





Purchasing Division
Finance Department
Room 120
411 West First Street
Duluth, Minnesota 55802

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Addendum 2
Solicitation 25-99742
2025 CIPP Sanitary Sewer Lining Project

This addendum serves to notify all bidders of the following changes to the solicitation documents:

- The Bid Package has been updated in Bid Express to add the attached planset.

Please acknowledge receipt of this Addendum by checking the acknowledgement box within the www.bidexpress.com solicitation.

Posted: **November 6, 2025**

last saved by proxy: 2025.11.03 7:41 AM

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PLAN LEGEND

| | |
|---------------------|-------------------|
| RIGHT OF WAY LINE | --- |
| DITCH CENTERLINE | --- |
| FENCE LINE | --- X --- |
| 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 LINE | --- W --- W --- |
| PR WATER LINE | --- W --- W --- |
| AB WATER LINE | --- AB-W --- |
| 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 | (X) |
| EX STORM MANHOLE | (STRM) |
| EX STORM CATCHBASIN | (Hatched) |
| EX WATER MANHOLE | (W) |
| EX WATER VALVE | (V) |
| EX WATER HYDRANT | (H) |
| EX WATER SHUTOFF | (S) |
| EX WATER & GAS MH | (W&G) |
| EX GAS MANHOLE | (GAS) |
| EX GAS VALVE | (V) |
| EX GAS SHUTOFF | (S) |
| EX STEAM MANHOLE | (STEAM) |
| EX TELEPHONE MANHOLE | (T) |
| EX ELECTRIC MANHOLE | (E) |
| EX POWERPOLE | (P) |
| EX LIGHT POLE | (L) |
| EX ELECTRIC VAULT | (V) |
| EX ANCHOR | (A) |
| EX ELECTRIC TRANSFORMER | (ET) |
| EX STREET LIGHT | (SL) |
| EX SIGNAL W/ STREET LIGHT | (S) |
| EX HANDHOLE | (H.H.) |
| EX HANDHOLE | (H.H.) |
| EX TELEPHONE PEDESTAL | (P) |
| EX WELL | (W) |
| BENCHMARK | (B) |
| FOUND CI MONUMENT | (M) |
| EX SIGN | (S) |
| CONTROL POINT | (CP) |
| EX DECIDUOUS TREE | (D) |
| EX CONIFEROUS TREE | (C) |
| EX PARKING METER | (P) |
| EX SOIL BORING | (SB) |

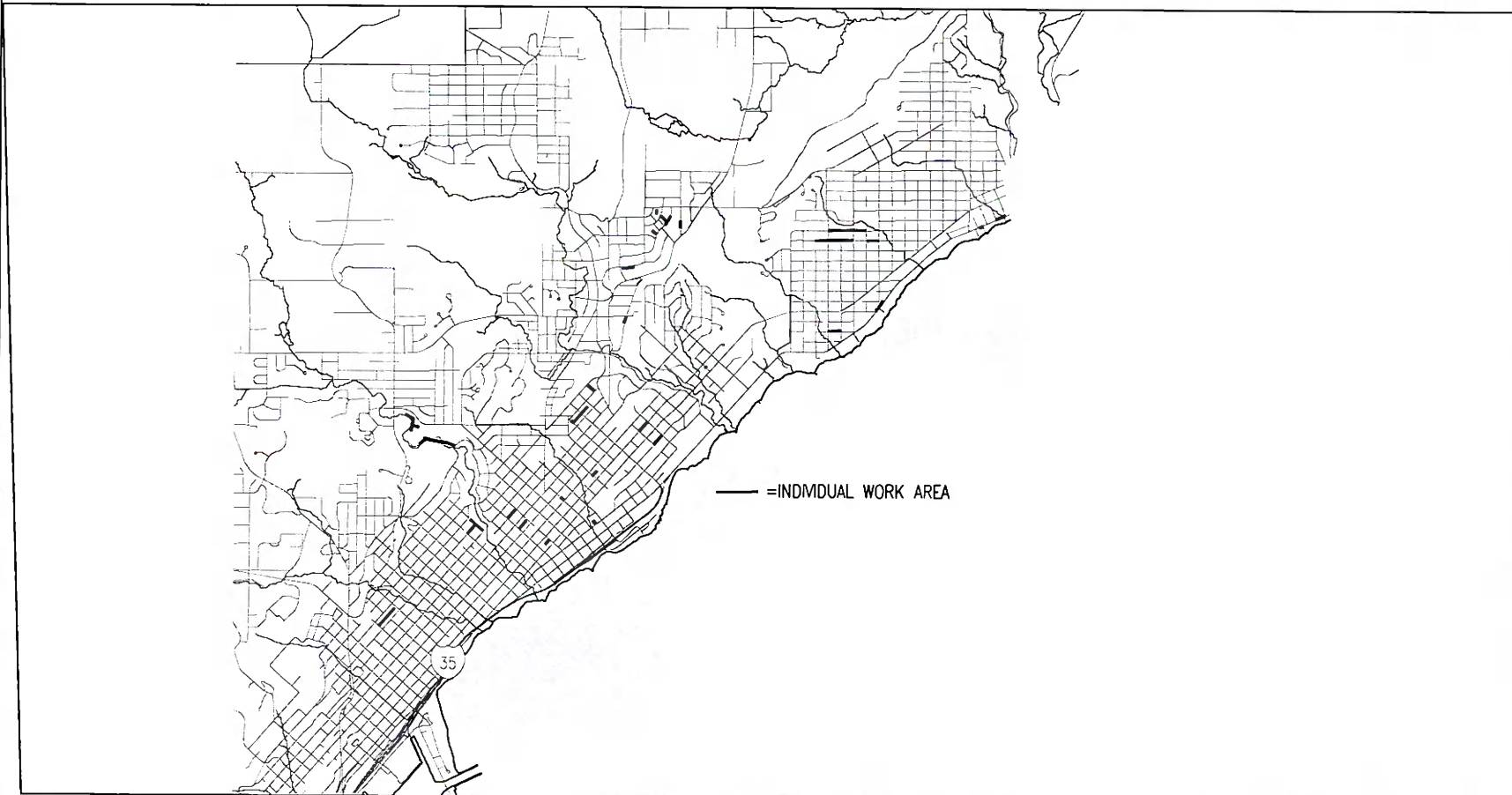
CITY OF DULUTH

DEPARTMENT OF PUBLIC WORKS AND UTILITIES ENGINEERING DIVISION

CONSTRUCTION PLANS FOR:

2025 CITYWIDE CIPP SANITARY SEWER LINING PROJECT

CITY PROJECT NO. 2280



--- =INDIVIDUAL WORK AREA

BASIS OF DATUM

- HORIZONTAL DATUM IS SAINT LOUIS COUNTY TRANSVERSE MERCATOR 1996 (SLCTM_96)

| PLAN REVISIONS | | |
|----------------|-----------|----------|
| DATE | SHEET NO. | APPROVER |
| | | |
| | | |
| | | |
| | | |

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 UTILITY DATA".



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 MNUCTD, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.

INDEX

| SHEET NO | DESCRIPTION |
|----------|-----------------------------------|
| 1 | TITLE |
| 2 | CITY OVERVIEW |
| 3 | STATEMENT OF ESTIMATED QUANTITIES |
| 4 | CHARTS |
| 5-9 | DETAILS |
| 10-40 | PLAN |

---THIS PLAN CONTAINS 40 SHEETS---

DESIGN TEAM: PMR

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.

TIM SANDERS

PROJECT ENGINEER (TYPED OR PRINTED NAME)

Tim Sanders 11/4/25 50401
PROJECT ENGINEER DATE LIC. NO.

CITY APPROVAL

DocuSigned by:

Cari Pedersen 11/5/2025 | 07:56:57 CST
APPROVED 3834EA... CHIEF ENGINEER OF TRANSPORTATION DATE

DocuSigned by:

Howard Smith, P.E. 11/4/2025 | 17:46:18 CST
APPROVED B84E7... CHIEF ENGINEER OF UTILITIES DATE

DocuSigned by:

Cindy Voigt 11/5/2025 | 10:44:40 CST
APPROVED B6A4E8... CITY ENGINEER DATE



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.

SIGNATURE: _____

TIM SANDERS
TYPE NAME

DATE: mm/dd/yyyy

LIC. NO: 50401



CITY OF DULUTH
ENGINEERING DIVISION
411 W. 1ST ST. STE. 211
DULUTH, MN 55802

2025 CITYWIDE CIPP SANITARY SEWER LINING PROJECT

CITY PROJECT NO.: 2280

STATE AID PROJECT NO.: STATE AID NUMBER

DRAWN BY: PMR

CITY OVERVIEW-1

SHEET NO. 2 OF 40

SCHEDULE OF ESTIMATED QUANTITIES

| NOTES | LINE | SPEC. NO. | DESCRIPTION | UNITS | EST. QUANTITY |
|-------|------|-----------|--|----------|---------------|
| | 1 | 2021.501 | MOBILIZATION | LUMP SUM | 1 |
| 1 | 2 | 2503.602 | DYE TEST ACTIVE SERVICE CONNECTION | EACH | 80 |
| 1 | 3 | 2503.602 | REMOTE CUT AND RECONNECT SANITARY SERVICE | EACH | 147 |
| 1 | 4 | 2503.602 | PIPE JOINT PRESSURE TEST - SERVICE LATERAL CONNECTION | EACH | 40 |
| 1 | 5 | 2503.602 | CHEMICAL GROUT POINT REPAIR - SERVICE LATERAL CONNECTION | EACH | 40 |
| 1 | 6 | 2503.602 | PIPE JOINT PRESSURE TEST - MAINLINE PIPE JOINT | EACH | 15 |
| 1 | 7 | 2503.602 | CHEMICAL GROUT POINT REPAIR - MAINLINE | EACH | 15 |
| | 8 | 2503.602 | 8" CIPP LINER END SEAL | EACH | 40 |
| | 9 | 2503.602 | 10" CIPP LINER END SEAL | EACH | 10 |
| | 10 | 2503.602 | 15" CIPP LINER END SEAL | EACH | 10 |
| | 11 | 2503.602 | 18" CIPP LINER END SEAL | EACH | 20 |
| 1 | 12 | 2503.602 | SPOT REPAIR - NON-STREET AREA (DEPTH LESS THAN 10') | EACH | 7 |
| 1 | 13 | 2503.602 | SPOT REPAIR - NON-STREET AREA (DEPTH 10' OR MORE) | EACH | 7 |
| 1 | 14 | 2503.602 | SPOT REPAIR - STREET AREA (DEPTH LESS THAN 10') | EACH | 7 |
| 1 | 15 | 2503.602 | SPOT REPAIR - STREET AREA (DEPTH 10' OR MORE) | EACH | 7 |
| 1 | 16 | 2503.603 | CLEAN & TELEWISE SEWER MAIN NOT TO BE LINED | LIN FT | 500 |
| | 17 | 2503.603 | 8" CIPP MAIN LINING | LIN FT | 12499 |
| | 18 | 2503.603 | 10" CIPP MAIN LINING | LIN FT | 99 |
| | 19 | 2503.603 | 12" CIPP MAIN LINING | LIN FT | 363 |
| | 20 | 2503.603 | 15" CIPP MAIN LINING | LIN FT | 101 |
| | 21 | 2503.63 | 18" CIPP MAIN LINING | LIN FT | 2,230 |
| 1 | 22 | 2503.603 | MANHOLE LINING - VARIOUS SIZES | LIN FT | 200 |
| 1 | 23 | 2503.610 | HEAVY ROOT CLEANING | HR | 100 |
| | 24 | 2563.601 | TRAFFIC CONTROL | LUMP SUM | 1 |

NOTES

1 QUANTITY IS AN ESTIMATE. EXACT QUANTITY AND LOCATION OF WORK TO BE IDENTIFIED AFTER PRE-LINING TELEVISION INSPECTION.

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.

SIGNATURE: _____

TIM SANDERS
TYPE NAME

DATE: mm/dd/yyyy

LIC. NO: 50401



CITY OF DULUTH
ENGINEERING DIVISION
411 W. 1ST ST. STE. 211
DULUTH, MN 55802

2025 CITYWIDE CIPP SANITARY SEWER LINING PROJECT

CITY PROJECT NO.: 2280

STATE AID PROJECT NO.: STATE AID NUMBER

DRAWN BY: PMR

SEQ

SHEET NO. 3 OF 40

CHART A

| PROJECT AREA | PAGE NUMBER | BASIN | PIPE ID NUMBER | U.S. M.H. | U.S. M.H. DEPTH | D.S. M.H. | D.S. M.H. DEPTH | SLOPE (%) 2 digit | LENGTH (FT) | DIAMETER (IN) | MATERIAL | CIPP 8" (FT) | CIPP 10" (FT) | CIPP 12" (FT) | CIPP 15" (FT) | CIPP 18" (FT) | 8" END SEAL | 10" END SEAL | 12" END SEAL | REMOTE CUT SERVICE | STREET | CROSS STREET 1 | CROSS STREET 2 | NOTES | | | | | | | | | | | | | | | | | | | | | |
|--------------|-------------|-------|----------------|-----------|-----------------|-----------|-----------------|-------------------|-------------|---------------|----------|--------------|---------------|---------------|---------------|---------------|-------------|--------------|--------------|--------------------|----------------------|-------------------|-------------------------|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| CW | 10 | 1 | SL0880110 | SA0880118 | 621.90 | SA0880117 | 621.38 | 0.36% | 145.6 | 12 | VCP | | | | | | | | | | 0 London Rd. | 55th Ave E | 56th Ave E | Lineable | | | | | | | | | | | | | | | | | | | | | |
| CW | 11 | 1 | SL0880124 | SA0880105 | 622.82 | SA0880107 | 622.67 | 0.04% | 365.9 | 8 | VCP | 365.9 | | | | | | | | | 2 London Rd. | 57th Ave E | 58th Ave E | Lineable Material Changes. Roots from 240' - 300' to End. Lateral Blockages | | | | | | | | | | | | | | | | | | | | | |
| CW | 12 | 3 | SL0870070 | SA0870080 | 738.40 | SA0870057 | 731.30 | 1.59% | 446.5 | 8 | VCP | 446.5 | | | | | | | | | 15 Jay St. | N 46th Ave E | N 47th Ave E | Lineable Offset joints | | | | | | | | | | | | | | | | | | | | | |
| CW | 13 | 3 | SL0870067 | SA0870077 | 769.69 | SA0870078 | 754.11 | 3.59% | 433.5 | 8 | VCP | 433.5 | | | | | | | | | 12 Jay St. | N 44th Ave E | N 45th Ave E | Lineable | | | | | | | | | | | | | | | | | | | | | |
| CW | 14 | 3 | SL0870065 | SA0870075 | 804.42 | SD0870076 | 772.01 | 6.07% | 533.5 | 8 | VCP | 533.5 | | | | | | | | | 7 Jay St. | N 42nd Ave E | N 43rd Ave E | Lineable Laterals Clogged with Roots. 380' begins roots. 420' Material change. Drop at end. | | | | | | | | | | | | | | | | | | | | | |
| CW | 14 | 3 | SL0870066 | SD0870076 | 772.01 | SA0870077 | 769.69 | 0.58% | 398.5 | 8 | VCP | 398.5 | | | | | | | | | 6 Jay St. | N 43rd Ave E | N 44th Ave E | Lineable Some PVC repairs. Water sitting at 1/3 full for parts of it. Lines show it could be running 3/4 full | | | | | | | | | | | | | | | | | | | | | |
| CW | 15 | 3 | SL0870029 | SA0870019 | 779.39 | SA0870029 | 759.60 | 4.25% | 466.0 | 8 | VCP | 466.0 | | | | | | | | | 8 Dodge St. | N 45th Ave E | N 46th Ave E | Lineable 81' Wye bad connect. 209' Possible Spot Repair. | | | | | | | | | | | | | | | | | | | | | |
| CW | 16 | 3 | SL0870018 | SA0870017 | 799.60 | SA0870018 | 789.42 | 2.18% | 467.7 | 8 | VCP | 467.7 | | | | | | | | UNK | Dodge St. | N 43rd Ave E | N 44th Ave E | Lineable Roots. 369' Broken Wye. Spot repair. | | | | | | | | | | | | | | | | | | | | | |
| CW | 16 | 3 | SL0870019 | SA0870018 | 789.42 | SA0870019 | 779.39 | 2.15% | 465.8 | 8 | VCP | 465.8 | | | | | | | | | 7 Dodge St. | N 44th Ave E | N 45th Ave E | Lineable Roots. Obstruction pipe in main. | | | | | | | | | | | | | | | | | | | | | |
| CW | 17 | 5 | SL0860110 | SA0860113 | 1128.60 | SA0860114 | 1119.10 | 3.36% | 282.8 | 8 | VCP | 282.8 | | | | | | | | | 3 Morningside Ave. | Snively Rd. | Glenwood St. | Lineable | | | | | | | | | | | | | | | | | | | | | |
| CW | 18 | 5 | SL0860080 | SA0860083 | 1203.10 | SA0860079 | 1200.91 | 1.26% | 174.4 | 8 | VCP | 174.4 | | | | | | | | | 2 Sparkman Ave Alley | Glenwood St. | Morley Pkwy | Lineable Many Roots | | | | | | | | | | | | | | | | | | | | | |
| CW | 18 | 5 | SL0860084 | SA0860088 | 1182.60 | SA0860089 | 1177.10 | 5.46% | 100.8 | 12 | VCP | | 100.8 | | | | | | | | 0 Spear Ave. | Private Property | Towards Leicester Ave. | Lineable | | | | | | | | | | | | | | | | | | | | | |
| CW | 18 | 5 | SL0860085 | SA0860089 | 1177.10 | SA0860092 | 1160.60 | 15.41% | 107.1 | 12 | VCP | | 107.1 | | | | | | | | 2 Spear Ave. | Private Property | Towards Leicester Ave. | Lineable Many Roots Drop out at end. | | | | | | | | | | | | | | | | | | | | | |
| CW | 18 | 5 | SL0860088 | SA0860092 | 1160.60 | SA0860093 | 1149.60 | 7.09% | 155.2 | 12 | VCP | | 155.2 | | | | | | | | Leicester Ave. | | | | | | | | | | | | | | | | | | | | | | | | |
| CW | 18 | 5 | SL0860089 | SA0860093 | 1149.60 | SD0860105 | 1148.60 | 0.99% | 101.2 | 15 | VCP | | | | 101.2 | | | | | | 0 Leicester Ave. | Morley Pkwy | - | Lineable. Can't get CCTV through very well due to offset joints. | | | | | | | | | | | | | | | | | | | | | |
| CW | 18 | 5 | SL0860107 | SA0860111 | 1146.66 | SA0860110 | 1145.50 | 0.55% | 209.4 | 8 | VCP | 209.4 | | | | | | | | | 5 Leicester Ave. | Morley Pkwy | Glendwood St. | Lineable, Water storage. Roots beginning at 90' Root balls at laterals. Material Change | | | | | | | | | | | | | | | | | | | | | |
| CW | 19 | 5 | SL0860097 | SA0860102 | 1195.10 | SA0860100 | 1175.60 | 9.27% | 210.3 | 8-10" | VCP | 210.3 | | | | | | | | | 2 Spear Ave. Alley | Leicester Ave. | - | Second Opinion at 40' Longitudinal Cracks. Appears to be base of build up material on bottom. Wye's on | | | | | | | | | | | | | | | | | | | | | |
| CW | 20 | 5 | SL0860047 | SA0860048 | 1141.60 | SA0860049 | 1138.60 | 1.52% | 196.8 | 8 | VCP | 196.8 | | | | | | | | | 8 Kenilworth Ave. | Sussex Ave. | - | Lineable Root Balls in TF Laterals | | | | | | | | | | | | | | | | | | | | | |
| CW | 20 | 5 | SL0860048 | SA0860049 | 1138.60 | SA0860050 | 1134.60 | 1.51% | 264.2 | 8 | VCP | 264.2 | | | | | | | | | 7 Kenilworth Ave. | Sussex Ave. | - | Lineable Root Balls in TF Laterals, Material Changes Multiple, Longitudinal Cracks and exposed soils. 25 | | | | | | | | | | | | | | | | | | | | | |
| CW | 21 | 4 | SL0830047 | SA0830121 | 638.60 | SA0830115 | 636.33 | 3.87% | 58.7 | 8 | VCP | 58.7 | | | | | | | | | 0 Regent St. | 47th Ave E | London Rd. | Lineable | | | | | | | | | | | | | | | | | | | | | |
| CW | 21 | 4 | SL0830123 | SA0830115 | 636.33 | SA0830106 | 631.46 | 1.85% | 262.6 | 8 | VCP | 262.6 | | | | | | | | | 0 London Rd. | Regent St. | N 47th Ave E | Lineable 25' Spot Repair Required. Water gushing in manhole. Couldn't tell if it was another pipe or jo | | | | | | | | | | | | | | | | | | | | | |
| CW | 21 | 4 | SL0830130 | SA0830104 | 629.60 | SD0830105 | 627.64 | 1.98% | 98.8 | 10 | VCP | | 98.8 | | | | | | | | 1 London Rd. | Cambridge St. | N 47th Ave E | Lineable | | | | | | | | | | | | | | | | | | | | | |
| CW | 22 | 4 | SL0830074 | SA0830074 | 662.60 | SA0830073 | 650.81 | 2.53% | 465.4 | 8 | VCP | 465.4 | | | | | | | | | 6 Luverne St. | N 43rd Ave E | N 44th Ave E | Lineable Lots of roots. Clogged laterals with roots. 400 visible soil. Water infiltration. | | | | | | | | | | | | | | | | | | | | | |
| CW | 23 | 5 | SL0820031 | SA0820025 | 1039.53 | SD0820022 | 1034.59 | 1.93% | 256.0 | 8 | VCP | 256.0 | | | | | | | | | 1 Lakeview Dr. | E Arrowhead Rd. | - | Lineable, Sags and changes of material from VCP to PVC to VCP. | | | | | | | | | | | | | | | | | | | | | |
| CW | 24 | 7 | SL0760029 | SA0760046 | 1008.63 | SA0760045 | 997.50 | 9.75% | 114.1 | 8 | VCP | 114.1 | | | | | | | | | 1 N 25th Ave E | E 7th St. | E 7th St. Alley | Lineable, Heavy Roots, | | | | | | | | | | | | | | | | | | | | | |
| CW | 24 | 7 | SL0760033 | SA0760044 | 1001.60 | SA0760045 | 997.50 | 0.92% | 445.2 | 8 | VCP | 445.2 | | | | | | | | | 5 E 7th St. Alley | N 25th Ave E | N 26th Ave E | Lineable, Material Changes, Heavy Roots | | | | | | | | | | | | | | | | | | | | | |
| CW | 24 | 7 | SL0490038 | SA0490139 | 1004.10 | SA0760044 | 1001.60 | 0.73% | 340.2 | 8 | VCP | 340.2 | | | | | | | | | 2 E 7th St. Alley | N 26th Ave E | N 27th Ave E | CCTV video corrupt. | | | | | | | | | | | | | | | | | | | | | |
| CW | 25 | 6 | SL0760022 | SA0760058 | 1042.95 | SA0760056 | 1022.68 | 11.07% | 183.1 | 8 | VCP | 183.1 | | | | | | | | | 1 Near Wallace Ave. | E 8th St. | E 7th St. | | | | | | | | | | | | | | | | | | | | | | |
| CW | 25 | 6 | SL0760023 | SA0760056 | 1022.68 | SA0760055 | 1010.50 | 7.33% | 166.2 | 8 | VCP | 166.2 | | | | | | | | | 0 Near Wallace Ave. | E 8th St. | E 7th St. | Lineable, Connection at Upstream MH offset. Line from Street to Street with a cut out in the middle ma | | | | | | | | | | | | | | | | | | | | | |
| CW | 30 | 8 | SL0470271 | SA0470259 | 883.19 | SA0470258 | 870.60 | 2.72% | 463.7 | 8 | VCP | 463.7 | | | | | | | | | 9 E 7th St. | N 13th Ave E | N 14th Ave E | Lineable, Gusher joint, Drinker joint, | | | | | | | | | | | | | | | | | | | | | |
| CW | 30 | 8 | SL0470272 | SA0470258 | 870.60 | SA0470261 | 851.60 | 5.35% | 355.2 | 8 | VCP | 355.2 | | | | | | | | | 3 N 14th Ave E | E 6th St. | E 7th St. | I think Lineable, Longitudinal cracks. Offset joints | | | | | | | | | | | | | | | | | | | | | |
| CW | 30 | 8 | SL0520236 | SD0520227 | 903.10 | SA0470228 | 890.88 | 12.32% | 99.2 | 8 | VCP | 99.2 | | | | | | | | | 0 N 14th Ave E | E 8th St. | - | Unable to Line on it's own. Run Liner from street MH SD0520226 to Street MH SA0470258 | | | | | | | | | | | | | | | | | | | | | |
| CW | 30 | 8 | SL0520241 | SA0470228 | 890.88 | SA0470258 | 870.60 | 12.49% | 162.4 | 8 | VCP | 162.4 | | | | | | | | | UNK | N 14th Ave E | E 8th St. | E 7th St. | Part of SL0520236 inquiry NO CCTV | | | | | | | | | | | | | | | | | | | | |
| CW | 31 | 17 | SL0520037 | SA0520130 | 905.60 | SA0520129 | 897.60 | 1.85% | 432.5 | 8 | VCP | 432.5 | | | | | | | | | | NORTH 5TH AVE E | NORTH 4TH AVE E | | | | | | | | | | | | | | | | | | | | | | |
| CW | 31 | 17 | SL0510018 | SA0510081 | 909.60 | SA0520129 | 897.60 | 2.68% | 447.9 | 8 | VCP | 447.9 | | | | | | | | | | NORTH 3TH AVE E | NORTH 4TH AVE E | | | | | | | | | | | | | | | | | | | | | | |
| CW | 32 | 6 | SL0490105 | SA0490112 | 817.60 | SA0490113 | 804.60 | 2.79% | 466.1 | 8 | VCP | 466.1 | | | | | | | | | | 6 E 1st St. | N 28th Ave E | N 29th Ave E | Lineable, Longitudinal Cracks, Root Balls in Laterals, Material Changes, | | | | | | | | | | | | | | | | | | | | |
| CW | 33 | 5 | SL0490033 | SA0490032 | 772.41 | SA0490035 | 764.60 | 9.52% | 82.0 | 8 | VCP | 82.0 | | | | | | | | | | 0 N 35th Ave E | E 1st St. | E Superior St. | Lineable Calcium Build up Heavy Cleaning | | | | | | | | | | | | | | | | | | | | |
| CW | 34 | 8 | SL0480206 | SA0480190 | 877.60 | SA0480189 | 854.60 | 5.32% | 432.0 | 8 | VCP | 432.0 | | | | | | | | | UNK | E 5th St. | N 16th Ave E | N 17th Ave E | Missing Video | | | | | | | | | | | | | | | | | | | | |
| CW | 35 | 7 | SL0480193 | SA0480182 | 832.63 | SD0480181 | 808 | 5.90% | 414.3 | 8 | VCP | 414.3 | | | | | | | | | 1 E 4th St. Alley | N 16th Ave E | N 17th Ave E | Lineable, Heavy Roots, Material Changes | | | | | | | | | | | | | | | | | | | | | |
| CW | 35 | 8 | SL0480220 | SA0480202 | 884.45 | SA0480199 | 874.60 | 5.41% | 182.0 | 8 | VCP | 182.0 | | | | | | | | | UNK | N 16th Ave E | E 6th St. | E 7th St Alley | Missing Video | | | | | | | | | | | | | | | | | | | | |
| CW | 35 | 8 | SL0480222 | SA0480203 | 924.15 | SA0480202 | 884.45 | 8.64% | 459.7 | 8 | VCP | 459.7 | | | | | | | | | | 6 E 7th St. Alley | N 16th Ave E | N 17th Ave E | Lineable, Heavy Roots, Material changes with offset joint, Longitudinal Cracks, drinker joint, May need | | | | | | | | | | | | | | | | | | | | |
| CW | 36 | 7 | SL0480174 | SA0480151 | 719.78 | SA0480152 | 712.83 | 2.97% | 234.0 | 10 | VCP | | 234.0 | | | | | | | | 9 E 1st St. Alley | 17th Ave E | Halfway to N 16th Ave E | Lineable, Logitudinal Cracks, Material Changes, root balls in laterals | | | | | | | | | | | | | | | | | | | | | |
| CW | 37 | 7 | SL0480135 | SA0480066 | 862.60 | SA0480067 | 847.10 | 6.68% | 232.1 | 8 | VCP | 232.1 | | | | | | | | | 3 E 2nd St. Alley | N 23rd Ave E | Halfway to N 24th Ave E | Lineable, Heavy Roots, I&I cracks/holes, Offset sections. | | | | | | | | | | | | | | | | | | | | | |
| CW | 38 | 7 | SL0480097 | SA0480125 | 836.60 | SA0480122 | 822.82 | 8.42% | 163.6 | 8 | VCP | 163.6 | | | | | | | | | 1 N 20th Ave E | E 3rd St. | E 2nd St. | Lineable Heavy Roots, Clogged, Material Changes. | | | | | | | | | | | | | | | | | | | | | |
| CW | 39 | 6 | SL0430152 | SA0430142 | 756.86 | SD0440011 | 735.73 | 4.53% | 466.5 | 8 | VCP | 466.5 | | | | | | | | | 6 Branch St. | S 28th Ave E | S 29th Ave E | Lineable, Longitudinal Cracks, Material Changes to PVC, back to VCP, root balls in laterals. | | | | | | | | | | | | | | | | | | | | | |
| CW | 40 | 7 | SL0430038 | SA0430034 | 722.68 | SA0430033 | 700.65 | 12.99% | 169.6 | 8 | VCP | 169.6 | | | | | | | | | 0 S 21st Ave E Alley | Greysolon Rd. | Jefferson St. | Missing Video | | | | | | | | | | | | | | | | | | | | | |
| Chester Park | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CP | 26 | 9 | SL0750089 | SD0750084 | 1136.08 | SA0750085 | 1132.60 | 1.00% | 347.3 | 18 | VCP | | | | | | | | | | | Chester Park | North of Soccer Field | | | | | | | | | | | | | | | | | | | | | | |
| CP | 26 | 9 | SL0750090 | SA0750085 | 1132.60 | SA0710001 | 1128.17 | 1.74% | 253.9 | 18 | VCP | | | | | | | | | | | Chester Park | North of Soccer Field | | | | | | | | | | | | | | | | | | | | | | |
| CP | 26 | 9 | SL0710030 | SA0710001 | 1128.17 | SA0710002 | 1117.60 | 5.06% | 208.9 | 18 | VCP | | | | | | | | | | | Chester Park | North of Soccer Field | | | | | | | | | | | | | | | | | | | | | | |
| CP | 26 | 9 | SL0710071 | SA0710047 | 1161.36 | SA0710046 | 1157.74 | 3.47% | 104.3 | 8 | VCP | 104.3 | | | | | | | | | | Chester Park | North of Soccer Field | | | | | | | | | | | | | | | | | | | | | | |
| CP | 26 | 9 | SL0710070 | SA0710046 | 1157.74 | SA0710045 | 1134.45 | 34.50% | 67.5 | 8 | VCP | 67.5 | | | | | | | | | | Chester Park | North of Soccer Field | | | | | | | | | | | | | | | | | | | | | | |
| CP | 26 | 9 | SL0710069 | SA0710045 | 1134.45 | SA0710001 | 1128.17 | 6.83% | 92.0 | 8 | VCP | 92.0 | | | | | | | | | | Chester Park | North of Soccer Field | | | | | | | | | | | | | | | | | | | | | | |
| CP | 27 | 9 | SL0710034 | SA0710012 | 1092.10 | SA0710013 | 1087.93 | 1.20% | 348.3 | 18 | VCP | | | | | | | | | | | Chester Bowl Dr. | - | - | | | | | | | | | | | | | | | | | | | | | |
| CP | 27 | 9 | SL0710035 | SA0710013 | 1087.93 | SA0710014 | 1084.68 | 1.37% | 236.5 | 18 | VCP | | | | | | | | | | | Chester Bowl Dr. | - | - | | | | | | | | | | | | | | | | | | | | | |
| CP | 27 | 9 | SL0710036 | SA0710014 | 1084.68 | SA0710015 | 1080.76 | 0.81% | 484.3 | 18 | VCP | | | | | | | | | | | Chester Bowl Dr. | - | - | | | | | | | | | | | | | | | | | | | | | |
| CP | 29 | 9 | SL0710037 | SA0710015 | 1080.76 | SA0710016 | 1075.15 | 1.60% | 350.6 | 18 | VCP | | | | | | | | | | | Chester Bowl Dr. | - | - | | | | | | | | | | | | | | | | | | | | | |
| CP | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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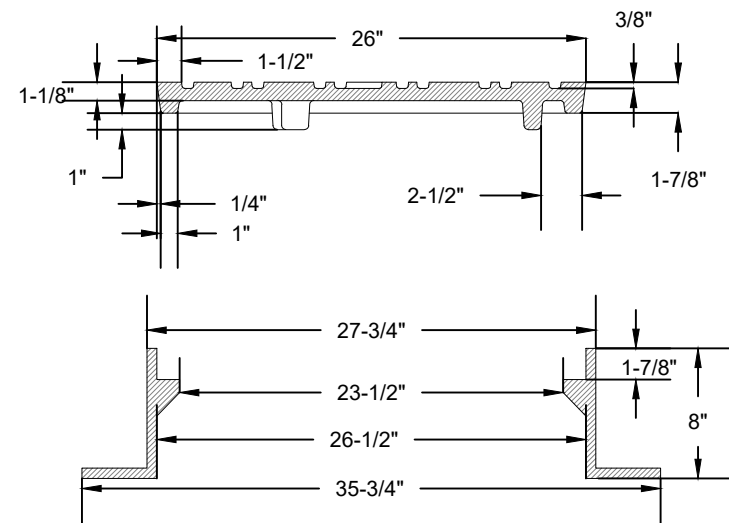
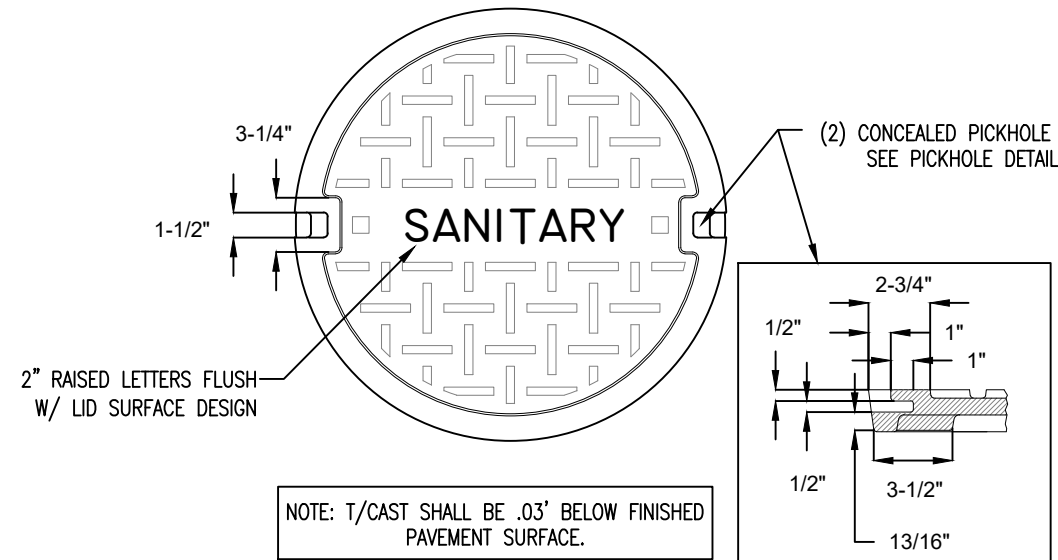
TIM SANDERS
TYPE NAME

