

TASK ORDER 1-22 ENGINEERING

ENGINEERING SERVICES FOR DESIGN OF PAVEMENT AND RIGHT OF WAY IMPROVEMENTS TO UNITED STREET AND STUDY OF SOUTH STREET

This TASK ORDER 1-22 ENG is issued under the terms and conditions of the AGREEMENT TO FURNISH GENERAL ENGINEERING SERVICES TO THE CITY OF KEY WEST ("AGREEMENT") between the City of Key West ("CITY") and CH2M HILL Engineers, Inc. ("CONSULTANT") dated November 3, 2017 which is incorporated herein by this reference.

A. SCOPE OF SERVICES

Specific services which the ENGINEER agrees to furnish are summarized on the attached statement entitled TASK ORDER 1-22 ENG "SCOPE OF SERVICES." The "Scope of Services" defines the work effort anticipated for the Task Order.

This Task Order, when executed, shall be incorporated in and shall become an integral part of the November 3, 2017, Master Agreement.

B. TIME OF COMPLETION

Work under this Task Order will begin immediately following acceptance and completed expeditiously subject to coordination with the City of Key West staff. Work may be performed at any time as requested by the CITY within 12 months after the date of execution of this Task Order, at which time the Task Order will expire.

C. COMPENSATION

Compensation for the labor portions of TASK ORDER 1-22 ENG, Task A will be on a lump sum fee basis as stipulated in Article 5, Paragraph 5.1 of the AGREEMENT. Compensation for the labor portion of Task B, subconsultants and all expenses will be on a Cost Reimbursable-Per Diem basis as stipulated in Article 5, Paragraph 5.2.1 of the AGREEMENT. The estimated compensation is shown on the attached statement entitled TASK ORDER 1-22 ENG COMPENSATION.

D. ACCEPTANCE

By signature, the parties each accept the provisions of this TASK ORDER 1-22 ENG and authorize the ENGINEER to proceed at the direction of the CITY's representative in accordance with the "SCOPE OF SERVICES." Start date for this project will be no later than two (2) days after execution of this authorization.

For CH2M HILL Engineers, Inc.

For CITY OF KEY WEST

By: _____

By: _____

Sirpa H. Hall, P.E.
Senior Business Vice President

Patti McLauchlin
City Manager

Krystal H. Burns 1/19/22

Dated the ____ day of ____, 2022

Krystal H. Burns, P.E.
Key West Technical Lead

ATTEST: _____

TASK ORDER 1-22 ENGINEERING
ENGINEERING SERVICES FOR DESIGN OF PAVEMENT AND RIGHT OF WAY
IMPROVEMENTS TO UNITED STREET AND STUDY OF SOUTH STREET

SCOPE OF SERVICES

Project Description

Using the Pavement Assessment document completed August 2019, the City of Key West (CITY) is taking a systematic approach to roadway and right of way improvements. The City has tasked Jacobs with developing design documents for constructing improvements to United Street, between and including the intersections of Whitehead and Grinnell Streets. Additional task includes providing concepts for alternative traffic management on South Street, between and including the intersections of Whitehead and Reynolds Streets.

Improvements to United Street will include:

- Pavement Design – full and partial mill & pave as warranted, itemizing & correcting any trench failures
- Pavement Marking – will match limits of mill & pave and replace existing crosswalks
- Signing – recommend if existing panels should be replaced, and identify proposed signs for potential bike lane and parking area changes
- Sidewalks and Curb Ramps – upgrade pedestrian facilities to ADA compliance within existing Right of Way
- Bike Lanes – consistent with the 2019 Key West Bicycle and Pedestrian Master Plan develop two conceptual design alternatives providing enhancement of bicycle facilities to United Street including potential enhancements to South Street.

Drainage Improvements:

- Drainage Analysis – document existing conditions and identify stormwater improvement alternatives
- Drainage Implementation – implement the preferred stormwater improvement alternative

Purpose

The CITY has requested that the ENGINEER provide engineering services for the design of roadway improvements to United Street from Whitehead Street to Grinnell Street. This Task Order describes the ENGINEER's Scope of Services. Specific activities to be performed under this Task Order include:

- Roadway pavement cores and laboratory analysis to determine resilient modulus, existing pavement layers and pavement condition
- Preparation of Bid Ready Document packages for United Street.

