



State Revolving Fund Loan Programs

Drinking Water, Wastewater, Nonpoint Source

ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT

TOWN OF WHITESTOWN Wastewater Improvements Project STATE REVOLVING FUND PROJECT WW 12062603

DATE: February 3, 2014

TARGET PROJECT APPROVAL DATE: March 6, 2014

I. INTRODUCTION

The above entity has applied to the Waste Water State Revolving Fund (WWSRF) Loan Program for a loan to finance all or part of the waste water project described in the accompanying Environmental Assessment (EA). 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, which can also be viewed at <http://www.in.gov/ifa/srf/>.

II. PRELIMINARY FINDING OF NO SIGNIFICANT IMPACT (FNSI)

The WWSRF 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 deadline date above. 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
100 N. Senate Ave. IGCN 1275
Indianapolis, IN 46204
317-232-8663; sahudson@ifa.in.gov

**ENVIRONMENTAL
ASSESSMENT**

I. PROJECT IDENTIFICATION

Project Name: Wastewater Improvements Project

Authorized Representative and Address: Ms. Dawn Semmler, Town Council President
Town of Whitestown
6320 South Cozy Lane
Whitestown, IN 46075

II. PROJECT LOCATION AND BACKGROUND

The project area is located in Whitestown, Indiana, in Boone County. Specifically, the proposed South Wastewater Treatment Plant (WWTP) and force main are located in Perry Civil Township, Township 17 N, Range 1 E, Sections 11, 12, and 14. A portion of the proposed force main and lift station (LS) improvements are located in Eagle Civil Townships, Township 17 and 18 N, Range 2 E, Sections 6, 7, and 31. The remaining portion of the proposed force main and lift station improvements are located in Worth Civil Townships, Township 18 N, Range 2 E, Sections 30 and 19. See Figure 1-4.

III. PROJECT NEED AND PURPOSE

Whitestown has experienced significant growth, resulting in undersized wastewater system components, including the North WWTP and several existing lift stations and force mains. The North WWTP can treat 0.25 million gallons per day (MGD) average, and 0.89 MGD peak. The North WWTP only serves part of the town. Flow from the remainder of the town is pumped via the Royal Run lift station to the Indianapolis sewer system.

Whitestown's average and peak flows to Indianapolis are limited to 0.6 MGD, and 1.5 MGD, respectively, per the town's agreement with Citizens Energy Group.

Currently, Whitestown's total system flow averages 0.49 MGD, and 1.4 MGD peak. If the current growth trend continues, the wastewater system will reach or exceed its available capacity on an average day within the next three years. Therefore, the town proposes to plan and design a new South WWTP, along with upgrades to several system lift stations and force mains.

IV. PROJECT DESCRIPTION

South WWTP – The proposed South WWTP will be designed for an initial (10-year) average day capacity of 1.7 MGD, and peak capacity of 6.0 MGD, and be expandable to a future (20-year) design capacity of 2.3 MGD and peak flow of 8.0 MGD. Components of the WWTP are:

- Mechanical fine screen
- Manual bar rack
- Grit removal tank, grit pump, grit classifier
- Preliminary treatment building
- Three sequencing batch reactor (SBR) tanks, each with influent valve, fine bubble diffusers, floating mixer, floating decanter, and waste sludge pump
- Three blowers dedicated to SBRs
- Ultraviolet (UV) disinfection

- UV equipment storage building
- Parshall flume effluent flow meter
- Cascade aeration
- Approximately 1,200 LF of 36” gravity sewer discharge pipe
- Aerobic digester tank with fine bubble diffusers, decant system, floating mixer, submersible sludge pump, and dedicated blower
- Aerated sludge holding tank with coarse bubble diffusers, decant system, two blowers, and two centrifuge feed pumps
- Centrifuge dewatering unit with in-line grinder and polymer feed
- Shaftless screw conveyor system
- Sludge dewatering building
- Control building for laboratory, SCADA controls, office space, motor control center, and restroom
- Maintenance building/garage
- Water well pump system for potable and non-potable use
- Plant drainage lift station
- Standby generator
- Vector truck dumping station (alternate)
- Septage receiving station (alternate)
- Odor control system (alternate)
- Maintenance building/garage two-bay garage addition (alternate)

Indianapolis Road Lift Station and Force Main – The existing Indianapolis Road lift station will be replaced with a new 4,050 gallons per minute (gpm) cast-in-place concrete lift station with the following components:

- Three submersible centrifugal non-clog sewage pumps
- Triplex pump control panel with VFDs
- Electromagnetic flow meter
- Relocate existing North WWTP generator to site
- Corrosion-resistance interior concrete lining system
- Approximately 18,600 LF of new 20” force main to South WWTP
- Selective demolition of existing lift station
- Approximately 100 LF of new 18” sanitary sewer from existing wet well to new wet well

Royal Run Lift Station and Force Main – The existing Royal Run lift station will be replaced with a new 3,150 gpm cast-in-place concrete lift station with the following components:

- Three submersible centrifugal non-clog sewage pumps
- Triplex pump control panel with VFDs
- Electromagnetic flow meter
- Emergency generator
- Corrosion-resistance interior concrete lining system
- Approximately 2,600 LF of new 18” force main to Indianapolis Road lift station
- Selective demolition of existing lift station
- Approximately 100 LF of new 24” sanitary sewer from existing wet well to new wet well

Walker Farms Lift Station and Force Main – The existing Walker Farms lift station will be modified with the following components:

- Two new 1,350 gpm submersible centrifugal non-clog sewage pumps within existing wet

well.

- Duplex pump control panel with VFDs
- Electromagnetic flow meter
- Emergency generator receptacle (for portable generator)
- Interior process piping and valve replacement
- Approximately 15,000 LF of new 10” force main, parallel to the existing force main for dual force main operation

Anson South Lift Station – The existing Anson South lift station will be modified with the following components:

- Two new 800 gpm submersible centrifugal non-clog sewage pumps within existing wet well.
- Duplex pump control panel with VFDs
- Electromagnetic flow meter
- Emergency generator receptacle (for portable generator)
- Interior process piping and valve replacement

Original Whitestown Lift Station – The flow direction is proposed to be reversed back to Walker Farms lift station by reusing the existing 10” force main from Original Whitestown lift station to intersection of CR 650E and 136th Street and installing approximately 2,000 LF of 10” force main to Walker Farms lift station. The existing pumps can be reused without modification.

Existing North WWTP Demolition – After commissioning the new South WWTP, the existing North WWTP will be selectively demolished, including removal and disposal of all treatment process equipment and demolition of structures to a point two feet below grade and will be backfilled with granular material, topsoil, and seeded. Only the existing Original Whitestown lift station and control building will remain in service. The existing generator will be relocated to the Indianapolis Road lift station. The source of funding for the demolition of the North WWTP (\$500,000) has not yet been determined.

V. ESTIMATED PROJECT COSTS, AFFORDABILITY AND FUNDING

A. Selected Plan Estimated Cost Summary

<u>Construction Components</u>	<u>Cost</u>
New South WWTP (including alternates)	\$12,040,000
New Indianapolis Road Lift Station and Force Main	\$2,760,000
New Royal Run Lift Station and Force Main	\$1,120,000
Walker Farms Lift Station and Force Main Upgrades	\$1,070,000
Anson South Lift Station Upgrades	\$85,000
Original Whitestown Lift Station and Force Main Upgrades	<u>\$168,000</u>
Construction Cost Subtotal	\$17,243,000
Contingency	<u>\$1,724,000</u>
Total Construction Cost	\$18,967,000
 <u>Non-Construction Components</u>	
Administrative, Financial, Legal	\$100,000
Preliminary Engineering Report	\$50,000

Engineering Design	\$943,000
Bidding Services	\$40,000
Construction Administration	\$300,000
Resident Inspection	\$527,000
Operation and Maintenance Manual/Start-up Costs	<u>\$25,000</u>
Total Non-Construction Cost	\$1,985,000
Total Estimated Project Cost	\$20,952,000

- B. Whitestown plans to finance the project through a future 20-year SRF loan at an interest rate to be determined at the loan closing. Monthly user rates and charges may need to be analyzed to determine if adjustments are required for loan repayment.

VI. DESCRIPTION OF EVALUATED ALTERNATIVES

A. Alternative No. 1 – “No Action”

The “No Action” alternative is not considered a viable approach since it does not address the current wastewater treatment operational and capacity deficiencies. The “No Action” alternative also does not alleviate the current pumping and sewer rate impacts from the City of Indianapolis.

