TYLin

City of the Sanibel

Periwinkle Way over Shell Harbor Canal Bridge Replacement (Bridge No. 126500)

Contract Number CCNA-PW-0-2023/SK

Approval of Professional Services Proposal by T. Y. Lin International

This agreement constitutes a work order made through and under the Professional Services Agreement between OWNER and CONSULTANT for Hurricane Ian Architectural and Engineering professional services dated October 3, 2023, the terms and conditions of which are still in full force and effect, except as modified herein.

Services not set forth, or not listed or described herein, are expressly excluded from the Scope of the Professional Services of the CONSULTANT. The CONSULTANT assumes no responsibility to perform any service not specifically identified and/or otherwise described in this Proposal.

SCOPE OF SERVICES

PROFESSIONAL SERVICE OF THE CONSULTANT:

Project Description

The principal intent of this project is to replace the existing hurricane damaged bridge (No. 126500) on Periwinkle Way over Joey Canal in Lee County, Florida. The roadway approaches should be resurfaced/reconstructed as appropriate, but as a minimum to the extent of the new profile meeting the existing profile and beyond the guardrail. At the project location, the existing roadway typical section consists of two 11' lanes and 2.5' shoulders with a 3.5 foot left sidewalk and 4.25 foot right sidewalk.

Public Involvement – not included.

TASK 1. PROJECT COMMON AND PROJECT GENERAL TASK

The CONSULTANT shall coordinate and respond to FDOT Electronic Review Comments (ERC). This includes BDR, 60% and Final Plan reviews to satisfy the federal funding requirements. This task also includes sub-consultant coordination, cost estimate, required bid documentation and specification by consultant, bid pay items, project management, project meeting, and digital delivery.

TASK 2. ENVIRONMENTAL PERMITS, COMPLIANCES, AND CLEARANCES

The CONSULTANT shall coordinate with appropriate agencies for all necessary permits. Potential agencies requiring coordination include, but are not limited to: United States Coast Guard, South Florida Water Management District, Department of Environmental Protection, and US Army Corps of Engineers. Environmental scientists will review previously issued permits (SFWMD GP 36-106194-P and ACOE SAJ-2021-03672 (NW-SJR)) and plans to determine if

the project deviates from previously issued authorizations, which are still active. TYLin will confirm with the South Florida Water Management District (SFWMD) and Army Corps of Engineers (ACOE) that the issued permits are still valid for the project and authorize the updated plans. If the project needs any additional permits from the SFWMD or ACOE due to modifications of design since the permits have been issued, TYLin will coordinate with environmental agencies for authorization. TYLin will submit application documents and response to requests for additional information from agencies.

TASK 3. STRUCTURAL DESIGN

The principal intent of this project is to replace the existing structurally deficient and hurricane damaged bridge on Periwinkle Way over Joel Canal in Lee County, Florida. The new structure shall be designed to include required shoulders and sidewalks.

Structure design will include the following:

Bridge Concept Report – Superstructure and Substructure Alternatives, construction sequence(s), quantities and cost estimate, wall type, and report preparation.

Structure Components design – overall bridge geometry, expansion joint, general plan and elevation, construction staging, approach slab, end bent, intermediate bent, foundation layout, finished grade elevations, bridge deck design, superstructure, reinforcing steel, load rating, retaining wall, temporary wall, seawall and bulkhead.

TASK 4. ROADWAY ANALYSIS

The CONSULTANT will 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 will provide an approved signed and sealed Typical Section Package prior to the Phase I plans submittal date.

4.2 Master Design File Setup and Maintenance

4.3 Horizontal/Vertical Master Design Files

4.4 Temporary Traffic Control Plan (TTCP) Analysis

The CONSULTANT will design a safe and effective TTCP to move vehicular and pedestrian traffic during all phases of construction. The design shall include construction phasing of roadways ingress and egress to existing property owners and businesses, routing, signing and pavement markings, and detour quantity tabulations, roadway pavement, drainage structures, ditches, front slopes, back slopes, drop offs within clear zone, and traffic monitoring sites.

4.5 Roadway Quantities for EQ Report

4.6 Cost Estimate for Roadway Items

4.7 Quality Assurance/Quality Control

4.8 Supervision

4.9 Roadway Meetings

4.10 Field Reviews

4.11 Coordination

TASK 5. ROADWAY PLANS

The CONSULTANT will prepare Roadway, TTCP, 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/Signature Sheets Sheet

5.2 Typical Section Sheets

5.3 General Notes/Pay Item Notes

5.4 Project Layout/Model Management

5.5 Plan/Profile Sheets

5.6 Special Profiles

5.7 Sidewalk Profiles

5.8 Special Details

5.9 Soil Survey Sheets

5.10 Cross Sections

5.11 Temporary Traffic Control Plan

5.12 Utility Adjustment Sheets

5.13 Quality Assurance/Quality Control

5.14 Supervision

TASK 6. DRAINAGE ANALYSIS

6.1 Base Clearance Analysis

6.2 Hydroplaning Analysis

6.3 Existing Permit Analysis

6.4 Quality Assurance/Quality Control

6.5 Supervision

6.6 Coordination

TASK 7. DRAINAGE PLANS

The CONSULTANT will prepare Drainage plan sheets, notes, and details. The plans shall include the following sheets necessary to convey the intent and scope of the project for the purposes of construction.

