

# Purchasing Division Finance Department

Room 120 411 West First Street Duluth, Minnesota 55802



# Addendum 2 Solicitation 22-99498 RFP for Construction Inspection Services for CIPP Project

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

The draft plans and specs for the construction of this project are attached for your reference.

Please acknowledge receipt of this Addendum by including a copy of this page with your proposal. The pages included will not count toward any page limitation, if any, identified in the RFP.

Posted: 6.23.22

# **SPECIAL PROVISIONS**

**2022 Citywide CIPP Lining** 

City Project # 2037

City of Duluth, Minnesota 411 West 1<sup>st</sup> Street Duluth, MN 55802

# **CERTIFICATION**

I HEREBY CERTIFY THAT THIS plan, SPECIFICATION or report 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.

Tany A Sandwe	Tim A Sanders
Signature	Typed or Printed Name
6/23/2022	_50401
Date	License No.

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The following forms and regulations/rules/statutes and interpretations, which are incorporated by reference in this contract, are available on the World Wide Web at the sites listed below. The City of Duluth will use its best efforts to ensure that the most recent, applicable forms and regulations/rules/statutes and interpretations are included on the web sites provided; however, if you are the successful bidder, prior to signing the contract, <u>you are responsible</u> for comparing the versions of the forms and regulations/rules/statutes and interpretations attached to the contract which you are signing with the versions on the web to ensure conformity.

THE VERSIONS OF THE FORMS AND REGULATIONS/RULES/STATUTES and INTERPRETATION ATTACHED TO THE CONTRACT WILL BE CONTROLLING.

FORM	FUND	WEB SITE
Certified Payroll Form WH347	All	http://www.dol.gov/whd/forms/
IC-134 Contractor Affidavit – Online	All	https://www.mndor.state.mn.us/tp/contractoraffidavit/
Request to Sublet TP-21834	All	http://www.dot.state.mn.us/const/labor/forms.html
Request to Sublet Summary	All	http://www.dot.state.mn.us/const/labor/forms.html
Statement of Compliance Form (8-2013)	All	http://www.dot.state.mn.us/const/labor/forms.html
MNOPS Intrastate Anti-Drug/Alcohol Misuse Prevention - Self Assessment	Gas	http://www.duluthmn.gov/engineering/standard- construction-specifications/construction-documents/
Operator Qualification Contractor Covered Tasks	Gas	http://www.duluthmn.gov/engineering/standard- construction-specifications/construction-documents/
Truck Rental Rates	State	http://www.doli.state.mn.us/LS/PrevWageTR1.asp
Contractor/Vendor Form	State	http://www.dot.state.mn.us/const/labor/forms.html
Trucking Com/Vendor Form	State	http://www.dot.state.mn.us/const/labor/forms.html
Month End Trucking Report Form A & B (12-10)	State	http://www.dot.state.mn.us/const/labor/forms.html
Month-End Trucking Report Statement of Compliance (12-10)	State	http://www.dot.state.mn.us/const/labor/forms.html
Notice to Bidders - Prompt Payment to Subs – STATE & FED (MS 16A.1245)	State & Federal	http://www.duluthmn.gov/engineering/standard-construction-specifications/construction-documents/
Notice to Bidders - Traffic Control Prevailing Wage - FED	Federal	http://www.duluthmn.gov/engineering/standard- construction-specifications/construction-documents/
Statement of Compliance Form – 2 <sup>nd</sup> page of WH347	Federal	http://www.dol.gov/whd/forms/

### SP-1 NOTICE TO ALL BIDDERS

The 2019 Edition of the City of Duluth Public Works & Utilities Department/Engineering Division "Construction Standards" book and any addendums or supplements is incorporated by reference and is deemed to be a part hereof as if fully incorporated and set forth herein. The 'Construction Standards' is available on the City website at: <a href="https://www.duluthmn.gov/engineering/standard-construction-specifications/">https://www.duluthmn.gov/engineering/standard-construction-specifications/</a>.

# SP-2 SCOPE OF WORK

The project includes 19,105 feet of CIPP lining ranging between 8'' - 27'' pipe, 40 chemical grout point repairs, and 12 open trench sewer pipe spot repairs. Additionally, five special excavation fixes that require extensive work.

# SP-3 CONTACT INFORMATION

Questions regarding this project should be directed to: Tim Sanders, PE, Project Engineer, 218-730-5066 or by email: <a href="mailto:tsanders@duluthmn.gov">tsanders@duluthmn.gov</a>

# SP-4 PRE-BID REVIEW OF CCTV INSPECTION VIDEOS

CCTV inspection videos for this project are available upon request. Contact Jon Maruska, Engineering Technician, 218-730-5093 or by email at jmaruska@duluthmn.gov

# SP-5 COMMUNITY BENEFITS POLICY

Updated 02-19-2020

For Contracts that include a Project Labor Agreement, the contractor shall comply with the City of Duluth's Community Benefits Policy. This policy requires a plan and good faith effort by contractors to recruit/hire/employ Eligible Workers to perform the work. Eligible Workers shall refer to women, people of color, and other individuals who are considered socially disadvantaged, and whose work hours on a covered project shall count toward the Community Benefits Goal set forth in the policy. A copy of the Community Benefits Program Contract Specification is available on the City of Duluth Purchasing web site.

# SP-6 COVID-19 PROJECT SHUTDOWN PLAN

Revised 04-03-2020

In the event that employee illness or a governmental agency requires that the project cease due to the Covid-19 Virus, prior to suspension, the contractor shall provide a written plan to the architect/engineer on the project and the City for their prior approval and, upon such approval, shall be implemented by the contractor as part of this contract. The plan shall include the following requirements which shall apply to the status of the work at the time of interruption:

- 1. Time, if any, between the determination of the necessity of suspension and the actual suspension of work will be allocated in this order of priority; Life Safety Issues, Asset Integrity, Environmental Impacts, & Economic Impacts.
- 2. Excavations will be completed or temporarily filled.
- 3. Equipment will be removed from the site or secured by the contractor.
- 4. Physical barricades shall be installed as necessary to protect the work from damage or destruction and the public from injury in the event of trespass on the site.
- 5. Warning signs shall be installed where reasonably necessary to warn the public of any hazardous condition on the site.
- 6. Erosion control necessary to protect the site shall be in place and functioning and vegetation shall be in place and properly protected; all exposed and or erodible soil surfaces shall be fully stabilized per the SWPPP/NPDES permit requirements.
- 7. Onsite materials shall be removed from the site to safe storage or protected on site from damage or theft.

# SP-7 (1203) ACCESS TO PROPOSAL PACKAGE

MN/DOT 1203 is hereby deleted from the MN/DOT Standard Specifications and replaced with the following:

Bidders shall access the proposal package electronically through Bid Express® at their website <a href="https://www.bidexpress.com">https://www.bidexpress.com</a>. There is no charge to view proposal packages, however Bidders must register with Bid Express® and login to the website. Bidders may search for 'City of Duluth' or the specific bid number to locate the proposal package. The city may require a fee for bidders to purchase paper copies of the proposal package.

# SP-8 (1206) PREPARATION OF PROPOSAL

Revised 02-03-2021

The provisions of MN/DOT 1206 are supplemented and/or modified with the following:

1206.1. "Preparation and Delivery", is modified as follows:

The **first paragraph** shall be deleted and replaced with the following:

Due to the closure of City Hall as a result of the COVID-19 pandemic, all bids must be submitted electronically through Bid Express® at <a href="https://www.bidexpress.com">www.bidexpress.com</a>.

The **third paragraph** shall be deleted and replaced with the following:

The Bidder shall submit the Proposal Guaranty electronically through Bid Express®, or a copy of the Proposal Guaranty may be submitted by email to <a href="mailto:purchasing@duluthmn.gov">purchasing@duluthmn.gov</a> prior to the bid opening. If submitting a certified check or bank draft, bidder must contact Purchasing seven days prior to bid opening to make arrangements.

# 1206.2 "Allowable Substitutions", is modified as follows:

The first paragraph shall be deleted and replaced with the following:

Any exceptions to electronic bidding must be due to unforeseen extenuating circumstances and must be requested and approved by the Purchasing Office in advance.

# SP-9 (1213) DISQUALIFICATION OF BIDDERS

Contractors who are debarred or suspended under Minnesota Statutes 161.315 Protection of Public Contracts will not be eligible for award of this contract or to act as a subcontractor to any contractor under this contract.

# SP-10 (1701) LAWS TO BE OBSERVED (PROMPT PAY AND RETAINAGE)

Revised 02-03-2021

Section 1701 Laws to Be Observed (Prompt Pay and Retainage) of the City of Duluth Construction Standard is hereby deleted and replaced with the following:

### **REVISED 10/09/19**

SP2018-33.1: The provisions of MN/DOT 1701 are supplemented with the following:

# Prompt payment of subcontractors is required by Minnesota Statutes §16A.1245.

The Contractor must pay a subcontractor no later than ten days after receiving payment from the Department for undisputed work provided by that subcontractor. If the Contractor fails to pay a subcontractor on time, then the Contractor must pay interest, at the rate of 1.5% per month, to the subcontractor on the undisputed amount not paid on time. For an unpaid amount under \$100, the Contractor must pay the actual interest penalty (calculated at 1.5% per month). For an unpaid amount over \$100, the Contractor must pay the actual interest penalty (calculated at 1.5% per month) or \$10, whichever is greater.

Minnesota Statutes §16A.1245 also provides that a subcontractor who prevails in a civil action to collect interest penalties from a prime contractor must be awarded its costs and disbursements, including attorney's fees, incurred in bringing the action.

# Payment of retainage for federal-aid projects is governed by Minnesota Statutes §§337.10, 15.72, and 49 C.F.R. 49 §26.29.

State law does not require retainage to be withheld. The contractor may not withhold more than 5% in retainage from a subcontractor, as provided by Minnesota Statutes §337.10 subd. 4 (b). If the Contractor holds retainage from a subcontractor, the Contractor must fully pay out that retainage no later than 30 days after the subcontractor's work is satisfactorily completed, or 10 days after the Contractor receives payment of retainage from the Department, whichever is earlier, unless there is a dispute about the work under a subcontract. If there is a dispute about the work under a subcontract, the contractor must pay out retainage to any subcontractor whose work is not involved in the dispute, and must provide a written statement detailing the amount and reason for the withholding to the affected subcontractor.

For purposes of paying out retainage, a subcontractor's work is satisfactorily completed when all of the tasks called for in the subcontract have been accomplished and documented as required by the Contract. When the Department has made an incremental acceptance of a portion of the prime contract, the work of a subcontractor covered by that acceptance is deemed to be satisfactorily completed.

<u>Payment of retainage for state and local projects is governed by Minnesota Statutes §337.10 and Minnesota Statutes §15.72.</u>

State law does not require retainage to be withheld. The contractor may not withhold more than 5% in retainage from a subcontractor, as provided by Minnesota Statutes §337.10 subd. 4 (b). The contractor must pay any retainage no later than 10 days after the Contractor receives payment of retainage from the Department, unless there is a dispute about the work under a subcontract. If there is a dispute about the work under a subcontract, the contractor must pay out retainage to any subcontractor whose work is not involved in the dispute, and must provide a written statement detailing the amount and reason for the withholding to the affected subcontractor.

# SP-11 (1806) DETERMINATION AND EXTENSION OF CONTRACT TIME

The Contract Time will be determined in accordance with the provisions of MN/DOT 1806 and the following:

- 1. Construction operations shall be started on or before TBD or within ten (10) calendar days after the date of **Notice to Proceed**, whichever is later.
- Substantial Completion. All work under this Contract shall be substantially complete on or before TBD For this project, Substantial Completion shall be deemed to include ALL work in the Contract, except the following items: Clean up and demobilization
- 3. <u>Final Completion</u>. ALL work required under this Contract shall be complete on or before TBD.
- 4. The third exemption listed under the second paragraph of the provisions of MN/DOT 1806.3 is modified to the extent that the phrase "(3) During the inclusive period from November 15 through April 15, except as specified in 1806.1..." is deleted.
- 5. No work which will restrict or interfere with traffic shall be performed between 12:00 noon on the day preceding and 6:30 a.m. on the day following any consecutive combination of a Saturday, Sunday, and legal holiday without written permission from the Engineer.
  - (A) If the Contractor chooses not to work at all on the day preceding the holiday period, no working day charges will be assessed.
  - (B) If the Contractor chooses to work prior to 12:00 noon on the day preceding the holiday period or if the Contractor obtains written permission to work after 12:00 noon on the day preceding the holiday period, working day charges will be assessed only for the actual hours worked.

6. When all, or a portion, of the Contract Time is specified as a calendar completion date, the time is presumed to have been determined by considering the Proposal quantities, normal weather for the locality and season of the year, and the necessity of having the work completed by the specified date. The time may be extended by the Engineer only if the delay is considered "Excusable" in accordance with MN/DOT 1806.2 Types of Delays.

# SP-12 (1807) FAILURE TO COMPLETE WORK ON TIME

The provisions of MN/DOT 1807 shall apply in full to both the Substantial Completion Date and the Final Completion Date.

# SP-13 (1906) PARTIAL PAYMENTS

Section 1906 Partial Payments of the City of Duluth Construction Standard is hereby deleted and replaced with the following:

Partial Payments shall be made in accordance with the provisions of MN/DOT 1906 and the following:

- A. Prior to Substantial Completion: The first sentence of Paragraph Three shall be amended to read as follows: "From the total of the amounts ascertained as payable, five percent (5%) will be deducted and retained by the City for the protection of its interests as hereinafter provided. The balance, less all previous payments, will be certified for payment." The City will withhold eight percent (8%) from out of state contractors unless a waiver has been granted from the State of Minnesota, Department of Revenue by submitting Form SDE, Exemption from Surety Deposits for Non-Minnesota Contractors.
- B. All provisions for partial payments shall apply to domestic materials only. No payments shall be made to the Contractor for materials manufactured outside of the United States until such materials have been delivered to the job site.
- C. After 'Substantial Completion', the City may withhold no more than: (1) 250 percent of the cost to correct or complete work known at the time of substantial completion; and (2) one percent of the value of the contract or \$500, whichever is greater, pending completion and submission of all final paperwork by the contractor or subcontractor.

# SP-14 (1908) FINAL PAYMENTS

Section 1908 Final Payments of the City of Duluth Construction Standard is hereby deleted and replaced with the following:

Final Payment shall be made in accordance with the provisions of MN/DOT 1908 and the following:

- 1) The final estimate will show the balance due the Contractor after making all legal and specified forfeitures and deductions. This balance will then be paid by the City to the Contractor within thirty (30) days after such estimate is presented to and accepted by the Contractor or within forty-five (45) days after such estimate is presented to and not acted upon by the Contractor, less allowable retainage per Minnesota Statutes 15.72 subdivision 2. At such time, the paid final estimate shall be considered valid with no further compensation due the Contractor.
- 2) The City will withhold and retain up to the allowable retainage per Minnesota Statutes 15.72 subdivision 2 of the final estimate for a period of up to the date of Final Contract Acceptance (MN/DOT 1516.4).
- 3) Where the provisions of MN/DOT 2571.3.K Plant Establishment Period pertain to the contract, the City will withhold and retain an amount equal to the final value of planting bid items or one percent (1%) of the final estimate, whichever is greater, for a period of up to two calendar years after the initial planting operations are complete.
- 4) State Law provides that the final estimate will be made within <u>90 days</u> after completion of all work required under this Contract. If, however, the total value of the Contract exceeds \$2,000,000.00, the <u>90-day</u> requirement will not apply and the time allowed for making such final estimate shall be <u>180 days</u> after the work under this Contract has been, in all things, completed to the satisfaction of the Commissioner
- 5) If this Contract contains a "Disadvantage Business Enterprise or Targeted Group Business" goal, the following requirement shall apply:

"Before final payment is made, the Contractor shall also complete an affidavit showing the total dollar amounts of work performed by disadvantaged business enterprise (DBE) and targeted group business (TGB) and/or veteran-owned small business."

# SP-15 (2301/2521/2531) CONCRETE PLACEMENT RESTRICTION (EXPOSURE TO SALT)

In addition to the pertinent provisions of MN/DOT and the City of Duluth Construction Standards, the following restriction applies to all concrete "flatwork" (i.e. curb, curb and gutter, sidewalk, driveways, pavement) that is typically exposed to road salt and/or deicing chemicals:

The Contractor shall not place concrete flatwork **after October 15**<sup>th</sup> without the written approval of the City's Chief Engineer of Transportation.

# SP-16 (2451) EXCAVATION, BACKFILL AND COMPACTION FOR UTILITIES – TRENCH BACKFILL

The provisions of section 2451 of the City of Duluth 'Construction Standards' are supplemented with the following:

Trench backfill above the top of encasement zone and below the subgrade shall be accomplished entirely with suitable salvaged on-site select grading materials meeting the City's Construction Standards.

The Engineer will determine if any material is suitable for use as trench backfill.

Where the Engineer determines that acceptable select grading material is not available within the site, the Contractor shall provide imported granular backfill or common backfill which will be considered Extra Work and the Contractor will be compensated under the provisions of MN/DOT 1904. Any Extra Work payments made for imported backfill shall be considered compensation in full for furnishing backfill materials to the site and disposing of waste excavation. No separate payment will be made for placing and compacting imported backfill materials.

All costs for placing and compacting backfill (regardless of type: select grading material, common or granular) shall be considered incidental to relevant Contract bid items.

# SP-17 (2503) CHEMICAL GROUT - PRESSURE TESTING AND POINT REPAIRS

# A. Description

This work involves pressure testing and chemical grouting of sewer joints and lateral connections. All products and construction methods shall be in accordance with industry standards. Contractor shall submit specific product literature and installation procedures to Engineer for review at least 3 weeks prior to installation.

### B. Documentation

The Contractor shall provide a report of all joints and service connections tested. As a minimum, the report shall include the following: operator's name, equipment identification, date, time, location in pipe footage from reference manhole, surface location/description of entry manhole, and pressure test observations.

The Contractor shall provide a report of all chemical grout point repairs. As a minimum, the report shall include the following: operator's name, equipment identification, date, time, location in pipe footage from reference manhole, surface location/description of entry manhole, grout materials used, set time, and observations.

The documentation reports are an essential component of the final acceptance of the work.

# C. Measurement

Measurement for pressure testing pipe joints will be made for each joint or service connection tested. Measurement for chemical grout point repair will be made for each repair complete and accepted.

### D. Payment

Payment for testing joints will be made under bid item 2503.602 (Pipe Joint Pressure Test – Service Lateral Connection) or 2503.602 (Pipe Joint Pressure Test – Mainline Pipe Joint) at the contract unit bid price per each which shall be considered compensation in full for all labor, equipment, and materials necessary to complete the work.

Payment for chemical grout point repairs will be made under bid item 2503.602 (Chemical Grout Point Repair – Service Lateral Connection) or 2503.602 (Chemical Grout Point Repair – Mainline) at the contract unit bid price per each which shall be considered compensation in full for all labor, equipment, and materials necessary to complete the work.

### **SP-18 HIGH PRIOTIRY AREAS**

# A. Description

Special Excavation Site D has a high priority. This includes 2 separate sections to dig and replace sunken sections of sanitary sewer. This is found on page 15 of the plan set. Site is known to have additional utilities including shallow abandoned gas main.

Special Excavation Site D Finish by October 1, 2022

# **SP-19 (2503) SPOT REPAIRS**

# A. Description

This work involves replacing sections of existing sanitary sewer that are found to be collapsed, displaced, severely fractured, or otherwise restrictive. The purpose of the spot repair is to create an improved pipe section so that after the CIPP liner is installed, the resulting "lined pipe" will provide be uniform pipe section.

# B. Materials

All materials shall be in accordance with the 2019 City of Duluth Construction Standard as supplemented with the following:

- 1) Pipe for spot repairs shall be PVC SDR 35. The pipe shall be assumed to be a nominal 10 feet in length and a diameter matching the inside diameter of the existing pipe.
- 2) Pipe encasement for spot repairs shall be in accordance with City of Duluth Standard Detail Drawing EX-3 "PVC and Corrugated Polyethylene Sewer Pipe Bedding Detail"
- 3) Trench backfill for spot repairs shall be suitable native materials. Refer to section 2451 of these special provisions.
- 4) Lawn restoration for spot repairs shall consist of topsoil, seed, fertilizer, and mulch in accordance with section 2575 "Turf Establishment" of the Construction Standard.
- 5) Street restoration for spot repairs shall match the existing pavement section and type, or (as a minimum) be in accordance with City of Duluth Standard Detail Drawing STR-8 "Street Restoration over Trench".

### C. Construction

All construction methods shall be in accordance with the pertinent provisions of the 2019 City of Duluth Construction Standards as supplemented with the following:

- Spot repairs shall be identified by the Contractor as part of the pre-installation CCTV inspection, AFTER the preparatory pipe cleaning is complete. The Contractor shall provide the pre-installation CCTV inspection recordings to the Engineer so that the necessity for the spot repair can be confirmed.
- 2) The Contractor shall make all necessary notifications, permits, traffic controls, and bypass pumping deemed necessary by the Engineer to perform the repair in a safe and convenient manner.
- 3) The Contractor shall perform CCTV inspection immediately prior to CIPP lining to confirm the completed spot repairs are adequate for the intended purpose.

# D. Measurement and Payment

The Engineer will separately measure spot repairs as individual units complete in place. For spot repairs requiring a pipe length longer than 10 feet, the Engineer prorate the number of units based on the actual length of pipe installed.

1) General. Unless otherwise noted as a special location (below), payment for spot repairs will be made under bid item 2503.602 Spot Repair – Non-Street Area (depth) or under bid item 2503.602 Spot Repair – Street Area (depth) at the Contract bid price per each, which shall be compensation in full for all costs, including but not limited to, equipment, labor, and materials necessary to excavate, remove old pipe, provide and install new pipe, pipe bedding, trench backfill, and restoration of either lawn or street area disturbed by the work.

# SP-20 (2506) REPAIRS - SPECIAL A

# A. Description

This work involves replacing sections of existing sanitary sewer that are found to be collapsed, displaced, severely fractured, or otherwise restrictive with a section of new PVC sanitary sewer pipe. This section is approximately 100' in length.

### B. Materials

- 1) Manholes for spot repairs shall be in accordance with the City of Duluth Standard Detail Drawing SAN-11, including bedding, casting and tracer wire. Contractor shall verify depth of sanitary main prior to ordering structure.
- Pipe encasement for exposed pipe during construction shall be in accordance with City of Duluth Standard Detail Drawing EX-3 "PVC and Corrugated Polyethylene Sewer Pipe Bedding Detail"
- 3) Trench backfill for spot repair special shall be suitable native materials. Refer to section 2451 of these special provisions.

- 4) Lawn restoration for spot repair special shall consist of topsoil, seed, fertilizer, and mulch in accordance with section 2575 "Turf Establishment" of the Construction Standard.
- 5) Street restoration for spot repair special shall match the existing pavement section and type, or (as a minimum) be in accordance with City of Duluth Standard Detail Drawing STR-8 "Street Restoration over Trench".

### C. Construction

All construction methods shall be in accordance with the pertinent provisions of the 2019 City of Duluth Construction Standards as supplemented with the following:

- Spot repairs shall be identified by the Contractor as part of the pre-installation CCTV inspection and located with exploratory digs, AFTER the preparatory pipe cleaning is complete. The Contractor shall provide the pre-installation CCTV inspection recordings to the Engineer so that the necessity for the spot repair can be confirmed.
- 2) The Contractor shall make all necessary notifications, permits, traffic controls, and bypass pumping deemed necessary by the Engineer to perform the repair in a safe and convenient manner.

# D. Measurement and Payment

The Engineer will separately measure spot repair special as individual units complete in place. The payment will be for all work performed for the individual structure. This includes all sawcutting, excavation, bedding, backfill, casting, tracer wire and restoration.

# SP-20 (2506) SPOT REPAIRS – SPECIAL B

# A. Description

This work involves replacing sections of existing sanitary sewer that are found to be collapsed, displaced, severely fractured, or otherwise restrictive with a new manhole structure and PVC sanitary sewer pipe. Additionally, the abandonment of SA0150084 would be required. This section is approximately 278' in length and includes one new man hole PMH-B1. Slip lining is also an option which would include multiple dig locations for laterals and host pipe to be sand-filled.

### B. Materials

- 6) Manholes for spot repairs shall be in accordance with the City of Duluth Standard Detail Drawing SAN-11, including bedding, casting and tracer wire. Contractor shall verify depth of sanitary main prior to ordering structure.
- 7) Pipe encasement for exposed pipe during construction shall be in accordance with City of Duluth Standard Detail Drawing EX-3 "PVC and Corrugated Polyethylene Sewer Pipe Bedding Detail"

- 8) Trench backfill for spot repair special shall be suitable native materials. Refer to section 2451 of these special provisions.
- 9) Lawn restoration for spot repair special shall consist of topsoil, seed, fertilizer, and mulch in accordance with section 2575 "Turf Establishment" of the Construction Standard.
- 10) Street restoration for spot repair special shall match the existing pavement section and type, or (as a minimum) be in accordance with City of Duluth Standard Detail Drawing STR-8 "Street Restoration over Trench".

### C. Construction

All construction methods shall be in accordance with the pertinent provisions of the 2019 City of Duluth Construction Standards as supplemented with the following:

- 3) PMH-B1 Spot repairs shall be identified by the Contractor as part of the pre-installation CCTV inspection and located with exploratory digs, AFTER the preparatory pipe cleaning is complete. The Contractor shall provide the pre-installation CCTV inspection recordings to the Engineer so that the necessity for the spot repair can be confirmed.
- 4) The Contractor shall make all necessary notifications, permits, traffic controls, and bypass pumping deemed necessary by the Engineer to perform the repair in a safe and convenient manner.

# D. Measurement and Payment

The Engineer will separately measure spot repair special as individual units complete in place. The payment will be for all work performed for the individual structure. This includes all sawcutting, excavation, bedding, backfill, casting, tracer wire and restoration.