B. Alternative No. 2 – New South WWTP

This is the selected alternative to convey all wastewater flow from the Whitestown system to a new South WWTP, located on a 21 acre site at the south end of the corporation limits, near CR 750 South and CR 450 East. This alternative proposes to correct operational and capacity deficiencies with the existing wastewater system. Note that Alternatives 2-5 include sanitary lift station and force main upgrades.

C. Alternative No. 3 – Expand Existing North Wastewater Treatment Plant

This alternative would convey all wastewater flow from the Whitestown system to the existing North WWTP site located off of Main Street, just south of Pierce Street. This alternative would require significant expansion, including the purchase of 5 to 10 acres of land east of the site. Due to the required land acquisition and location of the plant being in downtown Whitestown, this alternative was rejected.

D. Alternative No. 4 – Combination of Alternative Nos. 2 and 3

This alternative would convey wastewater flow from the north area of the town to the existing North WWTP, and flow from the south area of the town to the new South WWTP. This alternative would require the town to operate and maintain two separate WWTPs, which corresponds to high operation and maintenance costs. In addition, the North WWTP location would remain in downtown Whitestown. These factors caused this alternative to be rejected.

E. Alternative No. 5 – Pump to City of Indianapolis

This alternative would convey all wastewater flow to the City of Indianapolis sanitary sewer system. Citizens Energy Group would need to approve the increase in capacity, requiring a renegotiated agreement with Whitestown. The town would remain subject to rate increases, which as detailed in Appendix M of the PER, would be detrimental to the town. In addition, the

construction cost for this alternative is the highest of all five alternatives due to the improvements required at the existing lift stations and force mains to convey flow to the City of Indianapolis. These factors caused this alternative to be rejected.

VII. ENVIRONMENTAL IMPACTS OF THE FEASIBLE ALTERNATIVES

A. Direct Impacts of Construction and Operation

Disturbed / Undisturbed Land: Alternative 2 is the Selected Alternative. The proposed South WWTP and a portion of the force main will be constructed on undisturbed farm land. The 36” plant effluent sewer will be installed on undisturbed farm land. The construction corridor width of the effluent line is 30 feet; see Figure 4-1.

See Figure 1-4. The proposed Indianapolis Road Lift Station (LS) replacement will be constructed on land that was previously disturbed by the construction of the existing Indianapolis Road LS. The proposed 18,600 LF of 20” force main route from Indianapolis Road LS to the proposed South WWTP will be constructed in previously disturbed land adjacent to and parallel to existing roads and also in an undisturbed off-road farm land easement that connects to the WWTP site. Specifically, the route will go from the Indianapolis Road LS southeast, parallel to and along Indianapolis Road in areas disturbed by road construction (parallel to an existing sanitary sewer force main) to the intersection of Indianapolis Road and C.R. 750 South, then west parallel to C.R. 750 South in areas disturbed by road construction, then south parallel to C.R. 450 East in areas disturbed by road construction, then west in an undisturbed easement on farm land to terminate at the South WWTP.

The proposed Royal Run LS replacement will be constructed on land previously disturbed through the construction of the existing Royal Run LS. The proposed 2,600 LF of 18” force main route from the Royal Run LS to the Indianapolis Road LS will parallel an existing force main with approximately 5 feet of separation, so the new force main will be installed within previously disturbed areas from utility construction.

The proposed force main route from the intersection of E 400 South and S 650 East to the Walker Farms LS will involve the reversal of flow in the existing force main and the installation of approximately 2,000 LF of new 10” force main parallel to an existing 10” force main with approximately 5 feet of separation within previously disturbed areas.

The proposed 15,000 LF of 10” force main from the Walker Farms LS and the gravity sewer south connection point will operate as a dual force main and will parallel an existing 10” force main with approximately 5 feet of separation, which will be installed in previously disturbed land from the existing 10” force main installation.

The other lift station upgrades (Anson South LS, Whitestown LS, and Walker Farms LS) will involve construction within previously disturbed land from the existing lift station construction to set new pumps within existing wet wells and control panels.

A Phase 1a archeological records check and field reconnaissance was completed in May 2006 for the proposed South WWTP project area. The results of the report state: “the archeological reconnaissance located no archeological sites”. The report recommends that the “project be allowed to proceed without additional archaeological assessment”.

In addition, a Phase 1a archaeological records check and field reconnaissance of the CR South

650 East area was completed in 2009 as part of a separate water works project located in the same utility corridor as the force main. The results of the field work yielded “8 archaeological sites...none of the sites are potentially significant”. The report recommends that the “project be allowed to proceed without additional archaeological assessment.”

