



Mike DeWine, Governor  
Jon Husted, Lt. Governor  
Laurie A. Stevenson, Director

February 11, 2019  
Limited Environmental Review and Finding of No Significant Impact  
Cincinnati Water Main Replacements  
Hamilton County

**FS390255-0074 (Western Hills Avenue Area)**  
**FS390255-0073 (Aborcrest Drive Area)**  
**FS390255-0067 (Langdon Farm Road)**  
**FS390255-0068 (Ireland Avenue Area)**  
**FS390255-0078 (Ashland Avenue Area)**  
**FS390255-0083 (Kinney Avenue)**

The attached Limited Environmental Review (LER) is for water line replacement projects in your area which the Ohio Environmental Protection Agency intends to finance through its below-market interest rate Water Supply Revolving Loan Fund (WSRLA). The LER describes the projects, costs, and expected environmental benefits. Making available this LER fulfills Ohio EPA's environmental review and public notice requirements for this loan program.

Ohio EPA analyzes environmental effects of proposed projects as part of its WSRLA program review and approval process. We have concluded that the proposed project should not result in significant adverse environmental impacts. These projects' relatively narrow scope and lack of environmental impacts qualifies it for the LER rather than a more comprehensive Environmental Assessment. More information can be obtained by calling or writing the person named at the end of the document.

Loan award will proceed without further environmental review or public comment unless new information shows that environmental conditions of the proposed project have changed significantly.

Sincerely,

Jerry Rouch, Assistant Chief  
Division of Environmental and Financial Assistance  
Office of Financial Assistance

Attachment

## LIMITED ENVIRONMENTAL REVIEW

### Project Identification

Name: Cincinnati Water Main Replacements

Applicant: Jeffrey M. Pieper, Chief Engineer  
Greater Cincinnati Water Works  
4747 Spring Grove Ave.  
Cincinnati, Ohio 45232



Figure 1 Hamilton County

Loan Numbers: FS390255-0074 (Western Hills Avenue Area)  
FS390255-0073 (Aborcrest Drive Area)  
FS390255-0067 (Langdon Farm Road)  
FS390255-0068 (Ireland Avenue Area)  
FS390255-0078 (Ashland Avenue Area)  
FS390255-0083 (Kinney Avenue)

### Project Summary

The Greater Cincinnati Water Works (GCWW) applied to Ohio EPA's Water Supply Revolving Loan Account (WSRLA) to finance 6 water main replacement projects in Cincinnati, Hamilton County (**Figure 1**):

- Western Hills Avenue Area: replacement of 8,890 linear feet (LF) of cast iron water main along Western Hills Avenue, Ralph Avenue, Leders Lane and Mimosa Lane for \$1,950,000. (**Figure 2**)
- Aborcrest Drive Area: replacement of 8,923 LF of cast iron water main along Aborcrest Drive, Arborcrest Court, Longmeadow Lane and Springvalley Drive for \$1,520,152. (**Figure 3**)
- Langdon Farm Road: replacement of 5,486 LF of aging 8-inch water main and 6,500 LF of 16-inch water main for \$2,696,249. (**Figure 4**)
- Ireland Avenue Area: replacement of 7,044 LF of aging 6-inch and 8-inch water main with a new 8-inch water main for \$1,444,287. (**Figure 5**)
- Ashland Avenue Area: replacement of 4,668 LF of 6-inch unlined cast iron water main for \$1,050,095. (**Figure 6**)
- Kinney Road: replacement of 12,950 LF of 6-inch unlined cast iron water main that has 341 lead service branches for \$2,825,000. (**Figure 7**)

The existing water mains are at the end of their useful life and are leaking, causing unaccounted water loss.



## Existing Conditions/History

The GCWW provides approximately 136 million gallons of water per day through 3,100 miles of water mains to most of Hamilton County, portions of Butler and Warren counties, and Boone County in Kentucky. The GCWW supplies water from two sources: the Richard Miller Water Treatment Plant (WTP) that treats water from the Ohio River, and the Bolton WTP that treats water drawn from wells in the Great Miami Aquifer. Water from both WTPs is delivered to customers through an open distribution system, which means both plants feed water to the entire distribution system. These projects are part of a comprehensive effort to replace older, higher-maintenance cast iron water mains located within GCWW's distribution system, some of which date back to the late 1800s. The program's goal is 31 miles of replacement water main installed each year.