### SP-20 (2506) SPOT REPAIRS – SPECIAL C

# A. Description

This work involves replacing sections of existing sanitary sewer that are found to be collapsed, displaced, severely fractured, or otherwise restrictive with a new manhole structure. This section is approximately 5' in length and includes new manhole PMH-C1.

# B. Materials

- 11) Manholes for spot repairs shall be in accordance with the City of Duluth Standard Detail Drawing SAN-11, including bedding, casting and tracer wire. Contractor shall verify depth of sanitary main prior to ordering structure.
- 12) Pipe encasement for exposed pipe during construction shall be in accordance with City of Duluth Standard Detail Drawing EX-3 "PVC and Corrugated Polyethylene Sewer Pipe Bedding Detail"

- 13) Trench backfill for spot repair special shall be suitable native materials. Refer to section 2451 of these special provisions.
- 14) Lawn restoration for spot repair special shall consist of topsoil, seed, fertilizer, and mulch in accordance with section 2575 "Turf Establishment" of the Construction Standard.
- 15) Street restoration for spot repair special shall match the existing pavement section and type, or (as a minimum) be in accordance with City of Duluth Standard Detail Drawing STR-8 "Street Restoration over Trench".

### C. Construction

All construction methods shall be in accordance with the pertinent provisions of the 2019 City of Duluth Construction Standards as supplemented with the following:

- 5) PMH-C1 Spot repairs shall be identified by the Contractor as part of the pre-installation CCTV inspection and located with exploratory digs, AFTER the preparatory pipe cleaning is complete. The Contractor shall provide the pre-installation CCTV inspection recordings to the Engineer so that the necessity for the spot repair can be confirmed.
- 6) The Contractor shall make all necessary notifications, permits, traffic controls, and bypass pumping deemed necessary by the Engineer to perform the repair in a safe and convenient manner.

# D. Measurement and Payment

The Engineer will separately measure spot repair special as individual units complete in place. The payment will be for all work performed for the individual structure. This includes all sawcutting, excavation, bedding, backfill, casting, tracer wire and restoration.

### SP-20 (2506) SPOT REPAIRS - SPECIAL D

# A. Description

This work involves replacing sections of existing sanitary sewer that are found to be collapsed, displaced, severely fractured, or otherwise restrictive with a new sections of PVC pipe. This spot includes two sections of new PVC sanitary sewer main that is approximately 20' and 30' in length.

# B. Materials

- 16) Manholes for spot repairs shall be in accordance with the City of Duluth Standard Detail Drawing SAN-11, including bedding, casting and tracer wire. Contractor shall verify depth of sanitary main prior to ordering structure.
- 17) Pipe encasement for exposed pipe during construction shall be in accordance with City of Duluth Standard Detail Drawing EX-3 "PVC and Corrugated Polyethylene Sewer Pipe Bedding Detail"

- 18) Trench backfill for spot repair special shall be suitable native materials. Refer to section 2451 of these special provisions.
- 19) Lawn restoration for spot repair special shall consist of topsoil, seed, fertilizer, and mulch in accordance with section 2575 "Turf Establishment" of the Construction Standard.
- 20) Street restoration for spot repair special shall match the existing pavement section and type, or (as a minimum) be in accordance with City of Duluth Standard Detail Drawing STR-8 "Street Restoration over Trench".

### C. Construction

All construction methods shall be in accordance with the pertinent provisions of the 2019 City of Duluth Construction Standards as supplemented with the following:

- 7) Spot repairs shall be identified by the Contractor as part of the pre-installation CCTV inspection and located with exploratory digs, AFTER the preparatory pipe cleaning is complete. The Contractor shall provide the pre-installation CCTV inspection recordings to the Engineer so that the necessity for the spot repair can be confirmed.
- 8) The Contractor shall make all necessary notifications, permits, traffic controls, and bypass pumping deemed necessary by the Engineer to perform the repair in a safe and convenient manner.

### E. Measurement and Payment

The Engineer will separately measure spot repair special as individual units complete in place. The payment will be for all work performed for the individual structure. This includes all sawcutting, excavation, bedding, backfill, casting, tracer wire and restoration.

The Engineer will separately measure spot repair special as individual units complete in place. The payment will be for all work performed for the individual structure. This includes all sawcutting, excavation, bedding, backfill, casting, tracer wire and restoration.

# SP-20 (2506) SPOT REPAIRS – SPECIAL E

### A. Description

This work involves replacing sections of existing sanitary sewer that are found to be collapsed, displaced, severely fractured, or otherwise restrictive with a two new manhole structures and new PVC sanitary sewer main that is approximately 50' in length and includes manholes PMH-E1 and PMH-E2

# B. Materials

- 21) Manholes for spot repairs shall be in accordance with the City of Duluth Standard Detail Drawing SAN-11, including bedding, casting and tracer wire. Contractor shall verify depth of sanitary main prior to ordering structure.
- 22) Pipe encasement for exposed pipe during construction shall be in accordance with City of Duluth Standard Detail Drawing EX-3 "PVC and Corrugated Polyethylene Sewer Pipe Bedding Detail"
- 23) Trench backfill for spot repair special shall be suitable native materials. Refer to section 2451 of these special provisions.
- 24) Lawn restoration for spot repair special shall consist of topsoil, seed, fertilizer, and mulch in accordance with section 2575 "Turf Establishment" of the Construction Standard.
- 25) Street restoration for spot repair special shall match the existing pavement section and type, or (as a minimum) be in accordance with City of Duluth Standard Detail Drawing STR-8 "Street Restoration over Trench".

### C. Construction

All construction methods shall be in accordance with the pertinent provisions of the 2019 City of Duluth Construction Standards as supplemented with the following:

- 9) Spot repairs shall be identified by the Contractor as part of the pre-installation CCTV inspection and located with exploratory digs, AFTER the preparatory pipe cleaning is complete. The Contractor shall provide the pre-installation CCTV inspection recordings to the Engineer so that the necessity for the spot repair can be confirmed.
- 10) The Contractor shall make all necessary notifications, permits, traffic controls, and bypass pumping deemed necessary by the Engineer to perform the repair in a safe and convenient manner.

# D. Measurement and Payment

The Engineer will separately measure spot repair special as individual units complete in place. The payment will be for all work performed for the individual structure. This includes all sawcutting, excavation, bedding, backfill, casting, tracer wire and restoration.

# SP-21 (2503) CLEAN & TELEVISE SEWER MAIN NOT TO BE LINED

# A. Description

This work involves cleaning and CCTV inspection of sanitary sewer main, for pipe that does not get CIPP liner, to facilitate visual confirmation and dye testing of active service lateral connections.

# B. Measurement and Payment

Measurement of 'cleaning and televising sewer main not to be lined' will be length in linear feet from center of manhole to center of manhole. Payment for cleaning and televising pipe that does not get a CIPP liner will be made under bid item 2503.602 (Clean & Televise Sewer Main Not To Be Lined) at the contract unit bid price per linear feet which shall be considered compensation in full

for all labor, equipment, and materials including mobilization, cleaning, CCTV inspection, inspection report, coordination with active service connection dye testing, and providing an electronic video inspection file.

# SP-22 (2563) TEMPORARY TRAFFIC MANAGEMENT

The provisions of 2563 is supplemented with the following:

Short-term temporary traffic controls in accordance with the Minnesota Temporary Traffic Control Field Manual will be required for the daily operations of pipe cleaning, CCTV inspection, dye testing, and CIPP lining work where the manholes are located in traffic lanes and/or shoulders.

Where long-term lane/shoulder closures may be required to accommodate excavation for spot repairs, the temporary traffic controls shall be in accordance with the MN MUTCD. The Contractor shall prepare and submit temporary traffic control plan to the Engineer for review at least 3 weeks prior to the work.

- END -

### PLAN LEGEND RIGHT OF WAY LINE DITCH CENTERLINE FENCE LINE RETAINING WALL GRAVEL LINE GUARD RAIL LINE ROAD CENTERLINE TREE LINE STREAM LINE WETLAND LINE FX SANITARY LINE PR SANITARY LINE AB SANITARY LINE EX FORCEMAIN LINE PR FORCEMAIN LINE AB FORCEMAIN LINE — АВ-ЕМ -EX STORM LINE PR STORM LINE AB STORM LINE — AB-ST -EX WATER LINE PR WATER LINE AB WATER LINE EX GAS LINE PR GAS LINE AB GAS LINE EX STEAM LINE EX STEAM LINE UG CABLE TV LINE AB CABLE TV LINE UG ELECTRIC LINE AB ELECTRIC LINE UG FIBEROPTIC LINE AB FIBEROPTIC LINE UG TELEPHONE LINE AB TELEPHONE LINE OH ELECTRIC LINE OH TELEPHONE LINE OH CABLE TV LINE SYMBOLS EX SANITARY MANHOLE (SAN) EX SANITARY CLEANOUT EX STORM MANHOLE EX STORM CATCHBASIN EX. WATER MANHOLE EX. WATER VALVE EX. WATER HYDRANT \*S0 EX. WATER SHUTOFF (W&G) EX. WATER & GAS MH EX. GAS MANHOLE EX. GAS VALVE EX. GAS SHUTOFF STEAM EX. STEAM MANHOLE EX. TELEPHONE MANHOLE EX. ELECTRIC MANHOLE (E) EX. POWERPOLE EX. LIGHT POLE EX. ELECTRIC VAULT EX. ANCHOR $\langle ET \rangle$ EX. ELECTRIC TRANSFORMER EX. STREET LIGHT ·)— EX. SIGNAL W/ STREET LIGHT EX. HANDHOLE EX. HANDHOLE EX. TELEPHONE PEDESTAL EX. WELL BENCHMARK 困 FOUND CI MONUMENT FX. SIGN CONTROL POINT EX DECIDUOUS TREE EX CONIFEROUS TREE EX. PARKING METER $\bigoplus$ EX. SOIL BORING

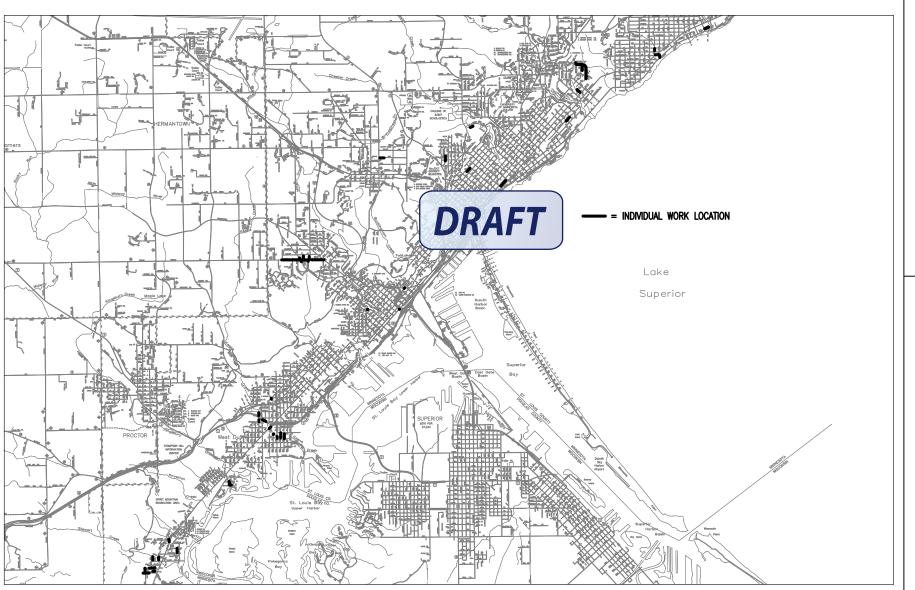
# CITY OF DULUTH

# DEPARTMENT OF PUBLIC WORKS AND UTILITIES ENGINEERING DIVISION

CONSTRUCTION PLANS FOR:

2022 CITYWIDE CIPP SANITARY SEWER LINING

CITY PROJECT NO. 2037



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".

# WARNING:

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

PROJECT LOCATION ST. LOUIS COUNTY

# GOVERNING SPECIFICATIONS

THE 2020 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/

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"

# **INDEX**

SHEET NO.	DESCRIPTION	
1	TITLE SHEET	
2	SEQ	
3-4	CHARTS	
5-6	OVERVIEW MAP	
7	EROSION CONTROL	
8	TRAFFIC CONTROL	
9-11	DETAILS	
12-16	SPECIAL EXCAVATION	PLAN
17-50	CIPP PLAN	

THIS PLAN CONTAINS 48 SHEETS

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 A. SANDERS

PROJECT ENGINEER (TYPED OR PRINTED NAME)

50401 PROJECT ENGINEER

CITY APPROVAL

APPROVED DATE CHIEF ENGINEER OF TRANSPORTATION

APPROVED DATE CHIEF ENGINEER OF UTILITIES

APPROVED DATE CITY ENGINEER

CITY OF DULUTH PROJECT NO. 1955 DRAWN BY: JJM SHEET NO. 1 OF 42

# SCHEDULE OF ESTIMATED QUANTITIES

IOTES	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	223
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
	9	2503.602	8" CIPP LINER END SEAL	EACH	48
	10	2503.602	10" CIPP LINER END SEAL	EACH	8
	11	2503.602	12" CIPP LINER END SEAL	EACH	2
	12	2503.602	SPECIAL EXCAVATION A	LUMP SUM	1
	13	2503.602	SPECIAL EXCAVATION B	LUMP SUM	1
	13	2503.602	SPECIAL EXCAVATION C	LUMP SUM	1
	13	2503.602	SPECIAL EXCAVATION D	LUMP SUM	1
	13	2503.602	SPECIAL EXCAVATION E	LUMP SUM	1
1	14	2503.602	SPOT REPAIR - NON-STREET AREA (DEPTH LESS THAN 10')	EACH	3
1	15	2503.602	SPOT REPAIR - NON-STREET AREA (DEPTH 10' OR MORE)	EACH	3
1	16	2503.602	SPOT REPAIR - STREET AREA (DEPTH LESS THAN 10')	EACH	3
1	17	2503.602	SPOT REPAIR - STREET AREA (DEPTH 10' OR MORE)	EACH	3
1	18	2503.603	CLEAN & TELEVISE SEWER MAIN NOT TO BE LINED	LIN FT	500
	<b>1</b> 9	2503.603	8" CIPP MAIN LINING	LIN FT	15,247
	20	2503.603	10" CIPP MAIN LINING	LIN FT	1,675
	21	2503.603	12" CIPP MAIN LINING	LIN FT	1,2 D F
	22	2503.603	15" CIPP MAIN LINING	LIN FT	
	23	2503.603	16" CIPP MAIN LINING	LIN FT	26
	24	2503.603	18" CIPP MAIN LINING	LIN FT	468
	25	2503.603	27" CIPP MAIN LINING	LIN FT	200
	26	2563.601	TRAFFIC CONTROL	LUMP SUM	1
	20	2303.001	TRAFFIC CONTROL	LUIVIP SUIVI	<del>                                     </del>

# NOTES

SIGNATURE: \_

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

I HEREBY	CERTIFY THAT	THIS PLAN V	vas prepared	BY ME OR	R under my dir	RECT SUPERVISION AND	THAT I AM A DULY LICENSED
PR0FESSIC	NAL ENGINEER	R UNDER THE	LAWS OF THE	STATE OF	MINNESOTA.		

NAL ENGINEER UNDER THE LAWS OF THE STATE OF MININESUTA.

TIM A. SANDERS
TYPE NAME

DATE: 3/1/2022 LIC. NO: 50401



CITY OF DU	LUTH			
ENGINEERIN	G DIVI	SION		
411 W. 1S1	ST.	RM.	240	
DULUTH MN	J 55	802		

	2022 CITYWIDE SAI	NITARY SEWER CIPP LINING		DRAWN BY: JJM
	2022 CITIWIDE SAI	MITART SEWER CIFF LINING		SEQ
CITY PROJECT NO.:	2037	STATE AID PROJECT NO.:	NA	SHEET NO. 2 OF 42

CHART	Λ																									
PROJECT	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 16" (FT)	CIPP 18" (FT)	CIPP 27" (FT)	8" END 1	.0" END	12" END SEAL	REMOTE CUT SERVICE	STREET	CROSS STREET 1	CROSS STREET 2	NOTES
MORRIS TH	OMAS																					JERVICE				
MT	19	20	SL0580054	SA0580054	12.20	SA0560015	5 12.09	2.14	204.9	15	RCP				204.9							4	HUTCHINSON RD	MORRIS THOMAS RD		
MT	19,20	20	SL0580055	SA0580055	10.18	SA0560013	3 7.99	0.71	365.9	8	VCP	365.9										6	LILLIAN AVE	MORRIS THOMAS RD	HARVEY ST	
MT	20	20	SL0580056	SA0580056	8.97	SA0560008	8 9.92	1.24	319.0	8	VCP	319.0										6	CHAMBERSBURG ALLEY	MORRIS THOMAS RD	HARVEY ST	
MT	17	20	SL0560001	SA0560001	9.81	SA0560002	2 7.98	0.53	410.7	8	VCP	410.7										6	MORRIS THOMAS RD	KARLST	HANFORD AVE	
MT	17	20	SL0560002	SA0560002	7.98	SA0560003	3 8.81	6.05	220.4	8	VCP	220.4										4	MORRIS THOMAS RD	KARLST	HANFORD AVE	
MT	18	20	SL0560003	SA0560003		SA0560004	_	2.45	348.8	8	VCP	348.8										9	MORRIS THOMAS RD	KARLST	HANFORD AVE	
MT	18	20	SL0560004	SA0560073		SA0560005		1.47	273.4	8	VCP	273.4										6	MORRIS THOMAS RD	HANFORD AVE	CHAMBERSBURG DR	
MT	18	20	SL0560005	SA0560005		SA0560006		3.34	189.9	8	VCP	189.9										5	MORRIS THOMAS RD	HANFORD AVE	CHAMBERSBURG DR	
MT	19	20	SL0560006	SA0560006		SA0560007		1.38	171.3	8	VCP	171.3										1	MORRIS THOMAS RD	CHAMBERSBURG DR		
MT	19	20	SL0560007	SA0560007		SA0560019	_	1.77	128.6	8	VCP	128.6									-	0	MORRIS THOMAS RD	CHAMBERSBURG DR	HUTCHINSON RD	
MT	20	20	SL0560008	SA0560008		SA0560010	-	2.86	88.0	8	VCP	88.0										1	MORRIS THOMAS RD	CHAMBERSBURG AVE		
MT	20	20	SL0560009	SA0560009		SA0560010		6.84	129.1	8	VCP	129.1										4	CHAMBERSBURG AVE	MORRIS THOMAS RD	LULIANIANE	DROP M.H.
MT		20	SL0560010	SA0560010		SA0560011		4.49	194.2 247.8	8	VCP	194.2										4 	MORRIS THOMAS RD	CHAMBERSBURG AVE	LILLIAN AVE	DROP M.H.
MT	20	20	SL0560011 SL0560012	SA0560011 SA0560012		SA0560013	_	3.57 3.92	247.8	8	VCP VCP	247.8 21.2										0	MORRIS THOMAS RD MORRIS THOMAS RD	CHAMBERSBURG AVE	LILLIAN AVE	
MT	19	20	SL0560012	SA0560012	_	SA0560014		3.24	240.3	8	VCP	240.3							+ +		+	1	MORRIS THOMAS RD	LILLIAN AVE	HUTCHINSON RD	
MT	19	20	SL0560013	SA0560014		SA0560019		21.21	38.7	8	VCP	38.7							+		+	2	MORRIS THOMAS RD	HUTCHINSON RD	HOTCHINSON KD	DROP M.H.
MT	19	20	SL0560015	SA0560015		SA0560016		2.28	194.6	15	RCP	36.7			194.6							3	HUTCHINSON RD	MORRIS THOMAS RD		DIOI WITE
MT	21	20	SL0560037	SA0560038		SA0560039		8.77	288.7	8	VCP	288.7			154.0				+			5	MORRIS THOMAS RD	CHAMBERSBURG AVE	PIEDMONT AVE	
MT	21	20	SL0560038	SA0560039		SA0560040		9.70	339.7	8	VCP	339.7										6	MORRIS THOMAS RD	CHAMBERSBURG AVE	PIEDMONT AVE	
MT	22	20	SL0560039	SA0560040		SA0560042	_	4.00	504.7	8	VCP	504.7										1	MORRIS THOMAS RD	CHAMBERSBURG AVE	PIEDMONT AVE	
MT	18		SL0560088	SA0560004		SA0560073		3.99	36.3	8	VCP	36.3										0	MORRIS THOMAS RD	HANFORD AVE		
HIDDEN VA	LLEY																									
HV	23	5	SL0820105	SA0820100	8.16	SA0820099	9 8.06	4.97	181.3	8	VCP	181.3										2	CRESCENT VIEW AVE	RUSTWOOD LN	PINEWOOD LN	
HV	23	5	SL0820106	SA0820099	8.09	SA0820103	1 10.61	1.68	286.4	8	VCP	286.4				7 /						4	PINEWOOD LN	CRESCENT VIEW AVE	4TH ST E	
HV	23	5	SL0820107	SA0820101	10.66	SD0820102	2 9.50	1.53	276.3	8	VCP	276.3			DF	AA						2	PINEWOOD LN	4TH ST E	4TH ST E	
HV	23	5	SL0820127	SA0820134	9.85	SA0820135	5 10.83	5.89	155.0	8	VCP	155.0										1	PINEWOOD LN	4TH ST E	3RD ST E	
HV	24	5	SL0820128	SA0820135	10.87	SA0820136	6 9.83	3.98	151.4	8	VCP	151.4										2	3RD ST E	PINEWOOD LANE		
HV	24	5	SL0820129	SA0820136	_	SA0820137		0.23	172.9	8	VCP	172.9										3	3RD ST E	PINEWOOD LANE	MISQUAH RD	
HV	24	5	SL0820130	SA0820137	_	SA0820138		0.38	271.3	8	VCP	271.3										4	3RD ST E	38TH AVE E	MISQUAN RD	
HV	24	5	SL0820131	SA0820138		SA0820139		0.33	121.1	8	VCP	121.1										3	3RD ST E	MISQUAN RD		
HV	24	5	SL0820136	SA0820139		SA0820140	_	1.20	30.7	8	VCP	30.7										0	3RD ST E	MISQUAN RD	ROCKRIDGE CIR	
HV	25	5	SL0820137	SA0820140		SA0820141	_	0.50	539.1	8	VCP	539.1										12	3RD ST E	MISQUAN RD	ROCKRIDGE CIR	
HV	23	5	SL0820108	SD0820102		SA0820157	_	1.60	281.9	8	VCP	281.9											4TH ST E	PINEWOOD LN	38TH AVE E	
HV	24	5	SL0820158	SA0820157	10.35	SA0820103	3 9.08	1.40	285.9	8	VCP	285.9										5	4TH ST E	PINEWOOD LN	38TH AVE E	
DACINI 30																										
BASIN 28 B28	26	28	SL0100017	SA0100019	10.45	SA0100018	8 9.00	3.60	388.7	8	VCP	388.7							2		-	2	SEAVER AVE ALLEY	COMMONWEALTH AVI	GRAND AVE	END SEALS, CHEMICAL GROUT
B28 B28	26	28	SL0100017 SL0100015	SD0100019		SA0100018		4.72	188.2	8	VCP	188.2							2		-	1	SEAVER AVE ALLEY	COMMONWEALTH AVI		END SEALS, CHEMICAL GROUT  END SEALS, CHEMICAL GROUT
B28	26	28	SL0100013	SA0100021		SA0100013		3.36	297.5	8	VCP	297.5							2			3	96TH AVE W	ZIMMERLY AVE	SEAVER AVE	END SEALS, CHEMICAL GROUT
B28	27		SL0100020		-			3.28	365.9	8	VCP	365.9							2		+	3	ZIMMERLY AVE	95TH AVE W	94TH AVE W	END SEALS, CHEMICAL GROUT
B28	27		SL0100007					5.05	193.2	8	VCP	193.2							2		-	3	ZIMMERLY AVE	94TH AVE W	GRAND AVE	END SEALS, CHEMICAL GROUT, DROP M.H.
B28	27						_	0.80	214.9	10	VCP		214.9						++	2		0	SEAVER AVE	94TH AVE W	GRAND AVE	END SEALS
B28	28		SL0100025	SA0140047		SD0120002		0.56	311.9	8	VCP	311.9							2	-		3	94TH AVE W	KEENE AVE	CLYDE AVE	END SEALS, CHEMICAL GROUT
B28	28			SA0140043		SA0140044		1.54	129.6	8	VCP	129.6							2			0	S 93RD AVE W ALLEY	KEENE AVE	CLYDE AVE	END SEALS
B28	12,29		SL0130026	SD0130066		SA0130014		0.73	416.0	10	VCP		416.0							2		6	88TH AVE W	BEAUDRY AVE	SWENSON AVE	END SEALS, CHEMICAL GROUT, SPECIAL EXCAVATION "A"
B28	30			SA0140043		SA0140044		1.54	129.6	8	VCP	129.6							2			0	90TH AVE W	GRAND AVE	LENROOT ST	END SEALS
B28	30	28	SL0140039	SA0140044	8.00	SA0140045	5 9.00	5.76	156.3	8	VCP	156.3							2			1	90TH AVE W	GRAND AVE	LENROOT ST	END SEALS, CHEMICAL GROUT
B28	13	28	SL0150032	SA0150084	16.41	SA1230002	2 8.14	0.59	277.9	27	VCP												S 72ND AVE W	THOMPSON ST	MILFORD ST	SPECIAL EXCAVATION "B"
B28	31	28	SL1240003	SA1240002	16.50	SA1240001	1 17.38	0.51	199.8	27	VCP							199.8				1	THOMPSON ST ALLEY	S 72ND AVE W	S 71ST AVE W	END SEALS, CHEMICAL GROUT

I HEREBY	CERTIFY	THAT	THIS	PLAN '	WAS	PREPAF	RED	BY I	ME	OR	UNDER	MY	DIRECT	SUPERVISION	AND	THAT	AM /	A DULY	LICENSED	Π
<b>PROFESSIO</b>	DNAI FNO	SINFFR	UNDF	FR THE	FIAV	VS OF	THF	STA	TF (	OF	MINNES	TA.								

