



# State Revolving Fund Loan Programs

## Drinking Water, Wastewater, Nonpoint Source

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### ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT

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#### MONTGOMERY COUNTY REGIONAL SEWER DISTRICT Nucor Road Wastewater Treatment Plant and Collection System SRF PROJECT WW 09 75 54 01

**DATE: October 25, 2011**

**TARGET PROJECT APPROVAL DATE: November 24, 2011**

#### I. INTRODUCTION

The above entity has applied to the Clean Water State Revolving Loan Fund (SRF) for a loan to finance all or part of the wastewater 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.

#### II. PRELIMINARY FINDING OF NO SIGNIFICANT IMPACT (FNSI)

The SRF Clean Water Program 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 approval 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 to:

**Max Henschen**  
**Senior Environmental Manager**  
**State Revolving Fund**  
**100 N. Senate Ave. IGCN 1275**  
**Indianapolis, IN 46204**  
**317-232-8623; mhensche at ifa.in.gov**

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# ENVIRONMENTAL ASSESSMENT

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## I. PROJECT IDENTIFICATION

Project Name and Address:                   **Montgomery County RSD Nucor Road Wastewater Treatment Plant and Collection System**  
Montgomery County Regional Sewer District  
309 North Green Street  
Crawfordsville, IN 47933

SRF Project Number:                         WW 09 75 54 01

Authorized Representative:                 Mr. Bill Henderson, Board Treasurer

## II. PROJECT LOCATION

The Montgomery County Regional Sewer District is a 21 square mile area in central Montgomery County, approximately two miles southeast of Crawfordsville. The project area is in the South Union civil township, in the Darlington 7.5' USGS quadrangle, Township 18 North, Range 4 West, sections 11 to 14, as well as in the Ladoga quadrangle, T18N, R4W, sections 13-14, 23-26 and 35-36; see Exhibits 1 and 2.

## III. PROJECT NEED AND PURPOSE

The Montgomery County Health Department, in correspondence dated May 19, 2010, stated that the on-site wastewater disposal systems in the Chigger Hollow subdivision *are aged and will possibly fail within the next 5 to 10 years...lot sizes are not conducive to allow another full-sized, on-site sewer system in these yards. A sewer system in this area would greatly serve this population....* The purpose of the proposed project is to extend sewer service to unsewered properties and eliminate the illicit discharge of wastewater to the environment.

## IV. PROJECT DESCRIPTION

The proposed wastewater treatment plant (WWTP) includes a new sequencing batch reactor (SBR) activated sludge system with tertiary filtration and ultraviolet disinfection. The treated effluent will be pumped to a pond on the Nucor Steel facility for Nucor's cooling water needs. The District will have an alternate effluent outfall to a tributary to the Walnut Fork of Sugar Creek known as the Epperson Drain or William Epperson #662, in case the Nucor facility cannot take the water for a period of time.

The proposed collection system includes approximately 18,350 feet of 8-inch diameter sanitary sewer, 13,200 feet of 10-inch diameter sanitary sewer, and approximately 95 manholes. The District will install approximately 3,200 feet of sanitary laterals up to the edge of the right-of-way; individual property owners will be responsible for installing service lines and connecting to

the laterals. The District will install a 200 gallons per minute (gpm) lift station south of Chigger Hollow subdivision and approximately 3,100 feet of 6-inch diameter force main. The treated effluent from the WWTP will require another 300 gpm lift station and approximately 5,600 feet of 8-inch diameter force main.

