and locate utilities lying in close proximity to the existing bridge. For purposes of this proposal it is assumed that divers will be deployed to better define the horizontal location and approximate burial depth of the two (2) reported watermains lying north of the bridge and the FPL cable lying south of the bridge. For Phase One of the investigation diver operations will be limited to electronic utility tracking and underwater mapping combined with minimal excavation to expose these three (3) utilities. Further diver groundtruthing and underwater excavation to verify the results of the remote sensing operations or to locate utilities not identified through the magnetometer survey will be addressed as part of Phase Two. The cost of this subsequent work, if necessary, will be addressed via supplemental proposal..

A description of the scope of services is as follows:

General:

SDI shall provide supervision, field / office support staff and equipment to perform the scope of work described, herewith. All work shall be conducted to the highest level of industry standards and under the responsible charge of a Professional Surveyor and Mapper registered in the State of Florida. All work shall meet or exceed the Minimal Technical Standards set forth by the Florida Board of Professional Surveyors and Mappers in Chapter 61G17-6, Florida Administrative Code, pursuant to Section 472.027, Florida Statutes. If time permits, deviations from the scope of work shall be addressed via formal approved addendum to the executed Agreement for Professional Services. Otherwise it is noted that field or office work beyond that described herewith, resulting in additional time and efforts, approved verbally by the client or client's representative, shall be considered authorization to perform the work for additional compensation.

Horizontal and Vertical Data:

Horizontal Data: Feet, relative to the Florida State Plane Coordinate System, East Zone, North American Datum (NAD), 83/90

Vertical Datum: Feet, relative to the North American Vertical Datum, (NAVD) of 1988.

Phase One: Magnetometer Survey and Dive Operations

Magnetometer Survey:

SDI shall conduct a magnetometer survey of the seafloor along each side of the Ocean Avenue Bridge extending north and south of the bridge a minimum distance of two hundred and fifty (250) feet. Magnetometer data will be used to identify and map features of ferrous composition that are either buried or projecting above the seafloor such as manmade debris, cables and pipelines and /or other submerged items that may be pertinent the bridge replacement project. The survey shall be conducted using a cesium magnetometer or equivalent with topside positioning / navigation system. Magnetic anomalies shall be processed and tabulated by position (X-Y SPCS and Lat/Lon) and magnetic intensity (gammas). The data will be used to map the apparent horizontal location of reported submerged utilities for subsequent underwater dive operations. It is noted that isolated magnetic anomalies detected from the sensor may warrant diver verification operations. Diver groundtruthing pertaining to magnetic anomalies is not included as part of the scope of work described, herewith and will be addressed via supplemental agreement based on the extent of groundtruthing necessary.

Underwater Diver Operations:

Upon completion of the above described survey operations, SDI shall deploy a dive team to electronically track utilities located in close proximity to the existing bridge. During this phase of work and for purposes of estimating manhours, dive operations will be limited to the location of the two (2) watermains reported along the north side of the bridge and the FPL cable along the south side of the bridge. It is noted that the ability for divers to electronically track these utilities will be based on whether or not a tone can be placed on the cable or pipeline and how effectively the line carries the tone from one side of the waterway to the other. Limited excavation may be required in order to place a tone on the cable or pipeline. Upon inducing the tone, divers will mark the apparent location of each utility via electronically tracking the tone across the waterway. Surveyors will be onsite during the dive operations to locate the marked positions of the utilities using RTK GPS methodologies. Minimal excavation to expose utilities will be included in this initial phase of work, however, approximate burial depths will be recorded as feasible using the electronic tracking device.

Upland Utility Location:

SDI shall perform twenty (20) "pot holes" as dictated by the client. Upon exposing and identifying the utility SDI shall coordinate with the upland surveyor to position the utility both horizontally and vertically. The pot hole locations shall be determined by the client and spaced so approximately ten (10) pot holes will be performed on each side of the bridge. Additional "pot holes", if required will be conducted based on a cost of $750.00 per "pot hole".

Data Processing and Final Deliverables:
Upon completion of field survey activities, data will be edited and reduced to the project datum and formatted as required for chart preparation. Charts will be prepared in MicroStation (.dgn) format depicting bathymetric contours at one-foot intervals and plan-view location of utilities with measured elevations. Digital data files and CADD drawing files will be provided on CD along with a survey report describing the methodologies used for the project along with a summary of results.

Total Fee for above described scope of work (Phase One) shall be as follows:

Magnetometer Survey :

Lump sum fee for data collection, processing and charting shall be $13,500.00

Dive Operations:

Lump sum fee for the above described dive operations shall be $37,500.00

Upland Utility Location:

Lump sum fee for the above described utility location shall be $15,000.00

Charting:

Lump sum fee for chart preparation as described above shall be $9,500.00

Phase Two: Diver Groundtruthing

Groundtruthing the results of the Phase One remote sensing operations is recommended in order to verify the precise horizontal and vertical location of submerged utilities that could potentially be impacted as part of the bridge construction activities. As requested, SDI shall deploy divers to physically expose, identify and map the horizontal and vertical location of reported utility crossings in proximity to the bridge. Divers shall use either water jetting equipment or air sand lifts to expose utilities to the extent required for classification and location. Prior to the commencement of diver operations, SDI survey crews will mark the apparent location of the utilities based on known asbuilt information and / or data acquired from the surveys described above. SDI survey crews will be onsite during the dive operations to locate the exposed utilities both horizontally and vertically using conventional survey and / or RTK GPS methodologies. Each known utility will be exposed at random intervals along the submerged length extending from the westerly to easterly bulkhead lines of the ICWW. It is noted that exposing buried pipelines or cables using the methods described here is generally limited to a maximum burial depth of three (3) to four (4) feet depending on the nature of the sediments, tidal currents, vessel traffic and extent of wake. Utilities buried beyond this depth may require additional personnel, different equipment or other methodologies.

Cost to conduct the groundtruthing operations will be based upon the number of utilities to be located and the accuracy requirements dictated by the client. This phase of work will be addressed via supplemental agreement.

Should you have questions or require additional information please do not hesitate to contact us at your convenience. We appreciate this opportunity to assist you with this project and look forward to hearing from you soon.

Sincerely,

William T. Sadler Jr., P.E., P.S.M.
President

WTS/tm

Tierra, Inc.

TIERRA

November 14, 2007
(Revised)

TO: Luis Costa, P.E.
Vice President
E.C. Driver & Associates
150 E. Palmetto Park Rd, Suite 400
Boca Raton, Florida 33432

SUBJECT: Geotechnical Services
Ocean Avenue Bascule Bridge over ICWW
Lantana, Florida
PBC Project No. 2003501S
Tierra Proposal No. 0703-116

Dear Luis:

Tierra, Inc. is pleased to present this Agreement for the above-referenced project. The proposal is prepared based on scope of services provided by Mr. Luis Costa, P.E. of EC Driver & Associates. The price proposal is based upon an understanding of the required geotechnical work scope for the project, a review of the latest revision of the Soil and Foundation Manual.

Attachment A lists the work proposed for this project. Attachment B shows the price proposal for the proposed work.

TIERRA enthusiastically looks forward to working with EC Driver & Associates and the Palm Beach County Roadway Production. Please call with any questions or need further information.

Very truly yours,

TIERRA, INC.

Raj Krishnasamy, P.E.
Principal Engineer
FL Registration No. 53567
RK:
Attachments

ATTACHMENT A
ESTIMATED SCOPE OF WORK
OCEAN AVENUE BASCULE BRIDGE
PALM BEACH COUNTY
TIERRA PROPOSAL NO. 0703-116

Based on the scope of services, we estimate the following work will be required.