SIGNATURE: \_

DATE: 3/1/2022 LIC. NO: 50401

TIM A. SANDERS
TYPE NAME

DULUTH

CITY OF	DULUT	Н	
<b>ENGINEE</b>	RING D	IVISION	
411 W.	1ST ST	. RM.	240
DULLITH	MN	55802	

CITY PROJECT NO.:

2022 CITYWIDE SAI	NITARY SEWER CIPP LINING		DF
2037	STATE AID PROJECT NO.:	NA	SHEE

| BASIN 26                   | PIPE ID   |   |   |   |   |  |  |   |  |  |  |  |   |   |   
   
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|                            | NUMBER    | U.S. M.H.   | U.S. M.H.<br>DEPTH  | D.S. M.H.   | D.S. M.H.<br>DEPTH  | SLOPE (%)<br>2 digit   | LENGTH<br>(FT)   | DIAMETER<br>(IN)  | MATERIAL   | CIPP 8"<br>(FT)  | CIPP 10"<br>(FT)   | CIPP 12" (   | CIPP 15"<br>(FT)  | CIPP 16"<br>(FT)  | CIPP 18"<br>(FT)  
   
  | CIPP 27"<br>(FT)   
  | 8" END<br>SEAL  | 10" END<br>SEAL  
   | 12" END<br>SEAL   
  | REMOTE<br>CUT<br>SERVICE   
   | STREET   | CROSS STREET 1  | CROSS STREET 2  | NOTES   |
|                            |           |   |   |   |   |  |  |   |  |  |  |  |   |   |   
   
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|                            | SL0220047 | SD0220048   | 13.41   | SA0220011   |   | 0.72   | 128.2  | 8   | VCP  | 128.2  |  |  |   |   |   
   
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   | 58TH AVE W ALLLEY  | RALEIGH ST  | POLK ST   | END SEALS   |
| 26                         | SL0220083 | SA0250060   | 14.75   | SA0220003   |   | 3.58   | 227.2  | 12  | VCP  |  |  | 227.2  |   |   |   
   
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   | GRAND AVE ALLEY  | KEENE CREEK   | HWY I-35  | END SEALS   |
| 25                         | SL0240049 | SA0240051   | 11.88   | SA0240052   |   | 1.18   | 120.7  | 10  | VCP  |  | 120.7  |  |   |   |   
   
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   | ROOSEVELTST  | 63RD AVE W ALLEY  | 62ND AVE W ALLEY  | END SEALS   |
| 25                         | SL0240048 | SA0240050   | 12.55   | SA0240051   | 11.88   | 2.27   | 254.2  | 10  | VCP  |  | 254.2  |  |   |   |   
   
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   | ROOSEVELTST  | 63RD AVE W ALLEY  | 62ND AVE W ALLEY  | END SEALS   |
| 26                         | SL0220049 | SA0220046   | 4.50  | SA0220009   |   | 0.84   | 200.3  | 8   | VCP  | 200.3  |  |  |   |   |   
   
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   | S 59TH AVE W ALLEY   | RALEIGH ST  | POLK ST   | END SEALS, CHEMICAL GROUT   |
| 26                         | SL0220093 | SA0220092   | 11.08   | SA0220012   |   | 0.13   | 189.2  | 15  | VCP  |  |  |  | 189.2   |   |   
   
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   | S 57TH AVE W ALLEY   | RALEIGH ST  | POLK ST   | END SEALS   |
| 26                         | SL0220018 | SA0220050   | 19.50   | SA0220013   |   | 2.71   | 250.7  | 8   | VCP  | 250.7  |  |  |   |   |   
   
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   | S 56TH AVE W ALLEY   | RALEIGH ST  | POLK ST   | END SEALS   |
| 26                         | SL0220063 | SA0220023   | 7.97  | SA0220024   |   | 14.58  | 91.4   | 8   | VCP  | 91.4   |  |  |   |   |   
   
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   | S 58TH AVE W ALLEY   | MAIN ST   | POLK ST   | END SEALS, CHEMICAL GROUT, VERIFY ALL SERVICES  |
| 26                         | SL0220064 | SA0220024   | 7.80  | SA0220011   | 2.83  | 0.84   | 299.5  | 8   | VCP  | 299.5  |  |  |   |   |   
   
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   | S 58TH AVE W ALLEY   | MAIN ST   | POLK ST   | END SEALS, CHEMICAL GROUT, VERIFY ALL SERVICES  |
| 25                         | SL0240037 | SD0240035   | 11.20   | SA0240034   | <b>!</b>  | 4.60   | 267.4  | 8   | VCP  | 267.4  |  |  |   |   |   
   
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   | N 64TH AVE W ALLEY   | GREENE ST   | BRISTOLST   | END SEALS, CHEMICAL GROUT   |
| 25                         | SL0240039 | -   | 10.95   | SA0240047   | 13.20   | 1.81   | 185.0  | 8   | VCP  | 185.0  |  |  |   |   |   
   
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  | 4  
   | N 64TH AVE W ALLEY   | ROOSEVELT ST  | BRISTOLST   | END SEALS, CHEMICAL GROUT   |
| 26                         | SL0220055 | SA0220040   | 8.92  | SA0220044   |   | 0.45   | 57.9   | 8   | Cl   | 57. <del>9</del>   |  |  |   |   |   
   
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  | 0  
   | 60TH AVE W ALLEY   | POLK ST   | MAIN ST   | END SEALS   |
| 26                         | SL0220056 | SA0220044   | 6.18  | SA0220007   | 4.00  | 2.23   | 48.0   | 8   | VCP  | 48.0   |  |  |   |   |   
   
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   | 60TH AVE W ALLEY   | POLK ST   | MAIN ST   | END SEALS   |
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| 25                         | SL0280003 |   | 7.02  | SA0250002   | 1   | 6.01   | 89.8   | 8   | VCP  | 89.8   |  |  |   |   |   
   
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  | 2  
   | 60TH AVE W   | ELINOR ST   | ELINOR ST ALLEY   |   |
| 18                         | SL0310019 | SA0310020   | 13.14   | SA0310021   | t   | 13.19  | 25.8   | 16  | Cl   |  |  |  |   | 25.8  |   
   
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   | W MICHIGAN ST  | S 22ND AVE W  |   | VERIFY PIPE DIAMETER  |
| 18                         | SL0360092 | SA036XXXX   | N/A   | SA0360091   | 3.01  | N/A  | 63.7   | 8   | VCP  | 63.7   |  |  |   |   |   
   
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   | 6TH ST W ALLEY   | 26TH AVE W  | 27TH AVE W  | SPECIAL EXCAVATION "C"  |
| 6                          | SL0440013 | SA0440005   | 8.80  | SA0440004   |   | 3.17   | 63.2   | 8   | VCP  | 63.2   |  |  |   |   |   
   
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  | 0  
   | SUPERIOR ST E ALLEY  | 30TH AVE E  |   |   |
| 6                          | SL0440012 | SA0440006   | 5.90  | SA0440005   | 8.80  | 1.45   | 435.0  | 8   | VCP  | 435.0  |  |  |   |   |   
   
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  | 7  
   | SUPERIOR ST E ALLEY  | 29th AVE E  | 30TH AVE E  |   |
| 16                         | SL0460173 | SA0460165   | 10.00   | SA0460164   |   | 1.47   | 289.8  | 10  | VCP  |  | 289.8  |  |   |   |   
   
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   | W 1ST ST   | LAKE AVE  | N 1S⊤AVE W  | VERIFY ALL SERVICES   |
| 16                         | SL0460174 | SA0460164   | 10.93   | SA0460163   |   | 1.46   | 174.5  | 10  | VCP  |  | 174.5  |  |   |   |   
   
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  | 3  
   | W 1ST ST   | LAKE AVE  | N 1ST AVE W   | VERIFY ALL SERVICES   |
| 13                         | SL0470265 | SA0470257   | 8.10  | SA0470256   |   | 0.54   | 426.4  | 8   | VCP  | 426.4  |  |  |   |   |   
   
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   | 1ST ST W ALLEY   | N 12TH AVE E  | N 11TH AVE E  |   |
| 13                         | SL0470266 |   | 6.50  | SA0470255   |   | 0.39   | 412.0  | 8   | VCP  | 412.0  |  |  |   |   |   
   
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   | 1ST ST W ALLEY   | N11TH AVE E   | N 10TH AVE E  | SPECIAL EXCAVATION "D"  |
| 14                         | SL0520152 |   | 8.64  | SD0520137   |   | 1.65   | 444.5  | 8   | VCP  | 444.5  |  |  | A   | RA  | v 🛶 .   
   
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  | 16   
   | 10TH ST E  | 9TH AVE E   | 8TH AVE E   | VERIFY ALL SERVICES   |
| 14                         | SL0540043 |   | 6.08  | SA0540041   |   | 7.19   | 480.5  | 8   | VCP  | 480.5  |  |  | U   | RA  |   
   
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  | 6  
   | BOULEVARD PL   | PLUM ST   | HIGH ST   |   |
| 21                         | SL0670014 |   | 10.98   | SA0670015   |   | 5.95   | 208.4  | 8   | VCP  | 208.4  |  |  |   |   |   
   
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  | 3  
   | GILEAD ST  | COMO AVE  | ARLINGTON AVE   |   |
| 21                         | SL0670015 | +   | 6.88  | SA0670016   |   | 4.00   | 200.1  | 8   | VCP  | 200.1  |  |  |   |   |   
   
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   | GILEAD ST  | COMO AVE  | ARLINGTON AVE   |   |
| 9                          | SL0710025 | SA0710009   | 10.55   | SA0710008   | 1   | 1.40   | 68.6   | 8   | VCP  | 68.6   |  |  |   |   |   
   
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   | KENWOOD AVE  | CHESTER BOWL DR   |   |   |
| 9                          | SL0710026 | SA0710008   | 12.49   | SA0710007   | 6.45  | 32.60  | 100.0  | 8   | VCP  | 100.0  |  |  |   |   |   
   
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   | KENWOOD AVE  | CHESTER BOWL DR   |   |   |
| 9                          | SL0710027 | SA0710007   | 6.45  | SA0710006   |   | 19.60  | 93.5   | 8   | VCP  | 93.5   |  |  |   |   |   
   
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   | KENWOOD AVE  | CHESTER BOWL DR   |   |   |
| 9                          | SL0710028 | SA0710006   | 8.32  | SA0710005   | 1   | 0.36   | 61.7   | 8   | CI   | 61.7   |  |  |   |   |   
   
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   | KENWOOD AVE  | CHESTER BOWL DR   |   |   |
| 9                          | SL0710029 | SA0710005   | 7.89  | SA0710003   | 14.22   | 1.15   | 104.2  | 8   | VCP  | 104.2  |  |  |   |   |   
   
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   | CHESTER BOWL DR  | KENWOOD AVE   |   |   |
| 9                          | SL0710032 | SA0710003   | 14.22   | SA0710004   |   | 1.60   | 260.1  | 18  | VCP  |  |  |  |   |   | 225.0   
   
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   | CHESTER BOWL DR  | KENWOOD AVE   |   | SPECIAL EXCAVATION "E"  |
| 9                          | SL0710033 | SA0710004   | 6.15  | SA0710012   | 7.00  | 1.20   | 278.0  | 18  | VCP  |  |  |  |   |   | 243.0   
   
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   | CHESTER BOWL DR  | KENWOOD AVE   |   | SPECIAL EXCAVATION "E"  |
| 5                          | SL0820121 | SA0820114   | 6.80  | SA0820116   | 6.50  | 4.02   | 109.4  | 10  | RCP  |  | 109.4  |  |   |   |   
   
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   | 35TH AVE E   | E 3RD ST  | E 3RD ST ALLEY  |   |
| 5                          | SL0490023 | SA0820116   | 6.50  | SA0490024   |   | 4.39   | 95.6   | 10  | RCP  |  | 95.6   |  |   |   |   
   
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   | 35TH AVE E   | E 3RD ST  | E 3RD ST ALLEY  |   |
| 5                          | SL0820122 |   | 8.00  | SA0490024   |   | 2.58   | 193.9  | 8   | VCP  | 193.9  |  |  |   |   |   
   
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   | 35TH AVE E   | E 3RD ST  | E 3RD ST ALLEY  |   |
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| 5<br>5<br>4<br>4<br>4<br>4 |           | SL0490024<br>SL0870160<br>SL0880075<br>SL0880076<br>SL0880077 | SL0490024         SA0490024           SL0870160         SA0870164           SL0880075         SA0870171           SL0880076         SA0880078 | SL0490024         SA0490024         6.00           SL0870160         SA0870164         6.50           SL0880075         SA0870171         11.07           SL0880076         SA0880078         6.76           SL0880077         SD0880079         8.46 | SL0490024         SA0490024         6.00         SA0490025           SL0870160         SA0870164         6.50         SA0870166           SL0880075         SA0870171         11.07         SA0880078           SL0880076         SA0880078         6.76         SD0880079           SL0880077         SD0880079         8.46         SA0880080 | SL0490024         SA0490024         6.00         SA0490025         7.00           SL0870160         SA0870164         6.50         SA0870166         8.00           SL0880075         SA0870171         11.07         SA0880078         6.76           SL0880076         SA0880078         6.76         SD0880079         8.46           SL0880077         SD0880079         8.46         SA0880080         8.10 | SL0490024         SA0490024         6.00         SA0490025         7.00         11.09           SL0870160         SA0870164         6.50         SA0870166         8.00         5.00           SL0880075         SA0870171         11.07         SA0880078         6.76         4.17           SL0880076         SA0880078         6.76         SD0880079         8.46         6.43           SL0880077         SD0880079         8.46         SA0880080         8.10         1.01 | SL0490024         SA0490024         6.00         SA0490025         7.00         11.09         171.4           SL0870160         SA0870164         6.50         SA0870166         8.00         5.00         204.1           SL0880075         SA0870171         11.07         SA0880078         6.76         4.17         390.4           SL0880076         SA0880078         6.76         SD0880079         8.46         6.43         199.2           SL0880077         SD0880079         8.46         SA0880080         8.10         1.01         83.5 | SL0490024         SA0490024         6.00         SA0490025         7.00         11.09         171.4         8           SL0870160         SA0870164         6.50         SA0870166         8.00         5.00         204.1         8           SL0880075         SA0870171         11.07         SA0880078         6.76         4.17         390.4         15           SL0880076         SA0880078         6.76         SD0880079         8.46         6.43         199.2         15           SL0880077         SD0880079         8.46         SA0880080         8.10         1.01         83.5         15 | SL0490024         SA0490024         6.00         SA0490025         7.00         11.09         171.4         8         VCP           SL0870160         SA0870164         6.50         SA0870166         8.00         5.00         204.1         8         VCP           SL0880075         SA0870171         11.07         SA0880078         6.76         4.17         390.4         15         VCP           SL0880076         SA0880078         6.76         SD0880079         8.46         6.43         199.2         15         VCP           SL0880077         SD0880079         8.46         SA0880080         8.10         1.01         83.5         15         VCP | SL0490024         SA0490024         6.00         SA0490025         7.00         11.09         171.4         8         VCP         171.4           SL0870160         SA0870164         6.50         SA0870166         8.00         5.00         204.1         8         VCP         204.1           SL0880075         SA0870171         11.07         SA0880078         6.76         4.17         390.4         15         VCP           SL0880076         SA0880078         6.76         SD0880079         8.46         6.43         199.2         15         VCP           SL0880077         SD0880079         8.46         SA0880080         8.10         1.01         83.5         15         VCP | SL0490024         SA0490024         6.00         SA0490025         7.00         11.09         171.4         8         VCP         171.4           SL0870160         SA0870164         6.50         SA0870166         8.00         5.00         204.1         8         VCP         204.1           SL0880075         SA0870171         11.07         SA0880078         6.76         4.17         390.4         15         VCP           SL0880076         SA0880078         6.76         SD0880079         8.46         6.43         199.2         15         VCP           SL0880077         SD0880079         8.46         SA0880080         8.10         1.01         83.5         15         VCP | SL0490024         SA0490024         6.00         SA0490025         7.00         11.09         171.4         8         VCP         171.4 | SL0490024         SA0490024         6.00         SA0490025         7.00         11.09         171.4         8         VCP         171.4 | \$1.0490024         \$A0490024         6.00         \$A0490025         7.00         \$11.09         \$171.4         8         VCP         \$171.4 <td>\$1.0490024         \$A0490024         6.00         \$A0490025         7.00         \$11.09         \$171.4         8         VCP         \$171.4        
\$171.4<td>SL0490024         SA0490024         6.00         SA0490025         7.00         11.09         171.4         8         VCP         171.4</td><td>\$1.0490024         \$A0490024         6.00         \$A0490025         7.00         \$11.09         \$171.4         8         VCP         \$171.4<td>\$1.0490024     \$A.0490024     6.00     \$A.0490025     7.00     \$11.09     \$171.4     8     VCP     \$171.4<td>\$1.0490024     \$A.0490024     6.00     \$A.0490025     7.00     \$11.09     \$171.4     8     VCP     \$171.4<td>\$1.0490024         \$A.0490024         6.00         \$A.0490025         7.00         \$11.09         \$17.4         \$1.0490024         \$1.0490024         \$1.0490025</td><td>\$1.0490024         \$0.00         \$0.0490025         7.00         \$11.09         \$171.4         \$8         \$VCP         \$171.4         \$1.0870160         \$0.0870166         \$0.00         \$0.0</td><td>\$1.0490024         \$6.00         \$A0490025         7.00         \$11.09         \$171.4         \$8         \$VCP         \$171.4<td>  SL0490024   SA0490025   CA0   SA0490025   CAO   CAO</td></td></td></td></td></td> | \$1.0490024         \$A0490024         6.00         \$A0490025         7.00         \$11.09         \$171.4         8         VCP         \$171.4 
       \$171.4         \$171.4 <td>SL0490024         SA0490024         6.00         SA0490025         7.00         11.09         171.4         8         VCP         171.4</td> <td>\$1.0490024         \$A0490024         6.00         \$A0490025         7.00         \$11.09         \$171.4         8         VCP         \$171.4<td>\$1.0490024     \$A.0490024     6.00     \$A.0490025     7.00     \$11.09     \$171.4     8     VCP     \$171.4<td>\$1.0490024     \$A.0490024     6.00     \$A.0490025     7.00     \$11.09     \$171.4     8     VCP     \$171.4<td>\$1.0490024         \$A.0490024         6.00         \$A.0490025         7.00         \$11.09         \$17.4         \$1.0490024         \$1.0490024         \$1.0490025</td><td>\$1.0490024         \$0.00         \$0.0490025         7.00         \$11.09         \$171.4         \$8         \$VCP         \$171.4         \$1.0870160         \$0.0870166         \$0.00         \$0.0</td><td>\$1.0490024         \$6.00         \$A0490025         7.00         \$11.09         \$171.4         \$8         \$VCP         \$171.4<td>  SL0490024   SA0490025   CA0   SA0490025   CAO   CAO</td></td></td></td></td> | SL0490024         SA0490024         6.00         SA0490025         7.00         11.09         171.4         8         VCP         171.4         171.4         171.4        
171.4         171.4 | \$1.0490024         \$A0490024         6.00         \$A0490025         7.00         \$11.09         \$171.4         8         VCP         \$171.4 <td>\$1.0490024     \$A.0490024     6.00     \$A.0490025     7.00     \$11.09     \$171.4     8     VCP     \$171.4<td>\$1.0490024     \$A.0490024     6.00     \$A.0490025     7.00     \$11.09     \$171.4     8     VCP     \$171.4<td>\$1.0490024         \$A.0490024         6.00         \$A.0490025         7.00         \$11.09         \$17.4         \$1.0490024         \$1.0490024         \$1.0490025</td><td>\$1.0490024         \$0.00         \$0.0490025         7.00         \$11.09         \$171.4         \$8         \$VCP         \$171.4         \$1.0870160         \$0.0870166         \$0.00         \$0.0</td><td>\$1.0490024         \$6.00         \$A0490025         7.00         \$11.09         \$171.4         \$8         \$VCP         \$171.4<td>  SL0490024   SA0490025   CA0   SA0490025   CAO   CAO</td></td></td></td> | \$1.0490024     \$A.0490024     6.00     \$A.0490025     7.00     \$11.09     \$171.4     8     VCP     \$171.4 
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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.

SIGNATURE: \_

TIM A. SANDERS TYPE NAME

DATE: \_\_\_\_3/1/2022

LIC. NO: 50401



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

CITY PROJECT NO .:

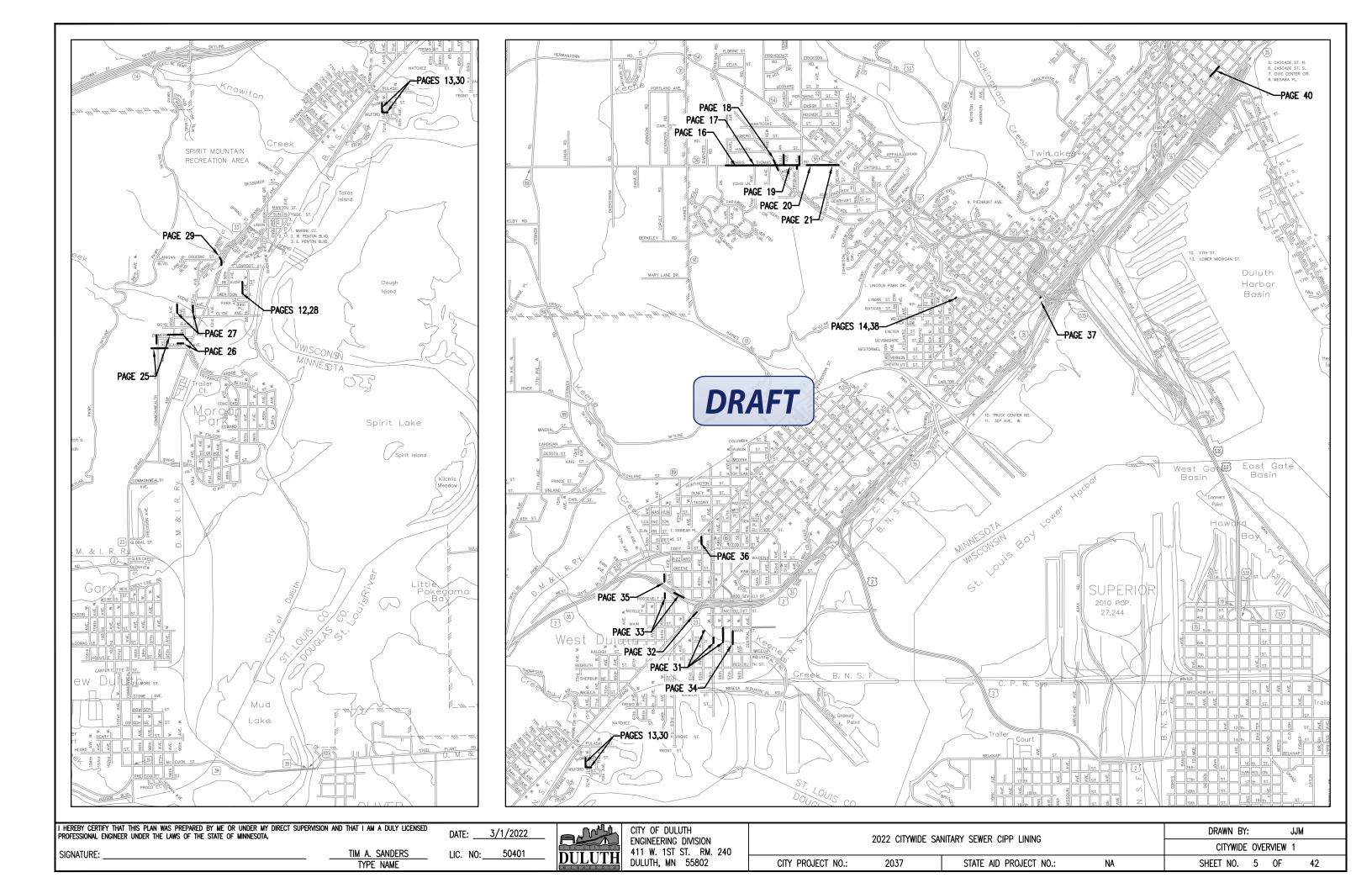
2022 CITYWIDE SANITARY SEWER CIPP LINING

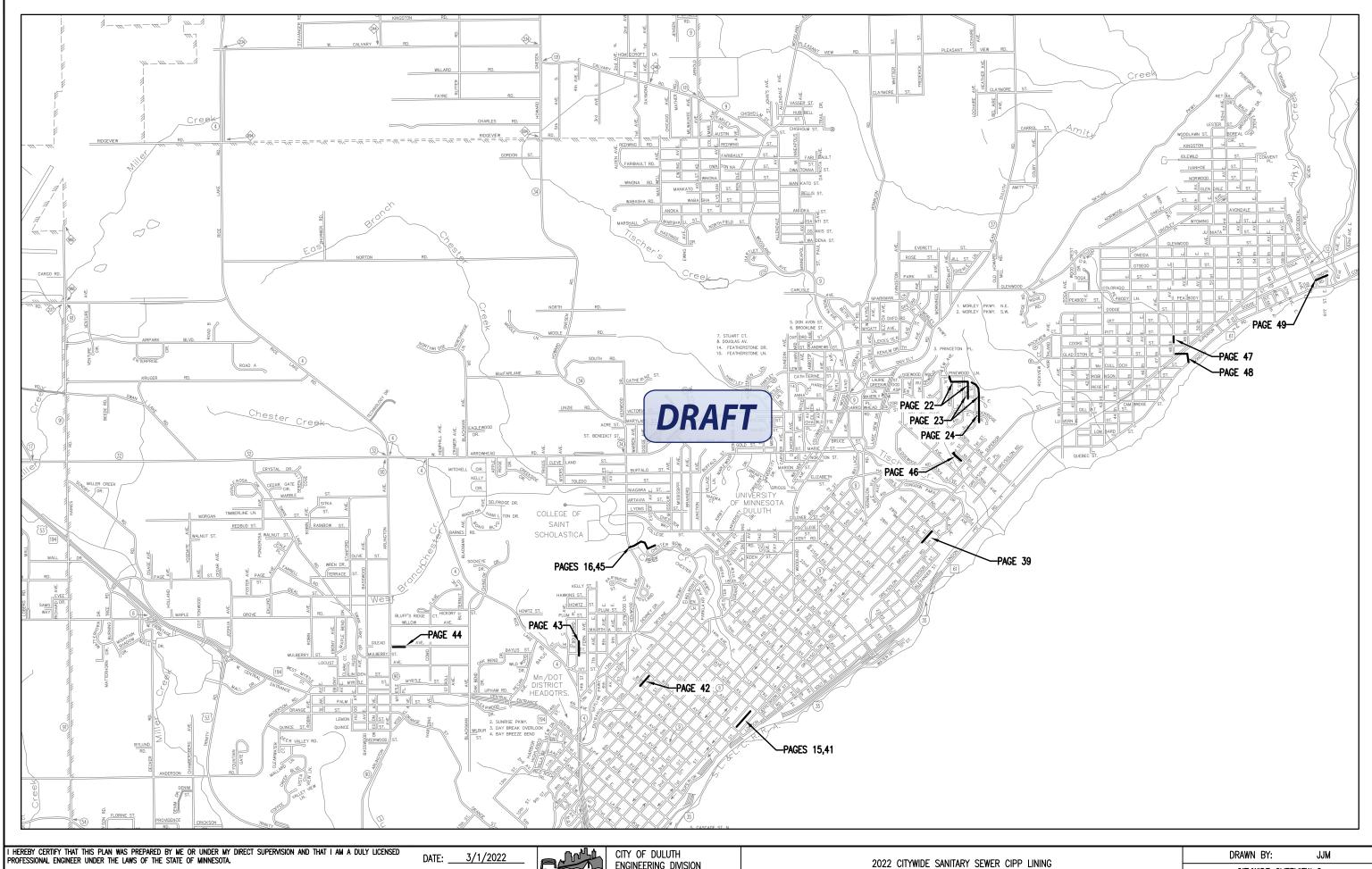
STATE AID PROJECT NO.:

NA

2037

DRAWN BY: JJM CHART A CONT. SHEET NO. 4 OF 42





DATE: 3/1/2022

SIGNATURE: TYPE NAME

DATE: 3/1/2022

TYPE NAME

DATE: 3/1/2022

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

DULUTH, MN 55802

CITY PROJECT NO.: 2037

STATE AID PROJECT NO.: NA SHEET NO. 6 OF 42

# STORMWATER MANAGEMENT AND EROSION CONTROL REQUIREMENTS

- 1. CITY OF DULUTH PROJECT #2037 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.
- 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.
- 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.
- 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.
- CONTRACT BID ITEMS AND SITE SPECIFIC ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR ANTICIPATED EROSION CONTROL DEVICES. EROSION CONTROL DEVICES CONSIDERED NECESSARY BY OR APPROVED BY THE ENGINEER BUT NOT INCLUDED IN THE BID WILL BE PAID FOR BY UNIT PRICES IN SECTION 2573 OF THE CITY OF DULUTH CONSTRUCTION STANDARD.
- CURRENT MNDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND THE CURRENT CITY OF DULUTH SHALL APPLY.
- THE CONTRACTOR SHALL DESIGNATE AN EROSION CONTROL SUPERVISOR.

