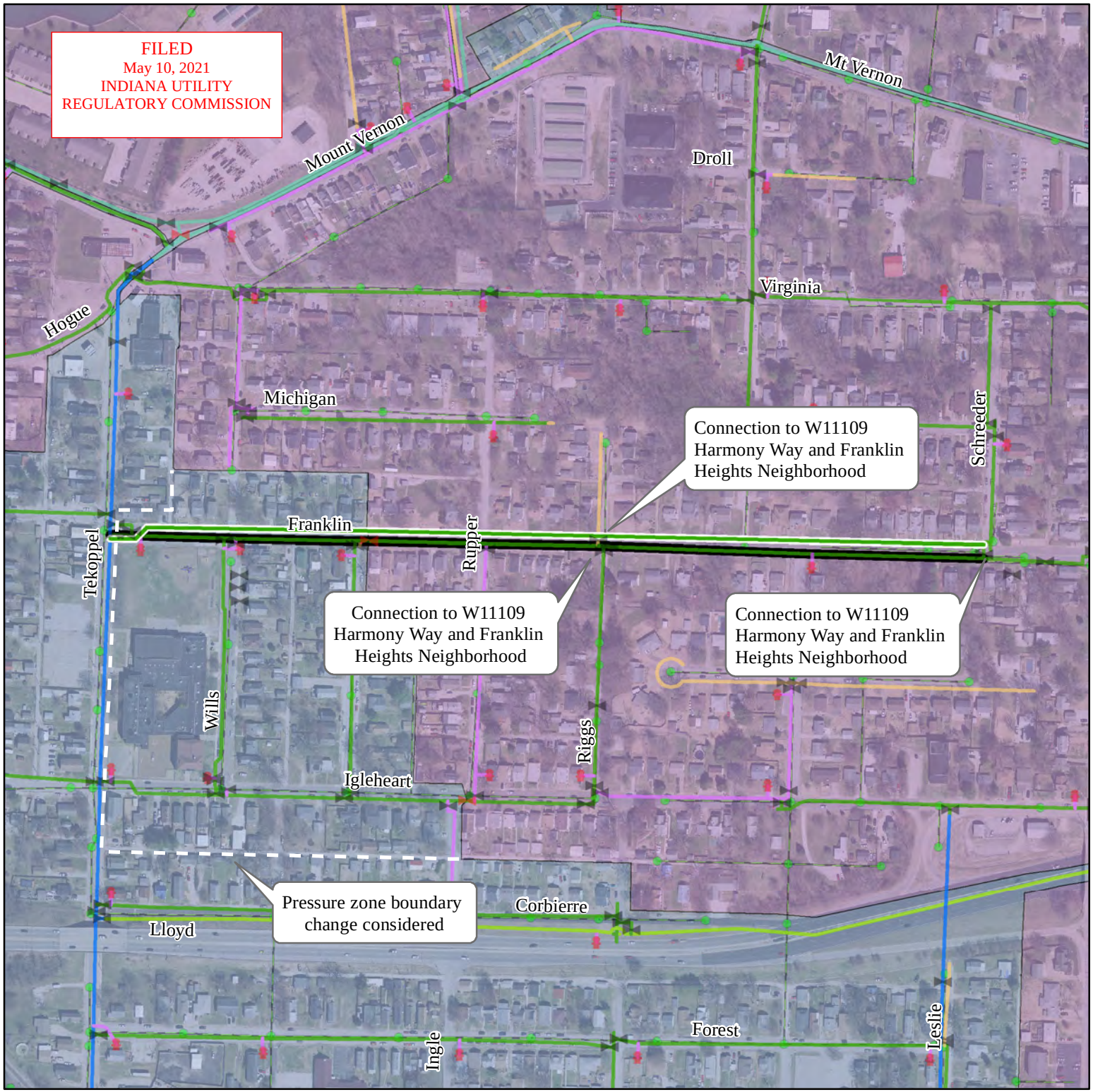


Figure 1
Report No. 7
Franklin Street, Tekoppel to Schreeder

Legend

Proposed Project

- Trenchless Installation
- Main to be Abandoned
- Proposed Main

Water Infrastructure

- Hydrants

Valves

- System Isolation
- System Separation

Mains

- <6"
- 6"
- 8"
- 10"
- 12"
- 16"
- 20"
- 24"
- 30"
- 36"
- 48"
- Private

Pressure Zones

- Central
- Killian
- Lincoln
- Northern

Sanitary Infrastructure

- Manholes
- Sewer

N

Print Date: December 2020

0 350 700 Feet

2. Hydraulic Modeling

The available fire flow and static pressure within the project limits and surrounding areas were evaluated using the WaterGEMS distribution system model under maximum day demands of 26.7 million gallons per day (MGD) based upon 2019 data. Two (2) alternatives were evaluated for replacement. Alternative 1 includes replacement with all 8-inch diameter water main in the project limits. Alternative 2 included replacement with 8-inch diameter water main in the project limits, abandonment of the 6-inch diameter water main on Ingle Avenue, and moving the pressure boundary which affects 52 customers.

2.1. Results

The existing available fire flow and static pressure in the project limits are shown in **Figure 2**. The available fire flow and static pressure in the project limits for Alternative 1 are shown in **Figure 3**. The available fire flow and static pressure in the project limits for Alternative 2 are shown in **Figure 4**.

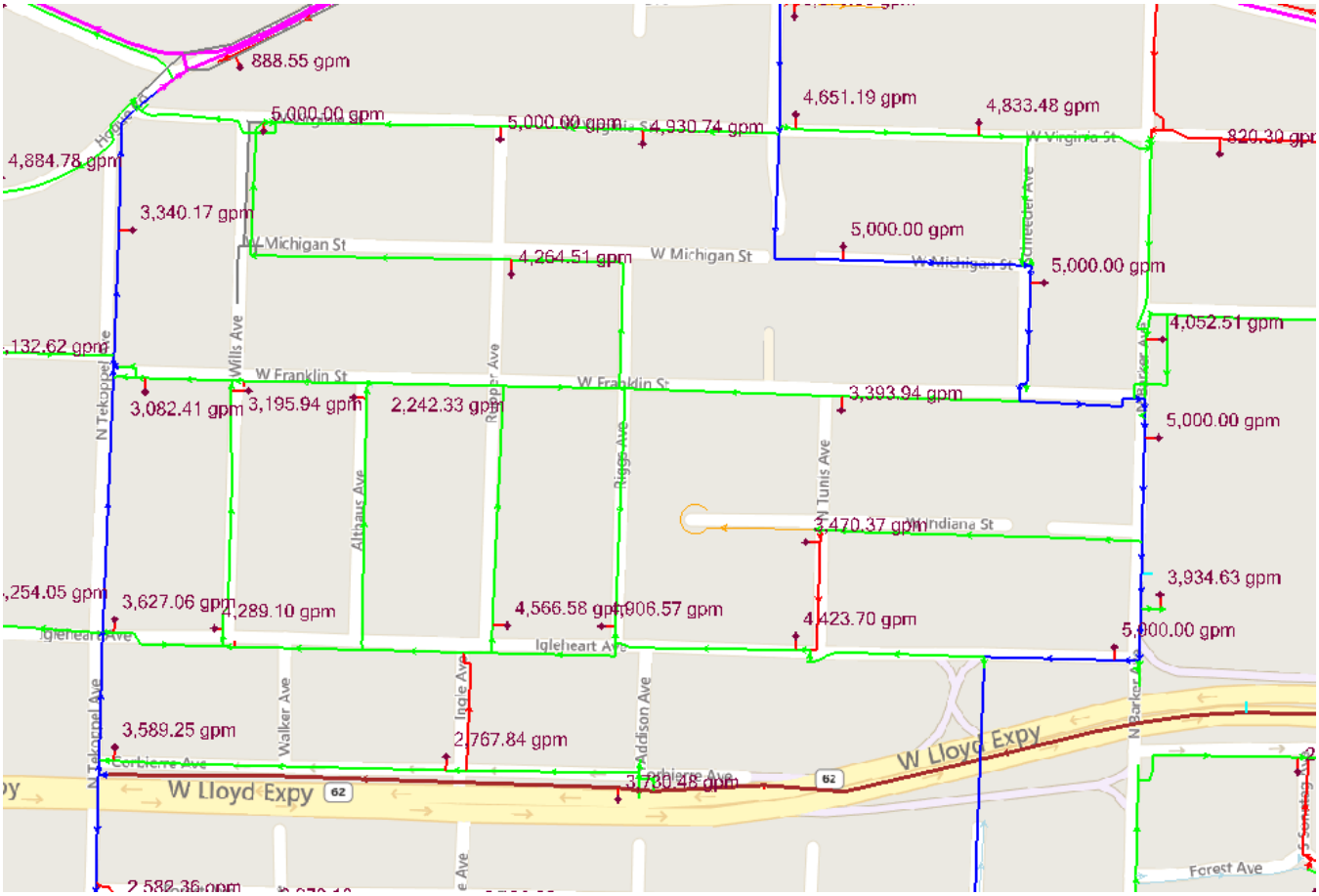


Figure 2. Existing Available Fire Flow and Static Pressure

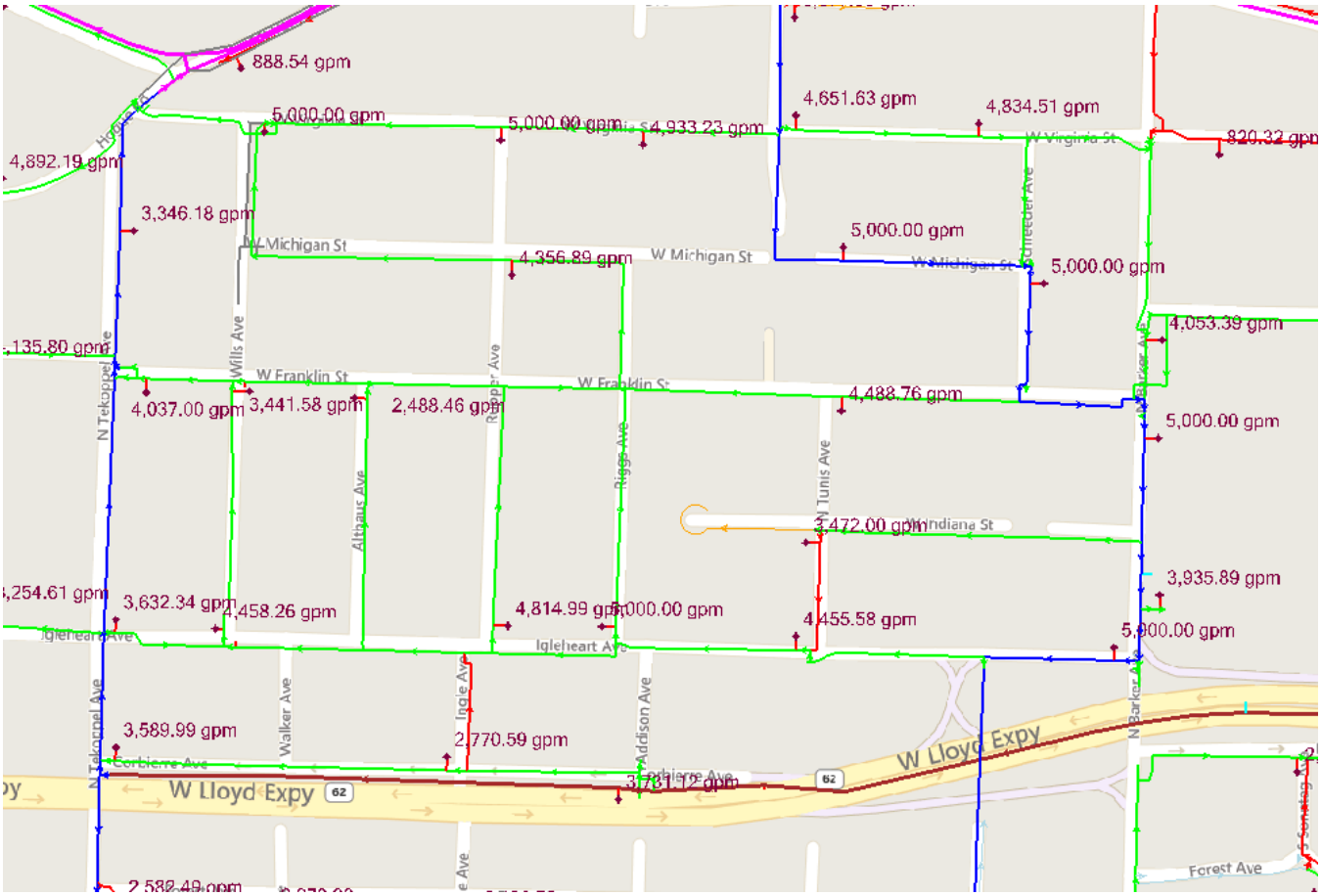


Figure 3. Alternative 1 Available Fire Flow and Static Pressure

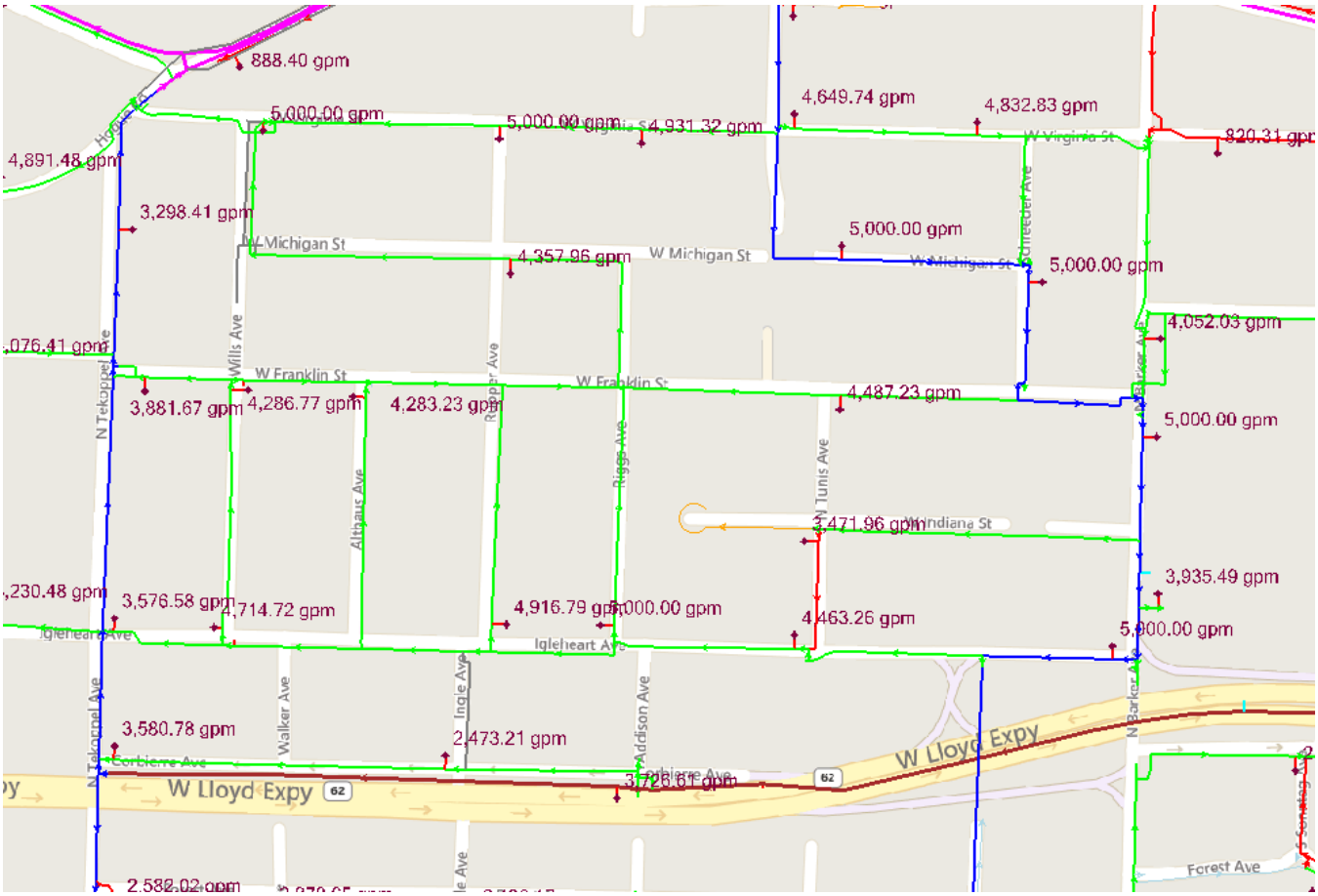


Figure 4. Alternative 2 Available Fire Flow and Static Pressure

2.1. Conclusion

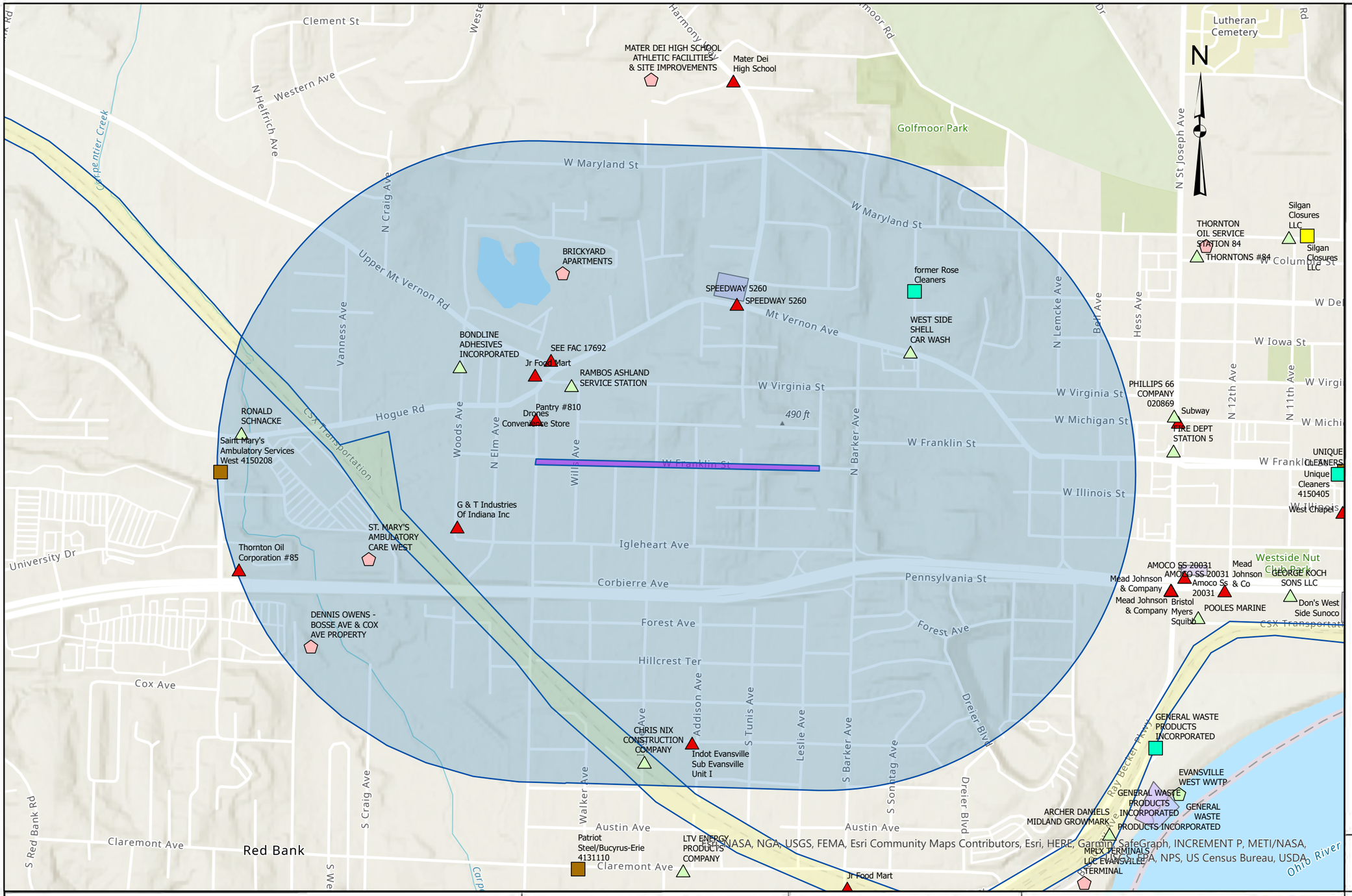
The project area is primarily residential, so the required fire flow is expected to be approximately 1,500 gallons per minute. All alternatives provide adequate pressure and available fire flow, therefore Alternative 1 was selected to minimize project costs.

3. Environmental Assessment

A preliminary environmental assessment was performed within the project limits and surrounding area using IndianaMap and Indiana Department of Transportation (INDOT) Geographical Information Office (GIO) Library to identify sites that may be of concern within one-half mile of the proposed project limits. The assessment of the project limits and surrounding area identified nine (9) potential contaminated sites and ten (10) known contaminated sites as shown in **Figure 5**.

3.1. Site Specific Concerns

The preliminary environmental assessment identified zero (0) known contaminated sites with close proximity to the project.



LEGEND

KNOWN CONTAMINATED SITES

- BROWNFIELD SITE
- CLEANUP SITE
- CONFINED FEEDING OPERATION
- SUPERFUND SITE
- LEAKING UNDERGROUND STORAGE TANK SITE
- VOLUNTARY REMEDIATION PROGRAM SITE
- INSTITUTIONAL CONTROL SITE
- JACOBSVILLE SUPERFUND SITE BOUNDARY
- WASTE COAL COMBUSTION IMPOUNDMENT

POTENTIAL CONTAMINATED SITES

- ELECTRONIC RECYCLING FACILITY
- MANUFACTURED GAS PLANT
- NPDES FACILITY
- NPDES PIPE LOCATION
- SEPTAGE WASTE SITE
- SOLID WASTE DISPOSAL/PROCESSING FACILITY
- UNDERGROUND STORAGE TANK SITE
- WASTE TIRE SITE
- RAILROAD
- SOLID WASTE LANDFILL

PROJECT INFORMATION

- HALF MILE RADIUS
- PROPOSED PROJECT LIMITS

Figure 5

0 SCALE 0.25
Miles

TITLE: W Franklin Street Hazardous Materials Concerns

LOCATION: W Franklin Street,
Tekoppel Avenue to Schreeder Avenue,
Evansville, IN
X: 87.6148231
Y: 37.9804694

PREPARED FOR:

EVANSVILLE WATER & SEWER DEPARTMENT
REFRESH PROGRAM
1 NW MARTIN LUTHER KING JR BLVD
EVANSVILLE, INDIANA 47708

DELIVERED TO:

HNTB CORPORATION
111 MONUMENT CIRCLE,
SUITE 1200
INDIANAPOLIS, INDIANA 46204

CRANE ENVIRONMENTAL SERVICES, LLC
MAIN OFFICE:
4209 HIGHWAY 41 NORTH, SUITE 24,EVANSVILLE, INDIANA 47711
INDIANAPOLIS OFFICE:
6745 S GRAY ROAD, SUITE I,INDIANAPOLIS, IN 46237

CRANE PROJECT NO.120-0108B

DATE: 11/6/2020

refresh EVANSVILLE

Scoping Report

Project Capital Cost Estimate

Franklin Street, Tekoppel to Schreeder Water Main Replacement

Report #: 7

CONSTRUCTION COSTS

ITEM ID	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL PRICE
STANDARD PAY ITEMS					
1083	8" PVC C900 PIPE	2,320	LF	$86.00	$199,520.00
1026	8" MJ GATE VALVE	2	EA	$1,645.00	$3,290.00
1013	8" MJ 45° BEND	14	EA	$441.00	$6,174.00
1119	FIRE HYDRANT ASSEMBLY WITH GATE VALVE	3	EA	$5,814.00	$17,442.00
1126	AUTOMATIC FLUSH DEVICE WITH GATE VALVE (9400)	2	EA	$5,212.00	$10,424.00
1132	3/4"-1" WATER SERVICE RELOCATION, OPEN CUT	35	EA	$1,682.00	$58,870.00
6004	Proposed 8" to Existing 8" Connection	1	LS	$7,122.00	$7,122.00
6003	Proposed 8" to Existing 6" Connection	1	LS	$6,308.00	$6,308.00
6025	Proposed 8" to Existing 12" Connection	1	LS	$10,115.00	$10,115.00
5006	ABANDON AND GROUT FILL EXISTING MAIN	2,310	LF	$10.00	$23,100.00
5007	COMPACTED AGGREGATE, NO. 53S	2,320	LF	$9.00	$20,880.00
5021	HOT MIX ASPHALT BASE	2,320	LF	$28.00	$64,960.00
5023	HOT MIX ASPHALT SURFACE	2,320	LF	$12.00	$27,840.00
NON-STANDARD PAY ITEMS					
--	System Separation Valve Vault	1	EA	$75,000.00	$75,000.00
--					
--					

STANDARD LUMP SUM PAY ITEMS				
DESCRIPTION	**QUANTITY**	**UNIT**	**%**	**TOTAL PRICE**
Mobilization & Demobilization (4% - 5%)	1	LS	5.0%	$26,600.00
Construction Engineering (2% - 3%)	1	LS	3.0%	$16,000.00
Clearing & Grubbing (0.5% - 1.5%)	1	LS	1.0%	$5,400.00
Erosion Control Devices (1% - 2%)	1	LS	2.0%	$10,700.00
Maintenance of Traffic (3% - 4%)	1	LS	4.0%	$21,300.00
Restoration, Grading, and Seeding (2% - 3%)	1	LS	3.0%	$16,000.00

CONSTRUCTION COST SUBTOTAL = $627,045.00

CONTINGENCY (30%) = $188,200.00

TOTAL ESTIMATED CONSTRUCTION COST, SCOPING REPORT = $816,000.00

NON-CONSTRUCTION COSTS

DESCRIPTION	QUANTITY	UNIT	%	TOTAL PRICE
Engineering Program Management Fees (estimated)	1	LS	3.0%	$24,500.00
Engineering Design Fees (estimated)	1	LS	10.0%	$81,600.00
Engineering Construction Engineering Fees (estimated)	1	LS	9.6%	$78,400.00

NON-CONSTRUCTION COST SUBTOTAL = $185,000.00

TOTAL ESTIMATED CAPITAL COST, SCOPING REPORT = $1,001,000.00

SOUTH EVERGREEN ACRES NEIGHBORHOOD WATER MAIN REPLACEMENT SCOPING REPORT

2022 WATER RATE CASE

December 2020
Last Revision January 2021

PREPARED FOR

Evansville Water & Sewer Utility
1 SE 9th Street
Suite 200
Evansville, IN 47708
Phone: (812) 421-2120
Contact: Michael Labitkze, P.E.