1. Review the United States Department of Agriculture, Geological Survey, Soil Conservation Service Maps, etc.

2. Review existing bridge borings and research other geotechnical data available from other projects adjacent to the bridge.

3. Perform sixteen (16) SPT borings to a depth 80 feet. All borings will be performed within Intracoastal Waterway. A barge will be utilized to perform all the borings.

4. Perform ten (10) auger borings for roadway approaches on west and east, and four (4) Borehole Permeability tests.

5. Perform four (4) borings to a depth 30 feet for the proposed MSE wall.

6. Additionally, we propose to obtain at least 10 feet of rock coring in each borings.

7. Perform Laboratory analysis an selected samples:
   - Grain Size
   - Moisture Content
   - Organic Content test
   - Compression / Split tensile tests

8. Prepare both preliminary and final Geotechnical engineering report based on field exploration and laboratory analysis. The report will summarize the gathered data and providing recommendations on foundation types.

TIERRA, INC 2006/2007
UNIT FEE
SCHEDULE

I. FIELD INVESTIGATION	Unit	# of Units		Unit Price		Total
Mobilization of Men and Equipment						
Truck-Mounted Equipment	Each	1	$	330.00	$	330.00
Specialized ATV/Mudbug	Each	0	$	712.00	$	0.00
Support Vehicle	Each	16	$	150.00	$	2,400.00
Mob/Demob Barge Equipment	Each	2	$	6000.00	$	12,000.00
Barge-Mounted Equipment	Day	16	$	6600.00	$	105,600.00
Crane Rental	Hour	20	$	250.00	$	5,000.00
Crash Attenuar Truck	Hour	0	$	120.00	$	0.00
Mob Between Holes	Each	0	$	160.00	$	0.00
Support Boat	Day	16	$	500.00	$	8,000.00
Standard Penetration Test Borings						
(By Barge-Mounted Equipment)						
0 - 50 ft depth	L.F.	500	$	20.00	$	10,000.00
50 - 100 ft depth	L.F.	500	$	27.00	$	13,500.00
100 - 150 ft depth	L.F.	0	$	50.00	$	0.00
Grout-Seal Boreholes						
(By Barge-Mounted Equipment)						
0 - 50 ft depth	L.F.	500	$	8.00	$	4,000.00
50 - 100 ft depth	L.F.	500	$	10.00	$	5,000.00
100 - 150 ft depth	L.F.	0	$	16.00	$	0.00
Casing Allowance						
(By Barge-Mounted Equipment)						
0 - 50 ft depth	L.F.	600	$	13.50	$	8,100.00
50 - 100 ft depth	L.F.	500	$	16.00	$	8,000.00
100 - 150 ft depth	L.F.	0	$	19.00	$	0.00
Rock Coring (Structures)						
(By Barge-Mounted Equipment)						
0 - 50 ft deep	L.F.	0	$	75.00	$	0.00
50 - 100 ft deep	L.F.	100	$	95.00	$	9,500.00
100 - 150 ft deep	L.F.	0	$	105.00	$	0.00
Standard Penetration Test Borings						
(By Truck-Mounted Equipment)						
Land: 0 - 50 ft depth	L.F.	120	$	12.00	$	1,440.00
Grout-Seal Boreholes						
(By Truck-Mounted Equipment)						
Land: 0 - 50 ft depth	L.F.	120	$	4.50	$	540.00
Field Permeability Tests (BoreHole Perc)	Each	4	$	275.00	$	1,100.00
Flagmen & Barricades (2 man crew)	Day	0	$	850.00	$	0.00
Flagmen & Barricades (2 man crew)	Night	0	$	1200.00	$	0.00
Florida Patrolmen (Traffic Control)	Hour	0	$	50.00	$	0.00
Sr. Eng Tech (Traffic Control)	Hour	20	$	65.00	$	1,300.00
Arrow Rental Sign	Day	2	$	130.00	$	260.00
Cones Barricades	Day	2	$	230.00	$	460.00
Variable Message Board	Day	2	$	160.00	$	320.00
Auger Borings (Roadway)	L.F.	50	$	9.00	$	450.00

TIERRA, INC 2006/2007
UNIT FEE
SCHEDULE

	Extra Split Spoon Samples	Each	0	$	44.20	$	0.00
	Hand Muck Probes (2-man crew)	Day	0	$	850.00	$	0.00
	Thin Walled Shelby Tube Samples (Land)	Each	0	$	187.43	$	0.00
	2-Inch Piezometer Installation	L.F.	0	$	43.00	$	0.00
	Standby/Decontamination (Drill Rig & Crew)	Hour	0	$	198.45	$	0.00
	Piezometer Permit	Each	0	$	70.35	$	0.00
	Double Ring Infiltration Test	Each	0	$	507.15	$	0.00
	Pavement Cores, Asphalt	Each	0	$	107.00	$	0.00
	Pavement Cores, Concrete	Each	0	$	107.00	$	0.00
	Ground Penetrating Radar	Day	0	$	3087.00	$	0.00
II.	**LABORATORY TESTING**						
	Natural Moisture Content Tests	Each	20	$	11.00	$	220.00
	Grain-Size Analysis - Full Gradation	Each	20	$	67.00	$	1,340.00
	Grain-Size Analysis - Single Sieve	Each	10	$	40.11	$	401.10
	Rock Compression Test	Each	10	$	125.00	$	1,250.00
	Split Tension Test	Each	10	$	125.00	$	1,250.00
	Organic Content Test	Each	5	$	35.00	$	175.00
III	**ENGINEERING SERVICES**						
	Principal Engineer, P.E.	Hour	48	$	120.00	$	5,760.00
	Senior Geotechnical Engineer, P.E.	Hour	208	$	100.00	$	20,800.00
	Engineer, P.E.	Hour	249	$	85.00	$	21,165.00
	Staff Engineer	Hour	0	$	75.00	$	0.00
	Senior Engineering Technician	Hour	27	$	65.00	$	1,755.00
	Engineering Technician	Each	0	$	50.00	$	0.00
	Drafter / CAD	Each	70	$	50.00	$	3,500.00
							254,916.10

The unit rates provided are those for both public and private sectors.

Raj Krishnasamy, P.E
Principal/Geotechnical Engineer

Project Activity: Geotechnical

Estimator: Raj Krishnasamy, P.E.
Form Revised 11/08/02

Ocean Avenue Bridge Over ICWW
PBC No. 2003502S

Task No.	Task	Units	No. of Units	Hours / Unit	Total Hours	Comments
	Roadway					
30.1	Document Collection and Review	LS	1	10	10	Sr. Engineer
30.2	Develop detailed boring location plan	LS	1	2	2	Sr. Engineer
30.3	Stake Borings/Utility Clearance	Boring	14	0.5	7	10 Auger and 4 BHP; Sr. Engg. Technician
30.4	Coordinate and develop MOT plans for field investigation	EA	1	8	8	Engineer
30.5	Drilling Access Permits	Location	0	0	0	
30.6	Property Clearances	EA	0	0	0	
30.7	Groundwater Monitoring	EA	0	0	0	
30.8	LBR Sampling	EA	0	0	0	
30.9	Coordination of Field Work	100 lf of boring	0.5	2	1	Engineer
30.10	Soil and Rock Classification - Roadway	100 lf of boring	0.5	2	1	Engineer
30.11	Determine Design LBR	LS	0	0	0	
30.12	Tabulate all Laboratory Data	100 lf of boring	0.5	1	1	Engineer
30.13	Estimate Seasonal High Water Table	Boring	0	0	0	
30.14	Calculate Parameters for Water Retention Areas	EA	4	1	4	Engineer
30.15	Delineate limits of Unsuitable Material	Cross-section	0	0	0	
30.16	ASCII files for cross-sections	100 lf of boring	0.5	1	1	Engineer
30.17	Embankment settlement and Stability	Embankment Boring	0	0	0	
30.18	Stormwater Volume Recovery and/or Background Seepage Analysis	EA	0	0	0	
30.19	Geotechnical Recommendations	LS	1	10	10	Sr. Engineer
30.20	Preliminary Roadway Report and Pavement Evaluation Report	LS	1	0	0	
30.21	Final Report	EA	1	10	10	Sr. Engineer
30.22	Auger boring drafting	100 lf boring	0.5	6	3	Drafter/CAD
30.23	SPT boring drafting	100 lf boring	0	0	0	
	Roadway Geotechnical Subtotal				58	

