

Land Surveying · Civil Engineering · Planning · Architecture · Project Funding · GIS · Environmental · Renewable Energy · Landscape Architecture

July 21, 2025

Indiana Finance Authority State Revolving Fund Loan Program Drinking Water and Wastewater Program 100 N. Senate Avenue, Suite 1275 Indianapolis, IN 46204

Attn: Jenn Pence - SRF Clean Water Program Manager

RE: TOWN OF BRISTOL WATER NETWORK, PRODUCTION, & STORAGE IMPROVEMENTS PER ADDENDUM NO. 1 (SRF Project No. DW22282001)

Dear Jenn:

This PER Addendum will address water main replacement and valve relocation beyond the scope of the original PER as previously accepted by SRF.

A. <u>Introduction</u>

This PER Addendum covers two changes. The first is the replacement of 8 blocks of water main on Elkhart and St Joseph Streets and the second is the replacement of the water main under the state highway intersection of Vistula (SR 120) & Division (SR 15).

The Town has been carefully considering the contingency funds that are part of this loan. Instead of waiting until the very end and applying for the use of remaining funds, they are planning to expand the overall scope of the project while taking advantage of paving projects from separate funding sources. The primary scope from the PER remains the priority for this project, and if any changes exceed the loan amount provided by SRF they will pay for the remainder out of their local funds. This was discussed briefly with Camille Meiners and given Bristol's good financial standing, she agreed.

Alternative 1 started as a locally funded project and then it was decided to use SRF funds, therefore the design is complete, the permit is submitted, and work is scheduled to begin in last summer of 2025. The Change Order will be sent to the IFA for review soon after the submittal of this PER Addendum. Alternate 2 is in the early design phase and is anticipated to be completed within the next few months.

In addition, the upcoming Change Order will extend this contract into 2026. The reason for this is twofold, first Contract A is required to re-mobilize after the water tower is complete, the end date of both Contracts will be September of 2026. The re-mobilization will include final paving and finalizing controls and start-up. And secondly, the additional time will allow the contractor enough time to mobilize and complete the new work in conjunction with the timeline of the other funds. The modification of the timeline will not impact the Town or any current services.

Details of each new Alternatives are below:

- 1. A Community Crossing Matching Grant (CCMG) has been awarded to the Town for road surface, curb, and sidewalk replacement for both Elkhart St. and St. Joseph St. This PER addendum includes additional water main replacement work not in the original PER. The scope includes the abandonment of existing asbestos concrete pipe along these same downtown blocks. The existing pipe is brittle and poses a risk of cracking from the road construction activities. These pipes will be replaced with modern materials and updated sizing to match current standards. The infrastructure will include the following:
 - a) 2500 LFT of PVC Water Main
 - b) 42 Water Main Fittings and Appurtenances
 - c) 28 Service Connections
 - d) 11 New Replacement Fire Hydrants
 - e) Tie-ins to existing mains on both sides
- 2. The INDOT paving project includes the intersection of Vistula and Division. This intersection has a cluster of three valves that are in the middle. The traffic at the intersection is continuous during all hours making the cluster of valves inaccessible without closing the intersection or risking the safety of the workers. This PER addendum will extend the original scope to include the adjacent sides of the intersection. The proposed work will replace the existing water main in the area and move the valves away from the intersection. The infrastructure will include the following:
 - a) 470 LFT of 16" HDPE Water Main
 - b) 23 Water Main Fittings and Appurtenances
 - c) 12 Service Connections
 - d) Replace 12 services from main to meter pit
 - e) Inspect and if needed replace non-compliant materials into the buildings

B. General Description

The following will describe the project changes listed above, then discuss the need, followed by a discussion on alternatives for each of the categories listed above.

1. Replacement of Existing Asbestos Lined Pipe Along Elkhart St and St Joseph St

- a) Need:
 - (1) The Town of Bristol received additional grant funding through the CCMG program prompting a scope increase to address existing asbestos lined cement pipe. The replacement was not originally considered as part of scope for budgetary considerations. The replacement is being added to this addendum to remove the risk that the existing brittle pipes pose during construction.

b) Alternative Analysis:

- (1) Alternative 1: Leave the Existing Mains Along Elkhart St. and St. Joseph St.
 - (a) The Town of Bristol could decline to replace the water mains. By doing nothing, the Town would be prolonging the risk of the brittle water mains breaking, and risk them breaking during the installation of the new road. Inevitably the pipes would need to be addressed in a future project or emergency repair. This would also cause damage to the newly paved roads. This alternative is not a desirable outcome and will not be considered further.
- (2) Alternative 2: Replace the Existing Mains Along Elkhart St. and St. Joseph St.
 - (a) The water mains could be replaced as a part of the Town of Bristol Water Network, Production & Storage Improvements project that has already been approved for SRF funding. This replacement could be funded by using approximately half of the already allocated construction contingency, in conjunction with the already awarded CCMG funding. See Attachment 1 for total construction costs for the water main replacement. Replacing the water mains as a part of this project will remove the need to replace these mains in the future and the risk of them breaking during construction. The streets already have funding for repair through the CCMG making it more favorable to replace the water mains now rather than having to tear up and repair the streets in a future project.

2. Relocation of Valves at the Intersection of Vistula St and Division St

a) Need:

(1) The Town of Bristol cannot easily access important system valves. The relocation was not originally considered as part of scope for budgetary consideration. The relocation is being added to this addendum to improve system operability and maintenance flexibility.

b) Alternate Analysis:

- (1) Alternative 1: Leave the Existing Valve Cluster at the Intersection of Vistula St. and Division St.
 - (a) The Town of Bristol could decline to relocate the valve cluster. By doing nothing the valve cluster will remain inaccessible without halting traffic along a busy corridor. Without easy access to the valves the Town has less maintenance flexibility and is unable to easily operate its water system.
- (2) Alternative 2: Relocate the valves at Intersection of Vistula St. and Division St.
 - (a) Relocating this valve cluster will allow the water system operators to access important system valves without putting themselves at risk or halting traffic. This infrastructure will allow for greater maintenance flexibility and system operability.

The valves could be relocated as a part of the Town of Bristol Water Network Production & Storage Improvements project that has already been approved for SRF funding. This could be funded by using approximately a third of the allocated construction contingency. See Attachment 2 for total construction costs for the valve relocation.

