

Key Largo Wastewater Treatment District
Board of Commissioners Meeting
Agenda Item Summary

Meeting Date:
January 18, 2022

Agenda Item Number: K-1

Action Required:
No

Department: Engineering Sponsor: Ed Castle

Subject:
Construction Projects Report

Summary of Discussion:

The updated Construction Projects Report summarizes the status of projects and work completed in the period from December 1 - 31, 2021.

<u>Reviewed / Approved</u>	<u>Financial Impact</u>	<u>Attachments</u>
Operations: _____	\$	Monthly Report
Administration: _____		
Finance: _____	Funding Source:	
District Counsel: _____	N/A	
District Clerk: _____	Budgeted:	
Engineering: _____	N/A	

Approved By:  _____ Date: 1-13-22

General Manager

Key Largo Wastewater Treatment District Construction Report

Including updates from December 1, 2021, through December 31, 2021

Current Construction Projects

Project	Original Contract Amount	Contract Amount {Including Direct Purchases, change orders and amendments}	Engineering and Other Cost {Anticipated}	Total Project Cost {Anticipated}
Solar Phase 2 & 3	\$2,160,135	\$2,330,331.20	\$193,800	\$2,524,131.20
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete {Anticipated}	
	\$179,948.00	\$2,042,396.80	\$223,279.23	

In the period from December 1st through December 31st, Burke completed the following work:

- Substantial Completion for all of the Vacuum Stations except for Vac Station E was issued previously. Punch list work has been completed at the vacuum stations. All arrays at all vacuum stations are producing power.
- Substantial Completion for the WWTP and Vacuum Station E Solar was issued on December 3rd with the punch list attached. Burke has been working on completion of punch list items at the WWTP and Vacuum Station E.
- The inverters, conduit and wiring have been installed at the Administration Building. Mounting of panels is delayed pending availability of tapered insulation so that the roof repairs can be performed.

Lindholm Roofing is the subcontractor for Burke for the repairs to the roof of the Administration Building. Lindholm has proposed use of tapered insulation to add pitch to the existing flat portion of the roof. Lindholm has not been able to procure the insulation due to supply issues related to the pandemic.

Note: The cost breakdown below is direct costs for construction only, engineering is not included.

WWTP and Vac E Solar	\$1,536,447	Includes 356 kW of new solar arrays, with some mounted-on rooftops with the remainder installed with ground-mount support racks. All are above the 100-yr flood elevation and are rated for 180 MPH winds.
Admin Building Solar	\$108,107	Includes a 39 KW solar array mounted on the rooftop. The array will be above the 100-yr flood elevation and is rated for 180 MPH winds.

Vac A, D, G, I and J/K Solar	\$515,582	Includes rooftop solar arrays at A, D, G I and J/K. The Vac I system included arrays on all three roof-tops and the Vac G system includes a carport-type structure. Total solar output for the vacuum stations will be 212 kW. The array will be above the 100-yr flood elevation and is rated for 180 MPH winds.
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Project	Original Contract Amount	Contract Amount {Including Direct Purchases, change orders and amendments	Engineering And Other Cost {Anticipated}	Total Project Cost {Anticipated}
Fire Safety {MJ Wood}	\$798,109	\$806,819	\$114,500	\$921,319
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete {Anticipated}	
	\$108,296.25	\$746,307.57	\$66,715.18	

MJW demobilized from the site during the period from December 1st, 2021 through December 31st while waiting for materials needed to replace sensor tubing and fittings for the clean agent electrical panel suppression systems. Remaining work to be completed in January includes the following:

- Sensor tubing and fittings on all clean agent suppression systems will be replaced to alleviate the problem with leaks. All clean agent suppression systems will be armed and made active once all leaks have been corrected and the systems tested.
- All fire alarm control panels will be tested and proper operation will be verified.
- The Voice Notification System messages will be programmed.
- Record drawings of the fire safety installation will be produced.

Note: The cost breakdown below is direct costs for construction only, engineering is not included.

WWTP Electrical Panel Clean Agent Fire Suppression	\$119,463.00	This component provided clean agent fire suppression for the major electrical panels at the WWTP and included additional fire detection peripherals. These are non-proprietary components and can be purchased off the shelf. The scope of work included integration of the fire alarm detection and suppression system into the existing FACP and SCADA.
Fire Detection & Suppression at Vacuum Pump Stations	\$348,944.00	This component includes provision of a fire alarm control panel and fire detection peripherals at the vacuum stations. Clean agent fire suppression is provided only for the AirVac electrical panel and the Automatic Transfer Switch. The vacuum stations include A, D, E, G, I and J/K.
Fire Detection and Alarms at the House & Office at Vac Station I	\$38,368.00	This component includes installation of fire detection peripherals for the house and the office at Vacuum Station I, including integration into the main FACP at the Vacuum Station I pump station.

