CITY OF DULUTH, MN
REQUEST FOR PROPOSALS FOR

Construction Administration for 2026 Lead Service Line Replacement Projects

Issued January 8, 2026

Solicitation Number: 26-AA04

Proposals Due: January 29, 2026
3:00 PM Central Time

SUBMIT TO
CITY OF DULUTH
ATTN: PUCHASING DIVISION
CITY HALL, ROOM 120
411 WEST 1ST STREET
DULUTH, MN 55802

PROJECT OVERVIEW

The City of Duluth is interested in retaining a consultant(s) to provide Construction Engineering Support Services (Construction Administration) for its Lead Service Line Replacement (LSLR) Projects in 2026.

BACKGROUND

The City plans to construct multiple LSLR projects in 2026 utilizing consultant-prepared design plans. Project funding is derived from two sources: Minnesota Public Facilities Authority (MPFA) lead replacement funding carried over from the 2025 construction season, and 2026 funding from the MPFA. Each funding category will be used to construct a primary, neighborhood-wide LSLR project in its entirety. Depending on the available funding and the bid prices of the first project, the City will contract a second LSLR project scaled in size equal to the remaining funding. The projects will all be advertised for construction individually, but Construction Administration will be in two packages as follows:

CA Package 1

a. LSLR Spirit Valley (Project #2321)
    i. Includes approximately 430 LSLRs
b. LSLR Project(s) – A portion of the Denfeld Neighborhood (Project #2322)
    i. Includes approximately 100 LSLRs, depending on funding and bid pricing

CA Package 2

a. LSLR East Hillside 1 (Project #2325)
    ii. Includes approximately 474 LSLRs
b. LSLR Project(s) – A portion of the Endion Neighborhood (Project #2324)
    iii. Includes approximately 100 LSLRs, depending on funding and bid pricing

In general, the plans in each bid package include individual site plans for lead water service replacements located at residential properties, homes, and/or facilities. Some buildings will have the public portion of the service line replaced (main to curb stop), some will have the private service line replaced (curb stop to building), and some with have the public and private service replaced. Replacing some lead water services requires small-diameter water main extensions. A Reference Plan Set is provided as an attachment to this RFP that shows typical plan sheet layouts, units of measurements, standard details, etc. for the proposer's information.

The City's general engineering requirements related to construction inspection, shop drawing review etc. can be found in the City's Engineering Guidelines for Professional Engineering Services and Developments (https://duluthmn.gov/media/cdfnmsp3/engineering-guidelines-updated-03-08-2022.pdf). For the purposes of this project, the City's expectations for administration, documentation, quantity tracking, inspection, etc. shall be consistent with the best practices and procedures described in the MnDOT State Aid Manual and website (https://www.dot.state.mn.us/stateaid/construction.html) for municipal projects.
The selected consultant will provide a Project Principal, Construction Engineer / Project Manager, Chief Inspector, Inspectors, and Assistant Inspectors and is responsible for the overall construction

administration and inspection of the project(s). The consultant inspection team will work under the coordination of the City Project Engineer / Project Supervisor.

The City's goals for this Construction Engineering Support Services (Construction Administration) project are:

- Ensure compliance of the Work with the project Plans and Specifications.
- Provide construction staff with the experience and knowledge to provide proactive, independent-decision making for the timely response/resolution of Contractor questions and to address field changes.
- Accurately track and record field quantities, take field measurements, maintain accurate project construction documentation, and provide accurate as-built information and record drawings; and,
- Promote effective communication and collaboration with the Contractor, residents, owners, public, and City staff to facilitate project completion on time and within budget.

The City of Duluth will provide the following to the awarded consultant(s):

- Project Plans and Special Provisions including addenda
- Assistance in obtaining other related information in City files pertaining to the project if needed.
- Materials Testing (the selected Consultant will coordinate with the City's designated materials testing agency / geotechnical consultant).

QUESTIONS & ANSWERS

Any questions regarding this RFP must be submitted by e-mail to the Purchasing Office at purchasing@duluthmn.gov. Answers to the questions will be posted as an Addendum to the RFP.

ADDENDA TO THE RFP

If the City deems it necessary to revise any part of this RFP before the proposal response date, the City will post an addendum to its website http://www.duluthmn.gov/purchasing/bids-request-for-proposals/. Although an e-mail notification will be sent, it is the Consultant's responsibility to periodically check the website for any new information.

SMALL DIVERSE BUSINESS INFORMATION

The City encourages participation by minority, women, and veteran-owned businesses as prime contractors, and encourages all prime contractors to make a significant commitment to use minority, women, veteran-owned and other disadvantaged business entities as subcontractors and suppliers. A list of certified Disadvantaged Business Enterprises is maintained by the Minnesota Unified Certification Program at http://mnucp.metc.state.mn.us/, however, the program is currently being reevaluated by the State.

MANDATORY DISCLOSURES

By submitting a proposal, each Bidder understands, represents, and acknowledges that:

A. Their proposal has been developed by the Bidder independently and has been submitted without collusion with and without agreement, understanding, or planned common course of action with any other vendor or suppliers of materials, supplies, equipment, or services described in the Request for

Proposals, designed to limit independent bidding or competition, and that the contents of the proposal have not been communicated by the Bidder or its employees or agents to any person not an employee or agent of the Bidder.

B. There is no conflict of interest. A conflict of interest exists if a Bidder has any interest that would actually conflict, or has the appearance of conflicting, in any manner or degree with the performance of work on the project. If there are potential conflicts, identify the municipalities, developers, and other public or private entities with whom your company is currently, or have been, employed and which may be affected.

C. It is not currently under suspension or debarment by the State of Minnesota, any other state or the federal government.

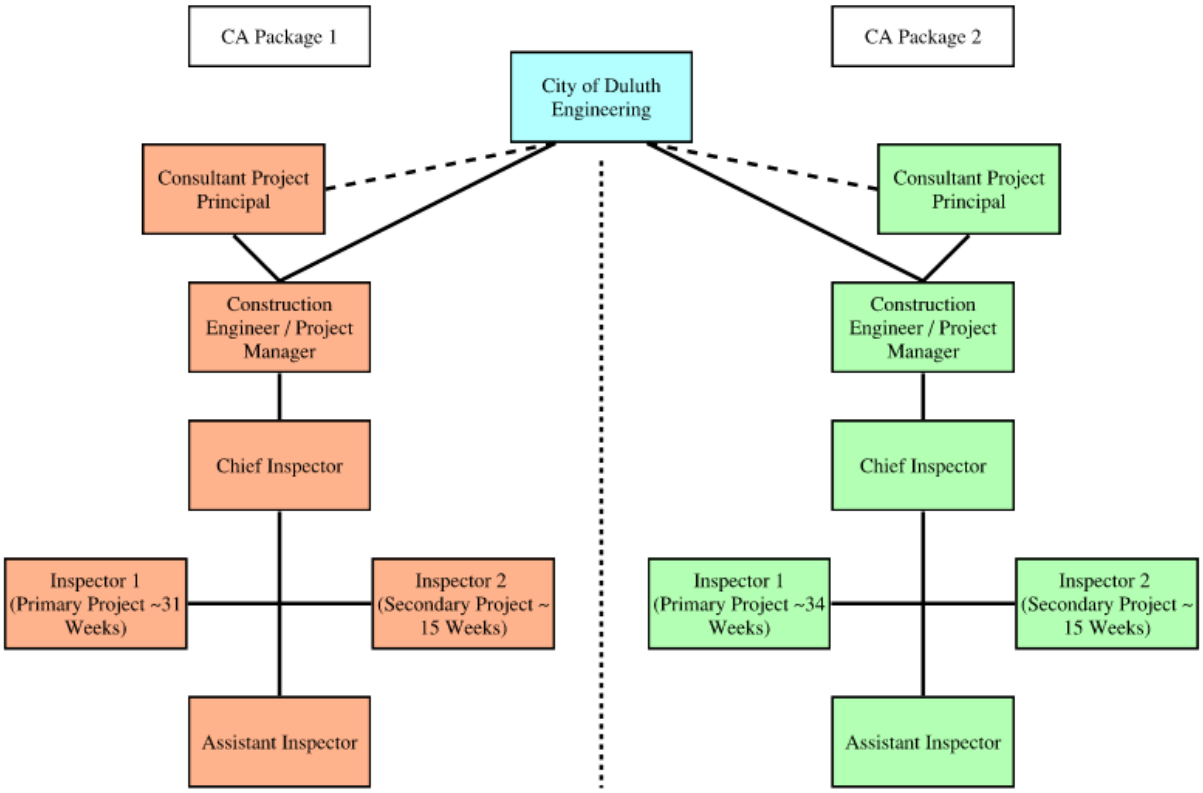
D. The company is either organized under Minnesota law or has a Certificate of Authority from the Minnesota Secretary of State to do business in Minnesota, in accordance with the requirements in M.S. 303.03.

NOTIFICATION OF SELECTION

Bidders whose proposals are not selected will be notified in writing.

GENERAL PROJECT SCOPE

Consulting Construction Engineering Services are expected to include all work necessary to provide construction administration, construction engineering, and engineering inspection / on-site observation. In general, the City anticipates the following project team organization:



Consultants may propose on CA Package 1 only, CA Package 2 only, either CA Package 1 or 2, or both CA Packages 1 and 2. Consultants should identify any package preference if proposing on either Package 1 or 2. If proposing on both packages, consultants should clearly identify their intent and capacity to execute the work in both packages if awarded both and detail any efficiencies or cost savings achieved by such an arrangement. The City does not prefer either a single contract or two contracts to complete the construction administration and inspection tasks identified in this RFP.

The City of Duluth will perform the following tasks:

- Participate in the preconstruction meeting.
- Review shop drawings.
- Review contract document clarifications as required.
- Review contract change order requests.
- Review and provide feedback on the Contractor submitted construction progress schedule.
- Process progress pay requests.
- Participate in weekly construction meetings.
- Participate in final and warranty inspections.

The selected consultant will serve as the Project Engineer and shall be responsible for the following:

- Provide experienced personnel on-site with the necessary experience and training to oversee and manage the construction administration of the project to assure the Work is monitored properly, to ensure conformance of the Work with the Plans and Specifications and perform all project Engineer duties per MnDOT 1501 and 1509; all Inspection duties per MnDOT 1510; and the City of Duluth Standard Construction Specifications except as modified or otherwise specified in this RFP. Duties shall include, but are not limited to, the following:
    - Serve as the principal point of contact with the Contractor for ensuring contract compliance.
    - Act as the project liaison with property owners and stakeholders.
        - Send a project start announcement letter to all residents and owners involved in the project.
        - Establish and distribute a phone number and email address residents and owners can use to submit questions and concerns.
    - Plan, direct, and coordinate the efforts of the project construction administration team.
    - Supervise and guide project staff, ensuring continuous inspection of workmanship, materials, and methods.
    - Interpret and enforce contract provisions.
    - Interpret and clarify project Plans, Specifications, and designs to maintain the project schedule, scope, and quality standards.
    - Review and approve shop drawings and submittals.
    - Process contract change order requests.
    - Prepare monthly progress payments.
    - Anticipate construction issues, review contract documents, and recommend necessary adjustments to project plans and specifications.
    - Ensure that construction schedules are adhered to and monitor Contractor performance against project Plans and Specifications.
    - Ensure compliance with all right-of-way, stormwater, environmental permits, and best practices.
    - Lead weekly construction meetings, including preparation of agendas and documentation of minutes.
    - Handle daily correspondence and reporting on project issues and concerns.
    - Ensure uniform, complete, high-quality, and efficient record-keeping practices.
    - Develop, update, and maintain project as-built drawings and related documentation.
    - Prepare and process all project warranty inspections, punchlists, and project close out documentation.

The selected consultant will serve as the on-site Inspector and shall be responsible for the following:

- Provide experienced personnel on-site with the necessary experience and training to inspect the construction of the project to assure the Work is monitored properly, to ensure conformance of the Work with the Plans and Specifications and perform all Inspector duties per MnDOT 1510 and the City of Duluth 2019 Standard Construction Specifications except as modified or otherwise specified in this RFP. Duties shall include, but are not limited to, the following:

- Attend the preconstruction meeting and review meeting minutes.
- Review shop drawings.
- Communicate with owners, residents, and the general public on behalf of the City
- Confirm signed work agreements are in place for each LSLR site and, in coordination with the Contractor, acquire outstanding signed work agreements.
- Prepare contract change order requests.
- Review and provide comment on the Contractor submitted construction progress schedule.
- Be in direct communication with the general Contractor to schedule and arrange for on-site inspection staffing.
- Provided basic construction staking including proposed water main extension alignments with offsets and estimated right of way lines and property corners.
- Review the building for the presence of existing supplemental electrical service grounding, confirm or correct the site plan regarding grounding, and direct the Contractor to install grounding where needed.
- Ensure the Contractor preserves or reestablishes electrical bonding to the internal metallic premise plumbing.
- Suggest and/or approve minor changes to the planned water service locations accommodating site conditions and according to City standards.
- Observe all aspects of the construction. Take regular photos of the Work to document progress and field conditions.
- Monitor the Contractor's performance and quality of the Work and provide immediate feedback, acceptance/rejection of Work, and necessary corrective measures to meet compliance with the Contract documents.
- Immediately notify the Engineer / City of non-conforming work or safety violations.
- Ensure all parts and materials delivered to the Work site have been previously submitted, reviewed and approved.
- Monitor excavations for suspicious or potentially contaminated soils.
- Collect survey-grade GPS points on existing and constructed utilities in excavations while installation is occurring and at the surface. Submit GPS points bi-weekly.
- Utilize an inspection documentation solution provided by the City including Survey 123 forms and spreadsheets in addition to standard inspection documentation practices. Submit records weekly.
- Prepare daily and weekly inspection records and submit weekly.
- Inspect erosion and sediment control measures for compliance with the project SWPPP.
- Provide a brief daily summary to the City Project Engineer / Project Supervisor at the end of each workday summarizing the work completed, major issues encountered, and updates to the City's water service material inventory.
- Serve as the initial point of contact for all resident / owner concerns. Answer questions and assist in resolving issues and concerns (based on consultation with City) from impacted property owners.
- Coordinate, witness, and document results of on-site materials testing with the City's material testing agency.
- Prepare and enter monthly progress payments.
- Prepare agenda, lead, and prepare timely minutes for weekly construction meetings between the Contractor, Owner(s), Engineer, and other interested parties such as utility

owners, permitting agencies and area residents.
- Provide as-built survey and record drawings/as-builts including water service cards.
- Conduct, prepare, distribute, and verify/track project final inspection punch list.
- Conduct, prepare, and complete One-Year warranty inspection.
- Provide all construction deliverables and project documentation including, but not limited to, field logs and computations, survey files and data, meeting minutes, project correspondence, as-builts/record drawings, punch list, and warranty inspection reports.

CA Package 1 – Spirit Valley has a construction start date of approximately April 15, 2026, and a project substantial completion date of November 13, 2026. The contract dates for the potential additional project of ~100 addresses in the Denfeld Neighborhood is not set. CA Package 2 – East Hillside 1 has a construction start date of approximately April 15, 2026, and a project substantial completion date of June 4, 2027. The contract dates for the potential additional project of ~100 addresses in the Endion Neighborhood is not set. All projects are expect to have punchlist and warranty work in the spring/early summer of 2027 and Final completion in early summer of 2027. All proposals shall assume full time inspection of the projects based on a 5-day work week (Monday – Friday) and up to 12 hours of inspection hours per day. Occasional Saturday work may be necessary.

The City anticipates that the Contractor(s) for these projects average 3-4 LSLRs per day and will have multiple crews operating at times to complete the work. The consultant shall provide Inspectors (Chief Inspector, Inspectors, and Assistant Inspectors) which shall be assigned as needed to the Contractor's crew(s) as directed by the City's Project Engineer / Supervisor and/or as required to ensure that critical operations are properly administered and inspected per the requirements of this RFP.

The Consultant Project Principal is expected to be a member of the engineering firm(s) senior management that has the authority and duty to ensure that the consultant construction administration team has the field and administrative personnel, resources, and capacity to fulfill the requirements of the Contract. The Project Principal will be in regular contact with the consultant's Project Engineer / Project Manager to verify the progress of the project, ensure the quality of project documentation and deliverables, and provide general oversight of the project. The Project Principal is not expected to be in day-to-day communication with the City or to be actively involved in the day-to-day administration of the project. Occasional check-in meetings with the City, Consultant Project Engineer / Project Manager, and the Project Principal may be necessary to verify successful prosecution of the Contract and consultant resource allocation.

The Construction Engineer / Project Manager is expected to have a minimum of six (6) years of experience, including extensive knowledge of roadway and utility construction methods, materials, standards, and specifications. This includes a strong working knowledge of MnDOT State Aid municipal and City of Duluth Construction Standards. The Construction Engineer will oversee general project construction administration, including the management and supervision of inspection staff and will ensure that construction activities comply with all relevant standards and specifications. The Construction Engineer / Project Manager will be responsible for resolving the complex issues that arise during construction, making critical field adjustments based on engineering principles, and providing clear and effective communication with contractors, residents, utility owners, and the public. The Construction Engineer / Project Manager shall serve as the Quality Assurance Manager with respect to consultant's Quality Management Plan for ensuring the adequacy, consistency, and compliance of

project records and documentation. The Construction Engineer / Project Manager is expected to, at a minimum, communicate with the City on a weekly basis or as needed to provide regular updates on project status and progress.

The Chief Inspector is expected to have a minimum of (4) four years of inspection experience (or equivalent) including a working knowledge of roadway and utility construction methods, materials, standards and specifications; working knowledge of MnDOT and City of Duluth Construction Standards. The Chief Inspector is expected to have the ability to provide technical supervision and leadership to the Inspectors; read and interpret the plans and contract specifications; apply engineering principles to determine field adjustments; and communicate effectively with contractor personnel, residents, utility owners, and the public. The Chief Inspector shall verify lines, grades dimensions, and elevations using survey equipment to ensure conformance with the plans and to prepare the project record drawings and as-built records. The Chief Inspector shall verify field measurements of pay items and preparation and maintenance of detailed project records including daily and weekly diaries, as-built plans, and pay quantity records. The Chief Inspector shall assist in the preparation of monthly progress payments and the development of change orders. The Construction Chief Inspector shall serve in Quality Control roles with respect to consultant's QMP for ensuring the adequacy, consistency, and compliance of project records and documentation. Experience with designing and/or inspecting a comparable LSLR project(s) is highly desired. A strong working knowledge of residential and commercial building construction, including electrical and plumbing systems, is highly preferred.

The Inspectors are expected to have a minimum of two (2) years of inspection experience (or equivalent) including a working knowledge of roadway and utility construction methods, materials, standards and specifications and a working knowledge of MnDOT and City of Duluth Construction Standards. The Inspector is expected to have the ability to read and interpret the plans and contract specifications; to contact and coordinate with the Chief Inspector to determine field adjustments; and communicate effectively with contractor personnel, residents, utility owners, and the public. The Inspector shall verify lines, grades dimensions, and elevations using survey equipment to ensure conformance with the plans and to prepare the project record drawings and as-built records. The Assistant Inspector shall make field measurements of pay items and is responsible for the preparation and maintenance of detailed project records including daily and weekly diaries, as-built plans, and pay quantity records. Under the guidance of the Chief Inspector, the Inspector shall assist in the preparation of monthly progress payments and the development of change orders. Experience with designing and/or inspecting a comparable LSLR project(s) is highly desired. A strong working knowledge of residential and commercial building construction, including electrical and plumbing systems, is highly preferred.

The Assistant Inspector will work under the direct supervision of the Inspector and will assist with various inspection-related tasks. This role is intended for individuals with at least one year of experience or equivalent education in engineering and construction methods, making it suitable for a college intern or entry-level professional. The assistant inspector is helping the inspector with appropriate delegated tasks including basic inspection duties, quantity measurements, recordkeeping, or other duties, as assigned.

The consultant will provide survey services performed by inspection staff or a designated surveyor. Survey services will include construction staking for water main extensions and locating approximate property corners when necessary to ensure water services are not installed on adjacent private property.

The consultant will have access to a designated environmental specialist (DES). The DES will respond if suspicious or contaminated soils are encountered. The DES will be prepared to execute all aspects of the attached construction contingency plan.

Detailed resumes for the Principal, Construction Engineer/Project Manager, Chief Inspector, Inspector(s), Assistant Inspector(s), and Designated Environmental Specialist including years of relevant experience, key project experience, education, certifications, and training should be provided. Chief Inspectors and Inspectors are expected to have current MnDOT Technical Certifications for Aggregate Production, Bituminous Street, Concrete Field, Concrete, and Grading and Base and a City of Duluth HDPE Fusion Certificaiton.

The selected consultant will be required to separately track and bill hours by each City project number worked on for all consultant staff. The consultant will prepare a project specific Quality Management Plan (QMP). The Consultant's QMP shall outline and prescribe who, what, when and how quality control and quality assurance activities will be performed on the project to ensure high quality and accurate field documentation, recordkeeping, testing, identification of non-conforming work, change orders, and progress payments are provided to ensure conformance with the Plans and Specifications, of project budget(s), and management/facilitation of project schedules.

The Consultant shall incorporate vehicle and mileage expenses into personnel rates and not separate these costs on invoices.

A survey-grade GPS shall be onsite and available to record utility location information while excavations are open and paint markings are fresh.

All work shall be performed in accordance with the most recent versions of the City Standard Specifications and Engineering Guidelines; both are available on the City of Duluth website at https://duluthmn.gov/engineering/.

SCOPE OF SERVICES

1. Construction Administration

    a. The Consultant shall provide project management for the project including general coordination of staff, attendance of the preconstruction meeting, project setup, review of the Plans and Specifications, and review of shop drawings and submittals.
    b. Project management services provided by the Consultant shall include, but not be limited to the following: coordination, contract management, invoicing, responding to resident inquiries & concerns, etc.
    c. Construction administration services shall be based upon an assumed construction duration of 31 weeks construction for CA Package 1 and 34 weeks of construction for CA Package 2. The estimated hours for the Construction Engineer / Project Manager will be 465 and 510 respectively.

2. Construction Inspection

a. CA Package 1 -The Consultant shall provide all documents and services to provide full time construction inspection services for final completion and acceptance of the street utility improvements including the completed construction documentation (quantity calculations, field measurements, change order preparation, schedule review, daily and weekly inspection records, preparation of monthly progress payments, final inspection and punchlist, warranty inspection and report, survey files and data, record drawings, water service cards, and final records). The proposal shall be based upon 31 weeks of construction (assumed April 13, 2026 – November 13, 2026) and the following assumed number or hours per position:
    a. Chief Inspector: 40 hours per week for 31 weeks = 1240 hours
    b. Inspector Primary Project: 60 hours per week for 31 weeks = 1860 hours
    c. Inspector Secondary Project (~100 services):60 hours per week for 15 weeks = 900 hours
    d. Assistant Inspector: 60 hours per week for 31 weeks = 1860 hours

b. CA Package 2 -The Consultant shall provide all documents and services to provide full time construction inspection services for final completion and acceptance of the street utility improvements including the completed construction documentation (quantity calculations, field measurements, change order preparation, schedule review, daily and weekly inspection records, preparation of monthly progress payments, final inspection and punchlist, warranty inspection and report, survey files and data, record drawings, water service cards, and final records). The proposal shall be based upon 34 weeks of construction (assumed April 13, 2026 – June 4 , 2027) and the following assumed number or hours per position:
    a. Chief Inspector: 40 hours per week for 34 weeks = 1360 hours
    b. Inspector Primary Project: 60 hours per week for 34 weeks = 2040 hours
    c. Inspector Secondary Project (~100 services):60 hours per week for 15 weeks = 900 hours
    d. Assistant Inspector: 60 hours per week for 34 weeks = 2040 hours

c. In the event of vacation or other circumstances necessitating time off by the Chief Inspectors or Inspectors, the Consultant shall be prepared to provide staff of **equal or better experience and qualifications** to serve in the absence of such key personnel. Notification of vacation or planned out of the office time must be given to the City at least three (3) weeks in advance. In addition, detailed resumes indicating experience and qualification of such temporary staff shall be provided three (3) weeks in advance for review and acceptance by the City.

PROJECT COMPLETION DATES

January 8, 2026	RFP Issued
January 29, 2026	Proposals Due
February 2026	Council Approval and Award of Contract(s)

March 2026	Begin Construction Administration Work (Project Setup, Plan and Shop Drawing Review, Etc.)
April 13, 2026	Start Construction
November 13, 2026	CA Package 1 Substantial Completion
June 4, 2027	CA Package 2 Substantial Completion
June 10, 2027	Final Warranty Inspection
June 30, 2027	Final As-Builts, Close Out Documentation

This schedule is subject to change based on bid results, Contract response, funding availability, additional LSLR projects contracted, and Contractor efficiency and progress.

QUALIFICATION PROPOSAL CONTENTS

To be considered, hard copies of proposals must arrive at the City on or before the time and date specified in the RFP. The proposal shall be submitted in the following format broken into the 5 sections identified below. Proposals not following the specified format will not be reviewed. No additional sections or appendices are allowed. The proposal shall be limited to 10 pages plus a cover letter (The page limit includes all resumes. Proposals that exceed this limit will not be reviewed. Dividers and covers are not included in the page limitation). The use of 11 x 17 sheets for the work plan, cost proposal, and/or exhibits is acceptable. The proposal format shall be as follows:

1. Goals and Objectives
   A restatement of the goals and objectives and the project tasks to demonstrate the responder's view and understanding of the project.

2. Experience
   An outline of the responder's background and experience with similar projects. Prior work with the City of Duluth including knowledge of City standards, specifications, and best practices are considered essential for this project. Consultants should include lead service line replacement projects and projects where there is extensive interaction with residents. Project descriptions shall include a list key staff and their role.

3. Personnel
   Identify personnel to conduct the project and detail their work experience. Identify how personnel proposed for this project were involved with the projects listed as experience. No change in personnel assigned to the project will be permitted without approval of the City.

4. Work Plan
   The proposer shall complete the provided work plans for the work tasks to be accomplished and the budget hours to be expended on each task. The work plan shall be submitted in the provided spreadsheet format and for each task and the number of hours for each staff person on that task.

   Do NOT include any costs in the work plan.

5. References
   References may be requested prior to final consultant selection and do not need to be included.

COST PROPOSAL CONTENTS

Provide, in separate **SEALED** envelope, one copy of the cost proposal (utilizing the provided cost proposal template), clearly marked on the outside "Cost Proposal" along with the responder's official business name and address. Terms of the proposal as stated must be valid for the project length of time.

For each proposal, the consultant must include a not-to-exceed total project cost. The cost proposal shall include all of the following:

- A cover/transmittal letter
- A breakdown of the hours by task for each employee. This shall be in the same format as the provided work plan in the Qualifications proposal with the addition of costs.
- Hourly rates for each specific employee proposed (not general rates by category).
- Identification of anticipated direct expenses and rates for miscellaneous charges such as mileage and copies.
- Identification of any assumption made while developing this cost proposal.
- Identification of any cost information related to additional services or tasks. Include this in the cost proposal, but identify it as additional costs and do not make it part of the total project cost.
- The Consultant must have the cost proposal/cover letter/transmittal signed in ink by a member of the firm authorized to bind the company into a contract, and the attached Appendix A completed.
- The consultant must not include any cost information within the body of the RFP qualification proposal response.

SELECTION

The proposals will be reviewed by City Staff. The intent of the selection process is to review proposals and make an award based upon qualifications as described herein. A 100-point scale will be used to create the final evaluation recommendations. The factors and weighting on which proposals will be judged are:

	Item	Percent
1	Goals and Objectives	10%
2	Experience	20%
3	Personnel	30%
4	Work Plan	20%
5	Project costs/fees	20%

Proposals will be evaluated on a best value basis with 80% qualifications and 20% cost consideration. The review committee will not open the cost proposal until after the qualification points have been awarded. The City reserves the right to interview Consultants (in-person or virtually) prior to making a final decision.

SUBMITTAL DATE

Submit five (5) paper copies of the Proposal and one (1) paper copy of the Cost Submittal in an envelope marked, 24-AA04 Construction Administration for 2026 Lead Water Service Replacement Projects by Thursday, January 29, 2026 to:

Purchasing
City Hall Room 120
411 West 1st Street
Duluth, MN 55802

CONTACT

All questions concerning the project shall be directed to:

Purchasing@duluthmn.gov

LIMITATIONS

This Request for Proposal does not commit the City of Duluth to award a contract or pay costs incurred in the preparation of the proposal, or to procure a contract for services or supplies.

The Proposal shall not in any way include any restrictions on the City of Duluth. The Consultant shall NOT provide proposed contract language.

The City of Duluth specifically reserves the right to accept or reject any or all proposals, to negotiate with any qualified source, to cancel in part or in its entirety the Request for Proposal, to waive any requirements, to investigate the qualifications of any proposal, to obtain new proposals, or proceed to have the service provided in any way as necessary to serve the best interests of the City of Duluth. The City is not liable for any costs the Consultant incurs in preparation and submission of its proposal, in participating in the RFP process or in anticipation of award of the contract.

The selected consultant must sign the City of Duluth standard Professional Engineering Services Agreement attached as Appendix D, a sample of which is available at https://duluthmn.gov/purchasing/forms/. Any questions concerning this agreement should be asked PRIOR to proposal submittal. These questions should be directed to the City Engineering Office.

All materials submitted in response to this RFP will become property of the City and will become public record after the evaluation process is completed and an award decision made.

Prior to entering into an agreement with the city, the consultant shall furnish proof that it has all legal requirements for transacting business in the State of Minnesota.

APPENDICES

Appendix A – Proposal Cover Sheet
Appendix B – Federal Supplemental Provisions
Appendix C – Byrd Anti-Lobbying Certificate: The completed certificate must be submitted with your proposal.
Appendix D – Professional Engineering Service Agreement
Appendix E – Work Plan & Cost Proposal Template – CA Package 1 – uploaded as a separate spreadsheet
Appendix F – Work Plan & Cost Proposal Template – CA Package 2 – uploaded as a separate spreadsheet
Appendix G – Project Areas Map
Appendix H – LSLR Reference Plan Set
Appendix I – LSLR Construction Contingency Plan

APPENDIX A - PROPOSAL COVER SHEET
CITY OF DULUTH
RFP 26-AA04
RFP Construction Administration for 2026 Lead Water Service Replacement Projects

Bidder Information:	
Bidder Name	
Mailing Address	
Contact Person	
Contact Person's Phone Number	
Contact Person's E-Mail Address	
Federal ID Number	
Authorized Signature	
Name & Title of Authorized Signer	
Email of Authorized Signer	

APPENDIX B – FEDERAL SUPPLEMENTARY PROVISIONS
CITY OF DULUTH
RFP 26-AA04
RFP Construction Administration for 2026 Lead Water Service Replacement Projects

APPENDIX B

City of Duluth
Supplementary Provisions for State and/or Federally Assisted Activities

1. Disbursements

a. No money under this Contract shall be disbursed by the City to any Contractor unless the Contractor is in compliance with the Federal Agency requirements with regard to accounting and fiscal matters to the extent they are applicable.

b. Unearned payments under this Contract may be suspended or terminated upon the Contractor's refusal to accept any additional conditions that may be imposed by the Federal Agency at any time; or if the grant, if applicable, to the City under which this Contract is made is suspended or terminated.

2. Subcontracting Requirements

a. The Contractor shall include in any subcontract the clauses set forth in these City of Duluth Supplementary Provisions in their entirety and shall also include a clause requiring the subcontractors to include these clauses in any lower tier subcontracts which they may enter into, together with a clause requiring this insertion in any further subcontracts that may in turn be made.

b. The Contractor shall not subcontract any part of the work covered by this Contract or permit subcontracted work to be further subcontracted without the City's prior written approval of the subcontractors. The City will not approve any subcontractor for work covered by this Contract who is at the time ineligible under the provisions of any applicable regulations issued by a Federal Agency or the Secretary of Labor, United States Department of Labor, to receive an award of such subcontract.

3. Breach of Contract.

The City may, subject to the Force Majeure provisions below and in addition to its other rights under the Contract, declare the Contractor in breach of the Contract by written notice thereof to the Contractor, and terminate the Contract in whole or in part, in accordance with Section 4, Termination, for reasons including but not limited to any of the following:

a. Failure to begin the Work within the time specified in the Contract;

b. Failure to perform the Work with sufficient labor, equipment, or material to insure the completion of the specified Work in accordance with the Contract terms;

c. Unsatisfactory performance of the Work;

d. Failure or refusal to remove material, or remove and replace any Work rejected as defective or unsatisfactory;

e. Discontinuance of the Work without approval;

f. Failure to resume the Work, which has been discontinued, within a reasonable time after notice to do so;

g. Insolvency or bankruptcy;

h. Failure to protect, to repair, or to make good any damage or injury to property;

i. Breach of any provision of the Contract;

j. Misrepresentations made in the Contractor's bid/proposal; or

k. Failure to comply with applicable industry standards, customs, and practice.

