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WATER MAIN EXTENSION SYMBOLS

- RIGHT OF WAY
- PERMANENT EASEMENT
- PROPERTY LINE
- HORIZONTAL CONTROL POINT
- BENCHMARK
- SURVEY MARKER
- SOIL BORING
- SANITARY SEWER AND MANHOLE
- FM — LIFT — FORCE MAIN AND LIFT STATION
- CO — SANITARY SEWER SERVICE & CLEANOUT
- WATER MAIN, HYDRANT, VALVE AND MANHOLE
- WATER SERVICE AND CURB STOP BOX
- STORM SEWER, MANHOLE AND CATCH BASIN
- CULVERT AND APRON ENDWALL
- G — GAS MAIN, VALVE, VENT AND METER
- HH — HANDHOLE
- FO — BURIED FIBER OPTIC CABLE AND MANHOLE
- T-BUR — BURIED PHONE CABLE, PEDESTAL AND MANHOLE
- TV-BUR — BURIED TV CABLE, PEDESTAL AND MANHOLE
- E — P-BUR — BURIED ELECTRIC CABLE, PEDESTAL, MANHOLE, TRANSFORMER AND METER
- OVERHEAD WIRE, POLE AND GUY WIRE
- LIGHT POLE
- TRAFFIC SIGNAL
- STREET NAME SIGN
- SIGN (NON STREET NAME)
- DECIDUOUS AND CONIFEROUS TREE
- BUSH / SHRUB AND STUMP
- EDGE OF WOODED AREA
- WET — WETLAND
- BUILDING

PROPOSED

- RIGHT-OF-WAY
- PERMANENT EASEMENT
- TEMPORARY EASEMENT
- CONSTRUCTION LIMITS
- SANITARY SEWER, BULKHEAD AND MANHOLE
- FM — FORCE MAIN
- SANITARY SERVICE AND CLEANOUT
- WATER MAIN, TEE, HYDRANT, BULKHEAD AND VALVE
- W — WATER VALVE MANHOLE, REDUCER, BEND AND CROSS
- WS — WATER SERVICE AND CURB STOP BOX
- ST — STORM SEWER, MANHOLE AND CATCH BASIN
- CULVERT AND APRON ENDWALL
- DRAIN TILE
- STREET NAME SIGN
- SIGN (NON STREET NAME)

LSLR SITE REPLACEMENT SYMBOLS

- WTR — EXISTING WATER MAIN
- EXISTING WATER SERVICE
- WATERMAIN EXTENSION
- REPLACE WATER SERVICE
- REPLACE CURB STOP
- MONUMENT
- PROPERTY CORNER
- HISTORY OF WATER SERVICE FREEZING
- EXISTING GAS MAIN
- ABANDONED GAS MAIN
- EXISTING GAS SERVICE
- SANI — EXISTING SANITARY MAIN
- EXISTING SANITARY SERVICE
- STRM — EXISTING STORM SEWER
- EXISTING CURB STOP
- EXISTING WATER VALVE
- EXISTING HYDRANT
- M — EXISTING GAS METER
- S — EXISTING SANITARY MANHOLE
- EXISTING STORM CATCH BASIN
- EXISTING STORM INLET
- EXISTING STORM MANHOLE
- EXISTING STEAM MANHOLE
- EXISTING STEAM VALVE
- EXISTING STEAM CASING
- EXISTING STEAM LATERAL
- EXISTING STEAM DRAIN
- EXISTING STEAM MAIN
- EXISTING STEAM VAULT