- **Western Hills Avenue Area** - The existing 6-inch water mains in Western Hills Avenue, Ralph Avenue, Leders Lane were installed in 1925. The existing water mains in Mimosa Lane and Beechmeadow Lane were installed in 1945 and 1951, respectively. These water mains service a residential area and have had numerous leaks.
- **Arborcrest Drive Area** - The existing 8-inch water mains in Arborcrest Drive was installed in 1955. The existing 6-inch water main in Arborcrest Court was installed in 1954. The 8-inch water mains in Longmeadow Lane and Springvalley Drive were installed in 1957. There have been numerous leaks in these residential areas.
- **Langdon Farm Road** - There are two existing water mains in Langdon Farm Road. The existing 8-inch cast iron water main and the existing 16-inch cast iron water main were both installed in 1954. These water mains service a residential, commercial and industrial area. Since 2005, there have been 23 main breaks on the existing 8-inch water main and 4 main breaks on the existing 16-inch water main.
- **Ireland Avenue Area** - The existing 6-inch water mains in Ireland Avenue and Illona Drive were installed in 1954. The existing 8-inch water mains in Jennings Road and Japonica Drive were also installed in 1954. These water mains service a residential area and there have been a number of breaks since 2005.
- **Ashland Avenue Area** - The existing 6-inch water mains in Ashland Avenue, Grandview Avenue, and Salutaris Avenue were originally installed in 1930. The existing water mains in Fleming Street and Upland Place were installed in 1915.
- **Kinney Avenue** - The water mains in this project were originally installed between 1915 and 1928. There are currently approximately 286 lead service branches on the water mains to be replaced as part of this project.

## **Project Description**

- **Western Hills Avenue Area** -The existing 6-inch water mains in Western Hills Avenue, Ralph Avenue Leders Lane, Mimosa Lane, and Beachmeadow Lane will be replaced with new 8-inch ductile iron water mains.
- **Arborcrest Drive Area** - The existing 8-inch water mains in Arborcrest Drive, Longmeadow Lane and Springvalley Drive will be replaced with new 8-inch ductile iron water mains. There are currently approximately 93 service branches on the water mains to be replaced as part of this project.
- **Langdon Farm Road** – This project will replace 5486 LF of 8-inch cast iron water main and 6500 LF of 16-inch cast iron water main with one 16-inch ductile iron water main.
- **Ireland Avenue Area**- The existing 6-inch and 8-inch cast iron water mains will be replaced with new 8-inch ductile iron water main. This project will replace 7044 LF of cast iron water main. Replacing the 5433 feet of aging 6-inch cast iron water main and 1611 LF of 8-inch cast iron water main will help reduce GCWW's unaccounted water loss. In addition, any lead services encountered with the replacement of the water mains will be replaced.
- **Ashland Avenue Area** – The project will replace 4668 LF of 6-inch unlined cast iron water main and will help reduce GCWW's unaccounted water loss. In addition, all lead services will be eliminated with the replacement of these old water mains.
- **Kinney Avenue** - This project will replace 12,950 LF of 6-inch unlined cast iron water main with 341 lead service branches.

## **Implementation**

The WSRLA loans will be repaid through revenue generated by GCWW's user charge system. In 2018, the total number of users was 242,335. The typical annual residential water bill was \$639. The annual water bill will increase 3.75% annually through 2022. The current water bill is 1.8% of the Cincinnati median household income of \$34,629, which is considered affordable.

The rates were increased in part to fund additional Capital Spending. These projects fall under that category.

By using the WSRLA low-interest financing for this project, the GCWW has minimized the cost and the economic impact on customers. GCWW will receive the Economic Affordability rate (2% or the Small System Rate if it is less than 2% the month of loan

award) for all project loans. The current market rate is 3.42%.  
The construction schedule for each project is as follows:

**Western Hills Ave. Area:**

Bid opening 2/1/19.  
Construction scheduled to start on 4/17/19.  
Completion is scheduled for 10/14/19.