## V. ESTIMATED PROJECT COSTS, AFFORDABILITY AND FUNDING

### A. Selected Plan Estimated Cost Summary

<b>Construction and Equipment Costs</b>	
10-inch Sanitary Sewer	\$660,000
8-inch Sanitary Sewer	\$734,000
Sanitary Manholes	\$213,750
6-inch Sanitary Lateral	\$128,000
Sanitary Wye	\$24,000
Bore & Jack 14-inch Steel Casing	\$55,000
6-inch Pressure Sewer	\$185,700
8-inch Pressure Sewer	\$336,000
Sanitary Lift Station	\$285,000
Effluent Lift Station	\$250,000
WWTP with Tertiary Treatment	\$3,400,000
Miscellaneous Storage Tanks	\$250,000
WWTP Site Preparation	\$315,000
Soil Erosion & Sedimentation Control	\$75,000
Traffic Control	\$30,000
Tree Removal	\$5,000
Clearing & Grubbing	\$12,500
Milling HMA Surface	\$9,750
Driveway Removal & Replacement	\$40,140
Dense Graded Subbase, Size No. 8 (6")	\$39,000
Compacted Aggregate Base, Size No. 53 (8")	\$43,875
HMA Surface, Type C Base, Intermediate & Surface (6")	\$61,600
Machine Roadway Grading	\$37,500
Restoration	\$11,090
	<b>Construction and Equipment Subtotal</b>
	<b>\$7,201,905</b>
	<i>Contingencies</i>
	<b>\$720,190</b>
	<b>Total Estimated Construction Cost</b>
	<b>\$7,922,095</b>
<b>Non-construction Costs</b>	
Administrative and Legal	\$253,124
Land & Right-of-Way Acquisition*	\$120,000
Engineering Design, Construction, Other	\$936,248
Project Inspection	\$324,086
Plant Startup	\$72,019
Capitalized Interest	\$246,000
	<b>Non-Construction Subtotal</b>
	<b>\$1,951,476</b>
	<b>Total Estimated Project Cost</b>
	<b>\$9,873,572</b>

\*Land and easement acquisition (\$120,000) are not eligible for State Revolving Fund reimbursement; however, soft costs to obtain easements or land are eligible.

- B. The District will finance the project with a 20-year loan of approximately \$9,753,572 from the State Revolving Fund (SRF) Loan Program at an interest rate to be determined at the time of loan closing.

## VI. DESCRIPTION OF EVALUATED ALTERNATIVES

Alternative #1 ("No Action"): The "No Action" alternative was discarded due to the condition of the existing septic systems located at individual residences and industrial locations, and the poor soil conditions for properly treating water discharged into those drain fields.

Alternative #2: Regionalization with Crawfordsville. This alternative proposed to send sanitary waste to Crawfordsville's WWTP via a six-mile long force main. Both the Crawfordsville WWTP and part of its collection system would need to be increased in capacity. The District eliminated this alternative.

Alternative #3: This alternative proposes to build a centralized treatment facility and two sanitary sewer collection systems on the North and South sides of the Walnut Fork of Sugar Creek. This alternative was put forth in a 2006 report but failed to include residential components that the District has subsequently considered important. Since this alternative does not meet the needs of District, it was rejected.

Alternative #4: This alternative proposes a new sewer system and treatment facility to be located based on its proximity to properties with failing and deficient septic systems and to the Nucor steel facility, which can reuse the treated effluent. The alternative allows a smaller capital investment than the other alternatives, and allows for expansion of the treatment system as the District builds out. This is the selected alternative.

Wastewater treatment options: In addition to the SBR plant, the following treatment systems were evaluated: (1) packaged membrane bio-reactor, (2) conventional activated sludge, and (3) oxidation ditches. The SBR plant was selected due to the lower capital cost, smaller footprint, easier future expansion, and lower operation and maintenance costs in comparison with the other options. In addition, the SBR process is almost entirely automated, requiring little operator supervision; the District will have a contract plant operator who will not be on-site at all times.

## VII. ENVIRONMENTAL IMPACTS OF THE FEASIBLE ALTERNATIVES

### A. Direct Impacts of Construction and Operation

Undisturbed/Disturbed Land (Exhibit 2): The lines and lift station will be placed within the disturbed right-of-way of county roads. The effluent line will follow CR350S west from the treatment plant to abandoned CR325E; the line will be directed south in abandoned CR325E, then east to a holding pond at Nucor. The line from the road to the pond will cross farmland which was disturbed during holding pond construction and by installation of lines by Nucor. The WWTP will be constructed on row-crop farmland. Two archaeological surveys on undisturbed land affected by the project found only low densities of artifacts.

Structural Resources (Exhibit 3): 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 the Section 106 of the national Historic Preservation Act is: "no historic properties affected."

Plants and Animals: Treatment plant construction will not disturb the small wooded area on the southeast corner of the proposed WWTP site. The stream crossings will be open cut and will not disturb trees.

Prime Farmland: Treatment plant installation will convert approximately 8 acres of prime farmland; treatment plant lift station construction will convert approximately 0.2 acres.

