



State Revolving Fund Loan Programs

Drinking Water, Wastewater, Nonpoint Source

ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT

CITY OF JONESBORO

WASTEWATER COLLECTION SYSTEM IMPROVEMENTS

STATE REVOLVING FUND PROJECT # WW 14 03 27 01

DATE: October 29, 2013

TARGET PROJECT APPROVAL DATE: December 2, 2013

I. INTRODUCTION

The above entity has applied to the State Revolving Fund (SRF) Loan Program for a loan to finance all or part of the wastewater project described in the Environmental Assessment (EA) attached to this Finding of No Significant Impact (FNSI). As part of facilities planning requirements, an environmental review has been completed which addresses the project's impacts on the natural and human environment. This review is summarized in the attached EA.

II. PRELIMINARY FINDING OF NO SIGNIFICANT IMPACT (FNSI)

The SRF has evaluated all pertinent environmental information regarding the proposed project and determined that an Environmental Impact Statement is not necessary. Subject to responses received during the 30-day public comment period, and pursuant to Indiana Code 4-4-11, it is our preliminary finding that the construction and operation of the proposed facilities will result in no significant adverse environmental impact. In the absence of significant comments, the attached EA shall serve as the final environmental document.

III. COMMENTS

All interested parties may comment upon the EA/FNSI. Comments must be received at the address below by the target project approval date. Significant comments may prompt a reevaluation of the preliminary FNSI; if appropriate, a new FNSI will be issued for another 30-day public comment period. A final decision to proceed, or not to proceed, with the proposed project shall be effected by finalizing, or not finalizing, the FNSI as appropriate. Comments regarding this document should be sent within 30 days to:

Sarah Hudson, Senior Environmental Manager
State Revolving Fund -- IGCN 1275
100 N. Senate Ave.
Indianapolis, IN 46204
317-232-8663
sahudson@ifa.in.gov

ENVIRONMENTAL ASSESSMENT

I. PROJECT IDENTIFICATION

Project Name and Address: **Wastewater Collection System Improvements**
City of Jonesboro
414 S. Main Street
Jonesboro, IN 46938

SRF Project Number: WW 14 03 27 01

Authorized Representative: The Honorable Terry Poling, Mayor

II. PROJECT LOCATION

Jonesboro is located in south central Grant County. The proposed project includes the rehabilitation of two interceptor sewers and two lift stations. The project areas will occur in Mill Township, in the Fairmount USGS quadrangle, T23N, R8E, section 4 and also T24N, R8E sections 32 and 33. See topographic map.

III. PROJECT NEED AND PURPOSE

Jonesboro has a sanitary sewer system that was constructed mainly of vitrified clay pipe in the mid 1950s. Jonesboro's transports its wastewater flow to a wastewater treatment plant (WWTP) in Gas City. Jonesboro entered into an Agreed Order with the Indiana Department of Environmental Management (IDEM) in 2005 to reduce wastewater flow to the Gas City's WWTP as well as identify and eliminate infiltration and inflow (I/I) sources in its collection system. Excessive I/I from Jonesboro's collection system particularly during rain events is causing a significant hydraulic load on Gas City's WWTP.

The city has conducted several sewer studies over the past several years to detect and identify sources of I/I. These studies included flow monitoring conducted from May 12, 2009 through July 13, 2009 and followed later with smoke testing in August of 2010. The results of these studies revealed cross connections between the sanitary and storm sewers and numerous unauthorized connections (i.e., foundation drains, basement sump pumps, and downspouts) were also detected.

These studies also showed that the most significant source of infiltration is occurring from the city's two main interceptor sewers due to defects and joint degradation. The two interceptors are an 18-inch diameter interceptor along Back Creek and a 15-inch diameter interceptor on the east side of the city between Main and Water Streets.

