

ST. LOUIS COUNTY

CITY OF DULUTH

CONSTRUCTION PLAN FOR MILLING, GRADING, BITUMINOUS SURFACING, ADA IMPROVEMENTS AND RETAINING WALL

LOCATED ON CSAH 37 (SNIVELY ROAD) FROM CSAH 9 (WOODLAND AVENUE) TO 350' SOUTH OF GLENWOOD STREET
 LOCATED ON WEST ARROWHEAD ROAD FROM DODGE AVENUE TO CSAH 9 (WOODLAND AVENUE)
 LOCATED ON CSAH 9 (WOODLAND AVENUE) FROM WEST ARROWHEAD ROAD TO CSAH 37 (SNIVELY ROAD)

W ARROWHEAD ROAD (MSAS 160)
 SP 118-160-024 / CP 1913

GROSS LENGTH 6,990.25 ft 1.324 miles
 BRIDGES-LENGTH _____ ft _____ miles
 EXCEPTIONS-LENGTH _____ ft _____ miles
 NET LENGTH 6,990.25 ft 1.324 miles

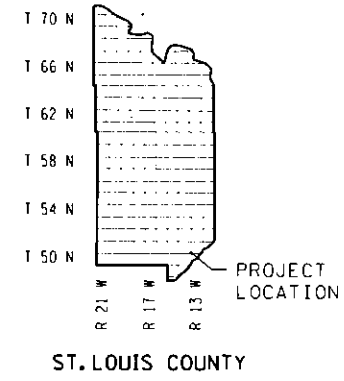
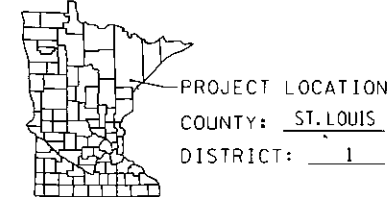
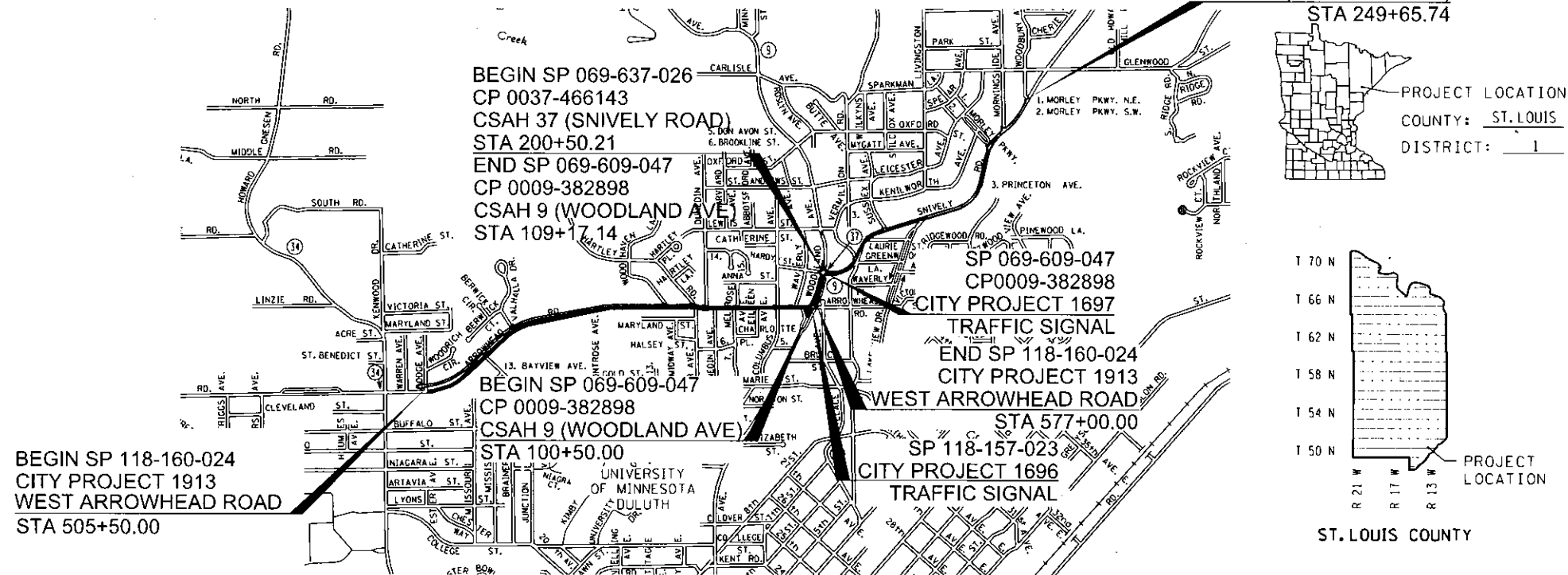
CSAH 9 (WOODLAND AVENUE)
 SP 069-609-047 / CP 0009-382898

GROSS LENGTH 717.14 ft 0.136 miles
 BRIDGES-LENGTH _____ ft _____ miles
 EXCEPTIONS-LENGTH _____ ft _____ miles
 NET LENGTH 717.14 ft 0.136 miles