Project Activit[redacted] Geotechnical

Task No.	Task	Units	No. of Units	Hours / Unit	Total Hours	Comments
	Structural					
30.24	Develop detailed boring location plan	LS	1	2	2	Sr. Engineer
30.25	Stake Borings/Utility Clearance	Boring	10	2	20	Sr. Engg Technician
30.26	Coordinate and develop MOT plans for field investigation	EA	1	20	20	Engineer
30.27	Drilling Access Permits	Location	1	0	0	
30.28	Property Clearances	EA	0	0	0	
30.29	Collection of corrosion samples	EA	0	0	0	
30.30	Coordination of Field Work	100 lf of boring	11.2	2.5	28	10 borings to 100 feet for bridge and 4 @ 30 feet for walls; total drilling = (10 x 100) + (4 x 30) = 1,120 lin. ft.; Engineer
30.31	Soil and Rock Classification - Structures	100 lf of boring	11.2	2	22	Engineer
30.32	Tabulate all Laboratory Data	100 lf of boring	11.2	2	22	Engineer
30.33	Estimate Design groundwater level for structures	EA	0	0	0	
30.34	Evaluation and Selection of Foundation Alternatives (BDR)	Bridge boring	10	5	50	Need to evaluate both driven piles and drilled shafts; Sr. Engineer - 25 hrs, Engineer - 25 hrs
30.35	Detailed Analysis of Selected Foundation Alternate(s)	Bridge boring	10	4	40	Sr. Engineer - 20 hrs, Engineer - 20 hrs
30.36	Bridge Construction and Testing Recommendations	Bridge boring	10	2	20	Sr. Engineer
30.37	Lateral Load Analysis	Bridge boring	10	4	40	Sr. Engineer - 10 hrs, Engineer - 30 hrs
30.38	Walls	Wall Boring	4	4	16	Engineer
30.39	Sheetpile wall Analysis	Wall Boring	0	0	0	
30.40	Design soil parameters for Signs, Signals, High Mast Lights, and Strain Poles and Geotechnical recommendations.	Boring	0	0	0	
30.41	Box Culvert Analysis	EA	0	0	0	
30.42	Preliminary Report - BDR	EA	1	40	40	Sr. Engineer - 20 hrs, Engineer - 20 hrs
30.43	Final Report - Bridge and associated walls	EA	1	60	60	Sr. Engineer - 30 hrs, Engineer - 30 hrs
30.44	Final Reports - Signs, Signals, Box Culvert, Walls and High Mast Lights.	EA	0	0	0	
30.45	SPT boring drafting	100 lf of boring	11.2	6	67	Drafter/CAD
	Structural Geotechnical Subtotal				447	
	Geotechnical Technical Subtotal				505	
30.46	Specification Development and Review (TSP)	EA	0	0	0	

Project Activity: Geotechnical

Task No.	Task	Units	No of Units	Hours / Unit	Total Hours	Comments
30.47	Field Reviews	LS	1	12	12	Sr. Engineer
30.48	Technical Meetings	LS	1	12	12	Sr. Engineer
30.49	Quality Assurance/Quality Control	LS	%	5.0%	25	Sr. Engineer
30.50	Supervision	LS	%	5.0%	25	PM
	Geotechnical Nontechnical Subtotal				74	
30.51	Coordination	LS	%	4.0%	23	PM
30.52	Optional Preliminary Contamination Assessment	LS	1	0	0	
	30 Geotechnical Total				602	

SUMMARY:

Project Manager	48	Hrs
Senior Geotechnical Engineer	208	Hrs
Engineer	249	Hrs
Senior Engineering Technician	27	Hrs
Drafter/CAD	70	Hrs
Total =	**602**	**Hrs**

BEA International, Inc.

Ocean Avenue Bridge
Scope of Services for BEA International

General:

The general scope of services for BEA is to prepare complete bid documents, including plans and specifications, for construction of the bridge tenders control house and associated architectural elements of the bascule piers. In addition, BEA will provide Architectural consultation to the design team and owner regarding the overall aesthetics concept for the project.

PART I Control House:

It is anticipated that the control house will be a two story structure with the first level at approximately the bridge deck level and the second level one story above the bridge deck. The first level will consist of an entry, access stairs to the bascule pier below and the control room above, a storage room, a lavatory/wash room and possibly locations for miscellaneous equipment such as lockers. The second level will be the control room. The second level will feature an exterior balcony or walkway to enable the bridge tender to move around outside the control room in the event a better vantage point is needed to observe the area around the bridge or to service/clean exterior windows. The second level will also feature cabinetry with built in refrigerator, microwave oven, bar sink, and counter space. The second level of the control house will have ceiling fan(s) and motorized windows and/or vents to provide for air circulation if the normal HVAC is not functioning.

BEA will prepare the architectural concept and final design plans and specifications for the bridge control house from the bridge deck level up. BEA will prepare the designs and detail plans and specifications for the HVAC and plumbing systems for the control house. HVAC will be provided in the entry level, control room, and the electrical equipment room located in the bascule pier below the control house. BEA will prepare the structural designs and detailed plans and specifications for the control house structure above the concrete structure (anticipated to be the top of floor of the control room).

Control House design criteria include the Florida Building Code and the FDOT Structures Manual (at the time this scope was prepared the applicable section is Structures Design Guidelines, Chapter 8, Section 8). Specific requirements of the FDOT requirements may be waived with approval of the County. The bridge operator shall be protected by bullet resistant glass and structure. The control house is exempt from ADA accessibility requirements regarding elevators.

BEA's design will be based upon geometric layouts of the control room floor, control panel location, and bridge tenders visibility study prepared by ECDA. Windows, window framing, and structural framing will be designed to maximize the bridge tenders views of vessels and vehicular traffic.

In addition to detailing the door and window schedules for the control house, detail and schedule the doors, windows and louvers in the two bascule piers. ECDA will provide the rough opening dimensions and requirements for these items and provide the rough opening details in the bridge plans. The following items are anticipated:

- Exterior doors from bascule pier to fender system
- Exterior widows in the bascule pier at the machinery level (operable)
- Interior doors between electrical room and pier and generator room and pier
- Exterior louvers to vent the bascule piers
- Exterior louvers to vent the generator

Drawings will be prepared in 11"x17" format with text and details sized so that they are legible when produced at that size. Specifications will be prepared in Masterspec format using Microsoft Word software. Electronic files of the specifications will be furnished to ECDA for incorporation into the project specifications package.

