City of Jacksonville, Florida

Lenny Curry, Mayor

Department of Public Works
Engineering & Construction Management Division
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Jacksonville, FL 32202
(904) 255-8762
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ONE CITY. ONE JACKSONVILLE.

December 11, 2017

TO: Gregory W. Pease, Chairman
Professional Services Evaluation Committee

THRU: John P. Pappas, P.E.
Director of Public Works

FROM: Tom Fallin, P. E., Chief
Engineering and Construction Management Division

Thomas H. Goldsbury, P.E., C.B.O., Chief
Building Inspection Division

SUBJECT: P-14-17 Professional Design Services for Jacksonville Beach Pier – Review/Design

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Phase 1 of the above referenced professional services is nearing completion and it has been determined that additional coastal investigation is required as noted in Item I-4 of the Scope of Services – Supplemental Agreement #1 attached as Exhibit A.

Accordingly, this is to recommend that Contract 3140-33 with RS&H for Professional Design Services for Jacksonville Beach Pier Review and Design be amended to include the attached Scope of Services – Supplemental Agreement #1, identified as Exhibit "A-1" and Fee Schedule identified as Exhibit "B-1"; that the amount for Phase 1 Study be increased by $19, 206.80 to a new lump sum amount of $224,663.58; and the maximum indebtedness of the City pursuant to this agreement be increased by the same $19,206.80 to a new total of $256,094.93; with all other terms and conditions of the Contract remaining unchanged.

THG

Attachments: Exhibits A & B

cc: Lori A. West, Engineering Contract Specialist

EXHIBIT A-1

SCOPE OF SERVICES – Supplemental Agreement #1

RFP #P-14-17: Professional Design Services for Jacksonville Beach Review, Design – Phase I: Study – SA#1 Department of Public Works

CITY OF JACKSONVILLE, FLORIDA

I. SCOPE OF PROJECT

1. (Remains unchanged) The intent of the project is for RS&H Inc. (RS&H), herein called the "Consultant", to perform a comprehensive analysis and study to determine the magnitude of the forces that damaged the Jacksonville Beach Pier (Pier) caused by the Hurricane Matthew storm event for the City of Jacksonville, herein called the "Client". These forces will be compared to the original design criteria and the original design of the Pier.

2. (Remains unchanged.) It is intended that the Consultant's services will result in a report providing:

   a) an evaluation of the design forces likely to have been used for the Pier;
   b) the forces the Pier experienced during Hurricane Matthew;
   c) recommendations on the design criteria for the design of the Pier reconstruction and repairs, most importantly the specific design storm event intended for use; and
   d) approximate limits of regions requiring reconstruction and repair.

3. (Remains unchanged.) In addition, RS&H understands that the City desires to open portions of the Pier for public use. RS&H will visit the site and also use assessments from previous field visits and previously collected field data from our January 27, 2017 Inspection Report in order to recommend the limits along the existing Pier that appear structurally sound to allow unrestricted public access. This recommendation will be made based on readily detectible flaws and whether the Pier appears in the same condition as prior to the damaging storm event.

   The City understands that detection of hidden flaws and structural analysis of any kind is outside the scope of basing this recommendation. This unrestricted limit recommendation may also require minor repairs which will be included in the recommendation provided. Also included will be conceptual guidelines on a physical barrier to prevent the public from accessing restricted areas. It is the sole responsibility of the City to secure the areas deemed unsafe for public access.

4. Additional Scope of Work will include:

   A. **Coastal Investigation and Analysis (to be performed by Intera Incorporated)**
   Intera Incorporated (INTERA) will determine the wave crest profiles for the 25-, 30-, 35-40-, 45-, and 50- year return period events, in an effort to provide the City of Jacksonville the information necessary to determine a return period for the final design. This work effort is explained in detail in INTERA's Scope of Work – Addendum 1 and is included as "Attachment A".

   B. **Geotechnical Investigations (to be performed by American Vibracore Services)**
   Services are unchanged.

C. **Structural Evaluation and Design Recommendations**

- RS&H will use provide coordination with the City and Intera regarding the results from the additional Coastal Analyses.
- RS&H will meet with the City to discuss recommendations on return year storm event.

D. **Deliverables**

- Coastal / Hydraulic Report – Amended to include results of additional Coastal analyses.
- Structural Evaluation Report– Amended to include results of additional Coastal analyses.

5. (Remains unchanged.) Items not included in the Scope of Work are excluded.