**Arborcrest Dr. Area:**

Bid opening 10/2/18.  
Construction started on 11/9/18.  
Completion is scheduled for 8/19/19.

**Langdon Farm Rd:**

Bid opening 6/5/18  
Construction started on 8/13/18.  
Completion is scheduled for 3/13/19.

**Ireland Ave. Area:**

Bid opening 3/22/18.  
Construction started on 5/15/18.  
Completion is scheduled for 1/30/19.

**Ashland Ave. Area**

Bid opening 10/9/18.  
Construction scheduled to start on 3/1/19.  
Completion is scheduled for 8/28/19.

**Kinney Ave:**

Bid opening scheduled for 2/27/19.  
Construction scheduled to start on 4/1/19.  
Completion is scheduled for 1/1/20.

**Public Participation**

Public participation on a project of this nature is provided during budget hearings/reviews. This water main replacement project is part of GCWW's infrastructure management program. This program has been approved as part of the city of Cincinnati's Annual Budget and funded through GCWW's rate structure and revenue.

The GCWW will issue a notification letter to every resident and business located within the project area before any construction starts. The letter describes the project schedule, traffic restrictions, and contact information for the project manager.



The GCWW will also post this Limited Environmental Review (LER) to its webpage for at least 30 days.

## **Conclusion**

Each project area consists of residential neighborhood and roads and has been previously disturbed by the installation of the existing water mains and other underground utilities. Because the project work limits are located entirely within existing road rights-of-way, no sensitive environmental resources such as streams, wetlands, state or federal threatened or endangered species, or archaeologic or historic resources will be impacted. No trees will be cleared as part of the installation of the new mains.

The GCWW will require restrictions typical of work within residential neighborhoods including traffic controls. Excavated areas will be re-seeded. No construction material or equipment will be stored in the rights-of way.

Ohio EPA conducts environmental reviews of all projects prior to approving WSRLA financing. Ohio EPA's State Environmental Review Process contains a special set of project review procedures for projects which do not have the potential to "individually, cumulatively over time, or in conjunction with other Federal, State, local, or private actions have a significant adverse effect on the quality of the human environment." Such projects qualify for an LER. The proposed projects meet the project type criteria for a LER; namely, the projects involve repair or functional replacement of existing drinking water systems. Furthermore, the projects meet the other qualifying criteria for a LER; specifically, the proposed projects:

- **will have no significant adverse environmental effect**, as sensitive resources such as floodplains, wetlands, riparian areas, prime or unique agricultural lands, aquifer recharge zones, archaeological or historically significant sites, or threatened or endangered species are not present in the project areas;
- **do not require extensive specific impact mitigation**, as the proposed projects involve the replacement of existing water mains located in disturbed residential road rights-of-way where the roads will be restored to their pre-project grade and condition;
- **will have no adverse effect on high value environmental resources**, as the project areas are highly developed residential neighborhoods, with asphalt roads, manicured lawns and numerous existing utilities, and no high value environmental resources are present there;
- **are not controversial actions**, Ohio EPA is unaware of any public opposition to the projects.

- **are cost-effective**, as replacement of the water mains will ensure continuous potable drinking water supply to residents located in the project areas at a reasonable cost by eliminating aged and deteriorated water mains that require frequent repair;
- **does not create new, or relocate existing, discharges to surface or ground waters; and will not result in substantial increases in the volume of discharge or the loading of pollutants from an existing source or from new facilities to receiving waters**, since the proposed projects do not involve a point source discharge or the treatment of wastewater flows;
- **will not create new sources of water withdrawals from either surface or ground waters, or significantly increase the amount of water withdrawn from an existing source; nor will they provide capacity to serve a population substantially greater than the existing population**, as the project is limited to replacing existing water mains with no effect on water demand or treatment.

