

# **Village of Carrollton, Ohio**

## **Public Water System Lead (Pb) Components**

**PWS#OH 100012**

**Prepared February 2017**

To comply with Section 6109.21 of the Ohio Revised Code, enacted in September 2016, the Village of Carrollton, the county seat of Carroll County, has created the following report and attached maps to identify known and potential components of its public water system that contain lead (Pb).

RCAP staff and the Carrollton water department met on February 24<sup>th</sup>, 2017 to review possible presence of lead in the service area. No applicable historical maintenance, or operational records were available to identify lead components. The water department has long maintained a set of tap cards that show the location of curb stop valves throughout the water system. These cards are primarily used for showing the location of the shutoff for individual structures. Not many of the tap cards include information about the material or age of the service line, however, in rare cases the material can be seen on the tap card. In addition, operators with extensive experience and knowledge of the system were present to provide the best knowledge of the system. Existing mapping and historical maintenance knowledge are the base of the institutional memory for the water distribution system. Lead component findings were identified by Carrollton water operators and recorded in a GIS database.

### **Service Lines and Ownership**

The Carrollton water department distributes water to 1,791 customers. The service area includes approximately 1,880 parcels. The system owns and maintains service lines from the water distribution main to the curb stop valve. The length of service line from the curb stop valve into the meter is owned and maintained privately by the water account holder. All of the publicly owned portions of service lines are copper. The private portions are a mix of copper, CTS plastic, and galvanized.

While the water distribution system existed before official lead mandates were put in place, the Carrollton Water Department is confident no lead service lines are present. Approximately 85% of the original system has been replaced. When replacement of mains is undergone the public side of the service line is replaced. The Village of Carrollton has regulations in place that require new service lines to be installed using ¾" to 2" type K copper or polyethylene, type 3304, CTS plastic pipe rated for 200 psi. The current regulations were adopted in 2001, but this was the standard operating procedure long before the adoption of the official legislation. Experienced operators currently in charge of maintaining the water distribution system have done replacement projects and repair work in all areas of the village and never uncovered any service line made of lead. It is common to replace faulty copper or galvanized service lines on the public side, but a lead line has never been found. Based on institutional knowledge and available information on tap cards, the Village of Carrollton considers the chance of the existence of lead service lines to be minimal, and believes all of its customers to have a very low probability of having a lead service line. Areas where service

lines come off the few remaining cast iron mains, that have not yet been replaced are the only ones with any risk of having a lead service line. The probability is still very low in these areas.

## **Distribution System**

Carrollton Water produces treated ground water and distributes potable water through approximately 40 miles of water main lines. The water distribution system was constructed between the 1930s and 2016. The system was constructed using copper, cast iron, ductile iron, Transite, SDR 21 PVC, and c900 PVC water pipe (all piping between 1 ¼" and 12"). Much of the original cast iron has been replaced and the system is now majority PVC. Replacement of more cast iron is scheduled for summer of 2017.

## **Water Meters and Indoor Plumbing**

None of the customer water meters contain lead. The Village of Carrollton did a meter replacement project in 2011 (See attached documentation). All meters were replaced with new models that conform to lead component standards (less than or equal to 8% lead).

Buildings in Ohio built prior to 1998 or that use plumbing material or solder manufactured before 1998 may have materials with greater than 8% lead and are at a higher risk of contributing lead to the drinking water than materials manufactured after 1998. Buildings built and plumbing materials manufactured after 2014 were required to have less than 0.25% lead by weight and have the lowest risk for contributing lead to the drinking water.

It should be noted however that, although prohibited, some use of leaded solder or leaded components may have occurred after the prohibitions became effective. According to Carroll county auditor records, 21 structures have been built since 2014. Those 21 should be completely free of plumbing with components containing greater than 0.25% lead, however, nearly all other buildings in Carrollton may have some percentage of lead in the plumbing components. The buildings that are most likely to contain a high percentage of plumbing with lead in it are in the historic district. Many of the buildings downtown Carrollton have been renovated since their original construction. The buildings in the historic district that have not had renovation done after 1986 are most at risk and most highly encouraged to inspect and self-report lead findings.

## **Customer Self-Reporting**

The information on this map regarding privately owned service lines is based on the limited information from the water system staff and Carroll County building and parcel data. Property owners are encouraged to inspect their own service lines entering the building if these are in anyway exposed, and notify the

Village of Carrollton water department if they have determined whether or not a lead service line exists. Please contact the Water Billing Clerk by emailing [vyost@villageofcarrollton.com](mailto:vyost@villageofcarrollton.com) or calling (330) 627-2411. A representative from the water department will contact you to confirm and update this information for the next map release.

