



CIPO BOWC PRESENTATION- DECEMBER 2019

PROCESS, PROJECT SELECTION AND CIP DEVELOPMENT

DECEMBER 4, 2019

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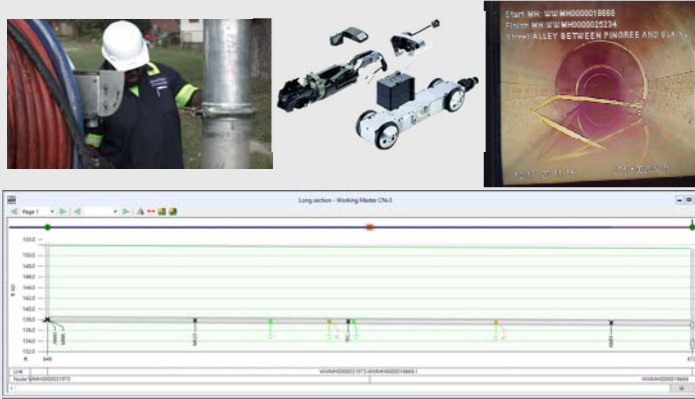


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Condition Assessment to CIP Workflow Summary Overview - Sewer

Inspection Activities

- CCTV (PACP) Inspection
- Manhole (MACP) Inspection



TEAM

Data
Management

Field

Sewer
Modeling

Planning /
Design

DWSD Database

Data Inputs

Process

Step A

- Field data are processed
- QA/QC is performed
- Geometric elements of network are updated

Step B

- Access tool is run on CCTV inspections
- Repair-worthy defects are set on manhole survey and CCTV user fields in InfoAsset Manager (IAM)
- Intervention recommendations are set based on defect quantities in IAM

Step C

- Engineer compares Tool and IAM suggested interventions
- Engineer reviews CCTV and manhole surveys to verify interventions
- Engineer recommends interventions

Step D

- Capacity analysis from hydraulic model is performed

Step E

- Interventions are reviewed holistically
- Final deliverable is prepared



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Condition Assessment to CIP Workflow Summary Overview - Water

Inspection Activities

- Leak Detection
- Valve Exercising
- Hydrant Testing
- C-factor Testing

Step A

- Field data are processed
- QA/QC is performed
- Geometric elements of network are updated

Step B-1

- C-factors are updated in hydraulic model based upon results and extrapolated to neighboring pipes in the same cohort
- Hydraulic model is calibrated based upon C-factor tests and hydrant flow tests

Step B-2

- Leaks are investigated by DWSD and actual breaks are recorded in CityWorks
- Newly found breaks are added to break data-set for evaluation of five breaks per 1,000 LF threshold

Step C

- Engineer incorporates break history, C-factors, available fire flow and valve condition into analysis
- Engineer reviews available data and prioritizes interventions
- Engineer recommends treatment types for various interventions

