



Water Supply Operations CIP Presentation

*Grant Gartrell, Director of Water
Engineering*

Springwells CIP #s 114002 and 114010

CIP #s 114002 and 114010 Budgeted Amounts
(in \$1000s)

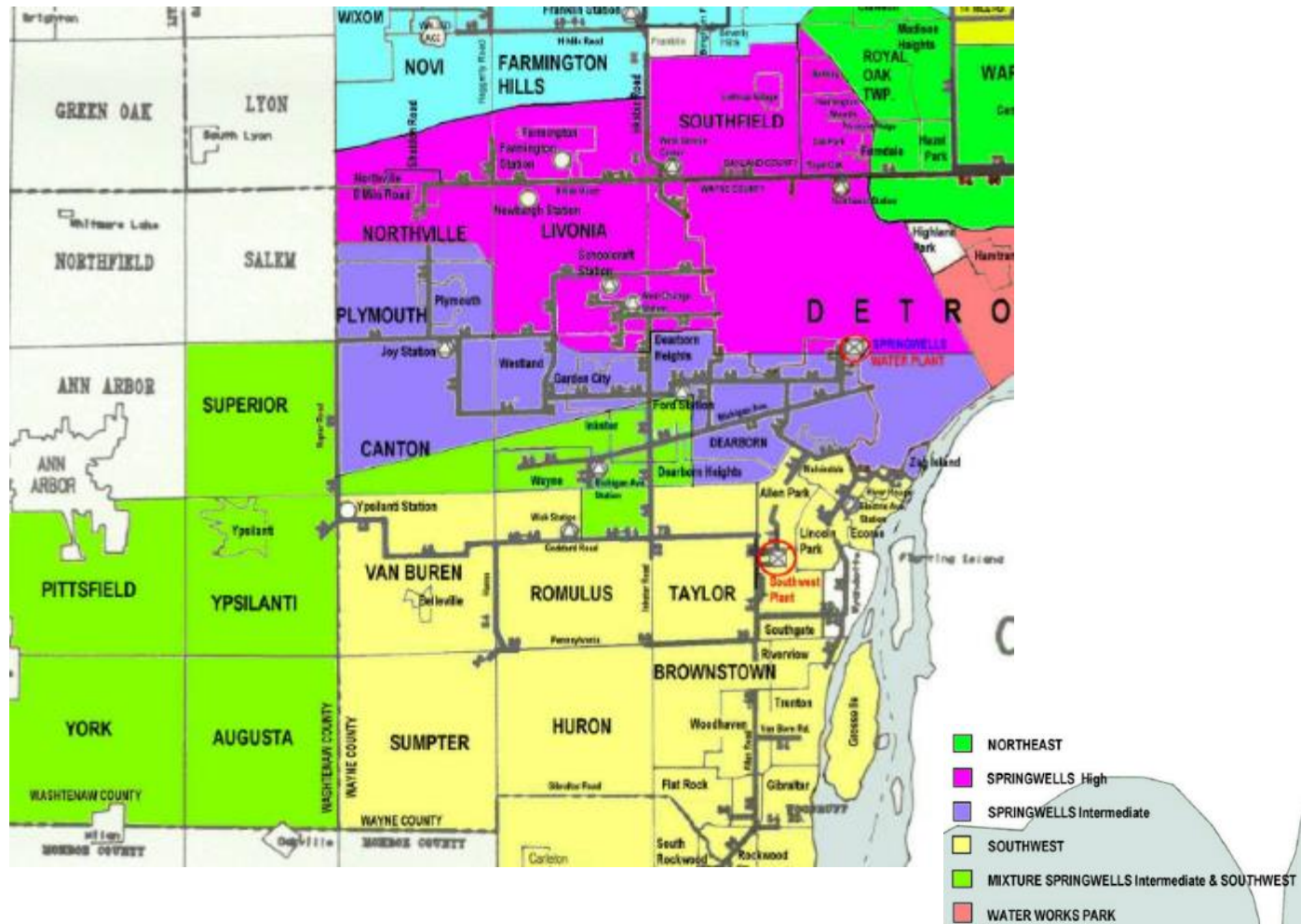
CIP #	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26+
114002: Low-Lift and High-Lift Pumping Station Improvements								
CS-103	\$1,945	\$991	\$1,104	\$779	\$1,328	\$1,216	\$1,215	\$3,109
1900134	\$2,048	\$4,908	\$3,487	\$1,000	\$	\$	\$	\$
C-TBD	\$	\$	\$	\$1,161	\$5,167	\$13,707	\$17,960	\$89,831
C-TBD	\$	\$	\$1,101	\$7,466	\$12,409	\$3,767	\$	\$
114010: Yard Piping and High-Lift Header Improvements								
DB-TBD	\$	\$	\$	\$	\$562	\$2,646	\$3,307	\$10,021
DB-TBD	\$	\$	\$	\$	\$	\$6,681	\$8,543	\$80,155