PREPARED BY

HNTB Corporation
111 Monument Circle
Suite 1200
Indianapolis, IN 46204
Phone: (317) 636-4682
Contact: Jason Hoff, P.E.

SOUTH EVERGREEN ACRES NEIGHBORHOOD WATER MAIN REPLACEMENT SCOPING REPORT

1. Project Summary

The proposed South Evergreen Acres Neighborhood Water Main Replacement Project includes the replacement of approximately 5,270 feet of water main. The project is expected to include approximately six (6) fire hydrants, nine (9) gate valves, two (2) automatic flushing device, and seventy-four (74) service connections. Approximately 5,200 feet of existing water main will be abandoned and filled with grout.

1.1. Project Limits

The project scope includes replacement of existing water mains along Pine Place, Heather Place, Pine Creek Drive, Larch Lane north of W Evergreen Road, and Heather Court. The proposed project and potential alignment for proposed water mains are shown in **Figure 1**. Actual horizontal and vertical alignment will be determined during final design based on surveyed locations of existing utilities in the project area.

1.2. Project Drivers

The existing water mains within the proposed project limits have replacement prioritization scores ranging from 150 to 230. The average score weighted by length for the existing water mains is 200.

This project had a high replacement rating due to a high likelihood of failure criteria score from a high operating pressure. Pipe material and low available fire flow also contributed to this project's high score.

1.3. Project Cost

The total capital cost estimate for the project is $1,874,000. This includes $1,528,000 construction costs and $346,000 non-construction costs. The project costs were estimated using the EWSU Cost Estimating Tool Scoping Report tab. The cost estimate is included at the end of the scoping report.

Figure 1
Report No. 9
South Evergreen Acres Neighborhood

Legend

Proposed Project

- Trenchless Installation
- Main to be Abandoned
- Proposed Main

Water Infrastructure

- Hydrants

Valves

- System Isolation
- System Separation

Mains

- <6"
- 6"
- 8"
- 10"
- 12"
- 16"
- 20"
- 24"
- 30"
- 36"
- 48"
- Private

Pressure Zones

- Central
- Lincoln
- Killian
- Northern

Sanitary Infrastructure

- Manholes
- Sewer

N

Print Date: December 2020

0 300 600 Feet

2. Hydraulic Modeling

The available fire flow within the project limits and surrounding areas were evaluated using the WaterGEMS distribution system model under maximum day demands of 26.7 million gallons per day (MGD) based upon 2019 data. One (1) alternative was evaluated for replacement. Alternative 1 includes replacement with all 8-inch diameter water main in the project limits.

2.1. Results

The existing available fire flow in the project limits are shown in **Figure 2**. The available fire flow in the project limits for Alternative 1 are shown in **Figure 3**.

Figure 2. Existing Available Fire Flow

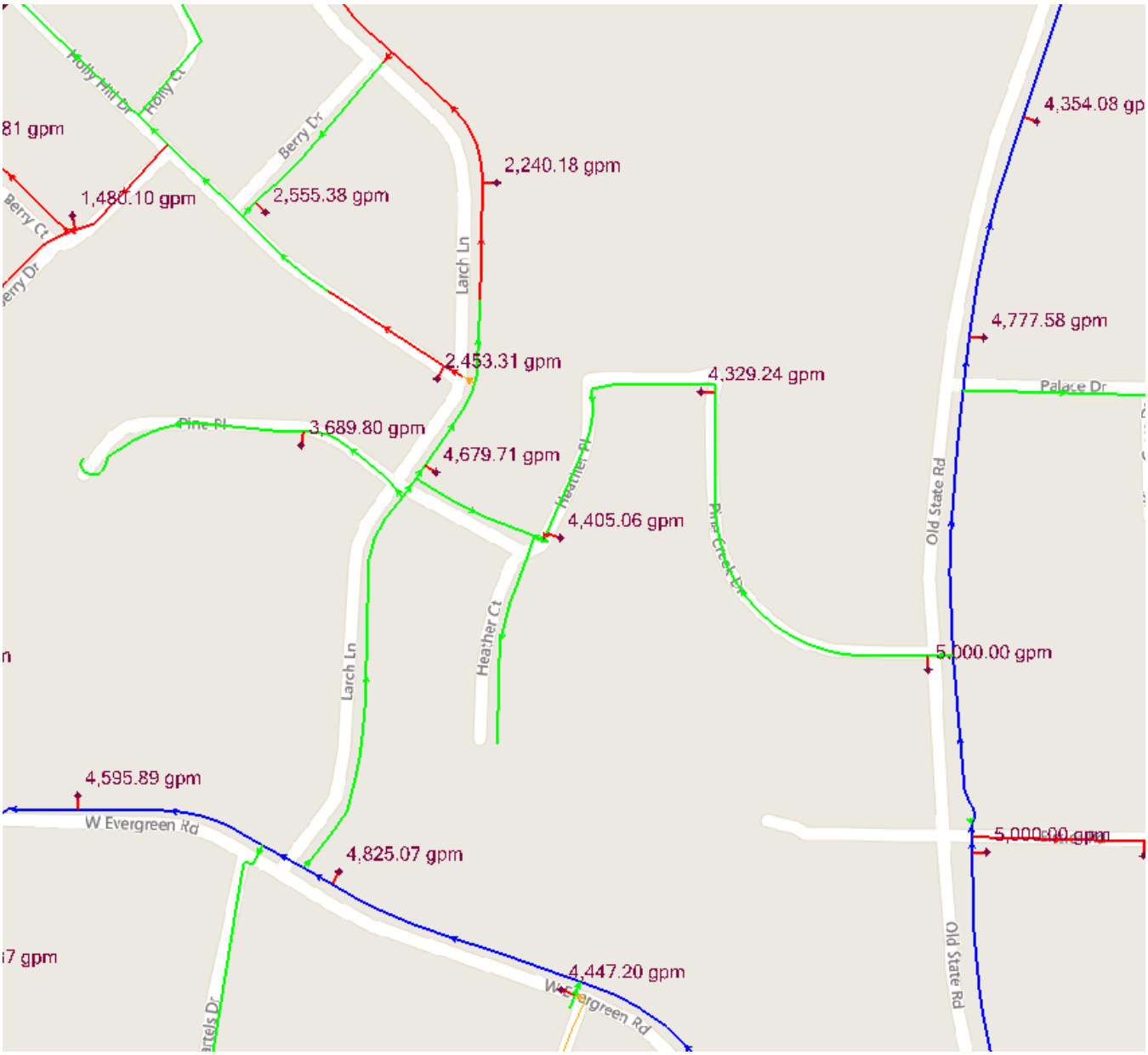


Figure 3. Alternative 1 Available Fire Flow

2.1. Conclusion

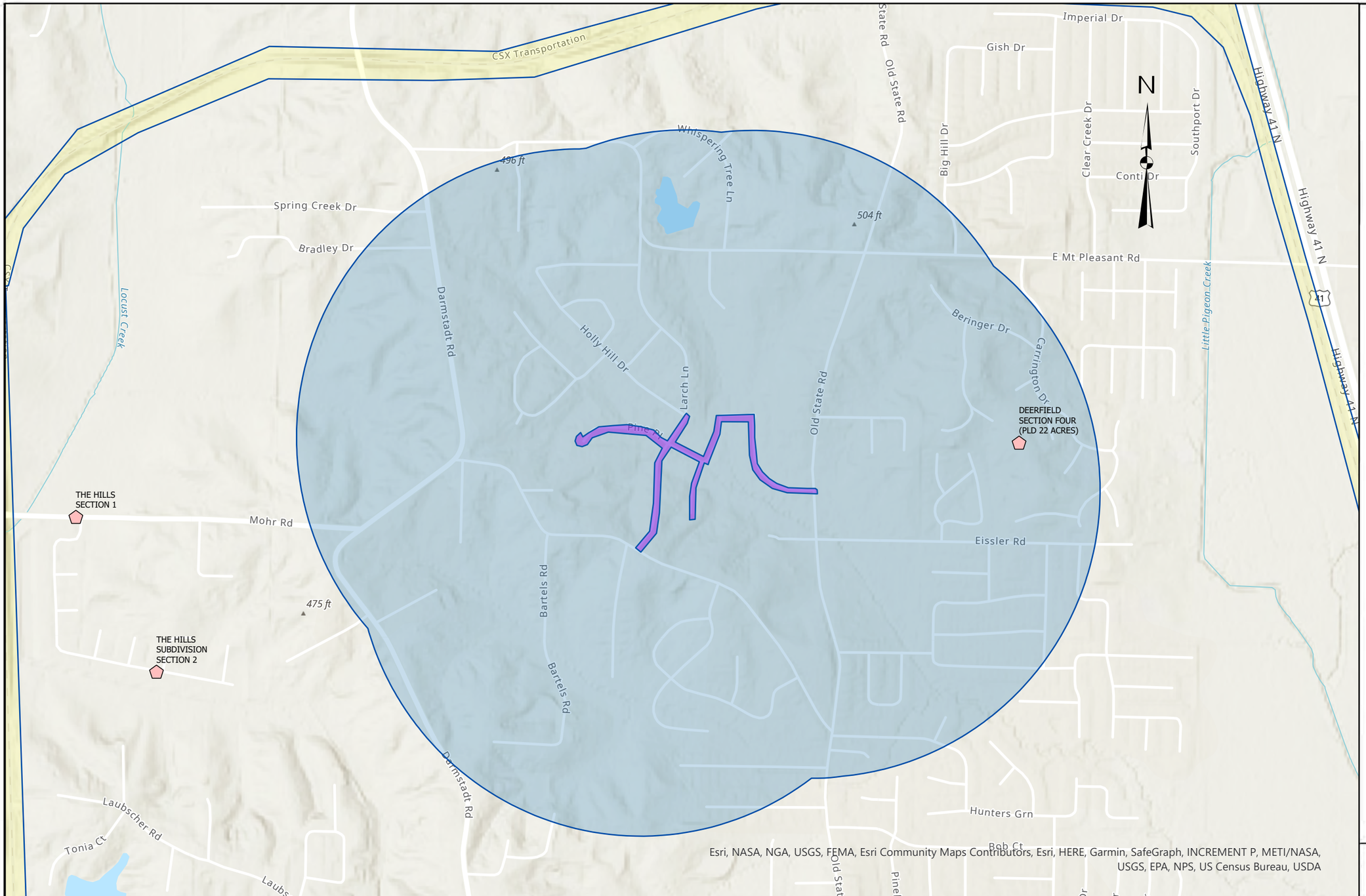
The project area is primarily residential, so the required fire flow is expected to be approximately 1,500 gallons per minute. Alternative 1 provides the required fire flow, therefore Alternative 1 was selective to provide the required fire flow in the project area.

3. Environmental Assessment

A preliminary environmental assessment was performed within the project limits and surrounding area using IndianaMap and Indiana Department of Transportation (INDOT) Geographical Information Office (GIO) Library to identify sites that may be of concern within one-half mile of the proposed project limits. The assessment of the project limits and surrounding area identified one (1) potential contaminated site and zero (0) known contaminated sites as shown in **Figure 4**.

3.1. Site Specific Concerns

The preliminary environmental assessment identified zero (0) known contaminated sites with close proximity to the project.



LEGEND

KNOWN CONTAMINATED SITES

- BROWNFIELD SITE
- CLEANUP SITE
- CONFINED FEEDING OPERATION
- SUPERFUND SITE
- LEAKING UNDERGROUND STORAGE TANK SITE
- VOLUNTARY REMEDIATION PROGRAM SITE
- INSTITUTIONAL CONTROL SITE
- JACOBSVILLE SUPERFUND SITE BOUNDARY
- WASTE COAL COMBUSTION IMPOUNDMENT

POTENTIAL CONTAMINATED SITES

- ELECTRONIC RECYCLING FACILITY
- MANUFACTURED GAS PLANT
- NPDES FACILITY
- NPDES PIPE LOCATION
- SEPTAGE WASTE SITE
- SOLID WASTE DISPOSAL/PROCESSING FACILITY
- UNDERGROUND STORAGE TANK SITE
- WASTE TIRE SITE
- RAILROAD
- SOLID WASTE LANDFILL

PROJECT INFORMATION

- HALF MILE RADIUS
- PROPOSED PROJECT LIMITS

Figure 4

0 SCALE 0.25
Miles

TITLE: South Evergreen Acres Hazardous Materials Concerns

LOCATION: South Evergreen Acres Neighborhood, Evansville, IN

X: 87.5676696
Y: 38.0530156

PREPARED FOR:

EVANSVILLE WATER & SEWER DEPARTMENT
REFRESH PROGRAM
1 NW MARTIN LUTHER KING JR BLVD
EVANSVILLE, INDIANA 47708

DELIVERED TO:

HNTB CORPORATION
111 MONUMENT CIRCLE,
SUITE 1200
INDIANAPOLIS, INDIANA 46204

CRANE ENVIRONMENTAL SERVICES, LLC
MAIN OFFICE:
4209 HIGHWAY 41 NORTH, SUITE 24,EVANSVILLE, INDIANA 47711
INDIANAPOLIS OFFICE:
6745 S GRAY ROAD, SUITE I,INDIANAPOLIS, IN 46237

CRANE PROJECT NO.120-0108I

DATE: 11/6/2020

refresh EVANSVILLE

Scoping Report

Project Capital Cost Estimate

South Evergreen Acres Neighborhood Water Main Replacement

Report #: 9

CONSTRUCTION COSTS

ITEM ID	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL PRICE
STANDARD PAY ITEMS					
1083	8" PVC C900 PIPE	4,830	LF	$86.00	$415,380.00
1081	4" PVC C900 PIPE	440	LF	$67.00	$29,480.00
1026	8" MJ GATE VALVE	9	EA	$1,645.00	$14,805.00
1078	8"X4" MJ REDUCER	2	EA	$384.00	$768.00
1013	8" MJ 45° BEND	36	EA	$441.00	$15,876.00
1224	4" MJ 45° BEND	15	EA	$302.00	$4,530.00
1036	8" MJ TEE	3	EA	$679.00	$2,037.00
1119	FIRE HYDRANT ASSEMBLY WITH GATE VALVE	6	EA	$5,814.00	$34,884.00
1126	AUTOMATIC FLUSH DEVICE WITH GATE VALVE (9400)	2	EA	$5,212.00	$10,424.00
1132	3/4"-1" WATER SERVICE RELOCATION, OPEN CUT	74	EA	$1,682.00	$124,468.00
6025	Proposed 8" to Existing 12" Connection	2	LS	$10,115.00	$20,230.00
6003	Proposed 8" to Existing 6" Connection	2	LS	$6,308.00	$12,616.00
5006	ABANDON AND GROUT FILL EXISTING MAIN	5,200	LF	$10.00	$52,000.00
5007	COMPACTED AGGREGATE, NO. 53S	5,270	LF	$9.00	$47,430.00
5021	HOT MIX ASPHALT BASE	5,270	LF	$28.00	$147,560.00
5023	HOT MIX ASPHALT SURFACE	5,270	LF	$12.00	$63,240.00
NON-STANDARD PAY ITEMS					
--					
--					
--					

STANDARD LUMP SUM PAY ITEMS				
DESCRIPTION	**QUANTITY**	**UNIT**	**%**	**TOTAL PRICE**
Mobilization & Demobilization (4% - 5%)	1	LS	5.0%	$49,800.00
Construction Engineering (2% - 3%)	1	LS	3.0%	$29,900.00
Clearing & Grubbing (0.5% - 1.5%)	1	LS	1.0%	$10,000.00
Erosion Control Devices (1% - 2%)	1	LS	2.0%	$20,000.00
Maintenance of Traffic (3% - 4%)	1	LS	4.0%	$39,900.00
Restoration, Grading, and Seeding (2% - 3%)	1	LS	3.0%	$29,900.00

CONSTRUCTION COST SUBTOTAL = $1,175,228.00

CONTINGENCY (30%) = $352,600.00

TOTAL ESTIMATED CONSTRUCTION COST, SCOPING REPORT = $1,528,000.00

NON-CONSTRUCTION COSTS

DESCRIPTION	QUANTITY	UNIT	%	TOTAL PRICE
Engineering Program Management Fees (estimated)	1	LS	3.0%	$45,900.00
Engineering Design Fees (estimated)	1	LS	10.0%	$152,800.00
Engineering Construction Engineering Fees (estimated)	1	LS	9.6%	$146,700.00

NON-CONSTRUCTION COST SUBTOTAL = $346,000.00

TOTAL ESTIMATED CAPITAL COST, SCOPING REPORT = $1,874,000.00

E MILL ROAD AND WEAVER ROAD WATER MAIN REPLACEMENT SCOPING REPORT

2022 WATER RATE CASE

December 2020
Last Revision January 2021

PREPARED FOR

Evansville Water & Sewer Utility
1 SE 9th Street
Suite 200
Evansville, IN 47708
Phone: (812) 421-2120
Contact: Michael Labitkze, P.E.

PREPARED BY

HNTB Corporation
111 Monument Circle
Suite 1200
Indianapolis, IN 46204
Phone: (317) 636-4682
Contact: Jason Hoff, P.E.

E MILL ROAD AND WEAVER ROAD WATER MAIN REPLACEMENT SCOPING REPORT

1. Project Summary

The proposed E Mill Road and Weaver Road Water Main Replacement Project includes the replacement of approximately 3,010 feet of water main. The project is expected to include approximately four (4) fire hydrants, four (4) gate valves, and thirty-five (35) service connections. Approximately 3,270 feet of existing water main will be abandoned and filled with grout. Two (2) existing parallel water mains will be replaced by one (1) water main so that only 3,010 feet of water main is proposed.

1.1. Project Limits

The project scope includes replacement of existing water mains along E Mill Road between Stringtown Road and Weaver Road from Hesmer Road to approximately 500 feet north of E Mill Road. The proposed project and potential alignment for proposed water mains are shown in **Figure 1**. Actual horizontal and vertical alignment will be determined during final design based on surveyed locations of existing utilities in the project area.

1.2. Project Drivers

The existing water mains within the proposed project limits have replacement prioritization scores ranging from 160 to 370. The average score weighted by length for the existing water mains is 217.

This project had a high replacement rating due to a high likelihood of failure criteria score from this project's high historical rate of failure, short service life remaining and high operating pressure. Pipe material and low available fire flow also contributed to this project's high score.

1.3. Project Cost

The total capital cost estimate for the project is $1,041,000. This includes $849,000 construction costs and $192,000 non-construction costs. The project costs were estimated using the EWSU Cost Estimating Tool Scoping Report tab. The cost estimate is included at the end of the scoping report.

Figure 1
Report No. 10
East Mill Road and Weaver Road

Legend

Proposed Project
- Trenchless Installation
- Main to be Abandoned
- Proposed Main

Water Infrastructure
- Hydrants

Valves
- System Isolation
- System Separation

Mains
- <6"
- 6"
- 8"
- 10"
- 12"
- 16"
- 20"
- 24"
- 30"
- 36"
- 48"
- Private

Pressure Zones
- Central
- Lincoln
- Killian
- Northern

Sanitary Infrastructure
- Manholes
- Sewer

N

Print Date: December 2020

0 300 600 Feet

2. Hydraulic Modeling

The available fire flow within the project limits and surrounding areas were evaluated using the WaterGEMS distribution system model under maximum day demands of 26.7 million gallons per day (MGD) based upon 2019 data. One (1) alternative was evaluated for replacement. Alternative 1 includes replacement with all 8-inch diameter water main in the project limits.

2.1. Results

The existing available fire flow in the project limits are shown in **Figure 2**. The available fire flow in the project limits for Alternative 1 are shown in **Figure 3**.