Step D

- Interventions are reviewed holistically
- Final deliverable is prepared



TEAM

Data Management

Field

Water Modeling

Planning / Design



DWSD Database

Data Inputs

Process

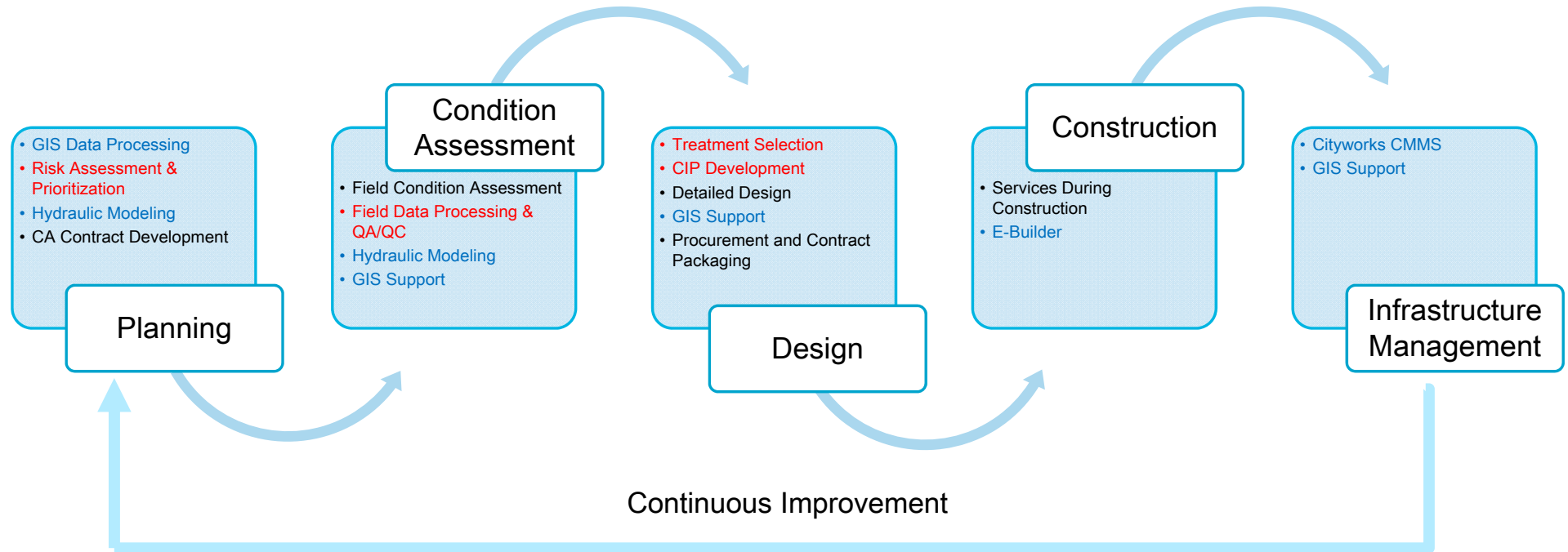
Location	Intervention Type	Priority	Estimated Cost	Notes
Block 1	Leak Repair	High	\$15,000	Repaired by DWSD on 10/15/2023
Block 2	Valve Replacement	Medium	\$25,000	Planned for Q1 2024
Block 3	Hydrant Testing	Low	\$5,000	Completed on 11/01/2023
Block 4	Leak Detection	Medium	\$10,000	Investigation ongoing
Block 5	Valve Exercising	Low	\$3,000	Completed on 11/05/2023
Block 6	Leak Repair	High	\$12,000	Planned for Q2 2024
Block 7	Hydrant Testing	Low	\$5,000	Completed on 11/08/2023
Block 8	Valve Replacement	Medium	\$20,000	Planned for Q3 2024
Block 9	Leak Detection	Medium	\$8,000	Investigation ongoing
Block 10	Hydrant Testing	Low	\$5,000	Completed on 11/10/2023
Block 11	Valve Exercising	Low	\$3,000	Completed on 11/12/2023
Block 12	Leak Repair	High	\$18,000	Planned for Q4 2023
Block 13	Hydrant Testing	Low	\$5,000	Completed on 11/15/2023
Block 14	Valve Replacement	Medium	\$22,000	Planned for Q1 2024
Block 15	Leak Detection	Medium	\$7,000	Investigation ongoing
Block 16	Hydrant Testing	Low	\$5,000	Completed on 11/18/2023
Block 17	Valve Exercising	Low	\$3,000	Completed on 11/20/2023
Block 18	Leak Repair	High	\$16,000	Planned for Q2 2024
Block 19	Hydrant Testing	Low	\$5,000	Completed on 11/22/2023
Block 20	Valve Replacement	Medium	\$21,000	Planned for Q3 2024



