

TASK ORDER 2-19 STM

PATRICIA AND ASHBY STORM WATER PIPING

This TASK ORDER 2-19 STM is issued under the terms and conditions of the MASTER AGREEMENT TO FURNISH GENERAL ENGINEERING SERVICES TO THE CITY OF KEY WEST ("AGREEMENT") between the City of Key West ("CITY") and CH2M Engineers, Inc. ("CONSULTANT") executed on November 03, 2017, which is incorporated herein by this reference.

A. SCOPE OF SERVICES

Specific services which the CONSULTANT agrees to furnish are summarized on the attached statement entitled TASK ORDER 2-19 STM, "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 03, 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.

C. COMPENSATION

Compensation for the labor portions of TASK ORDER 2-19 STM, Task A, and B will be on a lump sum fee basis as stipulated in Article 5, Paragraph 5.1.1 of the AGREEMENT. Compensation for the labor portions of Tasks C and D, and all expenses will be on a Cost Reimbursable-Per Diem basis as stipulated in Article 5, Paragraph 5.1.2 of the AGREEMENT. The estimated compensation is shown as Attachment B entitled TASK ORDER 2-19 STM COMPENSATION.

D. ACCEPTANCE

By signature, the parties each accept the provisions of this TASK ORDER 2-19 STM, and authorize the CONSULTANT 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 ten (10) days after execution of this authorization.

For CH2M HILL Engineers, Inc.

For CITY OF KEY WEST

By: _____

By: _____

Sirpa H. Hall
Sr. Business Vice President

Jim Scholl
City Manager

Dated the _____ day of _____, 20__

Sean McCoy, P.E.
Key West Project Manager

ATTEST: _____

**TASK ORDER 2-19 STM
PATRICIA AND ASHBY NEIGHBORHOOD STORM WATER PIPING**

SCOPE OF SERVICES

Project Description

The CITY has requested that the CONSULTANT provide engineering services for the design of storm water collection catch basins and piping as shown on Attachment A, Project Schematic. The proposed collection system will be connected to the Pump Assisted Recharge Well located at the Patricia and Ashby Storm Water Pump Station.

This project includes:

- Approximately 2,400 linear feet of 18-inch storm drain piping
- 24 inlet basins
- 320 linear feet exfiltration trench along George Street

The actual length of pipe and number of inlets is approximate and will be verified through modeling during detailed design of this project. Under this Task Order, following Final Design, the CONSULTANT will also provide Project Control Surveying, Permitting Assistance, Bid Phase services, and Construction Phase services.

Purpose

In 2012 CH2M HILL completed a Storm Water Master Plan for the City of Key West, which identified and ranked projects that would help to both reduce storm flood stage and reduce that flood stage more quickly through storm water collection, discharge into gravity wells, pump assisted wells, and emergency outfalls. This project location is within the highest ranked sub basin from the Master Plan, shown as Basin 130. It is a very low-lying area and is generally bounded by Flagler Avenue on the north, Bertha Street on the east, Stephens Avenue on the west, and Atlantic Boulevard to the south. The City has one pump assisted recharge well located in this area, plus many gravity recharge wells. Despite this infrastructure, the area near Patricia and Ashby still has the highest flooding severity in the City.

The overall effectiveness of this project at reducing peak flood stage was estimated to be low. However, this project was considered important to the City, and is recommended because it will improve the overall drainage of the area and will reduce the duration of flooding. When the City installed the pump-assisted injection wells, only the intersection at Patricia and Ashby had new inlets and pipes installed. This project will better connect other areas of the drainage basin. Additionally, the proposed project adds water quality benefits by directing more storm water through the existing Vortex separator at the Patricia and Ashby pump station, and ultimately into the ground.

Scope of Services

Task A -Design

This task includes activities related to the design of the collection basins, and gravity conveyance piping. CONSULTANT will conduct a project kickoff meeting between City Staff and CONSULTANT's Project Manager, with CONSULTANT's design manager participating via conference. The purpose of this meeting will be to discuss: components of the project design, and to set delivery schedules for design milestones. Following the kick-off meeting, project design will begin, and is divided into two subtasks that would correspond to logical review milestones for the CITY.