C-TBD: Construction contract to be determined

DB-TBD: Design-build contract to be determined

Grand Total \$286,615,000

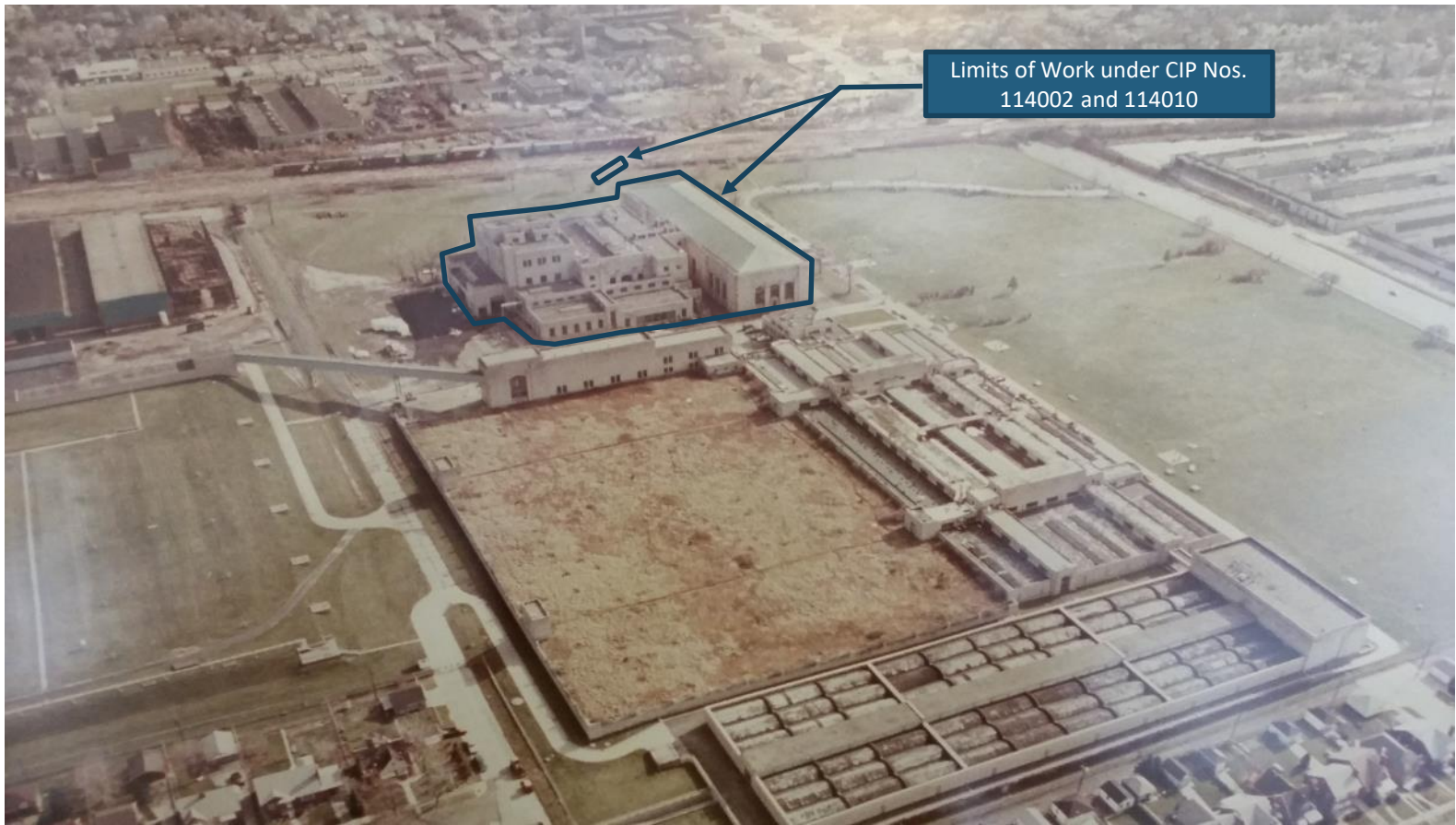
Springwells Location and Service Area



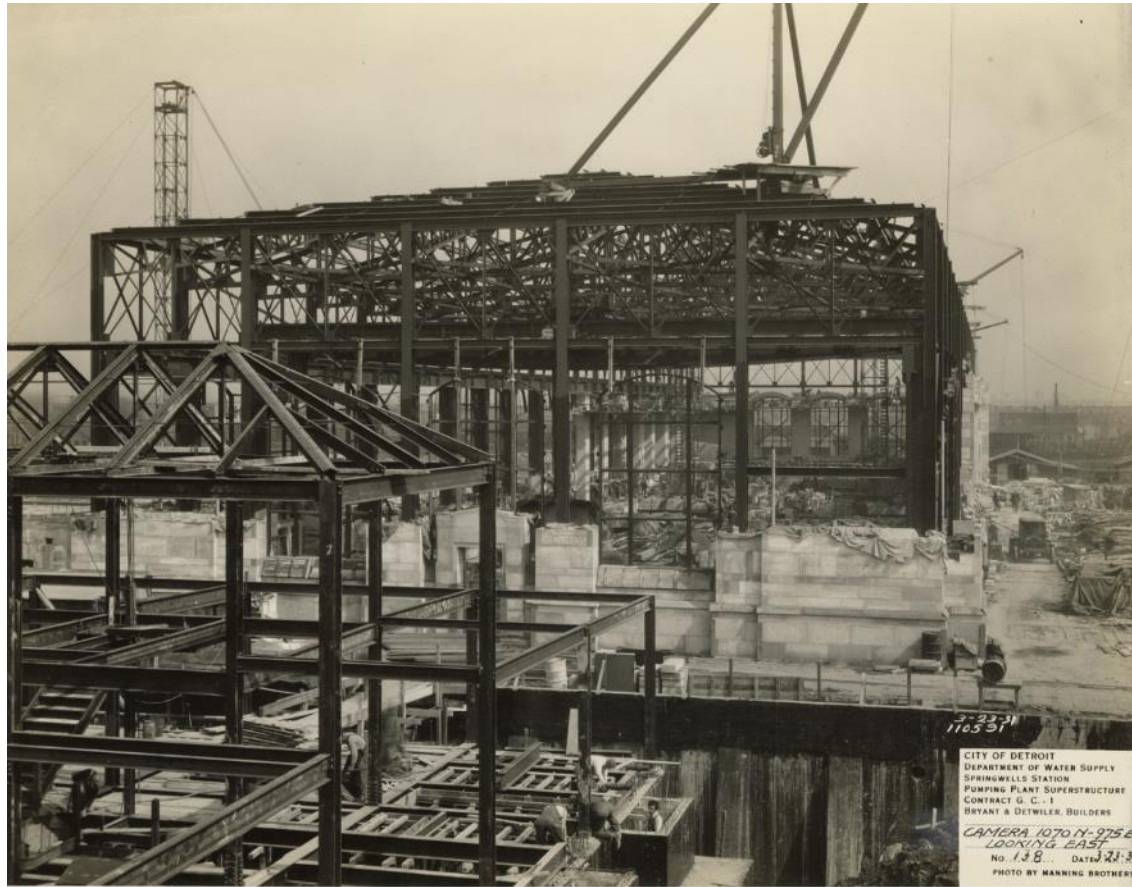
Springwells is 89 years old



Springwells Aerial View



Springwells High Lift Building in 1931



Springwells Yard Piping in 1937



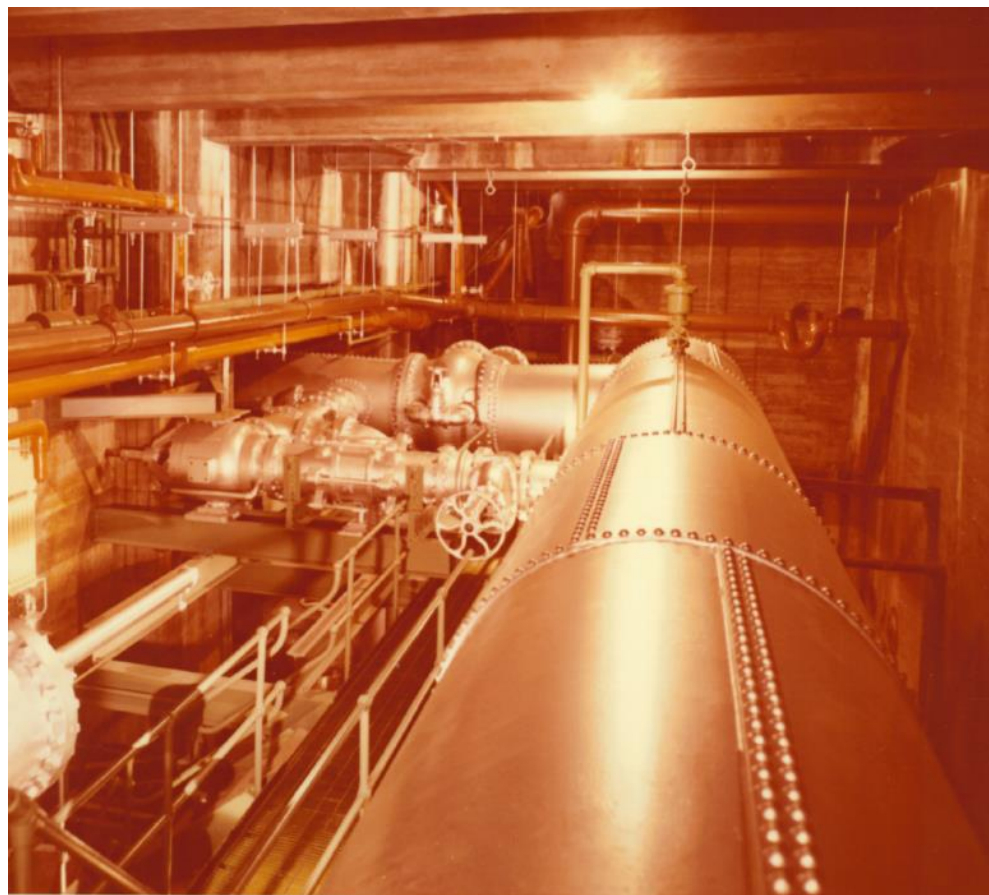
Springwells High Lift Building in 1937



Springwells Facility circa 1950



Springwells High Lift Header in 1959



Springwells High Lift Building in 2020