## Contacts and Resources

If you have questions about known and potential lead components within the Village of Carrollton Public Water System, please contact:

Carrollton Water Department

Phone (330) 627-2411

Email [vyost@villageofcarrollton.com](mailto:vyost@villageofcarrollton.com)

For more information about lead service lines and their removal, we recommend the following resources:

- **The Lead Service Line Replacement Collaborative**  
<http://www.lslr-collaborative.org/resources-for-concerned-consumers.html>
- **Ohio EPA 'Learn About Lead' page**  
<http://epa.ohio.gov/pic/lead.aspx>
- **US EPA Lead in Drinking Water Information Page**  
<https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water>

# Village of Carrollton Public Water Distribution System Lead Components and Lead Service Lines Map

*The following map(s) does not verify the presence of lead in any of the lines or structures shown. This map only shows the probable or possible locations based on the year that the structure was built, historical maintenance and operation records, and customer or utility staff verification.*

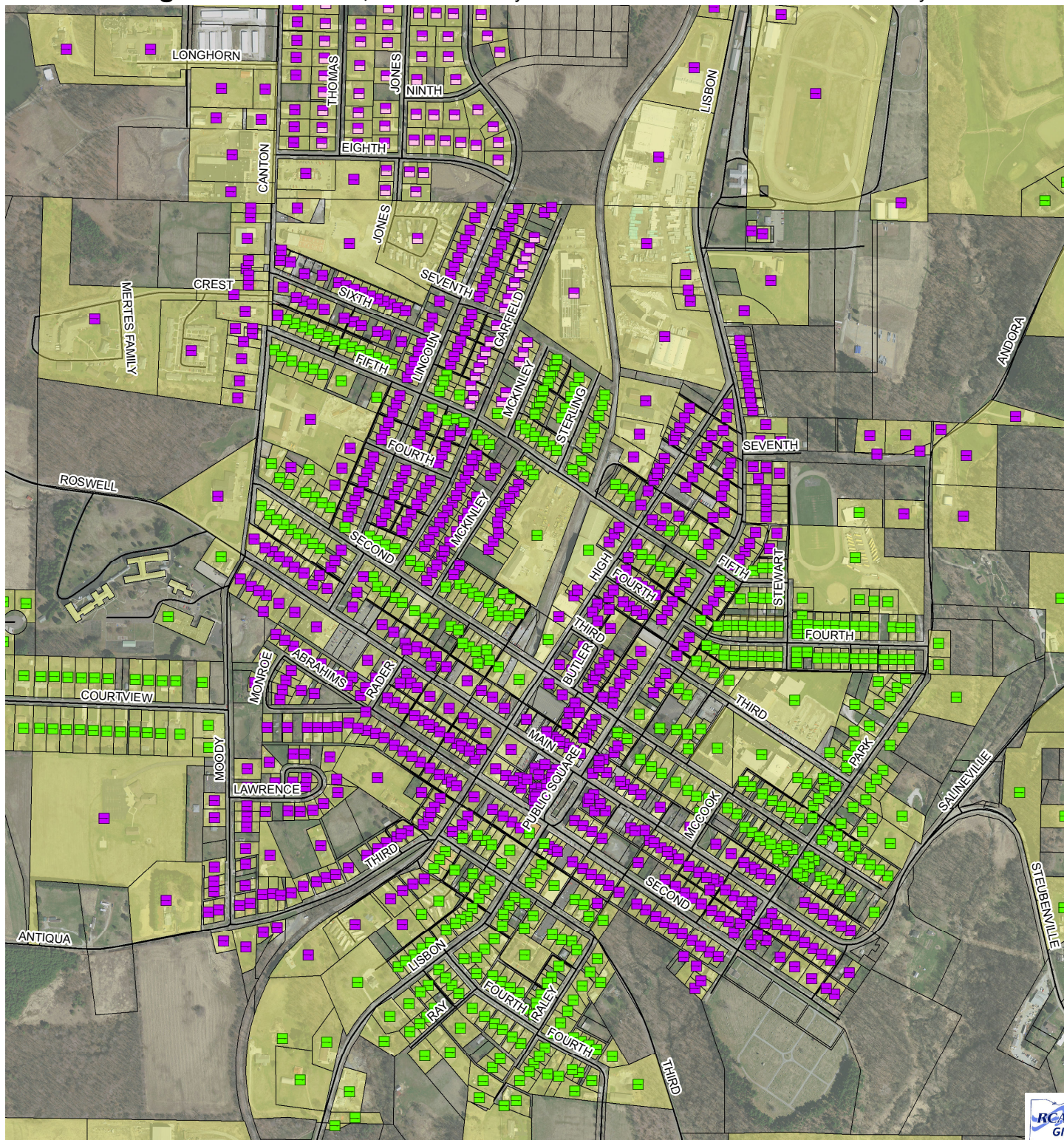
*This map is not intended for design engineering, surveying, or construction purposes. Information and data contained or accessed within this map emanates from various public and private sources and may contain errors and omissions*

*All data, information and documentation within this map are provided "as is" without warranty of any kind, either expressed or implied. The suitability of the data and information contained in this map is not guaranteed, and the user assumes all risk for such uses. WSOS Community Action and its employees, affiliates, agents and licensors cannot and do not warrant the accuracy, completeness, non-infringement, merchantability or fitness of any information contained within this map.*

*GIS Data Sources: OGRIP, OSIP, Carroll County Auditor, RCAP GIS. Datum/Projection: NAD 1983 Ohio State Plane North (ft) Date: 3/1/2016*



# Village of Carrollton, OH Probability of Lead Service Lines in Water Distribution System



0 625 1,250 2,500 Feet

Symbol representing single service line

Public Ownership of Line  
Private

## Probability of Lead Service Line

Determined by maintenance history

Moderate  
Low

## Material of Service Line Known

Lead  
Non-Lead

Carrollton Service Area Parcels

## Service Area Overview

Page  
Shown:  
Downtown

1 of 4

Created for use by The Village of Carrollton  
By RCAP GIS Team  
March 1, 2017

Buildings in Ohio built prior to 1998 or that use plumbing material or solder manufactured before 1998 may have materials with greater than 8% lead and are at a higher risk of contributing lead to the drinking water than materials manufactured after 1998.

