

PLAN LEGEND

RAILROAD TRACK LINE	
ROAD CENTERLINE	---
EX SANITARY LINE	—SAN—SAN—
PR SANITARY LINE	—SAN—
EX STORM LINE	—SS—SS—
PR STORM LINE	—SS—
EX WATER LINE	—W—
PR WATER LINE	—W—
EX GAS LINE	—G—
PR GAS LINE	—G—
OH ELECTRIC LINE	—OHE—
EX FIBEROPTIC LINE	—FO—
EX TELEPHONE LINE	—UGT—

SYMBOLS

EX SANITARY MANHOLE	⊙
EX STORM MANHOLE	⊕
EX STORM CATCHBASIN	⊞
EX. WATER CURBSTOP	⊗
EX. WATER VALVE	⊘
EX. WATER HYDRANT	⊙
EX. ELECTRIC MANHOLE	⊕
EX. POWERPOLE	⊙
PROPOSED WATER HYDRANT	⊙
PROPOSED WATER VALVE	⊘
PROPOSED CATCH BASIN	⊞
PROPOSED STORM MANHOLE	⊕
PROPOSED FLARED END SECTION	⊞
PROPOSED SANITARY MANHOLE	⊙

DESIGN DESIGNATION

RIVERWEST DRIVE	
R-VALUE	10
ADT (CURRENT YEAR) 2020	= 500
ADT (FUTURE YEAR) 2040	= 650
FUNCTIONAL CLASSIFICATION	= LOCAL ROADS
NO. OF TRAFFIC LANES	= 2
NO. OF PARKING LANES	= 0
D (DIRECTIONAL DISTR.)	= 50/50
T (HEAVY COMMERCIAL)	= N/A
PROJ. SOIL FACTOR	= N/A
SHOULDER WIDTH	= NA
DESIGN LOADING	= 10-TON
DESIGN SPEED	30 MPH
BASED ON STOPPING SIGHT DISTANCE	
HEIGHT OF EYE	3.5' HEIGHT OF OBJECT 2.0'
DESIGN SPEED NOT ACHIEVED AT:	
STA.	12+53 TO STA. 12+77 MPH 10
URBAN CLASSIFICATION: LOCAL STREET	
TRAFFIC LANES: 2	

RIVERWEST DRIVE - SHARED USE PATH	
DESIGN SPEED	20 MPH
BASED ON STOPPING SIGHT DISTANCE	
HEIGHT OF EYE	4.5' HEIGHT OF OBJECT 0.0'