Subtask A.1 – Preliminary Design (60%)

The CONSULTANT will prepare Preliminary Design Documents for the CITY. The CONSULTANT will conduct a review meeting with the CITY prior to conclusion of this task. The comments received from this meeting will be incorporated into Final Design.

Specific work performed in this task are outlined below:

- Project Kick-off
 - Preliminary design concept review
- Project Control Survey
 - CONSULTANT shall develop scope and retain a Professional Land Surveyor (PLS) sub-consultant to provide project control survey where needed to establish horizontal and vertical control for design. \$20,000 is included as an expense in COMPENSATION to cover work performed by sub-consultant
- Determination of the need for a second Storm Water Injection well at Patricia and Ashby
 - The ICPR storm water model will be applied to the proposed piping as part of Task A.1. As part of the drainage modeling, the effectiveness, (or lack thereof) of an additional Injection Well at the Patricia and Ashby Pump Station will be evaluated. Draft results of the modeling (representative of all proposed work) will be reviewed with the City in a teleconference prior to proceeding.
- Preliminary Design drawing development
- Draft list of Specifications
- Identify any potential constructability issues.
- Prepare Class 4 budget-level cost estimate.
- 60% Design Review Meeting.

Deliverables

- Draft and Final Kick-off Meeting Agenda and Minutes. (Submitted digitally).
- Project control survey performed by Sub-consultant. (Submitted digitally).

- Technical Memorandum on the addition of a second pump assisted injection well at the Patricia and Ashby Pump Station.
- Four hard copies of the Preliminary Design (60%) with Draft list of Specifications
- Class 4 budget-level cost estimate. (Submitted digitally).

Subtask A.2 – Final Design

During this subtask, the CONSULTANT will perform the work necessary to develop Construction Bid Documents and to communicate the design tasks to the CITY. The CONSULTANT will submit 90% detailed design documents to the CITY and will conduct a design review meeting with the CITY prior to the production of Bid Documents.

Specific work activities in this task are identified below:

- Prepare 90% contract documents, which include legal and technical specifications and drawings.
- Conduct 90% review meeting
- Incorporate review comments from CITY into the design documents,
- Based on the 90% documents prepare updated final construction cost estimate
- Based on the 90% documents review, prepare bid documents.
- Submit bid documents to the CITY.

Deliverables

- Four (4) hard copies of the 90% detailed design, which includes design drawings (estimated 19 sheets), and specifications (two (2) of these copies are for OMI).
- 90% construction cost estimate. (submitted digitally)
- 90% review meeting minutes. (submitted digitally)
- Four (4) hard copies of the Bid Documents (two (2) of these copies are for OMI).
- One CD of the Bid Documents in PDF format, and the invitation to Bid in Word format.

Task B – Permitting

A permit will be required by the South Florida Water Management District (SFWMD). The CONSULTANT shall prepare for the application a Drainage Technical Memorandum (TM). The Drainage TM shall use the existing model from the 2012 SWMP to highlight results for existing drainage patterns in the project area. The model will be applied to the preliminary design to verify the planned inlets and pipe sizes, and to quantify its benefits. The SFWMD will require these computations as part of the permit application.

CONSULTANT has budgeted 8 hours for one pre-application meeting in West Palm Beach between CH2M HILL and SFWMD. This meeting will be attended in person by the storm water Technologist who is local to the area, and by conference call by the local PM as needed.

A second drainage well would be permitted by the Florida Department of Environmental Protection (FDEP). The permitting effort for the second well is not included in this scope.

Deliverables

- Drainage TM
- ERP Permit Application

Task C – Bid Phase Services

Bidding services are based on a Bid Period of 30 days. The CONSULTANT will provide the following services to the CITY to assist in the bidding process:

- Provide CITY with contract documents, in PDF format, for upload to DemandStar for bidding.
- All communications with bidders on matters related to the technical aspects of the design will be forwarded by CITY, and reviewed by the CONSULTANT, for inclusion in ADDENDA, if required.
- Coordinate and conduct one pre-bid meeting to familiarize each bidder with the scope of work and to answer any questions that may arise.
- Issue up to two (2) ADDENDA, if required.
- Bids will be received, opened, and read aloud by the CITY at the designated time and location.
- Review and evaluate bids for compliance and completeness. The CONSULTANT will prepare an award letter for the CITY recommending the successful bidder.
- After award, the CONSULTANT will distribute to the successful contractor three sets of contract documents for execution. The contractor will be directed to return the documents to the CONSULTANT for compliance review of the bidding requirements. After the CONSULTANT reviews the contract documents, these three sets of documents will be sent to the CITY for final review and signatures.
- Prepare conformed contract documents for use by CITY, CONSULTANT, and Contractor during construction. Including three (3) signed and sealed sets of documents for submission by contractor to City of Key West Building Department.

