

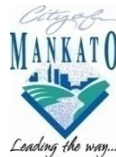
Lead Service Line Replacement Project

Phase 1

Project Feasibility Report

City Project Number 11213

July 20, 2026



Project Feasibility Report

Lead Service Line Replacement Project – Phase 1

City Project Number 11213

City of Mankato

I. TABLE OF CONTENTS

I.	TABLE OF CONTENTS	2
II.	CERTIFICATION PAGE.....	3
III.	PROJECT CONTACTS.....	3
IV.	EXECUTIVE SUMMARY	4
V.	PROJECT INTRODUCTION.....	4
VI.	EXISTING CONDITIONS.....	5
A.	PROJECT AREA.....	5
VII.	PROPOSED IMPROVEMENTS	6
A.	LEAD SERVICE LINE REPLACEMENT	6
B.	STREET RESURFACING.....	7
C.	LAWN RESTORATION.....	7
D.	OTHER UTILITIES.....	7
VIII.	PUBLIC ENGAGEMENT.....	7
A.	OPEN HOUSE MEETINGS	7
B.	MAIL NOTICES.....	8
C.	PROJECT COMMUNICATIONS.....	8
IX.	RIGHT-OF-WAY AND EASEMENT	8
A.	TEMPORARY CONSTRUCTION EASEMENTS	8
B.	RESTORATION OF PRIVATE PROPERTY	8
X.	PERMITS	9
XI.	PROJECT COST ESTIMATE AND FINANCING.....	9
XII.	POSSIBLE SCHEDULE.....	9
XIII.	CONCLUSION AND RECOMMENDATIONS.....	10
XIV.	APPENDIX	10

Figure No. 1 – Overview Location Map

Figure No. 2 – Property Index (Sheets G4.01, G4.02, G4.03)

Figure No. 3 – Typical Details/Sections (Sheet C1.01)

Project Feasibility Report

Lead Service Line Replacement Project – Phase 1
City Project Number 11213
City of Mankato

I. CERTIFICATION PAGE

CERTIFICATION

I hereby certify that this report was prepared by me or under my direct supervision and that I am a duly registered professional engineer under the laws of the state of Minnesota.



Gunnar S. Kern, P.E.
License Number: 62869
Project Manager

Date: July 20, 2026

II. PROJECT CONTACTS

TITLE	NAME	PHONE	EMAIL
Mayor	Najwa Massad	507.387.9693	nmassad@mankatomn.gov
Councilor at Large	Mike Laven	507.720.8674	mlaven@mankatomn.gov
Councilor Ward 1	Michael McLaughlin	507.720.1093	mmclaughlin@mankatomn.gov
Councilor Ward 2	Dennis Dieken	507.720.1817	ddieken@mankatomn.gov
Councilor Ward 3	Kevin Mettler	507.995.0070	kmettler@mankatomn.gov
Councilor Ward 4	Jenn Melby-Kelley	507.720.2502	jmelby-kelley@mankatomn.gov
Councilor Ward 5	Jessica Hatanpa	507.613.8067	jhatanpa@mankatomn.gov
City Manager	Susan Arntz	507.387.8695	sarntz@mankatomn.gov
Director of Administrative Services	Parker Skophammer	507.387.8739	pskophammer@mankatomn.gov
City Engineer	Cory Bienfang	507.387.8643	cbienfang@mankatomn.gov
Construction & Facilities Services Director	Jim Tatge	507.387.8504	jtatge@mankatomn.gov
Construction Manager	Luke Pederson	507.387.8541	Lpederson@mankatomn.gov
Project Engineer	Drew Weber	507.496.0306	drew.weber@bolton-menk.com
Project Engineer	Gunnar Kern	507.740.0174	gunnar.kern@bolton-menk.com
Associate Director of Public Utilities	Kyle Hinrichs	507.387.8588	khinrichs@mankatomn.gov

Project Feasibility Report

Lead Service Line Replacement Project – Phase 1

City Project Number 11213

City of Mankato

III. EXECUTIVE SUMMARY

The City of Mankato's 2026 Lead Service Line (LSL) Replacement Project is a targeted public health and infrastructure initiative focused on continuing the removal of lead-based water service lines throughout the community. In alignment with regulatory requirements under the Environmental Protection Agency's (EPA) Lead and Copper Rule Revisions (LCRR) and Lead and Copper Rule Improvements (LCRI), the project supports the City's ongoing commitment to safe drinking water and protection of public health.

Due to current state funding constraints for grant availability, the 2026 project will be a limited-scope effort with a total project budget capped at \$1 million. As a result, the City anticipates replacing approximately 40 to 60 lead service lines during this phase. This will be the first phase of the City's multi-year program to eliminate lead and galvanized service lines.

Project priorities will focus on areas with confirmed or suspected lead service lines, as well as locations that present opportunities for efficient construction or coordination with other utility improvements. The scope includes the replacement of all lead and galvanized service line sections from the water main to the water meter inside the building, surface restoration, customer coordination, and updates to the City's service line inventory to support ongoing regulatory compliance.

Construction is scheduled to begin in Fall 2026, with completion anticipated by June 2027. This extended construction window will allow for phased implementation, improved contractor efficiency, and better coordination with seasonal conditions and other infrastructure projects, while minimizing disruption to residents.

The City will continue to emphasize equitable participation by leveraging available state funding and minimizing financial barriers for property owners wherever possible. Proactive communication and outreach will ensure residents are informed of project benefits, timelines, and participation requirements.

Key outcomes of the Phase 1 Lead Service Line Replacement Project include:

- Removal of 40–60 lead service lines from the drinking water system
- Compliance with current and anticipated state and federal regulations
- Incremental progress toward full system-wide lead service line replacement

The Phase 1 project represents an important step in Mankato's long-term commitment to public health, regulatory compliance, and the delivery of safe, reliable drinking water.

IV. PROJECT INTRODUCTION

The City of Mankato is undertaking a Lead Service Line (LSL) Replacement Project as part of its continued commitment to providing safe, high-quality drinking water and protecting public health. Lead and galvanized service lines, which were historically used in water system construction, represent a potential source of lead exposure in drinking water and have become a national priority for removal under evolving federal and state regulations.

In response to the U.S. Environmental Protection Agency's (EPA) Lead and Copper Rule Revisions (LCRR) and Lead and Copper Rule Improvements (LCRI) under the authority of the Safe Drinking Water Act, the City has developed a comprehensive program to identify, prioritize, and replace remaining lead and galvanized service lines within its distribution system. The LCRR, finalized by EPA in 2021, strengthened the original Lead and Copper Rule by requiring water systems to develop service line inventories, improve public notification, enhance sampling protocols, and support earlier

Project Feasibility Report

Lead Service Line Replacement Project – Phase 1

City Project Number 11213

City of Mankato

action to reduce lead exposure. The LCRI, finalized by EPA in 2024, further strengthens these requirements by establishing a national framework for full lead service line replacement, improving testing and public communication, and lowering the lead action level beginning with the 2027 compliance period. Together, these federal rules guide the City's ongoing inventory development, customer outreach, replacement planning, and implementation of lead service line replacement projects. This effort builds upon previous inventory development and verification work, which established the foundation for targeted replacement planning.

