



State Revolving Fund Loan Programs Drinking Water, Wastewater, Nonpoint Source

ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT

SOUTHERN MONROE WATER AUTHORITY SOUTHERN MONROE WATER CORPORATION WATER SYSTEM IMPROVEMENTS STATE REVOLVING FUND PROJECT # DW 14035301

DATE: April 1, 2015

TARGET APPROVAL DATE: May 1, 2015

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 drinking water 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, which can also be viewed (along with the graphics) at <http://www.in.gov/ifa/srf/>.

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:

April Douglas
Senior Environmental Manager
State Revolving Fund -- IGCN 1275
100 N. Senate Ave.
Indianapolis, IN 46204
317-234-7294
adouglas@ifa.in.gov

**ENVIRONMENTAL
ASSESSMENT**

I. PROJECT IDENTIFICATION

Project Name and Address: Water System Improvements
Southern Monroe Water Authority
5790 S. Fairfax Road
Bloomington, IN 47401-9341

SRF Project Number DW 14 03 53 01

Authorized Representative: Ms. Laura Stevens, Board President

II. PROJECT LOCATION AND BACKGROUND

The Southern Monroe Water Authority (SMWA) current service area generally includes all of Monroe County south of the City of Bloomington. The service area includes the communities of Harrodsburg, Sanders, and Smithville. The proposed projects are located in the Clear Creek quadrangle in Township 8N Range 1W, Sections 21, 28, 29, and 30.

III. PROJECT NEED AND PURPOSE

SMWA purchases all of its water from the City of Bloomington. There are presently two points of interconnection with the City Bloomington water utility. One of these connections supplies approximately 75% of the total SMWA customers. The second connection is limited in its ability to serve the water utility due to small distribution pipe. The connection that supplies the majority of the water from the City of Bloomington to SMWA is a portion of the Bloomington water system that does not have enough pressure to fill all of the SMWA storage tanks. Two booster pump stations are being utilized to supply adequate pressure to the area. These booster pump stations are both over 30 years old and in need of rehabilitation or replacement. The dependence on one connection to serve 75% of the system customers can pose a risk and additional points of connection would result in a more reliable water supply. Having new connections to the City of Bloomington system at locations where the system pressure is enough to fill all of the SMWA water storage tanks would allow for elimination of the deteriorated booster pump stations.

IV. PROJECT DESCRIPTION

The proposed Phase I project includes (Figures 1-5):

- Construction of two new connections with the City of Bloomington water utility will provide enough pressure to fill SMWA's storage tanks. Both connections would be done as part of the Phase I project.

- Construction of 12,500 feet of 12-inch water distribution piping as part of the Phase I project to reinforce the distribution and allow for filling of Storage Tank Nos. 1 and 3 without the use of a booster pump.

V. ESTIMATED PROJECT COSTS, AFFORDABILITY AND FUNDING

A. Selected Plan Estimated Cost Summary

DESCRIPTION	ESTIMATED COSTS
1. 12-inch PVC, SDR 21	\$ 312,500
2. 12-inch State Highway Bore	112,500
3. 12-inch Gate Valve	9,600
4. Fire Hydrants	12,000
5. Connection to Existing Main	13,000
6. Bituminous Resurfacing	12,500
7. Stone Resurfacing	1,200
8. Grade "B" Borrow Backfill	6,600
9. Rock Excavation	234,000
10. Sand Bedding	20,800
11. Control Valve	50,000
12. Master Meter	<u>150,000</u>
Construction Sub-Total	\$ 934,700
Contingency	95,300
Phase I Construction Total	\$ 1,030,000
<u>*Non-Construction Total</u>	<u>\$ 360,000</u>
Total Estimated Project Cost	\$ 1,390,000

*Non-construction costs include land, design engineering, construction engineering, geotechnical, crop damage, legal and financial fees.

B. Southern Monroe Water Authority will finance the project improvements up to the maximum amount of approximately \$1,390,000 through a 20-year SRF loan at a fixed interest rate to be determined at the loan closing.

VI. DESCRIPTION OF EVALUATED ALTERNATIVES

The utility evaluated the no-action alternative and rejected it, since the deficiencies listed above would continue and the same issues would be experienced. An alternative which included replacing the two booster pump stations as well as the addition of two new water storage tanks for added storage was also evaluated. The above listed project was chosen based on cost-effectiveness, practicality, technical feasibility, ease of implementation and minimization of environmental impacts.

VII. ENVIRONMENTAL IMPACTS OF THE FEASIBLE ALTERNATIVES

A. Direct Impacts of Construction and Operation

Disturbed / Undisturbed Land: The construction of two new meter pits at the points of connection to the City of Bloomington water utility system will primarily occur in areas previously disturbed by prior construction activity. The construction of the water mains will disturb an area approximately 25 feet in width on either side of the road rights-of-way. A portion of the construction will occur within primarily a rural residential area including a small portion of row crop farmland. The two meter pits will disturb an area of 30 feet by 30 feet each. A phase IA reconnaissance for the project area was conducted by Accidental Discoveries, LLC. March 31, 2012 which found the proposed project should not have an adverse effect on archaeological resources.

Structural Resources: 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: A wetland delineation was completed as a part of a Natural Resource Assessment (NRA) in March 2012. There was one 0.03 acre wetland identified in the NRA. This wetland is located along Victor Pike Road. This wetland will be avoided by a route change. Avoidance of all wetlands will be completed to the extent possible. If avoidance is not possible, directional drilling will be utilized.

Surface Waters: 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. The project will include two stream crossings installed via open-cut and bore methods.

Floodplain: A portion of the 12-inch water main to be constructed west of the new meter pit at Church Lane and Rogers Street will be located within the 100-year floodplain. Also, a portion of the water main along Old SR 37 will be located within the 100-year floodplain. The Southern Monroe Water Utilities PER states: *no fill material will be placed in flood areas that would impact the floodplain and the original grade will be restored when work is completed.* (Refer to Figures 6 and 7)

Groundwater: The project will not adversely affect groundwater, and minimal dewatering is expected.