7.1 Summary of Drainage Structures

7.2 Optional Pipe/Culvert Material

7.3 Drainage Structure Sheet(s) (Per Structure)

7.4 Erosion Control Plan Sheet(s) 6b.12 SWPPP Sheet(s)

7.5 Quality Assurance/Quality Control 6b.14 Supervision

TASK 8. 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.

8.1 Traffic Data Analysis

8.2 No Passing Zone Study

8.3 Reference and Master Design File

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

8.4 S&PM Quantities for EQ Report

8.5 Cost Estimate

8.6 Quality Assurance/Quality Control

8.7 Supervision

8.8 Coordination

TASK 9. SIGNING AND PAVEMENT MARKING PLANS

The CONSULTANT will prepare a set of Signing and Pavement Marking Plans in accordance with the FDOT Design Manual that includes the following. The plans shall include only those sheets, of the following list of sheets, necessary to convey the intent and scope of the project for construction.

9.1 Key & Signature Sheet

9.2 General Notes & Pay Item Notes

TYLin

9.3 Project Layout

9.4 Plan Sheet

9.5 Quality Assurance/Quality Control

9.6 Supervision

TASK 10. BRIDGE HYDRAULIC

10.1 Data Collection

The CONSULTANT will collect and synthesize all relevant data for performing the bridge hydraulic study. This includes all available bathymetric data, tide gage information, high water marks, bridge inspection reports, hurricane history, etc. This task also includes a site investigation to document the current conditions at the bridge, assess erosional or scouring mechanisms, and verify selection of friction for the modeling.

10.2 Hydraulic Analysis

The CONSULTANT currently possesses a two-dimensional model of the Sanibel area as part of the work supporting the reconstruction of the Sanibel Causeways. This model will be modified to include resolution of the canal system on the east end of the island including the project bridge. The model will simulate the Hurricane Ian and 500-year hurricane-generated storm surge events. In addition to the storm surge, the model will also evaluate the wave climate at the bridge location during the Ian event. The surge elevations from the model will set the clearances at the bridge and the wave climate will provide the inputs to calculate the wave loading.

10.3 Scour Evaluation

Given the hydrodynamic conditions determined in Task 1 and the in-water sediment characteristics, CONSULTANT will calculate hurricane Ian and the 500-year local, general, and contraction scour depths at the bridge location.

11. GEOTECHNICAL

11.1 Pre- Exploration Tasks

- Review all available information provided by you.
- Develop a boring plan.
- Submit permit applications to the applicable permitting agencies.
- Layout the proposed test boring locations in the field.
- Submit utility tickets to Sunshine State One-Call in general accordance with Florida Statute 556.101-111 (Underground Facility Damage Prevention and Safety Act).
- Coordinate boring locations with utility companies for potential conflicts.

11.2 Field Exploration

Our proposed subsurface soil exploration will be performed by project component and are divided in phases. Tasks are presented accordingly.

- The following tasks will be performed for the geotechnical report for the roadway:
- Coordination of Field Work.
- A total of four (4) roadway auger borings to a planned depth of 5 feet.
- The Seasonal High Groundwater Level (SHGWL) will be estimated at all auger boring locations.
- Two (2) Standard Penetration Test (SPT) borings to a planned depth of 15 feet for the embankments.
- Limerock Bering Ratio (LBR) sampling for a total number of 4 samples.
- Up to four (4) pavement cores including measurement of the base at each core location.

The following tasks will be performed for the signal and bridge structures report:

- Coordination of Field Work.
- Corrosion series sampling at the proposed bridge site for a total of one (1) soil sample and one (1) water sample.
- We understand that the bridge spans will be less than 60 feet long and that the bents will be less than 70 feet wide. The CONSULTANT will perform two (2) Standard Penetration Test (SPT) borings to a planned depth of 100 feet.

The planned boring locations can be seen in the attached aerial image of the project site.

It is anticipated that casing will be needed to maintain the boreholes open during our drilling operations. The cost for casing has been added to this proposal.