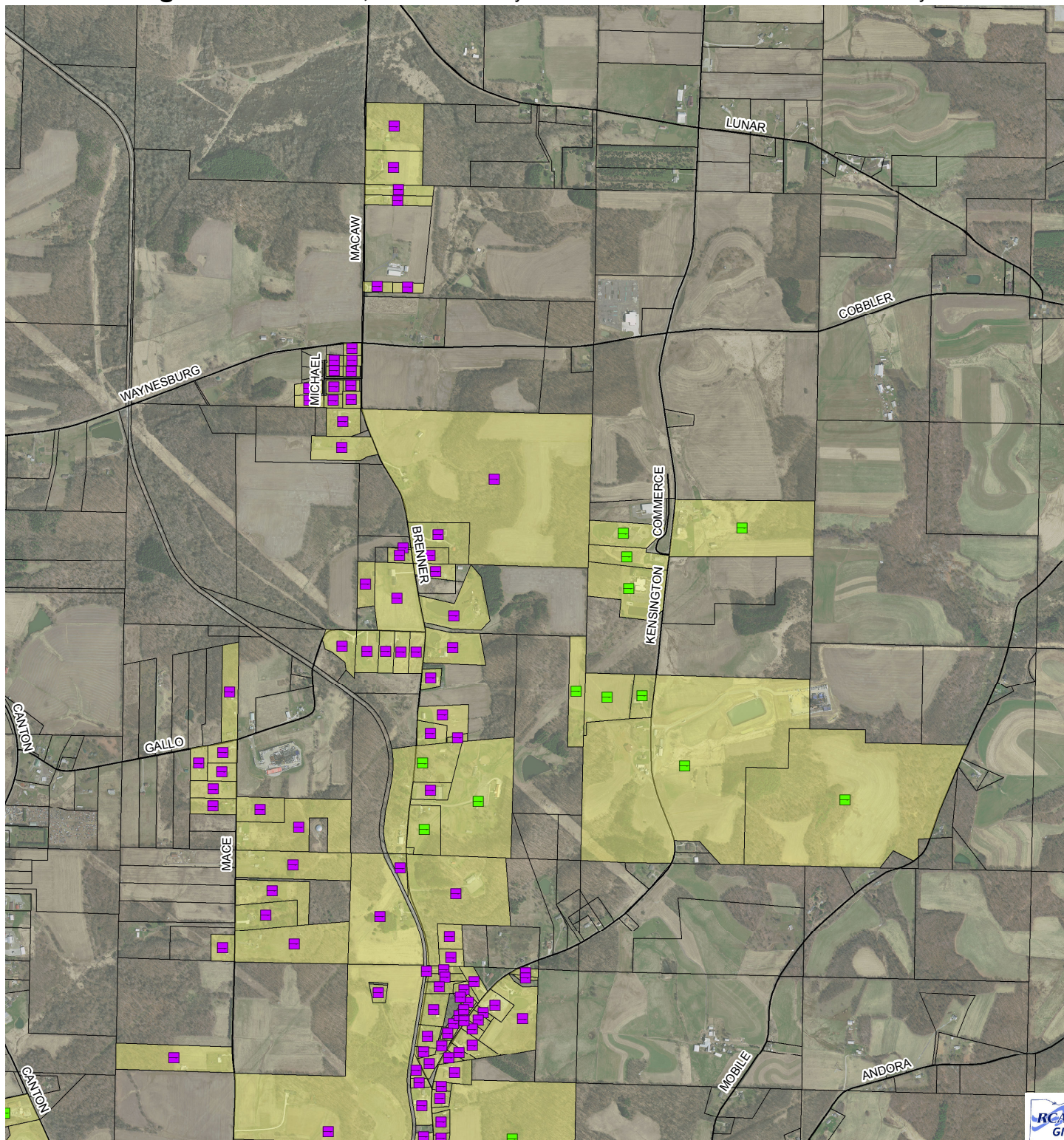
In addition, buildings built and plumbing materials manufactured after 2014 were required to have less than 0.25% lead by weight and have the lowest risk for contributing lead to the drinking water. It should be noted however that, although prohibited, some use of leaded solder or leaded components may have occurred after the prohibitions became effective.

Coordinate System:

NAD 1983 StatePlane Ohio North FIPS 3401 Feet  
Data Sources:  
Village of Carrollton, Carroll County, RCAP GIS Team,  
ESRI, OGRIP, OSIP, TIGER Lines



# Village of Carrollton, OH Probability of Lead Service Lines in Water Distribution System



0 1,250 2,500 5,000 Feet

Symbol representing single service line

Public Ownership of Line  
Private



## Probability of Lead Service Line

Determined by maintenance history

Moderate  
Low

## Material of Service Line Known

Lead  
Non-Lead

Carrollton Service Area Parcels



Service Area Overview

Page Shown:  
North

2 of 4

Created for use by The Village of Carrollton  
By RCAP GIS Team  
March 1, 2017

Buildings in Ohio built prior to 1998 or that use plumbing material or solder manufactured before 1998 may have materials with greater than 8% lead and are at a higher risk of contributing lead to the drinking water than materials manufactured after 1998.

In addition, buildings built and plumbing materials manufactured after 2014 were required to have less than 0.25% lead by weight and have the lowest risk for contributing lead to the drinking water. It should be noted however that, although prohibited, some use of leaded solder or leaded components may have occurred after the prohibitions became effective.