C. Environmental Discussion

The proposed scope will be installed, stored, or used in facilities, infrastructure, or on land that is now owned by the Town. Stantec has completed a supplemental environmental review and provided a Project Environmental Review Update Memo (Attachment No. 3). This letter states that the expanded study area contains no impact to wetland resources nor does it disturb any cultural areas.

D. Cost

The anticipated project cost change will be \$530,000 for Alternative 1, the water main replacement, and \$310,000 for Alternative 2, the valve relocation for a total of \$840,000. See Attachment 2 for total construction costs associated with this project addendum. The town understands that this is over 70% of the total \$1,173,700 contingency funds. The Town understands the primary scope accepted in the PER will be completed. The Town is prepared to pay for any additional funds above the loan amount to complete this work as it has been presented.

E. Conclusion

It is recommended that the Town proceeds with Alternative 2 to replace the existing asbestos lined cement pipe.

Attached to this PER Addendum, please see updated pertinent figures, graphics, and reports.

If you have any additional questions, comments, or concerns regarding this project PER, please don't hesitate to reach out to JPR at ifoglesong@jpr1source.com, or at (574) 314-7954.

Sincerely

Senior Project Engineer

Attachments:

Attachment No. 1 - Town Acceptance Letter

Attachment No. 2 - PER Addendum 1 Cost Estimate

Attachment No. 3 – Stantec Wetland & Archeological Evaluation Letter

Attachment No. 4 - Proposed Construction Figures - Water Main Replacement

Attachment 1 Town Acceptance Letter



BRISTOL TOWN COUNCIL P.O. Box 122, Bristol, IN 46507

July 21, 2023

Indiana Finance Authority State Revolving Loan Program Water Program 100 N Senate Avenue, Suite 1275 Indianapolis, IN 46204

Attn: Jenn Pence - SRF Clean Water Program Manager

RE: Town of Bristol Water Network, Production, & Storage Improvements

DW22282001

PER Addendum No. 1

Jenn,

On behalf of the Town of Bristol, I have reviewed and approved the PER Addendum 1 documents prepared by Jones Petrie Rafinski Corp for the above subject project.

Thank you for your work on this project and we look forward to moving forward with this additional work.

Best Regards,

Mike Yoder Town Manager

Cc: Ken Jones, PS – Jones Petrie Rafinski Corp.

Jenny Foglesong, PE – Jones Petrie Rafinski Corp.

Attachment 2 PER Addendum 1 Cost Estimate

TOWN OF BRISTOL WATER SYSTEM IMPROVEMENT PROJECT ELKHART ST & ST JOSEPH ST WATER MAIN REPLACEMENT OPINION OF PROBABLE COST

Item No.	Pay Item		Price
1	PVC Water Main	\$	179,821.00
2	Water Main Fittings and Appurtenances	\$	108,825.00
3	Water Main Service Connections	\$	78,378.50
4	Fire Hydrant Replacement	\$	123,000.00
5	Site Work/Road Restoration	\$	24,200.00
6	Mobilization & Demobilization	\$	8,500.00
Subtotal Construction Cost:			530,000.00

INTERSECTION OF DIVISION AND VISTULA ST OPINION OF PROBABLE COST

	\$ 310,000.00	
7	Mobilization & Demobilization	\$ 22,034.75
6	Site Work/Road Restoration/Traffic Control	\$ 44,080.00
5	Abandonment of Existing Water Mains	\$ 23,575.00
4	Water Main Service Connections	\$ 31,850.00
3	Water Main Fittings and Appurtenances	\$ 74,100.00
2	Water Main Installation Open Cut	\$ 30,000.00
1	Water Main Installation Directional Drill	\$ 81,767.50
Item No.	Pay Item	Price

Total Construction Cost for PER Addendum 1: \$ 840,000.00

Attachment 3 Stantec Wetland & Archeological Evaluation Letter





To: Jenny Foglesong, PE From: Benjamin Harvey

Jones Petrie Rafinski Corporation Indianapolis

Project/File: Bristol Waterline Improvements Project Date: July 15, 2025

Reference: Project Environmental Review Update Memo

Introduction

Stantec provided wetland delineation and cultural resources studies to Jones Petrie Rafinski (JPR) in support of the Town of Bristol's waterline improvement project State Revolving Fund (SRF) requirements. JPR prepared and coordinated the SRF submittals and has performed ongoing design and coordination with the Town of Bristol. Based on recent design updates and additional information provided by JPR to Stantec, it is our understanding that additional areas have been added to the project and require review for potential cultural resources and regulated waters resources.

These additional areas include the intersection of E Vistula St. and S Division St., extending south to E Elkhart St. The project now proposes an expanded area to replace the water main on Vistula, coinciding with INDOT replacing the road. Most of the work in this area will include directionally drilled HDPE pipe, with an open cut section leading through a town park within previously-disturbed land. No trees will be removed as part of this work. Additional project areas include E Elkhart St. and E St. Joseph St. between S Division and Ponderosa Dr. (Pearl St.). At these locations it is proposed to repave the streets and make improvements to drainage, all taking place in the south side lane of the streets and requiring no tree removal.

Wetland Delineation

Stantec prepared a wetland delineation and waters investigation report for this project in April 2022, and an addendum study for this report in March 2024. These studies are less than 5 years old so would generally still be considered valid under US Army Corps of Engineers (USACE) guidance. During these studies, a portion of the proposed expanded project area was surveyed at the Vistula/Division intersection, which included the park area where the proposed open cut trench is proposed. No wetlands or other surface waters were identified in this location.

Stantec performed a desktop review of the entire proposed new project areas to look for signs of surface waters or wetlands. No potentially regulated resources were identified in this review. Furthermore, the majority of the proposed project takes place within existing road right-of-way and only proposes to improve existing infrastructure, so wetlands or surface waters are not present in these locations. Therefore, it is our recommendation that the project would not impact any surface waters or wetlands in any way, beyond impacts that may have been previously documented or anticipated based on previous studies. No further wetland delineation or waters investigation is necessary based on this proposed scope change.