ECDA will design and detail the control house concrete structure (anticipated to be from the deck level up to the top of floor of the control room, including dimensioning all rough openings and detailing reinforcing steel and other embedded anchorages. ECDA will design and detail conduit and piping supports for potable water supply, electrical power supply, and wastewater discharge between the service points and the control house. ECDA will provide the sizes and requirements for bascule pier doors, windows, and louvers.

PART II Architectural Consultation:

BEA will assist the design team in preparing the aesthetic development and details for the project. ECDA will provide BEA with the general layout and dimensioning of the bridge structure, including span arrangements, beams, piers, control house, and pedestrian railings. BEA will develop an architectural concept for the project to include:

- color and surface finish pallet for those items of the project that receive an applied finish such as:
  - Aluminum or steel pedestrian handrails
  - Structural Steel of the Bascule Span
  - Concrete surfaces of the deck coping, exterior beams, abutments, retaining walls, approach piers, bascule piers
  - Control House windows, doors, exposed metal framing, roof, gutters, etc.
  - Louvers
- Concrete detail standards for items such as chamfers, joint detailing, rustications, or form liners as they may be applied.

Bridge Renderings:

BEA will prepare renderings of the preliminary and final bridge designs for use in presentation to the County and public. Renderings are to be made available in hard copy and electronic format that can be included in a Powerpoint presentation. In addition to the overall bridge, prepare select detail sketches to demonstrate the materials, colors and textures selected for the bridge.

Meetings:

BEA will attend progress meetings as required to coordinate the work. BEA will also attend up to three half day workshops with the bridge design team to discuss the bridge architecture and control house design. Progress meetings and workshops will be held in ECDA's Boca Raton Office unless otherwise agreed upon.

BEA will attend two public workshops and up to 2 small group public meetings and be prepared to present the renderings and answer questions regarding the design.

ESTIMATE OF WORK EFFORT AND COST - SUB-CONSULTANT

Name of Project: **Ocean Avenue Bridge in Lantana over the AICWW**
County: Palm Beach
PBC Project No. 2003502

Sub-consultant Name: **BEA International**
Consultant No.: NA
Date: rev 11.15.07
Estimator: Larry Levis, AIA

Staff Classification	Total Staff Hours	Senior Professional *	Professional *	Job Captain *	Senior Designer *	Designer *	Staff Classification	Staff Classification	SH By Activity	Salary Cost By Activity	Average Rate Per Task
		$150.00	$115.00	$100.00	$95.00	$80.00	$0.00	$0.00			
Architectural Plans	708	140	100	140	200	128			708	$75,740	$106.98
Architectural Design	348	60	24		184	80			348	$35,640	$102.41
Structural Plans	156	36	24	32	40	24			156	$17,080	$109.49
Mechanical Plans	100	24	24	24	16	12			100	$11,240	$112.40
Plumbing Plans	40	8	8	8	8	8			40	$4,320	$108.00
Fire Protection Plans	35	7	8	4	8	8			35	$3,770	$107.71
Electrical Plans	88	20	8	20	20	20			88	$9,420	$107.05
Total Staff Hours	1,475	295	196	228	476	280	0	0	1,475		
Total Staff Cost		$44,250.00	$22,540.00	$22,800.00	$45,220.00	$22,400.00	$0.00	$0.00		**$157,210.00**	**$106.58**

Check = $157,210.00

Form Revised 3/28/05

SALARY RELATED COSTS: $157,210.00
*Rates shown are loaded rates

GRAND TOTAL ESTIMATED FEE: $157,210.00

Project Activity 31: Architecture Development

Estimator: Larry Levis, AIA
Revised: 10.16.07

Task No.	Task	Scale	Units	No of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
	Architectural Plans							
31.17	Key Sheet and Index of Sheets		Sheet	1	8	1	8	
31.18	General Notes, Abbreviations, Symbols, and Legend		Sheet	1	8	1	8	
31.19	Life Safety Plan(s)		Sheet	2	20	2	40	
31.20	Site plan(s)		Sheet	1	12	1	12	
31.21	Floor Plan(s) (small scale)		Sheet	1	20	1	20	
31.22	Floor Plan(s) (large scale)		Sheet	1	40	1	40	
31.23	Exterior Elevation(s)		Sheet	2	40	2	80	
31.24	Roof Plan(s)		Sheet	1	16	1	16	
31.25	Roof Details		Sheet	1	20	1	20	
31.26	Interior Elevation(s)		Sheet	1	8	1	8	
31.27	Rest Room Plan(s) (Enlarged)		Sheet	1	16	1	16	
31.28	Rest Room Elevation(s)		Sheet	1	16	1	16	
31.29	Building Section(s)		Sheet	2	40	2	80	
31.30	Reflected Ceiling Plan(s)		Sheet	2	20	2	40	
31.31	Room Finish Schedule		Sheet	1	16	1	16	
31.32	Door Finish Schedule		Sheet	1	16	1	16	
31.33	Door Jamb Detail(s)		Sheet	1	16	1	16	
31.34	Exterior Wall Section(s)		Sheet	1	48	1	48	
31.35	Interior Wall Section(s)		Sheet	0	0	0	0	
31.36	Overhead Dorr Detail(s)		Sheet	0	0	0	0	
31.37	Curtain Wall Detail(s)		Sheet	0	0	0	0	
31.38	Fascia, Soffit and Parapet Details		Sheet	1	32	1	32	

Project Activity 31: Architecture Development

Task No.	Task	Scale	Units	No of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments	
31.39	Signage Detail(s)		Sheet	0	0	0	0		
31.40	Miscellaneous Detail(s)		Sheet	1	40	1	40		
31.41	Repetitive Sheets		Sheet	0	0	0	0		
31.42	Design Narrative Reports		LS	1	8		8		
31.43	Specifications		LS	1	50		50		
31.44	Permitting		LS	1	0		0		
31.45	Cost Estimates		LS	1	50		50		
31.46	Technical Special Provisions Package		LS	1	0		0		
Architectural Plans Technical Subtotal						**24**	**680**		
31.47	Field Reviews		LS	1	0		0		
31.48	Technical Meetings		LS	1	28		28	Meetings are listed below	
31.49	Quality Assurance/Quality Control		LS	%	0%		0		
31.50	Independent Peer Review		LS	%	0%		0		
31.51	Supervision		LS	%	0%		0		
Architectural Plans Total						**24**	**708**	$	75,740
Architectural Design									
31.01	Renderings		LS	1	240		260		
31.02	Color/Pallette development		LS	1	48		56		
31.03	Design meetings		LS	1	32		32		
Architectural Design Total							**348**	$	35,640