Coordinate System:

NAD 1983 StatePlane Ohio North FIPS 3401 Feet  
Data Sources:  
Village of Carrollton, Carroll County, RCAP GIS Team,  
ESRI, OGRIP, OSIP, TIGER Lines



Village of Carrollton, Ohio  
Carroll County  
Notes to the Financial Statements  
For the Year Ended December 31, 2011 (Continued)

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The Ohio Public Works Commission (OPWC) Loan CN943 relates to construction of the well field transmission line from the village well sites into the water treatment plant. The loan was issued August 30, 1995 in the amount of \$152,438 at the rate of 0% interest for 20 years. The loan will be repaid in semi-annual installments of \$3,812 over 20 years, payable on January 1 and July 1 of each year. The loan is secured by water receipts. The Village has agreed to set utility rates sufficient to cover OPWC debt service requirements.

The Ohio Public Works Commission (OPWC) Loan CN738 relates to a downtown water line improvement project for the replacement of waterlines in the downtown area. The loan was issued on April 15, 1994 in the amount of \$17,700 at 0% interest for 20 years. The loan will be repaid in semi-annual installments of \$443 over 20 years, payable on January 1 and July 1 of each year. The loan is secured by water receipts. The Village has agreed to set utility rates sufficient to cover OPWC debt service requirements.

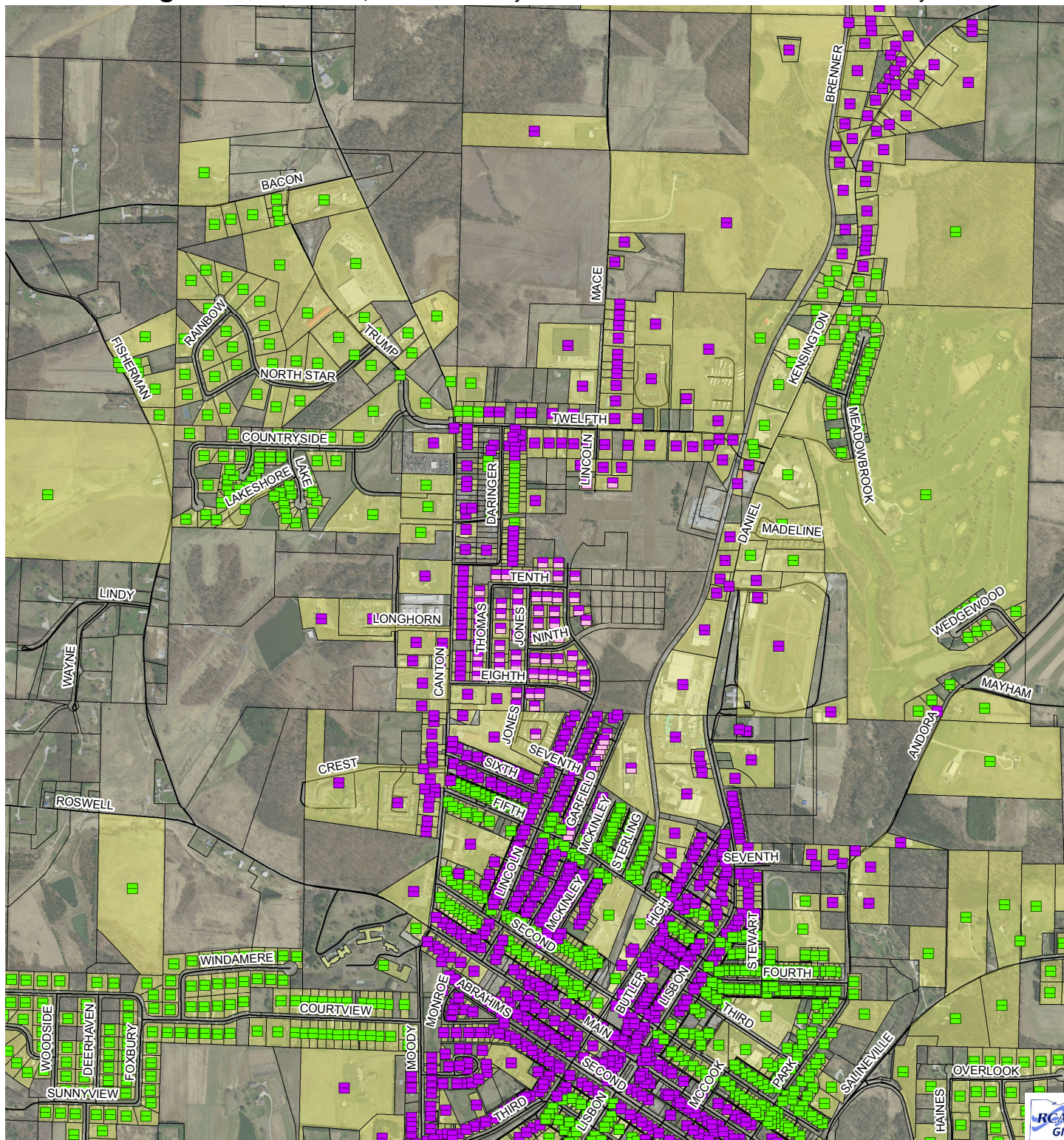
The Ohio Public Works Commission (OPWC) Loan CT72M relates to installation of new water tanks and meter upgrades for users of Village water. The loan was issued March 6, 2009 in the amount of \$500,000 at 0% interest for 30 years. The project was completed in 2010. The loan will be repaid in semi-annual installments of \$8,333 over 30 years, payable January 1 and July 1 of each year. The loan is secured by water receipts. The Village has agreed to set utility rates sufficient to cover OPWC debt service requirements.