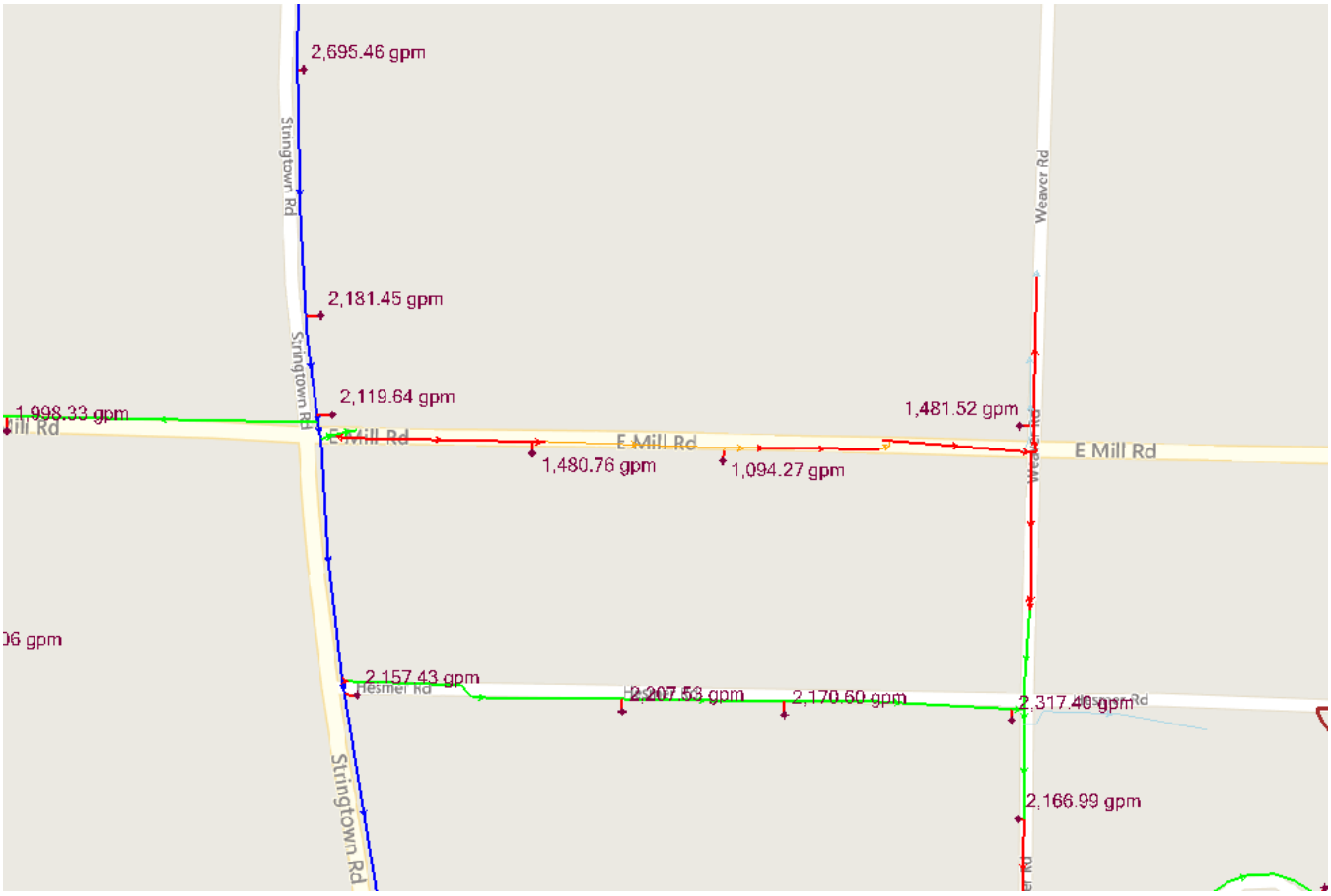


Figure 2. Existing Available Fire Flow

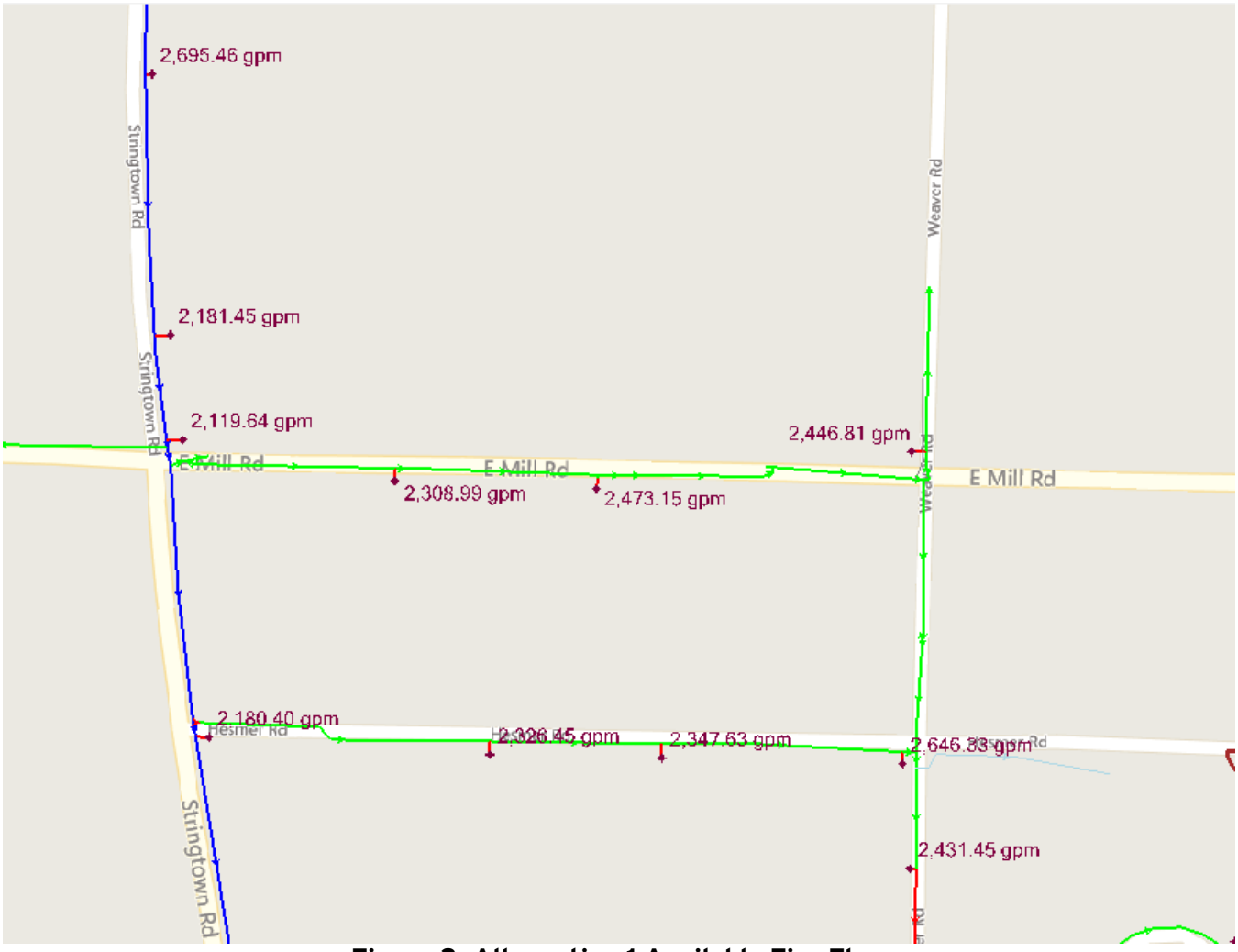


Figure 3. Alternative 1 Available Fire Flow

2.1. Conclusion

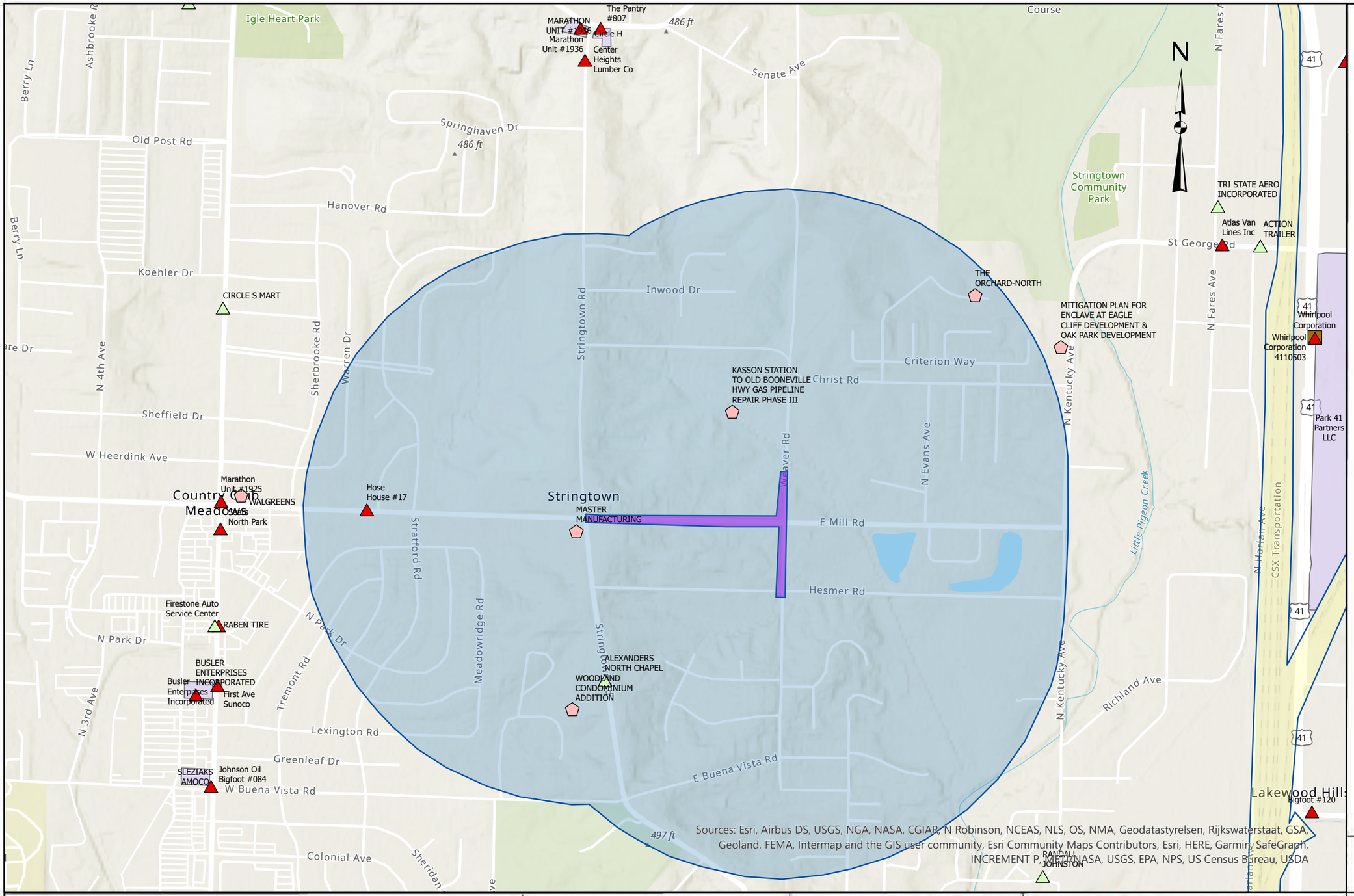
The project area is primarily residential, so the required fire flow is expected to be approximately 1,500 gallons per minute. Alternative 1 provides the required fire flow, therefore Alternative 1 was selective to provide the required fire flow in the project area.

3. Environmental Assessment

A preliminary environmental assessment was performed within the project limits and surrounding area using IndianaMap and Indiana Department of Transportation (INDOT) Geographical Information Office (GIO) Library to identify sites that may be of concern within one-half mile of the proposed project limits. The assessment of the project limits and surrounding area identified five (5) potential contaminated sites and one (1) known contaminated site as shown in **Figure 4**.

3.1. Site Specific Concerns

The preliminary environmental assessment identified zero (0) known contaminated sites with close proximity to the project.



Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community, Esri Community Maps Contributors, Esri, HERE, Garmin, SafeGraph, INCREMENT P, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA

LEGEND

KNOWN CONTAMINATED SITES

- BROWNFIELD SITE
- CLEANUP SITE
- CONFINED FEEDING OPERATION
- SUPERFUND SITE
- LEAKING UNDERGROUND STORAGE TANK SITE
- VOLUNTARY REMEDIATION PROGRAM SITE
- INSTITUTIONAL CONTROL SITE
- JACOBSVILLE SUPERFUND SITE BOUNDARY
- WASTE COAL COMBUSTION IMPOUNDMENT

POTENTIAL CONTAMINATED SITES

- ELECTRONIC RECYCLING FACILITY
- MANUFACTURED GAS PLANT
- NPDES FACILITY
- NPDES PIPE LOCATION
- SEPTAGE WASTE SITE
- SOLID WASTE DISPOSAL/PROCESSING FACILITY
- UNDERGROUND STORAGE TANK SITE
- WASTE TIRE SITE
- RAILROAD
- SOLID WASTE LANDFILL

PROJECT INFORMATION

- HALF MILE RADIUS
- PROPOSED PROJECT LIMITS

Figure 4

0 SCALE 0.25 Miles

TITLE: East Mill Road and Weaver Road Hazardous Materials Concerns

LOCATION: East Mill Road and Weaver Road, Evansville, IN

X: 87.5561316
Y: 38.0211405

PREPARED FOR:

EVANSVILLE WATER & SEWER DEPARTMENT
REFRESH PROGRAM
1 NW MARTIN LUTHER KING JR BLVD
EVANSVILLE, INDIANA 47708

DELIVERED TO:

HNTB CORPORATION
111 MONUMENT CIRCLE,
SUITE 1200
INDIANAPOLIS, INDIANA 46204

CRANE ENVIRONMENTAL SERVICES, LLC
MAIN OFFICE:
4209 HIGHWAY 41 NORTH, SUITE 24,EVANSVILLE, INDIANA 47711
INDIANAPOLIS OFFICE:
6745 S GRAY ROAD, SUITE I,INDIANAPOLIS, IN 46237

CRANE PROJECT NO.120-0108D

DATE: 11/6/2020

refresh EVANSVILLE

Scoping Report

Project Capital Cost Estimate

East Mill Road and Weaver Road Water Main Replacement

Report #: 10

CONSTRUCTION COSTS

ITEM ID	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL PRICE
STANDARD PAY ITEMS					
1083	8" PVC C900 PIPE	3,010	LF	$86.00	$258,860.00
1026	8" MJ GATE VALVE	4	EA	$1,645.00	$6,580.00
1013	8" MJ 45° BEND	16	EA	$441.00	$7,056.00
1036	8" MJ TEE	1	EA	$679.00	$679.00
1119	FIRE HYDRANT ASSEMBLY WITH GATE VALVE	4	EA	$5,814.00	$23,256.00
1132	3/4"-1" WATER SERVICE RELOCATION, OPEN CUT	35	EA	$1,682.00	$58,870.00
6025	Proposed 8" to Existing 12" Connection	1	LS	$10,115.00	$10,115.00
6004	Proposed 8" to Existing 8" Connection	1	LS	$7,122.00	$7,122.00
5006	ABANDON AND GROUT FILL EXISTING MAIN	3,270	LF	$10.00	$32,700.00
5007	COMPACTED AGGREGATE, NO. 53S	3,010	LF	$9.00	$27,090.00
5021	HOT MIX ASPHALT BASE	3,010	LF	$28.00	$84,280.00
5023	HOT MIX ASPHALT SURFACE	3,010	LF	$12.00	$36,120.00
NON-STANDARD PAY ITEMS					
--					
--					
--					

STANDARD LUMP SUM PAY ITEMS				
DESCRIPTION	**QUANTITY**	**UNIT**	**%**	**TOTAL PRICE**
Mobilization & Demobilization (4% - 5%)	1	LS	5.0%	$27,700.00
Construction Engineering (2% - 3%)	1	LS	3.0%	$16,600.00
Clearing & Grubbing (0.5% - 1.5%)	1	LS	1.0%	$5,600.00
Erosion Control Devices (1% - 2%)	1	LS	2.0%	$11,100.00
Maintenance of Traffic (3% - 4%)	1	LS	4.0%	$22,200.00
Restoration, Grading, and Seeding (2% - 3%)	1	LS	3.0%	$16,600.00

CONSTRUCTION COST SUBTOTAL = $652,528.00

CONTINGENCY (30%) = $195,800.00

TOTAL ESTIMATED CONSTRUCTION COST, SCOPING REPORT = $849,000.00

NON-CONSTRUCTION COSTS

DESCRIPTION	QUANTITY	UNIT	%	TOTAL PRICE
Engineering Program Management Fees (estimated)	1	LS	3.0%	$25,500.00
Engineering Design Fees (estimated)	1	LS	10.0%	$84,900.00
Engineering Construction Engineering Fees (estimated)	1	LS	9.6%	$81,600.00

NON-CONSTRUCTION COSTS SUBTOTAL = $192,000.00

TOTAL ESTIMATED CAPITAL COST, SCOPING REPORT = $1,041,000.00

POPLAR GROVE NEIGHBORHOOD, WEST OF ADDISON WATER MAIN REPLACEMENT SCOPING REPORT

2022 WATER RATE CASE

refresh EVANSVILLE

December 2020
Last Revision January 2021

PREPARED FOR

Evansville Water & Sewer Utility
1 SE 9th Street
Suite 200
Evansville, IN 47708
Phone: (812) 421-2120
Contact: Michael Labitkze, P.E.

PREPARED BY

HNTB Corporation
111 Monument Circle
Suite 1200
Indianapolis, IN 46204
Phone: (317) 636-4682
Contact: Jason Hoff, P.E.

HNTB

POPLAR GROVE NEIGHBORHOOD, WEST OF ADDISON WATER MAIN REPLACEMENT SCOPING REPORT

1. Project Summary

The proposed Poplar Grove Neighborhood, West of Addison Water Main Replacement Project includes the replacement of approximately 4,680 feet of water main. The project is expected to include eight (8) fire hydrants, fifteen (15) gate valves, three (3) automatic flushing device, and seventy-two (72) service connections. Approximately 4,990 feet of existing water main will be abandoned and filled with grout. Two (2) existing parallel water mains will be replaced by one (1) water main so that only 4,680 feet of water main is proposed.

1.1. Project Limits

The project scope includes replacement of existing water mains along Ingle Avenue from Marion Avenue to Hillcrest Terrace, Addison Avenue from Austin Avenue to Forest Avenue, Marion Avenue from Ingle Avenue to Addison Avenue, and Edgewood Drive and Hillcrest Terrace west of Addison Avenue. The proposed project and potential alignment for proposed water mains are shown in **Figure 1**. Actual horizontal and vertical alignment will be determined during final design based on surveyed locations of existing utilities in the project area.

1.2. Project Drivers

The existing water mains within the proposed project limits have replacement prioritization scores ranging from 130 to 295. The average score weighted by length for the existing water mains is 223.

This project had a high replacement rating due to a high likelihood of failure criteria score from this project's high historical rate of failure and short service life remaining. Pipe material and low available fire flow also contributed to this project's high score.

1.3. Project Cost

The total capital cost estimate for the project is $1,955,000. This includes $1,594,000 construction costs and $361,000 non-construction costs. The project costs were estimated using the EWSU Cost Estimating Tool Scoping Report tab. The cost estimate is included at the end of the scoping report.

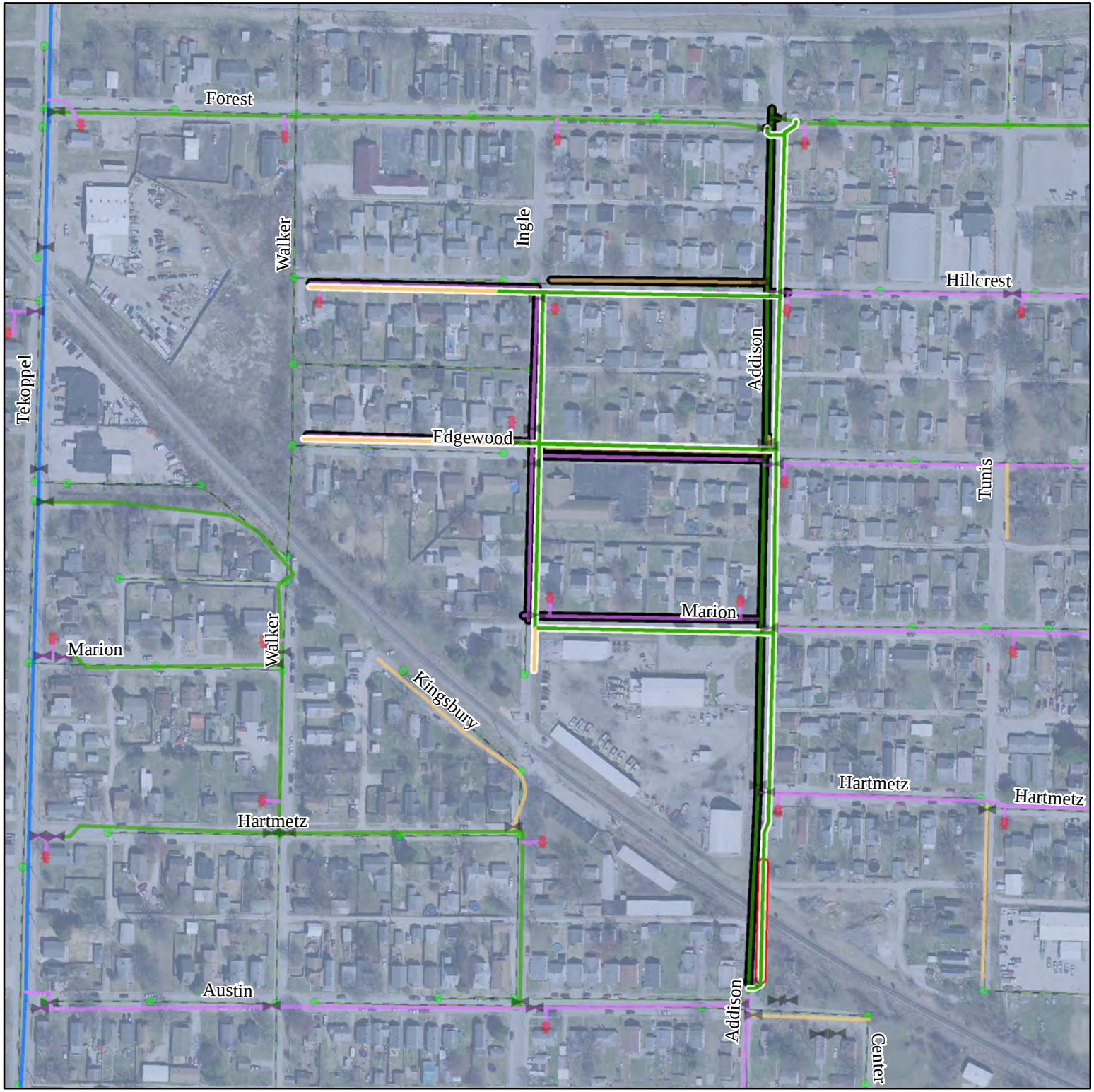


Figure 1
Report No. 12
Poplar Grove Neighborhood, West of Addison

Legend

Proposed Project

- Trenchless Installation
- Main to be Abandoned
- Proposed Main

Water Infrastructure

- Hydrants

Valves

- System Isolation
- System Separation

Mains

- <6"
- 6"
- 8"
- 10"
- 12"
- 16"
- 20"
- 24"
- 30"
- 36"
- 48"
- Private

Pressure Zones

- Central
- Lincoln
- Killian
- Northern

Sanitary Infrastructure

- Manholes
- Sewer

N

Print Date: December 2020

0 250 500 Feet

2. Hydraulic Modeling

The available fire flow within the project limits and surrounding areas were evaluated using the WaterGEMS distribution system model under maximum day demands of 26.7 million gallons per day (MGD) based upon 2019 data. Two (2) alternatives were evaluated for replacement. Alternative 1 includes replacement with all 8-inch diameter water main in the project limits. Alternative 2 includes replacement with all 8-inch diameter water main in the project limits and looping between Hillcrest Terrace and Edgewood Drive.

2.1. Results

The existing available fire flow in the project limits are shown in **Figure 2**. The available fire flow in the project limits for Alternative 1 are shown in **Figure 3**. The available fire flow in the project limits for Alternative 2 are shown in **Figure 4**.

