

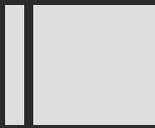


Fridley Filtration Plant
Constructed in 1920's



Filter Building ~ 440 feet long
20 filters





Project “at a glance”

- Reconstruct filters
- Add Granular Activated Carbon media
- Remove and replace Pipes in Gallery
- Add Backwash Supply system
- Replace Backwash Recovery system

Qualifications Based Selection of Engineering Consultant

- Project approach was confirmed by PRC
- Total engineering fee is in the expected range
- T&PW Letter, December 2013:
 - Part 1 - Preliminary Design and Initial Investigations (“smaller part”)
 - Part 2 – Final Design Phase & Construction Phase (“larger part”)



Study Phase results:

- The proposed Rehabilitation feasibility reports identified several “Win-Win” alternatives
 - Example: Two very good options for Backwash Supply system

Initial Investigations (in Part 1)

TM	Topic
1	Filter Design Criteria
2	Water Quality, Optimizing Biofiltration, Filter Media, GAC Procurement
3	Disinfection Parameters
4	Optimization of Clearwell Hydraulics and Finished Water Chemical Addition
5	Filter Underdrain System, Backwash Troughs, Piping and Valves
6	Filter Backwash Water Distribution
7	Filter Backwash and Air Scour Systems
8	Hydraulics
9	Spent Filter Backwash Water System
10	HVAC and Fire Protection Systems
11	Instrumentation & Control Systems
12	Electrical Systems
13	Backwash Building & Architectural
14	Construction Sequencing
15	Hazardous and Regulated Material Survey and Remediation

Engineering Fee Evaluation

Estimated Construction Cost	\$44,500,000		
(2015 to 2019 work)			
Engineering Fees		Percent of Construction Cost	
Preliminary Design & Initial Investigations	\$965,000	2.2%	
Final Design & Bid Phase	\$1,634,000	3.7%	5.9%
Construction Phase (3.8 years "on-site")	\$2,988,000	6.7%	
Engineering Services Total	\$5,587,000	12.6%	



MWW Treatment System

(Next Steps, beginning in 2013)