The Phase 1 project represents a focused, near-term phase within the City's broader, multi-year strategy to eliminate lead service lines. Due to current state funding limitations, the scope of this project is constrained to approximately 40 to 60 lead service line replacements, with a total project budget of approximately \$1 million. Despite its limited scale, this phase is critical for maintaining progress toward regulatory compliance and reducing potential risks to residents.

The project includes the replacement of all lead and galvanized service line sections from the water main to the water meter inside the building, along with associated restoration, customer coordination, and documentation updates. Galvanized service lines are known to contain lead components and are considered lead service lines as part of LSL Replacement Projects.

Construction is scheduled to begin in Fall 2026 and conclude in June 2027, allowing for efficient implementation and coordination with seasonal construction conditions.

This feasibility report evaluates the technical, financial, and operational considerations associated with the Phase 1 Lead Service Line Replacement Project and provides recommendations to guide project implementation. The report also supports the City's ongoing efforts to secure funding, optimize construction approaches, and ensure equitable participation among affected property owners.

It is expected that up to 8 phases of Lead Service Line Replacement Projects will be executed over the next 8 years, assuming State and Federal Funding will continue to be provided for these efforts.

Overall, the 2026 project represents an important step in Mankato's long-term effort to protect public health, meet regulatory requirements, and modernize critical drinking water infrastructure. Under MDH guidance, all lead service lines are expected to be replaced by 2033, and this project will help the City continue making measurable progress toward that deadline.

V. EXISTING CONDITIONS

A. PROJECT AREA

The Phase 1 Lead Service Line Replacement Project is primarily focused within the West Mankato neighborhood, an established residential area characterized by older housing stock where lead service lines are more likely to be present due to historic construction practices. Portions of this neighborhood were developed during periods when lead service materials were commonly used, resulting in a higher probability of remaining lead services within the distribution system.

Within the broader West Mankato area, targeted service replacements are anticipated in locations where prior inventory efforts have identified known or suspected lead service lines. In addition, there is notable replacement potential near and just east of Stolzman Road, where records and field verification indicate the presence of service lines that may contain lead and galvanized material. These areas provide an opportunity for efficient grouping of replacements, improving construction productivity, and minimizing disruption.

Project Feasibility Report

Lead Service Line Replacement Project – Phase 1

City Project Number 11213

City of Mankato

The project area has been selected based on EPA prioritization to maximize the effectiveness of limited funding by focusing on:

- Areas with children under the age of five
- Service lines that provide drinking water to schools, licensed childcare facilities, or other properties to be used by disproportionately large numbers of children.
- Clusters of known or suspected lead service lines
- Areas with favorable access and constructability
- Locations that support efficient service replacements within a defined geographic area

The selected West Mankato project area also allows the City to continue refining its service line inventory through field verification conducted during construction. This information will be used to support future phases of the City's lead service line replacement program.

Overall, the West Mankato neighborhood, including areas near and east of Stolzman Road, represents a practical and strategic focus area for the phase 1 project, balancing public health priorities, regulatory requirements, and cost-effective implementation.

VI. PROPOSED IMPROVEMENTS

The proposed project includes replacement of the existing water service lines, associated surface restoration, and roadway improvements. Key project components are described below.

A. LEAD SERVICE LINE REPLACEMENT

All existing lead service lines within the project address list will be replaced from the water main in the street to the meter location within each residence. Replacement services will consist of HDPE piping in accordance with local municipal and plumbing code requirements.

Service replacements will be coordinated with property owners to minimize disruption. Lead service line replacement will be completed using a combination of open trenching and trenchless installation methods, depending on site conditions:

- **Open Cut Installation:**
Conventional trenching will be used in areas where surface restoration is required or where subsurface conflicts necessitate direct excavation.
- **Trenchless Installation (Boring/Pulling):**
Where practical, trenchless methods such as horizontal boring or pneumatic piercing tools will be used to minimize disturbance to landscaping, driveways, and interior floor slabs.

The contractor will be responsible for evaluating each service location and selecting the most appropriate method while maintaining compliance with project specifications.

Where lead service replacement requires access through basement or slab-on-grade floors, the contractor will be expected to do the following per project specifications:

- Sawcut existing concrete floor neatly to minimize damage beyond the excavation area
- Remove and temporarily store excavated material as needed
- Backfill excavation with properly compacted granular material
- Restore the concrete floor to match existing thickness and strength
- Finish the surface to a smooth condition consistent with the surrounding floor

Project Feasibility Report

Lead Service Line Replacement Project – Phase 1
City Project Number 11213
City of Mankato

B. STREET RESURFACING

Following completion of underground work, street restoration will include full-width resurfacing within the project limits. Improvements will consist of:

- Removal/Replacement of existing street pavement, curb and gutter, driveways, and public sidewalks, as necessary.
- Placement of a uniform pavement overlay across the entire street width
- Adjustment of valves, manholes, and utility structures to final grade

Full-width resurfacing is intended to provide a uniform driving surface, improve pavement longevity, and eliminate patchwork inconsistencies resulting from utility construction.

C. LAWN RESTORATION

Disturbed turf areas within the public right-of-way and private properties will be restored after construction. Restoration shall include:

- Placement of topsoil to match existing grades
- Fine grading to eliminate ruts and settlement
- Seeding with an approved grass seed mix suitable for the region (or sod placement where specified)
- Erosion control measures, including mulch or blanket, as necessary

The contractor will initially be responsible for establishing a healthy stand of grass and may be required to perform additional maintenance or reseeding if initial growth is unsuccessful.

D. OTHER UTILITIES

This project does not include the replacement, rehabilitation, or modification of existing sanitary sewer or storm sewer service lines. All existing sanitary and storm sewer services will remain in place and are not part of the proposed improvements.

If unforeseen conflicts or damages to these utilities occur during construction, the contractor shall notify the engineer immediately and coordinate appropriate repairs in accordance with project specifications and municipal requirements.

The design of the proposed improvements will be coordinated with the owners of private utilities such as natural gas, electric, telephone, and cable television. If private utilities are in conflict with the service line replacement, the appropriate utility will be contacted prior to excavation.

VII. PUBLIC ENGAGEMENT

Public engagement for the Phase 1 project area has been an important component of project development to ensure that residents are informed and have opportunities to provide input.