DATE: mm/dd/yyyy

LIC. NO: 50401

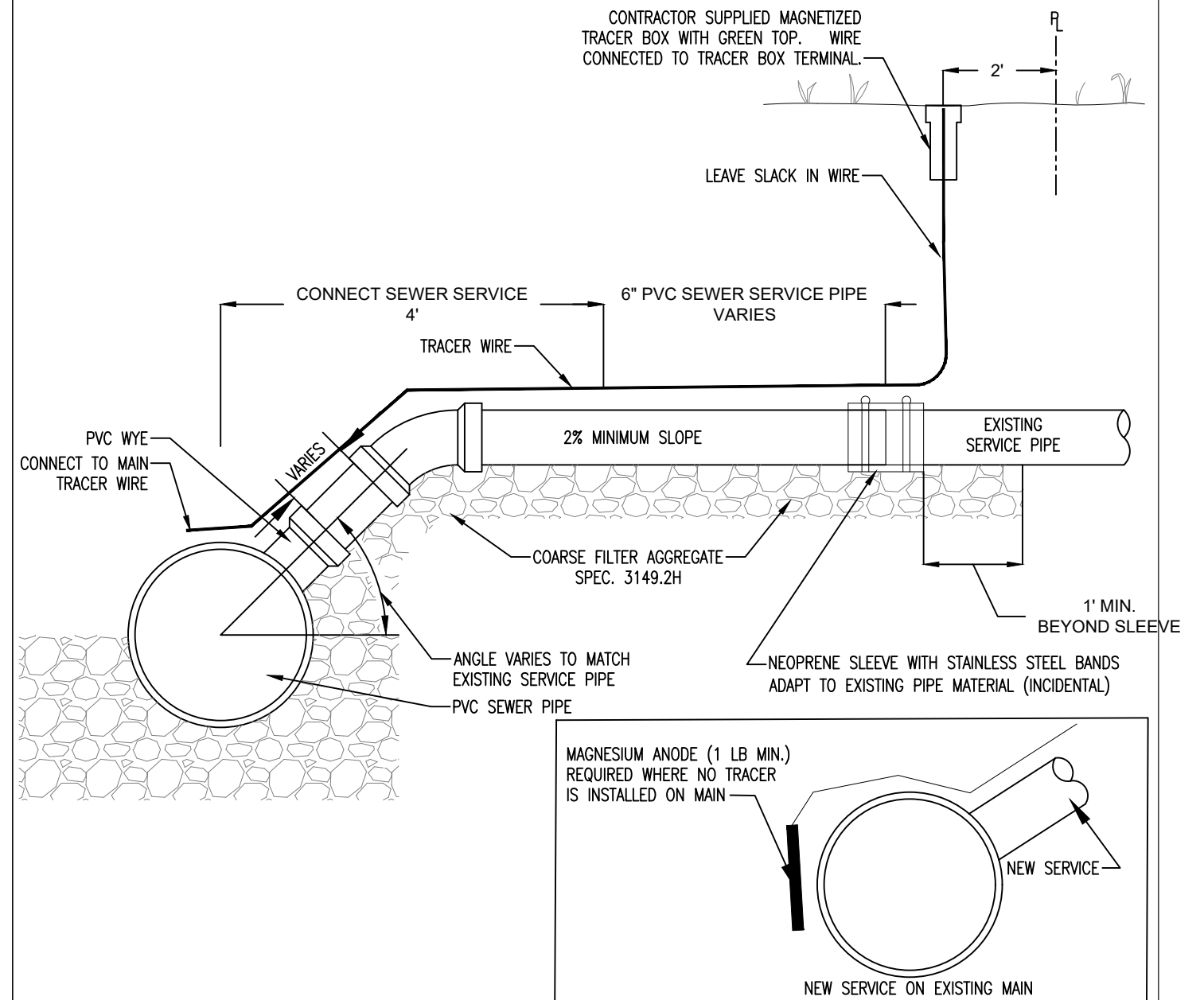
| | |
|-----------------------|-------------------------------|
| WGT. 298 LBS | MATERIAL: GRAY IRON CLASS 35B |
| WGT. 122 LBS | SPEC.: ASTM A-48-74 |
| TOTAL WEIGHT 420 LBS. | |

NOTE: SUITABLE FOR HS25 WHEEL LOADS



SANITARY CASTING DETAIL

SAN-1



NOTES

- BID ITEM FOR PVC WYE INCLUDES FURNISHING AND INSTALLING WYE IN SEWER MAIN.
- CONNECT SEWER SERVICE INCLUDES 6" PVC SEWER SERVICE PIPE (TO 4' FROM C/L) AND ALL FITTINGS
- 6" PVC SEWER SERVICE PIPE IS INTENDED FOR THE RECONSTRUCTION OF SEWER SERVICES (WHEN FOUND TO BE IN NEED BY THE ENGINEER) COMPLETE IN PLACE FROM 4.0' BEYOND THE C/L OF THE SEWER MAIN TO A POINT DESIGNATED BY THE ENGINEER
- FOR NEW SERVICES, PIPE TO STOP AT RIGHT OF WAY
- #12 GAUGE GREEN INSULATED COPPER TRACER WIRE SHALL BE INSTALLED WITH SANITARY SEWER MAINS AND SERVICES. TRACER WIRE TERMINAL BOXES SHALL BE INSTALLED DIRECTLY ABOVE THE SEWER SERVICE OR AS DETERMINED BY THE ENGINEER
- FOR SERVICES, TRACER WIRE SHALL RUN FROM THE WYE AND TERMINATE IN A FLUSH MOUNTED TRACER BOX WITH A GREEN CAST IRON LOCKABLE TOP.
- THE TRACER WIRE SHALL REMAIN CONTINUOUS TO THE GREATEST EXTENT POSSIBLE. SPLICES IN THE TRACER WIRE SHOULD BE MADE WITH SPLIT BOLT CONNECTORS. WIRE NUTS SHALL NOT BE USED. A WATER-PROOF CONNECTION IS NECESSARY TO PREVENT CORROSION.

TYPICAL SEWER SERVICE CONNECTION

SAN-2

REVISED/APPROVED 02/01/2013

CITY OF DULUTH STANDARD DETAIL
DEPT. OF PUBLIC WORKS AND UTILITIES

NO SCALE

REVISED/APPROVED 02/19/2015

CITY OF DULUTH STANDARD DETAIL
DEPT. OF PUBLIC WORKS AND UTILITIES

NO SCALE

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DATE: mm/dd/yyyy

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TIM SANDERS
TYPE NAME

LIC. NO: 50401



CITY OF DULUTH
ENGINEERING DIVISION
411 W. 1ST ST. STE. 211
DULUTH, MN 55802

2025 CITYWIDE CIPP SANITARY SEWER LINING PROJECT

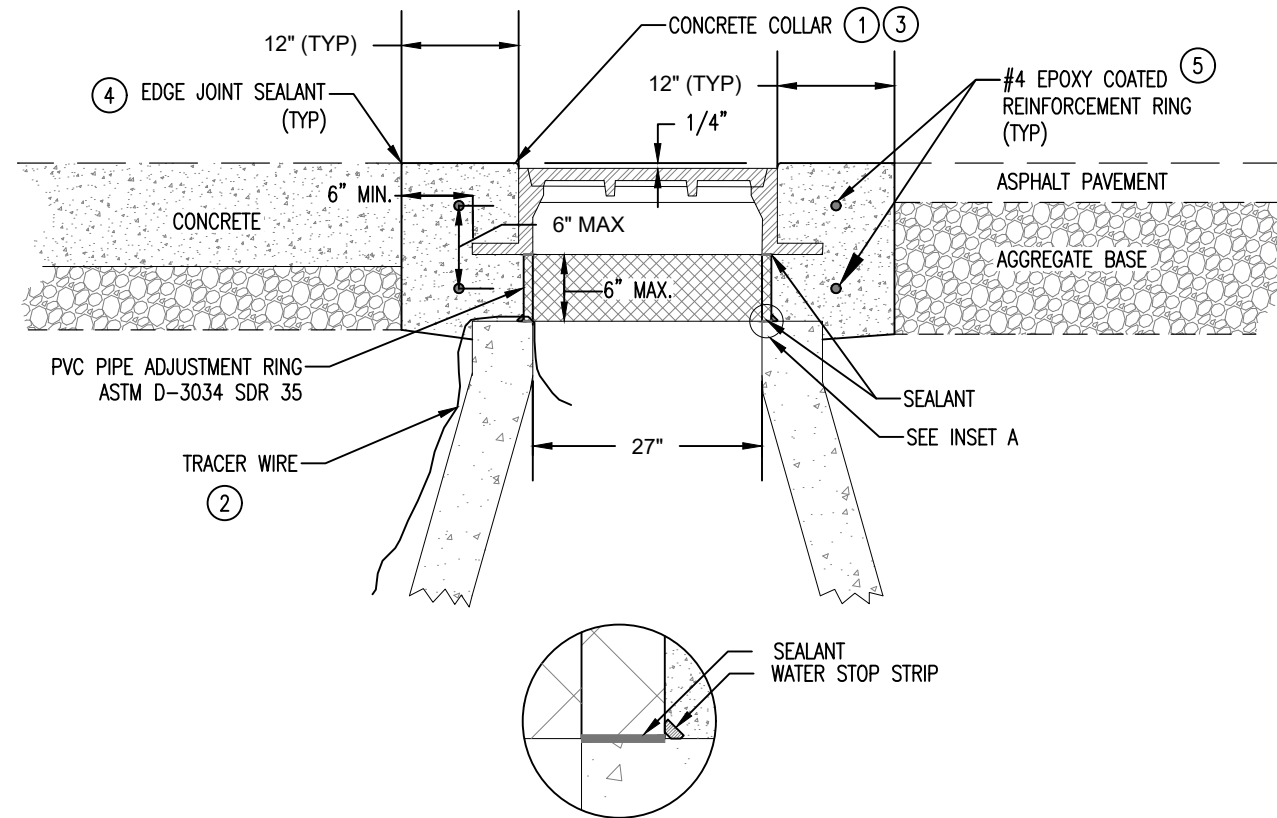
CITY PROJECT NO.: 2280

STATE AID PROJECT NO.: STATE AID NUMBER

DRAWN BY: PMR

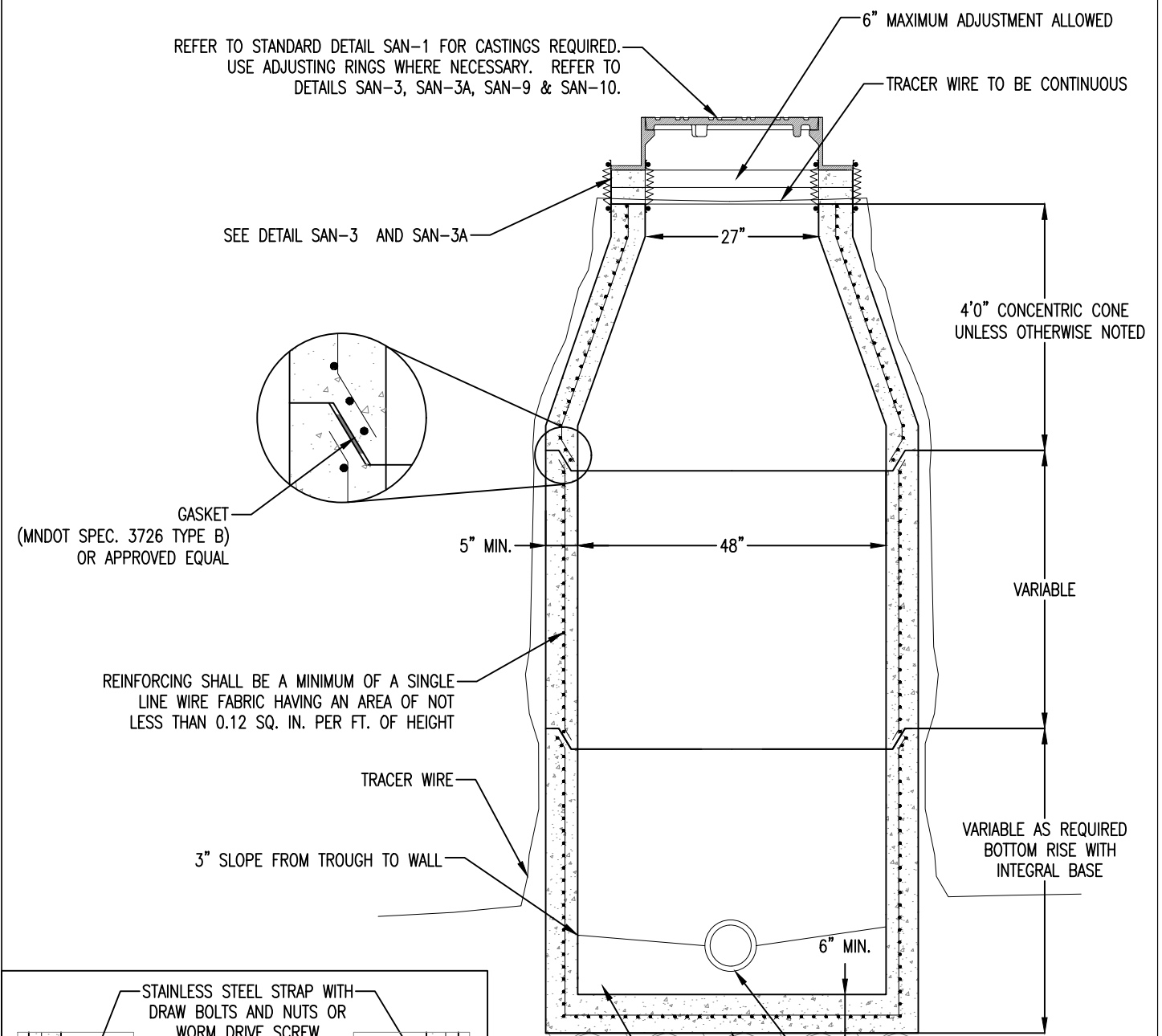
DETAILS-1

SHEET NO. 5 OF 40

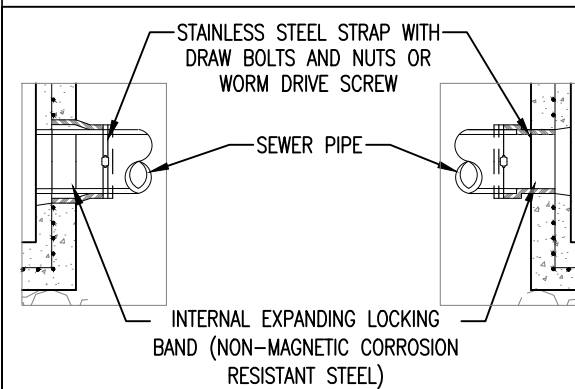


NOTES:

- ① CONCRETE (MIX NO. 3G52) COLLAR TO ENCASE CASTING AND ADJUSTMENT RING.
- ② TRACER WIRE REQUIRED ON ALL SANITARY SEWER MAINS.
- ③ CONCRETE COLLAR SHALL BE CIRCULAR LAYOUT. PAVEMENT AND BASE SHALL BE CUT OUT WITH ROTATING CUTTING DEVICE
- ④ FINISH CONCRETE EDGE WITH 1/4" RADIUS. SEAL JOINT BETWEEN PAVEMENT AND COLLAR.
- ⑤ MAINTAIN 3.5" COVER ON REINFORCEMENT.