Plants and Animals: Minimal tree removal is expected as a result of installation of the new water mains. The construction and operation of the project will not negatively impact state or federal-listed 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 not cause a conversion prime farmland.

Air Quality: Air quality will not be adversely affected by the project. Construction activities will be limited to normal working periods and proper cleanup practices will be implemented. Other mitigation measures to reduce noise, dust and airborne contaminants will be implemented as required by necessary permits.

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

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

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

B. Indirect Impacts

The SMWA's PER states: *The SMWA will ensure that future development, as well as future supply, storage, distribution, or treatment works projects connecting to the SRF-funded facilities will not adversely affect archaeological/historical/ structural resources, wetlands, wooded areas, or other sensitive environmental resources. The SMWA 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 project was environmentally reviewed by the Southern Indiana Development Commission (SIDC) in 2010. USDA Rural Development (RD) environmentally reviewed the project again after changes were made in 2012. RD funding was not pursued, so a Finding of No Significant Impact was not issued at that time. The previous reviews were compared to the current project and were found to be consistent. The following are the comments from the review authorities pertaining to the current project.

In correspondence dated March 13, 2015 the Natural Resources Conservation Service stated:

Phase II of the proposed project will not cause a conversion of prime farmland.

In correspondence dated May 7, 2010 the U.S. Fish and Wildlife Service stated:

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et. seq.) and are consistent with the intent of the National

Environmental Policy Act of 1969, the Endangered Species Act of 1973, and the U. S. Fish and Wildlife Service's Mitigation Policy.

According to your letter the proposed project includes construction of a water line along Victor Pike and replacements of water lines along Victor Pike, Ketcham Road and Strain Ridge Road. Because the water lines will follow existing roads we do not anticipate significant impacts on wildlife habitat, however some tree removal will probably be required, especially from forested areas along Victor Pike and Ketcham Road. Minor stream crossings will also be required, and apparently a crossing of Clear Creek on Fluck Mill Road for the Victor Pike project. We recommend the following measures to minimize physical impacts on streams and aquatic habitat:

- 1. Maintain a vegetated buffer between construction and streams, except at stream crossings. The buffer should be at least 25 feet wide, but preferably up to 100 feet wide if possible. For the Victor Pike and Ketcham Road projects, install the water lines on the opposite side of the road from Clear Creek. Where maintenance of an adequate buffer is not possible because of other physical constraints, locate the sewer line to minimize clearing of woody riparian vegetation and destabilization of stream banks.*
- 2. Minimize erosion and cover or contain soil piles to prevent runoff to streams during construction. Stabilize disturbed stream banks as quickly as possible after construction is completed. Revegetate with native plant species in areas that are currently dominated by natural vegetation.*
- 3. For a crossing of Clear Creek, attach the pipeline to existing bridges or use directional drilling rather than using an excavated crossing.*
- 4. If an excavated crossing of Clear Creek is unavoidable, there should be no disturbance of high-quality aquatic habitats, such as gravel/rock riffles, and no disturbance within the stream channel during the fish spawning season (April 1-June 30).*

The proposed project is in an area of karst geologic features, which often support unique subterranean ecosystems. If caverns or springs are encountered during excavation, all work should stop immediately and this office or the Indiana Department of Natural Resources should be contacted concerning proper mitigation measures. If sinkholes occur in construction areas they should be left undisturbed along with a 25 foot buffer around the highest closed contour. Existing volume of surface drainage to sinkholes should be maintained, and drainage from construction sites should be filtered or treated prior to entering a sinkhole.

Endangered Species

*The proposed project is within the range of the federally endangered Indiana bat (*Myotis sodalis*). While some foraging habitat may exist in the project area, we concur that the proposed project is not likely to adversely affect this listed species.*

This precludes the need for further consultation on this project as required under Section 7 of the Endangered Species Act of 1973, as amended. If, however, new information on endangered species at the site becomes available or if project plans are changed significantly, please

contact our office for further consultation.

In correspondence dated February 16, 2012 the U.S. Fish and Wildlife Service stated:

Your environmental review letter dated February 15 and a subsequent telephone conversation concerning this project confirmed that the only modifications from the original proposal are as follows:

- 1. Deletion of a proposed water line segment between Fairfax Road and Harrell Road.*
- 2. New Water mains will still be installed adjacent to roads, but the construction corridors will extend outside of road rights-of-ways in some areas.*

Based on this information I have concluded that our previous comments and recommendations in our letter dated May 7, 2010 are still appropriate and adequate for the revised project. There are no new concerns regarding federally endangered species since our previous review, therefore we continue to conclude that the project is not likely to affect the federally endangered Indiana bat.

In correspondence dated June 22, 2010 the Department of Natural Resources Division of Fish and Wildlife stated:

The Indiana Department of Natural Resources has reviewed the above referenced project per your request. Our agency offers the following comments for your information and in accordance with the National Environmental Policy Act of 1969.

Regulatory Assessment: This proposal will 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 LAC 10-5 that applies to utility line crossings (see enclosure). Please include a copy of this letter with the permit application if the project does not meet the general license criteria.

Natural Heritage Database: The Natural Heritage Program's data have been checked. To date, no plant or animal species listed as state or federally threatened, endangered, or rare have been reported to occur in the project vicinity.

Fish & Wildlife Comments: Avoid areas of concern to fish, wildlife, and botanical resources to the greatest extent possible. Be prepared to demonstrate avoidance, minimization, and mitigation of impacted resources. The following are recommendations for potential impacts identified in the proposed project area:

We recommend placing the utility line on the side of the road containing the least amount of woody vegetation. If both sides of the road are forested, the line should be placed within or as close to the existing cleared road right-of-way as possible to minimize forested habitat impacts, including forest fragmentation. This type of situation could occur where the road right-of-way is forested, but the cleared easement will be outside the road right-of-way, leaving

a thin strip of forest in the road right-of-way with cleared areas on both sides.

The cleared width through any forested area should be the minimum needed to install the line and no wider than 20 feet wide through the forested area to allow the canopy to close over the line. If the cleared area through a forested area must be wider than 20 feet, the easement should be revegetated with native hardwood trees and shrubs to within 10 feet of the line on either side of the line.