Power auger borings will be drilled using a rotary drill rig with a continuous flight, helical auger with a cutting head at its end. These borings will be drilled to a depth of 5 feet. The samples will be recovered by withdrawing the auger out of the ground without rotation. If the auger boring locations are not inaccessible with the drill rig then hand auger borings will be performed.

Hand augers will be drilled by advancing a 3-inch diameter hand bucket auger with a cutting head into the ground. The bucket auger is retrieved at approximately 6-inch intervals and its contents emptied for inspection. The boring is terminated at the planned depth or at refusal. Refusal happens when the presence of underground materials that prevent further advancement of the auger.

The SPT borings will be drilled using a procedure consistent with the one outlined in ASTM D-1586. The borings will be sampled at 18-inch intervals to 10 feet deep and at 2.5-foot intervals thereafter. Each sample will be removed from the sampler in the field and then examined and visually classified by our crew chief.

Water level observations will be made in the boreholes during the drilling operation. Representative portions will be sealed and packaged for transportation to our laboratory for further analysis as required.

The CONSULTANT will obtain up to four (4) pavement cores of the asphaltic concrete from the sections of roadway adjacent to the bridge. A 4-inch diameter core barrel will be used to obtain the pavement core specimens. The cores will be visually reviewed for layer thickness and layer

types. The base will be measured for thickness in the field. Measurements will be recorded to the nearest 0.1-inch. The core holes will be filled with cold-patch and the patching material will be compacted in thin layers (about 1½-inch).

The CONSULTANT will use a handheld Global Positioning System (GPS) device and aerial images to mark in the field and perform the field tests/borings, which is typically accurate to ± 20 feet, depending on field conditions. We recommend that the project surveyor locate our borings horizontally and vertically (i.e., determine the elevation of the ground surface at the boring locations). This effort can be done prior to our field operations, if needed. This information will increase the accuracy of the data obtained. We assume that the surveyor will be retained by the client to provide these services.

This proposal was prepared under the assumption that the subject site is accessible with our drilling equipment; therefore, fees associated with clearing operations by a subcontractor have not been included in the proposal. It was also assumed that traffic control for the vehicular travel lanes will not be needed to perform our field operations.

11.3 Laboratory Program

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

• Percent Fines	• Sieve Analysis	• Atterberg Limits
• Organic Content	• Moisture Content	• Corrosion Series

Additionally, we have included the following specialty testing:

- Unconfined compression for selected rock core runs obtained from the borings.
- Consolidation testing for selected undisturbed soil samples obtained from Shelby tubes during boring operations.

These tests will be performed if appropriate samples are encountered and successfully obtained during our exploration program.

11.4 Engineering Report

Data developed during the study will be submitted in written reports upon conclusion of the study. The general level of analysis, report format and report submissions will be per standard FDOT type practice for structure projects. Our report(s) will include the following:

- Copies of U.S.G.S. and S.C.S. maps with project limits shown.
- Evaluation and selection of foundation alternatives.
- Ultimate bearing capacity curves versus elevation for piles and drilled shafts.
- Lateral Analyses are not included on this proposal.

The report will be digitally signed and sealed and an electronic version will be provided in Adobe pdf format.

TYLin

TASK 12. SURVEY

12.1 Perform sufficient alignment and property corner recovery to establish right of way throughout project limits per right of way maps and parcel last deed of record.

12.2 Establish horizontal (NAD83 FL West SPC) and vertical (NAVD88) control and establish two on-site benchmarks.

12.3 Perform topographic survey from right of way to right of way along Periwinkle Way for a distance of 600' +/- and 20' beyond bridge walls 20' in the channel and provide up to 5 cross sections up and down stream to gather channel information. Topographic survey will be provided in CADD format preferred by client and will have a digital terrain model of project limits. For survey limits, please see Exhibit A on the following page.

12.4 Perform SUE Quality Level-B (designating) services along the 600' route to electronically designate and survey underground utilities. For SUE limits, please see Exhibit A on the following page.

12.5 Perform an estimated 3 SUE Quality Level-A test holes for utility verification.

12.6 Provide summary of verified utilities, surveyors report and supporting documentation.

TASK BY CITY - UTILITIES COORDINATION AND RELOCATION

TASK NOT INCLUDED – SIGNALIZATION, LIGHTING AND LANDSCAPE ARCHITECTURE

SCHEDULE

The scope of services will be performed in accordance with the following schedule:

Task 1 to 11 –

- Project Common and Project General Task
- Environmental Permits, Compliances, and Clearances
- Structure Design
- Roadway Analysis
- Roadway Plans
- Drainage Analysis
- Drainage Plans
- Signing and Pavement Marking Plans
- Bridge Hydraulic
- Geotechnical

- to be completed within 500 days of notice to proceed.

Task 12 – Survey - to be completed within 100 days of notice to proceed.

