

II. FISCAL IMPACT ANALYSIS

A. Five Year Summary of Fiscal Impact:

Fiscal Years	2024	2025	2026	2027	2028
Capital Expenditures	\$ 372,286	-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	\$ 372,286	-0-	-0-	-0-	-0-
# ADDITIONAL FTE POSITIONS (Cumulative)	-0-	-0-	-0-	-0-	-0-

Is Item Included in Current Budget? Yes No
 Is this item using Federal Funds? Yes No
 Is this item using State Funds? Yes No

Budget Account No:
 Fund 3950 Dept 361 Unit 1691 Object 6505-AE10

Recommended Sources of Funds/Summary of Fiscal Impact:
 Local Government One-Cent Infrastructure Surtax
 Barwick Rd. over LWDD Lat. 30 Canal (934455)

Consultant Service Authorization (CSA) No. 2

• Basic Services	\$ 187,353.00
• Reimbursable	\$ 59,032.99
• Optional Services	\$ 19,500.00
Total CSA #2	\$ 265,885.99

Estimated Staff Costs

• Roadway Production	\$ 53,200.00
• Roadway Production: Right-of-Way	\$ 13,300.00
• Survey	\$ 13,300.00
• Traffic	\$ 26,600.00
Total Staff Costs	\$ 106,400.00

Fiscal Impact \$ 372,285.99

C. Departmental Fiscal Review: *Danny Rumbalski*

III. REVIEW COMMENTS

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

<u><i>Liz M...</i></u> OFMB <i>PA 11/11</i> <i>MD 11/11</i>	<u><i>John L. Jacobson</i></u> Contract Dev. and Control <i>11/6/23</i> <i>11/6/23</i>
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B. Approved as to Form and Legal Sufficiency:
[Signature] *11/13/2023*
 Assistant County Attorney

C. Other Department Review:

 Department Director

This summary is not to be used as a basis for payment.
 2

PROJECT LOCATION

BARWICK ROAD OVER LAKE WORTH DRAINAGE DISTRICT L-30 CANAL (934455)

Palm Beach County Project #2022801



LOCATION MAP

ATTACHMENT 1

CONSULTANT SERVICE AUTHORIZATION NO. 2
UNDER THE ANNUAL STRUCTURAL ENGINEERING SERVICES CONTRACT

Project Name: **Barwick Road over Lake Worth Drainage District L-30 Canal (934455)**

Project No: **2022801**

Commission District No.: **4**

SBE Participation for this authorization is **100%**

SBE Participation to date for this CSA is **100%**

EBO Commitment is **98% SBE & 15% MBE (AA)**

This authorization is under the EBO Ordinance.

PALM BEACH COUNTY

BOARD OF COUNTY COMMISSIONERS

Acct. No.: **3950-361-1691-6505-AE10**

Consultant Service Authorization (CSA) No. 2 to the Annual Structural Engineering Services Contract dated March 14, 2023, (R2023-0260) (CONTRACT), between the COUNTY and the CONSULTANT identified herein is for the services described in **EXHIBIT A** and **EXHIBIT B** for this CSA.

1. CONSULTANT: Alan Gerwig & Associates, Inc.
2. Address: 12798 W. Forest Hill Boulevard, Suite 201, Wellington, FL 33414
3. CONSULTANT shall begin work promptly on the requested Services, per the schedule attached as part of **EXHIBIT A**.
4. Scope of Services to be provided by CONSULTANT: Provide professional engineering services to Palm Beach County for the Barwick Road over LWDD L-30 Canal (934455) project. Design and permit the bridge replacement in accordance with the attached **EXHIBIT A** dated September 7, 2023.
5. The compensation to be paid CONSULTANT for providing the requested services as detailed in **EXHIBIT B** shall be:

<input checked="" type="checkbox"/> Basic Services in a lump sum fee of	\$187,353.00
<input checked="" type="checkbox"/> Reimbursable Expenses capped at	\$ 59,032.99
<input checked="" type="checkbox"/> Optional Services capped at	<u>\$ 19,500.00</u>
Totaling	\$265,885.99

OEBO Schedules 1 & 2 **EXHIBIT C**

Project History **EXHIBIT D**

6. All terms of the CONTRACT, as amended, shall apply to this CSA.

ATTACHMENT 2

CONSULTANT SERVICE AUTHORIZATION NO. 2
UNDER THE ANNUAL STRUCTURAL ENGINEERING SERVICES CONTRACT

IN WITNESS WHEREOF, this CSA is accepted as of the date signed by the COUNTY below, subject to the terms and conditions of the aforementioned CONTRACT.

CONSULTANT:

Alan Gerwig & Associates, Inc.

Federal ID: ALAN0012

Signed: _____

Typed Name: Alan Gerwig, P.E., LEED AP

Title: President

Date: _____

10/12/23

(Corporate Seal)

ATTEST WITNESS:

Signed: _____

Typed Name: _____

SIMON A. COLEMAN

Title: _____

PROJECT MANAGER

Date: _____

10/12/23

Approved as to Terms and Conditions

By: MLR
MLR Jmo

Typed Name: Morton L. Rose, P.E.

Title: Division Director

CONSULTANT SERVICE AUTHORIZATION NO. 2
UNDER THE ANNUAL STRUCTURAL ENGINEERING SERVICES CONTRACT

{SIGNATURE PAGES CONTINUED}

COUNTY: **Palm Beach County**, a Political
Subdivision of the State of Florida, by and
through its Board of County Commissioners

Signed: _____

Typed Name: _____

Title: Mayor

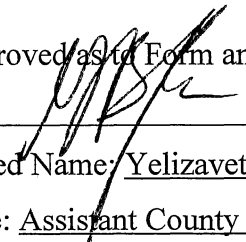
Date: _____

ATTEST:

Joseph Abruzzo
Clerk of the Circuit Court & Comptroller

By: _____
Deputy Clerk

Approved as to Form and Legal Sufficiency

By:  _____

Typed Name: Yelizaveta B. Herman

Title: Assistant County Attorney

N:\ROADWAY\CCNA\ANNUALS\STRUCTURAL\Gerwig\2022\2022801 Barwick Road over L-30\2022801 CSA.docx

12798 W. Forest Hill Boulevard
Suite 201
Wellington, FL 33414
Phone: (561) 792-9000
Fax: (561)792-9901
CA No. 7969

Alan Gerwig & Associates, Inc.

Consulting Engineers



April 11, 2022	Rev. May 1, 2023
Rev. June 30, 2022	Rev. June 3, 2023
Rev. September 8, 2022	Rev. September 5, 2023
Rev. February 3, 2023	Rev. September 7, 2023
Rev. February 15, 2023	

OK! *Sandra Wilens Uspine*
9-11-2023
Scope + Fee okay
[Signature]
9/11/23

Kristine Frazell-Smith, P.E.
Palm Beach County, Roadway Production Division
2300 N. Jog Road, Suite 3W-33
West Palm Beach, FL 33411

RE: Barwick Road Bridge over L-30 Canal Replacement (Bridge #934455)
Palm Beach County Project No. 2022801

Dear Ms. Frazell-Smith:

Basic Scope of Services

AGA will provide design services required to prepare construction documents and specifications for the replacement of the existing two lane, three span bridge and associated roadway approach improvements on Barwick Road over the LWDD L-30 Canal. Design survey services, geotechnical engineering services, and environmental services will be provided using sub consultants identified below.

The proposed basic scope of services will include developing a typical section for the bridge/roadway, a design survey, a geotechnical engineering investigation, engineering design, construction document preparation, permitting, and utility coordination, for bidding and construction. A detour around the bridge site of about 2 miles is available. Therefore, the bridge design scope assumes that the bridge will be closed to traffic during construction and constructed in one phase.

Design Survey

The design survey for this project will be performed by HSQ Group Inc., acting as a sub-consultant to AGA. The survey will locate all above-ground features and provide the existing cross sections in the road right-of-way and canal right-of way. The limits of the survey will include 25 feet outside the Right-of-Way, from 225 feet north of the center of the L-30 Canal to 225' south of the center of the canal. For the L-30 Canal R/W, 25' outside of the canal Right-of-Way, 125 feet

east and west of Barwick Road center of road. Full details of the scope of the design survey are attached to this proposal.

Geotechnical Investigation

The geotechnical investigation for this project will be performed by Pacifica Engineering Services acting as a sub-consultant to AGA. The geotechnical investigation will provide the data and recommendations required for the design of the bridge foundations at abutments and intermediate bents. The scope of the geotechnical investigation will contain the following key items:

- Two 100-ft. deep Standard Penetration Test (SPT) borings for the design of the bridge foundations.

Full details of the scope of the geotechnical investigation are attached to this proposal.

Typical Section and Layout

A typical section and horizontal layout will be developed and submitted to PBC for review and approval prior to commencing any design work. The typical section will be based on providing 2 – 12' lanes with 7' shoulders, and two 6' sidewalks. Horizontal layout of the roadway and bridge will include the following:

- Typical section will be developed in accordance with the County's roadway typical section requirements.
- Determination of begin and end project with transitions to existing lane conditions at both ends of the project.
- The survey and typical section package will be submitted for comment and approval prior to commencing the design phase of the project.

Roadway Improvements

Roadway construction plans for the restoration of approximately 100LF of approach roadway will be prepared based on the approved typical section. Drainage improvements will consist of providing water quality pretreatment and conveyance to the L-30 canal for the bridge deck and immediate swale area adjacent to the bridge.

The plans will be prepared in accordance with the current editions of the following standards.