This project proposes the rehabilitation of approximately 9,230 feet of 15-inch and 18-inch diameter sanitary interceptors using cured-in-place-pipe (CIPP) lining and the rehabilitation of the manholes along these two interceptor sewers. See Appendix F. The proposed rehabilitation of the manholes includes: applying an interior sprayed-on cementitious liner on the sidewalls;

repairing a cracked manhole cone using either grout or fiberglass; installing a neoprene boot to reset loose castings; replacing broken castings with new ones; and installing a manhole insert or manhole gasket to prevent inflow through the manhole cover. In addition, the manholes along the 18-inch interceptor adjacent to Back Creek must be provided with cover gaskets and bolt down lids.

In addition, this project proposes upgrades to two lift stations: the Main Lift Station and the White Oaks Mobile Home Park Lift Station. The Main Lift station is located on Water Street north of State Road 22, while the White Oaks Mobile Home Park (MHP) Lift Station is located at the intersection of 6th Street and State Road 22.

The Main Lift Station has the following issues: four submersible pumps and their associated piping and valves are in poor condition; the influent bar screen on the wetwell side is ineffective; the flow meter on the forcemain is inoperable; the control panel has components that have failed or will be failing due to their age (i.e., level floats in the wet well, wiring between the pump and motor starters); the alarm dialer is not functioning; and the automatic transfer switch and emergency generator are unreliable and obsolete.

This project proposes the following: replacements of the control panel, level floats in the wet well, wiring between the pump motor starters and the control panel, and soft starters; replacement of the alarm dialer; replacement of the existing submersible pumps with three chopper pumps along with new rails, hoist chains, and discharge elbow; replacement of the drywell and wetwell forcemain piping, valves and electromagnetic flow meter; and replacement of an automatic transfer switch and emergency generator.

The White Oaks MHP Lift Station also has failing components in the control panel (i.e., level floats and wiring between the pump and motor starter); and nuisance alarms caused by condensation in the surge protector.

This project proposes the following: installation of the condensation heater and thermostat in the control panel; refurbish the control panel; replacement of the level floats in the wet well, wiring in the control panel and soft starters; installation of receptacle on the control panel for a portable generator; and the purchase of a portable backup generator.

IV. PROJECT DESCRIPTION

The proposed sewer rehabilitation project includes:

- A. cured-in-place-pipe (CIPP) lining of approximately 3,300 feet of 15-inch diameter interceptor sewer;
- B. CIPP lining of approximately 5,930 feet of 18-inch diameter interceptor sewer;
- C. lining approximately 330 vertical feet of manholes;
- D. installing approximately 36 manhole frame seals;
- E. reinstating 46 service laterals;
- F. cleaning and pre-televising 9,230 feet of 15-inch and 18-inch interceptor sewers;

- G. bypass pumping;
- H. post-televising 9,230 feet of 15-inch and 18-inch interceptor sewers; and
- I. site work.

V. ESTIMATED PROJECT COSTS, AFFORDABILITY AND FUNDING

A. Selected Plan Estimated Cost Summary

<u>Construction Components</u>	<u>Costs</u>
Mobilization/Demobilization	\$ 46,000
CIPP Lining 15-inch Dia. Interceptor	198,000
CIPP Lining 18-inch Dia. Interceptor	438,820
Manhole Interior Lining	52,800
Manhole Frame Seal	10,800
Service Lateral Reinstatement	13,800
Cleaning & Televising	36,920
Bypass Pumping	86,400
Post-Televising	18,460
By-pass pumping	12,000
Site Restoration	5,000
Traffic Control	8,000
Main Lift Station	312,000
White Oaks MHP Lift Station	<u>55,000</u>
Construction Subtotal	\$1,294,000
Contingencies	<u>129,400</u>
Total Estimated Construction Cost	\$1,423,400