TYLin

COMPENSATION

The Price Proposal submitted by CONSULTANT attached hereto as Exhibit A is accepted and summarized as follows:

Definitions:

Lump Sum (LS): Includes all direct and indirect labor costs, personnel related costs, overhead and administrative costs, which may pertain to the services performed, provided and/or furnished by the CONSULTANT as may be required to complete the services in Exhibit A. The total amount of compensation to be paid the CONSULTANT shall not exceed the amount of the total Lump Sum compensation established and agreed to. The portion of the amount billed for CONSULTANT's services which is on account of the Lump Sum will be based upon CONSULTANT's estimate of the portion of the total services actually completed at the time of billing.

Time and Materials (T&M): For the actual hours expended by the CONSULTANT's professional and technical personnel, multiplied by the applicable hourly rates for each classification or position on the CONSULTANT's standard billing rate schedule in effect at the time the services are rendered. The current standard billing rate schedule is attached as Exhibit B. For the services of CONSULTANT's Sub-Consultants engaged to perform or furnish services in Exhibit A, the amount billed to CONSULTANT therefore times a factor of 1.10. The amount payable for Reimbursable Expenses will be the charge actually incurred by or imputed cost allocated by CONSULTANT, therefore times a factor of 1.10.

Estimated Fees: CONSULTANT's estimate of the amount that will become payable for Services (including CONSULTANT's Sub-Consultants and reimbursable expenses) is only an estimate for planning purposes, is not binding on the parties and is not the maximum amount payable to CONSULTANT for the services under this Agreement. Notwithstanding the fact that the estimated amount for the services is exceeded, CONSULTANT shall receive compensation for all Services furnished or performed under this Agreement.

If it becomes apparent to CONSULTANT at any time before the Services to be performed or furnished under this Agreement are about eighty percent complete that the total amount of compensation to be paid to CONSULTANT on account of these Services will exceed CONSULTANT's estimate, CONSULTANT shall endeavor to give CITY written notice thereof. Promptly thereafter CITY and CONSULTANT shall review the matter of compensation for such Services, and either CITY shall accede to such compensation exceeding said estimated amounts or CITY and CONSULTANT shall agree to a reduction in the remaining services to be rendered by CONSULTANT under this Agreement so that total compensation for such Services will not exceed said estimated amount when such services are complete. The CONSULTANT shall be paid for all services rendered if CONSULTANT exceeds the estimated amount before CITY and CONSULTANT have agreed to an increase in the compensation due to CONSULTANT or a reduction in the remaining services.

For the services provided and performed by CONSULTANT for providing and performing the Task(s) set forth and enumerated in Exhibit A entitled "Price Proposal", the CITY shall compensate the CONSULTANT as follows:

TYLin

ITEM	AMOUNT (Estimated if T&M)	FEE TYPE (LS; T&M; NTE)
Task 1 – Project Common and Project General Task	$75,216.00	LS
Task 2 – Environmental Permits, Compliances, and Clearances	$16,586.00	LS
Task 3 – Structure Design	$319,816.00	LS
TOTAL COMPENSATION FOR CONSULTANT'S SERVICES	**$411,618.00**	**LS**

For services of CONSULTANT's Sub-Consultants engaged to perform or furnish services, the CITY shall compensate the CONSULTANT as follows:

SUB-CONSULTANT	AMOUNT (Estimated if T&M)	FEE TYPE (LS; T&M; NTE)
Brindley Pieters & Associate – Task 4 to 9	$194,010.50	LS
Intera Incorporated – Task 10	$43,713.00	LS
Ardaman & Associates, Inc – Task 11	$64,970.00	LS
Aim Engineering & Surveying, Inc. – Task 12	$35,688.32	LS
TOTAL COMPENSATION FOR SUB-CONSULTANT'S SERVICES	**$338,381.82**	**LS**

For reimbursable expenses of CONSULTANT, the CITY shall compensate the CONSULTANT as follows:

REIMBURSABLE EXPENSES	AMOUNT (Estimated if T&M)	FEE TYPE (LS; T&M; NTE)
Airline Fares, hotels, rental car, fuel, courier and express delivery charges, reproduction of plans and reports, photography, field supplies and costs of other materials and/or equipment specifically used for and solely applicable to this project	$	T&M
TOTAL COMPENSATION FOR REIMBURSABLE EXPENSES	**$**	T&M

TOTAL COMPENSATION INCLUDING CONSULTANT'S SERVICES, SUB-CONSULTANT'S SERVICES & REIMBURSABLE EXPENSES	**$749,999.82**	**LS**

TYLin

EXHIBITS

This Agreement is subject to the provisions of the following Exhibits which are attached to and made a part of the Agreement:

Exhibit A “Price Proposal”
See the following page.