Scope of Services

The following tasks describe the activities to be performed and the work products to be prepared by the ENGINEER.

Task A – Design

This task details the activities related to the Roadway Improvements design. During this task, the ENGINEER will provide the following:

- Project Kick-off Meeting and Site Visit
 - Attended by ENGINEER's Project AND Design Managers. Travel restrictions may require the Kick-off meeting to be virtual. In-person site visit will occur prior to 60% Design. ENGINEER will walk the alignments with City Staff, including City Arborist.
- Subconsultants
 - Pavement cores proposed to be obtained and analyzed by a professional geotechnical engineering subconsultant
 - Survey of project area to be provided by the CITY
- Documentation of Design Criteria & Standards:
 - Florida Greenbook (FDOT Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways), Americans With Disabilities Act (ADA) Standards for Accessible Design, Manual on Uniform Traffic Control Devices (FHWA's MUTCD)
 - 25 mph Design Speed, based on 2017 Speed Study
 - Traffic Data for Pavement Design will be extrapolated from 2017 Speed Study
- Project limits of Milling & Resurfacing (M & R):
 - M & R limits to include existing striped pedestrian crossings on side streets (approx. 25 ft. from United Street edge of travel)
 - Upgrade signage and side streets within M & R limits as needed.
- Pavement Design:
 - The following pavement designs are anticipated:
 - United Street – full and partial depth milling & resurfacing as field conditions warrant.
 - Milling detail to adjust height of curb reveal, as needed
 - Side streets – functional milling & resurfacing, top layer only
- Signing & Pavement Marking:
 - Identify existing signs to be replaced based on loss of reflectivity and/or compliance with MUTCD
 - New post-mounted signs as needed for new bike lanes and parking modifications
- Sidewalk and Curb Ramps:

- o Coordinate meeting with Planner & Urban Forester to identify tree roots that may need trimming to prevent sidewalk vertical displacement.
 - o Preference is to hold back of sidewalk elevations
 - o Special Details will be provided for non-standard curb ramps (where applicable)
 - Curb, sidewalk and ramp tie-in elevations for standard curb ramps will be presented in table format
- Bike Lanes:
 - o *Preliminary Analysis:* In consideration of the City's Complete Streets Checklist, two striping alternatives will be drafted depicting potential bike lane improvements and resulting impacts to parking areas. Intent is to connect to the existing bicycle facilities on Reynolds Street. One alternative will include lane repurposing to provide one-way vehicle facilities on South St and United Street between Whitehead Street and Grinnell Street with consideration to extending to White Street. Alternatives will depict striping and some critical signing.
 - o Note: The milling and resurfacing of South Street is not funded for construction at this time.
- Temporary Traffic Control:
 - o Provide plan notes to contractor and basic phasing typicals with references to FDOT Standard Plans
- Utility Coordination:
 - o Based on site visit and available As-Built Plans provided by the CITY or the COUNTY, identify potential conflicts with utilities, and label locations in Plans for Contractor's awareness. No subsurface work is scoped for Task A.
 - o Agencies anticipated: CITY sewer/solid waste/stormwater, Florida Keys Aqueduct Authority, Keys Energy Services
- Landscaping:
 - o Preserve existing landscaping locations provided they do not interfere with current ADA requirements and standard Line of Sight requirements.
 - o Coordinate design with Planning, Urban Forester, and HARC representative(s) to identify design requirements as well as tree roots that may need cutting to prevent sidewalk popping. At CITY's direction this may be included with the initial site visit or may be a separate activity without the CONSULTANT's attendance.
 - o Coordinate with Urban Forester to locate new tree planting opportunities.
- *Exclusions to scope:*
 - o *No signalization upgrades or adjustments to timing;*
 - o *No lighting analyses or upgrades*
 - o *No 3D deliverables.*

Task B – Drainage Design

This task details the anticipated activities related to the analysis and design of Drainage Improvements. As a result of the uncertainty about the extent of changes required, this task will be compensated as a Cost Reimbursable-Per Diem basis which allows flexibility in the development of alternatives. During this task, the ENGINEER will provide the following:

- Drainage Analysis:
 - Preliminary Analysis: The intersection of United and Simonton requires consideration of drainage facilities. Drainage is provided by an existing gravity drainage well. With time, sea level rise will reduce the drainage capacity of the well. To avoid modifying United after this project is complete, the ENGINEER will assess potential resilience solutions at this location. Improvements may involve additional discharge wells, connecting a new overflow box to the Duval Street stormwater pipe, and/or pavement overbuild.
 - Deliverable includes 30% conceptual drainage improvements and one pre-application meeting to coordinate with SFWMD to identify permitting requirements. A summary memorandum will be prepared with recommendations.
 - Consider replacement of inlets (tops) with deeper throats around the Whitehead, Duval, and Simonton intersections; depending on available space and considering pedestrian access.
- Drainage Implementation:
 - Full design of the selected drainage solution to be included with the design documents for the entire project
 - Permit application assistance. The 90 percent drawings will be used for permitting.
 - Assumes drainage pipelines, inlets, and boxes are to be designed for United between Simonton and Duval Streets. Whitehead and Duval will primarily be inlet modifications.

Design Excludes: pump stations and associated electrical and mechanical components.

Deliverables

The deliverables for the Roadway Improvements Design will include:

- Kickoff meeting Agenda and Minutes (Submitted Digitally, .pdf)
- Site Visit observations, and any direction received from City Staff will be compiled into a Site Visit TM Draft. Following City Staff review for correctness, this TM will be issued as Final, and will become part of the design criteria.
- 30/60/90 percent design documents, submitted digitally for City Staff review
 - 30% Submittal will include
 - Typical Sections and a scroll plot (no cut sheets) of two bike lane alternatives

- o Drainage Technical Memo identifying the recommendations and conceptual research for stormwater improvements to United and Simonton.
- o 60% Submittal will include Construction Plans and:
 - o Design Documentation - with AutoTURN exhibits at signalized intersections using WB-40 Design Vehicle
 - o DRAFT Pavement Design Report
 - o DRAFT Geotechnical Findings Report (by Subconsultant)
- o 90% Submittal will include Construction Plans and also:
 - o Engineer's Estimate of Construction Costs.
 - o DRAFT Specifications
- Review meetings at each milestone will be held with City Staff and the ENGINEER's Project Manager, with design staff attending by phone as needed.
- Bid Ready Documents
- Pavement Core(s) laboratory analysis report

Assumptions

The scope and fee for this Task Order are based on the following assumptions:

- CONSULTANT will reasonably rely upon the accuracy, and completeness of the information/data provided by the Client or other third parties.
- Survey of project area to be provided by the CITY and will include full width Right of Way Survey to develop existing topography and map existing utilities.
- Only one in-person event is budgeted. The kickoff meeting is assumed to take place in Key West with one (1) ENGINEER's staff attending as allowed by Jacobs and CITY travel compliance and will include a site visit. Alternatively the kickoff meeting will be virtual and an in-person EOR site visit will occur prior to 60% Design.
- Monthly progress meetings and submittal review meetings will be attended via conference call.
- The design will be based on the federal, state, and local codes and standards in effect at the start of the project. Any changes in these codes may necessitate a change in scope.
- Providing Construction/Cost Estimates - In providing opinions of cost, financial analyses, economic feasibility projections, for the project, Jacobs has no control over cost or price of labor and materials; unknown or latent conditions of existing equipment or structures that may affect operation or maintenance costs; competitive bidding procedures and market conditions; time or quality of performance by operating personnel or third parties; and other economic and operational factors that may materially affect the ultimate project cost or schedule. Therefore, Jacobs makes no warranty that Client's actual project costs, financial

aspects, economic feasibility, will not vary from Jacobs' opinions, analyses, projections, or estimates and Jacobs' shall have no liability for such variances.

- The CONSULTANT's master specifications will be used as the basis for all technical sections in Divisions 1 through 49. The CONSULTANT's master specifications incorporating CITY requirements will be used for General Conditions, Supplemental Conditions, and other front-end documents.
- Legal, easement, or plat surveys are not included in the scope of work. If additional property is required it shall be the responsibility of the City to obtain.
- The following drawings are assumed to be included in the bid package, and are the basis for the labor compensation estimate:

- 1 Key Sheet
- 1 Signature Sheet
- 2 Summary of Pay Items
- 1 Drainage Map show basin boundaries
- 3 Typical Section includes paving details
- 1 Project Layout
- 5 Roadway Plan
- 1 Special Profile on Simonton Street
- 5 Intersection Layout/Detail - use detail on Plan Sheet where needed
- 31 Driveway Profiles
- 2 Roadway Soil Survey from Geotech
- 1 Stormwater Pollution Prevention Plan
- 2 Temporary Traffic Control Plans
- 2 Utility Adjustments
- 5 Signing and 5 Pavement Marking Plans
- 4 SPM - Keysheet, EOR, Quantities, special details
- 4 Summary of Quantities

- An ERP is required for drainage improvements. Assume a General Permit for minor modification of existing City drainage facilities.
- A dewatering permit is sometimes required if the SFWMD determines that they need the application prior to issuing the ERP. A draft dewater permit will be prepared for the design package, at a minimum. It is preferred that the contractor finalizes the application and applies since the schedule and pumping (methods) may be undetermined. If SFWMD requires a permit application prior to the ERP issuance, the CONSULTANT will make assumptions and apply.
- A permit fee allowance of \$3,500 is in the budget (Task B - cost reimbursable).

Obligations of the CITY

To assist meeting schedule and budget estimates contained in this proposal, the CITY will provide the following:

- o Prompt review and comment on all deliverables (within 10 working days of receipt).
- o Access to any required facilities.

- o Provide recent contractor bids to be used for unit costs.
- o Attendance of key personnel at meeting as requested.
- o Execution of permit applications.

Additional Services

The ENGINEER will, as directed, provide additional services that are related to the project but not included within this Scope of Services. These and other services can be provided, if desired by the CITY, as an amendment to the Task Order. Work will begin for the Additional Services after receipt of a written notice to proceed from the CITY. Additional services may include the following:

- Bid Phase Services
- Construction Phase Services

Compensation

The estimated compensation for TASK ORDER 1-22 ENG, is shown on Attachment A, entitled TASK ORDER 1-22 ENG, COMPENSATION.

Task A	\$75,274
Task B	\$42,893
Geotechnical Costs	\$13,146
TO 1-22 Total	\$131,313

Completion Dates

The estimated time of completion for TASK ORDER 1-22 ENG is shown in the following table.

Task	Proposed Dates
Kickoff meeting & Site visit	ASAP after NTP; travel restrictions may require the meeting to be virtual. EOR site visit will occur prior to 60% Design.
Drainage Report Conceptual Striping Alternatives	3/22/22
Mobilize Geotechnical Sub	3/28/22 - 2 weeks after Drainage Report submitted
60% Design	5/10/22
90% Design	6/14/22
Bid Documents	7/4/22 - Target is award date 9/7/22

ATTACHMENT A
TASK ORDER 1-22 ENG, COMPENSATION

Task Order 1-22																
Title	Engineer 8	Engineer 7	Engineer 6	Engineer 5	Engineer 4	Engineer 2	Technician 6	Technician 5	Technician 4	Technician 3	Clerical / Office	Subtask Labor Total	Expenses	Travel	Task/Line Item Subtotal	
Rate	\$264.09	\$243.88	\$223.66	\$192.96	\$176.92	\$132.68	\$141.52	\$128.90	\$115.00	\$99.82	\$80.87					
Task A - Engineering Support for United Street Construction Plans																
Project Site Visit Kick-Off Meeting - invite Arborist					8					2		\$1,615		\$1,000	\$2,615	
Project Meetings Monthly Contract Supervision	5				20			5	10			\$6,653			\$6,653	
Data Collection/ Organization Design Criteria & Standards		1			4					4		\$1,351			\$1,351	
Typical Sections Two mainline (2) + 1 sidestreets (1)					3					12		\$1,729			\$1,729	
Conceptual Striping Alternatives Sketches + Meeting			1	1	16		8		16	20	2	\$8,378	\$250		\$8,628	
Pavement Design Report + 1 Update			2		24					12	2	\$6,053			\$6,052	
Roadway Design Documentation - Line of Sight, AutoTurn, ADA compliance, Driveways + 1 update (90%)					12					30		\$5,118			\$5,118	
Signing and Pavement Marking Analysis coordination with Parking Director conformance with MUTCD					30		18					\$7,855			\$7,855	
60% Plan Production includes Internal Quality Control (see Task B for Drainage)			4	4	22				8	36		\$10,072	\$100		\$10,172	
60% Client Review Meeting					4					2		\$907			\$907	
Engineer's Estimate & Specifications + 2 updates (100 + Bid set)					18					16	2	\$4,943			\$4,943	
90% Plan Production includes Internal Quality Control (see Task B for Drainage)			3	4	18		14			30		\$9,603	\$100		\$9,703	
90% Client Review Meeting					4					2		\$907			\$907	
Final Plans (Bid Documents) includes Internal Quality Control includes Drainage		2	2	4	24		7			16		\$8,541	\$100		\$8,641	
Task A Hours Subtotal	5	3	12	13	207	0	47	5	34	182	6	514	---	---	--	
Task A Fee Subtotal	\$1,320	\$732	\$2,684	\$2,508	\$36,622	\$0	\$6,652	\$644	\$3,910	\$18,167	\$485	\$73,724	\$550	\$1,000	\$75,274	