<u>Non-Construction Costs</u>	
Design	\$ 139,000
Construction Engineering	31,000
Inspection	70,000
Post Construction Flow Monitoring	32,000
Bidding/Negotiations	20,000
Legal/Financial Services	30,000
Permit Assistance	20,000
Legal/Bond Counsel	30,000
Rate Consultant	35,000
BAN Refinancing	<u>485,000</u>
Non-Construction Subtotal	\$ 892,000
Total Estimated Project Cost	\$ 2,315,400

B. Jonesboro will borrow approximately \$1,830,400 from the State Revolving Fund (SRF) Loan Program for a 20-year term at a fixed interest rate to be determined at loan closing. Jonesboro will also borrow approximately \$485,000 from the Supplemental Loan Fund for SRF-ineligible BAN Refinancing. Monthly user rates and charges may need to be analyzed to determine if adjustments are required for loan repayment.

VI. DESCRIPTION OF EVALUATED ALTERNATIVES

The city evaluated three alternatives for the proposed Wastewater Collection System Improvements:

1. “No-Action” Alternative: This alternative was rejected since the city is required by IDEM to identify and eliminate I/I sources and reduce hydraulic loadings to Gas City’s WWTP.
2. Constructing a WWTP for Jonesboro Alternative: This alternative would involve the construction and operations of a new WWTP which would be cost prohibitive. Based on cost, this alternative was rejected.
3. Sewer Rehabilitation Alternative: This alternative was evaluated since it would reduce the amount of I/I in the city’s collection system and consequently reduces the hydraulic loading at the Gas City WWTP where its flow is transported for treatment.
 - a. Sewer Replacement Utilizing Open Excavation – this alternative involves open cut excavation and replacement of both the 15-inch and 18-inch interceptor sewers as well as the replacement of the manholes and reconnection of all the affected service laterals. This alternative was rejected due to cost.
 - b. Slip Lining – this alternative involves a trenchless technology where a flexible liner pipe of a slightly smaller diameter is inserted into the existing sewer pipe and the service connections being reconnected to the new liner. This alternative was rejected due to concerns about the loss of hydraulic capacity and cost.
 - c. Pipe Bursting – this alternative involves a trenchless technology where a pneumatic bursting head tool is being pulled through the existing sewer pipe and fracturing it, while pulling a replacement pipe behind it. This alternative was rejected due to numerous pit setups that would be required to accommodate the equipment and cost.
 - d. CIPP Lining – This alternative involves a trenchless technology where a resin-impregnated felt tube is inserted into the existing sewer pipe and inverted against the inner wall to be cured and form a new pipe. **Based on technicality, reliability and cost this was the selected alternative.**

VII. ENVIRONMENTAL IMPACTS OF THE FEASIBLE ALTERNATIVES

A. Direct Impacts of Construction and Operation

Undisturbed/Disturbed Land: All construction activities will take place within or at existing structures (i.e., interceptor sewers and lift stations); there will be no excavation.

Structural Resources: Construction and operation of the project will not alter, demolish or remove historic properties. The project will have no impact on curbs, brick streets, brick sewers, sidewalks, yards or street-side plantings. If any visual or audible impacts to historic properties occur, they will be temporary and will not alter the characteristics that qualify such properties for inclusion in or eligibility for the National Register of Historic Places. The SRF’s finding pursuant to the Section 106 of the national Historic Preservation Act is: “no

historic properties affected.”

Plants and Animals: The original Back Creek interceptor was constructed in the 1980s and the area has been relatively undisturbed since. Therefore, tree removal will be necessary, and will occur along the 18-inch Back Creek interceptor route between Sixth Street and Second Street due to the clearing of land for access to manholes. A 10 foot wide area will be cleared so that equipment can access the manholes in this section. Tree removal is not expected to occur anywhere else in the project area.