REINFORCING SHALL BE A MINIMUM OF A SINGLE LINE WIRE FABRIC HAVING AN AREA OF NOT LESS THAN 0.12 SQ. IN. PER FT. OF HEIGHT



PIPE SLEEVE DETAIL

- 1. ALL PIPE SLEEVES MUST BE WATER TIGHT

NOTES

- 1. SANITARY MANHOLES SHALL NOT HAVE STEPS.
- 2. ALL SANITARY MANHOLES SHALL BE VACUUM TESTED.
- 3. ALL SANITARY MANHOLES SHALL BE WATERTIGHT. ANY OBSERVABLE WATER SEEPAGE THROUGH THE END OF THE WARRANTY PERIOD SHALL BE CAUSE TO REJECT MANHOLES.
- 4. AN INSIDE DROP IS REQUIRED PER DETAIL SAN-4 ANYTIME THE DROP IS GREATER THAN 2.0'.

CONCRETE ENCASED CASTING COLLAR FOR SANITARY MH IN ROADWAY, WALKS, & DRIVES

SAN-3A

PRECAST MECHANICAL JOINT SEWER MANHOLE

SAN-11

REVISED/APPROVED 04/05/2019

CITY OF DULUTH STANDARD DETAIL
DEPT. OF PUBLIC WORKS AND UTILITIES

NO SCALE

REVISED/APPROVED 01/08/2016

CITY OF DULUTH STANDARD DETAIL
DEPT. OF PUBLIC WORKS AND UTILITIES

NO SCALE

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DATE: mm/dd/yyyy

SIGNATURE: _____

TIM SANDERS
TYPE NAME

LIC. NO: 50401



CITY OF DULUTH
ENGINEERING DIVISION
411 W. 1ST ST. STE. 211
DULUTH, MN 55802

2025 CITYWIDE CIPP SANITARY SEWER LINING PROJECT

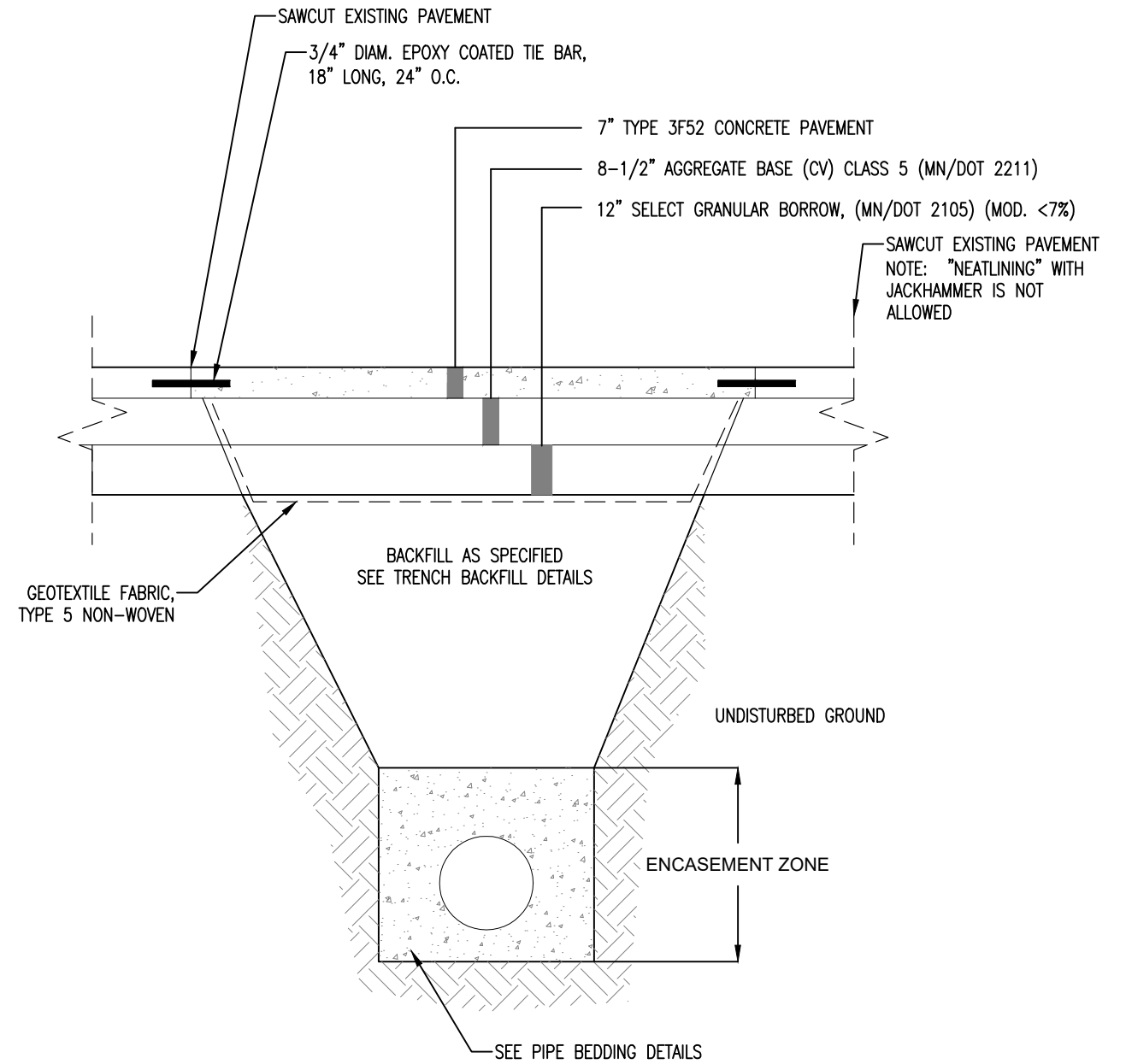
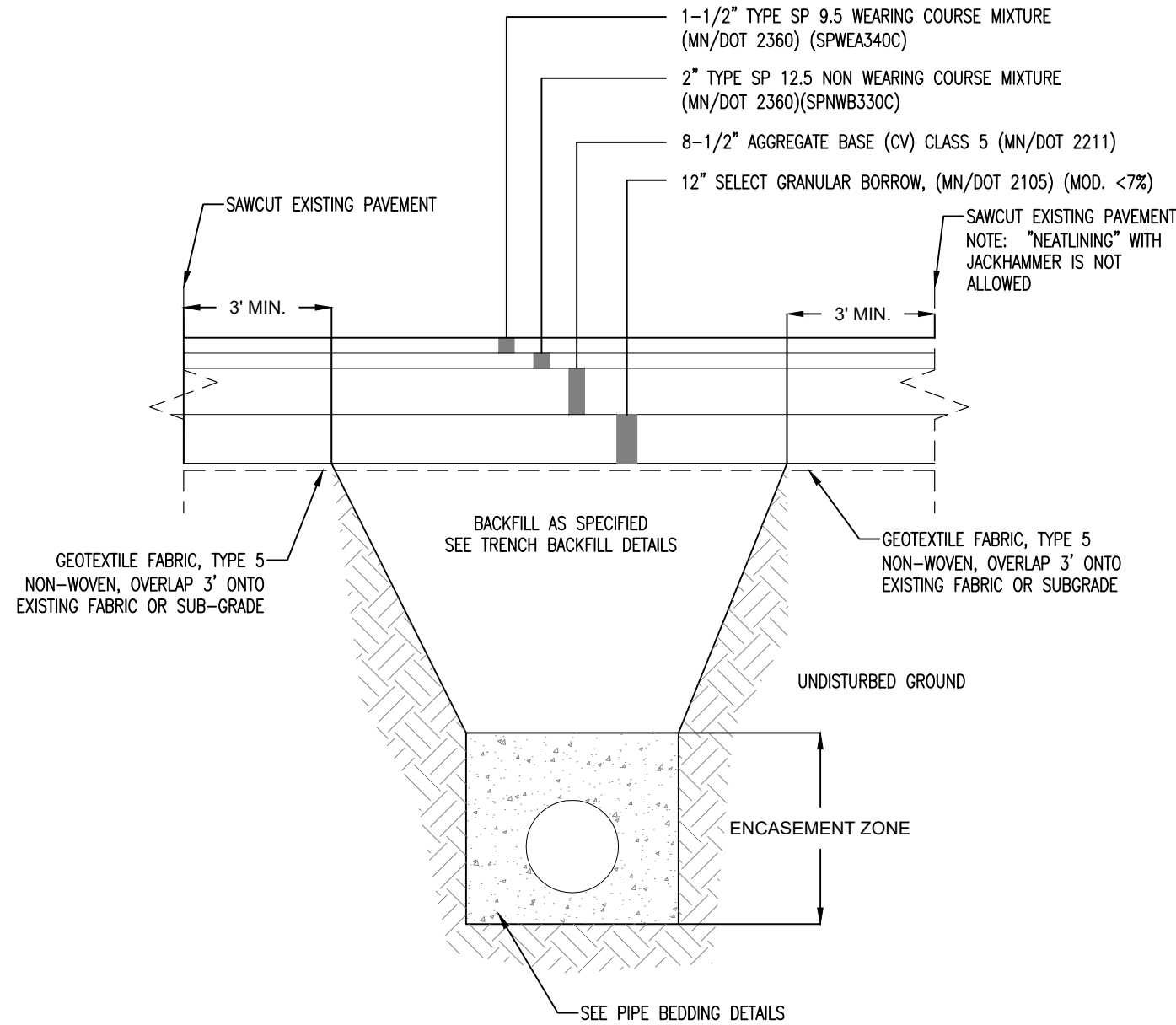
CITY PROJECT NO.: 2280

STATE AID PROJECT NO.: STATE AID NUMBER

DRAWN BY: PMR

DETAILS-2

SHEET NO. 6 OF 40



STREET RESTORATION OVER TRENCH

STR-8

CONCRETE STREET RESTORATION OVER TRENCH

REVISED/APPROVED 04/05/2019

CITY OF DULUTH STANDARD DETAIL
DEPT. OF PUBLIC WORKS AND UTILITIES

NO SCALE

CITY OF DULUTH STANDARD DETAIL
DEPT. OF PUBLIC WORKS AND UTILITIES

NO SCALE

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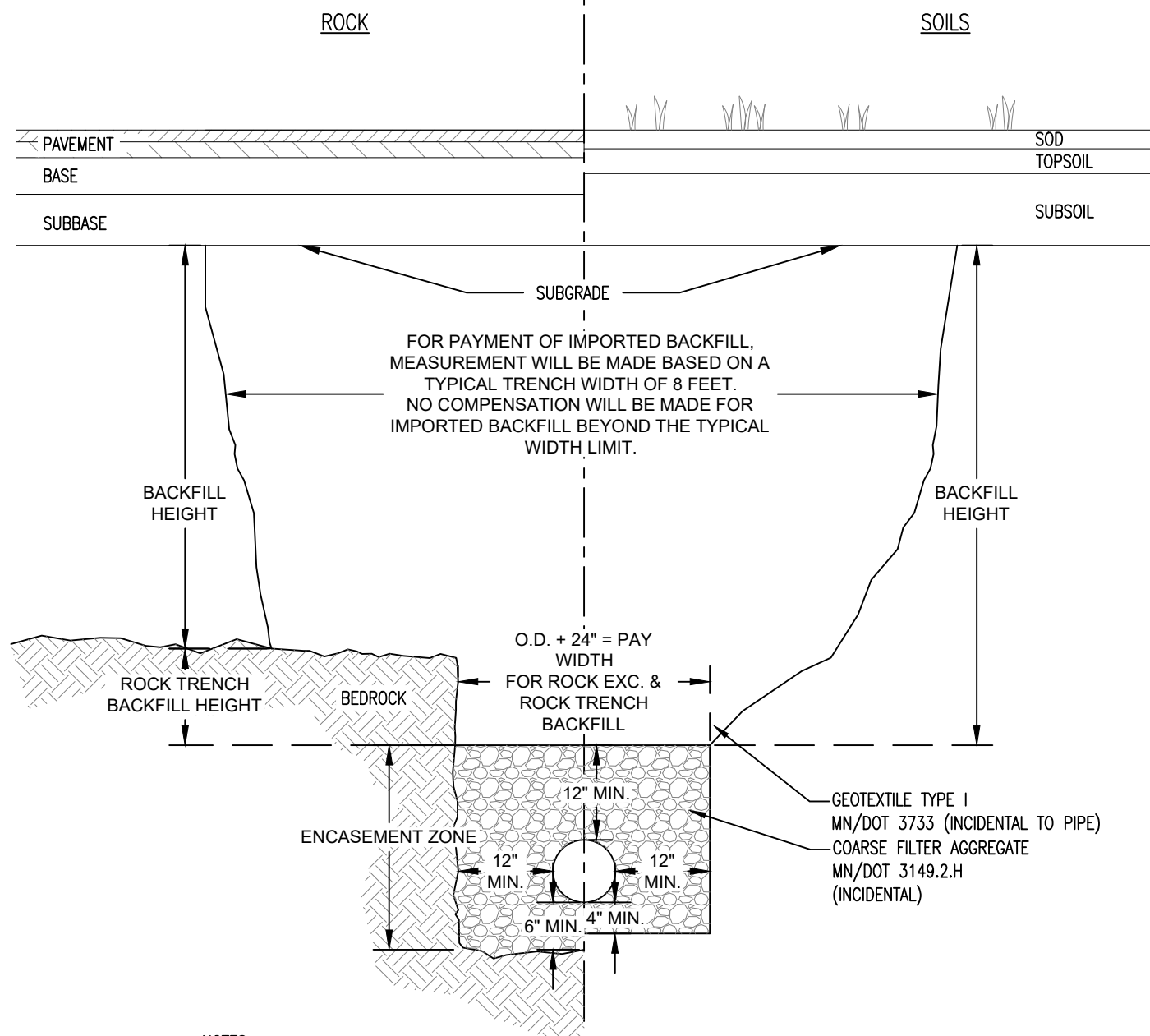
CITY PROJECT NO.: 2280

STATE AID PROJECT NO.: STATE AID NUMBER

DRAWN BY: PMR

DETAILS-3

SHEET NO. 7 OF 40




FOR PAYMENT OF IMPORTED BACKFILL, MEASUREMENT WILL BE MADE BASED ON A TYPICAL TRENCH WIDTH OF 8 FEET. NO COMPENSATION WILL BE MADE FOR IMPORTED BACKFILL BEYOND THE TYPICAL WIDTH LIMIT.

- 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 STRUCTURE EXCAVATION, CLASS R, 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. BACKFILL SHALL BE SELECT GRADING MATERIAL FOUND ON-SITE WHEN DEEMED SUITABLE BY THE ENGINEER OR AS OTHERWISE DEFINED IN THE PROJECT SPECIAL PROVISIONS. WHEN ON-SITE MATERIAL IS NOT SUITABLE AND WHEN BACKFILL MATERIAL IS NOT SPECIFIED, IMPORTED MATERIAL MEETING MN/DOT 3149.2.D.1 GRANULAR BACKFILL SHALL BE PROVIDED. USE OF NATIVE ON-SITE MATERIAL IS INCIDENTAL.
 7. 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'.

| | | |
|--|---|----------|
| PVC AND CORRUGATED POLYETHYLENE SEWER PIPE BEDDING | | EX-3 |
| REVISED/APPROVED 04/05/2019 | CITY OF DULUTH STANDARD DETAIL DEPT. OF PUBLIC WORKS AND UTILITIES | NO SCALE |

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SIGNATURE: _____ DATE: mm/dd/yyyy
 _____ DATE: mm/dd/yyyy
 TIM SANDERS TYPE NAME LIC. NO: 50401



CITY OF DULUTH
 ENGINEERING DIVISION
 411 W. 1ST ST. STE. 211
 DULUTH, MN 55802

2025 CITYWIDE CIPP SANITARY SEWER LINING PROJECT
 CITY PROJECT NO.: 2280 STATE AID PROJECT NO.: STATE AID NUMBER

DRAWN BY: PMR
 DETAILS-4
 SHEET NO. 8 OF 40

STORMWATER MANAGEMENT AND EROSION CONTROL REQUIREMENTS

1. CITY OF DULUTH PROJECT #2280 IS A SANITARY SEWER LINING PROJECT WITH EXCAVATION FOR SEWER SPOT REPAIRS. WHERE UTILITY EXCAVATION IS NECESSARY, THE FOLLOWING SHALL APPLY: SURFACE RESTORATION WILL BE IN KIND WITH EXISTING AND WILL NOT ADD TO IMPERVIOUS SURFACES. THE CITY OF DULUTH MS4 GENERAL PERMIT WILL APPLY. THE CONTRACTOR AND THE CITY SHARE JOINT RESPONSIBILITY FOR ENSURING PERMIT CONDITIONS ARE MET.
2. 18 SEWER SPOT REPAIR EXCAVATIONS ARE ESTIMATED FOR THIS PROJECT, FOR A TOTAL OF 3,200 SQUARE FEET OF LAND DISTURBANCE. RUNOFF FROM ALL SITES FLOWS TO THE LOCAL STORM SEWER AND EVENTUALLY LAKE SUPERIOR.
3. FOR EXCAVATION WORK THE CONTRACTOR SHALL COMPLETE, SUBMIT AND ABIDE BY THE CITY OF DULUTH "EROSION AND SEDIMENT CONTROL APPLICATION AND PERMIT" FORM INCLUDING A SITE SPECIFIC EROSION CONTROL LAYOUT PLAN AND SEQUENCING NARRATIVE. THESE DOCUMENTS SHALL BE SUBMITTED 7 DAYS PRIOR TO BEGINNING EXCAVATION ACTIVITIES.
4. THE EXACT NECESSITY, LOCATION AND SEQUENCING OF EROSION CONTROL DEVICES WILL BE DEPENDANT ON THE CONTRACTORS CHOSEN EQUIPMENT, CONSTRUCTION PRACTICES, CONSTRUCTION SEQUENCING, AND MATERIALS & EQUIPMENT PLACEMENT DECISIONS. IT IS THE THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT THE EROSION AND SEDIMENT CONTROL DEVICES AND PRACTICES ARE APPROPRIATE FOR THE CONTRACTOR'S MEANS AND METHODS FOR CONSTRUCTION.
5. ALL EXCAVATION WORK BID AS LUMP-SUM ITEMS SHALL INCLUDE EROSION CONTROL DEVICES AND PRACTICES TYPICAL FOR THAT WORK TYPE. EROSION CONTROL DEVICES ABOVE AND BEYOND THOSE TYPICALLY EMPLOYED DURING SUCH WORK BUT CONSIDERED NECESSARY BY OR APPROVED BY THE ENGINEER WILL BE PAID FOR BY UNIT PRICES IN SECTION 2573 OF THE CITY OF DULUTH CONSTRUCTION STANDARD.
6. CURRENT MNDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND THE CURRENT CITY OF DULUTH SHALL APPLY.
7. THE CONTRACTOR SHALL DESIGNATE AN EROSION CONTROL SUPERVISOR.
8. THE EROSION CONTROL SUPERVISOR SHALL PERFORM INSPECTIONS OF EACH EXCAVATION SITE WEEKLY AND AFTER A RAIN EVENT OR 1/2" OR MORE. THE CONTRACTOR SHALL BE KEEP A WRITTEN RECORD OF INSPECTIONS AND REPORT DEFICIENCIES AND CORRECTIVE ACTION TO THE ENGINEER.
9. THE CONTRACTOR SHALL REVIEW THE EROSION CONTROL PLAN & SCHEDULE WEEKLY WITH THE ENGINEER AND MAKE ALTERATIONS/ADJUSTMENT AS NECESSARY.
10. CONTRACTOR SHALL PHASE/SEQUENCE THE PROJECT TO MINIMIZE EXPOSURE TO EROSION. THE CONTRACTOR SHALL PLACE OR OTHERWISE CONSTRUCT EROSION CONTROL AND SEDIMENT CONTAINMENT DEVICES TO MINIMIZE THE RUNOFF, TRACKING, AND SEDIMENT LOSS FROM DISTURBED AREAS OF THE PROJECT SITE.
11. DISTURBED SLOPES NOT ACTIVELY WORKED SHALL BE PROTECTED FROM SOIL EROSION WITH TEMPORARY OR PERMANENT COVER WITHIN 3 DAYS OF BEING WORKED. EROSION CONTROL BLANKET AND SOIL STAPLES SHALL BE USED.
12. ALL SLOPES AND DITCHES SHALL BE STABILIZED PRIOR TO OPENING NEW CULVERTS INTO EXISTING DRAINAGE WAYS.
13. IF ANY STOCKPILE IS TO REMAIN IN PLACE FOR MORE THAN 3 DAYS, OR IF RAIN IS EXPECTED IN THE NEXT 24 HOURS SEDIMENT AND EROSION CONTROL DEVICES SHALL BE USED.
14. WATER PUMPED OR OTHERWISE DISCHARGED FROM THE SITE DURING CONSTRUCTION DEWATERING SHALL BE DIRECTED THROUGH EFFECTIVE FILTERING DEVICE(S) IN ACCORDANCE WITH MNDOT STANDARDS. USE OF APPROVED FLOCCULANT MAY BE NECESSARY. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY DEWATERING PERMITS FROM THE DNR.
15. THE CONTRACTOR SHALL TAKE ALL POSSIBLE PRECAUTIONS TO PREVENT APPRECIABLE SOIL TRACKING ONTO ROADWAYS. APPRECIABLE SOIL, MUD, OR DEBRIS WASHED, TRACKED, OR DEPOSITED ONTO PAVED SURFACES SHALL BE REMOVED PRIOR TO THE END OF EACH WORK DAY.
16. STABILIZED CONSTRUCTION ENTRANCE(S) SHALL BE REMOVED AND AREA RESTORED AFTER GRADING IS COMPLETE.
17. THE CONTRACTOR QC PROGRAM SHALL ENSURE THAT A COMPETENT INDIVIDUAL SHALL INSPECT EROSION AND SEDIMENT CONTROL DEVICES WEEKLY AND AFTER EACH RAIN EVENT. ALL NONFUNCTIONAL DEVICES SHALL BE REPAIRED/REPLACED/CLEANED. MAINTAIN WRITTEN LOG OF ALL WEEKLY AND RAIN EVENT INSPECTIONS - INCLUDE THE CORRECTIVE ACTIONS THAT WERE TAKEN.
18. THE CONTRACTOR SHALL MAINTAIN THE CAPABILITY TO IMPLEMENT RAPID STABILIZATION METHOD 4 (MNDOT 2575) AT ALL TIMES.
19. THE CONTRACTOR SHALL BE PROACTIVE IN THEIR APPROACH TO MINIMIZING SOIL EROSION AND SEDIMENT TRANSPORT FROM THE SITE. CURRENT TECHNOLOGY FOR WEATHER FORECASTING AND WEATHER RADAR ALLOWS FOR THE CONTRACTOR TO HAVE EROSION CONTROL BMPS INSTALLED AND FUNCTIONING FOR A RAIN EVENT. ALL CONSTRUCTION SITES SHALL STABILIZED PRIOR TO A FORECASTED RAIN EVENT DURING NON-WORK TIMES, I.E. WEEK NIGHTS AND WEEKENDS.
20. AS SITE CONDITIONS CHANGE, THE WORK PROGRESSES AND WEATHER CONDITIONS VARY, THE CONTRACTOR SHALL BE REACTIVE TO THESE CHANGING VARIABLES.. THEREFORE BMP INSTALLATION, CLEANING AND RELOCATION SHOULD BE ANTICIPATED IN MOST CONSTRUCTION ACTIVITIES.
21. CONSTRUCTION ACTIVITY PERFORMED WITHOUT APPROPRIATE EROSION CONTROL BEST MANAGEMENT PRACTICES MAY BE CONSIDERED UNACCEPTABLE WORK AND MAY BE SUBJECT TO NONPAYMENT.