Exhibit B “Standard Billing Rate Schedule”
Per contract CCNA-PW-0-2023/SK

EXHIBIT A

ESTIMATE OF WORK EFFORT AND COST - PRIME CONSULTANT

Name of Project: Periwinkle Bridge Replacement
County: Lee - City of Sanibel
FPN: CCNA-PW-0-2023/SK
FAP No.: N/A

Consultant Name: T. Y. Lin International
Consultant No.: enter consultants proj. number
Date: 5/16/2024
Estimator: Boon Chong

Staff Classification	Total Staff Hours From "SH Summary - Firm"	Project Manager	Chief Engineer	Senior Engineer V	Senior Engineer III	Senior Engineer II	Senior Engineer	Project Engineer III	Project Engineer II	Project Engineer	Designer II	Senior Technician	Clerical	SH By Activity	Salary Cost By Activity	Average Rate Per Task
		$288.00	$359.00	$290.00	$238.00	$209.00	$198.00	$153.00	$145.00	$132.00	$160.00	$126.00	$78.00			
3. Project Common and Project General Tasks	347	173	0	0	0	0	52	52	0	0	0	35	35	347	$75,216	$216.76
4. Roadway Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
5. Roadway Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
6a. Drainage Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
6b. Drainage Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
6c. Selective C&G	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
7. Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
8. Environmental Permits,and Env. Clearances	70	10	0	14	32	0	0	0	14	0	0	0	0	70	$16,586	$236.94
9. Structures - Misc. Tasks, Dwgs, Non-Tech.	261	39	13	26	0	104	26	0	0	0	53	0	0	261	$58,803	$225.30
10. Structures - Bridge Development Report	338	49	17	34	0	135	34	0	0	0	69	0	0	338	$76,062	$225.04
11. Structures - Temporary Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
12. Structures - Short Span Concrete Bridge	470	68	24	48	0	188	48	0	0	0	94	0	0	470	$105,956	$225.44
13. Structures - Medium Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
14. Structures - Structural Steel Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
15. Structures - Segmental Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
16. Structures - Movable Span	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
17. Structures - Retaining Walls	349	53	18	35	0	141	35	0	0	0	67	0	0	349	$78,995	$226.35
18. Structures - Miscellaneous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
19. Signing & Pavement Marking Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
20. Signing & Pavement Marking Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
21. Signalization Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
22. Signalization Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
23. Lighting Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
24. Lighting Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
25. Landscape Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
26. Landscape Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
27. Survey (Field & Office Support)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
28. Photogrammetry	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
29. Mapping	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
30. Terrestrial Mobile LiDAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
31. Architecture Development	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
32. Noise Barriers Impact Design Assessment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
33. Intelligent Transportation Systems Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
34. Intelligent Transportation Systems Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
35. Geotechnical	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
Total Staff Hours	1,835	392	72	157	32	568	195	52	14	0	283	35	35	1,835		
Total Staff Cost		$112,896.00	$25,848.00	$45,530.00	$7,616.00	$118,712.00	$38,610.00	$7,956.00	$2,030.00	$0.00	$45,280.00	$4,410.00	$2,730.00		**$411,618.00**	**$224.31**

Check = $411,618.00

Survey Field Days by Subconsultant
4 - Person Crew:

Notes:
1. This sheet to be used by Prime Consultant to calculate the Grand Total fee.

2. Manually enter fee from each subconsultant. Unused subconsultant rows may be hidden.

SALARY RELATED COSTS:						$411,618.00
OVERHEAD:			0%			$0.00
OPERATING MARGIN:			0%			$0.00
FCCM (Facilities Capital Cost Money):			0.00%			$0.00
EXPENSES:			0.00%			$0.00
Survey (Field - if by Prime)	0		4-person crew days @	$ -	/ day	$0.00
SUBTOTAL ESTIMATED FEE:						**$411,618.00**
Subconsultant:	Brindley Pieters & Associates					$194,010.50
Subconsultant:	AIM Engineering & Surveying, Inc.					$35,688.32
Subconsultant:	Intera Incorporated					$43,713.00
Subconsultant:	Ardaman & Associates, Inc.					$64,970.00
Subconsultant:	Sub 5					$0.00
Subconsultant:	Sub 6					$0.00
Subconsultant:	Sub 7					$0.00
Subconsultant:	Sub 8					$0.00
Subconsultant:	Sub 9					$0.00
Subconsultant:	Sub 10					$0.00
Subconsultant:	Sub 11					$0.00
Subconsultant:	Sub 12					$0.00
SUBTOTAL ESTIMATED FEE:						**$749,999.82**
Geotechnical Field and Lab Testing						$0.00
SUBTOTAL ESTIMATED FEE:						**$749,999.82**
Optional Services						$0.00
GRAND TOTAL ESTIMATED FEE:						**$749,999.82**