Wetlands: Several wetlands exist along the 18-inch interceptor that parallels Back Creek. No wetlands in the project area will be impacted except for the wooded area between Second and Sixth Streets. The impact to this area will be tree removal. A 10 foot wide area will be cleared so that equipment can access the manholes in this section. A wetland delineation was conducted on this area, which found “approximately 2.5 acres” of wetlands (September 2013, Commonwealth Biomonitoring). Wetlands within that area will be flagged and will be avoided by the contractor when they are clearing the area to access the manholes. The contractor will take all appropriate measures to stay as far away as possible from the wetlands and to minimize disturbance work outside the wetlands so that it doesn’t impact the wetland areas in any way. The wetland located between Pearl and Second Street will not be impacted.

Prime Farmland: The proposed project will not cause a conversion of prime farmland.

100-Year Floodplain: The proposed 18-inch interceptor rehabilitation project is within the 100-year floodplain. However, there will be no filling of the floodplain or displacement of flood waters as a consequence of the project.

Surface Waters: There will be no stream crossings or borings associated with this project. The proposed project will not adversely affect waters of high quality listed in 327 IAC 2-1-2(3), exceptional use streams listed in 327 IAC 2-1-11(b), Natural, Scenic and Recreational Rivers and Streams listed in 312 IAC 7-(2), Salmonid Streams listed in (327 IAC 2-1.5-5(a)(3), or waters on the Outstanding Rivers list.

Groundwater: Dewatering will not be required to complete the project and there will be no detrimental impacts to the groundwater resources in the project area.

Lake Michigan Coastal Program: The proposed project will not affect the Lake Michigan Coastal Zone.

Air Quality: In the short term, dust and noise will be produced during construction activities. No long term air-quality impacts are anticipated.

Open Space and Recreational Opportunities: The proposed project’s construction and operation will neither create nor destroy open space and recreational opportunities.

National Natural Landmarks: The construction and operation of the proposed project will not affect National Natural Landmarks.

B. Indirect Impacts

The city’s Preliminary Engineering Report (PER) states: “The City of Jonesboro, through the

authority of its Mayor and council members will ensure that future development, as well as future collection system or treatment works projects connecting to SRF-funded facilities will not adversely impact wetlands, archaeological/historical/ structural resources or other sensitive environmental resources. The City will require new development and treatment works projects to be constructed within the guidelines of the U.S. Fish and Wildlife Service, IDNR, IDEM, and other environmental review authorities.”

C. Comments from Environmental Review Authorities

In a letter dated August 1, 2013, the Natural Resources Conservation Service has determined that the project will not affect prime/unique farmland.

In a letter dated October 10, 2013, the Indiana Department of Natural Resources Division of Historic Preservation and Archaeology stated: “Based on our analysis, it has been determined that no historic properties will be altered, demolished, or removed by the proposed project. This analysis is subject to the following condition: the tree removal will not involve any ground disturbance in areas which have not already been previously disturbed.”

In a letter dated October 16, 2013, the Indiana Department of Natural Resources Division of Fish and Wildlife stated: “This proposal may require the formal approval for construction in a floodway under the Flood Control Act, IC 14-28-1, unless it qualifies for a general license under Administrative Rule 312-IAC 10-5 that applies to utility line crossings.

“We recommend a mitigation plan be developed (and submitted with the permit application, if required) if habitat impacts will occur. Impacts that remove trees from a non-wetland, riparian area should be mitigated. Impacts to non-wetland forest over one (1) acre should be mitigated at a minimum 2:1 ratio. If less than one acre of non-wetland forest is removed in a rural setting, replacement should be at a 1:1 ratio based on area. Impact to non-wetland forest under one (1) acre in an urban setting should be mitigated by planting five trees, at least 2 inches in diameter-at-breast height (dbh), for each tree which is removed that is 10” dbh or greater (5:1 mitigation based on the number of large trees).

“Due to the presence or potential presence of wetlands on site, we recommend contacting and coordinating with the Indiana Department of Environmental Management (IDEM) 401 program and also the US Army Corps of Engineers (USACE) 404 program. Impacts to wetlands should be mitigated at the appropriate ratio.