- Palm Beach County Thoroughfare Roadway Design Procedures.
- FDOT Design Standards.
- Florida Greenbook.

Pavement marking and signing plans for the proposed improvements will be prepared to Palm Beach County Standards as a separate set of documents.

Bridge Replacement

The existing bridge will be replaced by a three-span bridge that conforms to the approved typical section.

The bridge design will be in accordance with the current AASHTO LRFD and FDOT design specifications

Permitting

AGA will apply for the following permits required for the improvements detailed above:

- South Florida Water Management District Environmental Resource Permit.
- Lake Worth Drainage District R/W Permit
- Lake Worth Drainage District drainage permit
- Army Corp of Engineers Section 404 – dredge and fill permit and Environmental permit

AGA will hold pre-application meetings with the Lake Worth Drainage District, South Florida Water Management District and ACoE prior to making application.

Utility Coordination

It is understood that PBC will manage the coordination of the existing utilities with the various utility providers. AGA will assist PBC with this task by plotting the existing utility information supplied by the utility providers on the plans following the 35% submittal. AGA and its sub-consultant will attend up to a maximum of 3 utility coordination meetings to address and resolve any utility conflicts.

The design and permitting of any utilities that need to be relocated because of the bridge replacement and associated work is not part of the scope of this project.

Plan Submittals

All plans will be prepared on 11"x17" sheets. The roadway plans will be prepared at a scale of 1"=40' horizontal and 1"=4' vertical.

Plan review submittals will be made at Typical Section & Layout, 35% phase, 65% phase, 96% phase, 100% phase and Final Plans. Preliminary structural calculations will be submitted with the 65% and 96% submittals and final structural calculations will be submitted with the 100%, and Final submittals. All plan submittals shall include one PDF copy and CADD files. Plan submittals in PDF format shall also be made via email to the County's Project Manager.

Quantities and cost estimates will be provided with the 65%, 96% and 100%, and Final submittals for the project. Final plans submittal will include a copy of the cost estimate in excel format.

Optional Scope of Services**Post Design Services**

Post Design services will be provided by AGA, Inc. in support of the Construction Coordination Department as requested that include but are not limited to, public outreach, shop drawing review, requests for clarification from contractors, field observations. The bridge load rating calculations will be performed based on the as-built drawings per the FDOT requirements.

The fees are estimated and are an allowance that will be billed on an hourly basis.

Fees: Basic Services

Prime Consultant Fee: **\$187,353.00**

Reimbursable Fees

HSQ Group – Design Survey	\$17,141.76
Pacifica Eng. Svs. – Geotechnical	\$17,432.75
EW Consulting – Environmental	\$15,438.48

Permit Fees*	<u>\$9,020.00</u>
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Reimbursable Total **\$59,032.99**

* Permit fees associated with LWDD, SFWMD, and ACoE

Fees: Optional Services

Post Design Services (prime consultant)	\$7,800.00
Public Involvement (prime consultant)	\$3,900.00
Bridge Load Rating (prime consultant)	<u>\$7,800.00</u>
Optional Services Total	\$19,500.00

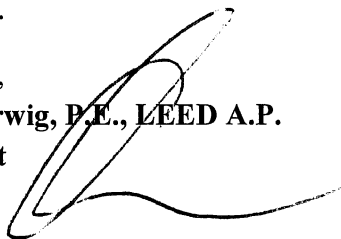
Project Deliverables

For each plan submittal, three sets of plans and two sets of calculations will be provided. The report from the geotechnical investigation and the design survey will be included with the 35% submittal.

Following the review and approval of the 100% submittal, final plans will be submitted in hard copy and electronically in pdf format. Three hard copies of the final plans will be provided, including one set signed and sealed.

We appreciate the opportunity to provide these services to you. Please contact me if you have any questions.

Sincerely,
Alan Gerwig, P.E., LEED A.P.
President



ESTIMATE OF WORK EFFORT AND COST - PRIME CONSULTANT

Name of Project: Barwick Road Bridge Replacement over the L-30 Canal
 County: Palm Beach County
 Palm Beach County Proj. No. 2022801

Consultant Name: Alan Gerwig & Associates, Inc.

Date: 9/7/2023

Staff Classification	Total Staff Hours From "SH Summary - Firm"	Sr. Engineer	Project Mgr	Project Eng	Designer	SH By Activity	Salary Cost By Activity	Average Rate Per Task
		\$65.00	\$61.00	\$57.00	\$36.00			
2. Roadway Analysis	64	32	13	13	6	64	\$3,830	\$59.84
3. Roadway Plans	82	33	21	16	12	82	\$4,770	\$58.17
4. Drainage Analysis	92	46	28	14	4	92	\$5,640	\$61.30
5. Drainage Plans	24	10	6	5	3	24	\$1,409	\$58.71
6. Permits and Environmental	98	59	10	0	29	98	\$5,489	\$56.01
7. Utilities	20	12	6	0	2	20	\$1,218	\$60.90
8. Signing & Marking Analysis	16	8	5	2	1	16	\$975	\$60.94
9. Signing & Marking Plans	12	5	3	2	2	12	\$694	\$57.83
19 Structures Plans	69	31	10	14	14	69	\$3,927	\$56.91
21. Short Span Concrete Bridge	572	315	143	57	57	572	\$34,499	\$60.31
Basic Services Total Staff Hours	1,049	551	245	123	130	1,049	\$62,451	\$59.53
Basic Services Total Staff Cost		\$35,815.00	\$14,945.00	\$7,011.00	\$4,680.00		\$62,451.00	\$59.53
Optional Services								
Proj. Activity 1: Post Design Services	40	40				40	\$2,600	\$65.00
Proj. Activity 1: Public Involvement	20	20				20	\$1,300	\$65.00
Proj. Activity 21: Bridge Load Rating	40	40				40	\$2,600	\$65.00
Basic Services Total Staff Hours	100	100				100		
Basic Services Total Staff Cost		\$6,500.00					\$6,500.00	\$65.00

SBE and M/WBE Participation for Solicited Professional Services Categories		
Committed Participation for SBE is 98% and M/WBE is 15% of Prime's Contracted Fee		
EBO SBE & N/WBE Fee Summary	SBE \$	M/WBE
Prime Consultant Fee	\$215,873.00	
HSQ Group (5.02) Fee	\$17,141.76	
Pacifca Engineering Services (6.01, 6.02) Fee	\$17,432.75	\$17,432.75
EW Consulting, Inc Fee	\$15,438.48	
Totals	\$265,885.99	17,432.75

*SBE % Achieved 100%
 *SBE % Committed 98.00%
 *M/WBE % Achieved 6.56%
 *M/WBE % Committed 15.00%

BASIC SERVICES - PRIME			
SALARY RELATED COSTS:			\$62,451.00
Contract Multiplier :	3		\$187,353.00
SUBTOTAL Prim Consultant FEE:			\$187,353.00

REIMBURSABLES - SUBCONSULTANTS and PERMIT FEES			
Subconsultant:	HSQ Group LLC - Design Survey		\$17,141.76
Subconsultant:	Pacifica Engineering Services LLC- Geotechnical		\$17,432.75
Subconsultant:	EW Consulting Inc - Environmental		\$15,438.48
Permit Fees			\$9,020.00
SUBTOTAL - REIMBURSABLES			\$59,032.99
OPTIONAL SERVICES			
Prim Consultant - Post Design			\$2,600.00
Prim Consultant - Public Involvement			\$1,300.00
Prim Consultant - Bridge Load Rating			\$2,600.00
Contract Multiplier :	3		\$19,500.00
SUBTOTAL - OPTIONAL SERVICES			\$19,500.00
GRAND TOTAL ESTIMATED FEE:			\$265,885.99

Project Activity 1: General Tasks						
Task No.	Task	Units	No of Units	Hours/ Unit	Total Hours	Comments
1.1	Public Involvement	LS	1	20	20	Provide Support as requested by County Project Manager
1.2	Renderings and Fly Throughs	EA	0	0	0	
1.3	PowerPoint Presentation	EA	0	0	0	
1.4	Public Meeting Preparations	EA	0	0	0	
1.5	Public Meeting Attendance/Followup	EA	0	0	0	
1.6	Value Engineering Review	LS	1	0	0	
1.7	Post Design Services	LS	1	40	40	Optional Services
1.8	Railroad, Transit, and/or Airport Coordination	LS	1	0	0	
1.9	Project Manager Coordination Meetings	EA	0	0	0	
1. General Tasks Total					60	

Project Activity 2: Roadway Analysis						
Task No.	Task	Units	No of Units	Hours/ Unit	Total Hours	Comments
2.1	Typical Section Package	LS	1	2	2	
2.2	Horizontal /Vertical Master Design Files	LS	1	16	16	
2.3	Roundabout Design Analysis	LS	1	0	0	
2.4	Design Report	EA	1	10	10	
2.5	Computation Book & Quantities	EA	4	3	12	65%, 96%, 100%, and Final submittals
2.6	Cost Estimate	EA	4	3	12	65%, 96%, 100%, and Final submittals
2.7	Technical Special Provisions and Modified Special Provisions	LS	1	0	0	Optional Services
2.8	ROW Impact Analysis	LS	1	0	0	
2.9	Other Roadway Analyses	LS	1	0	0	
2.10	Monitor Existing Structures	LS	1	0	0	
2.11	Field Review	EA	2	6	12	2 site visits
2.12	Technical Meetings	EA	2	0	0	
2. Roadway Analysis Total					64	