Bid services will be considered complete upon the CONSULTANT's review and forwarding of the Contractors executed documents to the CITY, and submittal of conformed documents to the CITY.

Deliverables

- Two (2) copies of Pre-bid meeting minutes
- Two (2) copies of recommendation of award letter
- Three (3) copies of Contract Documents for execution
- Six (6) copies of Conformed Contract Documents (two (2) of these copies are for OMI), one (1) full size set of drawings and one (1) CD containing specifications and drawings in PDF format.

Task D - Construction Phase Services

The CONSULTANT will perform limited construction phase services listed in this Task Order for a construction period that is estimated to be 8 months. The CITY will be responsible for full-time resident observation.

The CONSULTANT will perform the following activities during this portion of the project.

- The CONSULTANT will coordinate and conduct one pre-construction meeting and distribute meeting minutes.
- At the request of the CITY, coordinate and conduct monthly progress meetings and prepare and distribute meeting minutes; attendance at up to eight (8) meetings is assumed.
- At the request of the CITY, review up to twenty (20) shop drawings and other construction related submittals.
- At the request of the CITY, the CONSULTANT will provide up to 40 hours to assist in the technical interpretations of the drawings, specifications, and contract documents, and evaluate requested deviations from the approved design or specifications.
- At the request of the CITY, perform a substantial completion inspection of the project and assist in the preparation of a punch-list.
- At the request of the CITY, perform a final completion inspection of the project.
- Prepare record drawings based on mark-ups from the CONTRACTOR.

Deliverables

- One (1) electronic copy of pre-construction meeting minutes
- One (1) electronic copy of each progress meeting minutes
- One (1) electronic copy of each additional meeting minutes
- One (1) electronic copy of each reviewed shop drawings
- One (1) electronic copy of each Request for Information
- One (1) electronic copy of punch list(s)

One (1) full size copy, two (2) 11" x 17" copies, and one (1) electronic copy of record drawings in PDF and AutoCAD format

Assumptions

The following assumptions were used in the development of this Task order

- Work under this Task Order will be completed in first quarter of calendar year 2019
- Submittals listed above shall be in an approved digital format unless specifically shown as otherwise.
- Modeling performed as part of the Storm Water Master Plan reflects existing conditions, and is the basis for project design

- New modeling included in this Task Order is required for the permit application (calculations).
- Design and permitting of a second injection well are not included in this Task Order, but may be added via addendum at the City's discretion after reviewing the results as described in Subtask A.1
- No field meetings with regulators are included. No wetlands are expected to be impacted, so dredge and fill permitting is not expected or included in the budget.
- 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.
- 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.
- Recent LiDAR surveys will be available for base maps
 - While LiDAR is adequate for planning and general work, the relatively flat conditions and need for construction control will necessitate new field topographic survey along the route and at specific inlet locations.
- No land costs shall be included in cost estimating for the project. It will be assumed that all projects can be located in City rights of way.
- Existing system Record Drawings will be used when available. CH2M HILL will reasonably rely upon the accuracy and completeness of the information/data provided by the City or other third parties.
- All meetings will be attended by the Project Manager with other CH2M HILL team members participating by phone as needed, unless specifically stated otherwise.
- The design documents will be prepared for a single construction contract.
- The CITY will pay for all permit application fees.
- Concepts will be frozen at the end of each design phase and any redesigns after those points will be additional services.