- THE EROSION CONTROL SUPERVISOR SHALL PERFORM INSPECTIONS OF EACH EXCAVATION SITE WEEKLY AND AFTER A RAIN EVENT OR 3" OR MORE. THE CONTRACTOR SHALL BE KEEP A WRITTEN RECORD OF INSPECTIONS AND REPORT DEFICIENCIES AND CORRECTIVE ACTION TO THE FNGINFFR.
- 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 LO DISTURBED AREAS OF THE PROJECT SITE.
- 11. DISTURBED SLOPES NOT ACTIVELY WORKED SHALL BE PROTECTED FROM SOIL EROSION WITH TEMPORARY OR PERMANENT COV 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 OC 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:
- 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.
- A STABILIZED CONSTRUCTION ENTRANCE/EXIT WILL BE CONSTRUCTED TO REDUCE VEHICLE TRACKING OF SEDIMENTS OFF THE PROJECT RIGHT OF
- 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.
- RECYCLABLE MATERIALS MUST BE SEPARATED ON-SITE AND SEGREGATED IN DESIGNATED CONTAINERS.
- A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR WILL COLLECT ALL SANITARY WASTE FROM THE PORTABLE UNITS AT A RATE NECESSARY TO MAINTAIN DESIGNED FUNCTION.
- 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.
- 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.
- PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS, WHICH ARE CLEARLY LABELED.
- 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.
- 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.
- 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.	DATE:3/1/2022	CITY OF DULUTH	2022 CITYV	DRAWN BY:	JJM			
SIGNATURE: TIM A. SANDERS	LIC NO: 50401	ENGINEERING DIVISION 411 W. 1ST ST. RM. 240	2022 CITY	EROSION CONTROL R	EQUIREMENT	S		
TYPE NAME	EIC. NO	DULUTH DULUTH, MN 55802	CITY PROJECT NO.: 2037	STATE AID PROJECT NO.:	NA	SHEET NO. 7	OF 4	+2

### TRAFFIC CONTROL REQUIREMENTS:

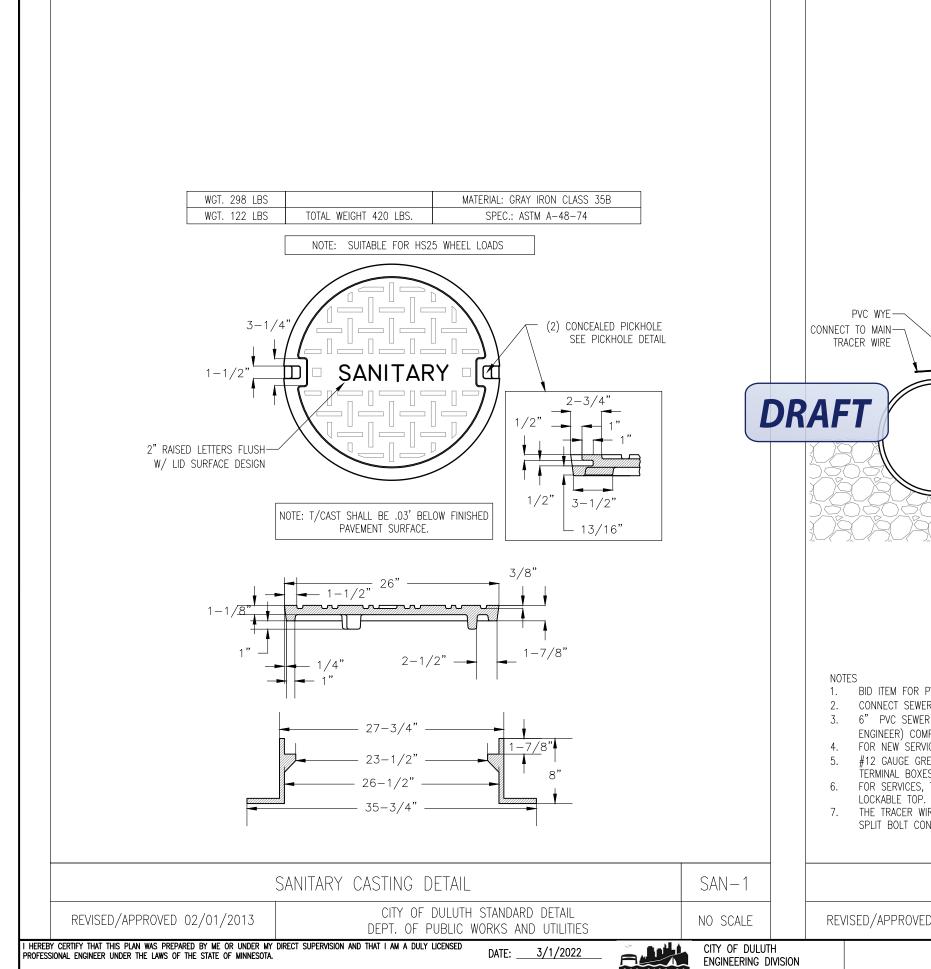
- 1. ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM TO THE CURRENT MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES INCLUDING THE MINNESOTA TEMPORARY TRAFFIC CONTROL FIELD MANUAL.
- 2. THE CONTRACTOR SHALL USE THE MANUAL ON UNIFORM TRAFFIC SONTROL DEVICES AND SELECT THE APPROPRIATE TEMPORARY TRAFFIC CONTROL ZONE LAYOUT.
- 3. THE CONTRACTOR SHALL FURNISH, INSTALL, ADJUST, MAINTAIN AND REMOVE ALL NECESSARY TRAFFIC CONTROL SIGNS AND DEVICES IN THE APPROPRIATE TEMPORARY TRAFFIC CONTROL ZONE LAYOUT.
- 4. FIELD CONDITIONS MAY REQUIRE MODIFICATIONS OF INDIVIDUAL LAYOUTS AS DEEMED NECESSARY BY THE ENGINEER.
- 5. ADDITIONAL SIGNS AND TRAFFIC CONTROL DEVICES OR ALTERNATE LAYOUTS MAY BE NECESSARY DEPENDING ON THE TYPE AND SEQUENCE OF THE CONTRACTORS OPERATION. ALL CHANGES TO THE TRAFFIC CONTROL PLAN MUST BE APPROVED BY THE ENGINEER. NO ADDITIONAL COMPENSATION WILL BE MADE FOR CHANGES RESULTING FROM THE CONTRACTOR'S OPERATIONS
- 6. THE CONTRACTOR SHALL RECEIVE COMPENSATION FOR ALL NECESSARY TRAFFIC CONTROL WORK, WHETHER SHOWN IN THIS PLAN OR OTHERWISE, ON THE BASIS OF A LUMP SUM PAYMENT FOR ITEM TRAFFIC CONTROL (2563.601).
- THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ANY WORK AREAS NEAR TRAFFIC IN ACCORDANCE WITH MMUTCD.
- B. ALL TRAFFIC CONTROL DEVICES ON ROADS OPEN TO TRAFFIC THAT ARE NOT CONSISTENT WITH TRAFFIC OPERATION, SHALL BE COVERED, REMOVED OR REVISED AS DIRECTED BY THE ENGINEER.
- 9. ALL DEVICES SHALL BE MOVED OR COVERED AS SOON AS THEY ARE NO LONGER REQUIRED OR APPROPRIATE.
- 10. CONTRACTOR TO VERIFY ALL EXISTING SIGN SIZES AND PREPARE CUSTOM SIGNS APPROPRIATELY.

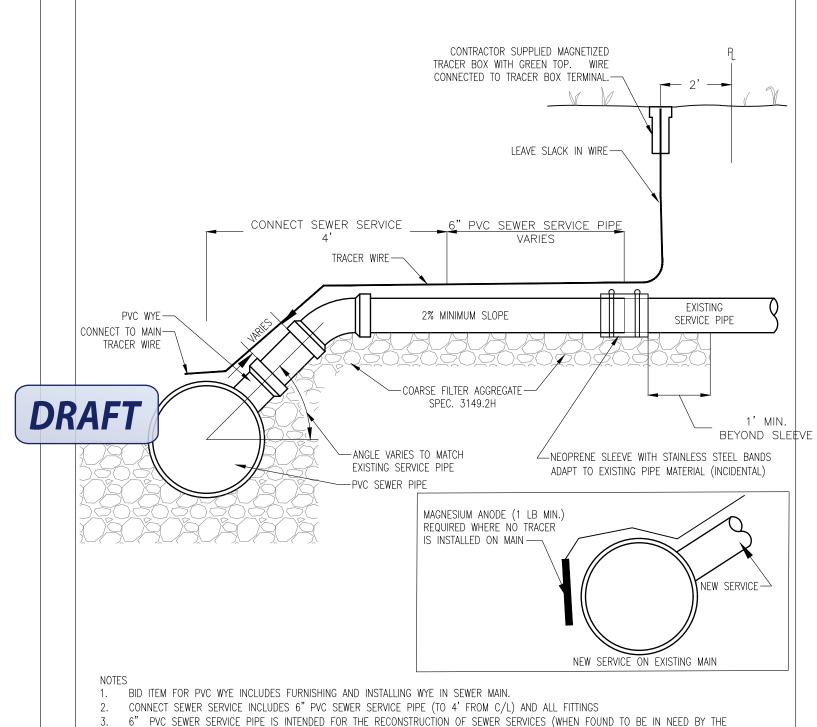
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- 11. WORK PERFORMED WITHOUT APPROPRIATE TRAFFIC CONTROL IN PLACE MAY BE CONSIDERED UNAUTHORIZED WORK AND MAY BE SUBJECT TO NONPAYMENT.
- 2. BEFORE LANE OR ROAD CLOSURES, THE CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST ALONG WITH A PROPOSED TRAFFIC CONTROL PLAN
  7 DAYS PRIOR TO BEGINNING WORK FOR APPROVAL BY THE ENGINEER.
- 13. PRIOR TO CLOSING ROADS THE CONTRACTOR SHALL CONTACT THE FOLLOWING AUTHORITIES 48 HOURS IN ADVANCE OF CLOSURE:
- 13.1. 911
- 13.2. Duluth Fire Department
- 13.3. Duluth Police Department 730-5400
- 13.4. Engineering Front Desk 730–5200
- 13.5. DTA (only when it affects a bus route)
  - Rod Fournier 623-4336
  - Dispatchers 623-4328 (only if very short notice)
- 13.6. Duluth School District/Bus (Notify all three contacts)
  Steven Johnson (Transportation) 336-8700 Ext 4005
  - Dale Honkala (Transportation) 348-5879 Voyager Bus (Rudy, Josh, or Deb) 724-1707
- 13.7. St. Louis County Communications Supervisor
  Emily Warnygora 336-4349
- 13.8. Summit Shuttle (only UMD/Scholastica/Rice Lake Rd/W. Arrowhead Rd)
  Jeff Richtman 651-705-3313 or 651-373-6137 (c)



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:3/1/2022	CITY OF DULUTH	2022 CITYWIDE SANITARY SEWER CIPP LINING	DRAWN BY: JJM
SIGNATURE: TIM A. SANDERS	LIC. NO: 50401	ENGINEERING DIVISION 411 W. 1ST ST. RM. 240	2022 CITTWIDE SANITART SEWER CIFF LINING	TRAFFIC CONTROL REQUIREMENTS
TYPE NAME	LIC. NO: 30401	-   <b>DULUTH</b>   411 W. 151 St. RM. 240   DULUTH, MN 55802	CITY PROJECT NO.: 2037 STATE AID PROJECT NO.: NA	SHEET NO. 8 OF 42





- 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
- 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.

TYPICA	L SEWER SERVICE CONNECTION	SAN-2
REVISED/APPROVED 02/19/2015	CITY OF DULUTH STANDARD DETAIL DEPT. OF PUBLIC WORKS AND UTILITIES	NO SCALE

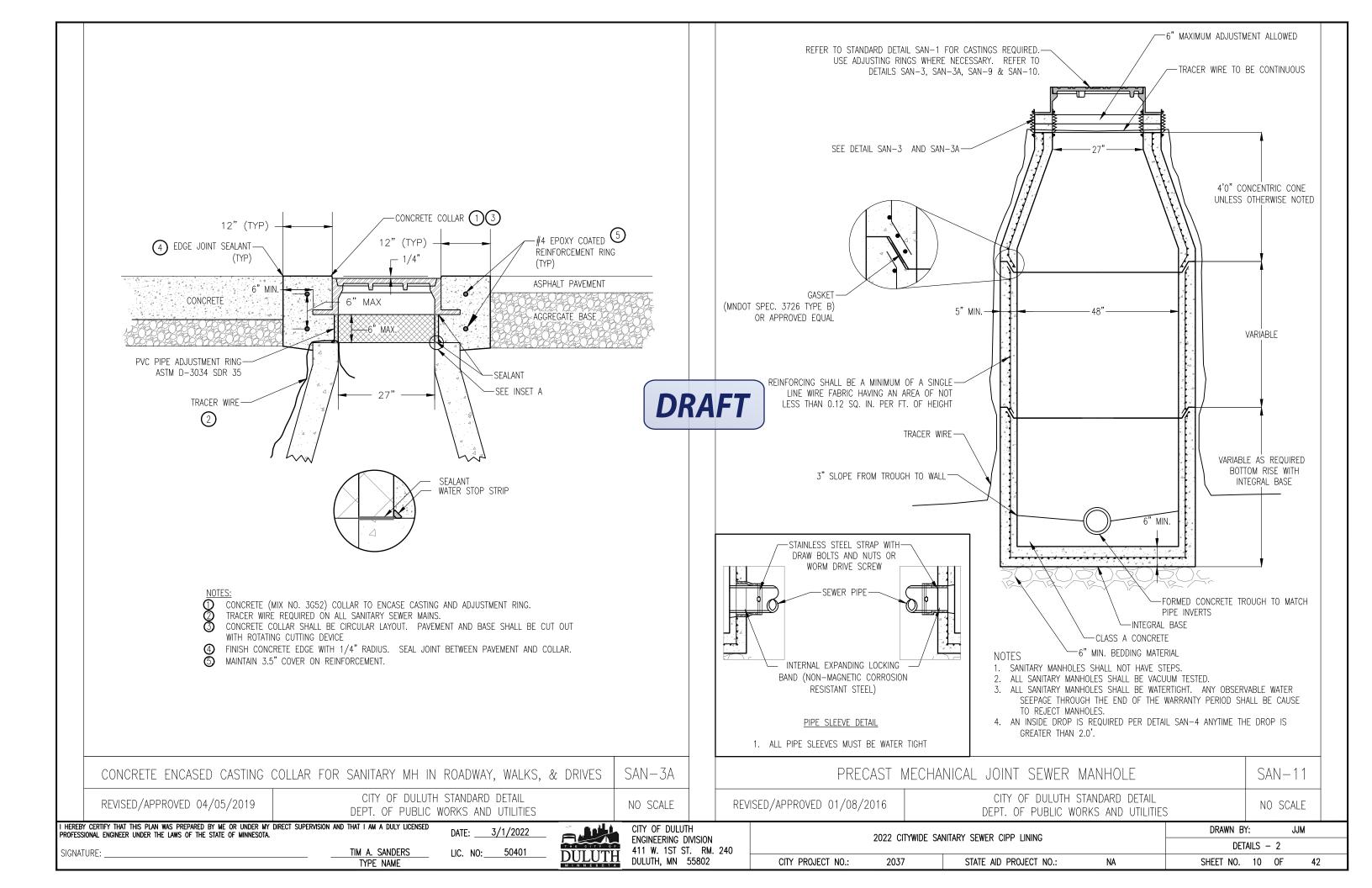
SIGNATURE: TIM A. SANDERS TYPE NAME

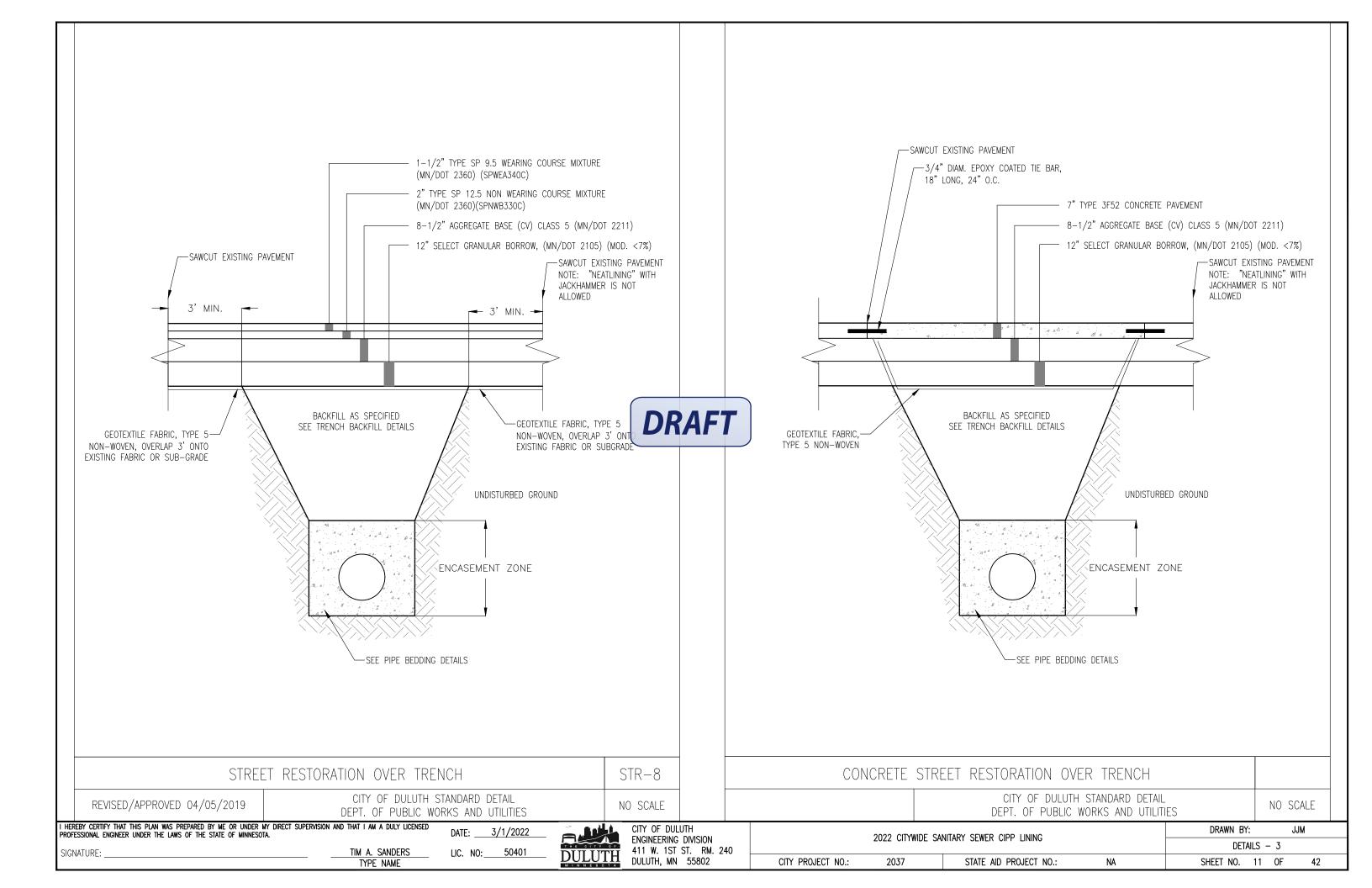
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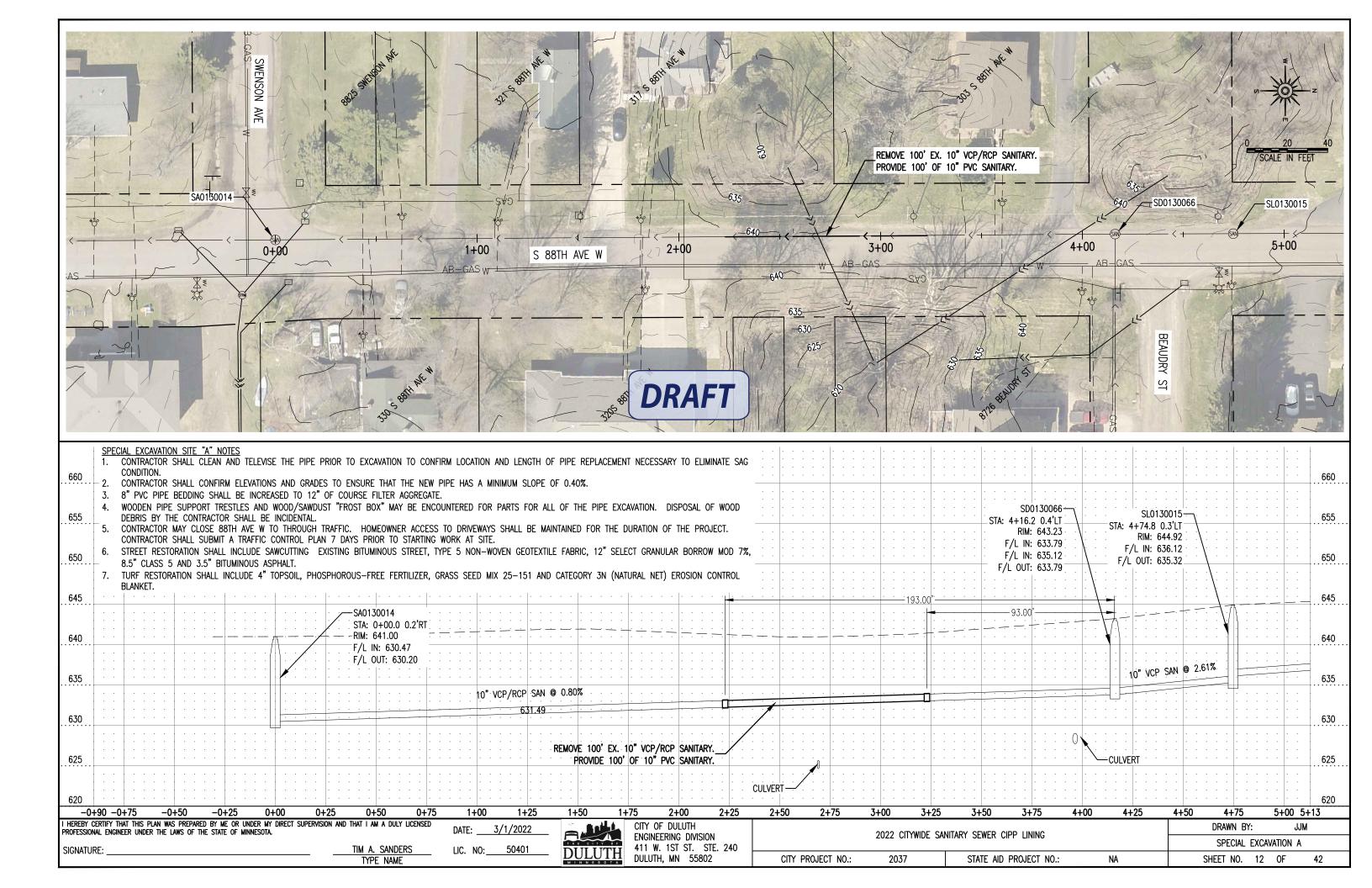