6. Additional Services can be provided, if necessary, by negotiated supplemental agreements.

7. (Remains unchanged.) Assumptions and information to be provided by the City.

II. AMENDED TIME SCHEDULE

1. Contract time to be increased. All deliverables to be submitted on or before February 28th, 2018.

III. FEE

1. All additional effort described above will be performed for an additional Fee of $19,206.80.

IV. NOTICE TO PROCEED

No additional effort described above on this project shall be performed until a contract has been executed and a NTP is issued which specifically authorizes such work, signified by a signed agreement with the Client.

EXHIBIT B-1

CONTRACT FEE SUMMARY FORMAT FOR ENGINEERING DIVISION
CITY OF JACKSONVILLE, FLORIDA

PART I - GENERAL	
1. Project Jacksonville Beach Pier Review, Design - Phase I	**2. Contract Number** P-14-17
3. Name of Consultant RS&H Inc.	**4. Date of Proposal** 6-20-17

PART II - LABOR RELATED COSTS				
5. Direct Labor	Hourly Rate	Estimated Hours	Estimated Cost	TOTAL
Project Manager	$ 62.60	14	$ 876.40	
Principal	$ 91.40	0	$ 0.00	
Chief Engineer / Architect	$ 86.22	14	$ 1,207.08	
Senior Engineer	$ 65.69	0	$ 0.00	
Project Engineer / Architect	$ 53.95	0	$ 0.00	
Engineer (Registered)	$ 42.84	0	$ 0.00	
Designer / Tech (non-registered)	$ 32.31	0	$ 0.00	
Field Inspector / CBI	$ 33.29	0	0.00	
Clerical	$ 24.48	0	0.00	
TOTAL DIRECT LABOR	$74.41	28		$ 2,083.48
6. Overhead (Combined Fringe Benefit & Administrative) Overhead Rate 190.1 % x Total Direct Labor				$ 3,960.70
7. SUBTOTAL: Labor + Overhead (Items 5 & 6)				$ 6,044.18
8. PROFIT: Labor Related Costs (Item 7		x	10%	$ 604.42

PART III - OTHER COSTS		
9. Miscellaneous Direct		
Transportation & Shipping	$ 0.00	
Original Reproducibles	$ 0.00	
Reproduction	$ 0.00	
Courier	$ 0.00	
MISCELLANEOUS DIRECT COSTS SUB-TOTAL		$ -
10. SUBCONTRACTS (Lump Sum)		
INTERA Inc.	$ 12,558.20	
SUB-CONTRACT SUB-TOTAL		$ 12,558.20
TOTAL LUMP SUM AMOUNT (Items 5, 6, 8, 9 and 10)		$ 19,206.80
11. REIMBURSABLE COSTS (Limiting Amount)		
SUB-TOTAL REIMBURSABLES		$ -

PART IV - SUMMARY	
TOTAL AMOUNT OF CONTRACT (Lump Sum Plus Reimbursables) (Items 5, 6, 8, 9, 10 and 11)	**$ 19,206.80**

ESTIMATE OF WORK EFFORT AND FEE FOR
STRUCTURAL ENGINEERING AND EVALUATION

CONSULTANT: RS&H Inc.
CONTRACT NO.: 3140-33 / P-14-17

ESTIMATOR NAME / DATE: S. Starnes / 12-08-17

NAME OF PROJECT: Jacksonville Beach Pier Review, Design - Phase I
FROM: N/A
TO: N/A
LENGTH: N/A

No. / ACTIVITY	Project Manager		Principal		Chief Engineer / Architect		Senior Engineer		Project Engineer / Architect	
	RATE/HR $ 62.60		RATE/HR $91.40		RATE/HR $86.22		RATE/HR $65.69		RATE/HR $53.95	
	HOURS	COST	HOURS	COST	HOURS	COST	HOURS	COST	HOURS	COST
Project Managment / Coordination	10	$626.00	0	$0.00	10	$862.20	0	$0.00	0	$0.00
	0	$0.00	0	$0.00	0	$0.00	0	$0.00	0	$0.00
Recommendations	4	$250.40	0	$0.00	4	$344.88	0	$0.00	0	$0.00
	0	$0.00	0	$0.00	0	$0.00	0	$0.00	0	$0.00
	0	$0.00	0	$0.00	0	$0.00	0	$0.00	0	$0.00
TOTAL	14	$876.40	0	$0.00	14	$1,207.08	0	$0.00	0	$0.00