Project Activity 3: Roadway Plans						
Task No.	Task	Units	No. of Units or Sheet	Hours/ Unit or Sheet	Total Hours	Comments
3.1	Key Sheet	Sheet	1	4	4	Prepare roadway plans key sheet
3.2	Typical Sections	EA	1	2	2	Prepare road and bridge typical sections, revisions per comments (2 typical sections)
3.3	Typical Section Details	EA	1	2	2	Pavement design data
3.4	General Notes/Pay Item Notes/Summary of Quantities	Sheet	1	8	8	
3.5	Project Control Sheet – Survey Plans	Sheet	0	0	0	
3.6	Master Plan	Sheet	1	12	12	Plan and Profile sheet (Horiz. only), existing R/W, baseline control, access mgmt & sight
3.7	Plan/Profile Sheet	Sheet	1	12	12	Project length approximately 400 LF presented on 1 sheet at 1"=40'
3.8	Profile Sheet	Sheet	0	0	0	
3.9	Plan Sheet	Sheet	0	0	0	
3.10	Driveway Profiles	EA	4	3	12	(2 hrs for analysis & 1 hr for Design) / Cross section
3.11	Special Profiles	Sheet	0	0	0	
3.12	Back-of-Sidewalk Profile Sheet	Sheet	0	0	0	
3.13	Intersection Layout Details	Sheet	0	0	0	
3.14	Plateau Intersection Detail	Sheet	0	0	0	
3.15	Miscellaneous Details	EA	8	2	16	Includes 6 canal cross sections with embankman stabilization details
3.16	Right-of-Way Acquisition Exhibit	Sheet	0	0	0	
3.17	Roadway Soil Survey Sheets	Sheet	1	2	2	Incorporate soil logs
3.18	Railroad Detail Sheets	Sheet	0	0	0	
3.19	Cross Sections	EA	4	3	12	4 roadway x-sections
3. Roadway Plans Total					82 ✓	

Project Activity 4: Drainage Analysis						
Task No.	Task	Units	No of Units	Hours/ Unit	Total Hours	Comments
4.1	Drainage Map Hydrology	LF	0	0	0	
4.2	Determine Base Clearance Water Elevation	EA	0	0	0	
4.3	Pond Siting Analysis and Report	EA	0	0	0	
4.4	Design of Cross Drains	EA	0	0	0	
4.5	Design of Roadside Ditches	LF	1	4	4	4 inlets, 2 cross drains and 2 outfalls into LWDD L-30 canal
4.6	Design of Storm Drains	EA	4	2	8	
4.7	French Drain Systems	LF	1	4	4	Roadside swale design and water quality provisions per SFWMD requirements
4.8	Drainage Design Report	LS	1	16	16	Roadway drainage report
4.9	Bridge Hydraulic Report	EA	1	60	60	Bridge hydraulic analysis and report per LWDD requirements
4.10	Technical Special Provisions / Modified Special Provisions	LS	1	0	0	Optional Services
4. Drainage Analysis Total					92	

Project Activity 5: Drainage Plans							
Task No.	Task	Scale	Units	No. of Units or Sheet	Hours/ Unit or Sheet	Total Hours	Comments
5.1	Drainage Area Map		Sheet	1	6	6	
5.2	Box Culvert Detail Sheet		Sheet	0	0	0	
5.3	Drainage Structure		EA	4	3	12	Four drainage structures, two cross drains, and two outfall pipes
5.4	Miscellaneous Drainage Detail Sheets		Sheet	0	0	0	
5.5	Lateral Ditch Plan/Profile		LF	0	0	0	
5.6	Lateral Ditch Cross Sections		EA	0	0	0	
5.7	Retention/Detention Ponds Detail Sheets		Sheet	0	0	0	
5.8	Retention Pond Cross Sections		EA	0	0	0	
5.9	SWPPP Sheets		Sheet	1	6	6	
5. Drainage Plans Total						24	

Project Activity 6: Permits & Environmental						
Task No.	Task	Units	No. of Units	Hours/ Units	Total Hours	Comments
6.1	Pond Site Alternatives	EA	0	0	0	
6.2	Establish Wetland Jurisdictional Lines	LS	1	0	0	
6.3	Existing Permit Analysis	LS	1	0	0	
6.4	Complete and Submit All Required Permit Applications	EA	1	60	60	<i>SFWMD ERP, WUD, ACOE, LWDD RW, LWDD Drainage Connection. Environmental Component by EW Consulting</i>
6.5	Prepare Dredge and Fill Sketches	LS	1	24	24	Prepare the cut and fill sketches for ACOE permit application
6.6	Mitigation Coordination and Meetings	EA	0	0	0	
6.7	Technical Meetings	EA	2	7	14	<i>2 meetings, 2 Attendees at 3.5 hrs per meeting. Includes meeting prep, attendance and minutes of mtg.</i>
6. Permits and Environmental Total					98	✓

Project Activity 7: Utilities						
Task No.	Task	Units	No of Units	Hours/ Unit	Total Hours	Comments
7.1	Incorporate Existing Utility Facilities	EA	1	4	4	Incorporate data and utility coordination results supplied by PBC and utility companies
7.2	Conflict Matrix	EA	2	2	4	Create utility conflict matrix and update based on coordination meeting
7.3	Identify and Incorporate Conflict Resolutions	LS	1	4	4	
7.4	Meetings	EA	2	4	8	2 meetings (pothole and 100%), 2 attendees
7. Utilities Total					20	✓

Project Activity 8: Signing & Marking Analysis						
Task No.	Task	Units	No. of Units	Hours/ Units	Total Hours	Comments
8.1	Master Design Files	LS	1	8	8	
8.2	Quantities	EA	4	1	4	65%, 96%, 100%, and Final submittals
8.3	Cost Estimate	EA	4	1	4	65%, 96%, 100%, and Final submittals
8.4	Other Signing and Pavement Marking	LS	1	0	0	
8. Signing and Pavement Marking Analysis Total					16 ✓	

Project Activity 9: Signing & Marking Plans						
Task No.	Task	Units	No of Units	Hours/ Unit or Sheet	Total Hours	Comments
9.1	Key Sheet	Sheet	1	2	2	
9.2	General Notes/Pay Item Notes/Summary of Quantities	Sheet	1	2	2	
9.3	Typical Details	EA	0	0	0	
9.4	Plan Sheet	Sheet	1	8	8	
9. Signing and Pavement Marking Plans Total					12	

Project Activity 18: Reimbursables							
Task No.	Task	Scale	Units	No. of Units	\$/Unit	Total Cost	Comments
18.1	Prints for Submittals						
	Plans	11x17	Sheet	0	\$ -	\$ -	
	Other	8 1/2x 11	Sheet	0	\$ -	\$ -	
18.2	Permit Fee						
	SFWM		EA	1	\$ 4,000.00	\$ 4,000.00	ERP & WUD
	LWDD		EA	1	\$ 5,020.00	\$ 5,020.00	Bridge and Drainage Connection
	ACOE		EA	0	\$ -	\$ -	
	Improvement District		EA	0	\$ -	\$ -	
	Municipality		EA	0	\$ -	\$ -	
	ERM		EA	0	\$ -	\$ -	
18.3	Other		LS	1	\$ -	\$ -	
18. Reimbursables Total						\$ 9,020.00	

Project Activity 19: Structural Plans						
Task No.	Task	Units	No. of Units	Hours per Unit or Sheet	Total	Comments
19.1	Key Sheet	Sheet	1	2	2	
19.2	Index of Drawings	Sheet	1	2	2	
19.3	Bridge Typical Section - Existing	EA	0	0	0	
19.4	Bridge Typical Section - Proposed	EA	0	0	0	Addressed in Task 3
19.5	Project Layout	Sheet	0	0	0	
19.6	General Notes and Bid Items	Sheet	2	6	12	
19.7	Miscellaneous Details	EA	0	0	0	
19.8	Incorporate Report of Core Borings	Sheet	1	1	1	
19.9	Bridge Plans	LS	1	8	8	Identify and insert appropriate FDOT Standard Plans
19.10	Existing Bridge Plans	LS	1	0	0	
19.11	Temporary Bridge Plans	LS	1	0	0	
19.12	Quantities	EA	4	6	24	<i>Estimate of Quantities to accompany cost estimates at 65%, 96%, 100% & Final Submittals</i>
19.13	Cost Estimate	EA	4	2	8	<i>4 Submittals (see item 19.12 comments above)</i>
19.14	Technical Special Provisions and Modified Special Provisions	LS	1	0	0	
19.15	Retaining Walls	EA	0	0	0	
19.16	Miscellaneous Structures	Sheet	0	0	0	
19.17	Field Reviews	EA	2	6	12	<i>Two field reviews throughout design process</i>
19.18	Technical Meetings	EA	0	0	0	<i>(LIST)</i>
19. Structures - Structural Plans Total					69	

