

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

Meeting Date:  
March 18, 2025

Agenda Item Number: M-1

Action Required:  
No

Department:  
Capital Projects

Sponsor:  
Ed Castle

Subject:  
**Capital Projects Report - February 2025**

Summary of Discussion:  
Mr. Castle will present the Capital Projects monthly report.

**Reviewed / Approved**

**Financial Impact**

**Attachments**

Operations: \_\_\_\_\_  
Administration: \_\_\_\_\_  
Finance: \_\_\_\_\_  
District Counsel: \_\_\_\_\_  
District Clerk: \_\_\_\_\_  
Engineering: \_\_\_\_\_

\$  
  
Funding Source:  
N/A  
  
Budgeted:  
N/A

1. Monthly Report

Approved By:  Date: 3/11/2025  
General Manager

# Key Largo Wastewater Treatment District Capital Projects Report

Including updates through February 2025

## Current Capital Projects

Project	Original Contract Amount	Current Contract Amount (Including Direct Purchases, change orders and Amendments)	Engineering And Other Cost (Anticipated)	Total Project Cost (Anticipated)
Vacuum Stations Modifications (LPA0136)	\$ 3,155,800.00	\$3,270,999.76	\$305,000.00	\$3,575,999.76
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete (Anticipated)	Percentage Complete
	\$296,446.25	\$2,478,994.07	\$800,559.44	78%

- The VPS modifications project was awarded to Reynolds Construction in the amount of \$3,155,800.00. The Agreement and the Notice to Proceed were both executed on May 18, 2023.
- Reynolds worked through the period to complete corrections for the open items from a previous site visit including installing pipe straps and supports, routing force main piping at Vac Station A, and coating piping and fittings.
- In February, WEC finalized the SOP draft and exhibits for AirVac to review, assume responsibility, and add any necessary details. The SOP includes safety upgrades, such as interlocking safety switches on odor control and vacuum line valves, ensuring proper emergency trailer operation.
- WEC worked with Reynolds to obtain pricing for a blow-off valve, valve position indicators, and the main trailer power disconnects to be included in an upcoming change order.
- VPS punch list walkthrough is scheduled with KLWTD, Reynolds, and WEC staff for the 3/12.
- Reynolds, Benson, WEC staff and KLWTD staff attended the construction progress meetings on February 13th and February 27th.

Project	Original Contract Amount	Current Contract Amount (Including Direct Purchases, change orders and Amendments)	Engineering And Other Cost (Anticipated)	Total Project Cost (Anticipated)
Collection System Monitoring (LPA0424)	\$7,575,677.00	\$9,581,965.61	\$850,000.00	\$10,431,965.61
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete (Anticipated)	Percentage Complete
	\$840,765.00	\$7,558,883.34	\$2,032,317.27	81%

- Work was completed in Basins A, B, D, G, H, F, I and JK
- Current Status:
  - Basin A: **293** installed (Basin complete)
  - Basin B: **383** installed (Basin complete)
  - Basin C: **48** installed (Basin in progress)
  - Basin D: **240** installed (Basin complete)
  - Basin E: **287** installed (Basin in progress)
  - Basin F: **339** installed (Basin complete)
  - Basin G: **231** installed (Basin complete)
  - Basin H: **45** installed (Basin complete)
  - Basin I: **225** installed (Basin complete)
  - Basin J/K: **437** installed (Basin Complete)
  - Total project installed: **2,528** out of **2,984**
  - **Sensor installation is approx. 85 % complete (Note: This is only sensors and does not include other aspects of the project)**
- During February, Flovac, IVC, WEC, and KLWTD completed walkthroughs in Basin E0 (KLTV & KLTP). Punchlist was distributed and Substantial Completion is forthcoming.
- Following completion of the punchlist items in Basin JK, the Final Completion documentation was fully executed in February.
- Flovac and IVC began working in Basin C, starting with sub basin C-1 (Bass Ave, Jewfish Ave, and Snapper Ave). Crews installed conduit and monitoring equipment, and rebuilt valves were installed.
- Valve rebuilds continued – 1,140 rebuilds completed. Continuing to target approx. 10-15 per day. Biweekly construction progress meetings were held on February 11<sup>th</sup> and 25<sup>th</sup> and attended by KLWTD, WEC, Flovac and Island Villa staff.