4. Termination

If the Contractor is in breach of the Contract, the City, by written notice to the Contractor, may

terminate the Contractor's right to proceed with the Work. Upon such termination, the City may take over the Work and prosecute the same to completion, by contract or otherwise, and the Contractor and its sureties shall be liable to the City for any additional cost incurred by the City in its completion of the Work and they shall also be liable to the City for liquidated damages for any delay in the completion of the Work as provided below. If the Contractor's right to proceed is terminated, the City may take possession of and utilize in completing the Work such materials, tools, equipment, and plant as may be on the site of the Work and necessary therefore.

City shall have the right to terminate this contract immediately without other cause in the event that all or a portion of the funds that the City intends to use to fund its obligations under the contract have their source with the State or Federal government or any agency thereof and said source reduces or eliminates their obligation to provide some or all of the funds previously committed by it to fund City's payment obligations under the Contract. The City agrees that termination hereunder will not relieve the City of its obligation to pay Contractor for Work satisfactorily performed and reasonable costs incurred prior to the effective date.

Notwithstanding anything herein to the contrary, the City may terminate this Contract at any time upon written notice given by the City (for any reason, including the convenience of the City) to the Contractor at least thirty (30) days prior to the effective date of the termination of this Contract. The City agrees that termination hereunder will not relieve the City of its obligation to pay Contractor for Work satisfactorily performed and reasonable costs incurred prior to the effective date of the termination provided that Contractor has not committed a breach of this Contract. Nothing contained in this section shall prevent either party from pursuing or collecting any damages to which it may be entitled by law.

5. Force Majeure.

The right of the Contractor to proceed shall not be terminated nor shall the Contractor be charged with liquidated damages for any delays in the completion of the Work due to any acts of the Government, including controls or restrictions upon or requisitioning of materials, equipment, tools, or labor by reason of war, National Defense, or any other national emergency; any acts of the City; causes not reasonably foreseeable by the parties to this Contract at the time of the execution of the Contract which are beyond the control and without the fault or negligence of the Contractor, including, but not restricted to, acts of God or of the public enemy, acts of another Contractor in their performance of some other contract with the City, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and weather of unusual severity such as hurricanes, tornadoes, cyclones, and other extreme weather conditions; nor to any delay of any Subcontractor occasioned by any of the causes specified above. The Contractor shall promptly notify the City in writing within ten (10) days of the delay. Upon receipt of such notification, the City shall ascertain the facts and the cause of the delay. If, upon the basis of facts and the terms of the Contract, the delay is properly excusable, the City shall extend the time for completing the Work for a period of time commensurate with the period of excusable delay.

6. Energy Standards.

Contractor shall comply with all mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (42 U.S.C. 6201).

7. Suspension and Debarment.

This contract is a covered transaction for purposes of 49 CFR Part 29. As such, the contractor is required to verify that none of the contractor, its principals, as defined at 49 CFR 29.995, or affiliates, as defined at 49 CFR 29.905, are excluded or disqualified as defined at 49 CFR 29.940 and 29.945. The contractor is required to comply with 49 CFR 29, Subpart C and must include the requirement to comply

with 49 CFR 29, Subpart C in any lower tier covered transaction it enters into. A contract award must not be made to parties listed on the governmentwide exclusions in the System for Award Management (SAM.gov), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 19898 Comp., p. 235), "Debarment and Suspension." SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.

8. Byrd Anti-Lobbying Amendment, 31 U.S.C. § 1352 (as amended)

Contractors must certify that that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352.

9. Telecommunications and Video Surveillance Services or Equipment

In the performance of this contract, Contractor/Supplier shall comply with Public Law 115-232, Section 889, which prohibits the procurement or use of covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, use of video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities) is prohibited.

In addition, telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country is prohibited.

APPENDIX C – BYRD ANTI-LOBBYING CERTIFICATE
CITY OF DULUTH
RFP 26-AA04
RFP Construction Administration for 2026 Lead Water Service Replacement Projects

The completed certificate must be submitted with your proposal.

APPENDIX C

BYRD ANTI-LOBBYING AMENDMENT CERTIFICATION
(To be submitted with each bid or offer exceeding $100,000)

The undersigned, [Company] _____ certifies, to the best of his or her knowledge, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form - LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31, U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor, [Company] _____, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. § 3801 *et seq*., apply to this certification and disclosure, if any.

_____
Signature of Contractor's Authorized Official

_____
Name and Title of Contractor's Authorized Official

_____
Date

APPENDIX D – PROFESSIONAL ENGINEERING AGREEMENT
CITY OF DULUTH
RFP 26-AA04
RFP Construction Administration for 2026 Lead Water Service Replacement Projects

APPENDIX D

PROFESSIONAL ENGINEERING SERVICES AGREEMENT

Click or tap here to enter text. **& CITY OF DULUTH**

THIS AGREEMENT, effective as of the date of attestation by the City Clerk, is made by and between the City of Duluth, Minnesota hereinafter referred to as the "City" and:

Name: Click or tap here to enter text.
Address: Click or tap here to enter text.

hereinafter referred to as the "Engineer", in consideration of the mutual promises contained herein.

Payments as described in Section V shall be made from Funding Click or tap here to enter text.; Project # Click or tap here to enter text.; and Resolution No. Click or tap here to enter text., passed on Click or tap here to enter text..

The professional engineering services obtained by the City under this agreement concern the following described project hereinafter referred to as the "Project":

Project Number: Click or tap here to enter text.
Project Name: Click or tap here to enter text.
Project Description: Click or tap here to enter text.

The professional engineering services to be provided under this agreement consist of those phases A through G checked below. A more particular description of each phase is contained in Section II, "Basic Services", of the agreement.

	Phase	Description
☐	A.	Study and Report Phase
☐	B.	Preliminary Survey Phase
☐	C.	Preliminary Design Phase
☐	D.	Final Design Phase
☐	E.	Bidding Phase
☐	F.	Construction Survey and Layout Phase
☐	G.	Construction Administration and Inspection Phase

SECTION I. GENERAL

A. ENGINEER

The Engineer shall provide professional engineering services for the City in all phases of the Project to which this agreement applies, serve as the City's professional engineering representative for the Project as set forth below and shall give professional engineering consultation and advice to the City during the performance of services hereunder. All services provided hereunder shall be performed by the Engineer in accordance with generally accepted Engineering standards to the satisfaction of the City.

B. NOTICE TO PROCEED

The Engineer shall only begin performance of each Phase of work required hereunder upon receipt of a written Notice to Proceed by City representative with that Phase.

TEMPLATE

C. TIME

The Engineer shall begin work on each successive phase promptly after receipt of the Notice to Proceed and shall devote such personnel and materials to the Project so as to complete each phase in an expeditious manner within the time limits set forth in Section II. Time is of the essence to this agreement.

D. CITY'S REPRESENTATIVE

The City's representative to the Engineer shall be the City Engineer or his or her designees assigned in writing.

E. ENGINEERING GUIDELINES

All work performed as part of this project shall conform to the most current edition of the Engineering Guidelines for Professional Engineering Services and Developments as approved by the City Engineer and on file in the office of the City Engineer.

F. SUBCONSULTANTS

Engineer may contract for the services of sub-consultants to assist Engineer in the performance of the services to be provided by Engineer hereunder but the selection of any sub-consultant to perform such services shall be subject to the prior written approval of the City Engineer. Engineer shall remain responsible for all aspects of any services provided by such sub-consultants to City under this Agreement. City shall reimburse Engineer for sub-consultant services under the categories of services to be provided by Engineer under Phases A through G, as applicable.

SECTION II. BASIC SERVICES

A. STUDY AND REPORT PHASE

☐ Included in this Agreement
☐ Not included in this Agreement

The Engineer shall:

1) City's Requirements

Review available data and consult with the City to clarify and define the City's requirements for the Project.

2) Advise Regarding Additional Data

Advise the City as to the necessity of the City's providing or obtaining from others data or services in order to evaluate or complete the Project and, if directed by the City's representative, act on behalf of the City in obtaining other data or services.

3) Technical Analysis

Provide analysis of the City's needs, planning surveys, site evaluations, and comparative studies of prospective sites and solutions.

4) Economic Analysis

Provide a general economic analysis of various alternatives based on economic parameters and assumptions provided by the City.

TEMPLATE

5) Report Preparation

Prepare a report containing schematic layouts, sketches and conceptual design criteria with appropriate exhibits to indicate clearly the considerations involved and the alternative solutions available to the City and setting forth the Engineer's findings and recommendations with opinions of probable total costs for the Project, including construction cost, contingencies, allowances for charges of all professionals and consultants, allowances for the cost of land and rights-of-way, compensation for or damages to properties and interest and financing charges (all of which are hereinafter called "Project Costs").

6) Report Presentation

Furnish three copies of the report and present and review the report in person with the City as the City Representative shall direct.

7) Supplementary Duties

The duties and responsibilities of Engineer during the Study and Report Phase shall also include any additional duties and responsibilities to be provided pursuant to the Engineer's proposal attached as Exhibit B.

8) Completion Time

The Study and Report Phase shall be completed and report submitted by Click or tap here to enter text..

B. PRELIMINARY SURVEY PHASE

☐ Included in this Agreement
☐ Not included in this Agreement

After written authorization by the City's representative to proceed with the preliminary survey phase, the Engineer shall:

1) General

Perform topographic survey as necessary to prepare the design and provide Construction Survey and Layout as described in Section II.F

2) Boundary Survey

Perform boundary survey if checked.

3) Document Presentation

Furnish a CADD file of the survey base map to the City. Files shall be in the software specified in the Engineering Guidelines for Professional Engineering Services and Developments described in Section I.E.

4) Supplementary Duties

The duties-responsibilities of the Engineer during the preliminary survey phase shall also include any additional duties and responsibilities to be provided pursuant to the Engineer's proposal attached as Exhibit B.

5) Completion Time

The preliminary survey phase shall be completed and submitted by Click or tap here to enter text..

TEMPLATE

C. PRELIMINARY DESIGN PHASE

☐ Included in this Agreement
☐ Not included in this Agreement

After written authorization by the City's Representative to proceed with the Preliminary Design Phase, the Engineer shall:

1) Preliminary Design Documents
Prepare preliminary design documents consisting of final design criteria, preliminary drawings and outline specifications.

2) Revised Project Costs
Based on the information contained in the preliminary design documents, submit a revised opinion of probable Project costs.

3) Preparation of Grants; Environmental Statements
Preparation of applications and supporting documents for governmental grants, loans or advances in connection with the Project, preparation or review of environmental assessments and impact statements; review and evaluation of the effect on the design requirements of the Project of any such statements and documentation prepared by others; and assistance in obtaining approvals of authorities having jurisdiction over the anticipated environmental impact of the Project.

4) Renderings and Models
Providing renderings or models for the City's use.

5) Economic Analysis
Investigations involving detailed consideration of operations, maintenance and overhead expenses; providing value engineering during the course of design; the preparation of feasibility studies, cash flow and economic evaluations, rate schedules and appraisals; assistance in obtaining financing for the Project; evaluating processes available for licensing and assisting the City in obtaining licensing; detailed quantity surveys of material, equipment and labor; and audits of inventories required in connection with construction performed by the City.

6) Document Presentation
Furnish three copies of the above preliminary design documents and present and review such documents in person with the City as the City Engineer may direct.

7) Supplementary Duties
The duties and responsibilities of the Engineer during the Preliminary Design Phase shall also include any additional duties and responsibilities to be provided pursuant to the Engineer's proposal attached as Exhibit B.

8) Completion Time
The Preliminary Design Phase shall be completed and report or plan submitted by Click or tap here to enter text..

D. FINAL DESIGN PHASE

☐ Included in this Agreement

TEMPLATE

☐ Not included in this Agreement

1) Drawings and Specifications

On the basis of the accepted preliminary design documents and the revised opinion of probable Project costs, prepare for incorporation in the contract documents Construction Plans to show the character and extent of the Project and specifications.

2) Approvals of Governmental Entities

Furnish to the City such documents and design data as may be required for, and prepare the required documents so that the City may apply for approvals and permits of such governmental authorities as have jurisdiction over design criteria applicable to the Project, and assist in obtaining such approvals by participating in submissions to and negotiations with appropriate authorities.

3) Adjusted Project Costs

Advise the City of any adjustments to the latest opinion of probable Project costs, identify cause of change and furnish a revised opinion of probable Project cost based on the drawings and specifications.

4) Contract Document Preparation

Prepare final plans and specifications for the Project, which shall include incorporation of plans and specifications prepared by subconsultants. Engineer shall assist in the preparation of contract documents. Engineer shall prepare all necessary project/plan review forms checklists, labor compliance requests, wage determination requests, bidding documents and other forms to assist the City with procuring Bids. Engineer shall review all plans and specifications and supporting documentation and resolve any inconsistencies in said documents being incorporated into the Contract prior to bid. To the extent possible, the Engineer will follow the document format supplied by the City and use the standard terms and conditions supplied by the City in preparation of these documents.

5) Real Estate Acquisition: Legal Description

Based on preliminary design documents, furnish a legal description and recordable reproducible 8-1/2" X 11" plat of each parcel of real estate in which the City must acquire an interest in order to proceed with construction of the Project.

6) Document Presentation

Furnish three copies of the above documents and present and review them in person with the City.

7) Supplementary Duties

The duties and responsibilities of the Engineer during the Final Design Phase shall also include any additional duties and responsibilities to be provided pursuant to the Engineer's proposal attached as Exhibit B.

8) Completion Time

The Final Design Phase shall be completed and contract documents submitted by Click or tap here to enter text..

E. BIDDING PHASE

☐ Included in this Agreement

TEMPLATE

☐ Not included in this Agreement

The Engineer shall:

1) Assist in Bidding
Assist the City in obtaining bids for each separate City contract for construction, materials, equipment and services.

2) Advise Regarding Contractors and Subcontractors
Consult with and advise the City as to the acceptability of subcontractors and other persons and organizations proposed by the City's contractor(s) (hereinafter called "Contractor(s)" for those portions of the work as to which such acceptability is required by the bidding documents).

3) Consult Regarding Substitutes
Consult with and advise the City as to the acceptability of substitute materials and equipment proposed by the contractor(s) when substitution prior to the award of contracts is allowed by the bidding documents.

4) Evaluation of Bids
Assist the City in evaluating bids or proposals and in assembling and awarding contracts.

5) Supplementary Duties
The duties and responsibilities of the Engineer during the Bidding Phase shall also include any additional duties and responsibilities to be provided pursuant to the Engineer's proposal attached as Exhibit B.

6) Completion Time
The bidding phase shall be completed by Click or tap here to enter text..

F. CONSTRUCTION SURVEY AND LAYOUT PHASE

☐ Included in this Agreement
☐ Not included in this Agreement

1) General
This phase of work may or may not be performed in conjunction with Phase G, "Construction Administration and Inspection Phase" of this agreement. Inclusion of this phase in the agreement does not imply that services identified under Phase G are to be provided unless specifically indicated in this agreement.

2) Duties
The Engineer shall provide horizontal and vertical control line and grade to enable construction of the improvement as depicted in the Project plans. The number of control points to be established by the Engineer shall be sufficient to permit the construction contractor to construct the improvement within the construction tolerances established in the Project specifications. In addition, the number of control points shall be consistent with standard engineering practice.

3) Accuracy
The Engineer shall provide the horizontal and vertical control points within the same measurement tolerances as the construction tolerances established in the Project specifications. The Engineer shall be responsible for the accuracy of the control points which are established.

TEMPLATE

The Engineer shall be responsible for costs which may result from errors in placement of control points. The Engineer shall be required to establish control points at Engineer's costs only one time. Control points which are lost, damaged, removed or otherwise moved by the Contractor or others shall be promptly replaced by the Engineer and costs for such replacement shall be computed on a time and materials basis, and reimbursed by the City. The Engineer shall take all reasonable and customary actions to protect the control points established by the Engineer.

4) Supplementary Duties

The duties and responsibilities of the Engineer during the construction survey and layout phase shall also include any additional duties and responsibilities to be provided pursuant to the Engineer's proposal attached as Exhibit B.

5) Completion Time

The construction survey & layout phase shall be completed by Click or tap here to enter text..

G. CONSTRUCTION ADMINISTRATION AND INSPECTION PHASE

☐ Included in this Agreement
☐ Not included in this Agreement

1) General Duties

Consult with and advise the City and act as its representative as provided herein and in the General Conditions of the construction contract for the Project. This phase of the work may or may not be performed in conjunction with Phase F "Construction Survey and Layout Phase" of this agreement. Inclusion of this phase in the agreement does not imply that services identified under Phase F are to be provided unless specifically indicated in this agreement.

2) Construction Inspection and Reporting

Make visits to the site with sufficient frequency at the various stages of construction to observe as an experienced and qualified design professional the progress and quality of the executed work of the contractor(s) and to ensure that such work is proceeding in accordance with the contract documents. During such visits and on the basis of on-site observations, the Engineer shall keep the City informed of the progress of the work, shall endeavor to guard the City against defects and deficiencies in such work and may disapprove or reject work failing to conform to the contract documents.

3) Warranty Inspection

Eleven months following construction completion, conduct an inspection to document any items to be repaired by the contractor under the conditions of the construction contract warranty. Submit work to be corrected to the Contractor and the City.

4) Review of Technical and Procedural Aspects

Review and approve (or take other appropriate action in respect to Shop Drawings), the results of tests and inspections and other data which each contractor is required to submit, determine the acceptability of substitute materials and equipment proposed by the contractor(s), and receive and review (for general content as required by the specifications) maintenance and operating instructions, schedules, guarantees, bonds and certificates of inspection which are to be assembled by the contractor(s).

5) Contract Documents

Receive from each contractor and review for compliance with contract documents all required

TEMPLATE

document submissions including but not limited to performance and payment bonds, certificates of insurance report forms required by any City, State or Federal law or rule or regulation and submit the forms to the City for final approval.

6) Conferences and Meetings

Attend meetings with the contractor, such as preconstruction conferences, progress meetings, job conferences and other Project-related meetings, and prepare and circulate copies of the minutes thereof including to the City.

7) Records

a) Maintain orderly files for correspondence, reports of job conferences, shop drawings and samples, reproductions of original contract documents, including all work directive changes, addenda, change orders, field orders, additional drawings issued subsequent to the execution of the contract, the Engineer's clarifications and interpretations of the contract documents, progress reports, and other Project-related documents.

b) Keep a diary or log book, recording the contractor's hours on the job site, weather conditions, data relative to questions of work directive changes, change orders, or changed conditions, list of job site visitors, daily activities, decisions, observations in general, and specific observations in more detail, as in the case of observing test procedures and send copies to the City. Take multiple photographs of the Work and keep a log and file of the photos. Specifically maintain records of acceptance and rejection of materials and workmanship.

c) Record names, addresses and telephone numbers of all the contractors, subcontractors, and major suppliers of materials and equipment.

8) Reports

a) Furnish the City periodic reports, as required, on progress of the work and of the contractor's compliance with the progress schedule and schedule of shop drawings and sample submittals.

b) Consult with the City, in advance of scheduled major tests, inspections, or start of important phases of the Work.

c) Draft proposed change orders and work directive changes, obtaining back-up material from the contractor, and make recommendations to the City regarding change orders, work directive changes and field orders.

d) Report immediately to the City upon the occurrence of any accident.

9) Contract Interpretation, Review of Quality of Work

Issue all instruction of the City to the contractor(s); issue necessary interpretations and clarifications of the contract Documents and in connection therewith prepare change orders as required, subject to the City's approval; have authority, as the City's representative, to require special inspection or testing of the work; act as initial interpreter of the requirements of the contract documents and judge of the acceptability of the work there under and make decisions on all claims of the contractor(s) relating to the acceptability of the work or the interpretation of the requirements of the contract documents pertaining to the execution and progress of the work.

10) Change Orders and Revisions

Prepare change orders to reflect changes in the Project requested or approved by the City,

TEMPLATE

evaluate substitutions proposed by the contractor(s) and make revisions to drawings and specifications occasioned thereby, and provide any additional services necessary as the result of significant delays, changes or price increases occurring as a direct or indirect result of material, equipment or energy shortages.

11) Review of Applications for Payment

Based on the Engineer's on-site observations as an experienced and qualified design professional and on review of applications for payment and the accompanying data and schedules, determine the amount owing to the contractor(s) and recommend in writing payments to the contractor(s) in such amounts; such recommendations of payment will constitute a representation to the City, based on such observations and review, that the work has progressed to the point indicated, that, to the best of the Engineer's knowledge, information and belief, the quality of such work is in accordance with the contract documents (subject to an evaluation of such work as a functioning Project upon substantial completion, to the results of any subsequent tests called for in the contract documents, and to any qualifications stated in his recommendation), and that payment of the amount recommended is due the contractor(s).

12) Determination of Substantial Completion

Conduct an inspection to determine if the Project is substantially complete and a final inspection to determine if the work has been completed in accordance with the contract documents and if each contractor has fulfilled all of his obligations there under so that the Engineer may recommend, in writing, final payment to each contractor and may give written notice to the City and the contractor(s) that the work is acceptable (subject to any conditions therein expressed).

13) Authority and Responsibility

The Engineer shall not guarantee the work of any contractor or subcontractor, shall have no supervision or control as to the work or persons doing the work, shall not have charge of the work, shall not be responsible for safety in, on, or about the job-site or have any control of the safety or adequacy of any equipment, building component, scaffolding, supports, forms or other work aids. If the Engineer determines that there are deficiencies in materials or workmanship on the Project, or otherwise deems it to be in the best interest of the City to do so, the Engineer shall be responsible to stop any contractor or subcontractor from performing work on the Project, until conditions giving rise to this need, therefore, are rectified.

14) Engineer Not Responsible for Acts of Contractor

The Engineer shall not be responsible for the supervision or control of the acts or omissions or construction means, methods or techniques of any contractor, or subcontractor, or any of the contractor(s)' or subcontractors' or employees or any other person (except the Engineer's own employees and agents) at the site or otherwise performing any of the contractor(s) work; however, nothing contained in this paragraph shall be construed to release the Engineer from liability for failure to properly perform duties undertaken by him in these contract documents or this agreement.

15) Preparation of Record Drawings

The Engineer shall prepare a set of record drawings in accordance with the Engineering Guidelines for Professional Engineering Services and Development described in Section I.E.

16) Manuals

The Engineer shall furnish operating and maintenance manuals; protracted or extensive assistance in the utilization of any equipment or system (such as initial start-up, testing, and adjusting and balancing); and training personnel for operation and maintenance.

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17) Supplementary Duties

The duties and responsibilities of the Engineer during the construction administration and inspection phase shall also include any additional duties and responsibilities to be provided pursuant to the Engineer's proposal attached as Exhibit B.

18) Completion Time

The construction administration and inspection phase shall be completed by Click or tap here to enter text..

SECTION III. CITY'S RESPONSIBILITIES

A. FURNISH REQUIREMENTS AND LIMITATIONS

Provide all criteria and full information as to the City's requirements for the Project, including design objectives and constraints, space, capacity and performance requirements, flexibility and expendability, economic parameters and any budgetary limitations; and furnish copies of all design and construction standards which the City will require to be included in the Drawings and Specifications.

B. FURNISH INFORMATION

Assist the Engineer by placing at the Engineer's disposal all available information reasonably known to and in possession of the City.

C. REVIEW DOCUMENTS

Examine all studies, reports, sketches, drawings, specifications, proposals and other documents presented by the Engineer.

D. OBTAIN APPROVALS AND PERMITS

Furnish approvals and permits from all governmental authorities having jurisdiction over the Project and such approvals and consents from others as may be necessary for completion of the Project.

E. ACCOUNTING, LEGAL AND INSURANCE SERVICE

Provide such accounting, independent cost estimating and insurance counseling services as may be required for the Project, such auditing service as the City may require to ascertain how or for what purpose any contractor has used the monies paid to him under the construction contract, and such inspection services as the City may require to ascertain that the contractor(s) are complying with any law, rule or regulation applicable to their performance of the work except as otherwise provided in Section II.

F. NOTIFY THE ENGINEER OF DEFECTS OR DEVELOPMENT

Give prompt written notice to the Engineer whenever the City observes or otherwise becomes aware of any development that affects the scope or timing of the Engineer's services, or any defect in the work of the contractor(s).

G. COSTS OF THE CITY'S RESPONSIBILITIES

Bear all costs incidental to compliance with the requirements of this Section III.

SECTION IV. GENERAL CONSIDERATIONS

TEMPLATE

A. SUCCESSORS AND ASSIGNS

The City and the Engineer each binds their respective partners, successors, executors, administrators and assigns to the other party of this agreement and to the partners, successors, executors, administrators, and assigns of such other party, in respect to all covenants of this agreement; the Engineer shall not assign, sublet, or transfer their respective interests in this agreement without the written consent of the City. Nothing herein shall be construed as creating any personal liability on the part of any officer or agent of any public body which may be a party hereto, nor shall it be construed as giving any rights or benefits hereunder to anyone other than the City and the Engineer.

B. OWNERSHIP OF DOCUMENTS

All drawings, specifications, reports, records, and other work product developed by the Engineer in connection with this Project shall remain the property of the City whether the Project is completed or not. Reuse of any of the work product of the Engineer by the City on extensions of this Project or any other Project without written permission of the Engineer shall be at the City's risk and the City agrees to defend, indemnify and hold harmless the Engineer from all damages and costs including attorney fees arising out of such reuse by the City or others acting through the City.

C. ESTIMATES OF COST (COST OPINION)

Estimates of construction cost provided are to be made on the basis of the Engineer's experience, qualifications and the best of their professional judgment, but the Engineer does not guarantee the accuracy of such estimates as compared to the contractor's bids or the Project construction cost.

D. INSURANCE

1) Engineer shall provide the following minimum amounts of insurance from insurance companies authorized to do business in the state of Minnesota:

a) Workers' compensation insurance in accordance with the laws of the State of Minnesota.

b) Commercial General and Automobile Liability Insurance with limits not less than **$1,500,000** Single Limit shall be in a company approved by the city of Duluth; and shall provide for the following: Liability for Premises, Operations, Completed Operations, Independent Contractors, and Contractual Liability. Umbrella coverage with a "form following" provision may make up the difference between the commercial general and auto liability coverage amounts and the required minimum amount stated above.

c) Professional Liability Insurance in an amount not less than **$1,500,000** Single Limit; provided further that in the event the professional liability insurance is in the form of "claims made," insurance, Engineer hereby commits to provide at least 60 days' notice prior to any change to the Professional Liability Insurance policy or coverage ; and in event of any change, Engineer agrees to provide the City with either evidence of new insurance coverage conforming to the provisions of this paragraph which will provide unbroken protection to the City, or, in the alternative, to purchase at its cost, extended coverage under the old policy for the period the state of repose runs; the protection to be provided by said "claims made" insurance shall remain in place until the running of the statute of repose for claims related to this

TEMPLATE

Agreement.

d) **City of Duluth shall be named as Additional Insured** under the Commercial General and Automobile Liability Policies. Engineer shall also provide evidence of Statutory Minnesota Workers' Compensation Insurance. Engineer to provide Certificate of Insurance evidencing such coverage with notice to City of cancellation in accordance with the provisions of the underlying insurance policy included. The City of Duluth does not represent or guarantee that these types or limits of coverage are adequate to protect the Engineer's interests and liabilities.

2) Certificates showing that Engineer is carrying the above described insurance in the specified amounts shall be furnished to the City prior to the execution of this Agreement and a certificate showing continued maintenance of such insurance shall be on file with the City during the term of this Agreement.

3) The City shall be named as an additional insured on each liability policy other than the professional liability and the workers' compensation policies of the Engineer.

4) The certificates shall provide that the policies shall not be cancelled during the life of this Agreement without advanced notice being given to the City at least equal to that provided for in the underlying policy of insurance.

5) Except as provided for in Section IV.D.1.d) above, Engineer hereby commits to provide notice to City at least 30 days in advance of any change in the insurance provided pursuant to this Section IV or in advance of that provided for in the underlying insurance policy or policies whichever is longer. For the purposes of Section IV.D of this Agreement, the term, "changed", shall include cancellation of a policy of insurance provided hereunder and any modification of such policy which reduces the amount of any coverage provided thereunder below the amounts required to be provided hereunder or otherwise reduces the protections provided under such policy to City.

E. HOLD HARMLESS

To the fullest extent permitted by law, Engineer agrees that it shall indemnify and hold harmless the City, its officers, employees, and agents, past or present, from and against any and all claims including but not limited to claims for contribution or indemnity, demands, suits, judgments, costs, and expenses (including attorneys' fees and incurred defense costs) asserted by itself or any person or persons including agents or employees of the City of Duluth or Engineer by reason of death or injury to person or persons or the loss or damage to property to the extent attributable to, or by reason of, any act, omission, operation or work of Engineer or its employees while engaged in the execution or performance of services under this Agreement. Said obligations to indemnify and hold harmless shall include, but not be limited to the obligation to indemnify and hold harmless the City in all matters where claims of liability against the City arise out of, relate to, are attributable to, are passive or derivative of, or vicarious to the negligent, intentional, or wrongful acts or omissions of Engineer, including but not limited to the failure to supervise, breach of warranty, the failure to warn, the failure to prevent such act or omission by Engineer, its employees, or its agents, and any other source of liability. Said obligations to indemnify and hold harmless shall be triggered upon the assertion of a claim for damages against City. Engineer shall not be required to indemnify City for amounts found by a fact finder to have arisen out of the sole negligent or intentional acts or omission of the City

TEMPLATE

unless Engineer should fail to comply with its insurance obligations in this contract to the detriment of City, in which case Engineer shall indemnify, defend, and hold harmless the City for any and all amounts except amounts attributed to intentional, willful or wanton acts of the City.

This Section, in its entirety, shall survive the termination of this Agreement if any amount of work has been performed by Engineer. Nothing in this provision shall affect the limitations of liability of the City as set forth in Minnesota Statutes Chapter 466.
Engineer understands this provision may affect its rights and may shift liability.

Engineer shall hold and save the City, its officers, employees, representatives and agents, and the Architect, harmless from liability of any nature or kind, including costs and expenses and reasonable attorney's fees and incurred defense costs to the extent attributable to Engineer's intellectual property infringement of any patented or unpatented invention, process, article, or appliance manufactured or used in the performance of the Contract, including its use by the City, unless otherwise specifically stipulated in the Technical Specifications.

Nothing herein is intended to impose an obligation on Engineer that is void and unenforceable under Minnesota Statutes Section 604.21.

F. TERMINATION

1) This agreement may be terminated in whole or in part in writing by either party in the event of substantial failure by the other party to fulfill its obligation under this agreement through no fault of the terminating party; provided that no such termination may be affected unless the other party is given not less than fifteen (15) calendar days' prior written notice (delivered by certified mail, return receipt requested) of intent to terminate.

2) This agreement may be terminated in whole or in part in writing by the City for its convenience; provided that the Engineer is given (1) not less than fifteen (15) calendar days' prior written notice (delivered by certified mail, return receipt requested) of intent to terminate and (2) an opportunity for consultation with the City prior to termination.

3) Upon receipt of a notice of intent to terminate from the City pursuant to this agreement, the Engineer shall (1) promptly discontinue all services affected (unless the notice directs otherwise), and (2) make available to the City at any reasonable time at a location specified by the City all data, drawings, specifications, reports, estimates, summaries, and such other information and materials as may have accumulated by the Engineer in performing this agreement, whether completed or in process.

4) Upon termination pursuant to this agreement, the City may take over the work and prosecute the same to completion by agreement with another party or otherwise.

G. LAWS, RULES AND REGULATIONS

The Engineer agrees to observe and comply with all laws, ordinances, rules and regulations of the United States of America, State of Minnesota, the City of Duluth and their respective agencies and instrumentalities which are applicable to the work and services to be performed hereunder.

H. INDEPENDENT CONTRACTOR STATUS

Nothing contained in this agreement shall be construed to make the Engineer an employee or partner of the City. The Engineer shall at all times hereunder be construed to be an independent

TEMPLATE

contractor.

I. FEDERAL FUNDING

If Federal Funds (i.e. HUD, FEMA, Revenue Sharing) are utilized as a source of Project funding, the Engineer shall abide by the terms of all Federal requirements in the performance of duties hereunder.

J. AMENDMENT OF AGREEMENT

This agreement shall be amended or supplemented only in writing and executed by both parties hereto.

