



St. Joseph CITY OF

City of St. Joseph Drinking Water Revolving Fund Project Plan

June 11, 2020

Prepared By

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1.0 INTRODUCTION

1.1 INTRODUCTION

The City of St. Joseph (City) has retained Abonmarche Consultants, Inc. (Abonmarche) to complete this Drinking Water State Revolving Fund (DWSRF) Project Plan for Lead Water Service Replacements, Water Distribution System Improvements, and Saint Joseph Water Treatment Plant (SJWTP) upgrades.

The purpose of this Project Plan is to meet the project planning requirements of the Environment, Great Lakes & Energy (EGLE) Drinking Water State Revolving Fund, to include Lead Water Service Replacements as part of the project scope, and to include updates to the previously approved WTP and distribution system improvements. The addition of scope for the replacement of Lead Service Replacements has been introduced as a requirement resulting from the new Lead Copper Rule (LCR) that has been recently adopted by the State of Michigan.

The City's infrastructure has been the subject of multiple engineering studies focused on Drinking Water as well as Storm Water and Wastewater Systems. Those that will be referenced in the plan include:

- *Asset Management Plan (October 2017)*
- *Water System Reliability Study (January 2016)*
- *Strategic Capital Improvement Plan (May 2017)*

1.2 ASSET MANAGEMENT PLAN (AMP)

The City's Asset Management Plan (AMP) for its Wastewater and Storm Water systems was completed using the funding made available through the SAW Grant program (Grant No. 1276-01). Please note that while the SAW Grant covered activities related to the preparation of this asset management plan for the City's wastewater and storm water systems, the City of St. Joseph invested its own resources to expand the AMP to include the City's water distribution system and roadway network so that all four major asset classes within the public right-of-way are covered under the initial version of this Asset Management Plan. This allows the city to be efficient in planning and executing infrastructure improvements. This integrated asset management approach will improve the level of service for users of all utility networks and presents long-term cost savings.

1.3 WATER SYSTEM RELIABILITY STUDY (WSRS)

St. Joseph's Water Reliability Study (WRS) evaluated the water system with an emphasis on water demand and fire flow. The system was evaluated using the number of service connections and Residential Equivalent Units (REUs). The City was determined to have 4,266 service connections and 5,053 total REUs. Of the 4,266 services, about 3,850 are residential service connections. An inventory of water mains based on age, diameter, and material was taken to determine the condition of the system and are summarized in Tables 1-3.

Table 1: Pipe Ages in the System

Approximate Year of Installation	Pipe Length (feet)	Percent of Pipe by Length
1890 - 1919	44,998	14.47%
1920 - 1949	96,635	31.07%
1950 - 1979	88,556	28.47%
1980-1999	13,392	4.31%
2000 - 2015	67,418	21.68%
Total Pipe Length	310,999	

Table 2 - Pipe Diameters in the System

Pipe Diameter, inches	Pipe Length (feet)	Percent of Pipe by Length
4.0	28,335	9.11%
6.0	98,632	31.71%
8.0	69,187	22.25%
10.0	38,661	12.43%
12.0	42,420	13.64%
14.0	148	0.05%
16.0	11,880	3.82%
20.0	10,682	3.43%
24.0	10,319	3.32%
30.0	735	0.24%
Total Pipe Length	310,999	

Table 3 - Pipe Materials in the System

Pipe Material	Pipe Length (feet)	Percent of Pipe by Length
Cast Iron	230,189	74.02%
Ductile Iron	78,405	25.21%
HDPE	2,405	0.77%
Total Pipe Length	310,999	

The water plant has adequate capacity to meet the average daily flow demand. The City's current average daily demand requires 26.3% of the water plant's firm capacity. However, several water distribution system improvements are recommended to replace mains which are



undersized or beyond the end of their useful life. 45% of the water distribution system was installed prior to 1950. The soils in the majority of the City are typically clays and silts which often result in a more corrosive environment, shortening a typical water main's useful life. Many mains have a history of main breaks and capacity issues, partly due to the corrosive environment in which they operate. A number of older mains have sustained excessive corrosion, compromising their structural integrity, and causing water to leak from the system. Replacement of these older mains will help reduce water loss throughout the system, which is approximately 10% higher than the EGLE recommended unaccounted water percentage. System improvements will also improve reliability of the system by replacing mains which are structurally compromised due to excessive corrosion.

1.4 STRATEGIC CAPITAL IMPROVEMENT PLAN (SCIP)

This Strategic Capital Improvement Plan (SCIP) is intended to provide a roadmap for water system improvements needed in the next 10 and 20 years. If the SJWTP were replaced today with a new water plant, the capital cost could be approximately \$50 million. Completing the recommended projects as outlined in the SCIP over a 20 year period at an approximate cost of \$25 million provides good value to water customers.

Water distribution system improvement projects were determined through the condition assessment and process evaluation tasks. Through this process, 44 projects totaling nearly \$100 million were identified and prioritized by benefit score so that projects with the highest benefit score received the greatest priority. Asset management principles of reducing risk to provide excellent customer service were used to develop and prioritize the recommended improvement projects. An implementation plan was developed for the orderly implementation of projects through the 20 year planning period.

1.5 PROJECT OVERVIEW

This DWSRF Project Plan is being submitted to fund improvements to the SJWTP and water distribution system as referenced in the 2017 DWRP Project Plan. The improvements to the SJWTP will benefit all users in the Southwest Michigan Regional Sanitary Sewer and Water Authority which is composed of the City of St. Joseph, St. Joseph Charter Township, Lincoln Charter Township, and Royalton Township. The Water Authority services 33,000 users. The distribution system serves the City's population of 8,365 along with many businesses and visitors to the City.

This loan will also finance the full replacement of lead or galvanized water service lines with new copper services at approximately 750 properties in the City of Joseph over the next five years. The total 5-year project cost estimate for lead service line replacements is \$5,230,200.

2.0 PROJECT SERVICE AREA AND DESCRIPTION

The project service areas for the WTP improvements and distribution system improvements were recently approved in the 2017 DWRP project plan and have not changed on this plan update.

The Lead Water Service Replacements encompass the entire City of St. Joseph. (See Figure 1)



2.1 LAND USE IN STUDY AREA

The City land area is 2,688 acres, or 4.2 square miles. The City is located at the mouth of the St. Joseph River and is surrounded on two sides (north and east) by the St. Joseph River and by Lake Michigan on the west side. The Authority communities lie generally to the south and east of the City.

Current land use in St. Joseph includes residential, commercial, industrial, institutional, recreational and vacant land. The St. Joseph Comprehensive Master Plan (2016) provides a summary of current development in the City. The development was assessed by a parcel-to-parcel study of all lands in the city limits.

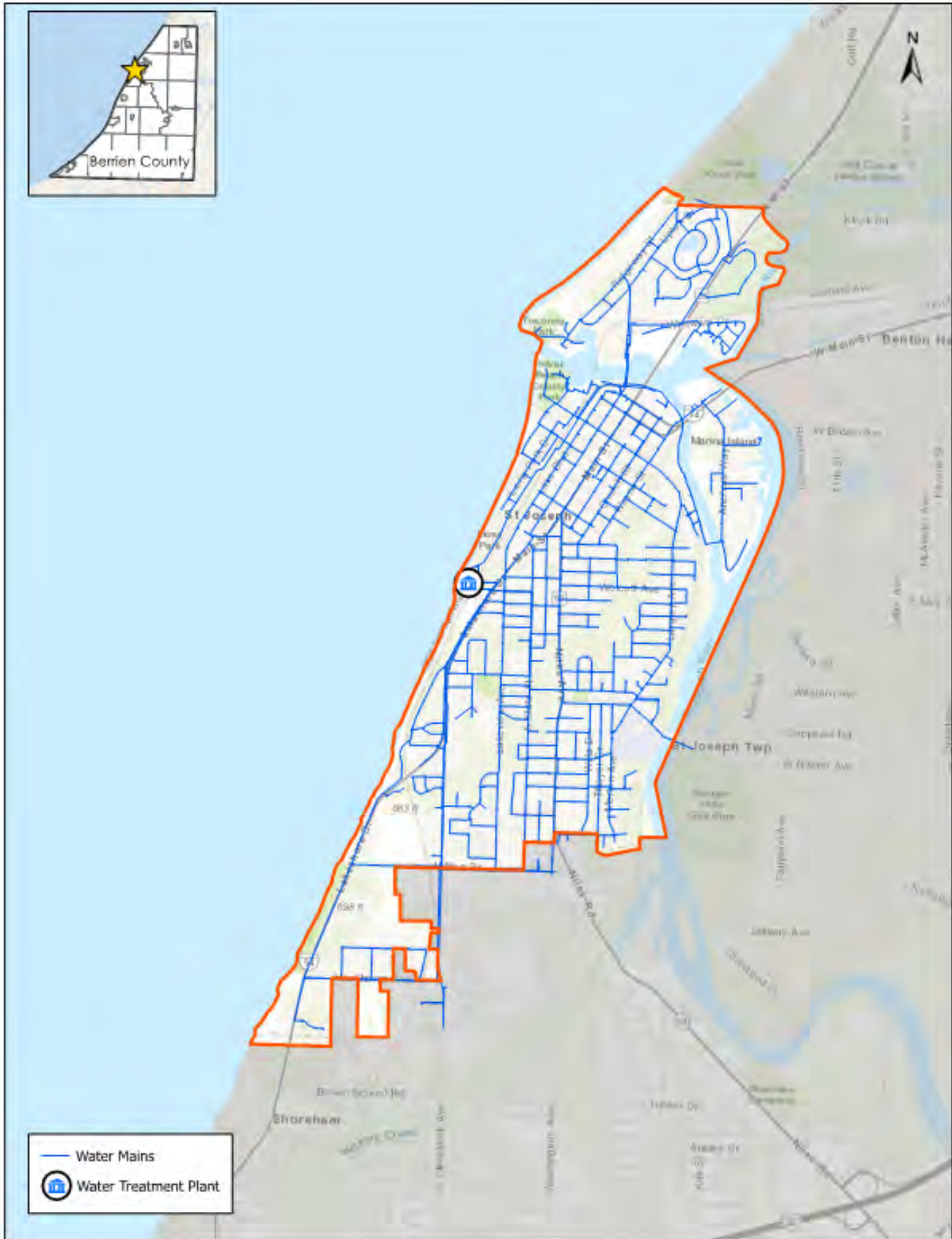
The master plan states that its future land use plan is intended to guide land use, policy decisions, and zoning ordinances within the City over the next 20 years. Generally, the zoning for the City of St. Joseph is industrial on the southern perimeter areas, residential in the northern and central areas, and office and business area transitioned in between. A copy of the City Zoning Map from the 2016 Zoning Ordinance is included in Appendix B.

The majority of the City's zoning composition is residential. Three types of residential zoning are present in the City: Single-Family Residence, Two-Family Residence, and Multiple-Family Residence. The single family housing mainly lies south of the river. The multiple family housing is dispersed throughout the City.

There are three main commercial zones in the City. The Downtown District is located just south of the St. Joseph River and is generally within the area bounded by Port Street, Lake Boulevard, Market Street, and southwest of Main Street. There is a commercial district adjacent, but distinct from, the Downtown District. The third commercial district lies in a corridor along Niles Avenue and Hilltop Road.

The industrial zones lie mainly to the south of the City. There is also a significant amount of commercial traffic in the harbor. Institutional zones consist of government offices, schools, churches, emergency services, and others. The parks throughout the City are zoned as recreational.

Figure 1. Study Area Overview Map



2.2 LEAD SERVICE LINE REPLACEMENT

The City of Saint Joseph has a reported 3,850 residential water services. Of the 3,850 water services, it is estimated that 70% (2,695) of them contain lead in some form and will need to be replaced. In order to remain in compliance with the Safe Drinking Water Act, the City plans on replacing 150 lead service lines per year for the next 20 years. The water services to be replaced have been evaluated and categorized by priority based on the following criteria:

- **Priority 1:** LSLR's as part of upcoming reconstruction projects for 2021 and 2022
- **Priority 2:** Water services that leak or need to be replaced as part of water main breaks.
- **Priority 3:** Lead services that test high for lead.
- **Priority 4:** Future projects listed in the Asset Management Plan slated for reconstruction
- **Priority 5:** Galvanized services previously connected to lead.

Priority 1 water services located on Langley Avenue, Upton Drive, and Donna Drive are expected to be completed by 2022. Beginning in 2022 lead water services will be replaced on near term CIP projects on Willa Drive, Lester Avenue, Botham Avenue, and then on other future CIP projects as appropriate. Beginning in 2021 the City also plans to address water services that leak and water services that test high for lead, replacing 25 of each per year. Beginning in 2023 services that are part of future CIP reconstruction projects will be replaced in locations to be determined, as priority 4. Finally, galvanized water services that were previously connected to lead will be selected as priority 5 projects, but will not begin until 2023 on Botham Avenue.

Existing lead water service lines will be removed and replaced with copper service lines from the water main in the street to the meter at the home residence (or business building). At each location, construction will entail an open cut at the water main located in the street right-of-way (ROW) and at the curb box near the ROW line, with each open cut measuring approximately 5 feet deep by 3 feet wide by 10 feet long. As part of the work, the curb stop and box will be replaced.

For work on the privately-owned property, the existing service from the ROW line to the meter at the house (or business) will be pulled out using trenchless technology, in which a new copper service line will be pulled along behind the old service line from inside the structure, out to the ROW line. This trenchless method will not disturb the ground and will not disrupt lawns, unless local soil conditions or other site features cause problems, at which point a small trench would be dug to lay the new copper line. In all scenarios, the lead line will be removed after the copper line is in service.

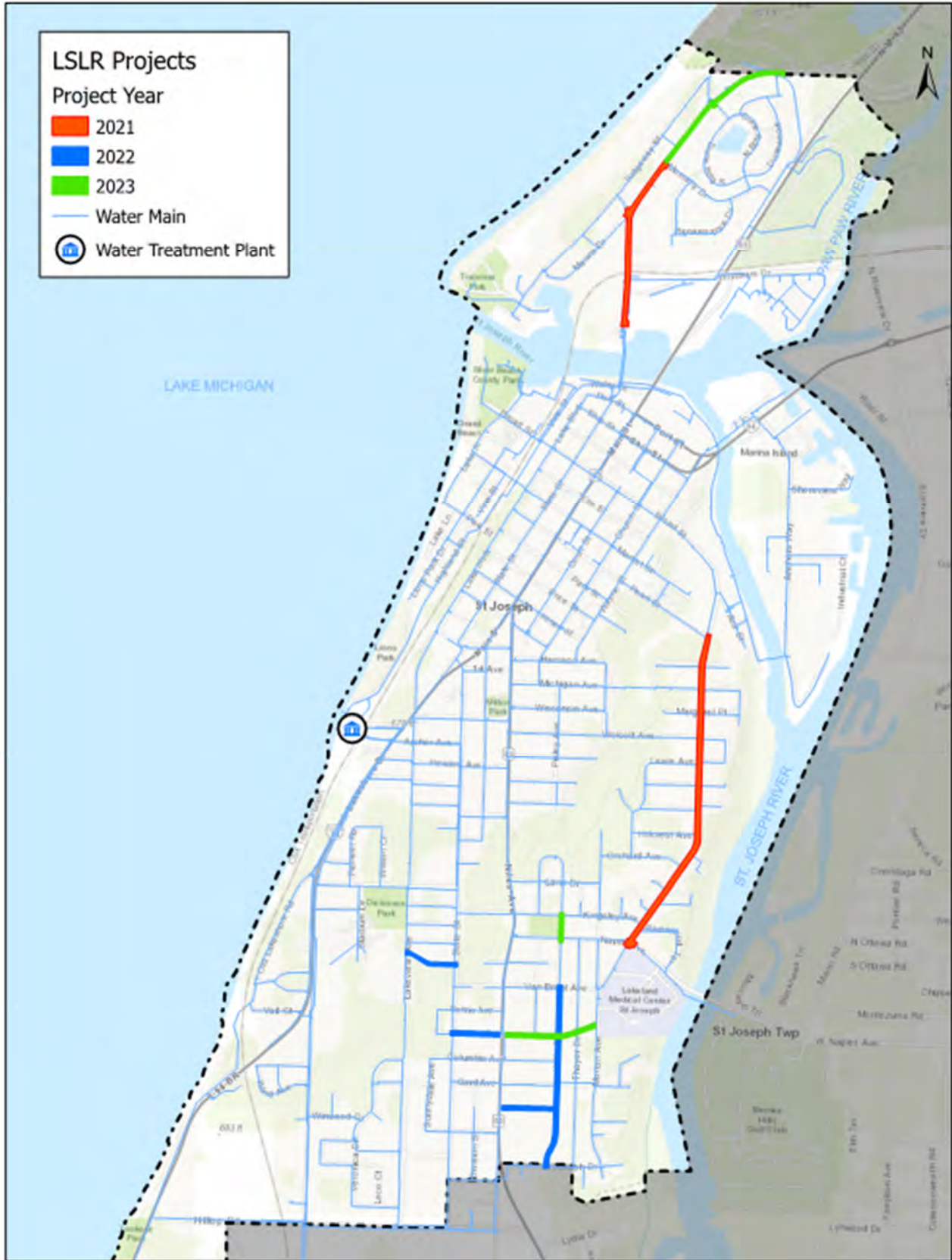
In Table 4 below, the total number of each anticipated type of lead service replacement in each priority category is summarized.

Table 4: Proposed LSLR Projects

Year	Water Services For Reconstruction Projects	Leaking/Broken Water Services	Lead Services That Test High For Lead	Water Services For CIP Projects	Galvanized Water Services Previously Connected To Lead	Total Service Replacements	Total Construction Cost	Engineering Cost	Total Project Cost
2021	108	25	25			158	\$948,000	\$142,200	\$1,090,200
2022	17	25	25	83		150	\$900,000	\$135,000	\$1,035,000
2023		25	25	83	17	150	\$900,000	\$135,000	\$1,035,000
2024		25	25	100		150	\$900,000	\$135,000	\$1,035,000
2025		25	25	100		150	\$900,000	\$135,000	\$1,035,000
					Total FY 21-25	758	\$4,548,000	\$682,200	\$5,230,200



Figure 2. LSLR Project Locations



2.3 WATER DISTRIBUTION SYSTEM IMPROVEMENTS

A number of distribution system improvements were developed for the next 20 years in response to concerns raised in Section 1.3. The proposed improvements are listed in Table 5. Most of the projects will be completed in conjunction with roadway, sanitary sewer, and storm sewer improvements. The distribution system improvements were developed as part of the City's latest water system reliability study as part of an overall asset management plan for the City's utilities. The first nine projects listed on Table 5 are intended to be completed in the next five years. (See Figure 3 and Appendix E for project locations)

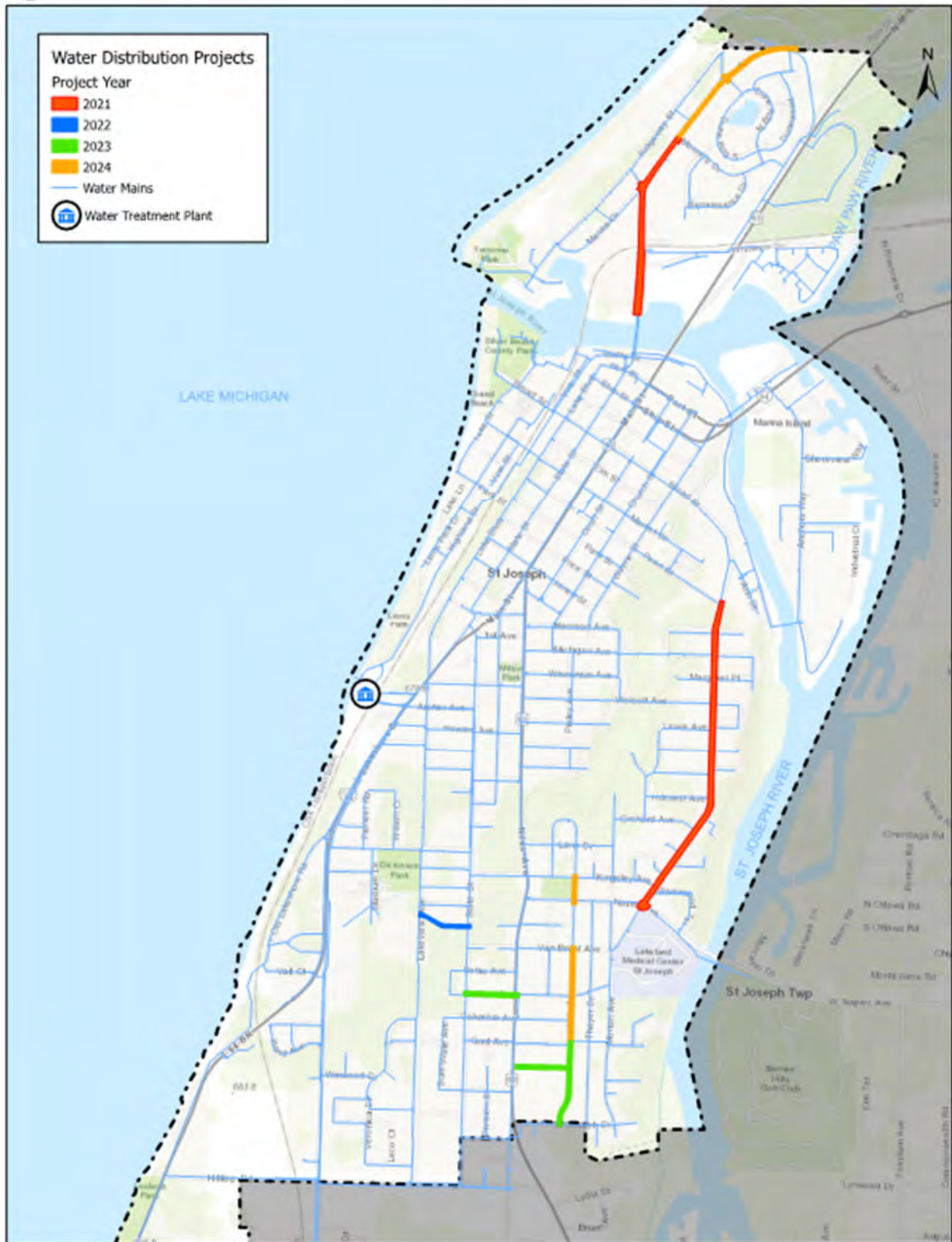
Projects for water distribution improvements were broken down into 5 and 20-year plans. The 5-year plan includes 9 projects totaling \$14,841,992 in estimated costs. The 20-year plan includes 44 projects totaling \$92,947,996. Proposed work in this DWRF Project Plan has a secondary benefit of improving fire flow capacities.