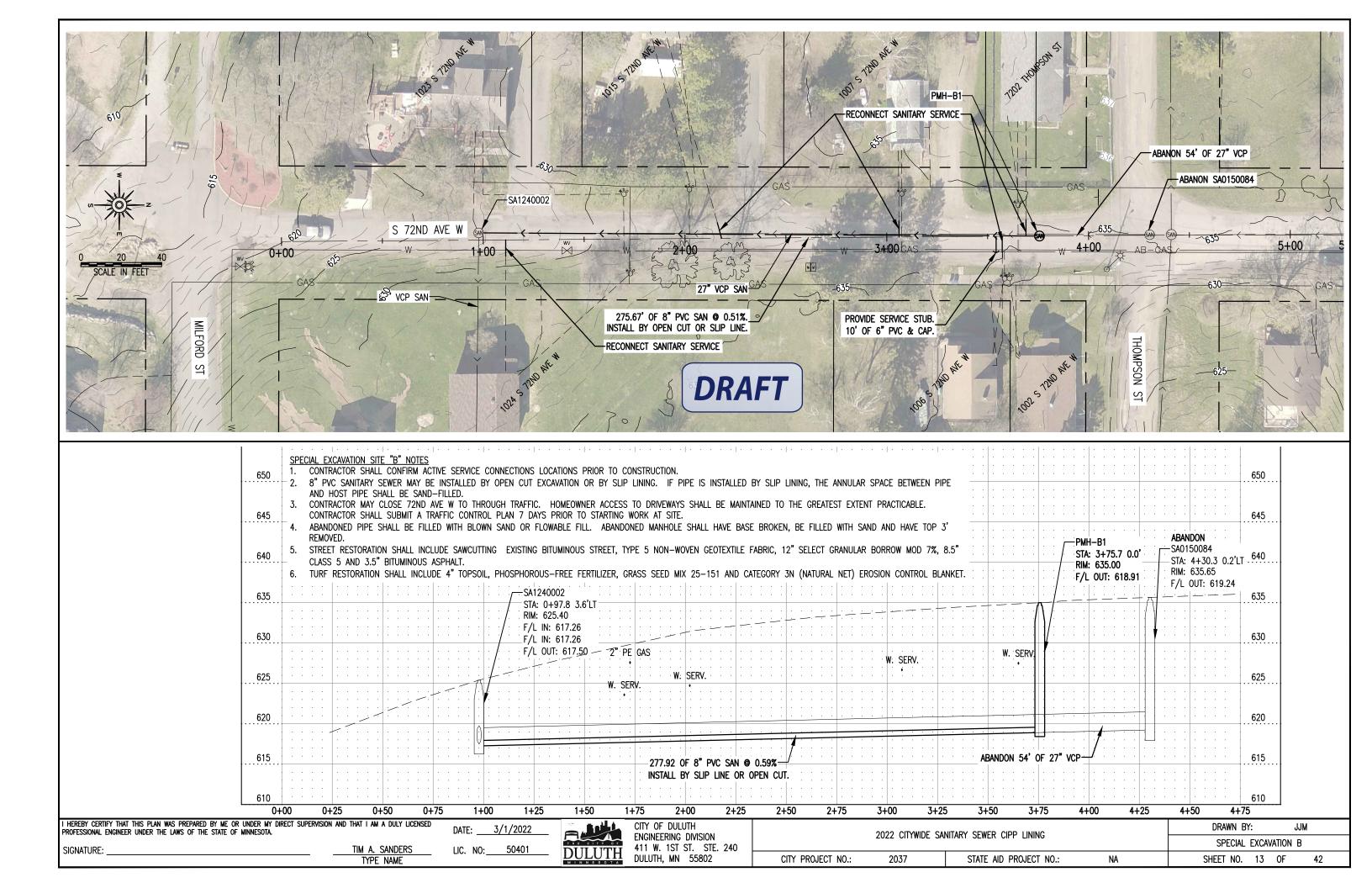
411 W. 1ST ST. RM. 240 DULUTH, MN 55802

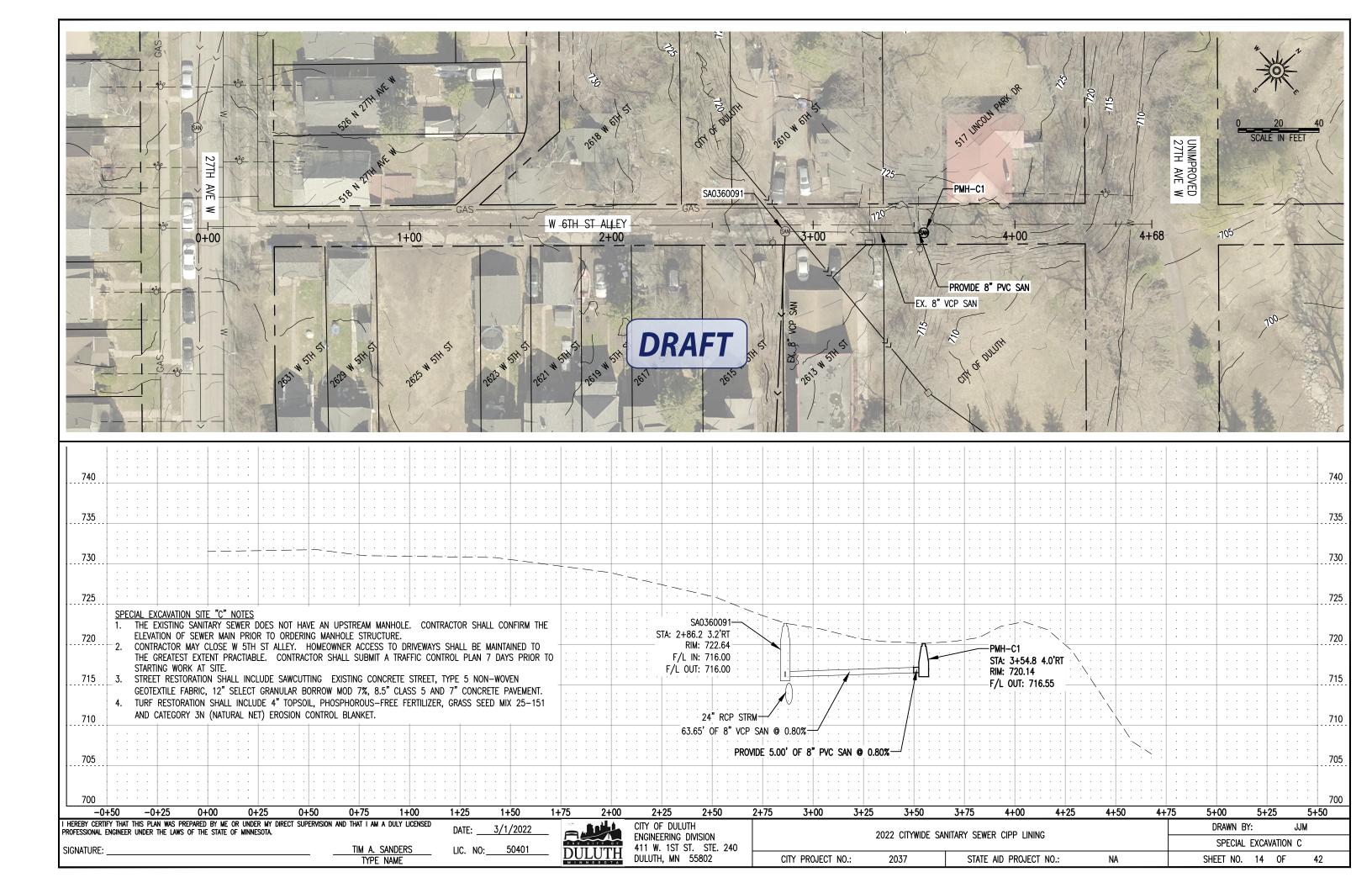
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CITY PROJECT NO .:	2037	STATE AID PROJECT NO.:	NA	SHEET NO.	9	OF 42	

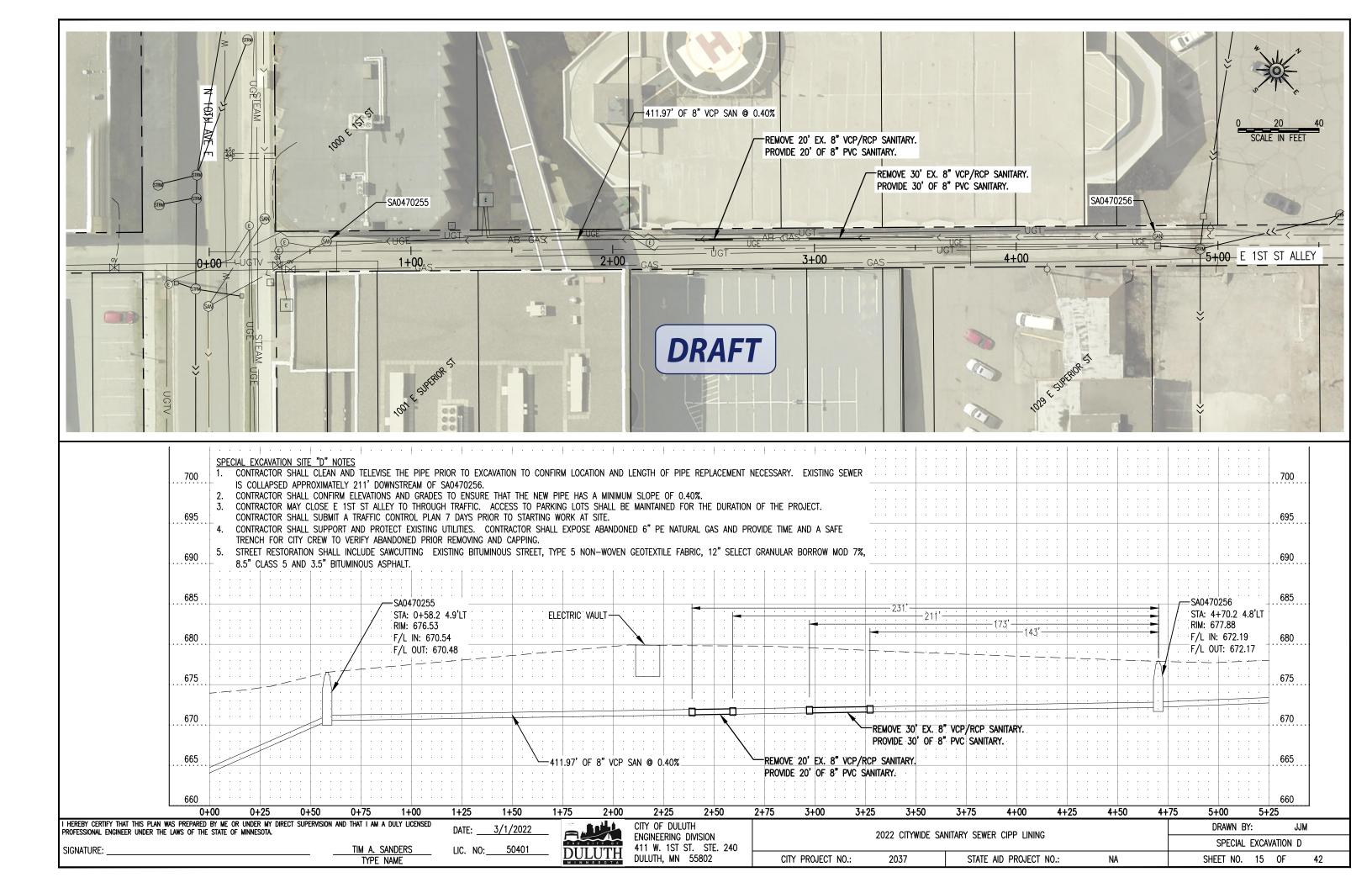


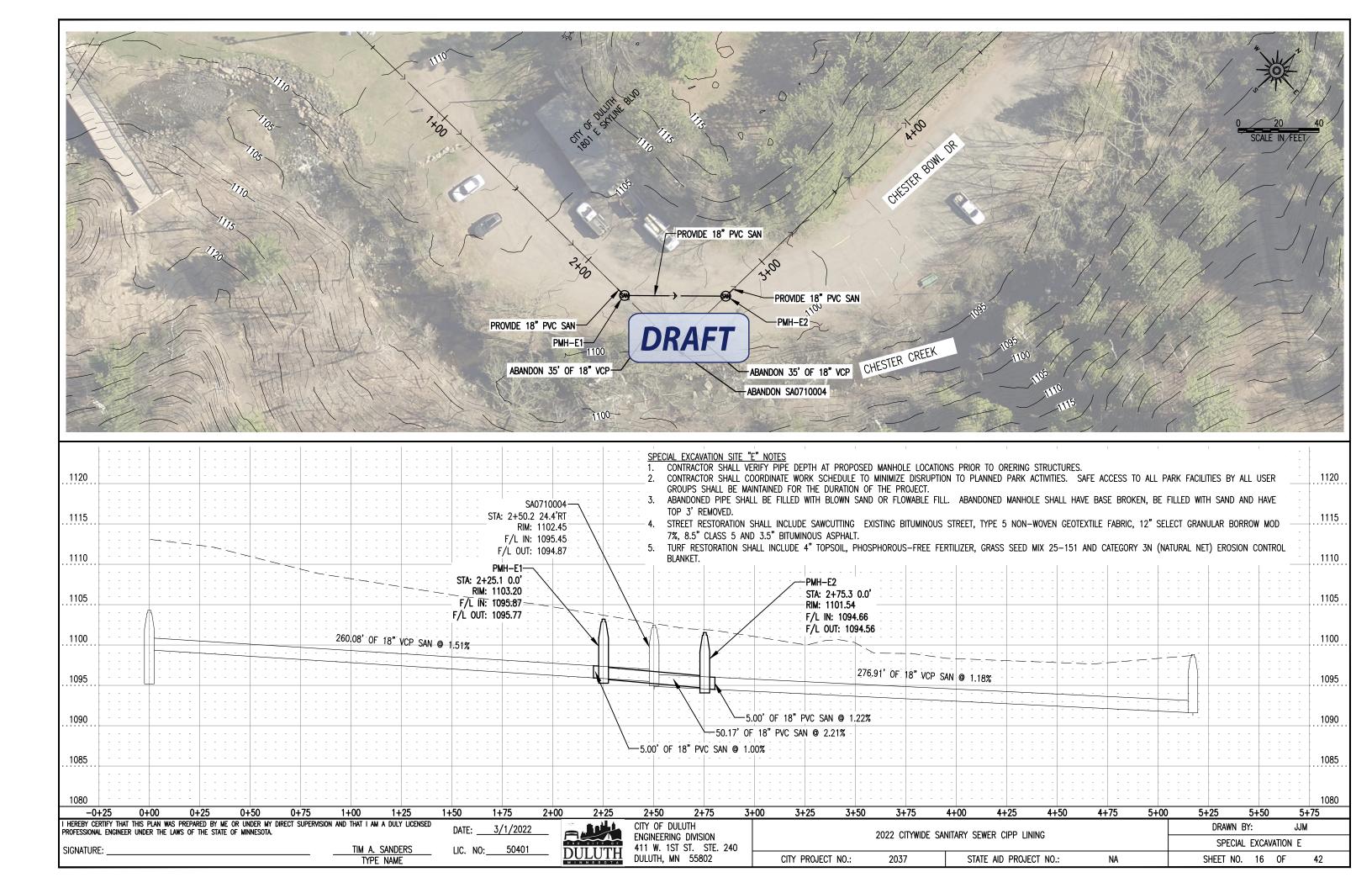




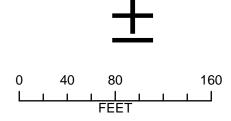


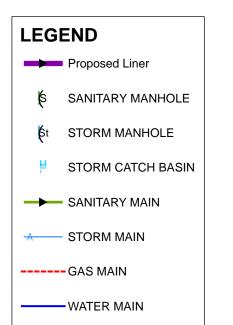


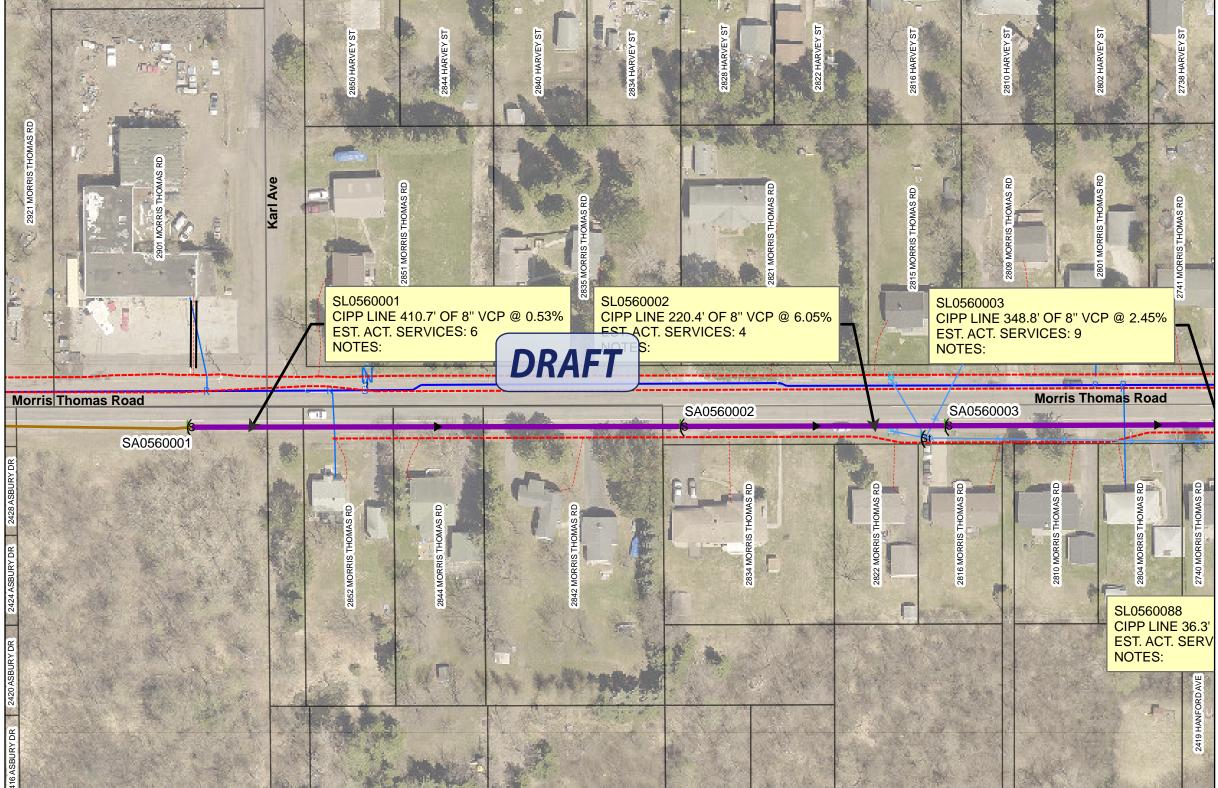




## OVERSTROM Rd OVERSTROM Rd Dana Rd Dana Rd Johnson Rd Alexander Rd







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SIGNATURE: \_\_\_\_\_ LIC. NO: 50401 DATE: 3/1/2022

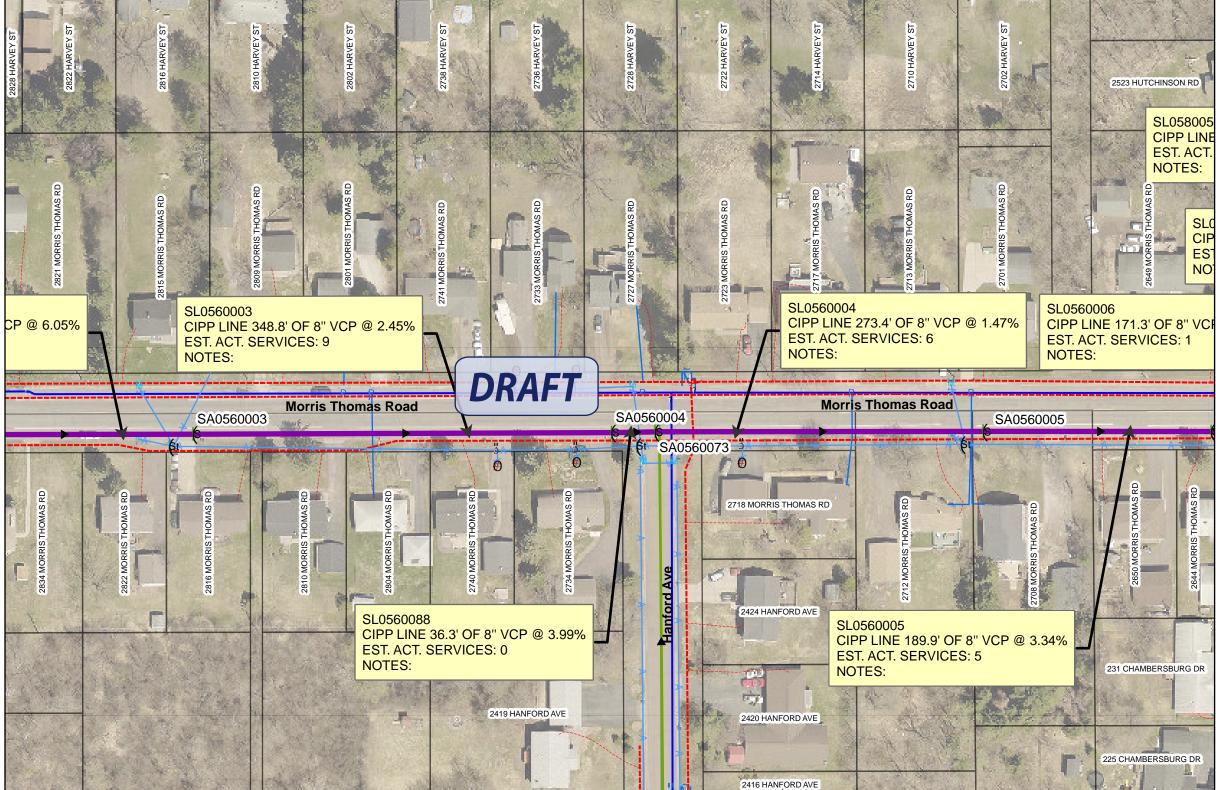


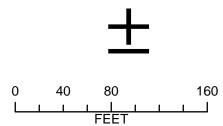
CITY OF DULUTH ENGINEERING DIVISION 411 W. 1ST ST. RM. 240 DULUTH, MN 55802

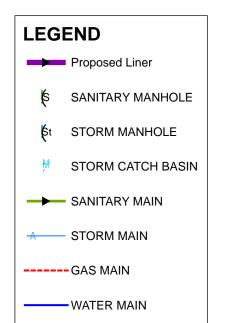
2021 CITYWIDE SANITARY SEWER CIPP LINING CITY PROJECT NO.: 1955

## OVERSTROM Rd OKERSTROM Rd Dana Rd Johnson Rd Alexander Rd Alexander Rd Haines Rd

### **PLAN**







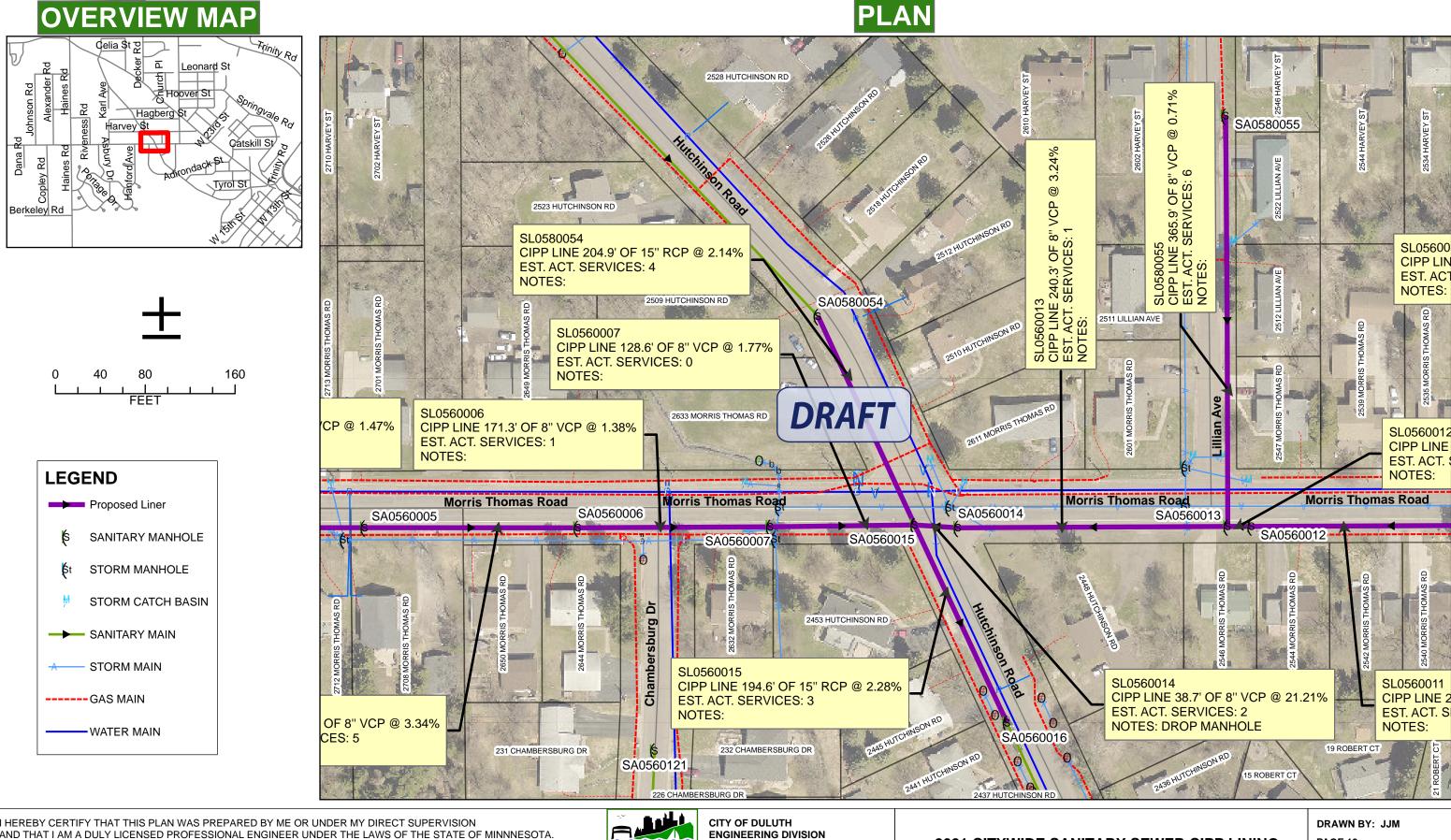
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNNESOTA.

| SIGNATURE:\_\_\_\_\_ LIC. NO: 50401 | DATE: 3/1/2022



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

2021 CITYWIDE SANITARY SEWER CIPP LINING CITY PROJECT NO.: 1955



AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNNESOTA.