The planning activities for the projects have identified no potentially significant short-term or long-term adverse impacts on the quality of the human environment or on sensitive resources. Implementation of appropriate construction mitigation measures is required by the contract specifications and construction activity will be limited to the existing, previously-disturbed road rights-of-way sites. The project will benefit the Cincinnati area by providing improved water service that is safe and reliable for residents and businesses, and will help reduce water system costs by minimizing/eliminating water loss due to leakage from old, failing water mains and by avoiding costly emergency repairs.

### **Contact info**

For further information, please contact:

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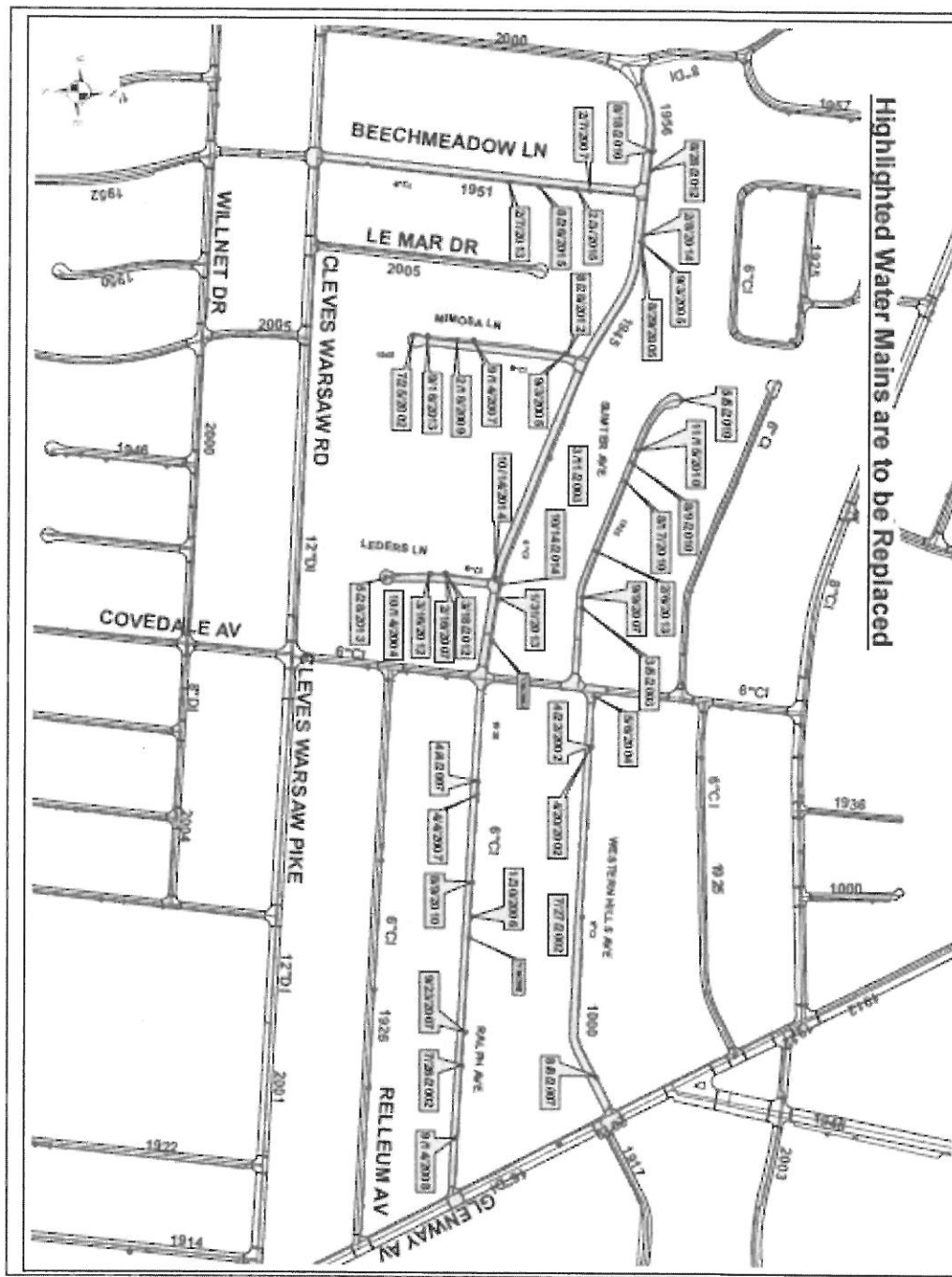