A. OPEN HOUSE MEETINGS

Two public open house meetings are planned to communicate project information and gather feedback:

- **June 23, 2026, Pre-Bid Open House:**
An initial open house was held on June 23, 2026, to introduce the project, present the proposed improvements, and explain anticipated construction activities and timelines. Property owners were provided the opportunity to ask questions and discuss potential impacts directly with engineers and city staff.

Project Feasibility Report

Lead Service Line Replacement Project – Phase 1
City Project Number 11213
City of Mankato

- **Fall 2026 Pre-Construction Open House:**

A second open house is to be scheduled for September 2026 to provide updated project information prior to construction and introduce construction personnel. This meeting will focus on final construction details, construction sequencing, timeline, and addressing any remaining concerns from residents.

B. MAIL NOTICES

Project notifications have been distributed via mail to all property owners within the Phase 1 project area. Mailed notices included:

- General project overview and purpose
- Public meeting announcements and details
- Contact information for project representatives

Additional mailings will be provided in advance of construction.

C. PROJECT COMMUNICATIONS

Notices will be used throughout the project to provide timely, location-specific updates directly to affected residents. These notices will be distributed to addresses within the phase 1 project area and will include:

- Advance notice of upcoming activities
- Information on water service interruptions
- Access restrictions or driveway impacts
- Contact information for questions or concerns

Notices will be deployed as needed to supplement mailed notifications and ensure residents receive clear and immediate communication during construction.

VIII. RIGHT-OF-WAY AND EASEMENT

A. TEMPORARY CONSTRUCTION EASEMENTS

In areas where water service replacement extends beyond the public right-of-way or where trenchless installation, excavation, or restoration activities require access to private property, temporary construction easements (TCEs) will be necessary.

The contractor shall be responsible for:

- Coordinating directly with property owners to obtain necessary permissions utilizing the TEMPORARY CONSTRUCTION EASEMENT AND LEAD WATER SERVICE LINE REPLACEMENT AGREEMENT
- Securing all required temporary easements or rights of entry prior to commencing work on private property
- Ensuring that all agreements comply with applicable local requirements

All temporary easements shall be limited in duration to the construction period and shall clearly define the work areas and extent of access.

B. RESTORATION OF PRIVATE PROPERTY

Areas impacted within temporary easements shall be restored, including:

- Lawn and landscaping restoration
- Repair building floor where cuts were made for service line installation
- Repair or replacement of driveways, walkways, and other surface features if disturbed
- Replacement of any fences, irrigation systems, or appurtenances affected by construction

Project Feasibility Report

Lead Service Line Replacement Project – Phase 1

City Project Number 11213

City of Mankato

The contractor shall be responsible for addressing any damage resulting from construction activities within both public right-of-way and private property access areas.

IX. PERMITS

Approvals and permits are required from various agencies for the construction of the project. They include:

- City of Mankato Work Within Right-of-Way Permit
- City of Mankato Residential Plumbing Permit
- Minnesota Pollution Control Agency (MPCA) Construction Stormwater Permit
- Minnesota Department of Health (MDH) Plan Review
- Temporary Construction Easement and Lead Service Line Replacement Agreement

X. PROJECT COST ESTIMATE AND FINANCING

Estimated projections for the cost of this project are summarized below.

ITEM	COST
Lead Service Line Replacements and Associated work (40 to 60 services)	\$790,514.00
Construction Contingency	\$79,051.00
Engineering & Administration	\$130,435.00
TOTAL PROJECT COST	\$1,000,000.00

Funding for the proposed improvements is shown in the table below.

FUNDING SOURCE	AMOUNT
MDH PFA Grants	\$1,000,000.00

XI. POSSIBLE SCHEDULE

The following is a possible schedule for the proposed improvements:

05/01/2025	Project Priority List (PPL) Application Submittal
06/06/2025	Intended Use Plan (IUP) Submittal
03/31/2026	Plan and Specification Submittal
06/23/2026	Pre-Bid Open House Meeting
06/30/2026	Receive MDH Plan and Specification Certification
07/27/2026	Resolution receiving report, ordering improvement, preparation of plans & specifications, and authorizing advertisement for bids
07/31/2026	Advertise for bid
08/25/2026	Open bids
09/14/2026	Award bid
Fall 2026	Pre-construction Open House Meeting.
Fall 2026	Begin construction.
June 2027	Construction complete.

Project Feasibility Report

Lead Service Line Replacement Project – Phase 1
City Project Number 11213
City of Mankato

XII. CONCLUSION AND RECOMMENDATIONS

The 2026 Lead Service Line (LSL) Replacement Project represents a feasible and strategically focused effort for the City of Mankato to continue addressing lead service lines within its water distribution system. Based on the evaluation of regulatory requirements, available funding, system inventory data, and construction considerations, the project is both technically viable and operationally achievable within the defined scope and budget.

With a total project budget of approximately \$1 million, the replacement of 40 to 60 lead service lines in the West Mankato neighborhood provides a practical approach to maximizing public health benefits while working within current funding constraints. The project allows the City to maintain forward momentum toward compliance with the EPA's Lead and Copper Rule requirements and supports continued risk reduction for residents.

The proposed construction schedule, beginning in fall 2026 and concluding in June 2027, is appropriate for the project scale and allows for efficient coordination with seasonal conditions, contractor availability, and other infrastructure activities. Additionally, the inclusion of all lead and galvanized service line replacements ensures complete removal of lead sources at each service location, which is critical for long-term effectiveness.

Overall, the project is consistent with the City's long-term infrastructure planning goals and serves as an important incremental step toward full system-wide lead service line replacement.