Project	Original Contract Amount	Current Contract Amount (Including Direct Purchases, change orders and Amendments)	Engineering And Other Cost (Anticipated)	Total Project Cost (Anticipated)
Effluent Filtration Upgrades (LPA0243)	\$ 3,043,820.00	\$3,332,095.76	\$410,000.00	\$3,742,095.76
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete (Anticipated)	Percentage Complete
	\$401,643.75	\$2,659,183.12	\$681,268.89	82%

- The Effluent Filtration Upgrades project was awarded to Reynolds Construction in the amount of \$3,043,820.00 on May 15, 2023.
- Pipe supports were installed throughout the period.
- Holes for the footers of the access walkway/stairs have been temporarily filled with #57 stone until the footers are ready to be poured.
- Coating of piping materials continued throughout February and was tested by WEC inspector and areas of low millage were marked with tape for recoating.
- In February, the filter deck drain piping was routed into the sump of the existing plant pump station vault. Both the filter deck drain piping and the filter drains which tie into the backwash piping were coated with Tnemec paint.
- Reynolds coated the slab underneath the elevated filter platform and recoated the deep injection well pad with Tnemec paint and primer.
- Benson Electric worked on installing conduit for the flow meter and grounding rod, as well as pulling power and control wiring for the turbidimeter and flow meter display.
- Aqua Aerobics completed the programming upload of the filter, flow meter, valve position indicators, and turbidity meter into SCADA. WEC provided I&C checklists for testing alarms and programming all the new equipment into SCADA.
  - Initial I&C testing occurred on 1/30 and revealed the need for more work to be done before completing the checklist. Programming work continued throughout the month of February and I&C testing will be conducted when all programming is completed and issues resolved with the filter.
- Reynolds, Benson Electric, WEC staff and KLWTD staff attended the construction progress meetings on February 13<sup>th</sup> and February 27<sup>th</sup>.

Project	Original Contract Amount	Current Contract Amount (Including Direct Purchases, change orders and Amendments)	Engineering And Other Cost (Anticipated)	Total Project Cost (Anticipated)
Grinder Pump Lateral Kits Replacement Project	\$346,065.33	\$332,941.12	\$138,496.25	\$477,941.12
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete (Anticipated)	Percentage Complete
	\$138,496.25	\$332,941.12	\$0.00	100%

- The Grinder Pump Lateral Kits Replacement Project was awarded to Page Excavation in the amount of \$346,065.33. The Agreement was executed on the 1<sup>st</sup> of July 2024. The Notice to Proceed was executed on the 12<sup>th</sup> of July 2024.
- CO #1 was approved for the ODP of the Stainless-Steel Lateral Kits for the project in September.
- Construction started for this project on 10/01/2024.
- WEC held a meeting with FJ Nugent on January 24<sup>th</sup> to discuss the sacrificial anode kits to be used as cathodic protection in the valve boxes that are at low elevations. FJ Nugent agreed to WEC suggestions for the anode kit and to put together a quote for each kit. WEC has been surveying elevations of valves to develop a list of valves that will be immersed in saltwater. It is anticipated that FJ Nugent will prepare sacrificial anode kits for installation by District staff. WEC Staff completed a count of valves to use anode protection based on the ground water table and tide in the surrounding keys.
- The deductive change order (CO #2) was sent the board for approval at the first board meeting in February and approved in order to balance the contract.
- A punch list walkthrough was completed the first week in February with final closeout being completed in early February.

