DWSD Capital Improvement Program Update

August 5, 2020

Agenda

- CIP Delivery Process Review
- Project Overview by District
- Planning Projects
- Condition Assessment Projects
- Design Projects
- Construction Projects
- Impacts of COVID-19
- Summary

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- **CIP Delivery Process Review**
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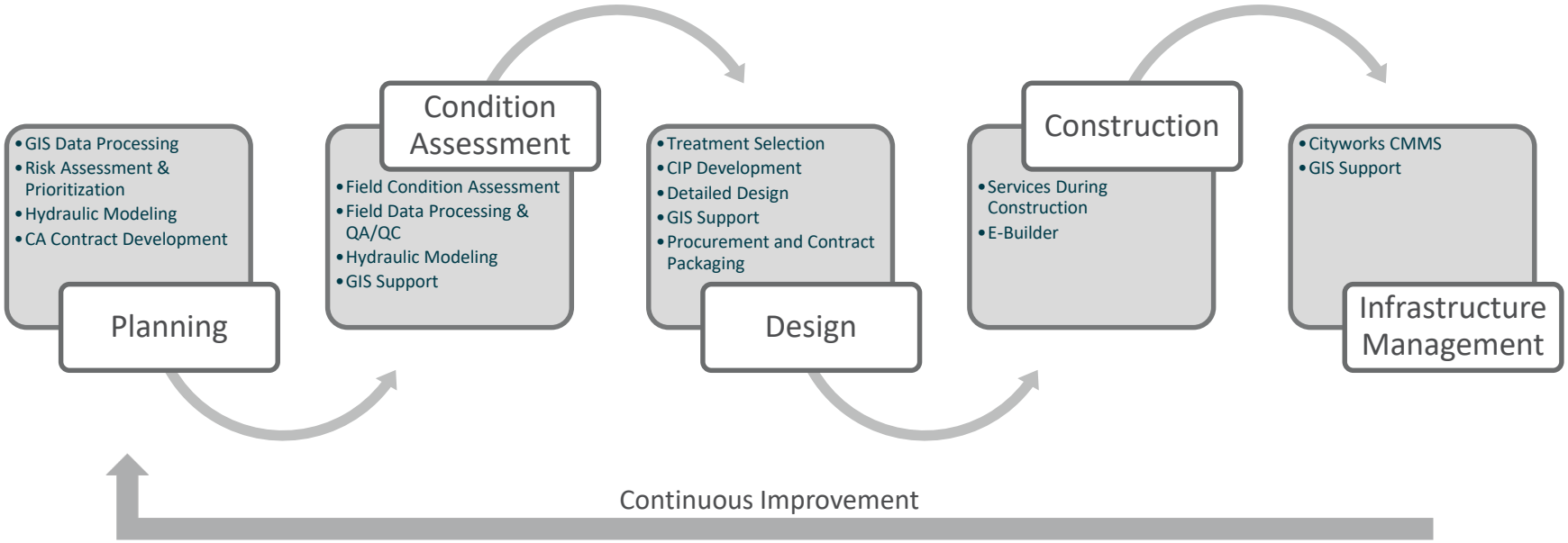
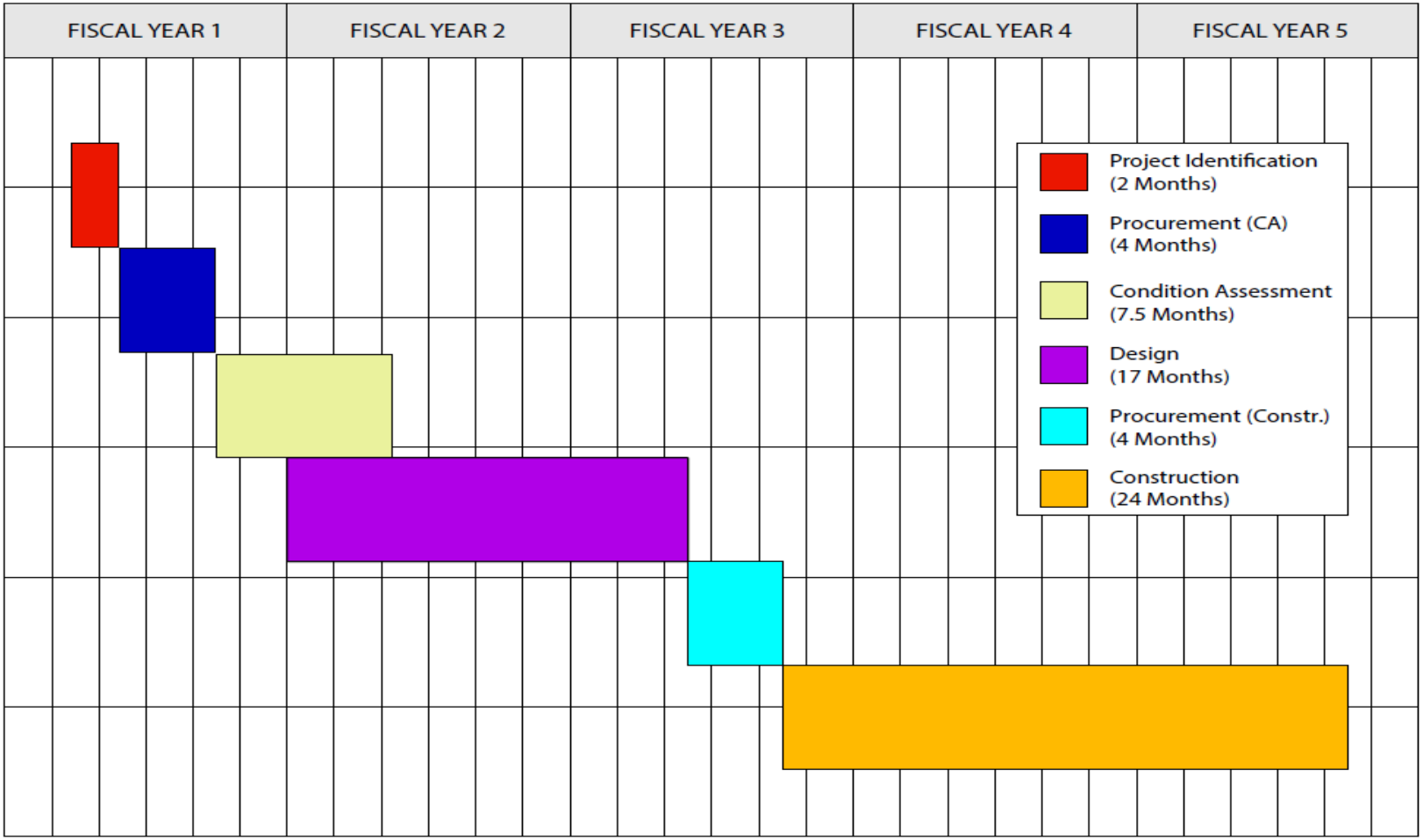
Capital Delivery Process Overview



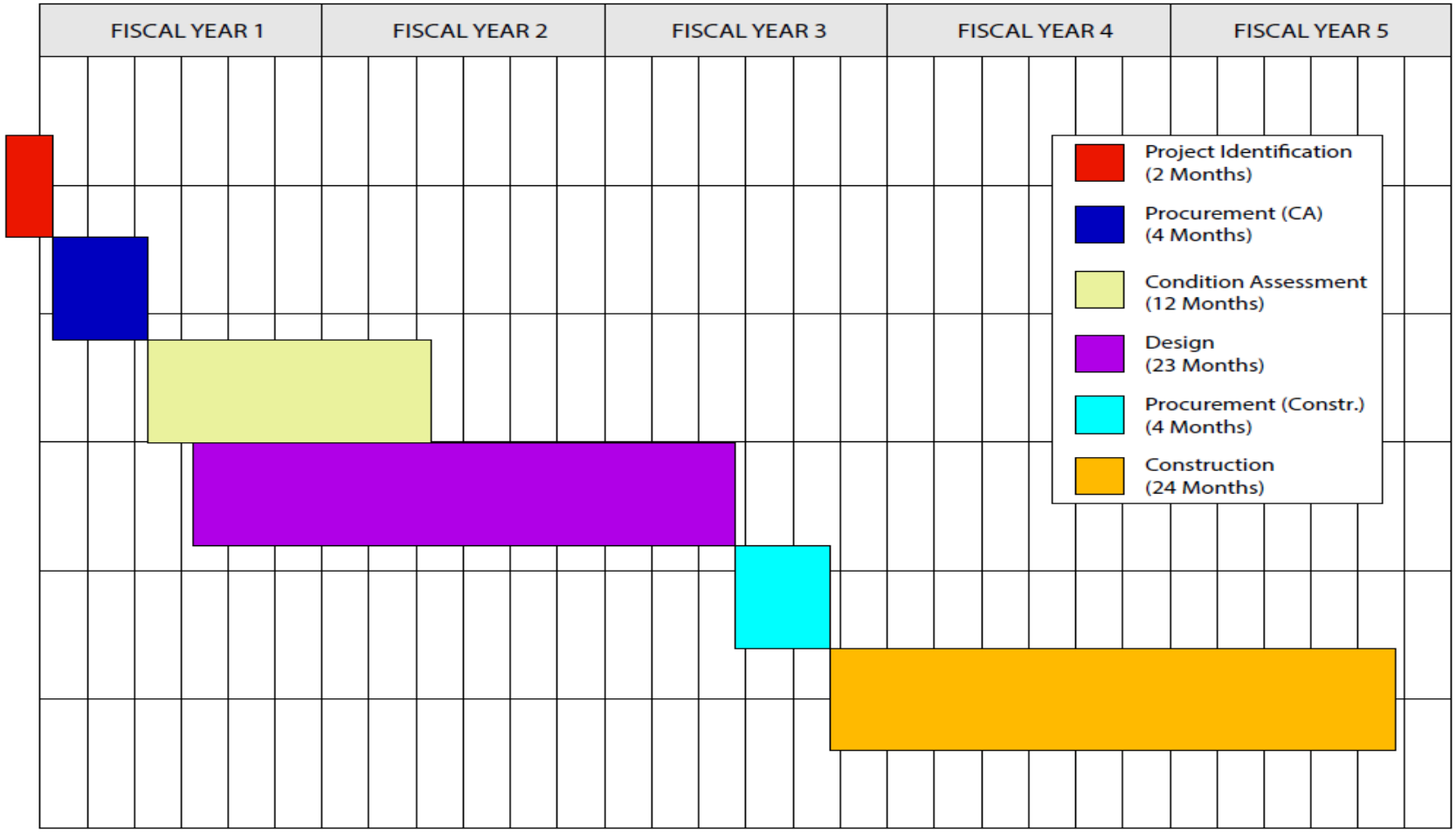
Capital Delivery Process Overview

Water CIP Development and Delivery



Capital Delivery Process Overview

Sewer CIP Development and Delivery



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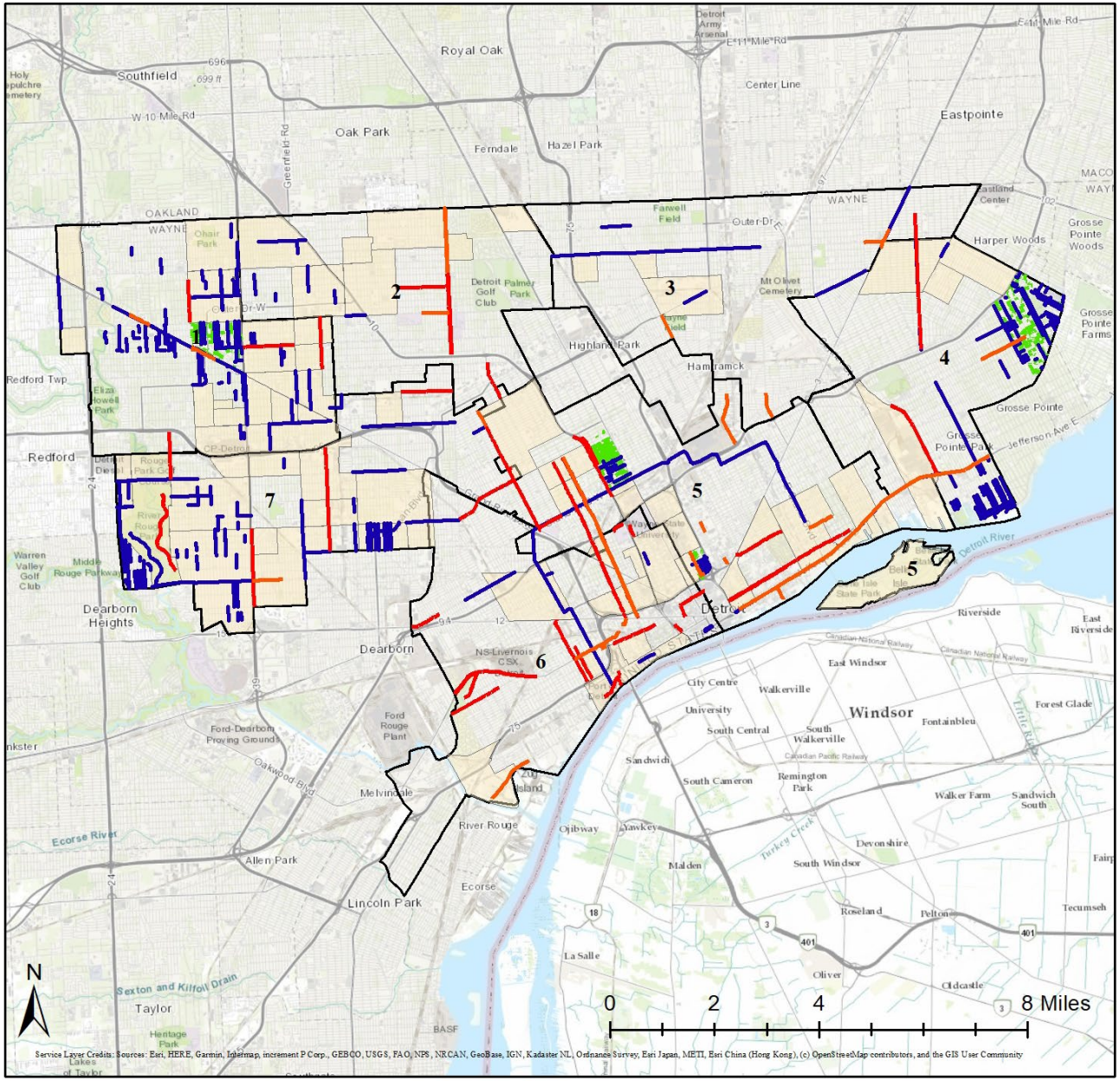
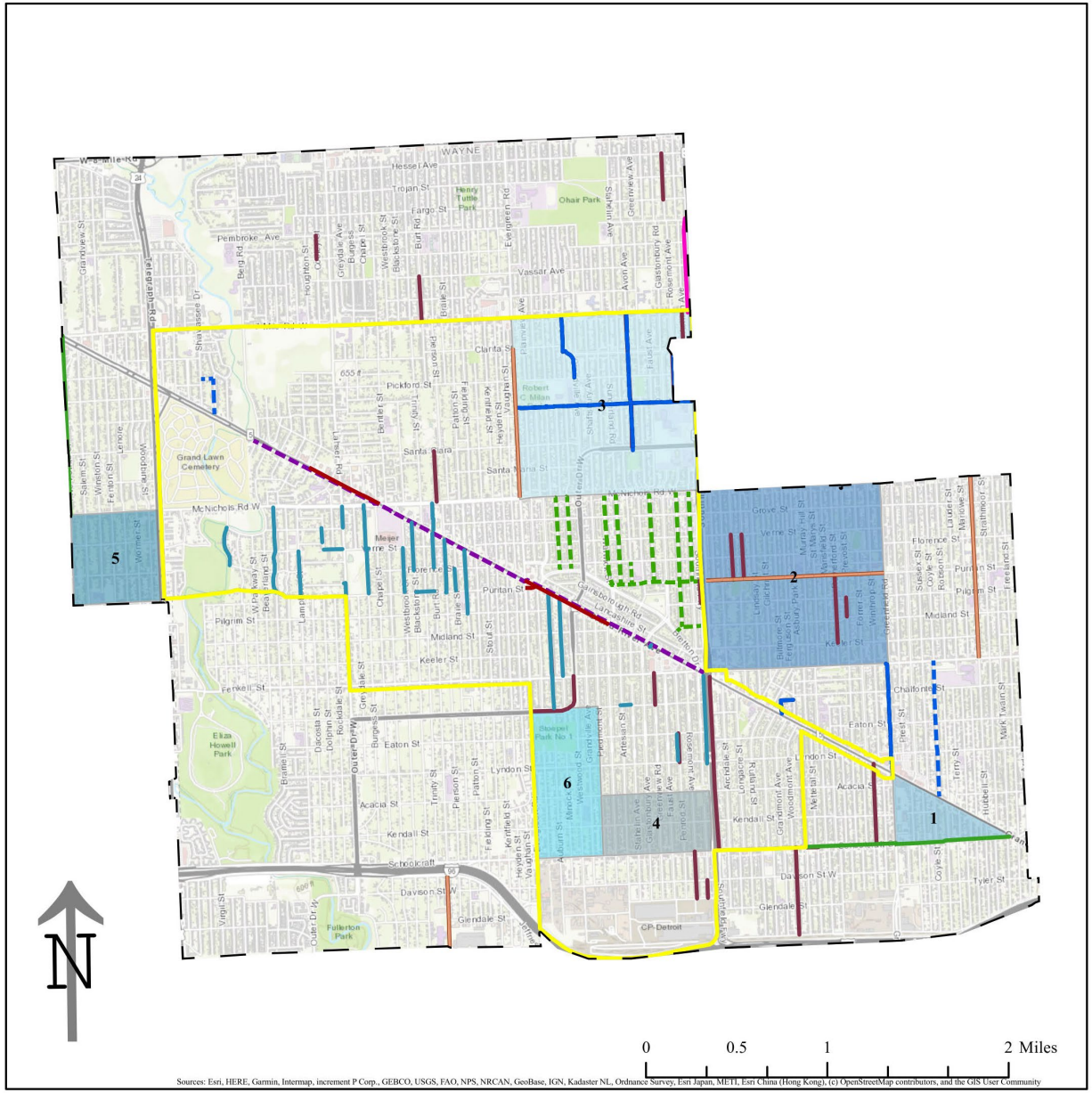
FY20 CIP Projects, Overview