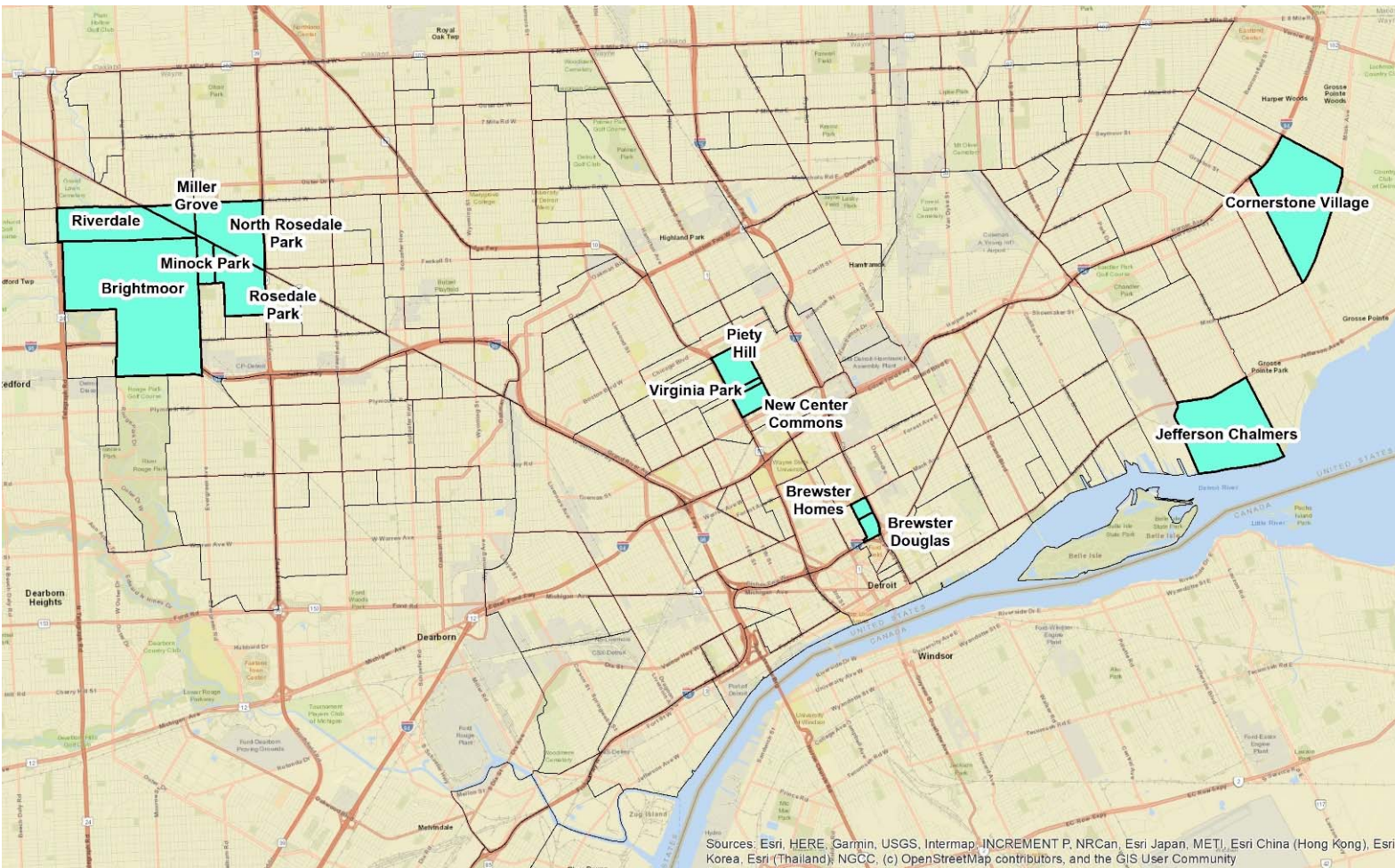
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Overall Capital Delivery within CIPMO



Condition Assessment Performed



<u>Neighborhood</u>	<u>W</u>	<u>S</u>
Cornerstone Village	✓	✓
N. Rosedale Park	✓	✓
Jefferson Chalmers	✓	
Brightmoor	✓	✓
Miller Grove	✓	✓
Minock Park	✓	✓
Riverdale	✓	✓
Rosedale Park	✓	✓
Brewster Douglass	✓	✓
Brewster Homes		✓
New Center Commons		✓
Piety Hill	✓	✓
Virginia Park	✓	✓

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community