Obligations of the CITY

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

- Prompt review and comment on all deliverables (within 10 working days of receipt).
- Provide GIS maps in areas of proposed storm water pipeline routes
- Pump data on the Patricia and Ashby storm water Pump Station

- Facilitate access to any required facilities
- Attendance of key personnel at meeting as requested
- Existing environmental data from the project area
- Permit application fees

Additional Services

The CONSULTANT 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, but are not limited to, the following:

- Additional data collection.
- Stormwater Modeling beyond what is described above.
- Design and permitting of second storm water injection well at Patricia and Ashby Pump Station
- Field meetings to review the project with regulators (typically not required).
- Re-bidding any, or all, portions of this project.

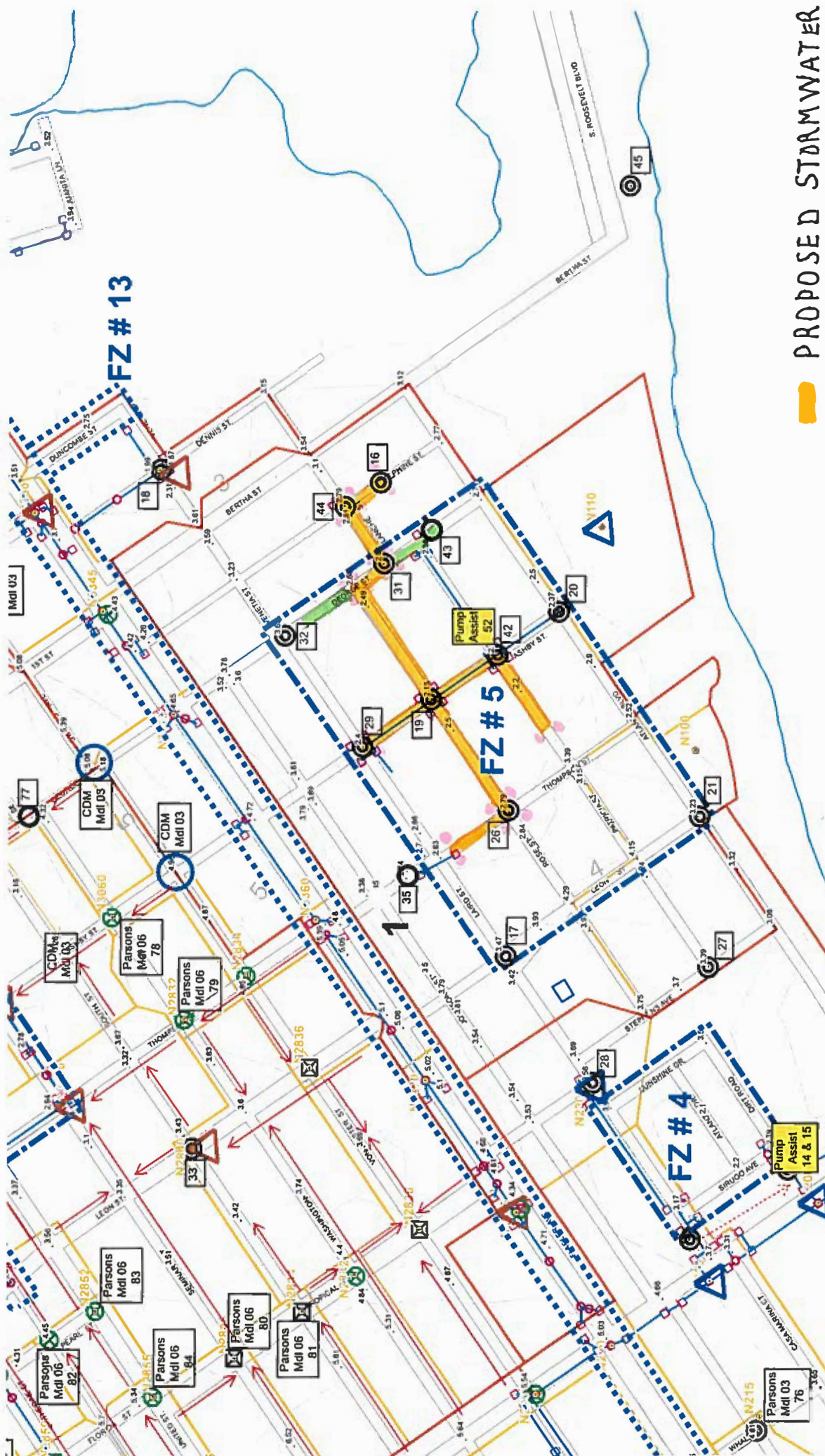
Completion Dates

CONSULTANT estimates 20 weeks to produce Bid ready documents once Notice to Proceed is issued. Permitting will proceed as quickly as possible when supporting design documents are ready.