Table 5: Cost Summary- Proposed Water Distribution System Improvement Projects

Project No.	Year	Project Name	From	To	Length (feet)	Estimated Cost	Water	Storm Sewer	Sanitary Sewer
1	2021	Langley Avenue Reconstruction	Napier Ave	Pearl St	4600	\$5,341,685	X	X	X
2	2021	Upton Drive Reconstruction	St. Joseph River	Momany Dr	2650	\$3,321,461	X	X	X
3	2022	Donna Drive Project	Lakeview Ave	S. State St	710	\$700,215	X	X	X
4	2023	Lester Avenue Reconstruction	Niles Ave	Willa Dr	790	\$740,554	X	X	X
5	2023	Willa Drive Reconstruction	St. Joseph Dr	Highland Ave	1109	\$1,107,217	X	X	X
6	2023	Botham Avenue Water Main Replacement	S. State St	Niles Ave	686	\$710,776	X	X	X
7	2024	Willa Drive Reconstruction- 2	Highland Ave	Van Brunt Ave	686	\$712,094	X	X	X
8	2024	Willa Drive Water Main Installation- 3	Napier Ave	Kingsley Ave	333	\$313,143	X	X	X
9	2024	Upton Drive Reconstruct-2	Momany Dr	N. City Limits	2015	\$1,894,847	X	X	X
Total						\$14,841,992			
10	2026	Morton Avenue Reconstruction	Kingsley Ave	Van Brunt Ave	950	\$893,352	X	X	X
11	2027	Ship Street Reconstruction	Main St	Wayne St	1120	\$1,544,715	X	X	X
12	2027	Main Street Reconstruction	Niles Ave	Port St	3800	\$6,941,987	X		X
13	2027	Port Street Reconstruction	Main St	Wayne St	1120	\$1,404,287	X	X	X
14	2028	Wolcott Avenue Reconstruction	Pixley Ave	Langley Ave	2006	\$1,697,745	X	X	X
15	2028	State Street Reconstruction	Sutherland Ave	Elm St	2650	\$3,073,444	X	X	X
16	2029	Napier Avenue Reconstruction	Niles Ave	Langley Ave	1650	\$1,861,934	X	X	X
17	2029	Division Street Reconstruction	St. Joseph Dr	Gard Ave	1320	\$1,655,052	X	X	X
18	2029	Kingsley Avenue Reconstruction-2	Morton Ave	Langley Ave	634	\$576,322	X	X	X
19	2029	Riverwood Terrance Reconstruction	Langley Ave	Riverwood Ter N/S	528	\$479,965	X	X	X
20	2029	Sunnydale Drive Reconstruction	S. State St	S. State St	1584	\$1,439,895	X	X	X
21	2030	Forres Avenue Reconstruction	Main St	WinchesterAve	1003	\$1,100,390	X	X	X
22	2030	S. State Street Reconstruction	Wallace Ave	WinchesterAve	2340	\$2,640,560	X	X	X
23	2030	Veronica Drive & Veronica Court Reconstruction	Lakeview Ave	Lakeview Ave	3907	\$3,674,028	X	X	X
24	2030	Wayne Street Project	Broad St	Port St	1050	\$987,389	X	X	X
25	2031	Columbia Avenue Reconstruction	Niles Ave	Willa Dr	785	\$713,585	X	X	X
26	2031	Hillcrest Avenue Reconstruction	Sunset Dr	Langley Ave	898	\$816,304	X	X	X
27	2031	Hawthorne Road Reconstruction	Lakeshore Dr	Cleveland Ave	3274	\$3,489,276	X	X	X
28	2031	Wisconsin Avenue Project	Niles Ave	Morton Ave	1325	\$1,245,991	X	X	X
29	2031	Winwood Avenue Project	Cleveland Ave	Veronica Dr	790	\$718,130	X	X	X
30	2031	Veronica Court Project	Veronica Dr	Leco Ct	325	\$199,337	X	X	
31	2032	St. Joseph Drive Reconstruction	West of Willa Dr	Morton Ave	1109	\$1,042,871	X	X	X
32	2032	Sunset Drive Reconstruction	Lewis Ave	Orchard Ave	1373	\$1,248,091	X	X	X
33	2032	Niles Avenue Project	Main St	South City Limits	7800	\$12,057,136	X		X
34	2032	Petrie Avenue Project	S. State St	Niles Ave	700	\$636,317	X	X	X
35	2032	Thayer Drive Project	St. Joseph Dr	Napier Ave	3100	\$2,915,149	X	X	X
36	2032	Highland Court Project	Highland Ave	Interceptor	850	\$772,671	X	X	X
37	2033	Napier Avenue Reconstruction	Langley Ave	River Crossing	1320	\$2,482,578	X	X	X
38	2034	Lane Drive Water Reconstruction	Langley Ave	Dead End	264	\$239,983	X	X	X
39	2034	Pioneer Street Water Reconstruction	Wallace Ave	North St	792	\$719,948	X	X	X
40	2034	Ridgeway Reconstruction	N. Pier Rd	N. Upton Dr	5861	\$2,939,473	X	X	X
41	2035	Lake Street Reconstruction	Park St	Market St	792	\$446,864	X	X	X
42	2035	Market Street Reconstruction	Church St	Olive St	898	\$844,453	X	X	X
43	2036	Whittlesey Avenue Reconstruction	Lakeview Ave	S. State St	686	\$666,597	X	X	X
44	2036	Lakeshore Drive Project	Winchester Ave	South City Limits	12400	\$13,940,185	X		X
Total Estimated Costs						\$92,947,996			



Figure 3: Water Distribution Project Locations



2.4 WATER PLANT IMPROVEMENTS

Phase 2 and carryover projects from Phase 1 of the Water Plant SCIP will begin in 2022 with construction expected to be completed over the following two to three years. These projects include improvements to clarifiers #2 and #3, HVAC upgrades, architectural improvements, lab improvements, and south low lift pump station upgrades. Please refer to the 2017 DWRP Project Plan for further detail on the proposed water plant improvements. All Water Plant improvements included in this plan will be confined within the building limits. No site work is expected that will cause any impacts to shoreline, dewatering, or wetlands.

The following sections include more detailed description of the performance and reliability and issues at the SJWTP. A summarized cost of the proposed Water Plant Improvements are identified in Table 6 below.

2.4.1 CLARIFIER IMPROVEMENTS

Clarifiers #2 and #3 were constructed in 1975 and have a rated capacity of 6 mgd at 0.9 gpm/sf and 2 hours of detention time. As currently rated, total clarification capacity is 16 mgd total, and 10 mgd firm. This limits the plant capacity if one of the clarifiers is out of service for maintenance.

Each clarifier will be retrofitted with horizontal flocculators, inclined plate settler basins, sludge removal mechanisms and automated flow split control between clarifiers. The capacity of each new clarifier will be 8 mgd for a total capacity of 16 mgd between the two.

2.4.2 HVAC UPGRADES

In the existing control room, lab and office, moisture from the basins and filters is being drawn into the space above the ceilings. HVAC upgrades will be made to pressurize this area, preventing moisture from entering. The existing laboratory also needs a ventilating hood and other upgrades to its existing HVAC system. The HVAC upgrades also include the installation of dehumidification units in the pipe galleries.

2.4.3 ARCHITECTURAL IMPROVEMENTS

Architectural improvements include renovating alum and fluoride feed rooms to incorporate an office and conference rooms, replacing windows and handrails, repairing cracks in walls and repainting, replacing the roof, and HVAC upgrades.

2.4.4 LAB IMPROVEMENTS

Lab improvement items include replacing countertops and cabinets, upgrading electrical facilities, and instrumentation for process lab capability.

2.4.5 SOUTH LOW LIFT PUMP STATION (ELECTRICAL) UPGRADES

Work for the electrical upgrades at the South Low Lift Pump Station include replacing MCC and switch gear, replacing pump packing, replacing the traveling screen, and replacement of the isolation gate.



Table 6: Proposed Water Plant Improvements

Water Treatment Plant Projects	
Project	Estimated Cost
Clarifier Improvements	\$6,160,000
HVAC Upgrades	\$420,000
Architectural Improvements	\$1,025,000
Lab Improvements	\$100,000
South Low Lift Pump Station (Electrical)	\$200,000
Water Treatment Plant Projects	\$7,905,000
Contingency (10%)	\$790,500
Engineering (15%)	\$1,304,500
Subtotal Water Treatment Plant Projects	\$10,000,000

3.0 PROJECT NEED

Lead in drinking water is widely known to pose a public health risk, and the Michigan Lead and Copper Rule promulgated in 2018 required municipal water suppliers to create an initial distribution system materials inventory (DSMI) by January 1, 2020. A final DSMI is required by January 1, 2025. Starting in 2021, water suppliers must begin removing all lead service lines at a rate averaging 5 percent per year, not to exceed 20 years for replacing lead components within the water system.

Much of the infrastructure dates to the early 1900's, meaning that the facilities are operating beyond their useful lives and represent a high probability of failure and service disruption. Aging and undersized infrastructure means low water pressure, poor water quality, and inadequate fire flow in the drinking water system. Aging and unreliable infrastructure includes leaky water mains and additional costs associated with these deteriorating system components.

A detailed evaluation of the water plant was conducted in a SCIP Study in 2017. The study includes several recommendations for improvements to the existing plant. Although many improvements have been or are currently being made to the plant, further improvements to the facilities are needed to address reliability and performance issues associated with the aging equipment. Additionally, there are some treatment processes that are not suited to the raw water conditions for the plant. This includes the solids contact clarification process, which is prone to clarifier upsets during conditions of rapidly changing water temperatures in the lake.

4.0 POPULATION DATA

The City of St. Joseph population according to the 2010 U.S. Census was 8,365. The population served by the SJWTP is 33,000.



5.0 ENVIRONMENTAL SETTING

5.1 FLOODPLAINS AND WETLANDS

Sensitive areas in St. Joseph consist of beaches and wetlands. Along much of Lake Michigan's shoreline are vast stretches of sandy beaches. These beaches require special attention to minimize erosion from wind and wave action. Wetlands are present in St. Joseph and a map of wetland locations is included in Appendix C. The emergent wetlands in St. Joseph are on the northeastern shore of Marina Island and on the west shore of the St. Joseph River south of Marina Island. Riverine wetlands may exist in the river channel west of Marina Island and on the St. Joseph River shoreline north of the City. The proposed work is not anticipated to impact wetlands in any capacity.

The extent of the 500-year flood boundary, as defined by the National Flood Insurance Program, consists primarily of the areas immediately adjacent to the St. Joseph River, the Paw Paw River, and their tributaries. The floodplain map designates areas which are susceptible to flooding. The largest floodplains are along the St. Joseph and the Paw Paw Rivers, which are more susceptible to short term fluctuations than Lake Michigan. The majority of Marina Island and the area between M-63 and the Paw Paw River are in the floodplain. A narrow band of land along Lake Michigan's shoreline is also in the 100-year floodplain. St. Joseph has a ravine, which crosses the City from the southwest to the northeast. The ravine contains many flood-prone areas that are not directly related to either the lake or the rivers. The only project that is expected to impact the floodplain is the Upton Drive Reconstruction Project, which would include limited excavation and grading within the floodplain as it is expected that the proposed roadway will be construction to the existing roadway elevations. Floodplain limits for the Upton Drive Project is in Appendix D.

5.2 COASTAL ZONE

The City's entire western boundary is Lake Michigan, a coastal zone. The nearest National Natural Landmarks to the project site are the Grand Mere Lakes and Warren Woods Natural Area. These landmarks are located on the lakeshore six and ten miles south of St. Joseph, respectively, and will not be affected by the selected alternatives.

5.3 AGRICULTURAL RESOURCES

The National Environmental Policy Act defines several classifications of farmland including Prime and Unique farmland. Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses. Unique farmland is land other than prime farmland that is used for the production of specific high value food and fiber crops. It has the special combination of soil quality, location, growing season, and moisture supply needed to economically produce sustained high quality and/or high yields of a specific crop when treated and managed according to acceptable farming methods.

There are 332 million acres of prime farmland in the United States. There are no prime and unique agricultural parcels located within or adjacent to the selected alternatives.



5.4 PROTECTED PLANTS, ANIMALS, AND HABITAT

Currently, nine species are listed as threatened or endangered by the U.S. Fish and Wildlife Service (USFWS) in Berrien County. Endangered or threatened designated species are protected under the Endangered Species Act. The projects proposed within this Plan take place within already developed areas and are not expected to impact any habitat. Where tree trimming or removal is necessary, this work will be scheduled to mitigate impacts on threatened or endangered species (Indiana Bat).

Table 7 indicates the species listed as endangered or threatened in Berrien County:

Table 7: Threatened and Endangered Species in Berrien County, MI

Species	Status	Habitat
Whooping Crane (<i>Grus americanus</i>)	**non-essential experimental population	Open wetlands and lakeshores
Indiana Bat (<i>Myotis sodalis</i>)	endangered	Summer habitat includes small to medium river and stream corridors with well-developed riparian woods; woodlots within 1 to 3 miles of small to medium rivers and streams; and upland forests. Caves and mines as hibernacula.
Northern Long-Eared Bat (<i>Myotis septentrionalis</i>)	threatened	Hibernates in caves and mines - swarming in surrounding wooded areas in autumn. Roosts and forages in upland forests during spring and summer.
Piping Plover (<i>Charadrius melodus</i>)	endangered	Beaches along shorelines of the Great Lakes
Rufa Red Knot (<i>Calidris canutus rufa</i>)	threatened	Only actions that occur along coastal areas during the red knot migratory window of May 1 - September 30
Eastern Massasauga (<i>Sistrurus catenatus</i>)	threatened	Wet prairies, marshes and low areas along rivers and lakes. They often hibernate in burrows, under logs, and tree roots
Mitchell's Satyr Butterfly (<i>Neonympha mitchellii mitchellii</i>)	endangered	Fens; wetlands characterized by calcareous soils which are fed by carbonate-rich water from seeps and springs
Pitcher's Thistle (<i>Cirsium pitcher</i>)	threatened	Stabilized dunes and blowout areas
Small whorled pogonia (<i>Myotis sodalist</i>)	threatened	Dry woodland; upland sites in mixed forests (second or third growth stage)

6.0 EXISTING FACILITIES

Please refer to the 2017 DWRP Project Plan for a description of existing facilities for the water treatment plant and distribution system.

6.1 LEAD SERVICE REPLACEMENT

The City of St. Joseph received grant funding as part of pilot program to improve their water supply system by reviewing and identifying existing water service lines to determine if lead materials are present within the municipal water system. The study provided confirmation by identifying both sides of a water service. The water service material from the distribution main to the shutoff at the right of way, has always been the responsibility of the City. The homeowner is typically responsible for their portion of the service line from the right or way to inside the home. As part of the lead service pilot grant, the City of St. Joseph was able to identify areas of the



system that contained lead services, or galvanized fittings, to update their DSMI from the main to the home. As all the existing services were not completed as part of the pilot grant, the City used this data to project an anticipated amount of water service lines that would be required to be replaced in the next 20 years as part of the new lead and copper rule requirements. The pilot grant allowed the City of St. Joseph to receive a head start to manage the lead service replacements that will be required by the State of Michigan in the future.

7.0 ALTERNATIVES ANALYSIS

Please refer to the 2017 DWRP Project Plan for alternative analysis for water treatment plant and water distribution improvements. The following sections provide alternatives analysis for the lead service line replacements only.

7.1 NO ACTION TAKEN

The No-Action alternative was not considered a feasible option because it would not address the public health risk posed by water service lines made of lead or galvanized steel or meet the requirements of the Lead and Copper Rule.

7.2 PARTIAL REPLACEMENT

Partial replacements of lead service lines (only up to the private property boundary) are not feasible because partial replacement is prohibited under the Michigan Lead and Copper Rule.

7.3 REGIONALIZATION

Regionalization is not applicable, because the St. Joseph water system already serves customers in multiple communities and the lead services in question are entirely within the City of St. Joseph.

7.4 SUMMARY

For planning purposes, the only feasible alternative is full replacement of lead water service lines from the public water main to the customer's water meter. Assessments of different pipe materials, excavation methods, and details of meter installation are design and construction considerations, and should not be intermixed with the planning-phase alternatives analysis. Furthermore, because a city of St. Joseph standard policy allows only copper to be used in service lines within the public right of way, a DWSRF planning assessment of other material options is not applicable. Consequently, when only one feasible alternative exists, a cost-effectiveness comparison between two or more feasible alternatives is not required by the DWSRF loan program.

8.0 ENVIRONMENTAL AND OTHER IMPACTS

The projects will be constructed in already developed areas and road right-of-ways minimizing environmental impacts.



8.1 PROTECTION OF PUBLIC HEALTH AND THE ENVIRONMENT

Primary impacts on the environment would be both long-term and short-term. The expenditure of monetary resources for construction, the use of energy for construction, and the short-term disturbance to the community due to construction are all primary direct impacts.

Long-term effects of the proposed alternative would include the benefit of decreased risk of health issues related to poor water quality.

Short-term impact will be related to construction. Minor impacts will include the increase in noise and dust at the construction sites, along with emissions from both gasoline and diesel engines. Impacts resulting from construction practices will cease or be repaired at the completion of the project.

Adverse impacts upon sensitive environmental areas will be either non-existent or minimal. Construction of work will take place within existing road right-of-ways and facilities in the city. There are no historical or archeological sites anticipated to be disturbed within the proposed plan area.

8.2 WATER CUSTOMER IMPACTS

The impacted locations to water customers can be seen on Figure 2, unless a water main break or high lead testing results in the replacement of the water service as described. Most service replacements will occur in locations of planned future water distribution and capital improvement projects as identified on this and prior approved plans. Service replacements will be made adjacent to these project locations. The impact during construction will include removing existing pavement, installing a new water service from the existing water main, providing a new water shutoff, and replacing the existing water service from the right of way to the residence.

8.3 MITIGATION

The Water Distribution System within the City of St. Joseph has existed for over 100 years. The projects suggested by this Project Plan are predominately that of replacement and rehabilitation of existing facilities. Generally, these projects are not anticipated to create significant environmental impact.

Environmental impacts of construction are limited to the potential for those stemming from tree trimming or removal. Where tree trimming or removal is necessary, this work will be scheduled to mitigate impacts on threatened or endangered species (Indiana Bat).

The primary adverse impacts are related to the construction work required for sewer construction. These impacts can be minimized through efficient and cost effective design and construction practices, soil erosion control procedures, air pollution control equipment, noise control, mufflers and limitations to the allowed hours of work. The project will also be segmented to allow a balanced construction cycle to minimize inconvenience to the community as a whole.

Soil erosion control procedures, such as the use of silt fence, erosion control blanket, watering, and the immediate seeding of disturbed areas with help to control erosion caused by rainfall



and wind. Air pollution can be minimized by proper maintenance through proper muffling of equipment and through limiting construction to acceptable times during the daytime hours.

The following measures could be taken to avoid, eliminate, or mitigate potential adverse impacts on the environment:

- Traffic Control – Flagmen, Warning Signs, Barricades, Cones, etc.
- Dust Control – Calcium Chloride and Water.
- Noise Control – Designate Work Hours, Mufflers, No Work on Weekends, Holidays, Religious Observance Times.
- Soil Erosion and Sedimentation Control – Seeding, Sodding, Rip Rap, Erosion-Control Blankets, Silt Fence, etc.
- Restoration – Pavement, Gravel, Topsoil, Seed, Fertilizer, Mulch, Sod.

9.0 PROJECT FUNDING AND SCHEDULE

9.1 PROJECT FUNDING

Funding for the Langley Avenue project would come from a combination of Drinking Water State Revolving Fund (DWSRF) and Clean Water State Revolving Fund (CWSRF) low interest loans, MDOT TIP (Road) and CMAQ (Trail/Path) funds, Water and Sewer funds and the City's local street fund. Funding for Upton Drive is expected to come from the DWSRF and possibly MDOT Road and Transportation Alternative Program (TAP) funds along with MEDC assistance. Lead service line replacement loans will be repaid with city water funds. Water plant improvement loans will be repaid with system water funds. The money from the DWSRF loans would cover the water system replacement work as well as the cost of replacing sections of roadway and sidewalk that will need to be removed to complete work. It is expected that the DSWRF loan will be payable over 20-30 years. Therefore, the expected annual debt repayment is \$200,000 - \$280,000 per year for the 2021 loan depending on the loan duration. Expected funding for the 2021 projects is summarized below in Table 8.

Table 8: 2021 Project Funding

Project	Total Cost	DWSRF	CWSRF	TIP	CMAQ	MDOT	MEDC	City
Lead Service Line Replacements	\$1,090,200	\$1,090,200						
Langley Avenue Reconstruction	\$5,341,685	\$2,136,674	\$473,955	\$722,027	\$100,000			\$1,909,029
Upton Drive Reconstruction	\$3,321,461	\$1,328,584	\$442,270			\$1,450,607	\$100,000	
Cost of Issuance	\$146,654	\$96,654	\$50,000					
	\$9,900,000	\$4,652,112	\$966,225	\$722,027	\$100,000	\$1,450,607	\$100,000	\$1,909,029

9.2 CONSTRUCTION COST

The estimated construction costs for all projects through FY 2025 is \$30,475,000. Of this total, \$21,438,621 is eligible for DWSRF Loan (See Table 9). A detailed summary of the estimated project costs is included in Appendix A.

Table 9: Project Cost Summary 2021-2025

Year	Project	Project Cost	DWSRF
2021	Lead Service Replacements	\$1,090,200	\$4,652,112
	Distribution System Projects	\$8,663,146	
	Cost of Issuance	\$146,654	
2022	Lead Service Replacements	\$1,035,000	\$11,447,025
	Distribution System Projects	\$700,215	
	Water Treatment Plant Improvements	\$10,000,000	
	Cost of Issuance	\$164,785	
2023	Lead Service Replacements	\$1,035,000	\$2,087,278
	Distribution System Projects	\$2,558,547	
	Cost of Issuance	\$56,453	
2024	Lead Service Replacements	\$1,035,000	\$2,208,894
	Distribution System Projects	\$2,856,604	
	Cost of Issuance	\$58,396	
2025	Lead Service Replacements	\$1,035,000	\$1,043,312
	Cost of Issuance	\$40,000	
Total Cost		\$30,475,000	\$21,438,621

9.3 CONSTRUCTION SCHEDULE

Construction of the first phase is proposed to start in April 2021 with a completion date in May 2023. Each following year is expected to follow a similar commencement date.

9.4 COST TO USERS

The expected annual debt repayment for FY 2021 is \$200,000 per year for 30 years. With 4,266 users it is expected that the necessary increase in rates to finance the remaining cost will be an average of \$3.90/month per user.