Figure 2. Western Hills Ave Area



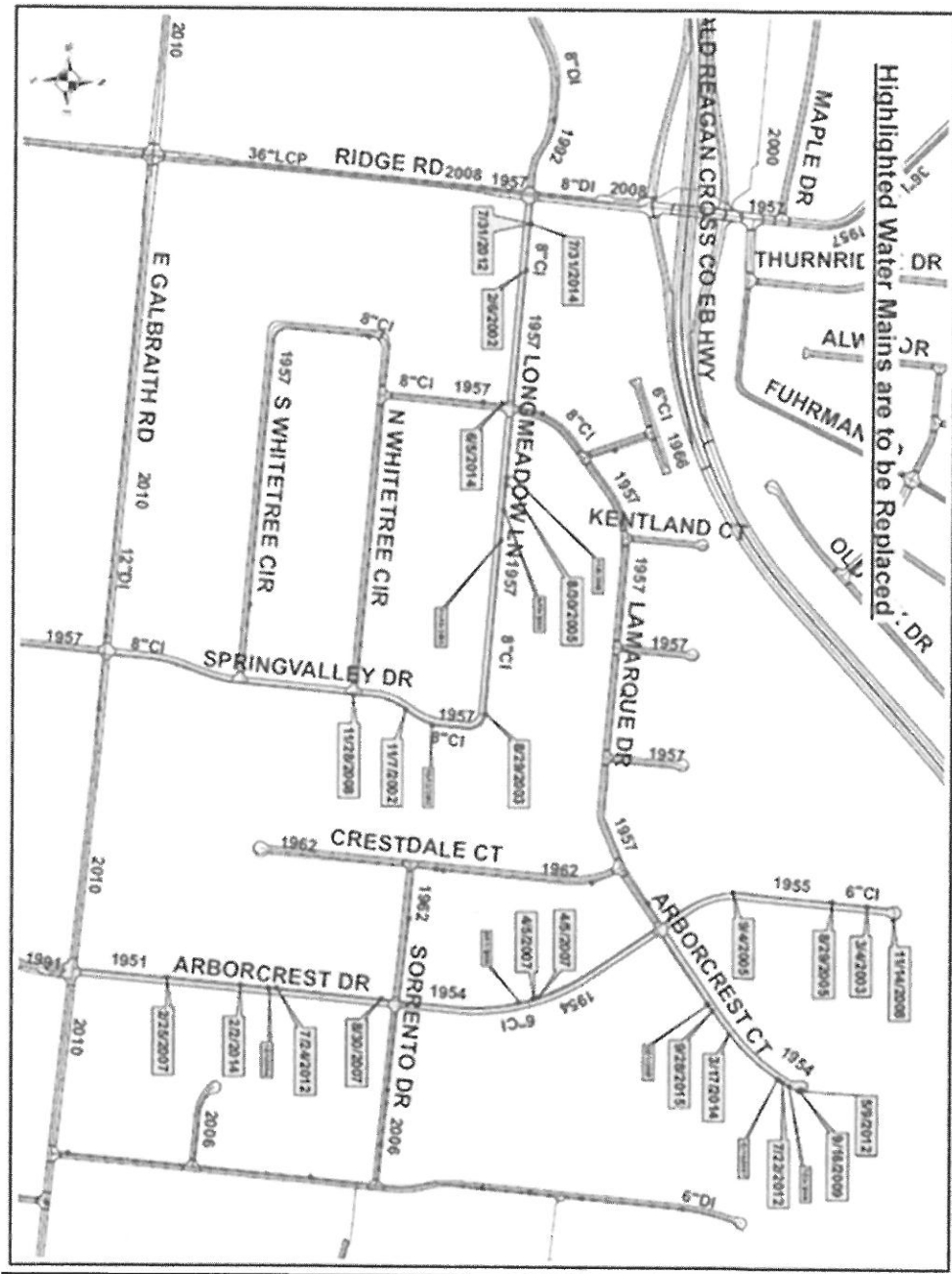