Project Activity 21: Short Span Concrete Bridge						
Task No.	Task	Units	No. of Units	Hours/ Unit or Sheet	Total Hours	Comments
General Layout Design and Plans						
21.1	Overall Bridge Final Geometry	LS	1	16	16	
21.2	Expansion/Contraction Analysis	EA Unit	1	4	4	
21.3	General Plan and Elevation	Sheet	1	40	40	
21.4	Construction Staging	Sheet	0	0	0	Bridge construction will be accomplished while roadway closed to traffic. No Phasing of construction included
21.5	Approach Slab Plan and Details	Sheet	2	20	40	Once custome approach slab design on north end to accommodate LWDD access driveway and barrier wall
21.6	Miscellaneous Details	Sheet	3	20	60	(i.e. wingwall, radius barrier walls and terminations, approach slabs, corner sheet piles)
End Bent Design and Plans						
21.7	End Bent Geometry	EA End Bent	2	16	32	
21.8	End Bent Structural Design	EA Design	2	20	40	
21.9	End Bent Plan and Elevation	Sheet	2	10	20	
21.10	End Bent Details	Sheet	2	12	24	
Intermediate Bent Design and Plans						
21.11	Bent Geometry	EA Bent	2	8	16	2 intermediate bent geometry designs required
21.12	Bent Stability Analysis	EA Analysis	1	20	20	
21.13	Bent Structural Design	EA Design	1	30	30	
21.14	Bent Plan and Elevation	Sheet	1	24	24	
21.15	Bent Details	Sheet	1	12	12	

Task No.	Task	Units	No. of Units	Hours/ Unit or Sheet	Total Hours	Comments
Miscellaneous Substructure Design and Plans						
21.16	Foundation Layout	Sheet	1	20	20	Foundation layout and incorporate bridge boring soil logs and prepare foundation layout
Miscellaneous Superstructure Design and Plans						
21.17	Finish Grade Elevation Calculation	LS	1	16	16	
21.18	Finish Grade Elevations	Sheet	1	16	16	
Cast-in-Place Slab Bridges						
21.19	Bridge Deck Design	EA Unit	0	0	0	
21.20	Superstructure Plan	Sheet	0	0	0	
21.21	Superstructure Sections and Details	Sheet	0	0	0	
Prestressed Slab Unit Bridges						
21.22	Prestressed Slab Unit Design	EA Design	2	16	32	4unique bridge deck slab units will be required
21.23	Prestressed Slab Unit Layout	Sheet	2	20	40	
21.24	Prestressed Slab Unit Details and Schedule	Sheet	1	12	12	Detailing of 4 unique slab units
21.25	Deck Topping Reinforcing Layout	Sheet	1	18	18	
21.26	Superstructure Sections and Details	Sheet	1	20	20	
Reinforcing Bar List						
21.27	Preparation of Reinforcing Bar List	Sheet	1	20	20	
Load Rating						
21.28	Load Ratings	EA Unit	1	40	40	
21. Short Span Concrete Bridge Total					612	

South Florida Water Management District

PERMIT APPLICATION FEE SCHEDULE

(Effective 8/7/2016)

Environmental Resource Permits

New Individual or Conceptual Permit (excludes Agriculture, Mitigation Bank)

- Project area < 10 acres; no wetlands or surface waters; no boat slips..... \$ 2,000
- Project area < 10 acres; < 1 acre wetland or surface water; < 10 boat slips..... \$ 3,500
- Project area < 40 acres; < 3 acres wetlands or surface waters; < 30 boat slips..... \$ 5,500
- Project area < 100 acres; < 10 acres wetlands or surface waters; < 50 boat slips..... \$ 7,500
- Project area < 640 acres; < 50 acres wetlands or surface waters; < 50 boat slips..... \$ 13,125
- Project area > 640 acres; > 50 acres wetlands or surface waters; > 50 boat slips..... \$ 25,000

New Individual Agriculture or Silviculture Permit

- Project area < 10 acres; < 1 acre wetland or surface water..... \$ 859
- Project area < 40 acres; < 3 acres wetlands or surface waters..... \$ 2,444
- Project area < 100 acres; < 10 acres wetlands or surface waters..... \$ 4,029
- Project area < 640 acres; < 50 acres wetlands or surface waters..... \$ 5,284
- Project area > 640 acres; > 50 acres wetlands or surface waters..... \$ 6,605

Individual or Conceptual Permit Major Modification (excludes Agriculture, Mitigation Banks)

- Project area < 10 acres; no wetlands or surface waters; no boat slips..... \$ 1,200
- Project area < 10 acres; < 1 acre wetland or surface waters; < 10 boat slips..... \$ 2,100
- Project area < 40 acres; < 3 acres wetlands or surface waters; < 30 boat slips..... \$ 3,300
- Project area < 100 acres; < 10 acres wetlands or surface waters; < 50 boat slips..... \$ 4,500
- Project area < 640 acres; < 50 acres wetlands or surface waters; < 50 boat slips..... \$ 7,875
- Project area > 640 acres; > 50 acres wetlands or surface waters; > 50 boat slips..... \$ 15,000

Individual Agriculture or Silviculture Permit Major Modification

- Project area < 10 acres; < 1 acre wetland or surface water..... \$ 515
- Project area < 40 acres; < 3 acres wetlands or surface waters..... \$ 1,466
- Project area < 100 acres; < 10 acres wetlands or surface waters..... \$ 2,417
- Project area < 640 acres; < 50 acres wetlands or surface waters..... \$ 3,170
- Project area > 640 acres; > 50 acres wetlands or surface waters..... \$ 3,963

Individual or Conceptual Permit Minor Modification (includes Mitigation Banks)

- Time Extension of Permit (not associated with SB/HB)..... \$ 500
- Time Extension of Permit (associated with SB/HB)..... \$ 0
- Minor errors not requiring technical review..... \$ 0
- Transfer of ownership..... \$ 0
- Transfer from construction to operation phase..... \$ 0
- All other minor modifications (Letter Modification)..... \$ 250

New Individual or Conceptual Permit for a Mitigation Bank

- Permit area < 100 acres..... \$ 7,500

Water Use Permits

Individual Permit, except Mining/Dewatering

- Max Month Allocation <= 3 MGM \$ 350
- Max Month Allocation > 3 MGM <= 15 MGM \$ 1,000

Individual Irrigation < 20 years

- Max Month Allocation > 15 MGM \$ 1,000

Individual Irrigation >= 20 years

- Max Month Allocation > 15 MGM <= 30 MGM \$ 1,600
- Max Month Allocation > 30 MGM <= 300 MGM \$ 3,400
- Max Month Allocation > 300 MGM \$ 5,600

Individual Public Water Supply < 20 years

- Max Month Allocation > 15 MGM <= 30 MGM \$ 2,700
- Max Month Allocation > 30 MGM <= 300 MGM \$ 5,500
- Max Month Allocation > 300 MGM \$ 7,000

Individual Public Water Supply >= 20 years

- Max Month Allocation > 15 MGM <= 30 MGM \$ 4,200
- Max Month Allocation > 30 MGM <= 300 MGM \$ 8,500
- Max Month Allocation > 300 MGM \$11,500

Individual Mining/Dewatering

- Standard Individual Permit <= 1 year..... \$ 500
- Standard Individual Permit > 1 year..... \$ 1,800
- Master Individual Permit \$ 4,000

Individual Industrial < 20 years

- Max Month Allocation > 15 MGM <= 30 MGM \$ 1,400
- Max Month Allocation > 30 MGM <= 300 MGM \$ 2,750
- Max Month Allocation > 300 MGM \$ 3,500

Individual Industrial >= 20 years

- Max Month Allocation > 15 MGM <= 30 MGM \$ 2,000
- Max Month Allocation > 30 MGM <= 300 MGM \$ 3,650
- Max Month Allocation > 300 MGM \$ 5,600

Individual Diversion/Impoundment < 20 years

- Max Month Allocation > 15 MGM <= 30 MGM \$ 1,400
- Max Month Allocation > 30 MGM <= 300 MGM \$ 2,750
- Max Month Allocation > 300 MGM \$ 3,500

Individual Diversion/Impoundment >= 20 years

- Max Month Allocation > 15 MGM <= 30 MGM \$ 2,000

1.3.2 Right-of-Way Permit Fee Schedule

Right-of-Way Permit Types	Permit Application Fee	One-Time Right-of-Way Usage or Occupancy Fee	Notes
Access Gate	\$610.00 each	Not Applicable	Access gates must be fabricated and installed according to LWDD approved plans and specifications. If the applicant requests, LWDD will supply the access gate and bollards, after the fee below is paid by the Applicant and the permit is issued. Access Gate (including bollards) \$ 2125.00 each The fees shown above for LWDD to supply the access gate and bollards includes all fees for LWDD to fabricate, deliver to the job site, and install the access gate and bollards as permitted. LWDD will not fabricate, deliver to the job site, or install any chain link fence material, even if permitted. Refer to Subsection 2.2.1 - <u>Access Gate</u> .
Bridge	\$0.25 per S.F. of bridge surface (min. \$300.00)	\$0.40 per S.F. of bridge surface (min. \$450.00)	Bridge surface includes the entire length of the bridge (Including the length of approach slabs) multiplied by the entire bridge width. Refer to Subsection 2.2.2 - <u>Bridge</u> .
Bulkheads	\$10.00 per L.F. of bulkhead within canal right-of-way (min. \$500.00)	\$15.00 per L.F. of bulkhead within canal right-of-way (min. \$750.00)	Refer to Subsection 2.2.3 - <u>Bulkheads</u> .
Canal Rehabilitation	\$20.00 per L.F. of canal frontage (min.\$4000.00)	Not Applicable	Refer to Subsection 1.8 - <u>Conditional Required Work within Canal Right-of-Way</u> .
Culvert Crossing	\$9.00 per L.F. of culvert within canal right-of-way (min. \$300.00)	\$14.00 per L.F. of culvert within canal right-of-way (min. \$450.00)	Culverts 200 feet or longer (as measured along the channel) are considered to be piping of a LWDD canal and will require Board approval. Refer to Subsections 2.2.9 - <u>Piping of Canal</u> and 2.2.4 - <u>Culvert Crossing</u> .
Docks, Davits, & Boatlifts			
Docks	\$2.00 per S.F. of dock surface within canal right-of-way (min. \$300.00)	\$5.00 per S.F. of dock surface within canal right-of-way (min. \$450.00)	Dock permit application fees and one-time right-of-way usage or occupancy fees include fees to permit required erosion control such as a bulkhead or rock rubble riprap. Refer to Subsection 2.2.5 - <u>Docks, Davits & Boatlifts</u> .
Davits	\$300.00 per davit lift arm within canal right-of-way	\$450.00 per davit lift arm within canal right-of-way	Davit permit application fees and one-time right-of-way usage or occupancy fees include fees to permit required erosion control such as a bulkhead or rock rubble riprap. Refer to Subsection 2.2.5 - <u>Docks, Davits & Boatlifts</u> .
Boatlifts	\$2.00 per S.F. of boat lift platform horizontal area within canal right-of-way (min. \$300.00)	\$5.00 per S.F. of boat lift platform horizontal area within canal right-of-way (min. \$450.00)	Boat lift permit application fees and one-time right-of-way usage or occupancy fees include fees to permit required erosion control such as a bulkhead or rock rubble riprap. Refer to Subsection 2.2.5 - <u>Docks, Davits & Boatlifts</u> .