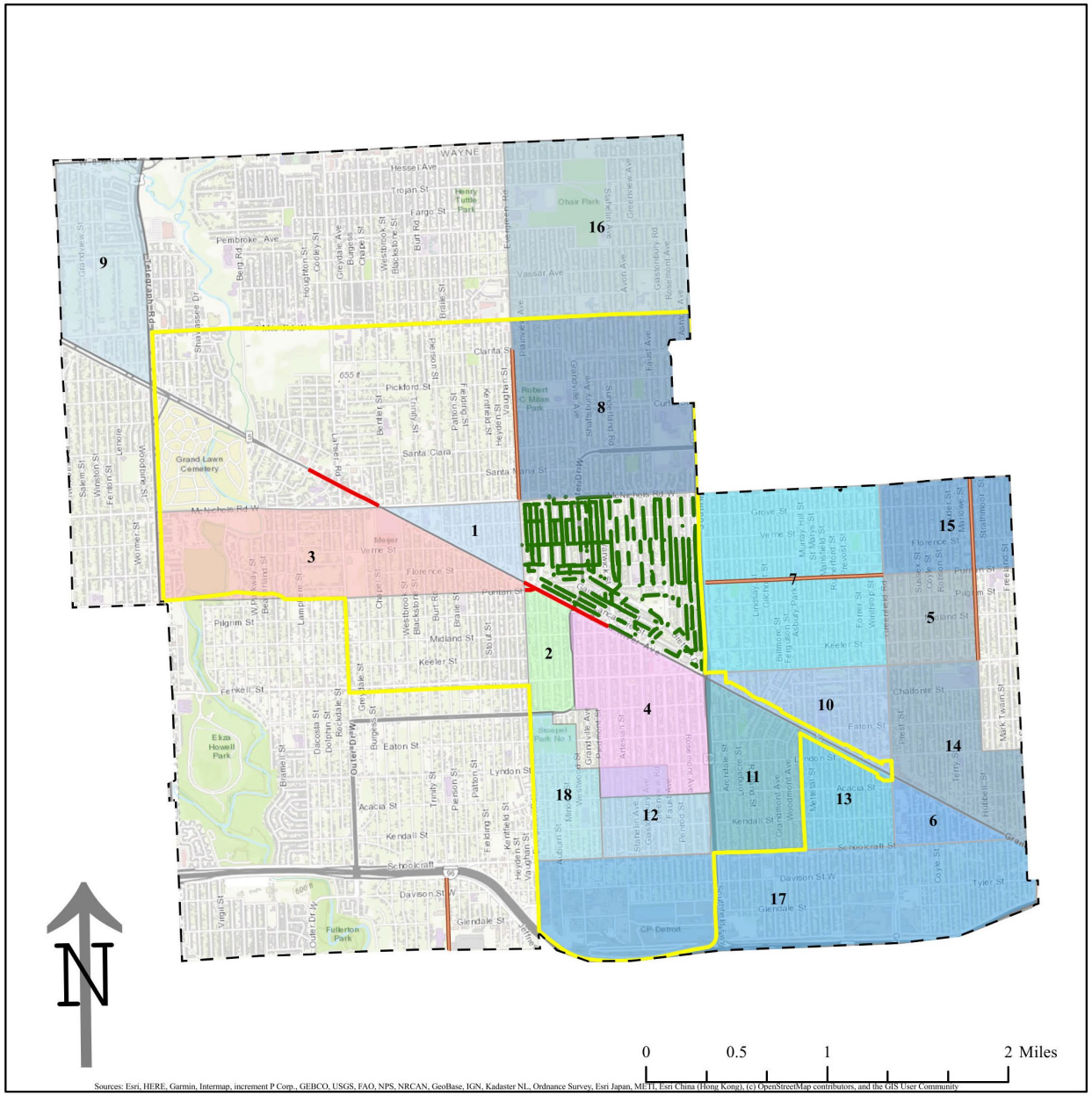


- DPW Streetscape 2020
- DPW Resurfacing 2020
- DWSD Water Projects
- DWSD Sewer/Stormwater Projects
- DWSD Water/Sewer Condition Assessment

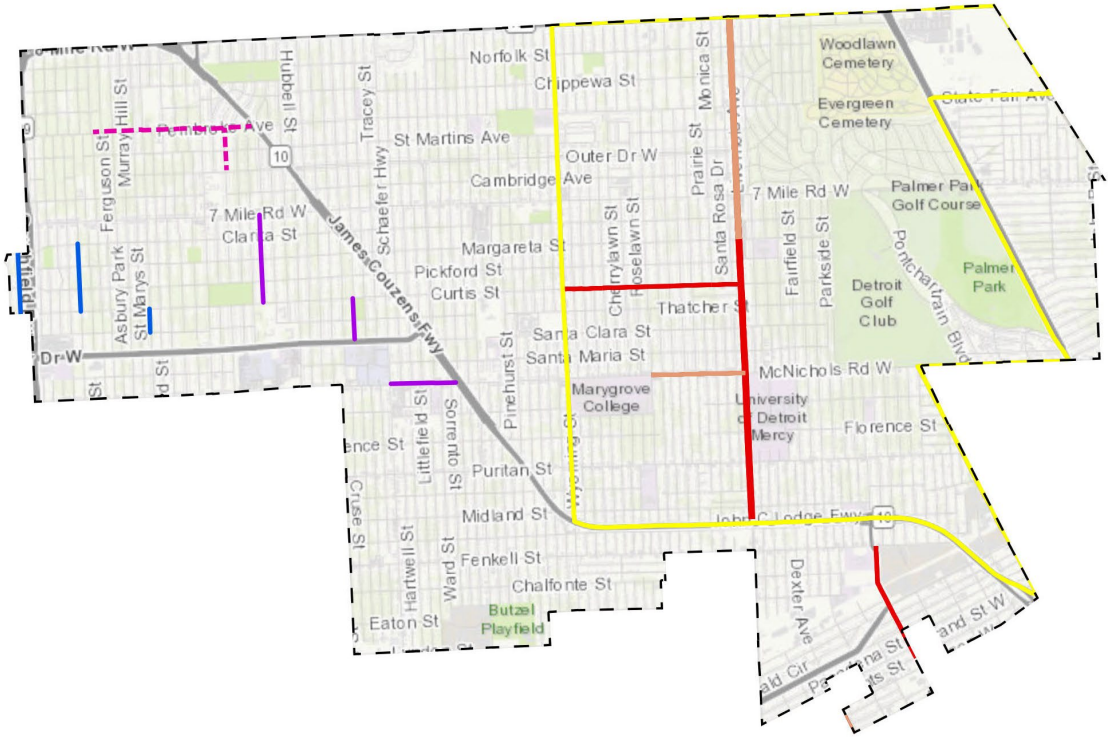
FY2020 CIP Water Projects, District 1



FY2020 CIP Sewer Projects, District 1



FY2020 CIP Water Projects, District 2



- District Boundary
- Strategic Neighborhood Fund
- DPW Streetscapes
- DPW Street Projects

Projects in Procurement

- CS-1909A

Projects in Construction

- WS-706
- WS-707

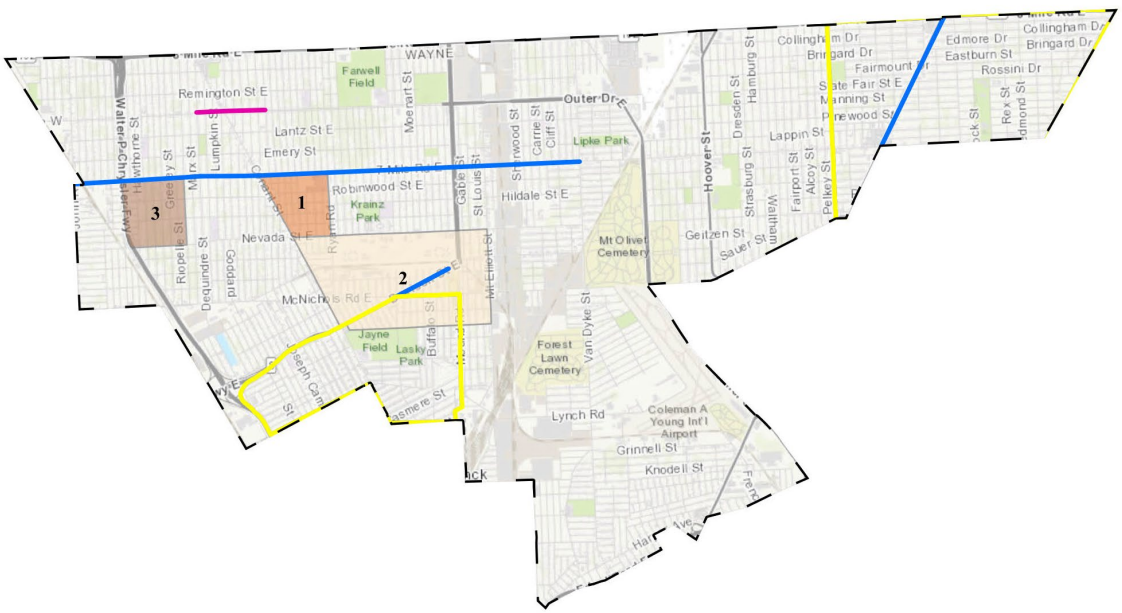
N

0 0.5 1 2 Miles

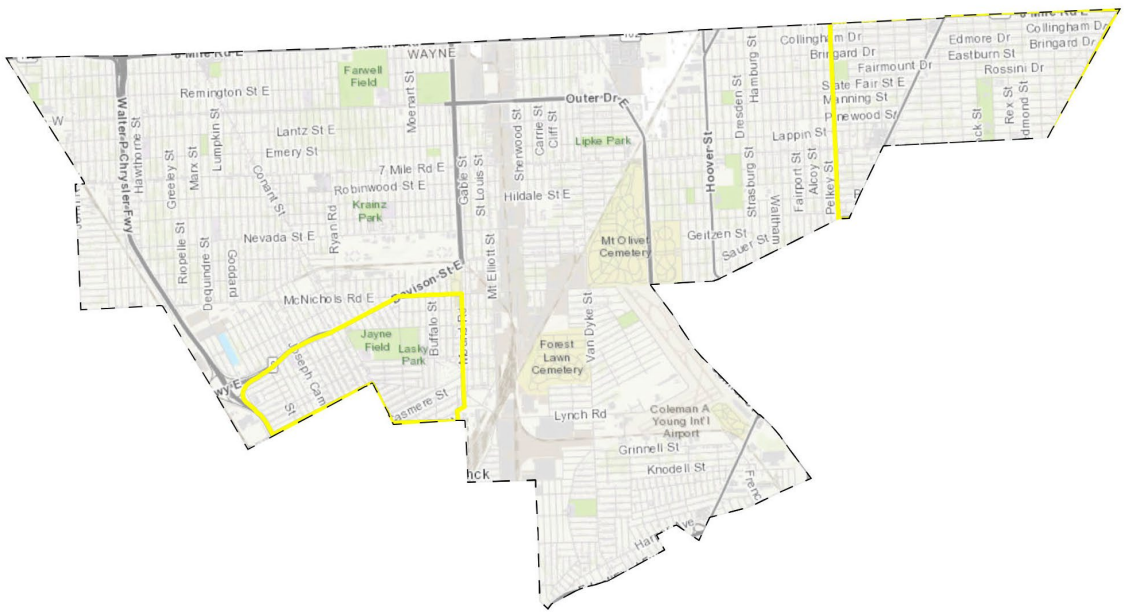
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