“The additional measures listed below should be implemented to avoid, minimize, or compensate for impacts to fish, wildlife, and botanical resources:

1. Revegetate all bare and disturbed areas with a mixture of grasses (excluding all varieties of tall fescue), legumes, and native shrubs and hardwood tree species as soon as possible upon completion.
2. Minimize and contain within the project limits all tree and brush clearing.
3. Do not cut any trees suitable for Indian bat roosting (greater than 3 inches dbh, living or dead, with loose hanging bark) from April 1 through September 30.
4. Appropriately designed measures from controlling erosion and sediment must be implemented to prevent sediment from entering the stream or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized.
5. Seed and protect all disturbed streambanks and slopes that are 3:1 or steeper with erosion control blankets; seed and apply mulch on all other disturbed areas.”

In a letter dated October 23, 2013, the U.S. Fish and Wildlife Service stated: “Wetland and stream impacts may require permits from the US Army Corps of Engineers, the Indiana Department of Environmental Management’s Water Quality Certification program and/or the Indiana Department of Natural Resources. Wetland impacts should be avoided, and any unavoidable impact should be compensated for in accordance with the Corps of Engineers mitigation guidelines.

“The proposed project is within the range of the federally endangered Indiana bat (*Myotis sodalist*) and the northern long-eared bat (*Myotis septentrionalis*), a species proposed as endangered. There is suitable summer habitat for Indiana bats present throughout the area surrounding the project site. There are no current records of Indiana bats near the site but to our knowledge the area has not been surveyed. The project will not eliminate enough habitat to affect this species, but to avoid incidental take from removal of an occupied roost tree we recommend that tree-clearing be avoided during the period April 1 – September 30. If this measure is implemented we concur that the proposed project is not likely to adversely affect this listed species.”