K. WAIVER OF CLAIM

The Engineer waives the right to make any claim whatsoever against any officer, agent or employee of the City for, or on account of, anything done, or omitted to be done, in connection with the drafting or ratification of this contract. In addition, if it is determined that this contract was not drafted or ratified in conformity with Minnesota or federal law, or City of Duluth ordinance or charter provisions, or if the contract includes obligations that are void as to Minnesota or federal law or City of Duluth ordinance or charter provisions, the Engineer agrees to raise no defense and make no claim against the City on the basis of ratification, laches, estoppel, or implied contract. **The Engineer understands this provision may affect its rights and may shift liability and specifically agrees to the same.**

SECTION V. PAYMENT

A. BASIS OF BILLING

City shall pay the Engineer based on hourly rates for all services rendered under Section II Phases A through G, an amount not to exceed the amount in Section V.C, including any and all Project-related expenses such as travel, reproduction of reports and drawings, tolls, mileage, etc. For the purposes of this agreement, the principals and employees of the Engineer and their hourly rates are set forth in Exhibit A.

B. PAYMENT FOR WORK COMPLETED

1) Monthly progress payments may be requested by the Engineer for work satisfactorily completed and shall be made by the City to the Engineer as soon as practicable upon submission of statements requesting payment by the Engineer to the City. When such progress payments are made, the City may withhold up to five percent (5%) of the vouchered amount until satisfactory completion by the Engineer of all work and services within a phase called for under this agreement. When the City determines that the work under this agreement for any specified phase hereunder is substantially complete, it shall release to the Engineer any retainage held for that phase.

2) No payment request made pursuant to subparagraph 1 of this Section V shall exceed the estimated maximum total amount and value of the total work and services to be performed by the Engineer under this agreement without the prior authorization of the City. These estimates have been prepared by the Engineer and supplemented or accompanied by such supporting data as may be required by the City.

3) Upon satisfactory completion of the work performed hereunder, and prior to final payment under this agreement, and as a condition precedent thereto, the Engineer shall execute and

TEMPLATE

deliver to the City a release of all claims against the City arising under or by virtue of this agreement.

4) In the event of termination by City under Section IV.F., upon the completion of any phase of the Basic Services, progress payments due Engineer for services rendered through such phase shall constitute total payment for such services. In the event of such termination by City during any phase of the Basic Services, Engineer also will be reimbursed for the charges of independent professional associates and consultants employed by Engineer to render Basic Services, and paid for services rendered during that phase on the basis of hourly rates defined in Exhibit A of this agreement for services rendered during that phase to date of termination by Engineer's principals and employees engaged directly on the Project. In the event of any such termination, Engineer will be paid for all unpaid additional services plus all termination expenses. Termination expenses mean additional expenses directly attributable to termination, which, if termination is at City's convenience, shall include an amount computed as a percentage of total compensation for basic services earned by Engineer to the date of termination as follows: 10% of the difference between the amount which the Engineer has earned computed as described in paragraphs A and B of this section and the maximum payment amount described in paragraph C of this section. The above applies only if termination is for reasons other than the fault of the Engineer.

C. TOTAL NOT TO EXCEED:

All payments under this Contract are not to exceed Click or tap here to enter text. ($Click or tap here to enter text.).

SECTION VI. SPECIAL PROVISIONS

The following exhibits are attached to and made part of this agreement:

1) Exhibit A, Engineer's Hourly Rates
2) Exhibit B**,** Engineer's Proposal

In the event of a conflict between the agreement and any Exhibit, the terms of the Agreement will be controlling.

SECTION VII. COUNTERPARTS

This Agreement may be executed in two or more counterparts, each of which shall be deemed to be an original as against any party whose signature appears thereon, but all of which together shall constitute but one and the same instrument. Signatures to this Agreement transmitted by facsimile, by electronic mail in "portable document format" (".pdf"), or by any other electronic means which preserves the original graphic and pictorial appearance of the Agreement, shall have the same effect as physical delivery of the paper document bearing the original signature.

[Remainder of this page intentionally left blank. Signature page to follow.]

TEMPLATE

IN WITNESS WHEREOF, the parties have hereunto set their hands on the date of attestation shown below.

CITY OF DULUTH-Client

By: _____
Mayor

Attest:

By: _____
City Clerk

Date: _____

Countersigned:

_____
City Auditor

Approved as to Form:

_____
City Attorney

Click or tap here to enter text.

By: _____

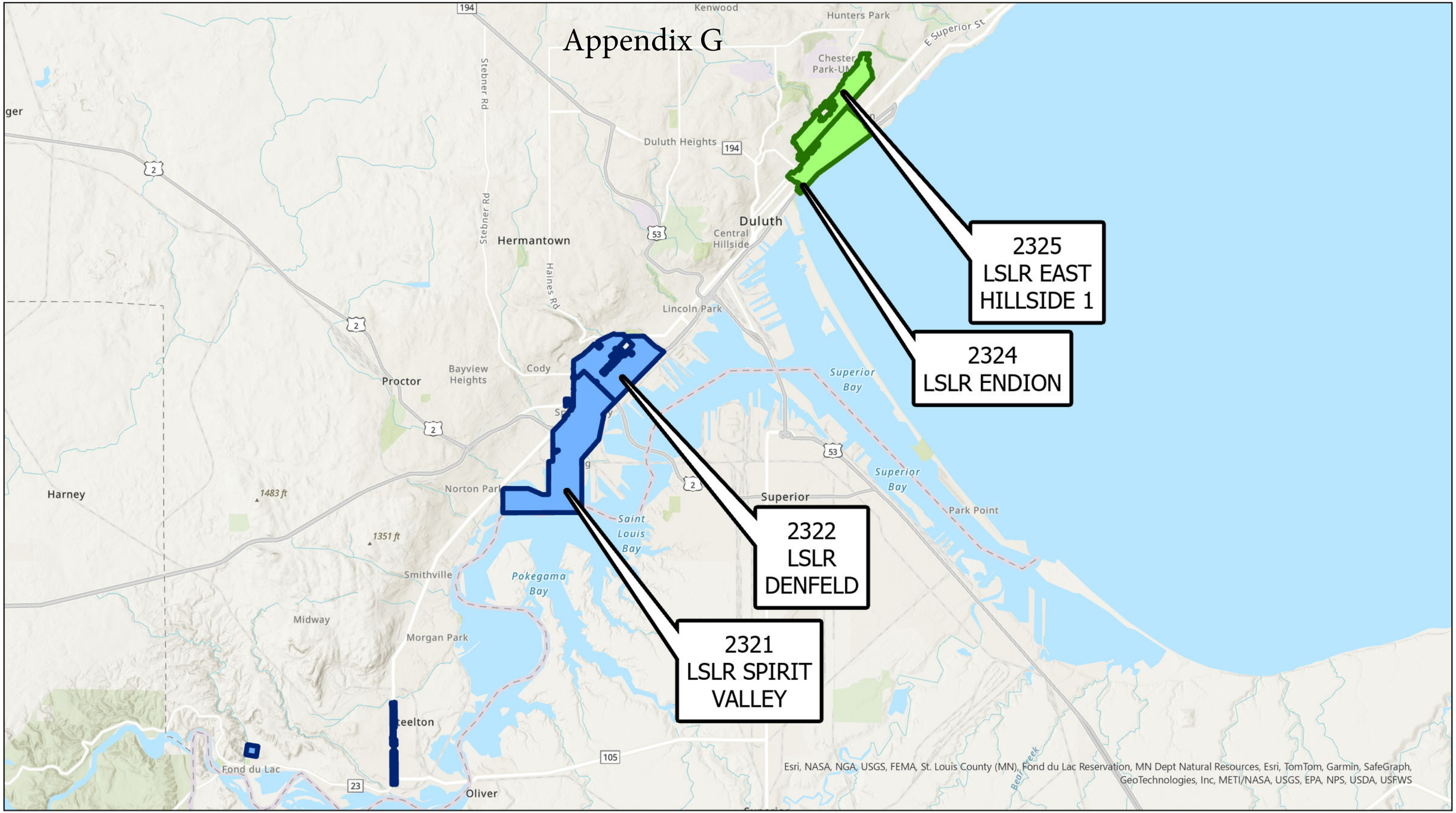
Its: _____
Title of Representative

Date: _____

TEMPLATE

APPENDIX G – PROJECT AREAS MAP
CITY OF DULUTH
RFP 26-AA04
RFP Construction Administration for 2026 Lead Water Service Replacement Projects

Appendix G



N

0 0.75 1.5 3 Miles

2026 LEAD SERVICE LINE REPLACEMENT PROJECT BOUNDARIES

Date: 1/7/2026

APPENDIX H – LSLR REFERENCE PLAN SET
CITY OF DULUTH
RFP 26-AA04
RFP Construction Administration for 2026 Lead Water Service Replacement Projects

WATER MAIN PLAN LEGEND

RIGHT OF WAY LINE
DITCH CENTERLINE
FENCE LINE
RETAINING WALL
GRAVEL LINE
GUARD RAIL LINE
RAILROAD TRACK LINE
ROAD CENTERLINE
TREE LINE
STREAM LINE
WETLAND LINE
EX SANITARY LINE
PR SANITARY LINE
AB SANITARY LINE — AB–SAN
EX FORCEMAIN LINE — FM
PR FORCEMAIN LINE — FM
AB FORCEMAIN LINE — AB–FM
EX STORM LINE
PR STORM LINE
AB STORM LINE — AB–STRM
EX WATER MAIN
PR WATER MAIN
AB WATER MAIN — AB–W
EX WATER SERVICE — WS
PR WATER SERVICE — WS
EX GAS LINE — GAS
PR GAS LINE — 3" PE GAS
AB GAS LINE — AB–GAS
EX STEAM LINE — STEAM
AB STEAM LINE — AB–STEAM
UG CABLE TV LINE — UGTV
AB CABLE TV LINE — AB–CATV
UG ELECTRIC LINE — UGE
AB ELECTRIC LINE — AB–ELEC
UG FIBEROPTIC LINE — UGFO
AB FIBEROPTIC LINE — AB–FO
UG TELEPHONE LINE — UGT
AB TELEPHONE LINE — AB–TELE
OH UTILITIES — OH

SYMBOLS

EX SANITARY MANHOLE (SAN)
EX SANITARY CLEANOUT
EX STORM MANHOLE (STRM)
EX STORM CATCHBASIN
EX. WATER MANHOLE (W)
EX. WATER VALVE (WV)
EX. WATER HYDRANT
EX. WATER SHUTOFF
EX. WATER & GAS MH (W&G)
EX. GAS MANHOLE (GAS)
EX. GAS VALVE (GV)
EX. GAS SHUTOFF
EX. STEAM MANHOLE (STEAM)
EX. TELEPHONE MANHOLE (T)
EX. ELECTRIC MANHOLE (E)
EX. POWERPOLE
EX. LIGHT POLE
EX. ELECTRIC VAULT
EX. ANCHOR
EX. ELECTRIC TRANSFORMER (ET)
EX. STREET LIGHT
EX. SIGNAL W/ STREET LIGHT
EX. HANDHOLE (H.H.)
EX. HANDHOLE (H.H.)
EX. TELEPHONE PEDESTAL
EX. WELL (W)
BENCHMARK
FOUND CI MONUMENT
EX. SIGN
CONTROL POINT
EX DECIDUOUS TREE
EX CONIFEROUS TREE
EX. PARKING METER
EX. SOIL BORING (SB#)

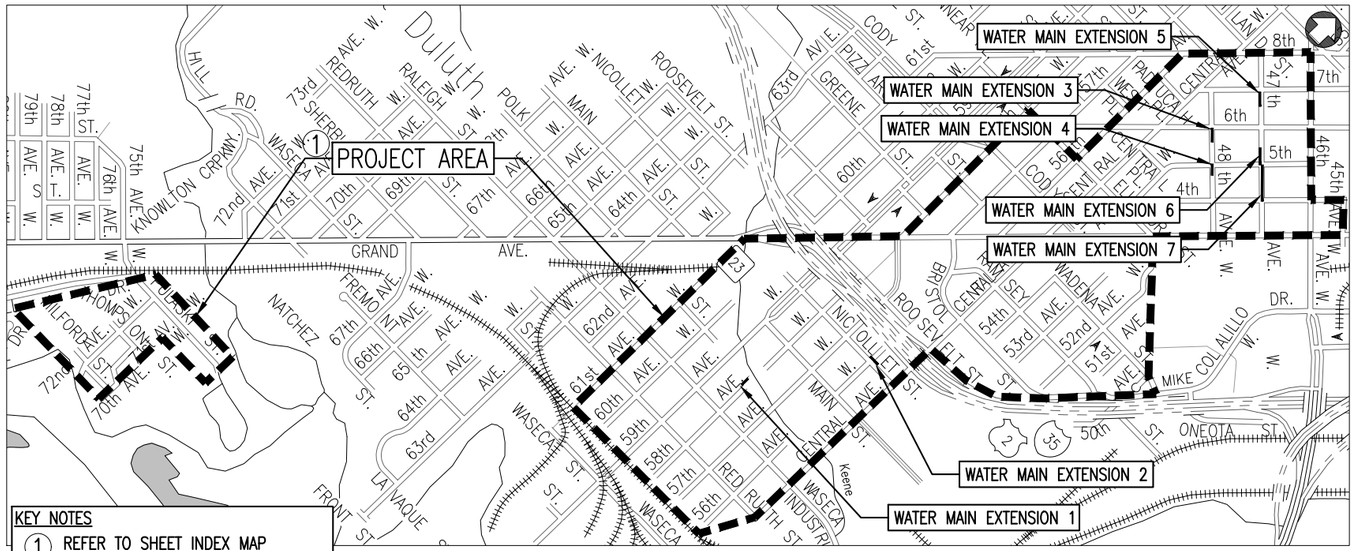
APPENDIX H
CITY OF DULUTH

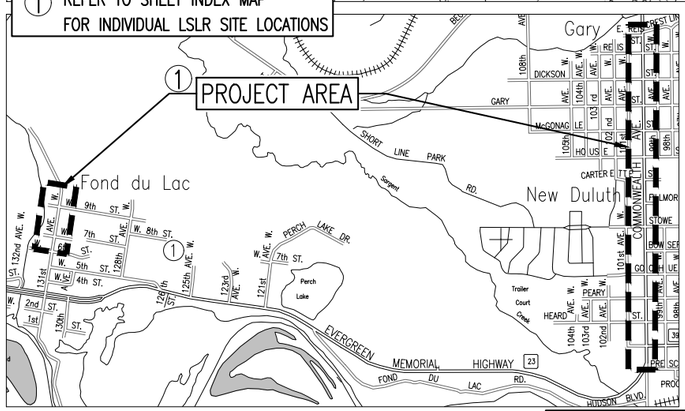
DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION

CONSTRUCTION PLANS FOR: LEAD SERVICE LINE REPLACEMENT (LSLR) – SPIRIT VALLEY

LEAD WATER SERVICE LINE REPLACEMENT, GRADING, BASE, ROADWAY PAVEMENT, SIDEWALK, CURB & GUTTER, AND WATER MAIN EXTENSIONS
LOCATION: DULUTH, MN – SPIRIT VALLEY NEIGHBORHOOD

CITY PROJECT NO. 2321





KEY NOTES
(1) REFER TO SHEET INDEX MAP FOR INDIVIDUAL LSLR SITE LOCATIONS

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38–02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTITLITY DATA".

BASIS OF DATUM
HORIZONTAL DATUM IS SAINT LOUIS COUNTY TRANSVERSE MERCATOR 1996 (SLCTM_96).
VERTICAL DATUM IS NAVD 88.

TRAFFIC CONTROL NOTE
ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM AND BE INSTALLED IN ACCORDANCE WITH THE CURRENT "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MnMUTCD), INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.

WARNING:
LOCATION OF UNDERGROUND UTILITIES TO BE VERIFIED BY CONTRACTOR. CALL BEFORE DIGGING. GOPHER STATE ONE CALL 1–800–252–1166 REQUIRED BY LAW

SCALES
WATER SERVICE PLAN 1"=30'
INDEX MAPS 1"=750', 1"=1500'
WATER MAIN PLAN 1"=20', 1"=40'
WATER MAIN PROFILE 1"=20'(HORIZ.), 1"=4' (VERT.)
1"=40'(HORIZ.), 1"=8' (VERT.)


PROJECT LOCATION
ST. LOUIS COUNTY
CITY OF DULUTH

PLAN REVISIONS

DATE	SHEET NO.	APPROVER

GOVERNING SPECIFICATIONS

THE 2025 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN. AVAILABLE AT: http://www.dot.state.mn.us/pre-letting/spec/index.html

THE 2019 EDITION OF THE CITY OF DULUTH PUBLIC WORKS AND UTILITIES DEPARTMENT CONSTRUCTION STANDARDS AND SUPPLEMENTS OR ADDENDUMS SHALL APPLY. AVAILABLE AT: http://www.duluthmn.gov/engineering/standard-construction-specifications/

ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST MNUTCD, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.

INDEX

---THIS PLAN CONTAINS 505 SHEETS---

DESIGN TEAM: WRT, AI, CF, SD, ES

I HEREBY CERTIFY THAT THIS PLAN 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.

WILSON TAYLOR, P.E.
PROJECT ENGINEER (TYPED OR PRINTED NAME)

PROJECT ENGINEER	DATE	LIC. NO.
	12/12/2025	59409

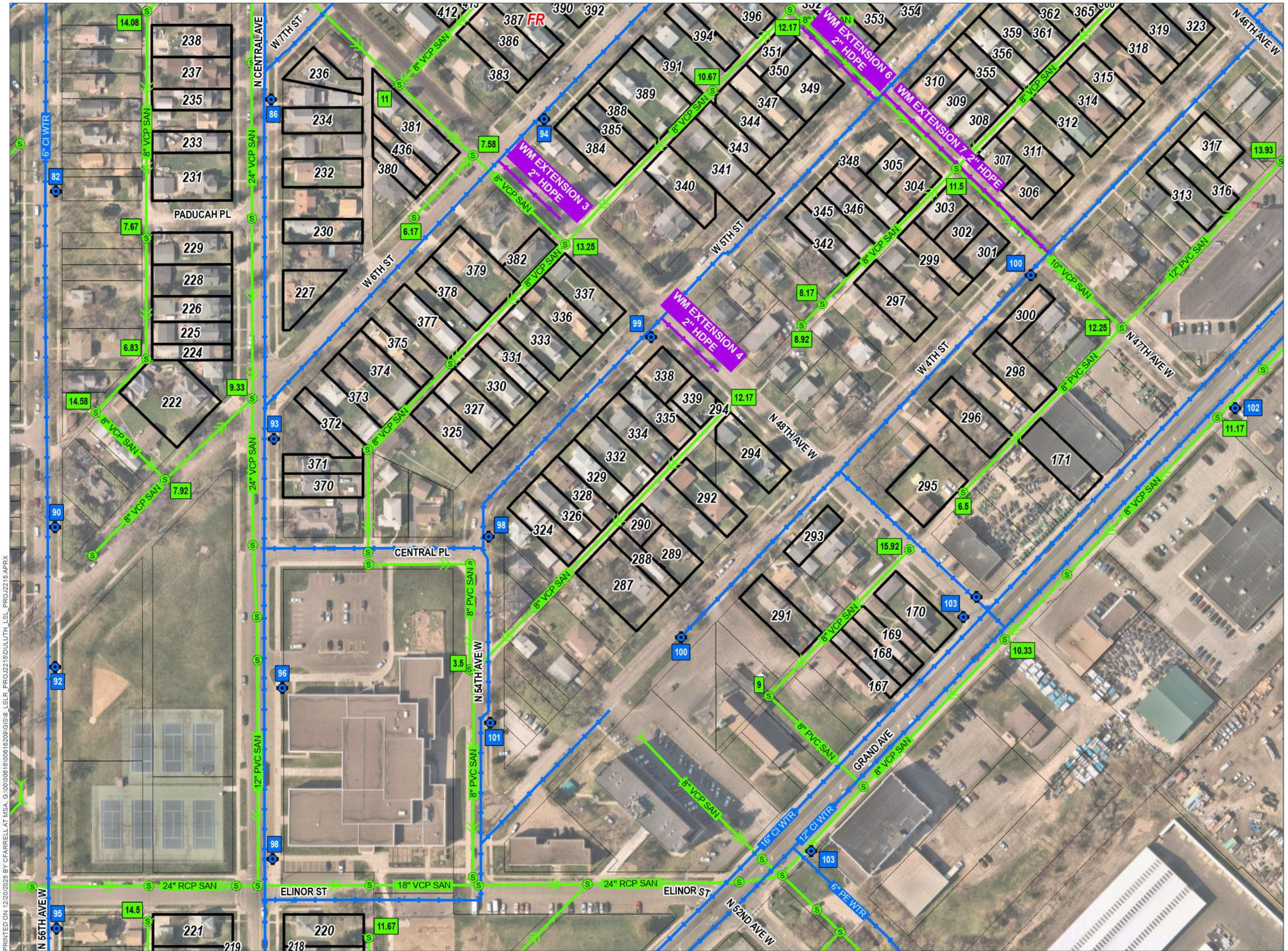
RECOMMENDED CITY APPROVAL

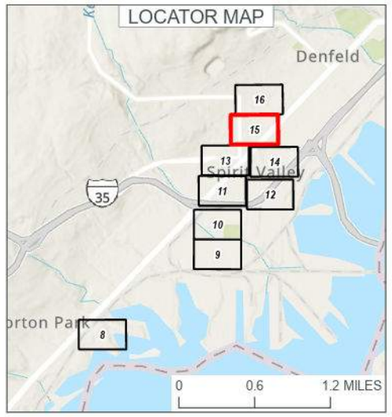
APPROVED CHIEF ENGINEER OF TRANSPORTATION DATE

APPROVED CHIEF ENGINEER OF UTILITIES DATE

APPROVED CITY ENGINEER DATE

MPFA PROJECT NO.1690011–21 | CITY OF DULUTH PROJECT NO. 2321 | DRAWN BY: WRT | SHEET NO. 1 OF 505





LEGEND

- PROJECT SITES
- PROPOSED WATER MAIN EXTENSION
- EXISTING WATER GRAVITY MAIN
- WATER HYDRANT
- SANITARY GRAVITY MAIN
- SANITARY MANHOLE
- 102 STATIC PRESSURE AT HYDRANT (PSI)
- 7.55 SANITARY MANHOLE DEPTH (FT)
- R INDICATES SHALLOW BEDROCK EXPECTED
- FR INDICATES HISTORY OF FROZEN SERVICE LINE

TRUE NORTH PLAN NORTH

0 75 150 FEET

PRINTED ON 12/20/2025 BY CFARRELL AT MSA, G:\00\00816\00618209\GIS\8_LSLR_PROJ2215\DULUTH_LSL_PROJ2215.APRX

I HEREBY CERTIFY THAT THIS PLAN 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.

MSA

WILSON TAYLOR, PE
TYPE NAME

DATE: 12/20/2025
LIC. NO.: 59409

CITY OF DULUTH
ENGINEERING DIVISION
411 W. 1ST ST. STE. 240
DULUTH, MN 55802

LEAD SERVICE LINE REPLACEMENT
SPIRIT VALLEY

CITY PROJECT NO.: 2321
MN PFA PROJECT NO.: 1690011-21

DRAWN BY: CMF & WRT
SITE INDEX MAPS
SHEET NUMBER: I15

12/22/2025 2:48 PM

STATEMENT OF ESTIMATED QUANTITIES

NOTES	LINE NUMBER	SPEC NUMBER	DESCRIPTION	UNIT	TOTAL ESTIMATED QUANTITY
	1	2021.501	MOBILIZATION	LUMP SUM	1
12, 13	2	2101.502	CLEARING	EACH	41
12, 13	3	2101.502	GRUBBING	EACH	41
	4	2104.602	SALVAGE & REINSTALL STREET SIGN	EACH	11
	5	2104.603	REMOVE & REPLACE CONCRETE CURB & GUTTER	LIN FT	649
	6	2104.603	REMOVE & REPLACE INTEGRANT CURB	LIN FT	1058
	7	2104.603	SALVAGE & REINSTALL FENCE	LIN FT	82
	8	2104.604	REMOVE & REPLACE BITUMINOUS DRIVEWAY	SQ YD	13
	9	2104.604	REMOVE & REPLACE CONCRETE DRIVEWAY	SQ YD	249
	10	2104.604	REMOVE & REPLACE STREET SECTION, TYPE A	SQ YD	14
	11	2104.604	REMOVE & REPLACE STREET SECTION, TYPE B	SQ YD	135
	12	2104.604	REMOVE & REPLACE STREET SECTION, TYPE C	SQ YD	347
	13	2104.604	REMOVE & REPLACE STREET SECTION, TYPE D	SQ YD	275
	14	2104.604	REMOVE & REPLACE STREET SECTION, TYPE E	SQ YD	379
	15	2104.604	REMOVE & REPLACE STREET SECTION, SPECIAL 1	SQ YD	26
	16	2104.604	REMOVE & REPLACE STREET SECTION, SPECIAL 2	SQ YD	15
	17	2104.618	REMOVE & REPLACE 4" CONCRETE WALK	SQ FT	35108
	18	2104.618	REMOVE & REPLACE 6" CONCRETE WALK	SQ FT	60
17	19	2104.618	REMOVE & REPLACE BRICK PAVERS	SQ FT	947
8, 10	20	2106.507	COMMON EMBANKMENT (CV)	CU YD	100
8, 14	21	2123.610	EXPLORATORY EXCAVATION	HOURS	40
8, 14	22	2123.610	EXPLORATORY EXCAVATION, HYDRO EXCAVATION	HOURS	40
	23	2301.602	DRILL AND GROUT DOWEL BAR (EPOXY COATED)	EACH	185
6	24	2411.607	REMOVE & REPLACE CONCRETE STEPS	CU YD	16
5	25	2411.607	REMOVE AND REPLACE RETAINING WALL TYPE L	CU YD	2
8, 10	26	2451.507	GRANULAR EMBANKMENT (CV)	CU YD	1000
	27	2451.602	POTHOLE WATER SERVICE FOR MATERIAL IDENTIFICATION	EACH	101
3	28	2451.602	PROVIDE EXCAVATION FOR HOT TAP BY CITY EMPLOYEES	EACH	12
8, 15	29	2451.607	BOULDER EXCAVATION	CU YD	20
8, 10	30	2451.607	GRANULAR BEDDING (CV)	CU YD	100
8	31	2451.607	ROCK EXCAVATION	CU YD	10
	32	2503.602	TELEVISE AND LOCATE SANITARY SERVICE	EACH	93
8	33	2503.602	SANITARY SERVICE HEAVY CLEANING	EACH	5
8	34	2503.603	SANITARY SERVICE REPAIR IN TRENCH	LIN FT	40
1	35	2504.601	TEMPORARY WATER SERVICE	LUMP SUM	1
	36	2504.602	ABANDON WATER SERVICE AT CORP. STOP IN SEPARATE EXCAVATION	EACH	16
	37	2504.602	2" x 1" TAPPING TEE W/ ELECTROFUSION SADDLE	EACH	19
11	38	2504.602	2-INCH CURB STOP AND BOX	EACH	8
2	39	2504.602	BLOW-OFF	EACH	6
	40	2504.602	CONNECT TO EXISTING CORPORATION STOP	EACH	94
	41	2504.602	CONNECT TO EXISTING CURB STOP	EACH	303

STATEMENT OF ESTIMATED QUANTITIES

NOTES	LINE NUMBER	SPEC NUMBER	DESCRIPTION	UNIT	TOTAL ESTIMATED QUANTITY
	42	2504.602	REPLACE CURB STOP	EACH	110
	43	2504.602	INSTALL CURB STOP	EACH	19
	44	2504.602	VALVE BOX TOP SECTION	EACH	2
4	45	2504.602	CONCRETE ENCASED VALVE BOX COLLAR	EACH	14
	46	2504.602	PREPARE FINISHED BASEMENT FOR WATER SERVICE REPLACEMENT	EACH	36
	47	2504.602	CONNECT TO EXISTING INDOOR PLUMBING	EACH	400
	48	2504.602	CONNECT TO EXISTING INDOOR PLUMBING, CRAWL SPACE	EACH	8
	49	2504.603	1" HDPE SDR 9 SERVICE PIPE (PRIVATE)	LIN FT	18081
	50	2504.603	1" HDPE SDR 9 SERVICE PIPE (PUBLIC)	LIN FT	2603
	51	2504.603	1.25" HDPE SDR 9 SERVICE PIPE (PRIVATE)	LIN FT	70
	52	2504.603	1.25" HDPE SDR 9 SERVICE PIPE (PUBLIC)	LIN FT	42
	53	2504.603	2" IPS HDPE WATER MAIN SDR 9 (HORIZONTAL DIRECTIONAL DRILL)	LIN FT	1115
8	54	2504.603	INDOOR PLUMBING TO RELOCATE WATER METER	LIN FT	2000
8, 16	55	2504.604	3" POLYSTYRENE INSULATION	SQ YD	100
	56	2531.618	TRUNCATED DOMES	SQ FT	8
	57	2545.602	ELECTRICAL SERVICE GROUND	EACH	321
7	58	2563.601	TRAFFIC CONTROL	LUMP SUM	1
9	59	2563.602	TRAFFIC CONTROL, ARTERIAL ROAD	EACH	9
	60	2573.601	EROSION CONTROL	LUMP SUM	1
	61	2575.504	SODDING TYPE LAWN (PUBLIC)	SQ YD	3635
8	62	2575.604	TURF ESTABLISHMENT, SEEDING	SQ YD	500
	63	2575.618	SALVAGE & REINSTALL LANDSCAPE GARDEN	SQ FT	237
8	64	2582.618	PAVEMENT MARKING SPECIAL	SQ FT	400

SEQ NOTES	
1)	PROVIDE TEMPORARY WATER FOR ANY SERVICE INSTALLATION THAT CAN NOT BE COMPLETED IN A SINGLE DAY, AND AT WATER MAIN EXTENSIONS, AS NECESSARY.
2)	REFER TO CITY DETAIL W-8C FOR REQUIREMENTS.
3)	REFER TO CITY DETAIL W-11 FOR REQUIREMENTS.
4)	REFER TO CITY DETAIL W-19 FOR REQUIREMENTS.
5)	REFER TO CITY DETAIL STR-6 FOR REQUIREMENTS.
6)	REFER TO CITY DETAIL STR-7 FOR REQUIREMENTS.
7)	REFER TO SPECIAL PROVISIONS FOR REQUIREMENTS.
8)	UNDISTRIBUTED QUANTITY TO BE PROVIDED AT THE DIRECTION OF THE ENGINEER.
9)	APPLIES TO ROADS DESIGNATED BY MNDOT FUNCTIONAL CLASSIFICATION AS 'ARTERIAL' IN THE TEMPORARY TRAFFIC CONTROL PLAN.
10)	TO BE USED IN AREAS WHERE CONTAMINATED SOILS ARE DISCOVERED OR WHERE OTHERWISE DIRECTED BY THE ENGINEER.
11)	ITEM INCLUDES VALVE BOX TOP SECTION AND LID TO BE PROVIDED BY THE CONTRACTOR.
12	APPLIES TO INDIVIDUAL TREES IN BOULEVARDS OR YARD AREAS WITH A DIAMETER GREATER THAN 3".
13)	ALL TREES SHALL BE REVIEWED IN THE FIELD BY THE CONTRACTOR AND THE ENGINEER PRIOR TO CLEARING AND GRUBBING.
14)	APPLIES TO EXPLORATORY EXCAVATION, EXCAVATIONS NOT RESULTING IN PIPE REPLACEMENT, OR AS OTHERWISE DIRECTED BY THE ENGINEER.
15)	APPLIES TO BOULDERS GREATER THAN OR EQUAL TO 1 CUBIC METER IN VOLUME.
16)	REFER TO CITY DETAIL LSLR-14A & LSLR 14B FOR REQUIREMENTS.
17)	REFER TO STREETSCAPE SIDEWALK DETAIL FOR BRICK PATTERN REQUIREMENTS, WHERE APPROPRIATE.

C:\00\00616\00616235\CADD\Construction Documents\2321 - SPIRIT VALLEY\00616235 SEQ

I HEREBY CERTIFY THAT THIS PLAN 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.