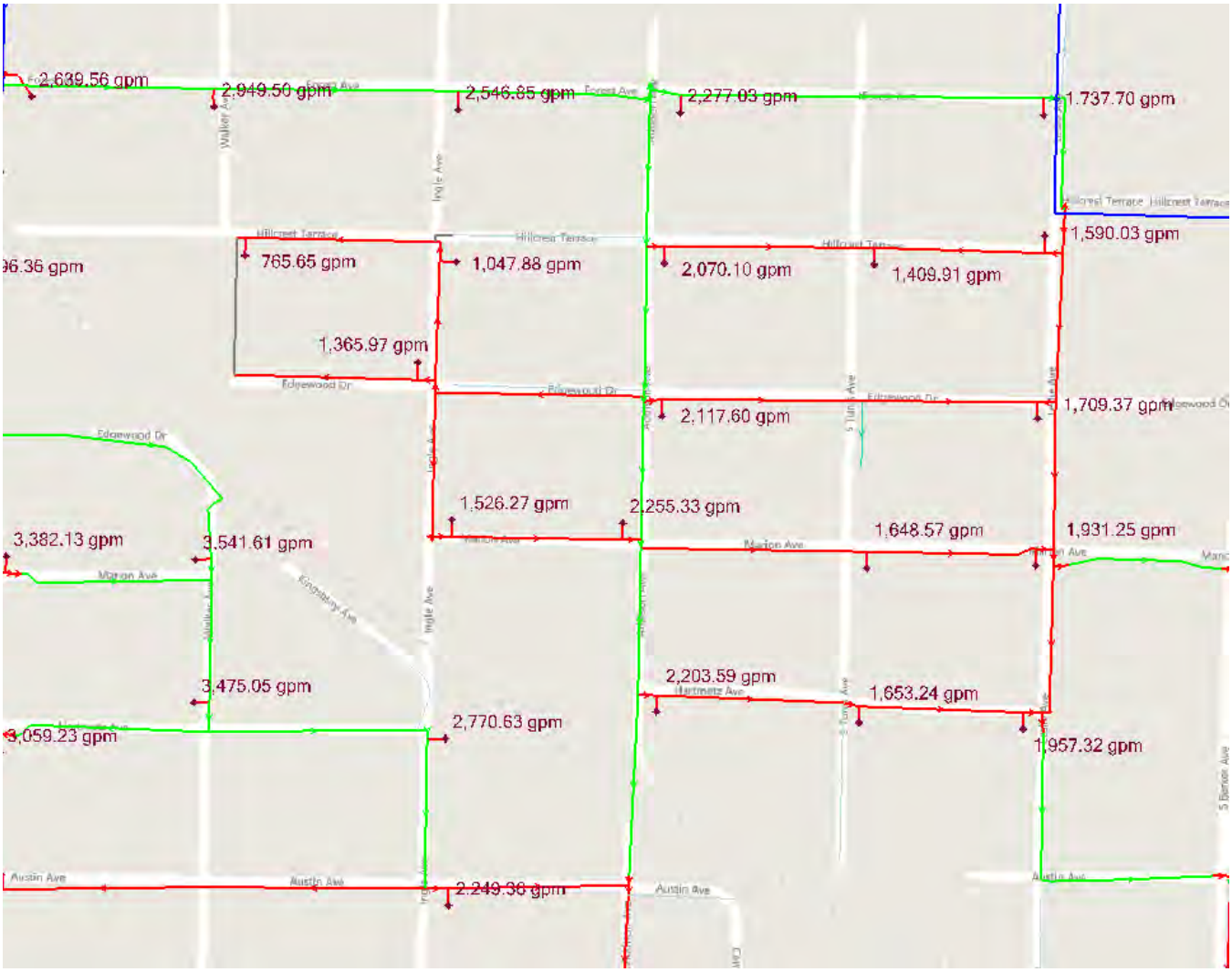


Figure 2. Existing Available Fire Flow

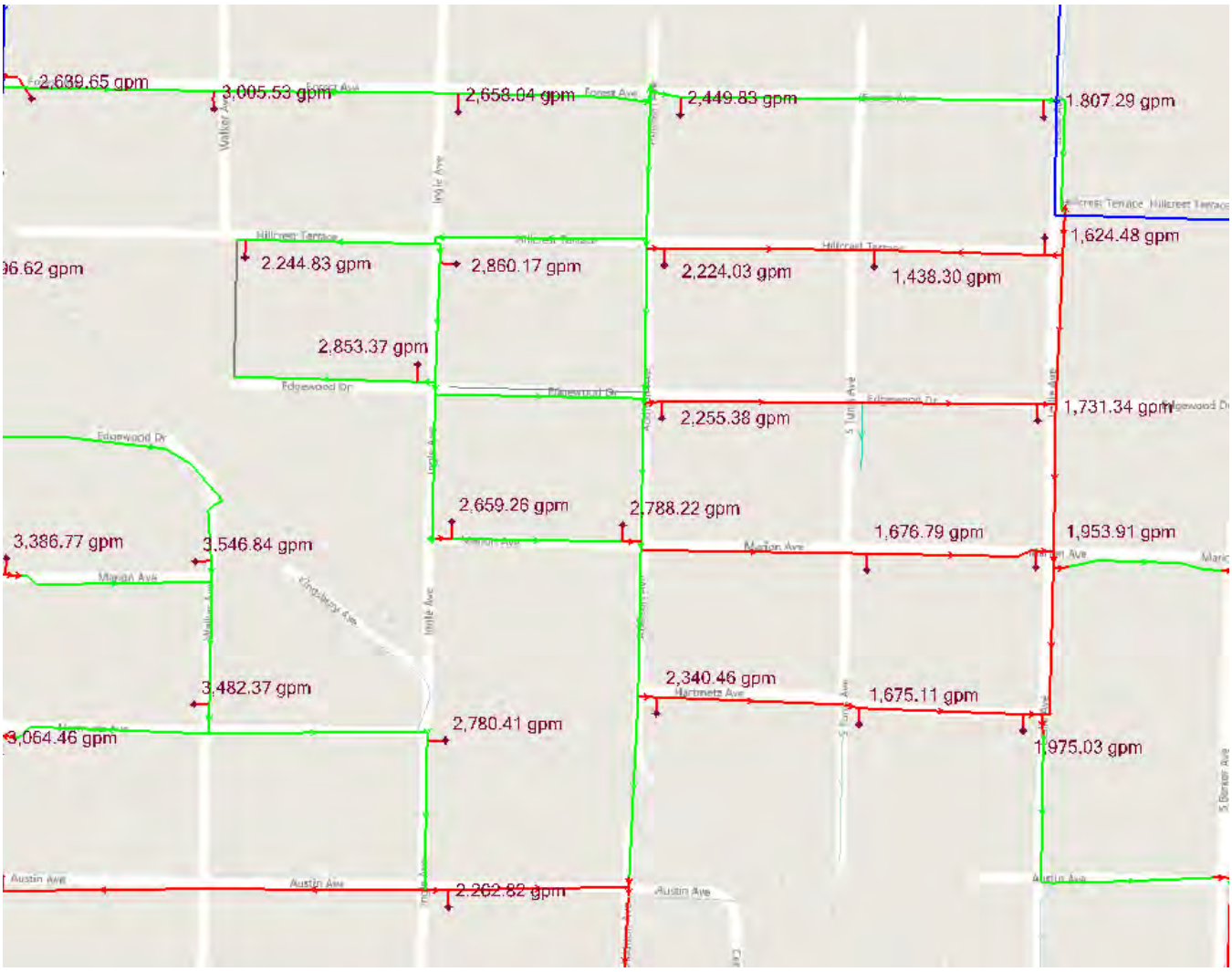


Figure 3. Alternative 1 Available Fire Flow

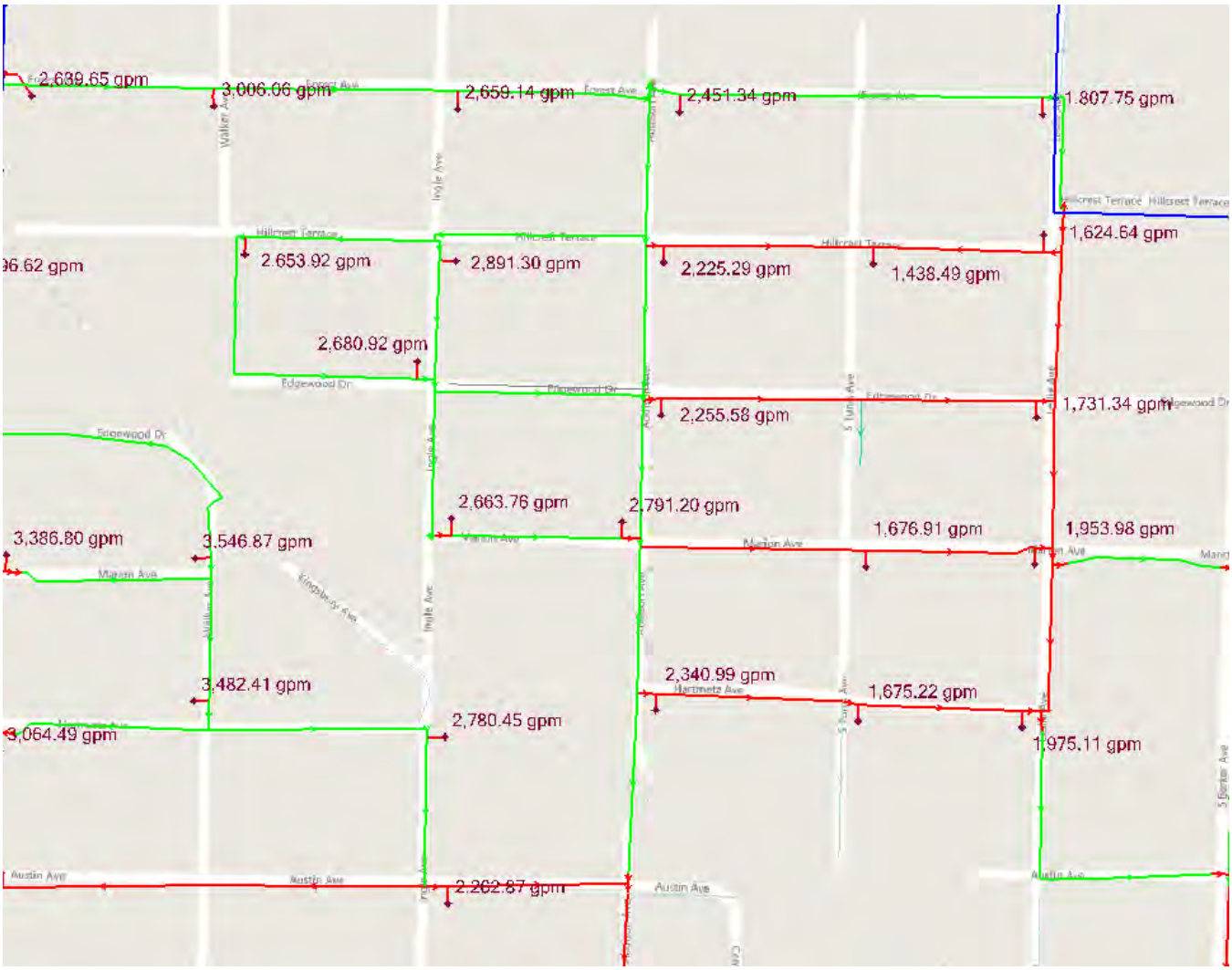


Figure 4. Alternative 2 Available Fire Flow

2.1. Conclusion

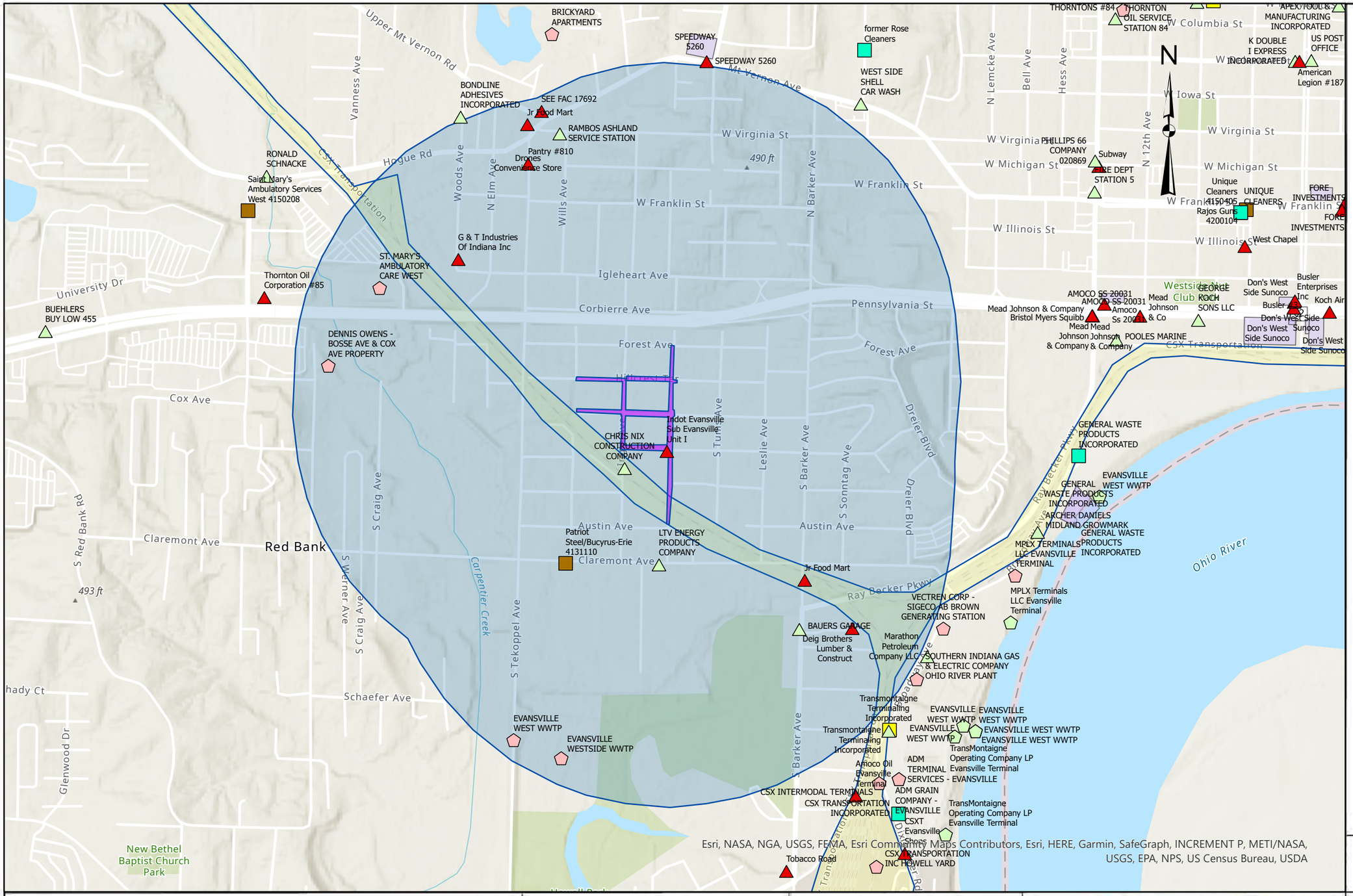
The project area is primarily residential, so the required fire flow is expected to be approximately 1,500 gallons per minute. All alternatives provide adequate pressure and available fire flow, therefore Alternative 1 was selected to minimize project costs.

3. Environmental Assessment

A preliminary environmental assessment was performed within the project limits and surrounding area using IndianaMap and Indiana Department of Transportation (INDOT) Geographical Information Office (GIO) Library to identify sites that may be of concern within one-half mile of the proposed project limits. The assessment of the project limits and surrounding area identified eight (8) potential contaminated sites and eight (8) known contaminated sites as shown in **Figure 5**.

3.1. Site Specific Concerns

The preliminary environmental assessment identified one (1) known contaminated site with close proximity to the project. This one (1) known contaminated site includes one (1) leaking underground storage tank site.



LEGEND

KNOWN CONTAMINATED SITES

- BROWNFIELD SITE
- CLEANUP SITE
- CONFINED FEEDING OPERATION
- SUPERFUND SITE
- LEAKING UNDERGROUND STORAGE TANK SITE
- VOLUNTARY REMEDIATION PROGRAM SITE
- INSTITUTIONAL CONTROL SITE
- JACOBSVILLE SUPERFUND SITE BOUNDARY
- WASTE COAL COMBUSTION IMPOUNDMENT

POTENTIAL CONTAMINATED SITES

- ELECTRONIC RECYCLING FACILITY
- MANUFACTURED GAS PLANT
- NPDES FACILITY
- NPDES PIPE LOCATION
- SEPTAGE WASTE SITE
- SOLID WASTE DISPOSAL/PROCESSING FACILITY
- UNDERGROUND STORAGE TANK SITE
- WASTE TIRE SITE
- RAILROAD
- SOLID WASTE LANDFILL

PROJECT INFORMATION

- HALF MILE RADIUS
- PROPOSED PROJECT LIMITS

Figure 5

0 SCALE 0.25
Miles

TITLE: Poplar Grove Neighborhood Hazardous Materials Concerns

LOCATION: Poplar Grove Neighborhood,
West of Addison,
Evansville, IN
X: 87.6150304
Y: 37.9751167

PREPARED FOR:

EVANSVILLE WATER & SEWER DEPARTMENT
REFRESH PROGRAM
1 NW MARTIN LUTHER KING JR BLVD
EVANSVILLE, INDIANA 47708

DELIVERED TO:

HNTB CORPORATION
111 MONUMENT CIRCLE,
SUITE 1200
INDIANAPOLIS, INDIANA 46204

CRANE ENVIRONMENTAL SERVICES, LLC
MAIN OFFICE:
4209 HIGHWAY 41 NORTH, SUITE 24,EVANSVILLE, INDIANA 47711
INDIANAPOLIS OFFICE:
6745 S GRAY ROAD, SUITE I,INDIANAPOLIS, IN 46237

CRANE PROJECT NO.120-0108F

DATE: 11/6/2020

refresh EVANSVILLE

Scoping Report

Project Capital Cost Estimate

Poplar Grove Neighborhood, West of Addison Water Main Replacement

Report #: 12

CONSTRUCTION COSTS

ITEM ID	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL PRICE
STANDARD PAY ITEMS					
1083	8" PVC C900 PIPE	3,670	LF	$86.00	$315,620.00
1089	8" DUCTILE IRON PIPE	210	LF	$145.00	$30,450.00
1140	12" STEEL CASING PIPE	210	LF	$150.00	$31,500.00
1096	8" SOLID SLEEVE	2	EA	$394.00	$788.00
1081	4" PVC C900 PIPE	790	LF	$67.00	$52,930.00
1026	8" MJ GATE VALVE	12	EA	$1,645.00	$19,740.00
1024	4" MJ GATE VALVE	3	EA	$1,061.00	$3,183.00
1013	8" MJ 45° BEND	46	EA	$441.00	$20,286.00
1036	8" MJ TEE	7	EA	$679.00	$4,753.00
1034	8"x4" MJ TEE	1	EA	$497.00	$497.00
1078	8"X4" MJ REDUCER	2	EA	$384.00	$768.00
1119	FIRE HYDRANT ASSEMBLY WITH GATE VALVE	8	EA	$5,814.00	$46,512.00
1126	AUTOMATIC FLUSH DEVICE WITH GATE VALVE (9400)	3	EA	$5,212.00	$15,636.00
1132	3/4"-1" WATER SERVICE RELOCATION, OPEN CUT	72	EA	$1,682.00	$121,104.00
6004	Proposed 8" to Existing 8" Connection	2	LS	$7,122.00	$14,244.00
6003	Proposed 8" to Existing 6" Connection	5	LS	$6,308.00	$31,540.00
5006	ABANDON AND GROUT FILL EXISTING MAIN	4,990	LF	$10.00	$49,900.00
5007	COMPACTED AGGREGATE, NO. 53S	4,680	LF	$9.00	$42,120.00
5021	HOT MIX ASPHALT BASE	4,680	LF	$28.00	$131,040.00
5023	HOT MIX ASPHALT SURFACE	4,680	LF	$12.00	$56,160.00
NON-STANDARD PAY ITEMS					
--	Environmental Remediation Contingency	1	LS	5.0%	$49,500.00
STANDARD LUMP SUM PAY ITEMS					
DESCRIPTION		**QUANTITY**	**UNIT**	**%**	**TOTAL PRICE**
Mobilization & Demobilization (4% - 5%)		1	LS	5.0%	$52,000.00
Construction Engineering (2% - 3%)		1	LS	3.0%	$31,200.00
Clearing & Grubbing (0.5% - 1.5%)		1	LS	1.0%	$10,400.00
Erosion Control Devices (1% - 2%)		1	LS	2.0%	$20,800.00
Maintenance of Traffic (3% - 4%)		1	LS	4.0%	$41,600.00
Restoration, Grading, and Seeding (2% - 3%)		1	LS	3.0%	$31,200.00

CONSTRUCTION COST SUBTOTAL = $1,225,471.00

CONTINGENCY (30%) = $367,700.00

TOTAL ESTIMATED CONSTRUCTION COST, SCOPING REPORT = $1,594,000.00

NON-CONSTRUCTION COSTS

DESCRIPTION	QUANTITY	UNIT	%	TOTAL PRICE
Engineering Program Management Fees (estimated)	1	LS	3.0%	$47,900.00
Engineering Design Fees (estimated)	1	LS	10.0%	$159,400.00
Engineering Construction Engineering Fees (estimated)	1	LS	9.6%	$153,100.00

NON-CONSTRUCTION COST SUBTOTAL = $361,000.00

TOTAL ESTIMATED CAPITAL COST, SCOPING REPORT = $1,955,000.00

MOUNT VERNON ROAD, VANNESS AVENUE TO HARMONY WAY WATER MAIN REPLACEMENT SCOPING REPORT

2022 WATER RATE CASE

December 2020
Last Revision January 2021

PREPARED FOR

Evansville Water & Sewer Utility
1 SE 9th Street
Suite 200
Evansville, IN 47708
Phone: (812) 421-2120
Contact: Michael Labitkze, P.E.

PREPARED BY

HNTB Corporation
111 Monument Circle
Suite 1200
Indianapolis, IN 46204
Phone: (317) 636-4682
Contact: Jason Hoff, P.E.

MOUNT VERNON ROAD, VANNESS AVENUE TO HARMONY WAY WATER MAIN REPLACEMENT SCOPING REPORT

1. Project Summary

The proposed Mount Vernon Road, Vanness Avenue to Harmony Way Water Main Replacement Project includes the replacement of approximately 9,630 feet of water main. The project is expected to include approximately sixteen (16) fire hydrants, nine (9) gate valves, five (5) butterfly valves, seven (7) automatic flushing device, and 113 service connections. Approximately 13,090 feet of existing water main will be abandoned and filled with grout. Two (2) existing parallel water mains will be replaced by one (1) water main so that only 9,630 feet of water main is proposed.

This proposed project was included in Preliminary Engineering Report B (PER B) in May 2019. Approximately 1,950 feet of proposed water main was removed from the project extents along Upper Mount Vernon Road, Franklin Street, and Rheinlander Avenue as the main was low scoring based on the 2020 distribution system scoring.

1.1. Project Limits

The project scope includes replacement of existing water mains along Upper Mount Vernon Road from Vanness Avenue to Harmony Way, Hogue Road from Upper Mount Vernon Road to N Tekoppel Avenue, Keymeyer Avenue, Rheinlander Avenue north of Martin Avenue, Martin Avenue east of Varner Avenue, N Barker Avenue south of W Maryland Street, W Delaware Street, Georgette Street, and W Columbia Street. The proposed project and potential alignment for proposed water mains are shown in **Figure 1**. Actual horizontal and vertical alignment will be determined during final design based on surveyed locations of existing utilities in the project area.

1.2. Project Drivers

The existing water mains within the proposed project limits have replacement prioritization scores ranging from 155 to 285. The average score weighted by length for the existing water mains is 201.

This project had a high replacement rating due to a high likelihood of failure criteria score from this project's short service life remaining and high operating pressure. This project also had a high consequence of failure score due to its location along Mount Vernon Road, a minor arterial. Pipe material and low available fire flow also contributed to this project's high score.

1.3. Project Cost

The total capital cost estimate for the project is $4,127,000. This includes $3,366,000 construction costs and $761,000 non-construction costs. The project costs were estimated using the EWSU Cost Estimating Tool Scoping Report tab. The cost estimate is included at the end of the scoping report.

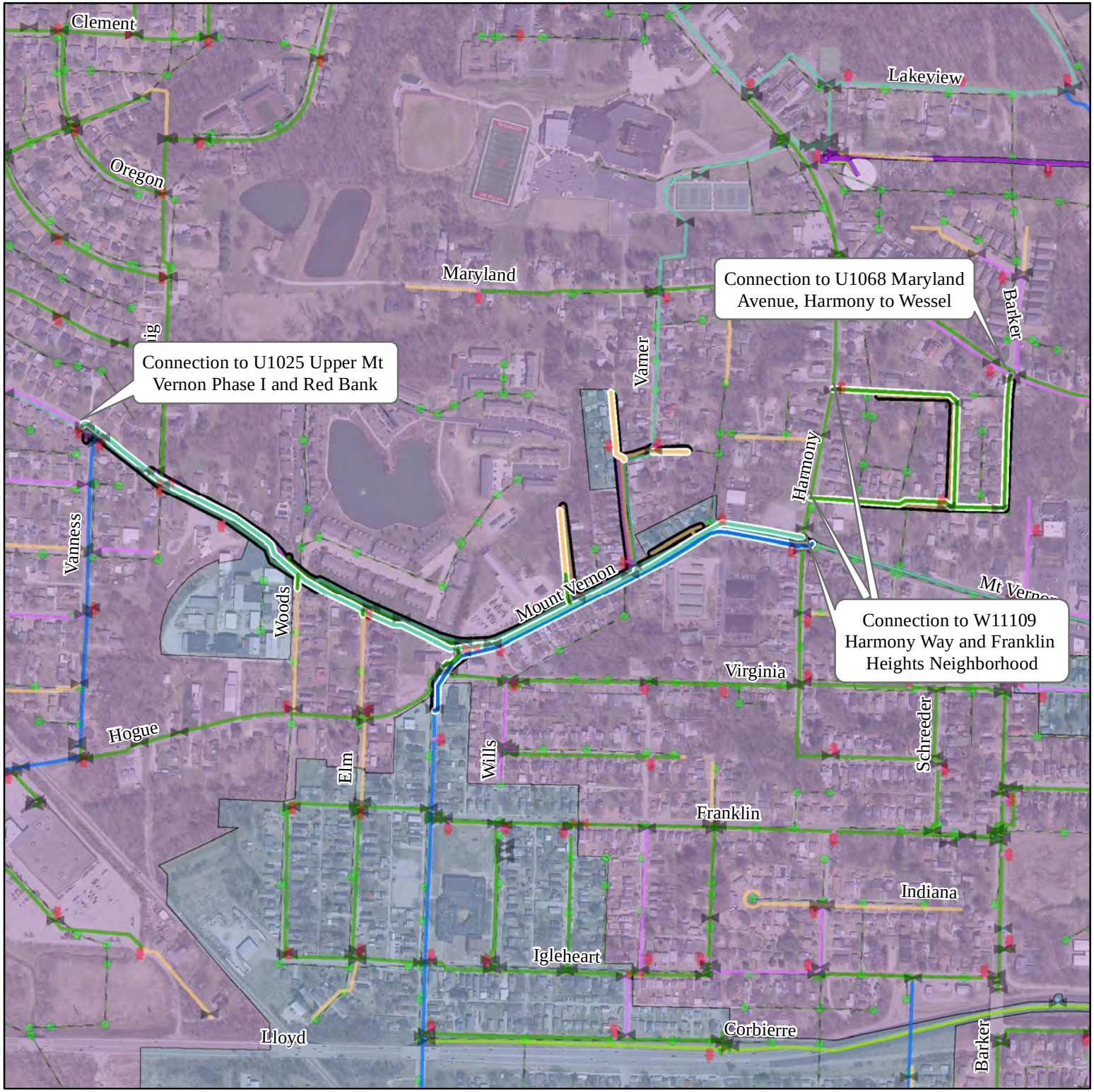


Figure 1
Report No. 16
Mount Vernon Road, Vanness Avenue to Harmony Way

Legend

Proposed Project

- Trenchless Installation
- Main to be Abandoned
- Proposed Main

Water Infrastructure

- Hydrants

Valves

- System Isolation
- System Separation

Mains

- <6"
- 6"
- 8"
- 10"
- 12"
- 16"
- 20"
- 24"
- 30"
- 36"
- 48"
- Private

Pressure Zones

- Central
- Lincoln
- Killian
- Northern

Sanitary Infrastructure

- Manholes
- Sewer

N

Print Date: December 2020

0 600 1,200 Feet

2. Hydraulic Modeling

The available fire flow and static pressure within the project limits and surrounding areas were evaluated using the WaterGEMS distribution system model under maximum day demands of 26.7 million gallons per day (MGD) based upon 2019 data. Two (2) alternatives were evaluated for replacement. Alternative 1 included replacement with 16-inch low pressure main on the south side of Upper Mount Vernon Road, connecting to Harmony Way and south of West Virginia Street. Alternative 2 included replacement with 12-inch low pressure water main along the south side of Upper Mount Vernon Road connecting to Harmony Way and south of West Virginia Street. Both alternatives include changing the main on Rheinlander to the Killian pressure zone, installing 8-inch main on Columbia Street, Georgette Street, Delaware Street, Martin Avenue, Rheinlander Avenue, and Kleymeyer Avenue, and installing 16-inch high pressure main on the north side of Upper Mount Vernon Road, connecting to Harmony Way, Hogue Road, and Van Ness Avenue. Both alternatives also include connections with 8-inch main to Columbia Street, Delaware Street, Elm Avenue, and Woods Avenue.