Figure 3. Arborcrest Drive Area

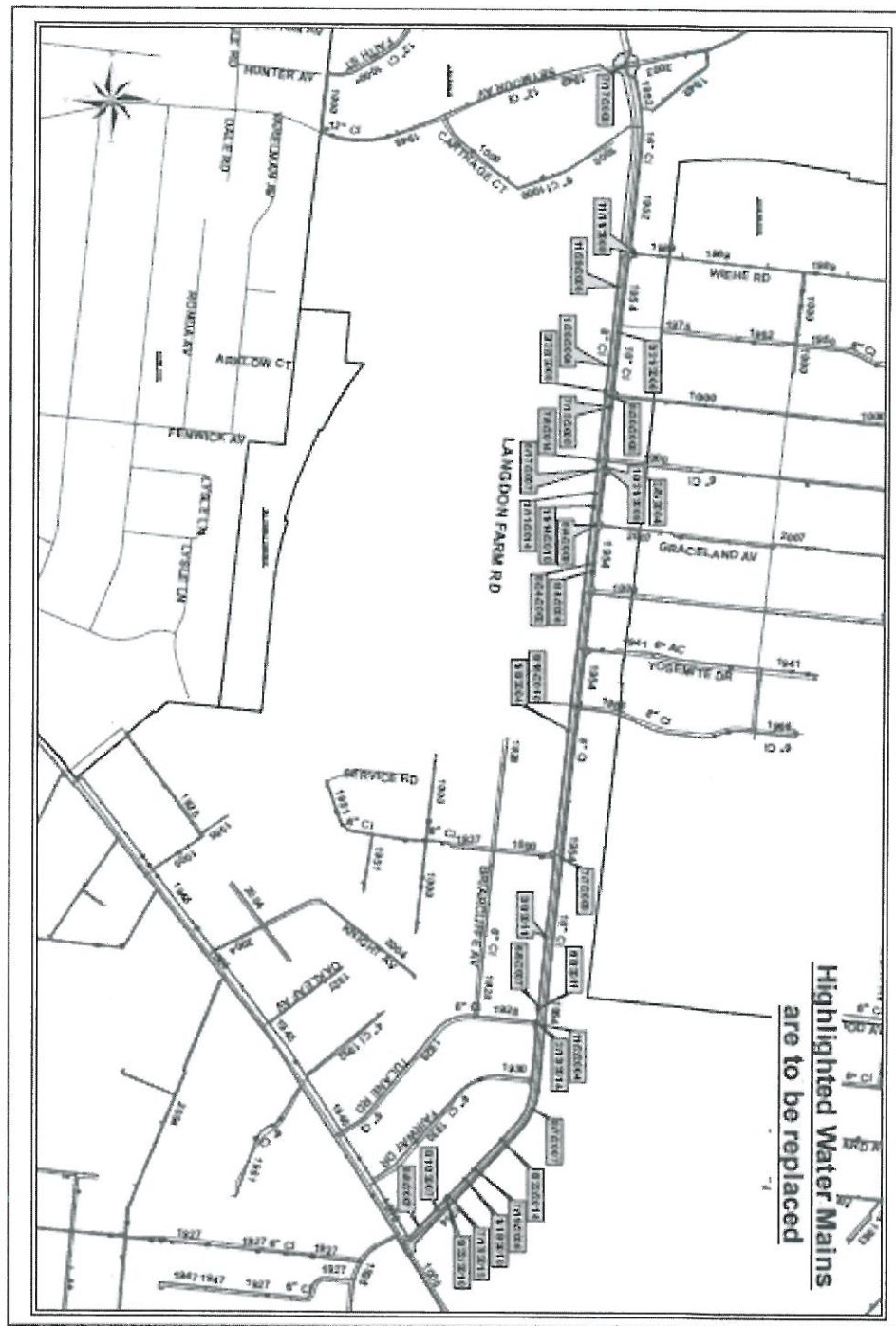
