

Mr. Jim Scholl
Key West City Manager
P. O. Box 1409

Key West, FL 33040
SUBJECT: APPROVAL TO SPEND UP TO $\$ 205,200.00$ OF IN-KIND FUNDS ON MOLE PIER PROTECTIVE ELECTRICAL RELAYS, NAS KEY WEST, FL

Enclosure: (1) Statement of Work and Cost Estimate dated January 19, 2017
(2) Site plan

Dear Mr. Scholl,
On September 14, 2016, we provided notice of approval to use up to $\$ 205,200.00$ of Mole Pier in-kind funds for the subject project. Bids received via the City's contract solicitation process were found to be unacceptable. Therefore, we rescind the approval of September 14, 2016.

Subsequently, we have reviewed the updated Statement of Work provided at Enclosure (1) and approve the use of in-kind funds for this revised scope. The project site plan is provided at Enclosure (2). Costs associated with this effort shall not exceed the total estimated cost of $\$ 205,200.00$ without prior written approval. Any request to exceed this authorized amount shall be requested of this office in advance of incurring such additional costs.

My point of contact for this action is Robin McCarthy, NAVFAC Southeast Realty Specialist, who can be reached at (904)542-1511 or via email: robin.mccarthy@navy.mil.

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Copy to:
Commanding Officer, Naval Air Station Key West
Public Works Officer, Naval Air Station Key West

# STATEMENT OF WORK (SOW) 

Project Title: Mole Pier Protective Electrical Relays
Activity Location: Mole Pier Sub-Stations SW-1, 2, 3 \& 4, Naval Air Station
Key West, Florida
SOW prepared by: Paul Shrem, Planner
Date: 19 January 2017, rev.1;

## 1. Background and Summary of Work

This project will include the removal and replacement of protective electrical relays within the existing electrical sub-stations, located at Mole Pier.

The City of Key West will procure the relay units, manufacturers programming, and training. The Navy staff will do the installation.

The four (4) existing sub-stations previously were housed in metal electrical cabinets that were exposed to the elements. Due to the physical proximity to the ocean, the corrosive effects of the salt air that permeated into the metal cabinets and have accelerated the aging of the electrical components. An electrical project, undertaken and completed in September of 2012, enclosed the four sub-stations into steel buildings to reduce the effects of the corrosive air on the wiring and equipment.

A partial replacement of the relays was completed in 2015. This project will replace the remaining existing relays with the new and contemporary units to comprise a complete re-fitting of this electrical relay component. Programming of the relays and training of the NAS Public Works operations staff will also be included as a part of this Project.

## 2. Detailed Scope of Work

The Project entails replacement of the remaining Basler Protective Electrical Relays. There are a total of fifty-six (56) relays distributed throughout the four (4) Switchgear cabinets on the Mole Pier, switchgear enclosures SW-1, SW-2, SW-3 and SW-4. Switchgear cabinets SW-1 thru 3 contain sixteen (16) relays each, and SW-4 contains eight (8) relays. To-date, of the total quantity of (56) relays, there has been a total of (16) relays replaced with the newer model relays. The new relay model series is the BE1-11 series and replaces the older series BE1-951 series. The installation will include replacing/installing the remaining forty (40) of the existing BE1-951 relays as well as the acquisition of five (5) spares. These new relays reflect updated industry technology and will replace the worn and corroded existing relays currently installed. The spares will allow for immediate availability for future replacements and continuity of electrical service.

The City will issue a sole-source, propriety product solicitation for the relays. This type of procurement is required to provide proper functionality of the replacement parts in the existing Basler switchgear system. The Navy Public Works staff will install the relays. The partial replacement of relays in 2015 was executed by the Public Works electrical staff. The replacement relays are functioning properly since installed and the Public Works electricians have the required experience and expertise to continue with full replacement.

As a part of the basic installation, each relay will be programmed to conduct the electrical conductivity for the system and provide the sequential safety function to 'trip' the circuiting when overloaded. The programming will 'trip' the lowest possible functionality and progressively advance to the higher voltage loads. The programming function will utilize an open-source software program that will be installed onto a laptop computer, to be purchased as part of this acquisition and will be a dedicated computer housed at Public Works (PW) to provide this function. The final outcome of the programming phase of the relays will be to have all of the previously replaced relays, and all the newly replaced relays, programmed and remotely monitored by PW staff. Finally, the vendor will provide on-site training of staff of the installation and relay programming as part of this acquisition.

## 3. Planning Estimate of Costs

| Item | Quantity | Unit Cost | Total Cost |
| :--- | :---: | :--- | :---: |
| a. Basler Protective electrical relays, <br> model BE1-11f, incl. 5 spares | 45 | $\$ 3,500$ | $\$ 157,500$ |
| b. Commissioning, Arc-Flash testing | 1 | $\$ 10,500$ | $\$ 10,500$ |
| c. Software and hardware (laptop) | 1 | $\$ 3,000$ | $\$ 3,000$ |
|  |  | Sub-total | $\$ 171,000$ |
| d. Contingency (20\%) |  |  | $\$ 34,200$ |



