



MEMORANDUM

**TO: RIVANNA WATER & SEWER AUTHORITY
BOARD OF DIRECTORS**

**FROM: JENNIFER WHITAKER, DIRECTOR OF ENGINEERING &
MAINTENANCE**

REVIEWED BY: BILL MAWYER, EXECUTIVE DIRECTOR

SUBJECT: CIP PROJECTS REPORT

DATE: DECEMBER 17, 2024

This memorandum reports on the status of the following major Capital Projects as well as other significant operating, maintenance, and planning projects.

For the current CIP and additional project information, please visit: <https://www.rivanna.org/wp-content/uploads/2024/06/2025-2029-CIP-Final-Draft.pdf>

Summary

| | Project | Construction Start Date | Construction Completion Date |
|----|---|--------------------------------|-------------------------------------|
| 1 | MC 5kV Electrical System Upgrades | October 2022 | June 2025 |
| 2 | Rivanna Pump Station Restoration | July 2024 | May 2025 |
| 3 | Red Hill Water Treatment Plant Upgrades | January 2025 | June 2026 |
| 4 | South Fork Rivanna River Crossing | December 2024 | January 2027 |
| 5 | RMR to OBWTP Raw Water Line and Pump Station | January 2025 | June 2029 |
| 6 | MC Building Upfits and Gravity Thickener Improvements | April 2025 | May 2027 |
| 7 | MC Structural and Concrete Rehabilitation | April 2025 | May 2027 |
| 8 | Crozet Pump Stations Rehabilitation | April 2025 | September 2027 |
| 9 | MC Administration Building Renovation and Addition | June 2025 | December 2027 |
| 10 | Central Water Line | April 2025 | March 2029 |
| 11 | Crozet WTP GAC Expansion – Phase I | August 2025 | March 2027 |
| 12 | SRWTP – PAC Upgrades | October 2025 | February 2027 |
| 13 | RMR Pool Raise | September 2025 | September 2026 |
| 14 | SRR to RMR Pipeline, Intake, and Facilities | February 2026 | December 2030 |
| 15 | Beaver Creek Dam, Pump Station, and Piping | May 2026 | January 2030 |
| 16 | Upper Schenks Branch Interceptor, Phase II | 2026 | 2027 |
| 17 | MC Pump Station Slide Gates, Valves, Bypass, and Septage Receiving Upgrades | June 2025 | September 2026 |

Under Construction

- 1. MC 5kV Electrical System Upgrades
- 2. Rivanna Pump Station Restoration
- 3. Red Hill Water Treatment Plant Upgrades
- 4. South Fork Rivanna River Crossing
- 5. RMR to OBWTP Raw Water Line and Pump Station
- 6. Crozet Pump Stations Rehabilitation

Design and Bidding

- 7. MC Building Upfits and Gravity Thickener Improvements
- 8. MC Structural and Concrete Rehabilitation
- 9. MC Administration Building Renovation and Addition
- 10. Central Water Line
- 11. Crozet WTP GAC Expansion – Phase I
- 12. SRWTP – PAC Upgrades
- 13. RMR Pool Raise
- 14. SFRR to RMR Pipeline, Intake, and Facilities
- 15. Beaver Creek Dam, Pump Station, and Piping
- 16. Upper Schenks Branch Interceptor, Phase II
- 17. MC Pump Station Slide Gates, Valves, Bypass, and Septage Receiving Upgrades

Planning and Studies

- 18. MCAWRRF Biogas Upgrades
- 19. Flood Protection Resiliency Study

Other Significant Projects

- 20. Urgent and Emergency Repairs
- 21. Security Enhancements

Under Construction

1. MCAWRRF 5kV Electrical System Upgrades

| | |
|---------------------------------------|---|
| Design Engineer: | Hazen and Sawyer |
| Construction Contractor: | Pyramid Electrical Contractors (Richmond, VA) |
| Construction Start: | May 2022 |
| Percent Complete: | 80% |
| Base Construction Contract + | |
| Change Order to Date = Current Value: | \$5,180,000 - \$800,127 = \$4,379,873 |
| Completion: | June 2025 |
| Budget: | \$6,200,000 |

Current Status: The Contractor completed replacement of the low-voltage switchboard in the Grit Building, as well as 5kV cable replacement to the Moores Creek Pump Station, and is currently working on 5kV cable and transformer replacement at the Grit Building.