FY2020 CIP Sewer Projects, District 2

FY2020 CIP Water Projects, District 3



FY2020 CIP Sewer Projects, District 3



N

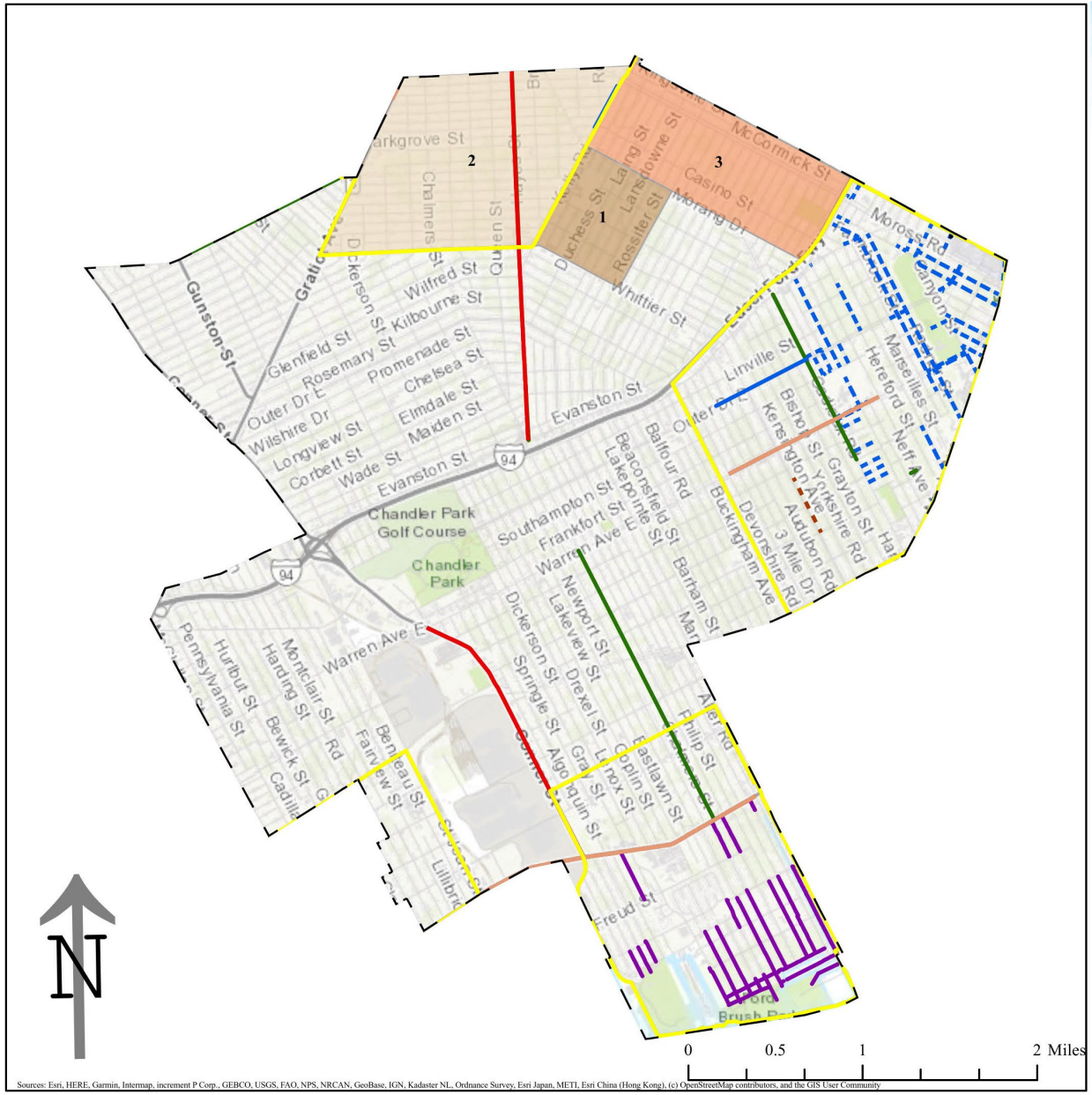
0 0.5 1 2 Miles

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

District Boundary

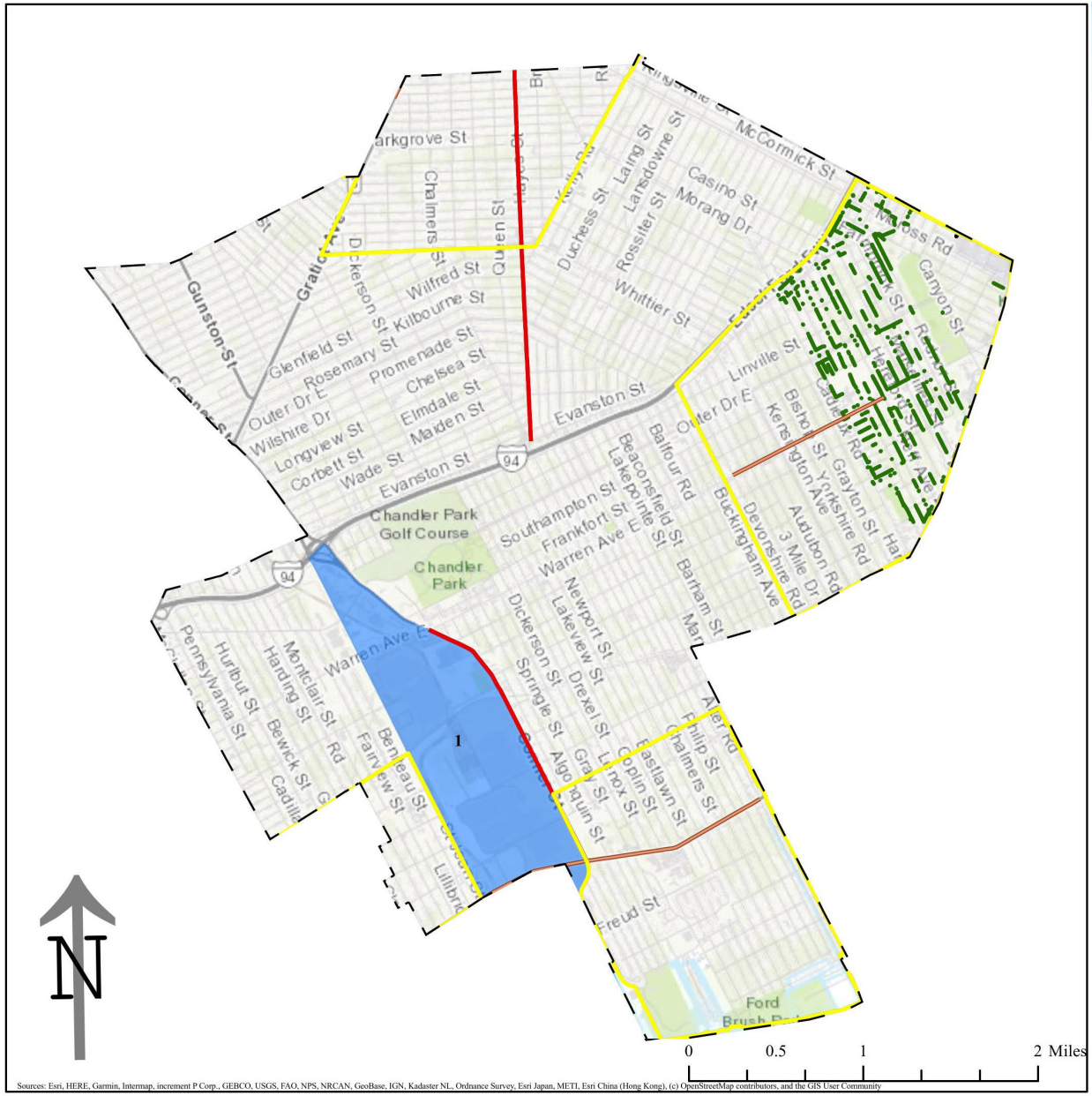
Strategic Neighborhood Fund

FY2020 CIP Water Projects, District 4

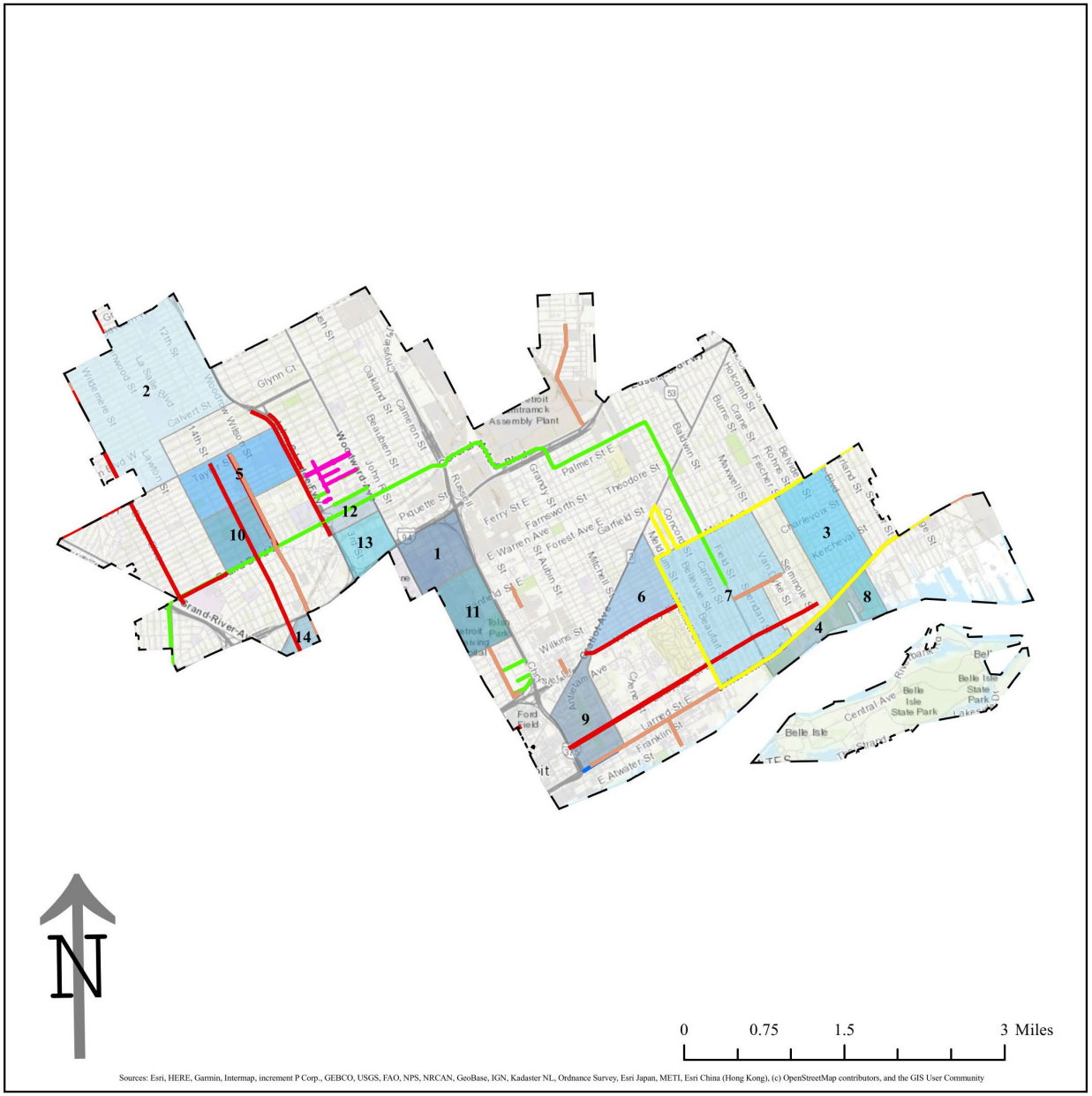


Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

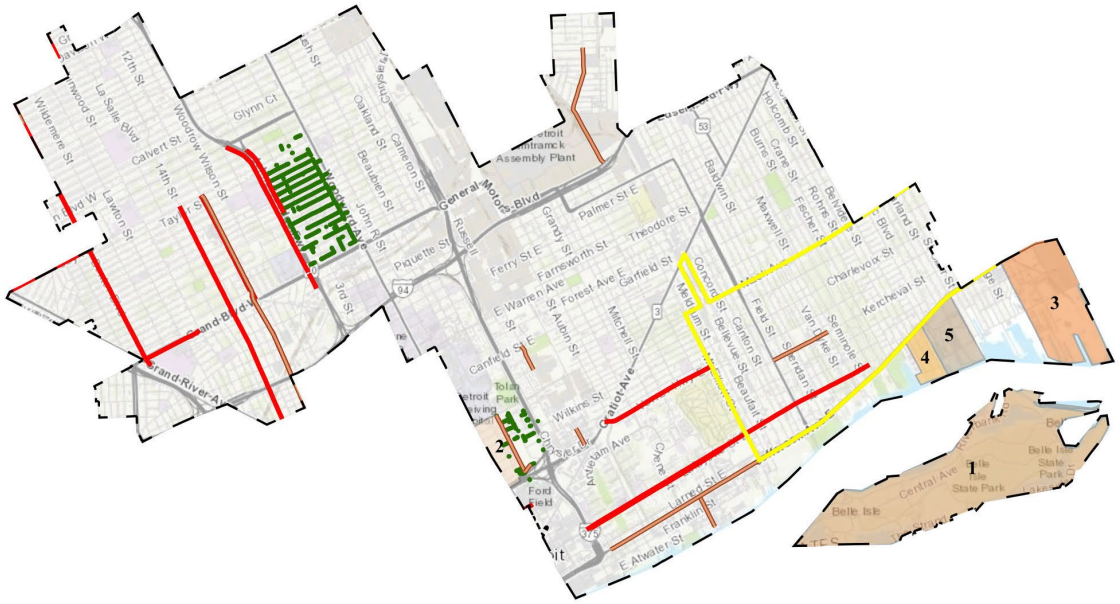
FY2020 CIP Sewer Projects, District 4



FY2020 CIP Water Projects, District 5



FY2020 CIP Sewer Projects, District 5



District Boundary

Strategic Neighborhood Fund

DPW Streetscapes

DPW Street Projects

Projects in Planning and Design

DWS-916

Projects in Procurement

DWS-909 Condition Assessment

Belle Isle-1

Brush Park-2

Conner Creek Industrial-3

Joseph Berry Sub-4

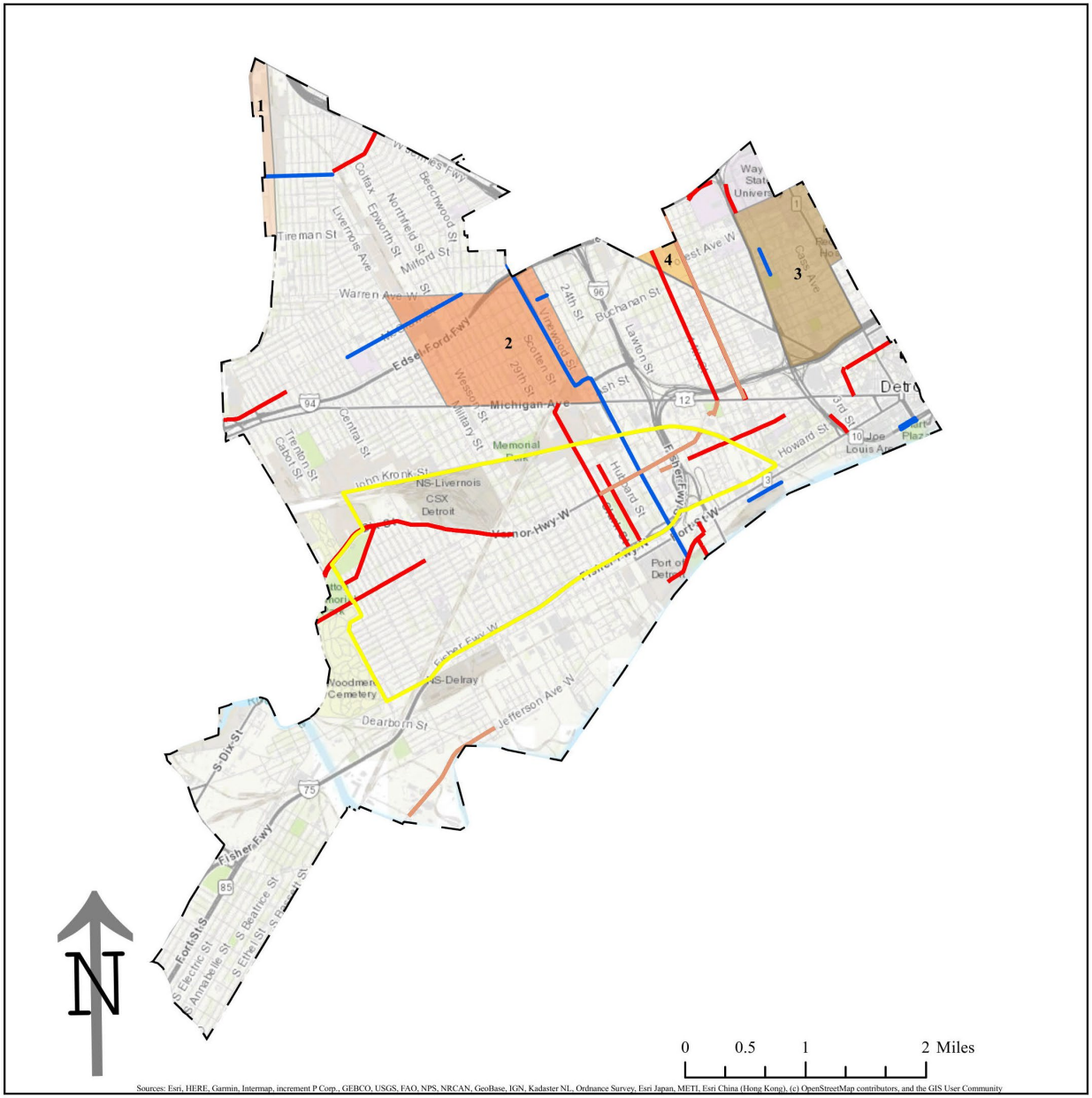
Waterworks Park-5

N

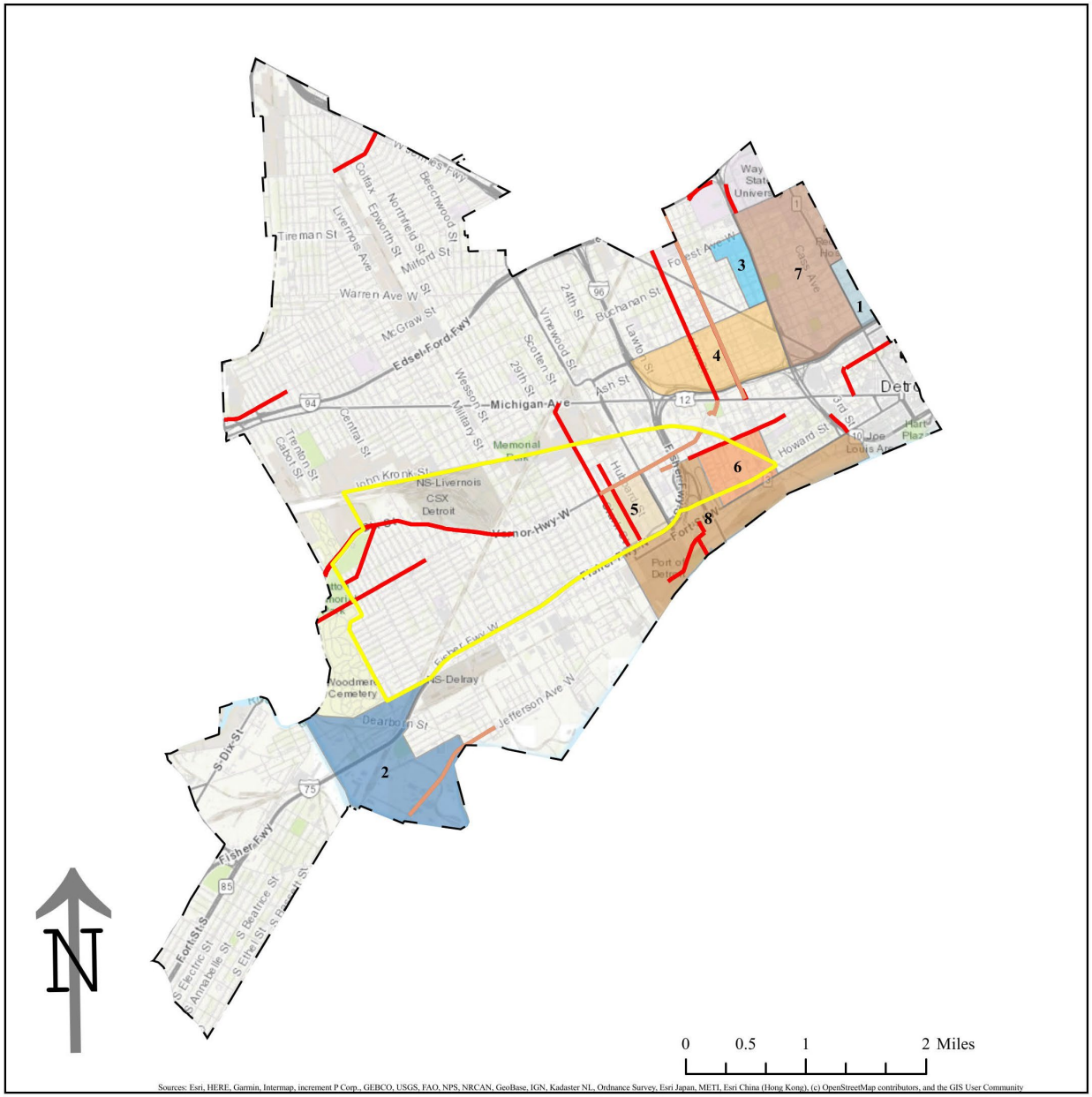
0 0.75 1.5 3 Miles

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

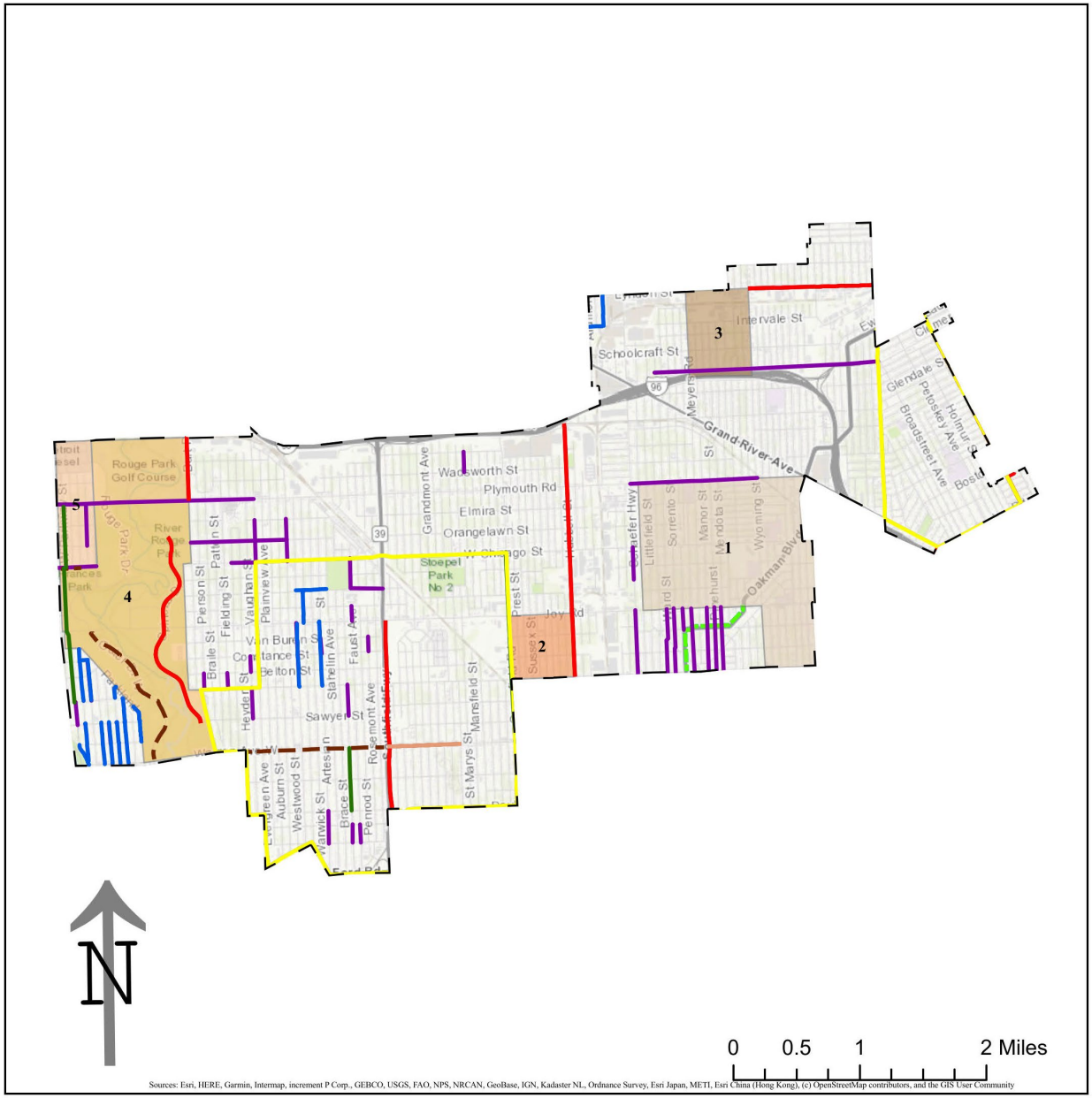
FY2020 CIP Water Projects, District 6



FY2020 CIP Sewer Projects, District 6

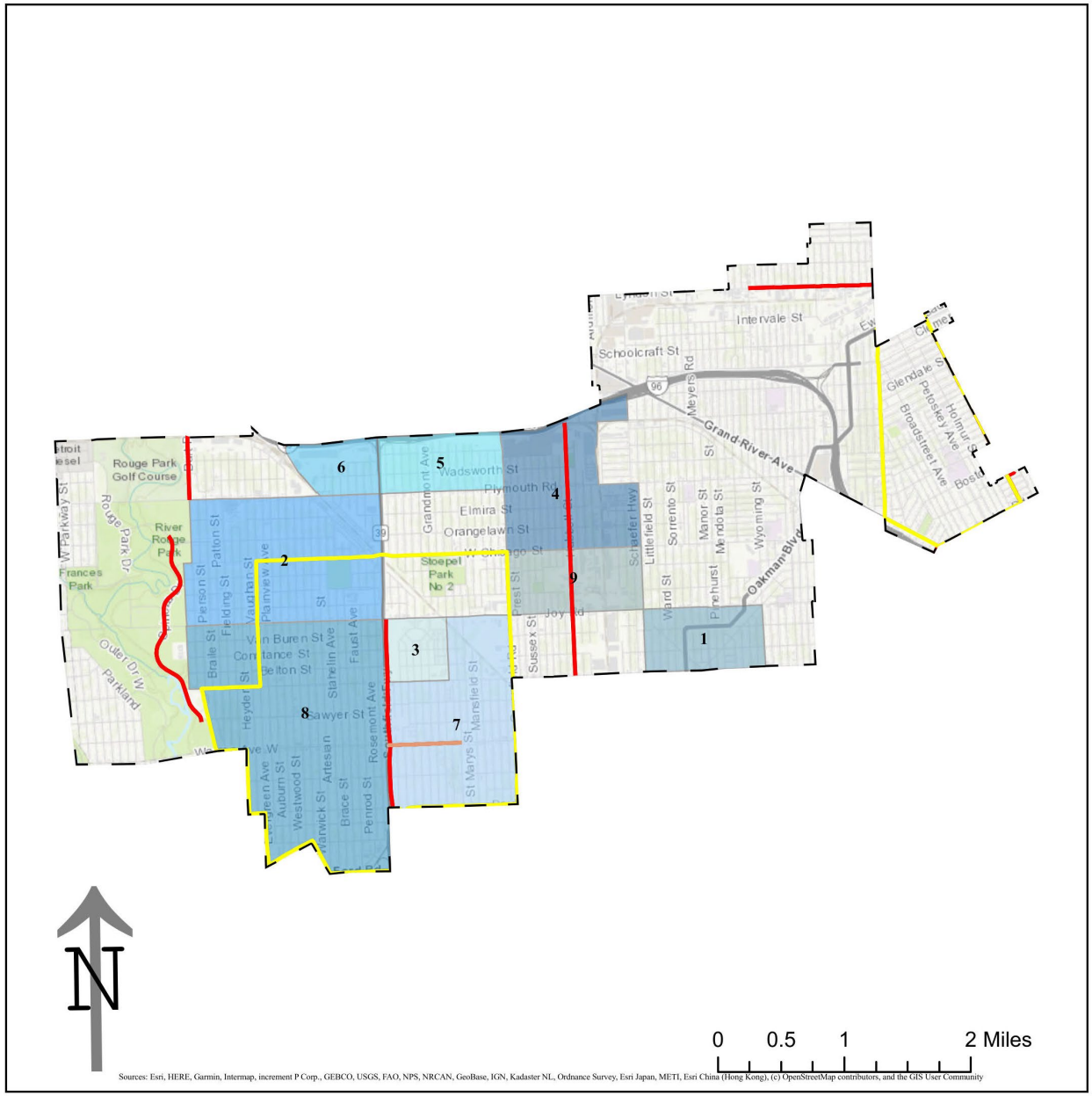


FY2020 CIP Water Projects, District 7



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

FY2020 CIP Sewer Projects, District 7



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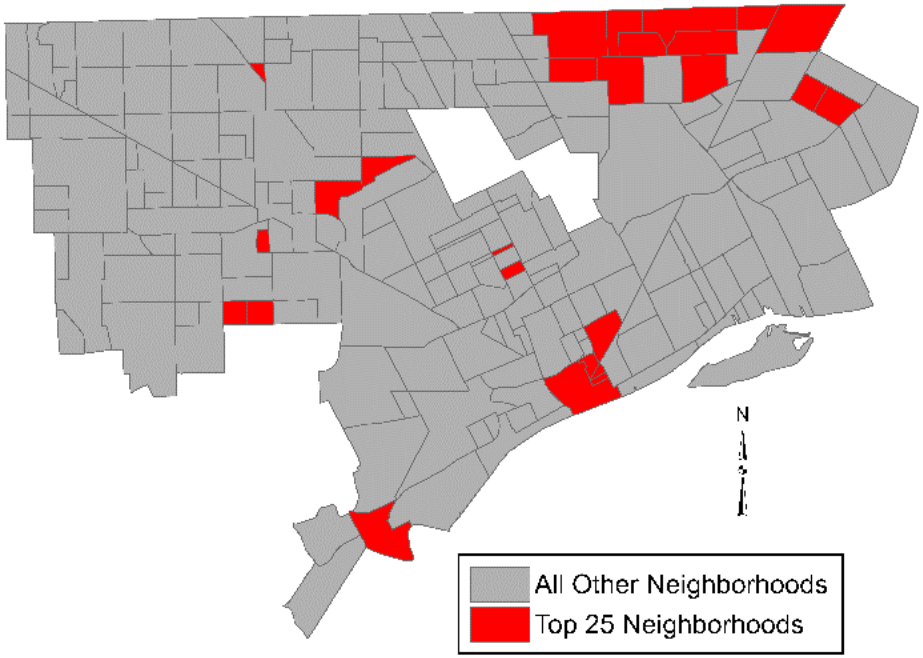
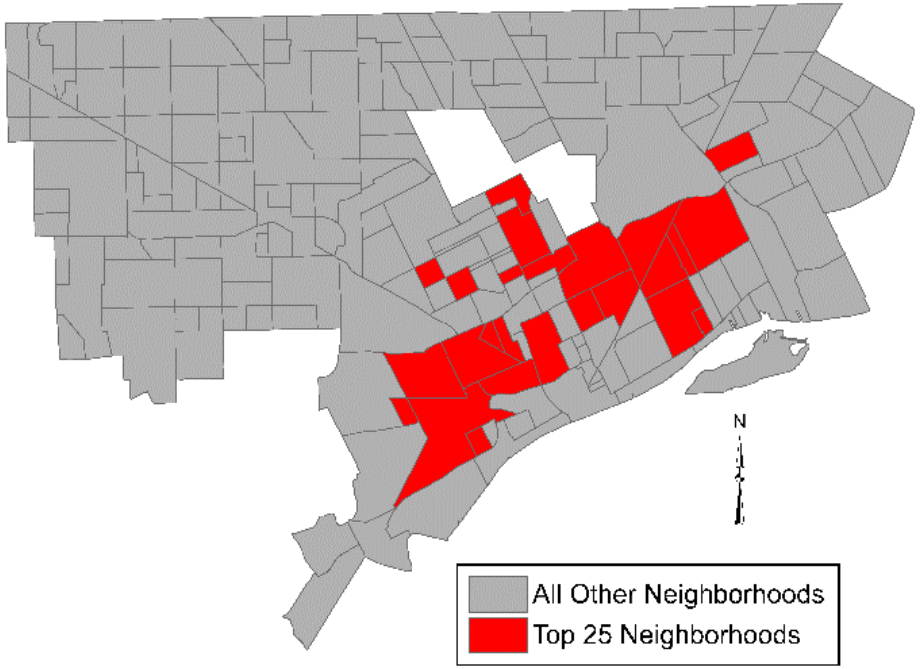
Planning Highlights

- Risk & Criticality Model updated to assign risk ratings to all assets
- High Risk neighborhoods were identified
- Annual CIP costs thru 2040 were forecasted ($60M/yr)