10.0 PUBLIC INVOLVEMENT

Throughout the process of the SAW Grant, Water Asset Management Plans, and Water Reliability Study, the Community has been involved with the process of reviewing and approving of the reports and recommendations contained therein. The findings, recommendations, and impacts of the proposed plans have been presented to the public at the City Commission meetings.

A public hearing will be held on June 8th, 2020. Documents related to the hearing and a transcript can be found in Appendix H.

APPENDIX A

YEARLY COST SUMMARY (FY 2021 – FY 2025)



FY 2021			
Lead Service Replacement Projects			
Description	No. of Replacements	Estimated Cost	DWSRF
Langley Avenue: (Napier Ave to Pearl St)	95	\$570,000	\$570,000
Upton Drive: (St. Joseph River to North City Limits)	13	\$78,000	\$78,000
Leaking/Broken Water Services	25	\$150,000	\$150,000
Services Testing High for Lead	25	\$150,000	\$150,000
Lead Service Replacement Projects		\$948,000	\$948,000
Contingency (0%)		\$0	\$0
Engineering (15%)		\$142,200	\$142,200
Subtotal LSRL Projects		\$1,090,200	\$1,090,200
Distribution System Projects			
Project	Length (Feet)	Estimated Cost	DWSRF
Langley Ave Reconstruction (Napier Ave to Pearl St)	4600	\$3,956,804	\$1,582,722
Upton Dr Reconstruction (St. Joseph River to Momany Dr)	2650	\$2,460,341	\$984,136
Distribution System Projects		\$6,417,145	\$2,566,858
Contingency (20%)		\$1,283,429	\$513,372
Engineering (15%)		\$962,572	\$385,029
Subtotal Distribution System Projects		\$8,663,146	\$3,465,258
Total Cost			
Subtotal All Projects		\$9,753,346	\$4,555,458
Cost of Issuance		\$146,654	\$96,654
Total FY 2021 Loan Amount		\$9,900,000	\$4,652,112



FY 2022			
Lead Service Replacement Projects			
Description	No. of Replacements	Estimated Cost	DWSRF
Donna Drive: (Lakeview Ave to S. State St)	17	\$102,000	\$102,000
Lester Avenue: (Niles Ave to Willa Dr)	7	\$42,000	\$42,000
Willa Drive: (St. Joseph Dr to Highland Ave)	26	\$156,000	\$156,000
Botham Avenue: (S. State St to Niles Ave)	20	\$120,000	\$120,000
Water Services for CIP Projects	30	\$180,000	\$180,000
Leaking/Broken Water Services	25	\$150,000	\$150,000
Water Services Testing High for Lead	25	\$150,000	\$150,000
Lead Service Replacement Projects		\$900,000	\$900,000
Contingency (0%)		\$0	\$0
Engineering (15%)		\$135,000	\$135,000
Subtotal LSRL Projects		\$1,035,000	\$1,035,000
Distribution System Projects			
Project	Length (Feet)	Estimated Cost	DWSRF
Donna Dr Reconstruction (Lakeview Ave to S. State St)	710	\$518,678	\$207,471
Distribution System Projects		\$518,678	\$207,471
Contingency (20%)		\$103,736	\$41,494
Engineering (15%)		\$77,802	\$31,121
Subtotal Distribution System Projects		\$700,215	\$280,086
Water Treatment Plant Projects			
Project		Estimated Cost	DWSRF
Clarifier Improvements		\$6,160,000	\$6,160,000
HVAC Upgrades		\$420,000	\$420,000
Architectural Improvements		\$1,025,000	\$1,025,000
Lab Improvements		\$100,000	\$100,000
South Low Lift Pump Station (Electrical)		\$200,000	\$200,000
Water Treatment Plant Projects		\$7,905,000	\$7,905,000
Contingency (10%)		\$790,500	\$790,500
Engineering (15%)		\$1,304,500	\$1,304,500
Subtotal Water Treatment Plant Projects		\$10,000,000	\$10,000,000
Total Cost			
Subtotal All Projects		\$11,735,215	\$11,315,086
Cost of Issuance		\$164,785	\$131,939
Total FY 2022 Loan Amount		\$11,900,000	\$11,447,025



FY 2023

Lead Service Replacement Projects

Description	No. of Replacements	Estimated Cost	DWSRF
Willa Drive: (Napier Ave to Kingsley Ave)	11	\$66,000	\$66,000
Willa Drive: (Highland Ave to Van Brunt Ave)	50	\$300,000	\$300,000
Water Services for CIP Projects	22	\$132,000	\$132,000
Leaking/Broken Water Services	25	\$150,000	\$150,000
Water Services Testing High for Lead	25	\$150,000	\$150,000
Botham Avenue: (Niles Ave to Morton Ave) - Priority 5	17	\$102,000	\$102,000
Lead Service Replacement Projects		\$900,000	\$900,000
Contingency (0%)		\$0	\$0
Engineering (15%)		\$135,000	\$135,000
Subtotal LSRL Projects		\$1,035,000	\$1,035,000

Distribution System Projects

Project	Length (Feet)	Estimated Cost	DWRF
Lester Ave Reconstruction (Niles Ave to Willa Dr)	790	\$548,559	\$219,423
Willa Dr Reconstruction (St. Joseph Drive to Highland Ave)	1109	\$820,161	\$328,064
Botham Ave Water Main Replacement (S. State St to Niles Ave)	686	\$526,501	\$210,600
Distribution System Projects		\$1,895,220	\$758,088
Contingency (20%)		\$379,044	\$151,618
Engineering (15%)		\$284,283	\$113,713
Subtotal Distribution System Projects		\$2,558,547	\$1,023,419

Total Cost

Subtotal All Projects		\$3,593,547	\$2,058,419
Cost of Issuance		\$56,453	\$28,859
Total FY 2023 Loan Amount		\$3,650,000	\$2,087,278



FY 2024			
Lead Service Replacement Projects			
Description	No. of Replacements	Estimated Cost	DWSRF
Water Services for CIP Projects	100	\$600,000	\$600,000
Leaking/Broken Water Services	25	\$150,000	\$150,000
Water Services Testing High for Lead	25	\$150,000	\$150,000
Lead Service Replacement Projects		\$900,000	\$900,000
Contingency (0%)		\$0	\$0
Engineering (15%)		\$135,000	\$135,000
Subtotal LSRL Projects		\$1,035,000	\$1,035,000
Distribution System Projects			
Project	Length (Feet)	Estimated Cost	DWSRF
Upton Dr Reconstruct-2 (Momany Dr to N. City Limits)	2015	\$1,373,077	\$549,231
Willa Dr Reconstruction-2 (Highland Ave to Van Brunt Ave)	686	\$516,010	\$206,404
Willa Dr. Water Main Installation - 3 (Napier Ave to Kingsley Ave)	333	\$226,915	\$90,766
Distribution System Projects		\$2,116,003	\$846,401
Contingency (20%)		\$423,201	\$169,280
Engineering (15%)		\$317,400	\$126,960
Subtotal Distribution System Projects		\$2,856,604	\$1,142,642
Total Cost			
Subtotal All Projects		\$3,891,604	\$2,177,642
Cost of Issuance		\$58,396	\$31,252
Total FY 2024 Loan Amount		\$3,950,000	\$2,208,894



FY 2025			
Lead Service Replacement Projects			
Description	No. of Replacements	Estimated Cost	DWSRF
Water Services for CIP Projects	100	\$600,000	\$600,000
Leaking/Broken Water Services	25	\$150,000	\$150,000
Water Services Testing High for Lead	25	\$150,000	\$150,000
Lead Service Replacement Projects		\$900,000	\$900,000
Contingency (0%)		\$0	\$0
Engineering (15%)		\$135,000	\$135,000
Subtotal LSRL Projects		\$1,035,000	\$1,035,000
Total Cost			
Subtotal All Projects		\$1,035,000	\$1,035,000
Cost of Issuance		\$40,000	\$8,312
Total FY 2025 Loan Amount		\$1,075,000	\$1,043,312

Cost Summary FY 2021-2025		
Year	Estimated Cost	DWSRF
Total FY 2021 Loan Amount	\$9,900,000	\$4,652,112
Total FY 2022 Loan Amount	\$11,900,000	\$11,447,025
Total FY 2023 Loan Amount	\$3,650,000	\$2,087,278
Total FY 2024 Loan Amount	\$3,950,000	\$2,208,894
Total FY 2025 Loan Amount	\$1,075,000	\$1,043,312
Total	\$30,475,000	\$21,438,621



APPENDIX B

CITY OF ST. JOSEPH ZONING MAP
(ST. JOSEPH 2016 MASTER PLAN)

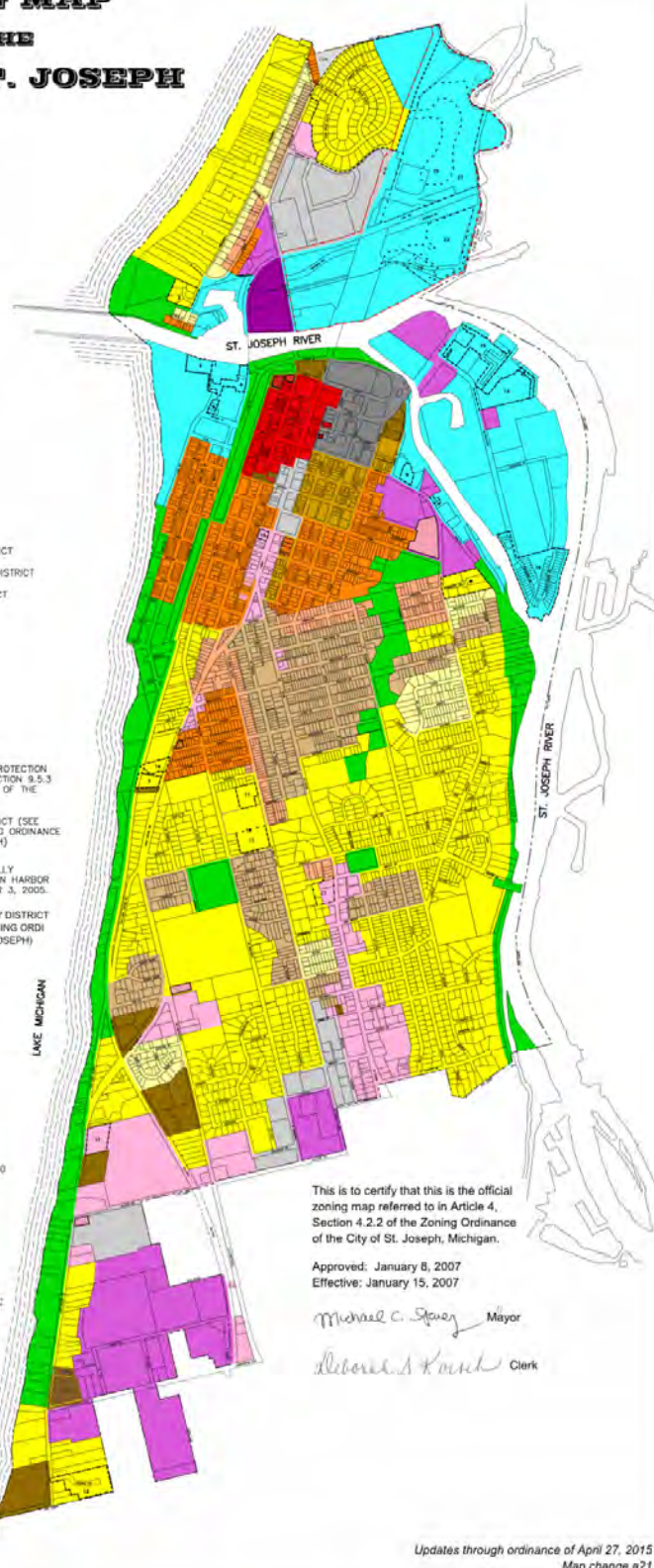


ZONING MAP OF THE CITY OF ST. JOSEPH

- DISTRICTS**
- R1-A 30'
 - R1-B 25'
 - R1-C 20'
 - R1-D 15'
 - R1-E 10'
- SINGLE FAMILY
DETACHED RESIDENCE
- R2 TWO-FAMILY RESIDENCE DISTRICT
 - R3 MULTIPLE FAMILY RESIDENCE DISTRICT
 - C COMMERCIAL BUSINESS DISTRICT
 - CO-A COMMERCIAL OFFICE DISTRICT
 - CO-B COMMERCIAL OFFICE DISTRICT
 - D DOWNTOWN DISTRICT
 - I1 LIGHT INDUSTRIAL DISTRICT
 - I2 HEAVY INDUSTRIAL DISTRICT
 - OS OPEN SPACE DISTRICT
 - W WATER RECREATION DISTRICT
- LB-00 LAKE BLUFF SCENIC VIEW PROTECTION
OVERLAY DISTRICT (SEE SECTION 9.5.3
OF THE ZONING ORDINANCE OF THE
CITY OF ST. JOSEPH)
- FP-00 FLOODPLAIN OVERLAY DISTRICT (SEE
SECTION 9.6 OF THE ZONING ORDINANCE
OF THE CITY OF ST. JOSEPH)
- BOUNDARY OF PROPERTY CONDITIONALLY
TRANSFERRED TO THE CITY OF BENTON HARBOR
UNDER THE AGREEMENT OF NOVEMBER 3, 2005.
- EB-00 EDGEWATER BEACH OVERLAY DISTRICT
(SEE SECTION 8.7 OF THE ZONING ORDINANCE
OF THE CITY OF ST. JOSEPH)

PLANNED UNIT DEVELOPMENTS

- 1 - EDGEWATER DUNES
- 2 - LIGHTHOUSE DUNES PATH
- 3 - LIGHTHOUSE POINT CONDOMINIUMS
- 4 - WATERFRONT MARINA CONDOMINIUMS
- 5 - LAKE STREET - 320, 340, 360 AND 380
- 6 - NEWBERRY HILLS
- 7 - SOUTH CLIFF COMMONS
- 8 - RIVERBEND
- 9 - SHOREVIEW CONDOMINIUMS
- 10 - ISLAND POINT MARINA
- 11 - 2000 S. STATE DEVELOPMENT, LLC
- 12 - THE ARBORAGE
- 13 - ISLAND YACHT AND TENNIS CLUB
- 14 - SOUTH CLIFF CONDOMINIUMS
- 15 - HARBOR ISLE
- 16 - STAR CONDOMINIUMS
- 17 - LAKEVIEW CONDOMINIUMS
- 18 - JEFFERSON ESTATES CONDOMINIUMS, LLC
- 19 - FAIRWAYS
- 20 - 1221 BROAD STREET
- 21 - THE GOLF CLUB AT HARBOR SHORES
- 22 - HARBOR VILLAGE AT HARBOR SHORES
- 23 - 2418, 2500 AND 2508 NILES AVENUE AND 711 MYRTLE AVENUE



This is to certify that this is the official zoning map referred to in Article 4, Section 4.2.2 of the Zoning Ordinance of the City of St. Joseph, Michigan.

Approved: January 8, 2007
Effective: January 15, 2007

Michael C. Spaw Mayor

Deborah S. Kunk Clerk

Updates through ordinance of April 27, 2015
Map change #21

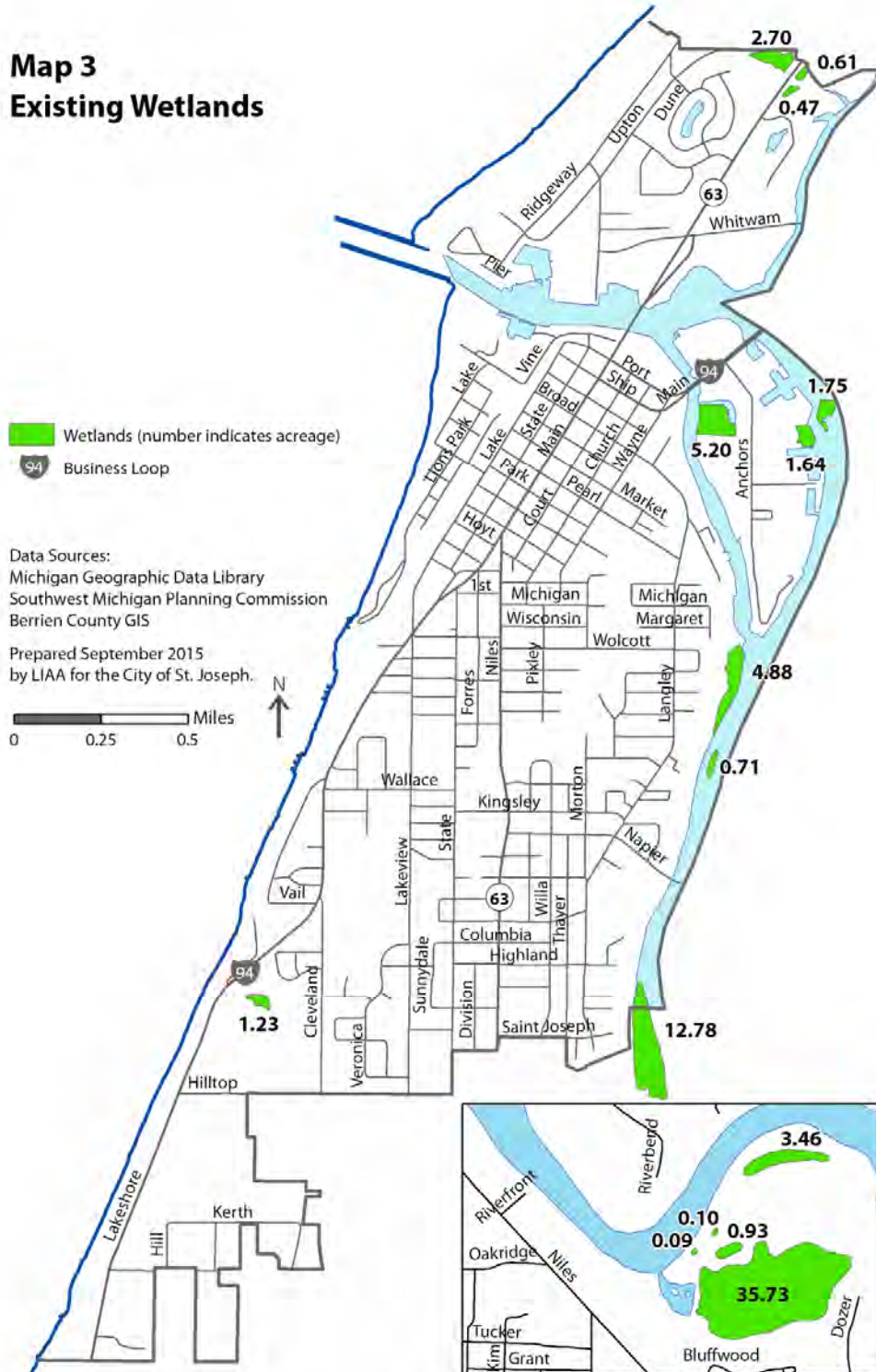


APPENDIX C

CITY OF ST. JOSEPH WETLAND MAP
(PROVIDED BY LIAA FOR ST. JOSEPH ON 2016 MASTER PLAN)



Map 3 Existing Wetlands



APPENDIX D

UPTON DRIVE FLOODPLAIN MAP





N
1 inch = 300 feet

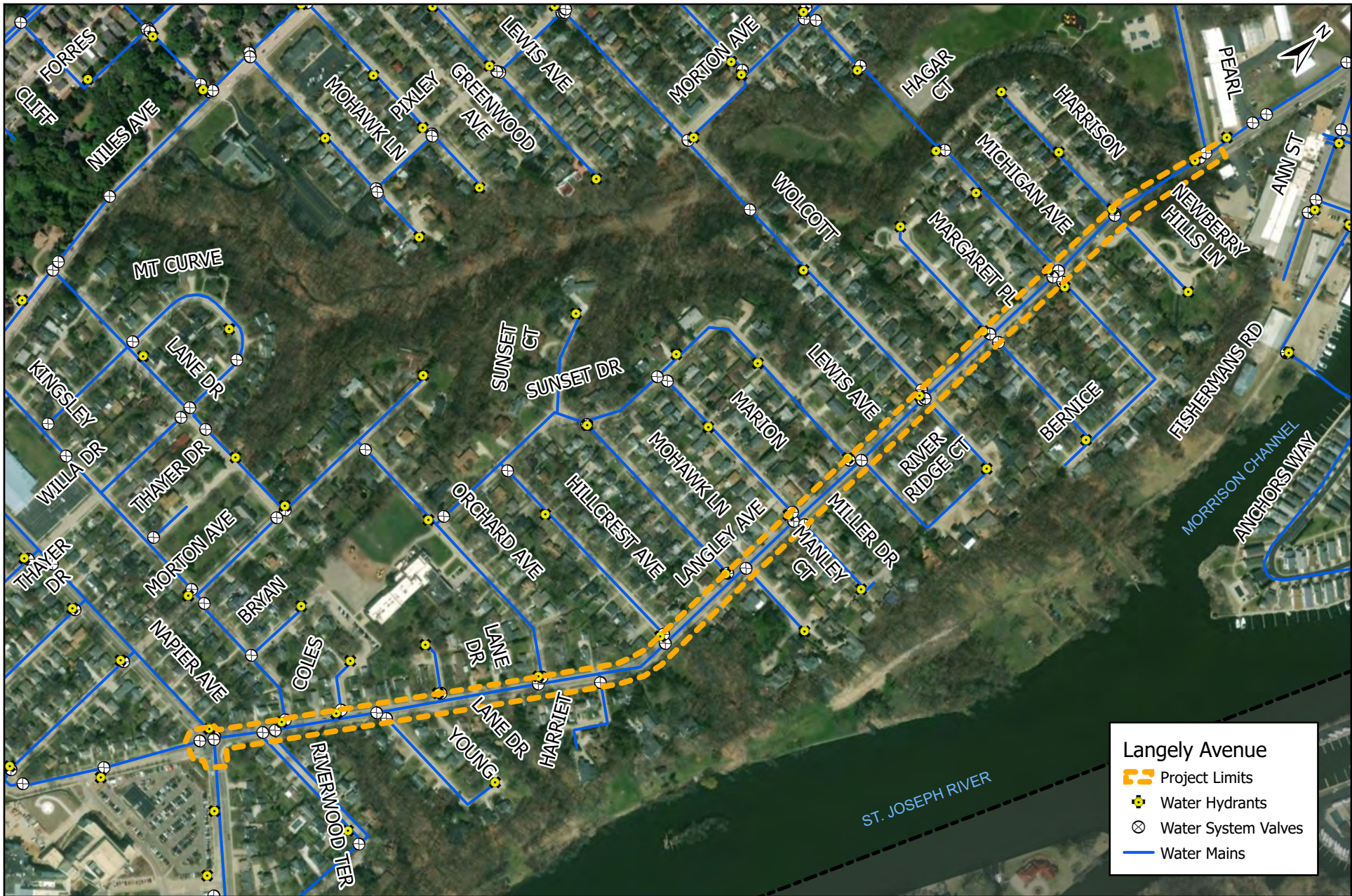
PROJECT AREA FLOOD HAZARDS

- LEGEND
- Project Limits
 - AE, 1% Annual Chance Flood Hazard
 - AE, Floodway
 - X, 0.2% Annual Chance Flood Hazard
 - X, Minimal Flood Hazard