Springwells Yard Piping in 2019

Main #5 Leak Repair



Main #5 Leak Repair



Springwells Yard Piping in 2019

Repaired Riveted Steel Pipe



Corroded Flange on Main #5



Springwells High Lift Header in 2019



Springwells High Lift Header in 2019

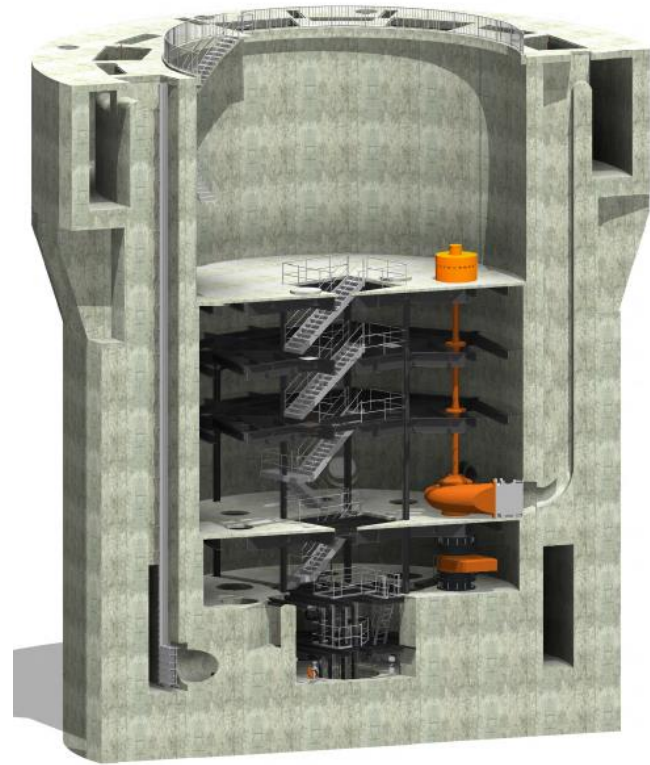


Springwells Low Lift Pumping Area

Low Lift Main Floor



Low Lift Station Cross Section

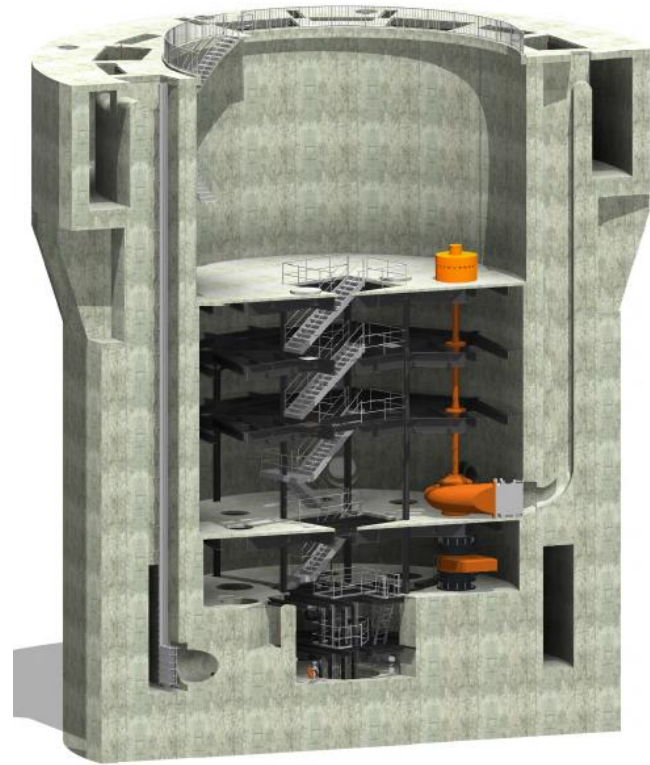


Springwells Low Lift Motor Floor in 2015

Low Lift Motor Floor



Low Lift Station Cross Section

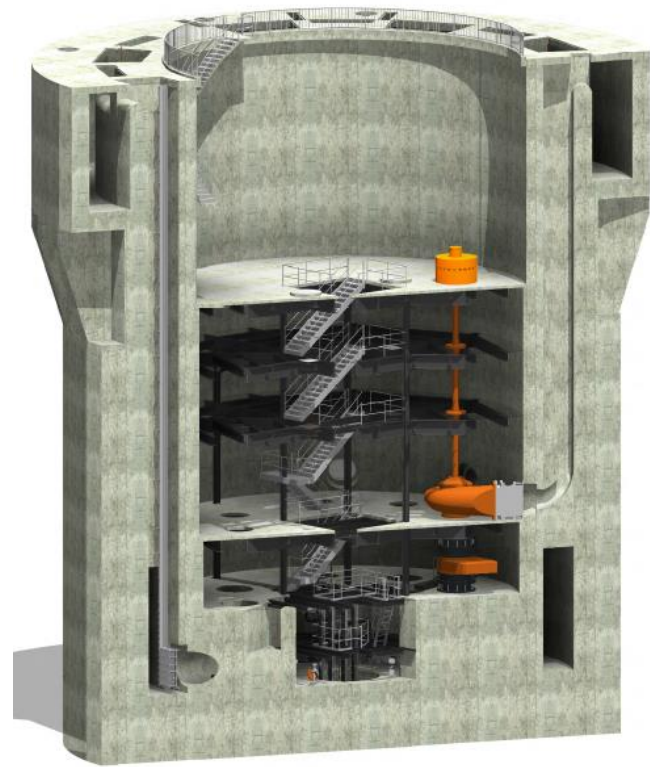


Springwells Low Lift Pumps in 2015