Project Activity 31: Architecture Development

Task No.	Task	Scale	Units	No of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
	Structural Plans							
31.52	General Notes, Abbreviations, Symbols, and Legend		Sheet	1	4	1	4	
31.53	Foundation Plan(s) (Small Scale)		Sheet	0	0	0	0	
31.54	Foundation Plan(s) (Large Scale)		Sheet	0	0	0	0	
31.55	Slab Plan(s) (Small Scale)		Sheet	1	8	1	8	
31.56	Slab Plan(s) (Large Scale)		Sheet	1	8	1	8	
31.57	Slab Placement Plan(s)		Sheet	0	0	0	0	
31.58	Slab Placement Detail(s)		Sheet	0	0	0	0	
31.59	Foundation Section(s)		Sheet	0	0	0	0	
31.60	Foundation Detail(s)		Sheet	0	0	0	0	
31.61	Slab Section(s)		Sheet	1	8	1	8	
31.62	Slab Detail(s)		Sheet	1	8	1	8	
31.63	Roof Framing Plan(s) (Small Scale)		Sheet	1	24	1	24	
31.64	Roof Framing Plan(s) (Large Scale)		Sheet	0	0	0	0	
31.65	Roof Loading Plan(s) and Detail(s)		Sheet	1	4	1	4	
31.66	Roof Section(s)		Sheet	1	8	1	8	
31.67	Roof Detail(s)		Sheet	1	8	1	8	
31.68	Bearing Wall Section(s)		Sheet	1	8	1	8	
31.69	Bearing Wall Detail(s)		Sheet	1	8	1	8	
31.70	Column Section(s)		Sheet	0	0	0	0	
31.71	Column Detail(s)		Sheet	0	0	0	0	
31.72	Miscellaneous Sections		Sheet	1	24	1	24	
31.73	Repetitive Sheets		Sheet	0	0	0	0	
31.74	Other Pertinent Project Documentation		LS	1	0		0	
31.75	Cost Estimate		LS	1	20		20	
31.76	Technical Special Provisions Package		LS	1	12		12	
	Structural Plans Technical Subtotal					**12**	**152**	
31.77	Field Reviews		LS	1	0		0	
31.78	Technical Meetings		LS	1	4		4	
31.79	Quality Assurance/Quality Control		LS	%	0%		0	
31.80	Independent Peer Review		LS	%	0%		0	
31.81	Supervision		LS	%	0%		0	
	Structural Plans Total					**12**	**156**	$ 17,080

Project Activity 31: Architecture Development

Task No.	Task	Scale	Units	No of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
	Mechanical Plans							
31.82	General Notes, Abbreviations, Symbols, Legend and Code Issues		Sheet	1	2	1	2	
31.83	Plan(s) (Small Scale)		Sheet	1	16	1	16	
31.84	Plan(s) (Large Scale)		Sheet	1	6	1	6	
31.85	Detail(s)		Sheet	1	16	1	16	
31.86	Section(s)		Sheet	0	0	0	0	
31.87	Piping Schematic(s)		Sheet	1	16	1	16	
31.88	Control Plan(s)		Sheet	1	8	1	8	
31.89	Schedule(s)		Sheet	1	8	1	8	
31.90	HVAC Calculations		Sheet	1	10	1	10	
31.91	Life Cycle Cost Analysis		Sheet	1	6	1	6	
31.92	Repetitive Sheets		LS	1	0		0	
31.93	Other Pertinent Project Documentation		LS	1	0		0	
31.94	Cost Estimate		LS	1	8		8	
31.95	Technical Special Provisions Package		LS	1	0		0	
	Mechanical Plans Subtotal					**9**	**96**	
31.96	Field Reviews		LS	1	0		0	
31.97	Technical Meetings		LS	1	4		4	
31.98	Quality Assurance/Quality Control		LS	%	0%		0	
31.99	Independent Peer Review		LS	%	0%		0	
31.100	Supervision		LS	%	0%		0	
	Mechanical Plans Total					**9**	**100**	$ 11,240

Project Activity 31: Architecture Development

Task No.	Task	Scale	Units	No of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
	Plumbing Plans							
31.101	General Notes, Abbreviations, Symbols, Legend, and Code Issues		Sheet	1	2	1	2	
31.102	Plan(s) (Small Scale)		Sheet	1	4	1	4	
31.103	Plan(s) (Large Scale)		Sheet	1	4	1	4	
31.104	Isometric(s)		Sheet	1	8	1	8	
31.105	Riser Diagram(s)		Sheet	1	8	1	8	
31.106	Detail(s)		Sheet	1	8	1	8	
31.107	Repetitive Sheets		Sheet	0	0	0	0	
31.108	Other Pertinent Project Documentation		LS	1	0		0	
31.109	Cost Estimate		LS	1	6		6	
31.110	Technical Special Provisions Package		LS	1	0		0	
	Plumbing Plans Subtotal					**6**	**40**	
31.111	Field Reviews		LS	1	0		0	
31.112	Technical Meetings		LS	1	0		0	
31.113	Quality Assurance/Quality Control		LS	%	0%		0	
31.114	Independent Peer Review		LS	%	0%		0	
31.115	Supervision		LS	%	0%		0	
	Plumbing Plans Total					**6**	**40**	$ 4,320
	Fire Protection Plans							
31.116	General Notes, Abbreviations, Symbols, Legend, and Code Issues		Sheet	1	4	1	4	
31.117	Fire Protection Plan		Sheet	1	9	1	9	
31.118	Riser Diagram, Details, and partial Plans		Sheet	1	12	1	12	
31.119	Hydraulic Calculation		Sheet	1	6	1	6	
31.120	Repetitive Sheets		Sheet	0	0	0	0	
31.121	Other Pertinent Project Documentation		LS	1	0		0	
31.122	Cost Estimate		LS	1	4		4	
31.123	Technical Special Provisions Package		LS	1	0		0	
	Fire Protection Plans Subtotal					**4**	**35**	
31.124	Field Reviews		LS	1	0		0	
31.125	Technical Meetings		LS	1	0		0	
31.126	Quality Assurance/Quality Control		LS	%	0%		0	
31.127	Independent Peer Review		LS	%	0%		0	
31.128	Supervision		LS	%	0%		0	
	Fire Protection Plans Total					**4**	**35**	$ 3,770

Project Activity 31: Architecture Development

Task No.	Task	Scale	Units	No of Units	Hours/ Unit	No. of Sheets	Total Hours	Comments
	Electrical Plans							
31.129	General Notes, Abbreviations, Symbols, Legend, and Code Issues		Sheet	1	2	1	2	
31.130	Electrical Site Plan		Sheet	0	0	0	0	
31.131	Lighting Plan(s)		Sheet	1	6	1	6	
31.132	Lighting Fixtures Schedule(s)		Sheet	1	6	1	6	
31.133	Lighting Fixtures Detail(s)		Sheet	0	0	0	0	
31.134	Lightning Protection Plan(s)		Sheet	1	2	1	2	
31.135	Lightning Protection Details		Sheet	1	2	1	2	
31.136	Power Plan(s)		Sheet	1	8	1	8	
31.137	Power Distribution Riser Diagram(s)		Sheet	1	8	1	8	
31.138	Panelboard Schedule(s)		Sheet	1	8	1	8	
31.139	Data Plan(s)		Sheet	1	4	1	4	
31.140	Data Detail(s)		Sheet	0	0	0	0	
31.141	Communication Plan(s)		Sheet	1	4	1	4	
31.142	Communication Detail(s)		Sheet	0	0	0	0	
31.143	Security Alarm Sysytem Plan(s)		Sheet	1	4	1	4	
31.144	Miscellaneous Detail(s)		Sheet	1	16	1	16	
31.145	Repetitive Sheets		LS	1	0		0	
31.146	Energy Analysis		LS	1	8		8	
31.147	Other Pertinent Project Documentation		LS	1	0		0	
31.148	Cost Estimate		LS	1	6		6	
31.149	Technical Special Provisions Package		LS	1	0		0	
	Electrical Plans Subtotal					**12**	**84**	
31.150	Field Reviews		LS	1	0		0	
31.151	Technical Meetings		LS	1	4		4	
31.152	Quality Assurance/Quality Control		LS	%	0%		0	
31.153	Independent Peer Review		LS	%	0%		0	
31.154	Supervision		LS	%	0%		0	
	Electrical Plans Total					**12**	**88**	$ 9,420
	31. Architecture Development Total						**1475**	$ 157,206

EXHIBIT "C"

PROJECT: Ocean Avenue (Lantana) Bridge over Intracoastal Waterway **PROJECT NO.:** 2003502

CONSULTANT: E. C. Driver & Associates, Inc.