RECOMMENDATIONS

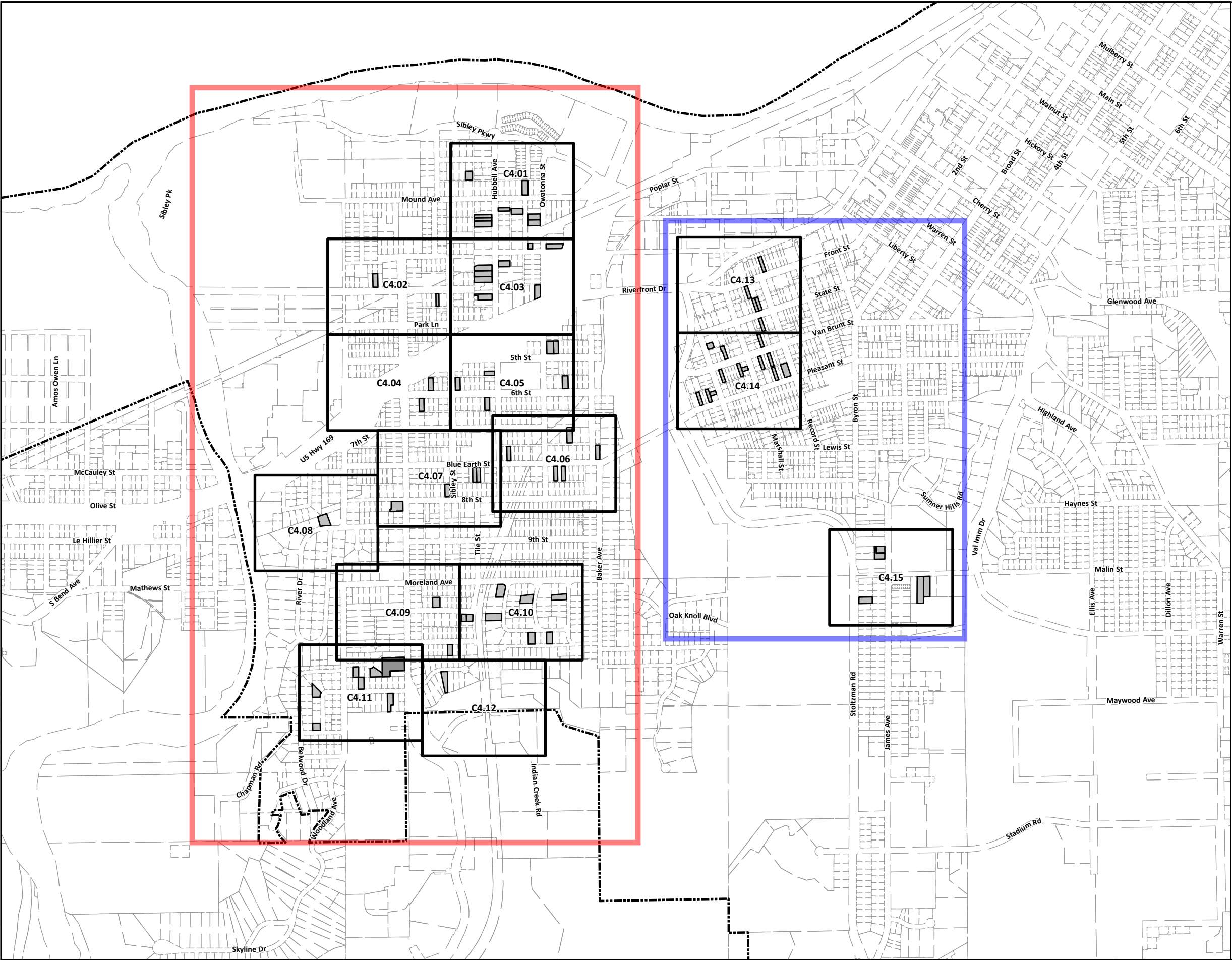
Based on the findings of this feasibility study, the following recommendations are provided to support the successful implementation of the Phase 1 Lead Service Line Replacement Project and inform future program phases:

1. **Proceed with Project Implementation as Scoped**
Advance the project with the defined scope of 40–60 lead and galvanized service line replacements within the identified West Mankato project area, maintaining alignment with available funding and regulatory priorities.
2. **Public Outreach and Participation**
Implement proactive communication strategies to inform affected residents, encourage participation, and clearly explain the benefits, process, and scheduling of replacements.
3. **Update and Refine Service Line Inventory**
Utilize field verification during construction to improve the accuracy of the City's service line inventory. Incorporate findings into GIS and asset management systems to better inform future project prioritization.

XIII. APPENDIX

- Figure No. 1 – Overview Location Map
- Figure No. 2 – Property Index (Sheets G4.01, G4.02, G4.03)
- Figure No. 3 – Typical Details/Sections (Sheet C1.01)

Map Document: \\arservers1\hml_4\3\MINNESOTA\MKT025X14179000\Pro\Mankato 2026 Lead Service Line Ph. 1.aprx | User name: kendell.hillis | Date Saved: 3/26/2026 10:23 AM



Legend

 WORK SITES

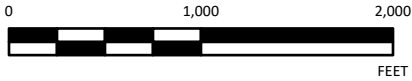
 CITY LIMITS

 PARCEL

Source: Blue Earth County, City of Mankato, MnDOT



- PHASE 1
- PHASE 2



DESIGNED:	DMA	NO.	100	DATE	3/31/2026
DRAWN:	KH/DMA	NO.	101	DATE	3/31/2026
CHECKED:	DPW	NO.	102	DATE	3/31/2026
CURRENT PROJ. NO.:	25X141799	NO.	103	DATE	3/31/2026

MANKATO, MINNESOTA
2026 LEAD SERVICE LINE REPLACEMENT PROJECT
OVERVIEW

SHEET
G2.01

Map Document: \\ars-server1\hmi_gis\MINNESOTA\MKTO\25X14179000\Pro\Mapkato_2026_Lead_Service_Line_Ph_1.aprx | Username: kendell.killis | Date Saved: 3/27/2026 10:34 AM