The Ohio Water Development Authority (OWDA) Water Pollution Control Loan Fund (WPCLF) #4926 relates to the wastewater treatment plant replacement project for the Village. The loan was issued June 26, 2008 in the amount of \$467,858 at 1% interest for 5 years. The loan is secured by sewer receipts. The Village has agreed to set utility rates sufficient to cover OWDA debt service requirements. The project is still under construction and funds received thus far are for reimbursement of expenses incurred. Therefore, the Village's liability for this loan, as of December 31, 2011 is for the amounts forwarded to the Village as of this date. Although these payments are made when invoices are received by OWDA, no "temporary" amortization schedule has been provided. These liabilities are not reflected within the accompanying summary of the Village's future annual debt service requirements for long-term debt. A scheduled principle payment of \$46,432 was made in 2011 and at December 31, 2011, the loan balance was \$207,545.

The Ohio Water Development Authority (OWDA) Loan #5127 relates to the water system improvements for replacement of water tanks and water meters. The loan was issued June 25, 2009 in the amount of \$1,105,384 at the rate of 1.5% interest for 30 years with a maturity date of January 1, 2040. The loan is secured by sewer receipts. The Village has agreed to set utility rates sufficient to cover OWDA debt service requirements. The loan will be re-paid in semi-annual installments in an amount invoiced by OWDA, payable January 1 and July 1 of each year. Principal payments made in 2011 were \$29,864 and interest payments paid in 2011 were \$16,028. Although these payments are made when invoices are received by OWDA, no "temporary" amortization schedule has been provided. These liabilities are not reflected within the accompanying summary of annual debt service requirements for long-term debt.



# Village of Carrollton, OH Probability of Lead Service Lines in Water Distribution System



0 1,000 2,000 4,000 Feet

Symbol representing single service line

Public Ownership of Line  
Private



## Probability of Lead Service Line

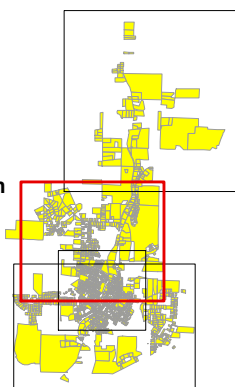
Determined by maintenance history

Moderate  
Low

## Material of Service Line Known

Lead  
Non-Lead

Carrollton Service Area Parcels



Service Area Overview

Page Shown:  
Central

3 of 4

Created for use by The Village of Carrollton  
By RCAP GIS Team  
March 1, 2017

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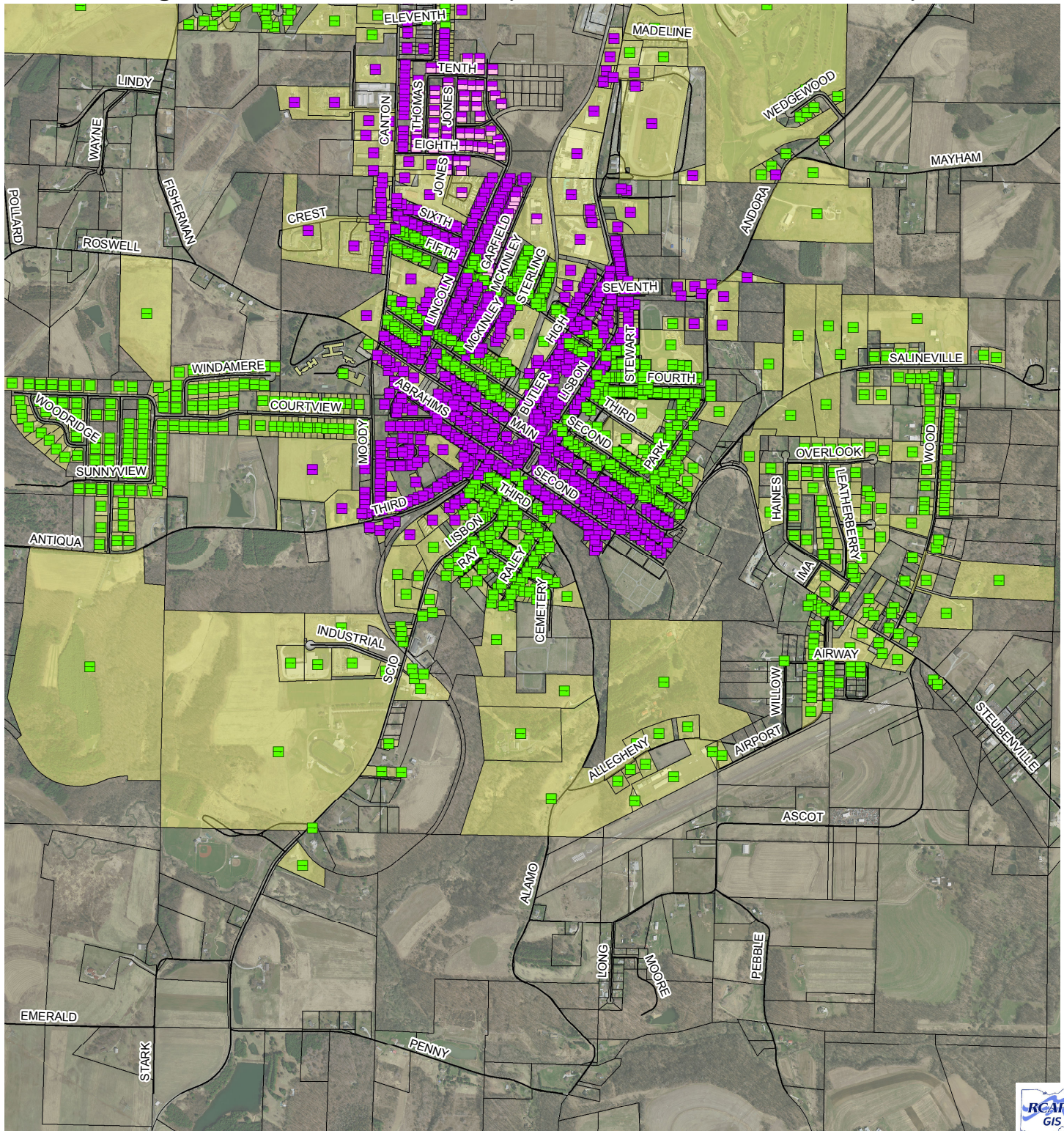
Coordinate System:

NAD 1983 StatePlane Ohio North FIPS 3401 Feet  
Data Sources:  
Village of Carrollton, Carroll County, RCAP GIS Team, ESRI, OGRIP, OSIP, TIGER Lines





# Village of Carrollton, OH Probability of Lead Service Lines in Water Distribution System



0 1,300 2,600 5,200 Feet

Symbol representing single service line

Public Ownership of Line  
Private



## Probability of Lead Service Line

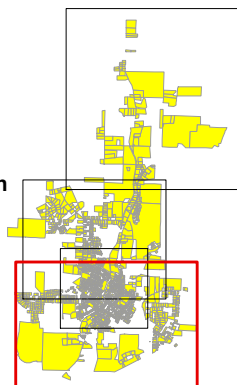
Determined by maintenance history

Moderate  
Low

## Material of Service Line Known

Lead  
Non-Lead

Carrollton Service Area Parcels



Service Area Overview

Page Shown:  
South

4 of 4

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By RCAP GIS Team  
March 1, 2017

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Coordinate System:

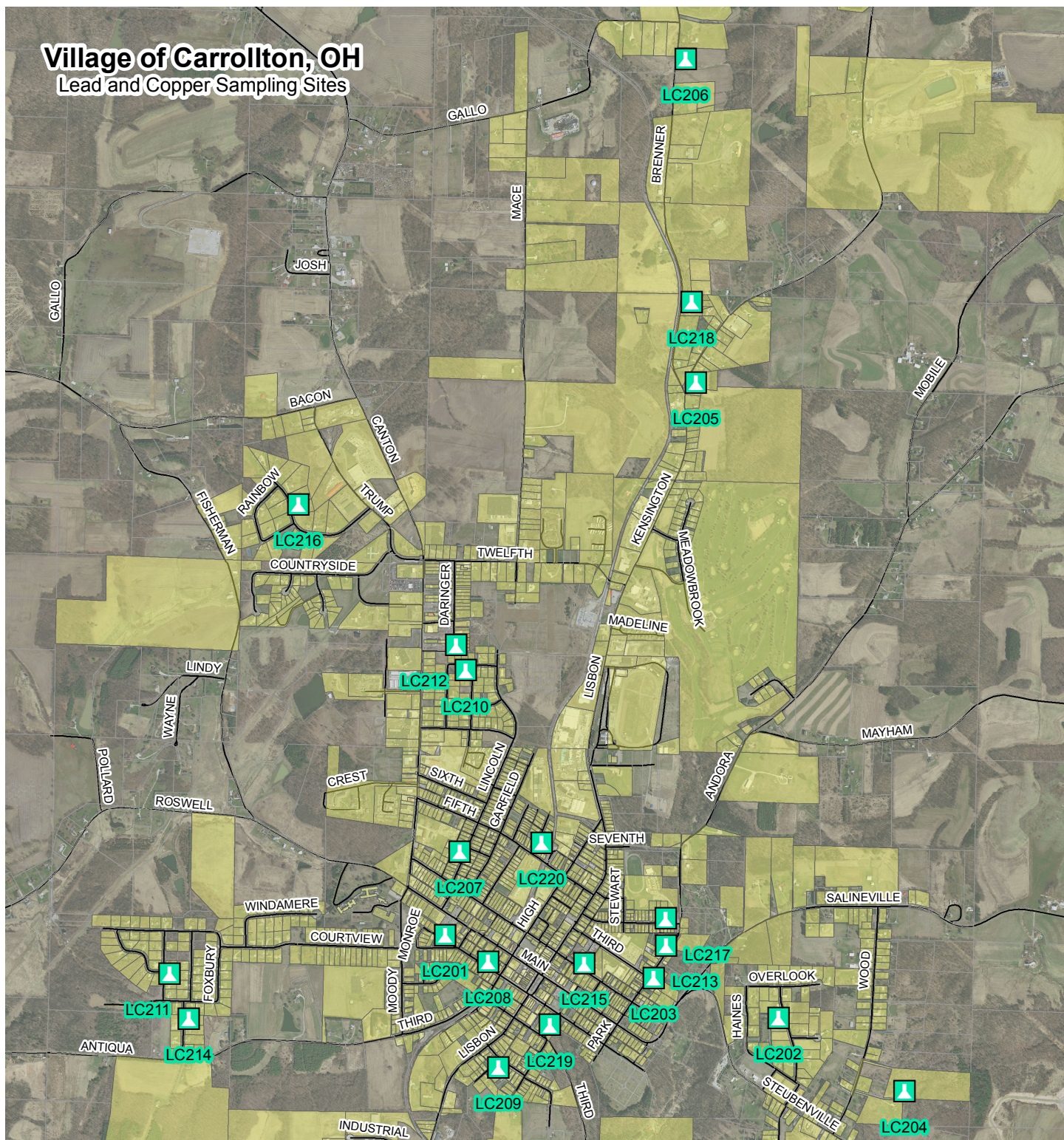
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Data Sources:  
Village of Carrollton, Carroll County, RCAP GIS Team, ESRI, OGRIP, OSIP, TIGER Lines