58' Bridge Width x 100LF = 5,800 sq. ft. of bridge deck
 Bridge permit fee = (\$0.25+\$0.40) x 5,800 sq.ft. = \$3,770.00



Right-of-Way Permit Types	Permit Application Fee	One-Time Right-of-Way Usage or Occupancy Fee	Notes
Drainage Connection.	\$500.00 per application	\$750.00 each	<p>A drainage outfall connection is defined as that facility conveying stormwater from the internal stormwater management system to the LWDD canal beginning at and including the internal stormwater management system's discharge control structure and ending at the outfall within LWDD right-of-way. The drainage outfall connection facility includes but may not be limited to stormwater discharge control structures, swales, ditches, pipes, manholes, catchbasins, endwalls, canal berms, canal channel side slopes, and revetment for channel side slope stabilization. Refer to Subsection 2.2.6 – <u>Drainage Connection</u>.</p> <p style="text-align: right;">\$1,250</p>
Irrigation Connection	\$6.50 per L.F. of irrigation connection pipe and intake equipment within canal right-of-way (min. \$300.00)	\$10.00 per L.F. of irrigation connection pipe and intake equipment within canal right-of-way (min. \$450.00)	Refer to Subsection 2.2.7 - <u>Irrigation Connection</u> .
Monitoring Well	\$580.00 each	\$870.00 each (Not Applicable for U.S.G.S. Wells)	Refer to Subsection 2.2.8 - <u>Monitoring Well</u> .
Piping of Canal	\$9.00 per L.F. of piping (min. \$1,800.00)	\$20.00 per L.F. of piping (min. \$4,000.00)	<p>LWDD will not consider approval to pipe a canal unless the applicant demonstrates a substantial hardship and provides reasonable assurances that drainage works and maintenance functions will not be harmed. All requests to pipe a LWDD canal require approval by the Board of Supervisors.</p> <p>Any pipe (culvert) 200 L.F. or longer installed parallel to, and within the channel of a LWDD canal shall pay an annual re-occurring right-of-way usage, or occupancy, fee of \$4.00 per L.F. for piping the LWDD canal channel. This annual re-occurring right-of-way usage, or occupancy, fee will be adjusted every five (5) years in accordance with the compounded Consumer Price Index (CPI).</p> <p>Any pipe less than 200 L.F. is considered a culvert crossing and will be subject to the appropriate culvert crossing fees.</p> <p style="text-align: center;">Refer to Subsection 2.2.9 - <u>Piping of Canal</u>.</p>
Signs	\$610.00 each	\$915.00 each	Refer to Subsection 2.2.10 - <u>Signs</u> .
Temporary Access	\$670.00 each	Not Applicable	<p>Requests for an extension of temporary access will be considered a permit extension and permittees will be charged accordingly.</p> <p style="text-align: center;">Refer to Subsections 1.3.3 - <u>General Permit Fees</u> and 2.2.11 - <u>Temporary Access</u>.</p>



HSQ GROUP, LLC
Engineers • Planners • Surveyors
 1001 Yamato Road, Suite 105
 Boca Raton, Florida 33431
 (561) 392-0221 Phone • (561) 392-6458 Fax

6/27/2022
 Rev. 9/7/2022
 Rev. 4/20/2023
 Rev. 8/23/2023
 Rev. 9/6/2023

**BARWICK ROAD BRIDGE OVER L-30
 CANAL REPLACEMENT (BRIDGE #934455)
 PALM BEACH COUNTY PROJECT # 2022801**

Land Survey Scope of Services

PROJECT LIMITS

Barwick Road, 25 feet outside the Right-of-Way, from 225 feet north of the center of the L-30 Canal to 225' south of the center of the canal. L-30 Canal, 25' outside of the canal Right-of-Way, 125 feet west of Barwick Road to 125' east of the center of Barwick Road.

SCOPE OF SERVICES

The Boundary and Topographic Survey will be done in accordance with the standards of practice set forth by the Florida Board of Professional Surveyors and Mappers in rule 5j-17.050-.052, of the Florida Administrative Code pursuant to chapter 472.027, Florida Statutes, the 2019 Palm Beach County Thoroughfare Road Design Procedures and the current State of Florida Standards of Practice.

1. Review Palm Beach County Title Report Documents to establish Right-of-Way and Baseline. Prepare a drawing showing the Baseline, Right-of-Way linework, corridor width, and recording information of the roadway and easements. No evidence of an historic baseline or Right-of-Way Maps were found.
2. Collect horizontal global positioning control monumentation and set control points tied to Florida East Zone State Plane Coordinates (NAD 83, 1990 adjustment).
3. Collect published vertical benchmarks, run a closed level loop, and set benchmarks outside the limits of construction (NAVD 1988 datum).
4. Locate subdivision corners, and lot corners (if needed) to establish the relative position.
5. Obtain existing spot elevations of roadway Right-of-Way, pavement, bridge deck, walks, canal bottom and embankments at high and low break points with intervals not to exceed 100-foot intervals.
6. Locate above ground features adjoining the roadway. Including pavement, utilities, walks, driveway, other amenities, and fences with elevations. Locate the bridge deck and abutment for informational purposes only. This bridge is to be replaced, (not retrofitted).
7. Obtain six cross sections of the canal, at bridge face, at 75 feet beyond the center of bridge and at 125 feet beyond the center of bridge.
8. Locate trees lying in the right-of-way within the scope limits, with diameter size and common type.
9. Obtain rim elevation, inverts and bottom of drainage structures and outfalls within the right of way with pipe sizes and materials.
10. Monument and reference the baseline.
11. Prepare a Boundary and Topographic Survey, including the Project Network Control and the Reference Point on 11" x 17" size sheets, digitally signed in "PDF" format for County submittal.
12. Prepare AutoCAD file reflecting the Topography, Baseline, Right-of-Way, easements and parcel lines.
13. Prepare a 3-dimensional digital terrain model in XML format.

SURVEY DELIVERABLES

- 1- Boundary and Topographic Survey with Project Network Control (PNC) and Reference Points on (11"x17" sheet, 1"=40' scale) drawing.
- 2- The SURVRD01 file in AutoCAD cad format.
- 3- Digital Terrain Model in XML format.
- 4- L.W.D.D. Deliverable of Canal Cross Sections

Estimate of Work Effort and Cost

Name of Project: Barwick Road Bridge over L-30 Canal Replacement (Bridge #934455)

Exhibit B: Page 20 of 28
 Consultant Name: HSQ GROUP, LLC

PBC Project Number: 2022801

Date: 9/6/2023

Task Description	Total Staff Hours	Staff Categories				Staff Hours By Activity	Salary Cost By Activity	Average Rate Per Task
		Senior Surveyor and Mapper	Surveyor and Mapper	CADD Technician	2 Man Field Crew			
		\$60.00	\$50.00	\$31.00	\$54.00			
BASIC SERVICES								
14 Survey - Field	51.0				51.0	51.0	\$2,754.00	\$ 54.00
15 Survey Plans	90.0	3.0	27.0	60.0		90.0	\$3,390.00	\$ 37.67
Total Staff Hours (Basic Services)	141.0	3.0	27.0	60.0	51.0	141.0		\$ 43.57
Total Staff Cost (Basic Services)		\$180.00	\$1,350.00	\$1,860.00	\$2,754.00		\$6,144.00	

Basic Services:	
Salary Related Costs:	\$6,144.00
Contract Multiplier	2.79
Basic Services Total:	\$17,141.76 ✓