Map ID	Sheet Number	Address	Parcel Number	Deedholder	1" PE Water Service: Main to Curb Stop	1" PE Water Service: Curb Stop to Meter	1" Curb Stop & Box	1" Corporation Stop & Saddle	Connect to Existing Curb Stop
1	C4.01	425 OWEN ST	R01.08.13.103.006	HEATH DENNIS H & MARDONNA T	11	55	1	1	
2	C4.01	316 MOUND AVE	R01.08.13.128.013	PETTIT JAMES H JR	25	50	1	1	
3	C4.01	207 HUBBELL AVE	R01.08.13.177.012	KRUGER ROGER J	27	34	1	1	
4	C4.01	216 HUBBELL AVE	R01.08.13.176.004	MORROW ELLEN MARIE	40	44	1	1	
5	C4.01	218 HUBBELL AVE	R01.08.13.176.005	CASTLE REAL PROPERTIES LLC	40	41	1	1	
6	C4.01	220 HUBBELL AVE	R01.08.13.176.006	CASTLE REAL PROPERTIES LLC	40	44	1	1	
7	C4.01	214 OWATONNA ST	R01.08.13.178.004	SCHMITZ WILL & AMBER	31	43	1	1	
8	C4.01	218 OWATONNA ST	R01.08.13.178.005	MURILLA BOBBI ERICKSON	31	50	1	1	
9	C4.02	618 W 3RD ST	R01.08.13.154.011	MANS GREGORY M	23	70	1	1	
10	C4.02	511 W 3RD ST	R01.08.13.160.010	JOHNS GARY L REV LIVING TRUST	48	48	1	1	
11	C4.03	305 HUBBELL AVE	R01.08.13.183.002	ESSER THELMA C	28	39	1	1	
12	C4.03	312 HUBBELL AVE	R01.08.13.182.001	WESTON ALASTAIR (CFD)	38	43	1	1	
13	C4.03	316 HUBBELL AVE	R01.08.13.182.002	TOONKEL MAUREEN E	39	43	1	1	
14	C4.03	322 HUBBELL AVE	R01.08.13.182.003	KAHMANN ZACHARY & LILA	38	40	1	1	
15	C4.03	410 HUBBELL AVE	R01.08.13.182.012	KOPISCHKE THERESE MAY	39	28	1	1	
16	C4.03	310 W 2ND ST	R01.08.13.180.001	KELLEY DEAN F	44	27	1	1	
17	C4.03	241 OWATONNA ST	R01.08.13.181.003	ERICKSON JAMES T	29	44	1	1	
18	C4.03	1604 S RIVERFRONT DR	R01.08.13.183.018	ROTCHADL MAX J		30			1
19	C4.04	512 W 6TH ST	R01.08.13.306.009	DONAHUE LISA	53	40	1	1	
20	C4.04	521 W 6TH ST	R01.08.13.308.004	LUCAS STEVEN D & HEATHER J	42	42	1	1	
21	C4.05	426 W 6TH ST	R01.08.13.328.010	WATTS BAMBI		30			1
22	C4.05	612 HUBBELL AVE	R01.08.13.328.008	HARTWELL A S & BRAUNWARTH A		44			1
23	C4.05	230 W 5TH ST	R01.08.13.327.010	LUSHER CHAR		65			1
24	C4.05	228 W 5TH ST	R01.08.13.327.011	ANCHOR RIDGE PROPERTIES LLC		41			1
25	C4.05	216 W 6TH ST	R01.08.13.330.011	GERMUNDSON CURT R		55			1
26	C4.05	407 W 6TH ST	R01.08.13.331.007	ENGGREN JEFF A		45			1
27	C4.06	124 SYLVIA ST	R01.08.13.336.005	SCHWARTZ JAMIE & CHRIS	12	76	1	1	
28	C4.06	326 BLUE EARTH ST	R01.08.13.335.010	ULVOG EVERETT & KAVANAUGH MARI		41			1
29	C4.06	129 BLUE EARTH ST	R01.08.13.378.002	BUTLER ERIN & MATTHEW & HEATHER		47			1
30	C4.06	125 BLUE EARTH ST	R01.08.13.378.004	LINDQUIST CHERYL S		55			1

NOTE: QUANTITIES IN PROPERTY APPENDIX ARE FOR REFERENCE ONLY

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Drew P. Weber, P.E.

LIC. NO. 58643

DATE 3/31/2026



**BOLTON
& MENK**

2900 43RD STREET NW, SUITE 100
ROCHESTER, MN, 55901
Phone: (507) 208-4332
Email: Rochester@bolton-menk.com
www.bolton-menk.com



DESIGNED:	DMA	NO.	ISSUED FOR	DATE
DRAWN:	KH/DMA			
CHECKED:	DPW			
CURRENT PROJ. NO:	25X141799			

MANKATO, MINNESOTA

2026 LEAD SERVICE LINE REPLACEMENT PROJECT

PROPERTY INDEX

SHEET

G4.01

Map Document: \\ars-server1\hmi_gis\MINNESOTA\MKT025X14179000\Pro Mankato 2026 Lead Service_Line Ph_1.aprx | Username: kendell.hillis | Date Saved: 3/27/2026 10:34 AM

Map ID	Sheet Number	Address	Parcel Number	Deedholder	1" PE Water Service: Main to Curb Stop	1" PE Water Service: Curb Stop to Meter	1" Curb Stop & Box	1" Corporation Stop & Saddle	Connect to Existing Curb Stop
31	C4.06	812 W PLEASANT ST	R01.08.13.406.011	MAGNER REBECCA & CHRISTOPHER		43			1
32	C4.07	423 BLUE EARTH ST	R01.08.13.376.005	JOHANNSEN JERROLD J & LAURYN L		49			1
33	C4.07	421 BLUE EARTH ST	R01.08.13.376.006	WALTERS ASHLEY & HARTMAN CHAD		49			1
34	C4.07	502 W 8TH ST	R01.08.13.352.015	MILLER RONALD & STARCIE	24	51	1	1	
35	C4.07	1006 CARNEY AVE	R01.08.13.353.021	GUTZMAN BETH L	40	58	1	1	
36	C4.08	1104 W RIVER DR	R01.08.14.480.020	ERIKSON ERMA R	45	45	1	1	
37	C4.09	506 W 10TH ST	R01.08.24.103.017	PATTISON KATE JOCELYN	23	63	1	1	
38	C4.09	419 W 11TH ST	R01.08.24.105.012	FRIESEN NICHOLAS		43			1
39	C4.10	405 W 10TH ST	R01.08.24.104.011	RASMUSSEN ROBERT G	20	39	1	1	
40	C4.10	401 W 10TH ST	R01.08.24.104.012	STEINBRINK CHELSEY M	20	34	1	1	
41	C4.10	103 WESTWOOD DR	R01.08.24.126.009	LYNCH ANGELA K V & MATTHEW M	36	45	1	1	
42	C4.10	111 WESTWOOD DR	R01.08.24.126.012	GARRY KEITH M & CAY ELLEN	30	43	1	1	
43	C4.10	105 RIDGE CT	R01.08.24.127.009	BRINKMANN ETHAN & SALINA	21	55	1	1	
44	C4.10	219 WESTWOOD DR	R01.08.24.126.018	SHNEIDER PAUL R & ASHLEY E	28	44	1	1	
45	C4.10	231 WESTWOOD DR	R01.08.24.126.021	HARRY MEYERING CENTER INC	29	69	1	1	
46	C4.10	105 TIMBER LN	R01.08.24.128.007	JOHNSON PATRICE L TRUST AGMT	28	56	1	1	
47	C4.11	740 GWYN DR	R01.08.23.230.019	MORRISON MARK D	35	39	1	1	
48	C4.11	720 GWYN DR	R01.08.23.230.015	MURRAIN DEBRA L	35	33	1	1	
49	C4.11	112 GWYN AVE	R01.08.24.101.047	VSBRT LLC	18	36	1	1	
50	C4.11	131 GWYN AVE	R01.08.24.102.009	WADE JAMES D	32	47	1	1	
51	C4.11	9 BRUCE CT	R01.08.24.101.021	BEHREND NOAH J & ERICKSON HARLEY L	5	41	1	1	
52	C4.11	15 BRUCE CT	R01.08.24.101.024	LITCHFIELD RICHARD C & DONNA E	18	42	1	1	
53	C4.11	1416 CARNEY AVE	R01.08.24.101.043	FILIPOVITCH ANTHONY & BRYNAERT KATHLEEN	46	92	1	1	
54	C4.11	1416 CARNEY AVE	R01.08.24.101.043	FILIPOVITCH ANTHONY & BRYNAERT KATHLEEN	46	85	1	1	
55	C4.12	21 SOUTHVIEW DR	R01.08.24.106.006	SWANSON GREGORY J & REBECCA LYNN	26	54	1	1	
56	C4.13	930 S FRONT ST	R01.08.13.280.008	DOWNTOWN PROPERTIES LLC	53	53	1	1	
57	C4.13	1009 S FRONT ST	R01.08.13.282.005	SPRING STREET PROPERTIES LLC	30	30	1	1	
58	C4.13	310 STATE ST	R01.08.13.282.014	ASHLEY WILLIAM F & PATRICIA	54	36	1	1	
59	C4.13	308 STATE ST	R01.08.13.282.015	LAVIGNE JONATHAN RICHARD & KATY LEE	54	44	1	1	
60	C4.13	311 STATE ST	R01.08.13.426.004	VESCIO TERESA M	21	53	1	1	

NOTE: QUANTITIES IN PROPERTY APPENDIX ARE FOR REFERENCE ONLY

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Drew P. Weber, P.E.