Structural Resources: The force main along CR 750 South will be installed in the right-of-way in land previously disturbed from road construction and parallel to utility construction (gas main) in front of Perry Township Interim Report sites 031 and 030. Site 031 is an old school house and site 030 is Howard Cemetery. Neither of these sites will be impacted by the project.

The force main along S 650 E will be on the opposite side of the road from these sites: Eagle Township Interim Report site 042 (Jones Cemetery), Worth Township Interim Report site 017 (Farm), and Schooler Cemetery (located on the south side of CR E 500 S at the intersection of S CR 650 E; the force main will be installed on the north side). Also, the Worth Township Interim Report site 016 (Bridge), which is the same site as Eagle Township Interim Report site 041 (Bridge), will not be impacted by this project since this bridge no longer exists. The county has recently replaced this bridge.

Construction and operation of the project will not alter, demolish or remove historic properties. 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 Section 106 of the National Historic Preservation Act is: “no historic properties affected.”

Wetlands: The project will not impact wetlands. The proposed 20” force main portion of the project along CR 750 South will cross Etter Ditch. The proposed force main will be installed via horizontal directional drilling (HDD), so the ditch (and wetland) will not be disturbed. The proposed 10” force main portion of this project along CR 500 South will cross Fishback Creek. The proposed force main will be installed via horizontal directional drilling, so the creek (and wetland) will not be disturbed. However, if HDD installation is not possible for the proposed force main creek crossing as a result of unforeseen conditions encountered, then it will be installed via open-cut method and disturbance will be held to a minimum and the site will be restored to existing grade and conditions in accordance with state/federal regulations.

The wetland near the intersection of S 650 E and E 400 S and one just south of it on the west side of S 650 E will not be impacted by the project.

Surface Waters: There will be two stream crossings within the project area for the proposed force main, estimated at 200 LF total: the first at Etter Ditch, considered an ephemeral (intermittent) stream, and the second at Fishback Creek, considered a perennial stream. Horizontal directional drilling (HDD) will be used to negate any impacts to the stream and riparian areas along the banks. However, if HDD installation is not possible for the proposed force main creek crossings as a result of unforeseen conditions encountered, then it will be installed via open-cut method and disturbance will be held to a minimum and the site will be restored to existing grade and conditions in accordance with state/federal regulations.

A plant effluent line will be installed from the South WWTP to the north bank of White Lick Creek. Construction on the creek bank will be limited to pipeline installation and headwall construction with riprap for slope stabilization. IDNR and U.S. Corps of Engineers permits will be obtained for work in this area.

Schooler Creek will not be impacted by this project. Schooler Creek goes into Fishback Creek north of the Fishback Creek crossing. Schooler Creek is on the west side of S 650 E, while the force main will be installed on the east side of S CR 650 E in this area.

The 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.

Floodplain: With the exception of the South WWTP effluent line at the outfall and the crossing of Fishback Creek, no other areas are located within the 100-year floodplain or floodways.

Groundwater: Dewatering will be needed. Discharge from dewatering wells will be filtered/settled in a temporary earthen basin and/or through rock check dams and filter fabric to remove suspended solids prior to discharge to nearby waterway or storm ditch. Project specifications will be included to cover dewatering practices. Any impact to existing groundwater tables is anticipated to be minor and temporary. The groundwater table will be restored to normal levels following below grade construction. The project is not expected to result in long-term impacts on groundwater or drinking water. There are no impacts to a Sole Source Aquifer.

Plants and Animals: Tree removal is necessary along White Lick Creek to install the South WWTP effluent line. In addition, if the force main can be installed via HDD across the streams as recommended, then trees at these crossings will not be impacted. However, if force mains are installed open-cut as a result of unforeseen conditions encountered, then a few trees would likely be removed.

The construction and operation of the project will not negatively impact state or federal-listed endangered species and their habitat. The project will be implemented to minimize impact to non-endangered species and their habitat. Mitigation measures cited in comment letters from the Indiana Department of Natural Resources and U.S. Fish and Wildlife Service will be implemented.

Prime Farmland: The project will cause a conversion of prime farmland.

Air Quality: Short-term impacts on local air quality will include noise, fugitive dust, and exhaust fumes resulting from construction activities. No direct long-term air quality impacts are expected.

Open Space and Recreational Opportunities: The project will neither create nor destroy any open space and recreation opportunities.