CONSTRUCTION PRACTICES TO MINIMIZE STORM WATER CONTAMINATION

TO PREVENT STORM WATER CONTAMINATION FROM OCCURRING, THE FOLLOWING BMPS WILL BE IMPLEMENTED:

1. ALL AREAS THAT ARE ROUGH GRADED SHALL BE KEPT IN A SMOOTH CONDITION AND TRACKED BY EQUIPMENT WITH TREAD MARKS RUNNING ACROSS THE SLOPE. ROUGH GRADED SOIL SHALL BE ALWAYS READY FOR SURFACE APPLICATION OF TEMPORARY OR PERMANENT, DEGRADABLE OR NON-DEGRADABLE BLANKETS, MULCH, OR OTHER PROTECTIVE COVERS.
2. A STABILIZED CONSTRUCTION ENTRANCE/EXIT WILL BE CONSTRUCTED TO REDUCE VEHICLE TRACKING OF SEDIMENTS OFF THE PROJECT RIGHT OF WAY.
3. ALL SOLID WASTE MATERIALS WILL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER OR OTHER APPROVED CONTAINMENT METHOD AT THE END OF EACH DAY. ANY ALTERNATIVE TO A METAL DUMPSTER MUST BE SUBMITTED IN WRITING FOR APPROVAL BY THE PROJECT ENGINEER. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE WILL BE DEPOSITED IN THE DUMPSTER. THE DUMPSTER WILL BE EMPTIED AS NECESSARY TO FUNCTION AS INTENDED FOR DEBRIS COLLECTION. NO CONSTRUCTION MATERIALS WILL BE BURIED ON-SITE. THE CONTRACTOR'S EROSION CONTROL SUPERVISOR WILL INSTRUCT ALL PERSONNEL REGARDING THE CORRECT PROCEDURE FOR DISPOSAL.
4. RECYCLABLE MATERIALS MUST BE SEPARATED ON-SITE AND SEGREGATED IN DESIGNATED CONTAINERS.
5. A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR WILL COLLECT ALL SANITARY WASTE FROM THE PORTABLE UNITS AT A RATE NECESSARY TO MAINTAIN DESIGNED FUNCTION.
6. ALL VEHICLES ON SITE WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. LEAKING EQUIPMENT SHALL BE IMMEDIATELY REPAIRED OR REMOVED FROM THE JOB SITE.
7. FERTILIZERS WILL BE STORED IN A COVERED SHED AND PARTIALLY USED BAGS WILL BE TRANSFERRED TO A SEALABLE BIN TO REDUCE THE CHANCE OF SPILLAGE.
8. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS, WHICH ARE CLEARLY LABELED.
9. SPILL KITS WILL BE INCLUDED WITH ALL FUELING SOURCES AND MAINTENANCE ACTIVITIES. SECONDARY CONTAINMENT MEASURES WILL BE INSTALLED AND MAINTAINED BY THE CONTRACTOR.
10. ANY ASPHALT SUBSTANCES USED ON SITE WILL BE APPLIED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
11. ALL PAINT CONTAINERS AND CURING COMPOUNDS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCHARGED TO THE STORM WATER SYSTEM BUT WILL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURER'S INSTRUCTION.
12. MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEAN-UP SHALL BE READILY AVAILABLE AND BE KEPT IN AN ENCLOSED TRAILER OR SHED ON SITE. EQUIPMENT WILL INCLUDE, BUT NOT LIMITED TO, BROOMS, MOPS, DUST PANS, RAGS, GLOVES, GOGGLES, ABSORBENT (KITTY LITTER, OIL ABSORBENT BOOMS AND DIAPERS) AND BUCKETS.
13. ALL SPILLS WILL BE CONTAINED AND CLEANED UP IMMEDIATELY UPON DISCOVERY. SPILLS LARGE ENOUGH TO REACH THE STORM WATER CONVEYANCE SYSTEM WILL BE REPORTED TO THE MINNESOTA DUTY OFFICER AT 1-800-422-0798.
14. CONCRETE TRUCKS WILL NOT BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON THE SITE UNLESS DONE IN AN ENGINEERED CONTAINMENT SYSTEM. THE ENGINEERED SYSTEM MUST INCLUDE SITE DRAWINGS FOR THE PROJECT FILE AND WRITTEN ASSURANCE THAT THE SYSTEM WILL WORK AS DESIGNED AND LEAVE NO DISCHARGE OF CONCRETE OR CONCRETE RESIDUE POTENTIAL TO ENTER WATERS OF THE STATE.
15. FORM RELEASE OIL USED FOR CONCRETE WORK MUST BE APPLIED OVER A PALLET CONTAINING ABSORBENT TO COLLECT EXCESS LIQUID. THE ABSORBENT MATERIAL WILL BE REPLACED AND PROPERLY DISPOSED OF WHEN SATURATED.
16. DURING CIPP SEWER LINING ALL CONDENSATE SHALL BE COLLECTED OR DIRECTED INTO THE SANITARY SEWER. ALL CONDENSATE AND EXCESS RESIN DEPOSITED ON THE STREET, GROUND OR INTO WATER WAYS SHALL BE CLEANED UP IMMEDIATELY. ALL DUST AND SHAVINGS FROM CUTTING STORM SEWER LINERS SHALL BE CLEANED UP IMMEDIATELY AND SURFACES WIPED CLEAN.
17. DISCHARGES FROM BASIN DEWATERING OPERATIONS THAT ARE TURBID OR SEDIMENT LADEN SHALL BE DISCHARGED TO TEMPORARY SEDIMENT BASINS CONSTRUCTED ON THE SITE TO PROVIDE TREATMENT PRIOR TO DISCHARGE TO A WATERS OF THE STATE.

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.

SIGNATURE: _____

TIM SANDERS
TYPE NAME

DATE: mm/dd/yyyy

LIC. NO: 50401



CITY OF DULUTH
ENGINEERING DIVISION
411 W. 1ST ST. STE. 211
DULUTH, MN 55802

2025 CITYWIDE CIPP SANITARY SEWER LINING PROJECT

CITY PROJECT NO.: 2280

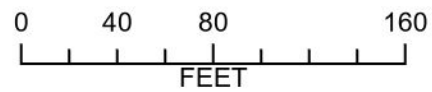
STATE AID PROJECT NO.: STATE AID NUMBER

DRAWN BY: PMR

EROSION CONTROL NOTES

SHEET NO. 9 OF 40

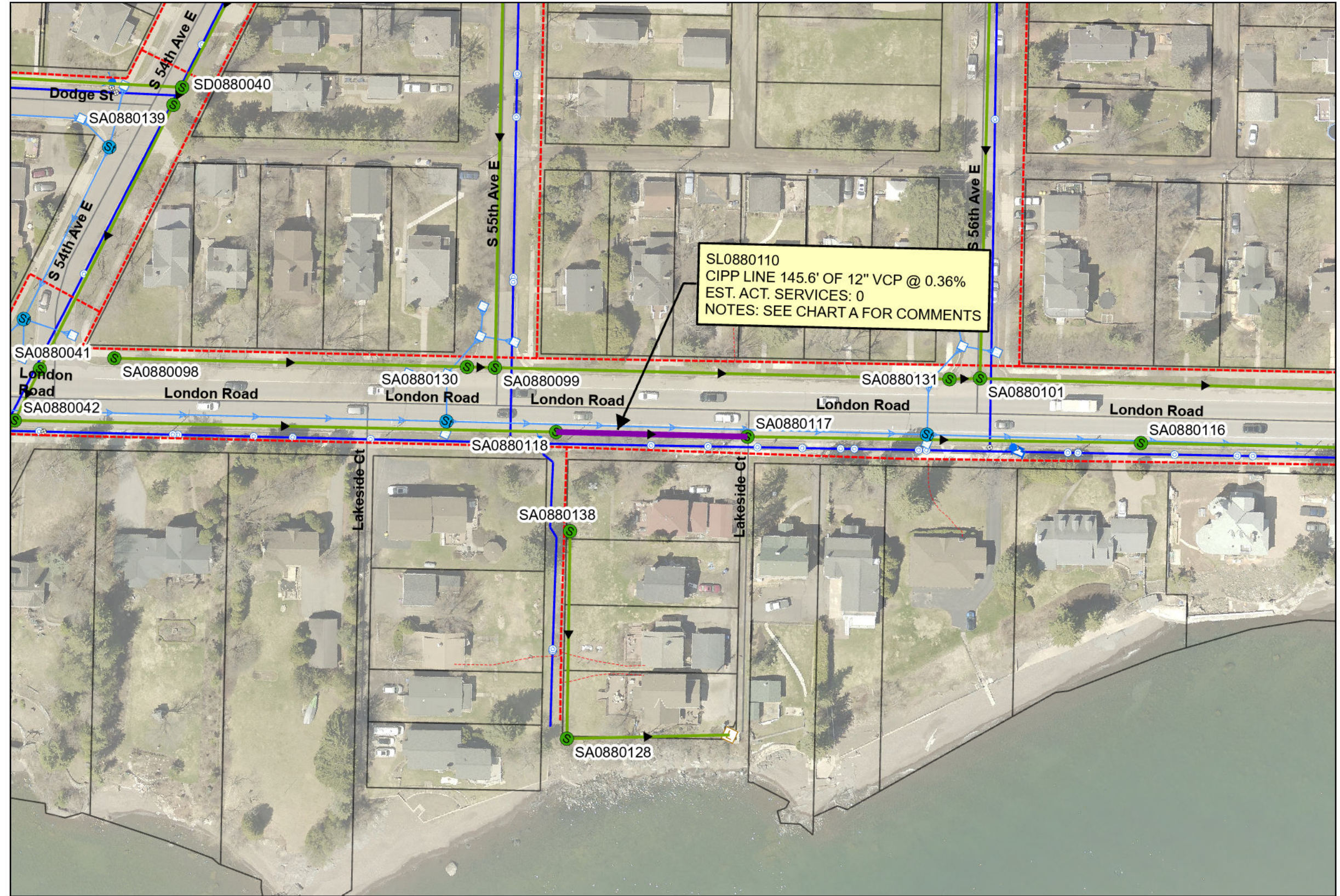
OVERVIEW MAP



LEGEND

- 2280-CIPP LINES EXPORT
- SANITARY MANHOLE
- STORM MANHOLE
- SAN CIPP JOIN
- SANITARY MAIN
- STORM CATCH BASIN
- STORM MAIN
- GAS MAIN
- WATER MAIN

PLAN



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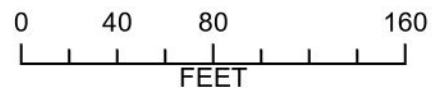


CITY OF DULUTH
ENGINEERING DIVISION
411 W. 1ST ST. RM. 240
DULUTH, MN 55802

2025 CITYWIDE SANITARY SEWER CIPP LINING
CITY PROJECT NO.: 2280

DRAWN BY: PMR
PAGE 10

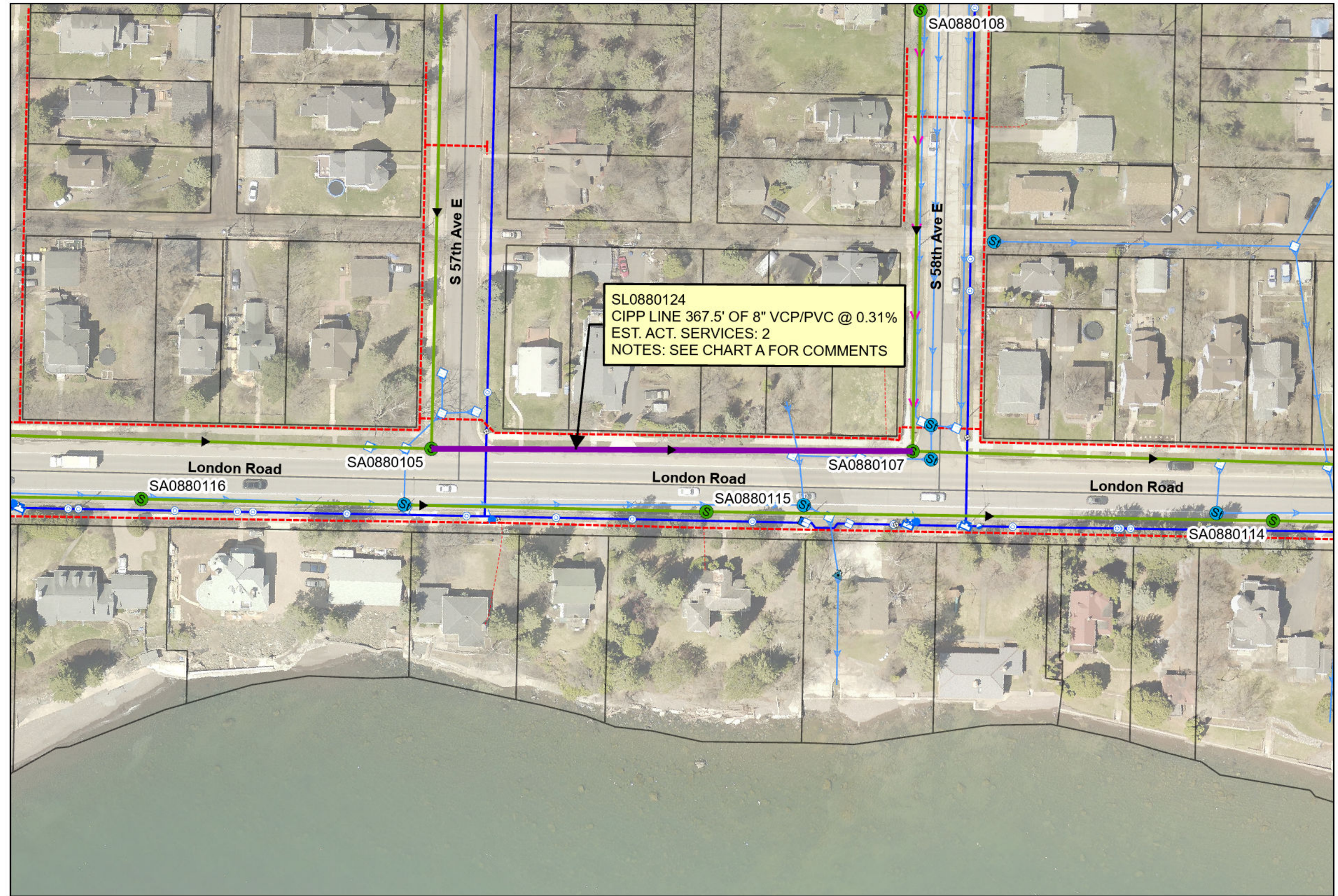
OVERVIEW MAP



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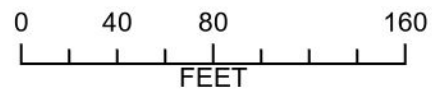


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2025 CITYWIDE SANITARY SEWER CIPP LINING
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PAGE 11

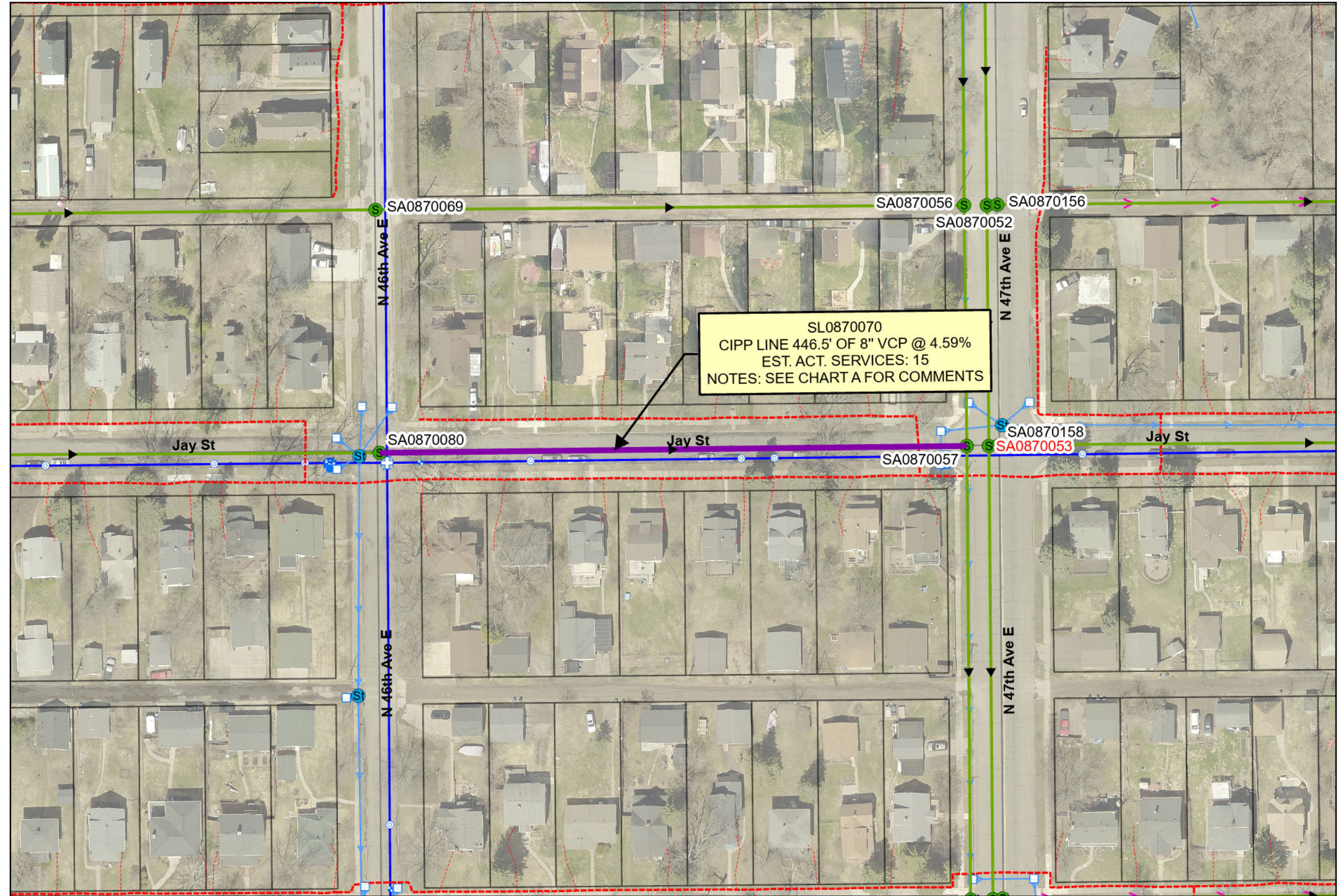
OVERVIEW MAP



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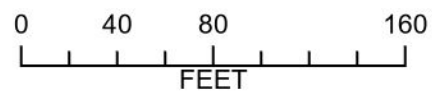


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2025 CITYWIDE SANITARY SEWER CIPP LINING
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PAGE 12

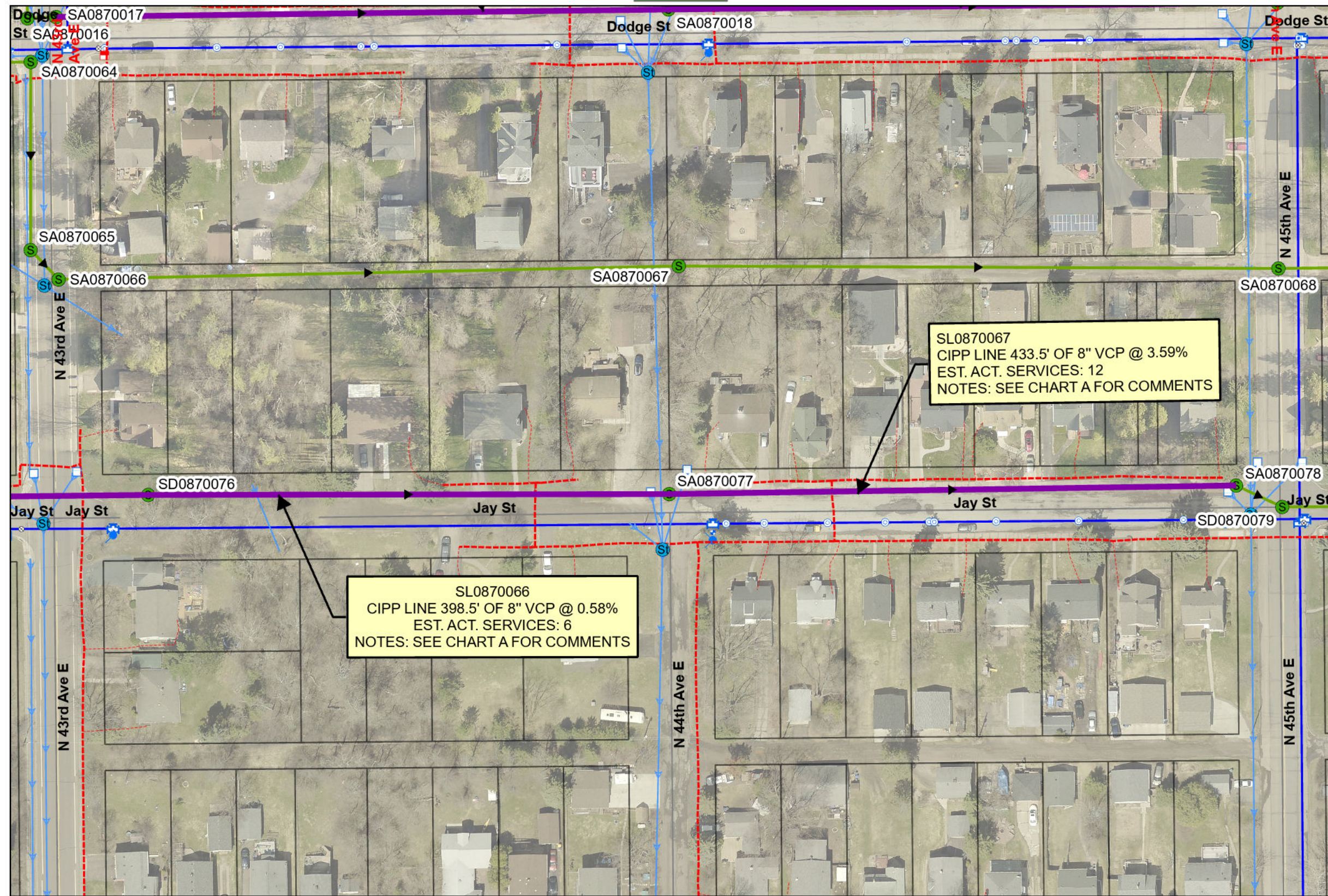
OVERVIEW MAP



LEGEND

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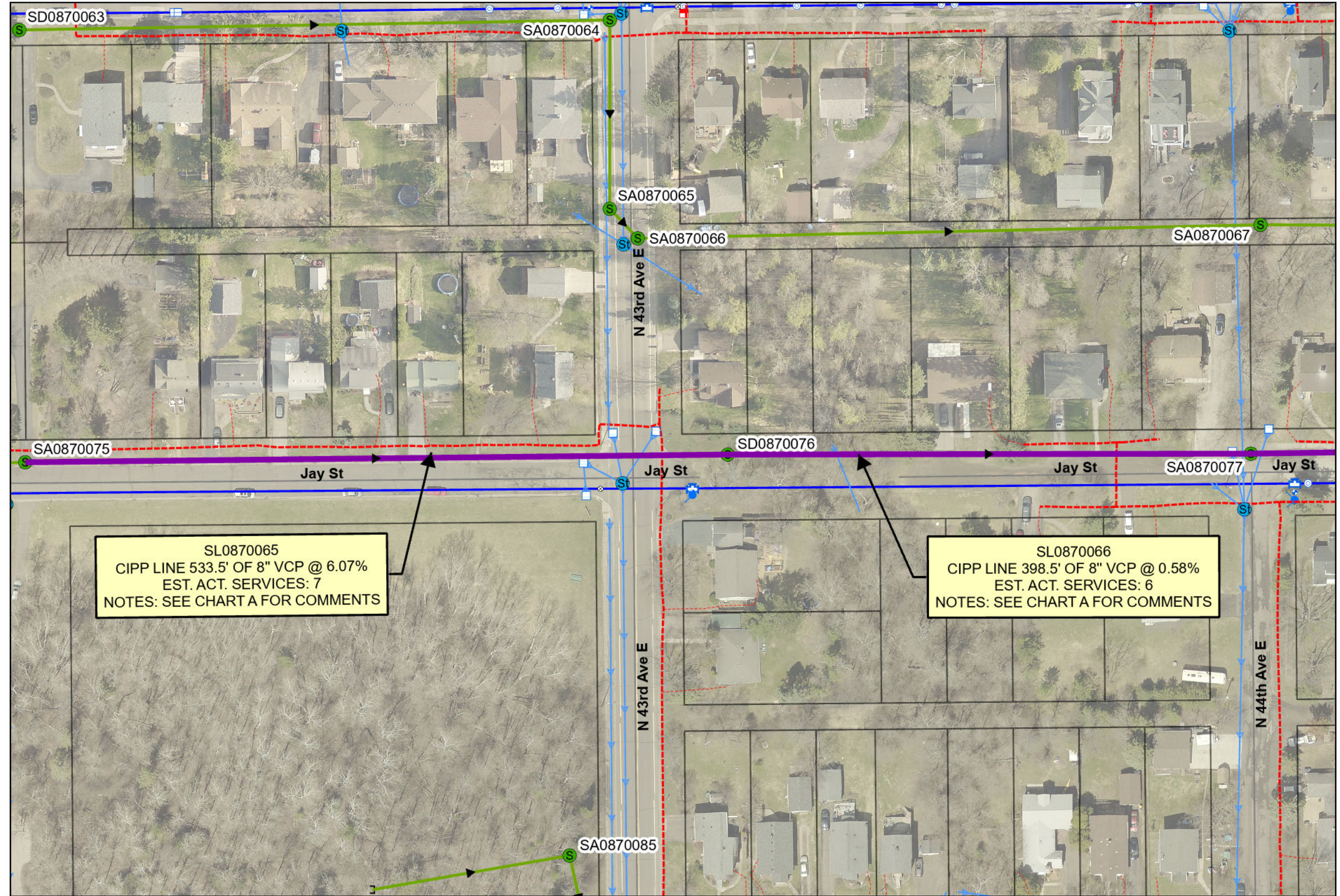
OVERVIEW MAP