Impacts to non-wetland forest under 1 acre should be mitigated at a 1:1 ratio, while impacts to non-wetland forest over 1 acre should be mitigated at a minimum 2:1 ratio. Impacts to wetlands should be mitigated at the appropriate ratio. For more information, see <http://www.in.gov/legislative/register/20061213-IR-312060562NRA.xml.pdf>.

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 United States Army Corps of Engineers (USACOE) 404 program.

We recommend that all creek or stream crossings be done using the directional bore method. Should the directional bore method not be feasible at any of the planned stream crossings due to the site conditions and the open-trench method is necessary, then the following measures should be implemented:

- 1) Any open-trench stream crossing should be timed to coincide with the low-water time of year (typically mid- to late-summer).*
- 2) Restore disturbed streambanks using bioengineering bank stabilization methods and revegetate disturbed banks with native trees, shrubs and herbaceous plants. Stream bank slopes after project completion should be restored to stable-slope steepness (not steeper than 2: 1).*
- 3) Use graded stone or riprap to protect the section of trench below the normal water level from scour or erosion (any stone or riprap fill in the stream bed must remain at the existing streambed level to avoid creating a fish passage obstruction).*

Fish, wildlife, and botanical resource losses can be expected to occur as a result of this project. These losses can be minimized through implementation of the following measures. Revegetate all bare and disturbed areas with a mixture of native grasses, wildflowers, and native shrub and hardwood tree species as soon as possible upon completion. Do not use any varieties of Tall Fescue or other non-native plants (e.g. crown-vetch). Minimize and contain within the project limits inchannel disturbance and the clearing of trees and brush.

Do not work in the waterway from April 1 through June 30 without the prior written approval of the Division of Fish and Wildlife.

Do not cut any trees suitable for Indiana bat roosting (greater than 3 inches dbh, living or dead, with loose hanging bark) from April 1 through September 30.

Use minimum average 6 inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids.

Plant native hardwood trees along the top of the bank and right-of-way to replace the vegetation destroyed during construction.

Post "Do Not Mow or Spray" signs along the right-of-way.

Appropriately designed measures for 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.

Seed and protect disturbed stream banks and slopes that are 3:1 or steeper with photo- or biodegradable heavy-duty erosion control blankets (follow manufacturer's recommendation for installation); seed and apply mulch on all other disturbed areas.

In correspondence dated March 15, 2012 the Department of Natural Resources Division of Fish and Wildlife stated:

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Post "Do Not Mow or Spray" signs along the right-of-way.

Appropriately designed measures for 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.

Seed and protect disturbed stream banks and slopes that are 3:1 or steeper with photo- or biodegradable heavy-duty erosion control blankets (follow manufacturer's recommendation for installation); seed and apply mulch on all other disturbed areas.

In correspondence dated May 5, 2010 the Louisville Office of the Army Corps of Engineers stated:

The Corps of Engineers exercises regulatory authority under Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) and Section 404 of the Clean Water Act (33 USC 1344). The data furnished indicates authorizations under Section 404 may be required before you begin the work. However, the information given is insufficient for us to be certain of the need for permits on this particular proposal. In order to determine whether Department of the Army (DA) permits are required, we will need additional detail on the project's design, scope, and construction methods in areas where the proposed utility activities will cross "waters of the United States."

Authorization pursuant to Section 404 is required for the placement of dredged or fill material into any "waters of the United States." This includes Monroe Lake, its tributaries, and adjacent wetlands. These tributary streams may be perennial, intermittent, or ephemeral having defined bed-and-bank features with an ordinary high water mark. Tributaries with these characteristics often extend beyond those indicated by blue lines on 7.5 minute USGS quadrangle maps in the headwaters within Indiana.

Jurisdictional wetland determinations need to be conducted in accordance with the 1987 Corps of Engineers Manual and supplemental data. Adjacency is indicated as being contiguous, bordering, or neighboring jurisdictional streams. We will implement regulation of isolated wetlands only with a substantiated interstate commerce nexus. A report of investigations and findings is normally provided for our review and determination of concurrency. We will be available to meet with representatives from your office upon being provided a copy of the report so that we may verify onsite jurisdiction determinations and delineations prior to the preparation of the final environmental assessment.

The avoidance, minimization, or potential mitigation will be required to minimize adverse impact to aquatic resources. This scoping process should be included in the alternative analysis and the feasible alternative selection process. Appurtenances such as access roads, staging areas, and borrow sites require review along with construction activities.

It is best to ultimately submit a formal DA permit application for impacts to the aquatic environment once the feasible alternative selection process is completed. Should an individual permit be required, we can then begin processing your request immediately. Enclosed is a packet that contains the information and forms needed to apply for a DA permit. You are reminded that all drawings must be submitted on 8- by 11-inch paper and be of reproducible quality. Please allow sufficient time for the processing of the permit application.

In correspondence dated May 5, 2010 the Louisville Office of the Army Corps of Engineers stated:

This is in response to your request for a Jurisdictional Determination (JD) on a corridor for a proposed water main project in Monroe County, Indiana. Based on our conversation today (4/18/2012), it appears that wetlands and other waters of the U.S. may be impacted by the proposal. I will be processing the JD request dated 3/26/2012.

Any discharge of dredged or fill material into waters of the U.S., including wetlands, will require a Department of the Army (DA) permit under Section 404 of the Clean Water Act. In addition, a DA permit is required under Section 10 of the Rivers and Harbors Act of 1899 for the placement of any structure or work that takes place in, under, or over a navigable water. The Corps does not have authority over directional boring under non-navigable waters of the U.S., if there is no discharge of dredged or fill material associated with activity.

If your project does necessitates any regulated work in waters as described above, it appear that the project will qualify for Nationwide Permit (NWP) 12 for Utility Line Activities. However, you will need to submitted a pre-construction notification (PCN) prior to any work. Please submit the PCN six months prior to any work. A DA permit application can be used as a PCN.