Project	Original Contract Amount	Current Contract Amount (Including Direct Purchases, change orders and Amendments)	Engineering And Other Cost (Anticipated)	Total Project Cost (Anticipated)
Power Conditioning and Electrical Upgrades at the WWTP (LPA0426)	\$2,670,450.00	\$2,670,450.00	\$485,000.00	\$4,359,916.00
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete (Anticipated)	Percentage Complete
	\$297,407.30	N/A	N/A	1%

- The Power Conditioning and Electrical Upgrades at the WWTP was awarded to Pedro Falcon in the amount of \$2,670,450.00 on January 29<sup>th</sup>, 2025.
- Pre-construction meeting was held on February 7<sup>th</sup>, 2025.
- The start date was February 10<sup>th</sup>, 2025, and Pedro Falcon is anticipating having a CPM schedule when the bulk of the equipment is ordered and after some exploration is completed on site for lighting and conduit routing.
- Pedro Falcon has begun to submit products to be used for the project and WEC staff has reviewed the submittals that have been received.
- Pedro Falcon has begun trenching the areas for the new installation of the site lighting and other exploratory trenching.
- WEC has discussed the upcoming change order details with Pedro Falcon, including the addition of:
  - Additional switch panel needed to isolate the Sure Volt unit.
  - Camlock connection switch box to be used in case of loss of grid and on-site generator power which will allow for plugging in a mobile generator to power the plant.
  - Fire suppression system in the proposed ATS, Sure Volt, 2 switch panels, and the camlock connection switch box.
- Pedro Falcon, KLWTD and WEC staff attended the construction progress meeting on February 26<sup>th</sup>, 2025.

Project	Original Contract Amount	Current Contract Amount (Including Direct Purchases, change orders and Amendments)	Engineering And Other Cost (Anticipated)	Total Project Cost (Anticipated)
Vacuum Stations Odor Control	TBD	TBD	TBD	TBD
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete (Anticipated)	Percentage Complete
	\$TBD	N/A	N/A	0%

- The Odor Control project went out to bid on December 9<sup>th</sup>, 2024.
- The pre-bid meeting was held on January 8<sup>th</sup>, 2025, at 10am.
- The bids were due on February 4<sup>th</sup>, 2025 by 2:00pm. Two bids were received.
- Bid packages were examined for responsiveness and responsibility. All bidders were found to be responsive and responsible. A bid ranking meeting was scheduled for February 11<sup>th</sup>, 2025 at 2:00pm.
- Total Estimated Construction Cost: \$3,939,280.00
- The bid amount in the proposals were received as shown below:
  - Belle Construction: Total Bid: \$4,009,141.26
  - Reynolds Construction: Total Bid: \$4,417,000.00
- The proposal ranking committee ranked the proposals on February 11<sup>th</sup>, 2025 and recommended that the project be awarded to Belle Construction.

## Upcoming Construction Projects

Project	Estimated Total Cost	Status
<b>Direct Potable Reuse Demonstration Project</b>	\$1,504,301.25 (Anticipated)	The district has budgeted funds for a demonstration project to produce potable water from the WWTP’s treated effluent. 2021 Florida legislation established Direct Potable Reuse (DPR) as a preferred effluent disposal method and provides for DPR projects to be eligible for grant funding, treating WWTP effluent as an Alternative Water Supply. The district has applied for a planning grant for this project and has requested grant funding to be allocated for the design, permitting, and construction of the DPR demonstration project. Initial estimates indicate that the volume of water produced in the DPR demonstration project would be in the range of 150,000 to 250,000 GPD.
<b>EQ Tank and Headworks Project</b>	\$4,500,000 (Anticipated)	The EQ Tank and Headworks Project involves the installation of new headworks as an upgrade to the current headworks at the KLWTD WWTP. This project also involves the installation of an influent EQ tank to regulate flow. This project is currently in the design phase with preliminary site plans and structural drawings for the EQ tank. Shop drawings have been received from Hydrodyne, and a center flow screen has been selected for the headworks screening, which will reduce the footprint of the headworks space and has a higher catch rate and efficiency than the existing headworks. Due to a lack of a decision by Islamorada on the NPK booster station design, the District is moving forward with completing design, with incorporation of an additive alternate scope of work should Islamorada decide to keep the current booster pump design. Permitting efforts are underway with FDEP.
<b>Blower Room Modifications Project</b>	\$250,000 (Anticipated)	The KLWTD staff has requested the addition of an access door behind blower #4 to better service the blower. Currently, the other blowers must be removed to access blower #4. These modifications will allow for more efficient service of the blowers. This project is currently in the preliminary design phase.