Compensation

The estimated compensation for TASK ORDER 2-19 STM, is shown as Attachment B, entitled TASK ORDER 2-19 STM, COMPENSATION.

**ATTACHMENT A:
PROJECT SCHEMATIC**



- PROPOSED STORMWATER
- PROPOSED EXFILTRATION
- INLETS

ATTACHMENT B: COMPENSATION

Task Order 2-19 STM COMPENSATION PATRICIA AND ASHBY NEIGHBORHOOD PIPING												
Employer Category	Engineer 7	Engineer 5	Engineer 4	Engineer 3	Technician 6	Technician 4	Specification Processor	Clerical/ Office Support	Expense Ship/Repro Travel			
FY 19 Rates	\$223.18	\$187.34	\$161.90	\$138.76	\$129.51	\$105.24	\$82.10	\$74.01				
TASK A - DESIGN											SubTask A.1 subtotal	
A.1 - Preliminary Design (60%)												
Kick-off meeting	8	8	12	0	8	2	0	2	0		\$6,621.54	
60% Design	14	7	160	0	152	2	14	2	100		\$51,633.32	
60% Review Meeting	8	18	12	18	0	2	0	2	0		\$9,956.54	
Stormwater Injection Well TM	8	4	4	24	0	0	4	0	0		\$6,841.04	
Hours	38	37	188	42	160	6	18	6	--	total hrs	495	
Cost	\$8,481	\$6,932	\$30,437	\$5,828	\$20,722	\$631	\$1,478	\$444	\$100	A.1 total	\$75,052.44	
A.2 - Final Design											SubTask A.2 subtotal	
90% Design	16	14	176	0	176	2	21	2	0		\$59,564.40	
90% Review Meeting	10	27	16	0	0	2	0	0	100		\$10,190.86	
Final Design/Bid Documents	6	4	28	8	8	3	5	3	200		\$9,916.05	
Hours	32	45	220	8	184	7	26	5	--	total hrs	527	
Cost	\$7,142	\$8,430	\$35,618	\$1,110	\$23,830	\$737	\$2,135	\$370	\$300	A.2 total	\$79,671.31	
B - Permitting											Task B subtotal	
Drainage TM	12	2	0	8	0	0	6	0	50		\$4,705.52	
Application Preparation	0	2	0	8	0	0	0	0	0		\$1,484.76	
Meetings/review	8	2	0	0	0	0	0	0	0		\$2,160.12	
Hours	20	6	0	16	0	0	6	0	--	total hrs	48	
Cost	\$4,464	\$1,124	\$0	\$2,220	\$0	\$0	\$493	\$0	\$50	B total	\$8,350.40	
C - Bid Phase Services											Task B subtotal	
Bid	2	8	10	0	0	2	4	2	0		\$4,250.98	
Conformed Documents	4	8	12	0	8	2	4	2	200		\$6,257.22	
Hours	6	16	22	0	8	4	8	4	--	total hrs	68	
Cost	\$1,339	\$2,997	\$3,562	\$0	\$1,036	\$421	\$657	\$296	\$200	C total	\$10,508.20	
D - Construction Phase Services											Task B subtotal	
Project Meetings	0	80	0	0	0	2	0	4	100		\$15,593.72	
Submittals	8	8	88	0	8	40	0	0	250		\$23,027.04	
RFI	4	8	16	0	8	4	0	4	0		\$6,734.92	
Record Drawings	4	8	16	0	40	4	0	0	200		\$10,783.20	
Closeout	2	16	2	0	0	8	0	8	50		\$5,251.60	
Hours	18	120	122	0	56	58	0	16	--	total hrs	390	
Cost	\$4,017	\$22,481	\$19,752	\$0	\$7,253	\$6,104	\$0	\$1,184	\$600	D total	\$61,390.48	
											Subtotal Expenses	\$1,250
											Survey Allowance	\$20,000
											Subtotal Labor	\$233,723
											Task Order 2-19 Total	\$254,973