SIGNATURE: LIC. NO: 50401 DATE: 3/1/2022

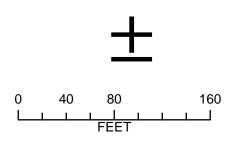


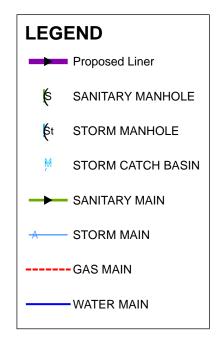
411 W. 1ST ST. RM. 240 **DULUTH, MN 55802** 

2021 CITYWIDE SANITARY SEWER CIPP LINING **CITY PROJECT NO.: 1955** 

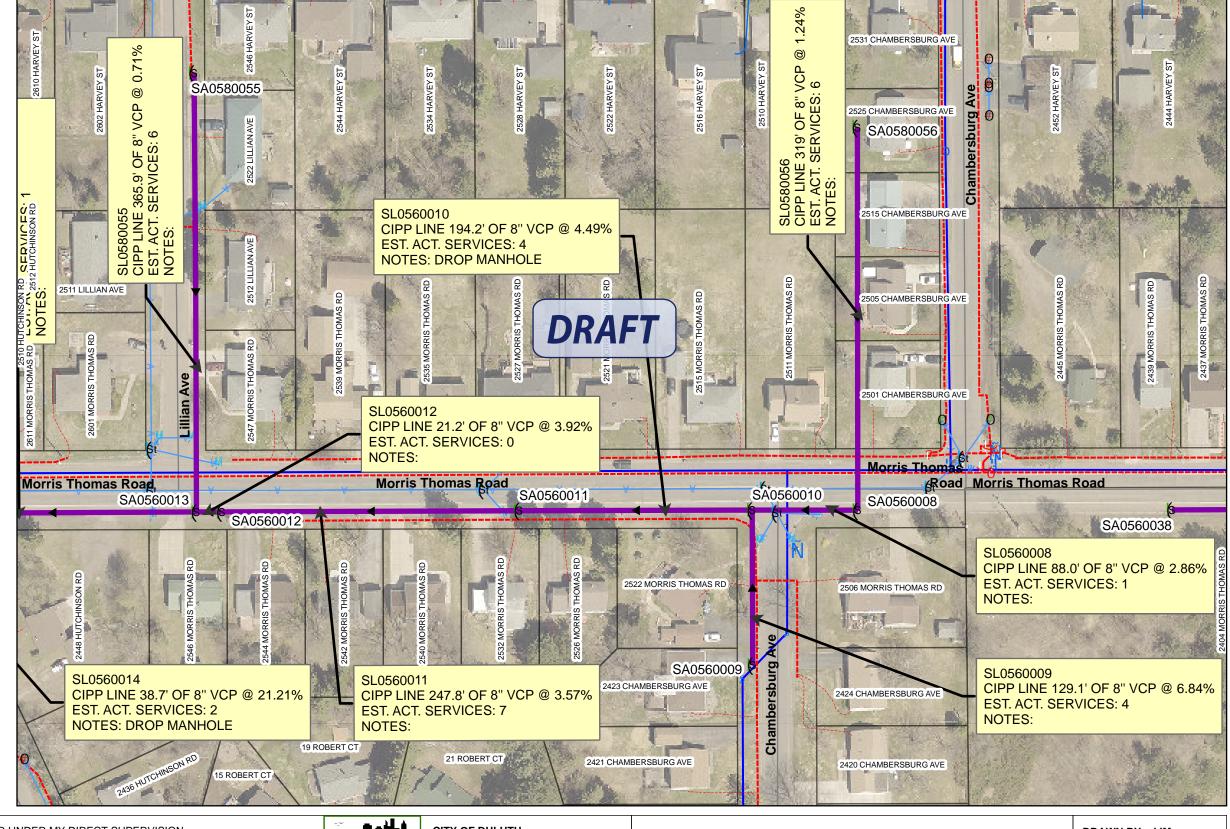
PAGE 19

# OVERVIEW MAP Gelia St D Decker Rd Haines Rd Havey St Havey St





### **PLAN**



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 MINNNESOTA.

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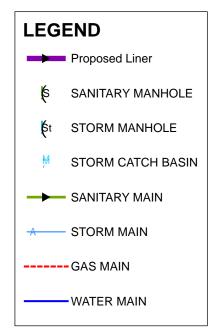
CITY OF DULUTH ENGINEERING DIVISION 411 W. 1ST ST. RM. 240 DULUTH, MN 55802

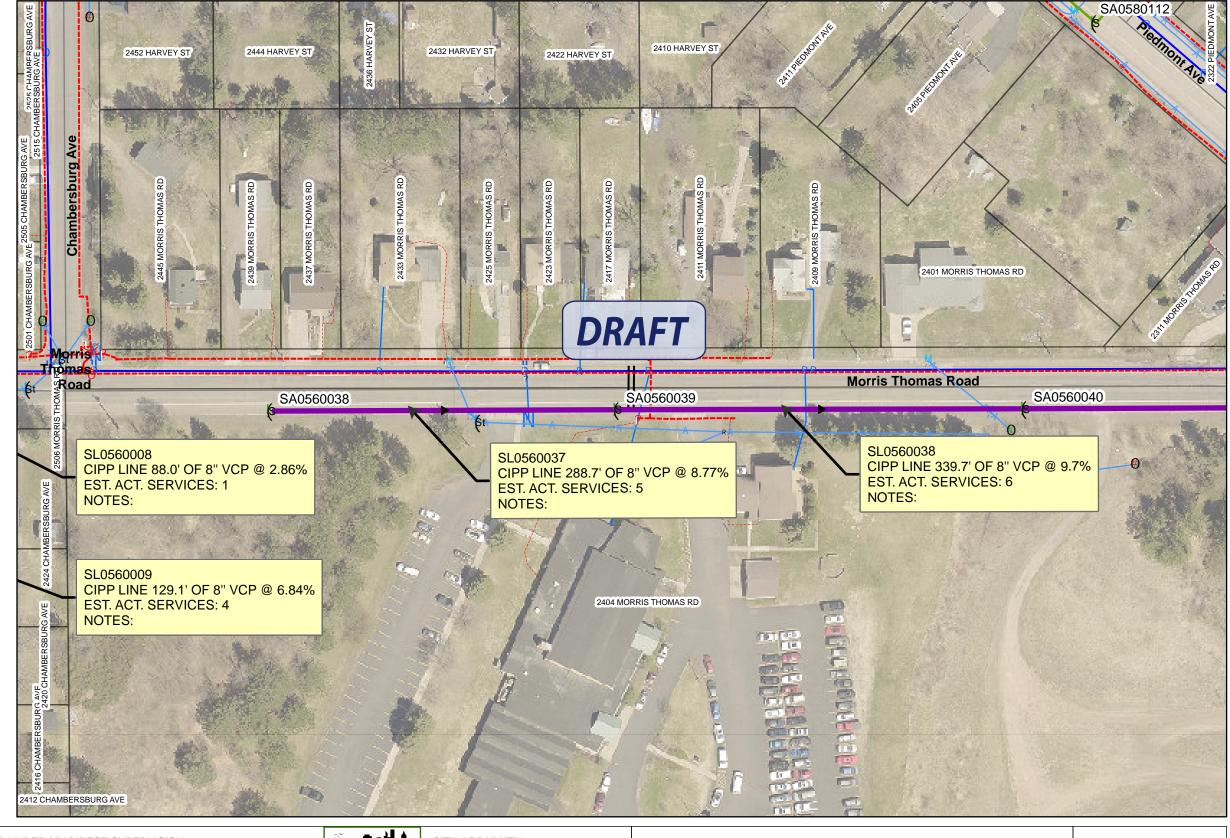
2021 CITYWIDE SANITARY SEWER CIPP LINING CITY PROJECT NO.: 1955

### Catskill St Tyrol St









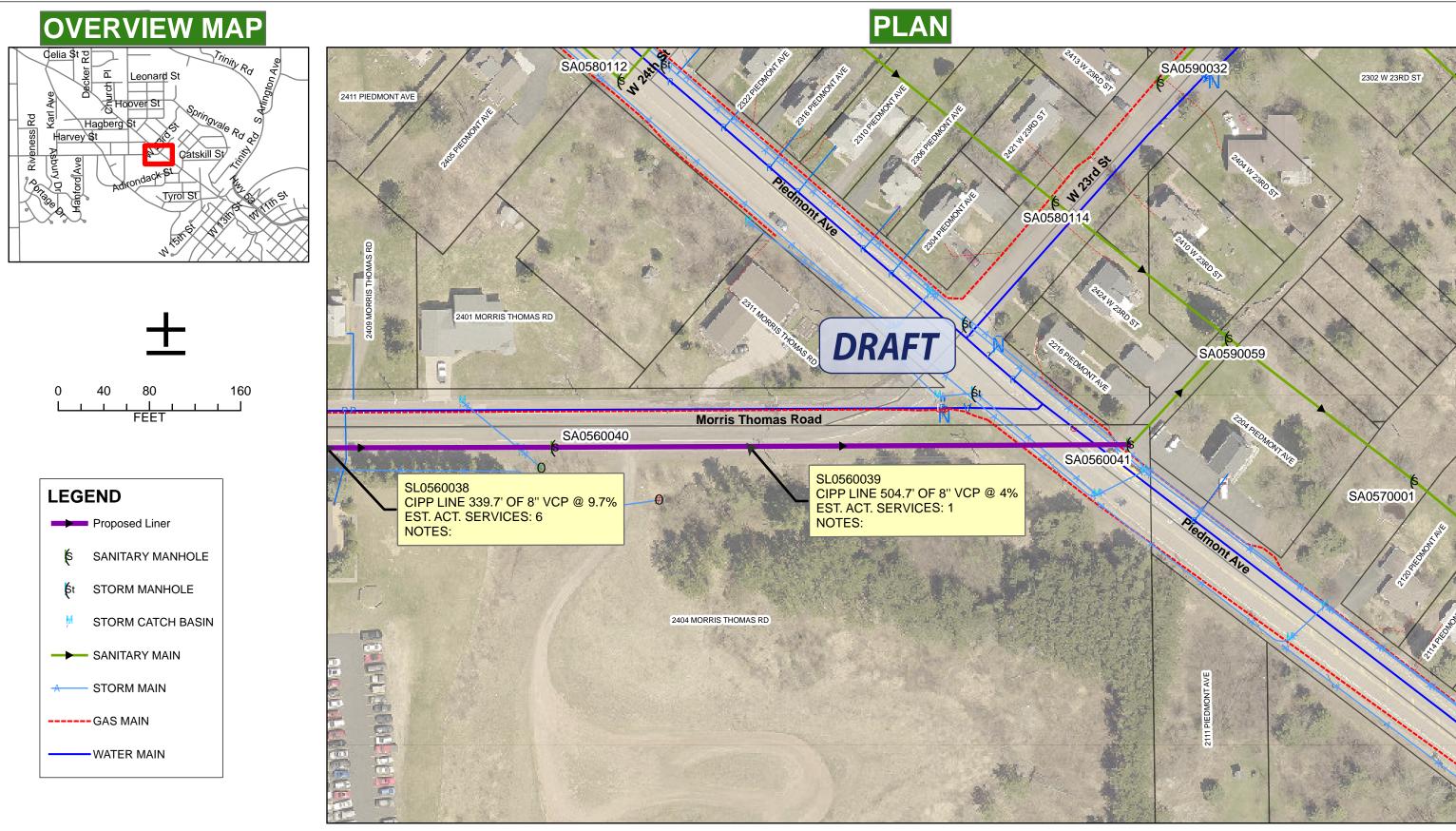
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CITY OF DULUTH ENGINEERING DIVISION 411 W. 1ST ST. RM. 240 DULUTH, MN 55802

2021 CITYWIDE SANITARY SEWER CIPP LINING CITY PROJECT NO.: 1955



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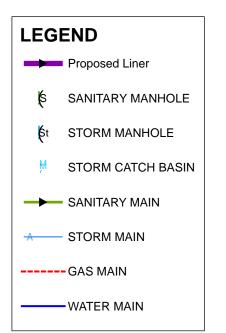
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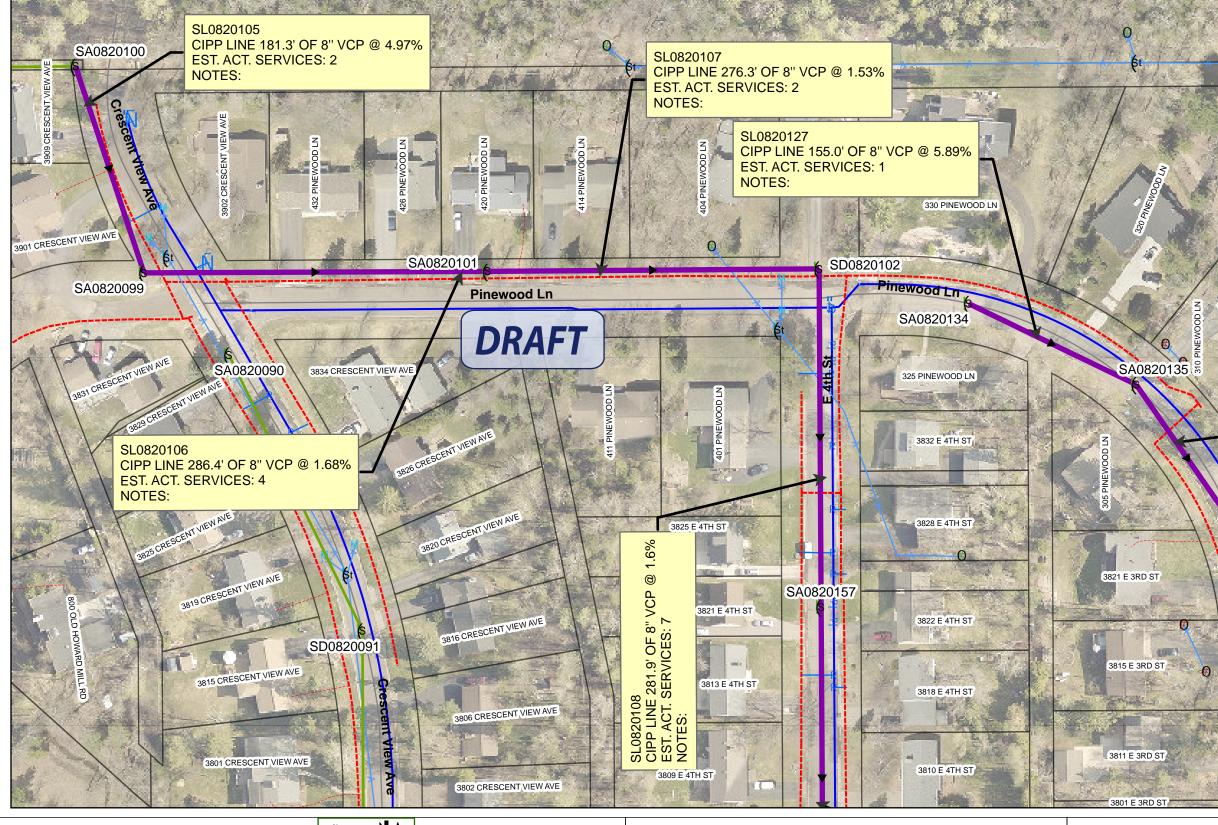
2021 CITYWIDE SANITARY SEWER CIPP LINING CITY PROJECT NO.: 1955



### **PLAN**







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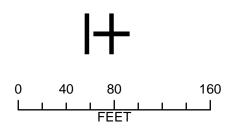
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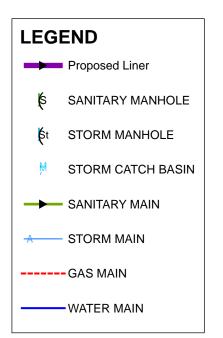


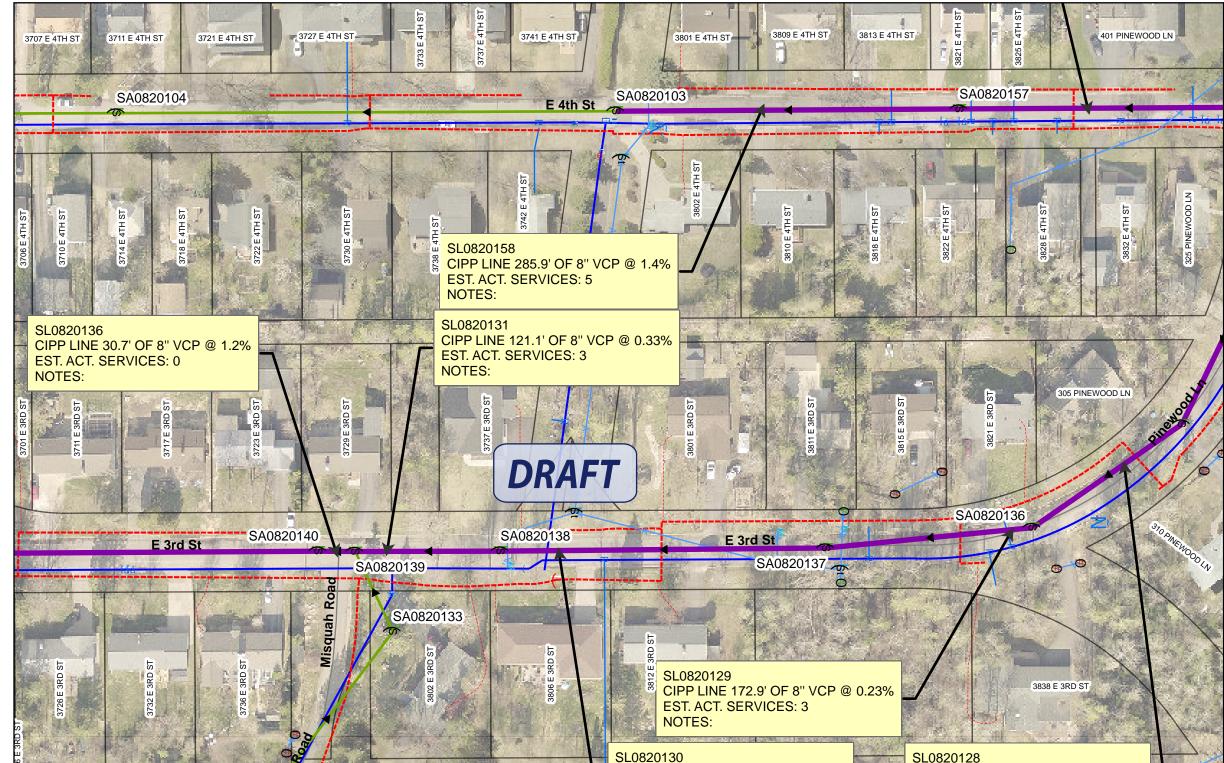
CITY OF DULUTH ENGINEERING DIVISION 411 W. 1ST ST. RM. 240 DULUTH, MN 55802

2021 CITYWIDE SANITARY SEWER CIPP LINING CITY PROJECT NO.: 1955









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280 MISQUAH RD

SIGNATURE: LIC. NO: 50401 DATE: 3/1/2022



209 MISQUAH RD

SA0820132

300 MISQUAH RD

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

2021 CITYWIDE SANITARY SEWER CIPP LINING **CITY PROJECT NO.: 1955** 

CIPP LINE 271.3' OF 8" VCP @ 0.38%

EST. ACT. SERVICES: 4

NOTES:

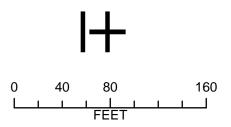
DRAWN BY: JJM PAGE 24

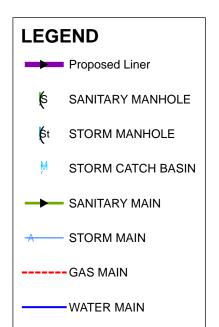
CIPP LINE 151.4' OF 8" VCP @ 3.98%

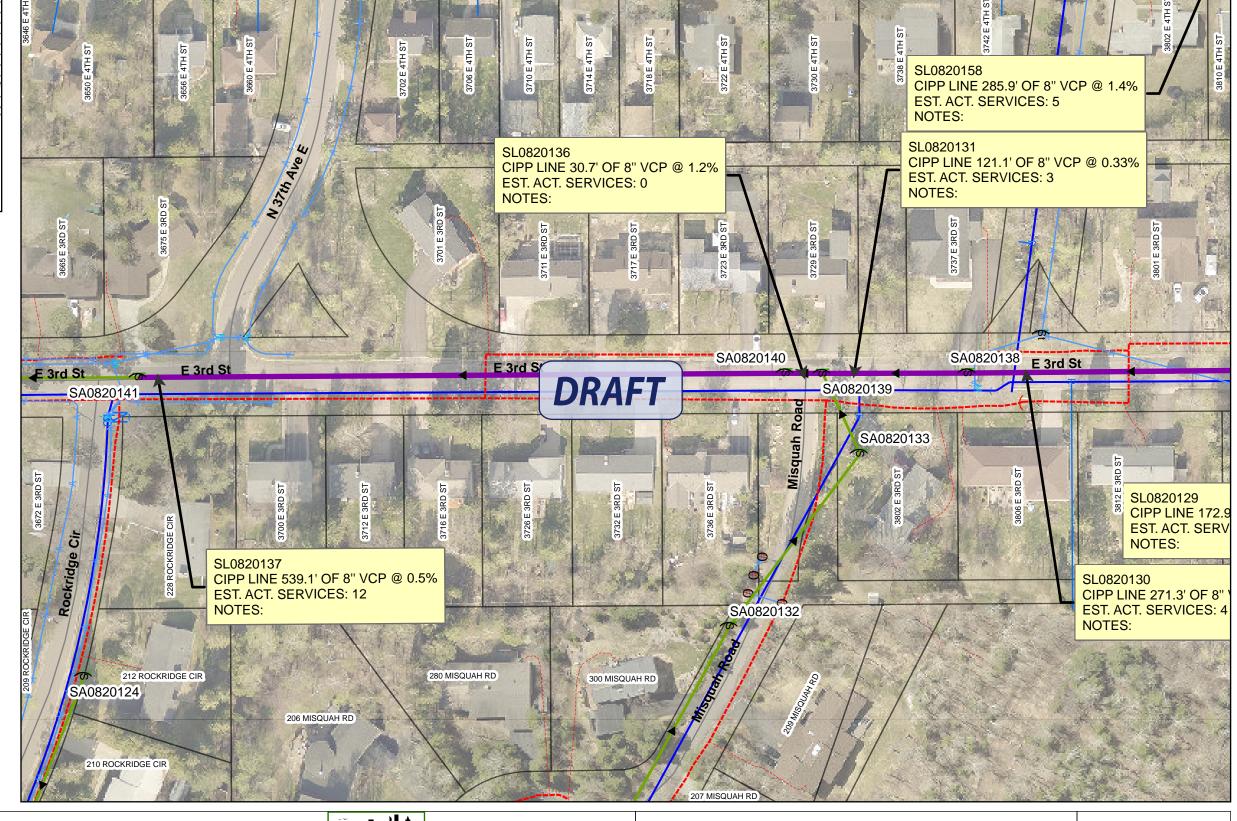
EST. ACT. SERVICES: 2

NOTES:









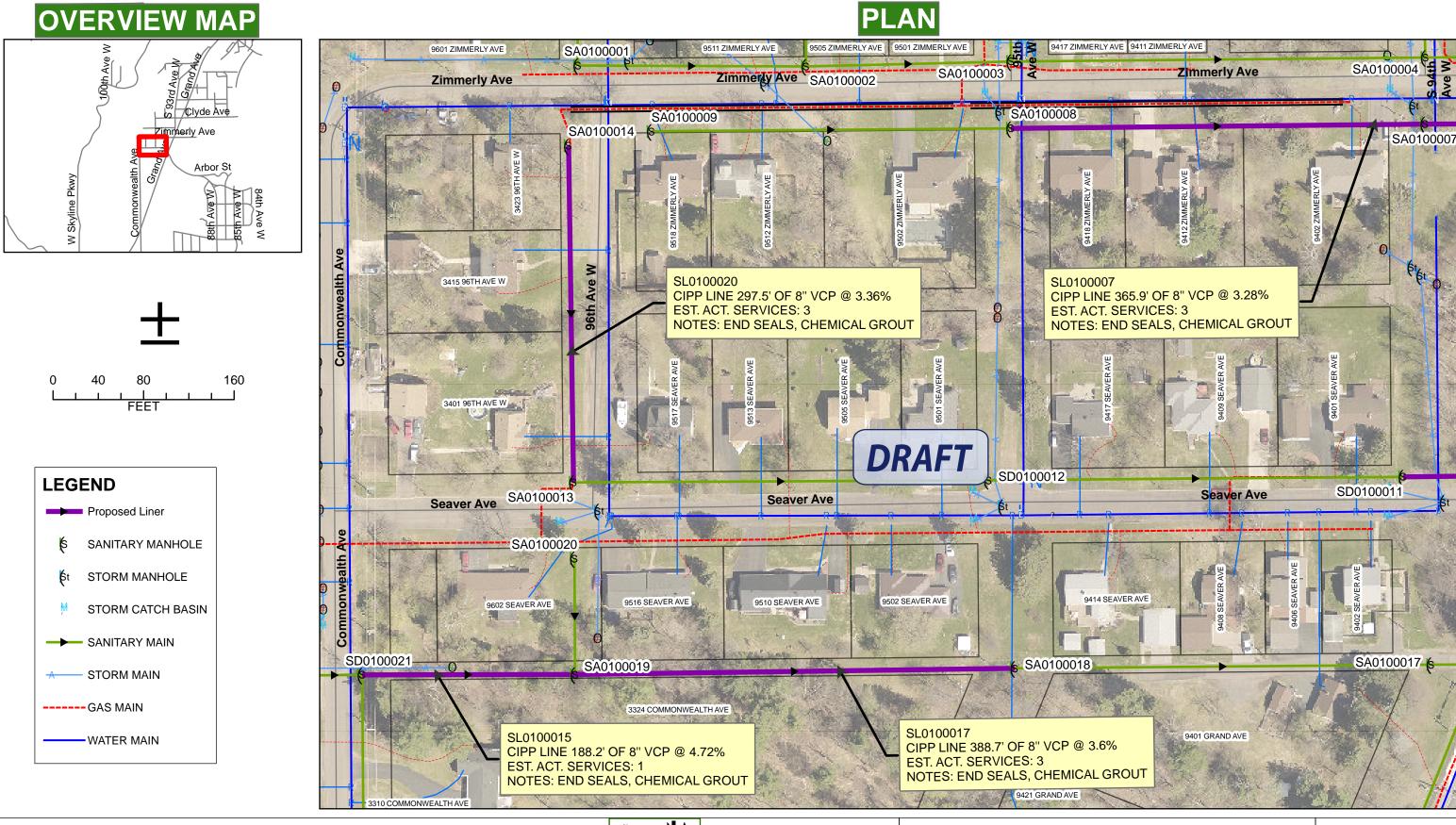
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNNESOTA.