Asset Risk Score 2020 Analysis



Water



Sewer

Forecasted Annual CIP Costs

Fiscal Year	Water ($M)	Sewer ($M)	Total ($M)
2021	$28.9	$25.6	$54.4
2022	$29.6	$29.8	$59.4
2023	$30.2	$29.1	$59.3
2024	$30.5	$30.3	$60.7
2025	$30.4	$30.5	$60.9
2026	$30.9	$30.2	$61.1
2027	$30.2	$29.4	$59.6
2028	$28.3	$29.8	$58.1
2029	$30.1	$29.5	$59.6
2030	$30.2	$30.0	$60.2
2031	$30.3	$29.5	$59.8
2032	$30.9	$29.5	$60.3
2033	$30.5	$30.4	$60.9
2034	$27.4	$30.1	$57.5
2035	$34.5	$29.8	$64.3
2036	$28.2	$30.3	$58.4
2037	$29.4	$31.0	$60.4
2038	$29.2	$28.3	$57.6
2039	$29.7	$30.0	$59.7
2040	$30.1	$30.8	$60.9
Total	**$599.2**	**$593.9**	**$1,193.2**
Average	**$30.0**	**$29.7**	**$59.7**

Forecasted CIP Construction Costs

WATER

Neighborhood	Fiscal Year	Cost ($M)
Conner Creek	2021	$8.9
Sherwood (Eastside)	2021	$4.8
Regent Park	2021	$15.2
Nortown	2022	$5.8
Farwell	2022	$15.1
Grant	2022	$8.8
Foxtown	2023	$1.4
Paveway	2023	$1.4
Krainz Woods	2023	$6.4
Joy-Schaefer	2023	$3.2
Carbon Works	2023	$4.9
Davison-Schoolcraft	2023	$3.9
Pulaski	2023	$9.1
Eastern Market	2024	$6.7
Von Steuben	2024	$10.1
Yorkshire Woods	2024	$5.7
Dexter-Fenkell	2024	$3.3
We Care Community	2024	$4.7
Moross-Morang	2025	$9.4
Oakwood Heights	2025	$7.2
Rivertown	2025	$6.7
Medbury Park	2025	$1.5
West Village	2025	$2.1
Hubbard Richard	2025	$3.6

SEWER

Neighborhood	Fiscal Year	Cost ($M)
West Village	2021	$1.4
Michigan-Martin	2021	$1.9
Southwest Detroit	2021	$22.3
Woodbridge	2022	$2.6
McDougall	2022	$8.4
Forest Park	2022	$3.4
LaSalle Gardens	2022	$2.4
North End	2022	$6.5
Gratiot-Grand	2022	$6.5
Gratiot Town/Ketterring	2023	$10.1
Poletown East	2023	$13.5
Milwaukee Junction	2023	$2.8
New Center	2023	$1.1
West Woodbridge	2023	$1.7