July 15, 2025 Jenny Foglesong, PE Page 2 of 2

Reference: Bristol Waterline Improvements Project

Cultural Resources

Stantec prepared a Phase 1a archaeological records review and reconnaissance (Phase Ia) for this project for this project in 2022, and an updated addendum to this report in 2024. During these studies, a portion of the proposed expanded project area was surveyed at the Vistula/Division intersection, which included the park area where the proposed open cut trench is proposed. Based on these studies, it was determined that the project would not have an effect on any known cultural resources. This conclusion is based on the subsurface nature of the project relative to any aboveground historic structures, and the project team identifying no new archaeological resources within undisturbed parts of the project.

Stantec performed a desktop review of the new proposed project areas and the proposed scope of work for these areas. The entire proposed new project consists of subsurface utility work, and nearly all of this work will take place within existing road right-of-way. The portion of work outside existing road right-of-way has also been previously disturbed for work within the park, and the park itself is not recorded on the Indiana Historic Sites and Structures Inventory (IHSSI) or as a cultural resources concern. The previous report concluded that none of the IHSSI resources adjacent to the project area or in the wider study area will be directly affected by the proposed project due to the subsurface nature of the water line installation. After reviewing the proposed additional work locations and scope of the project, it is our opinion that this conclusion is still valid for the project.

Conclusion

After reviewing the proposed expanded project areas and the work that is will occur in these areas, it is our opinion that the project will have no further impacts on wetlands or water resources or cultural resources because of these changes.

Thank you,

Stantec Consulting Services Inc.

Benjamin Harvey PWS, CPESC

Associate, Senior Environmental Project Manager

Phone: (317) 599-4390 Mobile: (463) 269-1622 benjamin.harvey@stantec.com

stantec.com

Attachment 4 Proposed Construction Figures – Water Main Replacement

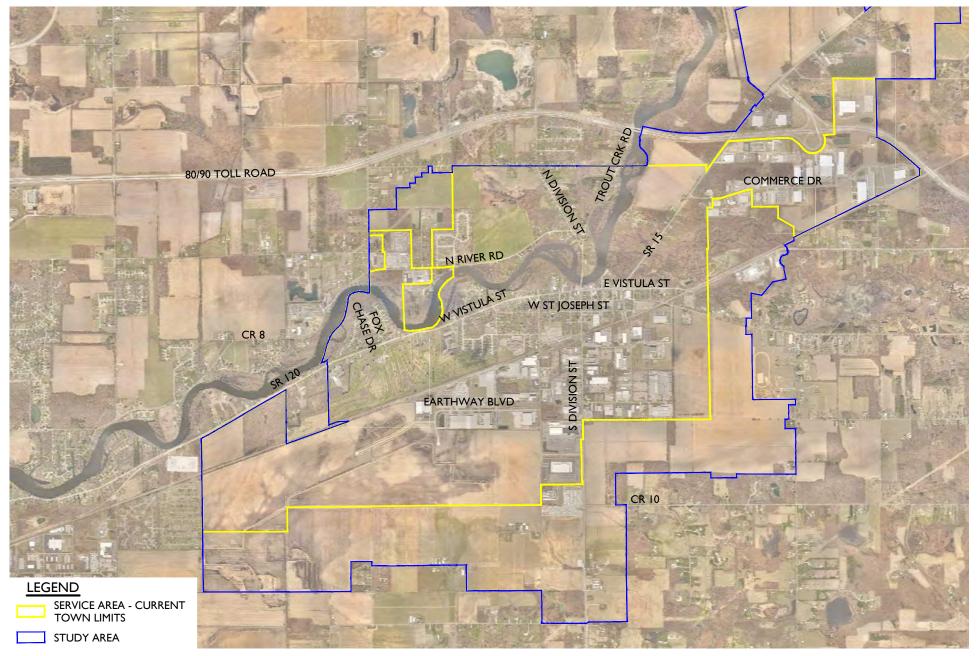
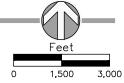


FIGURE I STUDY AREA © 2023 JPR - All Rights Reserved





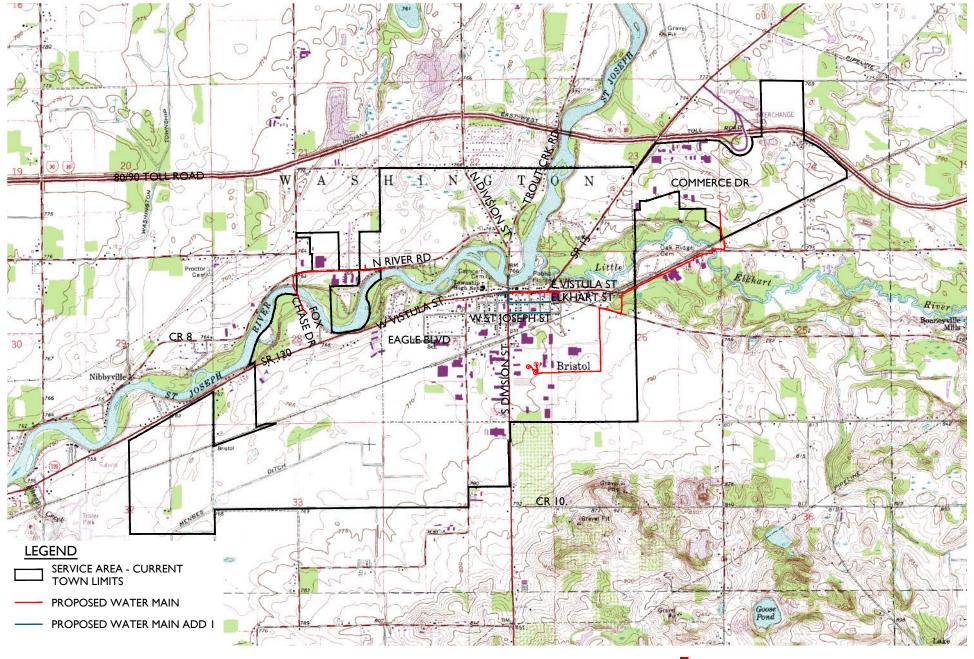
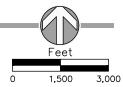