TRUTH-IN-NEGOTIATION STATEMENT

By entering into this Agreement, the **CONSULTANT** certifies that the wage rates and costs used to determine the lump sum fees contained in herein are accurate, complete and current as of the date of this Agreement.

The said lump sum fees shall be adjusted to exclude any significant sums should the **COUNTY** determine that the lump sum fees were increased due to inaccurate, incomplete or non-current wage rates or due to inaccurate representations of fees paid to outside consultants.

The **COUNTY** shall exercise its right under this "Certificate" within one year following final payment.

PROHIBITION AGAINST CONTINGENT FEES STATEMENT

By entering into this Agreement the **CONSULTANT** warrants that they have not employed or retained any company or person other than a bonafide 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 bonafide employee working solely for the **CONSULTANT,** any fee, commission, percentage, gift or other consideration contingent upon or resulting from the award of making of this agreement.

PUBLIC ENTITY CRIMES STATEMENT

As provided in F.S. 287.132-133, by entering this Agreement or performing any work in furtherance hereof, the **CONSULTANT** certifies that it, its affiliates, suppliers, sub-contractors and consultants who will perform hereunder, have not been placed on the convicted vendor list maintained by the State of Florida Department of Management Services within the 36 months immediately preceding the date hereof. This notice is required by F.S. 287.133 (3) (a).

NON-DISCRIMINATION STATEMENT

The **CONSULTANT** warrants and represents that all of its employees are treated equally during employment without regard to race, color, religion, disability, sex, age, national origin, ancestry, marital status, or sexual orientation.

Luis Costa, P.E.
Vice President

CONFLICT OF INTEREST DISCLOSURE FORM

Project: Ocean Avenue (Lantana) Bridge over Intracoastal Waterway
Project No.: 2003502

ENGINEER represents that it presently has no interest, either direct or indirect, which would or could conflict in any manner with the performance of services for the County, except as follows:

_____

_____

_____

(Attach additional sheets as needed.)

ENGINEER further represents that no person having any interest shall be employed for said performance. By signing below, ENGINEER certifies that the information contained herein is true and correct and constitutes all current potential conflicts of interest which may influence or appear to influence ENGINEER'S judgment or quality of services being provided to the County.

ENGINEER shall promptly notify the COUNTY in writing by certified mail of all potential conflicts of interest that may arise in the future through any prospective business association, interest or other circumstance which may influence or appear to influence ENGINEER'S judgment or quality of services being provided to the County. Such written notification shall identify the prospective business association, interest or circumstance, the nature of work that ENGINEER may undertake and request an opinion of the COUNTY as to whether the association, interest or circumstance would, in the opinion of the COUNTY, constitute an unacceptable conflict of interest if entered into by the ENGINEER.

If, in the sole opinion of the COUNTY, the prospective business association, interest or circumstance of ENGINEER would constitute an unacceptable conflict of interest to the COUNTY, the COUNTY shall so state in the notification and the ENGINEER shall not enter into said association, interest or circumstance.

THIS DISCLOSURE is submitted by Luis Costa, P.E. (Name of Individual), as Vice President (Title/Position), of E. C. Driver & Associates, Inc. (Firm Name of ENGINEER) who hereby certifies that the information stated above is true and correct. Further, it is hereby acknowledged that any misrepresentation by the Consultant on this Disclosure is considered an unethical business practice and is grounds for sanctions against future County business with the Consultant.

_____ 12/5/07
(Signature) (Date)

F:\ROADWAY\CCNA\2003\2003502\Project\Disclosure Doc.doc

Revised 01/27/05

EXHIBIT "D"

Engineering & Public Works Roadway Production

12/04/2007

PARTICIPATION FOR MWBE/SBE CONSULTANTS

Contract

Project Name: Ocean Avenue (Lantana) Bridge over

Project No.: 2003502

Prime Consultant: E.C. Driver & Associates, Inc.

Prime Contact Person:

Telephone No.: (561) 392-9578

Resolution Date: / /

Res #:

Department: Engineering & Public Works

Name / Address / Telephone of Minority Sub-Consultant	Type / Description of Work Performed by Sub-Consultant		Contract Dollar Amount for Sub-Consultant				
			Black	Hispanic	Other	Women	White Male
Brown & Phillips, Inc. 901 NORTHPOINT PKY STE 305 WEST PALM BEACH, FL 33407 (561) 615-3988	Design	MWBE	0.00	0.00	0.00	0.00	
		SBE	126,760.00	0.00	0.00	0.00	0.00
Scheda Ecological Associates, Inc. 1486 A SKEES RD WEST PALM BEACH, FL 33411-2622 (561) 689-9198	Environmental	MWBE	0.00	0.00	0.00	103,277.50	
		SBE	0.00	0.00	0.00	0.00	0.00
Tierra, Inc. 2765 VISTA PKY STE 10 WEST PALM BEACH, FL 33411 (561) 687-8536	Geotechnical	MWBE	0.00	254,916.10	0.00	0.00	
		SBE	0.00	0.00	0.00	0.00	0.00
		Total MWBE	0.00	254,916.10	0.00	103,277.50	
		%		10.06		4.07	
		Total SBE	126,760.00	0.00	0.00	0.00	0.00
		%	5.00				

Total Contract Amount of Authorization 2,531,474.98

Exhibit c

EXHIBIT "E"

LETTER OF INTENT TO PERFORM AS AN SBE, M/WBE AND/OR SUB-CONSULTANT

TO: E. C. Driver & Associates, Inc.
(NAME OF PRIME CONSULTANT)

150 E. Palmetto Park Road, Suite 400, Boca Raton, Florida 33432
(ADDRESS)

Note: If Prime is an SBE or M/WBE, address Letter of Intent to "Palm Beach County."

CONTACT PERSON & TITLE:

FROM: Brown & Phillips, Inc.
SUB-CONSULTANT (Prime if SBE or M/WBE)

901 Northpoint Parkway, Suite 305, West Palm Beach, Florida 33407
(ADDRESS)

561-615-3988 (TELEPHONE No.) 561-615-3986 (FAX No.)

CONTACT PERSON: John E. Phillips III, P.L.S.

TITLE: Principal **EMAIL:** john@brown-phillips.com

The undersigned intend to perform work in connection with the above project as (check one):
____an individual __X__ a corporation ____a partnership ____a joint venture

---

B. PALM BEACH COUNTY CERTIFIED SBE OR M/WBE * : __X__ **YES** _____ **NO** **If YES, Check all that apply:**

*** MBE:** ____**BL** ____**H** ____**WBE** ____**O(Other)**

*** SBE :** __X__**BL** ____**H** ____**WBE** ____**O(Other)** _____ **White Male**

* ATTACH APPLICABLE COPY OF NOTICE OF PALM BEACH COUNTY SBE OR M/WBE CERTIFICATION

The undersigned is prepared to perform the following described work in connection with the project (specify in detail, particular work items or parts thereof to be performed by the sub-consultant) or Prime if SBE or M/WBE:

1. **Activity Provided:** Surveyor Services

2. **** SUB-CONSULTANT'S "TOTAL PARTICIPATION" FOR THIS PROJECT :** 5.00 **%**
NOTE: Line 2 shall be the ACTUAL % of Total Project, NOT 100%.

The undersigned will enter into a formal agreement for the described work with the above-named prime consultant upon an executed agreement with Palm Beach County.