Islandview	2024	$10.9
Pingree Park	2024	$2.2
North End Neighborhood	2024	$3.6
Core City	2024	$10.2
Wade	2024	$3.4
Gratiot Woods	2025	$15.5
Chadsey Condon	2025	$12.2
Arden Park	2025	$0.5
Jamison	2025	$2.4

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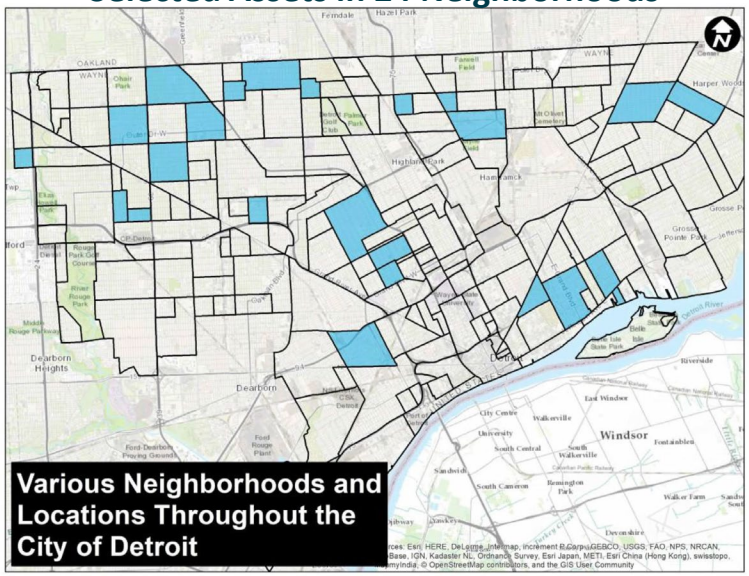
Condition Assessment Highlights

- Sewer CA completed in Brightmoor, Miller Grove, Minock Park, Riverdale, and Rosedale Park (under DWS-903)
- Contracts for 130 miles of Sewer CA awarded and about to begin (DWS-909 & DWS-910)
- Contract document preparation began for 77 more miles of Sewer CA
- Contract for 225 miles of Water CA advertised and about to be awarded

Active CIP Projects, Condition Assess.

Title	CS-1909A, Water Condition Assessment in Various Locations Throughout the City		
Scope	Leak detection of 1.2M LF of water main, exercising of 5,900 valves, and flow testing of 620 Hydrants		
Budget $M	1.0	Start Date	TBD
Actual $M	0 (0%)	End Date	TBD
Status	Proposals received on 1/31/20, Review and award delayed due to COVID-19. Final evaluations in progress		

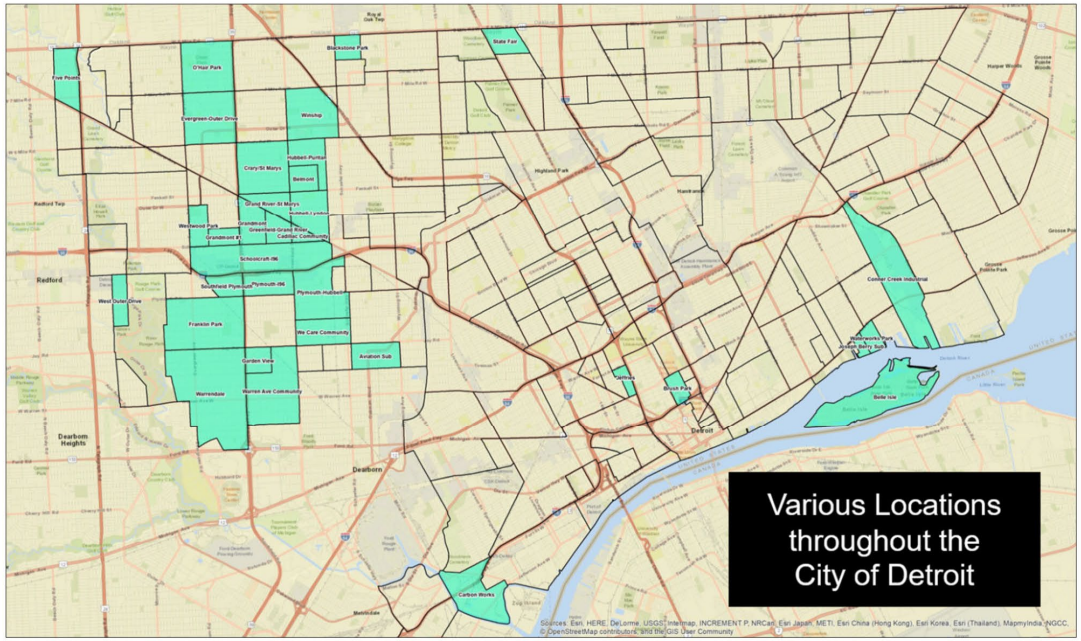
Selected Assets in 24 Neighborhoods



All Assets in 15 Neighborhoods

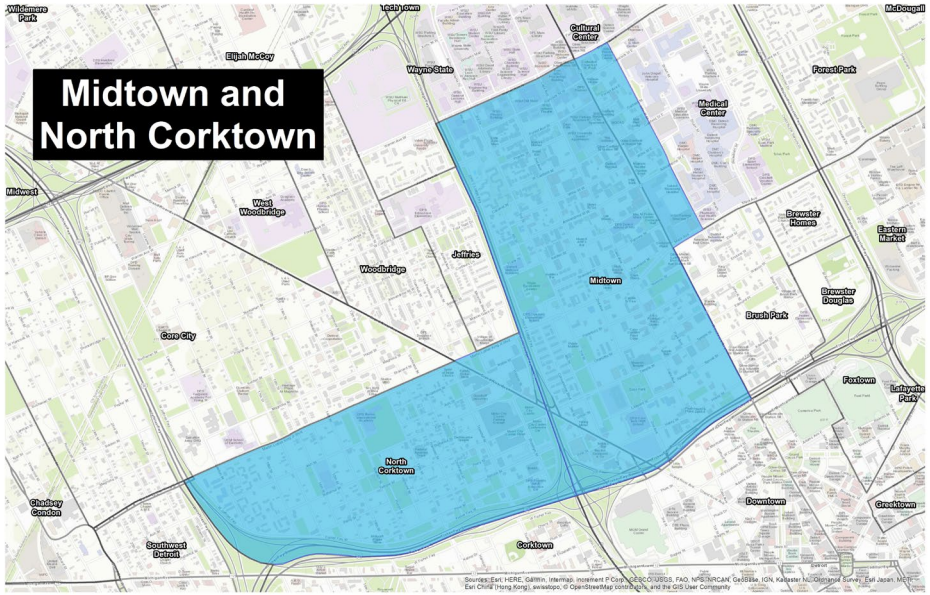
Active CIP Projects, Condition Assess.

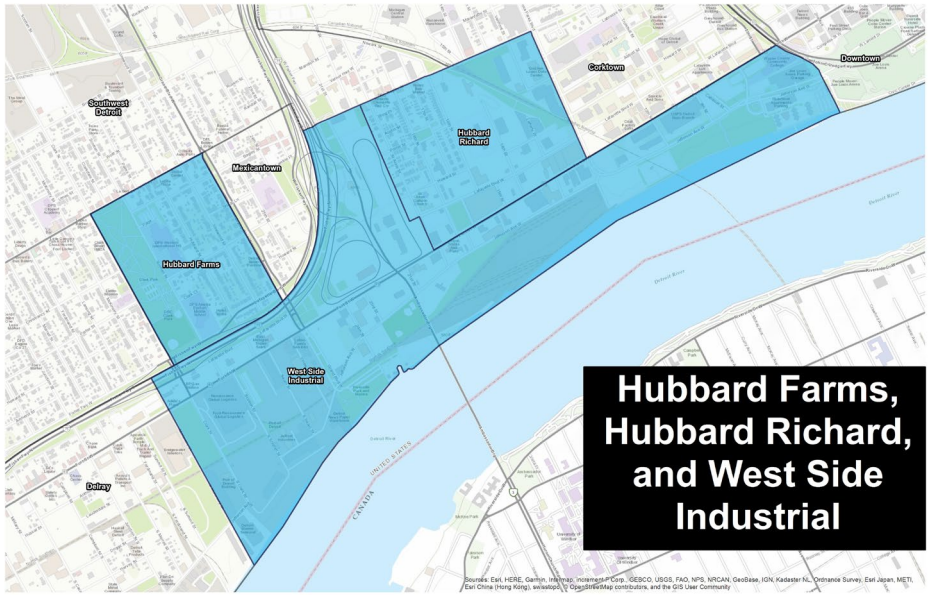
Title	DWS-909, Sewer Condition Assessment in Various Locations Throughout the City		
Scope	CCTV of 370,000 LF of sewers and 800 manholes		
Budget $M	4,433,798	Start Date	Aug-2020
Actual $M	2,965,900 (67%)	End Date	Sept-2021
Status	Initial start date was April, delayed due to COVID-19 and is now scheduled to start Aug-2020		



Active CIP Projects, Condition Assess.