FIGURE 2 TOPOQUAD MAP © 2023 JPR - All Rights Reserved





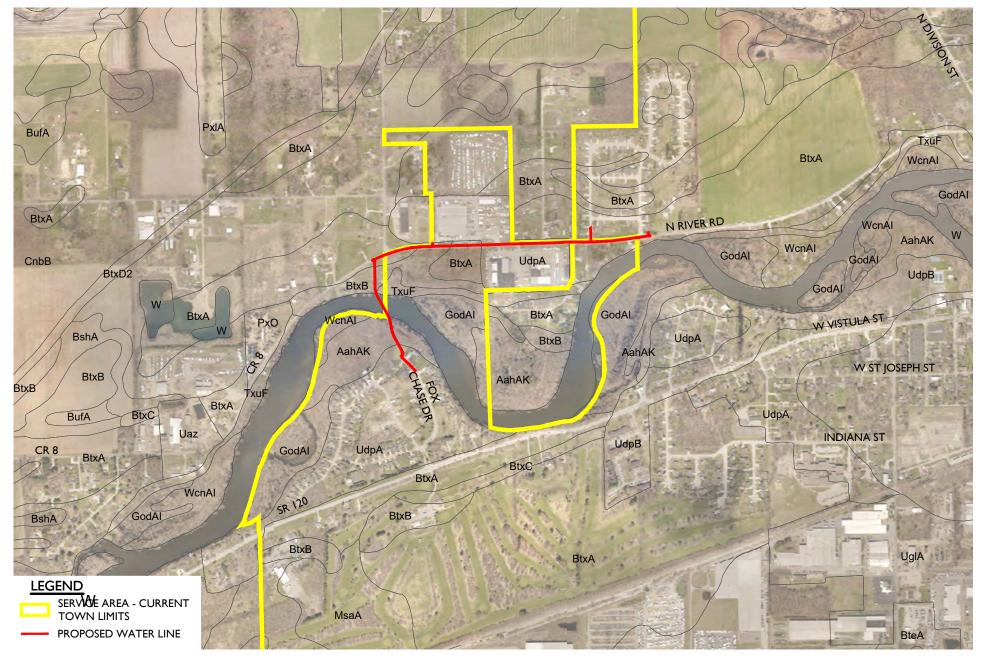
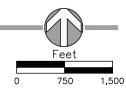


FIGURE 3.1 SOILS MAP - WEST © 2023 JPR - All Rights Reserved





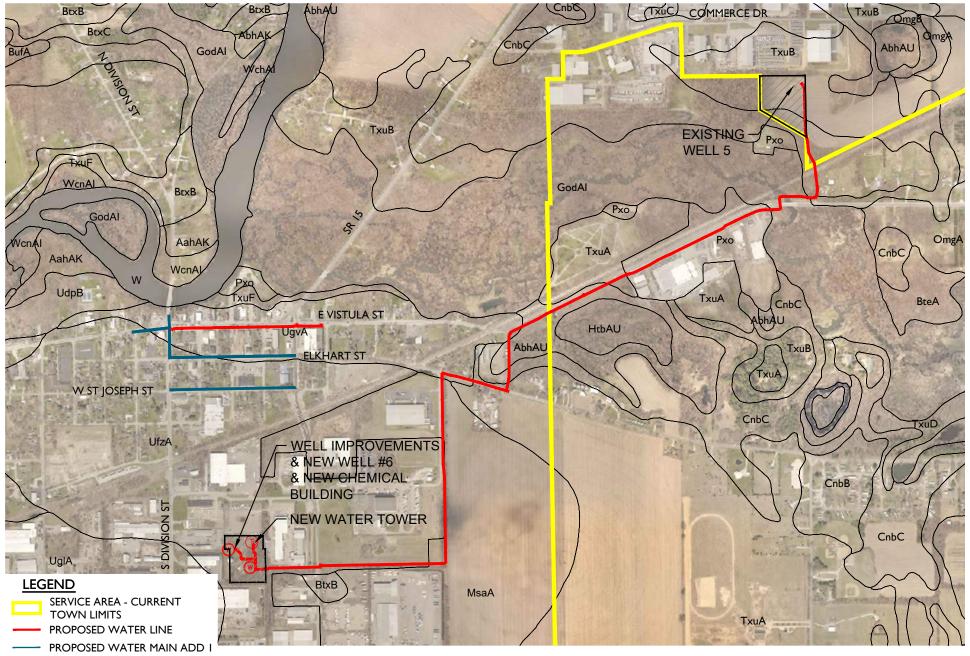
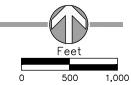


FIGURE 3.2 SOILS MAP - EAST & PROPOSED BUILDING SITES © 2023 JPR - All Rights Reserved





AahAK	Abscota loamy sand, 0 to 2 percent slopes, occasionally	HhaAP	Histosols, 0 to 1 percent slopes, ponded	UdpB	Urban land-Bristol complex, 1 to 5 percent slopes
AbhAN	flooded, brief duration Adrian muck, drained, 0 to 1	HtbAN	Houghton muck, drained, 0 to 1 percent slopes	UdrA	Urban land-Bronson complex, 0 to 1 percent slopes
AbhAU	percent slopes Adrian muck, undrained, 0 to 1	HtbAU	Houghton muck, disintegration moraine, 0 to 2 percent slopes	UeqA	Urban land-Gilford complex, 0 to 1 percent slopes
BshA	percent slopes Brady sandy loam, 0 to 1	MgcA	Maumee loamy sand, 0 to 1 percent slopes	UfzA	Urban land-Mishawaka complex, 0 to 1 percent
BteA	percent slopes Brems loamy sand, 0 to 1	MsaA	Mishawaka sandy loam, 0 to 1 percent slopes	UglA	slopes Urban land-Osolo complex, 0
	percent slopes	MvkA	Morocco loamy sand, 0 to 2		to 1 percent slopes
BtxA	Bristol loamy sand, 0 to 2 percent slopes	OmgA	percent slopes Osolo loamy sand, 0 to 1	UgvA	Urban land-Tyner complex, 0 to 1 percent slopes
BtxB	Bristol loamy sand, 2 to 5 percent slopes	OmgB	percent slopes Osolo loamy sand, 1 to 5	UgvB	Urban land-Tyner complex, 1 to 5 percent slopes
BtxC	Bristol loamy sand, 5 to 10 percent slopes	-	percent slopes	VnxA	Vistula loamy sand, 0 to 1 percent slopes
BtxD2	Bristol loamy sand, 10 to 18	Pmg	Pits, gravel	W	Water
	percent slopes, eroded	PxIA	Psammaquents	WcnAl	Waterford loam, 0 to 2 percent slopes, frequently flooded,
BufA	Bronson sandy loam, 0 to 1 percent slopes	Pxo	Psamments		long duration
CnbA	Coloma sand, 0 to 2 percent	ReyA	Rensselaer loam, 0 to 1 percent slopes		
CnbB	slopes Coloma sand, 2 to 5 percent	RopB	Riddles-Oshtemo fine sandy loams, 1 to 5 percent slopes		
CnbC	slopes Coloma sand, 5 to 10 percent	TxuA	Tyner loamy sand, 0 to 1 percent slopes		
CvdA	slopes Crosier loam, 0 to 1 percent	TxuB	Tyner loamy sand, 1 to 5 percent slopes		
	slopes	TxuC	Tyner loamy sand, 5 to 10 percent slopes		
EchAN	Edwards muck, drained, 0 to 1 percent slopes	TxuD	Tyner loamy sand, 10 to 18		
GczA	Gilford sandy loam, 0 to 2 percent slopes, gravelly	TxuF	percent slopes Tyner loamy sand, 18 to 45		
	subsoil		percent slopes		
GdnA	Gilford mucky sandy loam, 0 to 1 percent slopes, gravelly subsoil	UdkA	Urban land-Brady complex, 0 to 1 percent slopes		
GodAl	Gravelton loam, 0 to 1 percent slopes, frequently flooded,	UdpA	Urban land-Bristol complex, 0 to 1 percent slopes		