CSAH 37 (SNIVELY ROAD)
 SP 069-637-026 / CP 0037-466143

GROSS LENGTH 4,915.53 ft 0.931 miles
 BRIDGES-LENGTH _____ ft _____ miles
 EXCEPTIONS-LENGTH _____ ft _____ miles
 NET LENGTH 4,915.53 ft 0.931 miles

END SP 069-637-026
 CP 0037-466143
CSAH 37 (SNIVELY ROAD)
 STA 249+65.74



GOVERNING SPECIFICATIONS

THE 2020 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MNMUTCD INCLUDING THE FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	GENERAL LAYOUT
3	CONSTRUCTION NOTES & STANDARD PLATES
4 - 9	TYPICAL SECTIONS
10 - 16	STANDARD PLANS
17 - 28	CONSTRUCTION STAGING & TRAFFIC CONTROL
29 - 31	ALIGNMENT PLANS & TABULATIONS
32 - 37	INPLACE TOPOGRAPHY & UTILITIES PLAN
38 - 43	MISCELLANEOUS REMOVAL PLAN
44 - 49	CONSTRUCTION PLAN
50 - 55	PAVING PLAN
56 - 66	INTERSECTION DETAILS
67 - 73	SIGN REMOVAL PLAN
74 - 81	SIGNING PLAN
82 - 91	PAVEMENT MARKING PLAN

THIS PLAN CONTAINS 92 SHEETS.

ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS AND ORDINANCES WILL BE COMPLIED WITHIN THE CONSTRUCTION OF THIS PROJECT.

wsb

SIGNATURE: _____ TYPED OR PRINTED NAME: ANDREW FLOWMAN, PE
 DESIGN ENGINEER: 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.
 DATE: \$SIGNDATE\$ LICENSE NUMBER 44200

APPROVED: ST. LOUIS COUNTY HIGHWAY ENGINEER _____ DATE _____

APPROVED: CITY OF DULUTH ENGINEER _____ DATE _____

DISTRICT STATE AID ENGINEER: REVIEWED FOR COMPLIANCE WITH STATE AND/OR FEDERAL AID RULES/POLICY _____ DATE _____

STATE AID ENGINEER: APPROVED FOR STATE AID AND/OR FEDERAL AID FUNDING _____ DATE _____

DESIGN DESIGNATION
 W ARROWHEAD ROAD (MSAS 160)
 SP 118-160-024 / CP 1913

R VALUE = 20
 ADT (Current Year) 2022 = 14,000
 ADT (Future Year) 2042 = 15,400
 D (DIRECTIONAL DISTR.) = 50/50
 HCA DT (Future Year) 2042 = 770
 ESALS 1,304,000
 DESIGN SPEED 30
 BASED ON STOPPING SIGHT DISTANCE
 HEIGHT OF EYE 3.5 HEIGHT OF OBJECT 2.0
 DESIGN SPEED NOT ACHIEVED AT: N/A
 FUNCTIONAL CLASSIFICATION MINOR ARTERIAL
 NO. OF TRAFFIC LANES 2
 NO. OF PARKING LANES N/A
 SHOULDER WIDTH 4' - 8'
 TON DESIGN 10

DESIGN DESIGNATION
 CSAH 9 (WOODLAND AVENUE)
 SP 069-609-047 / CP 0009-382898

R VALUE = 20
 ADT (Current Year) 2022 = 20,400
 ADT (Future Year) 2042 = 22,450
 D (DIRECTIONAL DISTR.) = 50/50
 HCA DT (Future Year) 2042 = 1,120
 ESALS 1,710,000
 DESIGN SPEED 30 MPH
 BASED ON STOPPING SIGHT DISTANCE
 HEIGHT OF EYE 3.5 HEIGHT OF OBJECT 2.0
 DESIGN SPEED NOT ACHIEVED AT: N/A
 FUNCTIONAL CLASSIFICATION MINOR ARTERIAL
 NO. OF TRAFFIC LANES 2
 NO. OF PARKING LANES N/A
 SHOULDER WIDTH 2' - 5'
 TON DESIGN 10

DESIGN DESIGNATION
 CSAH 37 (SNIVELY ROAD)
 SP 069-637-026 / CP 0037-466143

R VALUE = 20
 ADT (Current Year) 2022 = 10,850
 ADT (Future Year) 2042 = 11,950
 D (DIRECTIONAL DISTR.) = 50/50
 HCA DT (Future Year) 2042 = 600
 ESALS 1,011,000
 DESIGN SPEED 45 MPH
 BASED ON STOPPING SIGHT DISTANCE
 HEIGHT OF EYE 3.5 HEIGHT OF OBJECT 2.0
 DESIGN SPEED NOT ACHIEVED AT: N/A
 FUNCTIONAL CLASSIFICATION MINOR ARTERIAL
 NO. OF TRAFFIC LANES 2
 NO. OF PARKING LANES N/A
 SHOULDER WIDTH 6'
 TON DESIGN 10



PLAN REVISIONS		
DATE	SHEET NO.	APPROVED BY

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY 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 UTILITY DATA."

CP 1913 / 0009-382898 / 1696 / 1967 / 0037-466143
 SP 118-160-024 / 118-157-023 / 069-609-047 / 069-637-026 SHEET NO. 1 OF 92 SHEETS