APPENDIX E

PROJECT LOCATION MAPS





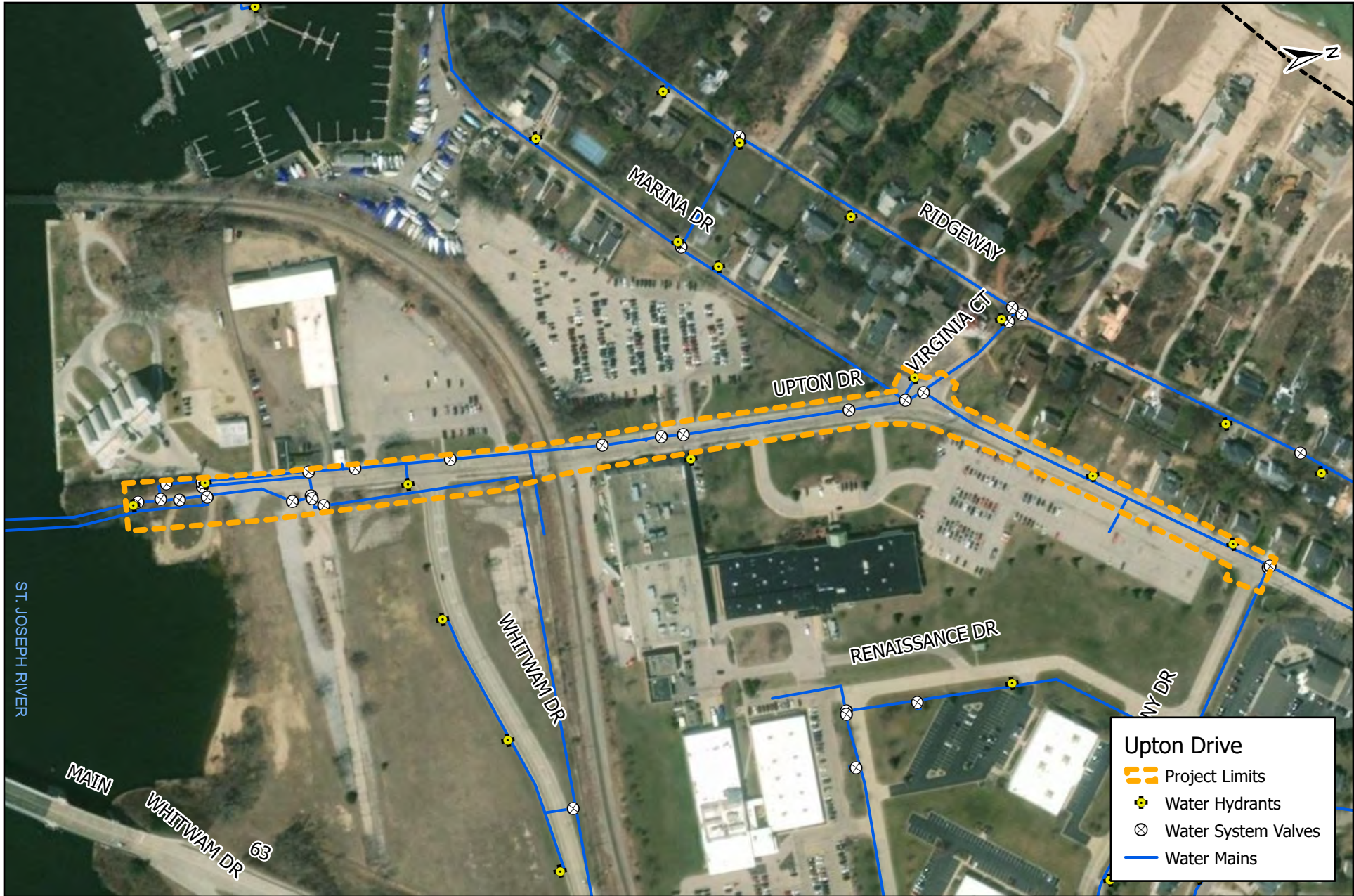
City of St. Joseph
 Engineering Department
 700 Broad Street
 St. Joseph, MI 49085

Telephone: 269-983-5541
 Email: tzebell@sjcity.com
 aaustin@sjcity.com

Langleys Ave LSLR and Water Distribution System Improvement Location

Scale: 1" = 500'

DRAWN BY: AKA
 DATE: 5/5/2020



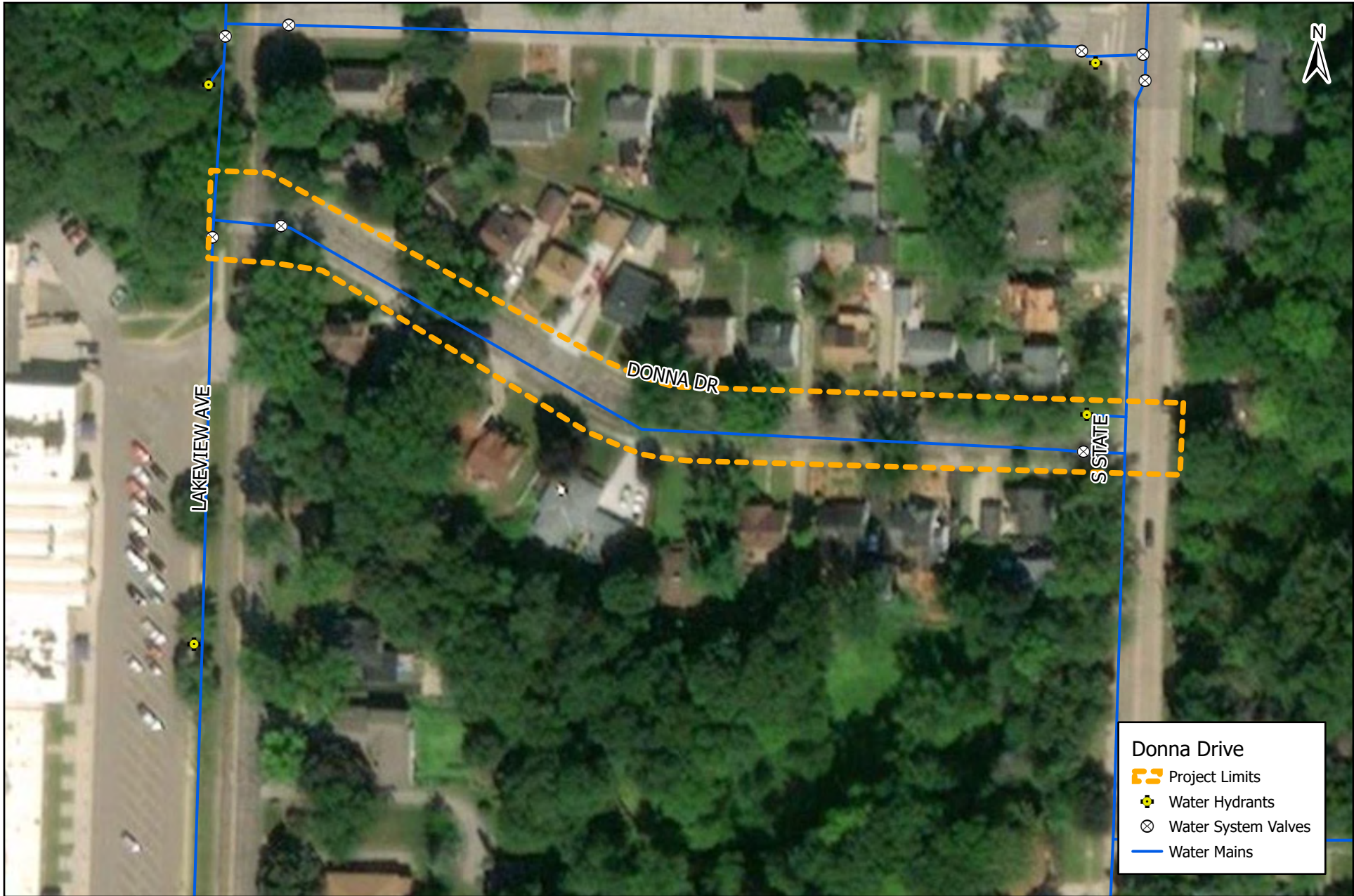
City of St. Joseph
 Engineering Department
 700 Broad Street
 St. Joseph, MI 49085

Telephone: 269-983-5541
 Email: tzebell@sjcity.com
 aaustin@sjcity.com





Upton Drive LSLR and Water Distribution System Improvement Location

Scale: 1" = 300'

DRAWN BY: AKA
 DATE: 5/5/2020



Donna Drive

-  Project Limits
-  Water Hydrants
-  Water System Valves
-  Water Mains



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 Engineering Department
 700 Broad Street
 St. Joseph, MI 49085

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 Email: tzebell@sjcity.com
 aaustin@sjcity.com

Donna Drive LSLR and Water Distribution System Improvement Location

Scale: 1" = 100'

DRAWN BY: AKA
 DATE: 4/17/2020



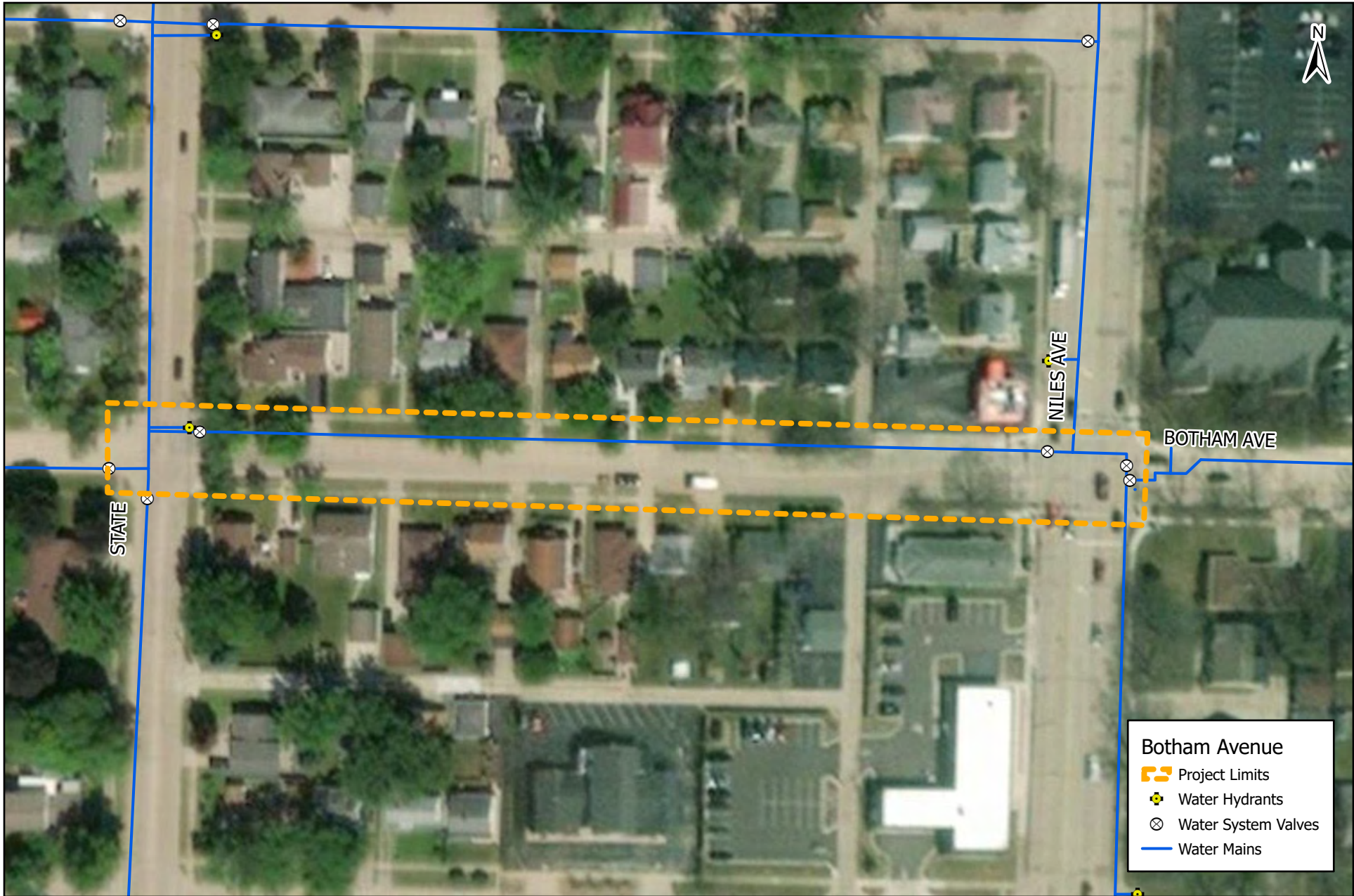
City of St. Joseph
 Engineering Department
 700 Broad Street
 St. Joseph, MI 49085

Telephone: 269-983-5541
 Email: tzebell@sjcity.com
 aaustin@sjcity.com

Willa Drive and Lester Avenue LSLR and Water Distribution System Improvement Location

Scale: 1" = 200'

DRAWN BY: AKA
 DATE: 4/17/2020



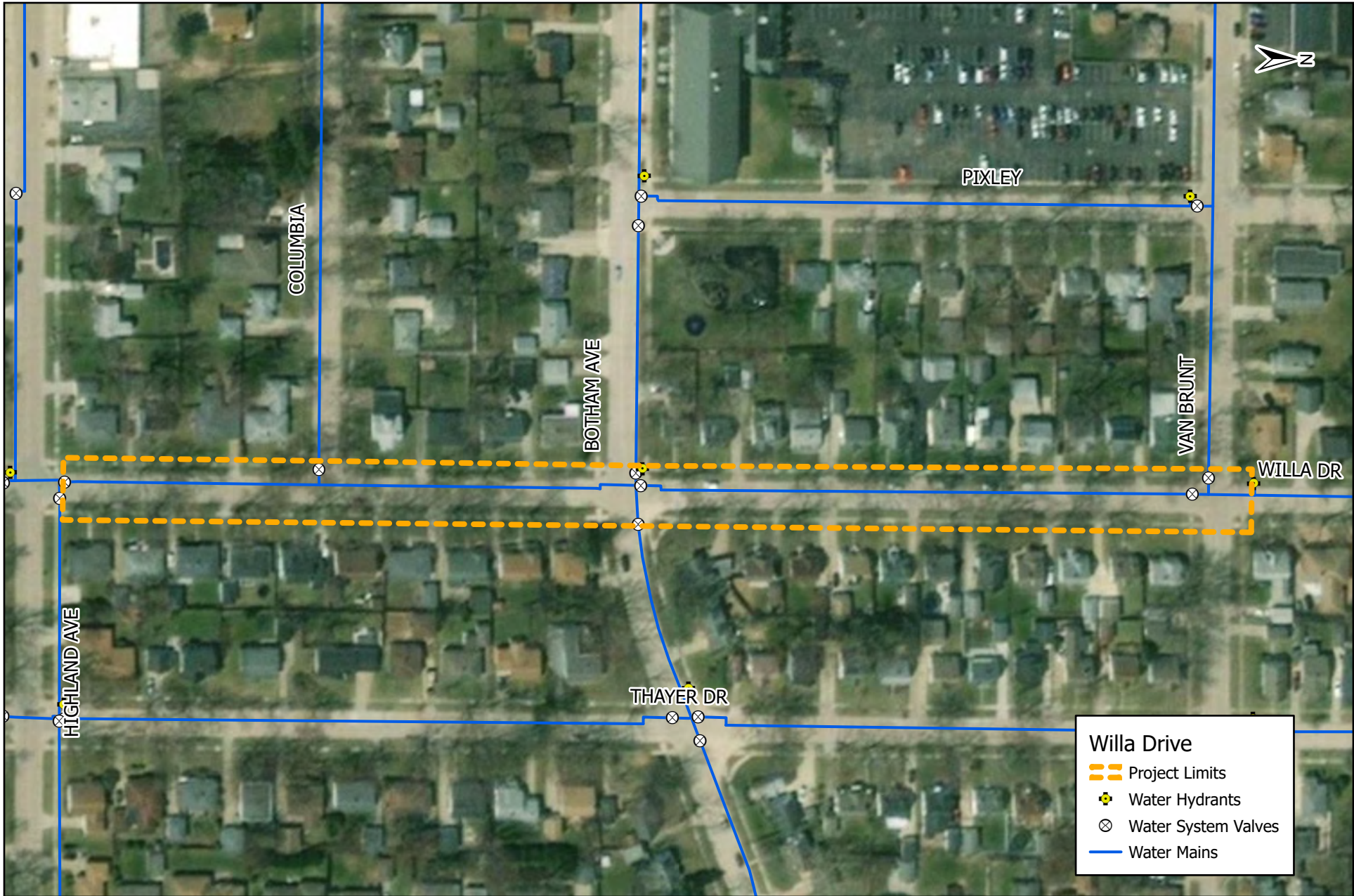
City of St. Joseph
 Engineering Department
 700 Broad Street
 St. Joseph, MI 49085

Telephone: 269-983-5541
 Email: tzebell@sjcity.com
 aaustin@sjcity.com





Botham Avenue LSLR and Water Distribution System Improvement Location

Scale: 1" = 100'

DRAWN BY: AKA
 DATE: 4/17/2020



Willa Drive

-  Project Limits
-  Water Hydrants
-  Water System Valves
-  Water Mains



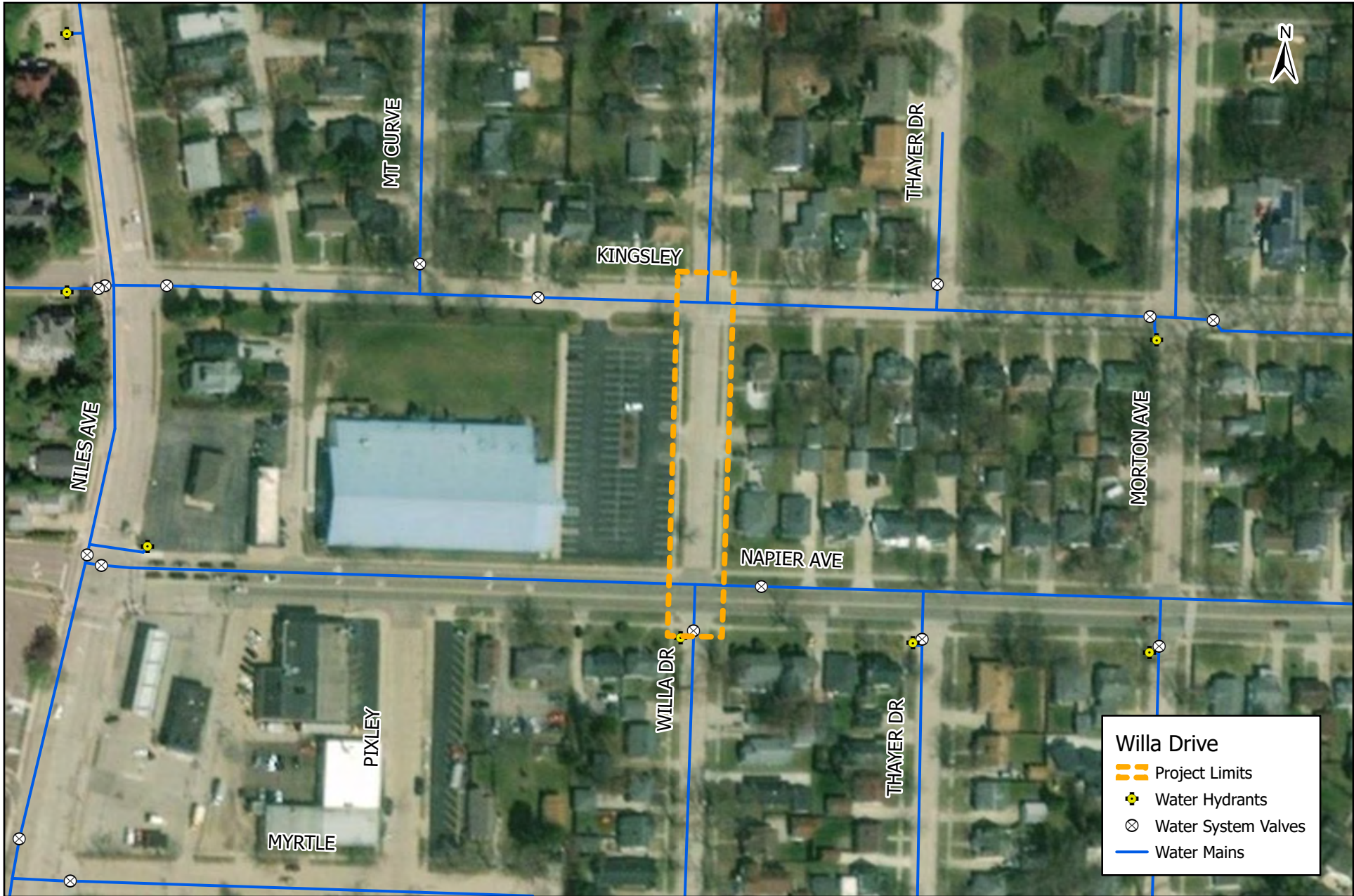
City of St. Joseph
 Engineering Department
 700 Broad Street
 St. Joseph, MI 49085

Telephone: 269-983-5541
 Email: tzebell@sjcity.com
 aaustin@sjcity.com

Willa Drive LSLR and Water Distribution System Improvement Location

Scale: 1" = 150'