# Village of Carrollton, OH

## Lead and Copper Sampling Sites



0 1,250 2,500 5,000 Feet



Lead & Copper Sampling Sites



Carrollton Service Area Parcels



**Village of**

**Carrollton**

**Developers Sub-Division  
Plan Requirements**

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**Standard Details**

Adopted: September 14, 2001

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**Kevin Brooks, Village Administrator**

# Village of Carrollton

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of

Developers Sub-Division Plan Requirements

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**VILLAGE OF CARROLLTON**  
**CHAPTER 1**  
**GENERAL STANDARDS**

1. Developer or developer's designer to obtain all required permits from local and/or state regulatory agencies having jurisdiction over these types of facilities. (I.e.: Ohio EPA for approval of water and sewer systems, and Ohio Basic Building Code, Division of Factory and Building for any pump stations, etc.) Provide the VILLAGE ADMINISTRATOR with copies of approval letters.
2. Designer to obtain Ohio EPA Storm water permit if the scope of the project is within EPA permit limits and forward copy to VILLAGE ADMINISTRATOR.
3. Developer's designer shall contact the Village Water and Wastewater Superintendents to verify available capacity for additional loading to systems at the point of connection to the existing water or sewer system.
4. Verify with Water Superintendent whether project will fall within limits of article 921.03 of the Codified Ordinances of the Village of Carrollton.
5. Developer is responsible for verifying or obtaining all of the latest copies of the Village's appropriate standards and standard details, as they are occasionally updated and revised. Incorporate the necessary standard details into the plan sheets, include the title and the date of the standard. This will aid the Village in filing and for future reference in knowing which standard was in effect at time of construction.
6. Developer is responsible for verifying if project is within a flood hazard area as determined by FEMA flood maps on file with village. If project falls within flood area, developer must comply with provisions in chapter 1349 of VILLAGE OF CARROLLTON codified ordinances.
7. Include date, scale, sheet title, name of project and names of persons and firm preparing plans in title block.
8. Include North arrows on appropriate plan sheets.
9. Plan and Profile sheet's horizontal scale should be no smaller than 50 scale with a vertical scale no smaller than 5 feet to the inch.
10. Show all permanent utility easements outside roadway right of way or on private property. Easements shall be 15' minimum width unless more is needed. All permanent easements shall be recorded at Carroll County tax map office.
11. Include roadway typical section on plan.
12. Proposed streets with properties on both sides to be ~~forty~~ (60) foot minimum right of way unless previously approved by village.
13. All properties to have twenty-five (25) foot minimum frontage in accordance with village standards.
14. Include certification from Developer's designer or Engineer insuring that site soil conditions are adequate for proposed construction. If site has previously been underground mined, additional documentation regarding mining operations in the area will be required. The VILLAGE ADMINISTRATOR reserves the right to require additional subsurface information if the site history is questionable.

**VILLAGE OF CARROLLTON**  
**CHAPTER 2**  
**WATER STANDARDS**

1. All water mains to be 8" minimum diameter, unless looping or gridding of 6" size is accomplished in the network area. Other special conditions or circumstances might also warrant a smaller than 8" size. Any decrease in size from 8" minimum to be approved by Village Water Superintendent, processing through the VILLAGE ADMINISTRATOR'S office.
2. All water main pipe to be plastic, Polyvinyl Chloride (PVC) C-900, DR-18 or ductile iron, class 52.
3. All water pipe to have sand bedding all around in accordance with village standard SD-116.
4. All ductile iron water pipe installed in acidic soil will be encased with polyethylene wrap.
5. Provide a fire hydrant assembly with concrete anchor block at each dead end of waterline. See standard detail SD-140.
6. Provide mainline water valves no more than 500 foot maximum spacing.
7. Install valve & valvebox each leg at all intersections with water lines in three or more directions.
8. Service lines: ¾"- 2" diameter, Type "K" copper, or polyethylene, type 3304, CTS, 200 psi.
9. Corporation Stops: "Mueller", flare fitting. (H-15204) or "Ford" (Z44-333).
10. Curb Stops: "Ford", (Z44-333).
11. Curb Boxes: 2-piece, 40"-60" bury - shaft screw service box.
12. 2" Roadway Box: 4½" shaft, 39"-54" round cast iron.
13. Mainline Valve: "Mueller", AWWA C-509, Resilient wedge, cast iron, non-rising stem, open left
14. Mainline Valve Box: 5¼" shaft, three piece valve box, 36"-48" cast iron.
15. Provide back-flow preventers when necessary in accordance with water superintendent and article 921.03 of the Village's codified ordinances.
16. On plans, show all service tap locations , curb stop and box for each property.
17. Include brand names and model numbers along with material, construction and testing specifications on plans.
18. Maintain all clearances between water lines and sanitary sewers, both in lateral and crossing locations as required by Ohio EPA.
19. All tapping valves and sleeves connecting to an existing waterline will be installed by village forces. The cost of materials and labor will be billed back to the Developer.