Title	DWS-910, Sewer Condition Assessment in Hubbard Farms, Hubbard Richard, West Side Industrial, Midtown and N. Corktown		
Scope	CCTV of 340,000 LF of sewers and 2,000 manholes		
Budget $M	4,280,335	Start Date	Aug-2020
Actual $M	2,999,621 (71%)	End Date	Sept-2021
Status	Initial start date was April, delayed due to COVID-19 and is now scheduled to start Aug-2020		





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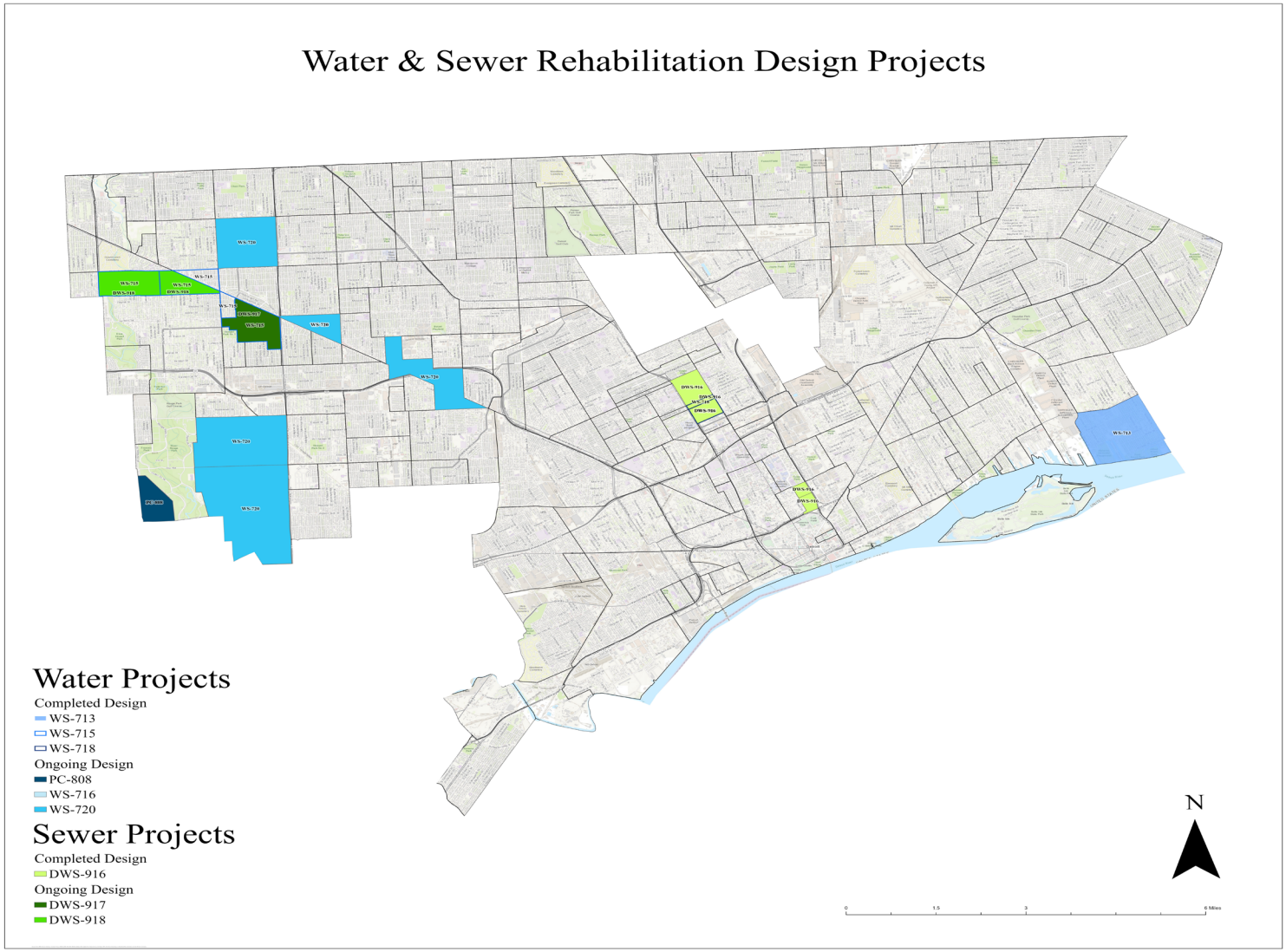
Design Highlights

- 5.8 miles of water main replacement design completed (WS-715 & WS-718)
- 8 miles of water main replacement design almost complete (PC-808 & WS-720)
- 5.8 miles of sewer rehabilitation design completed (DWS-916)
- 17 miles of sewer rehabilitation design almost complete (DWS-917 & DWS-918)
- Add something from SMG

Design Highlights



Active CIP Projects, Design

Title	CS-1812, Professional Eng. and Construction Services for CIPMO		
Scope	Professional Engineering and Construction Management Services for the Capital Improvement Program Management Organization		
Budget $M	57.4	Start Date	Jul-2017
Actual $M	34.1 (60%)	End Date	Jun-2022
Status	On schedule, no impact from COVID-19		

DWSD holds annual construction biz workshop

Active CIP Projects, Design

Title	CS-1884A, Green Infrastructure Program Management		
Scope	Professional Engineering and Construction Management Services for the Green Stormwater Infrastructure Program		
Budget $M	12.0	Start Date	Jul-2018
Actual $M	0.7 (6%)	End Date	Jun-2023
Status	On schedule, no impact from COVID-19		

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Construction Highlights

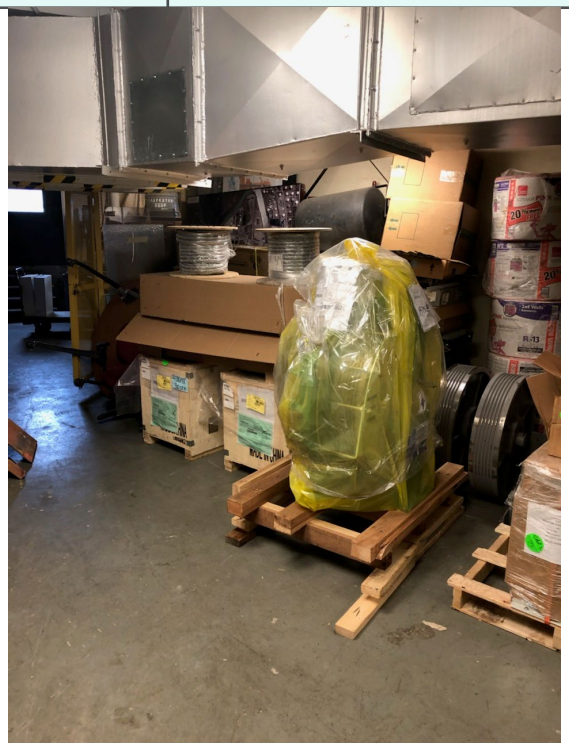
- 14 miles of water main replaced
- 630 water main breaks repaired
- 414 lead service lines replaced
- 146 hydrants replaced
- 16.5 miles of sewers rehabilitated
- 275 miles of sewers inspected
- 2,700 square yards of stormwater subsurface storage created
- 1,200 LF of stormwater pipe installed

Active CIP Projects, Construction

Title	CSF Roof Project		
Scope	75% Roof Replacement Project and Demo of abandoned HVAC Equipment.		
Budget $M	7	Start Date	Jul-2020
Actual $M	x (y%)	End Date	Jan-2021
Status	Start date 07.06.2020, pushed back from April start date due to COVID-19		

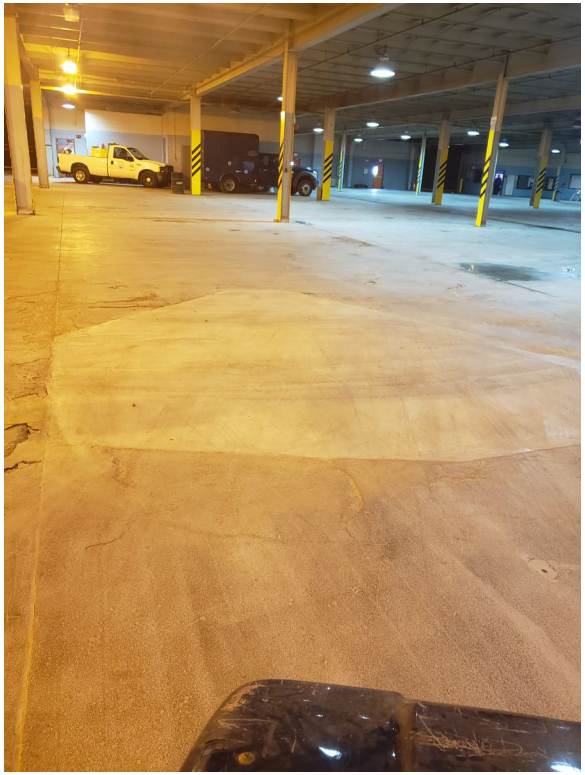
Active CIP Projects, Construction

Title	MOB Elevator Rehabilitation		
Scope	Rehabilitation of 6 Elevator Cars & the Elevator Machine Room		
Budget $M	2.2	Start Date	Jul-2020
Actual $M	x (y%)	End Date	Jun-2021
Status	Construction start date 07.20.20, push back from May start date due to COVID-19.		



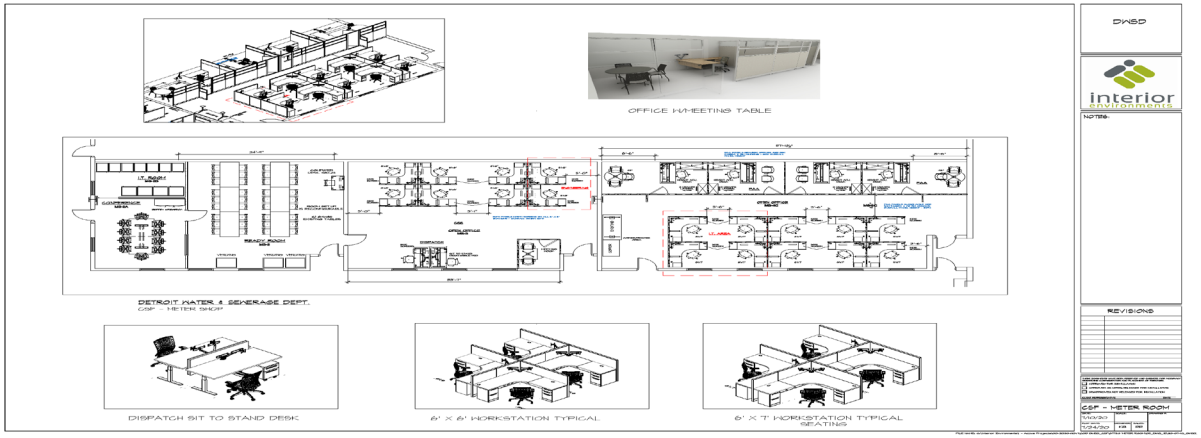
Active CIP Projects, Construction

Title	Concrete Repairs Inside CSF		
Scope	Concrete repairs and rebar replacement (Central & East Yard)		
Budget $M	0.2	Start Date	Mar-2020
Actual $M	x (80%)	End Date	Aug-2020
Status	Suspended from March to late May due to COVID-19		



Active CIP Projects, Construction

Title	CSF Meter Shop		
Scope	Redesign of Meter Shop (Admin/OSS Staff). New work space conference room, ready rooms, new IT storage area, concrete repairs and new HVAC installed.		
Budget $M	TBD	Start Date	TBD
Actual $M	0 (0%)	End Date	TBD
Status	Project suspended in March due to COVID-19. Construction documents had to be redesigned due to Post COVID-19 work standards. Redesign on-going, with Meter shop & Architect, contract advertisement scheduled for 7/30/2020 release.		



Active CIP Projects, Construction

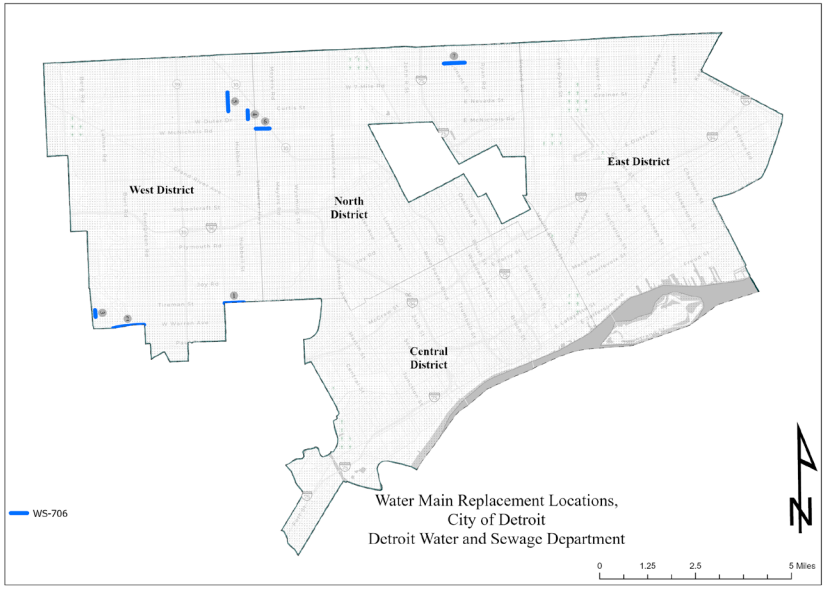
Title	CSF Overhead Door Replacement		
Scope	Replacement of 10 Overhead Doors (7 CSF & 3 West Yard)		
Budget $M	0.45	Start Date	TBD
Actual $M	0 (0%)	End Date	TBD
Status	April advertisement pushed back to June due to COVID-19.		

Active CIP Projects, Construction

Title	WS-705 Water Main Replacement – Eastside and Westside		
Scope	Replacement of 33,000 LF of water main, 12,000 lead service lines, and 78 Hydrants		
Budget $M	12.8	Start Date	Feb-2019
Actual $M	10.7 (84%)	End Date	Dec-2020
Status	Suspended from March to late May due to COVID-19. New final Completion date of 12/31/2020.		