In correspondence dated November 2, 2012 the Division of Historic Preservation and Archaeology stated:

We concur with the USDA Rural Development's October 2, 2012 finding that there are no historic buildings, structures, districts, objects, or archaeological resources within the area of potential effects that will be affected by the above indicated project.

If any archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (Indiana Code 14-21-1-27 and 29) requires that the discovery must be reported to the Department of Natural Resources within two (2) business days. In that event, please call (317) 232-1646. Be advised that adherence to Indiana Code 14-21-1-27 and 29 does not obviate the need to adhere to applicable federal statutes and regulations.

Please be advised that provisions of relevant state statutes regarding cemeteries (including IC 23-14 and IC 14-21-1) must be adhered to. All cemeteries should be avoided by staging, stockpiling, temporary land use, and ground disturbing activities.

VIII. MITIGATION MEASURES

The SMWA states the following in the PER:

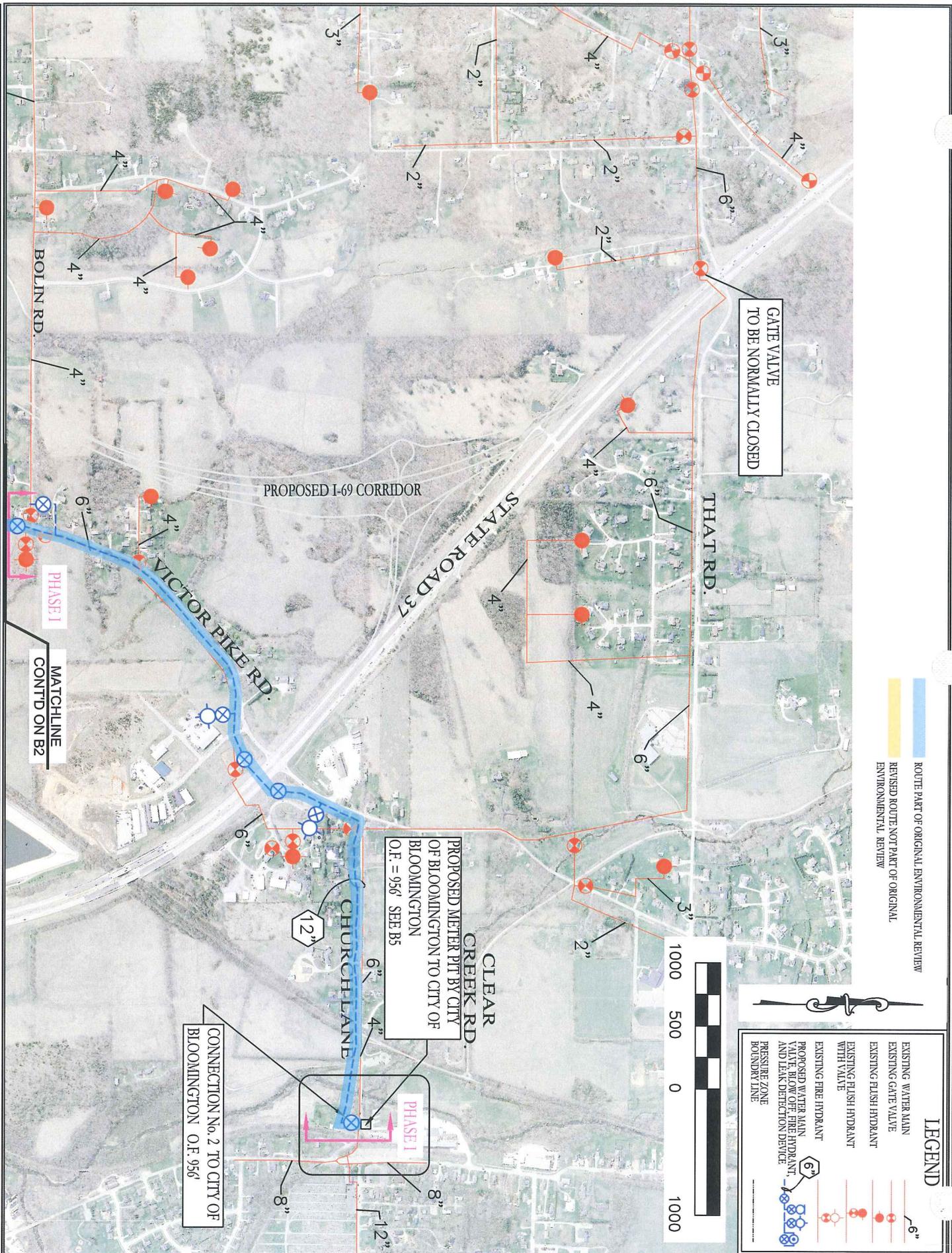
- (1) Upon completion of construction, the contractor shall remove all equipment, temporary structures, waste materials and rubbish from the vicinity of which the work was being done. The premises should be left in a neat and presentable condition. Therefore, there should be no negative indirect or cumulative impacts to the visual aesthetics of the project area.*
- (2) No fill material will be placed in flood areas that would impact the floodplain and the original grade will be restored when work is completed.*
- (3) The area around all construction will be restored to its original condition after construction is complete to minimize the direct impacts. All disturbed areas of this project located outside of the pavement will be refurbished and seeded to establish cover and prevent erosion. Siltation devices or temporary seeding will be utilized, where applicable. The contractor in charge of*

construction must abide by local and state requirements to minimize soil erosion. This will include complying with IDEM's rule 5 for storm water runoff.

- (4) To minimize the affects on air quality, construction activities shall be limited to normal working periods and proper clean up practices shall be implemented. Surface wetting practices will be utilized to control dust emissions.*

IX. PUBLIC PARTICIPATION

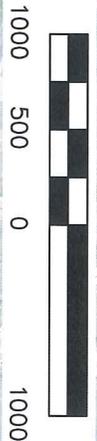
A properly publicized public hearing was held at 5:30 p.m., on March 10, 2014, at the SMWA utility office located at 5790 South Fairfax Road, Bloomington, IN 47401. There were no questions raised during the hearing, and the utility received no written comments in the ten day post-hearing period.