ESTIMATE OF WORK EFFORT AND COST - PRIME CONSULTANT

Name of Project: Periwinkle Way Bridge Replacement
County: Lee
FPN: 452819-1
FAP No.:

Consultant Name: Brindley Pieters & Associates
Consultant No.:
Date: 5/8/2024
Estimator: Michael Harter, PE

Staff Classification	Total Staff Hours From "SH Summary - Firm"	Engineer 2	Chief Designer	Engineering Intern	Drainage Engineer	Staff Classi-fication 5	Staff Classi-fication 6	Staff Classi-fication 7	Staff Classi-fication 8	Staff Classi-fication 9	Staff Classi-fication 10	Staff Classi-fication 11	Staff Classi-fication 12	SH By Activity	Salary Cost By Activity	Average Rate Per Task
		$224.70	$166.10	$117.80	$129.40	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00			
3. Project Common and Project General Tasks	136	61	34	34	7	0	0	0	0	0	0	0	0	136	$24,265	$178.42
4. Roadway Analysis	457	160	160	137	0	0	0	0	0	0	0	0	0	457	$78,667	$172.14
5. Roadway Plans	167	33	67	67	0	0	0	0	0	0	0	0	0	167	$26,436	$158.30
6a. Drainage Analysis	97	10	19	44	24	0	0	0	0	0	0	0	0	97	$13,692	$141.15
6b. Drainage Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
6c. Selective C&G	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
7. Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
8. Environmental Permits,and Env. Clearances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
9. Structures - Misc. Tasks, Dwgs, Non-Tech.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
10. Structures - Bridge Development Report	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
11. Structures - Temporary Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
12. Structures - Short Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
13. Structures - Medium Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
14. Structures - Structural Steel Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
15. Structures - Segmental Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
16. Structures - Movable Span	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
17. Structures - Retaining Walls	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
18. Structures - Miscellaneous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
19. Signing & Pavement Marking Analysis	231	116	116	0	0	0	0	0	0	0	0	0	0	232	$45,333	$195.40
20. Signing & Pavement Marking Plans	31	8	23	0	0	0	0	0	0	0	0	0	0	31	$5,618	$181.22
21. Signalization Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
22. Signalization Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
23. Lighting Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
24. Lighting Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
25. Landscape Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
26. Landscape Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
27. Survey (Field & Office Support)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
28. Photogrammetry	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
29. Mapping	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
30. Terrestrial Mobile LiDAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
31. Architecture Development	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
32. Noise Barriers Impact Design Assessment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
33. Intelligent Transportation Systems Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
34. Intelligent Transportation Systems Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
35. Geotechnical	0	0	0	0	0	0	0	0	0	0	0	0	0	0	$0	#DIV/0!
Total Staff Hours	1,119	388	419	282	31	0	0	0	0	0	0	0	0	1,120		
Total Staff Cost		$87,183.60	$69,595.90	$33,219.60	$4,011.40	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		**$194,010.50**	**$173.22**

Check = $194,010.50

Survey Field Days by Subconsultant
4 - Person Crew:

Notes:
1. This sheet to be used by Prime Consultant to calculate the Grand Total fee.

2. Manually enter fee from each subconsultant. Unused subconsultant rows may be hidden.

SALARY RELATED COSTS:						$194,010.50
OVERHEAD:			0%			$0.00
OPERATING MARGIN:			0%			$0.00
FCCM (Facilities Capital Cost Money):			0.00%			$0.00
EXPENSES:			0.00%			$0.00
Survey (Field - if by Prime)	0	4-person crew days @	$ -	/ day		$0.00
SUBTOTAL ESTIMATED FEE:						**$194,010.50**
Subconsultant:	Enter Name Sub 1					$0.00
Subconsultant:	Sub 2					$0.00
Subconsultant:	Sub 3					$0.00
Subconsultant:	Sub 4					$0.00
Subconsultant:	Sub 5					$0.00
Subconsultant:	Sub 6					$0.00
Subconsultant:	Sub 7					$0.00
Subconsultant:	Sub 8					$0.00
Subconsultant:	Sub 9					$0.00
Subconsultant:	Sub 10					$0.00
Subconsultant:	Sub 11					$0.00
Subconsultant:	Sub 12					$0.00
SUBTOTAL ESTIMATED FEE:						**$194,010.50**
Geotechnical Field and Lab Testing						$0.00
SUBTOTAL ESTIMATED FEE:						**$194,010.50**
Optional Services						$0.00
GRAND TOTAL ESTIMATED FEE:						**$194,010.50**

AIM Engineering & Surveying, Inc.