Grand Total Estimated Fees: \$17,141.76

Project Activity 14: Survey - Field						
Task No.	Task	Units	No of Units	Hours/Unit	Total Hours	Comments
14.1	Horizontal Project Control (HPC)					
	2-Lane Roadway	LF	700	0.0086	6	Recover and locate PBC GPS control points, set control points
	Multi-lane Roadway	LF	0	0	0	
14.2	Vertical PC / Bench Line					
	2-Lane Roadway	LF	700	0.0057	4	Recover PBC Benchmarks and perform differential leveling on control
	Multi-lane Roadway	LF	0	0	0	
14.3	Reference Points					
	2-Lane Roadway	EA	700	0.0043	3	Set 3 reference points for each baseline point
	Multi-lane Roadway	EA	0	0	0	
14.4	Baseline Layout	LF	700	0.0014	8	Set points on baseline begin, & end PI
14.5	Section, Subdivision & Property Ties	EA	6	1	6	Recover right-of-way and boundary corners
14.6	Topography/DTM (3D)	LF	700	0.0114	8	Locate features with elevations
14.7	Cross Sections	EA	700	0.0114	8	Obtain spot elevations @ 100' intervals
14.8	Side Street Surveys	LF	0	0	0	
14.9	SUE	EA	0	0	0	Optional Services (Upland/Submerged?)
14.10	Locates - Pothole	EA	0	0	0	
14.11	Outfall Survey	LF	0	0	0	
14.12	Drainage Survey	EA	2	1	2	Obtain rim and invert elevations with pipe details in structures
14.13	Bridge Survey	EA	0	0	0	Major or Minor?
14.14	Canal Survey	LF	250	0.016	4	Obtain canal cross sections on each side of roadway
14.15	Channel Survey and Soundings	LS	1	0	0	
14.16	Pond Site Survey	EA	0	0	0	(Provide Description of site - How heavily forested?)
14.17	Jurisdictional Line Survey	LS	1	0	0	(Detail - MHWL?)
14.18	Tree Survey	LS	1	2	2	Locate trees within right-of-way
14.19	Route/Corridor Survey	LF	0	0	0	
14.20	Boundary Survey	LS	1	0	0	
14.21	Topographic Survey	LS	1	0	0	
14.22	Specific Purpose Survey	LS	1	0	0	
14.23	Hydrographic Survey	LS	1	0	0	
14.24	Quantity Survey	LS	1	0	0	
14.25	Record/As-Built Survey	LS	1	0	0	
14.26	R/W Staking					
	Parcel	EA	0	0	0	
	R/W Line	LF	0	0	0	
14.27	Meetings	EA	0	0	0	(LIST)
14. Survey - Field Total					51	

Project Activity 15: Survey Plans						
Task No.	Task	Units	No. of Units	Hours/ Unit or Sheet	Total Hours	Comments
15.1	Alignment	MI	0.1	30	3	Establishment of the alignment
15.2	Section and 1/4 Section Lines	Section	1	1	1	analyze found monuments and record data calculate ties
15.3	Subdivisions / Property Lines	EA	1	1	1	analyze found monuments and record data calculate alignment
15.4	Existing R/W	LF	1	1	1	Review Right-of-Way
15.5	Topography	LF	1	6	6	locate trees, drainage, draw elevations at cross sections and high low points
15.6	Parent Tract Properties/Existing Easements	EA	0	0	0	N/A
15.7	Title Review	LS	1	10	10	Review Title package from PBC Prepare base map
15.8	Jurisdictional/Agency Lines	LF	0	0	0	N/A
15.9	Survey Key Sheet	Sheet	1	2	2	prepare cover, notes,
15.10	Survey Detail & Legend Sheet	Sheet	1	4	4	
15.11	Reference Point Sheet	Sheet	1	12	12	calculate points and grid ground ties prepare drawing
15.12	Project Control Sheet	Sheet	1	10	10	review bench run, gps control, calculate grid ground ties, prepare drawing
15.13	Specific Purpose & Topographic Survey	Sheet	4	10	40	Prepare cad file, DTM, Draw sheets and review
15.14	Boundary Survey	EA	0	0	0	N/A
15.15	Technical Meetings	EA	0	0	0	N/A
15. Survey Plans Total					90	

May 3, 2023

Alan Gerwig & Associates

12798 W. Forest Hill Blvd, Suite 201
Wellington, FL 33414

Attention: Mr. Alan Gerwig, PE, LEED AP
President

Re: Scope of Services for Geotechnical Engineering Services
Barwick Road Bridge Replacement
Barwick Road over LWDD L-30 Canal
Boynton Beach, Palm Beach County, Florida
PACIFICA Proposal No.: 610-12015232

Dear Mr. Gerwig:

Pacifica Engineering Services, LLC (PACIFICA), is pleased to submit this scope of services to perform a subsurface exploration program for the above-referenced project. Included herein is our understanding of the proposed development along with the scope of services.

This project includes the design and construction of a bridge replacement at Barwick Road.

The current plan is to replace the existing bridge with a new two-lane bridge with a span length of 66 ft. The bridge is to be supported on concrete driven piles. Loads on the piles are not known at this time. We expect site grading to be minimal with no significant fills in the bridge approach areas.

GEOTECHNICAL SCOPE OF SERVICES

PACIFICA proposes to perform the following geotechnical field services:

- Perform two (2) Standard Penetration Test (SPT) borings, one at each end bent to a depth of 100 feet below existing grades.

The SPT borings will be performed with truck-mounted machinery using rotary drilling procedures. Samples of the in-place materials will be recovered with a standard split barrel driven with a 140-pound hammer falling 30 inches (the Standard Penetration Test in accordance with ASTM D1586). After completion of drilling, all boreholes will be grouted, asphalt cold patch applied where needed, and the site generally cleaned, as required. SPT borings and Asphalt Cores will not be performed in the wheel path.

Underground utility clearance will be required prior to the commencement of the geotechnical field exploration. Therefore, PACIFICA will contact "Sunshine One-Call" Service to obtain underground public utility clearance. PACIFICA understands that private utilities will be marked by others prior to each mobilization.

GEOTECHNICAL REPORT

After the geotechnical field exploration is completed, a geotechnical engineer will review the soil samples and select samples will be tested for physical properties such as gradation, moisture content, and organic content, if deemed necessary. The results of the geotechnical exploration will be transmitted in a report which will specifically contain the information listed below:

1. A location plan of the site showing the location of the soil borings.
2. CAD Soil profiles for the exploratory borings, which furnish the results of the SPT sampling.
3. Results of the FDOT corrosion series testing and laboratory test results.
4. The existence of organic soils or any other soil conditions.
5. Foundation Axial Capacities
6. FB pier soil parameters for lateral analysis.
7. Retaining Wall Design Parameters (temporary and permanent)
8. Provide mitigation for vibration and settlement (100% PDA / pre-drilling to minimum tip elevations).
9. Report

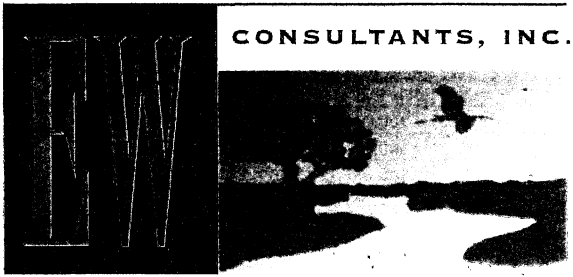
PERMITS ARE NOT INCLUDED.

ELEVATIONS AT BORING LOCATIONS, IF REQUIRED, WILL NEED TO BE PROVIDED BY OTHERS.



DESCRIPTION	UNIT	# OF UNITS	UNIT RATE	TOTAL
I. FIELD EXPLORATIONS				
Mobilization of Drill Equipment (50-mile travel)	each	1.0	\$420.00	\$420.00
Standard Penetration Tests - Truck Rig (0' - 50')	feet	100.0	\$16.00	\$1,600.00
Standard Penetration Tests - Truck Rig (51' - 100')	feet	100.0	\$19.00	\$1,900.00
Grout Bore Hole (0 to 50 Feet)	feet	100.0	\$6.40	\$640.00
Grout Bore Hole (51 to 100 Feet)	feet	100.0	\$7.50	\$750.00
Casing (0 to 50 Feet)	feet	100.0	\$9.80	\$980.00
Casing (51 to 100 Feet)	feet	100.0	\$10.00	\$1,000.00
Engineering Technician (Site Reconnaissance, Boring Layout and Underground Utility Clearance) (Raw Rate: \$31*3)	hour	8.0	\$93.00	\$744.00
Engineering Technician (Drilling oversight) (Raw Rate: \$31*3)	hour	16.0	\$93.00	\$1,488.00
II. SOIL & AGGREGATE TESTING				
Organic Content Test	each	2.0	\$55.00	\$110.00
DOT Corrosivity - (pH, sulfate, chlorides & conductivity)	each	1.0	\$205.00	\$205.00
Natural Sample Moisture Content	each	4.0	\$20.00	\$80.00
Grain size determination: Full grain size (8 sieves)	each	2.0	\$78.00	\$156.00
Engineer P.E. (Raw Rate: \$49.05*3)	hour	2.0	\$147.15	\$294.30
III. ENGINEERING SERVICES (MULTIPLIER: 3.0)				
Principal Engineer, P.E. (Raw Rate: \$84.10*3)	hour	3.0	\$252.30	\$756.90
Senior Engineer (Raw Rate: \$69.30*3)	hour	12.0	\$207.90	\$2,494.80
Engineer P.E. (Raw Rate: \$49.05*3)	hour	24.0	\$147.15	\$3,531.60
Drafter / CADD (Raw Rate: \$31.35*3)	hour	3.0	\$94.05	\$282.15
TOTAL BASIC SERVICES				\$17,432.75

EW CONSULTANTS, INC.
NATURAL RESOURCE MANAGEMENT, WETLAND, AND ENVIRONMENTAL PERMITTING SERVICES



September 1, 2023

Mr. Alan Gerwig, P.E.
Alan Gerwig & Associates, Inc.
12798 Forest Hill Boulevard, Suite 201
Wellington, FL 33414

VIA EMAIL: agerwig@aga-engineering.com

RE: Barwick Rd Bridge; Environmental Permitting
Palm Beach County, Florida

Dear Mr. Gerwig:

EW Consultants, Inc. is pleased to provide this letter agreement for professional environmental consulting services. Pursuant to our conversation, we understand you are in need of environmental assessment and consulting assistance for proposed bridge replacement in the subject area. Based on this understanding, we have prepared the following scope of services, schedule and fees for your review.