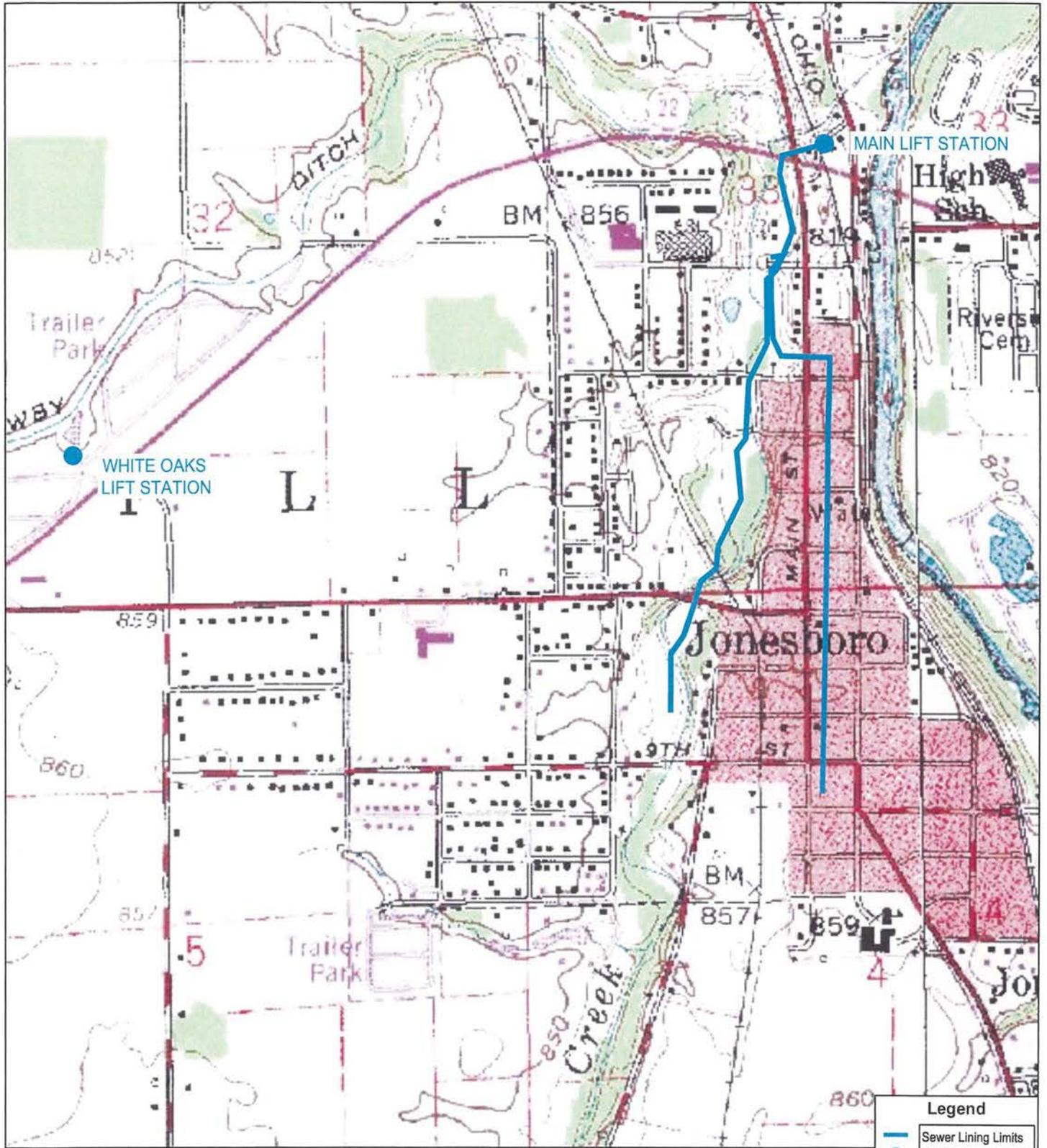
VIII. MITIGATION MEASURES

The city’s PER states:

- A. *The work is expected to be completed during normal working hours, restricting any work related nuisances to those hours.*
- B. *All construction equipment will be required to have mufflers to reduce noise pollution.*
- C. *Additionally, reasonable and proper construction techniques and clean up practices will be required by the contractor to reduce dust emissions. Proper surface wetting practices will be required.*
- D. *Any mitigation measures cited in comment letters from the Indiana Department of Natural Resources and the U.S. Fish and Wildlife Service will be implemented.*

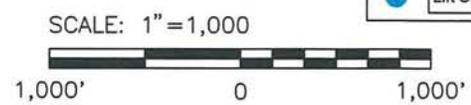
IX. PUBLIC PARTICIPATION

A public hearing was held at the Jonesboro City Hall, at 5:00 P.M. on July 9, 2013 to discuss the wastewater collection system improvements project. Questions were raised by attendees at the hearing, which were addressed by the city. No written comments were submitted in the 5-day post-hearing comment period.