long duration



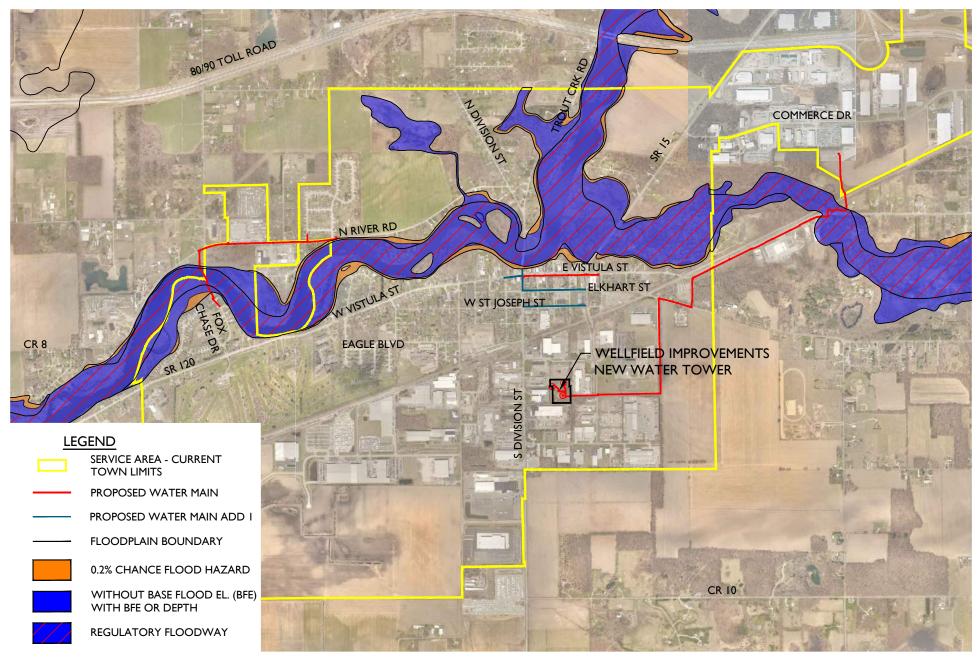
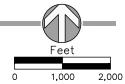


FIGURE 4.1 FLOODPLAINS © 2023 JPR - All Rights Reserved





LEGEND



The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, 499, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A No Base Flood Elevations determined.

ZONE AE Base Flood Elevations determined.

ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations

letermined.

ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE AR Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently describifed. Zone AR indicates that the former flood control system is being restored to provide

protection from the 1% annual chance or greater flood.
Area to be protected from 1% annual chance flood by a Federal flood
protection system under construction; no flase flood flewations determined.

ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevational

ZONE VE Coastal flood zone with velocity hazard (wave action). Base Flood Elevations

deterrine

ZONE X

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D Areas in which flood hazards are undetermined, but possible.

OTHERWISE PROTECTED AREAS (OPAs)

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

CONDINE DAMNIER RESOURCES STOTELY (COND) AT

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

1% Annual Chance Floodplain Boundary

0.2% Annual Chance Floodplain Boundary

Figodway boundary

Zone D boundary

CBRS and OPA boundary

Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depictus, or flood velocities.

Statement Special Flood Elevation line and value; elevation in feet*

Base Flood Elevation value where uniform within zone; elevation in feet*

(A) (A) (23) ---- (23) (45° 02' 08°, 93° 02' 12°

* M1 5

Cross section line
Transect line

Culvert

*Referenced to the North American Vertical Datum of 1988

1983 (NAO 83) Western Hemisphere
3100000 FT S000-foot ticks: Indiana State Plane East Zone

(FIPS Zone 1301), Transverse Mercator projection

**B80⁶⁰⁰N 1000-meter Universal Transverse Mercator grid values, zone 16

DX5510
Bench mark (see explanation in Notes to Users section of this FIRM

Geographic coordinates referenced to the North American Datum of

panel) River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP August 2, 2011

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to county-wide mapping, refer to the Community Map History table located in the Flood insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood insurance Program at 1-800-638-6620





3

25

RAMINE

OID.

PANEL 0157D

FIRM

FLOOD INSURANCE RATE MAP ELKHART COUNTY, INDIANA AND INCORPORATED AREAS

PANELS 151-154, 156-159 OF 395 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
ELKHART COUNTY	180056	0151	D
TOWN OF BRISTOL	180060	0152	D
ELKHART COUNTY	180056	0152	D
TOWN OF BRISTOL	180060	0153	D
ELKHART COUNTY	180056	0153	D
TOWN OF BRISTOL	180060	0154	D
ELKHART COUNTY	180056	0154	D
TOWN OF BRISTOL	180060	0156	D
ELKHART COUNTY	180056	0156	D
TOWN OF BRISTOL	180060	0157	D
ELKHART COUNTY	180056	0157	D
TOWN OF BRISTOL	180060	0158	D
ELKHART COUNTY	180056	0158	D
ELKHART COUNTY	180056	0159	D

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.



