State Revolving Fund Loan Program
an Indiana Finance Authority Environmental Program

100 North Senate Avenue, Room 1275
Indianapolis, Indiana 46204
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MEMORANDUM

TO: Project File, Town of Newburgh, 2015 Sanitary Sewer Improvements Project, SRF Project # WW15 06 87 06

FROM: Jack Fisher

DATE: February 17, 2017

RE: Green Project Reserve (GPR), Business Case

Summary:

- The town needs to address shortcomings in their collection system by providing enough current and future capacity. The city identified five projects: Deaconess Lift Station (L.S.) and Force Main (F.M.) Rehabilitation project; Halston Force Main Replacement project; Halston Gravity Sewer Main Extension project; Kingston Lift Station Elimination project; and the Lincoln Avenue Widening and Sanitary Sewer Relocation project.

- The Deaconess L.S. and F.M. project involves replacing the existing lift station and force main with a new one having two pumps controlled by variable frequency drives (VFDs) and a SCADA system to better accommodate existing and future flows from the Deaconess Hospital Complex. The Halston F.M. Replacement project includes: installing a larger force main that will direct flows into a different area of the collection system; rehabilitating the lift station; and making site improvements. The Halston Gravity Sewer Main Extension involves installing a larger gravity sewer that will provide enough capacity to accept flows from the Halston Force Main and the Deaconess Force Main projects along with flows from future development. The Kingston L.S. Elimination project involves installing a gravity sewer from the Kingston L.S. to the Triple Crown L.S. The Lincoln Avenue Widening project involves relocating portions of the sanitary sewer system to avoid conflicts during the reconstruction of Lincoln Avenue.

- Estimated State Revolving Fund Loan Amount is $5,310,000.

- Estimated GPR portion cost of loan are associated with the construction of two projects (i.e., Kingston L.S. Elimination Project and Deaconess L.S. and F.M. Replacement Project). The Kingston L.S. Elimination Project has a construction cost of **$629,334** and a planning and design cost of **$61,**200, while the Deaconess L.S. and F.M. Replacement Project has a construction cost of **$43,465** and a planning and design costs of **$10,060** producing a total GPR cost of **$744,059**. This represents 14% of the estimated loan amount. **These GPR projects fall under the category of energy efficiency.**

Conclusions

- The Deaconess Force Main and L.S. project will eliminate double pumping from the Colonial Hills L.S. The proposed project will allow the Colonial Hills L.S. to pump directly to the Master Lift Station. This project will result in a 30.73 % reduction in energy usage and an annual cost savings of $1,389.

- The Kingston L.S. Elimination project will involve the replacement of the lift station with a gravity sewer. This project will result in an annual energy savings of 14,217 kWh/year and an annual cost savings of $1,956, respectively.

- The VFDs and SCADA control system for the Deaconess L.S. will help control flows more efficiently in the collection system and save on energy costs. These components will result in a 40.85% reduction in energy usage and an annual cost savings of $8,379 when compared to constant speed.