Wetlands (Exhibit 4): A wetland delineation found wetlands not shown on the National Wetlands Inventory map at: (1) The southeast corner of the WWTP site in the wooded area; this area will not be affected by construction activities; (2) The plant entry drive at the Epperson Drain crossing approximately 1200 feet east of Nucor Road, where the District will install 24 feet of box culvert per IDNR permit; (3) The corner of 350S and Nucor Road; (4) Near the lift station, and along the proposed sewer route along Nucor Road south of CR350S; these should not be affected by the project.

100-Year Floodplain (Exhibit 5): The proposed project will not place any structures or collection system components within the 100-year floodplain or floodway.

Surface Waters: According to the wetland delineations performed in April and November 2010, proposed lines will cross the tributary to the Walnut Fork of Sugar Creek known as the Epperson Drain or William Epperson #662 at three locations; see Exhibit 4. Crossings will be open-cut. 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 2-2-11(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 (Natural Resources Commission Non-rule Policy Document).

Groundwater: Although dewatering is not anticipated, if any occurs, it will be mitigated to ensure that no solids are discharged to surface water and that no drawdown or contamination of local wells or water tables occurs.

Air Quality: Air quality will be temporarily affected by construction activities, including vehicle exhaust and dust.

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

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

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

## B. Indirect Impacts

The MCRSD Preliminary Engineering Report (PER) states: *Montgomery County, through the authority of its board, planning commission or other means, 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 County 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

This document serves as the first notice to the U.S. Fish and Wildlife Service and the IDNR Environmental Unit. The IDNR Division of Historic Preservation and Archaeology (DHPA) is currently reviewing the project; the DHPA has reviewed archaeological aspects of part of the project in May and July 2011.

## VIII. MITIGATION MEASURES

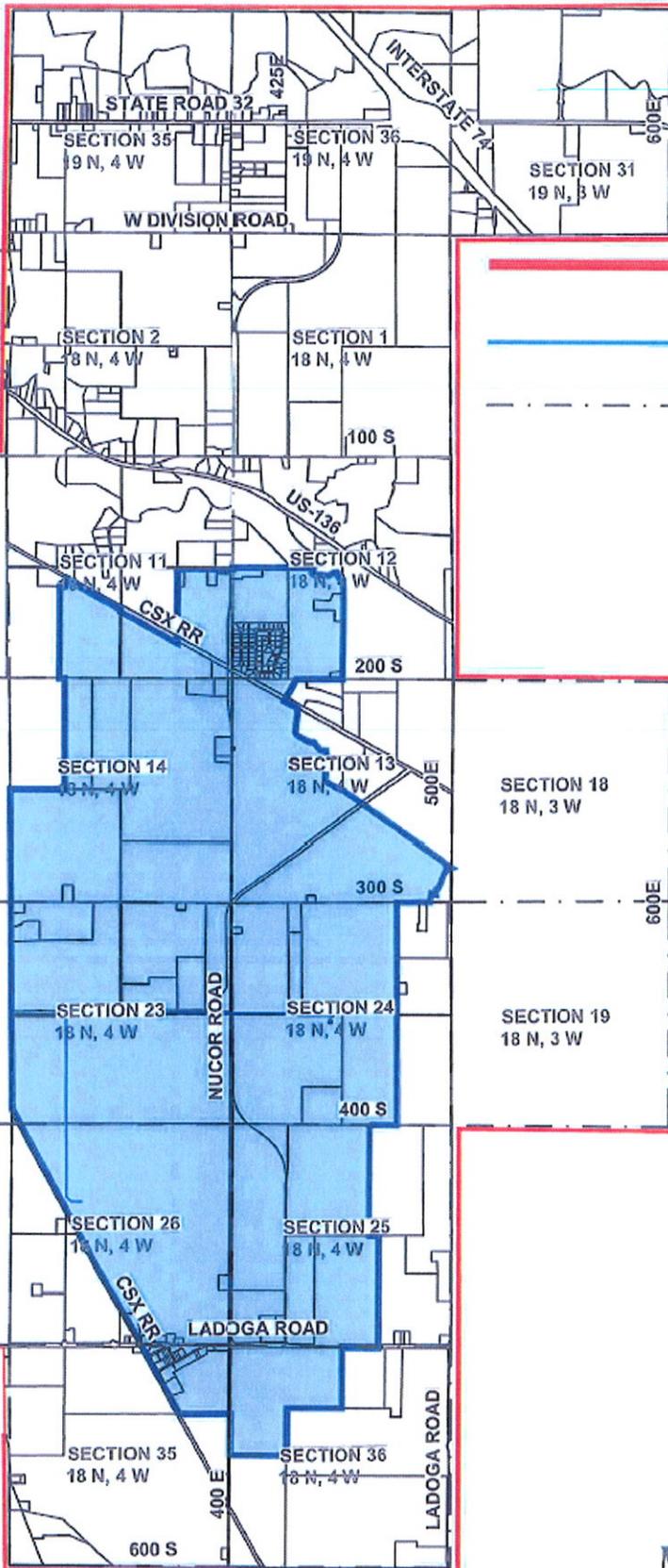
The MCRSD PER states:

*Mitigation measures to address potential land erosion and siltation include silt fence around construction areas and land stabilization to restore growth to disturbed areas. Any dewatering flows for construction will be discharged into a settling basin or silt catching device to prevent the introduction of solids to surface water. Project design and construction activities will avoid routes that would have any impacts to wooded areas or wetlands as well as historical or archaeological sites.*

*Mitigation measures cited in any comment letters received from the Indiana Department of Natural Resources and the U.S. Fish and Wildlife Service will be implemented.*

## VIII. PUBLIC PARTICIPATION

A properly noticed public hearing was held on October 14, 2010 at 6 pm in the Crawfordsville Public Library. The public raised several questions related to project cost, revenue and funding sources, and user rates. Project and sewer district boundaries and home values relating to those on sewers versus septic systems were also discussed. All comments were addressed at the hearing. No written comments were received in the 5-day period following the hearing.



**LEGEND**

BOUNDARY OF  
SANITARY SEWER DISTRICT

BOUNDARY OF  
20 YEAR SERVICE AREA

SECTION LINE

**LEGAL DESCRIPTION OF  
SANITARY SEWER DISTRICT  
(02-12-10)**

SECTIONS 1, 2, 10, 11, 12, 13,  
14, 15, 22, 23, 24, 25, 26, 27,  
35 & 36, SOUTH UNION  
TOWNSHIP, MONTGOMERY COUNTY,  
INDIANA