MAP NUMBER

18039C0151D, 18039C0152D, 18039C0153D, 18039C0154D, 18039C0156D, 18039C0157D, 18039C0158D, 18039C0157D,

EFFECTIVE DATE AUGUST 2, 2011

Federal Emergency Management Agency



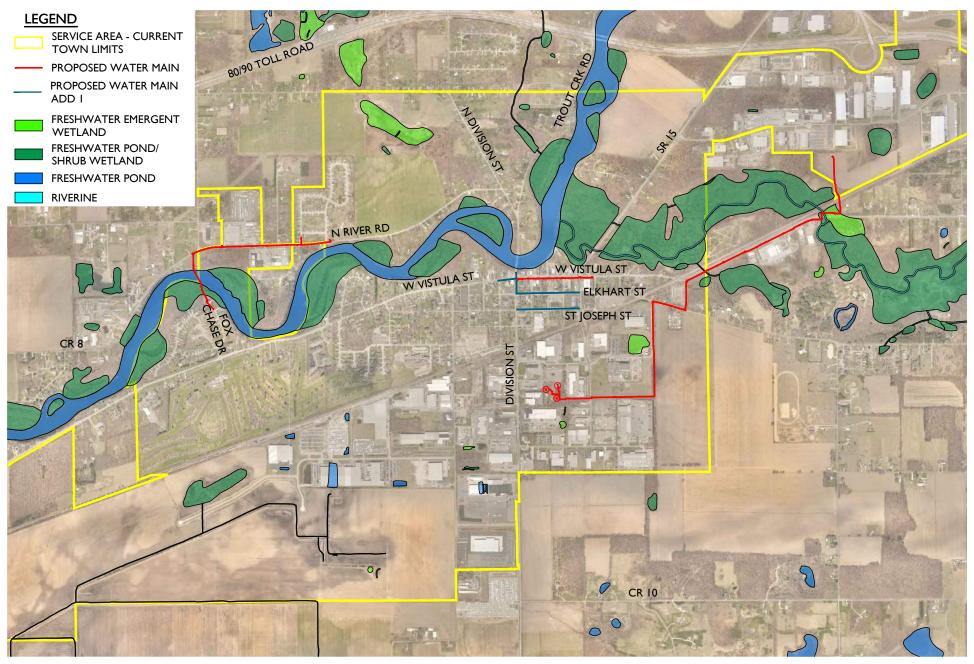
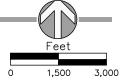


FIGURE 5 WETLANDS - TOWN LIMITS © 2023 JPR - All Rights Reserved





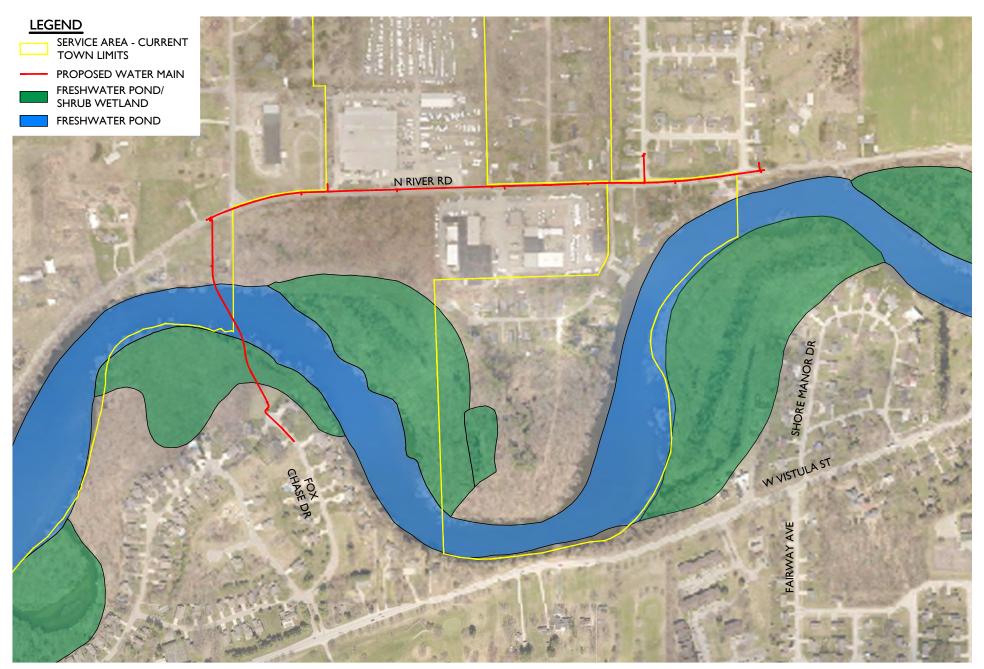
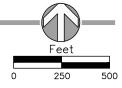


FIGURE 5.1 WETLANDS - LINEAR IMPROVEMENTS - WEST © 2023 JPR - All Rights Reserved