WILSON TAYLOR, PE — TYPE NAME

SIGNATURE

12/12/2025 — DATE

59409 — LIC. NO

SPIRIT VALLEY LSLR

CITY PROJECT NO. 2321

2026 LEAD WATER SERVICE REPLACEMENTS
SPIRIT VALLEY

STATEMENT OF ESTIMATED QUANTITIES

SHEET NO. Q1 OF Q1

12/22/2025 2:48 PM

CHART A – SITE QUANTITIES				SITE 1	SITE 2	SITE 3	SITE 4	SITE 5	SITE 6	SITE 7	SITE 8	SITE 9	SITE 10	SITE 11	SITE 12	SITE 13	SITE 14	SITE 15	SITE 16	SITE 17	SITE 18	SITE 19	SITE 20	SITE 21	SITE 22	SITE 23	SITE 24	SITE 25
LINE NUMBER	SPEC NUMBER	DESCRIPTION	UNIT	13115 W 6TH ST	13101 W 6TH ST	804 131ST AVE W	13022 W 9TH ST	132 COMMONWEALTH AVE	REMOVED FROM PROJECT	226 COMMONWEALTH AVE	302 COMMONWEALTH AVE	307 COMMONWEALTH AVE	505 COMMONWEALTH AVE	806 COMMONWEALTH AVE	814 COMMONWEALTH AVE	1107 COMMONWEALTH AVE	1206 COMMONWEALTH AVE	1302 COMMONWEALTH AVE	1306 COMMONWEALTH AVE	1313 COMMONWEALTH AVE	1314 COMMONWEALTH AVE	1321 COMMONWEALTH AVE	1331 COMMONWEALTH AVE	1334 COMMONWEALTH AVE	1336 COMMONWEALTH AVE	1408 COMMONWEALTH AVE	1412 COMMONWEALTH AVE	1415 COMMONWEALTH AVE
1	2101.502	CLEARING	EACH																									
2	2101.502	GRUBBING	EACH																									
3	2104.602	SALVAGE & REINSTALL STREET SIGN	EACH															1										
4	2104.603	REMOVE & REPLACE CONCRETE CURB & GUTTER	LIN FT																									
5	2104.603	REMOVE & REPLACE INTEGRANT CURB	LIN FT					8		8	8	8	8	8		8	8	8	8	8	8	8	8	8	8	8	8	8
6	2104.603	SALVAGE & REINSTALL FENCE	LIN FT																									
7	2104.604	REMOVE & REPLACE BITUMINOUS DRIVEWAY	SQ YD														6											
8	2104.604	REMOVE & REPLACE CONCRETE DRIVEWAY	SQ YD					50									10											
9	2104.604	REMOVE & REPLACE STREET SECTION, TYPE A	SQ YD				9																					
10	2104.604	REMOVE & REPLACE STREET SECTION, TYPE B	SQ YD																									
11	2104.604	REMOVE & REPLACE STREET SECTION, TYPE C	SQ YD																									
12	2104.604	REMOVE & REPLACE STREET SECTION, TYPE D	SQ YD																									
13	2104.604	REMOVE & REPLACE STREET SECTION, TYPE E	SQ YD					11		2	2	2	2	2		11	13	2	11	11	13	2	11	2	11	13	2	11
14	2104.604	REMOVE & REPLACE STREET SECTION, SPECIAL 1	SQ YD																									
15	2104.604	REMOVE & REPLACE STREET SECTION, SPECIAL 2	SQ YD																									
16	2104.618	REMOVE & REPLACE 4" CONCRETE WALK	SQ FT					50		90	90	90	90	106	90	120		180	210	17	180	150	150	180	180	150	150	150
17	2104.618	REMOVE & REPLACE 6" CONCRETE WALK	SQ FT																									
18	2104.618	REMOVE & REPLACE BRICK PAVERS	SQ FT																									
19	2301.602	DRILL AND GROUT DOWEL BAR (EPOXY COATED)	EACH																									
20	2411.607	REMOVE & REPLACE CONCRETE STEPS	CU YD																									
21	2411.607	REMOVE AND REPLACE RETAINING WALL TYPE L	CU YD																									
22	2451.602	POTHOLE WATER SERVICE FOR MATERIAL IDENTIFICATION	EACH	1	1	1	1				1				1		1				1	1						
23	2451.602	PROVIDE EXCAVATION FOR HOT TAP BY CITY EMPLOYEES	EACH																									
24	2503.602	TELEVISE AND LOCATE SANITARY SERVICE	EACH	1			1			1	1	1	1	1	1	1	1		1	1	1	1	1	1	1	1	1	1
25	2504.602	ABANDON WATER SERVICE AT CORP. STOP IN SEPARATE EXCAVATION	EACH																1									
26	2504.602	2" x 1" TAPPING TEE W/ ELECTROFUSION SADDLE	EACH																									
27	2504.602	CONNECT TO EXISTING CORPORATION STOP	EACH					1								1	1			1	1		1		1	1		1
28	2504.602	CONNECT TO EXISTING CURB STOP	EACH	1	1	1	1			1	1	1	1	1	1			1	1			1		1			1	
29	2504.602	REPLACE CURB STOP	EACH					1								1	1			1	1		1		1	1		1
30	2504.602	INSTALL CURB STOP	EACH																									
31	2504.602	VALVE BOX TOP SECTION	EACH				1																					
32	2504.602	PREPARE FINISHED BASEMENT FOR WATER SERVICE REPLACEMENT	EACH												1										1			
33	2504.602	CONNECT TO EXISTING INDOOR PLUMBING	EACH	1	1	1	1	1		1	1	1	1	1	1	1	1	1	1		1	1		1	1	1	1	
34	2504.602	CONNECT TO EXISTING INDOOR PLUMBING, CRAWLSPACE	EACH																									
35	2504.603	1" HDPE SDR 9 SERVICE PIPE (PRIVATE)	LIN FT	48	44	55	50	55		8	10	13	8	56	45	13	32	24	15		18	12		15	15	13	12	
36	2504.603	1" HDPE SDR 9 SERVICE PIPE (PUBLIC)	LIN FT					15								45	16			46	12		46		15	15		46
37	2504.603	1.25" HDPE SDR 9 SERVICE PIPE (PRIVATE)	LIN FT																									
38	2504.603	1.25" HDPE SDR 9 SERVICE PIPE (PUBLIC)	LIN FT																									
39	2531.618	TRUNCATED DOMES	SQ FT																									
40	2545.602	ELECTRICAL SERVICE GROUND	EACH	1			1	1		1	1		1	1		1	1	1	1		1	1		1	1	1	1	
41	2575.504	SODDING TYPE LAWN (PUBLIC)	SQ YD	17	16	25						2		2	2	1												
42	2575.618	SALVAGE & REINSTALL LANDSCAPE GARDEN	SQ FT																									

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I HEREBY CERTIFY THAT THIS PLAN 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.

WILSON TAYLOR, PE
TYPE NAME

SIGNATURE

12/12/2025
DATE

59409
LIC. NO

SPIRIT VALLEY LSLR

CITY PROJECT NO. 2321

2026 LEAD WATER SERVICE REPLACEMENTS
SPIRIT VALLEY

QUANTITY CHARTS

SHEET NO. C1 OF C19

12/22/2025 2:48 PM

CHART S – WATER MAIN EXTENSION & UNDISTRIBUTED QUANTITIES				UNDISTRIBUTED QTY	WM 1 QTY	WM 2 QTY	WM 3 QTY	WM 4 QTY	WM 5 QTY	WM 6 WTY	WM 7 QTY
LINE NUMBER	SPEC NUMBER	DESCRIPTION	UNIT								
1	2021.501	MOBILIZATION	LUMP SUM	1							
2	2104.603	REMOVE & REPLACE CONCRETE CURB & GUTTER	LIN FT		20	10	10	10	10	10	
3	2104.604	REMOVE & REPLACE STREET SECTION, TYPE B	SQ YD		18						
4	2104.604	REMOVE & REPLACE STREET SECTION, TYPE C	SQ YD			18	17	18	17	16	18
5	2106.507	COMMON EMBANKMENT (CV)	CU YD	100							
6	2123.610	EXPLORATORY EXCAVATION	HOUR	40							
7	2123.610	EXPLORATORY EXCAVATION, HYDRO EXCAVATION	HOUR	40							
8	2451.507	GRANULAR EMBANKMENT (CV)	CU YD	1000							
9	2451.507	PROVIDE EXCAVATION FOR HOT TAP BY CITY EMPLOYEES	EACH		1	1	1	1	1	1	2
11	2451.607	BOULDER EXCAVATION	CU YD	20							
12	2451.607	GRANULAR BEDDING (CV)	CU YD	100							
10	2451.607	ROCK EXCAVATION	CU YD	10							
13	2503.602	SANITARY SERVICE HEAVY CLEANING	EACH	5							
14	2503.603	SANITARY SERVICE REPAIR IN TRENCH	LIN FT	40							
15	2504.601	TEMPORARY WATER SERVICE	LUMP SUM	1							
16	2504.602	2–INCH CURB STOP AND BOX	EACH		1	1	1	1	1	1	2
17	2504.602	BLOW–OFF	EACH		1	1	1	1	1	1	
18	2504.602	CONCRETE ENCASED VALVE BOX COLLAR	EACH		2	2	2	2	2	2	2
19	2504.603	2" IPS HDPE WATER MAIN SDR 9 (HORIZONTAL DIRECITONAL DRILL)	LIN FT		88	106	135	125	131	170	360
20	2504.603	INDOOR PLUMBING TO RELOCATE WATER METER	LIN FT	2000							
21	2504.604	3" POLYSTYRENE INSULATION	SQ YD	100							
22	2563.601	TRAFFIC CONTROL	LUMP SUM	1							
23	2563.602	TRAFFIC CONTROL, ARTERIAL ROAD	EACH	9							
24	2573.601	EROSION CONTROL	LUMP SUM	1							
25	2575.504	SODDING TYPE LAWN (PUBLIC)	SQ YD		5	5	3	3	3	3	
26	2575.604	TURF ESTABLISHMENT, SEEDING	SQ YD	500							
27	2582.618	PAVEMENT MARKING SPECIAL	SQ FT	400							

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WILSON TAYLOR, PE — TYPE NAME

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12/12/2025 — DATE

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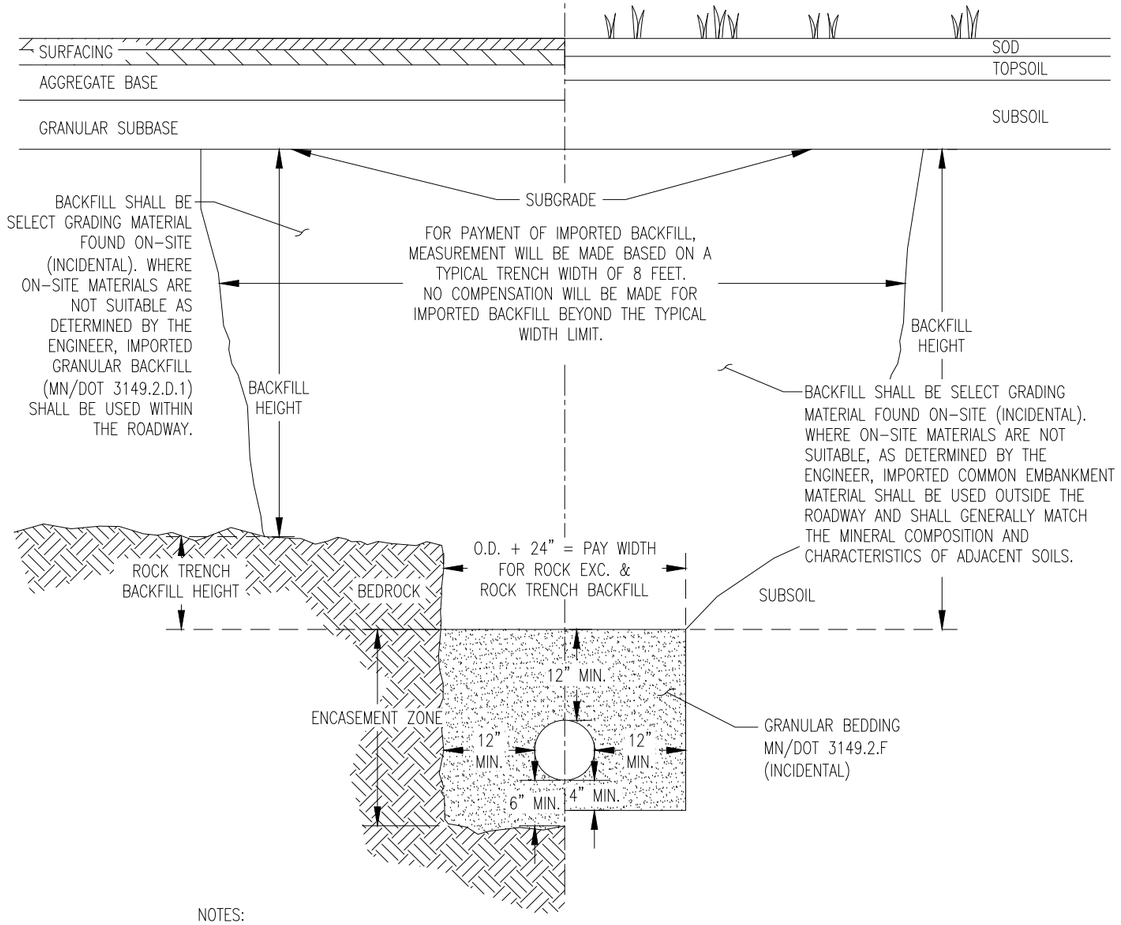
2026 LEAD WATER SERVICE REPLACEMENTS
SPIRIT VALLEY

QUANTITY CHARTS

SHEET NO. C19 OF C19

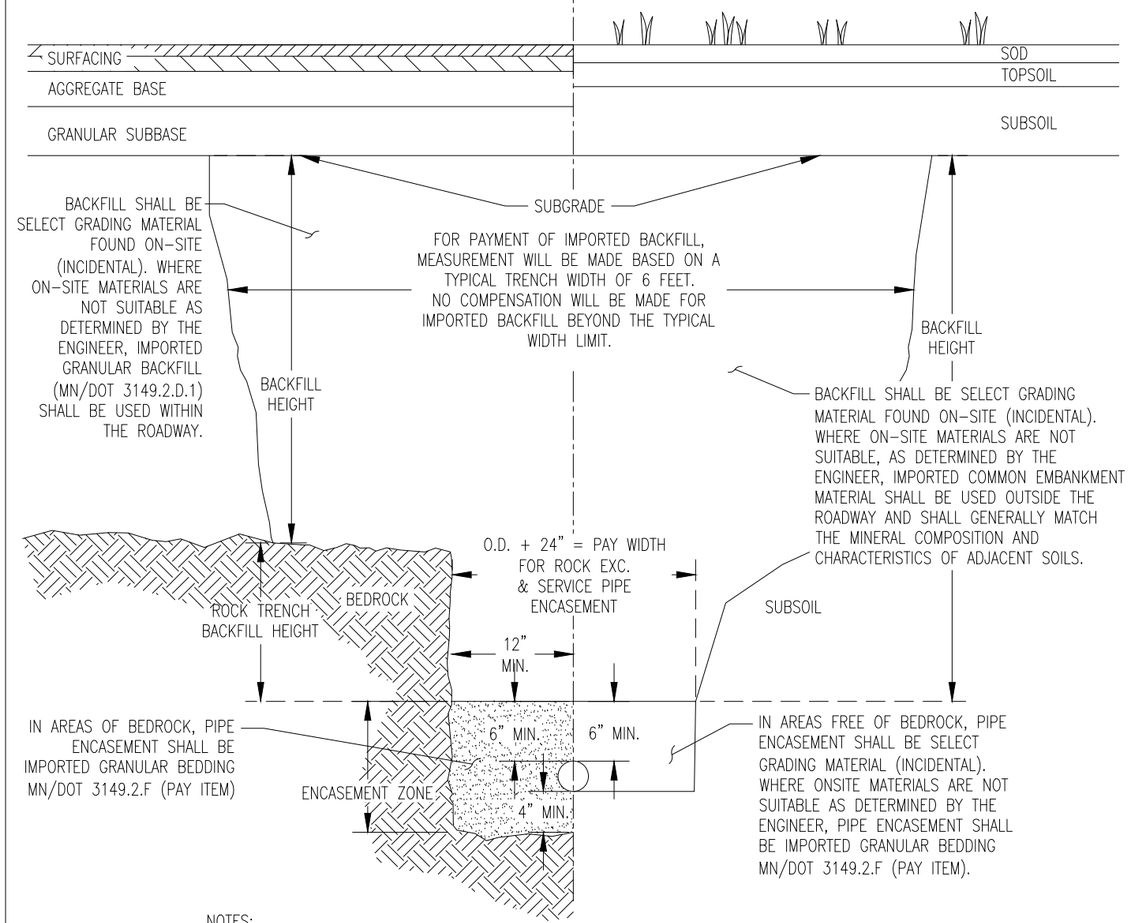
12/22/2025 2:48 PM



NOTES:

1. EXCESS EXCAVATION MATERIAL SHALL BE DISPOSED OF OFF PROJECT R.O.W. (INCIDENTAL)
2. PAY WIDTH FOR ROCK EXCAVATION SHALL BE BASED ON OUTSIDE DIAMETER OF PIPE PLUS 24".
3. A MINIMUM OF 1 CUBIC YARD OF EXCAVATION – ROCK WILL BE PAID FOR EVERY 10' OF PIPE WHERE ROCK REMOVAL IS REQUIRED.
4. TRENCH STABILIZATION BEDDING MATERIAL MAY BE USED IN AREAS AS DETERMINED BY THE ENGINEER.
5. ENCASEMENT ZONE MATERIAL SHALL BE COMPACTED TO 95% OF MAXIMUM STANDARD PROCTOR DENSITY.
6. COMPACT BACKFILL MATERIALS TO 100% OF MAXIMUM STANDARD PROCTOR DENSITY FOR THE UPPER 3' BELOW THE SUBGRADE, AND TO 95% OF MAXIMUM STANDARD PROCTOR DENSITY BELOW THE UPPER 3'.

HDPE WATER MAIN ENCASEMENT & BACKFILL		LSLR-1
REVISED/APPROVED 12/05/2025	CITY OF DULUTH STANDARD DETAIL DEPT. OF PUBLIC WORKS AND UTILITIES	NO SCALE



NOTES:

1. EXCESS EXCAVATION MATERIAL SHALL BE DISPOSED OF OFF PROJECT R.O.W. (INCIDENTAL)
2. PAY WIDTH FOR ROCK EXCAVATION SHALL BE BASED ON OUTSIDE DIAMETER OF PIPE PLUS 24".
3. A MINIMUM OF 1 CUBIC YARD OF EXCAVATION – ROCK WILL BE PAID FOR EVERY 10' OF PIPE WHERE ROCK REMOVAL IS REQUIRED.
4. TRENCH STABILIZATION BEDDING MATERIAL MAY BE USED IN AREAS AS DETERMINED BY THE ENGINEER.
5. ENCASEMENT ZONE MATERIAL SHALL BE COMPACTED TO 95% OF MAXIMUM STANDARD PROCTOR DENSITY.
6. COMPACT BACKFILL MATERIALS TO 100% OF MAXIMUM STANDARD PROCTOR DENSITY FOR THE UPPER 3' BELOW THE SUBGRADE, AND TO 95% OF MAXIMUM STANDARD PROCTOR DENSITY BELOW THE UPPER 3'.

HDPE WATER SERVICE ENCASEMENT & BACKFILL		LSLR-2
REVISED/APPROVED 12/05/2025	CITY OF DULUTH STANDARD DETAIL DEPT. OF PUBLIC WORKS AND UTILITIES	NO SCALE

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WILSON TAYLOR, PE — TYPE NAME

SIGNATURE

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SPIRIT VALLEY LSLR

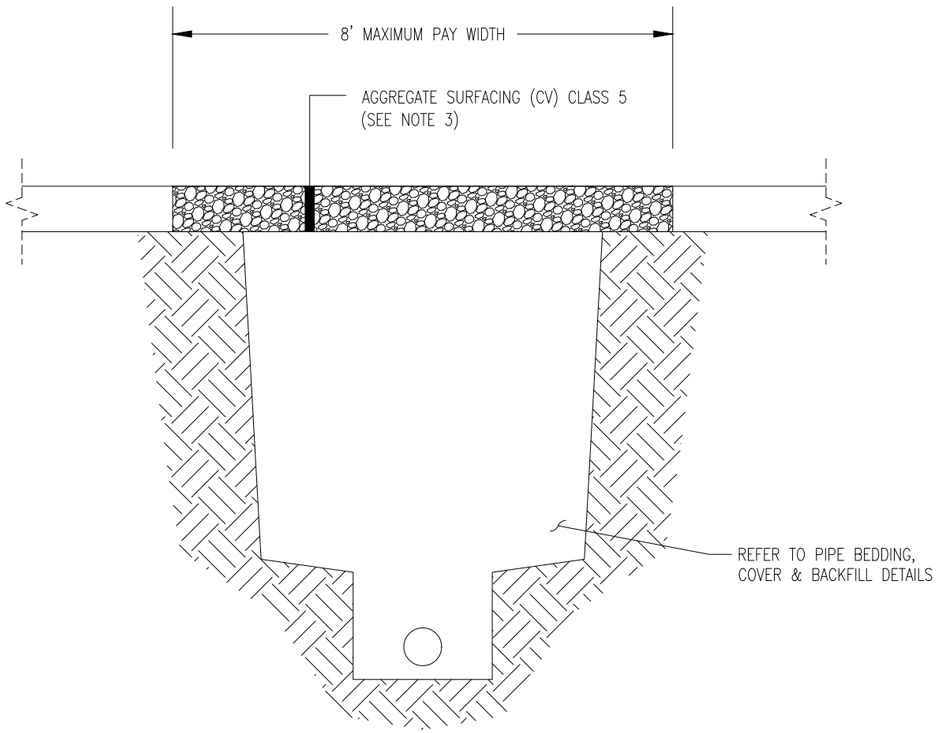
CITY PROJECT NO. 2321

2026 LEAD WATER SERVICE REPLACEMENTS
SPIRIT VALLEY

CONSTRUCTION DETAILS

SHEET NO. D1 OF D20

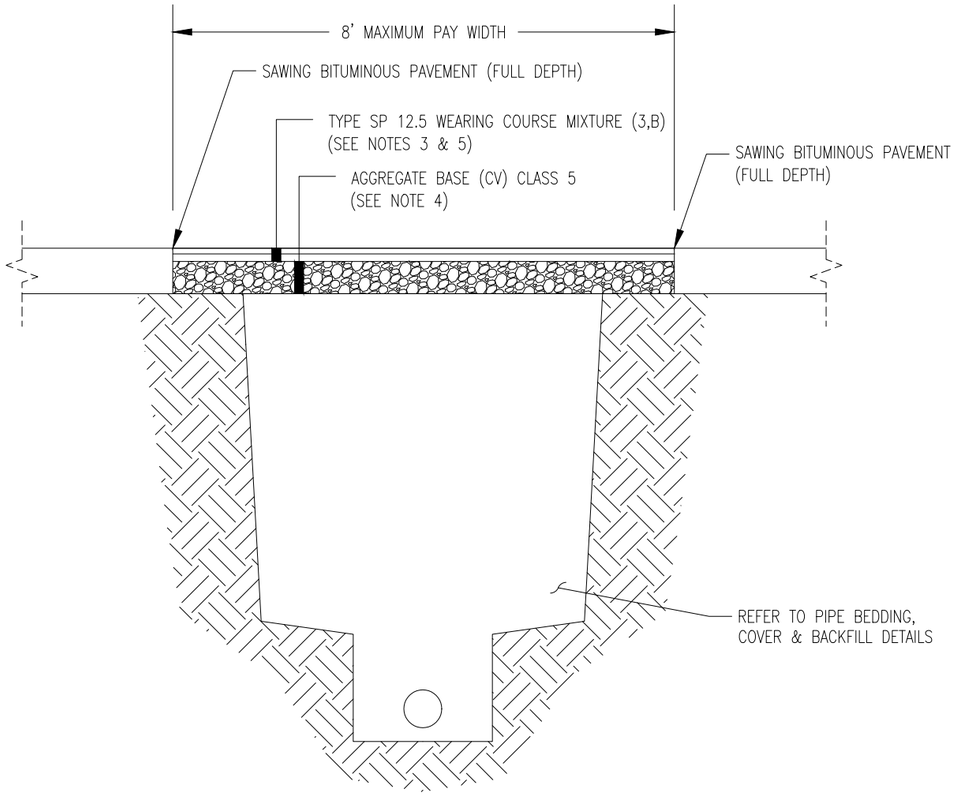
12/22/2025 2:48 PM



NOTES:

1. REMOVE & REPLACE STREET SECTION TYPE "A" SHALL BE CONSTRUCTED WHERE EXISTING STREET SURFACE IS AGGREGATE SURFACING.
2. MAXIMUM PAY LENGTH AND WIDTH SHALL BE DETERMINED BY THE MAXIMUM PAY LIMITS DETAILS.
3. AGGREGATE SURFACING (CV) CLASS 5 SHALL MATCH THE EXISTING SURFACING THICKNESS OR 12", WHICHEVER IS GREATER.
4. INCLUDES ANY NECESSARY AGGREGATE SHOULDER RESTORATION (INCIDENTAL).
5. INCLUDES PROTECTING, REPAIRING OR REPLACING CURB DRAIN IF PRESENT (INCIDENTAL).
6. UNLESS OTHERWISE INDICATED, ALL WORK SHOWN ON THIS DETAIL SHALL BE CONSIDERED AS INCLUDED FOR PAYMENT UNDER THE "REMOVE & REPLACE STREET RESTORATION TYPE 'A'" PAY ITEM.

REMOVE & REPLACE STREET SECTION TYPE 'A'		LSLR-3
REVISED/APPROVED 12/05/2025	CITY OF DULUTH STANDARD DETAIL DEPT. OF PUBLIC WORKS AND UTILITIES	NO SCALE



NOTES:

1. REMOVE & REPLACE STREET SECTION TYPE "B" SHALL BE CONSTRUCTED WHERE EXISTING STREET CONSISTS OF BITUMINOUS OVER AGGREGATE BASE WITH NO GRANULAR SUBBASE LAYER.
2. MAXIMUM PAY LENGTH AND WIDTH SHALL BE DETERMINED BY THE MAXIMUM PAY LIMITS DETAILS.
3. BITUMINOUS PAVEMENT SHALL MATCH EXISTING PAVEMENT THICKNESS OR 3.5", WHICHEVER IS GREATER.
4. AGGREGATE BASE (CV) CLASS 5 SHALL MATCH EXISTING BASE THICKNESS OR 8.5", WHICHEVER IS GREATER.
5. BITUMINOUS SHALL BE PLACED AT 2" MAXIMUM LIFT THICKNESS.
6. EXISTING STREET SECTION MAY OR MAY NOT INCLUDE CURB AND GUTTER. REPLACEMENT OF CURB AND GUTTER SHALL BE PAID FOR UNDER SEPARATE BID ITEMS.
7. INCLUDES ANY NECESSARY AGGREGATE SHOULDER RESTORATION (INCIDENTAL).
8. INCLUDES PROTECTING, REPAIRING OR REPLACING CURB DRAIN, IF PRESENT (INCIDENTAL).
9. UNLESS OTHERWISE INDCATED, ALL WORK SHOWN ON THIS DETAIL SHALL BE CONSIDERED AS INCLUDED FOR PAYMENT UNDER THE "REMOVE & REPLACE STREET SECTION TYPE 'B'" PAY ITEM.

REMOVE & REPLACE STREET SECTION TYPE 'B'		LSLR-4
REVISED/APPROVED 12/05/2025	CITY OF DULUTH STANDARD DETAIL DEPT. OF PUBLIC WORKS AND UTILITIES	NO SCALE

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2026 LEAD WATER SERVICE REPLACEMENTS
SPIRIT VALLEY

CONSTRUCTION DETAILS

SHEET NO. D2 OF D20

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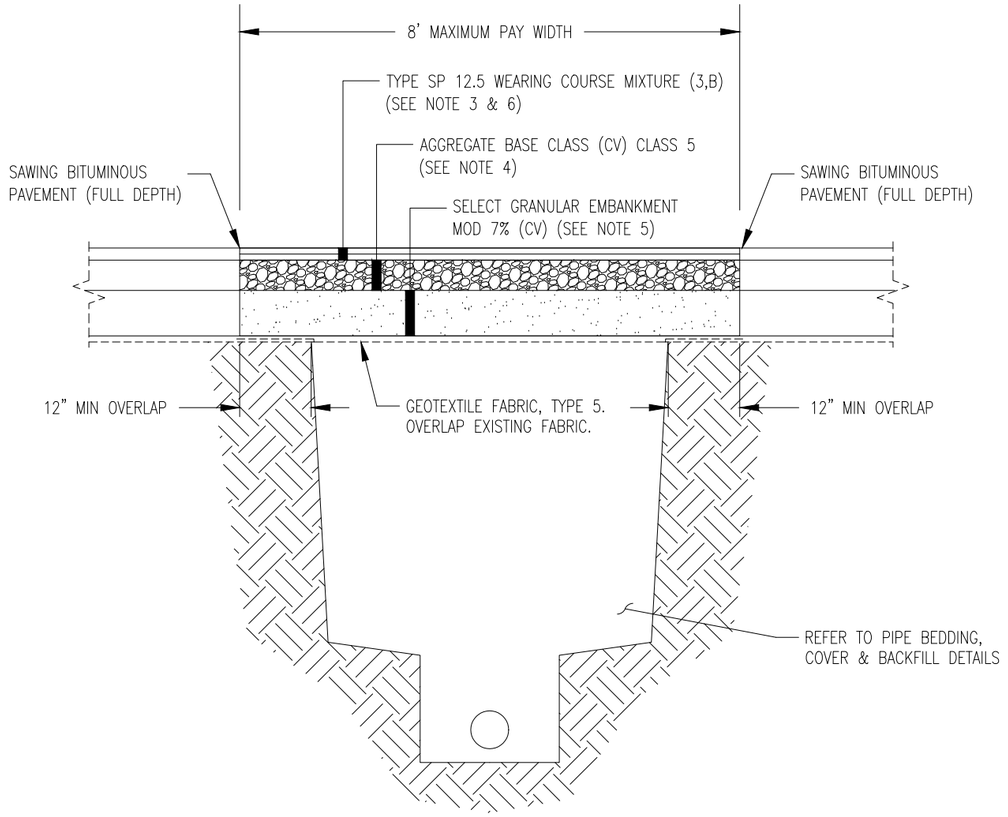
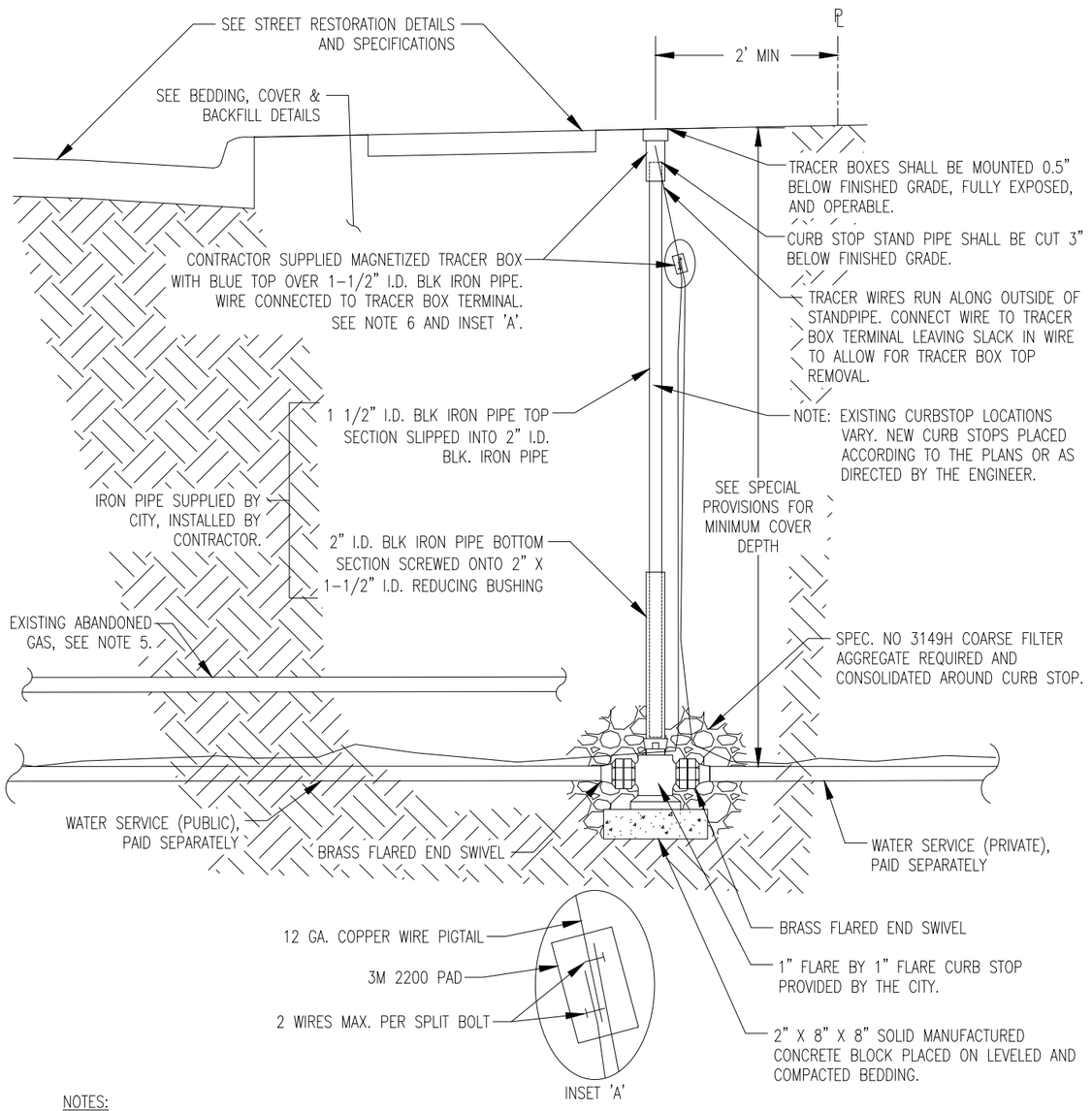


NOTES:

1. REMOVE & REPLACE STREET SECTION TYPE "SPECIAL 1" SHALL BE CONSTRUCTED WHERE EXISTING STREET CONSISTS OF BITUMINOUS WITH AGGREGATE BASE & GRANULAR SUBBASE LAYERS.
2. MAXIMUM PAY WIDTH SHALL BE 8'.
3. BITUMINOUS PAVEMENT SHALL MATCH EXISTING PAVEMENT THICKNESS OR 7", WHICHEVER IS GREATER.
4. AGGREGATE BASE (CV) CLASS 5 SHALL MATCH EXISTING BASE THICKNESS OR 12", WHICHEVER IS GREATER.
5. SELECT GRANULAR EMBANKMENT MOD 7% (CV) SHALL MATCH EXISTING SUBBASE THICKNESS OR 12", WHICHEVER IS GREATER.
6. BITUMINOUS SHALL BE PLACED AT 2" MAXIMUM LIFT THICKNESS.
7. EXISTING STREET SECTION MAY OR MAY NOT INCLUDE CURB AND GUTTER. REPLACEMENT OF CURB AND GUTTER SHALL BE PAID FOR UNDER SEPARATE BID ITEMS.
8. INCLUDES ANY NECESSARY AGGREGATE SHOULDER RESTORATION.
9. INCLUDES PROTECTING AND/OR REPLACING CURB DRAIN, IF PRESENT.
10. UNLESS OTHERWISE INDICATED, ALL WORK SHOWN ON THIS DETAIL SHALL BE CONSIDERED AS INCLUDED FOR PAYMENT UNDER THE "REMOVE & REPLACE STREET SECTION TYPE 'C'" PAY ITEM.