ROUTE PART OF ORIGINAL ENVIRONMENTAL REVIEW
 REVISED ROUTE NOT PART OF ORIGINAL ENVIRONMENTAL REVIEW

LEGEND

- EXISTING WATER MAIN
- EXISTING GATE VALVE
- EXISTING FLUSH HYDRANT WITH VALVE
- EXISTING FIRE HYDRANT
- PROPOSED WATER MAIN
- VALVE BLOW OFF FIRE HYDRANT AND LEAK DETECTION DEVICE WITH VALVE
- PRESSURE ZONE BOUNDARY LINE



CLEAR RD.
 PROPOSED METER PIT BY CITY OF BLOOMINGTON TO CITY OF BLOOMINGTON
 O.F. = 956' SEE B5

CONNECTION No. 2 TO CITY OF BLOOMINGTON O.F. 956'

GATE VALVE TO BE NORMALLY CLOSED

BOLIN RD.

PROPOSED I-69 CORRIDOR

STATE ROAD 37

THAT RD.

VICTOR PIKE RD.

CHURCH LANE

CLEAR RD.

PHASE 1
 MATCHLINE
 CONT'D ON B2

PHASE 1

DATE: FEBRUARY 2014
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 PROJECT NUMBER: 2011025-00

1

PROPOSED WATER SYSTEM IMPROVEMENTS
 SOUTHERN MONROE WATER AUTHORITY
 MONROE COUNTY, INDIANA

7/31/14
 11/26/14

Midwestern Engineers, Inc.
 802 West Broadway Street
 P.O. Box 295
 Logansport, IN 47553
 Phone: 812.295.2901

3500 DePue Boulevard
 Suite 200
 Portland, IN 47375
 Phone: 812.295.2902

Quality Engineering Services Since 1999

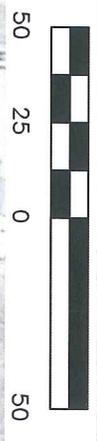


ROUTE PART OF ORIGINAL ENVIRONMENTAL REVIEW
 REVISED ROUTE NOT PART OF ORIGINAL ENVIRONMENTAL REVIEW

LEGEND

- EXISTING WATER MAIN
- EXISTING GATE VALVE
- EXISTING FLUSH HYDRANT
- EXISTING FLUSH HYDRANT WITH VALVE
- EXISTING FIRE HYDRANT
- PROPOSED WATER MAIN
- VALVE BLOW OFF FIRE HYDRANT AND LEAK DETECTION DEVICE
- PRESSURE ZONE BOUNDARY LINE

6"



PROPOSED DISTURBED AREA FOR NEW METER PIT

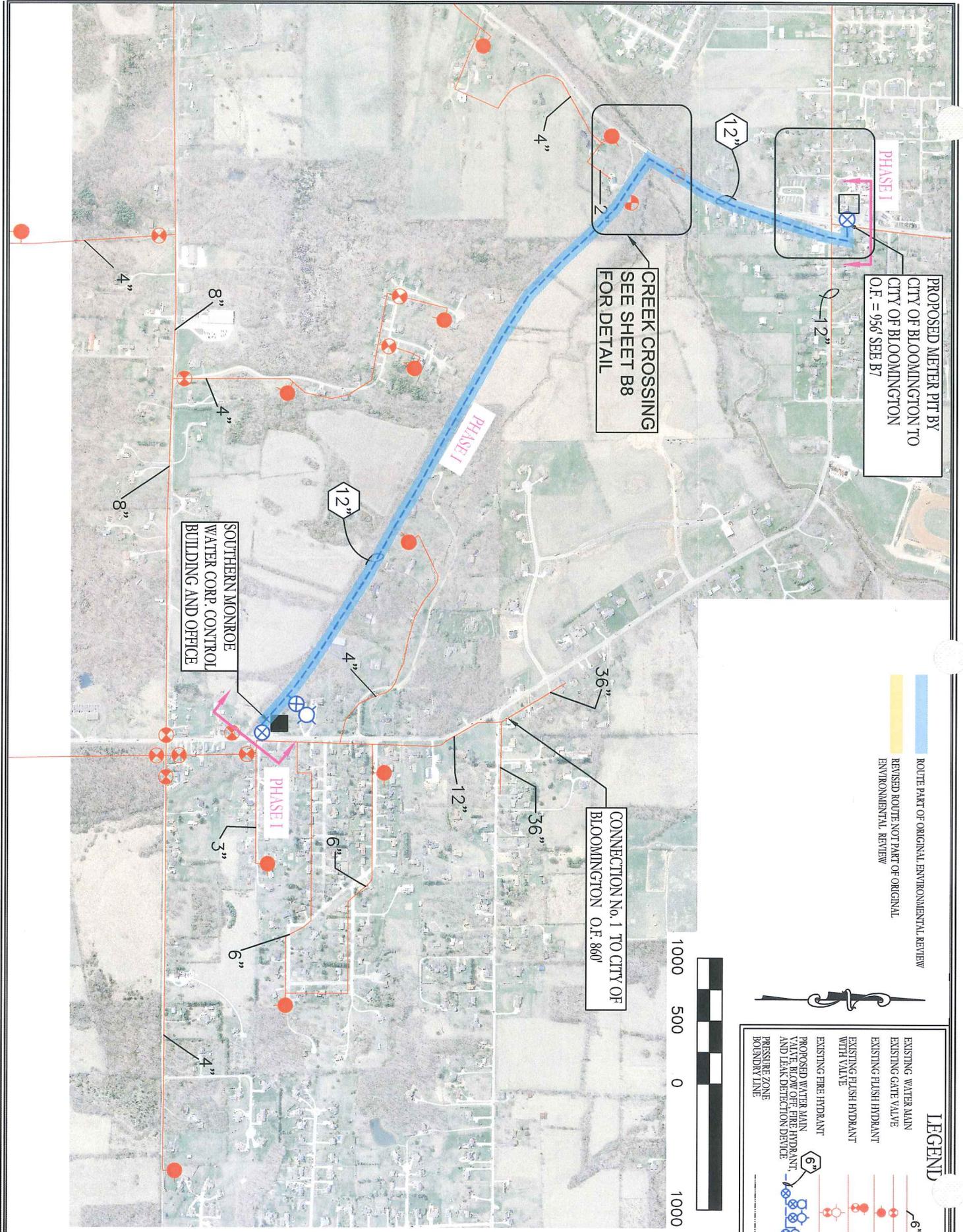
CHURCH LANE

12"