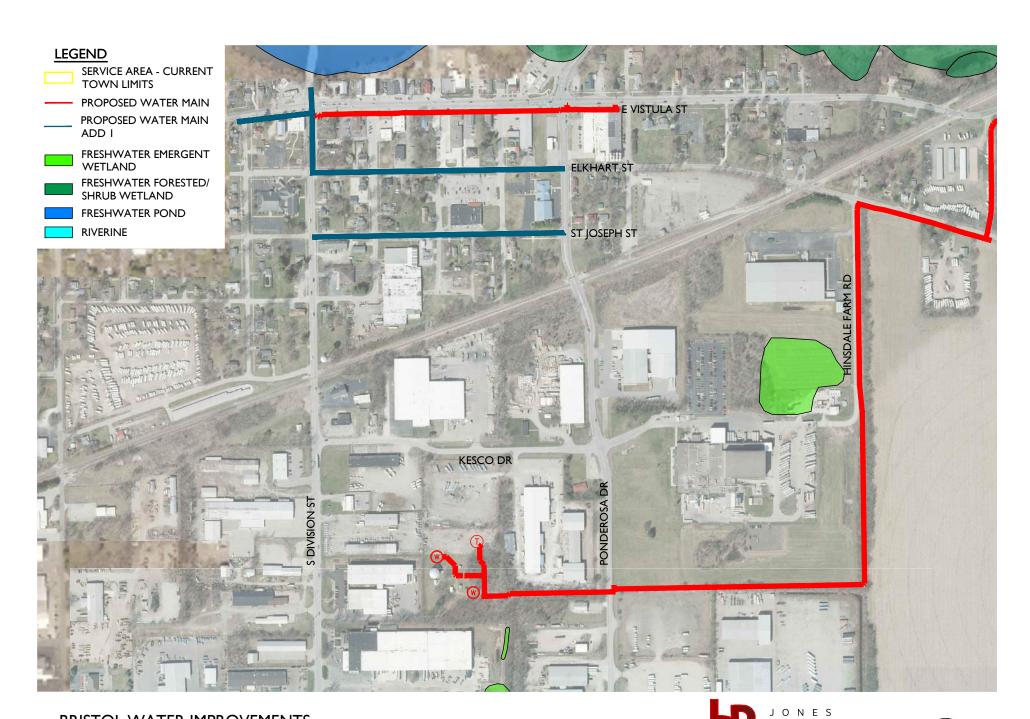


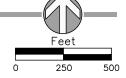
FIGURE 5.2

WETLANDS - LINEAR IMPROVEMENTS - DOWNTOWN & EAST PART I WETLANDS - LINEAR IMPROVEMENTS - PROPOSED TOWER



Fort Wayne, IN p: 260.422.2522

P E T R I E R A F I N S K I



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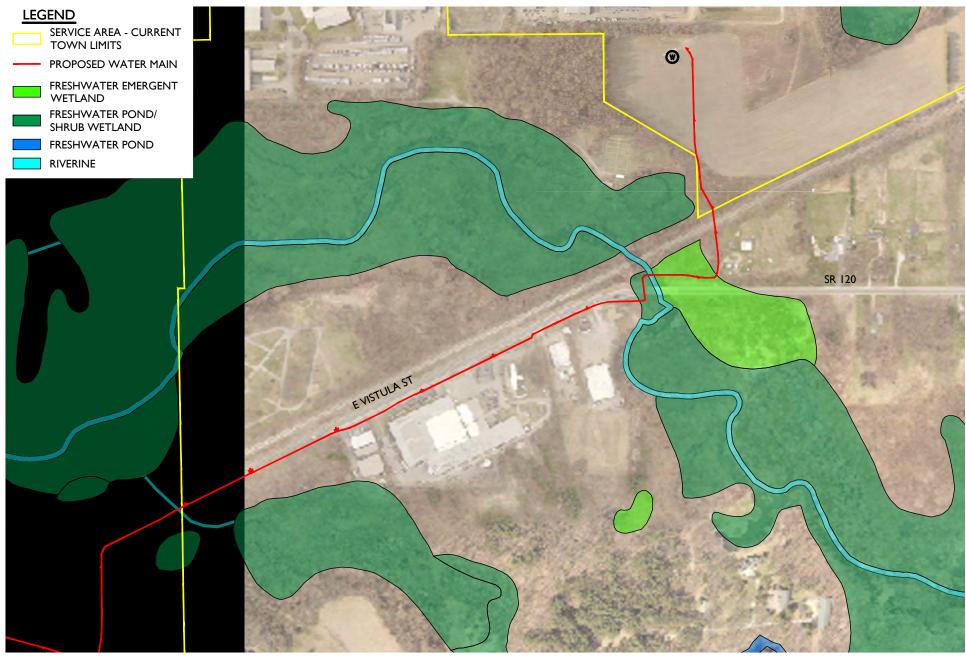
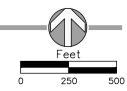


FIGURE 5.3
WETLANDS - LINEAR IMPROVEMENTS - EAST PART 2
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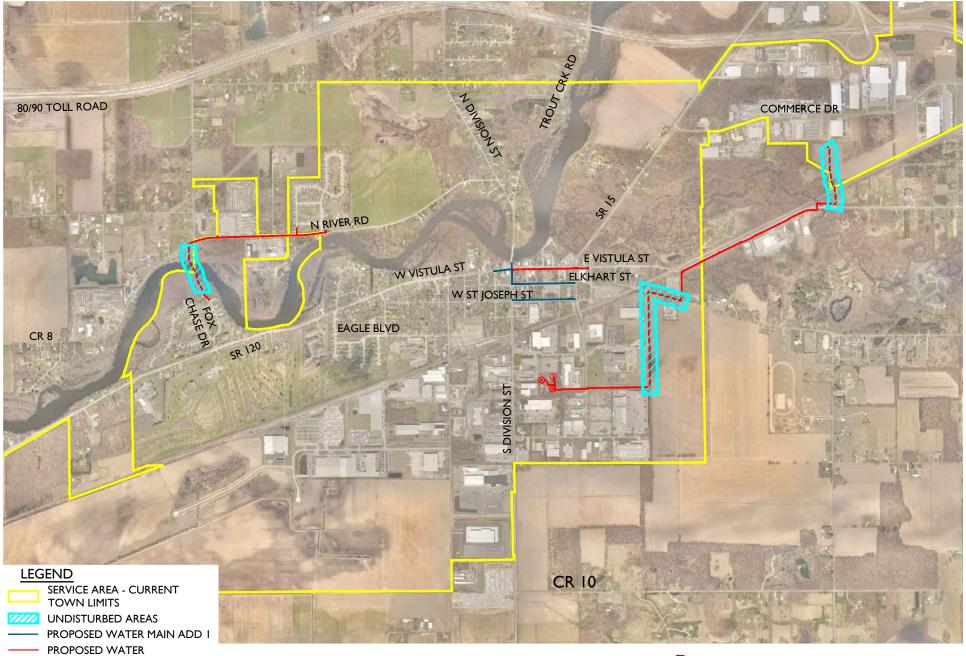
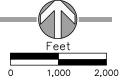