REMOVE & REPLACE STREET SECTION TYPE 'SPECIAL 2'		LSLR-S2
REVISED/APPROVED 12/05/2025	CITY OF DULUTH STANDARD DETAIL DEPT. OF PUBLIC WORKS AND UTILITIES	NO SCALE



NOTES:

1. INCLUDES REMOVAL OR ABANDONMENT OF EXISTING CURB STOP AT THE DIRECTION OF THE ENGINEER.
2. THE LOCATION OF THE NEW CURB STOP MAY BE MOVED UP TO 4' TO AVOID DISTURBANCE OF EXISTING SANITARY SEWER SERVICE.
3. ALL WATER SERVICE LINES SHALL BE INSTALLED PERPENDICULAR TO THE STREET RIGHT OF WAY FROM THE WATER MAIN TO THE CURB STOP.
4. TRACER WIRE SHALL BE CONTINUOUS FROM ANODE TO TRACER BOX AND FROM TRACER BOX TO INSIDE BUILDING.
5. ABANDONED LOW PRESSURE GAS PIPE MAY BE PRESENT NEAR THE WATER SERVICE. SHOULD THE CONTRACTOR REMOVE ANY ABANDONED LOW PRESSURE GAS SERVICES, ALL REMAINING PIPE ENDS SHALL BE FITTED WITH WATER TIGHT CAPS OR PLUGS.
6. INSTALL 12 GA. COPPER WIRE PIGTAIL TO TRACER BOX IN A CONFIGURATION WHEREBY TWO WIRES AND ONE SPLIT BOLT & 3M 2200 PAD IS USED PER ELECTRICAL CONNECTION.
7. UNLESS OTHERWISE INDICATED, ALL WORK SHOWN ON THIS DETAIL SHALL BE CONSIDERED AS INCLUDED FOR PAYMENT UNDER THE "REPLACE CURB STOP" PAY ITEM.

REPLACE CURB STOP		LSLR-10
REVISED/APPROVED 12/05/2025	CITY OF DULUTH STANDARD DETAIL DEPT. OF PUBLIC WORKS AND UTILITIES	NO SCALE

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WILSON TAYLOR, PE — TYPE NAME

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SPIRIT VALLEY LSLR

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2026 LEAD WATER SERVICE REPLACEMENTS
SPIRIT VALLEY

CONSTRUCTION DETAILS

SHEET NO. D6 OF D20

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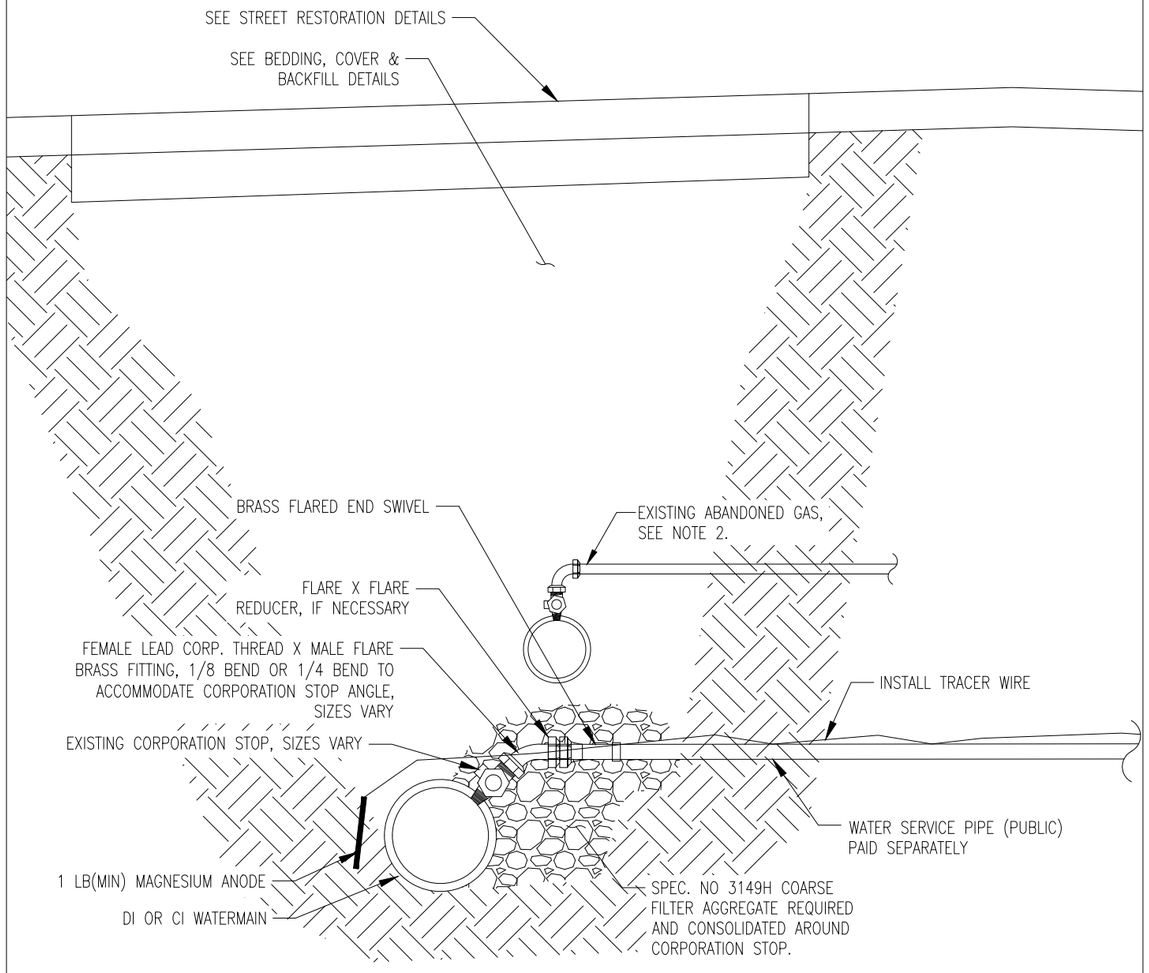
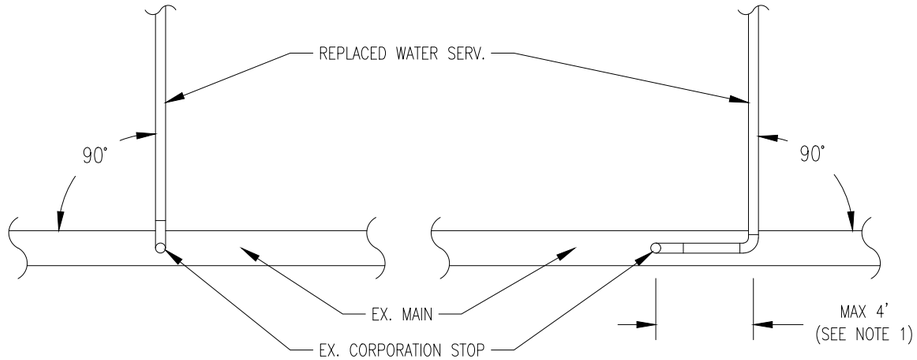


NOTES:
1. PROVIDE 1 LB ANODE FOR TRACER WIRE AT WATER MAIN. TRACER WIRE SHALL BE CONTINUOUS FROM ANODE TO TRACER BOX AND FROM TRACER BOX TO INSIDE HOUSE.
2. ABANDONED LOW PRESSURE GAS PIPE MAY BE PRESENT NEAR THE WATER SERVICE. SHOULD THE CONTRACTOR REMOVE ANY ABANDONED LOW PRESSURE GAS SERVICES, ALL REMAINING PIPE ENDS SHALL BE FITTED WITH WATER TIGHT CAPS OR PLUGS.
3. SEE SPECIAL PROVISIONS FOR LEAD THREAD FITTINGS & PARTS SUPPLIED BY THE CITY. ALL OTHER FITTINGS AND PARTS REQUIRED SHALL BE SUPPLIED BY THE CONTRACTOR
4. UNLESS OTHERWISE INDICATED, ALL WORK SHOWN ON THIS DETAIL SHALL BE CONSIDERED AS INCLUDED FOR PAYMENT UNDER THE "CONNECT TO EXISTING CORPORATION STOP" PAY ITEM.

CONNECT TO EXISTING CORPORATION STOP		LSLR-11
REVISED/APPROVED 12/05/2025	CITY OF DULUTH STANDARD DETAIL DEPT. OF PUBLIC WORKS AND UTILITIES	NO SCALE



NOTES:
1. WHERE THE INPLACE SANITARY SERVICE CONFLICTS WITH THE PERPENDICULAR PLACEMENT OF THE WATER SERVICE FROM THE EXISTING CORPORATION STOP, THE LOCATION OF THE REPLACED WATER SERVICE SHALL BE SHIFTED UP TO 4' TO AVOID DISTURBING THE EXISTING SEWER SERVICE AS SHOWN AT NO ADDITIONAL EXPENSE TO THE CITY.
2. ALL WATER SERVICES SHALL BE INSTALLED PERPENDICULAR TO THE RIGHT OF WAY FROM THE WATER MAIN TO THE CURB STOP.
3. IF A WATER SERVICE ALIGNMENT IS SHIFTED, THE OFFSET SHALL BE ACCOUNTED FOR WITH 90 DEGREE BENDS AT THE MAIN TO KEEP THE SERVICE ORIENTED PERPENDICULAR TO THE MAIN.
4. PROVIDE 1 LB ANODE FOR TRACER WIRE AT WATER MAIN. TRACER WIRE SHALL BE CONTINUOUS FROM ANODE TO TRACER BOX AND FROM TRACER BOX TO INSIDE HOUSE.
5. ADJUSTING THE LOCATION OF THE WATER SERVICE AS REQUIRED TO AVOID DISTURBING AN EXISTING SEWER SERVICE SHALL BE CONSIDERED INCIDENTAL WITH NO ADDITIONAL PAYMENT THEREFORE.

ACCEPTABLE WATER SERVICE CONNECTION LAYOUTS		LSLR-12
REVISED/APPROVED 12/05/2025	CITY OF DULUTH STANDARD DETAIL DEPT. OF PUBLIC WORKS AND UTILITIES	NO SCALE

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2026 LEAD WATER SERVICE REPLACEMENTS
SPIRIT VALLEY

CONSTRUCTION DETAILS

SHEET NO. D7 OF D20

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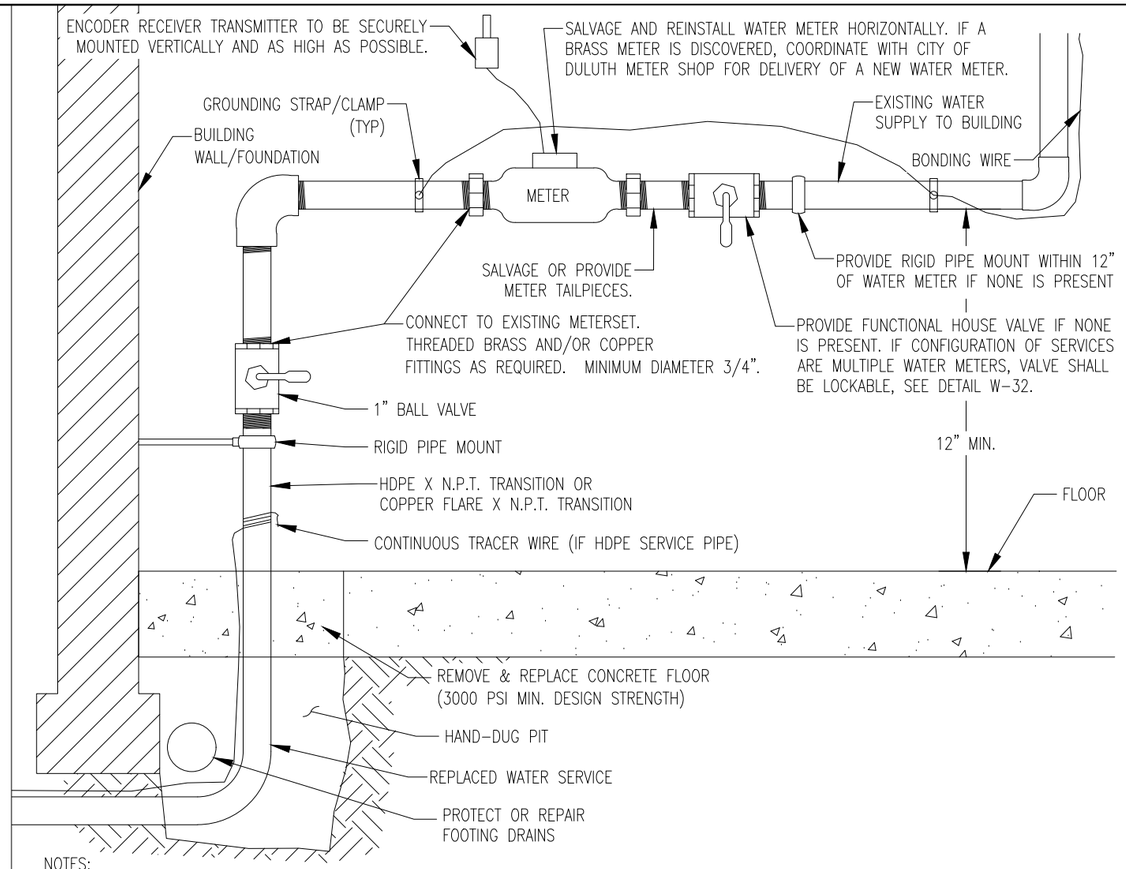
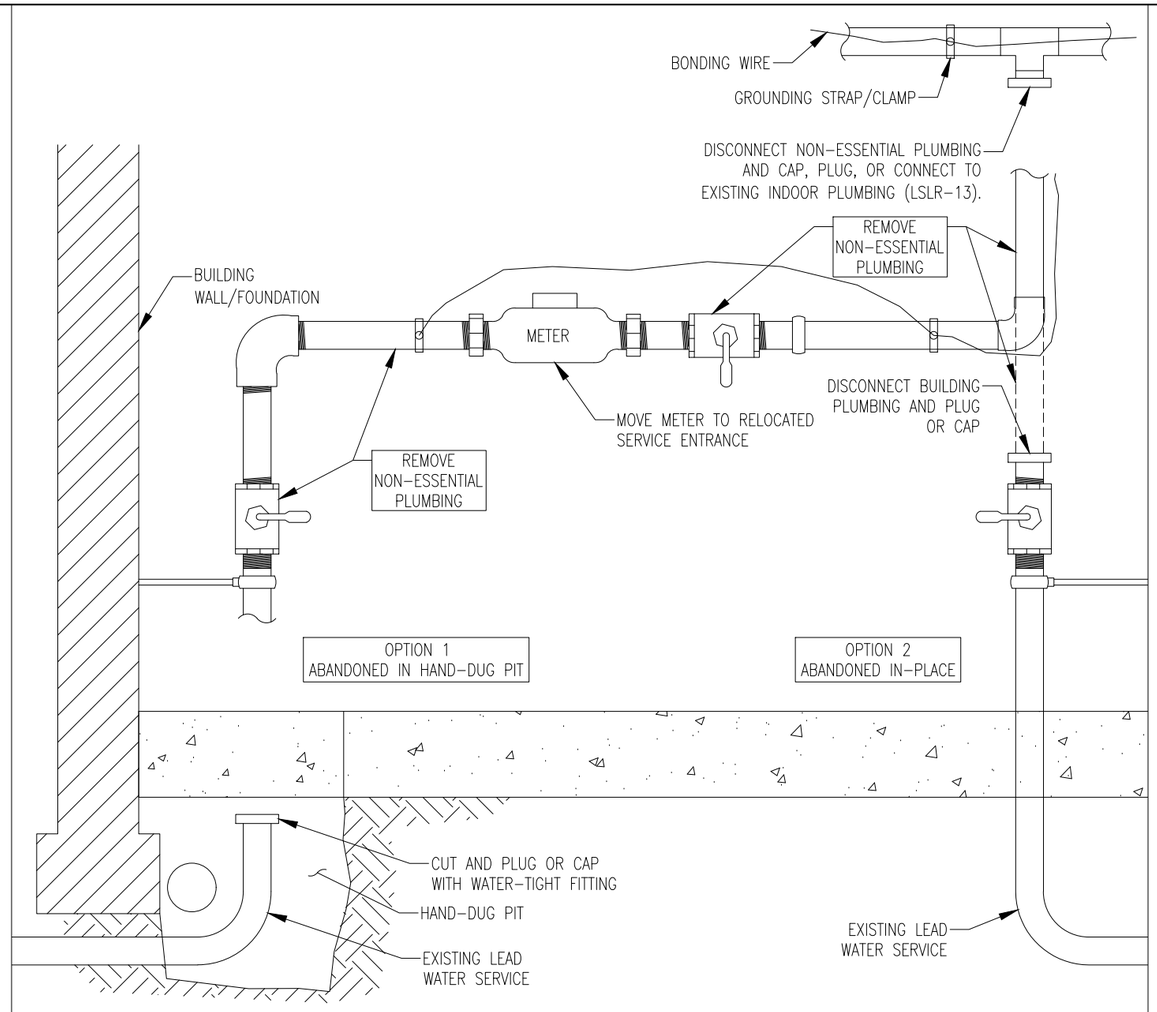


NOTES:

1. CONTRACTOR SHALL CHECK ALL PIPING FOR ELECTRICAL CURRENT PRIOR TO CUTTING OR DISCONNECTING PIPES.
2. CONCRETE SHALL BE BROKEN AND REMOVED IN A CONTROLLED MANNER TO PREVENT WAYWARD CRACKING. REMOVE MINIMUM AMOUNT OF CONCRETE NECESSARY TO REPLACE THE WATER SERVICE. CONCRETE PATCH SHALL BE 3" THICK OR MATCH THE EXISTING FLOOR, WHICHEVER IS GREATER, BE WATERTIGHT, HAVE A SMOOTH TROWELED FINISH, AND BE FLUSH WITH THE SURROUNDING FLOOR SURFACE.
3. THE WATER SERVICE PIPE SHALL BE INSTALLED WITH SMOOTH BENDS ONLY. NO FITTINGS OR ELBOWS SHALL BE INSTALLED UPSTREAM OF THE THREADED TRANSITION TO BUILDING PLUMBING.
4. THE WATER METER MAY NEED TO BE MOVED AND/OR RAISED TO ACCOMMODATE THE LOCATION OF REPLACED WATER SERVICE. IF NECESSARY, "CONNECT TO EXISTING INDOOR PLUMBING" ITEM INCLUDES RAISING THE METER, MOVING THE METER UP TO 5' HORIZONTALLY AND MODIFYING/REPLACING THE CONNECTION TO THE DOWNSTREAM BUILDING SUPPLY PIPE.
5. PIPE AND FITTINGS BETWEEN BUILDING VALVE AND METER SHALL BE THREADED BRASS OR BRAZED COPPER OF NOT LESS THAN 3/4" DIAMETER.
6. WATER METER AND ADJACENT PIPING SHALL BE RIGIDLY MOUNTED. PIPE SHALL BE SUPPORTED TO COMPLY WITH PLUMBING CODES.
7. VALVES SHALL BE GATE OR FULL PORT BALL VALVES.
8. BUILDING WATER PRESSURE SHALL BE CHECKED BEFORE THE SERVICE REPLACEMENT AND AFTER RECONNECTION TO EXISTING INDOOR PLUMBING. THE PRESSURE READINGS SHALL BE RECORDED.
9. WHERE PRESENT, PRESSURE REDUCING VALVES SHALL BE SALVAGED, REINSTALLED, AND RESET TO PREVIOUS RECORDED EXISTING PRESSURE.
10. THE AREA AROUND THE WATER METER SHALL BE PROTECTED, CLEANED, AND RESTORED TO THE PRE-EXISTING CONDITION.
11. THE SERVICE PIPE ENTRANCE, METER, AND BUILDING PLUMBING SHALL BE INSTALLED AS NEAR AS POSSIBLE TO THE EXISTING CONFIGURATION. WHEN SITE CONDITIONS REQUIRE THE SERVICE ENTRANCE TO BE MOVED, NOTIFY BUILDING OWNER AND ENGINEER AND MOVE THE SERVICE ENTRANCE TO AN AGREEABLE ALTERNATIVE LOCATION.
12. SERVICE PIPES, WATER METERS, AND BUILDING PLUMBING SHALL BE INSTALLED/MOUNTED OUT OF THE WAY AND AS CLOSE AS POSSIBLE TO WALLS OR OTHER FIXED OBJECTS.
13. CONTRACTOR SHALL MAINTAIN OR RE-ESTABLISH FUNCTIONALITY OF ELECTRICAL BONDING BETWEEN THE INTERIOR WATER AND ELECTRICAL SYSTEMS.
14. UNLESS OTHERWISE INDICATED, ALL WORK SHOWN ON THIS DETAIL SHALL BE CONSIDERED AS INCLUDED FOR PAYMENT UNDER THE "CONNECT TO EXISTING INDOOR PLUMBING" PAY ITEM.

CONNECT TO EXISTING INDOOR PLUMBING	LSLR-13
REVISED/APPROVED 12/05/2025	CITY OF DULUTH STANDARD DETAIL DEPT. OF PUBLIC WORKS AND UTILITIES	NO SCALE



NOTES:

1. THE CONTRACTOR SHALL CHECK ALL PIPING FOR ELECTRICAL CURRENT PRIOR TO CUTTING OR DISCONNECTING PIPES.
2. CONTRACTOR SHALL MAINTAIN OR RE-ESTABLISH FUNCTIONALITY OF ELECTRICAL BONDING BETWEEN THE INTERIOR WATER AND ELECTRICAL SYSTEMS.
3. THE CONTRACTOR SHALL ABANDON AND CAP THE LEAD WATER SERVICE AT THE MAIN OR CURB STOP PRIOR AND VERIFY THE WATER SERVICE IS DEPRESSURIZED BEFORE ABANDONING THE SERVICE IN THE BUILDING.
4. IF THE NEW WATER SERVICE ENTERS WITHIN 3' OF THE EXISTING LEAD SERVICE, THE LEAD SERVICE SHALL BE SEALED WATER-TIGHT AND ABANDONED BELOW THE FLOOR IN A HAND-DUG PIT NEXT TO THE NEW SERVICE, SEE OPTION 1.
5. IF THE NEW WATER SERVICE ENTERS MORE THAN 3' FROM THE EXISTING LEAD SERVICE, THE EXISTING SERVICE MAY BE ABANDONED IN PLACE WITH THE VALVE CLOSED, ALL NON-ESSENTIAL DOWNSTREAM PIPING REMOVED, AND A PLUG OR CAP INSTALLED ON THE EXISTING VALVE. REMAINING ESSENTIAL PIPING SHALL BE FITTED WITH AN APPROPRIATE PLUG OR CAP, SEE OPTION 2.
6. PLUMBING PIPE EITHER NEWLY INSTALLED OR ALTERED BY THE CONTRACTOR SHALL BE RIGIDLY MOUNTED.

INTERIOR ABANDONMENT OF LEAD WATER SERVICE	LSLR-13A
REVISED/APPROVED 12/05/2025	CITY OF DULUTH STANDARD DETAIL DEPT. OF PUBLIC WORKS AND UTILITIES	NO SCALE

I HEREBY CERTIFY THAT THIS PLAN 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.

WILSON TAYLOR, PE — TYPE NAME

SIGNATURE

12/12/2025 — DATE

59409 — LIC. NO

SPIRIT VALLEY LSLR

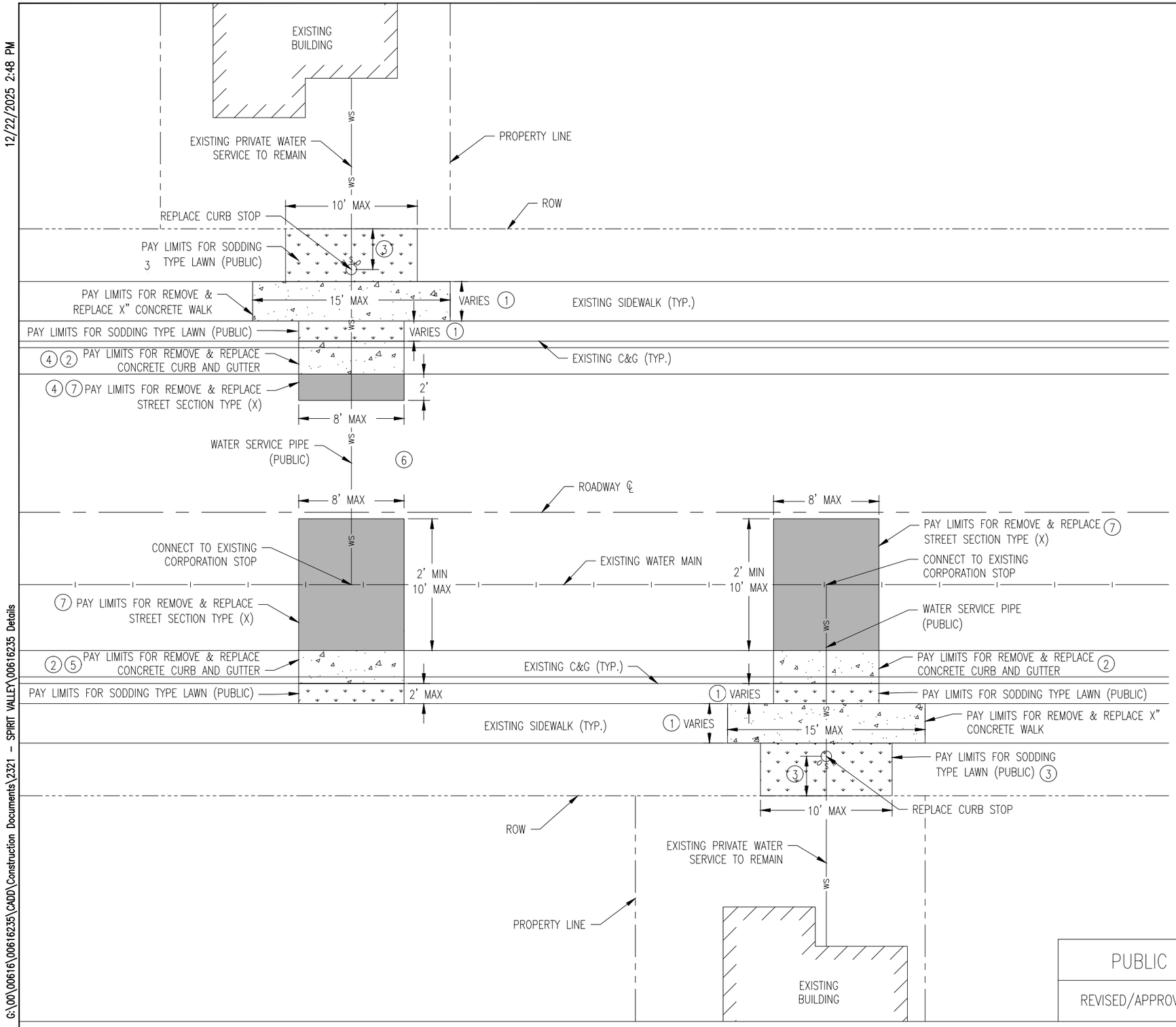
CITY PROJECT NO. 2321

2026 LEAD WATER SERVICE REPLACEMENTS
SPIRIT VALLEY

CONSTRUCTION DETAILS

SHEET NO. D8 OF D20

12/22/2025 2:48 PM



KEY NOTES:

(1) SHALL MATCH EXISTING WALK OR CURB TYPE GEOMETRY.

(2) LIMIT OF MEASUREMENT FOR REMOVE & REPLACE INTEGRANT CURB, WHERE PRESENT, SHALL BE LIMITED TO A 2-FT OFFSET MEASURED FROM EXISTING FACE OF CURB.

(3) LIMITS OF PAYMENT FOR SODDING TYPE LAWN AREAS SHALL BE A MAXIMUM OF 8-FT BEHIND CURB STOP OR AS MEASURED TO THE RIGHT-OF-WAY, WHICHEVER IS LESS.

(4) CURB AND GUTTER AND PAVEMENT REMOVALS SHALL ONLY BE PAID FOR WHERE THE LOCATION OF THE INPLACE CURB STOP IS LOCATED WITHIN 4-FT OF THE INPLACE BACK OF CURB.

(5) CURB AND GUTTER REMOVAL AND REPLACEMENT SHALL ONLY BE PAID FOR WHERE THE LOCATION OF THE PAY LIMITS FOR CONNECTING TO THE INPLACE WATER MAIN IS LOCATED WITHIN 2-FT OF THE GUTTER/PAVEMENT EDGE OR WITHIN 4-FT OF THE FACE OF INTEGRANT CURB.

(6) THE MAXIMUM PAY LENGTH FOR RESTORATION WITHIN THE RIGHT OF WAY WILL BE EXTENDED WHEN THE ENGINEER DIRECTS OPEN CUT EXCAVATION TO PLACE INSULATION WHERE PUBLIC WATER SERVICES CANNOT BE INSTALLED WITH 7.0' OF COVER DUE TO BEDROCK. THE MAXIMUM PAY WIDTH SHALL REMAIN 8.0'.

(7) ON FINISHED CONCRETE PAVED STREETS, FULL CONCRETE PANELS SHALL BE REPLACED TO EXISTING JOINTS. THE MAXIMUM PAY LIMIT WILL BE INCREASED TO PROVIDE COMPENSATION FOR REPLACEMENT OF FULL PANELS.

NOTES:

THE PAY LIMITS SHOWN REPRESENT THE MAXIMUM EXTENT OF REMOVAL AND RESTORATION THAT WILL BE MEASURED AND COMPENSATED AT EACH WATER SERVICE REPLACEMENT SITE. NO ADDITIONAL PAYMENT SHALL BE MADE FOR ANY IMPACTS BEYOND THESE LIMITS. ALL IMPACTS, REGARDLESS OF LOCATION, SHALL BE FULLY RESTORED BY THE CONTRACTOR, ACCORDING TO THE RESPECTIVE CONSTRUCTION REQUIREMENTS AND SPECIFICATIONS.