DATE: FEBRUARY 2014
 PROJECT NUMBER: 2011023-00
 SHEET NUMBER: 2

PROPOSED WATER SYSTEM IMPROVEMENTS
 SOUTHERN MONROE WATER AUTHORITY
 MONROE COUNTY, INDIANA

Midwestern Engineers, Inc.
 802 West Broadway Street
 P.O. Box 295
 Logansport, IN 47253
 Phone: 812.295.2800
 3550 DuPine Boulevard
 Suite 302
 Pyramid Pk. 2
 Indianapolis, IN 46206
 Phone: 317.34.0262
 Email: info@midwesterneng.com
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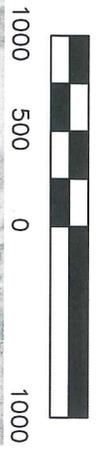
PROPOSED METER PTT BY CITY OF BLOOMINGTON TO CITY OF BLOOMINGTON O.F. = 956 SEE B7

CREEK CROSSING SEE SHEET B8 FOR DETAIL

SOUTHERN MONROE WATER CORP. CONTROL BUILDING AND OFFICE

CONNECTION No. 1 TO CITY OF BLOOMINGTON O.F. 860'

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LEGEND

- EXISTING WATER MAIN
- EXISTING GATE VALVE
- EXISTING FLUSH HYDRANT
- EXISTING FLUSH HYDRANT WITH VALVE
- EXISTING FIRE HYDRANT
- PROPOSED WATER MAIN
- VALVE ROOM OFF FIRE HYDRANT AND LEAK DETECTION DEVICE
- PRESSURE ZONE BOUNDARY LINE

3

DATE: 11/30/14
 DESIGNED BY: [Signature]
 CHECKED BY: [Signature]
 PROJECT NUMBER: 20111023-00

PROPOSED WATER SYSTEM IMPROVEMENTS
 SOUTHERN MONROE WATER AUTHORITY
 MONROE COUNTY, INDIANA

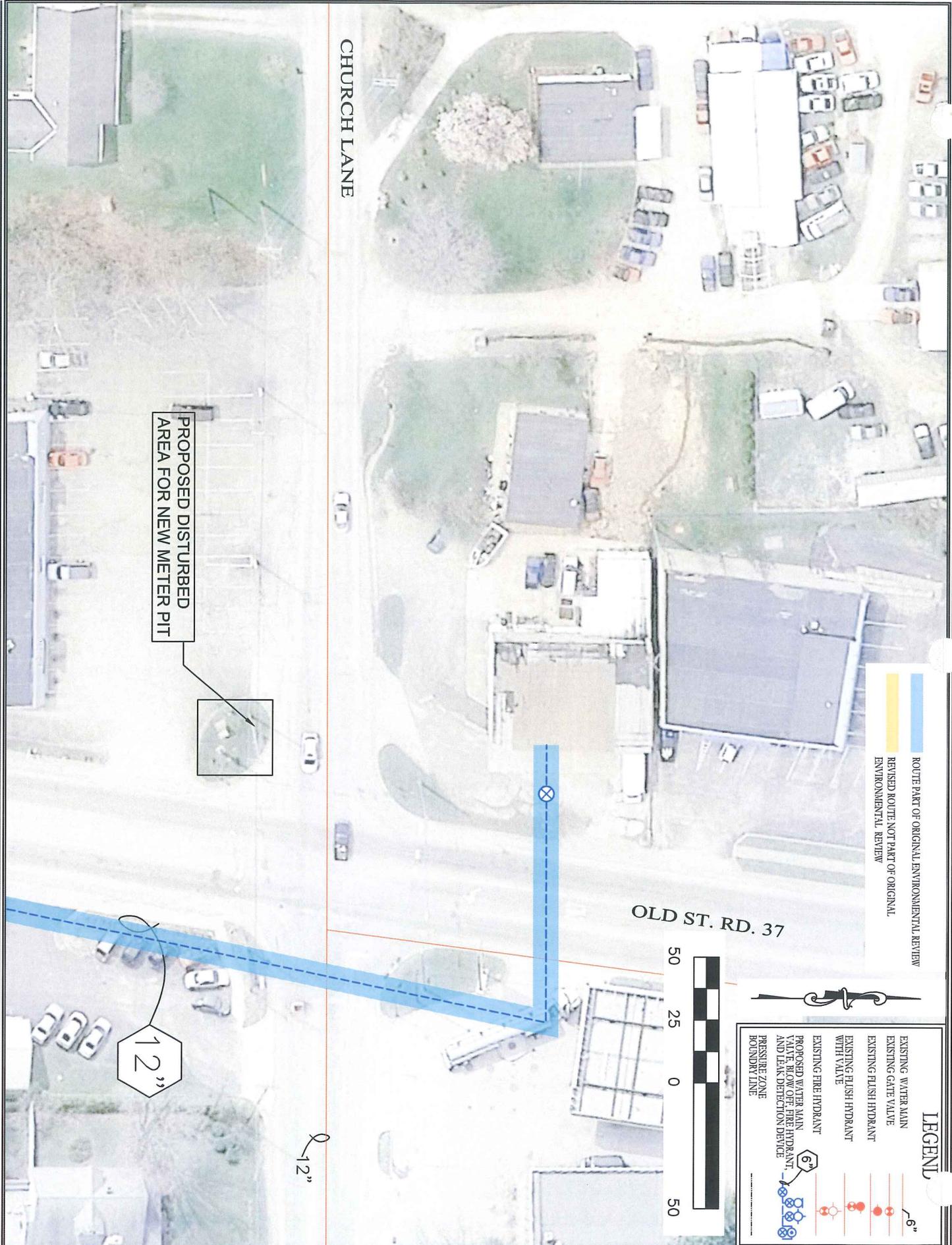
11/30/14

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 802 West Broadway Street, Suite 2033
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LEGEND