2.1. Results

The existing available fire flow and static pressure in the project limits are shown in **Figure 2**. The available fire flow and static pressure in the project limits for Alternative 1 are shown in **Figure 3**. The available fire flow and static pressure in the project limits for Alternative 2 are shown in **Figure 4**.

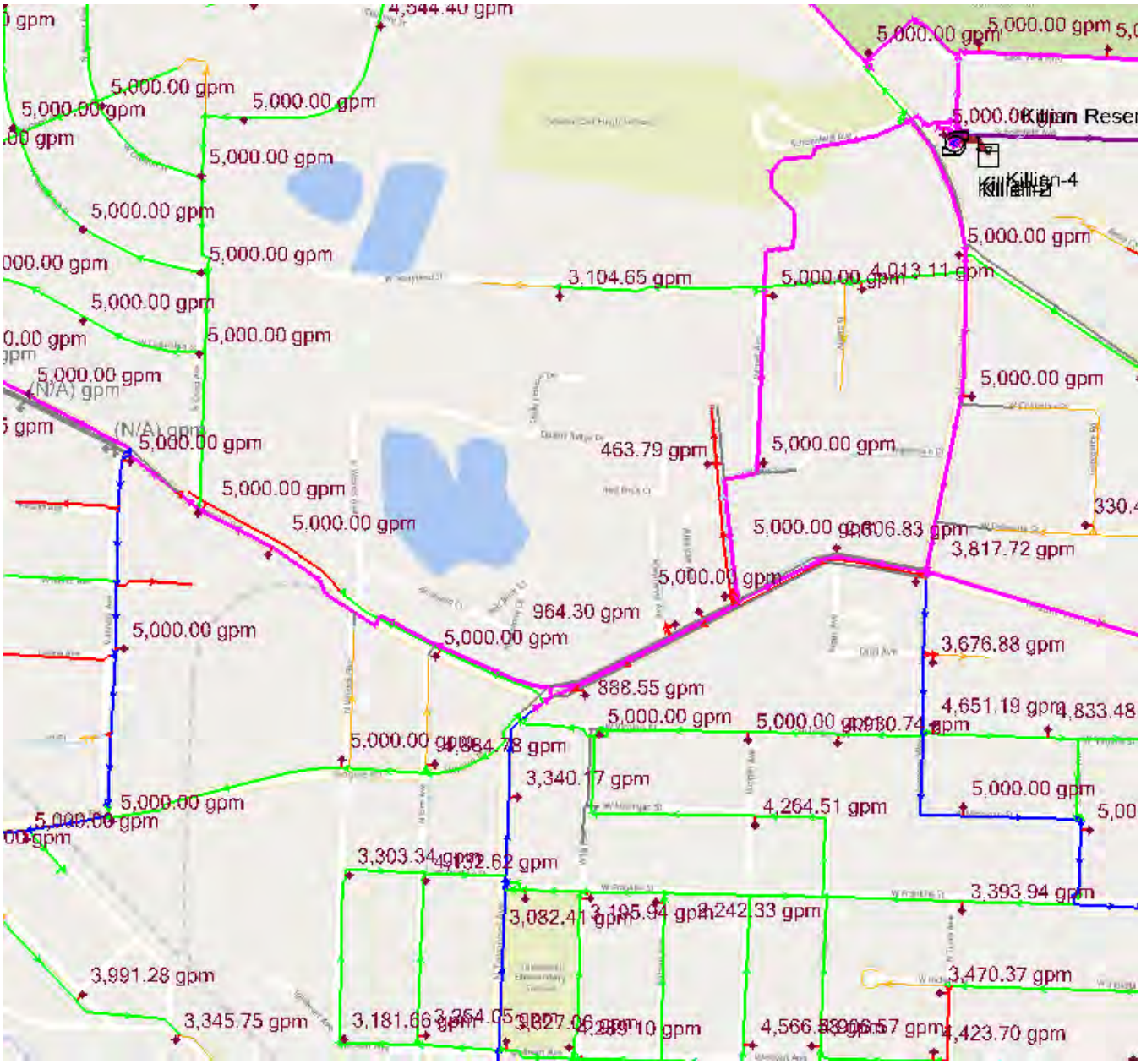


Figure 2. Existing Available Fire Flow and Static Pressure

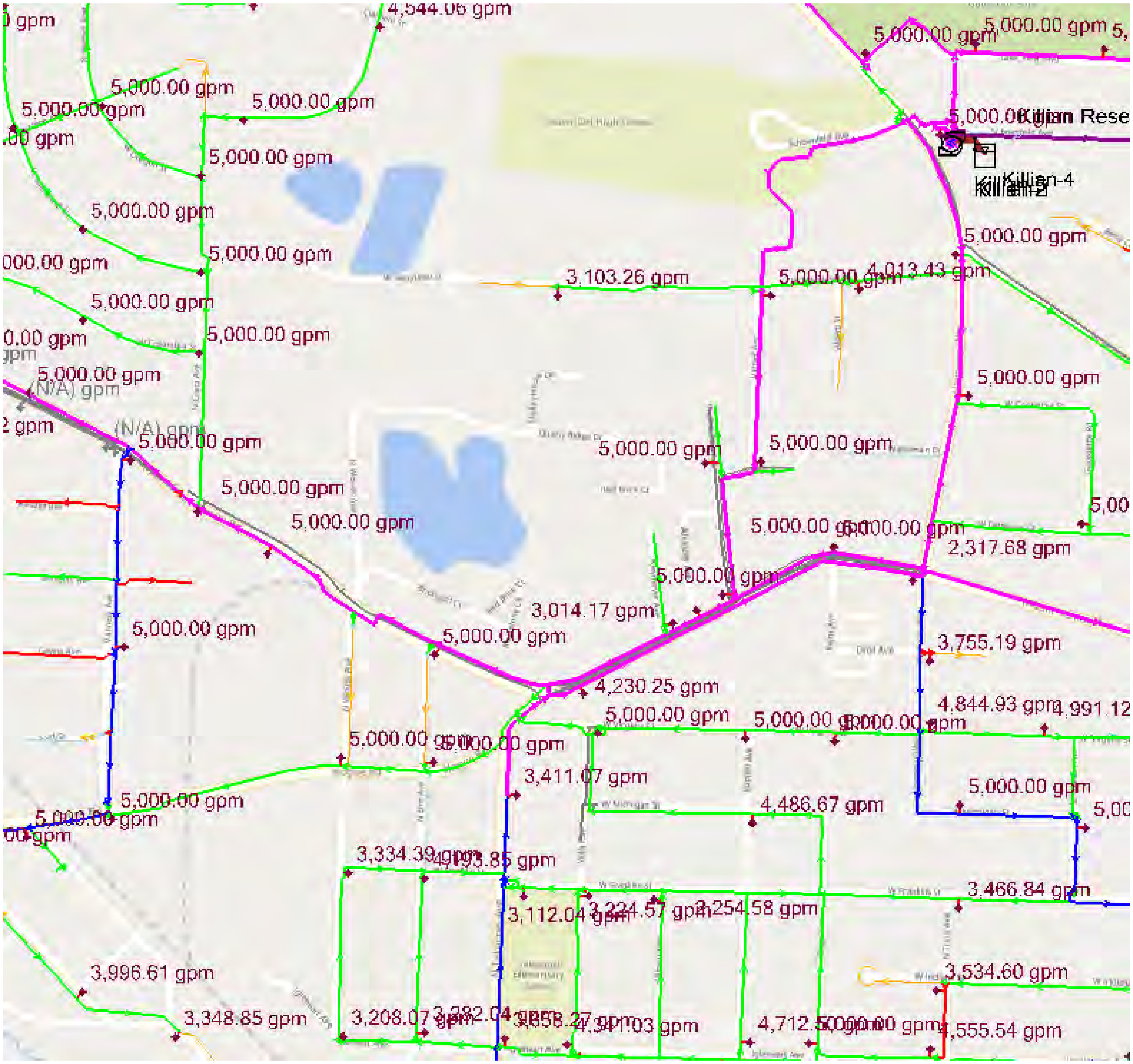


Figure 3. Alternative 1 Available Fire Flow and Static Pressure

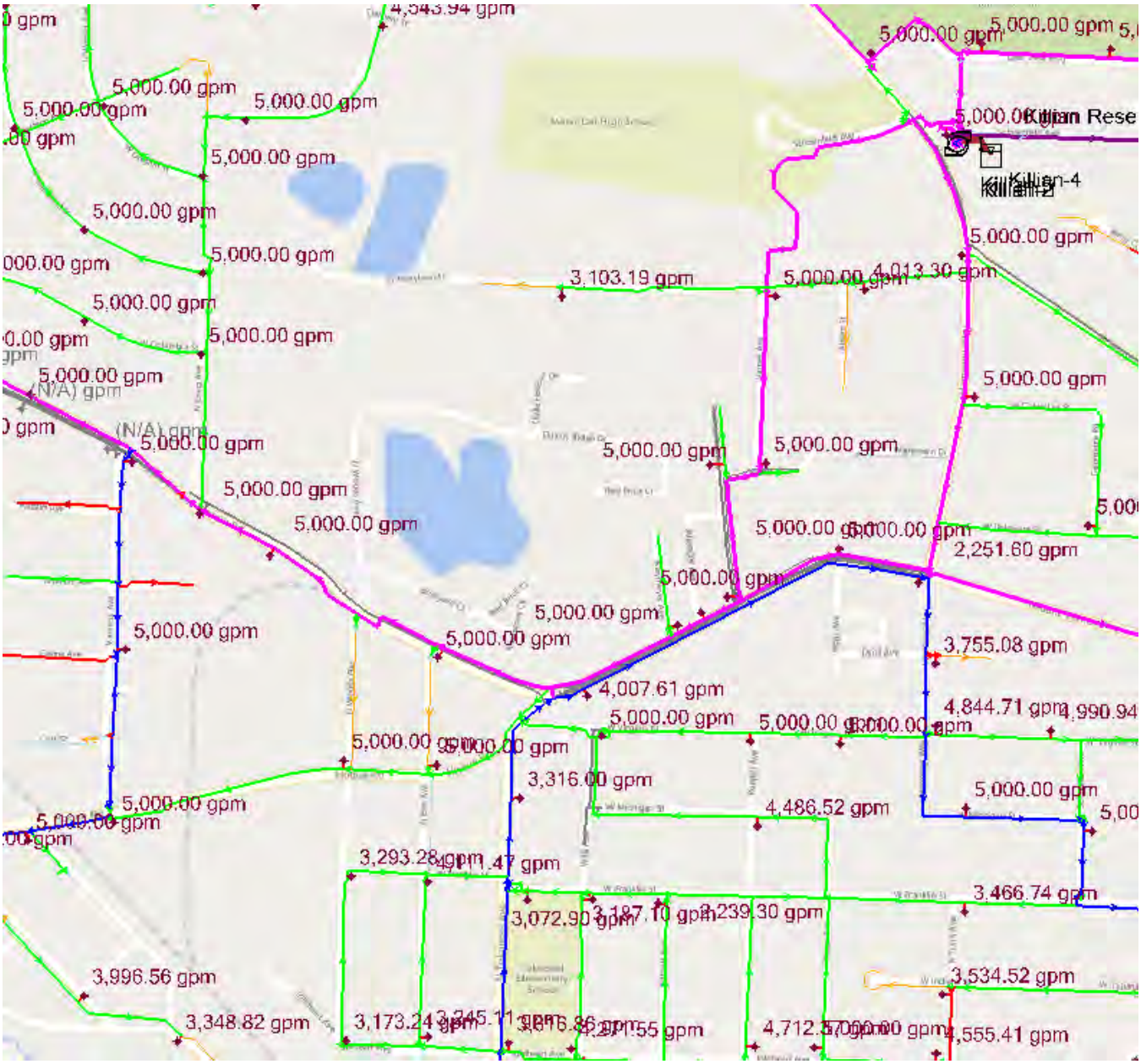


Figure 4. Alternative 2 Available Fire Flow and Static Pressure

2.1. Conclusion

The project area is primarily residential with some commercial, so the required fire flow is expected to be approximately 2,000 gallons per minute. All alternatives provide adequate pressure and available fire flow, therefore Alternative 2 was selected to minimize project costs.

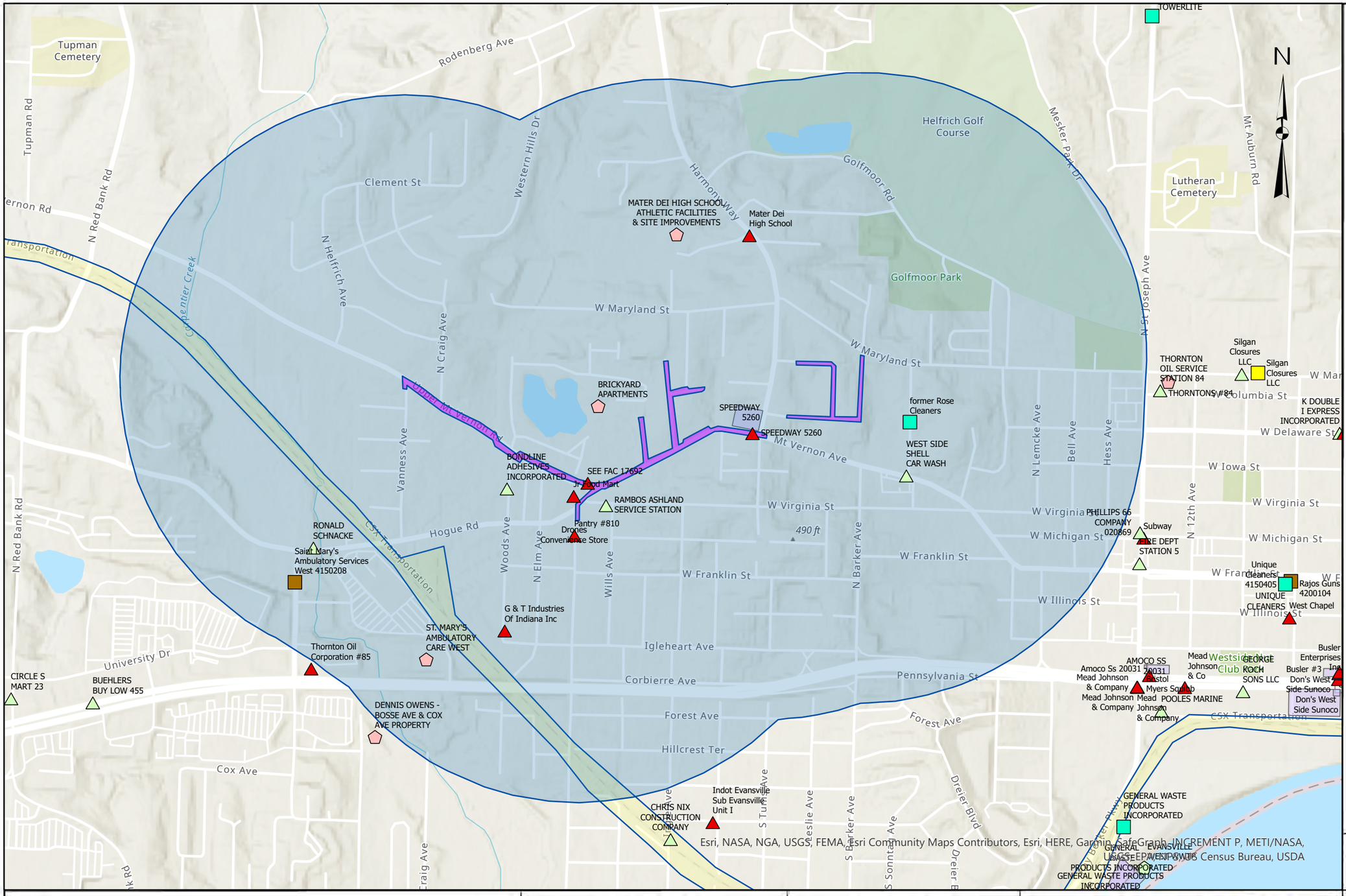
3. Environmental Assessment

A preliminary environmental assessment was performed within the project limits and surrounding area using IndianaMap and Indiana Department of Transportation (INDOT) Geographical Information Office (GIO)

Library to identify sites that may be of concern within one-half mile of the proposed project limits. The assessment of the project limits and surrounding area identified seven (7) potential contaminated sites and eight (8) known contaminated sites as shown in **Figure 5**.

3.1. Site Specific Concerns

The preliminary environmental assessment identified four (4) known contaminated sites with close proximity to the project. These four (4) known contaminated sites include three (3) leaking underground storage tank sites and one (1) institutional control site.



LEGEND

KNOWN CONTAMINATED SITES

- BROWNFIELD SITE
- CLEANUP SITE
- CONFINED FEEDING OPERATION
- SUPERFUND SITE
- LEAKING UNDERGROUND STORAGE TANK SITE
- VOLUNTARY REMEDIATION PROGRAM SITE
- INSTITUTIONAL CONTROL SITE
- JACOBSVILLE SUPERFUND SITE BOUNDARY
- WASTE COAL COMBUSTION IMPOUNDMENT

POTENTIAL CONTAMINATED SITES

- ELECTRONIC RECYCLING FACILITY
- MANUFACTURED GAS PLANT
- NPDES FACILITY
- NPDES PIPE LOCATION
- SEPTAGE WASTE SITE
- SOLID WASTE DISPOSAL/PROCESSING FACILITY
- UNDERGROUND STORAGE TANK SITE
- WASTE TIRE SITE
- RAILROAD
- SOLID WASTE LANDFILL

PROJECT INFORMATION

- HALF MILE RADIUS
- PROPOSED PROJECT LIMITS

Figure 5

0 SCALE 0.25
Miles

TITLE: Mount Vernon Road Hazardous Materials Concerns

LOCATION: Mount Vernon Road,
Vanness Avenue to Harmony Way,
Evansville, IN
X: 87.6173747
Y: 37.9830146

PREPARED FOR:

EVANSVILLE WATER & SEWER DEPARTMENT
REFRESH PROGRAM
1 NW MARTIN LUTHER KING JR BLVD
EVANSVILLE, INDIANA 47708

DELIVERED TO:

HNTB CORPORATION
111 MONUMENT CIRCLE,
SUITE 1200
INDIANAPOLIS, INDIANA 46204

CRANE ENVIRONMENTAL SERVICES, LLC
MAIN OFFICE:
4209 HIGHWAY 41 NORTH, SUITE 24,EVANSVILLE, INDIANA 47711
INDIANAPOLIS OFFICE:
6745 S GRAY ROAD, SUITE I,INDIANAPOLIS, IN 46237

CRANE PROJECT NO.120-0108X

DATE: 11/6/2020

refresh EVANSVILLE

Scoping Report

Project Capital Cost Estimate

Mount Vernon Road, Vanness Avenue to Harmony Way Water Main Replacement

Report #: 16

CONSTRUCTION COSTS

ITEM ID	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL PRICE
STANDARD PAY ITEMS					
1093	16" DUCTILE IRON PIPE	3,810	LF	$121.00	$461,010.00
1083	8" PVC C900 PIPE	2,970	LF	$86.00	$255,420.00
1085	12" PVC C900 PIPE	2,070	LF	$102.00	$211,140.00
1081	4" PVC C900 PIPE	780	LF	$67.00	$52,260.00
1030	16" MJ BUTTERFLY VALVE	5	EA	$4,171.00	$20,855.00
1026	8" MJ GATE VALVE	5	EA	$1,645.00	$8,225.00
1028	12" MJ GATE VALVE	4	EA	$2,818.00	$11,272.00
1017	16" MJ 45° BEND	43	EA	$1,409.00	$60,587.00
1013	8" MJ 45° BEND	4	EA	$441.00	$1,764.00
1015	12" MJ 45° BEND	8	EA	$765.00	$6,120.00
1047	16"X8" MJ TEE	4	EA	$1,535.00	$6,140.00
1078	8"X4" MJ REDUCER	1	EA	$384.00	$384.00
1119	FIRE HYDRANT ASSEMBLY WITH GATE VALVE	16	EA	$5,814.00	$93,024.00
1126	AUTOMATIC FLUSH DEVICE WITH GATE VALVE (9400)	7	EA	$5,212.00	$36,484.00
1132	3/4"-1" WATER SERVICE RELOCATION, OPEN CUT	110	EA	$1,682.00	$185,020.00
7004	16" Tapping Sleeve & 16" Tapping Valve	2	LS	$9,171.00	$18,342.00
6028	Proposed 16" to Existing 12" Connection	1	LS	$11,434.00	$11,434.00
6012	Proposed 16" to Existing 8" Connection	1	LS	$8,448.00	$8,448.00
6002	Proposed 8" to Existing 4" Connection	2	LS	$5,964.00	$11,928.00
6027	Proposed 12" to Existing 16" Connection	1	LS	$16,024.00	$16,024.00
6026	Proposed 12" to Existing 12" Connection	1	LS	$10,368.00	$10,368.00
5006	ABANDON AND GROUT FILL EXISTING MAIN	13,090	LF	$10.00	$130,900.00
5007	COMPACTED AGGREGATE, NO. 53S	9,630	LF	$9.00	$86,670.00
5021	HOT MIX ASPHALT BASE	9,630	LF	$28.00	$269,640.00
5023	HOT MIX ASPHALT SURFACE	9,630	LF	$12.00	$115,560.00
NON-STANDARD PAY ITEMS					
--	Environmental Remediation Contingency	1	LS	5.0%	$104,500.00
STANDARD LUMP SUM PAY ITEMS					
DESCRIPTION		**QUANTITY**	**UNIT**	**%**	**TOTAL PRICE**
Mobilization & Demobilization (4% - 5%)		1	LS	5.0%	$109,700.00
Construction Engineering (2% - 3%)		1	LS	3.0%	$65,900.00
Clearing & Grubbing (0.5% - 1.5%)		1	LS	1.0%	$22,000.00
Erosion Control Devices (1% - 2%)		1	LS	2.0%	$43,900.00
Maintenance of Traffic (3% - 4%)		1	LS	4.0%	$87,800.00
Restoration, Grading, and Seeding (2% - 3%)		1	LS	3.0%	$65,900.00

CONSTRUCTION COST SUBTOTAL = $2,588,719.00

CONTINGENCY (30%) = $776,700.00

TOTAL ESTIMATED CONSTRUCTION COST, SCOPING REPORT = $3,366,000.00

NON-CONSTRUCTION COSTS

DESCRIPTION	QUANTITY	UNIT	%	TOTAL PRICE
Engineering Program Management Fees (estimated)	1	LS	3.0%	$101,000.00
Engineering Design Fees (estimated)	1	LS	10.0%	$336,600.00
Engineering Construction Engineering Fees (estimated)	1	LS	9.6%	$323,200.00

NON-CONSTRUCTION COST SUBTOTAL = $761,000.00

TOTAL ESTIMATED CAPITAL COST, SCOPING REPORT = $4,127,000.00

INDIANA STREET, ILLINOIS STREET AND FRANKLIN STREET WATER MAIN REPLACEMENT SCOPING REPORT

2022 WATER RATE CASE

December 2020
Last Revision January 2021

PREPARED FOR

Evansville Water & Sewer Utility
1 SE 9th Street
Suite 200
Evansville, IN 47708
Phone: (812) 421-2120
Contact: Michael Labitkze, P.E.