Corporate Office
2161 Fowler Street
Suite 100
Fort Myers, FL 33901

239-332-4569
800-226-4569
www.aimengr.com

Successfully providing our clients and the community with quality planning, engineering and surveying since 1980.

May 3, 2024

Boon Chong
TYLIN
SR. PROJECT MANAGER
ASSOCIATE VICE PRESIDENT
T +1 813.775.7052
M +1 813.313.0779
Boon.chong@tylin.com

RE: Periwinkle Bridge Replacement, Bridge No. 126500

Dear Mr. Chong,

SCOPE OF SERVICE

1. Perform sufficient alignment and property corner recovery to establish right of way throughout project limits per right of way maps and parcel last deed of record.

2. Establish horizontal (NAD83 FL West SPC) and vertical (NAVD88) control and establish two on-site benchmarks.

3. Perform topographic survey from right of way to right of way along Periwinkle Way for a distance of 600' +/- and 20' beyond bridge walls 20' in the channel and provide up to 5 cross sections up and down stream to gather channel information. Topographic survey will be provided in CADD format preferred by client and will have a digital terrain model of project limits. For survey limits, please see Exhibit A on the following page.

4. Perform SUE Quality Level-B (designating) services along the 600' route to electronically designate and survey underground utilities. For SUE limits, please see Exhibit A on the following page.

5. Perform an estimated 3 SUE Quality Level-A test holes for utility verification.

6. Provide summary of verified utilities, surveyors report and supporting documentation.

TOTAL COST OF SURVEY & SUE SERVICES: $35,688.32

Staff hour Breakdown:

Principal Land Surveyor: 5 hours@ $204.88=$1,024.40

Field Crew Supervisor: 7 hours@ $134.42=$940.94

Senior CADD Technician: 47 hours@ $149.99=$7,044.83

3 Person Field Crew: 70 hours@ $283.77=$19,863.90

3 Person SUE Locate and Designate Crew: 25 hours@ $272.57= $6,814.25

Exhibit A

PERIWINKLE WAY BRIDGE REPLACEMENT PROJECT
Bridge Hydraulic Analysis
INTERA Incorporated
April 2024

Problem Understanding

The City of Sanibel, Florida plans to replace the Periwinkle Way Bridge over Joey Canal. TY Lin International (TYL) has asked INTERA to prepare this scope of work to provide hydraulic and scour calculation services in support of the new bridge design.

Fee

The table below documents the fee estimate. It reflects fully burdened labor rates employing FDOT audited multipliers.

Staff Classification	Rate $/hr	Hours	Total Cost
Engineer 2	$ 174.02	80	$ 13,921.60
Principal Engineer	$ 286.11	20	$ 5,722.20
Senior Engineer 2	$ 244.60	80	$ 19,568.00
Senior Engineering Technician	$ 112.54	40	$ 4,501.60
		Total	**$ 43,713.40**