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PLAN



SL0870065
CIPP LINE 533.5' OF 8" VCP @ 6.07%
EST. ACT. SERVICES: 7
NOTES: SEE CHART A FOR COMMENTS

SL0870066
CIPP LINE 398.5' OF 8" VCP @ 0.58%
EST. ACT. SERVICES: 6
NOTES: SEE CHART A FOR COMMENTS

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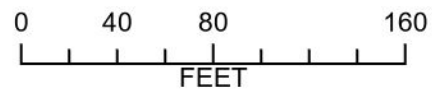
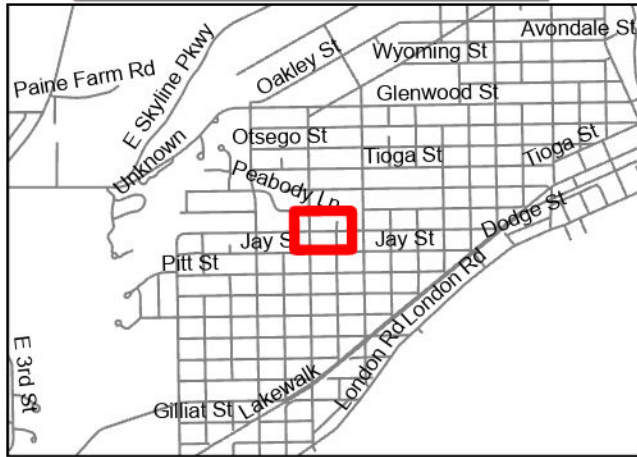


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2025 CITYWIDE SANITARY SEWER CIPP LINING
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PAGE 14

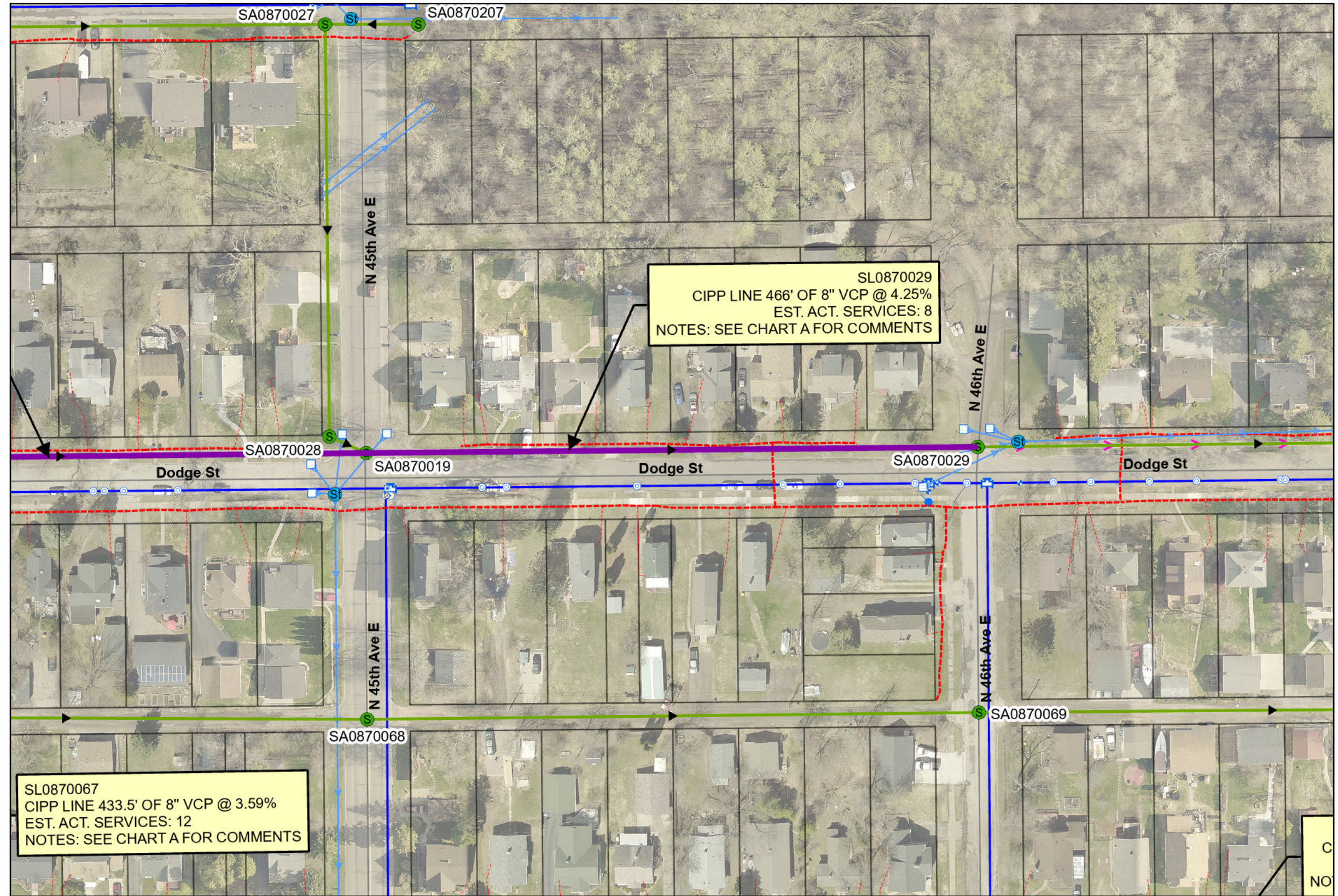
OVERVIEW MAP



LEGEND

- 2280-CIPP LINES EXPORT
- SANITARY MANHOLE
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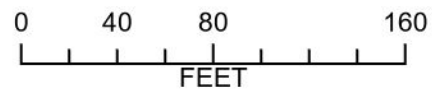


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2025 CITYWIDE SANITARY SEWER CIPP LINING
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PAGE 15

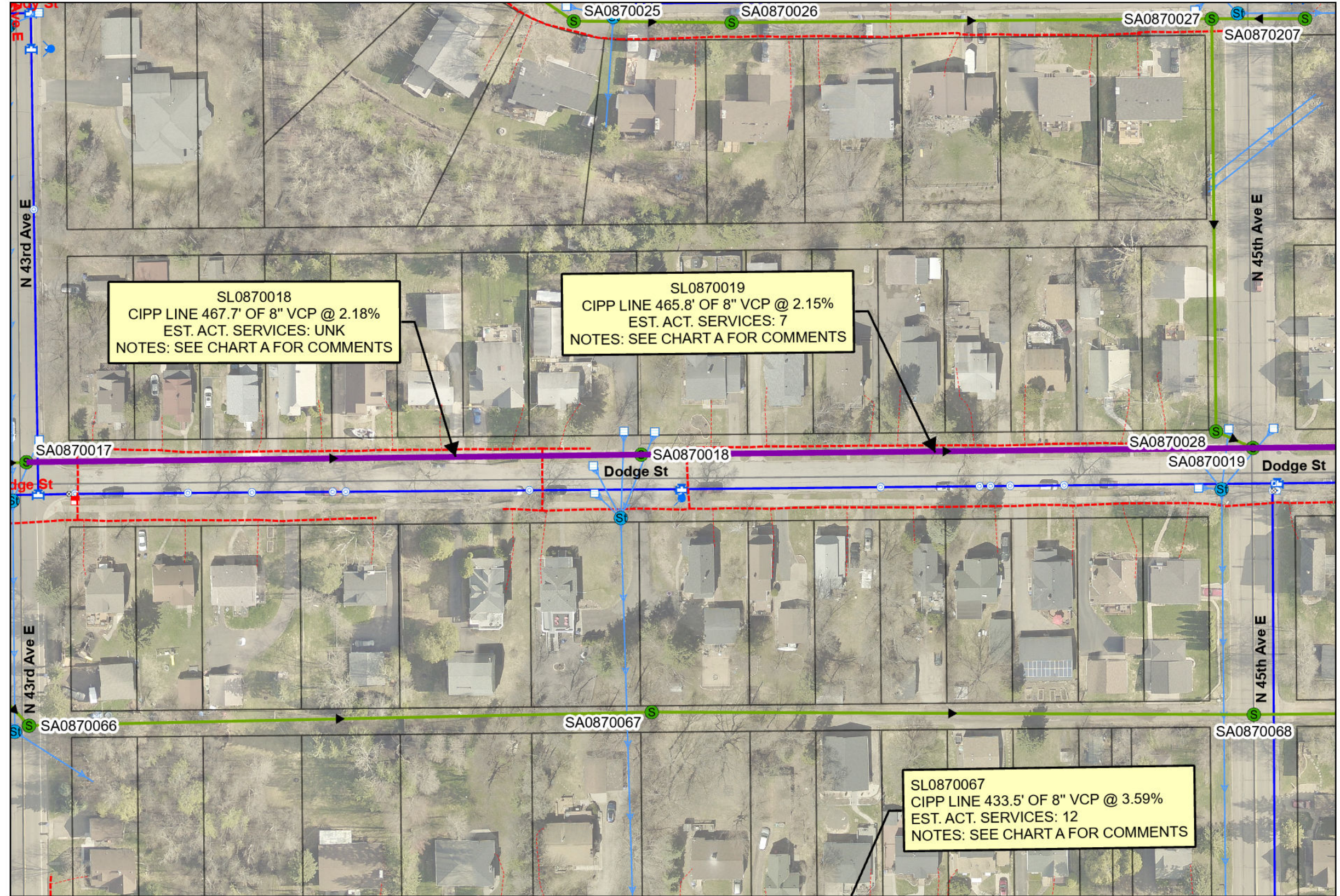
OVERVIEW MAP



LEGEND

- 2280-CIPP LINES EXPORT
- SANITARY MANHOLE
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PLAN



SL0870018
CIPP LINE 467.7' OF 8" VCP @ 2.18%
EST. ACT. SERVICES: UNK
NOTES: SEE CHART A FOR COMMENTS

SL0870019
CIPP LINE 465.8' OF 8" VCP @ 2.15%
EST. ACT. SERVICES: 7
NOTES: SEE CHART A FOR COMMENTS

SL0870067
CIPP LINE 433.5' OF 8" VCP @ 3.59%
EST. ACT. SERVICES: 12
NOTES: SEE CHART A FOR COMMENTS

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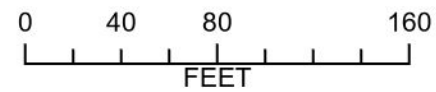


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2025 CITYWIDE SANITARY SEWER CIPP LINING
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PAGE 16

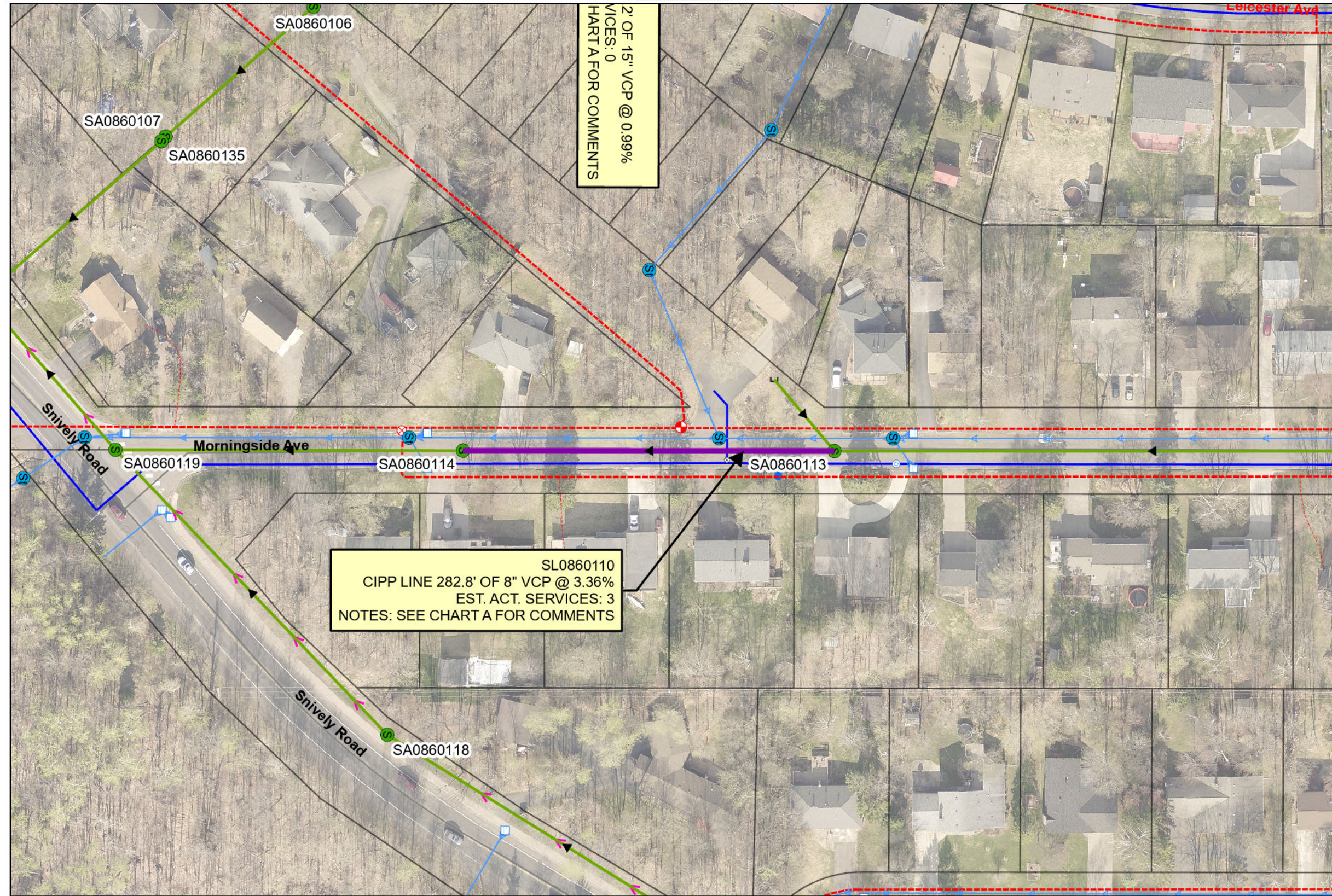
OVERVIEW MAP



LEGEND

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PLAN



2' OF 15" VCP @ 0.99%
 VICES: 0
 HART A FOR COMMENTS

SL0860110
 CIPP LINE 282.8' OF 8" VCP @ 3.36%
 EST. ACT. SERVICES: 3
 NOTES: SEE CHART A FOR COMMENTS

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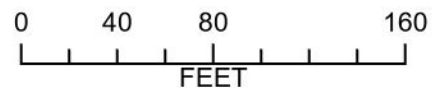


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2025 CITYWIDE SANITARY SEWER CIPP LINING
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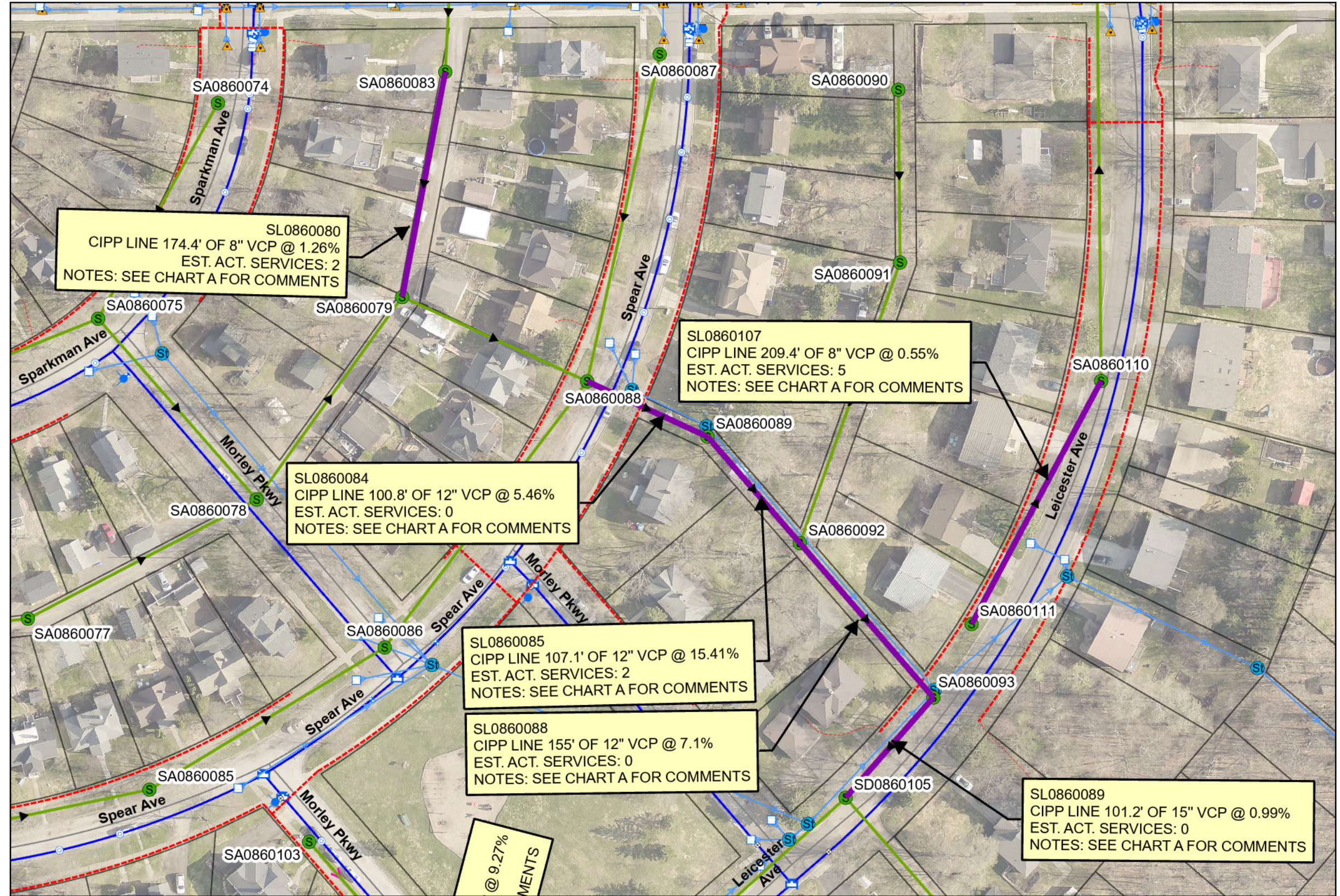
OVERVIEW MAP



LEGEND

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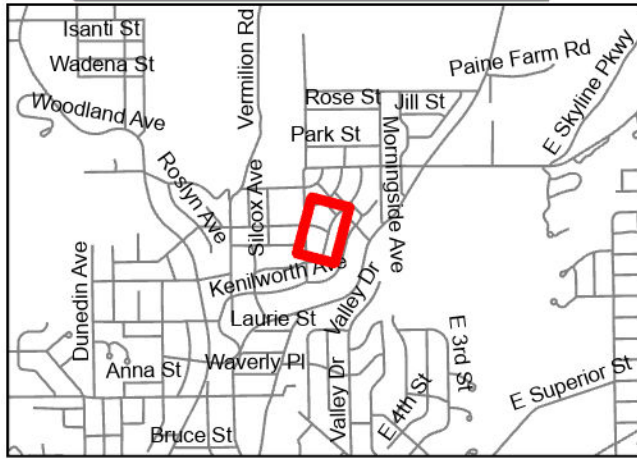


CITY OF DULUTH
ENGINEERING DIVISION
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DULUTH, MN 55802

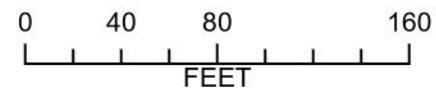
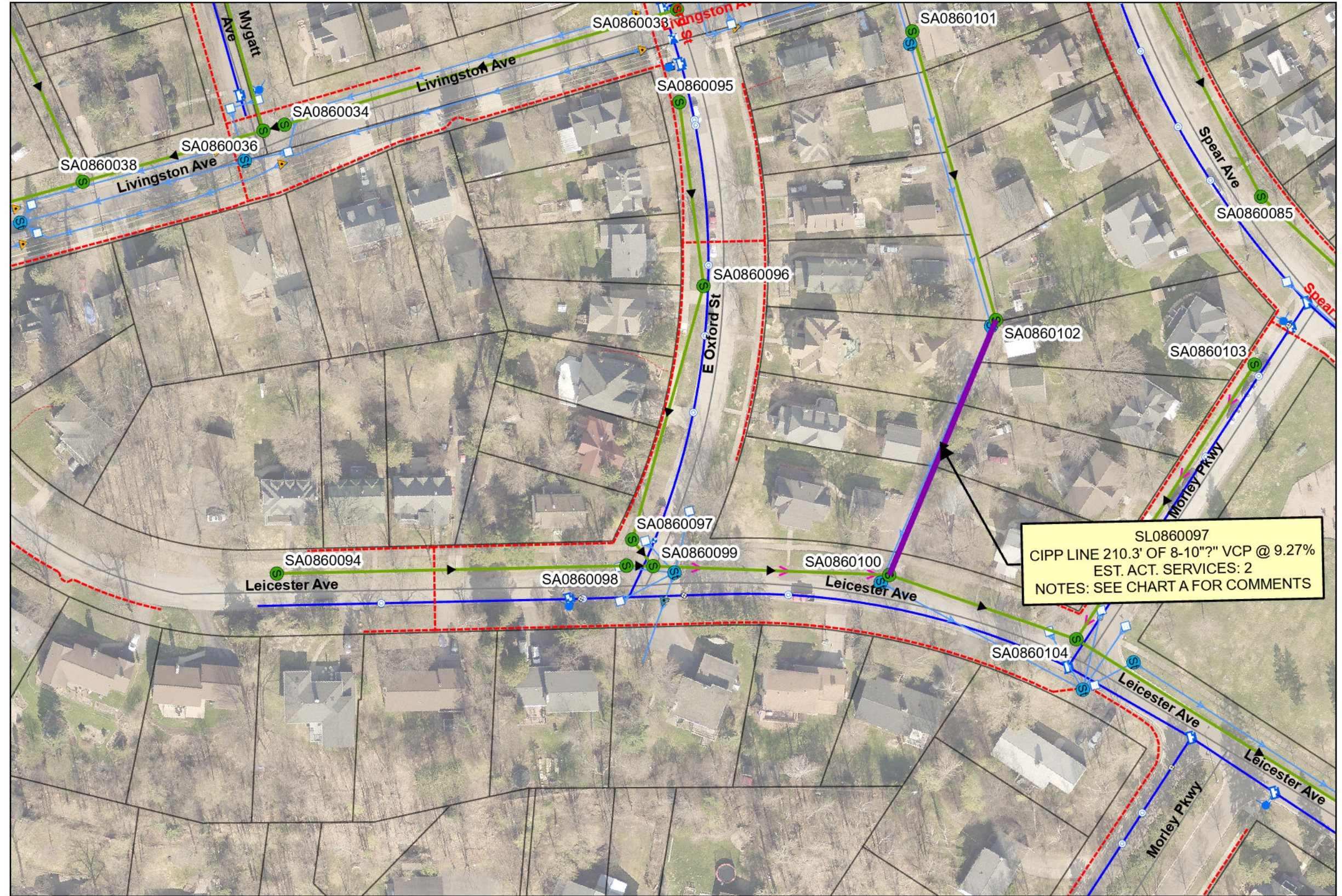
2025 CITYWIDE SANITARY SEWER CIPP LINING
CITY PROJECT NO.: 2280

DRAWN BY: PMR
PAGE 18

OVERVIEW MAP



PLAN



LEGEND

- 2280-CIPP LINES EXPORT
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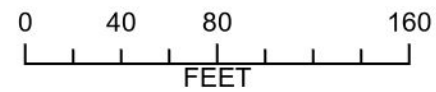