CITY OF DULUTH

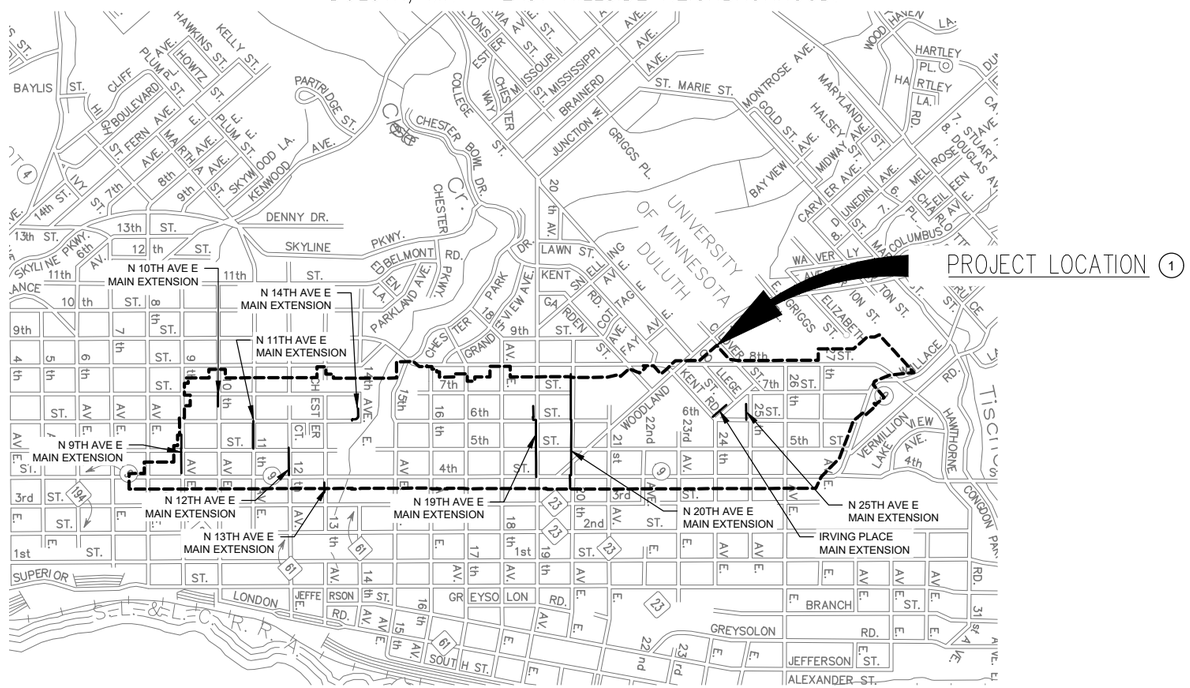
DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION

CONSTRUCTION PLANS FOR LEAD SERVICE LINE REPLACEMENT – EAST HILLSIDE 1

LEAD WATER SERVICE LINE REPLACEMENT, GRADING, BASE, ROADWAY PAVEMENT, SIDEWALK, CURB & GUTTER, AND WATER MAIN EXTENSIONS.

LOCATION

DULUTH, MN – EAST HILLSIDE NEIGHBRORHOOD.



INDEX MAP 0 1000 ft.

BASIS OF DATUM

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

KEY NOTE:

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

WARNING
LOCATION OF UNDERGROUND UTILITIES TO BE VERIFIED BY CONTRACTOR. CALL BEFORE DIGGING. GOPHER STATE ONE CALL 811 OR 1-800-252-1166 REQUIRED BY LAW

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".

SEH
PHONE: 218.279.3000
418 W SUPERIOR ST,
STE 200
DULUTH, MN 55802-1512
www.sehinc.com

PLAN REVISIONS		
DATE	SHEET NO.	APPROVER

PROJECT LOCATION
ST. LOUIS COUNTY
CITY OF DULUTH

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

SHEET NO.	DESCRIPTION
1	TITLE SHEET AND INDEX MAP
I1–I14	SITE INDEX PLANS
Q1	STATEMENT OF ESTIMATED QUANTITIES
C1–C28	CHARTS
D1–D29	CONSTRUCTION DETAILS
E1–E3	EROSION CONTROL & SWPPP
T1–T2	TRAFFIC CONTROL
S1–S498	SERVICE REPLACEMENT PLANS
W1–W15	WATER MAIN EXTENSION PLAN AND PROFILE SHEETS

---THIS PLAN CONTAINS 589 SHEETS---

DESIGN TEAM: SEH

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.

DAN HINZMANN
PROJECT ENGINEER (TYPED OR PRINTED NAME)

PROJECT ENGINEER	DATE	LIC. NO.
	12/09/2025	49874

RECOMMENDED CITY APPROVAL

DocuSigned by:
Cari Pedersen — 12/19/2025 | 19:34:01 C
5CBDF2CE53634EA...
APPROVED — CHIEF ENGINEER OF TRANSPORTATION — DATE

DocuSigned by:
Howard Smith, P.E. — 12/19/2025 | 17:14:03 C
C4F3BC0BEB84E7...
APPROVED — CHIEF ENGINEER OF UTILITIES — DATE

Signed by:
Cindy Voigt — 12/22/2025 | 07:32:37 C
1313FC01022GA4E8...
APPROVED — CITY ENGINEER — DATE

CITY OF DULUTH PROJECT NO. 2325	MPFA PROJECT NO. 1690011-31	SHEET NO. 1 OF 589

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