Legend

- Sewer Lining Limits
- Lift Station Site

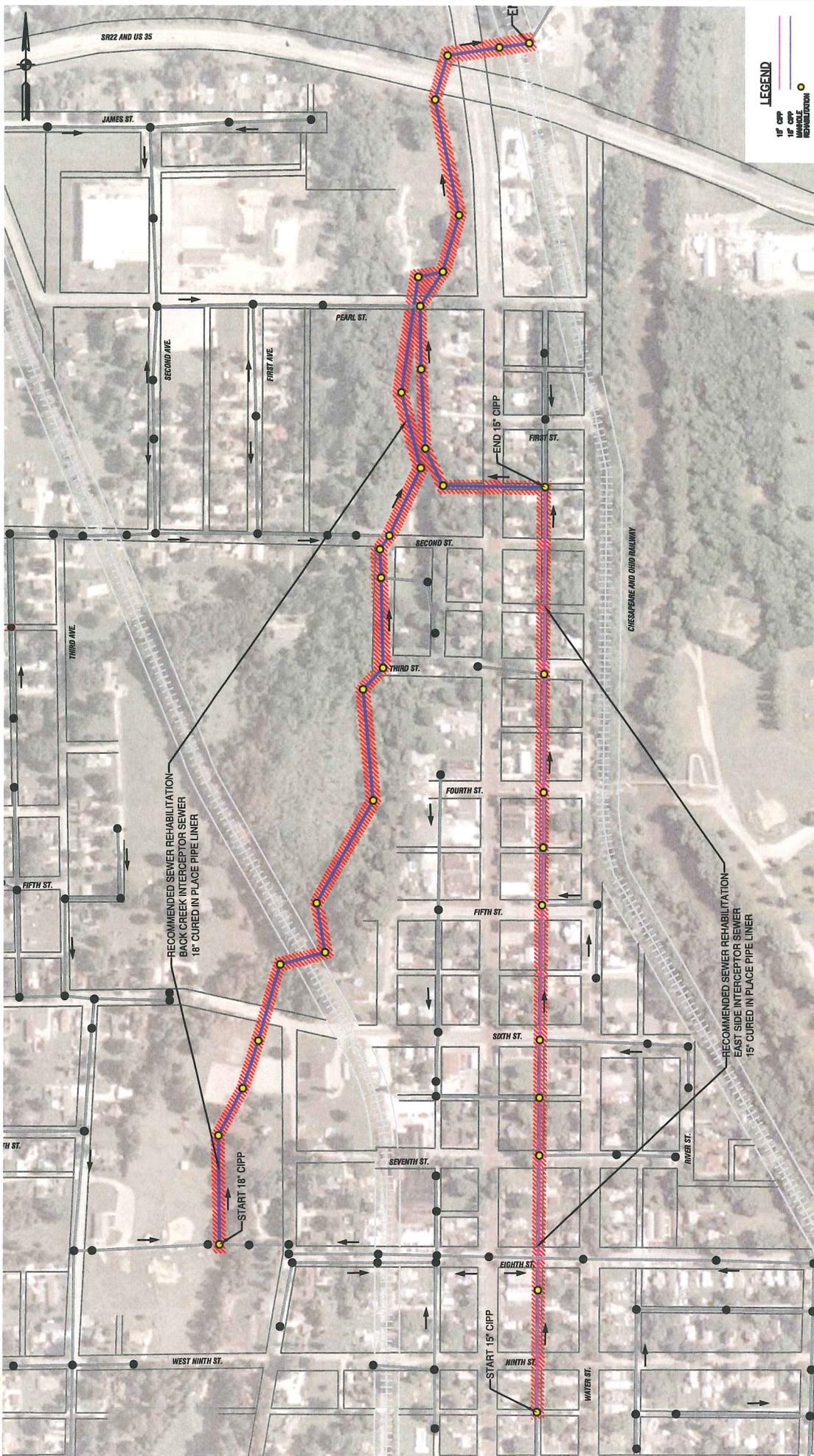


SOURCE:
INDIANAMAP.ORG

COMMONWEALTH
ENGINEERS, INC.

CITY OF JONESBORO, INDIANA
GRANT COUNTY
PRELIMINARY ENGINEERING REPORT
TOPOGRAPHIC MAP





LEGEND

- 18" CIPP
- 15" CIPP
- MANHOLE
- REHABILITATION



COMMONWEALTH

101 Plaza Blvd., Ste. 200
 28100-0000
 704-399-1177

1015 S. Jonesboro, Grant County, Ind. 47450
 317-838-1177

APPENDIX **F**

1 OF 1

CITY OF JONESBORO
 GRANT COUNTY

RECOMMENDED SANITARY SEWER
 REHABILITATION AREA MAP

NO.	DATE	REVISIONS	DESIGNER	REVIEWED BY

INDIANA UNREGISTERED
 CALL A LICENSED PROFESSIONAL ENGINEER FOR MORE INFORMATION
 1-800-388-6644
 (IN THE USA)

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