DRAWN BY: AKA
 DATE: 4/17/2020



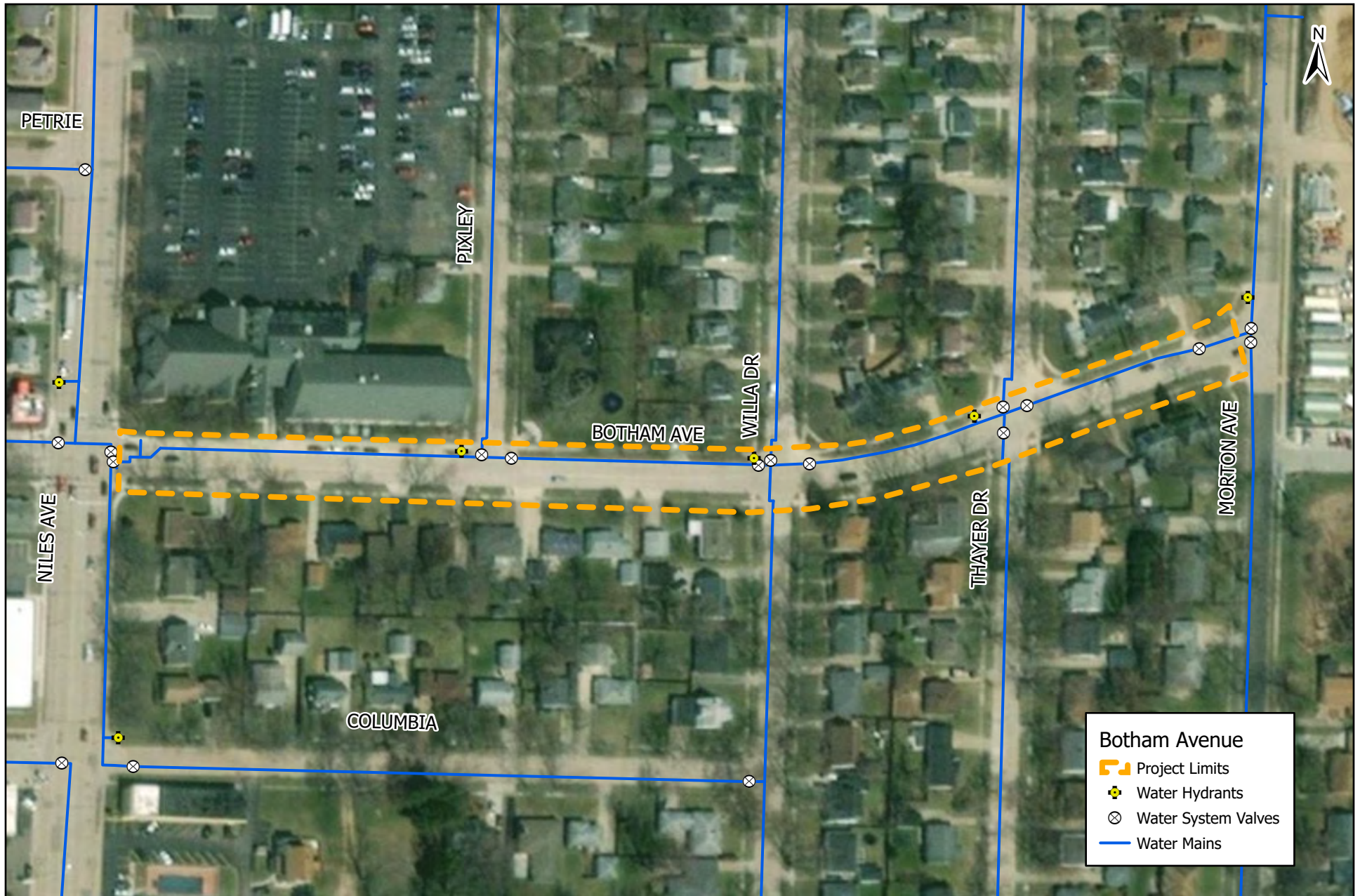
City of St. Joseph
 Engineering Department
 700 Broad Street
 St. Joseph, MI 49085

Telephone: 269-983-5541
 Email: tzebell@sjcity.com
 aaustin@sjcity.com

Willa Drive LSLR and Water Distribution System Improvement Location

Scale: 1" = 150'

DRAWN BY: AKA
 DATE: 4/17/2020



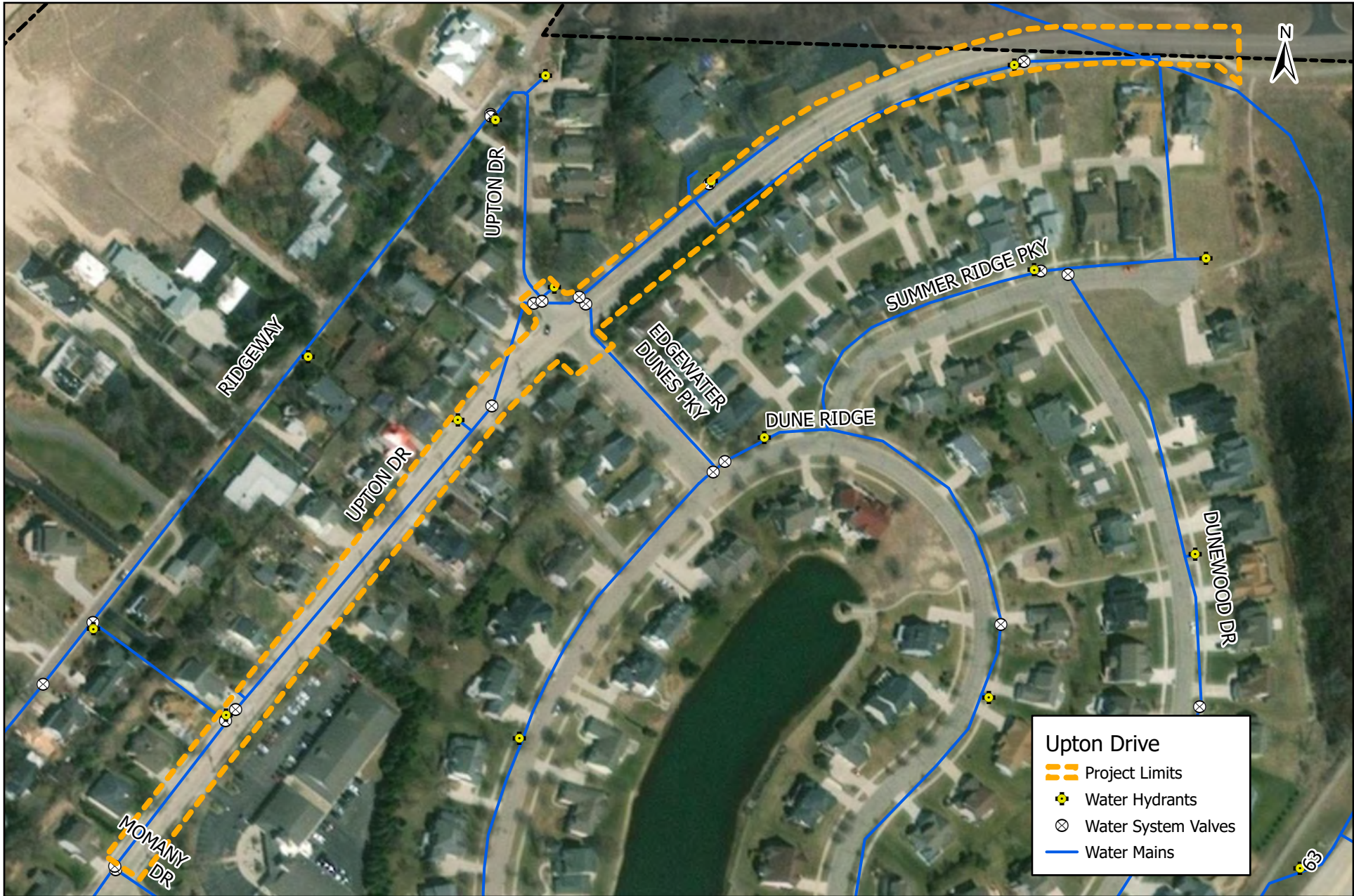
City of St. Joseph
 Engineering Department
 700 Broad Street
 St. Joseph, MI 49085

Telephone: 269-983-5541
 Email: tzebell@sjcity.com
 aaustin@sjcity.com

Botham Avenue Lead Service Line Replacement (Priority 5) Location

Scale: 1" = 150'

DRAWN BY: AKA
 DATE: 4/17/2020



Upton Drive

- Project Limits
- Water Hydrants
- Water System Valves
- Water Mains



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 Engineering Department
 700 Broad Street
 St. Joseph, MI 49085

Telephone: 269-983-5541
 Email: tzebell@sjcity.com
 aaustin@sjcity.com

Upton Drive LSLR and Water Distribution System Improvement Location

Scale: 1" = 200'

DRAWN BY: AKA
 DATE: 4/17/2020

APPENDIX F

SHPO/THPO SUBMITTALS



LETTER OF TRANSMITTAL

TO: SHPO: Cultural Resources
Management and Planning Section
300 North Washington Square,
Lansing, MI 48913

DATE: May 6, 2020

JOB NO.: 20-0260

RE: Saint Joseph DWSRF Project Plan
City of Saint Joseph
Berrien County, Michigan

ATTN: To Whom it May Concern

WE ARE SENDING YOU: Contract / Agreement Prints / Plans Shop Drawings
 Change Order Specifications See Below

COPIES	DATE	DESCRIPTION
1	05/05/20	Completed SHPO Application and Attachments

THESE ARE TRANSMITTED as checked below:

- For Review & Comment For Your Use As Requested
 Approved as Submitted Approved as Noted Returned for Corrections
 For Bids Due:

REMARKS: Please find attached the Section 106 SHPO application for the Saint Joseph DWRF Project Plan in Saint Joseph, MI.

Should you have any questions or comments, please feel free to contact our office.

SIGNED: _____
Jonathan Greco
Staff Engineer

If enclosures are not as noted, kindly notify us at once.

May 6, 2020

State Historic Preservation Office
Cultural Resources Management and Planning Section
300 North Washington Square,
Lansing, MI 48913

RE: Saint Joseph DWSRF Project Plan
City of Saint Joseph
Section 106 Review

To Whom It May Concern:

The City of Saint Joseph has prepared a planning report for application to The Department of Environment, Great Lakes and Energy, Drinking Water State Revolving Fund. Starting in fiscal year 2021 to fund lead service line replacements and water distribution system improvements.

As part of this process, we are requesting a Section 106 Review.

The proposed work consists of replacing the existing water, sanitary, and storm sewer mains and related infrastructure including the roadway and sidewalks. All work is expected to be within existing road right-of-ways or existing facilities and not impact any historic properties.

Thank you for your assistance in this matter. If you have any questions or comments, please feel free to contact me at (269) 208-2479 or jgreco@abonmarche.com.

Sincerely,
ABONMARCHE

Jonathan Greco
Staff Engineer

Attachment: Application for Section 106 Review

STATE HISTORIC PRESERVATION OFFICE Application for Section 106 Review

SHPO Use Only					
<input type="checkbox"/>	IN	Received Date	___ / ___ / ___	Log In Date	___ / ___ / ___
<input type="checkbox"/>	OUT	Response Date	___ / ___ / ___	Log Out Date	___ / ___ / ___
		Sent Date	___ / ___ / ___		

Submit one copy for each project for which review is requested. This application is required. Please type. Applications must be complete for review to begin. Incomplete applications will be sent back to the applicant without comment. Send only the information and attachments requested on this application. Materials submitted for review cannot be returned. Due to limited resources we are unable to accept this application electronically.

I. GENERAL INFORMATION

THIS IS A NEW SUBMITTAL THIS IS MORE INFORMATION RELATING TO ER#

- a. Project Name: Saint Joseph DWRP Project Plan
- b. Project Address (if available): City of Saint Joseph, see attached maps
- c. Municipal Unit: City of Saint Joseph County: Berrien
- d. Federal Agency, Contact Name and Mailing Address (If you do not know the federal agency involved in your project please contact the party requiring you to apply for Section 106 review, not the SHPO, for this information.): N/A
- e. State Agency (if applicable), Contact Name and Mailing Address: Cindy Clendenon,EGLE Water Infrastructure Financing, P.O. Box 30817, Lansing, Michigan 48909-8311
- f. Consultant or Applicant Contact Information (if applicable) *including mailing address*: Jonathan Greco, Staff Engineer, Abonmarche Consultants, Inc., 95 W. Main St, Benton Harbor, MI 49022

II. GROUND DISTURBING ACTIVITY (INCLUDING EXCAVATION, GRADING, TREE REMOVALS, UTILITY INSTALLATION, ETC.)

DOES THIS PROJECT INVOLVE GROUND-DISTURBING ACTIVITY? YES NO (If no, proceed to section III.)

Precise project location map (preferably USGS 7.5 min Quad with quad name, date, and location) with previously recorded archaeological sites visible (this site information is available to qualified archaeologists at the SHPO Office) Portions, photocopies of portions, and electronic USGS maps are acceptable as long as the location is clearly marked.

- a. USGS Quad Map Name: Saint Joseph Quadrangle
- b. Township: Range: Section:
- c. Site plan showing limits of proposed excavation. Description of width, length and depth of proposed ground disturbing activity: see attached
- d. Previous land use and disturbances: Roadway through residential and commercial corridor; water supply structures
- e. Current land use and conditions: Roadway through residential and commercial corridor; water supply structures
- f. Did you check the State Archaeological Site Files located at the SHPO? YES NO

III. PROJECT WORK DESCRIPTION AND AREA OF POTENTIAL EFFECTS (APE)

Note: Every project has an APE.

- a. Provide a detailed written description of the project (plans, specifications, Environmental Impact Statements (EIS), Environmental Assessments (EA), etc. **cannot** be substituted for the written description); see attached
- b. Provide a localized map indicating the location of the project; road names must be included and legible.
- c. On the above-mentioned map, identify the APE.

- d. Provide a written description of the APE (physical, visual, auditory, and sociocultural), the steps taken to identify the APE, and the justification for the boundaries chosen. see attached

IV. IDENTIFICATION OF HISTORIC PROPERTIES

- a. List and date all properties 50 years of age or older located in the APE. The Section 106 Above-Ground Resources inventory form is the preferred format for providing this information and a completed form should be included as an attachment to this application. If the property is located within a National Register eligible, listed or local district it is only necessary to identify the district: see attached
 - b. Describe the steps taken to identify whether or not any historic properties exist in the APE and include the level of effort made to carry out such steps: There are no physical structures within the APE for street projects as defined by the public right of way. There were also no registered national historic sites listed on the National Register of Historic Places within these limits.
 - c. Based on the information contained in "b", please choose one:
 - Historic Properties Present in the APE
 - No Historic Properties Present in the APE
 - d. Describe the condition, previous disturbance to, and history of any historic properties located in the APE: N/A
-

V. PHOTOGRAPHS

Note: All photographs must be keyed to a localized map.

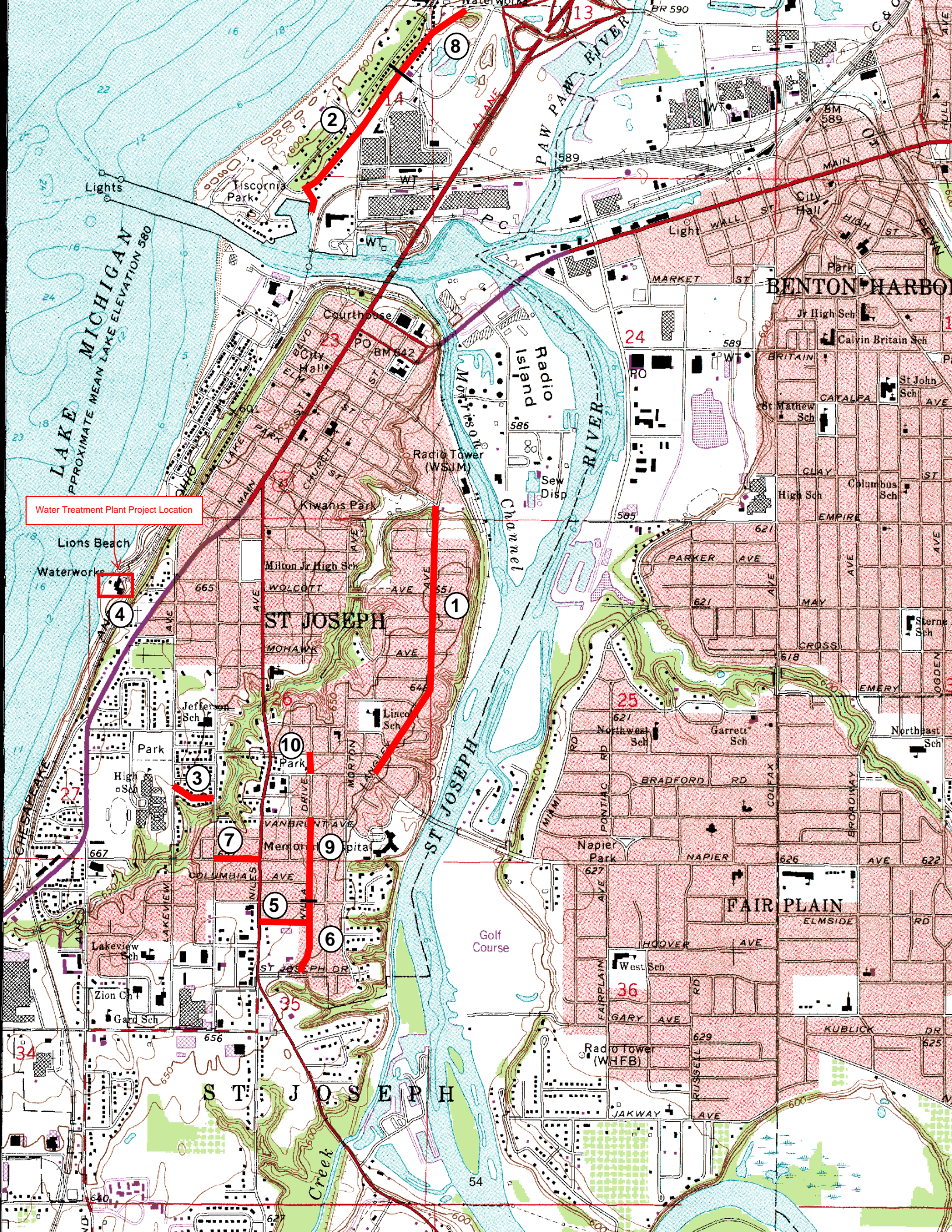
- a. Provide photographs of the site itself.
 - b. Provide photographs of all properties 50 years of age or older located in the APE (faxed or photocopied photographs are not acceptable).
-

VI. DETERMINATION OF EFFECT

Note: you must provide a statement explaining/justifying your determination. Include statement as an attachment if necessary.

- No historic properties affected based on [36 CFR § 800.4(d)(1)], **please provide the basis for this determination.**
- No Adverse Effect [36 CFR § 800.5(b)] on historic properties, **explain why the criteria of adverse effect, 36 CFR Part 800.5(a)(1), were found not applicable.**
- Adverse Effect [36 CFR § 800.5(d)(2)] on historic properties, **explain why the criteria of adverse effect, [36 CFR Part 800.5(a)(1)], were found applicable.**

***Please print and mail completed form and required information to:
State Historic Preservation Office, Cultural Resources Management Section
Michigan Economic Development Corporation
300 North Washington Square, Lansing, MI 48913***



Water Treatment Plant Project Location

LAKE MICHIGAN
APPROXIMATE MEAN LAKE ELEVATION 580

BENTON HARBOR

ST JOSEPH

FAIR PLAIN

ST JOSEPH

II. Ground Disturbing Activity

Site	Project	Length	Width	Depth	Previous Land Use	Future Land Use
1	Langley Ave Reconstruction (Napier Ave to Pearl St)	4600'	40'	12'	Street Right-of-Way	Street Right-of-Way
2	Upton Dr Reconstruction (St. Joseph River to Momany Dr)	2650'	33'	15'	Street Right-of-Way	Street Right-of-Way
3	Donna Dr Reconstruction (Lakeview Ave to S. State St)	710	30	10	Street Right-of-Way	Street Right-of-Way
4	Water Plant Improvements	N/A	N/A	N/A	Municipal Water Plant	Municipal Water Plant
5	Lester Ave Reconstruction (Niles Ave to Willa Dr)	790'	40'	10'	Street Right-of-Way	Street Right-of-Way
6	Willa Dr Reconstruction (St. Joseph Drive to Highland Ave)	1109'	30'	10'	Street Right-of-Way	Street Right-of-Way
7	Botham Ave Water Main Replacement (S. State St to Niles Ave)	686'	30'	12'	Street Right-of-Way	Street Right-of-Way
8	Upton Dr Reconstruction (Momany Dr to N. City Limits)	2015'	30'	6.5'	Street Right-of-Way	Street Right-of-Way
9	Willa Dr Reconstruction (Highland Ave to Van Brunt Ave)	686'	30'	11.5'	Street Right-of-Way	Street Right-of-Way
10	Willa Dr. Water Main Installation (Napier Ave to Kingsley Ave)	333'	40'	11.5'	Street Right-of-Way	Street Right-of-Way

Project Location: City of Saint Joseph, Berrien County
Township 04S, Range 19W, Section 13, Section 14, Section 23, Section 24, Section 26 and Section 35.



