BUSINESS OF THE CITY COUNCIL
CITY OF MERCER ISLAND

AB 6867
February 3, 2026
Consent Agenda

AGENDA BILL INFORMATION

TITLE:	AB 6867: Reservoir Booster Pump Station Upgrades Project Closeout	☐ Discussion Only ☒ Action Needed: ☒ Motion ☐ Ordinance ☐ Resolution
RECOMMENDED ACTION:	Accept the completed project and authorize staff to close out the project.	

DEPARTMENT:	Public Works
STAFF:	Jason Kintner, Chief of Operations Kellye Hilde, Deputy Director Clint Morris, Capital Division Manager Christopher Marks, Utilities Engineer
COUNCIL LIAISON:	n/a
EXHIBITS:	1. Pre- and Post-Construction Photos
CITY COUNCIL PRIORITY:	3. Make once-in-a-generation investments to update and modernize aging infrastructure, capital facilities, and parks.

AMOUNT OF EXPENDITURE	$ 2,329,160
AMOUNT BUDGETED	$ 2,330,000
APPROPRIATION REQUIRED	$ n/a

EXECUTIVE SUMMARY

The purpose of this agenda item is to accept the completed Reservoir Booster Pump Station Upgrades Project (WU0128/90.40.0034) and authorize staff to close out the project.

- The reservoir booster pump station utilizes five submersible pumps and is responsible for supplying water service and fire flow to the largest pressure zone on the Island, as well as a number of smaller pressure zones along the Island's perimeter.
- The Reservoir Booster Pump Station Upgrades Project:
  - Replaced the five existing vertical turbine pumps (Pumps 1 through 5) with new 100 HP vertical split case pumps;
  - Installed two 25-HP vertical multistage pumps (Pumps 6 and 7); and
  - Completed change order work including repair of a leak in an existing 24-inch fitting outside the original project limits, replaced the City's overhead crane hoist, and procured two spare 100-HP motors used temporarily to maintain operations at the City's Reservoir site.
- The project was included in the 2023-2024 Water Capital Improvement Program with an initial budget of $1,080,000.

- On March 19, 2024, AB6430 appropriated an additional $1,075,000 from the Water Fund to bring the project budget to $2,155,000, and authorized award of the construction contract to Strider Construction Co.
- On April 15, 2025, AB6655 appropriated an additional $175,000 from the Water fund to cover unforeseen construction expenses, bringing the total approved project budget to $2,330,000.
- Construction began November 21, 2024, and reached completion on June 17, 2025 (see Exhibit 1).
- Upon project closeout, $840 in project savings will be returned to the Water Fund.

BACKGROUND

The City's water distribution system consists of two 4-million-gallon water storage tanks, two booster pump stations, approximately 120 miles of water mains, and 85 pressure-reducing valve stations.

The Reservoir Booster Pump Station serves the City's largest pressure zone (the 492 Pumped Zone) and several smaller perimeter pressure zones. The station provides domestic water service and fire flow using five original 1970s-era Byron Jackson submersible turbine pumps (see Exhibit 1). This pump configuration is considered legacy equipment and is no longer a standard design for new municipal booster station installations. Manufacturer support is limited, and the pump motors contain mercury seals, which present a potential contamination risk during pump failure or disassembly.

On July 16, 2021, the City retained RH2 Engineering to design replacement of all five pumps. To properly size the replacement pumps, RH2 evaluated both current and projected system demands. The analysis identified significant seasonal and daily flow variations that lead to inefficient operation and increased hydraulic and mechanical stress under the existing pump configuration. As a result, the final design incorporated smaller-capacity jockey pumps for low-demand conditions and larger-capacity pumps for peak demands, with redundancy to maintain system reliability.

Final design was completed in December 2023, and the project was advertised on January 29, 2024. Five construction bids were received and opened on February 29, 2024. The lowest responsive bid was received from Strider Construction Co. in the amount of $1,726,011. On April 10, 2024, following City Council's approval of AB6430, the Reservoir Booster Pump Station Upgrades Project (90.40.0034) budget was set at $2,155,000, and a notice to proceed was issued to Strider Construction Co.

ISSUE/DISCUSSION

PROJECT DESCRIPTION

The purpose of this project was to modernize the Reservoir Booster Pump Station and improve system reliability and efficiency by replacing all five existing vertical turbine pumps with new 100-horsepower vertical split-case pumps manufactured by Peerless (Pumps 1 through 5) and adding two smaller 25-horsepower vertical multistage pumps manufactured by Grundfos (Pumps 6 and 7) to better accommodate variable system demand and rising energy costs.

Construction was initially scheduled to begin on January 6, 2025, based on manufacturer delivery estimates for the new pumps. Because the station must continuously meet domestic water demand and fire flow requirements for Mercer Island, the project was planned to use a phased construction approach to ensure that no more than two pumps were taken out of service at any one time.

PROJECT EXPENDITURES

On April 15, 2025, City Council approved AB 6655 which authorized an additional $175,000 be appropriated from the Water Fund to cover unforeseen construction expenses, bringing the approved project budget to $2,330,000. A summary of the unforeseen construction expenses is below:

- **Unforeseen Pump Failures.** Existing Pumps 2 and 3 failed irreparably on September 6, 2024, prior to the planned start of construction, leaving limited pumping capacity. Pump 5 had already been out of service prior to the planned construction start. This required expedited procurement and the purchase of two temporary motors to maintain system operations.
- **Accelerated Construction Impacts.** Expedited pump replacement work resulted in additional costs and damage to the station's overhead crane hoist, which required replacement to safely complete construction activities.
- **Existing Infrastructure Deficiencies.** A leak was discovered in an existing 24-inch fitting located outside the original project limits, requiring additional engineering and construction work to avoid shutting down water service to the City's largest pressure zone. Once a plan was in place, work to replace the leak was completed in late April 2025, across two 10-hour work shifts.

CONSTRUCTION SEQUENCE

The final construction sequence, as a result of the events described above, was as follows:

- November 21, 2024: Contractor mobilization
- November–December 2024: Pumps 2 and 3 were replaced and placed into service
- December 2024–early January 2025: Pumps 4 and 5 were replaced
- February 2025: Construction began on new Pumps 6 and 7, but was paused after a leak was discovered in adjacent piping
- March 2025: The construction sequence was adjusted, and Pump 1 was replaced and brought online
- Late May 2025: Following repair of the piping leak near Pumps 6 and 7, work resumed on these pumps, and startup, testing, and commissioning were completed
- June 17, 2025: Final completion

RESERVOIR BOOSTER PUMP STATION UPGRADES (WU0128/90.40.0034)			
PROJECT ELEMENTS	**ORIGINAL BUDGET (AB 6430)**	**REVISED BUDGET (AB 6655)**	**ACTUAL EXPENDITURES**
Construction Contract (Strider)	$1,726,011	$1,879,844	$1,924,738
Construction Contingency	$172,601	$25,000	
Construction Engineering Support (RH2)	$79,938	$192,986	$187,122
Project Management/Utility Team (City)	$20,400	$40,402	$40,000
Inspection Services (City & Krazan)	$70,050	$31,350	$12,103
SCADA Software Config (Brown & Caldwell)	$86,000	$52,191	$49,398
Expedited Pump Delivery (PumpTech)		$99,262	$99,262
Overhead Hoist Replace (Crane Tech)		$8,965	$14,884
VFD Integration (S&B)			$1,653
Total Project Cost	**$2,155,000**	**$2,330,000**	**$2,329,160**
Budget Remaining			***$840***

RECOMMENDED ACTION

Accept the completed Reservoir Booster Pump Station Upgrades project and authorize staff to close out the project.