LIC. NO. 58643

DATE 3/31/2026



**BOLTON
& MENK**

2900 43RD STREET NW, SUITE 100
ROCHESTER, MN, 55901
Phone: (507) 208-4332
Email: Rochester@bolton-menk.com
www.bolton-menk.com



DESIGNED:	DMA	REV.	ISSUED FOR:	DATE:
DRAWN:	KH/DMA			
CHECKED:				
DPW				
CURRENT PROJ. NO:	25X141799			

MANKATO, MINNESOTA
2026 LEAD SERVICE LINE REPLACEMENT PROJECT
PROPERTY INDEX

SHEET
G4.02

Map Document: \\ars-server1\hmi_gis\MINNESOTA\MKT0\25X14179000\Pro\Mankato 2026 Lead Service Line Ph. 1.aprx | Username: kendell.hillis | Date Saved: 3/27/2026 10:34 AM

Map ID	Sheet Number	Address	Parcel Number	Deedholder	1" PE Water Service: Main to Curb Stop	1" PE Water Service: Curb Stop to Meter	1" Curb Stop & Box	1" Corporation Stop & Saddle	Connect to Existing Curb Stop
61	C4.14	211 WILLARD ST	R01.08.13.402.001	STRAKA RICHARD J & STACEY L A	22	31	1	1	
62	C4.14	418 VAN BRUNT ST	R01.08.13.402.010	JOSEPH DIANA J	54	42	1	1	
63	C4.14	318 VAN BRUNT ST	R01.08.13.426.012	BLANSHAN MARSHALL & SARAH	52	36	1	1	
64	C4.14	315 VAN BRUNT ST	R01.08.13.429.005	BENTDAHL DAVID & MARJORIE TRUST	28	39	1	1	
65	C4.14	325 VAN BRUNT ST	R01.08.13.429.002	JOHNSON RANDY J & MARY J	28	44	1	1	
66	C4.14	310 MARSHALL ST	R01.08.13.428.010	STRASSBURG DELMAR & MAXFIELD LEAH	51	29	1	1	
67	C4.14	407 VAN BRUNT ST	R01.08.13.428.008	COOLEY RANDALL R & LORI R	28	46	1	1	
68	C4.14	425 VAN BRUNT ST	R01.08.13.428.002	DANIELSON JUSTIN W	26	49	1	1	
69	C4.14	322 WILLARD ST	R01.08.13.403.013	MUELL ETHAN THOMAS	42	39	1	1	
70	C4.14	508 W PLEASANT ST	R01.08.13.403.008	KORFF DOROTHY A	44	40	1	1	
71	C4.14	516 W PLEASANT ST	R01.08.13.403.005	BROTHERS BOARD AND LODGE LLC	45	54	1	1	
72	C4.14	304 W PLEASANT ST	R01.08.13.429.020	HAWKEYE HOLDINGS LLC	45	54	1	1	
73	C4.14	314 W PLEASANT ST	R01.08.13.429.017	BLACKSTAD MELISSA	42	38	1	1	
74	C4.15	143 JAMES AVE	R01.09.18.355.020	DIAZ JESSICA M		35			1
75	C4.15	147 JAMES AVE	R01.09.18.355.022	MEIXL JOSEPH F & DOBSON NANCY DIANE		28			1
76	C4.15	220 STOLTZMAN RD	R01.09.19.101.005	PEPPER CONNOR	19	57	1	1	
77	C4.15	127 FAIRFIELD AVE	R01.09.19.102.009	YOUNG SADANA & DELACRUZ SHANE	33	40	1	1	
78	C4.15	133 FAIRFIELD AVE	R01.09.19.102.010	BIRR SCOTT & JACQUELINE	34	50	1	1	

NOTE: QUANTITIES IN PROPERTY APPENDIX ARE FOR REFERENCE ONLY

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Drew P. Weber, P.E.

LIC. NO.58643

DATE3/31/2026



BOLTON & MENK

2900 43RD STREET NW, SUITE 100
ROCHESTER, MN, 55901
Phone: (507) 208-4332
Email: Rochester@bolton-menk.com
www.bolton-menk.com



DESIGNED:	DMA	NO.	ISSUED FOR	DATE
DRAWN:	KH/DMA			
CHECKED:	DPW			
CURRENT PROJ. NO:	25X141799			

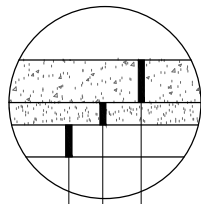
MANKATO, MINNESOTA

2026 LEAD SERVICE LINE REPLACEMENT PROJECT

PROPERTY INDEX

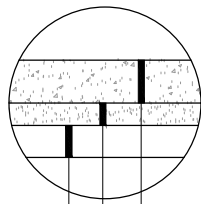
SHEET

G4.03



6" RESIDENTIAL CONCRETE DRIVEWAY PAVEMENT (2531)
PER MnDOT STANDARD ADA PLANS
6" (MIN) AGGREGATE BASE, CL 5 (2211) (INCIDENTAL)
6" SUBGRADE PREPARATION (2112) (INCIDENTAL)

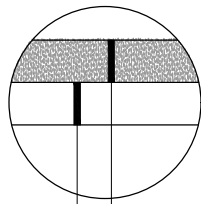
CONCRETE DRIVEWAY PATCH
NOT TO SCALE



8" CONCRETE PAVEMENT (2531) [1] [2]
8" AGGREGATE BASE, CL 5 (2211) (INCIDENTAL)
12" SUBGRADE PREPARATION (2112) (INCIDENTAL)

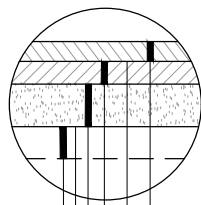
NOTE: MATCH EXISTING TYPICAL SECTION AT CONCRETE PATCH IF EXISTING SECTION IS THICKER THAN PROPOSED
ALL JOINTS NEED TO BE TIED TO EXISTING PAVEMENTS