Lake Michigan Coastal Program: The project is not within the Lake Michigan Coastal area and will not impact it.

National Natural Landmarks: Construction and operation of the proposed project will not impact National Natural Landmarks.

B. Indirect Impacts

The town's Preliminary Engineering Report (PER) states: "the Whitestown Utilities, through the authority of its Town Council, will ensure that future development, as well as future collection system or treatment works projects connecting to SRF-funded facilities, will not adversely

impact archaeological/historical/structural resources, wetlands, wooded areas, or other sensitive environmental resources. The Town will require new development treatment works projects to be constructed within the guidelines of the U.S. Fish and Wildlife Service, DNR, IDEM, and other environmental review authorities.”

C. Comments by Environmental Review Authorities

In a letter dated August 10, 2005, the Natural Resources Conservation Service determined that the project will convert 22.1 acre of prime/unique farmland.

In a letter dated December 10, 2013, the Indiana Natural Heritage Data Center determined that the project will not impact a “significant high quality central till plain flatwood natural community” that is located close to the project area.

This document is the first notice to the U.S. Fish and Wildlife Service, the Indiana Department of Natural Resources (IDNR) Division of Historic Preservation and Archaeology, the IDNR Division of Water, and the IDNR Lake Michigan Coastal Program.

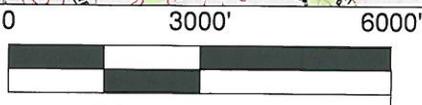
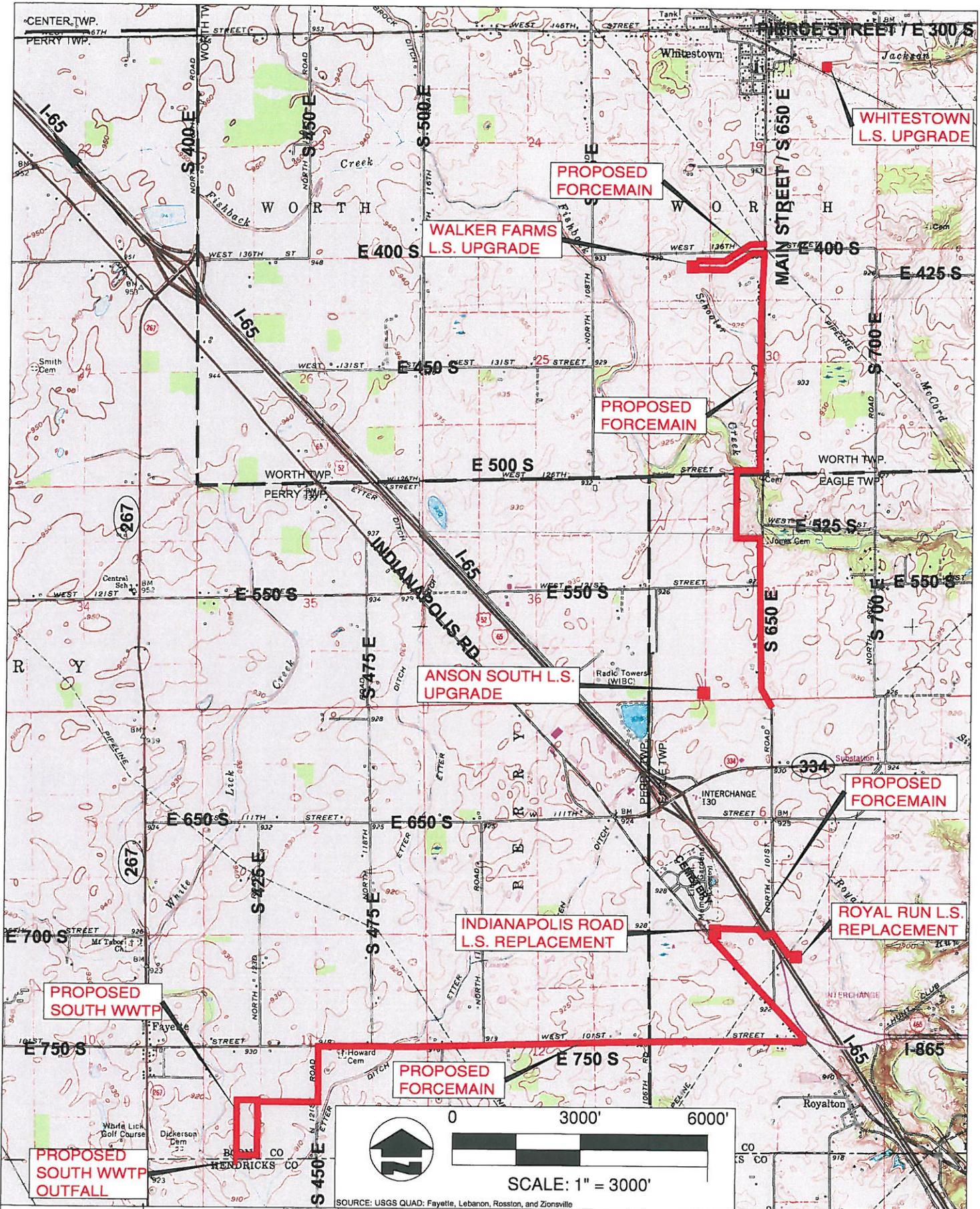
VIII. MITIGATION MEASURES

