

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

Meeting Date:  
January 21, 2025

Agenda Item Number: M-1

Action Required:  
No

Department:  
Capital Projects

Sponsor:  
Ed Castle

Subject:  
**Capital Projects Report - December 2024**

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

<u>Reviewed / Approved</u>	<u>Financial Impact</u>	<u>Attachments</u>
Operations: _____	\$	1. Monthly Report
Administration: _____		
Finance: _____	Funding Source:	
District Counsel: _____	N/A	
District Clerk: _____	Budgeted:	
Engineering: _____	N/A	

Approved By:  Date: 1-16-25  
General Manager

# Key Largo Wastewater Treatment District Capital Projects Report

Including updates through December 2024

## 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)
<b>Vacuum Stations Modifications (LPA0136)</b>	\$ 3,155,800.00	\$3,270,999.76	\$285,000.00	\$3,555,999.76
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete (Anticipated)	Percentage Complete
	\$269,356.25	\$2,478,994.07	\$807,649.44	77%

- 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.
- WEC prepared I&C checklist for the startup of the emergency vacuum trailer and reviewed with all parties.
- Reynolds and AirVac conducted start up for stations A, D, I, G, and J/K through November. Programming for Station E was completed 11/13/24 and start up for Vacuum Station E was completed on 12/18/24.
- Reynolds, KLWTD and WEC did a preliminary walkthrough on 12/12/2024 to determine open items that need to be corrected before the official punch list walkthrough.
- Reynolds worked through the period to complete corrections for the open items addressed during the 12/12 walkthrough.
  - Work included installing pipe hangers for the odor control piping, patching and painting holes from pipe penetrations on walls, installing camlocks on hose-to-pipe connectors for trailer, and replacing galvanized bolts with stainless steel.
- Reynolds, WEC staff and KLWTD staff attended the construction progress meeting on December 12<sup>th</sup>. The meeting slated for December 26<sup>th</sup> was cancelled due to the Holiday.

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
	\$794,606.25	\$7,558,883.34	\$2,078,476.02	80%

- Work was completed in Basins A, B, D, G, H, F 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: **199** 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 in progress)
  - Total project installed: **2,440** out of **2,984**
  - **Sensor installation is approx. 82 % complete (Note: This is only sensors and does not include other aspects of the project)**
- During December, Flovac and IVC continued work in Basin E0.
- Valve rebuilds continued – 925 rebuilds completed. Continuing to target approx. 10-15 per day.
- Crews continued the walkthrough of punch list items for Basin JK during December.
- Construction progress meeting was held on December 10<sup>th</sup>. The biweekly meeting slated for December 24<sup>th</sup> was cancelled due to the Holiday.

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	\$385,000.00	\$3,717,095.76
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete (Anticipated)	Percentage Complete
	\$376,296.25	\$2,613,259.36	\$727,540.15	80%

- The Effluent Filtration Upgrades project was awarded to Reynolds Construction in the amount of \$3,043,820.00 on May 15, 2023.
- The filter platform railings have been installed on all edges besides the north facing edge of the platform. Preliminary installation of the stairs from the existing access platform to the new elevated deck has been completed.
- Pipe supports were installed throughout the period.
- Excavation for the footers of the access walkway/stairs was completed and design of walkway continued throughout December.
- Coating of piping materials continued throughout December and was tested by WEC inspector.
- Evoqua reinstalled the spray headers and nozzles for the filter in December and resealed leaking plugs at the disk filter.
- Aqua Aerobic began integrating the new disk filter into the existing SCADA system in this period and will continue throughout the coming month with the position indicators in the booster pump basin.
- Reynolds installed an air release valve on a new reducer fitting in the booster pumps basin for Booster Pump #4 line and a wheel to a plug valve on the influent line to the filter.
- Reynolds, WEC staff and KLWTD staff attended the construction progress meeting on December 12th the meeting slated for December 26th was cancelled due to the Holiday.

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	\$346,065.33	\$130,000.00	\$476,065.33
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete (Anticipated)	Percentage Complete
	\$116,940.00	\$94,240.00	\$264,885.33	90%

- 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.
- Throughout the period the contractor installed 56 lateral kits and valve boxes for a total of 147 valves and boxes.
- Completed working in C-905 on restorations and continued working on properties along U.S. 1 in December.
- WEC Inspector used GPS to survey the new valve box elevations throughout December, determining the elevations of each valve lateral kit and assessing the extent of project sites that would need cathodic protection to address the rusting valve assemblies.
- Page Excavation, WEC staff and KLWTD staff attended the construction progress meeting on December 19<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)
Power Conditioning and Electrical Upgrades at the WWTP (LPA0426)	TBD	TBD	\$485,000.00	\$4,359,916.00
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete (Anticipated)	Percentage Complete
	\$283,061.05	N/A	N/A	0%

- The Power Conditioning project went out to bid on 10/8.
- The pre-bid meeting was held on 10/28.
- Addendum 1 was uploaded on Monday, 11/4.
- Addendum 2 was uploaded on Thursday, 11/21.
- Addendum 3 was uploaded on Wednesday, 11/27.
- Addendum 4 was uploaded on Thursday, 12/13.
- The bids were due on 12/19 by 10:00 am. Pedro Falcon was the sole bidder at \$2,670,450.00 . The Engineer’s Opinion of Probable Cost Estimate was \$ 3,495,186.94 .
- Bid will be brought to board for recommendation at the 1/21 board meeting.