SCOPE OF SERVICES

Task 1 - Environmental Resource Permitting Assistance

We will assist project engineers in preparing relevant portions of the Environmental Resource Permit (ERP) application for submittal to South Florida Water Management District (SFWMD) and U.S. Army Corps of Engineers (COE). This work will include documentation and graphics quantifying surface water impacts, a compensatory mitigation plan if applicable, habitat scoring, and coordination with agencies regarding listed species issues. This will include coordination with Federal commenting agencies such as EPA and USFWS, who may have specific habitat or species related concerns. We will coordinate with agency staff to facilitate timely review of the ERP application through the process. We will provide technical responses to two agency requests (two each SFWMD and COE) for additional information) and will coordinate with staff reviewers. We will provide necessary documents to speed and facilitate the processing, such as Public Notice and permit drafts.

2581 METROCENTRE BLVD, SUITE 1 • WEST PALM BEACH, FL 33407 • 561-291-7950 PHONE
WWW.EWCONSULTANTS.COM

EW CONSULTANTS, INC.

NATURAL RESOURCE MANAGEMENT, WETLAND, AND ENVIRONMENTAL PERMITTING SERVICES

Task 2 - Team and Submittal Meetings

The Environmental Project Manager will prepare for and attend up to six team or submittal meetings. This scope includes preparation of responses to comments received from the project team or CID relating to the project plan submittals.

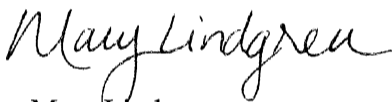
FEES AND BILLING

We will provide the services described in Tasks 1 and 2 in accordance with the fee schedule table provided below. All direct expenses are billed at cost, and are included in the task fee amounts.

Task	Description	Fee Amount
1.	Environmental Resource Permitting Assistance	\$11,850.00
2.	Team and Submittal Meetings	\$ 3,590.00

Billing is monthly based on percentage complete of lump sum efforts and hourly effort and direct expenses for any Additional Services. All invoices are due and payable within 30 days of receipt by the Client. If you would like us to proceed with these services, please sign this agreement in the space provided below and return it to us. This will be considered notice to proceed. We look forward to the opportunity to assist you on this project, and if you have any questions, please feel free to call me.

Sincerely,
EW Consultants, Inc.



Mary Lindgren
Environmental Project Manager

TASK	Senior Scientist	Project Manager	Environmental Scientist	CADD Technician	EXPENSE	TOTAL SALARY COST	TOTAL HOURS
	\$ 41.67	\$ 33.33	\$28.33	\$28.33			
TASK 1. ENVIRONMENTAL RESOURCE PERMITTING ASSISTANCE							
Application preparation, team and agency coordination, RAI responses	6	60	40	20		\$ 3,949.62	126
SUBTOTAL TASK 1	6	60	40	20	\$ -	\$ 3,949.62	126
TASK 2. TEAM AND SUBMITTAL MEETINGS							
Attendance at six meetings including planning and responses	0	24	12	2		\$ 1,196.54	38
SUBTOTAL TASK 2	0	24	12	2	\$ -	\$ 1,196.54	38
PROJECT SUMMARY TOTAL TASKS 1-2	6	84	52	22	0	\$5,146.16	164
PROJECT FEE TOTAL TASKS 1-2	\$250.02	\$2,799.72	\$1,473.16	\$623.26	\$0.00	\$5,146.16	

*3.0 Contract Multiplier = \$ 15,438.48 TOTAL FEE

OEBO SCHEDULE 1

SOLICITATION/PROJECT/BID NAME: Barwick Rd Bridge over LWDD Lat. 30 Canal (934455) SOLICITATION/PROJECT/BID NO.: 2022801 EXHIBIT C Page 1 of 5
 SOLICITATION OPENING/SUBMITTAL DATE: June 14, 2022 COUNTY DEPARTMENT: Roadway Production Division

Section A PLEASE LIST THE DOLLAR AMOUNT OR PERCENTAGE OF WORK TO BE COMPLETED BY THE PRIME CONTRACTOR/CONSULTANT* ON THE PROJECT:

NAME OF PRIME RESPONDENT/BIDDER: Alan Gerwig & Associates, Inc. ADDRESS: 12798 W. Forest Hill Blvd., #201, Wellington, FL 33414
 CONTACT PERSON: Alan Gerwig PHONE NO.: 561-792-9000 E-MAIL: agerwig@aga-engineering.com

PRIME'S DOLLAR AMOUNT OR PERCENTAGE OF WORK: \$215,873.00
 *SMWBE Prime's must include their percentage or dollar amount in the Total Participation line under section B.

Non-SBE	MBE	WBE	SBE
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Section B PLEASE LIST THE DOLLAR AMOUNT OR PERCENTAGE OF WORK TO BE COMPLETED BY ALL SUBCONTRACTORS/SUBCONSULTANTS ON THE PROJECT BELOW:

Subcontractor/Sub consultant Name	(Check all Applicable Categories)				DOLLAR AMOUNT OR PERCENTAGE OF WORK					
	Non-SBE	MBE	WBE	SBE	Black	Hispanic	Women	Caucasian	Asian	Other
		Minority Business	Women Business	Small Business						
1. HSQ Group, LLC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				\$17,141.76		
2. Pacifica Engineering Services, LLC	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	\$17,432.75					
3. EW Consultants, Inc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				\$15,438.48		
4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						

(Please use additional sheets if necessary)

Total Bid/Offer Price \$ 265,885.99 Total Certified S/M/WBE Participation \$ 265,885.99

I hereby certify that the above information is accurate to the best of my knowledge: Alan Gerwig President
 Name & Authorized Signature Title

- Note:
- The amount listed on this form for a Subcontractor/sub consultant must be supported by price or percentage listed on the properly executed Schedule 2 or attached signed proposal.
 - Only those firms certified by Palm Beach County at the time of solicitation opening or due date are eligible to meet the established OEBO Affirmative Procurement Initiative (API). Please check the applicable box and list the dollar amount or percentage under the appropriate demographic category.
 - Modification of this form is not permitted and will be rejected upon submittal.

A completed Schedule 2 is a binding document between the Prime Contractor/consultant and a Subcontractor/subconsultant (for any tier) and should be treated as such. The Schedule 2 shall contain bolded language indicating that by signing the Schedule 2, both parties recognize this Schedule as a binding document. All Subcontractors/subconsultants, including any tiered Subcontractors/subconsultants, must properly execute this document. Each properly executed Schedule 2 must be submitted with the bid/proposal.

SOLICITATION/PROJECT NUMBER: 2022801

SOLICITATION/PROJECT NAME: Barwick Rd Bridge over LWDD Lat. 30 Canal (934455)

Prime Contractor: Alan Gerwig & Associates, Inc. Subcontractor: N/A

(Check box(s) that apply)

SBE WBE MBE M/WBE Non-S/M/WBE Date of Palm Beach County Certification (if applicable): 12/28/21 - 12/27/24

The undersigned affirms they are the following (select one from each column **if applicable**):

Column 1	Column 2	Column 3
<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> African-American/Black <input type="checkbox"/> Asian American <input checked="" type="checkbox"/> Caucasian American	<input type="checkbox"/> Supplier
	<input type="checkbox"/> Hispanic American <input type="checkbox"/> Native American	

S/M/WBE PARTICIPATION – S/M/WBE Primes must document all work to be performed by their own work force on this form. Failure to submit a properly executed Schedule 2 for any S/M/WBE participation may result in that participation not being counted. Specify in detail, the scope of work to be performed or items supplied with the dollar amount and/or percentage for each work item. S/M/WBE credit will only be given for the areas in which the S/M/WBE is certified. A detailed proposal may be attached to a properly executed Schedule 2.

Line Item	Item Description	Unit Price	Quantity/ Units	Contingencies/ Allowances	Total Price/Percentage
1	Structural Engineering Services				\$215,873.00

The undersigned Subcontractor/subconsultant is prepared to self-perform the above-described work in conjunction with the aforementioned project at the following total price or percentage: \$215,873.00

If the undersigned intends to subcontract any portion of this work to another Subcontractor/subconsultant, please list the business name and the amount below accompanied by a separate properly executed Schedule 2.

_____ Price or Percentage: _____

Name of 2nd/3rd tier Subcontractor/subconsultant

Alan Gerwig & Associates, Inc.

Print Name of Prime

By: [Signature]
Authorized Signature

Alan Gerwig

Print Name

President

Title

Date: 10/19/2023

N/A

Print Name of Subcontractor/subconsultant

By: _____
Authorized Signature

Print Name

Title

Date: _____

OEBO LETTER OF INTENT – SCHEDULE 2

A completed Schedule 2 is a binding document between the Prime Contractor/consultant and a Subcontractor/subconsultant (for any tier) and should be treated as such. The Schedule 2 shall contain bolded language indicating that by signing the Schedule 2, both parties recognize this Schedule as a binding document. All Subcontractors/subconsultants, including any tiered Subcontractors/subconsultants, must properly execute this document. Each properly executed Schedule 2 must be submitted with the bid/proposal.