Low Lift Pump Floor



Low Lift Station Cross Section



Springwells Low Lift Suction Gate in 2020

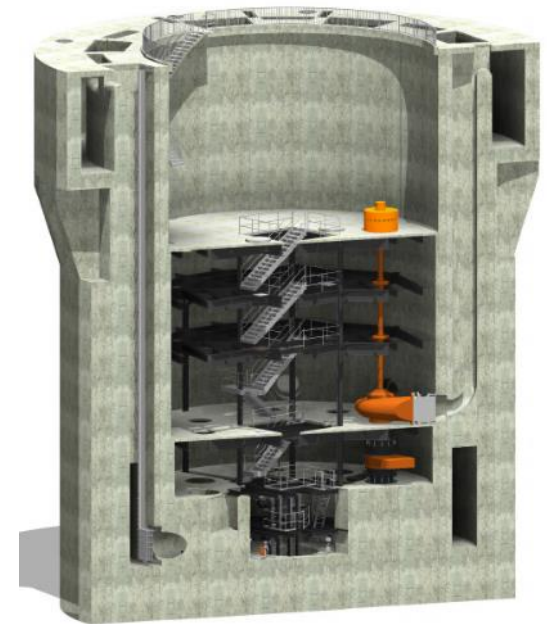
Low Lift Suction Gate



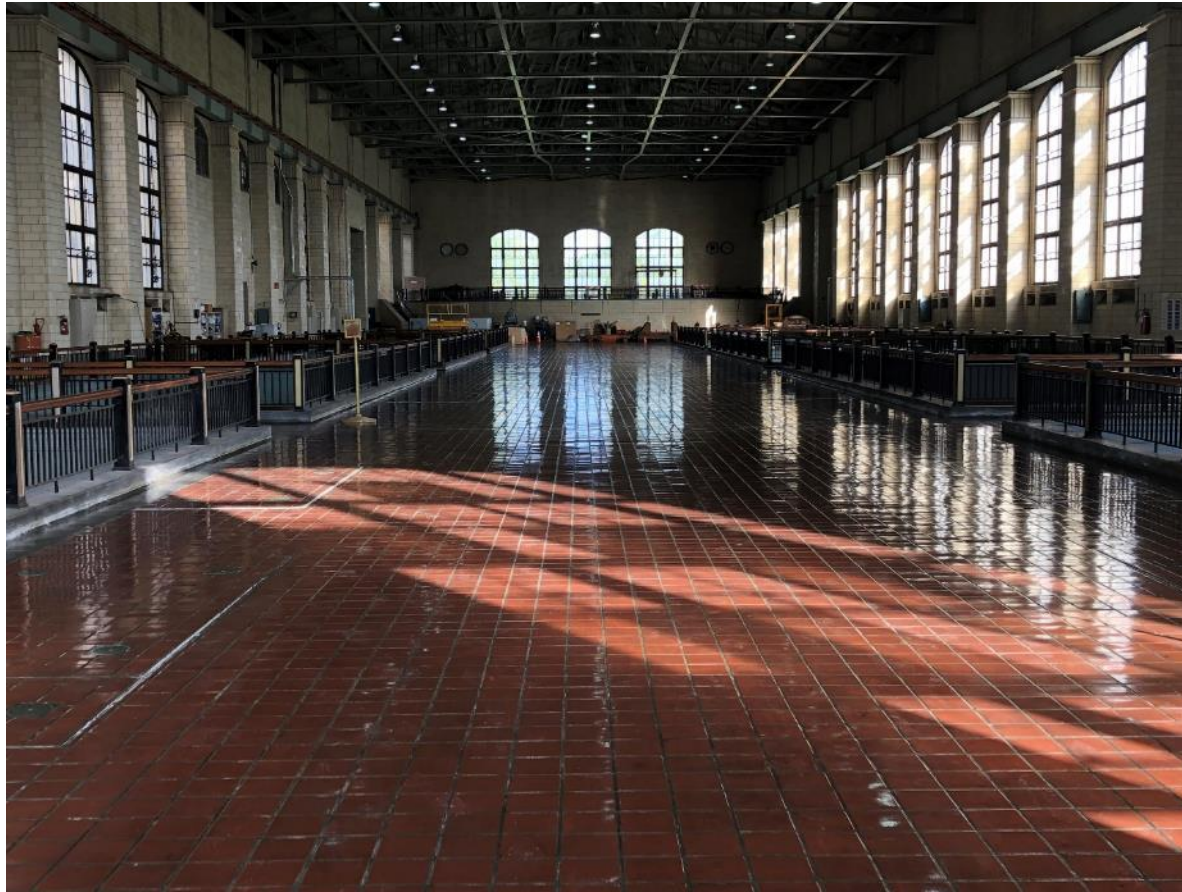
Low Lift Section Gate



Low Lift Cross Section



Springwells Low/High Lift Pumping Plant



Springwells High Lift Duplex Pump Pits

Typical High Lift Pumping Setup



High Lift Pumping Pits



Springwells High Lift Header in 2020



Springwells High Lift Header in 2020



Springwells High Lift Header Valve Leak in 2020



Contracts for CIP No. 114002