** Prime's information if an SBE or M/WBE.

Project: Ocean Avenue (Lantana) Bridge over Intracoastal Waterway **Project No.:** 2003502

Brown & Phillips, Inc.
NAME OF SUB-CONSULTANT FIRM (PRIME if SBE or M/WBE)

Anthony Brown, CEO
(PRINT - NAME & TITLE OF AUTHORIZED REPRESENTATIVE)

BY: Anthony Brown 12/5/07
(SIGNATURE OF AUTHORIZED REPRESENTATIVE) **(DATE)**

LETTER OF INTENT TO PERFORM AS AN SBE, M/WBE AND/OR SUB-CONSULTANT

TO: E. C. Driver & Associates, Inc.
(NAME OF PRIME CONSULTANT)

150 E. Palmetto Park Road, Suite 400, Boca Raton, Florida 33432
(ADDRESS)

Note: If Prime is an SBE or M/WBE, address Letter of Intent to "Palm Beach County."

CONTACT PERSON & TITLE:

FROM: Scheda Ecological Associates, Inc.
SUB-CONSULTANT (Prime if SBE or M/WBE)

1486-E. Skees Road, West Palm Beach, Florida 33411-2622
(ADDRESS)

561-689-9198 (TELEPHONE No.) 561-253-0898 (FAX No.)

CONTACT PERSON: Ms. Sandy Scheda,

TITLE: President **EMAIL:** sscheda@scheda.com

The undersigned intend to perform work in connection with the above project as (check one):
____an individual __X__a corporation ____a partnership ____a joint venture

---

B. PALM BEACH COUNTY CERTIFIED SBE OR M/WBE * : __X__ YES _____ NO If YES, Check all that apply:

*** MBE: ___BL ___H __X__WBE ___O(Other)**

*** SBE : ___BL ___H ___WBE ___O(Other) _____ White Male**

* ATTACH APPLICABLE COPY OF NOTICE OF PALM BEACH COUNTY SBE OR M/WBE CERTIFICATION

The undersigned is prepared to perform the following described work in connection with the project (specify in detail, particular work items or parts thereof to be performed by the sub-consultant) or Prime if SBE or M/WBE:

1. **Activity Provided:** Environmental Services

2. **** SUB-CONSULTANT'S "TOTAL PARTICIPATION" FOR THIS PROJECT :** 4.07 %
NOTE: Line 2 shall be the ACTUAL % of Total Project , NOT 100%.

The undersigned will enter into a formal agreement for the described work with the above-named prime consultant upon an executed agreement with Palm Beach County.

** Prime's information if an SBE or M/WBE.

Project: Ocean Avenue (Lantana) Bridge over Intracoastal Waterway **Project No.:** 2003502

Scheda Ecological Associates, Inc.
NAME OF SUB-CONSULTANT FIRM (PRIME if SBE or M/WBE)

Sandra Scheda Klaus, President
(PRINT - NAME & TITLE OF AUTHORIZED REPRESENTATIVE)

BY: Sandra Scheda Klaus 12-4-07
(SIGNATURE OF AUTHORIZED REPRESENTATIVE) (DATE)

LETTER OF INTENT TO PERFORM AS AN SBE, M/WBE AND/OR SUB-CONSULTANT

TO: E. C. Driver & Associates, Inc.
(NAME OF PRIME CONSULTANT)

150 E. Palmetto Park Road, Suite 400, Boca Raton, Florida 33432
(ADDRESS)

Note: If Prime is an SBE or M/WBE, address Letter of Intent to "Palm Beach County."

CONTACT PERSON & TITLE:

FROM: Tierra, Inc.
SUB-CONSULTANT (Prime if SBE or M/WBE)

2765 Vista Parkway, Suite 10, West Palm Beach, Florida 33411
(ADDRESS)

561-687-8536 (TELEPHONE No.) 561-687-8570 (FAX No.)

CONTACT PERSON: Raj Krishnasamy, P.E.

TITLE: Principal Geotechnical Engineer **EMAIL:** raj@tierraeng.com

The undersigned intend to perform work in connection with the above project as (check one):
____an individual _X_ a corporation ____a partnership ____a joint venture

---

B. PALM BEACH COUNTY CERTIFIED SBE OR M/WBE * : _X_ **YES** ____ **NO** **If YES, Check all that apply:**

*** MBE:** ___BL _X_H ___WBE ___O(Other)

*** SBE :** ___BL ___H ___WBE ___O(Other) ____ **White Male**

* ATTACH APPLICABLE COPY OF NOTICE OF PALM BEACH COUNTY SBE OR M/WBE CERTIFICATION

The undersigned is prepared to perform the following described work in connection with the project (specify in detail, particular work items or parts thereof to be performed by the sub-consultant) or Prime if SBE or M/WBE:

1. **Activity Provided:** Geotechnical Services

2. **** SUB-CONSULTANT'S "TOTAL PARTICIPATION" FOR THIS PROJECT :** 10.06 **%**
NOTE: Line 2 shall be the ACTUAL % of Total Project , NOT 100%.

The undersigned will enter into a formal agreement for the described work with the above-named prime consultant upon an executed agreement with Palm Beach County.

** Prime's information if an SBE or M/WBE.

Project: Ocean Avenue (Lantana) Bridge over Intracoastal Waterway **Project No.:** 2003502

TIERRA, INC.
NAME OF SUB-CONSULTANT FIRM (PRIME if SBE or M/WBE)

Raj Krishnasamy, P.E., Vice President
(PRINT - NAME & TITLE OF AUTHORIZED REPRESENTATIVE)

BY: _____ **December 4, 2007**
(SIGNATURE OF AUTHORIZED REPRESENTATIVE) **(DATE)**

ACORD™ CERTIFICATE OF LIABILITY INSURANCE

DATE: 12/05/2007

PRODUCER

877-945-7378

Willis North America, Inc.
26 Century Blvd.
P. O. Box 305191
Nashville, TN 372305191

INSURED

E.C. Driver & Associates, Inc.
150 E. Palmetto Park Road, Suite 400
Boca Raton, FL 33432

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURERS AFFORDING COVERAGE	NAIC#
INSURER A: National Union Fire Ins Co of Pittsburgh	19445-100
INSURER B: American International South Insurance Co	40258-001
INSURER C: Insurance Company of the State of PA	19429-100
INSURER D: Lloyd's of London/A.F. Beazley Syndicate	15792-200
INSURER E: Lexington Insurance Company	19437-000