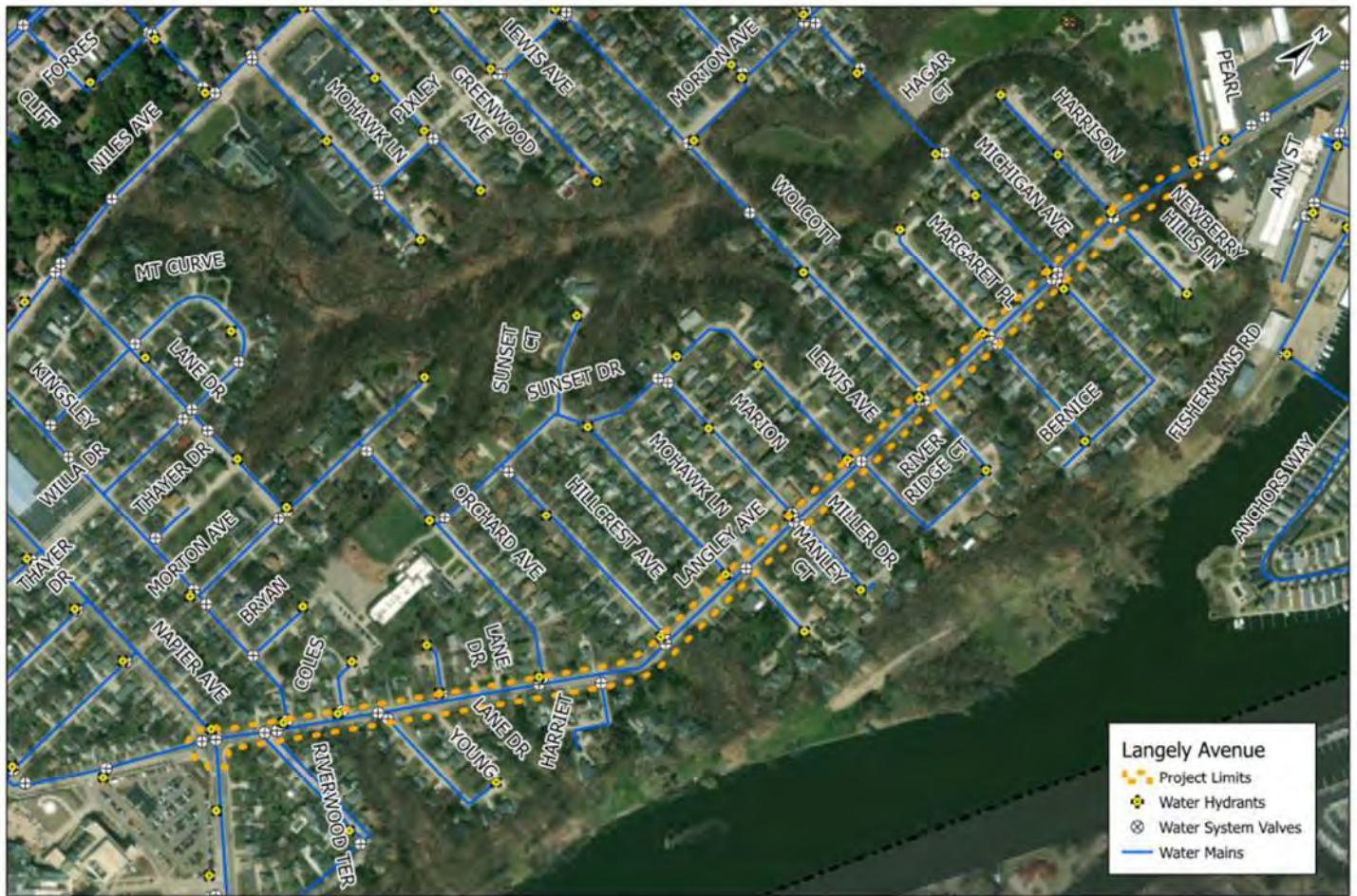
III. Project Work Description & Area of Potential Effects (APE)

Site	Description
1	Reconstruction of existing water, sanitary, and storm water infrastructure as well as roadway and sidewalks on Langley Ave from Napier Ave to Pearl St.
2	Reconstruction of existing water, sanitary, and storm water infrastructure as well as roadway and sidewalks on Upton Dr. from The Saint Joseph River to Momany Dr.
3	Reconstruction of existing water, sanitary, and storm water infrastructure as well as roadway and sidewalks on Donna Dr. from Lakeview Ave to S. State St.
4	Clarifier improvements, HVAC upgrades, architectural improvements, lab Improvements, and lift pump station upgrades
5	Reconstruction of existing water, sanitary, and storm water infrastructure as well as roadway and sidewalks on Lester Ave from Niles Ave to Willa Dr.
6	Reconstruction of existing water, sanitary, and storm water infrastructure as well as roadway and sidewalks on Willa Dr. from St. Joseph Dr. to Highland Ave.
7	Reconstruction of existing water, sanitary, and storm water infrastructure as well as roadway and sidewalks on Botham Ave from S. State St to Niles Ave
8	Reconstruction of existing water, sanitary, and storm water infrastructure as well as roadway and sidewalks on Upton Dr. from Momany Dr. to North City Limits
9	Reconstruction of existing water, sanitary, and storm water infrastructure as well as roadway and sidewalks on Willa Dr. from Highland Ave to Van Brunt Ave.
10	Reconstruction of existing water, sanitary, and storm water infrastructure as well as roadway and sidewalks on Willa Dr. from Napier Ave to Kingsley Ave.

All street projects are being constructed to replace infrastructure similar to existing. Existing lead service lines will be replaced with copper in accordance with the Michigan Lead Copper Rule. Each APE is limited to the right of way and permitted easements on private property. No changes are anticipated that would alter the character or use of the historic built environment on or adjacent to the street. The impacts to properties will not be physical in nature. Visually, the roadways will be replaced as roadways to avoid any detrimental change to the aesthetics of the area. Similarly, improvements made to the water plant will not alter the character or use of the property or area and the APE is limited to the municipal owned property surrounding the structures.



Site 1.



City of St. Joseph
 Engineering Department
 700 Broad Street
 St. Joseph, MI 49085
 Telephone: 269-983-5541
 Email: tzebel@sjoty.com
 aaustin@sjoty.com

**Location of Water System Improvements on
 Langley Ave**

Scale: 1" = 500'

DRAWN BY: AKA
 DATE: 4/17/2020



Site 2.



City of St. Joseph
Engineering Department
703 Broad Street
St. Joseph, MI 49085
Telephone: 269-983-5541
Email: tzabell@sjcity.com
gaustin@sjcity.com

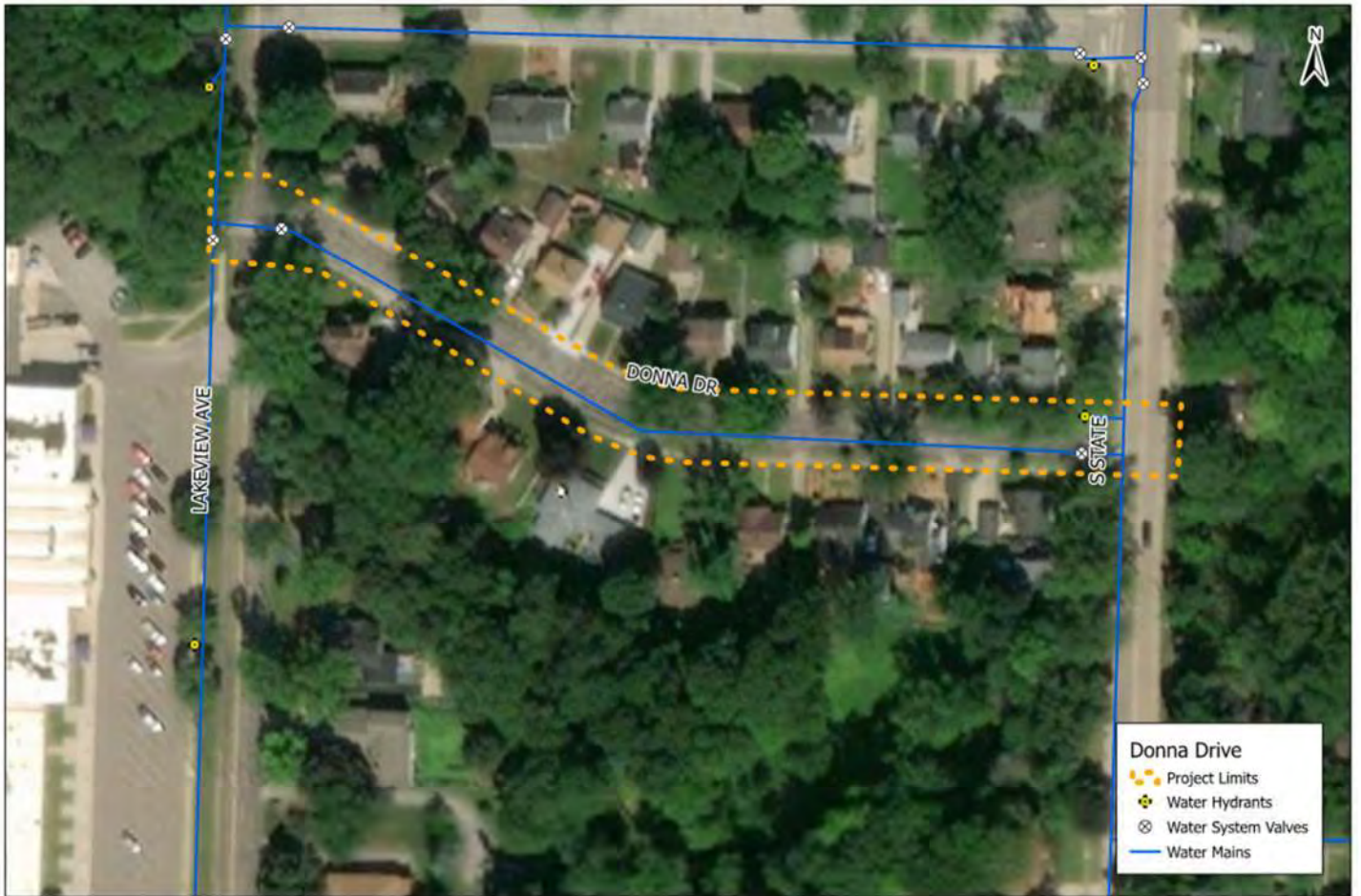
Location of Water System Improvements on Upton Dr

Scale: 1" = 300'

DRAWN BY: AKA
DATE: 4/17/2020



Site 3.



City of St. Joseph
Engineering Department
700 Broad Street
St. Joseph, MI 49085
Telephone: 269-983-5541
Email: tzebell@sjcity.com
aaustin@sjcity.com

Location of Water System Improvements on Donna Dr

Scale: 1" = 100'

DRAWN BY: AKA
DATE: 4/17/2020



Site 4.



City of St. Joseph
 Engineering Department
 700 Broad Street
 St. Joseph, MI 49085
 Telephone: 269-983-5541
 Email: tzebell@sjcity.com
 aaustin@sjcity.com

**Location of Water System Improvements at
 The City of St. Joseph Water Filtration Plant**

Scale: 1" = 200'

DRAWN BY: AKA
 DATE: 4/23/2020



Sites 5 & 6



City of St. Joseph
 Engineering Department
 700 Broad Street
 St. Joseph, MI 49085
 Telephone: 269-983-5541
 Email: tzebell@sjcity.com
 aaustin@sjcity.com

**Location of Water System Improvements on
 Willa Dr and Lester Ave**

Scale: 1" = 200'

DRAWN BY: AKA
 DATE: 4/17/2020



Site 7.



City of St. Joseph
Engineering Department
700 Broad Street
St. Joseph, MI 49085
Telephone: 269-983-5541
Email: tzebell@sjcity.com
aaustin@sjcity.com

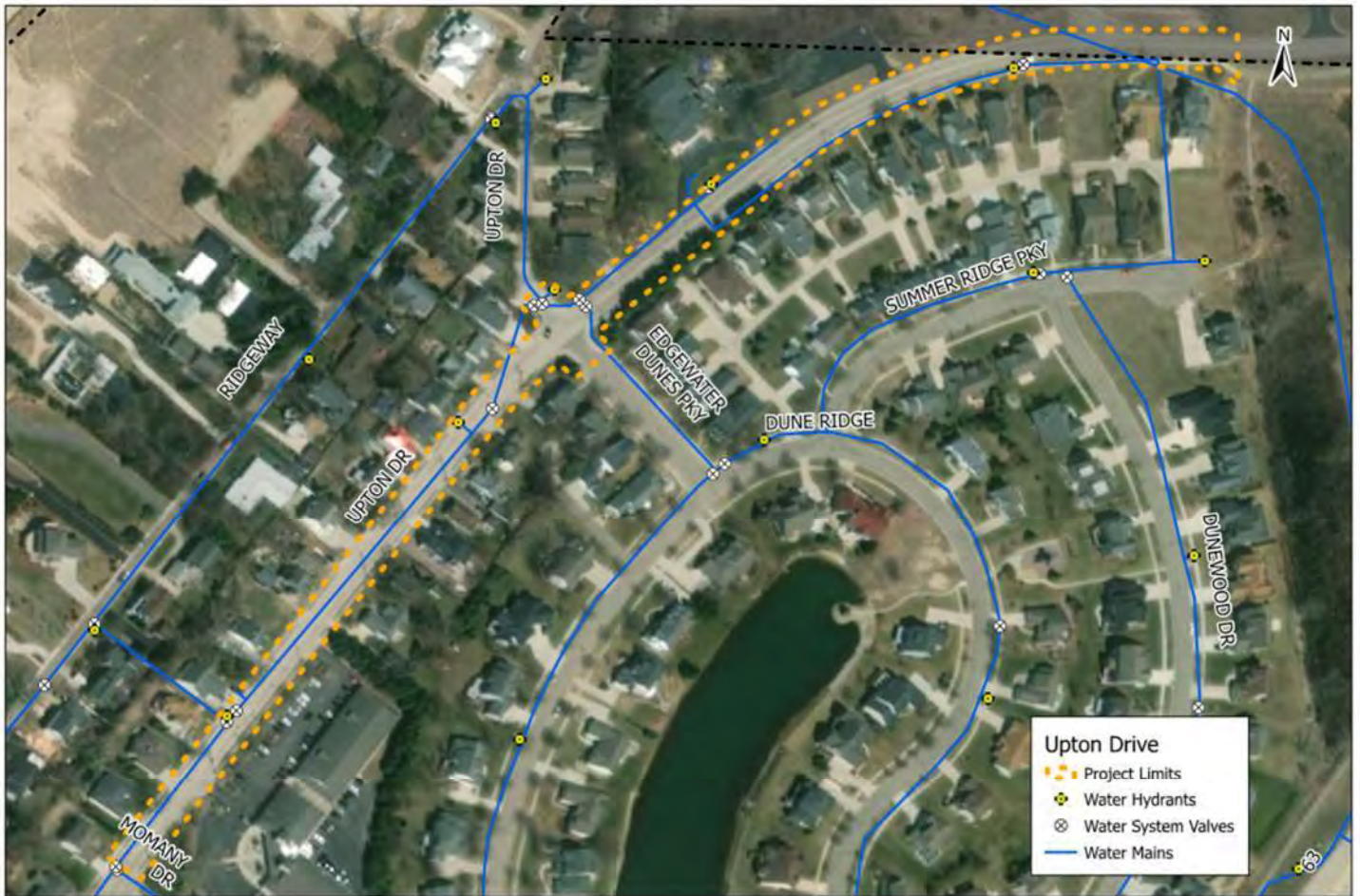
Location of Water System Improvements on Botham Ave

Scale: 1" = 100'

DRAWN BY: AKA
DATE: 4/17/2020



Site 8.



City of St. Joseph
Engineering Department
700 Broad Street
St. Joseph, MI 49085
Telephone: 269-983-5541
Email: tzobell@sjcity.com
aaustin@sjcity.com

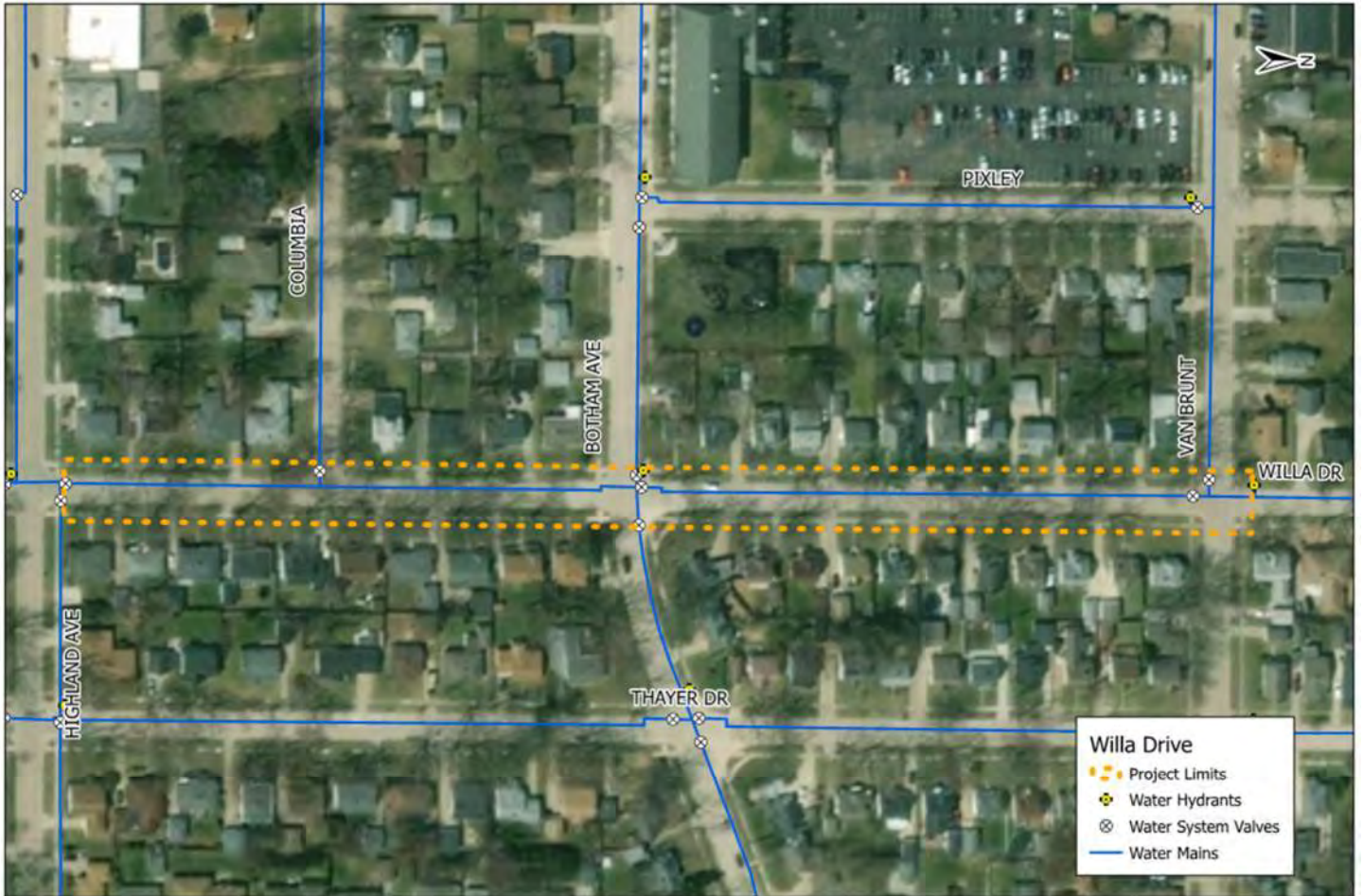
Location of Water System Improvements on Upton Dr

Scale: 1" = 200'

DRAWN BY: AKA
DATE: 4/17/2020



Site 9.



City of St. Joseph
Engineering Department
700 Broad Street
St. Joseph, MI 49085
Telephone: 269-363-5541
Email: zebell@sjcity.com
aaustin@sjcity.com

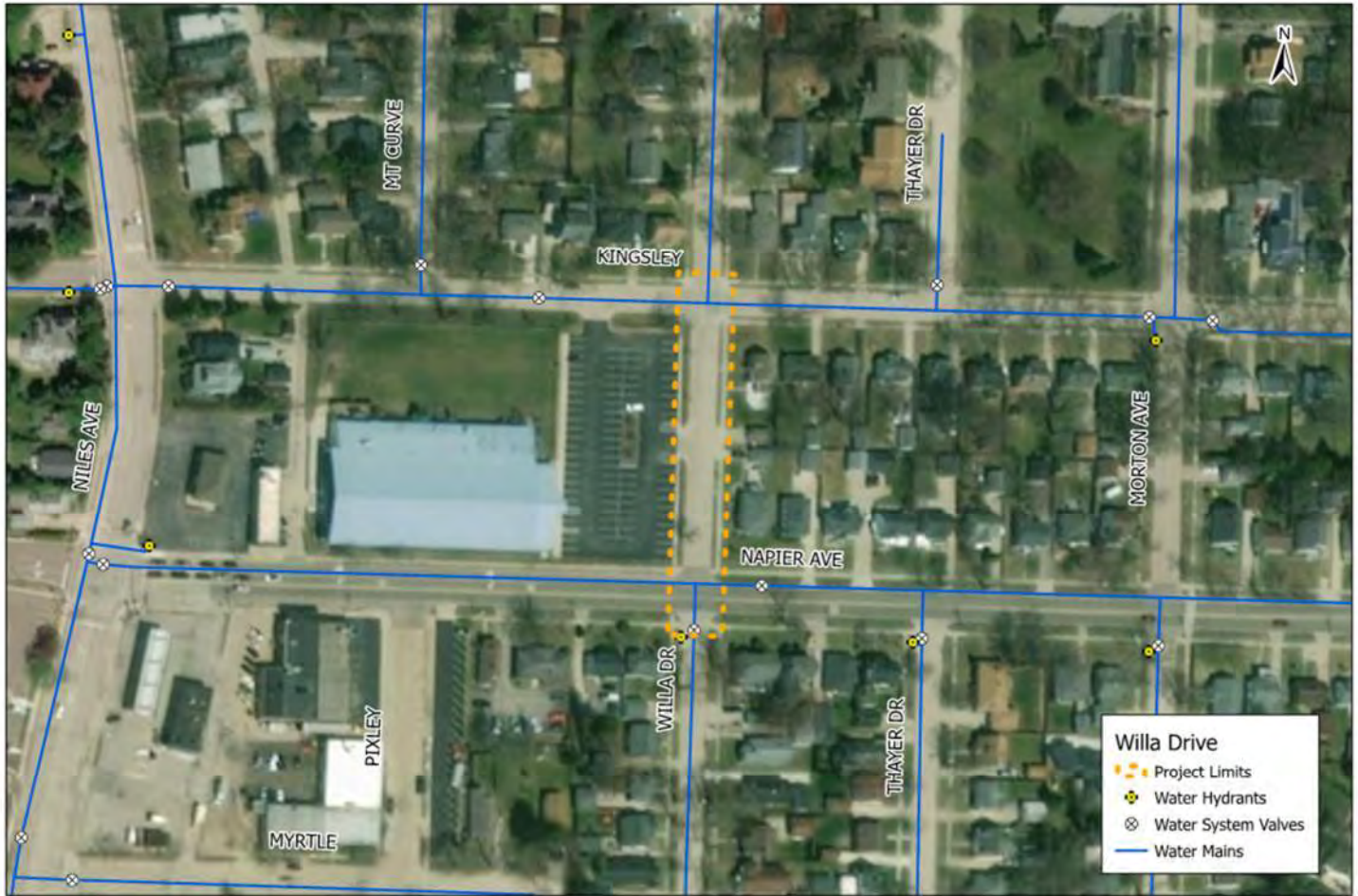
Location of Water System Improvements on Willa Dr

Scale: 1" = 150'

DRAWN BY: AKA
DATE: 4/17/2020



Site 10.



City of St. Joseph
 Engineering Department
 700 Broad Street
 St. Joseph, MI 49085

Telephone: 269-983-5541
 Email: tzabell@sjcity.com
 aaustin@sjcity.com

Location of Water System Improvements on Willa Dr

Scale: 1" = 150'

DRAWN BY: AKA
 DATE: 4/17/2020



IV. Identification of Historic Properties

No historic properties are located within any of the APE's. The Saint Joseph Water Plant was originally constructed over 50 years ago. It has since had upgrades and additions. The work proposed at the plant includes operational equipment and architectural improvements and should not impact the historic nature of the building. The original building is not considered historically important.