CIP No. 114002 – Low and High Lift Pumping Station Improvements

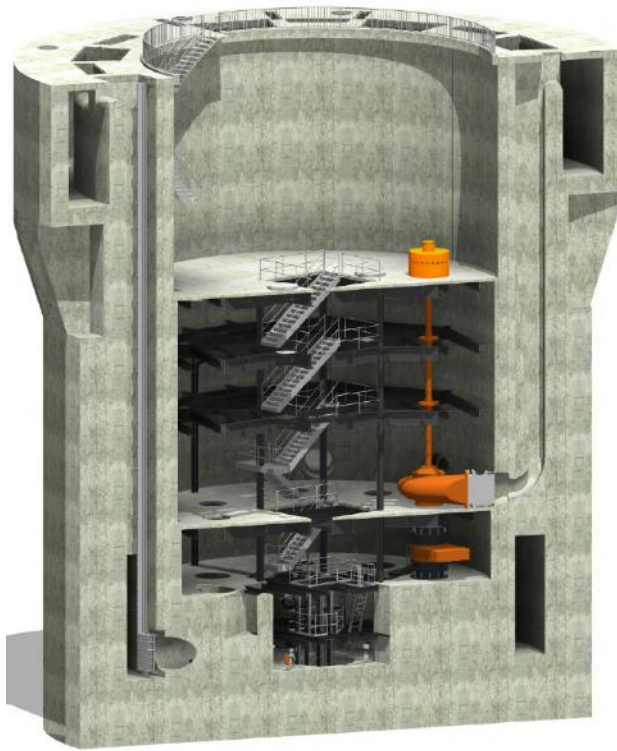
- A. Contract No. CS-103 Design Engineering Services
- B. Contract No. 1900134 Design-Build Low-Lift Suction Gates (under construction)
- C. Contract No. TBD Construction Medium Voltage Switch Gear Replacement (90% design near complete)
- D. Contract No. TBD Construction Pumping and Architectural Systems Replacement (study phase near complete)
- E. Contract No. TBD Construction Replacement of 3, 24-kV Electric Substations with 2, 120-kV Substations (study phase near complete)