2. Rivanna Pump Station Restoration

| | |
|--------------------------|---|
| Design Engineer: | Hazen/SEH |
| Construction Contractor: | MEB |
| Construction Start: | July 2024 |
| Project Status: | Design, Material Acquisition & Construction |
| Completion: | May 2025 |
| Budget: | \$22,000,000 |

Current Status: Contractor continues to order equipment/materials and complete interior piping modifications in advance of rebuilt pump deliveries. Rebuilt pumps will be installed and bypass pumping system removed by March 2025 with full restoration completed by May 2025.

3. Red Hill Water Treatment Plant Upgrades

| | |
|---|-----------------------------------|
| Design Engineer: | Short Elliot Hendrickson (SEH) |
| Construction Contractor: | Anderson Construction (Lynchburg) |
| Construction Start: | January 2025 |
| Percent Complete: | 0% |
| Base Construction Contract + Change Order to Date = Current Value: | \$1,742,375 |
| Completion: | June 2026 |
| Budget: | \$2,050,000 |

Current Status: Work on-site is expected to begin in January after finalizing site plan details with the County. Submittals are being reviewed so materials can be ordered. This project received partial grant funding from Albemarle County.

4. South Fork Rivanna River Crossing

| | |
|---|-------------------------------------|
| Design Engineer: | Michael Baker International (Baker) |
| Construction Contractor: | Faulconer (Charlottesville) |
| Construction Start: | December 2024 |
| Percent Complete: | 0% |
| Base Construction Contract + Change Order to Date = Current Value: | \$4,916,940 |
| Completion: | January 2027 |
| Budget: | \$7,300,000 |

Current Status: The contractor is submitting shop drawings for approval.

5. Ragged Mountain Reservoir to Observatory Water Treatment Plant Raw Water Line and Pump Station

| | |
|--------------------------|--------------------------------------|
| Design Engineer: | Kimley-Horn |
| Construction Contractor: | Thalle Construction (North Carolina) |
| Construction Start: | January 2025 |

| | |
|---------------------------------------|--------------|
| Percent Complete: | 0% |
| Base Construction Contract + | |
| Change Order to Date = Current Value: | \$53,908,400 |
| Completion: | June 2029 |
| Budget: | \$61,490,000 |

Current Status: The Notice of Award was provided to Thalle Construction Company, Inc. on October 23rd. Construction contracts have been signed by both parties, and an introductory meeting was held with the Contractor on December 4th. A Pre-Construction Conference and NTP are anticipated in the coming weeks.

6. Crozet Pump Stations Rehabilitation

| | |
|---------------------------------------|----------------|
| Design Engineer: | Wiley Wilson |
| Construction Contractor: | Waco, Inc. |
| Construction Start: | April 2025 |
| Percent Complete: | 0% |
| Base Construction Contract+ | |
| Change Order to Date = Current Value: | \$9,583,350 |
| Completion: | September 2027 |
| Budget: | \$12,350,000 |

Current Status: One bid was received for this project on October 31st which exceeded our budget by approximately 10% (\$1.5 M). The bid was reviewed with the contractor for cost reductions. A recommendation for award is being presented to the Board this month after successfully completing negotiations.

Design and Bidding

7. MCAWRRF Building Upfits and Gravity Thickener Improvements

| | |
|---------------------|--------------------------------|
| Design Engineer: | Short Elliot Hendrickson (SEH) |
| Project Start: | March 2023 |
| Project Status: | Bidding |
| Construction Start: | April 2025 |
| Completion: | May 2027 |
| Budget: | \$7,500,000 |

Current Status: Bids are due on December 19, 2024.

8. MCAWRRF Structural and Concrete Rehabilitation

| | |
|---------------------|--------------------------|
| Design Engineer: | Hazen and Sawyer (Hazen) |
| Project Start: | April 2023 |
| Project Status: | Bidding |
| Construction Start: | April 2025 |
| Completion: | May 2027 |

Budget: \$11,300,000

Current Status: Bids are due on December 18, 2024.