CITY OF DULUTH
ENGINEERING DIVISION
411 W. 1ST ST. RM. 240
DULUTH, MN 55802

2025 CITYWIDE SANITARY SEWER CIPP LINING
CITY PROJECT NO.: 2280

DRAWN BY: PMR
PAGE 19

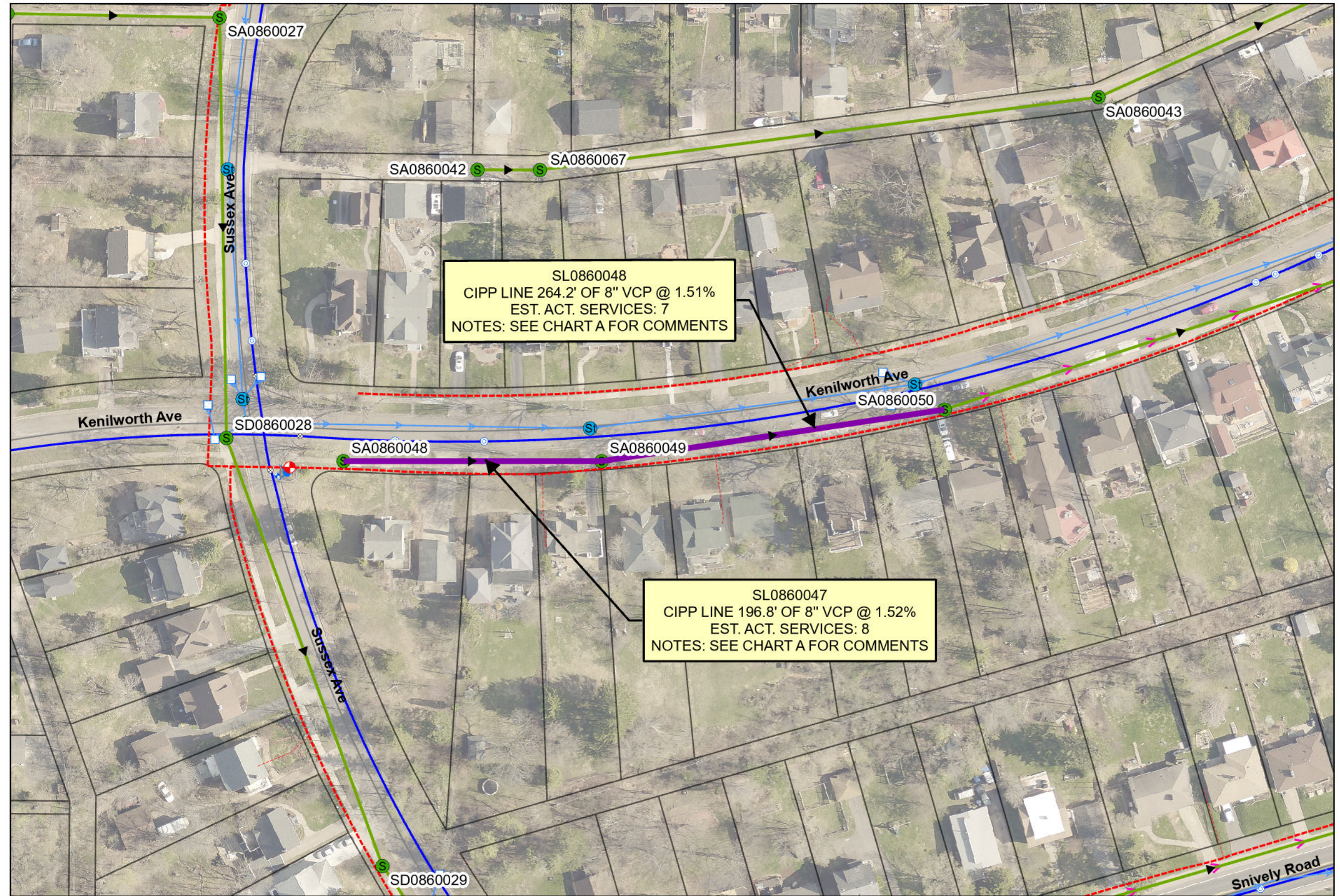
OVERVIEW MAP



LEGEND

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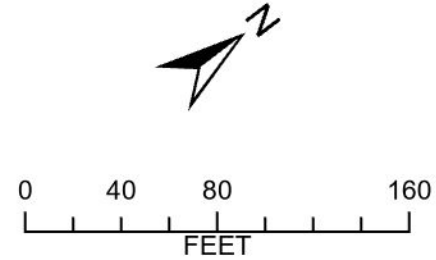
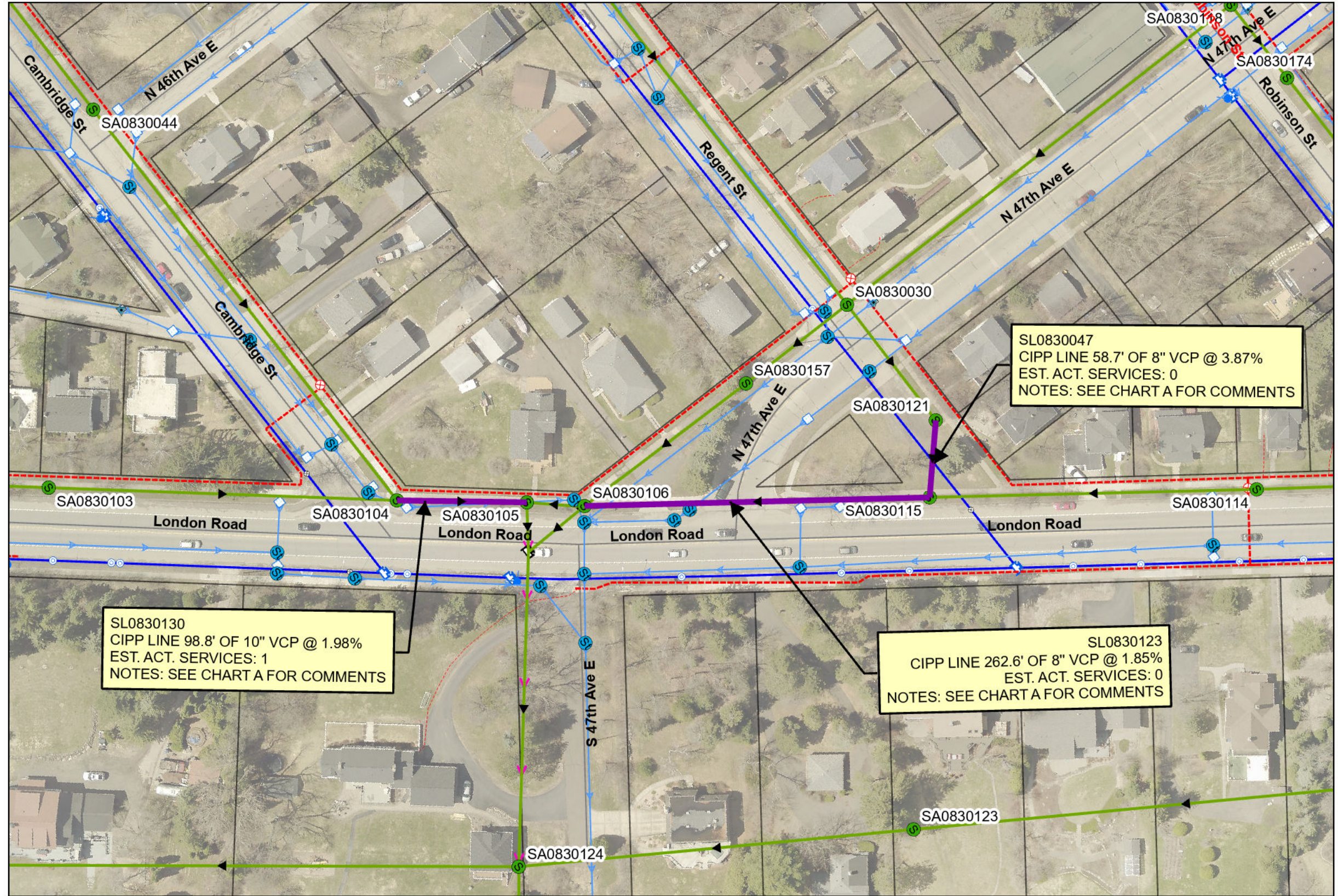
2025 CITYWIDE SANITARY SEWER CIPP LINING
CITY PROJECT NO.: 2280

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PAGE 20

OVERVIEW MAP



PLAN



- LEGEND**
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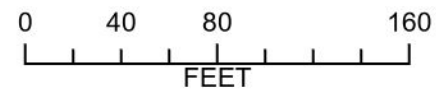


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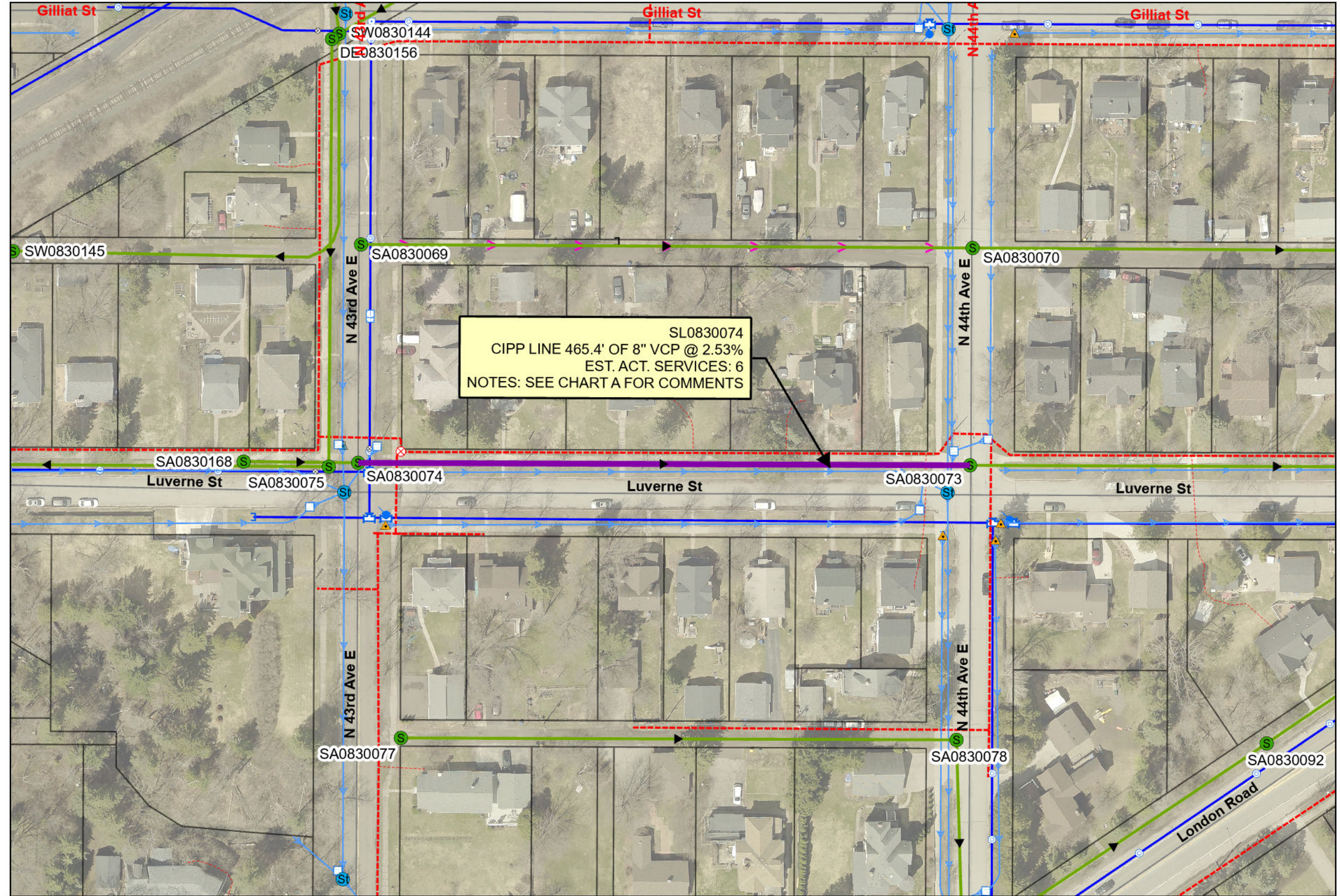
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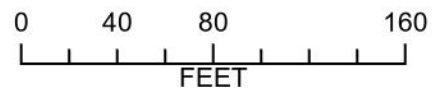
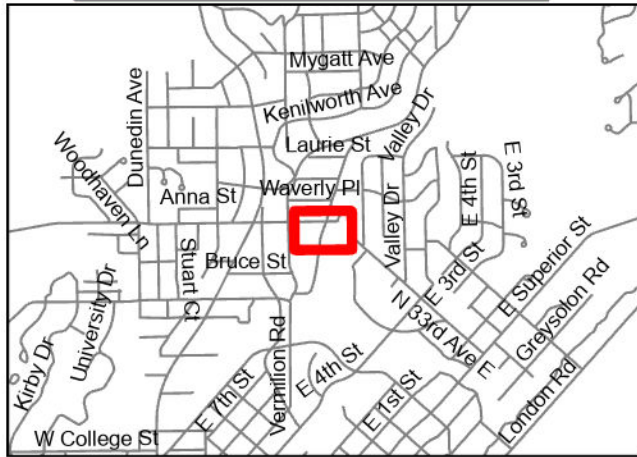


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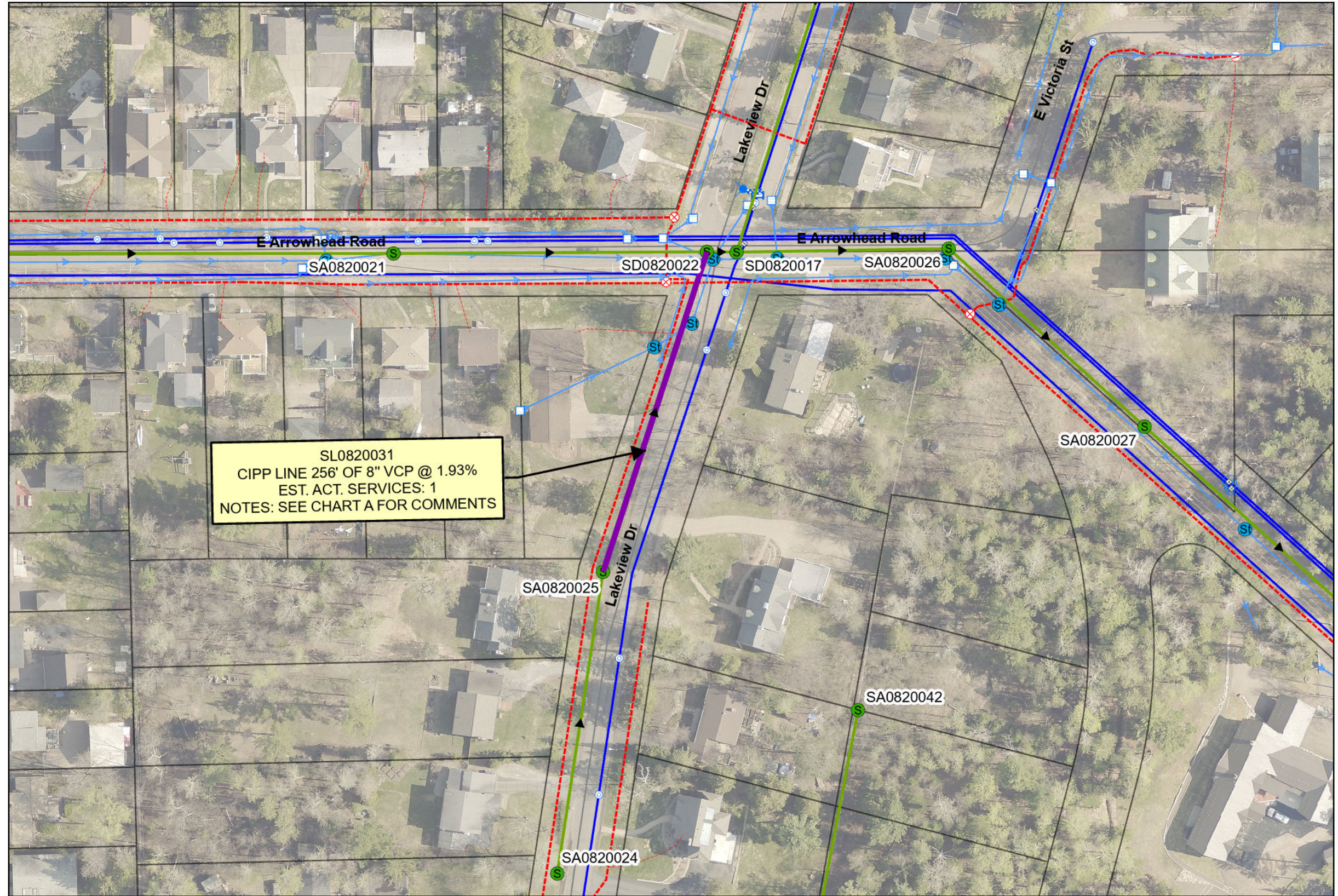
OVERVIEW MAP



LEGEND

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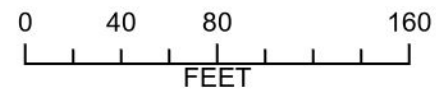
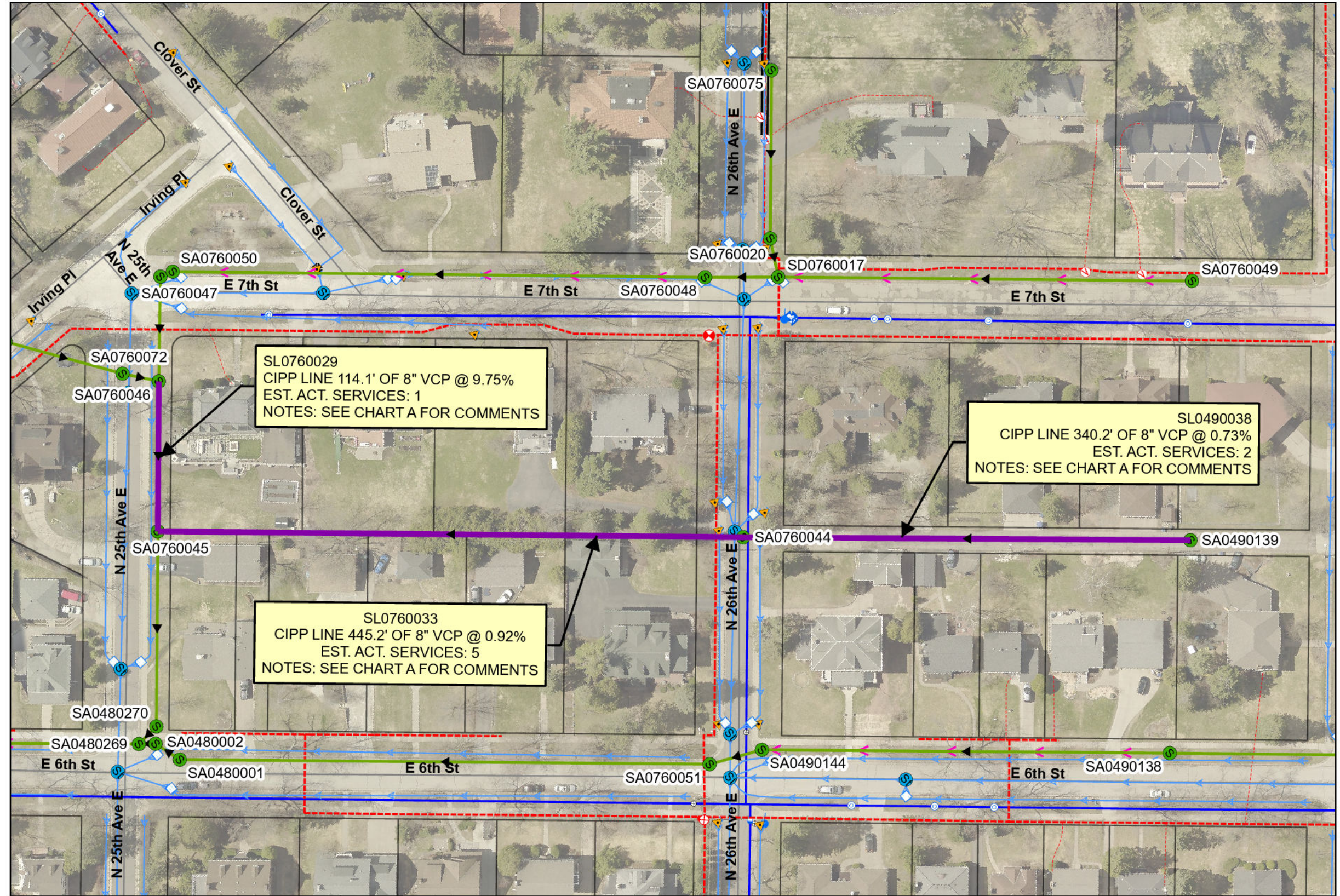
2025 CITYWIDE SANITARY SEWER CIPP LINING
CITY PROJECT NO.: 2280

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OVERVIEW MAP



PLAN



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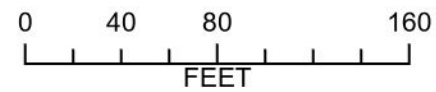
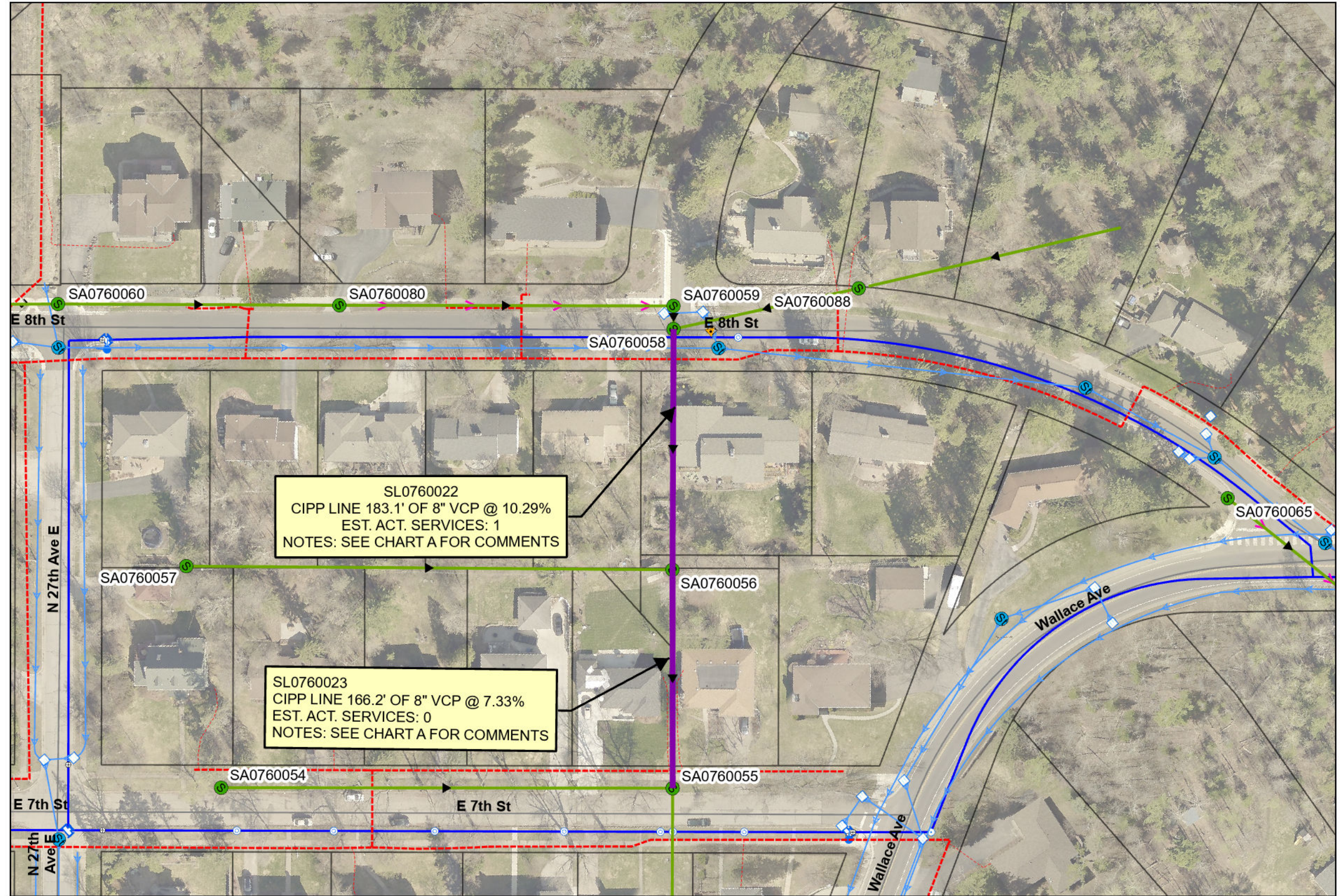
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OVERVIEW MAP



PLAN



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SL0760022
 CIPP LINE 183.1' OF 8" VCP @ 10.29%
 EST. ACT. SERVICES: 1
 NOTES: SEE CHART A FOR COMMENTS

SL0760023
 CIPP LINE 166.2' OF 8" VCP @ 7.33%
 EST. ACT. SERVICES: 0
 NOTES: SEE CHART A FOR COMMENTS

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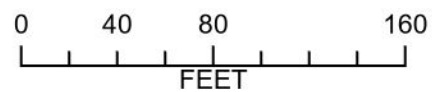