Low and High Lift Pumping Right-Sizing

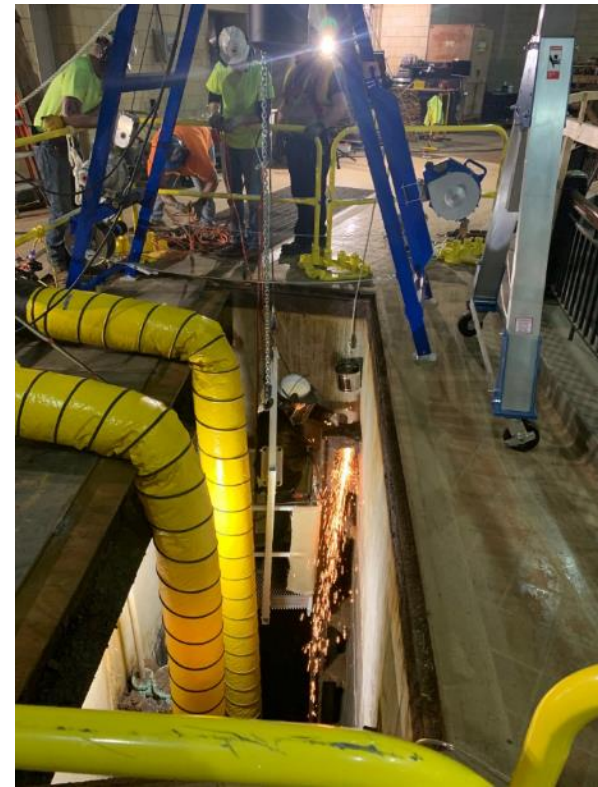
System	Existing	Proposed	Future
Low Lift Pumping	820	540	600
Intermediate Service Pumping	320	240	240
High Service Pumping	510	340	400