PUBLIC SIDE LEAD WATER SERVICE REPLACEMENT		LSLR-15
REVISED/APPROVED 12/05/2025	CITY OF DULUTH STANDARD DETAIL DEPT. OF PUBLIC WORKS AND UTILITIES	NO SCALE

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WILSON TAYLOR, PE — TYPE NAME

SIGNATURE

12/12/2025 — DATE

59409 — LIC. NO

SPIRIT VALLEY LSLR

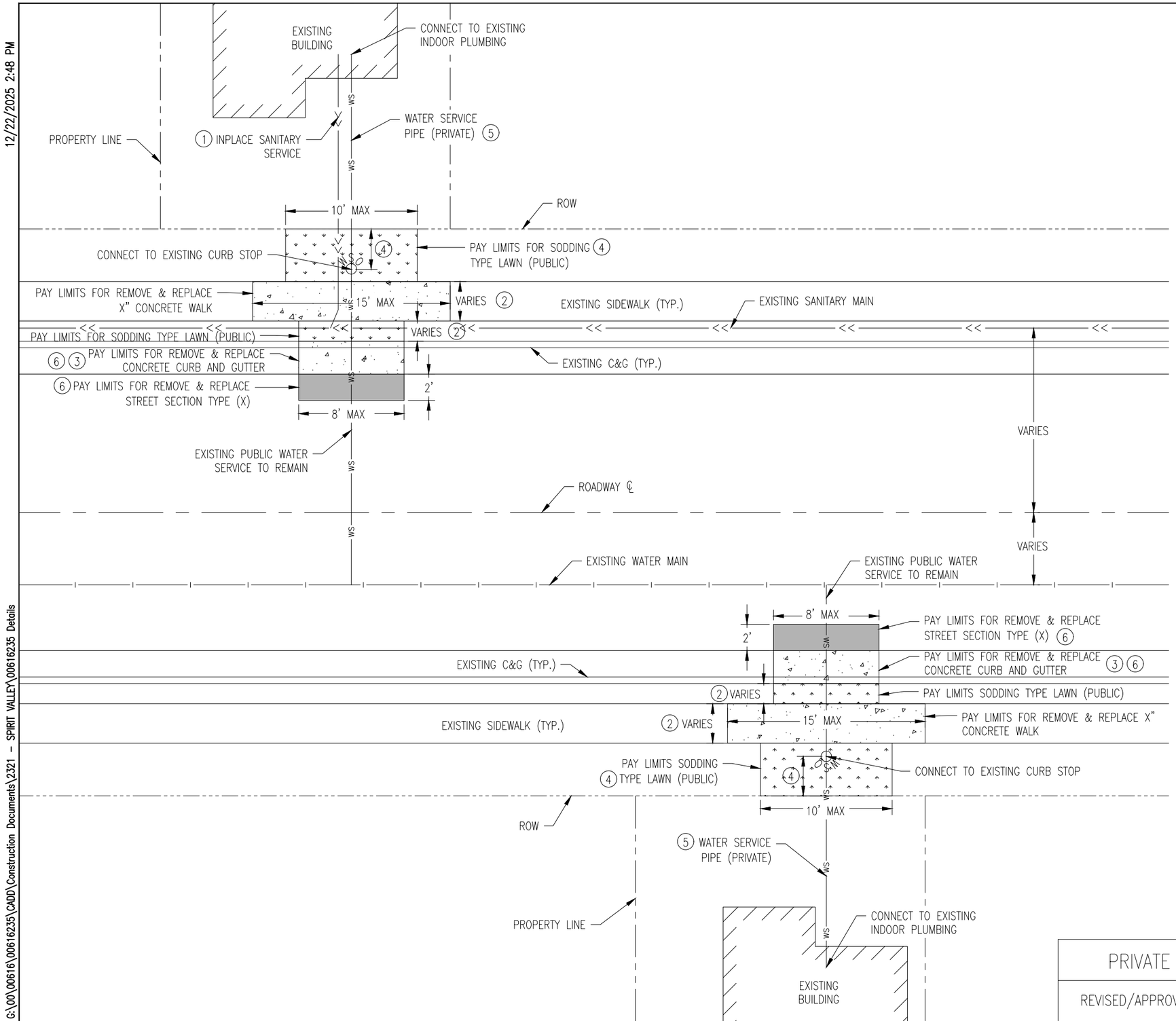
CITY PROJECT NO. 2321

2026 LEAD WATER SERVICE REPLACEMENTS
SPIRIT VALLEY

CONSTRUCTION DETAILS

SHEET NO. D10 OF D20

12/22/2025 2:48 PM



KEY NOTES:

1. WHERE THE SUSPECTED PRESENCE OF BEDROCK IS INDICATED IN THE PLANS OR WHERE DIRECTED BY THE ENGINEER DUE TO FIELD CONDITIONS, THE CONTRACTOR SHALL BE PREPARED TO UTILIZE A TRENCHLESS METHOD UTILIZING THE INPLACE SANITARY SEWER SERVICE LINE TO COMPLETE THE WATER SERVICE REPLACEMENT. IN SUCH CASES, THE WORK SHALL INCLUDE FULLY REPLACING THE SANITARY SERVICE LINE. REFER TO SPECIAL PROVISIONS FOR REQUIREMENTS. UTILIZING THE SANITARY SERVICE TO PLACE THE WATER SERVICE LINE IS OTHERWISE NOT PERMITTED AND THE SANITARY SERVICE SHALL BE PROTECTED DURING THE WORK.
2. SHALL MATCH EXISTING WALK OR CURB TYPE GEOMETRY.
3. LIMIT OF MEASUREMENT FOR REMOVE & REPLACE INTEGRANT CURB, WHERE PRESENT, SHALL BE LIMITED TO A 2-FT OFFSET MEASURED FROM EXISTING FACE OF CURB.
4. LIMITS OF PAYMENT FOR SODDING TYPE LAWN AREAS SHALL BE A MAXIMUM OF 8-FT BEHIND CURB STOP OR AS MEASURED TO THE RIGHT-OF-WAY, WHICHEVER IS LESS.
5. NO PAYMENT SHALL BE MADE FOR ANY REMOVALS OR RESTORATION ON A PRIVATE PROPERTY BUT ALL COSTS SHALL BE CONSIDERED INCLUDED FOR PAYMENT UNDER THE 1" HDPE SDR 9 SERVICE PIPE (PRIVATE) PAY ITEM. REFER TO THE SPECIAL PROVISIONS FOR ADDITIONAL REQUIREMENTS.
6. CURB AND GUTTER AND PAVEMENT REMOVALS SHALL ONLY BE PAID FOR WHERE THE LOCATION OF THE INPLACE CURB STOP IS LOCATED WITHIN 4-FT OF THE INPLACE BACK OF CURB.

NOTES:

THE PAY LIMITS SHOWN REPRESENT THE MAXIMUM EXTENT OF REMOVAL AND RESTORATION THAT WILL BE MEASURED AND COMPENSATED AT EACH WATER SERVICE REPLACEMENT SITE. NO ADDITIONAL PAYMENT SHALL BE MADE FOR ANY IMPACTS BEYOND THESE LIMITS. ALL IMPACTS, REGARDLESS OF LOCATION, SHALL BE FULLY RESTORED BY THE CONTRACTOR, ACCORDING TO THE RESPECTIVE CONSTRUCTION REQUIREMENTS AND SPECIFICATIONS.

PRIVATE SIDE LEAD WATER SERVICE REPLACEMENT		LSLR-16
REVISED/APPROVED 12/05/2025	CITY OF DULUTH STANDARD DETAIL DEPT. OF PUBLIC WORKS AND UTILITIES	NO SCALE

C:\00\00616\00616235\CADD\Construction Documents\2321 - SPIRIT VALLEY\00616235 Details

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WILSON TAYLOR, PE — TYPE NAME

SIGNATURE

12/12/2025 — DATE

59409 — LIC. NO

SPIRIT VALLEY LSLR

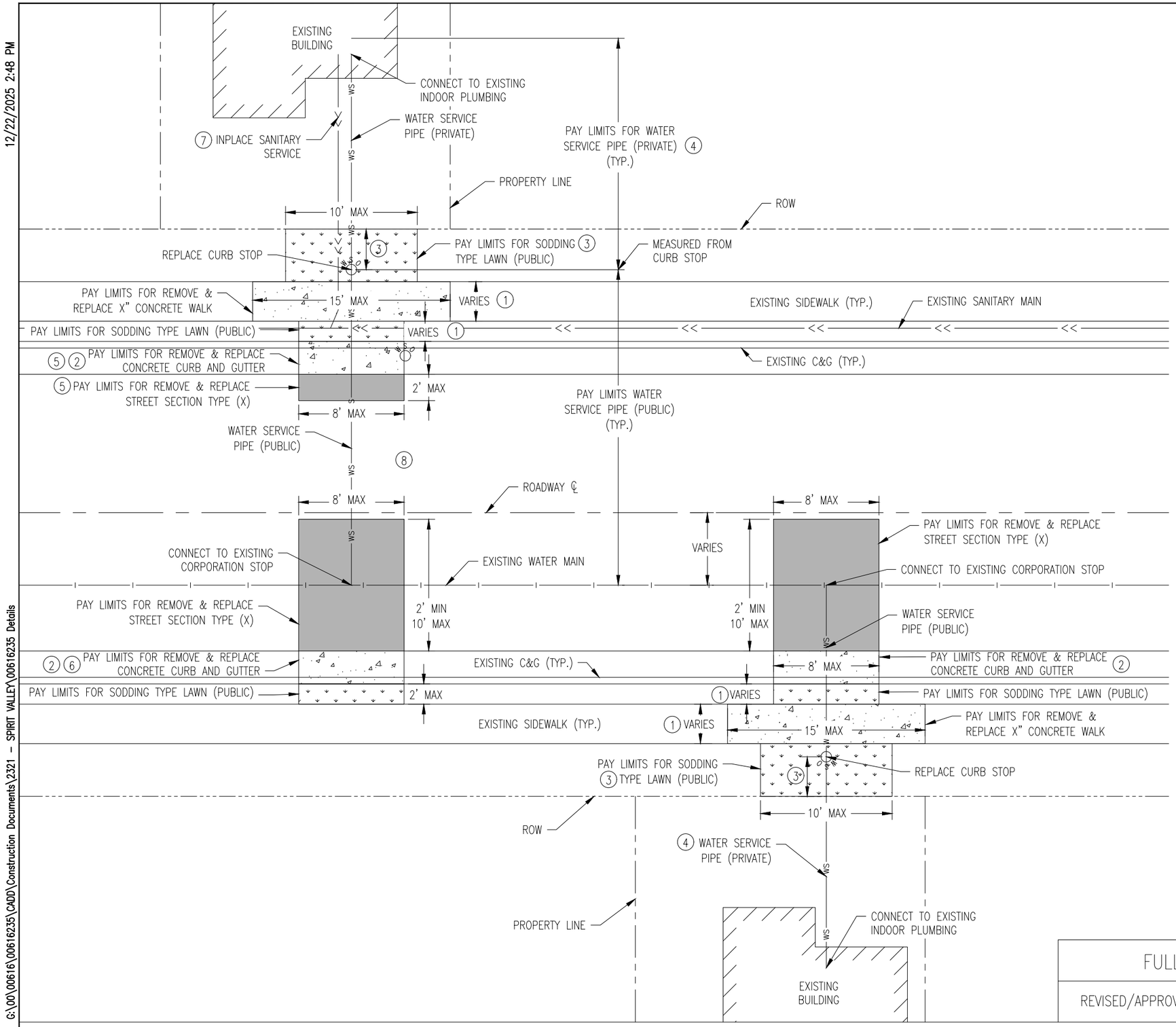
CITY PROJECT NO. 2321

2026 LEAD WATER SERVICE REPLACEMENTS
SPIRIT VALLEY

CONSTRUCTION DETAILS

SHEET NO. D11 OF D20

12/22/2025 2:48 PM



KEY NOTES:

1. SHALL MATCH EXISTING WALK OR CURB TYPE GEOMETRY.
2. LIMIT OF MEASUREMENT FOR REMOVE & REPLACE INTEGRANT CURB, WHERE PRESENT, SHALL BE LIMITED TO A 2-FT OFFSET MEASURED FROM EXISTING FACE OF CURB.
3. LIMITS OF PAYMENT FOR SODDING TYPE LAWN AREAS SHALL BE A MAXIMUM OF 8-FT BEHIND CURB STOP OR AS MEASURED TO THE RIGHT-OF-WAY, WHICHEVER IS LESS.
4. NO PAYMENT SHALL BE MADE FOR ANY REMOVALS OR RESTORATION ON A PRIVATE PROPERTY BUT ALL COSTS SHALL BE CONSIDERED INCLUDED FOR PAYMENT UNDER THE APPROPRIATE WATER SERVICE PIPE (PRIVATE) PAY ITEM. REFER TO THE SPECIAL PROVISIONS FOR ADDITIONAL REQUIREMENTS.
5. CURB AND GUTTER AND PAVEMENT REMOVALS SHALL ONLY BE PAID FOR WHERE THE LOCATION OF THE INPLACE CURB STOP IS LOCATED WITHIN 4-FT OF THE INPLACE BACK OF CURB.
6. CURB AND GUTTER REMOVAL AND REPLACEMENT SHALL ONLY BE PAID FOR WHERE THE LOCATION OF THE PAY LIMITS FOR CONNECTING TO THE INPLACE WATER MAIN IS LOCATED WITHIN 2-FT OF THE GUTTER/PAVEMENT EDGE OR WITHIN 4-FT OF THE FACE OF INTEGRANT CURB.
7. WHERE THE SUSPECTED PRESENCE OF BEDROCK IS INDICATED IN THE PLANS OR WHERE DIRECTED BY THE ENGINEER DUE TO FIELD CONDITIONS, THE CONTRACTOR SHALL BE PREPARED TO UTILIZE A TRENCHLESS METHOD UTILIZING THE INPLACE SANITARY SEWER SERVICE LINE TO COMPLETE THE WATER SERVICE REPLACEMENT. IN SUCH CASES, THE WORK SHALL INCLUDE FULLY REPLACING THE SANITARY SERVICE LINE. REFER TO SPECIAL PREVISIONS FOR REQUIREMENTS. UTILIZING THE SANITARY SERVICE TO PLACE THE WATER SERVICE LINE IS OTHERWISE NOT PERMITTED AND THE SANITARY SERVICE SHALL BE PROTECTED DURING THE WORK.
8. THE MAXIMUM PAY LENGTH FOR RESTORATION WITHIN THE RIGHT OF WAY WILL BE EXTENDED WHEN THE ENGINEER DIRECTS OPEN CUT EXCAVATION TO PLACE INSULATION WHERE PUBLIC WATER SERVICES CANNOT BE INSTALLED WITH 7.0' OF COVER DUE TO BED ROCK. THE MAXIMUM PAY WIDTH SHALL REMAIN 8.0'.

NOTES:

THE PAY LIMITS SHOWN REPRESENT THE MAXIMUM EXTENT OF REMOVAL AND RESTORATION THAT WILL BE MEASURED AND COMPENSATED AT EACH WATER SERVICE REPLACEMENT SITE. NO ADDITIONAL PAYMENT SHALL BE MADE FOR ANY IMPACTS BEYOND THESE LIMITS. ALL IMPACTS, REGARDLESS OF LOCATION, SHALL BE FULLY RESTORED BY THE CONTRACTOR, ACCORDING TO THE RESPECTIVE CONSTRUCTION REQUIREMENTS AND SPECIFICATIONS.

FULL LEAD WATER SERVICE REPLACEMENT		LSLR-17
REVISED/APPROVED 12/05/2025	CITY OF DULUTH STANDARD DETAIL DEPT. OF PUBLIC WORKS AND UTILITIES	NO SCALE

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CONSTRUCTION DETAILS

SHEET NO. D12 OF D20

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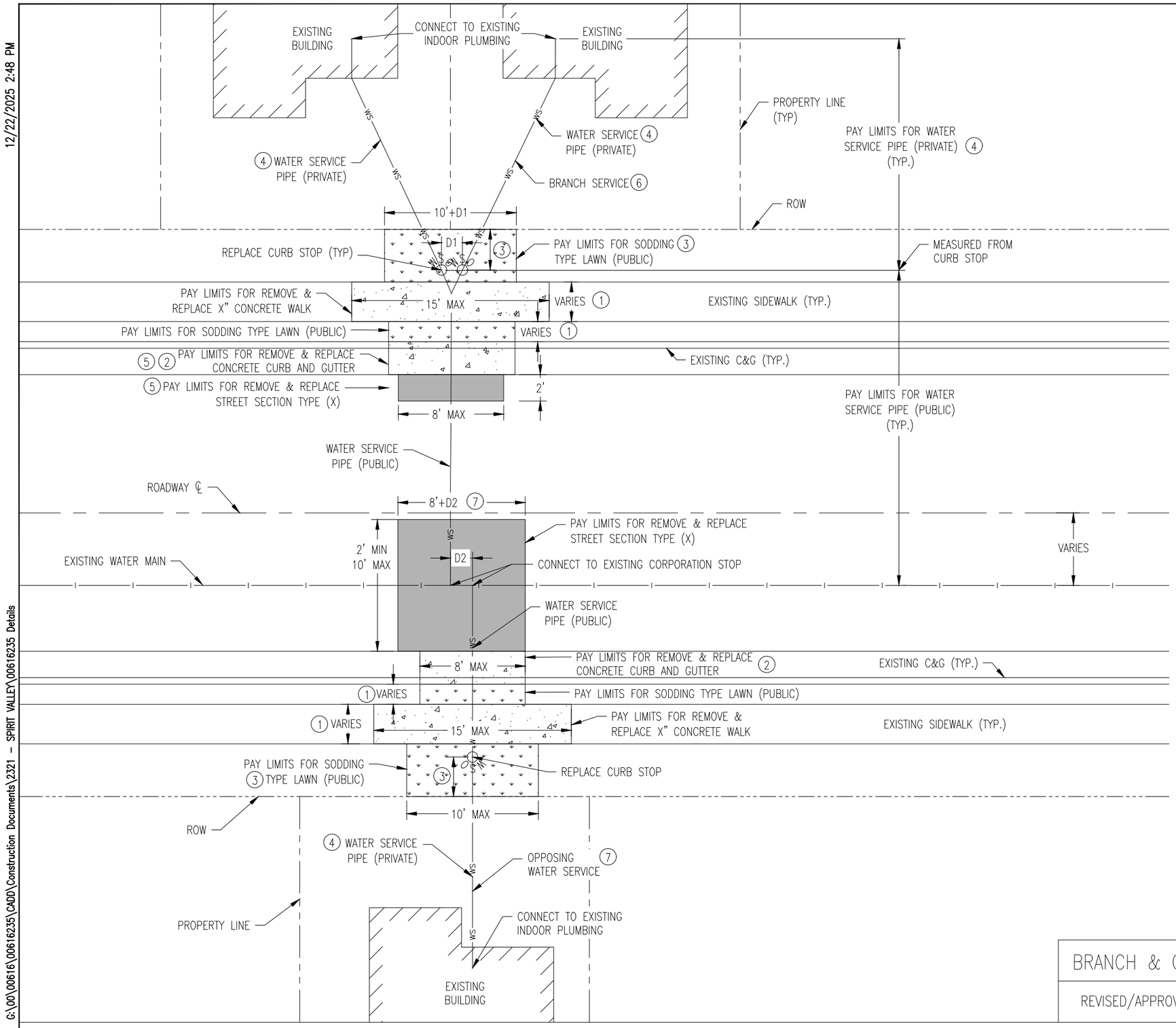

KEY NOTES:

1. SHALL MATCH EXISTING WALK OR CURB TYPE GEOMETRY.
2. LIMIT OF MEASUREMENT FOR REMOVE & REPLACE INTEGRANT CURB, WHERE PRESENT, SHALL BE LIMITED TO A 2-FT OFFSET MEASURED FROM EXISTING FACE OF CURB.
3. LIMITS OF PAYMENT FOR SODDING TYPE LAWN AREAS SHALL BE A MAXIMUM OF 8-FT BEHIND CURB STOP OR AS MEASURED TO THE RIGHT-OF-WAY, WHICHEVER IS LESS.
4. NO PAYMENT SHALL BE MADE FOR ANY REMOVALS OR RESTORATION ON A PRIVATE PROPERTY BUT ALL COSTS SHALL BE CONSIDERED INCLUDED FOR PAYMENT UNDER THE APPROPRIATE WATER SERVICE PIPE (PRIVATE) PAY ITEM. REFER TO THE SPECIAL PROVISIONS FOR ADDITIONAL REQUIREMENTS.
5. CURB AND GUTTER AND PAVEMENT REMOVALS SHALL ONLY BE PAID FOR WHERE THE LOCATION OF THE INPLACE CURB STOP IS LOCATED WITHIN 4-FT OF THE INPLACE BACK OF CURB.
6. WHERE A BRANCH SERVICE IS PRESENT, THE WIDTH OF THE PAY LIMITS SHALL BE INCREASE BY THE DISTANCE BETWEEN THE CURB STOP "D1".
7. WHERE OPPOSING SERVICES ARE PRESENT AND LOCATED WITHIN 4-FT OF EACH OTHER, THE WIDTH OF THE PAY LIMITS SHALL BE INCREASE BY THE DISTANCE BETWEEN THE CORPORATION STOPS "D2".

NOTES:

THE PAY LIMITS SHOWN REPRESENT THE MAXIMUM EXTENT OF REMOVAL AND RESTORATION THAT WILL BE MEASURED AND COMPENSATED AT EACH WATER SERVICE REPLACEMENT SITE. NO ADDITIONAL PAYMENT SHALL BE MADE FOR ANY IMPACTS BEYOND THESE LIMITS. ALL IMPACTS, REGARDLESS OF LOCATION, SHALL BE FULLY RESTORED BY THE CONTRACTOR, ACCORDING TO THE RESPECTIVE CONSTRUCTION REQUIREMENTS AND SPECIFICATIONS.

BRANCH & OPPOSING LEAD WATER SERVICE REPLACEMENT		LSLR-18
REVISED/APPROVED 12/05/2025	CITY OF DULUTH STANDARD DETAIL DEPT. OF PUBLIC WORKS AND UTILITIES	NO SCALE

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WILSON TAYLOR, PE — TYPE NAME

SIGNATURE

12/12/2025 — DATE

59409 — LIC. NO

SPIRIT VALLEY LSLR

CITY PROJECT NO. 2321

2026 LEAD WATER SERVICE REPLACEMENTS
SPIRIT VALLEY

CONSTRUCTION DETAILS

SHEET NO. D13 OF D30

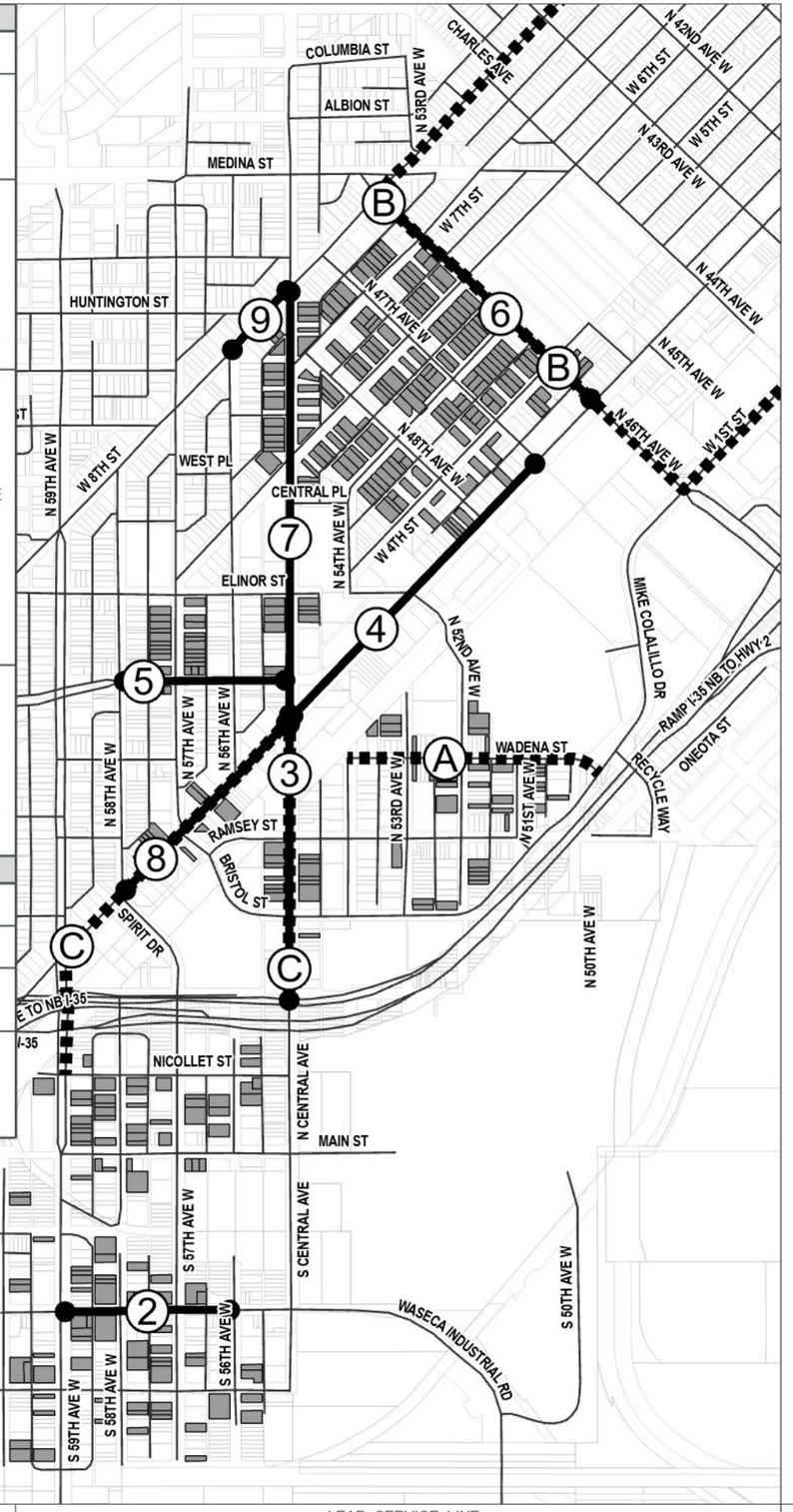
G:\00\00616\00616235\CADD\Construction Documents\2321 - SPIRIT VALLEY\00616235 Details

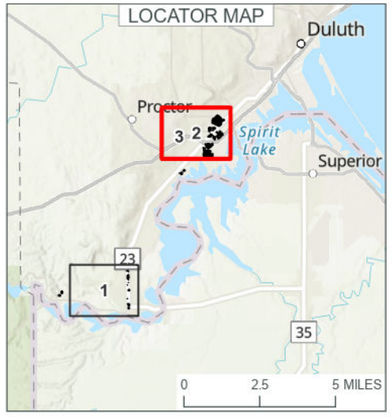
TRAFFIC CONTROL - ARTERIAL ROAD LIST

SEGMENT NUMBER	STREET	EXTENTS	NOTES
2	RALEIGH ST	S 59TH AVE W TO S 56TH AVE W	THIS ROAD SEGMENT CONTAINS APPROXIMATELY 5 PRIVATE WATER SERVICE REPLACEMENTS BETWEEN CURB STOPS TO BUILDINGS. TRAFFIC FLOW SHALL BE MAINTAINED IN BOTH DIRECTIONS. CONSTRUCTION ACTIVITIES AND RESTORATION ON THIS ROAD SEGMENT SHALL BE CONTINUOUS AND SHALL BE COMPLETED WITHIN 1 WEEK.
3	CENTRAL AVE	I35 TO GRAND AVE	THIS ROAD SECTION CONTAINS APPROXIMATELY 15 PRIVATE WATER SERVICE REPLACEMENTS BETWEEN CURB STOP TO BUILDINGS. TRAFFIC FLOW SHALL BE MAINTAINED IN BOTH DIRECTIONS. CONSTRUCTION ACTIVITIES AND RESTORATION ON THIS ROAD SEGMENT SHALL BE CONTINUOUS AND SHALL BE COMPLETED WITHIN 3 CONSECUTIVE WEEKS. THE "SPIRIT VALLEY DAYS" CELEBRATION UTILIZES THIS ROAD SEGMENT. NO WORK CAN OCCUR ON THIS SEGMENT, THE STREET SHALL BE OPEN, AND ALL SURFACES SHALL BE PERMANENTLY RESTORED DURING THE TIME PERIOD FROM JULY 31ST, 2026 TO AUGUST 9TH, 2026.
4	GRAND AVE	CENTRAL AVE TO N 47TH AVE W	THIS ROAD SECTION CONTAINS APPROXIMATELY 5 PRIVATE WATER SERVICE REPLACEMENTS BETWEEN CURB STOPS TO BUILDINGS AND 2 PUBLIC WATER SERVICE REPLACEMENTS BETWEEN THE WATER MAIN AND CURB STOPS. TRAFFIC FLOW SHALL BE MAINTAINED IN BOTH DIRECTIONS. JERSEY BARRIERS SHALL BE EMPLOYED WHERE OPEN EXCAVATIONS ARE ADJACENT TO FLOWING TRAFFIC. SHOULD CONSTRUCTION OPERATIONS NOT ALLOW TRAFFIC FLOW TO BE MAINTAINED IN BOTH DIRECTIONS, A DETOUR ROUTE SHALL BE SUBMITTED AND APPROVED BY THE CITY. CONSTRUCTION ACTIVITIES AND RESTORATION ON THIS ROAD SEGMENT SHALL BE CONTINUOUS AND SHALL BE COMPLETED WITHIN 2 CONSECUTIVE WEEKS. THE "SPIRIT VALLEY DAYS" CELEBRATION UTILIZES THIS ROAD SEGMENT. NO WORK CAN OCCUR ON THIS SEGMENT, THE STREET SHALL BE OPEN, AND ALL SURFACES SHALL BE PERMANENTLY RESTORED DURING THE TIME PERIOD FROM JULY 31ST, 2026 TO AUGUST 9TH, 2026.
5	CODY ST	N 58TH AVE W TO CENTRAL AVE	THIS ROAD SECTION CONTAINS APPROXIMATELY 7 WATER SERVICE REPLACEMENTS FROM THE MAIN TO BUILDINGS. THIS ROAD SEGMENT MAY BE FULLY CLOSED FOR WATER SERVICES REPLACEMENTS. 59TH AVE W, GRAND AVE, AND CENTRAL AVE SHALL BE THE DETOUR ROUTE AND SHALL HAVE NO OTHER CONSTRUCTION ACTIVITIES WHILE ACTING AS A DETOUR. THE DURATION OF FULL ROAD CLOSURE SHALL BE MINIMIZED TO THE GREATEST EXTENT POSSIBLE. CONSTRUCTION ACTIVITIES AND RESTORATION ON THIS ROAD SEGMENT SHALL BE CONTINUOUS AND SHALL BE COMPLETED WITHIN 2 CONSECUTIVE WEEKS.

ROADS REQUIRING SPECIAL COORDINATION REQUIREMENTS ARE INCIDENTAL

SEGMENT LETTER	STREET	EXTENTS	NOTES
A	WADENA ST	54TH AVE W TO MIKE COLALILLO	LEAD REPLACEMENT WORK AND RESTORATION SHALL BE COMPLETE PRIOR TO 6/30/2026 IN ADVANCE OF A PLANNED STREET PRESERVATION PROJECT
B	8TH ST, 46TH AVE W, W 1ST ST, W SUPERIOR ST		THIS IS A PLANNED DETOUR ROUTE DURING THE RECONSTRUCTION OF 40TH AVE W BY ST. LOUIS COUNTY
C	GRAND AVE, CENTRAL AVE		THE "SPIRIT VALLEY DAYS" CELEBRATION UTILIZES THIS ROAD SEGMENT FOR A PARADE AND STREET DANCE. NO WORK CAN OCCUR ON THIS SEGMENT, THE STREET MUST BE OPEN, AND ALL SURFACES SHALL BE PERMANENTLY RESTORED DURING THE TIME PERIOD FROM JULY 31ST, 2026 TO AUGUST 9TH, 2026.