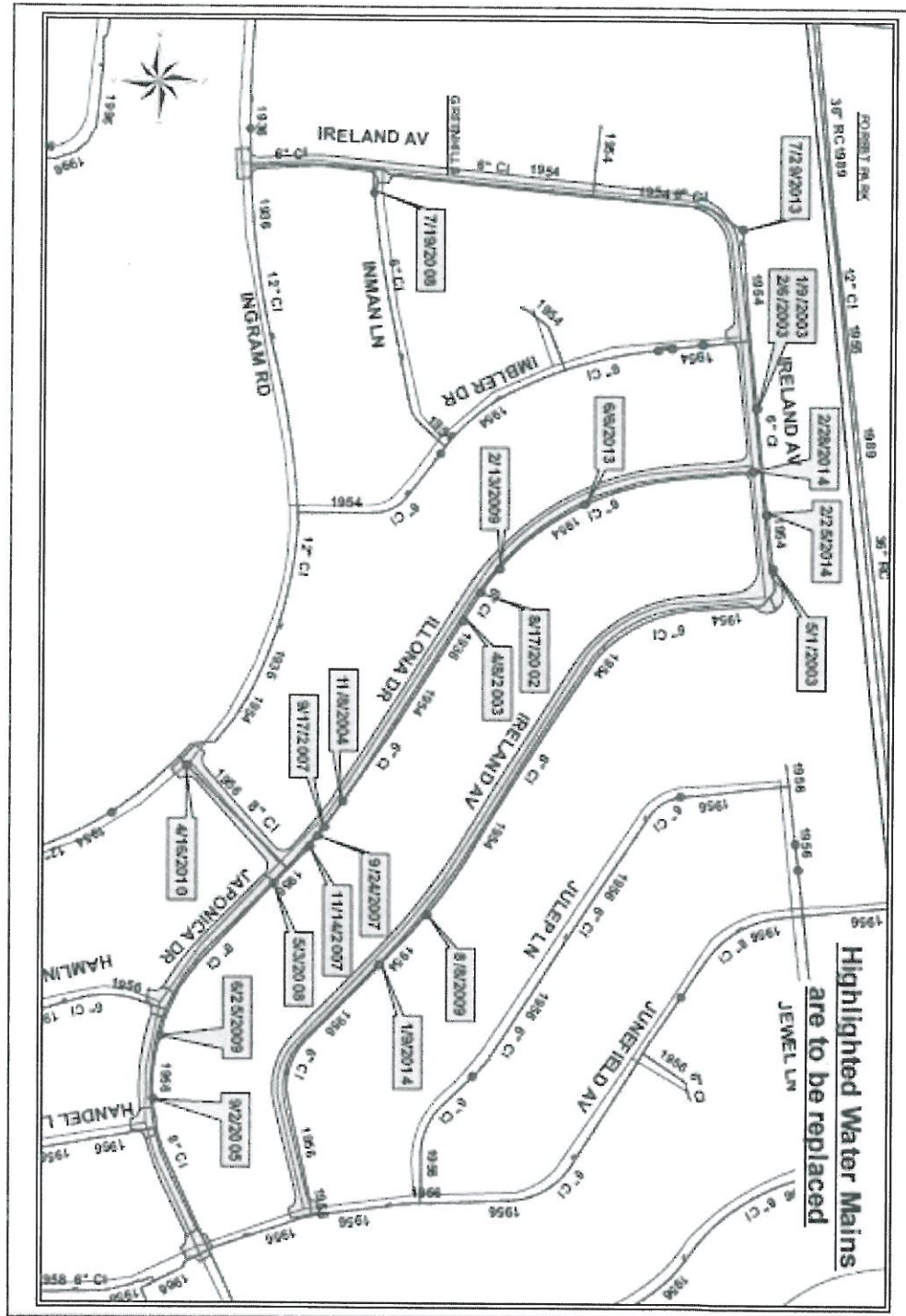
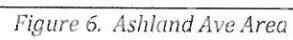