**Figure 1. Extended Force main at Vacuum Station A to Front of Building**



**Figure 2. Rebuilt Valve Rack in Flovac Trailer**



Figure 3 and 4. Compacting Installed Asphalt with Double Steel Wheel Roller/Compactor on #8 Miami Dr.

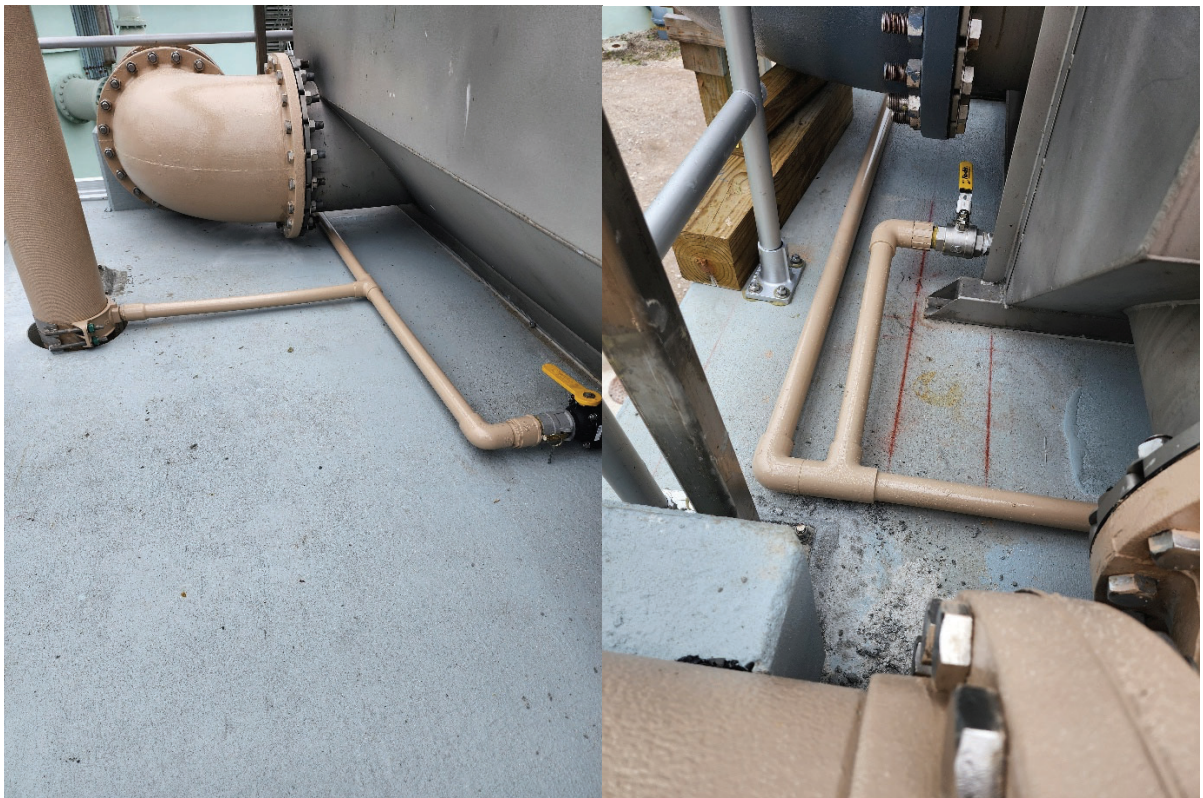


Figure 5 and 6. New Drain Piping for Filter to Tie Into Backwash Pipe Coated



**Figure 7 and 8. New Filter Platform Drain Line Installed and Coated**



**Figure 9 and 10. Conduit Connected to New Flow Meter Display to Flow Meter with Control and Power Wiring**



**Figure 11 and 12. Exploratory Trenching to Expose Conduits Between Light Poles**