LEGEND

- PROJECT SITES
- COUNTY PARCELS
- LOCAL ROAD - TRAFFIC CONTROL (LUMP SUM) APPLIES
- ARTERIAL ROAD - TRAFFIC CONTROL, ARTERIAL ROAD (EACH) APPLIES
- ROAD REQUIRING SPECIAL COORDINATION - REQUIREMENTS ARE INCIDENTAL

TRUE NORTH PLAN NORTH

0 450 900 FEET

PRINTED ON 12/21/2025 BY CFARRELL AT MSA. G:\00\00616\00616209\GIS\8_LSLR_PROJ2215\DULUTH_LSL_PROJ2215.APRX

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MSA

WILSON TAYLOR, PE
TYPE NAME

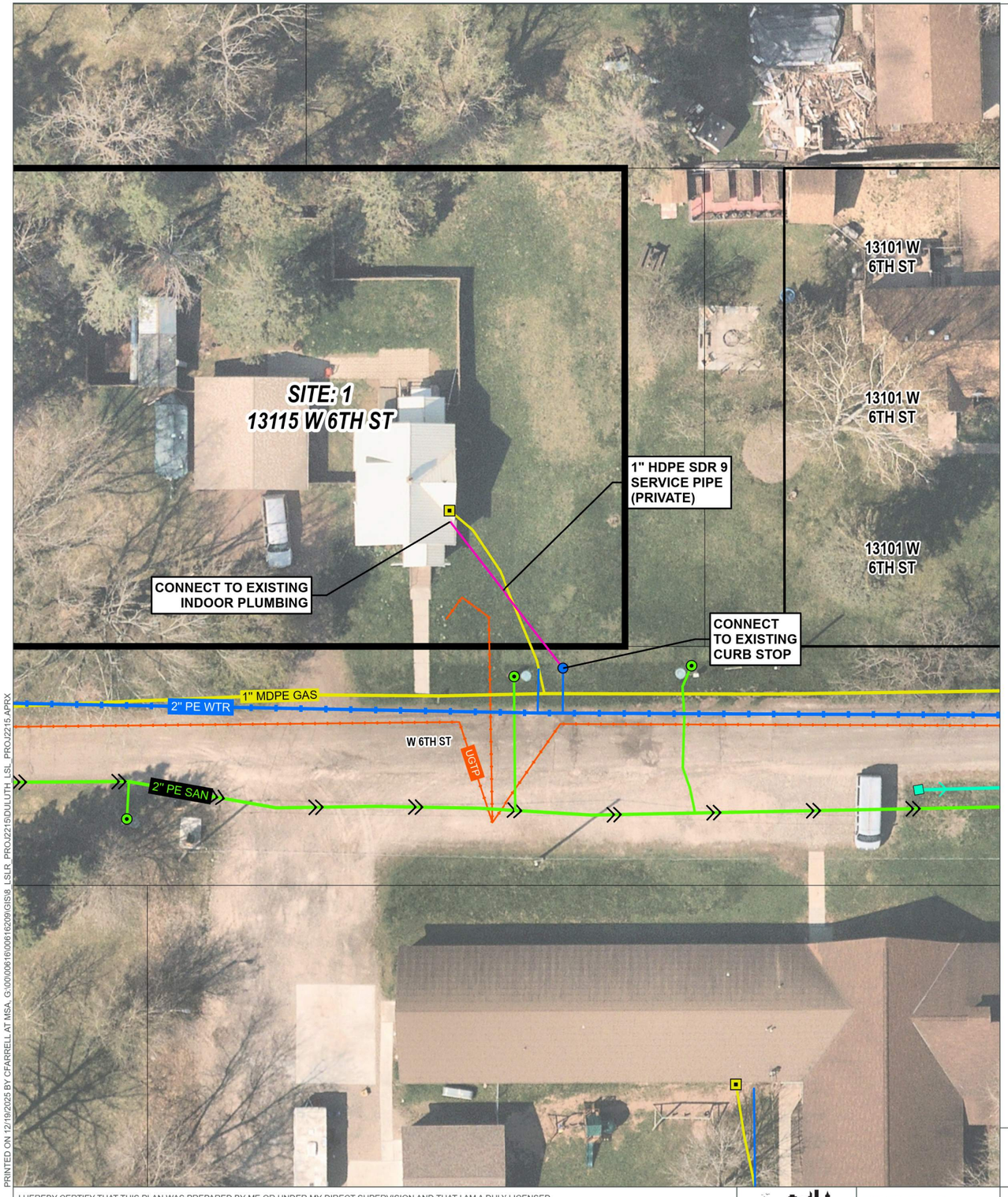
DATE: 12/21/2025
LIC. NO.: 59409

CITY OF DULUTH
ENGINEERING DIVISION
411 W. 1ST ST. STE. 240
DULUTH, MN 55802

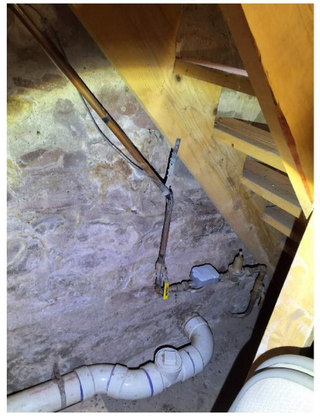
LEAD SERVICE LINE REPLACEMENT
SPIRIT VALLEY

CITY PROJECT NO.: 2321
MN PFA PROJECT NO.: 1690011-21

DRAWN BY: CMF & WRT
TRAFFIC CONTROL MAPS
SHEET NUMBER: TC2 OF TC5



EXTERIOR WORK AREA



INTERIOR WORK AREA

WATER SERVICE PIPE

SITE INFORMATION

TITLE HOLDER	PAULSON DOUGLAS A
CONSTRUCTION CONTACT	PAULSON DOUGLAS A
RENTAL PROPERTY	NO
WORK AGREEMENT SIGNED	YES
PRIVATE SERVICE MATERIAL	COPPER - SUSPECT LEAD
PUBLIC SERVICE MATERIAL	COPPER - NOT LEAD
MATERIAL CONFIRMATION NEEDED	YES
METER LOCATION NOTES	WATER METER LOCATED ALONG EAST WALL, 7 FEET NORTH OF SOUTH WALL.
BASEMENT NOTES	UNFINISHED BASEMENT.
SANITARY NOTES	SANITARY SERVICE EXPECTED TO BE CO-LOCATED WITH WATER SERVICE.
ELECTRICAL GROUND NOTES	SECONDARY ELECTRICAL GROUND NOT OBSERVED
OTHER NOTES	ARCHEOLOGICAL AREA OF CONCERN - THE CONTRACTOR SHALL NOTIFY THE CITY 14 DAYS PRIOR TO EXCAVATION TO ALLOW COORDINATION OF EXCAVATION MONITORING.

ESTIMATED QUANTITIES

POTHOLE WATER SERVICE FOR MATERIAL IDENTIFICATION (EACH): 1
TELEVISE & LOCATE SANITARY SERVICE (EACH): 1
CONNECT TO EXISTING CURB STOP (EACH): 1
CONNECT TO EXISTING INDOOR PLUMBING (EACH): 1
1" HDPE SDR 9 SERVICE PIPE (PRIVATE) (LIN FT): 48
ELECTRICAL SERVICE GROUND (EACH): 1
SODDING TYPE LAWN (PUBLIC) (SQ YD): 17

TRUE NORTH PLAN NORTH 0 15 30 FT.

I HEREBY CERTIFY THAT THIS PLAN 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.

MSA

WILSON TAYLOR, PE
TYPE NAME

DATE: 12/19/2025
LIC. NO.: 59409

CITY OF DULUTH
ENGINEERING DIVISION
411 W. 1ST ST. STE. 240
DULUTH, MN 55802

LEAD SERVICE LINE
REPLACEMENT
SPIRIT VALLEY

CITY PROJECT NO.: 2321
MN PFA PROJECT NO.: 1690011-21

SITE NUMBER: 1
ADDRESS: 13115 W 6TH ST
DRAWN BY: CMF & WRT
LEAD REPLACEMENT PLAN
SHEET NUMBER: S1 OF S441

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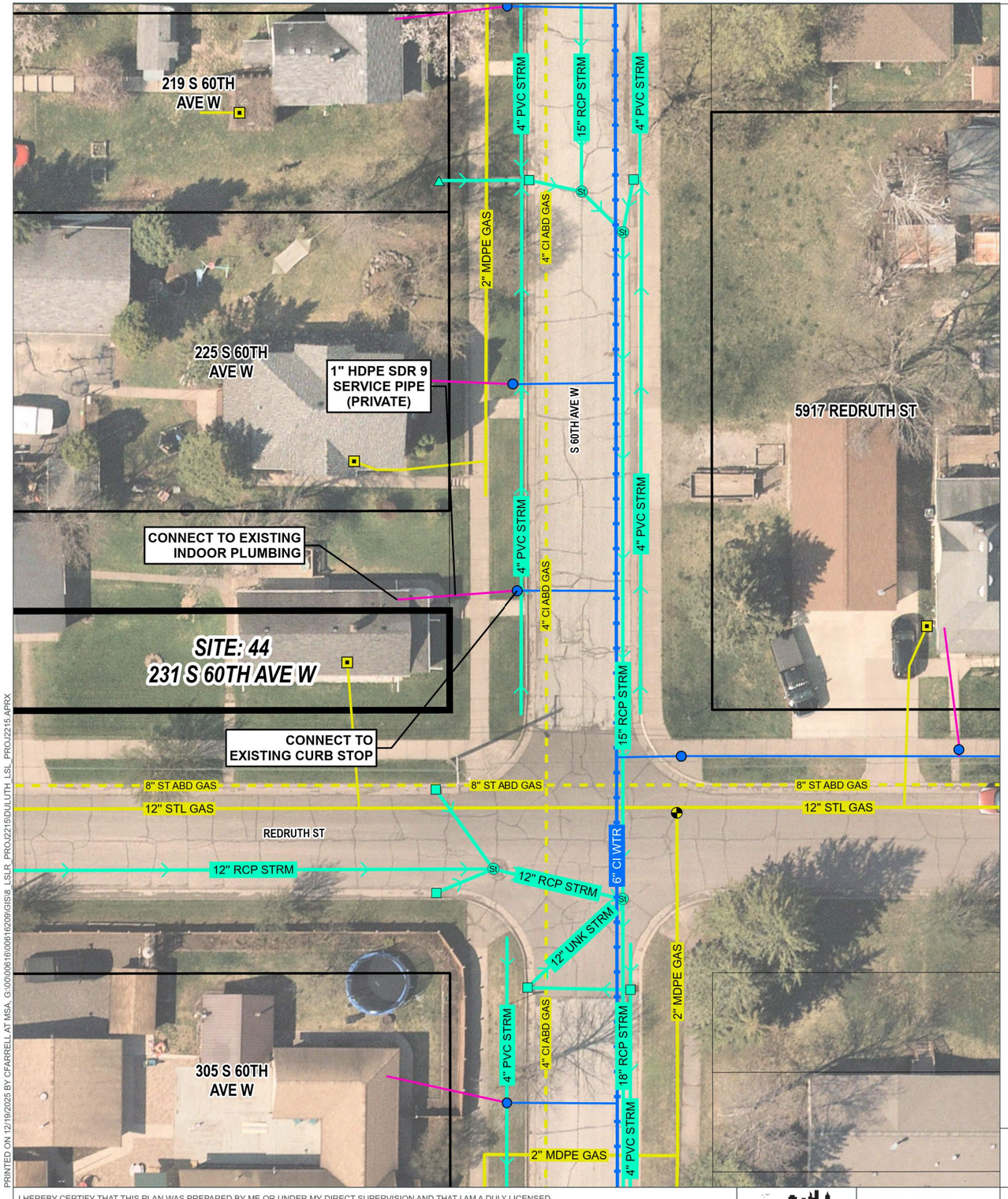
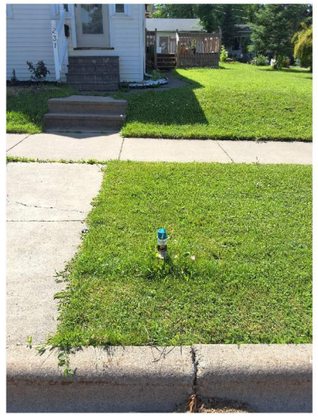
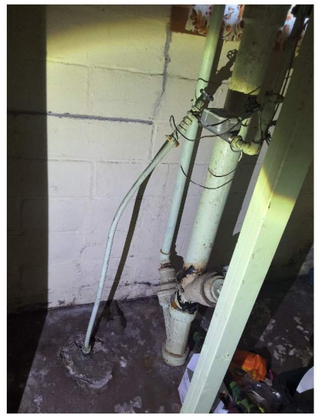




EXTERIOR WORK AREA



INTERIOR WORK AREA

WATER SERVICE PIPE

SITE INFORMATION

TITLE HOLDER	RACHELLE A RAHN
CONSTRUCTION CONTACT	RAHN RACHELLE A
RENTAL PROPERTY	YES
WORK AGREEMENT SIGNED	YES
PRIVATE SERVICE MATERIAL	GALVANIZED IRON - SUSPECT LEAD
PUBLIC SERVICE MATERIAL	COPPER - NOT LEAD
MATERIAL CONFIRMATION NEEDED	NO
METER LOCATION NOTES	WATER METER IS LOCATED ALONG NORTH WALL, 5 FEET WEST OF EAST WALL.
BASEMENT NOTES	UNFINISHED BASEMENT.
SANITARY NOTES	SANITARY SERVICE NOT EXPECTED TO BE CO-LOCATED WITH WATER SERVICE.
ELECTRICAL GROUND NOTES	SECONDARY ELECTRICAL GROUND NOT OBSERVED
OTHER NOTES	

ESTIMATED QUANTITIES

REMOVE & REPLACE CONCRETE CURB & GUTTER (LIN FT): 8
REMOVE & REPLACE STREET SECTION, TYPE B (SQ YD): 2
REMOVE & REPLACE 4" CONCRETE WALK (SQ FT): 111
CONNECT TO EXISTING CURB STOP (EACH): 1
CONNECT TO EXISTING INDOOR PLUMBING (EACH): 1
1" HDPE SDR 9 SERVICE PIPE (PRIVATE) (LIN FT): 30
SODDING TYPE LAWN (PUBLIC) (SQ YD): 6

TRUE NORTH PLAN NORTH 0 15 30 FT.

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WILSON TAYLOR, PE
TYPE NAME

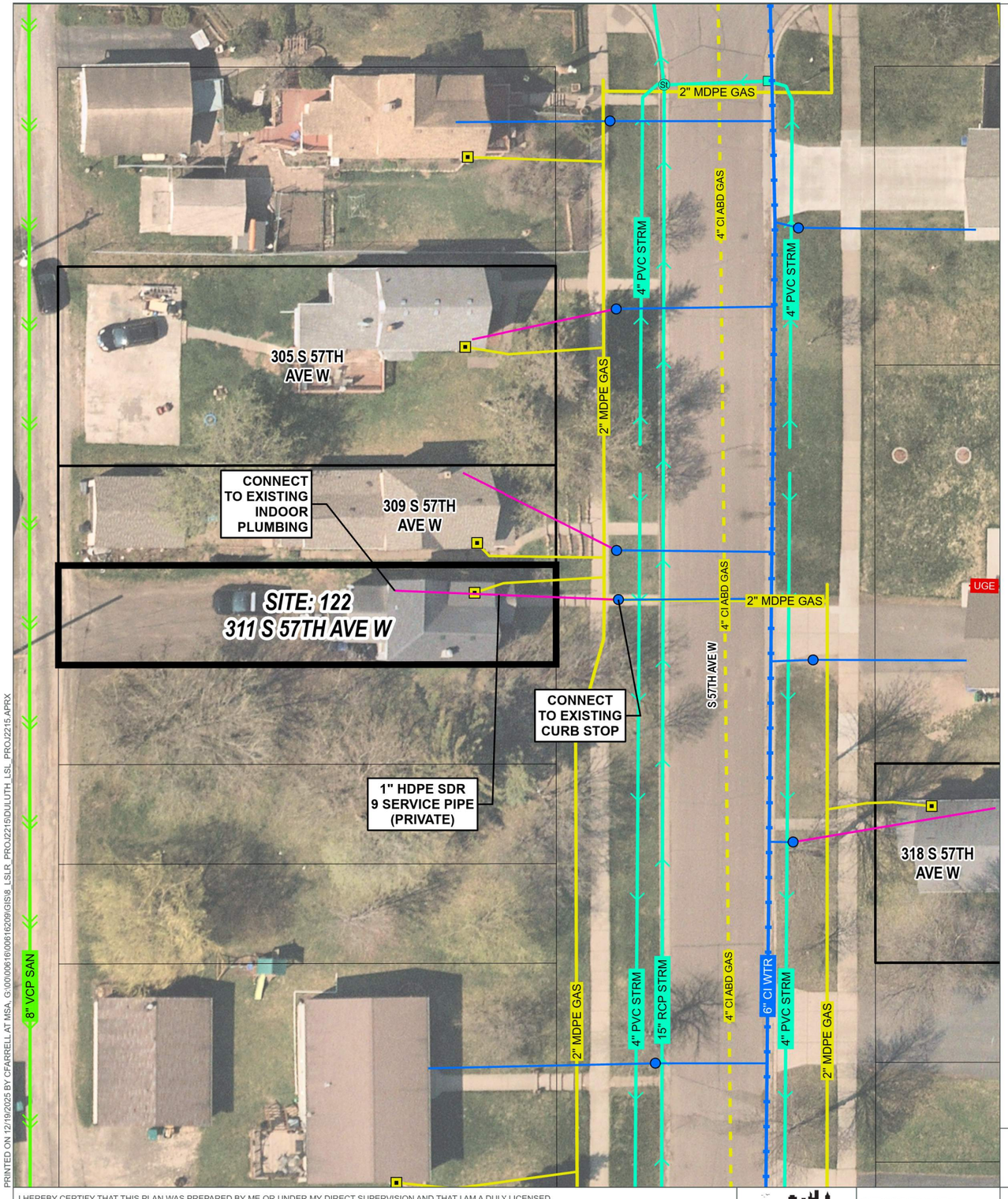
DATE: 12/19/2025
LIC. NO.: 59409

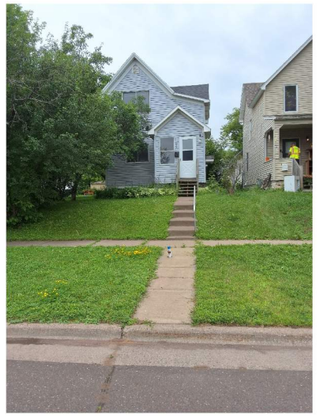
CITY OF DULUTH
ENGINEERING DIVISION
411 W. 1ST ST. STE. 240
DULUTH, MN 55802

LEAD SERVICE LINE
REPLACEMENT
SPIRIT VALLEY

CITY PROJECT NO.: 2321
MN PFA PROJECT NO.: 1690011-21

SITE NUMBER: 44
ADDRESS: 231 S 60TH AVE W
DRAWN BY: CMF & WRT
LEAD REPLACEMENT PLAN
SHEET NUMBER: S44 OF S441





EXTERIOR WORK AREA

INTERIOR WORK AREA

WATER SERVICE PIPE

SITE INFORMATION

TITLE HOLDER	KYLER K ERICKSON
CONSTRUCTION CONTACT	ERICKSON KYLER K
RENTAL PROPERTY	NO
WORK AGREEMENT SIGNED	YES
PRIVATE SERVICE MATERIAL	LEAD - CONFIRMED LEAD
PUBLIC SERVICE MATERIAL	COPPER - NOT LEAD
MATERIAL CONFIRMATION NEEDED	NO
METER LOCATION NOTES	WATER METER LOCATED ALONG NORTH WALL, 22 FEET WEST OF EAST WALL.
BASEMENT NOTES	UNFINISHED BASEMENT.
SANITARY NOTES	SANITARY SERVICE NOT EXPECTED TO BE CO-LOCATED WITH WATER SERVICE
ELECTRICAL GROUND NOTES	SECONDARY ELECTRICAL GROUND NOT OBSERVED
OTHER NOTES	

ESTIMATED QUANTITIES

REMOVE & REPLACE 4" CONCRETE WALK (SQ FT): 114
CONNECT TO EXISTING CURB STOP (EACH): 1
CONNECT TO EXISTING INDOOR PLUMBING (EACH): 1
1" HDPE SDR 9 SERVICE PIPE (PRIVATE) (LIN FT): 61
ELECTRICAL SERVICE GROUND (EACH): 1
SODDING TYPE LAWN (PUBLIC) (SQ YD): 11

TRUE NORTH PLAN NORTH 0 15 30 FT.

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MSA

WILSON TAYLOR, PE
TYPE NAME

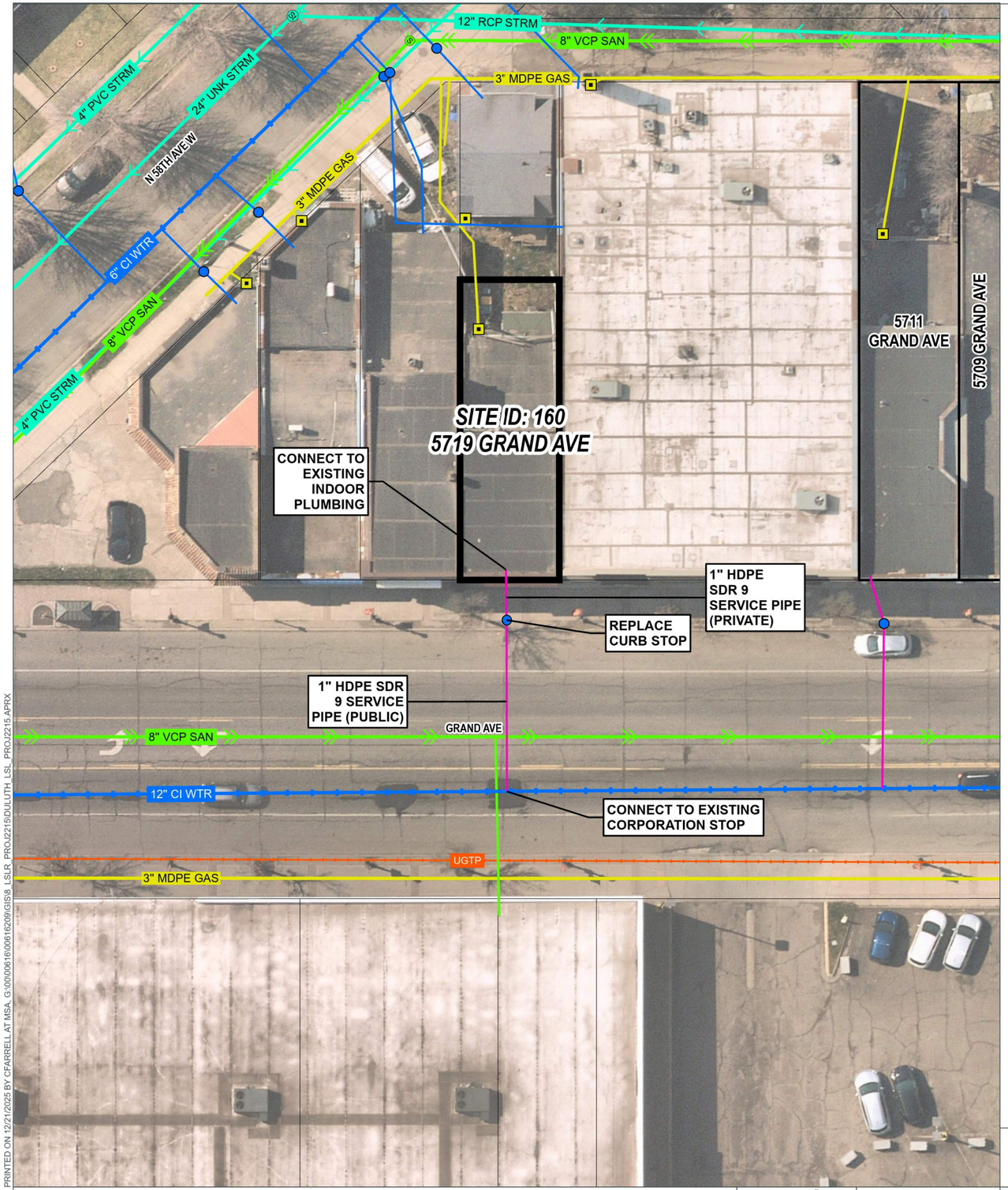
DATE: 12/19/2025
LIC. NO.: 59409

CITY OF DULUTH
ENGINEERING DIVISION
411 W. 1ST ST. STE. 240
DULUTH, MN 55802

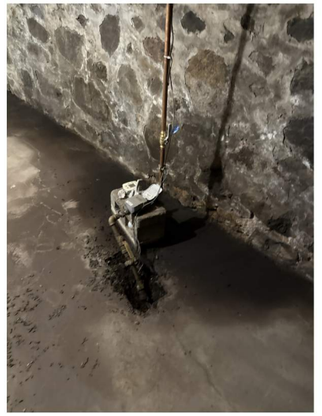
LEAD SERVICE LINE
REPLACEMENT
SPIRIT VALLEY

CITY PROJECT NO.: 2321
MN PFA PROJECT NO.: 1690011-21

SITE NUMBER: 122
ADDRESS: 311 S 57TH AVE W
DRAWN BY: CMF & WRT
LEAD REPLACEMENT PLAN
SHEET NUMBER: S122 OF S441



EXTERIOR WORK AREA



INTERIOR WORK AREA

WATER SERVICE PIPE

SITE INFORMATION

TITLE HOLDER	FAMILY RISE TOGETHER
CONSTRUCTION CONTACT	FATHERS RISE TOGETHER
RENTAL PROPERTY	NO
WORK AGREEMENT SIGNED	NO
PRIVATE SERVICE MATERIAL	LEAD - CONFIRMED LEAD
PUBLIC SERVICE MATERIAL	LEAD - CONFIRMED LEAD
MATERIAL CONFIRMATION NEEDED	NO
METER LOCATION NOTES	WATER METER LOCATED ALONG SOUTH WALL, 12 FEET WEST OF EAST WALL.
BASEMENT NOTES	UNFINISHED BASEMENT.
SANITARY NOTES	SANITARY SERVICE EXPECTED TO BE CO-LOCATED WITH WATER SERVICE.
ELECTRICAL GROUND NOTES	SECONDARY ELECTRICAL GROUND NOT OBSERVED
OTHER NOTES	

ESTIMATED QUANTITIES

REMOVE & REPLACE INTEGRANT CURB (LIN FT): 8
REMOVE & REPLACE STREET SECTION, TYPE E (SQ YD): 11
REMOVE & REPLACE 4" CONCRETE WALK (SQ FT): 118
POTHOLE WATER SERVICE FOR MATERIAL IDENTIFICATION (EACH): 1
TELEVISE & LOCATE SANITARY SERVICE (EACH): 1
CONNECT TO EXISTING CORPORATION STOP (EACH): 1
REPLACE CURB STOP (EACH): 1
CONNECT TO EXISTING INDOOR PLUMBING (EACH): 1
1" HDPE SDR 9 SERVICE PIPE (PRIVATE) (LIN FT): 12
1" HDPE SDR 9 SERVICE PIPE (PUBLIC) (LIN FT): 43
ELECTRICAL SERVICE GROUND (EACH): 1
REMOVE & REPLACE BRICK PAVERS (SQ FT): 32

TRUE NORTH PLAN NORTH 0 15 30 FT.

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MSA

WILSON TAYLOR, PE
TYPE NAME

DATE: 12/21/2025
LIC. NO.: 59409

CITY OF DULUTH
ENGINEERING DIVISION
411 W. 1ST ST. STE. 240
DULUTH, MN 55802

LEAD SERVICE LINE REPLACEMENT
SPIRIT VALLEY

CITY PROJECT NO.: 2321
MN PFA PROJECT NO.: 1690011-21

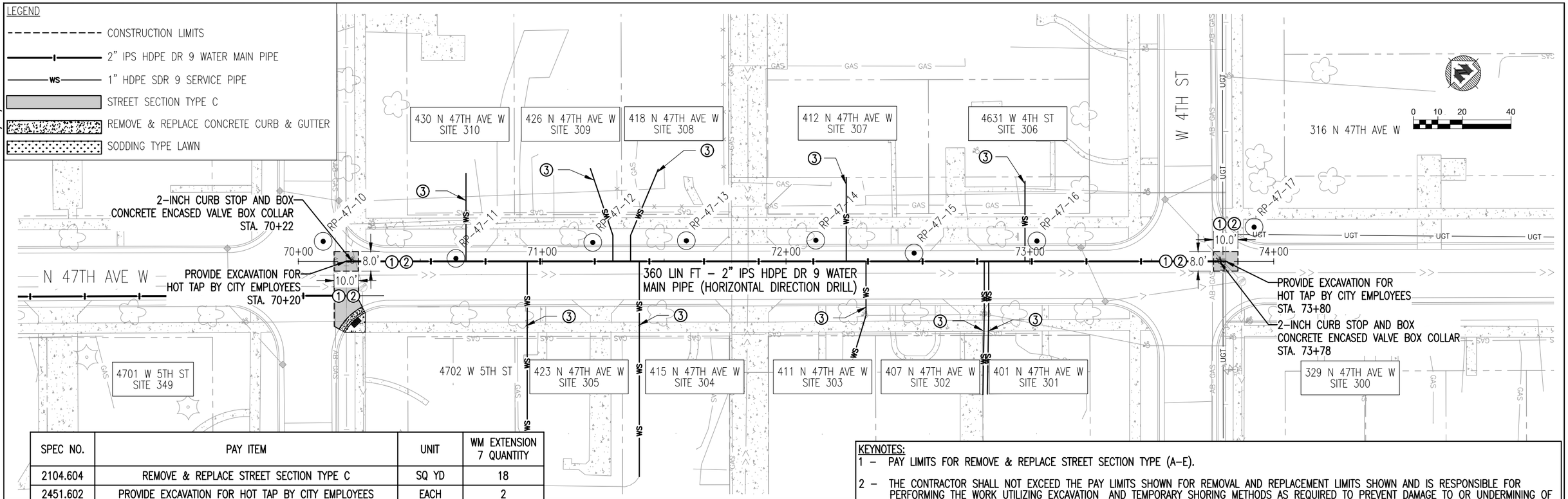
SITE NUMBER: 160
ADDRESS: 5719 GRAND AVE
DRAWN BY: CMF & WRT
LEAD REPLACEMENT PLAN
SHEET NUMBER: S160 OF S441

12/22/2025 2:54 PM

G:\00\00616\00616235\CADD\C3D\2321 - SPIRIT VALLEY\00616235_SPIRIT VALLEY WM DESIGN

LEGEND

- CONSTRUCTION LIMITS
- 2" IPS HDPE DR 9 WATER MAIN PIPE
- WS — 1" HDPE SDR 9 SERVICE PIPE
- STREET SECTION TYPE C
- REMOVE & REPLACE CONCRETE CURB & GUTTER
- SODDING TYPE LAWN



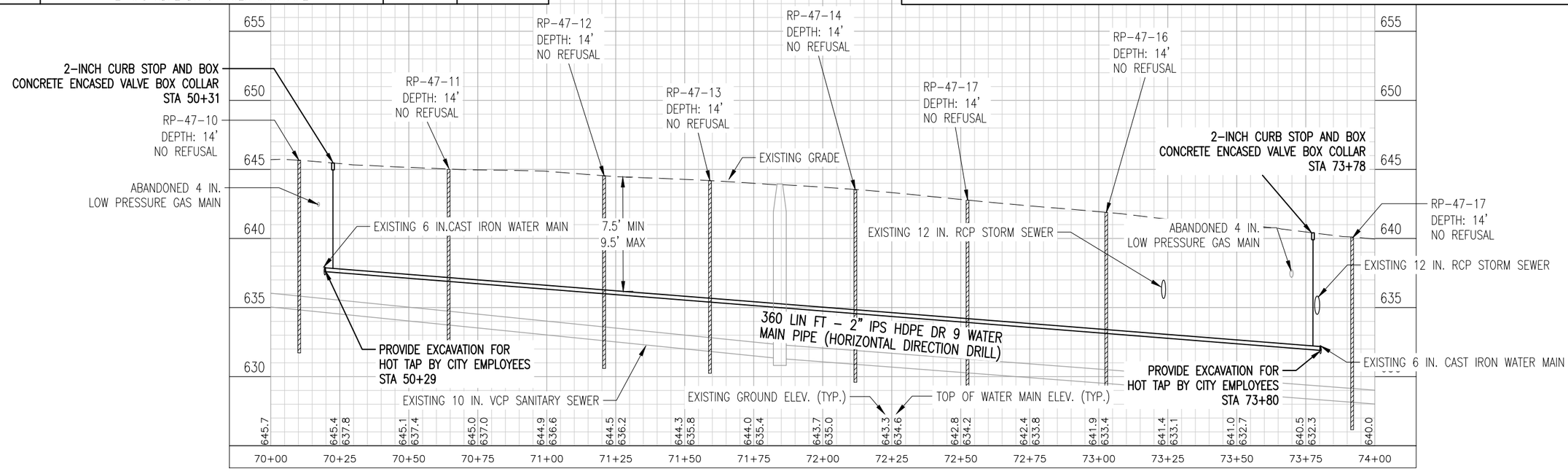
SPEC NO.	PAY ITEM	UNIT	WM EXTENSION 7 QUANTITY
2104.604	REMOVE & REPLACE STREET SECTION TYPE C	SQ YD	18
2451.602	PROVIDE EXCAVATION FOR HOT TAP BY CITY EMPLOYEES	EACH	2
2504.602	2-INCH CURB STOP AND BOX	EACH	2
2504.602	CONCRETE ENCASED VALVE BOX COLLAR	EACH	2
2504.603	2" IPS HDPE DR 9 WATER MAIN PIPE	LIN FT	360

KEYNOTES:

1 – PAY LIMITS FOR REMOVE & REPLACE STREET SECTION TYPE (A–E).