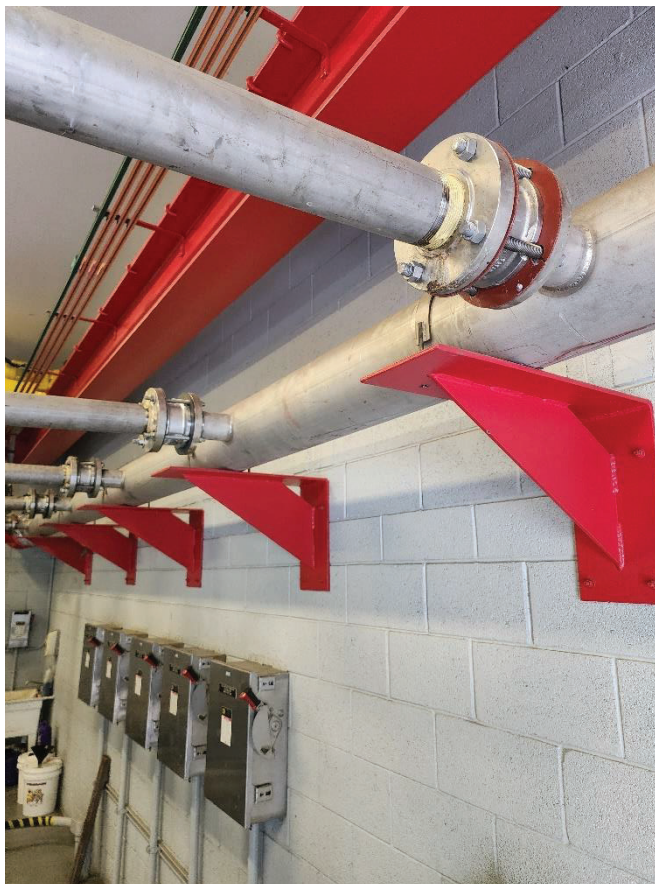
Project	Original Contract Amount	Current Contract Amount (Including Direct Purchases, change orders and Amendments)	Engineering And Other Cost (Anticipated)	Total Project Cost (Anticipated)
Vacuum Stations Odor Control	TBD	TBD	TBD	TBD
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete (Anticipated)	Percentage Complete
	\$x	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.
- Last day for questions: January 14<sup>th</sup>, 2025.
- The bids are due on January 24<sup>th</sup> by 2:00pm.
- Engineer’s Opinion of Probable Cost Estimate:
  - Subtotal Vac A: \$1,266,000.00
  - Subtotal Vac D: \$900,000.00
  - Subtotal Base Bid (Vac A & D): \$2,339,280.00
  - Subtotal Remaining Vac Stations: \$1,600,000.00
  - Total Estimate: \$3,939,280.00