Fire Detection for Main Generator at WWTP	\$18,010.00	This component included installation of a fire detection system in the generator enclosure for the large generator at the WWTP. Integration of the fire detection equipment into the WWTP FACP and SCADA are included in the scope.
Install Voice Evacuation / Emergency Response Loudspeakers	\$83,250.00	This additive alternate item includes installation of a voice evacuation system that will automatically notify personnel orally of an emergency condition, including recommendation for evacuation if needed.
Chlorine Leak Detectors	\$30,844.00	This item includes installation of three chlorine gas detectors that will generate an alarm should chlorine be detected. Detection of chlorine will result in notification and activation of the voice evacuation system.
Fire Detection & Suppression at Admin Bldg.	\$67,353.00	This item includes installation of fire detection peripherals and a fire alarm control panel at the Administrative Building. It also includes clean agent fire suppression for the server room only.
Water Mist Fire Protection for Main Generator at WWTP	\$69,387.00	This item provides for installation of a fine mist water fire suppression system for the main generator at the WWTP. This very large generator would be expensive to replace if damaged and would likely have a long lead time.
Fire Walls and Barriers at Vacuum Stations A & D	\$22,490.00	This item provides for construction of fire doors and walls at Vacuum Stations A and D. These two stations have their generators and fuel tanks indoors. Should a fire occur at the fuel tank or generator, it could spread to the control room and cause severe damage.

Project	Amount	Contract Amount {Including Direct Purchases, change orders and amendments	Engineering And Other Cost {Anticipated}	Total Project Cost {Anticipated}
Coating of Concrete Structures at WWTP	\$373,430	\$373,430	\$46,800	\$420,230.00
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete {Anticipated}	
	\$8,555.00	\$61,942	\$359,732	

In the period from December 1st to December 31st, the following work has been completed by Southland:

- The Operations Building coatings were completed.
- The Equalization Basin roof and wall coatings were completed
- The Headworks structure coatings were completed.
- The Digester was pressure washed and the first coat of paint was applied.

The contract with Southland Painting Corporation included an allocation for repairs and painting of piping as needed, but there was less work than anticipated for this time and materials allocation, leaving unspent funds in the contract. WEC requested a quote from Southland Painting Corp. to add the Vacuum Station E control building and the Vacuum Station E vacuum tank vault to the scope of work. That quote has been received and a Change Order form has been prepared. The Change Order is scheduled to be presented to the Board at the January 4, 2022 meeting.

Project	Amount	Contract Amount {Including Direct Purchases, change orders and amendments	Engineering And Other Cost {Anticipated}	Total Project Cost {Anticipated}
Upgrade of Sewage Pumps at Vacuum Stations	\$772,146	\$772,146	\$45,000	\$817,146
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete {Anticipated}	
	\$9,252	\$0	\$797,893.10	

In the period from December 1st, 2021 through December 31st, 2021 the following work was completed:

- The proposal from Tom Evans Environmental for the replacement and upgrade of the sewage pumps was presented to the Board on December 7th. The Board approved the sole source purchase of the hardened stainless-steel pumps at that meeting.
- Shop drawings and product data sheets have been received and are under review.
- The pumps have been released for production with delivery of the first pumps scheduled for early February, 2022.

Upcoming Construction Projects

Project	Estimated Total Cost	Status
Vacuum Station A Odor Control	\$50,000 (Budgeted)	WEC staff performed engineering surveys at Vacuum Stations A and D. Shots of building corners, fence lines, driveways and other improvements were taken. The survey was imported into AutoCAD and preliminary site plan layouts are being prepared for review by District staff. The easement from the Catholic Church shows the boundaries of the area that the District is permitted to use. The easement also states that all equipment must be inside the building and not visible from outside. WEC is preparing a site plan with the generator and odor control to be covered by a structure, but additional space is needed. When the site plan has been reviewed by the District, the Catholic Church will be asked to consider an increase in the easement area.
Vacuum Trailer and VPS Modifications	\$332,000 in FY22 budget. Total project cost is \$496,250 (Estimated)	WEC completed the Invitation to Bid (ITB) and the technical specifications for purchase and installation of a roll-back enclosure for the trailer. The ITB was published on December 29 th . Bids are due by February 23, 2022.