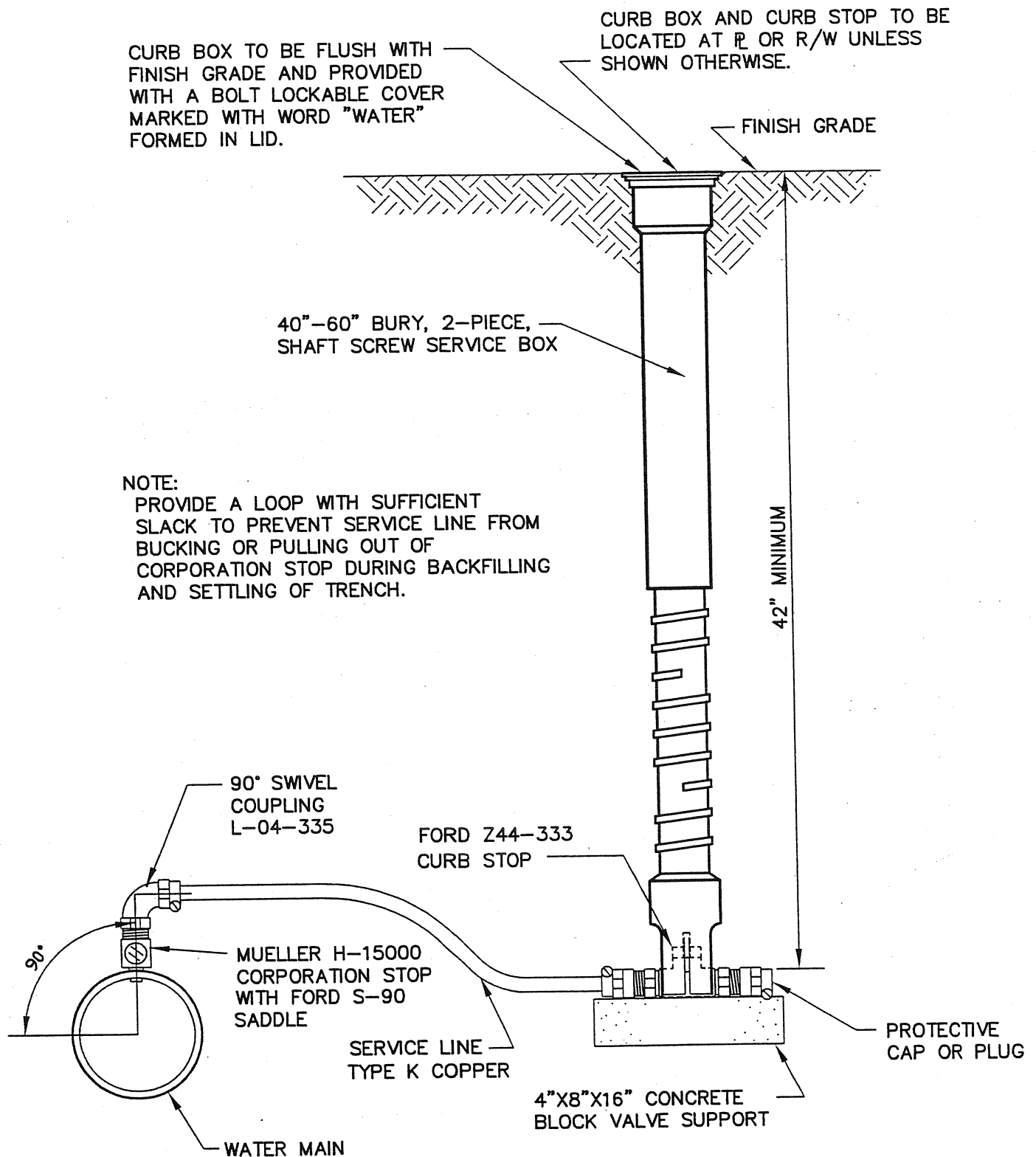
**VILLAGE OF CARROLLTON**  
**CHAPTER 2**  
**WATER STANDARDS - CONTINUED**

20. All water main to have a concurrent leakage and pressure test applied after installation in accordance with AWWA C600 standards using the following formula.

$$L = SD \sqrt{P} \div 133,200$$

Where:

- $L$  = allowable leakage, in gallons per hour
  - $S$  = length of pipe tested, in feet
  - $D$  = nominal diameter of the pipe, in inches
  - $P$  = average test pressure during the leakage test,  
in pounds per square inch (gauge)
21. All new and replacement water lines must be inspected by the Water/Sewer Superintendent or authorized personnel before being covered.
22. Refer to Village's Standard Details for additional information.



# VILLAGE OF CARROLLTON

TYPICAL SERVICE LINE  
AND SERVICE STOP SETTING

STANDARD  
CONSTRUCTION  
DETAIL NO.

SD-139

REV. 9-01