The town’s Preliminary Engineering Report (PER) states:

1. The project plans and layouts will be designed to fit the local topography and soil conditions.
2. Land grading and excavation will be kept to a minimum in order to reduce runoff and erosion problems.
3. Appropriate structure (e.g. sediment basins, staked hay bales, riprap) or agronomic (e.g. seeding, mulching, liming, fertilizing) practices to control runoff and sedimentation will be provided during and after construction in accordance with the latest edition of Indiana Stormwater Quality Manual.
4. Drainage systems will be stabilized as early as possible to avoid sedimentation problems.
5. Surface and subsurface drainage patterns will be restored as early as possible.
6. Construction entrances, roadways, and parking lots will be stabilized as soon as possible by means of stone pads or paving.
7. Construction activities (clearing and grading) will not be started until a firm schedule is known and can be effectively coordinated with the appropriate soil erosion control measures.
8. The plan will be consistent with applicable state and local ordinances and federal non-point source pollution control guidance.
9. An erosion and sedimentation control plan will be developed and implemented in coordination with the Indiana Stormwater Quality Manual.
10. Areas of exposed soil will be periodically wetted.
11. No chemicals (e.g. calcium chloride) will be used for dust control.
12. Topsoil will be stockpiled separately for future use as topdressing for those areas to be restored.
13. Ensure asphalt-paving plants are permitted and operate properly.
14. If any unanticipated significant cultural resources are encountered during construction, construction activities will be stopped so that the resources may be studied, protected, or recovered in accordance with State/Federal requirements.
15. Exposed soils and unpaved roadways will be periodically wetted to reduce the suspension of dust and airborne contaminants.
16. The contractor will be required to keep equipment in proper working order to minimize noise and air pollution. Machinery should be well muffled.
17. Construction will be scheduled for daylight hours only.

IX. PUBLIC PARTICIPATION

A properly noticed public hearing was held on June 12, 2012 at 6:30 pm at the Whitestown Town Hall, 6320 S. Cozy Lane to discuss the project's preliminary engineering report. No comments or questions were raised by the public at the public hearing. No written comments were submitted in the five-day period following the public hearing.



SCALE: 1" = 3000'