SECTIONS 35 & 36, NORTH UNION  
TOWNSHIP, MONTGOMERY COUNTY,  
INDIANA

SECTION 31, FRANKLIN TOWNSHIP,  
MONTGOMERY COUNTY, INDIANA

SECTION 18, 19, WALNUT  
TOWNSHIP, MONTGOMERY COUNTY,  
INDIANA



HORIZONTAL SCALE IN MILES



**EXHIBIT 1**

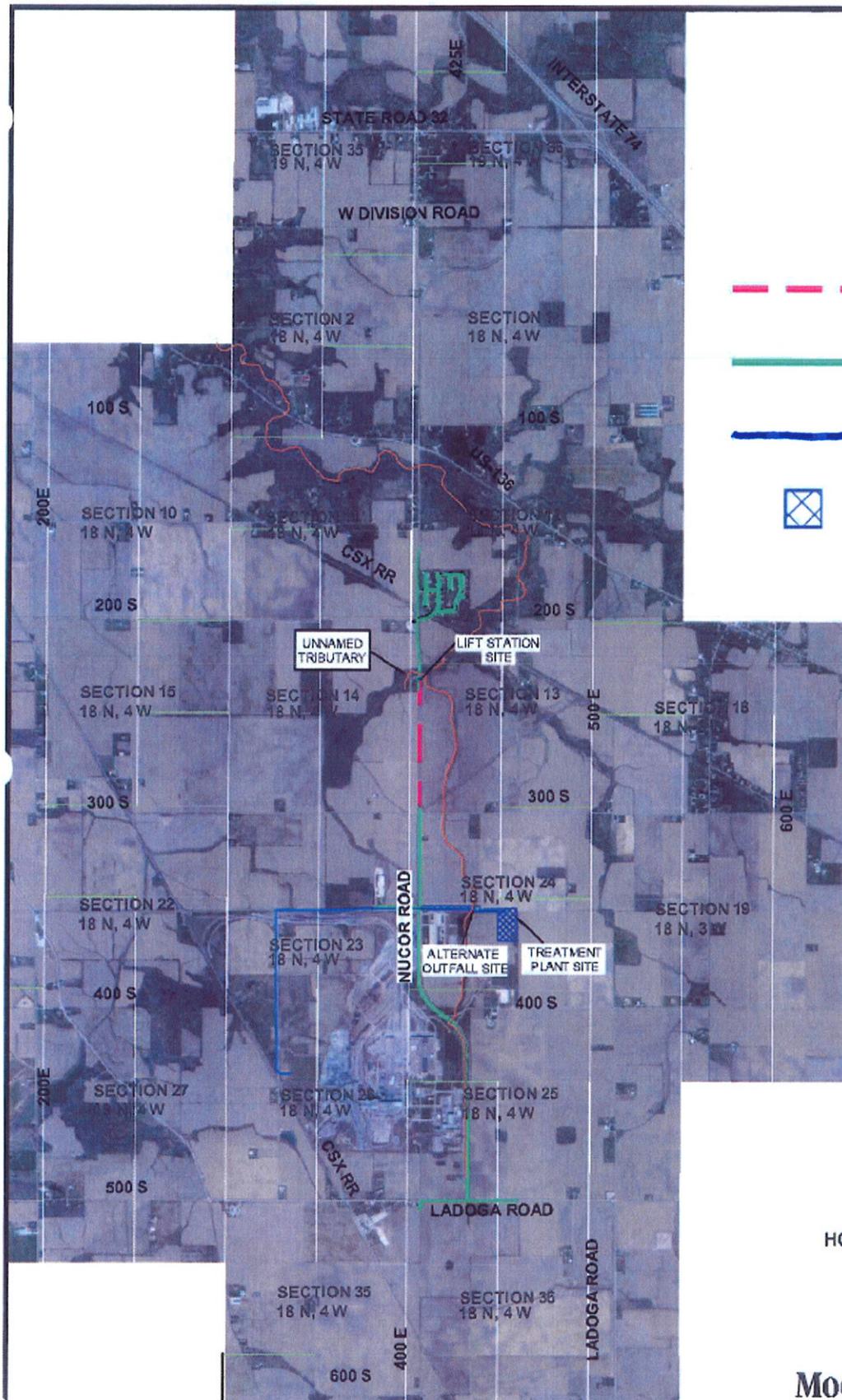
**MOORE & BRUGGINK, INC.**

Consulting Engineers  
2020 Monroe Avenue N.W.  
Grand Rapids, Michigan 49505-6298  
Phone: (516) 363-9801 Web: www.mbce.com

SEPTEMBER 1, 2011  
PROJECT #090144.1

**SANITARY SEWER DISTRICT BOUNDARY  
AND 20 YEAR SERVICE AREA  
MONTGOMERY COUNTY, INDIANA**

- LEGEND**
-  SANITARY SEWER FORCE MAIN
  -  GRAVITY SANITARY SEWER
  -  EFFLUENT WATER FORCEMAIN
  -  WASTE WATER TREATMENT PLANT & LIFT STATION SITES