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Title	Engineer 8	Engineer 7	Engineer 6	Engineer 5	Engineer 4	Engineer 2	Technician 6	Technician 5	Technician 4	Technician 3	Clerical / Office	Subtask Labor Total	Expenses	Travel	Task/Line Item Subtotal
Rate	\$264.09	\$243.88	\$223.66	\$192.96	\$176.92	\$132.68	\$141.52	\$128.90	\$115.00	\$99.82	\$80.87				
Task B - Drainage Design for United Street Construction Plans															
Drainage Analysis identify resilience solutions		20				38				4		\$10,319			\$10,319
Report with 30% conceptual alternatives		10				24					2	\$5,785			\$5,785
Pre-Permitting Coordination		4				2						\$1,241			\$1,241
60% Plan Production only Drainage		12		4		16			24			\$8,581			\$8,581
Permitting Coordination		8				16						\$4,074	\$3,500		\$7,574
90% Plan Production only Drainage		20		8		12			12			\$9,393			\$9,393
Task B Hours Subtotal	0	74	0	12	0	108	0	0	36	4	2	236	---	---	--
Task B Fee Subtotal	\$0	\$18,047	\$0	\$2,316	\$0	\$14,329	\$0	\$0	\$4,140	\$399	\$162	\$39,393	\$3,500	\$0	\$42,893
Subconsultant Fee - Geotech													\$13,146		\$13,146
Total Hours by Per Diem Rate	5	77	12	25	207	108	47	5	70	186	8	750	---	---	--
Total Fee Estimate by Per Diem Rate	\$1,320	\$18,779	\$2,684	\$4,824	\$36,622	\$14,329	\$6,652	\$644	\$8,050	\$18,566	\$647	\$113,117	\$17,196	\$1,000	\$131,313
Task Order 1-22 Total Labor												\$113,117			

EXHIBIT A
TASK ORDER 1-22 ENG

SURVEY LIMITS
FOR MILLING AND RESURFACING DESIGN

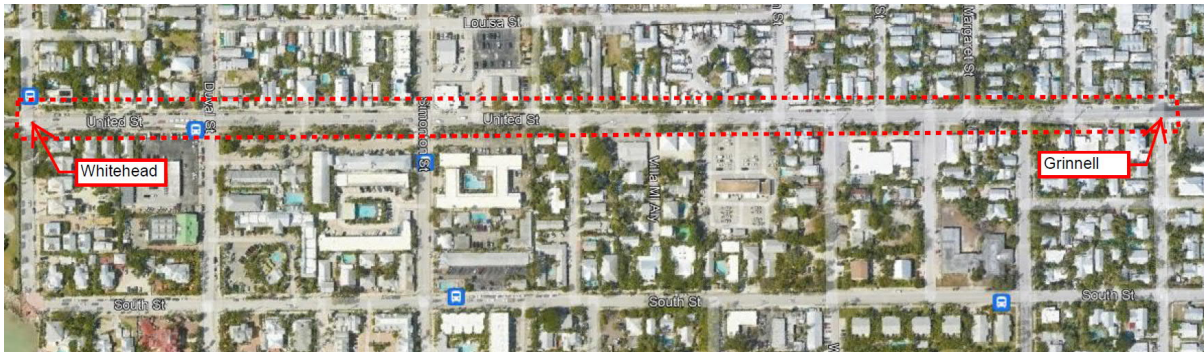


EXHIBIT A



Rectangular Strip

AVIROM & ASSOCIATES, INC.