- EXISTING WATER MAIN
- EXISTING GATE VALVE
- EXISTING FLUSH HYDRANT
- EXISTING FLUSH HYDRANT WITH VALVE
- EXISTING FIRE HYDRANT
- PROPOSED WATER MAIN
- VALVE, BLOW OFF, FIRE HYDRANT, AND LEAK DETECTION DEVICE WITH VALVE
- 6" (Symbol)
- PRESSURE ZONE BOUNDARY LINE



DATE: FEBRUARY 2014
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 PROJECT NUMBER: 2011023-00

4

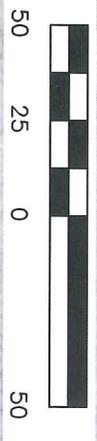
PROPOSED WATER SYSTEM IMPROVEMENTS
 SOUTHERN MONROE WATER AUTHORITY
 MONROE COUNTY, INDIANA

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 Website: midwesterneng.com
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 Plymouth, IN 47454
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OLD ST. RD. 37

PROPOSED DISTURBED
AREA FOR CREEK
CROSSING BY OPEN CUT

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LEGEND

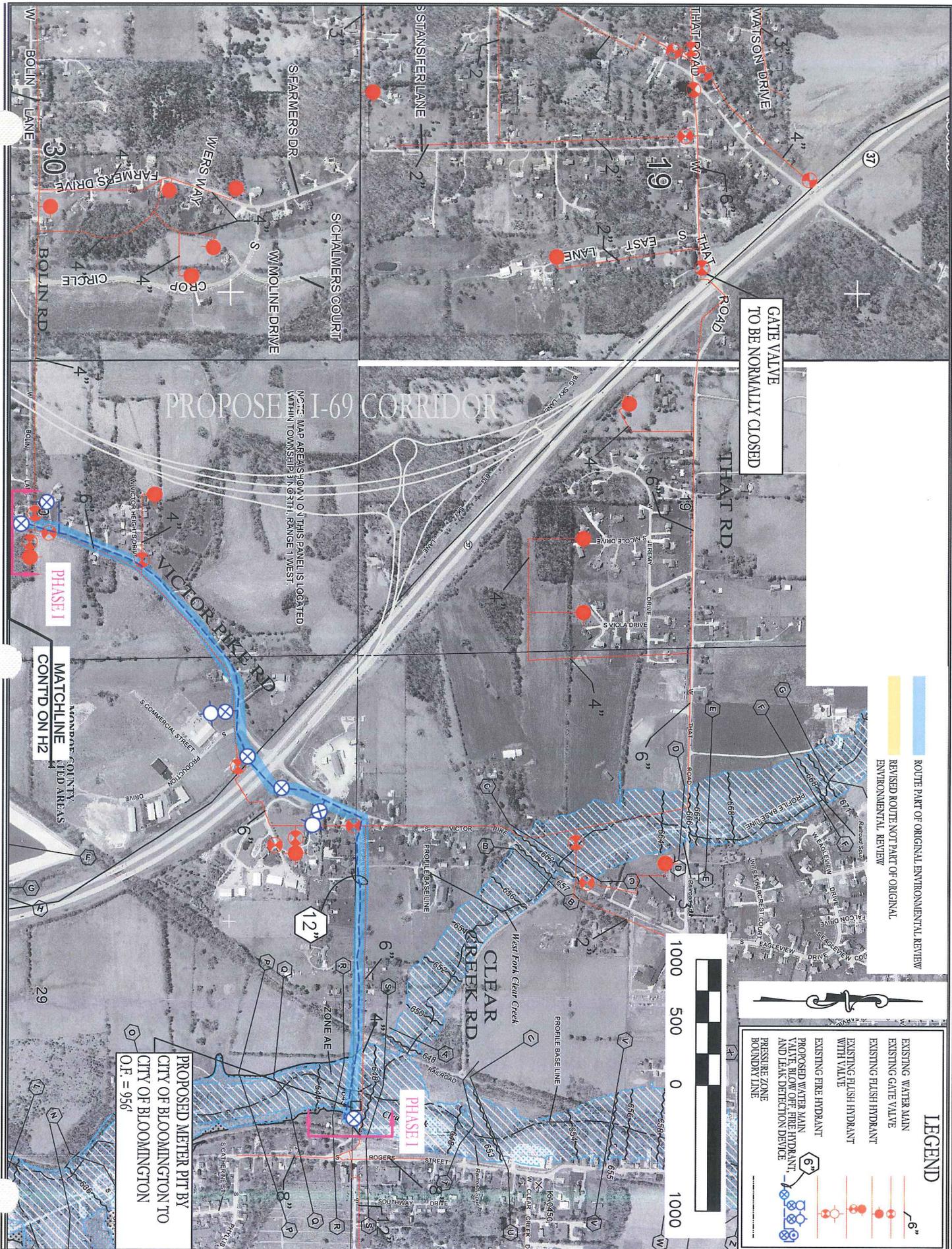
- EXISTING WATER MAIN
- EXISTING GATE VALVE
- EXISTING FLUSH HYDRANT WITH VALVE
- EXISTING FIRE HYDRANT
- PROPOSED WATER MAIN
- VALVE, BLOWOFF FIRE HYDRANT AND LEAK DETECTION DEVICE
- PRESSURE ZONE BOUNDARY LINE



DATE: _____
 DESIGNED BY: _____
 CHECKED BY: _____
 PROJECT NUMBER: 2011023-00
 SHEET NUMBER: 5

PROPOSED
 WATER SYSTEM IMPROVEMENTS
 SOUTHERN MONROE WATER AUTHORITY
 MONROE COUNTY, INDIANA

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 Suite 2015
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 Phone: 317.344.0262
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PROPOSED I-69 CORRIDOR

NOTE: MAP AREAS SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 31N 63TH, RANGE 1 WEST.