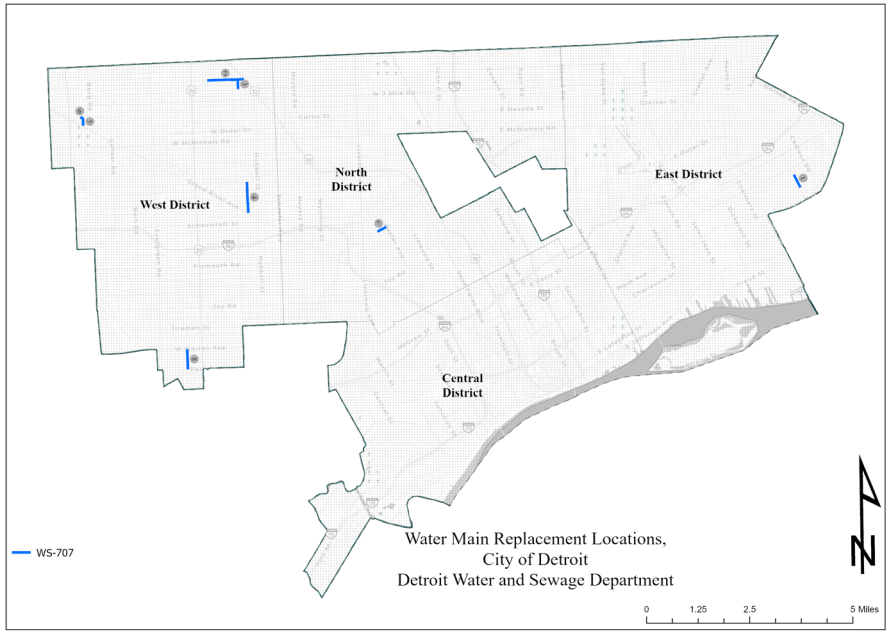
Active CIP Projects, Construction

Title	WS-706 Water Main Replacement Wayne Co. Roads		
Scope	Replacement of 29,000 LF of water main, 130 lead service lines, and 64 Hydrants		
Budget $M	10.3	Start Date	Nov-2018
Actual $M	7.2 (7%)	End Date	June-2021
Status	Suspended from March to late May due to COVID-19. New final Completion date of 6/30/2021.		



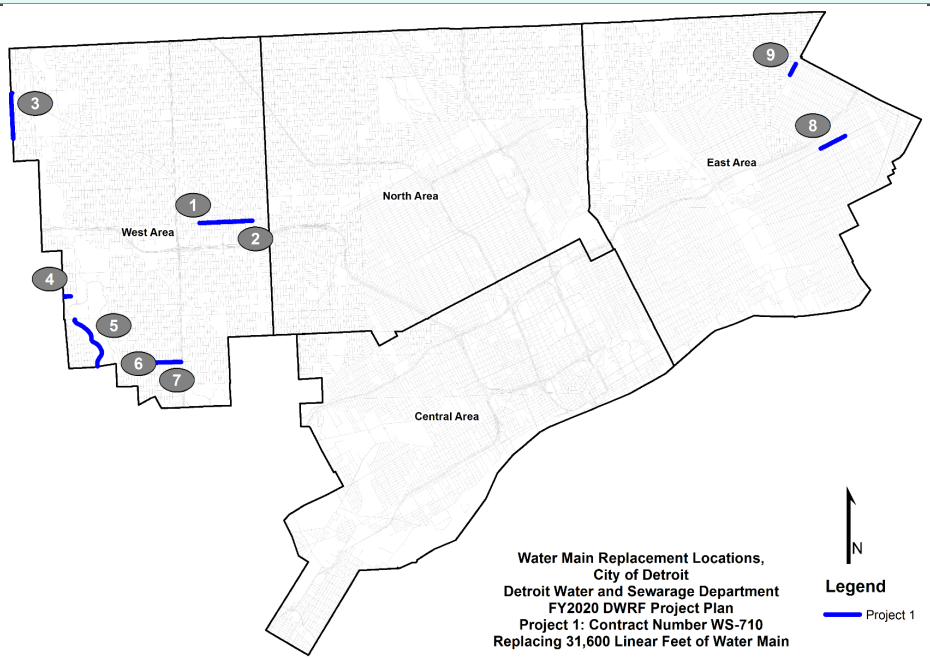
Active CIP Projects, Construction

Title	WS-707 Water Main Replacement – Select Streets Across Detroit		
Scope	Replacement of 19,000 LF of water main, 230 lead service lines, and 30 Hydrants		
Budget $M	7.0	Start Date	Apr-2019
Actual $M	4.6 (66%)	End Date	Apr-2021
Status	Suspended from March to late May due to COVID-19		



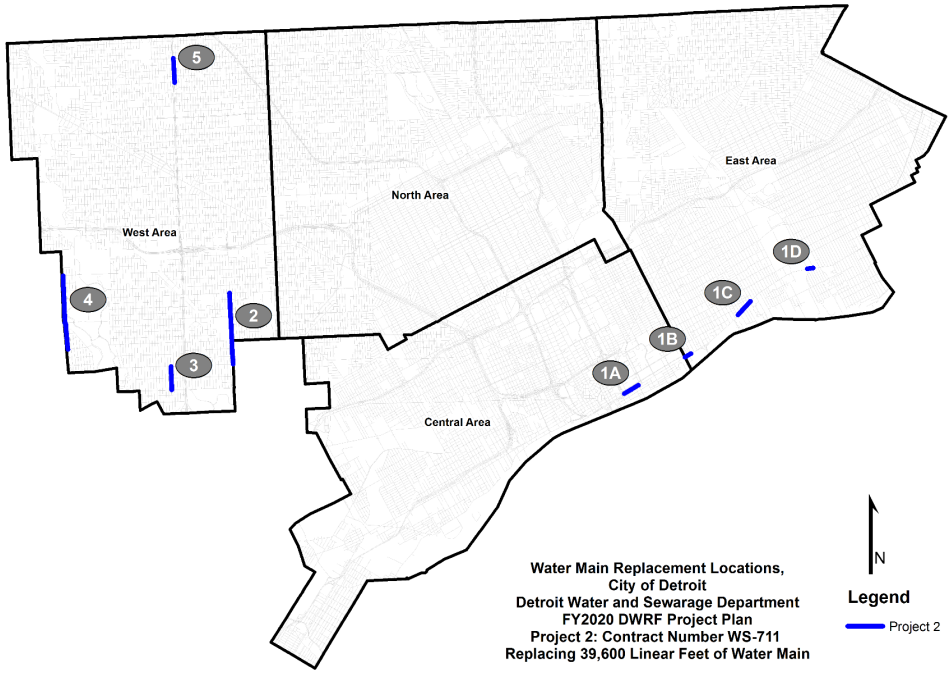
Active CIP Projects, Construction

Title	WS-710 Water System Improvements, Various Locations		
Scope	Replacement of 32,000 LF of water main, 200 lead service lines, and 140 Hydrants		
Budget $M	9.1	Start Date	TBD
Actual $M	0 (0%)	End Date	TBD
Status	Start Work Date: July 27, 2020. Substantial Completion Date: June 02, 2022. This is a drinking water revolving funded project (7460-01)		



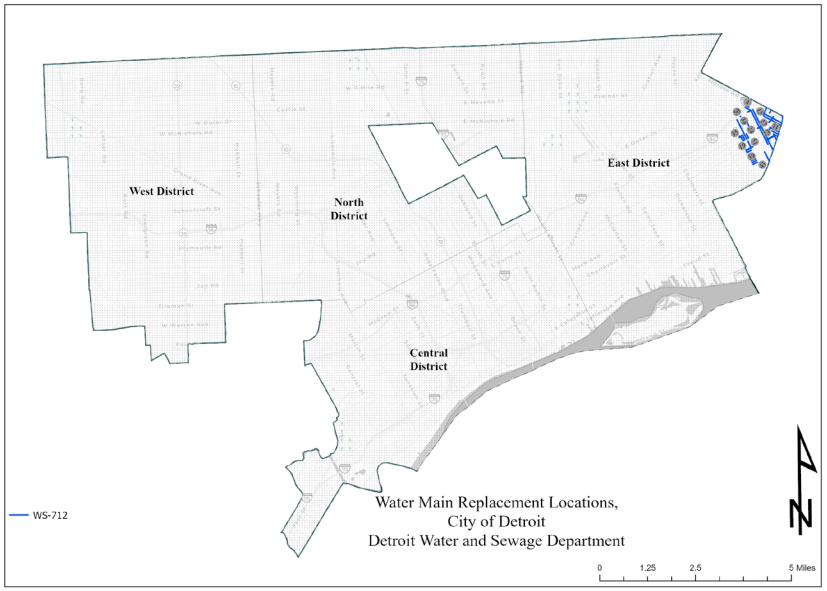
Active CIP Projects, Construction

Title	WS-711 Water System Improvements, Various Locations		
Scope	Replacement of 41,000 LF of water main, 390 lead service lines, and 80 Hydrants		
Budget $M	13.0	Start Date	TBD
Actual $M	0 (0%)	End Date	TBD
Status	Start Work Date: August 17, 2020. Substantial Completion Date: June 23, 2022. This is a drinking water revolving funded project (7460-01)		



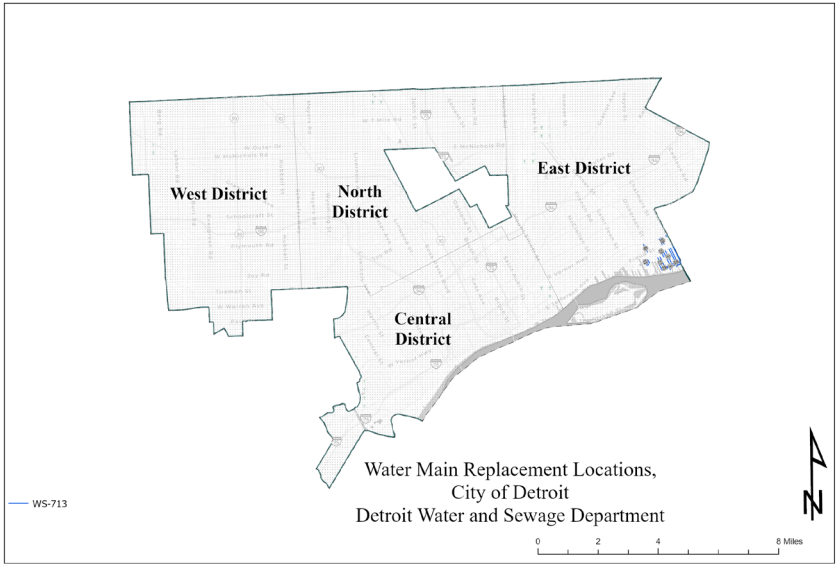
Active CIP Projects, Construction

Title	WS-712 Water System Improvements, Cornerstone Village		
Scope	Replacement of 38,000 LF of water main, 120 Hydrants, and 1,200 lead services; lining of 7,500 LF of water main		
Budget $M	18.6	Start Date	Dec-2019
Actual $M	1.6 (9%)	End Date	Dec-2021
Status	It was started May 18, 2020 after 3-month delay due to COVID-19. Construction is now in progress.		



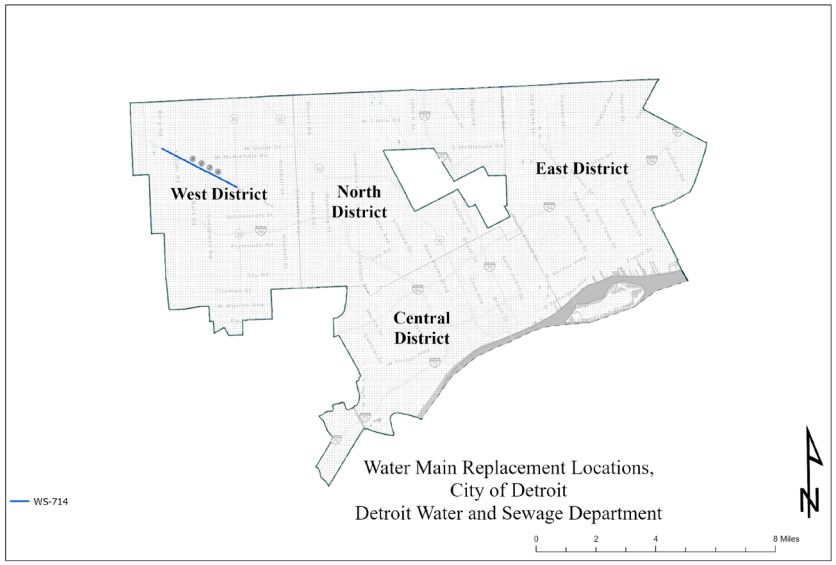
Active CIP Projects, Construction

Title	WS-713 Water System Improvements, Jefferson Chalmers		
Scope	Replacement of 35,000 LF of water main, 110 Hydrants, and 800 lead services; lining of 1,400 LF of water main; 3 canal crossings		
Budget $M	17.4	Start Date	TBD
Actual $M	0 (0%)	End Date	TBD
Status	Processing for construction bid package. DWRF's Intent To Apply was submitted to GLWA/EGLE. Advertisement scheduled for early 2021		



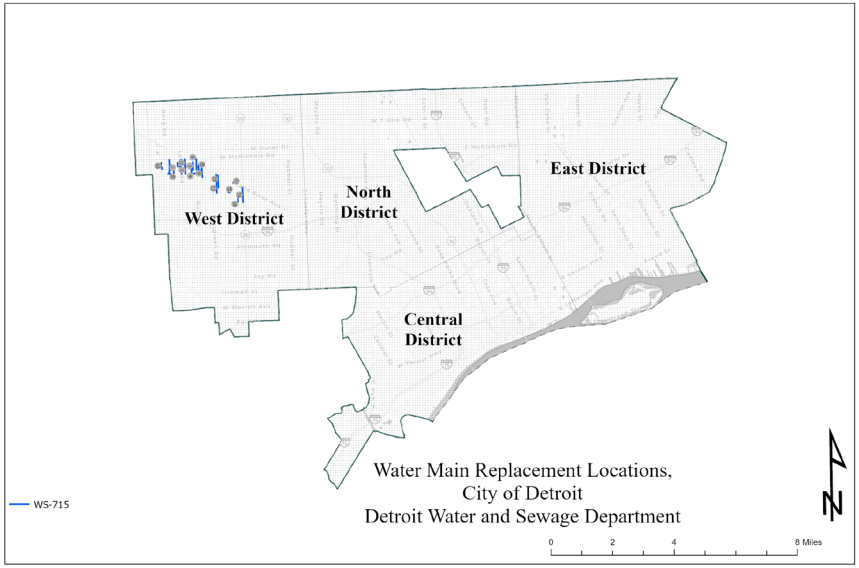
Active CIP Projects, Construction

Title	WS-714 Water Main Replacement Along Grand River		
Scope	Replacement of 26,000 LF of water main, 53 Hydrants, and 160 lead services (MOU with MDOT)		
Budget $M	8.6	Start Date	Jul-2019
Actual $M	4.6 (55%)	End Date	
Status	Active construction contract along Grand River. Started last year and may continue to the next year.		