PREPARED BY

HNTB Corporation
111 Monument Circle
Suite 1200
Indianapolis, IN 46204
Phone: (317) 636-4682
Contact: Jason Hoff, P.E.

INDIANA STREET, ILLINOIS STREET AND FRANKLIN STREET WATER MAIN REPLACEMENT SCOPING REPORT

1. Project Summary

The proposed Indiana Street, Illinois Street and Franklin Street Water Main Replacement Project includes the replacement of approximately 3,210 feet of water main. The project is expected to include approximately five (5) fire hydrants, six (6) gate valves, and ninety-six (96) service connections. Approximately 3,350 feet of existing water main will be abandoned and filled with grout.

1.1. Project Limits

The project scope includes replacement of existing water mains along E Indiana Street and E Illinois Street west of N Willow Road, E Franklin Street between N Harlan Avenue and N Willow Road and N Harlan Avenue between E Illinois Street and E Franklin Street. The proposed project and potential alignment for proposed water mains are shown in **Figure 1**. Actual horizontal and vertical alignment will be determined during final design based on surveyed locations of existing utilities in the project area.

1.2. Project Drivers

The existing water mains within the proposed project limits have replacement prioritization scores ranging from 175 to 325. The average score weighted by length for the existing water mains is 224.

This project had a high replacement rating due to a high likelihood of failure criteria score from this project's high historical rate of failure and short service life remaining. Pipe material and low available fire flow also contributed to this project's high score.

1.3. Project Cost

The total capital cost estimate for the project is $1,343,000. This includes $1,095,000 construction costs and $248,000 non-construction costs. The project costs were estimated using the EWSU Cost Estimating Tool Scoping Report tab. The cost estimate is included at the end of the scoping report.

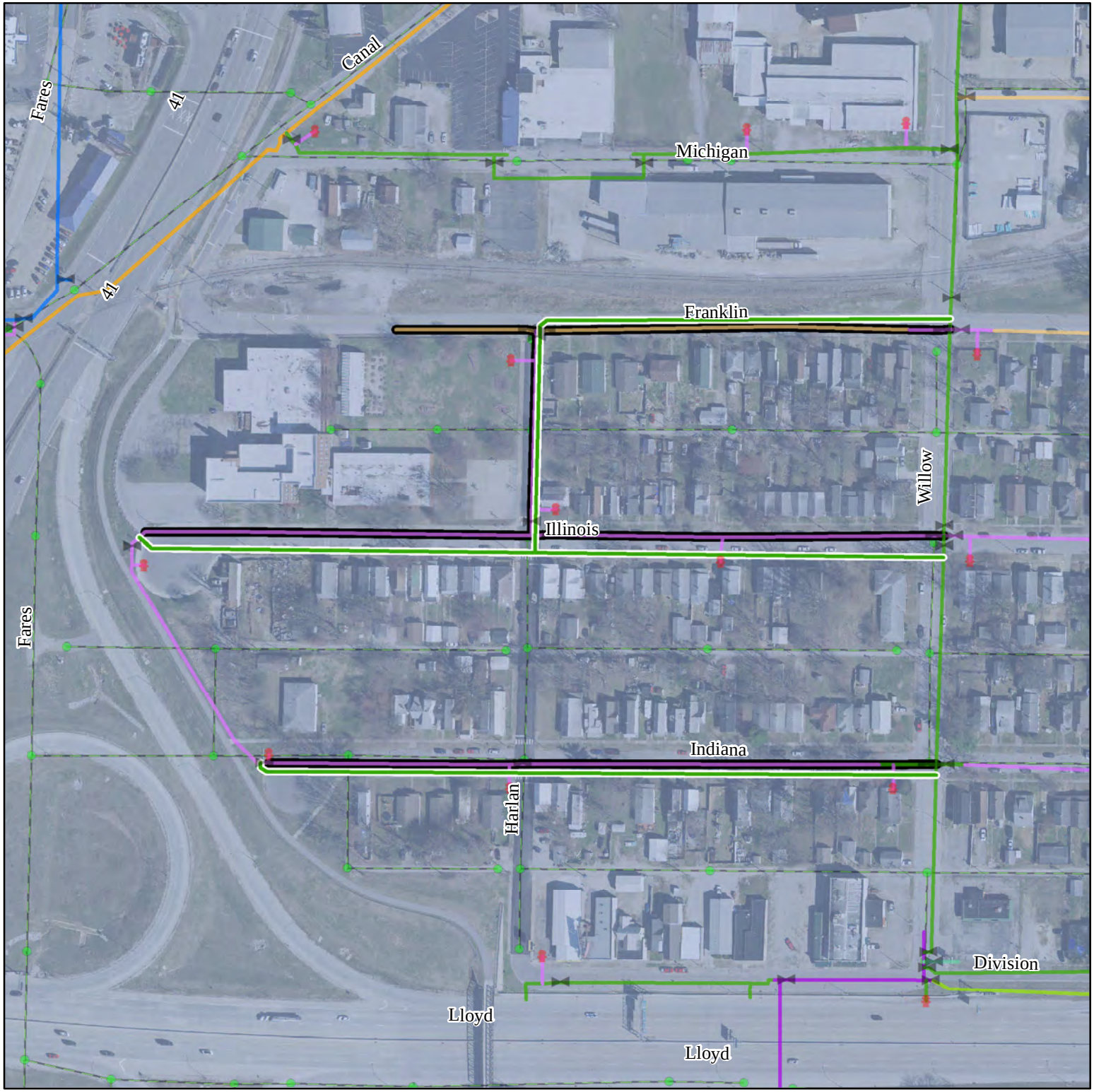


Figure 1
Report No. 17
Indiana Street, Illinois Street, and Franklin Street

Legend

Proposed Project

- Trenchless Installation
- Main to be Abandoned
- Proposed Main

Water Infrastructure

- Hydrants

Valves

- System Isolation
- System Separation

Mains

- <6"
- 6"
- 8"
- 10"
- 12"
- 16"
- 20"
- 24"
- 30"
- 36"
- 48"
- Private

Pressure Zones

- Central
- Killian
- Lincoln
- Northern

Sanitary Infrastructure

- Manholes
- Sewer

N

Print Date: December 2020

0 200 400 Feet

2. Hydraulic Modeling

The available fire flow within the project limits and surrounding areas were evaluated using the WaterGEMS distribution system model under maximum day demands of 26.7 million gallons per day (MGD) based upon 2019 data. Two (2) alternatives were evaluated for replacement. Alternative 1 includes replacement with all 8-inch diameter water main in the project limits. Alternative 2 included replacement with all 8-inch diameter water main in the project limits and a loop connecting Franklin Street and Illinois Street.

2.1. Results

The existing available fire flow in the project limits are shown in **Figure 2**. The available fire flow in the project limits for Alternative 1 are shown in **Figure 3**. The available fire flow in the project limits for Alternative 2 are shown in **Figure 4**.

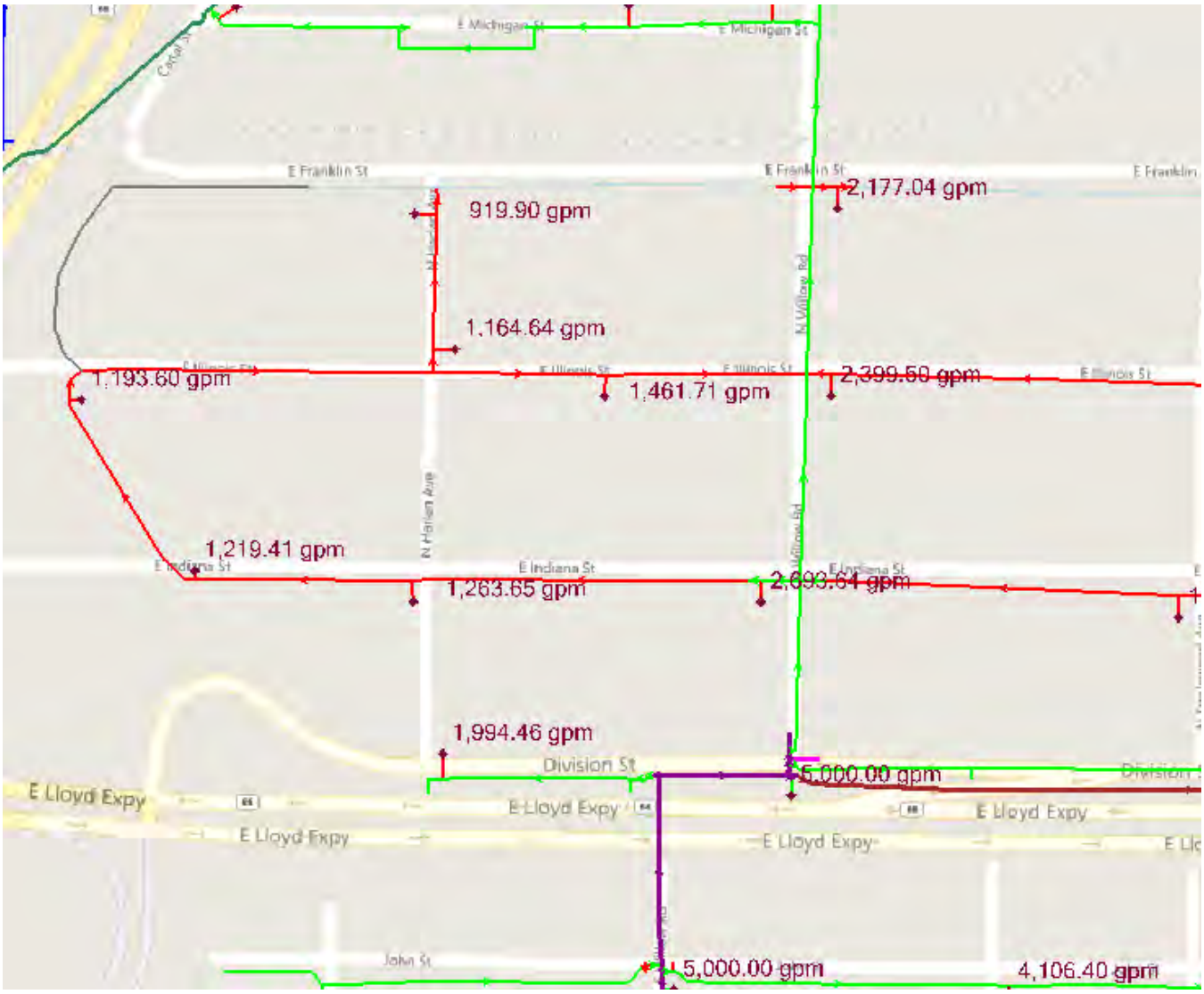


Figure 2. Existing Available Fire Flow

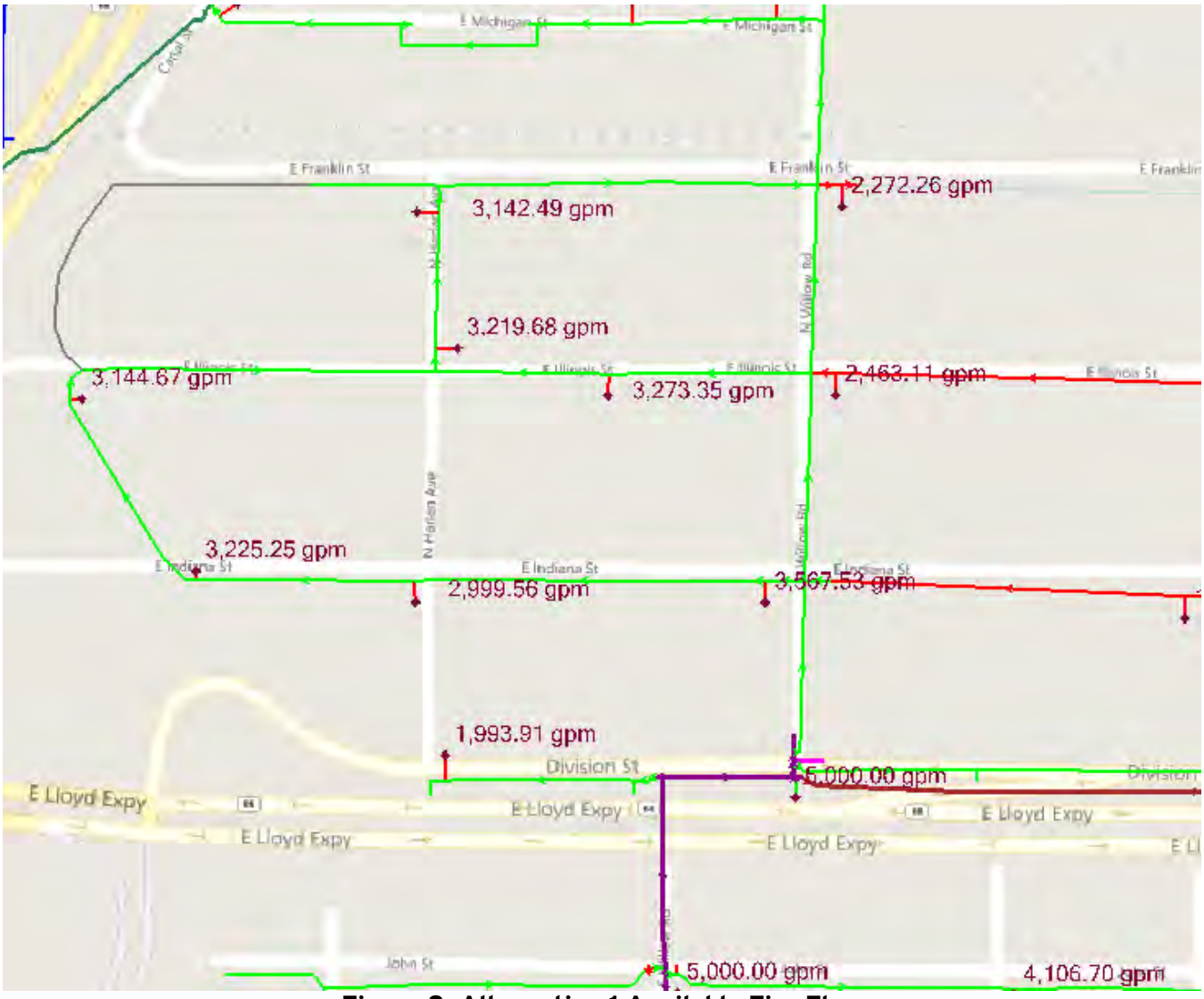


Figure 3. Alternative 1 Available Fire Flow

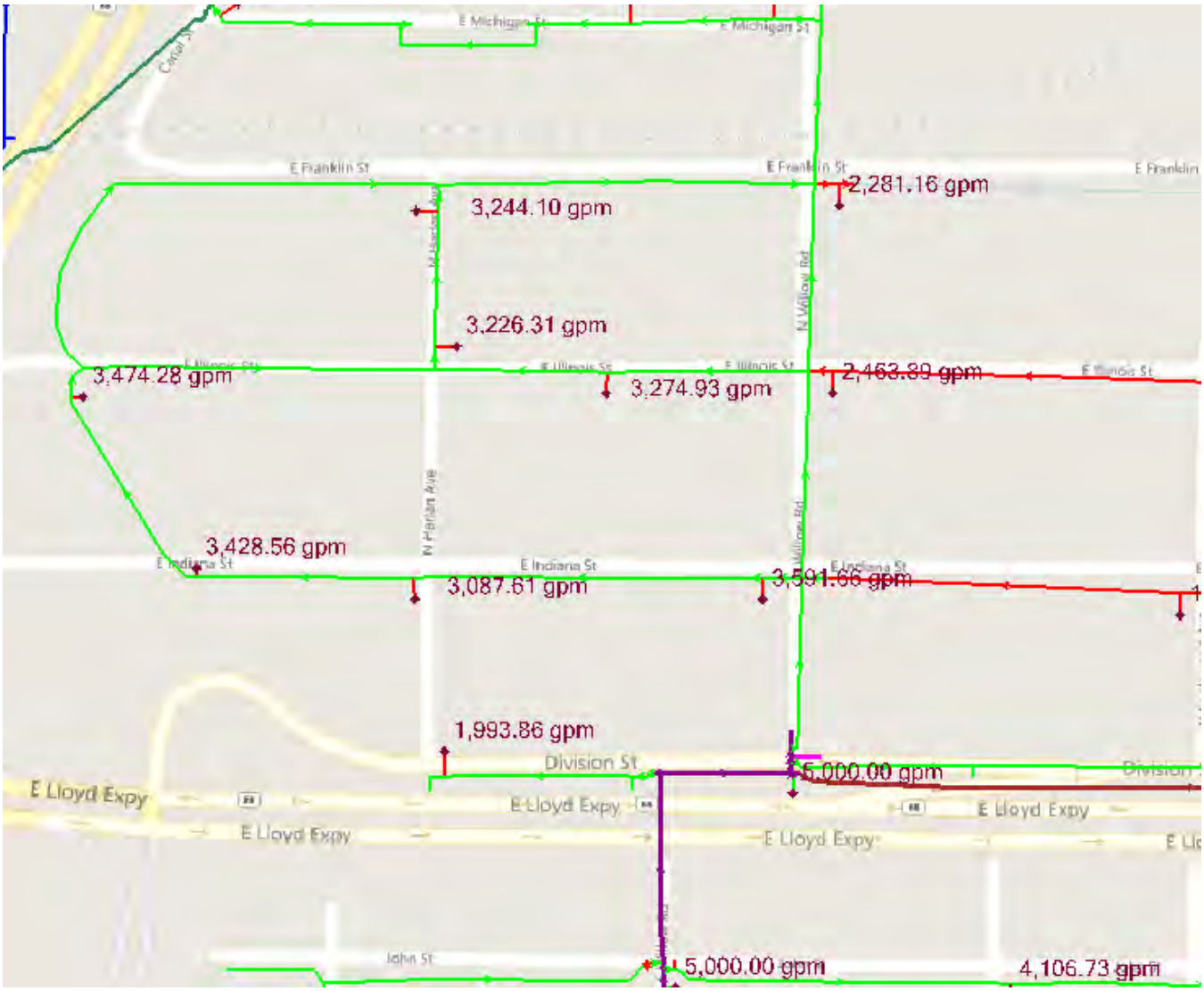


Figure 4. Alternative 2 Available Fire Flow

2.1. Conclusion

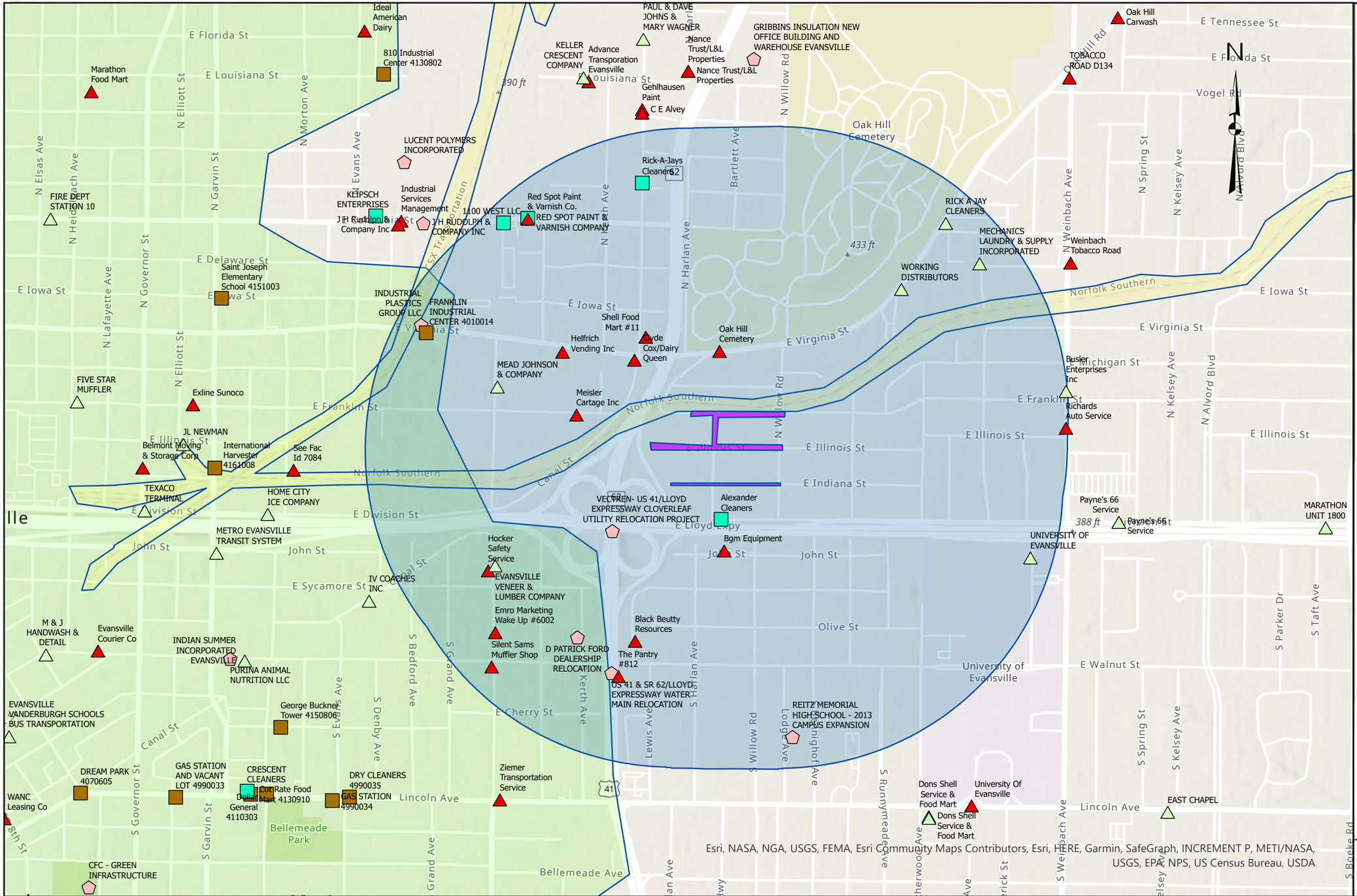
The project area is primarily residential with some commercial, so the required fire flow is expected to be approximately 1,500 gallons per minute to 2,000 gallons per minute. All alternatives provide adequate pressure and available fire flow, therefore Alternative 1 was selected to minimize project costs.

3. Environmental Assessment

A preliminary environmental assessment was performed within the project limits and surrounding area using IndianaMap and Indiana Department of Transportation (INDOT) Geographical Information Office (GIO) Library to identify sites that may be of concern within one-half mile of the proposed project limits. The assessment of the project limits and surrounding area identified twelve (12) potential contaminated sites and eighteen (18) known contaminated sites as shown in **Figure 5**.

3.1. Site Specific Concerns

The preliminary environmental assessment identified zero (0) known contaminated sites with close proximity to the project.