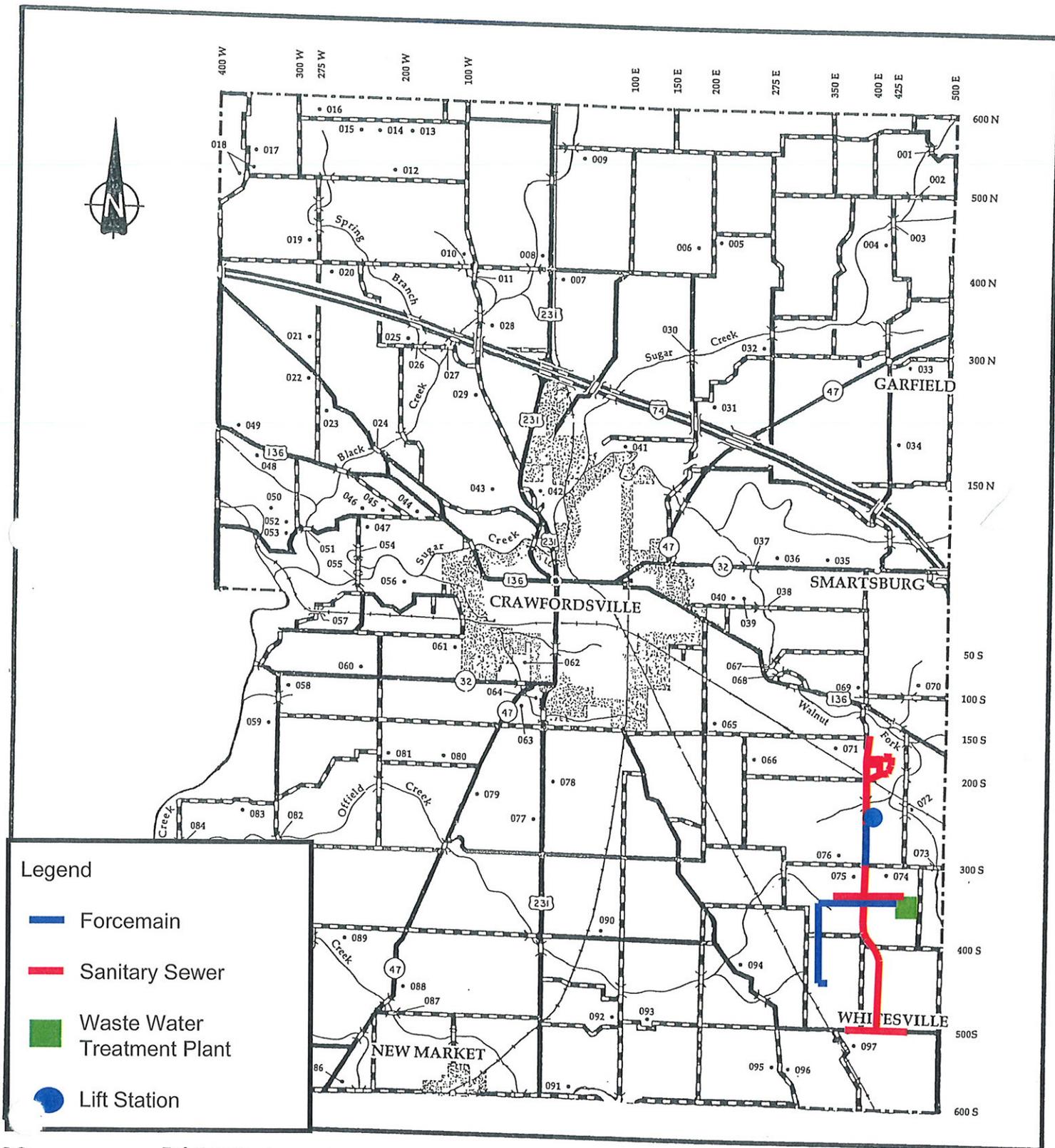
HORIZONTAL SCALE IN MILES  
 0 1/4 1/2 1