9. Moore's Creek Administration Building Renovation and Addition

Design Engineer: SEH
Project Start: October 2022
Project Status: 95% Design
Construction Start: June 2025
Completion: December 2027
Budget: \$25,000,000

Current Status: Contract documents are being finalized. Revised exterior and interior renderings have been submitted to the County ARB for approval and the exhibit design process continues.

10. Central Water Line

Design Engineer: Michael Baker International (Baker)
Project Start: July 2021
Project Status: Bidding (Phase 1)
Construction Start: April 2025
Completion: March 2029
Budget: \$47,000,000

Current Status: **Phase 1 Contract (west end):** All private easements have been acquired and the easement with UVA along Hereford Drive is ready for execution. Bids will be received in January 2025. **Phase 2 Contract (east end):** Redesign efforts in the E. High Street area are in process and survey work is complete. An additional private easement will be required with the redesign as well as new easements on two City parcels. Phase 2 design will be completed in summer 2025.

11. Crozet GAC Expansion – Phase I

Design Engineer: SEH
Project Start: July 2023
Project Status: 100% Design
Construction Start: August 2025
Completion: March 2027
Budget: \$6,550,000

Current Status: 100% documents have been completed and are under review. \$6.24 M in grant funds from VDH have been awarded for this project.

12. SRWTP – PAC Upgrades

Design Engineer: SEH
Project Start: November 2023
Project Status: 100% Design
Construction Start: October 2025

Completion: February 2027
Budget: \$1,100,000

Current Status: Design documents have been completed and are ready for bidding. RWSA applied for a Congressionally Directed Spending grant from Senators Kaine and Warner for this project in the amount of \$880,000 and have received approval of the grant by the Senate committee. Final grant approval will occur upon approval of the federal budget by Congress and the President. Bidding and construction will begin after this grant is finalized.

13. RMR Pool Raise

Design Engineer: Schnabel Engineering
Project Start: April 2024
Project Status: 40% Design
Construction Start: September 2025
Completion: September 2026
Budget: \$5,000,000

Current Status: Design Engineer has developed clearing plans around the reservoir and initiated permitting efforts with ACOE, VDCR and Albemarle County.

14. SRR to RMR Pipeline, Intake, and Facilities

Design Engineer: Kimley Horn/SEH
Project Start: July 2023
Project Status: 57% Design
Construction Start: February 2026
Completion: December 2030
Budget: \$79,000,000

Current Status: Design Engineer continues to work on both the new reservoir intake and the pipe between SRR and RMR. A workshop on the new intake and pump station at SRR was held, and staff has provided comments on the draft PER. The nutrient report has also been submitted for review.

15. Beaver Creek Dam, Pump Station and Piping Improvements

Design Engineer: Schnabel Engineering (Dam)
Design Engineer: Hazen & Sawyer (Pump Station)
Project Start: February 2018
Project Status: 65% Design
Construction Start: May 2026
Completion: January 2030
Budget: \$47,100,000

Current Status: Hazen has submitted the PER for the new raw water pump station, intake, raw water main, and hypolimnetic oxygenation system for review. Design work by Schnabel Engineering for the dam spillway upgrades, temporary detour, and spillway bridge is ongoing. Preliminary design submittals for the dam are currently under review by internal staff and NRCS. Discussions with the County have been initiated for acquisition or lease of property for the Pump Station. A significant construction grant from the NRCS is anticipated.

16. Upper Schenks Branch Interceptor, Phase II

| | |
|---------------------|----------------|
| Design Engineer: | CHA Consulting |
| Project Start: | July 2021 |
| Project Status: | Design |
| Construction Start: | 2026 |
| Completion: | 2027 |
| Budget: | \$4,725,000 |

Current Status: Meetings with the County and City are ongoing to finalize the piping location and design.

17. MC Pump Station Slide Gates, Valves, Bypass, and Septage Receiving Upgrades

| | |
|---------------------|--------------------------|
| Design Engineer: | Hazen and Sawyer (Hazen) |
| Project Start: | June 2023 |
| Project Status: | 70% Design |
| Construction Start: | June 2025 |
| Completion: | September 2026 |
| Budget: | \$3,600,000 |

Current Status: Staff has been interviewing software vendors for additional improvements to the current septage receiving equipment and billing software, and Hazen is completing a flood resiliency evaluation.