GATE VALVE TO BE NORMALLY CLOSED

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LEGEND

- EXISTING WATER MAIN
- EXISTING GATE VALVE
- EXISTING FLUSH HYDRANT
- EXISTING FLUSH HYDRANT WITH VALVE
- EXISTING FIRE HYDRANT
- PROPOSED WATER MAIN
- VALVE BLOW OFF FIRE HYDRANT AND LEAK DETECTION DEVICE
- PRESSURE ZONE BOUNDARY LINE



PROPOSED METER PIT BY CITY OF BLOOMINGTON TO CITY OF BLOOMINGTON O.F. = 056

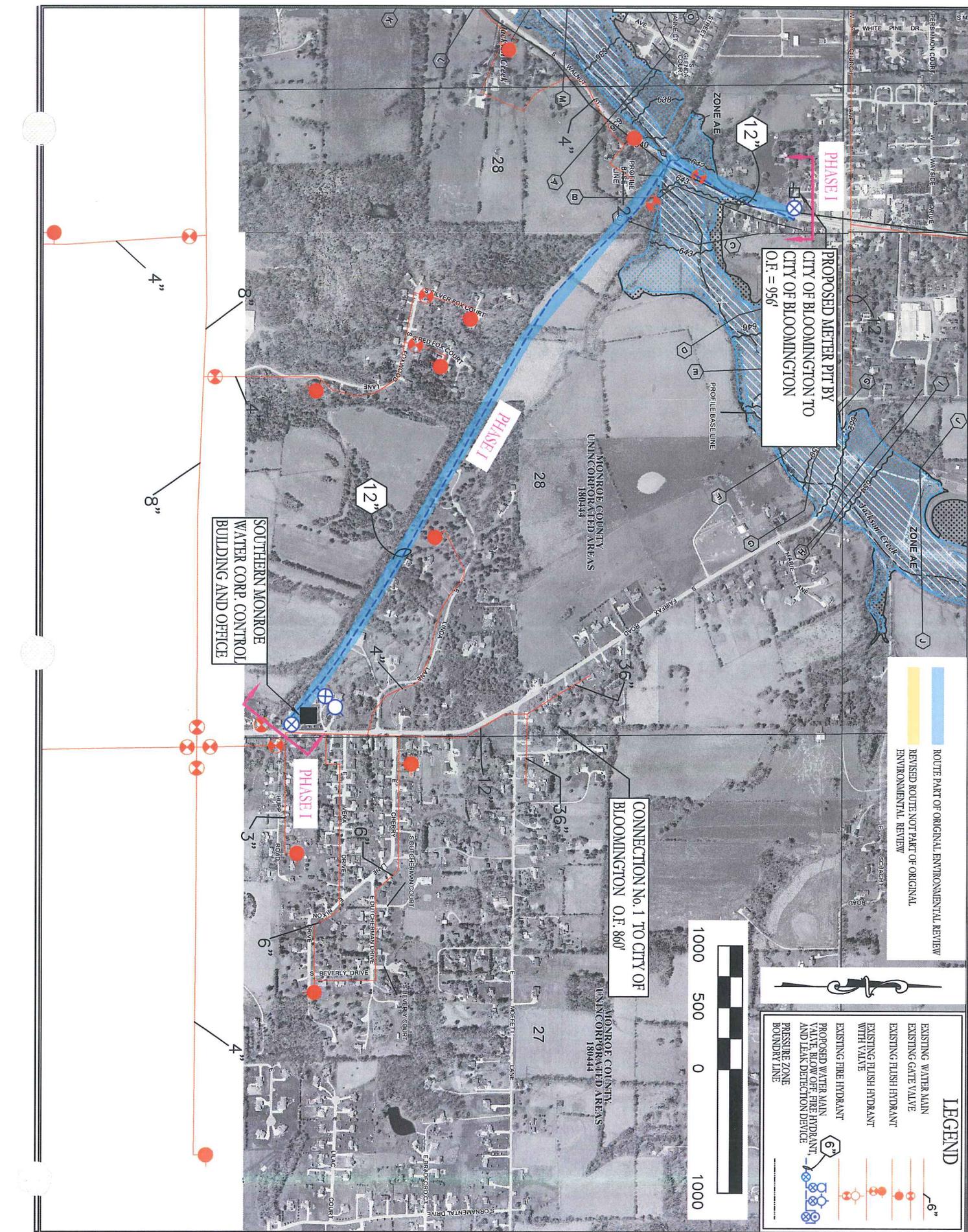
PHASE I
 MATCHLINE CONT'D ON H2

DATE: _____
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 DRAWN BY: _____
 CHECKED BY: _____
 PROJECT NUMBER: 2011102-00

7/31/14

100 YEAR FLOOD PLAIN MAPS
 SOUTHERN MONROE WATER AUTHORITY
 MONROE COUNTY, INDIANA

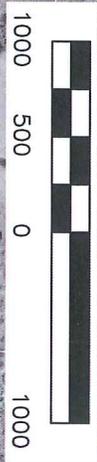
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LEGEND

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- EXISTING GATE VALVE
- EXISTING FLUSH HYDRANT
- EXISTING FIRE HYDRANT
- EXISTING FIRE HYDRANT
- PROPOSED WATER MAIN
- VALVE BLOW OFF FIRE HYDRANT AND LEAK DETECTION DEVICE WITH VALVE
- PRESSURE ZONE BOUNDARY LINE



CONNECTION No. 1 TO CITY OF BLOOMINGTON O.F. 860

PROPOSED METER PIT BY CITY OF BLOOMINGTON TO CITY OF BLOOMINGTON O.F. = 956

SOUTHERN MONROE WATER CORP. CONTROL BUILDING AND OFFICE

DATE: FEBRUARY 2014
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7

100 YEAR FLOOD PLAIN MAPS
 SOUTHERN MONROE WATER AUTHORITY
 MONROE COUNTY, INDIANA

7/31/14

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