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 411 W. 1ST ST. RM. 240
 DULUTH, MN 55802

2025 CITYWIDE SANITARY SEWER CIPP LINING
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 PAGE 25

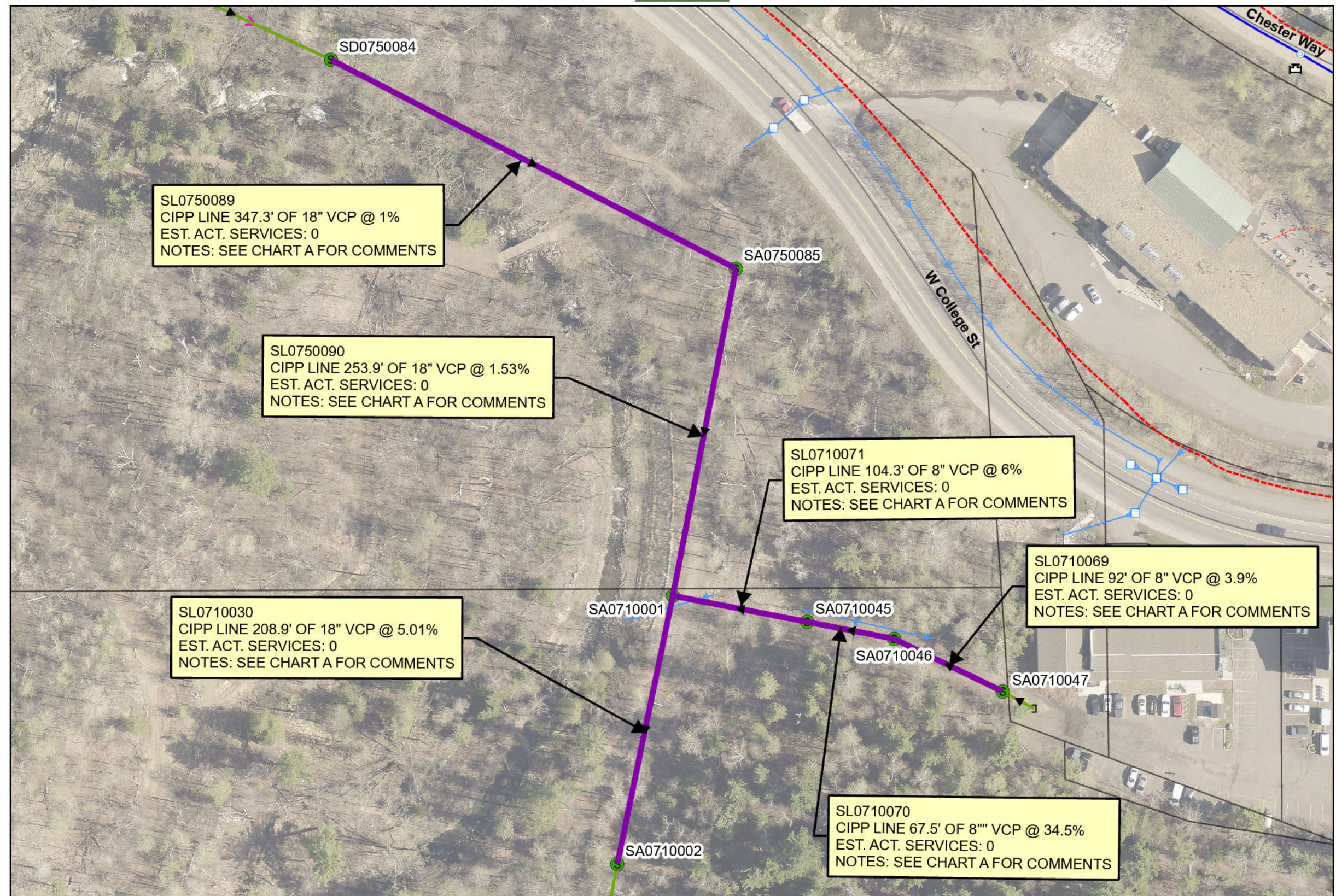
OVERVIEW MAP



LEGEND

- 2280-CIPP LINES EXPORT
- SANITARY MANHOLE
- STORM MANHOLE
- SAN CIPP JOIN
- SANITARY MAIN
- STORM CATCH BASIN
- STORM MAIN
- GAS MAIN
- WATER MAIN

PLAN



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SIGNATURE: Tom A. Sanderson LIC. NO: 50401 DATE: 11/05/2025

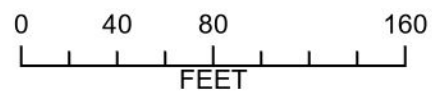


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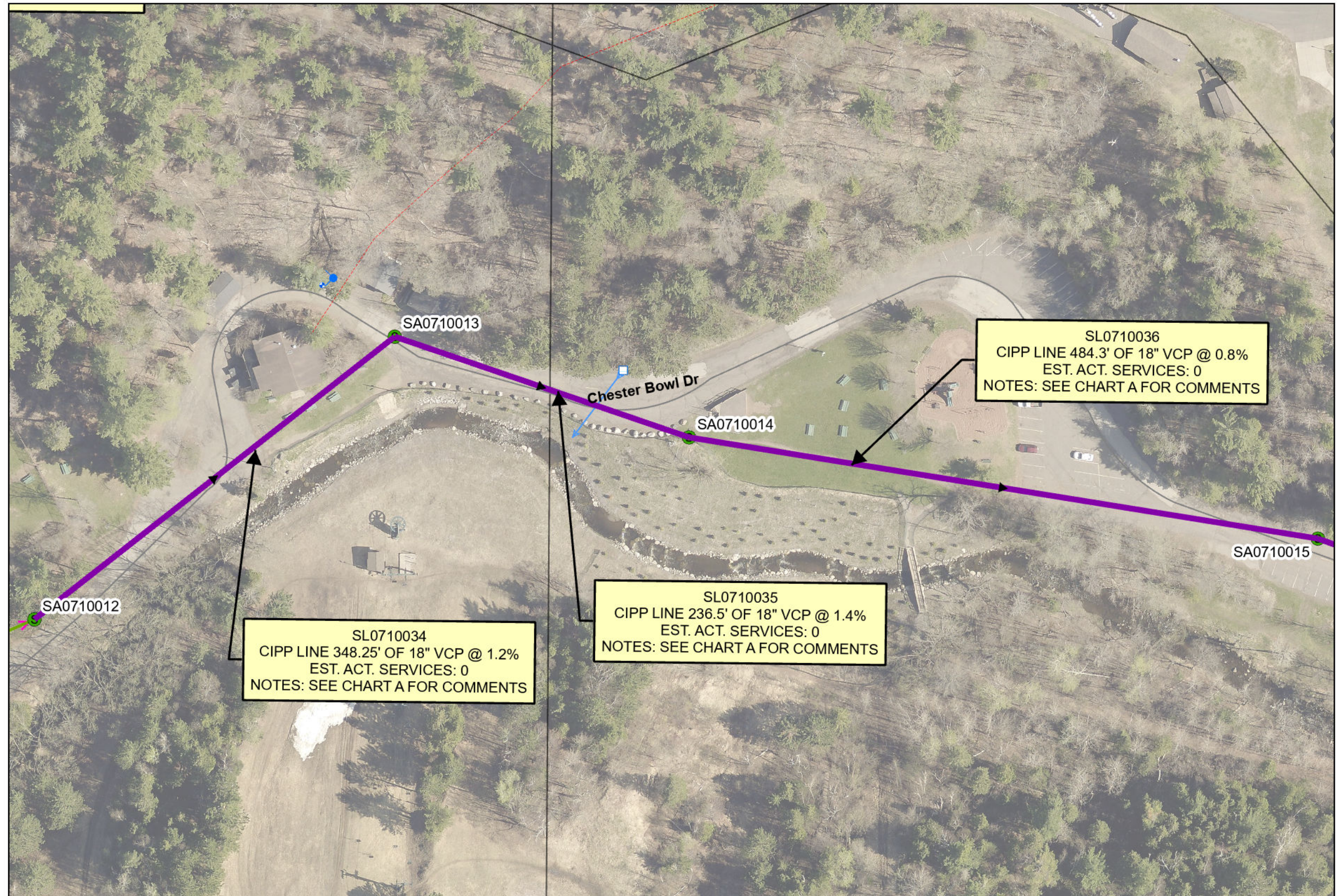
OVERVIEW MAP



LEGEND

- 2280-CIPP LINES EXPORT
- SANITARY MANHOLE
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- WATER MAIN

PLAN



SL0710036
CIPP LINE 484.3' OF 18" VCP @ 0.8%
EST. ACT. SERVICES: 0
NOTES: SEE CHART A FOR COMMENTS

SL0710035
CIPP LINE 236.5' OF 18" VCP @ 1.4%
EST. ACT. SERVICES: 0
NOTES: SEE CHART A FOR COMMENTS

SL0710034
CIPP LINE 348.25' OF 18" VCP @ 1.2%
EST. ACT. SERVICES: 0
NOTES: SEE CHART A FOR COMMENTS

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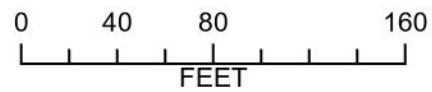


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OVERVIEW MAP



LEGEND

- 2280-CIPP LINES EXPORT
- SANITARY MANHOLE
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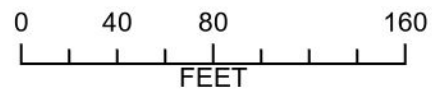


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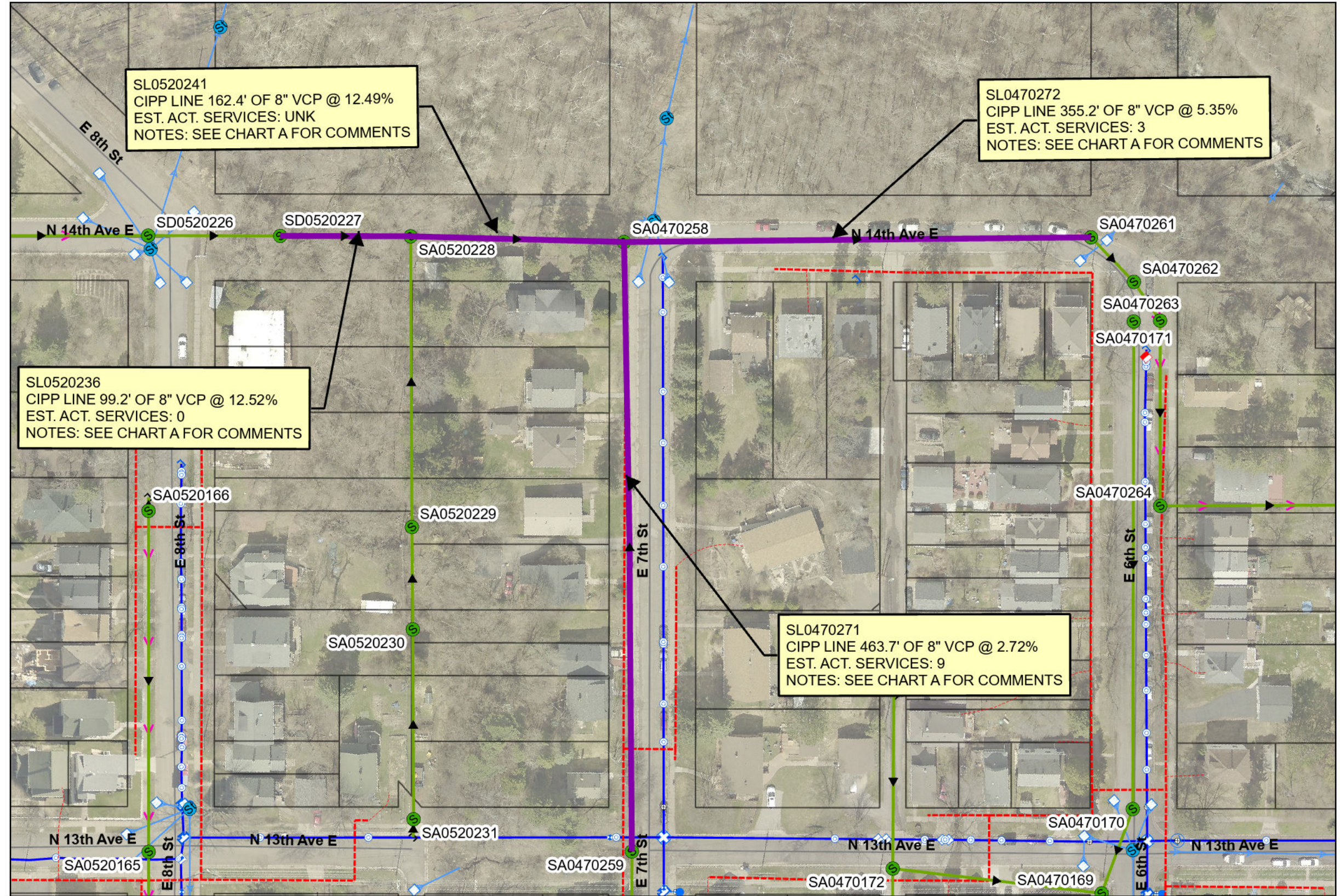
OVERVIEW MAP



LEGEND

- 2280-CIPP LINES EXPORT
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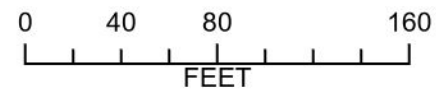
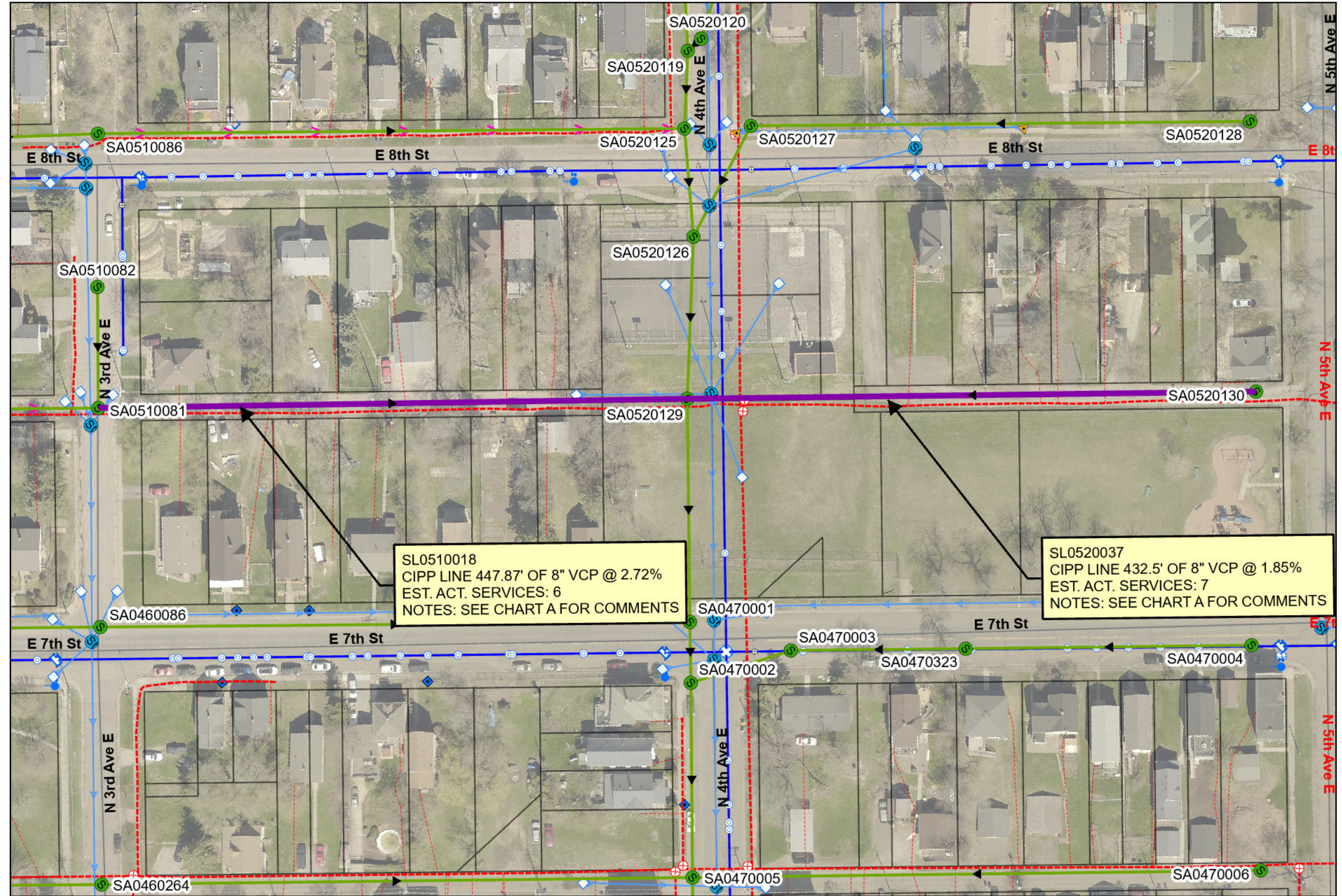
2025 CITYWIDE SANITARY SEWER CIPP LINING
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OVERVIEW MAP



PLAN



LEGEND

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- WATER MAIN

SL0510018
 CIPP LINE 447.87' OF 8" VCP @ 2.72%
 EST. ACT. SERVICES: 6
 NOTES: SEE CHART A FOR COMMENTS

SL0520037
 CIPP LINE 432.5' OF 8" VCP @ 1.85%
 EST. ACT. SERVICES: 7
 NOTES: SEE CHART A FOR COMMENTS

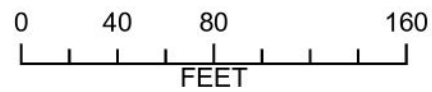
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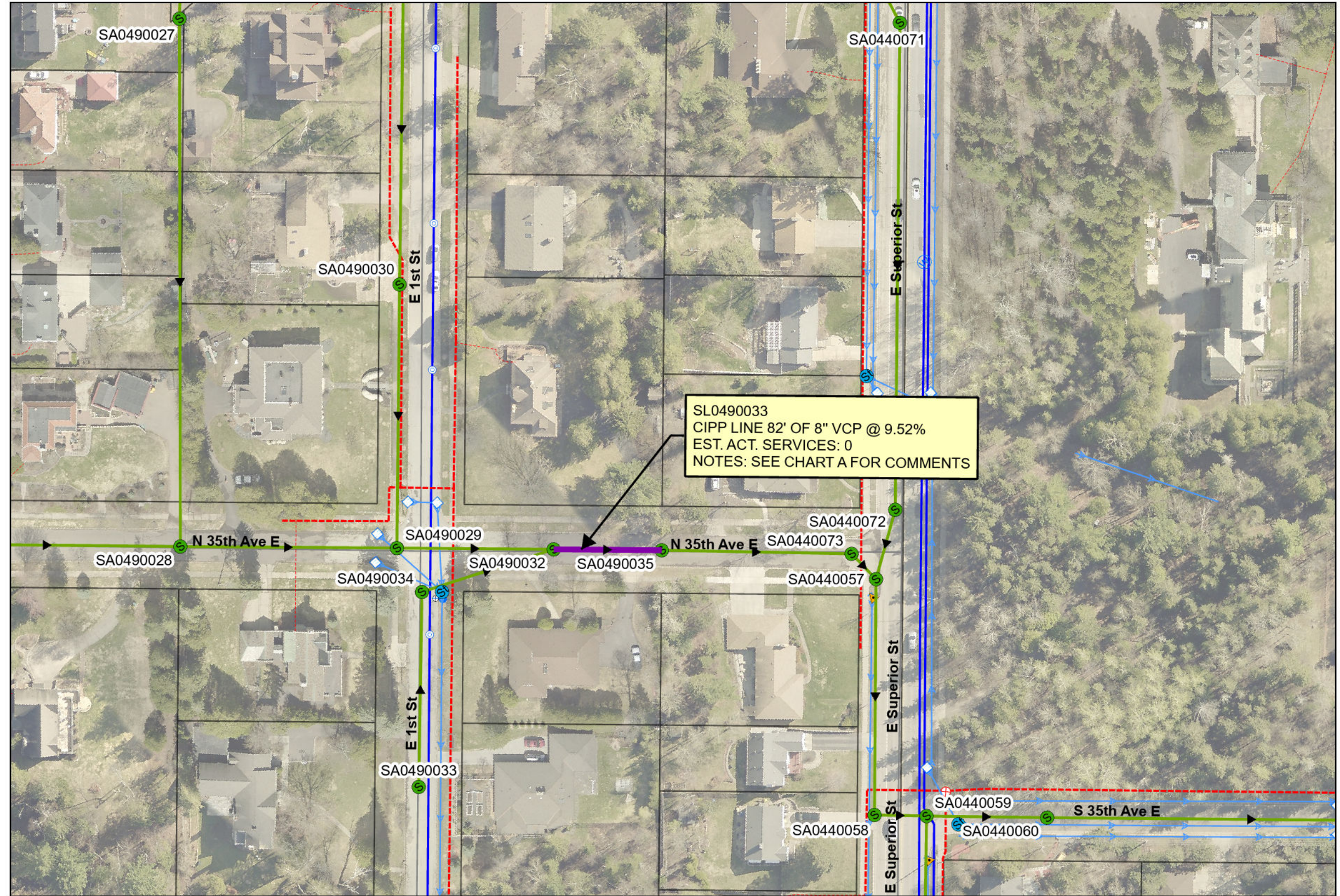
OVERVIEW MAP



LEGEND

-  2280-CIPP LINES EXPORT
-  SANITARY MANHOLE
-  STORM MANHOLE
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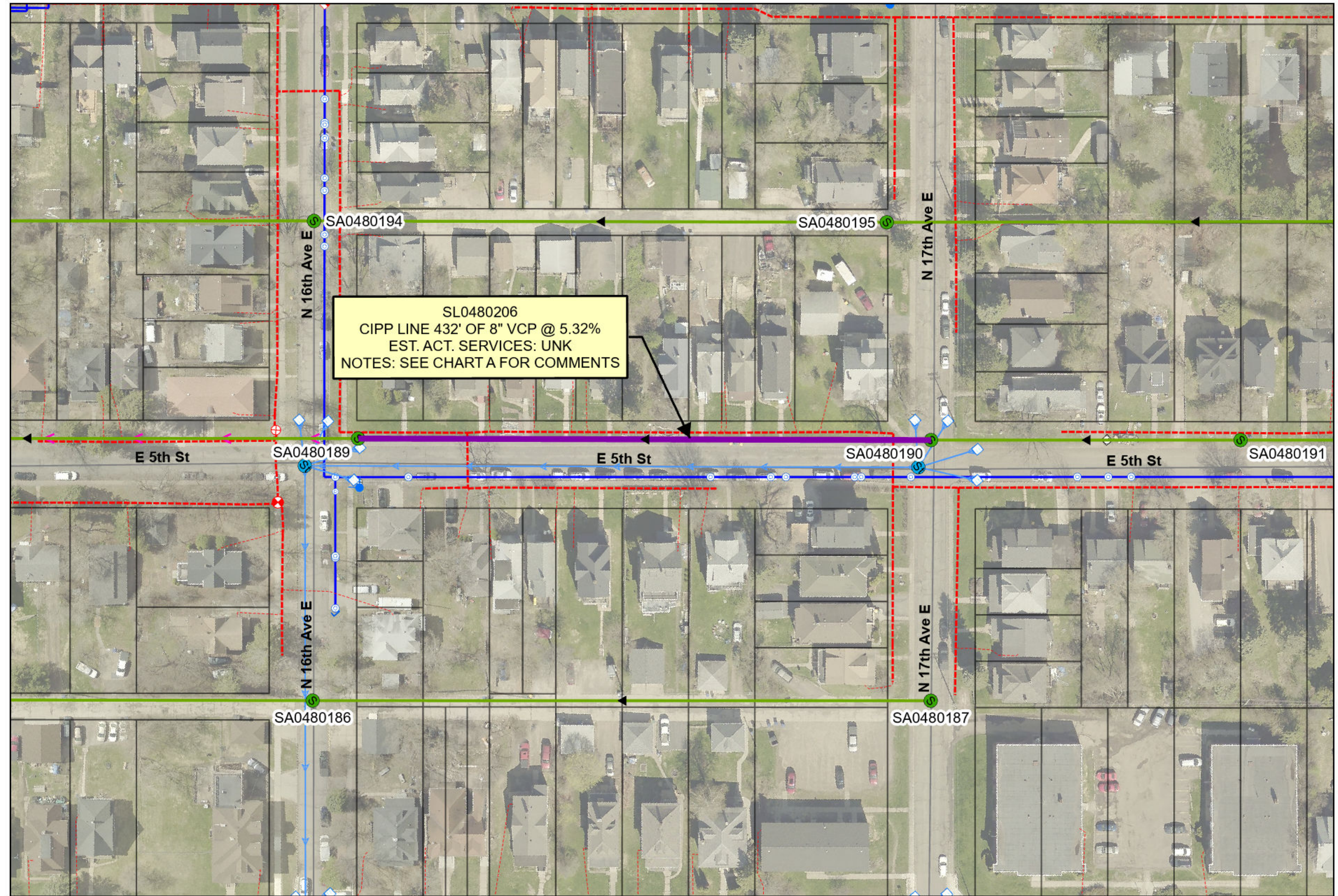
OVERVIEW MAP