CONCRETE STREET AND ALLEY PATCH
NOT TO SCALE



12" AGGREGATE SURFACING, CL 2 (2118)
6" SUBGRADE PREPARATION (2112) (INCIDENTAL)

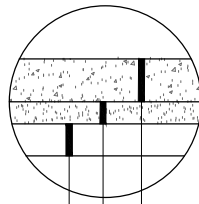
AGGREGATE SURFACING
NOT TO SCALE



1.5" TYPE SP 12.5 WEARING COURSE (SPWEB340C) (2360) [2] [3]
BITUMINOUS TACK COAT (2357) (INCIDENTAL)
2.5" TYPE SP 12.5 NON-WEARING COURSE (SPNWB330C) (2360)
15" AGGREGATE BASE, CL 5 (2211) (INCIDENTAL)
BIAXIAL GEOGRID, TYPE 1 (2108) (INCIDENTAL)
12" SUBGRADE PREPARATION (2112) (INCIDENTAL)

NOTE: MATCH EXISTING BITUMINOUS SECTION IF THICKER THAN PROPOSED

BITUMINOUS STREET PATCH (LOCAL)
NOT TO SCALE

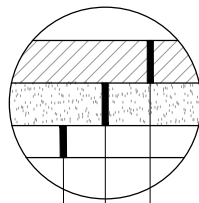


4" CONCRETE SIDEWALK (2531)
PER MnDOT STANDARD ADA PLANS
4" AGGREGATE BASE, CL 5 (2211) (INCIDENTAL)
6" SUBGRADE PREPARATION (2112) (INCIDENTAL)

NOTE:

- FOLLOW CONCRETE DRIVEWAY DETAIL FOR 6" SIDEWALK THROUGH DRIVEWAYS. TRANSITION PANEL FROM 4" TO 6" CONC ON EACH SIDE OF THE DRIVEWAY WILL BE PAID AS CONCRETE DRIVEWAY PATCH.
- MATCH EXISTING SIDEWALK OR DRIVEWAY SECTION IF THICKER THEN PROPOSED

CONCRETE SIDEWALK PATCH
NOT TO SCALE



3.0" TYPE SP 9.5 WEARING COURSE (SPWEA340C) (2360) [3]
8" AGGREGATE BASE, CL 5 (2211) (INCIDENTAL)
12" SUBGRADE PREPARATION (2112) (INCIDENTAL)

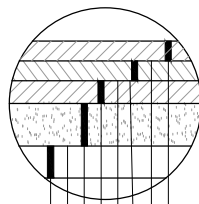
NOTE: MATCH EXISTING DRIVEWAY SECTION IF THICKER THAN PROPOSED

BITUMINOUS DRIVEWAY AND ALLEY PATCH
NOT TO SCALE

PAVEMENT REPLACEMENT NOTE: COST FOR THICKNESS BEYOND PROPOSED TO BE COVERED BY CONSTRUCTION ALLOWANCE

NUMBERED NOTES:

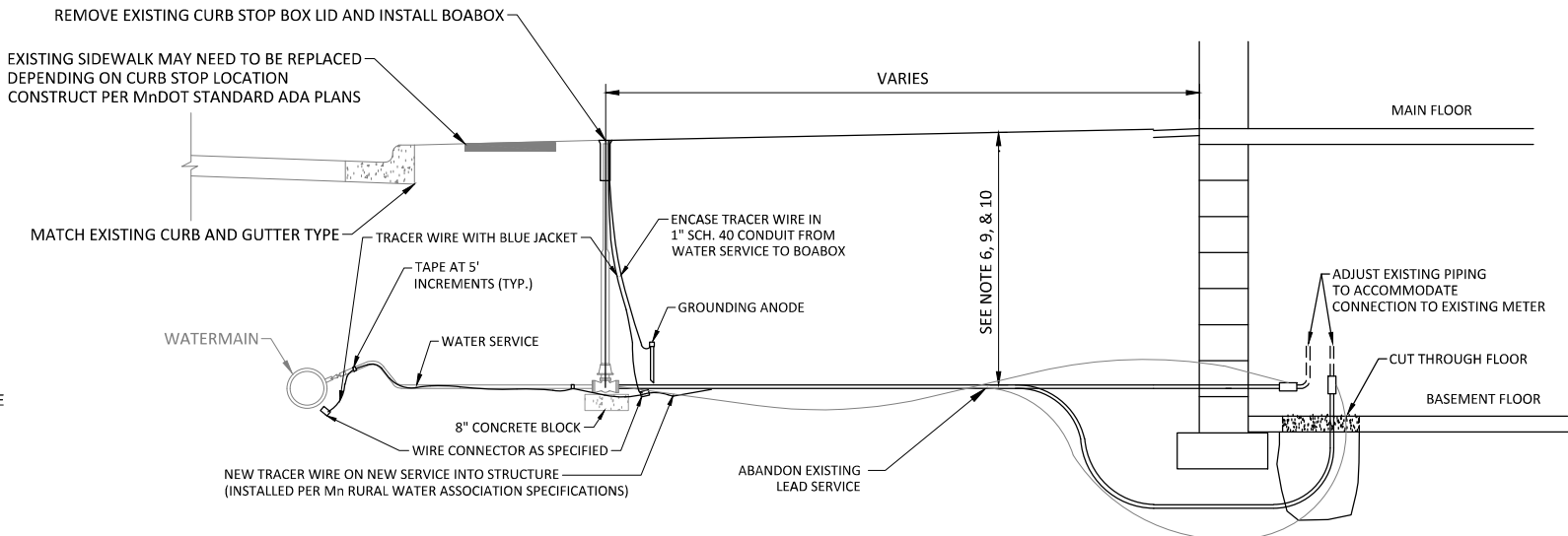
- DRILL & GROUT REINFORCEMENT BARS, DOWER BARS, AND INSTALL DOWEL BASKETS AS REQUIRED TO MATCH EXISTING REINFORCEMENT PATTERNS. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO CONCRETE STREET PATCH.
- STREET PATCHES SHALL BE CONSTRUCTED FULL WIDTH OF THE ROADWAY (LIP OF CURB TO LIP OF CURB, OR EDGE OF ASPHALT TO EDGE OF ASPHALT)
- AGGREGATE MATERIALS FOR FINAL WEARING COURSE SHALL BE COMPRISED OF VIRGIN MATERIAL. NO RECYCLE MIX WILL BE ALLOWED ON THE WEAR COURSE MIXTURE.