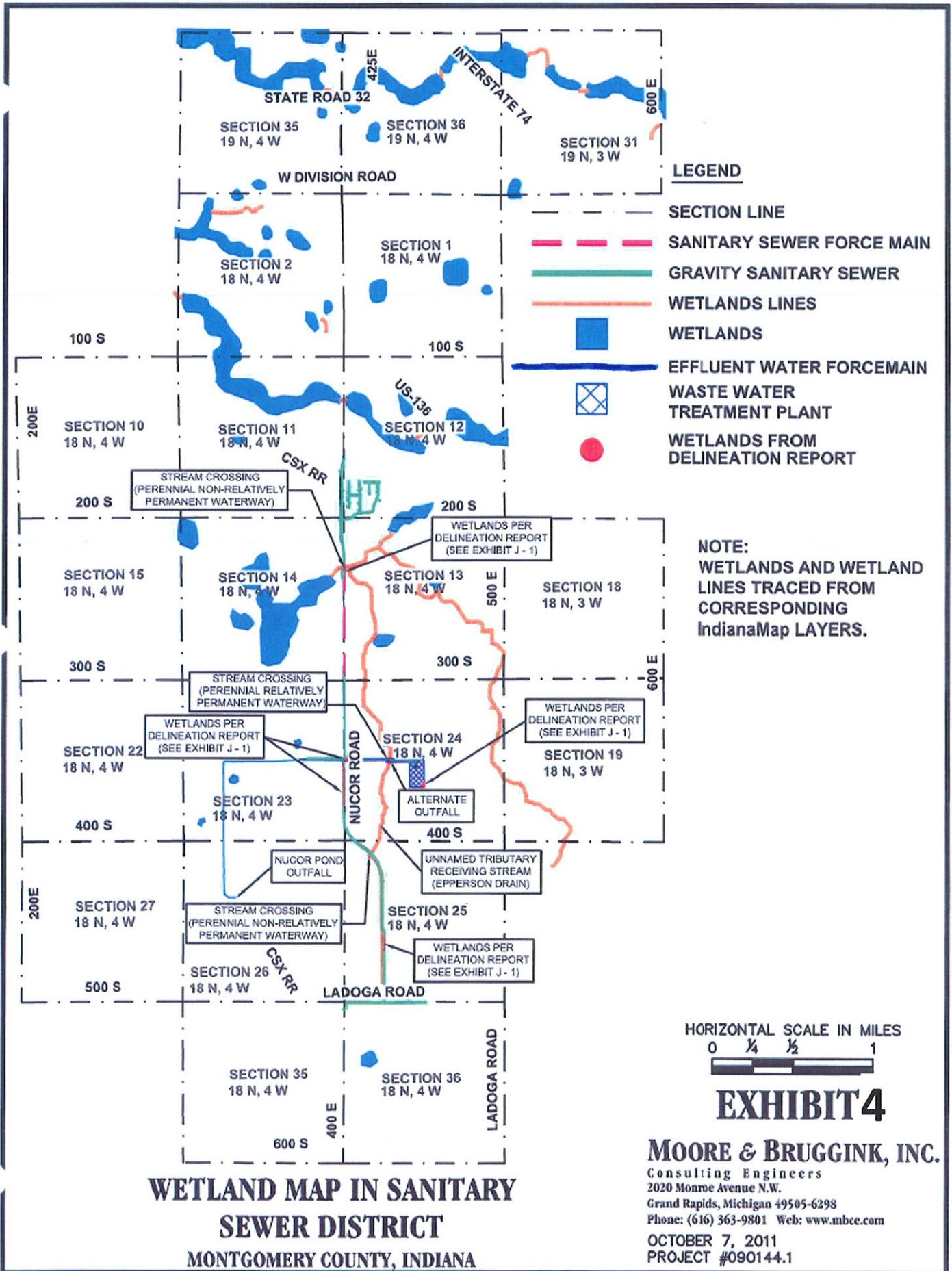
## EXHIBIT 2

# AERIAL PHOTO WITH PROJECT ELEMENTS SANITARY SEWER DISTRICT MONTGOMERY COUNTY, INDIANA

**MOORE & BRUGGINK, INC.**  
 Consulting Engineers  
 2020 Monroe Avenue N.W.  
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 Phone: (616) 363-9801 Web: www.mbce.com  
 OCTOBER 7, 2011  
 PROJECT #090144.1

# Union Township (20001-097)

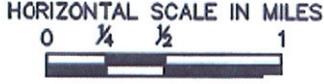




**LEGEND**

- SECTION LINE
- SANITARY SEWER FORCE MAIN
- GRAVITY SANITARY SEWER
- WETLANDS LINES
- WETLANDS
- EFFLUENT WATER FORCEMAIN
- ⊠ WASTE WATER TREATMENT PLANT
- WETLANDS FROM DELINEATION REPORT