Contract No. 1900134

Springwells Low Lift Caisson



Removal of Gate Guides



Contract No. 1900134

Removal of Gate Guides



View of Suction Well

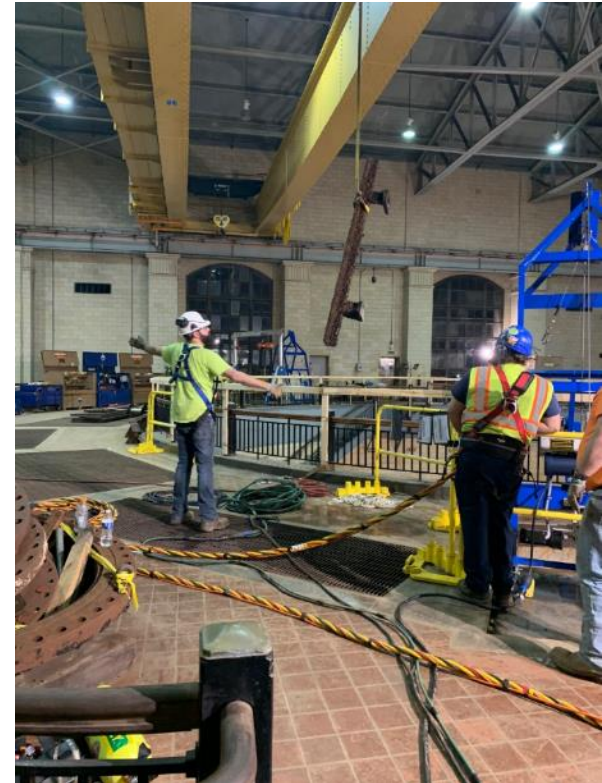


Contract No. 1900134

Diver Preparing for Entry



Removal of Underwater Guides



Contract No. 1900134

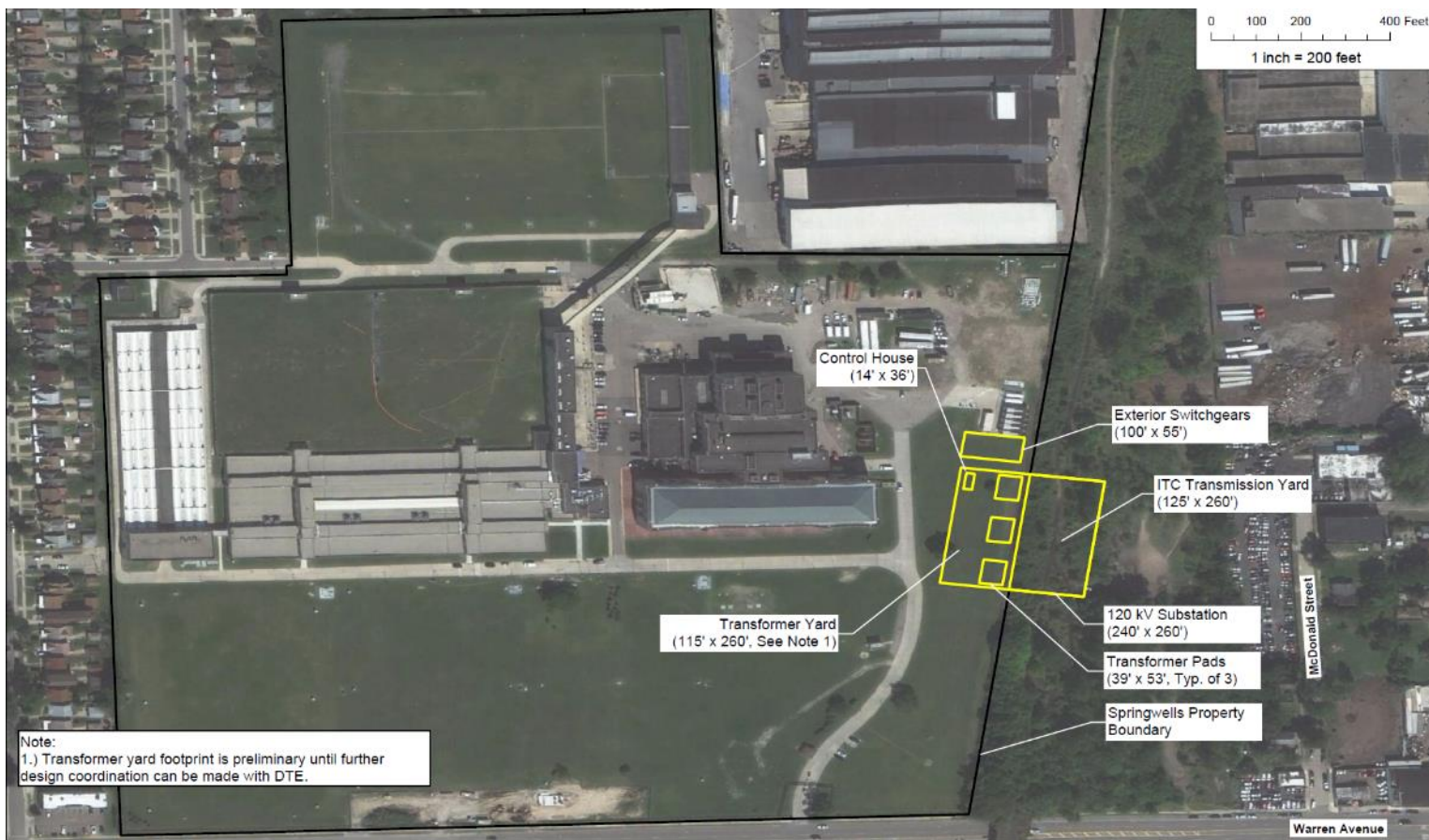
Corroded Steel Guides Removed



Diver Entering Water



Contracts TBD for Medium Voltage Switchgear and Substation Replacements



Contract TBD Pumps, Motors, Controls, Electrical, and Architectural Imp.