V. Photographs

Photo 1: 387 Upton Dr. // Whirlpool Tech Center



Photo credit: Google Street View



Photo 2: 3811 Niles Ave // Tux Shop



Photo credit: Google Street View

Photo 3: 815 Lester Ave. // Materials Resources



Photo credit: Google Street View



VI. Basis For Determination

No historic properties were identified within the projects' APE's. No changes are anticipated that would alter the character or use of the historic built environment on or adjacent to the street projects. The roadway alignments will remain unchanged in the horizontal direction with minor vertical revisions to address drainage issues, driveway grades, and federal Americans with Disabilities Act (ADA) compliance. There will be a temporary disturbance due to construction noise throughout the duration of the project. These audible disturbances will subside upon construction completion. Visually, the roadways will be replaced as roadways so there should not be any detrimental change to the aesthetics of the area. Similarly, improvements made to the water plant will not alter the character or use of the property or area.



May 6, 2020

Ms. JoAnne Cook, THPO
Match-e-be-nash-she-wish (Gun Lake) Band of Pottawatomi Indians
Gun Lake Tribe Administration
2872 Mission Dr. Shelbyville, MI 49344
JoAnne.Cook@glt-nsn.gov

Re: City of Saint Joseph – Michigan Drinking Water and State Revolving Loan Fund
Section 106 Review

Dear Ms. Cook,

The City of Saint Joseph has prepared a planning report for application to The Department of Environment, Great Lakes and Energy, Drinking Water State Revolving Fund, starting in fiscal year 2021 to fund water infrastructure improvements in several locations around the city and improvements to the Water Plant.

The proposed work consists of replacing the existing water, sanitary, and storm sewer mains and related infrastructure including the roadway and sidewalks. Also, improvements are proposed at the existing Water Plant including clarifier improvements, HVAC upgrades, architectural improvements, lab improvements, and lift pump station upgrades. All work is expected to be within existing road right-of-ways or already developed property. We believe that the project areas have been so extensively modified by modern development that there is little likelihood that the proposed project will impact undisturbed historic or Tribal property.

This notice and opportunity to comment is being sent to you to fulfill Section 106 of the National Historic Preservation Act review process, which requires a federal agency or applicant to consult with THPOs and federally recognized Indian tribes. The purpose of this notice is to give you an opportunity to have your interests and concerns considered. Should you have any comments on potential impacts to known religious and/or culturally significant properties in the area of the proposed project, please provide them to us within 30 days of this notice.

Project Location: City of Saint Joseph, Berrien County
Township 04S, Range 19W, Section 13, Section 14, Section 23, Section 24, Section 26 and Section 35.

Enclosed is a project map for your reference.

Sincerely,
ABONMARCHE

Jon Greco
Staff Engineer
jgreco@abonmarche.com

May 6, 2020

Earl Meshigaud
Hannahville Indian Community
N-14911 Hannahville B1 Rd.
Wilson, MI 49896
earlmeshigaud@hannahville.org

Re: City of Saint Joseph – Michigan Drinking Water and State Revolving Loan Fund
Section 106 Review

Dear Mr. Meshigaud,

The City of Saint Joseph has prepared a planning report for application to The Department of Environment, Great Lakes and Energy, Drinking Water State Revolving Fund, starting in fiscal year 2021 to fund water infrastructure improvements in several locations around the city and improvements to the Water Plant.

The proposed work consists of replacing the existing water, sanitary, and storm sewer mains and related infrastructure including the roadway and sidewalks. Also, improvements are proposed at the existing Water Plant including clarifier improvements, HVAC upgrades, architectural improvements, lab improvements, and lift pump station upgrades. All work is expected to be within existing road right-of-ways or already developed property. We believe that the project areas have been so extensively modified by modern development that there is little likelihood that the proposed project will impact undisturbed historic or Tribal property.

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Project Location: City of Saint Joseph, Berrien County
Township 04S, Range 19W, Section 13, Section 14, Section 23, Section 24, Section 26 and Section 35.

Enclosed is a project map for your reference.

Sincerely,
ABONMARCHE

Jon Greco
Staff Engineer
jgreco@abonmarche.com

May 6, 2020

Matthew J.N. Bussler, THPO/GIS Specialist
Department of Housing & Community Development
57824 E. Potawatomi Rd.
P.O. Box 180
Dowagiac, MI 49047
matthew.bussler@pokagonband-nsn.gov

Re: City of Saint Joseph – Michigan Drinking Water and State Revolving Loan Fund
Section 106 Review

Dear Mr. Bussler,

The City of Saint Joseph has prepared a planning report for application to The Department of Environment, Great Lakes and Energy, Drinking Water State Revolving Fund, starting in fiscal year 2021 to fund water infrastructure improvements in several locations around the city and improvements to the Water Plant.

The proposed work consists of replacing the existing water, sanitary, and storm sewer mains and related infrastructure including the roadway and sidewalks. Also, improvements are proposed at the existing Water Plant including clarifier improvements, HVAC upgrades, architectural improvements, lab improvements, and lift pump station upgrades. All work is expected to be within existing road right-of-ways or already developed property. We believe that the project areas have been so extensively modified by modern development that there is little likelihood that the proposed project will impact undisturbed historic or Tribal property.

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Project Location: City of Saint Joseph, Berrien County
Township 04S, Range 19W, Section 13, Section 14, Section 23, Section 24, Section 26 and Section 35.

Enclosed is a project map for your reference.

Sincerely,
ABONMARCHE

Jon Greco
Staff Engineer
jgreco@abonmarche.com

May 6, 2020

Jonnie J. Sam, Director
Little River Band of Ottawa Indians
2608 Government Center Dr.
Manistee, MI 49660
jsam@lrboi.com

Re: City of Saint Joseph – Michigan Drinking Water and State Revolving Loan Fund
Section 106 Review

Dear Mr. Sam,

The City of Saint Joseph has prepared a planning report for application to The Department of Environment, Great Lakes and Energy, Drinking Water State Revolving Fund, starting in fiscal year 2021 to fund water infrastructure improvements in several locations around the city and improvements to the Water Plant.

The proposed work consists of replacing the existing water, sanitary, and storm sewer mains and related infrastructure including the roadway and sidewalks. Also, improvements are proposed at the existing Water Plant including clarifier improvements, HVAC upgrades, architectural improvements, lab improvements, and lift pump station upgrades. All work is expected to be within existing road right-of-ways or already developed property. We believe that the project areas have been so extensively modified by modern development that there is little likelihood that the proposed project will impact undisturbed historic or Tribal property.

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Project Location: City of Saint Joseph, Berrien County
Township 04S, Range 19W, Section 13, Section 14, Section 23, Section 24, Section 26 and Section 35.

Enclosed is a project map for your reference.

Sincerely,
ABONMARCHE

Jon Greco
Staff Engineer
jgreco@abonmarche.com

May 6, 2020

Fred Jacko, Jr., THPO
Nottawaseppi Huron Band of the Potawatomi
1485 Mno-Bmadzewen Way
Fulton, MI 49052
fred.jacko@nhbpi.com

Re: City of Saint Joseph – Michigan Drinking Water and State Revolving Loan Fund
Section 106 Review

Dear Mr. Jacko,

The City of Saint Joseph has prepared a planning report for application to The Department of Environment, Great Lakes and Energy, Drinking Water State Revolving Fund, starting in fiscal year 2021 to fund water infrastructure improvements in several locations around the city and improvements to the Water Plant.

The proposed work consists of replacing the existing water, sanitary, and storm sewer mains and related infrastructure including the roadway and sidewalks. Also, improvements are proposed at the existing Water Plant including clarifier improvements, HVAC upgrades, architectural improvements, lab improvements, and lift pump station upgrades. All work is expected to be within existing road right-of-ways or already developed property. We believe that the project areas have been so extensively modified by modern development that there is little likelihood that the proposed project will impact undisturbed historic or Tribal property.

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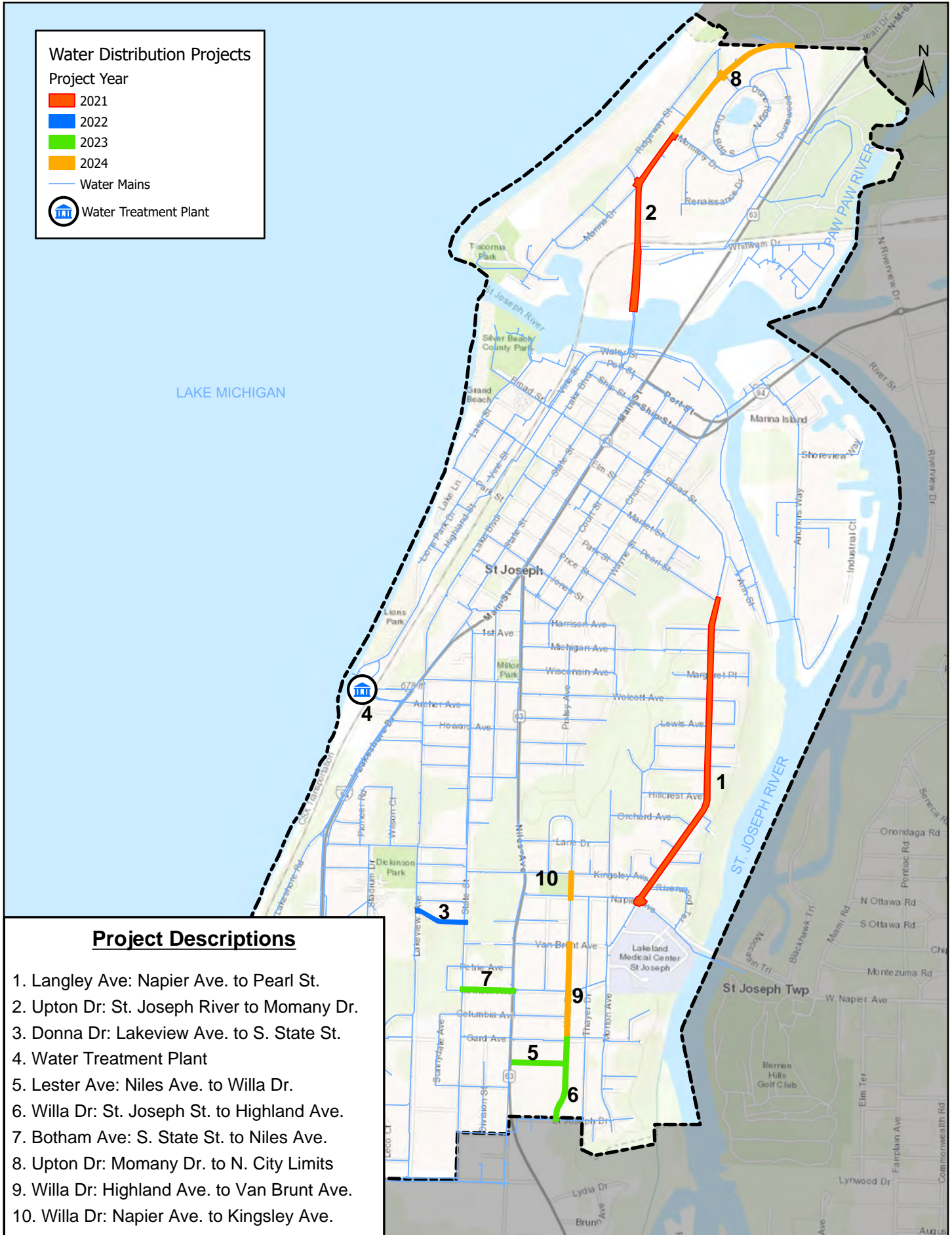
Project Location: City of Saint Joseph, Berrien County
Township 04S, Range 19W, Section 13, Section 14, Section 23, Section 24, Section 26 and Section 35.

Enclosed is a project map for your reference.

Sincerely,
ABONMARCHE

Jon Greco
Staff Engineer
jgreco@abonmarche.com

Figure 3: Water Distribution Project Locations



Water Distribution Projects

Project Year

- 2021
- 2022
- 2023
- 2024

— Water Mains

Water Treatment Plant

Project Descriptions

1. Langley Ave: Napier Ave. to Pearl St.
2. Upton Dr: St. Joseph River to Momany Dr.
3. Donna Dr: Lakeview Ave. to S. State St.
4. Water Treatment Plant
5. Lester Ave: Niles Ave. to Willa Dr.
6. Willa Dr: St. Joseph St. to Highland Ave.
7. Botham Ave: S. State St. to Niles Ave.
8. Upton Dr: Momany Dr. to N. City Limits
9. Willa Dr: Highland Ave. to Van Brunt Ave.
10. Willa Dr: Napier Ave. to Kingsley Ave.

APPENDIX G

SELF-CERTIFICATION CHECKLIST



SRF-DWRF-NPS Applicant Self-Certification Forms (Rev. Draft 16 Jan 2019)

APPLICANT INSTRUCTIONS FOR SECTIONS "A" and "B"

<p>■ Use streamlined checklists A & B below during and after the pre-application meeting to help determine which project planning elements are most relevant for developing a Project Application Narrative (PAN). The PAN proposed for pilot testing will be a streamlined version of the SRF-DWRF Project Plan. Refer to the Project Plan Preparation Guidance and Applicant Actions for details.</p>
<p>■ The PAN is an Executive Summary-style planning document to be submitted with all new or amended projects in lieu of an SRF-DWRF Project Plan. For editorial consistency in this test of streamlining, the PAN will provide a ten-point table of contents described elsewhere in another guidance document.</p>
<p>■ Important: All planning elements in "A" and "B" must be considered for all projects, and all boxes must be marked, thereby attesting to the applicant's completion of a comprehensive planning process. To streamline the narrative portion of the application, only the minimally required and most relevant elements must be described in the PAN (streamlined project plan).</p>
<p>■ After considering <u>each</u> element, circle the appropriate box to indicate either: "Yes, the project is likely to involve or likely to impact" (Yes); or "No, the project is not likely to involve or not likely to impact" (No). Include "NA" if it is neither relevant nor applicable to the proposed project (NA).</p>
<p>■ "REQUIRED FOR ALL" means the element must be considered <u>and also</u> briefly described in the narrative portion of the streamlined PAN, even if the statement is "no impact." Additional information can be attached or incorporated by reference. Add a check mark to confirm completion of this step.</p>
<p>■ If a project involves multiple sub-projects or contracts with different characteristics and different answers for certain boxes, add clarifying comments, notes, or additional pages.</p>
<p>■ In addition to the required Act 399 (water) or Part 41 (wastewater) construction permits, any other permits likely to be required prior to construction must be identified in Section "B".</p>
<p>■ Submit the completed, signed self-certification forms "A" and "B" with the streamlined PAN document. .</p>

A. Purpose and Alternatives Analysis including Cost and Effectiveness **PROJECT NO. 7486-01**

<p>Project Need and Eligibility (identify problems, NOT the project to be constructed)</p> <p><input checked="" type="checkbox"/> REQUIRED FOR ALL</p>	<p>Protection of Public Health and the Environment</p> <p><input checked="" type="checkbox"/> REQUIRED FOR ALL</p>	<p>Removal of Lead Service Pipes in Water Systems (DWRF only)</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA</p>	<p>Public Information and Education</p> <p><input checked="" type="checkbox"/> REQUIRED FOR ALL</p>
<p>Existing Facilities (only as relevant to proposed project)</p> <p><input checked="" type="checkbox"/> REQUIRED FOR ALL</p>	<p>Compliance Violation, Enforcement Action, or Related Concerns</p> <p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA</p>	<p>Alternatives: Option to optimize performance and improve operation and maintenance</p> <p><input checked="" type="checkbox"/> REQUIRED FOR ALL</p>	<p>Alternatives: Facility Regionalization / Coordination with Regional Planning Agencies</p> <p><input checked="" type="checkbox"/> REQUIRED FOR ALL</p>

Continued on Page 2

<p>Comparative "Cost and effectiveness" of Feasible Alternatives, processes, materials, techniques, and technologies <input checked="" type="checkbox"/> REQUIRED FOR ALL <i>This checkbox satisfies the USEPA requirement</i></p>	<p>Comparative non-monetary analysis of Feasible Alternatives (environmental, operational, other) <input checked="" type="checkbox"/> REQUIRED FOR ALL</p>	<p>Financial, legal, institutional, managerial, social, or other community considerations impacting planning analysis <input checked="" type="checkbox"/> REQUIRED FOR ALL</p>	<p>Enviro-Topographical-Geographical Constraints / Constructability concerns (e.g, poor soils, steep slopes) Yes <input checked="" type="checkbox"/> No NA</p>
<p>Alternative Facility Locations or Pipe Routings Yes <input checked="" type="checkbox"/> No NA</p>	<p>CSO separation or system upgrades (SRF only) Yes No <input checked="" type="checkbox"/> NA</p>	<p>Structural Integrity PACP/MACP (SRF only) Yes No <input checked="" type="checkbox"/> NA</p>	<p>Reduction of excessive infiltration and inflow (SRF only) Yes No <input checked="" type="checkbox"/> NA</p>
<p>Water / Wastewater Pretreatment requirements Yes No <input checked="" type="checkbox"/> NA</p>	<p>Other Planning Elements Relevant to Project Analysis: Changes to Land Use, Changes to Capacity, Long-Term Sustainability, Climate Resilience, Facility Security, <input checked="" type="checkbox"/> Phasing of <input checked="" type="checkbox"/> Construction, Geotechnical-Hydrogeological-Biological-Tree Survey, etc (please identify) <input checked="" type="checkbox"/> Yes No NA</p>		
<p>Green Infrastructure for stormwater / Energy-water-wastewater conservation or resource recovery (USEPA Green Project Reserve) / Alternative or innovative technologies Yes <input checked="" type="checkbox"/> No NA</p>		<p>Integrated Asset Management Planning Principles and Practices, including coordinated construction (water, sanitary, storm, transportation) <input checked="" type="checkbox"/> Yes No NA</p>	
<p>Planning consideration of construction and operational impacts on water levels in streams, rivers, and groundwater aquifers (e.g., major dewatering, large water withdrawals) Yes <input checked="" type="checkbox"/> No NA</p>		<p>Planning consideration of operational impacts to downstream processes, e.g., WTP or WWTP discharges, mgmt and disposal of spent filters, mgmt and disposal of sludges & other treatment residuals, etc. Yes No <input checked="" type="checkbox"/> NA</p>	
<p>Description of Selected Alternative (the project to be constructed) <input checked="" type="checkbox"/> REQUIRED FOR ALL</p>	<p>User Impacts, Affordability, Disadvantaged Community, Environmental Justice <input checked="" type="checkbox"/> REQUIRED FOR ALL</p>	<p>Eligibility, construction schedule, and project delivery considerations (e.g., ineligible components, contracting method, project phasing or segmenting, other funding sources) <input checked="" type="checkbox"/> REQUIRED FOR ALL</p>	
<p>DOCUMENTS INCORPORATED BY REFERENCE AND/OR SUBMITTED IN LIEU (CIRCLE AS APPROPRIATE)</p> <p>USDA-RD Preliminary Engineering Report & Enviro Review SSES (SRF only) I/I Study (SRF only) PACP/MACP/NASSCO Report <input checked="" type="checkbox"/> AMP <input checked="" type="checkbox"/> CIP Basis of Design Geotechnical-Hydrogeological-Biological-Tree Survey Environmental Assessment Report Watershed Management Plan Master Plan Compliance Documents (letters, ACO, LTCAP, permit schedule, DCA, other - please specify) <input checked="" type="checkbox"/> Water Reliability Study (DWRF only) <input checked="" type="checkbox"/> Sanitary Survey (DWRF only) <input checked="" type="checkbox"/> SWPP (DWRF only), Symposia/Workshop Findings Engineering Proposal Rate Study Existing Permit Other</p>			
<p>Applicant Comments (attach additional page if necessary)</p>			
<p>MDEQ Reviewer Comments (attach additional page if necessary)</p>			

Continued on Page 3

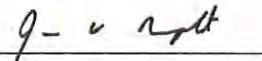
B. Environmental Preview / Review (NEPA-Like) and Useful Life Analysis PROJECT NO. _____

SHPO: Archeo-Histor-Cultural <input checked="" type="checkbox"/> LETTERS SENT, REQUIRED FOR ALL	THPO: Tribal <input checked="" type="checkbox"/> LETTERS SENT, REQUIRED FOR ALL	Protected Plants and Animals (Endangered-Threatened) USFWS/MNFI Yes <input checked="" type="radio"/> No NA	Protected or Important Habitats (including Trees) Yes <input checked="" type="radio"/> No NA
Floodplain Impacts and/or Permit Yes <input checked="" type="radio"/> No NA	Wetlands Impacts and/or Permit Yes <input checked="" type="radio"/> No NA	Inland Lakes & Streams Impacts and/or Permit Yes <input checked="" type="radio"/> No NA	Airspace and Airports Yes <input checked="" type="radio"/> No NA
Soil Erosion and Sedimentation and/or Permit Yes <input checked="" type="radio"/> No NA	Construction Storm Water Permit, Storm Water Discharge Permit Yes <input checked="" type="radio"/> No NA	Great Lakes Coastal Zone and related (Shorelands, Sand Dunes, Submerged Lands, etc) and/or Permit Yes <input checked="" type="radio"/> No NA	Wild, Scenic and Natural Rivers / National Natural Landmarks / Farmland Preservation Yes <input checked="" type="radio"/> No NA
Air Quality (beyond temporary construction) Yes <input checked="" type="radio"/> No NA	Water or Wastewater Facility NPDES Discharge Permit (New or Modified) Yes <input checked="" type="radio"/> No NA	Other permits anticipated for water-wells, roads, buildings, local health dept, lagoon berm, etc (please identify) Yes <input checked="" type="radio"/> No NA	
Public Lands, Recreational Areas, Scenic Areas, Beauty Roads, Open Space, etc Yes <input checked="" type="radio"/> No NA	Noise-Sensitive or Security-Sensitive Zones (e.g., hospitals, schools, apartments) Yes <input checked="" type="radio"/> No NA	<p align="center">USEFUL LIFE ANALYSIS (SRF ONLY) <i>This checkbox satisfies the USEPA requirement</i></p> <p align="center">The Useful Design Life of the project or activity is ____ years. For projects with multiple sub-components, see XYZ for determining the Useful Life.</p>	
Applicant Comments (attach additional page if necessary)			
MDEQ Reviewer Comments (attach additional page if necessary)			

APPLICANT CERTIFICATION (Please print or type)

I certify that all the above-referenced planning requirements Pages 1-3 have been considered, including the environmental preview, and including additional planning elements where relevant and applicable to the proposed project.

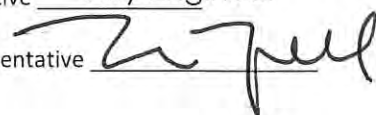
Name of Professional Engineer Jason W. Marquardt, PE

Signature of Professional Engineer 

Date 06/22/20

Name of Authorized Representative Tim Zebell, P.E.