SIGNATURE: LIC. NO: 50401 DATE: 3/1/2022



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

2021 CITYWIDE SANITARY SEWER CIPP LINING **CITY PROJECT NO.: 1955** 



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 MINNNESOTA.

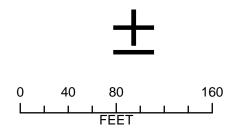
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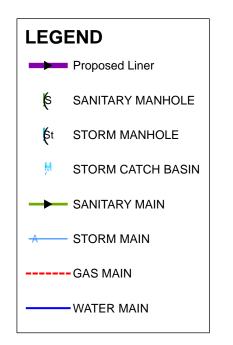


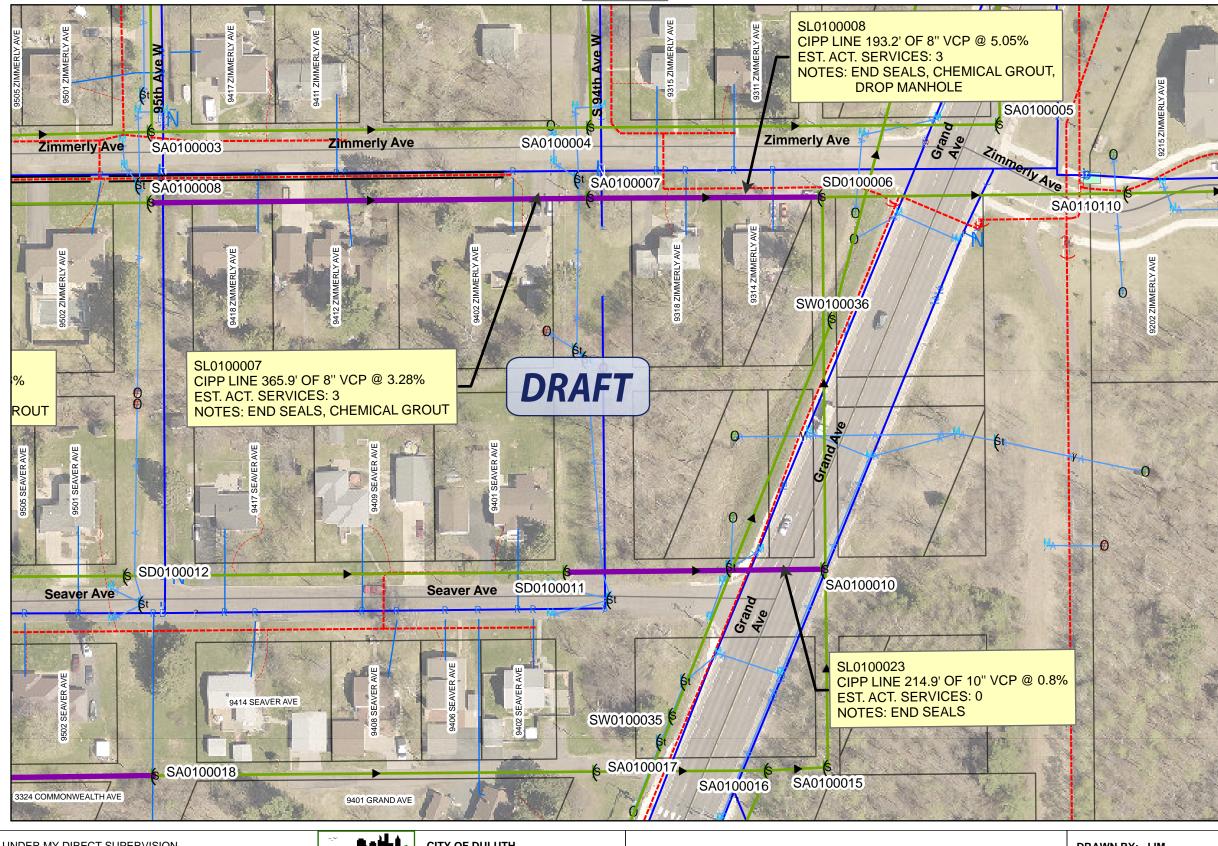
CITY OF DULUTH ENGINEERING DIVISION 411 W. 1ST ST. RM. 240 DULUTH, MN 55802

2021 CITYWIDE SANITARY SEWER CIPP LINING CITY PROJECT NO.: 1955









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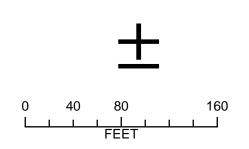
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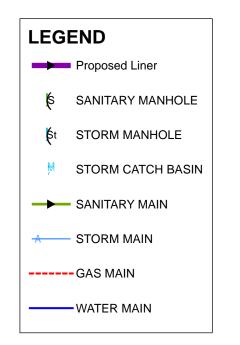


CITY OF DULUTH ENGINEERING DIVISION 411 W. 1ST ST. RM. 240 DULUTH, MN 55802

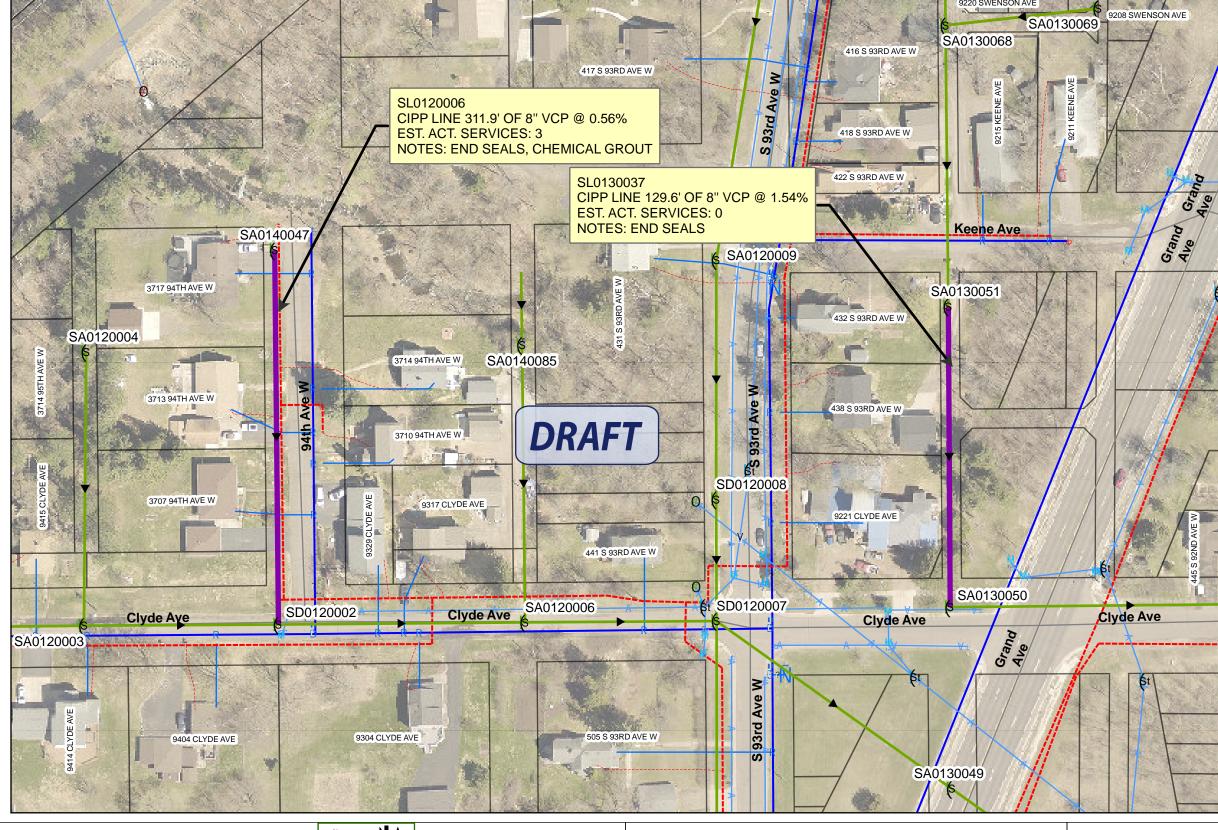
2021 CITYWIDE SANITARY SEWER CIPP LINING CITY PROJECT NO.: 1955

### OVERVIEW MAP Mayor Divide Ave Zimmerly Ave Arbor St





### PLAN



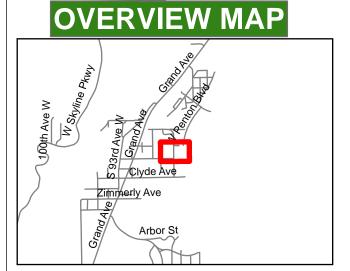
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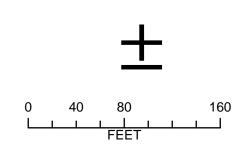
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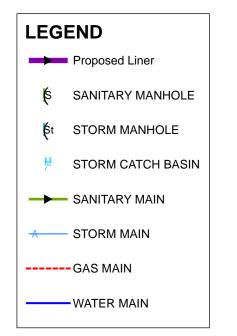


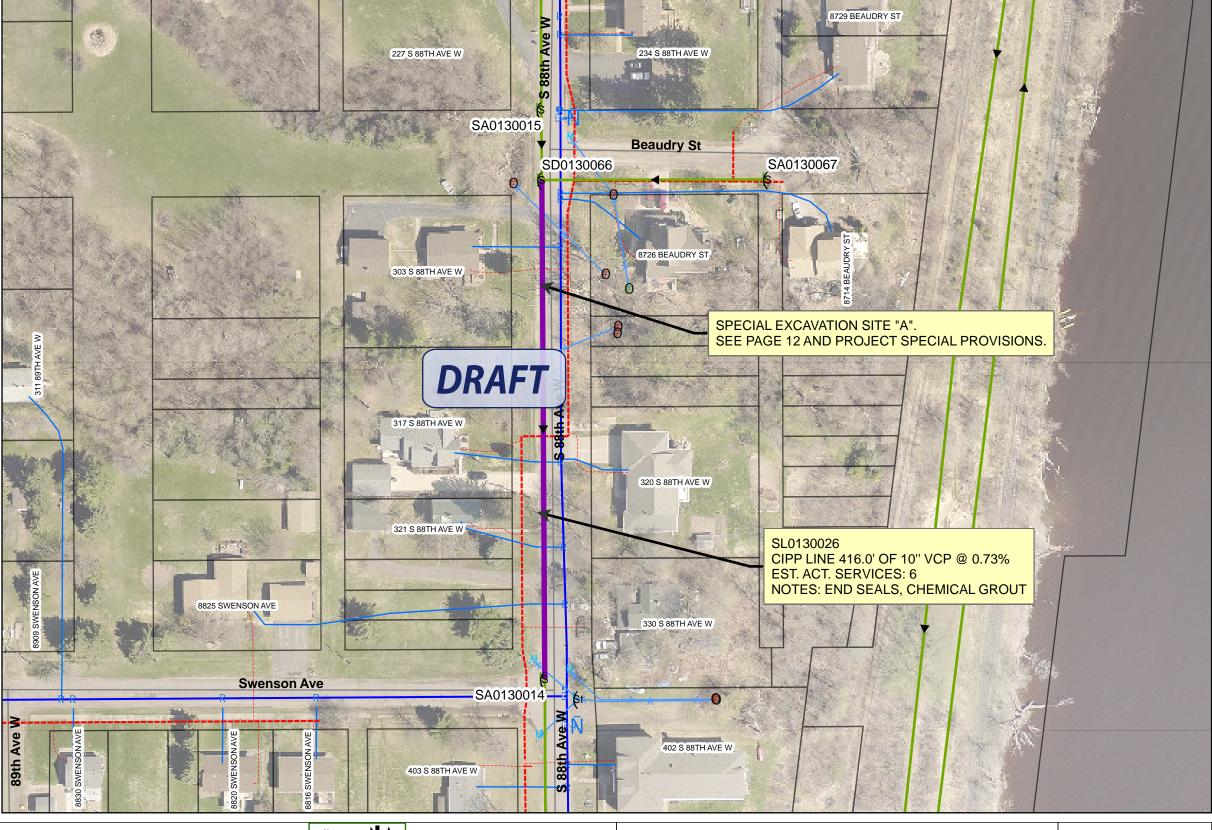
CITY OF DULUTH ENGINEERING DIVISION 411 W. 1ST ST. RM. 240 DULUTH, MN 55802

2021 CITYWIDE SANITARY SEWER CIPP LINING CITY PROJECT NO.: 1955









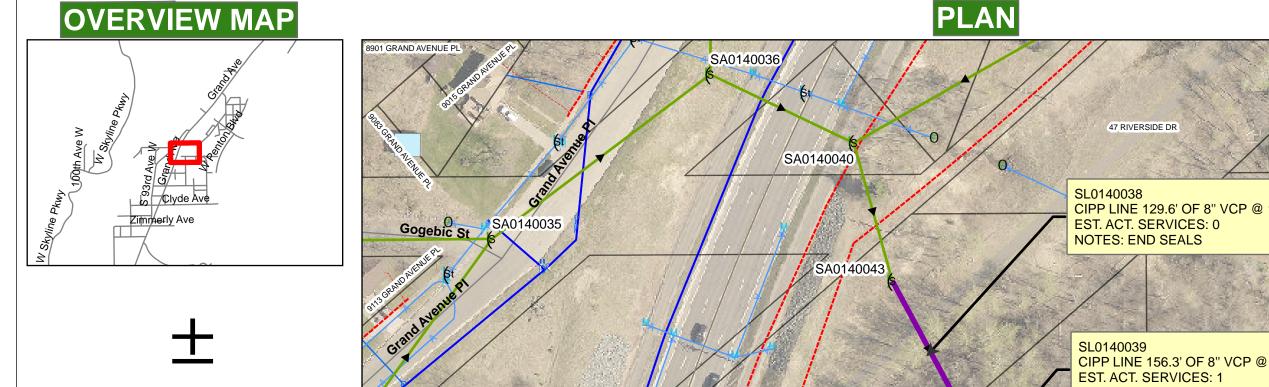
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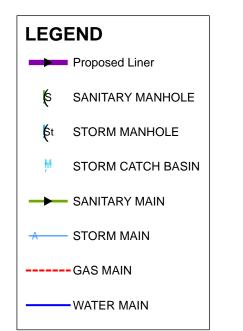
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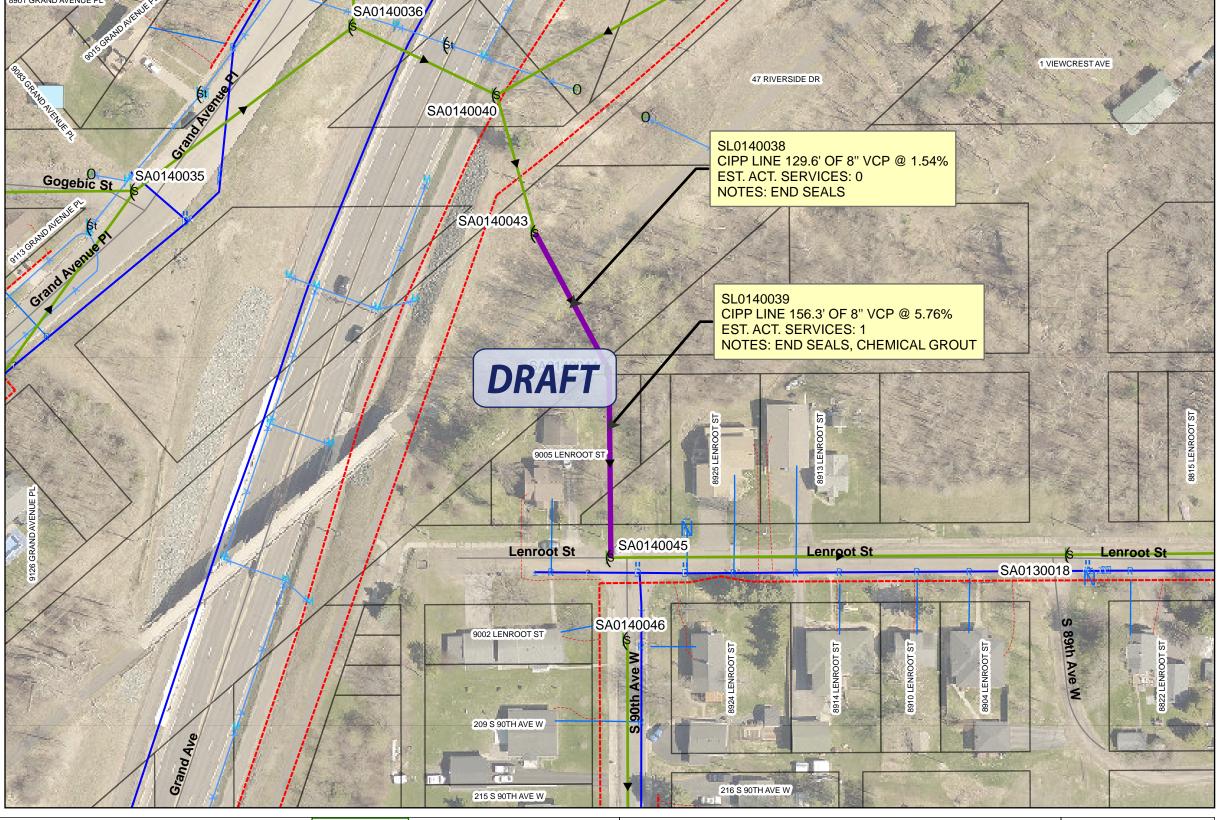


CITY OF DULUTH ENGINEERING DIVISION 411 W. 1ST ST. RM. 240 DULUTH, MN 55802

2021 CITYWIDE SANITARY SEWER CIPP LINING CITY PROJECT NO.: 1955







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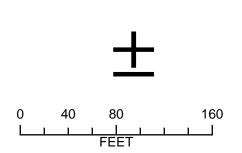


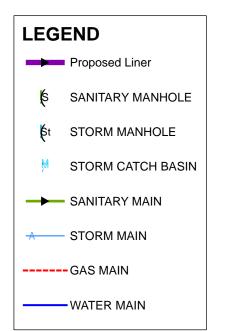
CITY OF DULUTH ENGINEERING DIVISION 411 W. 1ST ST. RM. 240 **DULUTH, MN 55802** 

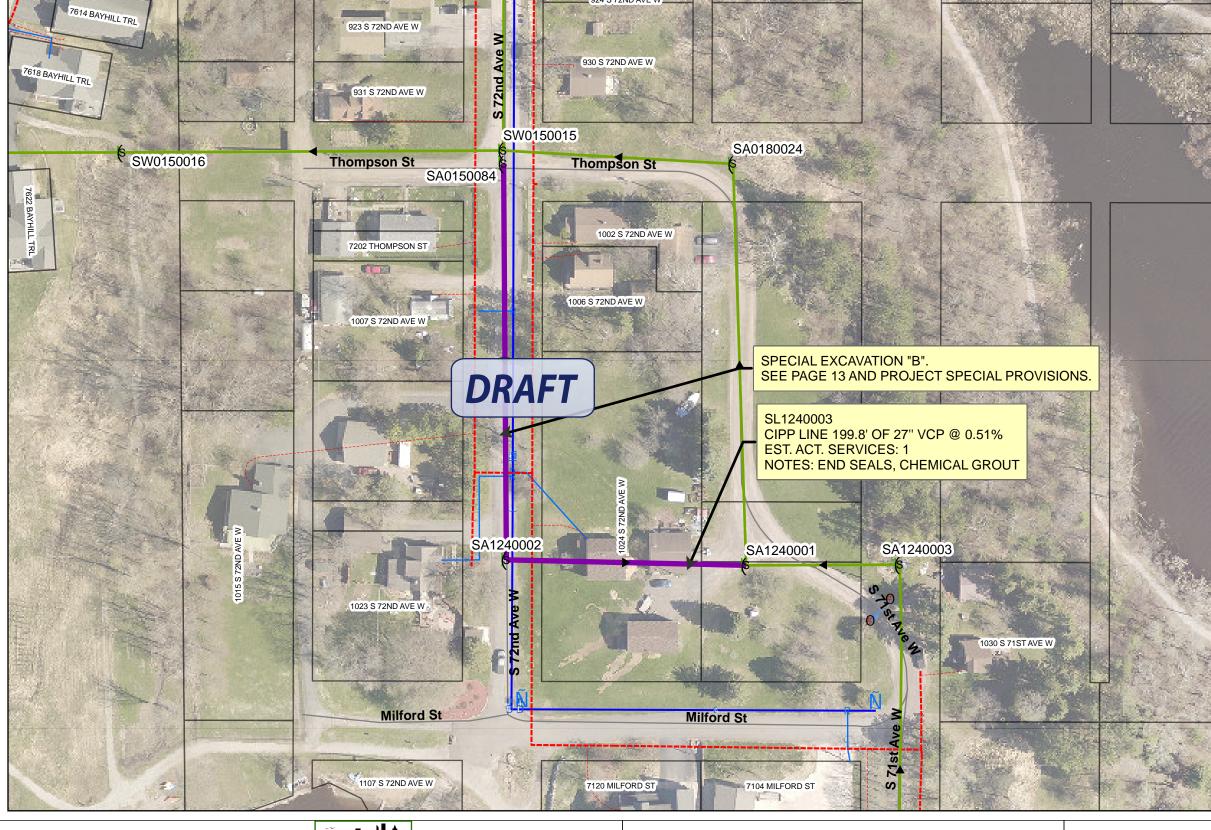
2021 CITYWIDE SANITARY SEWER CIPP LINING **CITY PROJECT NO.: 1955** 

### OVERVIEW MAP Waseca St Pulaski St Solution Graphic Control C

### PLAN







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 MINNNESOTA.