LEGEND

KNOWN CONTAMINATED SITES

- BROWNFIELD SITE
- CLEANUP SITE
- CONFINED FEEDING OPERATION
- SUPERFUND SITE
- LEAKING UNDERGROUND STORAGE TANK SITE
- VOLUNTARY REMEDIATION PROGRAM SITE
- INSTITUTIONAL CONTROL SITE
- JACOBSVILLE SUPERFUND SITE BOUNDARY
- WASTE COAL COMBUSTION IMPOUNDMENT

POTENTIAL CONTAMINATED SITES

- ELECTRONIC RECYCLING FACILITY
- MANUFACTURED GAS PLANT
- NPDES FACILITY
- NPDES PIPE LOCATION
- SEPTAGE WASTE SITE
- SOLID WASTE DISPOSAL/PROCESSING FACILITY
- UNDERGROUND STORAGE TANK SITE
- WASTE TIRE SITE
- RAILROAD
- SOLID WASTE LANDFILL

PROJECT INFORMATION

- HALF MILE RADIUS
- PROPOSED PROJECT LIMITS

Figure 5

0 SCALE 0.25
Miles

TITLE: Indiana, Illinois, and Franklin St. Hazardous Materials Concerns

LOCATION: Indiana, Illinois, and Franklin Street, Evansville, IN

X: 87.5404685
Y: 37.9789493

PREPARED FOR:

EVANSVILLE WATER & SEWER DEPARTMENT
REFRESH PROGRAM
1 NW MARTIN LUTHER KING JR BLVD
EVANSVILLE, INDIANA 47708

DELIVERED TO:

HNTB CORPORATION
111 MONUMENT CIRCLE,
SUITE 1200
INDIANAPOLIS, INDIANA 46204

CRANE ENVIRONMENTAL SERVICES, LLC
MAIN OFFICE:
4209 HIGHWAY 41 NORTH, SUITE 24,EVANSVILLE, INDIANA 47711
INDIANAPOLIS OFFICE:
6745 S GRAY ROAD, SUITE I,INDIANAPOLIS, IN 46237

CRANE PROJECT NO.120-0108C

DATE: 11/6/2020

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Scoping Report

Project Capital Cost Estimate

Indiana Street, Illinois Street and Franklin Street Water Main Replacement

Report #: 17

CONSTRUCTION COSTS

ITEM ID	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL PRICE
STANDARD PAY ITEMS					
1083	8" PVC C900 PIPE	3,210	LF	$86.00	$276,060.00
1026	8" MJ GATE VALVE	6	EA	$1,645.00	$9,870.00
1013	8" MJ 45° BEND	25	EA	$441.00	$11,025.00
1036	8" MJ TEE	1	EA	$679.00	$679.00
1119	FIRE HYDRANT ASSEMBLY WITH GATE VALVE	5	EA	$5,814.00	$29,070.00
1132	3/4"-1" WATER SERVICE RELOCATION, OPEN CUT	96	EA	$1,682.00	$161,472.00
6004	Proposed 8" to Existing 8" Connection	3	LS	$7,122.00	$21,366.00
6003	Proposed 8" to Existing 6" Connection	2	LS	$6,308.00	$12,616.00
5006	ABANDON AND GROUT FILL EXISTING MAIN	3,350	LF	$10.00	$33,500.00
5007	COMPACTED AGGREGATE, NO. 53S	3,210	LF	$9.00	$28,890.00
5021	HOT MIX ASPHALT BASE	3,210	LF	$28.00	$89,880.00
5023	HOT MIX ASPHALT SURFACE	3,210	LF	$12.00	$38,520.00
NON-STANDARD PAY ITEMS					
--					
--					
--					

STANDARD LUMP SUM PAY ITEMS				
DESCRIPTION	**QUANTITY**	**UNIT**	**%**	**TOTAL PRICE**
Mobilization & Demobilization (4% - 5%)	1	LS	5.0%	$35,700.00
Construction Engineering (2% - 3%)	1	LS	3.0%	$21,400.00
Clearing & Grubbing (0.5% - 1.5%)	1	LS	1.0%	$7,200.00
Erosion Control Devices (1% - 2%)	1	LS	2.0%	$14,300.00
Maintenance of Traffic (3% - 4%)	1	LS	4.0%	$28,600.00
Restoration, Grading, and Seeding (2% - 3%)	1	LS	3.0%	$21,400.00

CONSTRUCTION COST SUBTOTAL = $841,548.00

CONTINGENCY (30%) = $252,500.00

TOTAL ESTIMATED CONSTRUCTION COST, SCOPING REPORT = $1,095,000.00

NON-CONSTRUCTION COSTS

DESCRIPTION	QUANTITY	UNIT	%	TOTAL PRICE
Engineering Program Management Fees (estimated)	1	LS	3.0%	$32,900.00
Engineering Design Fees (estimated)	1	LS	10.0%	$109,500.00
Engineering Construction Engineering Fees (estimated)	1	LS	9.6%	$105,200.00

NON-CONSTRUCTION COST SUBTOTAL = $248,000.00

TOTAL ESTIMATED CAPITAL COST, SCOPING REPORT = $1,343,000.00

BROADWAY AVENUE PHASE II WATER MAIN REPLACEMENT SCOPING REPORT

2022 WATER RATE CASE

December 2020
Last Revision January 2021

PREPARED FOR

Evansville Water & Sewer Utility
1 SE 9th Street
Suite 200
Evansville, IN 47708
Phone: (812) 421-2120
Contact: Michael Labitkze, P.E.

PREPARED BY

HNTB Corporation
111 Monument Circle
Suite 1200
Indianapolis, IN 46204
Phone: (317) 636-4682
Contact: Jason Hoff, P.E.

BROADWAY AVENUE PHASE II WATER MAIN REPLACEMENT SCOPING REPORT

1. Project Summary

The proposed Broadway Avenue Phase II Water Main Replacement Project includes the replacement of approximately 11,800 feet of water main. The project is expected to include approximately twelve (12) fire hydrants, twenty-two (22) gate valves, two (2) automatic flushing devices, and eighty-one (81) service connections. Approximately 12,980 feet of existing water main will be abandoned and filled with grout. Two (2) existing parallel water mains will be replaced by one (1) water main so that only 11,800 feet of water main is proposed.

This proposed project was included in Preliminary Engineering Report B (PER B) in May 2019. Broadway Avenue Phase III was removed from the project as the main was low scoring based on the 2020 distribution system scoring.

1.1. Project Limits

The project scope includes replacement of existing water mains along Broadway Avenue between Red Bank Road and just east of Claremont Avenue and S Helfrich Avenue between Arlington Avenue and Saunders Avenue. The proposed project and potential alignment for proposed water mains are shown in **Figure 1**. A pressure zone boundary change was also considered as part of the project and is also shown in **Figure 1**. Actual horizontal and vertical alignment will be determined during final design based on surveyed locations of existing utilities in the project area.

1.2. Project Drivers

The existing water mains within the proposed project limits have replacement prioritization scores ranging from 130 to 295. The average score weighted by length for the existing water mains is 214.

This project had a high replacement rating due to a high likelihood of failure criteria score from this project's high historical rate of failure and short service life remaining. This project also had a high consequence of failure score due to its location along Broadway Avenue, a minor arterial. Pipe material also contributed to this project's high score.

1.3. Project Cost

The total capital cost estimate for the project is $5,621,000. This includes $4,584,000 construction costs and $1,037,000 non-construction costs. The project costs were estimated using the EWSU Cost Estimating Tool Scoping Report tab. The cost estimate is included at the end of the scoping report.

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Figure 1
Report No. 18
Broadway Avenue Phase II

Legend

Proposed Project

- Trenchless Installation
- Main to be Abandoned
- Proposed Main

Water Infrastructure

- Hydrants

Valves

- System Isolation
- System Separation

Mains

- <6"
- 6"
- 8"
- 10"
- 12"
- 16"
- 20"
- 24"
- 30"
- 36"
- 48"
- Private

Pressure Zones

- Central
- Lincoln
- Killian
- Northern

Sanitary Infrastructure

- Manholes
- Sewer

N

Print Date: December 2020

0 1,000 2,000 Feet

2. Hydraulic Modeling

The available fire flow and static pressure within the project limits and surrounding areas were evaluated using the WaterGEMS distribution system model under maximum day demands of 26.7 million gallons per day (MGD) based upon 2019 data. Two (2) alternatives were evaluated for replacement. Alternative 1 includes replacement with all 12-inch diameter water main in the project limits except for 8-inch diameter water main along Helfrich Avenue and the private main. Alternative 2 included replacement all 12-inch diameter water main in the project limits except for 8-inch diameter water main along Helfrich Avenue and the private main, and moving the pressure boundary which affects 144 customers.

2.1. Results

The existing available fire flow and static pressure in the project limits are shown in **Figure 2**. The available fire flow and static pressure in the project limits for Alternative 1 are shown in **Figure 3**. The available fire flow and static pressure in the project limits for Alternative 2 are shown in **Figure 4**.

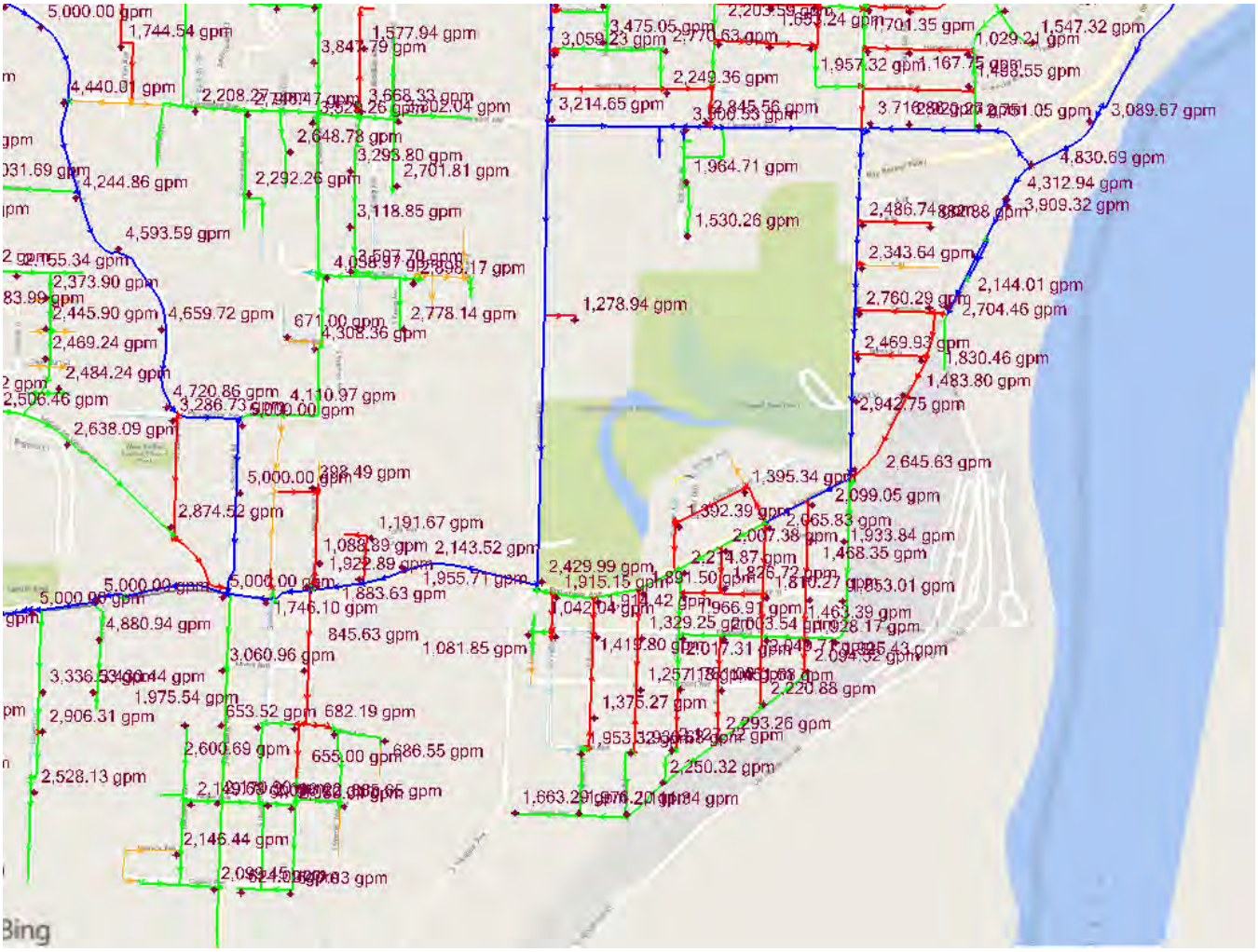


Figure 2. Existing Available Fire Flow and Static Pressure

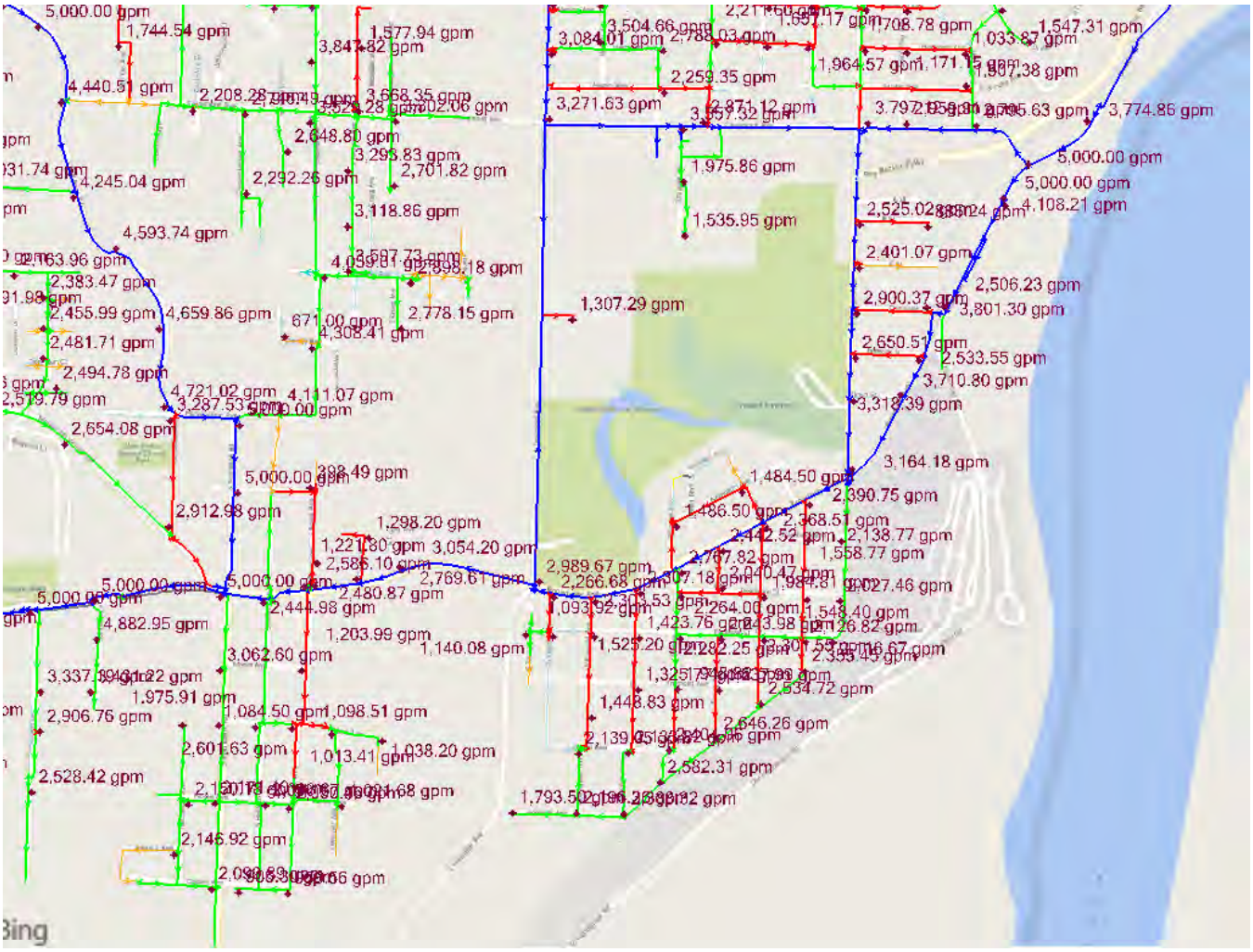


Figure 3. Alternative 1 Available Fire Flow and Static Pressure

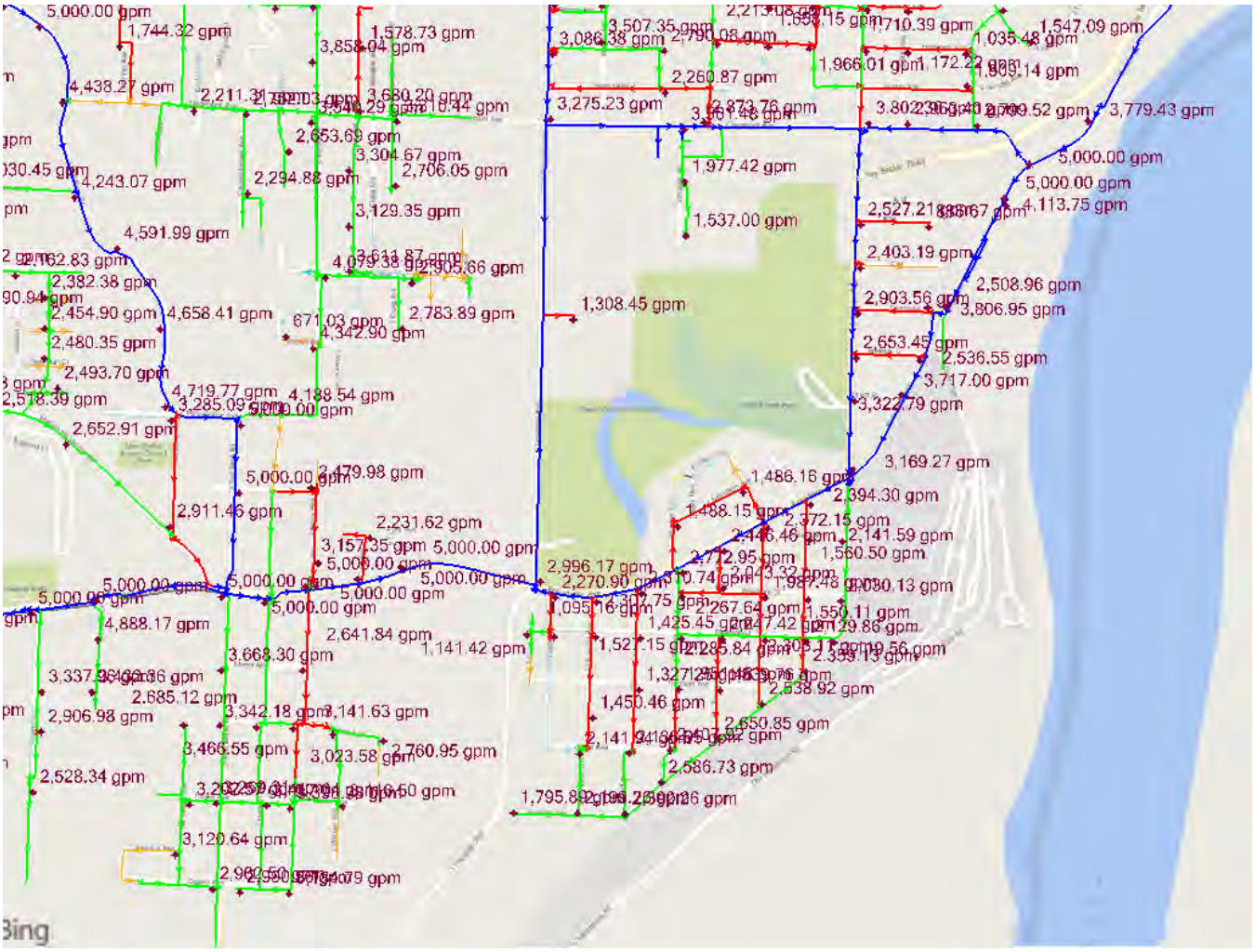


Figure 4. Alternative 2 Available Fire Flow and Static Pressure

2.1. Conclusion

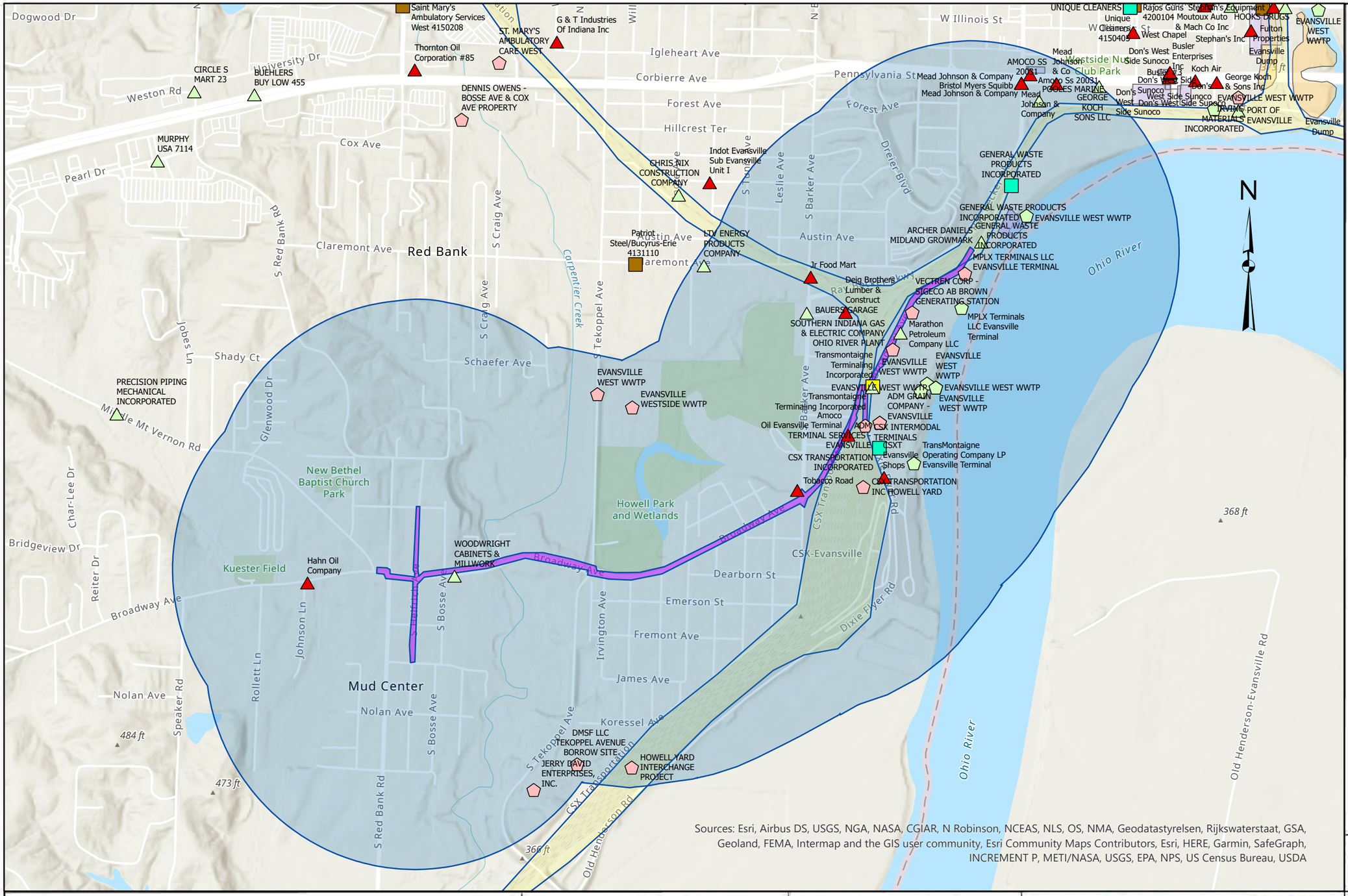
The project area is primarily residential, so the required fire flow is expected to be approximately 1,500 gallons per minute. Alternative 2 provides the required fire flow while Alternative 1 does not, therefore Alternative 2 was selective to provide the required fire flow in the project area. Alternative 2 also reduces the number of system separation valves, thought it will require pressure reducing valves for 144 customer meters.

3. Environmental Assessment

A preliminary environmental assessment was performed within the project limits and surrounding area using IndianaMap and Indiana Department of Transportation (INDOT) Geographical Information Office (GIO) Library to identify sites that may be of concern within one-half mile of the proposed project limits. The assessment of the project limits and surrounding area identified twenty-five (25) potential contaminated sites and nine (9) known contaminated sites as shown in **Figure 5**.

3.1. Site Specific Concerns

The preliminary environmental assessment identified three (3) known contaminated sites with close proximity to the project. These three (3) known contaminated sites include two (2) leaking underground storage tank sites and one (1) voluntary remediation program site.