Planning and Studies

18. MCAWRRF Biogas Upgrades

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|------------------|-------------------------------------|
| Design Engineer: | SEH |
| Project Start: | October 2021 |
| Project Status: | Preliminary Engineering/Study (99%) |
| Completion: | December 2024 |
| Budget: | \$2,145,000 |

Current Status: RWSA and City staff continue to discuss all available options to reuse biogas.

19. Flood Protection Resiliency Study

| | |
|------------------|-------------------------------|
| Design Engineer: | TBD |
| Project Start: | August 2024 |
| Project Status: | Preliminary Engineering/Study |
| Completion: | July 2025 |
| Budget: | \$278,500 |

Current Status: This project will identify individualized flood mitigation measures of six facilities to increase their resiliency from a 1% to a 0.2% flooding event. Facilities include: Mechums River Raw Water PS, Glenmore WW PS, Moores Creek AWRRF, Scottsville WRRF, Crozet FET, and Crozet WW PS #2. A consultant is being selected to perform this study and the specific scope of the evaluation

is being confirmed. This project received \$198,930 in grant funding from FEMA and VDEM.

Other Significant Projects

20. Urgent and Emergency Repairs

Staff are currently working on several urgent repairs within the water and wastewater systems as listed below:

| Project No. | Project Description | Approx. Cost |
|-------------|--|--------------|
| 2023-01 | Finished Water System ARV Repairs | \$150,000 |
| 2024-08 | Sugar Hollow Raw Waterline Break @ Mechums River | \$350,000 |

- **RWSA Finished Water ARV Repairs:** RWSA Engineering staff recently met with Maintenance staff to identify a list of Air Release Valves (ARVs) that need to be repaired, replaced, or abandoned. Several of these locations will require assistance from RWSA On-Call Maintenance Contractors, due to the complexity of the sites (proximity to roadways, depth, etc.). The initial round will include seven (7) sites, all along the South Rivanna Waterline. Three replacements have been completed at this time, with a fourth site in progress. This in progress site included abandonment of an existing manual ARV located in the middle of the Route 29-Hydraulic intersection, which has been completed, and was a major coordination effort with VDOT, as they intend to pave this area in the coming weeks. The Contractor is working with VDOT on permits for the final sites. The remaining replacements will likely be scheduled starting in Spring 2025.
- **Sugar Hollow Raw Waterline Break at Mechums River:** On October 8th, it was discovered that the Sugar Hollow Raw Waterline had failed at its aerial crossing of the Mechums River, due to the impacts associated with Hurricane Helene. RWSA will be utilizing its On-Call Maintenance Contractor, Faulconer Construction, along with its Design Engineer, SEH, to help design and construct the repairs to the aerial crossing. Mobilization occurred on November 5th to address concerns with the existing access road to the site initially. Repairs are now underway, with installation of concrete piers and preparation for pipe installation complete. The goal remains to have the pipeline back in service prior to the end of the year, pending availability of materials and weather/site conditions. Funding opportunities are being pursued through FEMA/VDEM.

21. Security Enhancements

| | |
|--|--------------------------------------|
| Design Engineer: | Hazen & Sawyer |
| Construction Contractor: | Security 101 (Richmond, VA) |
| Construction Start: | March 2020 |
| Percent Complete: | 90% (WA9) |
| Based Construction Contract + | |
| Change Orders to Date = Current Value: | \$718,428 (WA1) + \$834,742 (WA2-10) |
| Completion: | June 2024 (WA9), August 2024 (WA10) |
| Budget: | \$2,810,000 |

Current Status: WA9 will include installation of card access on all exterior doors at the South Rivanna WTP and has been amended to include interior doors at the new IT data center. Design of MCAWRRF entrance modifications with Hazen & Sawyer continues, with discussions with Dominion Energy also ongoing, as relocation of existing electrical infrastructure will be required. This relocation process will need to be finalized prior to the project proceeding to the bidding phase. Relocation of existing

electrical infrastructure will require coordination with the adjacent landowner, as the infrastructure must be completely relocated from the entrance area. As these discussions are ongoing, staff have submitted appropriate permitting documents to Albemarle County.