Ardaman Proposal No. 24-448R

Project Name: Sanibel Periwinkle Bridge Replacement **County:** Lee

Client: TY Lin **Date:** 5/14/2024

Fee Schedule

Item	Unit	Rate	Quantity	Sub-Total
Engineering and/or Technical Support Man-Hours				
Principal Engineer	Hour	$257.00	15.00	$3,855.00
Senior Project Engineer	Hour	$197.00	39.00	$7,683.00
Project Engineer	Hour	$161.00	15.00	$2,415.00
Assistant Project Engineer	Hour	$126.00	65.00	$8,190.00
Staff Engineer	Hour	$104.00	66.00	$6,864.00
Permit Coordinator	Hour	$92.00	31.00	$2,852.00
Senior Engineering Technician	Hour	$92.00	15.00	$1,380.00
Technical Draftsperson	Hour	$81.00	39.00	$3,159.00
Engineering Technician	Hour	$74.00	15.00	$1,110.00
Technical Secretary	Hour	$74.00	8.00	$592.00
		Engineering Man-Hours - Sub-Total:		**$38,100.00**
Pay Items				
1.0 MOBILIZATION				
1.2b Mob./Demobilization Truck-Mounted Drill Rig (Sites between 25 and 50 miles from Office)	Each	$653.00	0	$0.00
1.3b Mob./Demobilization Mud Bug Drill Rig (Sites between 25 and 50 miles from Office)	Each	$748.00	1	$748.00
1.5b Support Vehicle (Sites up to 25 miles from Office)	Day	$240.00	6	$1,440.00
2.0 STANDARD DRILLING				
2.3.1 SPT from surface to 25 feet - Truck-Mounted Drill Rig	ft	$23.30	0	$0.00
2.3.2 SPT from 25 to 50 feet - Truck-Mounted Drill Rig	ft	$25.90	0	$0.00
2.3.3 SPT from 50 to 100 feet - Truck-Mounted Drill Rig	ft	$29.00	0	$0.00
2.5.1 Casing - from surface to 50 feet - Truck-Mounted Drill Rig	ft	$13.80	0	$0.00
2.11 Standard Penetration Test (SPT) Borings (ASTM D-1586) in Soil (N-Values <50) - Mud Bug Drill Rig				
2.11.1 SPT from surface to 25 feet - Mud Bug Drill Rig	ft	$25.70	80	$2,056.00
2.11.2 SPT from 25 to 50 feet - Mud Bug Drill Rig	ft	$29.00	50	$1,450.00
2.11.3 SPT from 50 to 100 feet - Mud Bug Drill Rig	ft	$32.00	100	$3,200.00
2.11.4 SPT from 100 to 125 feet - Mud Bug Drill Rig	ft	$41.00	0	$0.00
2.13 Furnish, Install and Remove Casing (up to 4-inch) - Mud Bug Drill Rig				
2.13.1 Casing - from surface to 50 feet - Mud Bug Drill Rig	ft	$15.20	120	$1,824.00
2.13.2 Casing - from 50 to 100 feet - Mud Bug Drill Rig	ft	$18.60	50	$930.00
2.16 Rock Coring (N size) - Mud Bug Drill Rig				
2.16.1 from surface to 50 feet - Mud Bug Drill Rig	ft	$56.90	0	$0.00
2.16.2 from 50 to 100 feet - Mud Bug Drill Rig	ft	$65.30	10	$653.00
3.0 SAMPLING				
3.1 Continuous SPT Sampling from 10 to 25 feet	Add'l	$42.60	4	$170.40
3.2 Continuous SPT Sampling from 25 to 50 feet	Add'l	$46.60	5	$233.00
3.3 Continuous SPT Sampling from 50 to 100 feet	Add'l	$53.10	10	$531.00
3.6 Undisturbed Samples – Shelby Tube	sample	$188.70	1	$188.70
4.0 OTHER CHARGES				
4.1 Clearing (minor), Difficult Access, Moving Between Holes, and Set-up	Crew Hr	$247.50	9	$2,227.50
4.2 Grouting and Sealing (plus cement)	Crew Hr	$275.00	10	$2,750.00
4.4a Soil Test Boring Permits (required by Lee County) (Cost+15%)	Permit	$230.00	1	$230.00
4.4b Vegetation Permits (required by Lee County) (Cost+15%)	Permit	$37.00	1	$37.00
4.4c Right of Way Permits (required by Sanibel) (Assumed no cost)	Permit	$0.00	1	$0.00
4.5 Cement – 47 lbs.	Bag	$15.40	23	$354.20
9.0 SOIL CLASSIFICATION TESTS				
9.1 Moisture Content (ASTM D-2216)	Each	$21.80	18	$392.40
9.2 Organic Content (ASTM D 2974)	Each	$47.00	10	$470.00
9.4 Sieve Analysis (ASTM D-421, D-422)	Each	$70.00	8	$560.00
9.5 Percent Fines (ASTM D-1140)	Each	$49.00	12	$588.00
9.8 Atterberg Limits (ASTM D-4318)	Set	$154.00	5	$770.00
10.0 MOISTURE-DENSITY TESTS				
10.3 Limerock Bearing Ratio (FM5-515)	Each	$518.00	4	$2,072.00
11.0 CONSOLIDATED TESTS				
11.1.1 Load Up to Ten Load or Unload Increments	Each	$822.80	1	$822.80
13.0 STRENGTH TEST				
13.7 Compressive Strength of Rock Core	Each	$74.00	1	$74.00
14.0 CHEMICAL TESTS				
14.7 Water Corrosivity Series (FM5-550, 551, 552, 533)	Each	$200.00	1	$200.00
14.8 Soil Corrosivity Series (FM5-550, 551, 552, 553)	Each	$249.00	1	$249.00
20.0 CORING				
20.1b Mobilization of Coring Equipment (Sites between 25 and 50 miles from Office)	Each	$429.00	1	$429.00
20.3. Two-Man Coring Crew (Senior Technician and Technician)	Hour	$166.00	4	$664.00
20.5 Core on Asphaltic Concrete (up to 4-inch diameter)	Core	$81.00	4	$324.00
20.6 Limerock Base Thickness Determination	Hole	$58.00	4	$232.00
		Pay Items - Sub-Total:		**$26,870.00**
		Total Estimated Fees:		**$64,970.00**

TYLin

IN WITNESS WHEREOF, the parties hereto have executed the Agreement to be effective as of the date above.

OWNER:	**CONSULTANT:**
CITY OF SANIBEL	**COMPANY NAME**
_____	_____
Signature	Signature
By: Dana Souza	By: Atiq Alvi
Title City Manager	Title Vice President