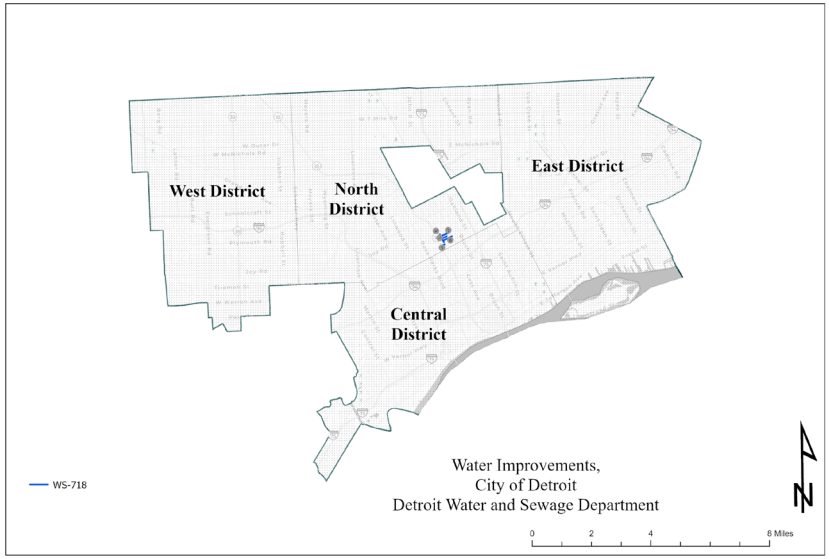
Active CIP Projects, Construction

Title	WS-715 Water Improvements for Miller Grove, Minock Park, Riverdale, and Rosedale Park		
Scope	Replacement of 21,000 LF of water main, 75 Hydrants, and 590 lead services; lining of 4,400 LF of water main		
Budget $M	1.1	Start Date	TBD
Actual $M	0 (0%)	End Date	TBD
Status	Bids opened on 6/23/20, and currently under review.		



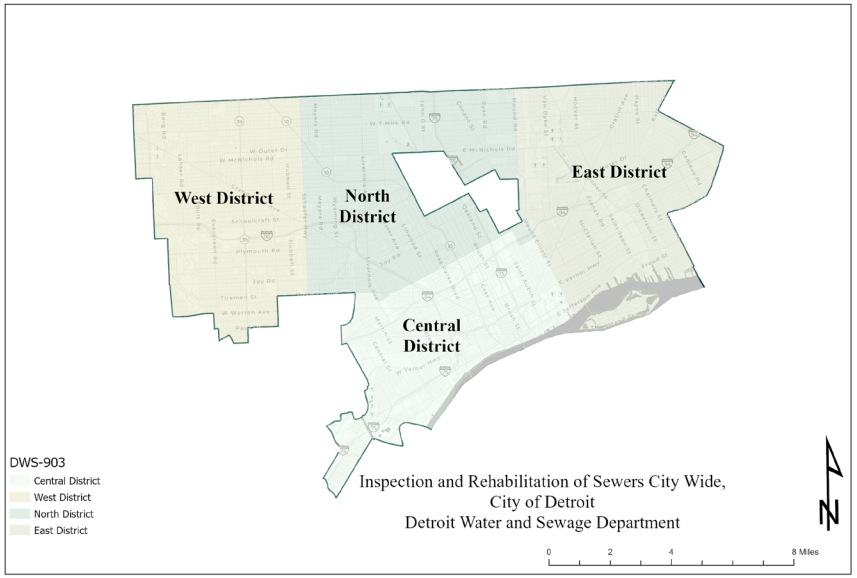
Active CIP Projects, Construction

Title	WS-718 Water Improvements for New Center Commons and Virginia Park		
Scope	Replacement of 9,500 LF of water main, 24 Hydrants, and 110 lead services		
Budget $M	0.4	Start Date	TBD
Actual $M	0 (0%)	End Date	TBD
Status	Bids opened on 6/30/20, and currently under review		



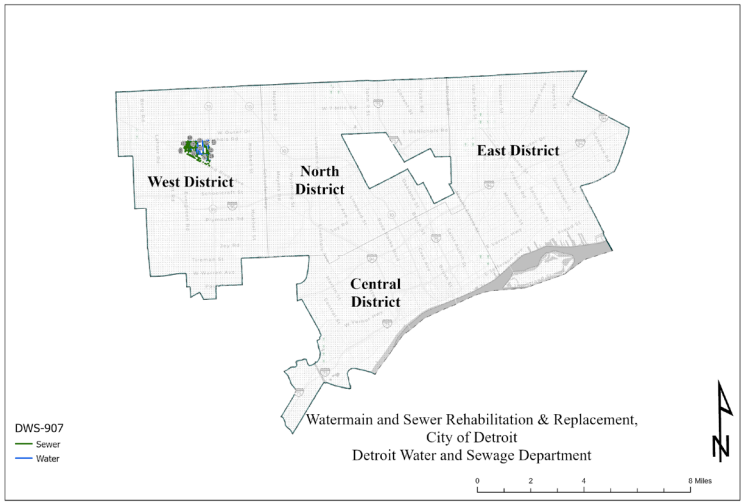
Active CIP Projects, Construction

Title	DWS-903, Inspection and Rehabilitation of Sewers City Wide		
Scope	As-needed CCTV inspection and rehabilitation of sewers		
Budget $M	60	Start Date	Dec-2017
Actual $M	48 (80%)	End Date	Dec-2020
Status	310,000 LF of sewers lined, 21,000 LF of sewers repaired, and 3.4M LF of sewers inspected (thru Feb-2020)		



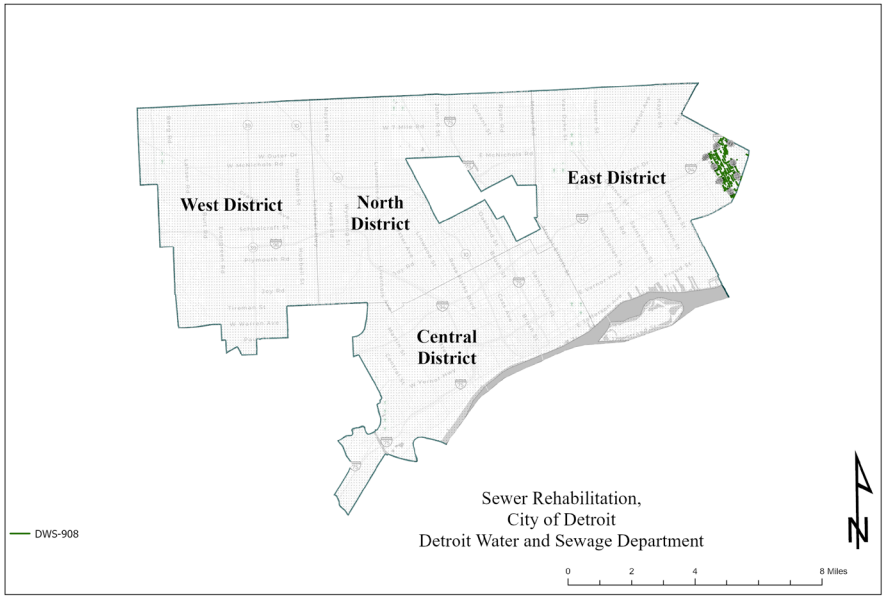
Active CIP Projects, Construction

Title	DWS-907, Watermain and Sewer Rehabilitation & Replacement, North Rosedale Park		
Scope	Replacement of 17,000 LF of water main, 60 Hydrants, and 500 lead services; Rehabilitation of 32,500 LF of sewers (6,100 LF of new sewers, 24,700 LF of lining, and 1,700 LF of Point Repairs		
Budget $M	13.0	Start Date	Dec-2019
Actual $M	0.3 (2%)	End Date	Mar-2022
Status	Work was suspended for 3 months due to COVID-19		



Active CIP Projects, Construction

Title	DWS-908, Sewer Rehabilitation in Cornerstone Village		
Scope	Rehabilitation of 46,000 LF of sewers (640 LF of new sewers, 42,400 LF of lining, and 3,200 LF of Point Repairs)		
Budget $M	7.7	Start Date	Dec-2019
Actual $M	0 (0%)	End Date	Mar-2022
Status	Construction has resumed. Work was suspended for 3 months due		

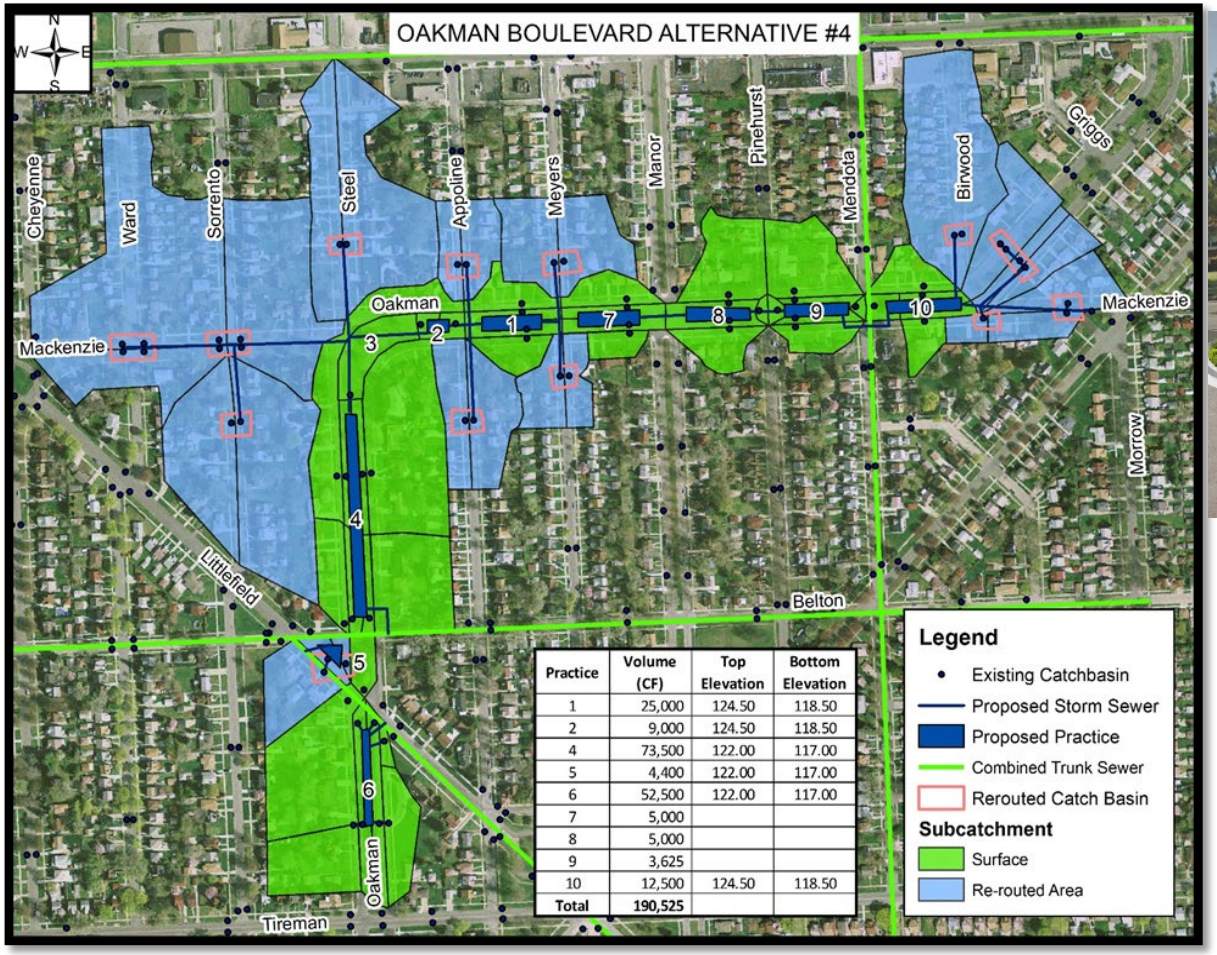


Active CIP Projects, Construction

Title	PC-801A – Oakman Boulevard Green Stormwater Infrastructure and Water Main Replacement Project		
Scope	**GSI:** Transform medians along Oakman Boulevard from Tireman Ave to Joy Road to incorporate surface bioretention, subsurface detention storage. GSI will manage 63 acres and 37 million gallons annually. **Water Main:** Install approximately 5200 linear feet of new ductile iron water main piping.		
Contract $	$8,694,164.40	Start Date	08/01/2019
% Complete	28% (Billed as of June 2020 Invoice)	End Date	07/31/2024
Status	Blaze Contracting Inc. initiated work on the project site performing tree cutting from March 10, 2020 – March 19, 2020. The Contractor reconvened work on the project site on May 8, 2020. Contractually, Substantial Completion must be achieved by August 1, 2021. The most recent progress schedule provided by Blaze Contracting Inc. shows a substantial completion date of July 14, 2021. COVID impact duration was March 20, 2020 through May 7, 2020 (49 Calendar Days). No significant delay impact in progress schedule.		

Active CIP Projects, Construction

Title	PC-801A – Oakman Boulevard Green Stormwater Infrastructure and Water Main Replacement Project



Practice	Volume (CF)	Top Elevation	Bottom Elevation
1	25,000	124.50	118.50
2	9,000	124.50	118.50
4	73,500	122.00	117.00
5	4,400	122.00	117.00
6	52,500	122.00	117.00
7	5,000		
8	5,000		
9	3,625		
10	12,500	124.50	118.50
Total	**190,525**		

Active CIP Projects, Construction

Title	PC-799 Crowell Recreation Center and Ecological Site Retrofits		
Scope	Constructed two parking lots at Crowell Recreation Center with centralized permeable pavers and small bioretention areas. The parking areas will manage 2.48 acres and 1.47 million gallons annually. Constructed two trench drain road crossing with diversion chambers for two ecological sites (Vaughn and Stahelin). The retrofit for Vaughn manages .21 acres and .64 million gallons annually. The retrofit for Stahelin manages .41 acres and .62 million gallons annually.		
Contract $	$876,368.32	Start Date	11/20/2017
% Complete	93%	End Date	12/31/2021
Status	Substantial Completion was achieved in 2019. Maintenance Period is ongoing. There has been no COVID-19 impact.		

Active CIP Projects, Construction

Title	PC-799 Crowell Recreation Center and Ecological Site Retrofits

Active CIP Projects, Construction

Title	PC-800 O'Shea Playground Stormwater Improvements		
Scope	Constructed a bioretention to manage 3.72 acres consisting of roadway and areas within the park. The bioretention will manage 1.59 million gallons annually.		
Contract $	$582,542.95	Start Date	05/08/2018
% Complete	95%	End Date	12/31/2021
Status	Substantial Completion achieved in 2018. Maintenance is ongoing. There was no COVID-19 impact.		

Agenda

- CIP Delivery Process Review
- Project Overview by District
- Planning Projects
- Condition Assessment Projects
- Design Projects
- Construction Projects
- **Impacts of COVID-19**
- Summary

Impacts of COVID-19

Phase	Impact(s)
Planning	None
Condition Assessment	The award of CS-1909A and DWS-926 was delayed approximately three (3) months
Design	None
Construction	Active contracts were suspended in March, and were resumed starting in May (one contract per week). As a result, completion dates will be pushed out 3 months

Agenda

- CIP Delivery Process Review
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- **Summary**

Summary

- Planning, Condition Assessment, Design, and Construction activities are proceeding
- Overall, COVID-19 had a minor impact on delivery of DWSD CIP
- COVID-19 may result in budgetary constraints that may scale back the amount of CIP delivered on an annual basis
- Great progress made with the creation and ongoing communications being done through the Infrastructure Coordination Team (ICT)

Summary

- DWSD has been focused on hiring staff for the sustainability of CIP delivery.
- Transition and training of current staff with CIPMO contracted resources occurring frequently
- DWSD adopted industry standard documents for the procurement of construction and professional services contracts
  (Engineers Joint Contract Documents Committee -EJCDC)

Questions/Discussion