No. / ACTIVITY	Engineer (Registered)		Designer / Tech (non-registered)		Field Inspector / CBI		Clerical		MAN HOURS BY ACTIVITY	SALARY COST BY ACTIVITY	AVG. HOURLY COST	SALARY COST DIST. %
	RATE/HR $42.84		RATE/HR $32.31		RATE/HR $ 33.29		RATE/HR $ 24.48					
	MAN HOURS	LABOR COST	MAN HOURS	LABOR COST	MAN HOURS	LABOR COST	MAN HOURS	LABOR COST				
Project Managment / Coordination	0	$0.00	0	$0.00	0	$0.00	0	$0.00	20	$1,488.20	$74.41	71.4
	0	$0.00	0	$0.00	0	$0.00	0	$0.00	0	$0.00	$0.00	0.0
Recommendations	0	$0.00	0	$0.00	0	$0.00	0	$0.00	8	$595.28	$74.41	28.6
	0	$0.00	0	$0.00	0	$0.00	0	$0.00	0	$0.00	$0.00	0.0
	0	$0.00	0	$0.00	0	$0.00	0	$0.00	0	$0.00	$0.00	0.0
TOTAL	0	$0.00	0	$0.00	0	$0.00	0	$0.00	28	$2,083.48	$74.41	100.0

ATTACHMENT "A"

WORK PROPOSAL
PHASE 1, ADDENDUM 1

JACKSONVILLE FISHING PIER DESIGN
FOR
RS&H
10748 DEERWOOD PARK BLVD SOUTH
JACKSONVILLE, FL 32256

By

INTERA INCORPORATED
2114 NW 40th TERRACE, SUITE A-1
GAINESVILLE, FLORIDA 32605

INTERA
GEOSCIENCE & ENGINEERING SOLUTIONS

December 2017

JACKSONVILLE FISHING PIER DESIGN

Introduction:

The Jacksonville Beach Fishing Pier sustained significant damage during the passing of Hurricane Matthew. The Department of Public Works of the City of Jacksonville (COJ) has contracted with the RS&H Team to design either repairs or a complete replacement of the pier. The scope of the project is divided into two phases. The first phase evaluated the failure of the existing pier during Hurricane Matthew. The second phase develops the design based on a specific return period wave crest elevation profile. The return period (wave crest elevation profile) for the design will balance conserving as much of the undamaged pier as practical with raising the pier low chord above the design wave crest elevation while maintaining a deck slope that is ADA compliant. To begin the design process, the structural engineers will need the wave crest elevation associated with the selected return period. Given the constraints, developing the wave crest elevation associated for the design is likely to be an iterative process where the structural and coastal engineers refine the design and return period until the design meets the constraints. That said, an initial target design return period is necessary to start the process. This addendum begins the process by developing the return period wave crest profiles for the 25-, 30-, 35-, 40-, 45-, and 50-year return period. This will provide the COJ information necessary to select an initial return period for the design. This scope details the tasks required to complete this addendum.

Assumptions:
We based our scope of services on the following assumptions:

1. INTERA will utilize only available profile data; and
2. INTERA will not collect any field data.

The tasks required to provide the return period wave crest profiles include the following:

Task 1. Collection and Synthesis Historical Profiles

INTERA will collect available historical surveyed profiles from the FDEP at the closest monument to the pier. These data will be converted to a common elevation datum and plotted. The initial design bed elevation profile will consist of the lowest points of all the historical profiles along the pier alignment.

Task 2. Develop Bed and Wave Crest Elevation Profiles

INTERA will utilize data collected during Phase 1 to determine the 25-, 30-, 35-, 40-, 45-, and 50-year water surface elevations (FEMA FIS data) and wave

heights (USACE WIS data). Those data will provide the input to erode the initial bed profile developed in Task 1 to develop the eroded 25-, 30-, 35-, 40-, 45-, and 50-year bed profiles along the pier alignment.

FEMA guidelines will provide the methodology to develop the eroded profiles. INTERA will then develop the 25-, 30-, 35-, 40-, 45-, and 50-year wave crest elevation based on the water surface elevations, wave heights, and profiles.

Task 3. Report

INTERA will document all work performed for this addendum in a memorandum report.

Task 4. Coordination

Coordination with RS&H structural engineers and one meeting with the COJ in Jacksonville to discuss the results.

Budget:
The total fixed fee cost to perform this work is $12,558.20 This value reflects all burdened labor and other direct costs.