SOLICITATION/PROJECT NUMBER: 2022801

SOLICITATION/PROJECT NAME: Barwick Rd Bridge over LWDD Lat. 30 Canal (934455)

Prime Contractor: Alan Gerwig & Associates, Inc. Subcontractor: HSQ Group, LLC

(Check box(s) that apply)

SBE WBE MBE M/WBE Non-S/M/WBE Date of Palm Beach County Certification (if applicable): 3/13/2021 - 3/12/2024

The undersigned affirms they are the following (select one from each column **if applicable**):

Column 1	Column 2	Column 3
<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> African-American/Black <input type="checkbox"/> Asian American <input checked="" type="checkbox"/> Caucasian American	<input type="checkbox"/> Supplier
	<input type="checkbox"/> Hispanic American <input type="checkbox"/> Native American	

S/M/WBE PARTICIPATION – S/M/WBE Primes must document all work to be performed by their own work force on this form. Failure to submit a properly executed Schedule 2 for any **S/M/WBE** participation may result in that participation not being counted. Specify in detail, the scope of work to be performed or items supplied with the dollar amount and/or percentage for each work item. S/M/WBE credit will only be given for the areas in which the S/M/WBE is certified. A detailed proposal may be attached to a properly executed Schedule 2.

Line Item	Item Description	Unit Price	Quantity/ Units	Contingencies/ Allowances	Total Price/Percentage
1	Surveying Services	1	1	0	\$17,141.76

The undersigned Subcontractor/subconsultant is prepared to self-perform the above-described work in conjunction with the aforementioned project at the following total price or percentage: \$17,141.76

If the undersigned intends to subcontract any portion of this work to another Subcontractor/subconsultant, please list the business name and the amount below accompanied by a separate properly executed Schedule 2.

N/A Price or Percentage: _____

Name of 2nd/3rd tier Subcontractor/subconsultant

Alan Gerwig & Associates, Inc.

Print Name of Prime

By: [Signature]
Authorized Signature

Alan Gerwig

Print Name

President

Title

Date: 10/19/2023

HSQ Group, LLC

Print Name of Subcontractor/subconsultant

By: [Signature]
Authorized Signature

Nour Shehadeh

Print Name

Managing Member

Title

Date: October 18, 2023

A completed Schedule 2 is a binding document between the Prime Contractor/consultant and a Subcontractor/subconsultant (for any tier) and should be treated as such. The Schedule 2 shall contain bolded language indicating that by signing the Schedule 2, both parties recognize this Schedule as a binding document. All Subcontractors/subconsultants, including any tiered Subcontractors/subconsultants, must properly execute this document. Each properly executed Schedule 2 must be submitted with the bid/proposal.

SOLICITATION/PROJECT NUMBER: 2022801
SOLICITATION/PROJECT NAME: Barwick Rd Bridge over LWDD Lat. 30 Canal (934455)

Prime Contractor: Alan Gerwig & Associates, Inc. Subcontractor: Pacifica Engineering Services, LLC

(Check box(s) that apply)

SBE WBE MBE M/WBE Non-S/M/WBE Date of Palm Beach County Certification (if applicable): 10/25/2021 - 10/24/2024

The undersigned affirms they are the following (select one from each column if applicable):

Column 1 **Column 2** **Column 3**
 Male Female African-American/Black Asian American Caucasian American Supplier
 Hispanic American Native American

S/M/WBE PARTICIPATION – S/M/WBE Primes must document all work to be performed by their own work force on this form. Failure to submit a properly executed Schedule 2 for any S/M/WBE participation may result in that participation not being counted. Specify in detail, the scope of work to be performed or items supplied with the dollar amount and/or percentage for each work item. S/M/WBE credit will only be given for the areas in which the S/M/WBE is certified. A detailed proposal may be attached to a properly executed Schedule 2.

Line Item	Item Description	Unit Price	Quantity/ Units	Contingencies/ Allowances	Total Price/Percentage
1	Geotechnical Engineering Services				\$17,432.75

The undersigned Subcontractor/subconsultant is prepared to self-perform the above-described work in conjunction with the aforementioned project at the following total price or percentage: \$17,432.75

If the undersigned intends to subcontract any portion of this work to another Subcontractor/subconsultant, please list the business name and the amount below accompanied by a separate properly executed Schedule 2.

Name of 2nd/3rd tier Subcontractor/subconsultant

Price or Percentage: _____

Alan Gerwig & Associates, Inc.

Print Name of Prime

By: [Signature]
Authorized Signature

Alan Gerwig

Print Name

President

Title

Date: 9/22/23

Pacifica Engineering Services, LLC

Print Name of Subcontractor/subconsultant

By: [Signature]
Authorized Signature

Wesley Foster, P.E.

Print Name

President

Title

Date: September 21, 2023

OEBO LETTER OF INTENT – SCHEDULE 2

A completed Schedule 2 is a binding document between the Prime Contractor/consultant and a Subcontractor/subconsultant (for any tier) and should be treated as such. The Schedule 2 shall contain bolded language indicating that by signing the Schedule 2, both parties recognize this Schedule as a binding document. All Subcontractors/subconsultants, including any tiered Subcontractors/subconsultants, must properly execute this document. Each properly executed Schedule 2 must be submitted with the bid/proposal.

SOLICITATION/PROJECT NUMBER: 2022801
 SOLICITATION/PROJECT NAME: Barwick Rd Bridge over LWDD Lat. 30 Canal (934455)

Prime Contractor: Alan Gerwig & Associates, Inc. Subcontractor: EW Consultants, Inc.

(Check box(s) that apply)

SBE WBE MBE M/WBE Non-S/M/WBE Date of Palm Beach County Certification (if applicable): 02/16/2021 - 02/15/2024

The undersigned affirms they are the following (select one from each column **if applicable**):

Column 1	Column 2	Column 3
<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> African-American/Black <input type="checkbox"/> Asian American <input checked="" type="checkbox"/> Caucasian American	<input type="checkbox"/> Supplier
	<input type="checkbox"/> Hispanic American <input type="checkbox"/> Native American	

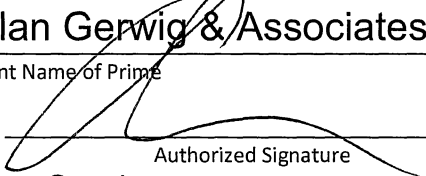
S/M/WBE PARTICIPATION – S/M/WBE Primes must document all work to be performed by their own work force on this form. Failure to submit a properly executed Schedule 2 for any **S/M/WBE** participation may result in that participation not being counted. Specify in detail, the scope of work to be performed or items supplied with the dollar amount and/or percentage for each work item. S/M/WBE credit will only be given for the areas in which the S/M/WBE is certified. A detailed proposal may be attached to a properly executed Schedule 2.

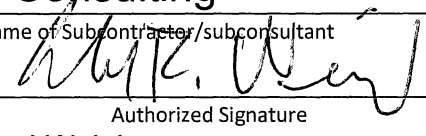
Line Item	Item Description	Unit Price	Quantity/Units	Contingencies/Allowances	Total Price/Percentage
	Enviromental Services				\$15,438.48

The undersigned Subcontractor/subconsultant is prepared to self-perform the above-described work in conjunction with the aforementioned project at the following total price or percentage: \$15,438.48

If the undersigned intends to subcontract any portion of this work to another Subcontractor/subconsultant, please list the business name and the amount below accompanied by a separate properly executed Schedule 2.

Name of 2nd/3rd tier Subcontractor/subconsultant: _____ Price or Percentage: _____

Alan Gerwig & Associates, Inc.
 Print Name of Prime
 By: 
 Authorized Signature
Alan Gerwig
 Print Name
President
 Title
 Date: 10/20/2023

EW Consulting
 Print Name of Subcontractor/subconsultant
 By: 
 Authorized Signature
Edward Weinberg
 Print Name
President
 Title
 Date: 10/18/23

PROJECT HISTORY

Barwick Road Over L-30 Canal Bridge Replacement					
Project #2022801					
Authorization	Supplement	Date Approved	Total Amount	SBE Amount	SBE %
BCC	Original CSA	Pending	\$ 265,886.99	\$ 265,886.99	100.00%
Project Totals			\$ 265,886.99	\$ 265,886.99	100.00%

Search

Insured Name
 Ian Gerwig & Associates, Inc.

Alan Gerwig & Associates, Inc.

Active Records Only

Advance Search

Insured

Name: Alan Gerwig & Associates, Inc.

Account Number: DX00000507

Address:

Status: Currently in Compliance.

Insured Tasks Admin Tools

View

- Insured
- Notes
- History
- Deficiencies
- Coverages
- Requirements
- Contract Screen

Add

Edit

Help

Video Tutorials

Insured

Account Information

Account Number: DX00000507

Risk Type: Standard - Professional Services

Do Not Call: Address Updated:

Address Information

Mailing Address Physical Address

Insured: Alan Gerwig & Associates, Inc.

Address 1:

Address 2:

City:

State:

Zip:

Country:

Contract Information

Contract Number:

Contract Start Date: Contract End Date:

Contract Effective Date: Contract Expiration Date:

Description of Services: Structural Engineering Annual Services Safety Form II: No

Contact Information

Contact Name: Elizabeth Joseph Misc:

Phone Number: 5617929000 Alt Phone Number:

Fax Number:

E-Mail Address: ejoseph@aga-engineering.com

Approval Date:

Rush: No

Contract on File: No

Certificate Received: No

Indemnification Agreement: No

Tax Id:

This Account created by f26 on 02/19/2020.