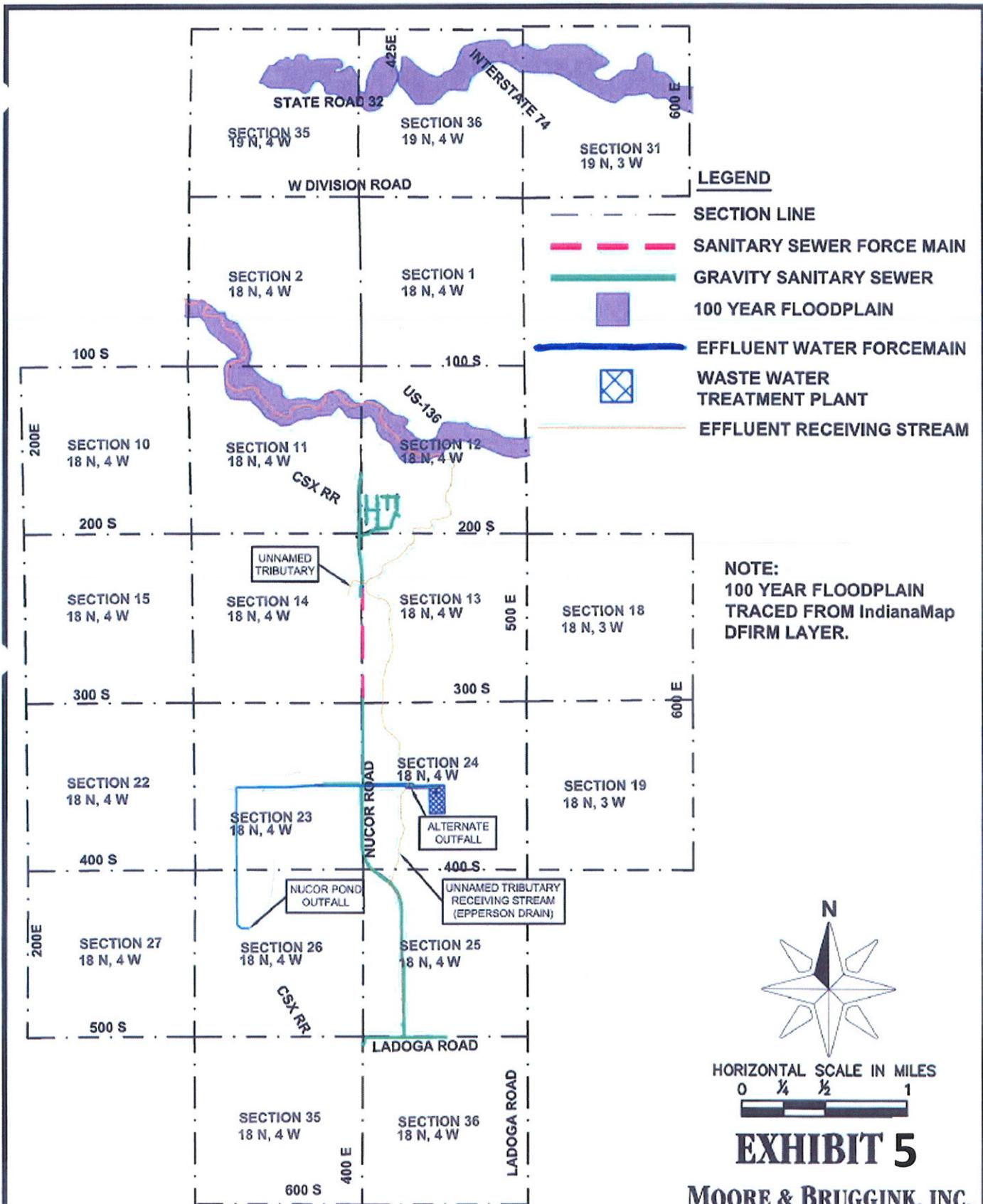
**NOTE:**  
WETLANDS AND WETLAND LINES TRACED FROM CORRESPONDING IndianaMap LAYERS.



**EXHIBIT 4**

**MOORE & BRUGGINK, INC.**  
 Consulting Engineers  
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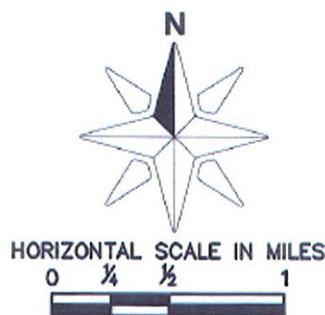
**WETLAND MAP IN SANITARY SEWER DISTRICT MONTGOMERY COUNTY, INDIANA**



**100 YEAR FLOODPLAIN MAP IN  
SANITARY SEWER DISTRICT  
MONTGOMERY COUNTY, INDIANA**

- LEGEND**
-  SECTION LINE
  -  SANITARY SEWER FORCE MAIN
  -  GRAVITY SANITARY SEWER
  -  100 YEAR FLOODPLAIN
  -  EFFLUENT WATER FORCEMAIN
  -  WASTE WATER TREATMENT PLANT
  -  EFFLUENT RECEIVING STREAM

**NOTE:**  
100 YEAR FLOODPLAIN  
TRACED FROM IndianaMap  
DFFIRM LAYER.



**EXHIBIT 5**

**MOORE & BRUGGINK, INC.**  
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