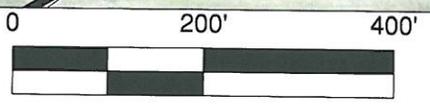
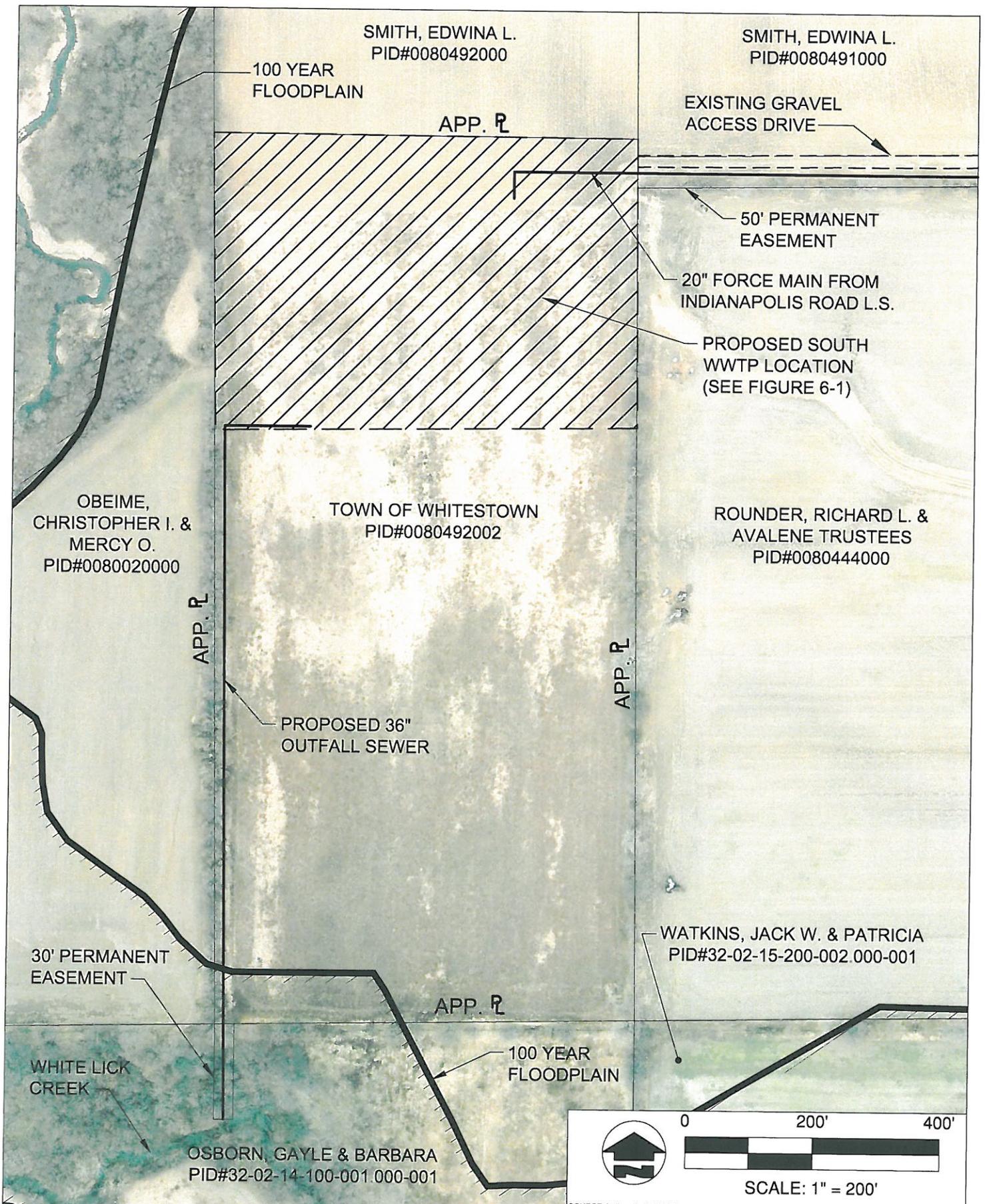
SOURCE: USGS QUAD: Fayette, Lebanon, Rosston, and Zionsville

GRW PROJECT NO.: 4054		CLIENT PROJECT NO.: N/A		DESIGNED: DSW
REVISIONS				DRAWN: CJF
NO.	DESCRIPTION	DATE	BY	REVIEWED: TRM
				APPROVED: DSW
SCALE CHECK				THIS MARK SHOULD MEASURE EXACTLY 1/2" WHEN PLOTTED

**PROJECT AREA
LOCATION MAP
ALTERNATIVE 2**
 PRELIMINARY ENGINEERING REPORT
 WHITESTOWN WASTEWATER
 IMPROVEMENTS PROJECT
 TOWN OF WHITESTOWN, INDIANA


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DATE: JUNE 2012
SCALE: 1" = 3000'
FIGURE NO. 1-4



SCALE: 1" = 200'

SOURCE: Indiana Aerial (2009)

GRW PROJECT NO.: 4054		CLIENT PROJECT NO.: N/A	
DESIGNED: DSW			
DRAWN: CJF			
REVIEWED: TRM			
APPROVED: DSW			
SCALE CHECK: THIS MARK SHOULD MEASURE EXACTLY 1/2" WHEN PLOTTED			

**CONCEPTUAL PLAN
 SOUTH WWTP
 ALTERNATIVES 2 AND 4
 PRELIMINARY ENGINEERING REPORT
 WHITESTOWN WASTEWATER
 IMPROVEMENTS PROJECT
 TOWN OF WHITESTOWN, INDIANA**



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DATE: JUNE 2012
SCALE: 1" = 200'
FIGURE NO. 4-1