LEGEND

- 2280-CIPP LINES EXPORT
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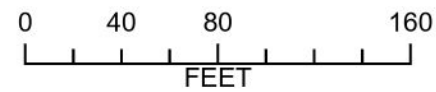
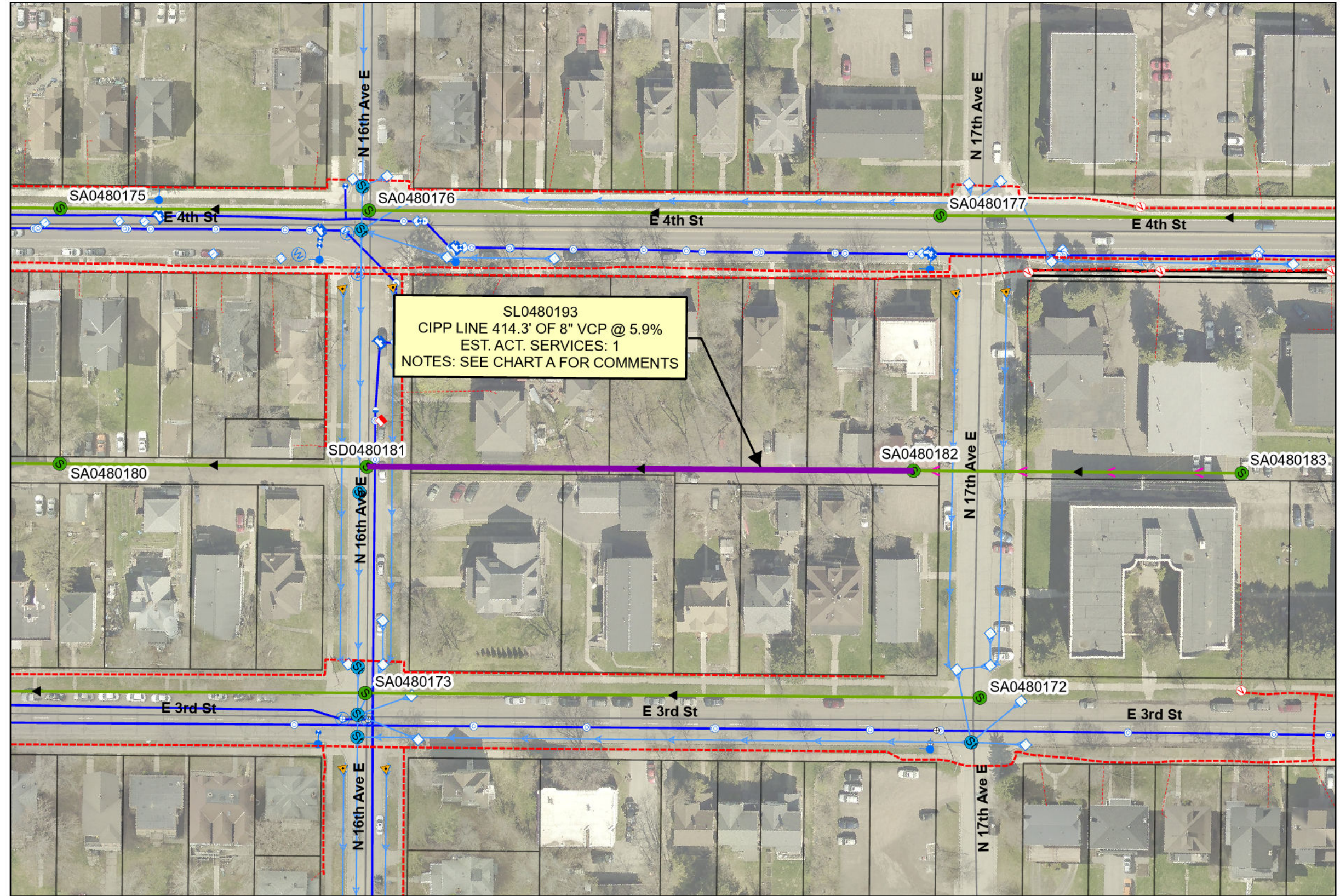
2025 CITYWIDE SANITARY SEWER CIPP LINING
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OVERVIEW MAP



PLAN



LEGEND

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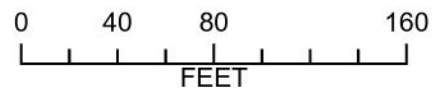


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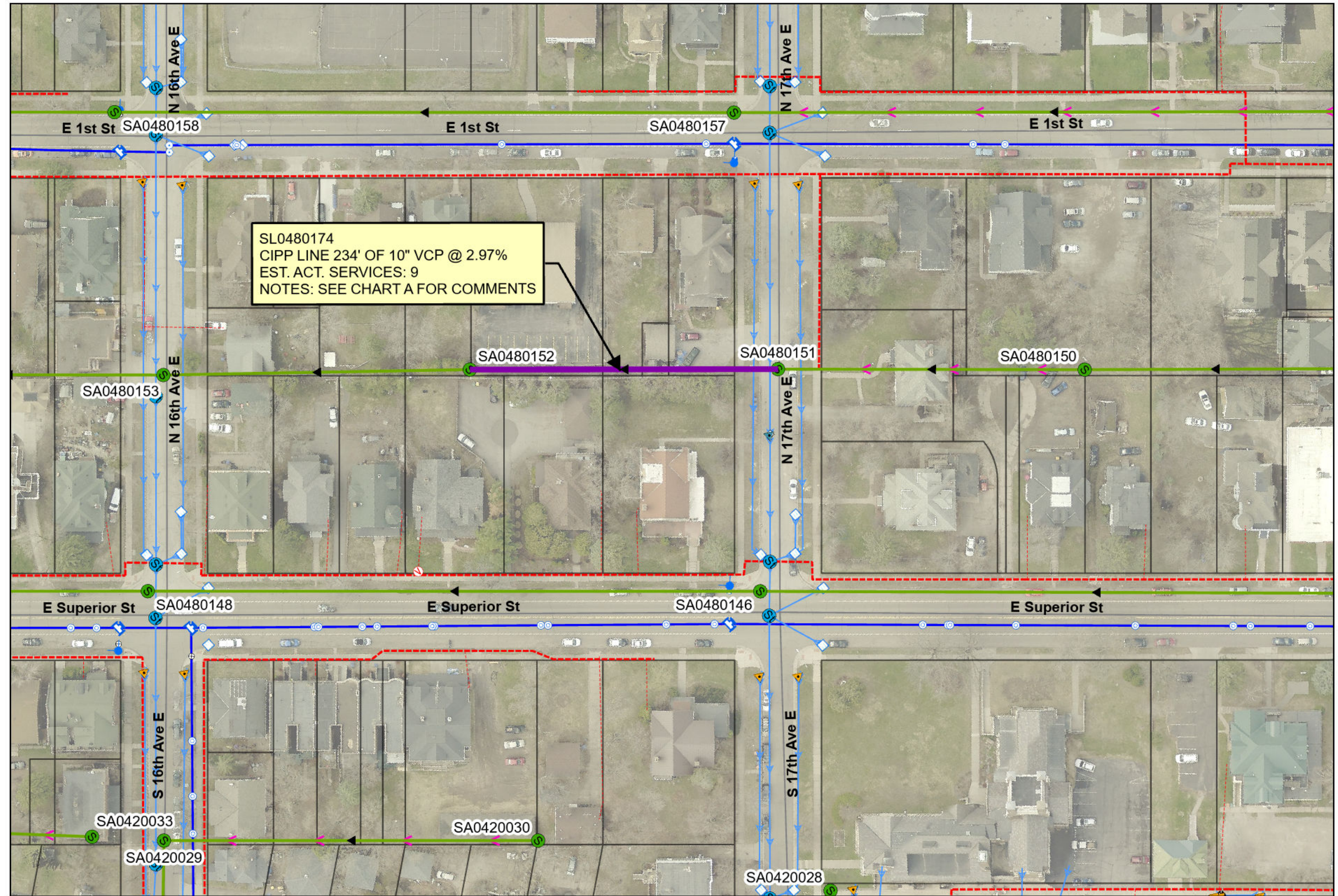
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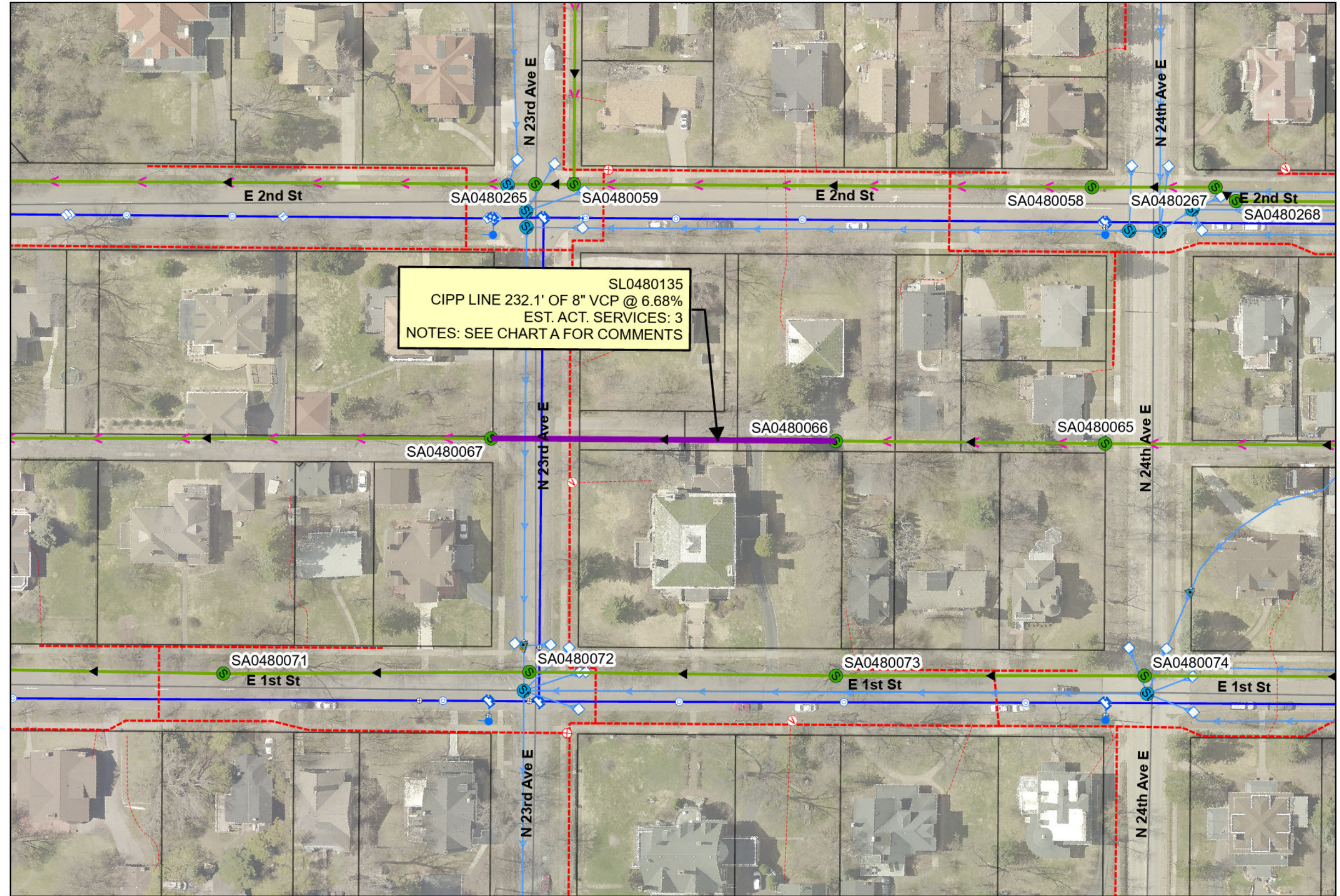
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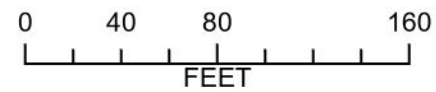
OVERVIEW MAP



PLAN



SL0480135
 CIPP LINE 232.1' OF 8" VCP @ 6.68%
 EST. ACT. SERVICES: 3
 NOTES: SEE CHART A FOR COMMENTS



LEGEND

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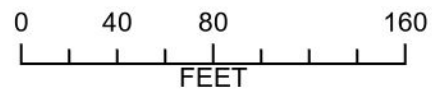


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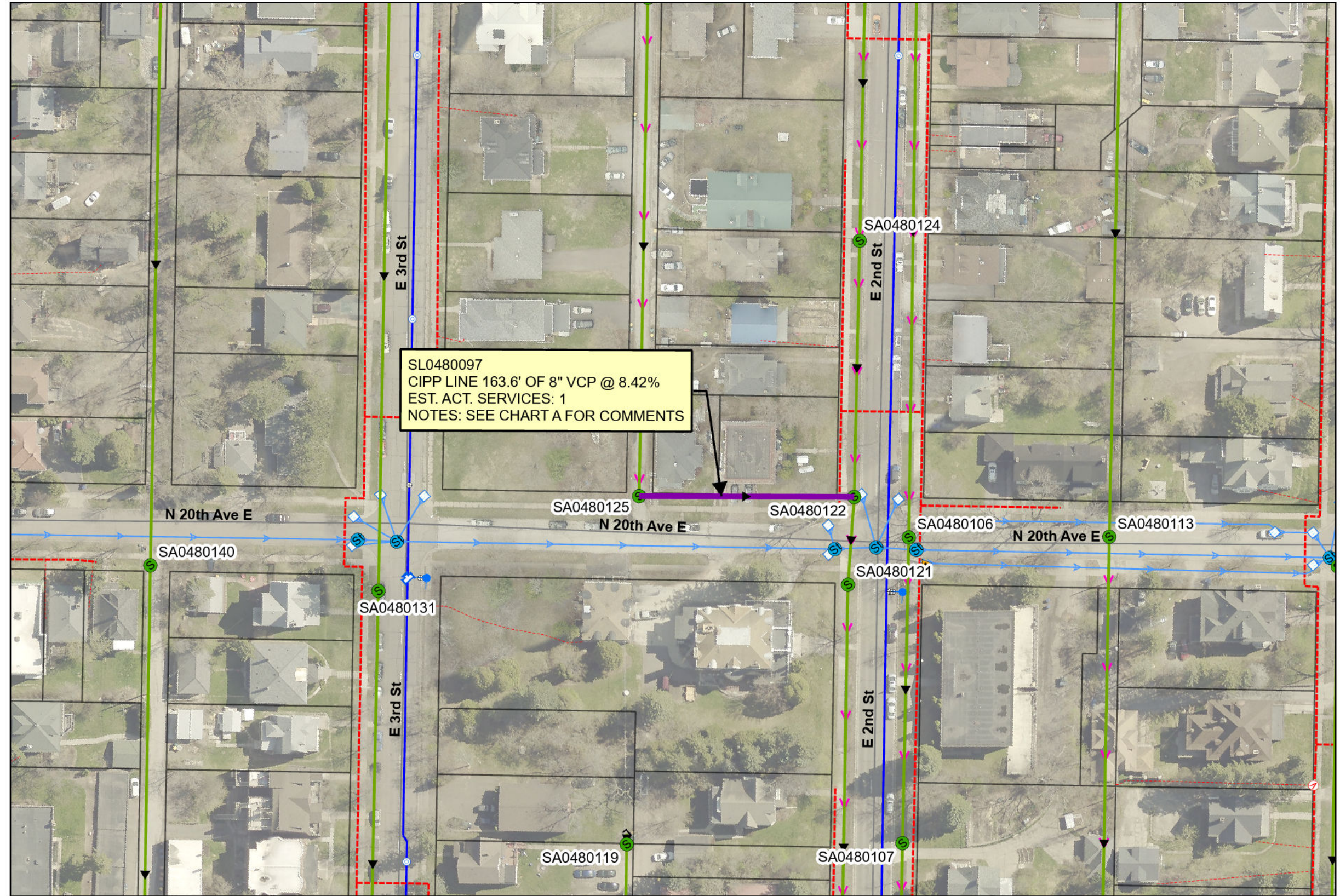
OVERVIEW MAP



LEGEND

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- SANITARY MANHOLE
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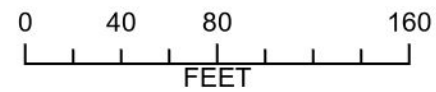
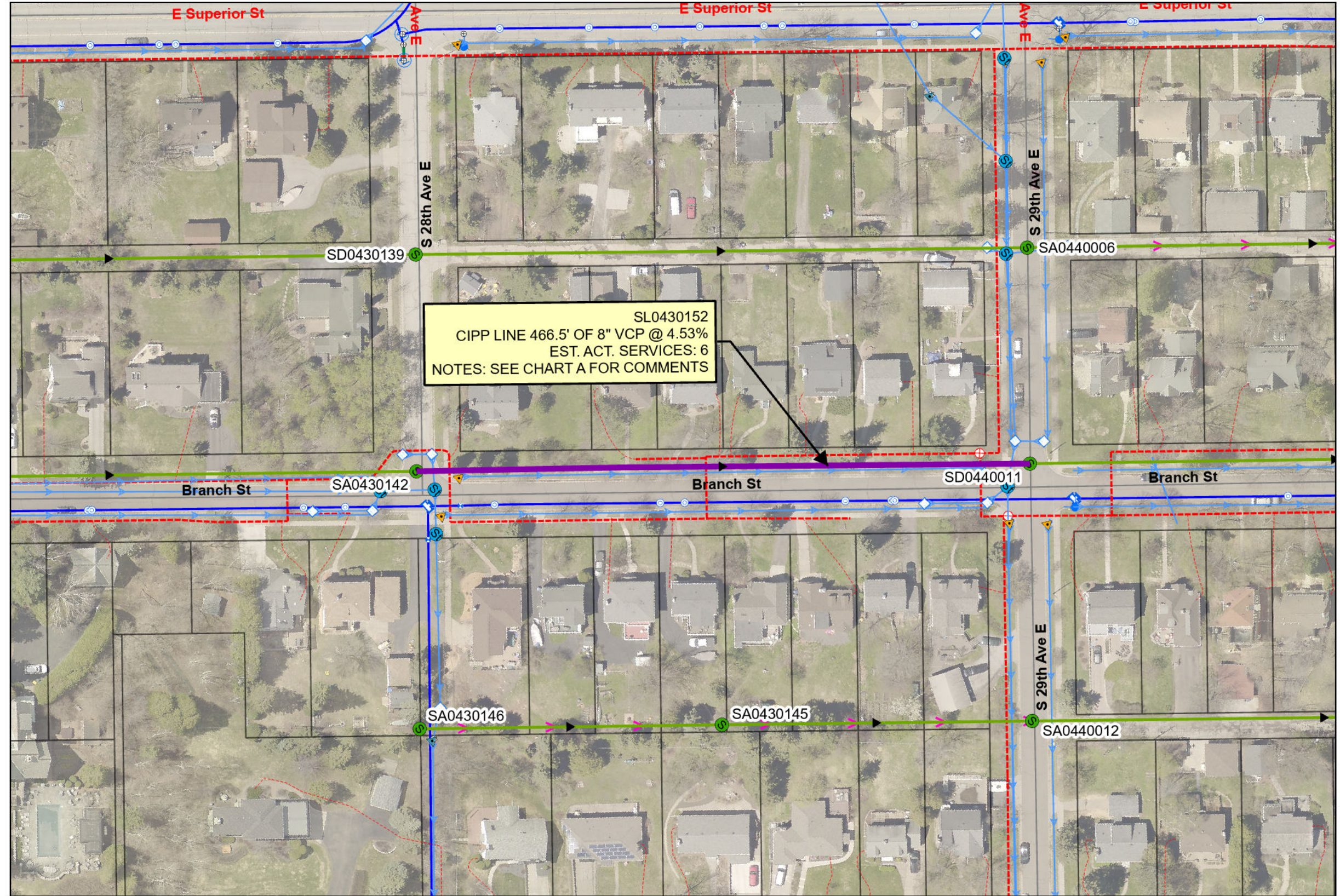
2025 CITYWIDE SANITARY SEWER CIPP LINING
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OVERVIEW MAP



PLAN



LEGEND

- 2280-CIPP LINES EXPORT
- SANITARY MANHOLE
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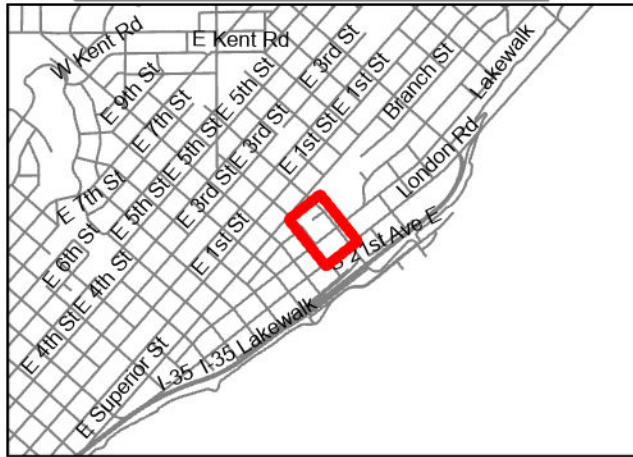


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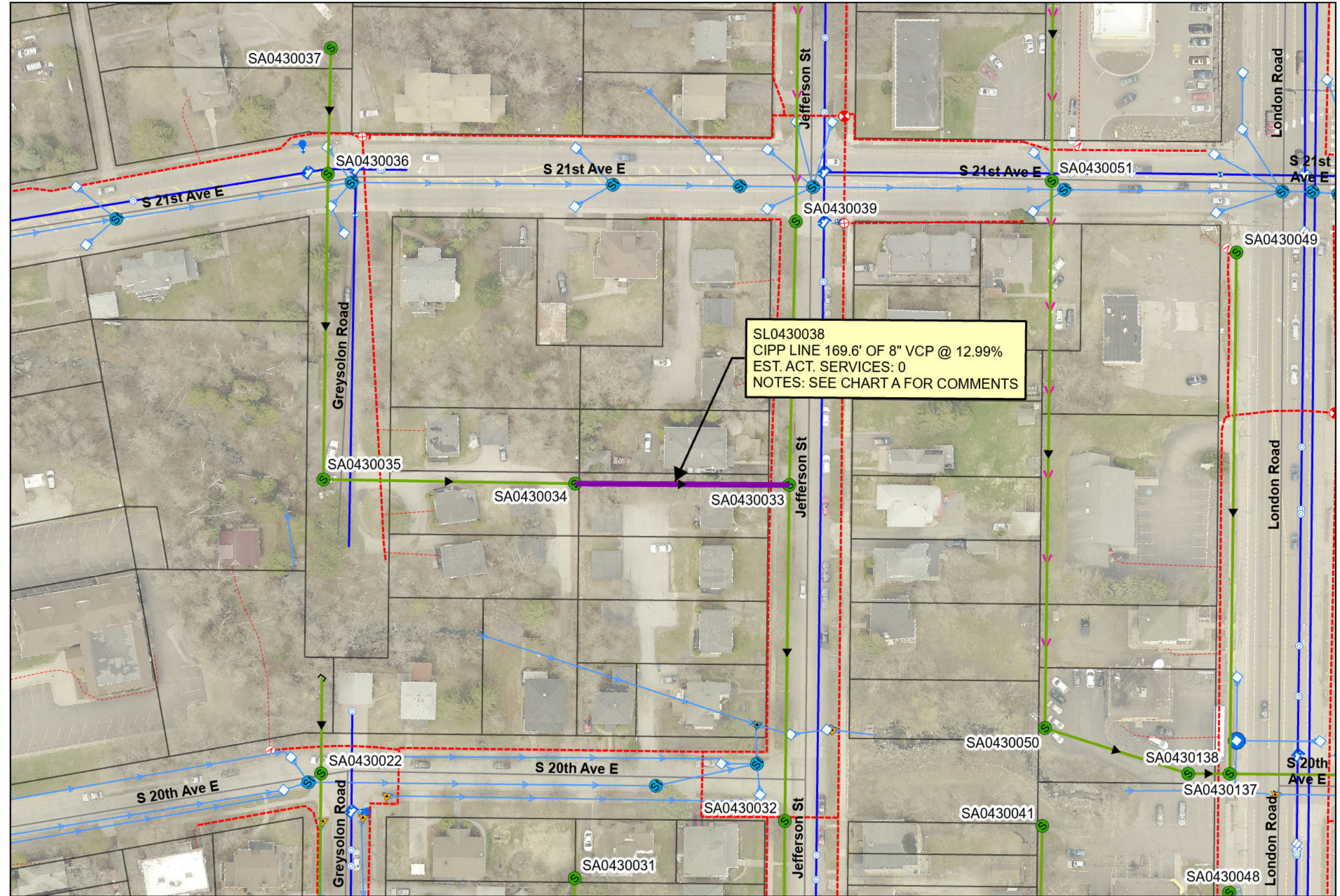
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