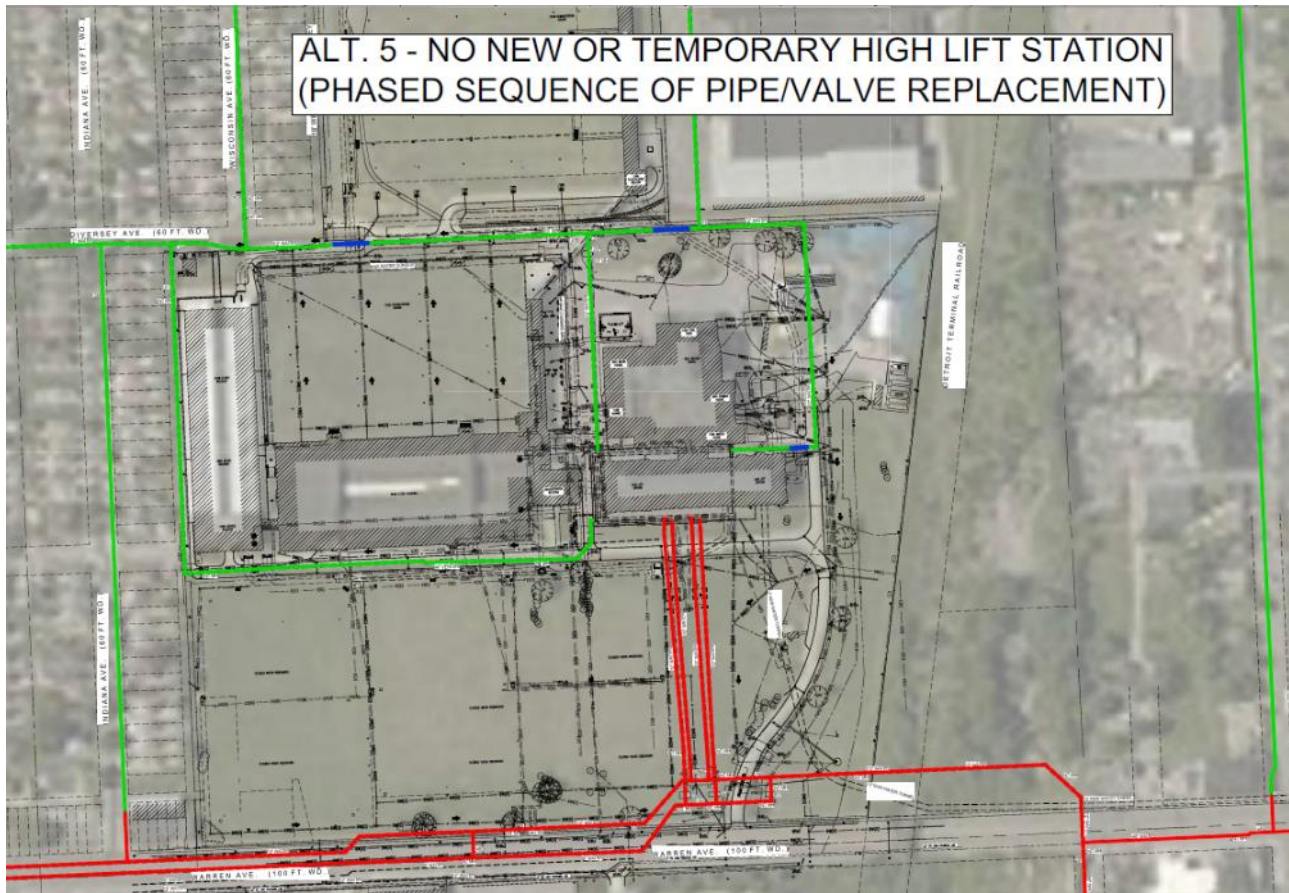


Contracts for CIP No. 114010

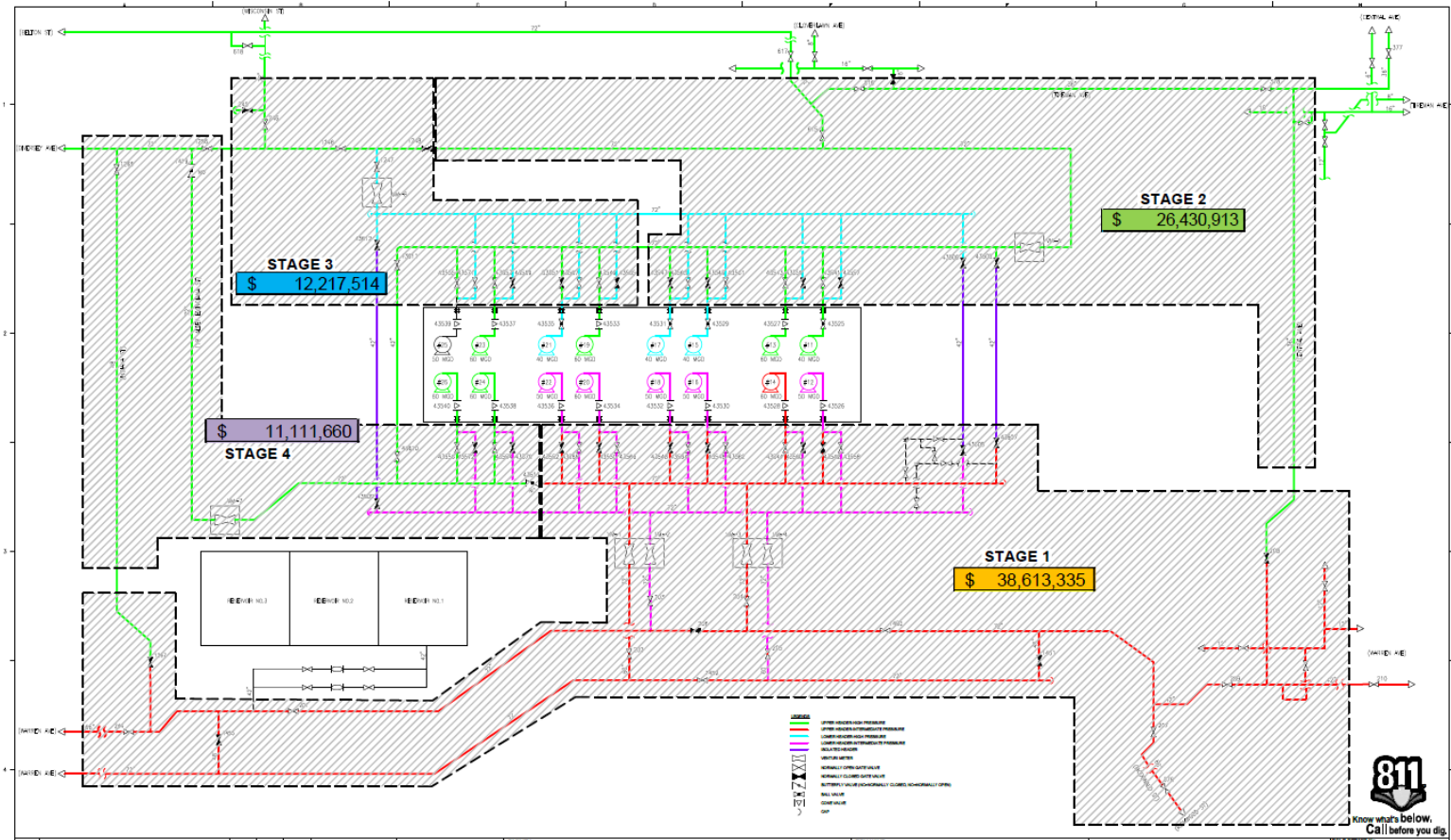
CIP No. 114010 – High-Lift Header and Yard Piping Replacement

- Contract No. CS-272 Program Management, Project Programming (under way)
 - Phase 1: CIP validation, alternatives analysis and contracting approach
 - Phase 2: Prepare RFPs for the design-build contracts
- Current, FY21, CIP assumes two design build contracts to deliver the CIP No. 114010 improvements.
- Planned FY22 CIP will show yard piping replacement portion of CIP No. 114010 advancing ahead of CIP No. 114002 pumping unit replacement due to lessons learned under construction contracts CON-133 and CON-253.

CIP No. 114010 Yard Piping Replacement



CIP No. 114010 High Lift Header Replacement





GLWA

Great Lakes Water Authority