COVERAGES

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

INSR LTR	ADD'L INSRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
A	X	GENERAL LIABILITY	GL197-9807	5/1/2007	5/1/2008	EACH OCCURRENCE	$ 1,000,000
		[X] COMMERCIAL GENERAL LIABILITY				DAMAGE TO RENTED PREMISES (Ea occurence)	$ 1,000,000
		[ ] CLAIMS MADE [X] OCCUR				MED EXP (Any one person)	$ 10,000
		[X] XCU, BFPD				PERSONAL & ADV INJURY	$ 1,000,000
		[X] Contractual Liability				GENERAL AGGREGATE	$ 2,000,000
		GEN'L AGGREGATE LIMIT APPLIES PER:				PRODUCTS - COMP/OP AGG	$ 2,000,000
		[ ] POLICY [X] PRO-JECT [ ] LOC					
A	X	AUTOMOBILE LIABILITY	CA826-2672	5/1/2007	5/1/2008	COMBINED SINGLE LIMIT (Ea accident)	$ 2,000,000
A	X	[X] ANY AUTO	CA826-2675	5/1/2007	5/1/2008		
		[ ] ALL OWNED AUTOS				BODILY INJURY (Per person)	$
		[ ] SCHEDULED AUTOS				BODILY INJURY (Per accident)	$
		[ ] HIRED AUTOS				PROPERTY DAMAGE (Per accident)	$
		[ ] NON-OWNED AUTOS					
		GARAGE LIABILITY				AUTO ONLY - EA ACCIDENT	$
		[ ] ANY AUTO				OTHER THAN AUTO ONLY: EA ACC	$
						AGG	$
		EXCESS/UMBRELLA LIABILITY				EACH OCCURRENCE	$
		[ ] OCCUR [ ] CLAIMS MADE				AGGREGATE	$
		[ ] DEDUCTIBLE					$
		[ ] RETENTION $					$
A		WORKERS COMPENSATION AND EMPLOYERS' LIABILITY	WC7181903	1/1/2007	1/1/2008	[X] WC STATU-TORY LIMITS [ ] OTH-ER	
B		ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED?	WC7181935	1/1/2007	1/1/2008	E.L. EACH ACCIDENT	$ 1,000,000
C		If yes, describe under SPECIAL PROVISIONS below	WC7181937	1/1/2007	1/1/2008	E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
C			WC7181904/WC7181936	1/1/2007	1/1/2008	E.L. DISEASE - POLICY LIMIT	$ 1,000,000
D		OTHER	MMP 0005	5/1/2007	5/1/2008		
E		Professional Liability w/Limited Contractual - Claims Made Policy	1156494 E&O	5/1/2007	5/1/2008	$2,000,000. Each Claim $2,000,000. Aggregate	

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

Automobile Liability Effective Dates: 5/1/07 - 5/1/08
Policy No. CA826-2674 (MA) - American Home Assurance Company (19380-100)
Limits:
Combined Single Limit
$2,000,000. Each Accident

CERTIFICATE HOLDER

Palm Beach County
Attn: JaeAnn Dean
2300 N. Jogg Rd.
West Palm Beach, FL 33411

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

Willis **CERTIFICATE OF LIABILITY INSURANCE** Page 2 of 3

DATE 12/05/2007

PRODUCER 877-945-7378

Willis North America, Inc.
26 Century Blvd.
P. O. Box 305191
Nashville, TN 372305191

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURED

E.C. Driver & Associates, Inc.
150 E. Palmetto Park Road, Suite 400
Boca Raton, FL 33432

INSURERS AFFORDING COVERAGE	NAIC#
INSURER A: National Union Fire Ins Co of Pittsburgh	19445-100
INSURER B: American International South Insurance Co	40258-001
INSURER C: Insurance Company of the State of PA	19429-100
INSURER D: Lloyd's of London/A.F. Beazley Syndicate	15792-200
INSURER E: Lexington Insurance Company	19437-000

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

Re: Project Title - Ocean Avenue Bridge in Lantana Over The Atlantic Intercoastal Waterway; Project No.: 2003502.

Palm Beach County Board of Commissioners, A Political Subdivision of The State of Florida, its Officers, Employees and Agent are Additional Insureds with respect to operations performed by or for the Named Insured as respects General and Auto Liability.

Retro Coverage applies on Professional Liability. Retro Coverage is extended to include the effective date of the contract.

Retro Coverage Date : 11/17/38

IMPORTANT

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

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

DISCLAIMER

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

POLICY NUMBER: GL197-9807

COMMERCIAL GENERAL LIABILITY
CG 20 10 10 01

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – SCHEDULED PERSON OR ORGANIZATION

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Name of Person or Organization:
Palm Beach County Board of Commissioners, A Political Subdivision of The State of Florida, its Officers, Employees and Agent

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

A. Section II – Who Is An Insured is amended to include as an insured the person or organization shown in the Schedule, but only with respect to liability arising out of your ongoing operations performed for that insured.

B. With respect to the insurance afforded to these additional insureds, the following exclusion is added:

2. Exclusions

This insurance does not apply to "bodily injury" or "property damage" occurring after:

(1) All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the site of the covered operations has been completed; or

(2) That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

POLICY NUMBER: GL197-9807

COMMERCIAL GENERAL LIABILITY
CG20 37 10 01

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – COMPLETED OPERATIONS

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

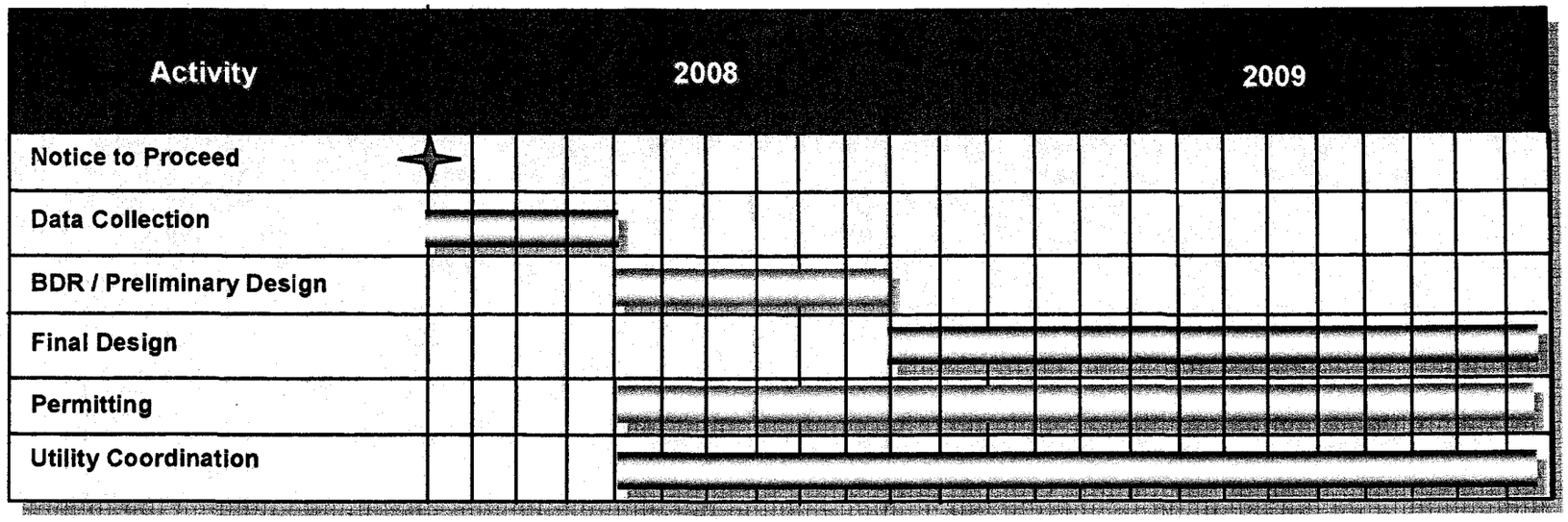
SCHEDULE

Name of Person or Organization: Palm Beach County Board of Commissioners, A Political Subdivision of The State of Florida, its Officers, Employees and Agent
Location And Description of Completed Operations: Project Title - Ocean Avenue Bridge in Lantana Over The Atlantic Intercoastal Waterway; Project No.: 2003502.
Additional Premium:

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

Section II – Who Is An Insured is amended to include as an insured the person or organization shown in the Schedule, but only with respect to liability arising out of "your work" at the location designated and described in the schedule of this endorsement performed for that insured and included in the "products-completed operations hazard".

Project Schedule



Ocean Avenue Bridge in Lantana over the Intracoastal
Palm Beach County Project No. 2003502

ATTACHMENT #3