LEGEND

KNOWN CONTAMINATED SITES

- BROWNFIELD SITE
- CLEANUP SITE
- CONFINED FEEDING OPERATION
- SUPERFUND SITE
- LEAKING UNDERGROUND STORAGE TANK SITE
- VOLUNTARY REMEDIATION PROGRAM SITE
- INSTITUTIONAL CONTROL SITE
- JACOBSVILLE SUPERFUND SITE BOUNDARY
- WASTE COAL COMBUSTION IMPOUNDMENT

POTENTIAL CONTAMINATED SITES

- ELECTRONIC RECYCLING FACILITY
- MANUFACTURED GAS PLANT
- NPDES FACILITY
- NPDES PIPE LOCATION
- SEPTAGE WASTE SITE
- SOLID WASTE DISPOSAL/PROCESSING FACILITY
- UNDERGROUND STORAGE TANK SITE
- WASTE TIRE SITE
- RAILROAD
- SOLID WASTE LANDFILL

PROJECT INFORMATION

- HALF MILE RADIUS
- PROPOSED PROJECT LIMITS

Figure 5

0 SCALE 0.5
Miles

TITLE: Broadway Avenue Hazardous Materials Concerns **LOCATION:** Broadway Avenue, Evansville, IN X: 87.6101301 Y: 37.9631951	**PREPARED FOR:** EVANSVILLE WATER & SEWER DEPARTMENT REFRESH PROGRAM 1 NW MARTIN LUTHER KING JR BLVD EVANSVILLE, INDIANA 47708	**DELIVERED TO:** HNTB CORPORATION 111 MONUMENT CIRCLE, SUITE 1200 INDIANAPOLIS, INDIANA 46204	CRANE ENVIRONMENTAL SERVICES, LLC MAIN OFFICE: 4209 HIGHWAY 41 NORTH, SUITE 24,EVANSVILLE, INDIANA 47711 INDIANAPOLIS OFFICE: 6745 S GRAY ROAD, SUITE I,INDIANAPOLIS, IN 46237	**CRANE PROJECT NO.120-0108J** **DATE:** 11/6/2020

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Scoping Report

Project Capital Cost Estimate

Broadway Avenue Phase II Water Main Replacement

Report #: 18

CONSTRUCTION COSTS

ITEM ID	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL PRICE
STANDARD PAY ITEMS					
1085	12" PVC C900 PIPE	9,470	LF	$102.00	$965,940.00
1083	8" PVC C900 PIPE	1,960	LF	$86.00	$168,560.00
1091	12" DUCTILE IRON PIPE	120	LF	$192.00	$23,040.00
1141	16" STEEL CASING PIPE	120	LF	$160.00	$19,200.00
3036	12" HDPE PIPE	250	LF	$50.00	$12,500.00
1098	12" SOLID SLEEVE	4	EA	$394.00	$1,576.00
1028	12" MJ GATE VALVE	18	EA	$2,818.00	$50,724.00
1026	8" MJ GATE VALVE	4	EA	$1,645.00	$6,580.00
1015	12" MJ 45° BEND	90	EA	$765.00	$68,850.00
1041	12"X8" MJ TEE	2	EA	$866.00	$1,732.00
1119	FIRE HYDRANT ASSEMBLY WITH GATE VALVE	12	EA	$5,814.00	$69,768.00
1126	AUTOMATIC FLUSH DEVICE WITH GATE VALVE (9400)	2	EA	$5,212.00	$10,424.00
1132	3/4"-1" WATER SERVICE RELOCATION, OPEN CUT	81	EA	$1,682.00	$136,242.00
1269	PRESSURE REDUCING VALVE	144	EA	$2,500.00	$360,000.00
6026	Proposed 12" to Existing 12" Connection	6	LS	$10,368.00	$62,208.00
6003	Proposed 8" to Existing 6" Connection	1	LS	$6,308.00	$6,308.00
6004	Proposed 8" to Existing 8" Connection	1	LS	$7,122.00	$7,122.00
6008	Proposed 12" to Existing 8" Connection	11	LS	$7,446.00	$81,906.00
6007	Proposed 12" to Existing 6" Connection	1	LS	$6,723.00	$6,723.00
6006	Proposed 12" to Existing 4" Connection	1	LS	$6,538.00	$6,538.00
5006	ABANDON AND GROUT FILL EXISTING MAIN	12,980	LF	$10.00	$129,800.00
5007	COMPACTED AGGREGATE, NO. 53S	11,800	LF	$9.00	$106,200.00
5021	HOT MIX ASPHALT BASE	11,800	LF	$28.00	$330,400.00
5023	HOT MIX ASPHALT SURFACE	11,800	LF	$12.00	$141,600.00
NON-STANDARD PAY ITEMS					
--	System Separation Valve Vault	1	EA	$75,000.00	$75,000.00
--	Environmental Remediation Contingency	1	LS	5.0%	$138,700.00
STANDARD LUMP SUM PAY ITEMS					
DESCRIPTION		**QUANTITY**	**UNIT**	**%**	**TOTAL PRICE**
Mobilization & Demobilization (4% - 5%)		1	LS	5.0%	$149,400.00
Construction Engineering (2% - 3%)		1	LS	3.0%	$89,700.00
Clearing & Grubbing (0.5% - 1.5%)		1	LS	1.0%	$29,900.00
Erosion Control Devices (1% - 2%)		1	LS	2.0%	$59,800.00
Maintenance of Traffic (3% - 4%)		1	LS	4.0%	$119,600.00
Restoration, Grading, and Seeding (2% - 3%)		1	LS	3.0%	$89,700.00

CONSTRUCTION COST SUBTOTAL = $3,525,741.00

CONTINGENCY (30%) = $1,057,800.00

TOTAL ESTIMATED CONSTRUCTION COST, SCOPING REPORT = $4,584,000.00

NON-CONSTRUCTION COSTS

DESCRIPTION	QUANTITY	UNIT	%	TOTAL PRICE
Engineering Program Management Fees (estimated)	1	LS	3.0%	$137,600.00
Engineering Design Fees (estimated)	1	LS	10.0%	$458,400.00
Engineering Construction Engineering Fees (estimated)	1	LS	9.6%	$440,100.00

NON-CONSTRUCTION COST SUBTOTAL = $1,037,000.00

TOTAL ESTIMATED CAPITAL COST, SCOPING REPORT = $5,621,000.00

HNTB

NORTH BALLARD NEIGHBORHOOD WATER MAIN REPLACEMENT SCOPING REPORT

2022 WATER RATE CASE

December 2020
Last Revision January 2021

PREPARED FOR

Evansville Water & Sewer Utility
1 SE 9th Street
Suite 200
Evansville, IN 47708
Phone: (812) 421-2120
Contact: Michael Labitkze, P.E.

PREPARED BY

HNTB Corporation
111 Monument Circle
Suite 1200
Indianapolis, IN 46204
Phone: (317) 636-4682
Contact: Jason Hoff, P.E.

NORTH BALLARD NEIGHBORHOOD WATER MAIN REPLACEMENT SCOPING REPORT

1. Project Summary

The proposed North Ballard Neighborhood Water Main Replacement Project includes the replacement of approximately 5,490 feet of water main. The project is expected to include approximately eleven (11) fire hydrants, eighteen (18) gate valves, one (1) automatic flushing device, and eighty-four (84) service connections. Approximately 5,560 feet of existing water main will be abandoned and filled with grout.

1.1. Project Limits

The project scope includes replacement of existing water mains along S Bedford Avenue, S Grand Avenue, S Kentucky Avenue and S New York Avenue north of E Walnut Street, E Sycamore Street from S Bedford Avenue to just past S Kentucky Avenue and Canal Street between S Bedford Avenue and S Grand Avenue. The proposed project and potential alignment for proposed water mains are shown in **Figure 1**. Actual horizontal and vertical alignment will be determined during final design based on surveyed locations of existing utilities in the project area.

1.2. Project Drivers

The existing water mains within the proposed project limits have replacement prioritization scores ranging from 190 to 295. The average score weighted by length for the existing water mains is 225.

This project had a high replacement rating due to a high likelihood of failure criteria score from this project's high historical rate of failure and short service life remaining. Pipe material also contributed to this project's high score.

1.3. Project Cost

The total capital cost estimate for the project is $2,171,000. This includes $1,770,000 construction costs and $401,000 non-construction costs. The project costs were estimated using the EWSU Cost Estimating Tool Scoping Report tab. The cost estimate is included at the end of the scoping report.

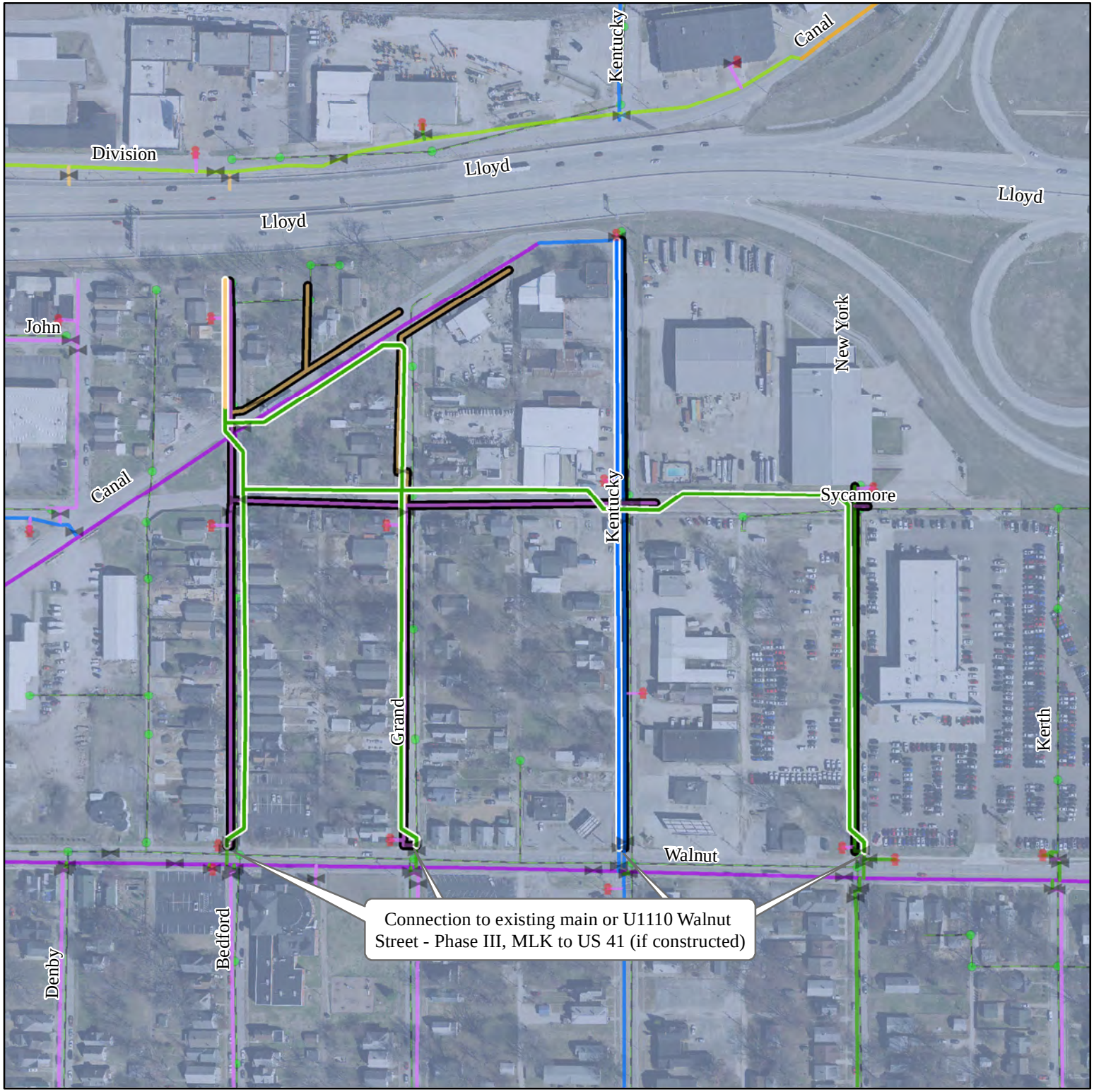

Figure 1
Report No. 19
North Ballard Neighborhood

Legend

Proposed Project

- Trenchless Installation
- Main to be Abandoned
- Proposed Main

Water Infrastructure

- Hydrants

Valves

- System Isolation
- System Separation

Mains

- <6"
- 6"
- 8"
- 10"
- 12"
- 16"
- 20"
- 24"
- 30"
- 36"
- 48"
- Private

Pressure Zones

- Central
- Lincoln
- Killian
- Northern

Sanitary Infrastructure

- Manholes
- Sewer

N

Print Date: December 2020

0 250 500 Feet

2. Hydraulic Modeling

The available fire flow within the project limits and surrounding areas were evaluated using the WaterGEMS distribution system model under maximum day demands of 26.7 million gallons per day (MGD) based upon 2019 data. Two (2) alternatives were evaluated for replacement. Alternative 1 includes replacement with all 8-inch diameter water main in the project limits except for 12-inch water main along Kentucky Avenue. Alternative 2 included replacement with all 8-inch diameter water main in the project limits except for 12-inch water main along Kentucky Avenue and an 8-inch loop connecting New York Avenue and Sycamore Street.

2.1. Results

The existing available fire flow in the project limits are shown in **Figure 2**. The available fire flow in the project limits for Alternative 1 are shown in **Figure 3**. The available fire flow in the project limits for Alternative 2 are shown in **Figure 4**.

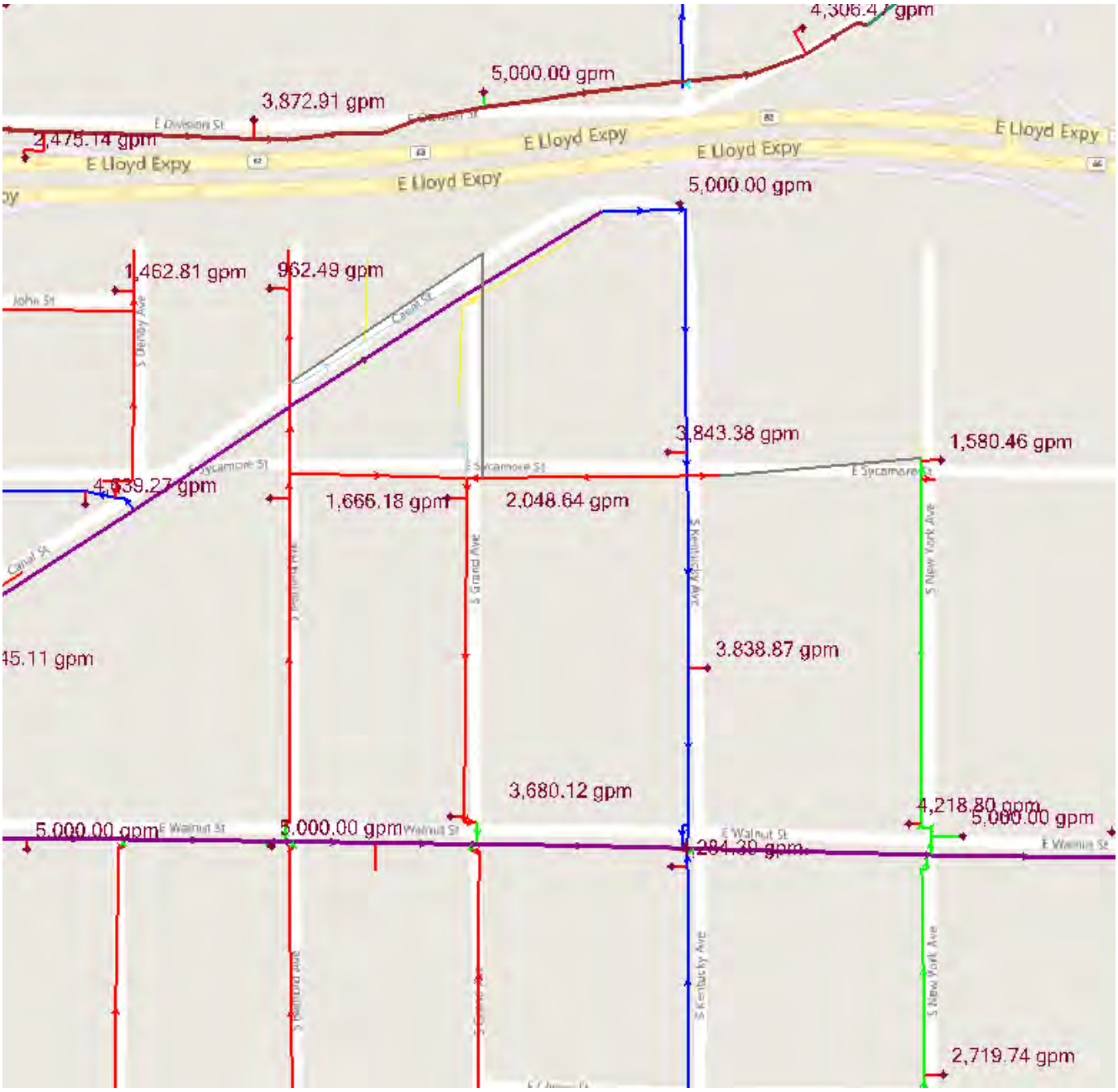

Figure 2. Existing Available Fire Flow

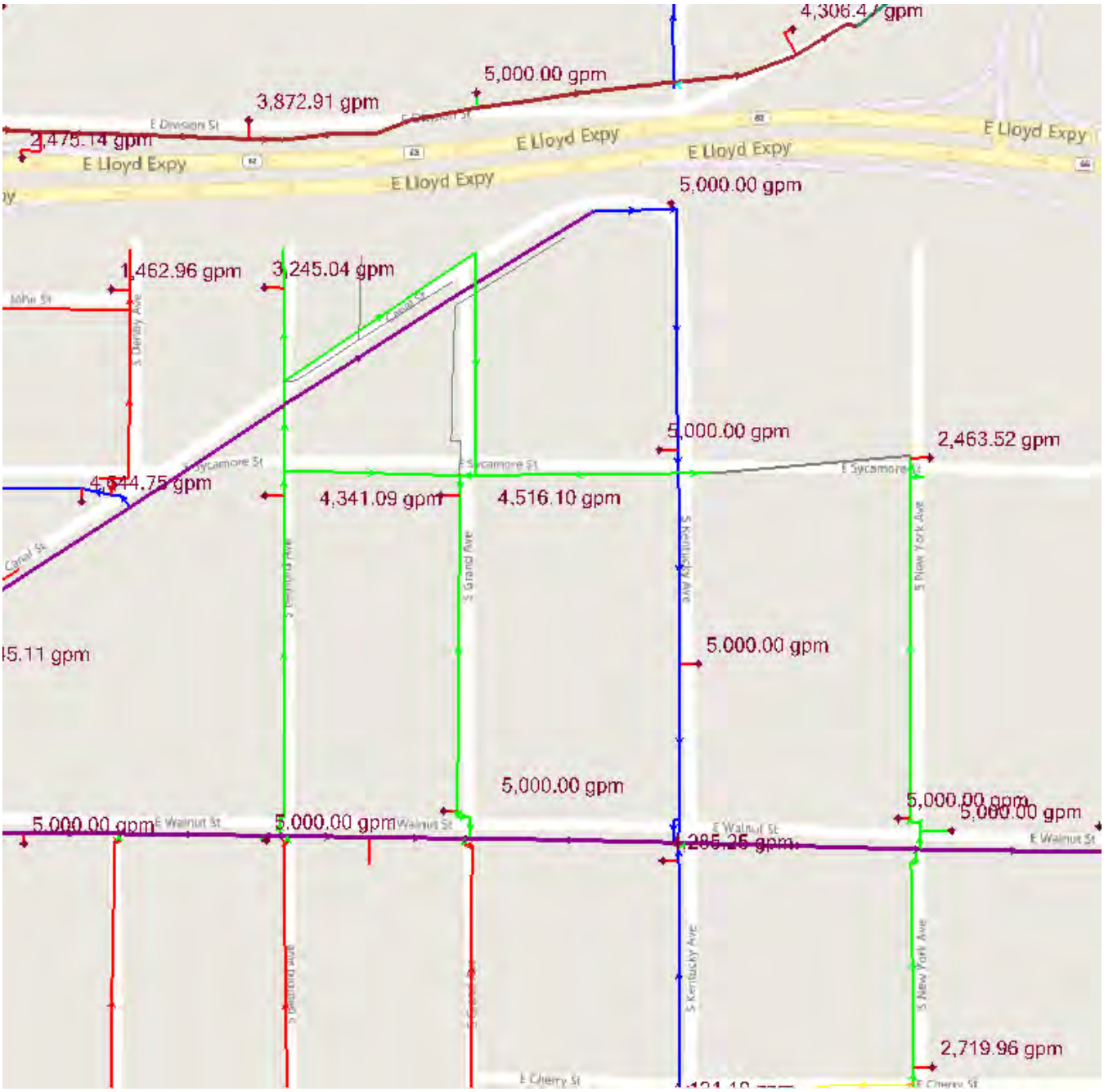

Figure 3. Alternative 1 Available Fire Flow

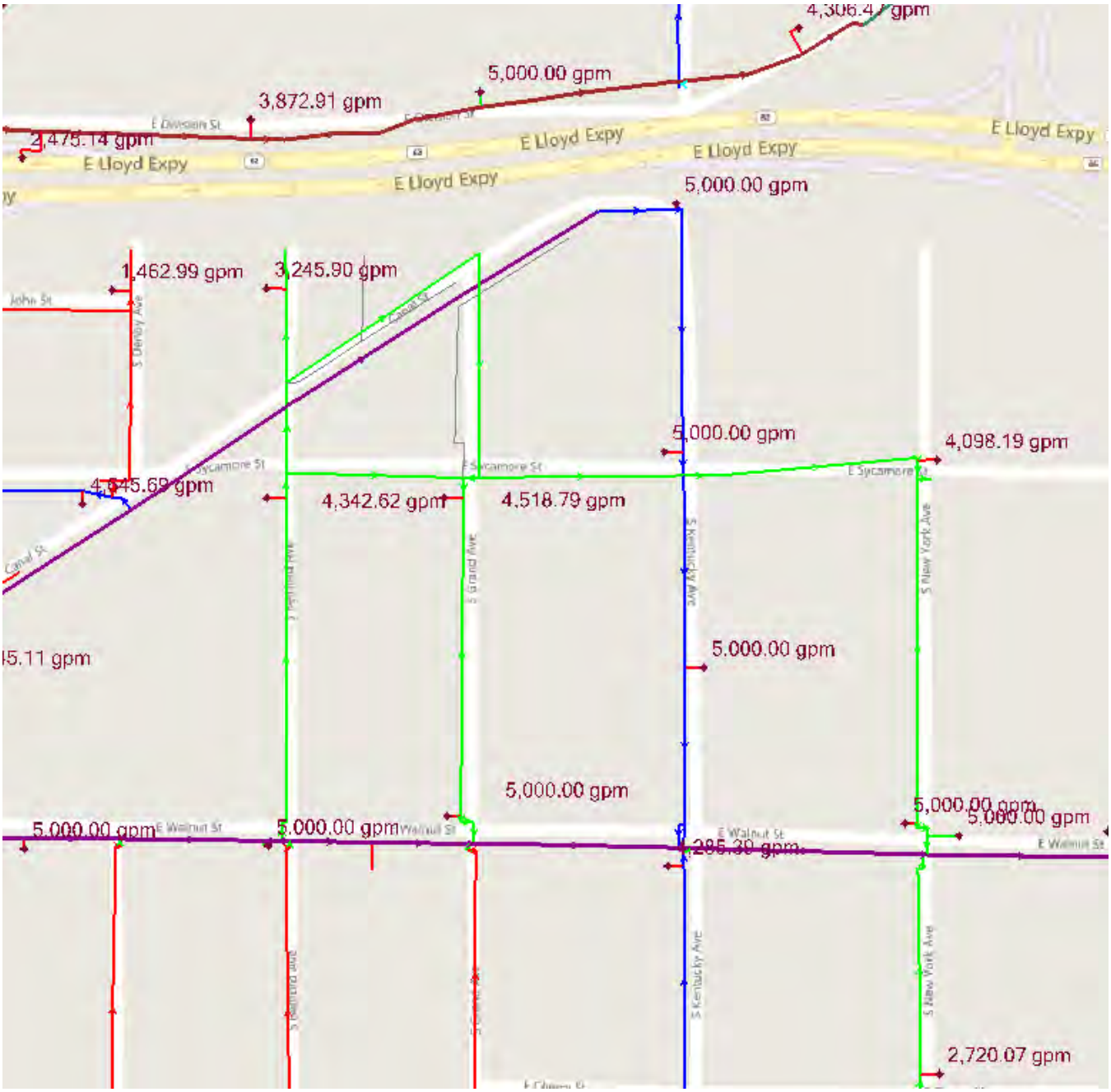

Figure 4. Alternative 2 Available Fire Flow

2.1. Conclusion

The project area is primarily residential and commercial, so the required fire flow is expected to be approximately 2,000 gallons per minute. All alternatives provide adequate pressure and available fire flow, however Alternative 2 was selected to eliminate the long dead-end water main on New York Avenue.

3. Environmental Assessment

A preliminary environmental assessment was performed within the project limits and surrounding area using IndianaMap and Indiana Department of Transportation (INDOT) Geographical Information Office (GIO) Library to identify sites that may be of concern within one-half mile of the proposed project limits. The assessment of the project limits and surrounding area identified fourteen (14) potential contaminated sites and twenty-three (23) known contaminated sites as shown in **Figure 5**.

3.1. Site Specific Concerns

The preliminary environmental assessment identified two (2) known contaminated sites with close proximity to the project. These two (2) known contaminated sites include two (2) leaking underground storage tank sites.