2 – THE CONTRACTOR SHALL NOT EXCEED THE PAY LIMITS SHOWN FOR REMOVAL AND REPLACEMENT LIMITS SHOWN AND IS RESPONSIBLE FOR PERFORMING THE WORK UTILIZING EXCAVATION AND TEMPORARY SHORING METHODS AS REQUIRED TO PREVENT DAMAGE TO OR UNDERMINING OF INPLACE FEATURES DESIGNATED TO REMAIN. ANY SUCH DAMAGE, UNDERMINING, OR IMPACTS BEYOND THE PAY LIMITS SHOWN SHALL BE REPAIRED AND RESTORED AT NO ADDITIONAL EXPENSE TO THE CITY.

3 – SEE CORRESPONDING LEAD SERVICE REPLACEMENT SITE PLAN FOR SERVICE QUANTITIES AND ABANDONMENT OF EXISTING SERVICE CONNECTION.



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WILSON TAYLOR, PE		12/12/2025	SPIRIT VALLEY LSLR	2026 LEAD WATER SERVICE REPLACEMENTS SPIRIT VALLEY	WATER MAIN EXTENSION 7
TYPE NAME	SIGNATURE	DATE	CITY PROJECT NO. 2321		SHEET NO. W7 OF W7
		59409 LIC. NO			

APPENDIX I –LSLR CONSTRUCTION CONTINGENCY PLAN
CITY OF DULUTH
RFP 26-AA04
RFP Construction Administration for 2026 Lead Water Service Replacement Projects

APPENDIX I

Construction Contingency Plan

Duluth Lead Service Line Replacement Projects

Duluth, St. Louis County, Minnesota

DULUT 183604 | January 7, 2026

SEH

Building a Better World for All of Us®

Engineers | Architects | Planners | Scientists

Building a Better World for All of Us®

January 7, 2026

RE: Construction Contingency Plan
Duluth Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota
SEH No. DULUT 183604

Jon Maruska, Senior Engineering Specialist
City of Duluth
Engineering Division
411 West First Street, City Hall Room 240
Duluth, MN 55802

Dear Mr. Maruska:

Please find enclosed the Contingency Plan for the Duluth Lead Service Line Replacement Projects in Duluth, St. Louis County, Minnesota. Please feel free to contact me directly at 651.262.6715 or msherrill@sehinc.com if you have any questions or comments.

Sincerely,

Mark Sherrill

Mark Sherrill, PG (MN, WI)
Project Manager

Certification

Construction Contingency Plan
Duluth Lead Service Line Replacement Projects
Duluth, St. Louis County, Minnesota

SEH No. DULUT 183604

January 7, 2026

Mark Sherrill, PG (MN, WI)
Project Manager

Robert Hawkins, PG (MN, WI)
Environmental Scientist

Short Elliott Hendrickson Inc.
3535 Vadnais Center Drive
St. Paul, MN 55110-5196
651.490.2000

Distribution

No. of Copies	Sent to
1	Jon Maruska, Senior Engineering Specialist City of Duluth Engineering Division 411 West First Street, City Hall Room 240 Duluth, MN 55802

Contents

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Contents (continued)

Construction Contingency Plan

Duluth Lead Service Line Replacement Projects

Prepared for the City of Duluth

1 Introduction

Short Elliott Hendrickson Inc. (SEH®) was retained by the City of Duluth (herein referred to as the "City") to develop a Construction Contingency Plan (CCP) that will be implemented during the Duluth Lead Service Line Replacement (LSLR) projects (herein referred to as the "LSLR Projects").

The City is anticipating to complete LSLRs for five separate neighborhoods during the 2025 construction season. Additional neighborhoods will receive LSLRs in the 2026 construction season and beyond. This CCP is intended to be used for LSLR Projects for the 2025 construction season and beyond.

For the purposes of this CCP, the responsibility of deciding whether environmental oversight and/or implementation of engineering controls will be completed is that of the Designated Environmental Specialist (DES). The DES may be a project engineer, an environmental consultant, or another individual deemed acceptable by the City. For the 2025 LSLR Projects, the City has formally identified an engineering representative to fulfill the role of DES.

1.1 Background

The City is planning for the replacement of lead service lines (LSLs) using funding from the Minnesota Department of Health (MDH) Minnesota Drinking Water Revolving Fund (DWRF) Program. LSLs are the primary source of lead exposure in drinking water and were the most common material used for water services within the City through 1929 and in the early 1940s. The recently proposed Lead and Copper Rule Improvements (LCRI) is expected to require the vast majority of water systems to replace LSLs within a period of 10 years. The City's current water service inventory indicates that there are approximately 31,200 water services in Duluth. The City's current estimate of LSLs and galvanized requiring replacement (GRR) is 10,700 services.

In accordance with the MDH DWRF Program funding requirements, plans and specifications are to be provided to the MDH for review along with an Environmental Review and Section 106 exemption checklists. Prior to the implementation of the LSLR projects, the City will have completed an Environmental Due Diligence Review. The Environetmnal Due Diligence Reviews generally consisted of evaluating the potential that contaminated soil and/or groundwater may be encountered during the project through a review of reasonably ascertainable records from standard government databases including the following:

- MPCA Groundwater Contamination Atlas
- MPCA Institutional Control Sites

- MPCA's What's in my Neighborhood (WIMN)
- MPCA's Incident Reports (Spill Sites)
- Minnesota Department of Agriculture's (MDA's) WIMN
- St Louis County's parcel database for residences with a fuel tank on-site.

The Environmental Due Diligence Review includes recommendations where a potential release or documented release was identified. Recommendations include:

- Conducting environmental monitoring during installation of the new service line;
- Use of a copper service line rather than high-density polyurethane (HDPE);
- Notifying the contractor of the potential for contamination to be present.

The Environmental Due Diligence Review completed for the LSLR projects are included under separate cover.

1.2 Construction Contingency Plan Scope and Objectives

The objective of the CCP is to manage regulated material (defined below) if encountered, in a manner that protects human health, welfare and the environment from releases or threatened releases of hazardous substances, pollutants, or contaminants.

Regulated materials refer to any materials on the project that do not satisfy the Minnesota Pollution Control Agency (MPCA) Unregulated Fill Criteria, as outlined in the MPCA Best Management Practices for Off-site Reuse of Unregulated Fill (guidance document c-rem1-01 - MPCA, February 2012). Any regulated materials encountered during construction will be evaluated using the MPCA's risk-based approach. See **Section 3** for more details

The CCP is limited to construction-related actions and is not intended to remediate the entirety of the project areas (although, as with any construction project, beneficial remediation will occur through the excavation and disposal of contaminated materials as part of the construction process). Contaminated materials that are not disturbed by the project because they are outside project excavation areas will remain in-place.

1.3 Responsibilities

The following parties and their representatives are those currently involved in the LSLR Projects:

Project Owner and Occupant:
City of Duluth
411 West First Street, City Hall Room 240
Duluth, MN 55802
Contact: Jon Maruska
(218) 730-5093
jmaruska@DuluthMN.gov

City's Designated Environmental Specialist:
The City has formerly designated an engineering representative to perform the duties described in this CCP.

General Contractor
To be determined

Disposal Facility
To be determined

2 Construction Contingency Plan

The DES will be prepared to respond if suspect contamination or regulated materials are unexpectedly encountered during excavation. In the event that unforeseen regulated materials are encountered during construction, appropriate notifications will be made, and regulations followed. Previously unidentified releases to the environment, as determined by the DES, will be reported to the MPCA. This CCP will be used in managing suspect or identified regulated materials unless conditions under which there is an immediate threat to human health, or the environment is encountered, in which case a release will be reported immediately to the State Duty Officer.

The following sections outline the CCP procedures and methods that will be instituted during completion of the current and proposed LSLR Projects.

2.1 Proposed Project

The current and proposed LSLR Projects include water service line replacement or abandonment of the existing water service line at select parcels.

The existing service lines are anticipated to be replaced with a 1 inch high density polyethylene (HDPE) standard dimension ratio (SDR) 9 service pipe. The service line replacements may be limited to only the private or public portions of the service line or include both private and public portions.

A majority of the service line replacements will be completed using horizontal directional drilling methods; however, excavations are anticipated where connections to the corporation stop at the water main and/or curb stop are made. Excavations to make connections to the water main are anticipated to be 8 feet by 10 feet by the depth of the watermain; smaller excavations will be made to connect to curb stops. Excavations to connect the new water service to existing indoor plumbing will be completed by hand digging below the floor slab.

In areas where the depth of the water service line is limited by shallow bedrock, a rigid polystyrene insulation will be added to protect the utility from freezing.

2.2 Engineering controls

In the event that regulated materials are encountered the use of engineering controls may be implemented to prevent the migration of petroleum-impacted soil vapor and/or maintain the integrity of the service line piping.

The DES will be responsible for implementation of the engineering controls.

2.2.1 Vapor Migration Along Utility Corridors

In the event photoionization detector (PID) readings above 10 parts per million (ppm), as determined by the DES, are observed in the base or sidewalls of the trench/excavation, the use of a vapor barrier or clay dam will is recommended to prevent migration of impacted soil vapor along utility corridors and into homes.

To line the trench, a layer of 10 millimeter (mil) polyethylene sheeting will be draped over the sidewalls and base of the excavation. Between 1 to 2 feet of clean fill will be placed at the base as pipe bedding, followed by the new utility pipe, and an additional 1 to 2 feet of clean fill on top of the pipe, creating a buffer of clean backfill around the pipe. The polyethylene sheeting will then be wrapped over the top of the fill and piping. Clay dams or similar will be constructed across the utility trench to prevent vapors from migrating into nearby structures.

2.2.2 Use of Copper Service Lines

It is anticipated that HDPE service lines will be used for a majority of the replacements. In areas where petroleum impacts are observed (PID readings above 10 ppm as determined by the DES), it is recommended that the service line be replaced with copper to avoid potential future degradation of the HDPE service piping.

2.3 Soil Disposition

The following sections summarize reusability of soil in the event that anticipated or unforeseen regulated materials are encountered during construction, as determined by the DES or otherwise identified individual authorized by the City in writing.

2.3.1 Onsite Reuse

Soil to be re-used on the LSLR Projects will have the following characteristics:

- Meets geotechnical requirements
- No asbestos containing material (ACM) and less than 5 percent (%) by volume of debris.
- Field headspace readings using a PID below 10 ppm in greenspace and in utility corridors.
- Contains contaminants below the MPCA's residential Soil Reference Values (rSRVs) based on existing analytical data.

2.3.2 Offsite Reuse for Unregulated Fill

Soil to be exported from the LSLR Projects as unregulated fill soil as outlined in the MPCA's Best Management Practices for the Off-Site Reuse of Unregulated Fill dated March 2024 will have the following characteristics:

- Free of solid waste, debris, ACM, visual staining, and chemical odors;
- No organic vapors above 10 ppm, as measured by a PID;
- Less than 100 milligrams per kilogram (mg/kg) diesel range organics (DRO)/gasoline range organics (GRO); and
- Contaminant concentrations less than the MPCA's rSRVs and Screening Soil Leaching Values (SLVs). Naturally occurring concentrations of some metals, including arsenic, selenium or copper, can exceed SRVs or SLVs. Such soils are not considered impacted in the absence of a contaminant source or other field or laboratory indications of contamination.

The number of samples required to evaluate contaminant concentrations in soil will follow MPCA guidance (see **Section 4.3.4**) and additional sampling may be required based on the volume of soil.

2.3.3 Off-site Disposal

Soil not meeting the above criteria will be transported offsite for disposal at a Minnesota permitted landfill.

3 Standard Operating Procedures and Methods

The following sections outline the SOPs and methods that will be instituted during the LSLR Projects in the event that anticipated or unexpected regulated material are encountered.

3.1 Project Coordination

The DES will coordinate with the project team, general contractor, and excavation contractor regarding the construction schedule and logistics related to implementing this CCP.

3.2 Site Health and Safety

Project representatives involved in monitoring and sampling activities will be required to meet the training requirements of 29 Code of Federal Regulations (CFR) 1920.120. Specifically, each person will have completed an Occupational Safety & Health Administration (OSHA) certified 40 Hour Hazardous Waste Operations and Emergency Response (HAZWOPER) safety course. In addition, they will have experience in directing regulated material excavation and be competent in proper screening and sampling procedures.

A Site Health and Safety Plan (HASP) will be prepared for use by personnel involved with the project. The HASP will assign responsibilities, establish personal protection standards and safety practices and procedures, and provide for contingencies that may arise during site operations. The HASP procedures will be based on the site conditions and chemical hazards known or expected to be present at the site using site data available at the time it is written. The HASP is subject to revision when deemed necessary by actual site conditions encountered during field activities.

The contractors selected for the LSLR Projects will be provided with the previously completed environmental reports. The contractors will be required to comply with all applicable safety regulations imposed by federal and state law for handling pollutants, contaminants, hazardous substances, wastes or materials. Contractor personnel involved with contaminated materials will be expected to be familiar with and to meet applicable Minnesota OSHA requirements.

If encountered, asbestos-related work will be conducted by a Minnesota Department of Health (MDH) certified personnel operating under State and Federal regulations. When asbestos-related work is being conducted, the project staff will be required to have their valid MDH Asbestos Inspector certification (or higher-level credentials) on-site and available when completing monitoring and sampling activities.

3.3 Excavation, Hauling and Disposal

At a minimum, requirements for excavation, hauling, and disposal will be as follows:

The contractor will be responsible for controlling fugitive dust and minimizing noise, odors, and off-site tracking to the extent possible.

- When applicable, excess impacted soil or waste materials will be removed from trucks prior to leaving the site. If necessary, trucks used to transport contaminated soil may require decontamination prior to leaving the site, in order to minimize the tracking of contaminants off-site. If so, a decontamination pad will be constructed at a designated location, just prior to exiting a specific property. Prior to demobilization from the project area, all on-site equipment used for excavation will be decontaminated.
- Designated truck routes will be used, so as to minimize the disruption of the site and limit exposure to the public.
- The contractor will be responsible for properly manifesting all waste or regulated material that leaves the project. See **Section 5.5** for manifesting requirements
- The contractor will be responsible for taking the appropriate measures to ensure excavations are appropriately secured at the end of work each day.
- All activities will be conducted in compliance with Local, State and/or Federal Laws.

In the event that ACM or asbestos containing waste material (ACWM) is identified, those materials will be segregated, placed on and covered with plastic sheeting. While general procedures will be conducted as described above, the following is required for areas with ACM/ACWM:

- A designated exclusion zone will be established, and all personnel will be required to wear Level C personal protective equipment (PPE), including Tyvek suits and respiratory protection.
- Excavation, loading and transport of ACM/ACWM must be completed under the direction of a Minnesota MDH certified asbestos supervisor, after the appropriate MDH notifications have been filed with the MDH.
- The excavation contractor will be required to use wet dry material with water as it is removed to prevent visible emissions.
- Trucks or roll off boxes must be lined with plastic sheeting, before wrapping and sealing them, prior to transport to the landfill for disposal.

3.3.1 Field Screening of Excavated Material

The DES will travel to the site to conduct screening should anticipated or unexpected suspect regulated materials be encountered. A certified asbestos inspector will be on call for sampling of suspect ACM, if observed.

Soils will be observed for the presence of visual and olfactory indications of contamination. Soil from excavations will be field screened with a PID as well as visual inspections for potential ACM, debris, staining, petroleum odors, etc. As the soil is excavated, it will be placed at the surface adjacent to the excavation for screening. The DES will screen excavated soil for contaminants using a combination of techniques:

- Headspace monitoring will be completed in accordance with MPCA methodology using a PID equipped with a 10.6 electron-volt lamp to monitor soil for the presence of organic vapors. The frequency of samples collected for headspace analysis will be based on the type of soil being excavated. The DES will determine the frequency of PID headspace sampling throughout the project area based on the homogeneity of the material being

excavated and the volume and type of debris encountered. A minimum of one sample for headspace analysis will be collected for approximately every 10 cubic yards of soil removed.

- Visual observation for suspect ACM and debris during excavation tasks and screening of graded surface soil. If soil or free product is visually observed, the soil will be considered contaminated and treated as regulated fill.
- Screening results will be documented.

3.3.2 Soil Staging

To the extent possible and when applicable, soil designated for disposal will be direct loaded and hauled to a Minnesota permitted solid waste or industrial landfill facility (see **Section 5.5** for additional information on disposal requirements). Soil that cannot be immediately hauled to the landfill will be stockpiled as detailed below.

Soil designated for reuse that cannot be immediately reused will be segregated and stockpiled on-site.

Excess unregulated fill that cannot be immediately reused will be stockpiled on or off-site for unrestricted reuse on or off-site.

3.3.3 Laboratory Testing

If additional characterization is required by the landfill for disposal approval, samples will be collected and analyzed for the parameters required by the receiving landfill.

Sampling procedures will follow MPCA guidelines. The samples will be analyzed for contaminants of concern as determined by the DES utilizing field observations, potentially including, but not limited to the following parameters:

- DRO (Wisconsin Method DRO)
- GRO (Wisconsin Method GRO)
- DRO silica gel cleanup (Wisconsin Method DRO)
- Volatile organic compounds (VOCs - United States Environmental Protection Agency [EPA] Method 8260D)
- Polycyclic aromatic hydrocarbons (PAHs) (EPA Method 8270)
- Priority Pollutant Metals or 8 Resource Conservation and Recovery Act (RCRA) Metals (EPA 6010D/7471)
- Polychlorinated Biphenyls (PCBs) (EPA Method 8082A)
- Asbestos (by Polarized Light Microscopy [PLM])

3.3.4 Soil Stockpile Management

Excavated material that is determined to have potential chemical impacts based on field screening results will be placed in a temporary stockpile on the property. Soils with suspected different contaminants, soils exhibiting different visual or olfactory characteristics, or soils with substantially different PID readings will be placed in separate stockpiles. Regulated materials will be covered with minimum 10 mil poly plastic sheeting as soon as work on the stockpile has been completed during the day or at a minimum at the end of each working day. The poly will be

adequately secured in place. If the contaminated material is not stockpiled on pavement, the stockpiles will be constructed on a minimum 10 mil poly plastic placed over smooth debris free ground. The stockpile(s) will be bermed, if necessary, to prevent storm water run-on and/or runoff.

Stockpiles will be managed either immediately adjacent to the excavation or within the LSLR Projects.

If laboratory analysis of stockpiled soil is required to either evaluate if chemical impacts are present or to profile the material for offsite disposal, sample frequency will be determined based on the homogeneity of the stockpile and contaminant type.

The number of stockpile samples will follow MPCA's recommended frequency provided in the *Brownfield Program Response Action Plan, Guidance Document c-rem4-43* (April 2024), as summarized below:

Cubic yards of soil in pile	Number of samples
0 to 500	1 per 100 cubic yards
501 to 1,000	1 per 250 cubic yards
1,001 or more	1 per 500 cubic yards

If the soil is not reasonably homogeneous, the number of samples will be adjusted to sufficiently represent the material and/or meet additional disposal requirements of the landfill.

3.3.5 Excavation Base and Sidewall Samples

If collection of base and sidewall samples is proposed, the number of base samples will follow MPCA's recommended frequency provided in the *Brownfield Program Response Action Plan, Guidance Document c-rem4-43* (April 2024), as summarized below:

Excavation Base Confirmation Sampling Rates	
Area of Floor (square feet)	**Number of samples**
0-500	2
501-1,000	3
1,001 -1,500	4
1,501-2,500	5
2,501 – 4,000	6
4,001 – 6,000	7
6,001 – 8,500	8
8,501 – 10,890 (0.25-acre)	9
0.25 to 3.0 acres	1 sample every 15 to 30 feet
Greater than 3.0 acres	1 every 30 feet

Excavation Sidewall Confirmation Sampling Rates	
Area of Sidewall (square feet)	**Number of samples**
0-500	4
501-1,000	5
1,001 -1,500	6
1,501-2,000	7
2,001 – 3,000	8
3,000 – 4,000	9
Greater than 4,000	1 sample every 45 lineal feet

3.3.6 Imported Fill Material

Any imported fill material must meet the MPCA qualifications for unrestricted reuse material. Material sourced from a pit or undisturbed native deposit with no indications of past sources of contamination is considered unrestricted reuse material. Material from any other source must be evaluated for potential impacts prior to import to the site. The contractor must provide sufficient evidence that material meets the unrestricted reuse criteria. Sufficient evidence includes at least one of the following, but may not be limited to the following:

- Evidence that the property is not suspect for impacts based on sufficient knowledge of past use of the property and surrounding properties.
- Analytical results that indicate that soil meets unrestricted reuse criteria established by the MPCA.
- Analytical results that indicate that soil meets restricted reuse criteria established by the MPCA and that reuse has been site-specifically and formally approved by MPCA and local authorities.

3.3.7 Site Controls

3.3.7.1 Street Sweepings

The streets will be swept as directed by engineer and whenever necessary to prevent the production of dust in amounts damaging to property, vegetation, animals, or persons in the vicinity of construction activity. Street sweepings will be managed appropriately: contaminated street sweepings will be disposed at a permitted industrial or solid waste landfill facility, and non-contaminated street sweepings will be reused on or off-site as determined by the LSLR Project contractor. If water is employed for equipment decontamination, it will be collected, tested and properly disposed.

3.3.7.2 Site Security

The contractor will be responsible for securing the site as described in the project specifications.

3.3.7.3 Dust Control

Methods will be employed to prevent fugitive dust emissions. Methods will include keeping exposed working areas as small as practicable during excavation and grading. Watering will be

employed, as necessary, to control emissions from exposed work areas, access roads and working stockpiles. A balance will be maintained between effective dust control and making the area muddy, causing off-site tracking of contaminants.

3.3.7.4 Air Criteria

Air monitoring criteria will be outlined in the Site HASP prepared for the project.

3.3.7.5 Storm Water Pollution Prevention Plan and National Pollutant Discharge Elimination System Permits

The construction contractor selected for project construction will be required to obtain a Storm Water Pollution Prevention Plan (SWPPP) and National Pollutant Discharge Elimination System (NPDES) permit for management of storm water. The contractor is required to follow the Best Management Practices (BMPs) required by these permits.

4 Additional Considerations

4.1 Contamination Indicators

Indicators of potentially contaminated soil, regulated material, groundwater or surface water include, but are not limited to the following:

- Odor including gasoline, diesel, creosote (odor of railroad ties), mothballs, or other chemical-like odors in soil excavation areas.
- Soil with unusual staining (such as black or green staining not associated with organic content), or with an oily appearance, or any unusual soil texture or color.
- A rainbow sheen on the surface of water (groundwater or ponded rainwater) or soil.
- Indications of a release through the use of a PID or another field screening instrument.
- Indicators of regulated wastes include, but are not limited to the following:
  - Unexpected presence of buried cans, bottles, scrap metal, wood, glass (indicates dumping/burial of solid waste and a possible dump with associated chemical contamination).
  - Unexpected presence of asphalt and concrete rubble (indicates dumping/burial of demolition waste with associated chemical contamination).
  - Shingles, roofing materials, vermiculite, transite siding, floor tiles, insulation, or any fibrous material (demolition debris that could be associated with ACM or associated contamination).
  - In-place intact active or inactive transite pipes (steam or water pipes) or conduit (contains ACM).
  - Culverts or other pipes with tar-like coating (potentially contains ACM).
  - Wood Ash (potentially contains lead, asbestos, or other chemicals) or coal ash or slag (potentially contains metals).
  - Sandblast or foundry sand residue (potentially contains lead or other metals).
  - Treated wood, including, but not limited to products referred to as brown-or green-treat, and creosote (potentially contains arsenic, chromium, copper, or PAHs).

- Chemical containers such as drums and other containers (potential source of chemical contaminants within intact containers, or surrounding damaged containers)
- Underground storage tanks (USTs)/aboveground storage tanks (ASTs) (potential source of petroleum or other chemical contaminants within intact USTs/ASTs or surrounding damaged USTs/ASTs).
- Intact filled-in basement or buried concrete slab from demolished building with insulation or intact floor tiles (potential ACM), waste traps (potentially contains oily waste), cesspools (potentially contains chemical or oil wastes) and sumps (potentially contains chemical waste).

4.2 Notification

The contractor will proceed with the following notifications in the order listed:

Contact #1: 911 (if the incident/release represents an immediate danger to life or health)

Contact #2: Project owner and DES (to conduct and document a detailed inspection and evaluation of the unexpected material)

In the event of a new release, the project owner or DES will report the release to the Minnesota State Duty Officer (651.649.5451).

4.3 Incident Response

If unexpected contaminated soil, water, debris, or potentially contaminated waste materials are encountered during construction, the contractor will immediately stop work in the vicinity and notify the project owner.

The contractor will not resume work in the suspect area until approved by the DES. Work outside the vicinity of the suspect area may continue if the DES determines that the extent of the contamination has been defined.

The DES will investigate and characterize all unexpected contaminated soil, water, or regulated waste materials. Field screening activities will not proceed until the situation is analyzed, and health and safety considerations resolved in accordance with the project's HASP. Visual and olfactory indications of contamination will be documented. Samples of the potentially impacted soil or regulated materials will be collected from excavation base and sidewalls (if accessible) or stockpiles for PID screening and laboratory analysis. Potential impacted water will be collected from excavations. Soil and/or regulated material sample analytical parameters will be determined based on field observations, site history, and MPCA guidelines. Laboratory analytical results typically take 10 working days to obtain.

The results of the preliminary screening will be evaluated by the DES. The contractor will not be allowed to continue work in the area until the type and magnitude of contamination is documented, and an appropriate response action is determined.

4.4 Potential Contaminated Soil / Regulated Materials

4.4.1 Asbestos

Asbestos may be encountered in three different forms:

Isolated ACM - The ACM occurs as isolated fragments that can be segregated by hand and containerized (such as a fragment of roofing paper),

ACWM - The ACM occurs in larger quantities that cannot be segregated by hand (such as numerous fragments of transite buried with other demolition material), and

Inactive Intact ACM - The ACM is still intact as part of an inactive utility (such as asbestos-wrapped steam pipe, an asbestos water pipe or asbestos conduit).

All ACM/ACWM will be abated by a licensed asbestos contractor who will complete all required notifications and obtain all required approvals from the MPCA and/or MDH prior to completing ACM/ACWM abatement. The asbestos abatement contractor will manage removal (excavation/disposal/abatement) of all ACM and ACWM such that all removal activities will result in no visible dust emissions. Excavation, containerization, loading and hauling of ACM/ACWM will be completed in accordance with all applicable laws, rules, and regulations. Prior to abatement, an Emission Control Plan will be prepared.

4.4.2 Underground Storage Tanks

In the event an unknown petroleum UST is encountered, the following actions will be taken:

An MPCA-certified UST supervisor that is also a certified contractor or in the employ of a certified contractor will oversee the removal of the tank.

The MPCA tank removal forms will be submitted.

The tank removal will be completed in accordance with all safety and environmental protection precautions as required by law including, but not limited to: drain all connecting pipes, remove fuel and fuel/water mixture from the tank to the extent practicable, purge all explosive vapors from the tank, inspect the removed tank for evidence of leaks, and document the condition of the tank.

Soil samples in the tank excavation cavity will be screened with a PID, and soil samples (and water samples if encountered) collected for laboratory analysis in accordance with the MPCA requirements.

Metal tanks dismantled and cleaned on-site will be disposed by recycling them as metal scrap; fiberglass tanks will be disposed in a permitted solid waste or industrial landfill.

Removed petroleum product will be recycled at a permitted facility and removed tank bottom/sludge will be managed as a hazardous waste for disposal/recycling at a permitted fuel recycling facility.

4.4.3 Free Product

In the event that free product is encountered, work will stop in the area until appropriate collection measures can be brought to the site and the State Duty Officer notified. The DES, in consultation with the MCPA as necessary, will determine appropriate handing, testing, and disposal requirements.

4.4.4 Buried Containers

In the event that drums, or other storage containers are unearthed during excavation activities, they will be removed, and their condition evaluated by appropriately trained personnel. If the containers are established to be in poor condition, the contents will be transferred to Department of Transportation (DOT) approved overpack drums. The drums will be placed in a secure location. The contents of the containers will be sampled and characterized for disposal in accordance with appropriate state and federal requirements.

Soil from the area around the container will be screened for indications of contamination and potentially impacted soil will be properly managed.

4.4.5 Creosote Timbers/Railroad Ties

In the event that materials such as treated wood are encountered, the treated wood will be segregated and properly disposed.

4.4.6 Waste Tires

In the event that waste tires are encountered, the tires will be segregated. When a sufficient number of tires are accumulated, they will be collected by an approved vendor and hauled off-site for recycling. Documentation regarding the recycling will be obtained by the contractor and provided to the DES.

4.4.7 Batteries

In the event that batteries are encountered, the batteries will be segregated and placed in a labeled corrosion-resistant box. Any recovered batteries will be collected by an approved vendor and hauled off-site for recycling. Documentation regarding the recycling will be obtained by the contractor and provided to the DES.

4.4.8 Oil Filters

In the event that oil filters are encountered, the oil filters will be segregated and placed into a labeled steel drum. When a sufficient number of filters are accumulated, they will be collected by an approved vendor and hauled off-site for recycling. Documentation regarding the recycling will be obtained by the contractor and provided to the DES.

4.4.9 Dewatering

If dewatering of potentially contaminated water needs to occur, the DES will observe and document the dewatering activities in the contaminated area. Contractor will be prepared to containerize the water if required.

The DES will collect all water samples necessary to apply for the appropriate permit(s) to coordinate with the City of Duluth and Western Lake Superior Sanitary District to identify an appropriate discharge location. The contractor will be responsible for obtaining all necessary permits and completing all required documentation reports for discharge of contaminated water.

If analytical samples indicate that pre-treatment is necessary due to contamination concentrations prior to discharge of water, then the contractor shall supply a portable water treatment system. The system will need to be designed by a registered Professional Engineer

licensed in the State of Minnesota and include components that will treat and discharge water that meets permit requirements. Components may include, but not be limited to: flow equalizer, suspended solids removal, oil/water separator, and activated carbon filtration. The portable water treatment system shall have a treatment capacity equal to or greater than the rate of temporary construction dewatering.

Uncontaminated water will be managed in accordance with the project's SWPPP.

4.4.10 Spills

If a spill occurs, the spill and impacted materials will be cleaned up immediately if safe to do so. If the spill is not safe to clean up or too large for the contractor to handle, an emergency spill responder will be contacted immediately, and the spill addressed upon their arrival. State Duty Officer reporting will be completed as required by Minnesota Statute §115.061.

State Duty Officer phone number: 651.649.5451

Impacted materials will be stockpiled and/or containerized, labeled, and sampled as required by the landfill for disposal.

4.5 Disposal

In the event that contaminated and/or regulated materials need to be disposed, the contractor will use a Minnesota permitted landfill that will to accept the regulated materials that need to be properly disposed. The contractor will provide a waste profile from the landfill and the DES will review it prior to it being submitted to the landfill. No material can be hauled to the landfill without an approval (email is acceptable) from the landfill.

The Generator for the contaminated and/or regulated materials encountered during excavation will be City of Duluth. The City's authorized representative or designee will sign as the Generator. Copies of the final signed manifests and weigh tickets will be provided to the Project engineer daily, or as approved by the Project engineer or otherwise authorized representative by the City.

4.6 Reporting

Any incidents managed in accordance with the CCP will be documented as part of a CCP Implementation Report. The report will document the following:

- Documentation of field activities;
- Site plan showing pertinent site features;
- Illustration showing sample locations, if applicable;
- Analytical laboratory results, if applicable;
- Data evaluation and presentation of findings; and
- Recommendations concerning further action, if necessary

5 Limitations

Although no future LSLR Projects have been identified prior to the completion of this CCP, the actions described above shall be implemented in the event that unexpected contaminated materials are encountered.

Plan sets were not available for review during the preparation of the previously completed Environmental Due Diligence Review and this CCP. The potential exists for the scope of work to vary across specific parcels. We recommend the City seek further consultation if the scope of work for a specific parcel or project is outside that of which was described above.

This CCP references current federal and state regulatory limits for regulated materials. We recommend this CCP be amended to reflect updated values as they become available.

An archeological study was completed for the active 2025 LSLR Projects and was provided under separate cover. This CCP does not pertain to items of historical significance. We recommend a licensed archeologist be contacted as future project areas are designated.

6 References

MPCA, June 2013, Remediation Division Soil Leaching Pathway Spreadsheet, c-r1-03.xls (live.com)

MPCA, January 2021, *Petroleum Remediation Program Soil Sample Collection and Analysis Procedures, Guidance Document c-prp4-04*

MPCA, March 2024, Soil Reference Value Spreadsheet, Guidance Document c-r1-06, https://www.pca.state.mn.us/document/c-r1-06xlsx

MPCA, March 2024, *Best Management Practices for the Off-Site Reuse of Unregulated Fill*, Guidance Document c-rem1-01, https://www.pca.state.mn.us/sites/default/files/c-rem1-01.pdf

MPCA, April 2024, *Brownfield Program Response Action Plans*, Guidance Document c-rem4-43, Brownfield Program Response Action Plans (state.mn.us)

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