1.5" TYPE SP 12.5 WEARING COURSE (SPWEB340C) (2360) [2] [3]
BITUMINOUS TACK COAT (2357) (INCIDENTAL)
2.0" TYPE SP 12.5 NON-WEARING COURSE (SPNWB330C) (2360)
BITUMINOUS TACK COAT (2357) (INCIDENTAL)
2.5" TYPE SP 12.5 NON-WEARING COURSE (SPNWB330C) (2360)
15" AGGREGATE BASE, CL 5 (2211) (INCIDENTAL)
BIAXIAL GEOGRID, TYPE 1 (2108) (INCIDENTAL)
12" SUBGRADE PREPARATION (2112) (INCIDENTAL)

NOTE: MATCH EXISTING BITUMINOUS SECTION IF THICKER THAN PROPOSED

BITUMINOUS STREET PATCH (COLLECTOR)
NOT TO SCALE



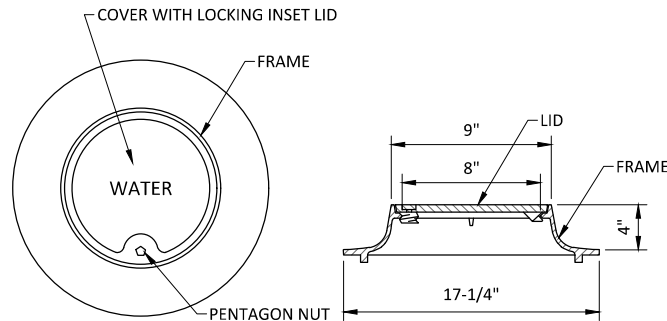
NOTES:

- BUILDING FOUNDATION MATERIALS MAY VARY FROM RED BRICK, CONCRETE BLOCK, POURED IN PLACE, TO BACKPLASTERED LIMESTONE.
- CONTRACTOR TO CONFIRM IF ELECTRICAL SERVICE GROUND IS ATTACHED TO EXISTING WATER SERVICE, DISCONNECT GROUNDING FROM WATER SERVICE AND FURNISH AND INSTALL NEW GROUNDING SYSTEM TO MEET STATE ELECTRICAL CODE.
- VERIFY LOCATION OF SANITARY SEWER SERVICE IN RELATION TO WATER SERVICE.
- ANODE TO BE INSTALLED WHEN NO TRACER WIRE EXISTS ON MAIN.
- CONDITION 1 (PULL METHOD) - DISCONNECT THE OLD SERVICE AT THE MAIN OR CURB STOP AND INSIDE THE HOUSE. FEED A CABLE THROUGH THE OLD SERVICE LINE, CONNECT NEW PIPE TO CABLE, AND PULL CABLE BACK TO PIT WITH NEW PIPE. PROVIDE WATER TIGHT SEAL WHERE PIPE ENTERS BUILDING.
- CONDITION 2 (DIRECTIONAL BORE METHOD) - SAW, REMOVE AND REPLACE CONCRETE FLOOR AT DESIRED LOCATION. ABANDON EXISTING SERVICE AND BORE NEW PIPE FROM MAIN OR CURB STOP TO THE DESIRED LOCATION. NEW LINE SHALL BE INSTALLED AT 7.0' MIN COVER UNLESS PREVENTED BY ROCKY SOIL CONDITIONS.
- CONNECT TO EXISTING PLUMBING, ADJUSTING EXISTING PIPING AS REQUIRED (BY A LICENSED PLUMBER).
- PATCH FLOOR WITH CONCRETE AND CLEAN SITE.
- IF THE WATER SERVICE IS DETERMINED TO HAVE LESS THAN 6.0' COVER WHEN EXPOSED AT THE MAIN OR CURB STOP, THE CONTRACTOR SHALL NOTIFY CITY STAFF PRIOR TO CONSTRUCTING THE NEW LINE. CITY STAFF WILL CHECK FOR RECORDS OF FREEZING ISSUES AND COORDINATE A PLAN WITH THE PROPERTY OWNER.
- THE CONTRACTOR SHALL MAKE EVERY REASONABLE EFFORT TO ACHIEVE 7.0' COVER ABOVE THE WATER SERVICE LINE OR INSTALL 4-INCHES OF INSULATION IN AREAS WITH LESS THAN 6.0' COVER AS CONSTRUCTION METHODOLOGIES ALLOW.
- CITY OF MANKATO RIGHT OF WAY PERMIT SHALL BE OBTAINED PRIOR TO WORK BEING PERFORMED IN THE CITY'S RIGHT OF WAY PER SITE.
- COORDINATE WITH CITY OF MANKATO PUBLIC WORKS IF WATER SHUT DOWN IS REQUIRED TO PERFORM WORK. CONTRACTOR IS RESPONSIBLE FOR NOTIFYING AFFECTED PROPERTY OWNERS/RESIDENTS.
- CITY PLUMBING PERMIT REQUIRED FOR WORK BEING PERFORMED ON PRIVATE PROPERTY PER SITE.
- SALVAGING AND REINSTALLING OF WATER METER IS INCIDENTAL. CITY STAFF WILL NOT PARTICIPATE IN THIS WORK.
- ALL EXISTING SANITARY SEWER SERVICES SHALL BE PROTECTED DURING WATER SERVICE REPLACEMENT OPERATIONS. ANY SANITARY SEWER SERVICE DAMAGED, UNDERMINED, OR OTHERWISE ADVERSELY AFFECTED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE, AS DIRECTED BY THE ENGINEER. ALL WORK REQUIRED TO PROTECT, REPAIR, OR REPLACE SANITARY SEWER SERVICES SHALL BE CONSIDERED INCIDENTAL TO THE WATER SERVICE REPLACEMENT AND NO SEPARATE PAYMENT WILL BE MADE.

1
C1.01

NOT TO SCALE

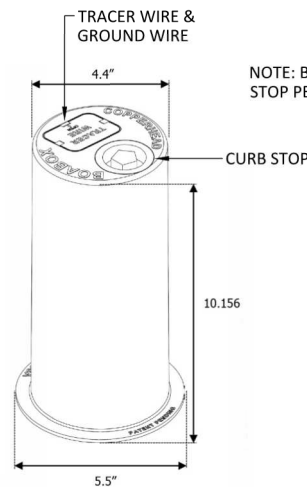
**LEAD SERVICE REPLACEMENT
SECTION VIEW**



NOTES:

- FURNISH AND INSTALL ON CURB STOPS THAT ARE WITHIN CONCRETE, GRAVEL, OR BITUMINOUS SURFACING
- CASTING ASSEMBLY TO BE FORD METER BOX MODEL A1 OR APPROVED EQUAL

CASTING ASSEMBLY SPECIAL
NOT TO SCALE



NOTE: BOABOX TO BE PLACED ON TOP OF CURB STOP PER MANUFACTURER INSTRUCTIONS.

**BOABOX WATER ACCESS POINT AS
MANUFACTURED BY COPPERHEAD**
NOT TO SCALE