# MINNESOTA DEPARTMENT OF TRANSPORTATION CITY OF DULUTH DEPARTMENT OF PUBLIC WORKS AND UTILITIES ENGINEERING DIVISION

## CONSTRUCTION PLAN FOR RIVERWEST DRIVE:

GRADING, BITUMINOUS PAVEMENT, CONCRETE CURB & GUTTER,  
ADA, UTILITIES, & SIGNALS

S.P. 6910-112 - LOCATED AT TH 23 (GRAND AVENUE) AND RIVERWEST DRIVE

CITY PROJ. NO 1403 - LOCATED ON RIVERWEST DRIVE FROM TH 23 (GRAND AVENUE)  
TO TERMINUS AT BNSF RAIL LINE

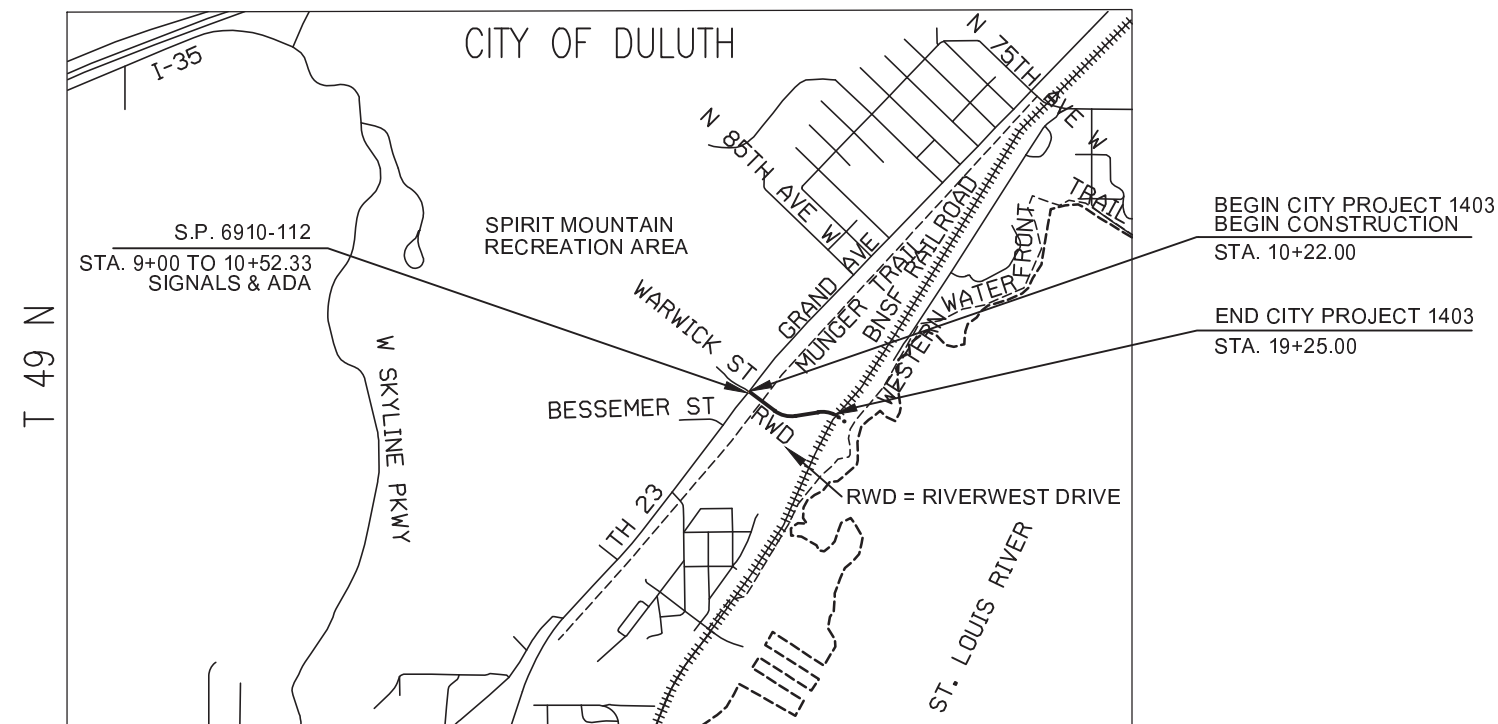
CITY PROJ. NO. 1403

GROSS LENGTH	903.00	FEET	0.171	MILES
BRIDGES-LENGTH	NA	FEET	NA	MILES
EXCEPTIONS-LENGTH	NA	FEET	NA	MILES
NET LENGTH	903.00	FEET	0.171	MILES

S.P. 6910-112

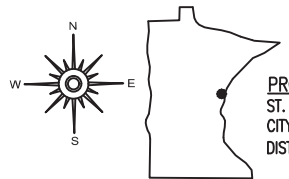
GROSS LENGTH	NA	FEET	NA	MILES
BRIDGES-LENGTH	NA	FEET	NA	MILES
EXCEPTIONS-LENGTH	NA	FEET	NA	MILES
NET LENGTH	NA	FEET	NA	MILES

SECTION 23



T 49 N

R 15 W



AGREEMENT NO. 1046012  
CITY OF DULUTH  
SP 6910-112 (TH 23=185)  
STATE FUNDS  
DISTRICT 1 (DULUTH)

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

WARNING: NATURAL GAS PIPELINE MSA PROJECT NO. 00616134

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

ENGINEERING | ARCHITECTURE | SURVEYING  
FUNDING | PLANNING | ENVIRONMENTAL  
332 W Superior Street, Duluth MN 55802  
(218) 722-3915 www.msa-ps.com  
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STATE FUNDS

GOVERNING SPECIFICATIONS

THE 2018 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION  
"STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.  
THE CITY OF DULUTH PUBLIC WORKS AND UTILITIES DEPARTMENT  
ENGINEERING DIVISION 2019 EDITION STANDARD CONSTRUCTION SPECIFICATION  
SHALL APPLY.  
ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MMUTCD,  
INCLUDING THE FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE  
LAYOUTS.

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THIS PLAN SHEET CONTAINS 134 SHEETS.

I HEREBY CERTIFY THAT SHEETS WERE 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.

JAMES A. WATTERS

PROJECT ENGINEER (TYPED OR PRINTED NAME)

*James A. Watters* 4/1/21 53557  
PROJECT ENGINEER DATE LIC. NO.

DocuSigned by:  
*Cari Pedersen* 4/1/2021  
5C3DF28E53834EA... CHIEF ENGINEER OF TRANSPORTATION DATE  
APPROVED CITY OF DULUTH

DocuSigned by:  
*Eric R Shaffer* 4/1/2021  
49F9F0ACF03C4AA... CHIEF ENGINEER OF UTILITIES DATE  
APPROVED CITY OF DULUTH

DocuSigned by:  
*Cindy Voigt* 4/1/2021  
3CE89AC02DB8436... CITY ENGINEER DATE  
APPROVED CITY OF DULUTH

*Julie Groetsch* Digitally signed by Julie Groetsch  
Date: 2021.04.09 12:00:54 -05'00'

OFFICE OF LAND FOR DIRECTOR OF  
MANAGEMENT APPROVAL LAND MANAGEMENT DATE

*Tom Styrbicki* Digitally signed by Tom Styrbicki  
Date: 2021.04.09 12:08:46 -05'00'

APPROVED STATE DESIGN ENGINEER DATE