Title of Authorized Representative City Engineer

Signature of Authorized Representative 

Date 06/23/2020

MDEQ Review (attach existing May 1/July 1 Screening checklist until Rules / Law are amended)

I certify that I have completed a thorough review of the above-referenced proposed SRF/DWRF loan project, using steps consistent with the long-established State Environmental Review Process and associated historical and recent guidance documents.

Date of PAN Screening Review _____

Name of Reviewer _____

More Info Needed? Y / N

Preliminary Tier 1 - 2 - 3

Approve for Initial PPL? Y / N

APPENDIX H

PUBLIC HEARING DOCUMENTS

(NOTICE OF PUBLIC HEARING)

(TRANSCRIPT OF PUBLIC HEARING)

(ATTENDEES)



AFFP
NOTICE OF PUBLIC HEARING The

RECEIVED
JUN 15 2020
ABONMARCHE

Affidavit of Publication

STATE OF MICHIGAN }
COUNTY OF BERRIEN } SS

NOTICE OF PUBLIC HEARING

The City of St. Joseph will hold a public hearing on the proposed Drinking Water State Revolving Fund (DWSRF) Project Plan for the purpose of receiving comments from interested persons.

Courtney Kruger, being duly sworn, says:

The hearing will be held at 6:00 p.m. on Monday, June 8th, 2020 at the regular City Commission Meeting at St. Joseph City Hall – Commission Chambers, 700 Broad Street, St. Joseph, Michigan. The purpose of the proposed project is to replace Lead Water Services, make improvements to the water distribution system, and construct additional improvements to the water treatment plant.

That she is Legal Clerk of the Herald Palladium, a Daily newspaper of general circulation, printed and published in St Joseph, Berrien County, Michigan; that the publication, a copy of which is attached hereto, was published in the said newspaper on the following dates:

Lead service line replacements are intended to be completed throughout the city. Distribution system improvements include replacement of water main and water service lines on Langley Avenue, Upton Drive, Donna Drive, Willa Drive, Lester Avenue, and Botham Avenue. Water Plant Improvements include Clarifier Improvements, HVAC upgrades, Lab and Architectural Improvements, and South Low Lift Pump Station upgrades.

May 07, 2020

Assistance in funding for the project will be solicited from the Michigan Department of Environment, Great Lakes, and Energy Drinking Water State Revolving Loan Fund. Over the 5 years included in the plan, the amount eligible for the loan is \$21.1 million and the total estimated cost to users for the proposed project is expected to be up to \$30.2 million.

Publisher's Fee: \$ 348.50

Impacts of the proposed project include construction related road closures, detours, sidewalk closures, tree removal, and construction dust. Temporary shutoffs to the water system and some individual water services are also expected during this work. Electronic copies of the plan detailing the proposed project are available for review at the following websites:

That said newspaper was regularly issued and circulated on those dates.

www.sjcity.com
www.abonmarche.com

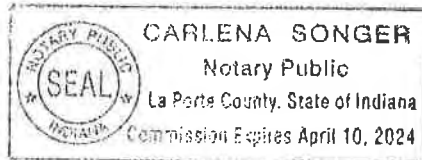
SIGNED:

Courtney Kruger

Written comments received before the hearing record is closed on June 15, 2020 will receive responses in the final project plan. Written comments should be sent to Jason W. Marquardt, P.E., Abonmarche Consultants, Inc., 95 W. Main Street, Benton Harbor, MI 49022. By email to jmarquardt@abonmarche.com. The hearing site is accessible, including handicap parking. People with disabilities requiring additional accommodations in order to participate in the hearing should contact City Hall at (269) 983-5541 at least 7 days prior to the hearing date. Information at this meeting will be presented by speakers.

Subscribed to and sworn to me this 7th day of May 2020.

Carlena Songer
Carlena Songer, Notary Public 4/10/2024



60000150 61125687 269-985-0347

City Clerk
CITY OF ST JOSEPH
700 BROAD STREET
ST. JOSEPH, MI 49085

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ST. JOSEPH CITY COMMISSION HEARING

Virtual Public Hearing before the Public for
the St. Joseph City Commission, on June 8, 2020, at 6:00
p.m., before Ms. Dawn M. Houghton, (attending
telephonically), Michigan License CSR-3071, RPR, Illinois
License 084.004881.

1 MAYOR MICHAEL GAREY: Thank you. Questions or
2 comments? Denise, call the role.

3 DEPUTY CITY CLERK DENISE WESTFALL: Commissioner
4 Goos?

5 MAYOR PRO TEM LAURA GOOS: Yes.

6 DEPUTY CITY CLERK DENISE WESTFALL: Commissioner
7 Richards?

8 COMMISSIONER JEFFREY RICHARDS: Yes.

9 DEPUTY CITY CLERK DENISE WESTFALL: Commissioner
10 Todman?

11 COMMISSIONER DR. LYNN TODMAN: Yes.

12 DEPUTY CITY CLERK DENISE WESTFALL: Mayor Garey?

13 MAYOR MICHAEL GAREY: Yes.

14 DEPUTY CITY CLERK DENISE WESTFALL: Commissioner
15 Getty?

16 COMMISSIONER PEGGY GETTY: Yes.

17 MAYOR MICHAEL GAREY: All right. Under New
18 Business, we have the Public Hearing Resolution, the 2020
19 DWSRF Project Plan. I know we have Jason Marquardt here from
20 Abonmarche, I believe, but I don't know if, Tom MacDonald, if
21 you weigh in on this also, or is that going to be Tim?

22 MR. TIM ZEBELL: We need to do this. We basically
23 have to hold the public hearing in order to comply with the
24 requirements of the Drinking Water State Revolving Fund
25 submittal, so this requirement is there. We actually did a

1 DWSR -- or they called it a DWFR, sorry, a DWRF back then.
2 They've added an additional initial now.

3 But in 2016, we basically had a plan, and because
4 we've added lead service line replacement, we need to do
5 essentially a new plan. So a lot of this has come before the
6 commissioner -- the commission in the past. It's the lead
7 service line replacements. It's kind of a new thing that is
8 in this project plan that we need to go through the full
9 public hearing process for.

10 MAYOR MICHAEL GAREY: Okay. Thank you. So at this
11 time, open to public hearing on the matter, and if anyone has
12 any comments or thoughts on the matter, please state your
13 name and address for the record. So we're going to open the
14 public hearing. John, do we have anyone with questions?

15 MR. TIM ZEBELL: Generally what we'll do is we have
16 to cover a minimum amount of information, and Jason has a
17 PowerPoint, so he's going to cover 7 to 10 slides, I believe
18 he has.

19 Some of this stuff might be a little dry, but we
20 have to cover that to meet the requirements of the program.
21 And we want to do this because it's a low-interest loan.
22 It's the best rates we'll get. And like this year on -- for
23 lead service line replacements, they're offering principal
24 forgiveness, so we're actually getting 10 percent back, if
25 you will, on all the costs associated with the lead service

1 line replacements that we don't have to pay.

2 MAYOR MICHAEL GAREY: Thank you. Good evening,
3 Jason.

4 MR. JASON MARQUARDT: Can everybody see my screen?

5 MAYOR MICHAEL GAREY: Yes.

6 MR. JASON MARQUARDT: Okay. Thanks, Tim, for the
7 lead-in. My name is Jason Marquardt. I'm with Abonmarche,
8 been working with Tim and Tom putting this DWSRF project plan
9 together, just like Tim kind of led into, so this is our
10 presentation.

11 A little bit of introduction. The city has applied
12 for these loans in the past, so this is the process to, you
13 know, to apply for -- for new loans. This would be an
14 application for low-interest loans through EGLE programs, the
15 Department of Environment, Great Lakes and Energy.

16 This loan will help fund the Phase 2 water
17 treatment plant projects which had been updated since the
18 previous plans, distribution system projects that have been
19 slightly updated, and then, like Tim said, the new lead
20 service replacements.

21 Once the project plan is finalized and sent to the
22 State, projects usually are selected by date, based on the
23 priority, and to maximize available financing.

24 Background, like Tim mentioned as well, the city
25 has done three previous studies since 2016, so this new plan

1 is kind of a combination of all three plans. EGLE has
2 allowed a streamlined process now to apply -- when applying
3 for funding if -- if projects haven't changed much since the
4 previous plan.

5 The plans that were referenced, that will be
6 referenced in this project plan update are the asset
7 management plan, the water system reliability study, and the
8 strategic capital improvement plan. Once finalized assets--
9 The assets in the plan were scored based on probability of
10 failure, the age and condition. That would be your water
11 mains and your equipment at the water treatment plant and if
12 they have any consequential failure. In these plans, the
13 needs have been identified, and now the city can seek funding
14 to assist with the implementation of these projects.

15 The need for the project, so the distribution
16 systems do have, you know, aging and undersized water mains
17 throughout the city that's been identified in some of the
18 previous project plans. That leads to sometimes inadequate
19 water pressure and poor water quality. Older mains do have
20 histories of breaks that require maintenance, also water
21 leaks from the system that -- that costs the system dollars.

22 For the water treatment plant itself, there's
23 limited plant capacity with the clarifiers currently, so the
24 new plant would provide some redundancy. Some
25 dehumidification is needed to eliminate moisture issues at

1 the plant. The plant has some inadequate meeting spaces and
2 structural issues on the -- in the walls and roof, and then
3 also the South Low Lift Pump Station will have electrical
4 improvements as part of this plan.

5 The biggest thing is the Lead and Copper Rule,
6 that's been updated. Many of you have probably listened to
7 quite a bit of updates on that Lead and Copper Rule, but now
8 with the -- with the revisions, the new lead action levels
9 have been identified during testing and sampling. It also
10 requires the city or municipality to prepare a distribution
11 system materials inventory, which the city had completed at
12 the end of last year.

13 When -- when it comes to its actual replacement of
14 the lead service lines now, they've changed the requirements.
15 Partial lead service line replacement is no longer allowed
16 except in the case of emergency repair, and even when you do
17 make the repair, you have 72 hours to -- to replace it, the
18 entire line.

19 Water supplies with lead service lines, regardless
20 -- regardless of your lead action levels when you do testing,
21 must replace all lead service lines at an average rate of
22 five -- five percent per year, not to exceed 20 years, so
23 that means that municipalities with lead service lines will
24 be required to change those out over the next 20 years.

25 The full lead service line must be replaced at the

1 water city -- or the water supplier's expense regardless of
2 ownership. All the projects that we've done in the past
3 replaced the water service from the main to the -- to the
4 shutoff within the right-of-way. This will require full lead
5 service replacement through the house or property to the
6 meter.

7 The distribution projects as listed on the plan are
8 shown on this five-year. We have -- we had identified
9 projects from 2021 through 2024. The 2021 project includes
10 the Langley Avenue project, and we noted Upton Drive here;
11 2022 would be the water treatment plant improvements and
12 Donna Drive; 2023 would be the Botham section and Lester
13 Avenue and Willa Drive; and then 2024 would be the remaining
14 Willa Drive on Phase 2, if you will.

15 For the lead service line replacement, though, you
16 have lines throughout the entire system. Right now, there's
17 estimated 3,850 residential water services. Of that, there's
18 been an estimate of 70 percent contain lead in some form that
19 will need replacement over the next 20 years.

20 Our current plan of the city's strategy was to
21 replace 150 lead services each year for the next 20 years,
22 and they've prioritized locations of these lead service
23 replacements. Instead of just going through the whole system
24 entirely as a whole and replacing stuff, there's been this
25 strategy and these priorities, and Priority 1 would be the

1 lead service line replacements as part of the upcoming
2 reconstruction projects for 2021 and 2022, so that -- that
3 would include a project like Langley. So we would get -- you
4 would get in earlier than the actual construction of the
5 project and replace the -- the lead service lines to allow a
6 more seamless transition when the actual contractor gets on
7 the site to do that -- do that work, which would limit them
8 to potentially just working with inside -- inside the
9 right-of-way.

10 Priority 2 would be any water alert services that
11 leak or need to be replaced as part of water main breaks as
12 they arise. So that would be annually. So if -- if there's
13 a leak in the system and it's uncovered and they notice that
14 the lead service is in close proximity, that would be
15 replaced at the time of the excavation.

16 Priority 3 would be lead services that test high
17 for lead as they come up through the city's testing program,
18 and that would be done annually. Priority 4 would be any
19 future projects listed in those previous plans, so kind of
20 getting ahead of -- of this lead service replacements so that
21 the construction of the project can -- can happen without as
22 much impact to the water service replacements.

23 And Priority 5 would be any galvanized services
24 previously connected to lead. So over the last 20 years,
25 there's been a lot of water main projects in the city, and

1 the -- the service line would be replaced from the new main
2 to new -- from the new water main to the shutoff and connect
3 to the existing property owner's service. Priority 5 would
4 replace those.

5 So a project like Botham Avenue that was done in
6 2015 would be like a Priority 5 project. And additionally,
7 those may have to be replaced, but it's set at Priority 5
8 because we have some other needs first.

9 So the lead service replacements, as you can see,
10 this graphic is very similar to the distribution improvement
11 map. Really what it shows is, you know, Priority 1, like I
12 just mentioned, would occur on Upton Drive and Langley
13 Avenue, getting ahead of any projects that -- that would
14 occur on those streets.

15 Priority 4 would be any -- any -- any replacements
16 listed there in blue that -- that would get ahead of those
17 capital improvement projects. And then we listed them by
18 year, I guess, so the green would be -- oh, I'm sorry,
19 Priority 5 would be Botham Avenue, like I mentioned. That
20 project was done in -- in 2015. So that would be the
21 galvanized services if -- if the Priority 5 services was
22 replaced.

23 We did mention, you know, Priority 2 and Priority 3
24 in the bottom left. You know, those are system-wide. That
25 can happen -- those can happen anywhere throughout the system

1 depending on if a water service or a water main has -- has a
2 leak in the system that requires maintenance, or if a -- if
3 some sampling comes back that's -- that's tested high for
4 lead, those would be Priority 2 and Priority 3 replacements.

5 Kind of give you a snapshot of -- of what would be
6 going -- would be occurring, you know, for each -- each one
7 of these years, we've placed that in the table here. So like
8 for 2021, you know, 108 would be water service for
9 reconstruction projects similar to, you know, projects such
10 as Langley. And then you would have 25 each for any leaking
11 or broken water main services or any that test high for lead,
12 just to kind of give you a snapshot of what we're telling the
13 State of how this money or how this money would potentially
14 be spent on water service replacements.

15 As you can see there, that's the, you know, 150 a
16 year for the next five years, you know, total is about --
17 totals to about 900,000 in construction costs and just over a
18 million in -- in full construction and engineering costs.

19 As part of the plan, they asked us to look at some
20 alternatives to -- to basically determine what the -- what
21 type of alternative is the most economically and engineering
22 sound choice. And this one, it's kind of interesting because
23 it's lead service replacements.

24 So we looked at no action-- We looked at three
25 alternatives: No action, partial replacement, and obviously

1 full lead line replacement. Well, no action was really not
2 considered a feasible option because it would not address the
3 public health risks by water services lines made of lead or
4 galvanized steel, and really it comes down to meeting the
5 requirements of the Lead and Copper Rule.

6 Partial replacements of lead service lines, only up
7 to the private property boundaries, so similarly to what we
8 may have done in the past on construction projects are not
9 feasible because the partial replacements is not -- not
10 allowed under the new Michigan Lead and Copper Rule.

11 So really, the only alternative that -- that's
12 viable here is -- is the full replacement of a lead service
13 line or a lead -- a water service line from the public main
14 to the customers' water meter.

15 Assessments of pipe materials or different things
16 and different strategies for that have not been used in this
17 analysis but would be addressed during design. Also, I
18 wanted to note the city of St. Joseph policy only allows
19 copper to be used in service lines within the public
20 right-of-way. Therefore, using different type of materials
21 was just not applicable.

22 Some of the social and environmental impacts and
23 some mitigation measures that we -- we have to list and we
24 have to note is that, well, the benefits for the distribution
25 projects and the -- and the water treatment plant is

1 increased capacity, improved level of service to users.

2 As part of this plan, you could potentially ask for
3 funding for 750 lead service lines to be replaced to remain
4 in compliance with the new lead and copper requirements.

5 That would -- that would allow you to, you know, replace five
6 percent each year. And also, the distribution projects would
7 improve flows and pressures, with benefits to fire
8 suppression.

9 The impact/mitigation to users would be some
10 short-term construction impacts, noise, mitigated through
11 some noise barriers, mufflers, limitation of work hours is
12 something that we've done during the construction projects.
13 Dust, we've mitigated that through soil erosion control
14 during construction. Emissions, mitigated that through
15 requirements for air pollution control during construction.
16 And then the obvious big one that a lot of us are associated
17 with during construction is road closures. You know, we
18 manage that through traffic control and detours.

19 Adverse impacts upon sensitive environmental areas
20 like cutting down trees or -- or things like that, nature,
21 will really be kind of nonexistent, because as -- as most
22 work will take place in the existing road right-of-way and
23 civic facilities, so we don't see many impacts of
24 environmentally sensitive areas.

25 This is a -- this is a snapshot of what the 2021

1 immediate project funding would be. With those distribution
2 projects and those lead service line replacements, the total
3 cost in 2021 is 9.9 million. We have estimated that DWSRF
4 eligible costs is just over 4.6 million there. That includes
5 a breakdown on this table of a million, just over a million
6 dollars of lead service replacements for the total cost and
7 the eligible DWSRF costs.

8 Langley Avenue has a total project estimate of just
9 over 5.3 million, with a potential of 2.1 million in DWSRF
10 funds. Upton Drive has a total project cost of --
11 construction cost and project cost of 3.3 million with a
12 potential 1.3 million in DWSRF funds.

13 And then there's some costs of issuances of the
14 actual DWSRF bonds. The expected debt repayment for 2021
15 would be 200,000 per year over 30 years for these DWSRF
16 funds.

17 MAYOR MICHAEL GAREY: Okay.

18 MR. JASON MARQUARDT: Looking at the entire project
19 in the whole, we listed what we did put in this plan for each
20 of the years after 2021. So summarizing from 2021, you have
21 lead service line replacements and distribution system
22 improvement projects, and it kind of goes each year as -- as
23 each one of these kind of project scope items there, but the
24 total project -- project plan cost, just over 30 million,
25 with a DWSRF eligible cost of 21 -- just over 21 million.

1 I would note that the water treatment plant
2 improvements would be, in this plan, stay in 2022, as you can
3 see kind of in the middle of the screen there. And then just
4 for -- for note, for the actual scope items for the water
5 treatment plant, these -- these items were -- were taken from
6 the previous plans, but this would -- would total what the --
7 the water treatment plant improvements are. We had some
8 clarifier improvements identified, some HVAC upgrades, some
9 architectural improvements, some lab improvements, and then
10 the South Low Lift Station, electrical improvements that we
11 mentioned at the very beginning of the -- of the
12 presentation. That totals close -- total 10 million dollars
13 for those Phase 2 water treatment plant projects.

14 And do you have any questions?

15 MAYOR MICHAEL GAREY: Do the commissioners have
16 questions for Jason on this issue? (No response.)

17 All right. John, anyone in the audience have any
18 questions for Jason?

19 CITY MANAGER JOHN HODGSON: Give it a second.
20 Nothing at this time.

21 MAYOR MICHAEL GAREY: Okay. Then accept a motion
22 to close the public hearing?

23 COMMISSIONER JEFFREY RICHARDS: So moved.

24 UNIDENTIFIED COMMISSIONER: Second.

25 MAYOR MICHAEL GAREY: Question or comments?

1 Denise, call the role.

2 DEPUTY CITY CLERK DENISE WESTFALL: Commissioner
3 Richards?

4 COMMISSIONER JEFFREY RICHARDS: Yes.

5 DEPUTY CITY CLERK DENISE WESTFALL: Commissioner
6 Todman?

7 COMMISSIONER DR. LYNN TODMAN: Yes.

8 DEPUTY CITY CLERK DENISE WESTFALL: Mayor Garey?

9 MAYOR MICHAEL GAREY: Yes.

10 DEPUTY CITY CLERK DENISE WESTFALL: Commissioner
11 Getty?

12 COMMISSIONER PEGGY GETTY: Yes.

13 DEPUTY CITY CLERK DENISE WESTFALL: Commissioner
14 Goos?

15 MAYOR PRO TEM LAURA GOOS: Yes.

16 MAYOR MICHAEL GAREY: Thank you very much. And now
17 we have, going back now, we had to pass a resolution, John.
18 I don't have all these up on my screen.

19 MAYOR PRO TEM LAURA GOOS: So -- so we need to
20 consider a motion to approve the resolution accepting the
21 2020 DWSRF Project Plan. Right?

22 So I would move that we approve the resolution
23 adopting the 2020 Drinking Water Revolving Fund Final Project
24 Plan for water system improvements, and designating the city
25 finance director and city engineer as authorized project

1 representatives for the project.

2 COMMISSIONER DR. LYNN TODMAN: I support.

3 MAYOR MICHAEL GAREY: Questions or comments?

4 Denise, call the role.

5 DEPUTY CITY CLERK DENISE WESTFALL: Commissioner
6 Todman?

7 COMMISSIONER DR. LYNN TODMAN: Yes.

8 DEPUTY CITY CLERK DENISE WESTFALL: Mayor Garey?

9 MAYOR MICHAEL GAREY: Yes.

10 DEPUTY CITY CLERK DENISE WESTFALL: Commissioner
11 Getty?

12 COMMISSIONER PEGGY GETTY: Yes.

13 DEPUTY CITY CLERK DENISE WESTFALL: Commissioner
14 Goos?

15 MAYOR PRO TEM LAURA GOOS: Yes.

16 DEPUTY CITY CLERK DENISE WESTFALL: Commissioner
17 Richards?

18 COMMISSIONER JEFFREY RICHARDS: Yes.

19 MAYOR MICHAEL GAREY: Thank you. Just before --
20 John, before I go to your comments, is there anyone on-line
21 that has been waiting for -- to make some other point?

22 CITY MANAGER JOHN HODGSON: I'll give it a moment.
23 Nothing coming up.

24 MAYOR MICHAEL GAREY: Okay. I'll turn it over to
25 John Hodgson, city manager.

Public Hearing Attendees

Name
Burwell Carmichael
Dawn Houghton
Erika Trumble
Greg Alimenti
Jack Sanderson
Jeanne Strine
Jon Greco
Julie Swidwa
Mary Sanderson
Michael Gross
Robert Kruk
Andrew Green
Anne Vandermolen
Deb Deja
Marjorie A. Covey
Tim Zebell
Jason Marquardt
John Hodgson
Denise Westfall
Jeffrey Richards
Chris Cook
Deb Koroch
Greg Grothous
Jeremy Connell
Joan Ross
Kristen Gundersen
Laura Goos
Lauri Schmidt
Lynn Todman
Peggy Getty
Steve Neubecker
Tom MacDonald

APPENDIX I

RESOLUTION OF ADOPTION