Figure 4. Langdon Farm Road







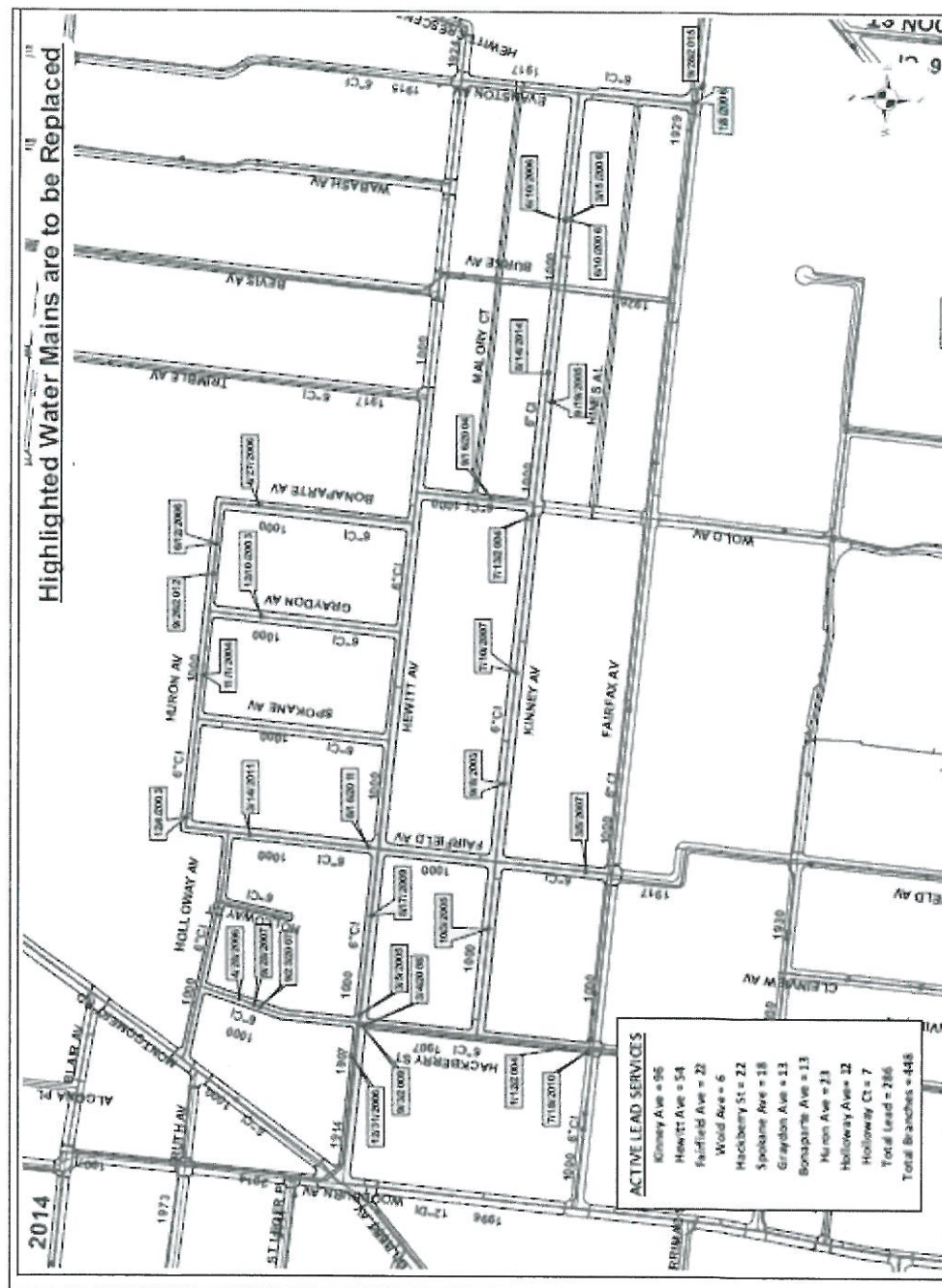


Figure 7. Kinney Ave