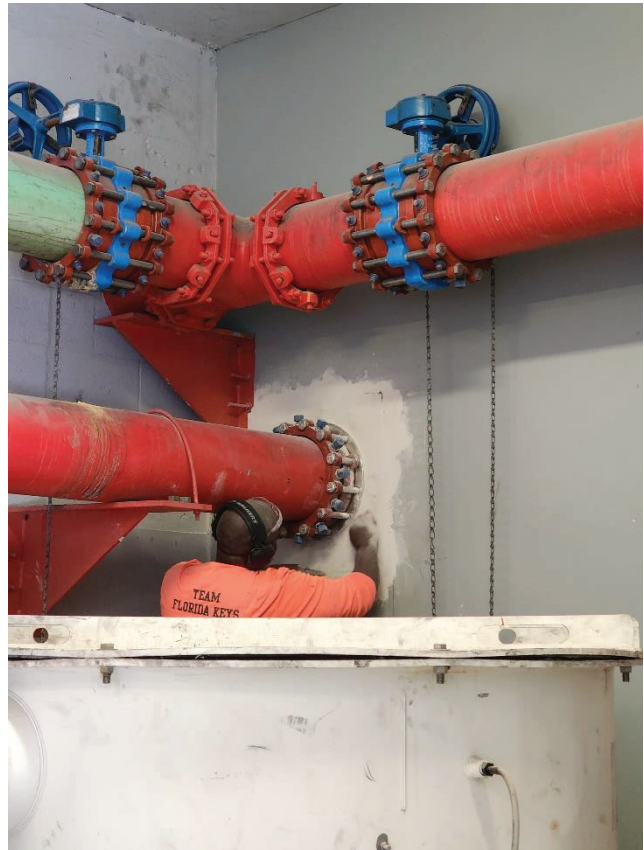
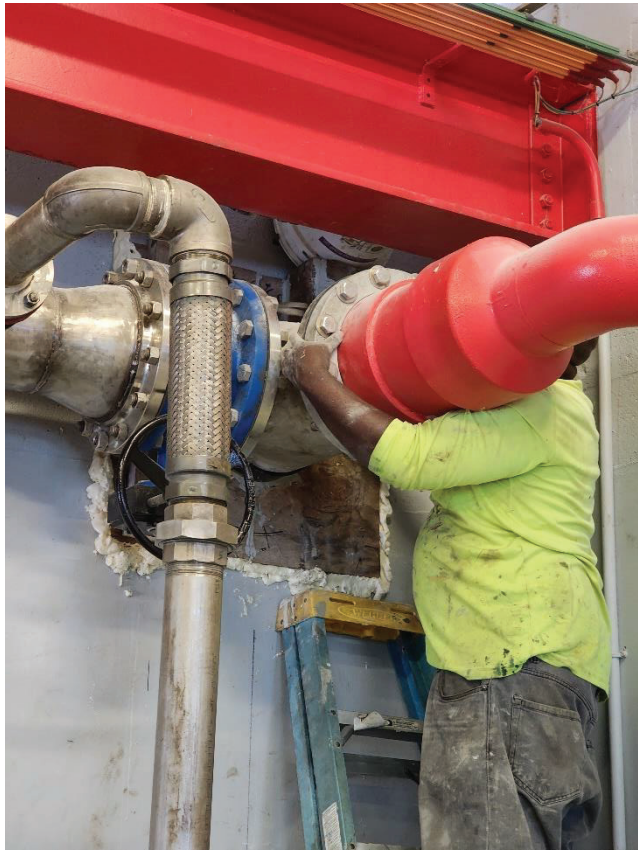
## Upcoming Construction Projects

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 a 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 in order 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 and 2. SS Pipe Straps and Supports to Secure New Odor Control Pipe**



**Figure 3 and 4. Patching Pipe-through-Wall Penetrations**



**Figure 5. Extended Force Main Connection for Vac Trailer to Corner of Vac G**



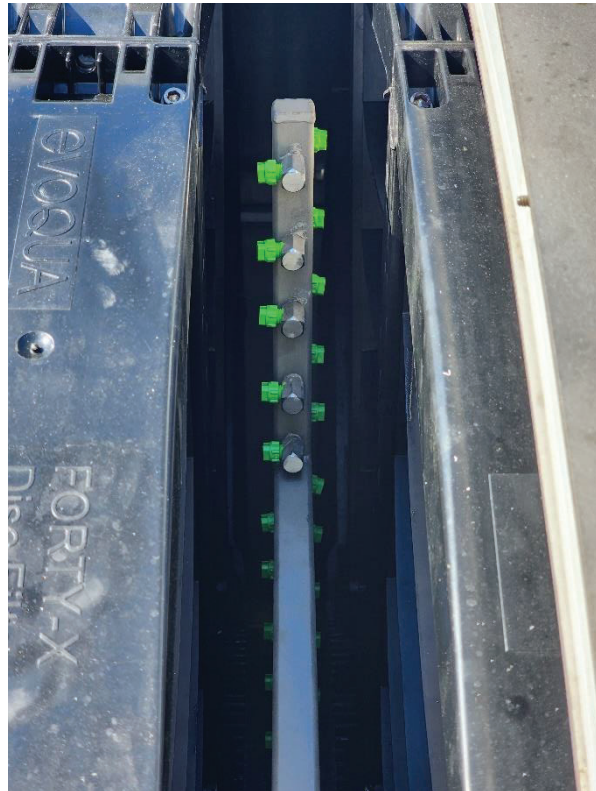
**Figure 6. Installed Flovac Pedestal and Candy Cane Dedicated Air Intake – Typical Installation in E0**



**Figure 7 and 8. Installation of Conduit & Flovac Pedestal and Site Restoration for Collection System Monitoring Project**



**Figure 9. Booster Pump Startup Inspection at WWTP**



**Figure 10. Spray bars and Nozzles Reinstalled Inside Disk Filter Tank**



**Figure 11. Valve Box Bedded with #57 Stone vs. Fully Installed and Restored**