FIGURE 6 UNDISTURBED AREAS © 2023 JPR - All Rights Reserved





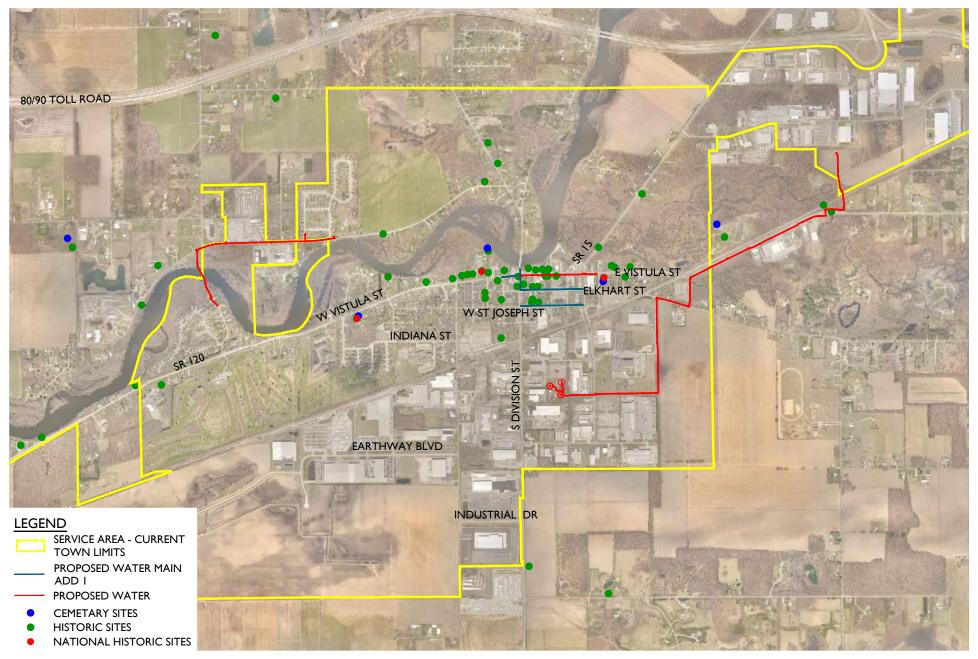
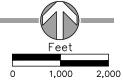


FIGURE 7 HISTORIC SITES © 2023 JPR - All Rights Reserved





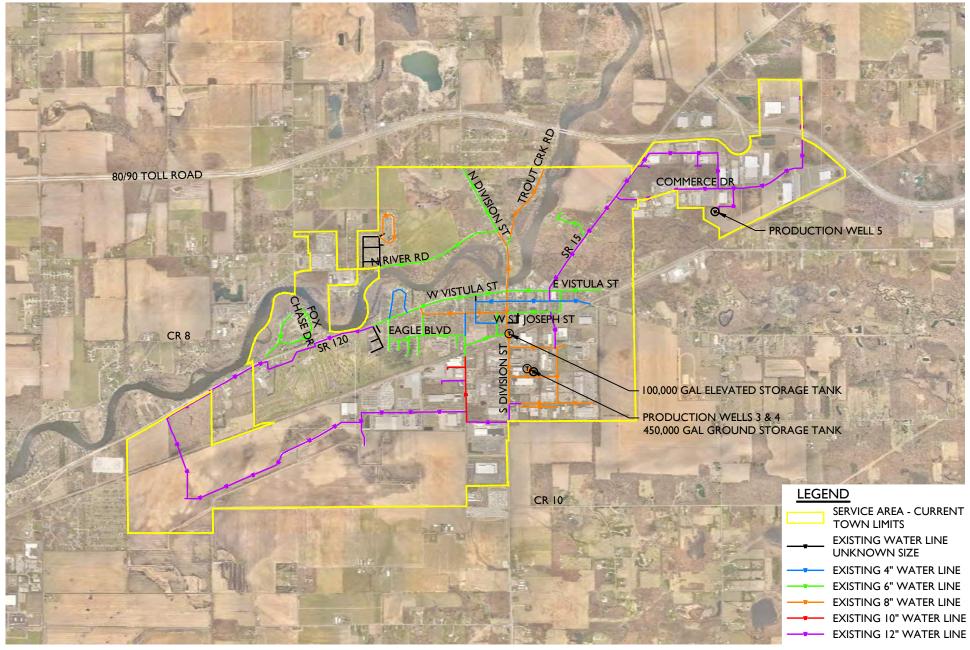
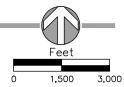


FIGURE 8 EXISTING WATER SYSTEM © 2023 JPR - All Rights Reserved





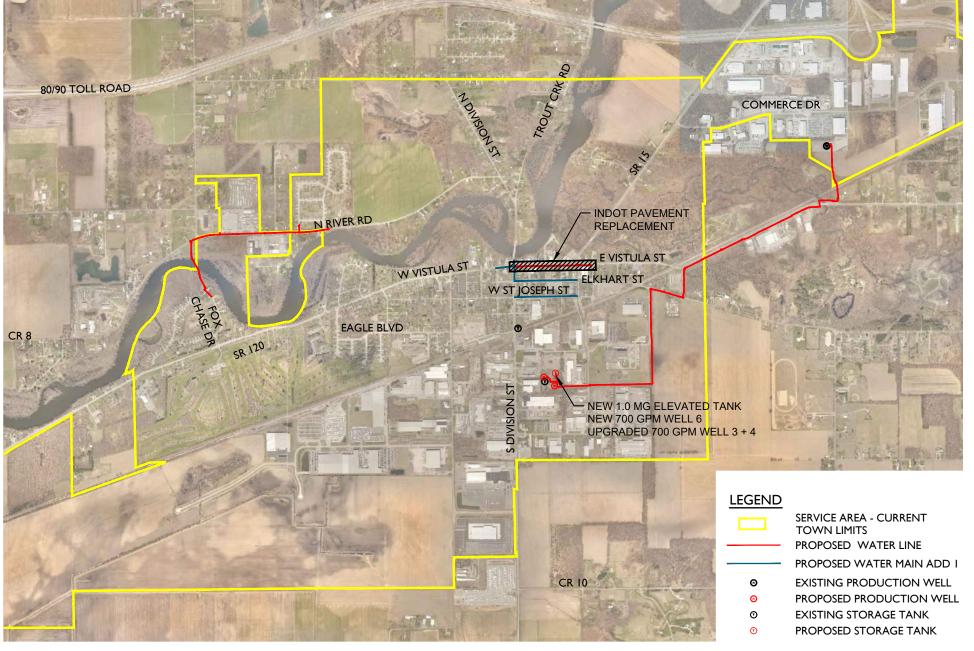


FIGURE 9 PROPOSED WATER SYSTEM © 2023 JPR - All Rights Reserved



Elkhart, IN p: 574.293.7762

South Bend, IN p: 574.232.4388

Fort Wayne, IN p: 260.422.2522