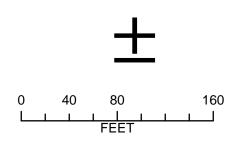
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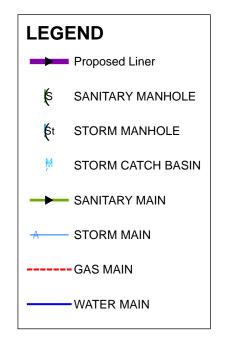


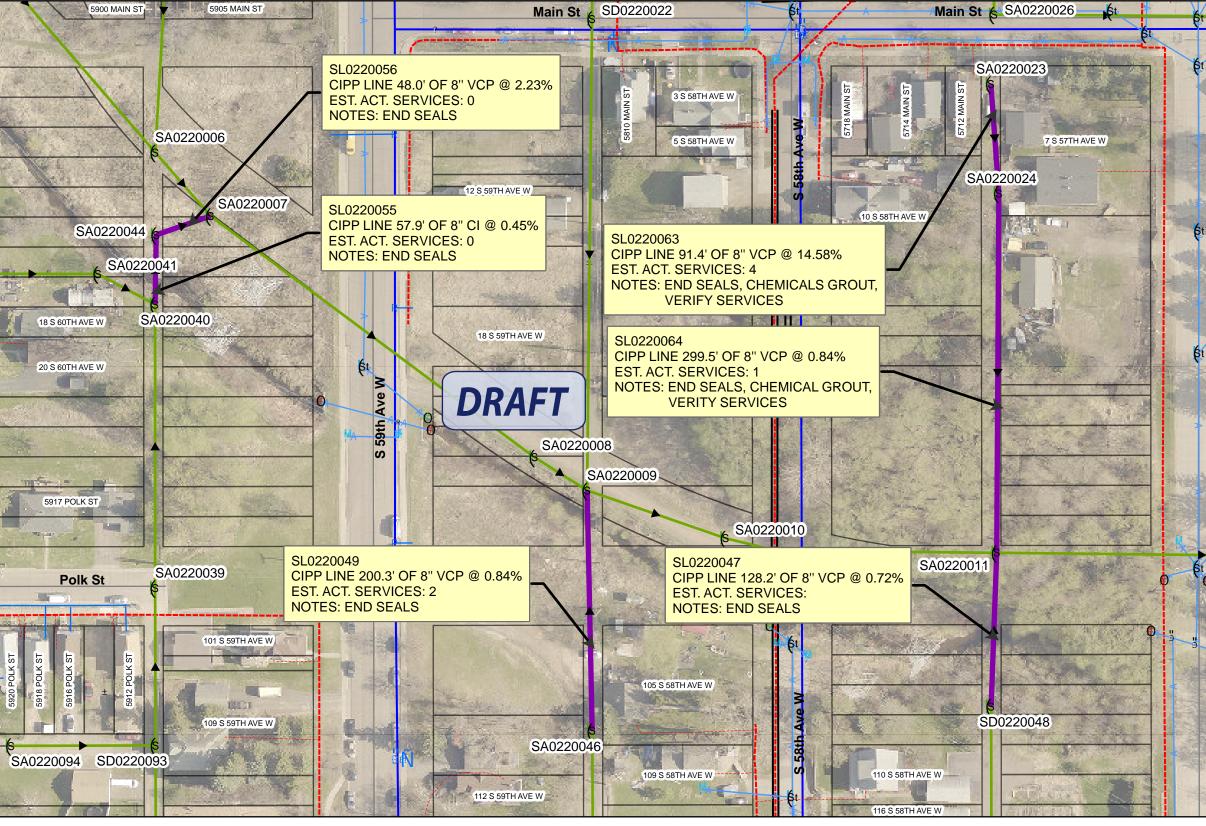
CITY OF DULUTH ENGINEERING DIVISION 411 W. 1ST ST. RM. 240 DULUTH, MN 55802

2021 CITYWIDE SANITARY SEWER CIPP LINING CITY PROJECT NO.: 1955

## OVERVIEW MAP Cody St Cody St Last 135 Last Main St Raleigh St Raleigh St Pulaski St







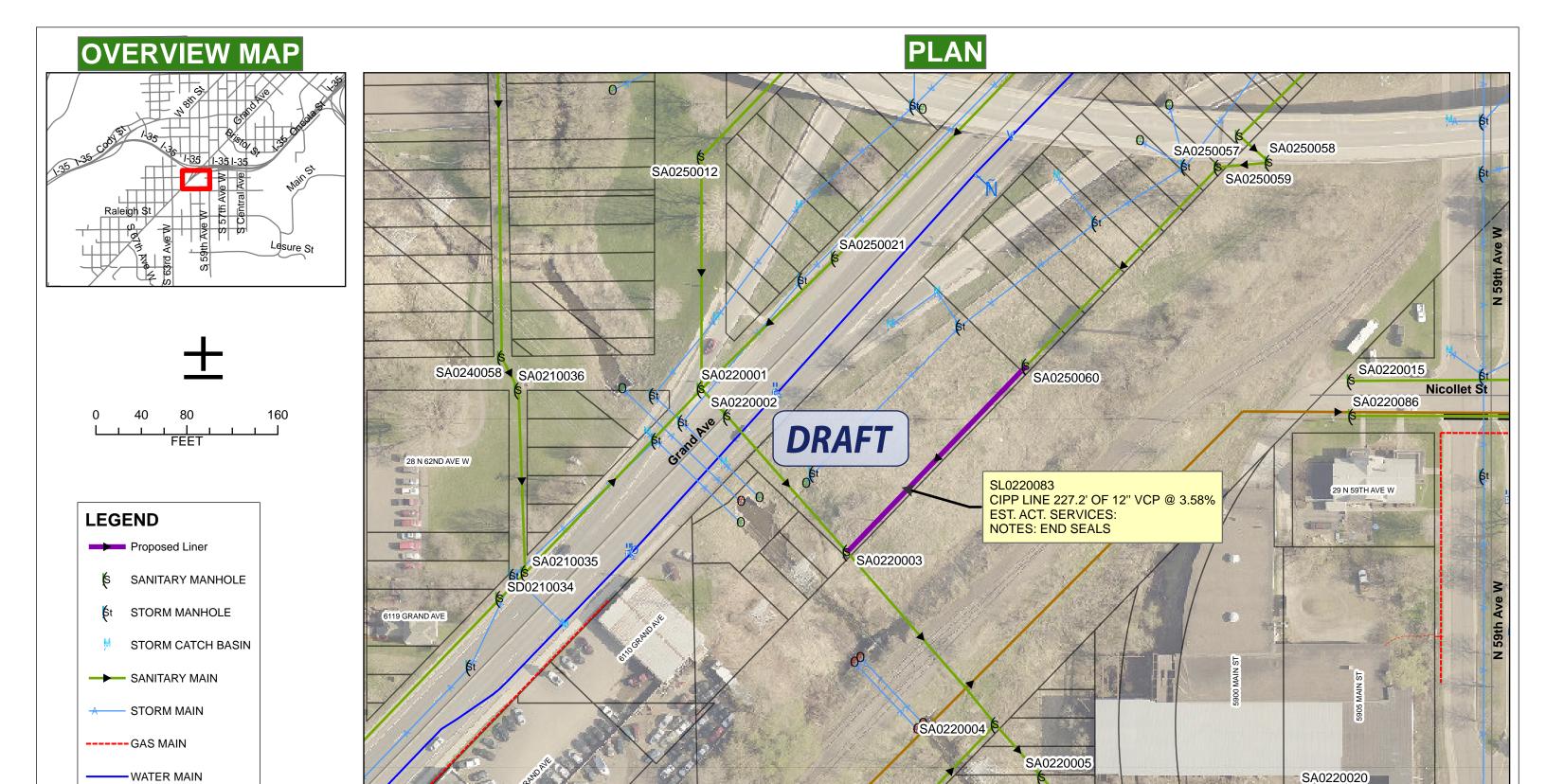
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CITY OF DULUTH ENGINEERING DIVISION 411 W. 1ST ST. RM. 240 DULUTH, MN 55802

2021 CITYWIDE SANITARY SEWER CIPP LINING CITY PROJECT NO.: 1955



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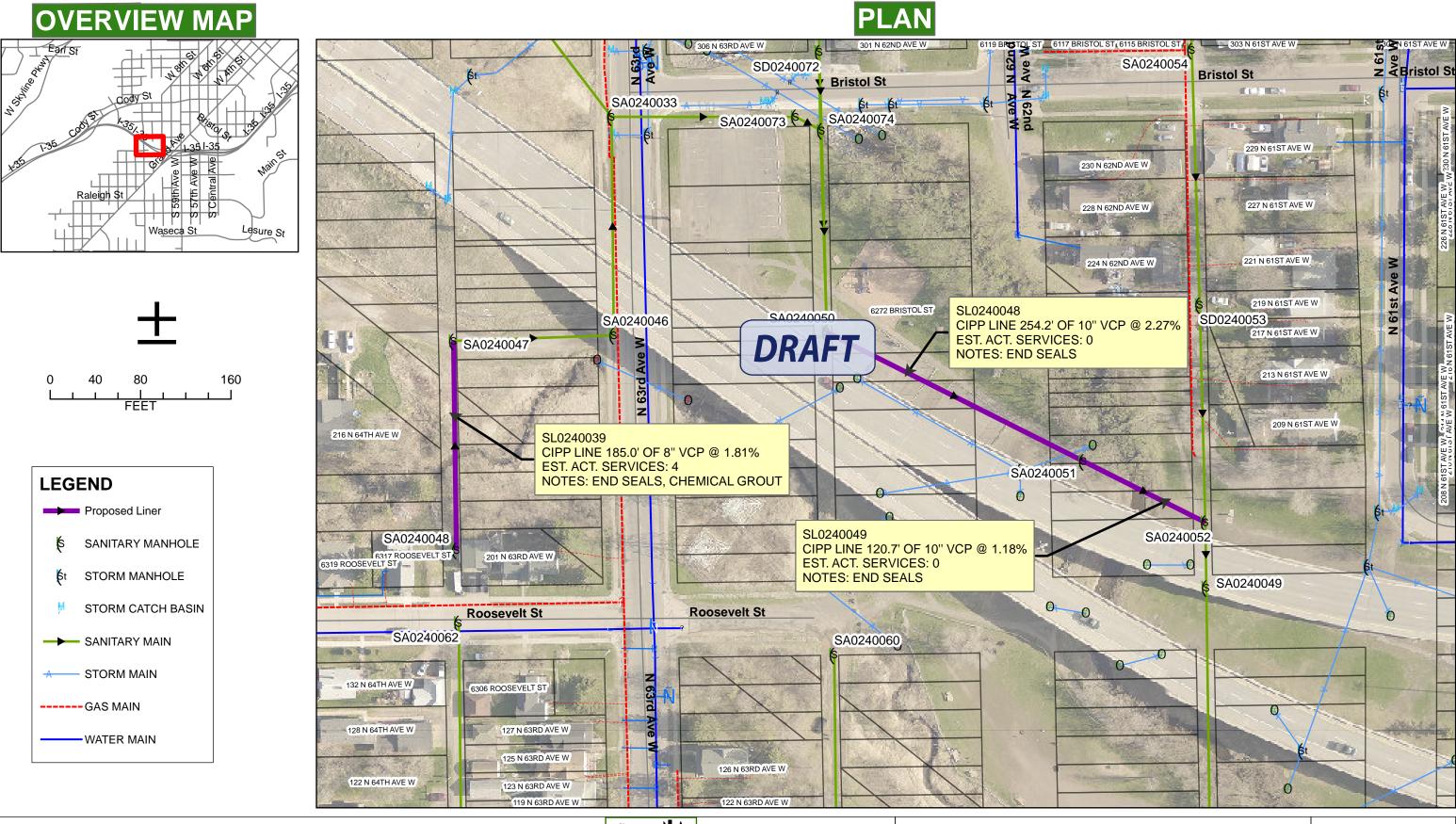
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CITY OF DULUTH ENGINEERING DIVISION 411 W. 1ST ST. RM. 240 DULUTH, MN 55802

SA0220037

2021 CITYWIDE SANITARY SEWER CIPP LINING CITY PROJECT NO.: 1955



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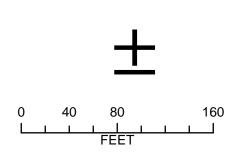


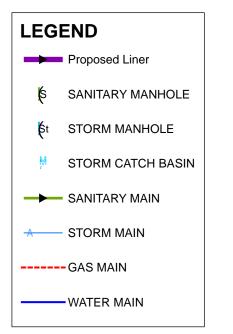
CITY OF DULUTH ENGINEERING DIVISION 411 W. 1ST ST. RM. 240 DULUTH, MN 55802

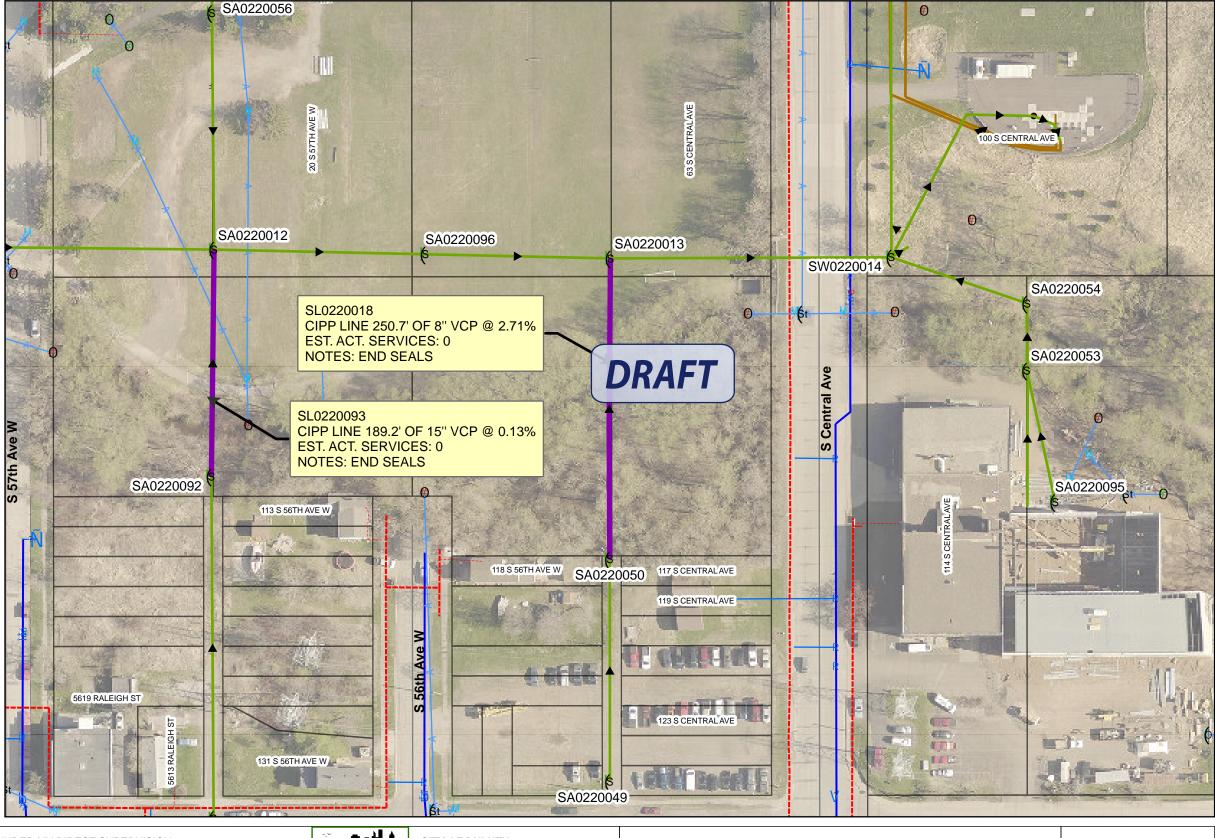
2021 CITYWIDE SANITARY SEWER CIPP LINING CITY PROJECT NO.: 1955

### Cody St Main S

### **PLAN**







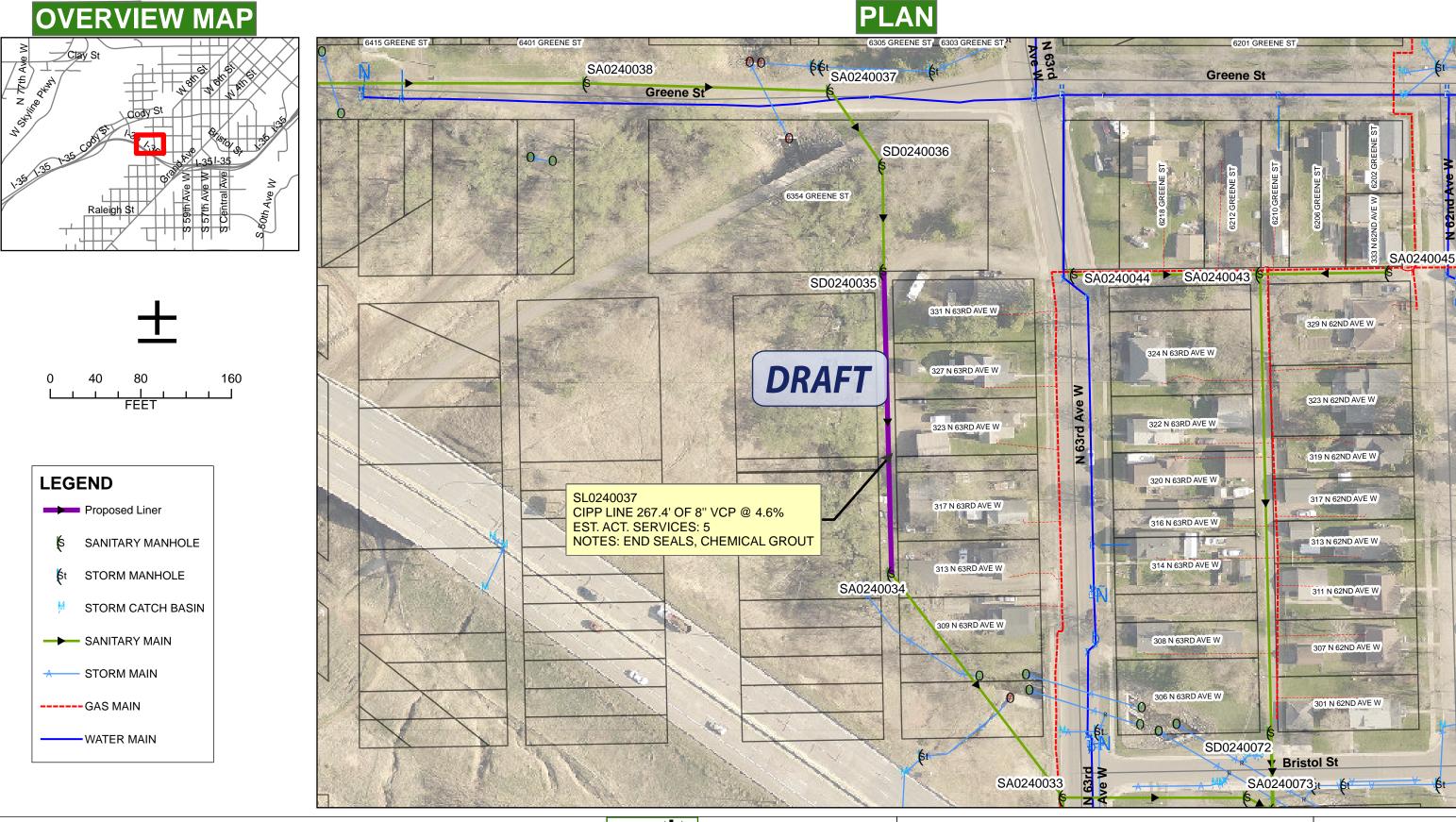
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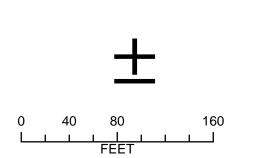
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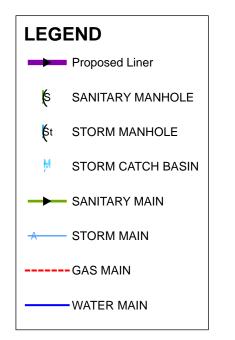


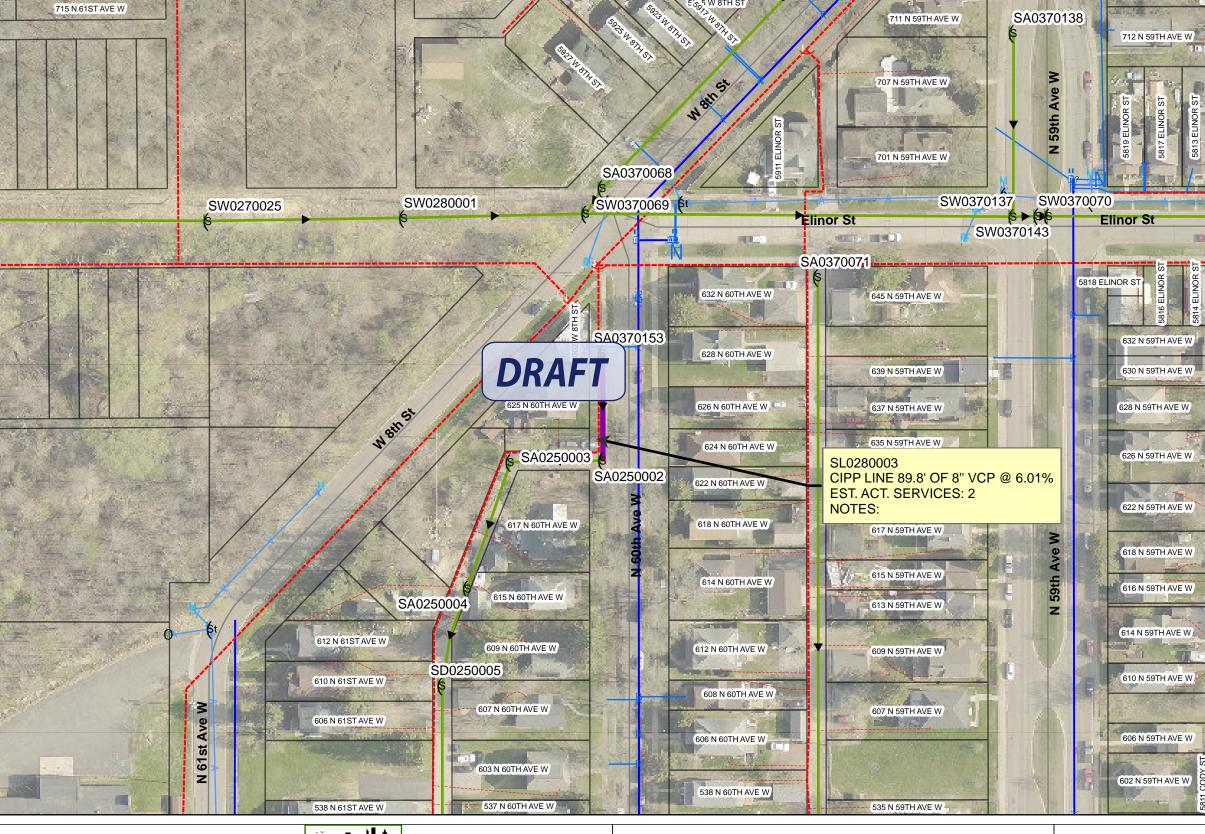
CITY OF DULUTH ENGINEERING DIVISION 411 W. 1ST ST. RM. 240 DULUTH, MN 55802

2021 CITYWIDE SANITARY SEWER CIPP LINING CITY PROJECT NO.: 1955

### Clay St Highland St Clay St Albion St Highland St Clay St Albion St Main St Main St







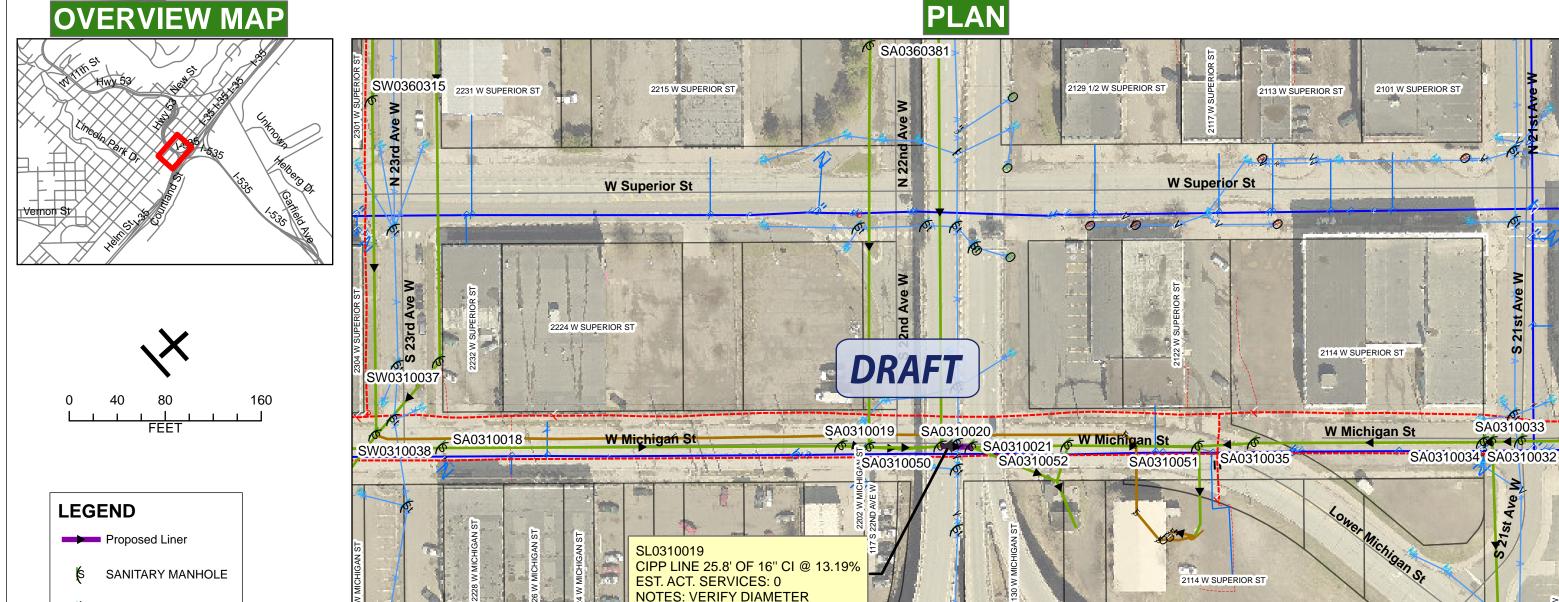
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CITY OF DULUTH ENGINEERING DIVISION 411 W. 1ST ST. RM. 240 DULUTH, MN 55802

2021 CITYWIDE SANITARY SEWER CIPP LINING CITY PROJECT NO.: 1955



STORM MANHOLE STORM CATCH BASIN → SANITARY MAIN STORM MAIN -----GAS MAIN -WATER MAIN

ST0310025 CITY OF DULUTH ENGINEERING DIVISION DRAWN BY: JJM 2021 CITYWIDE SANITARY SEWER CIPP LINING PAGE 38 411 W. 1ST ST. RM. 240

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 MINNNESOTA.

SIGNATURE: LIC. NO: 50401 DATE: 3/1/2022

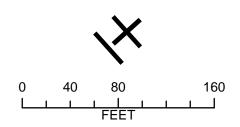


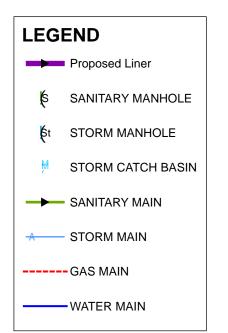
**DULUTH, MN 55802** 

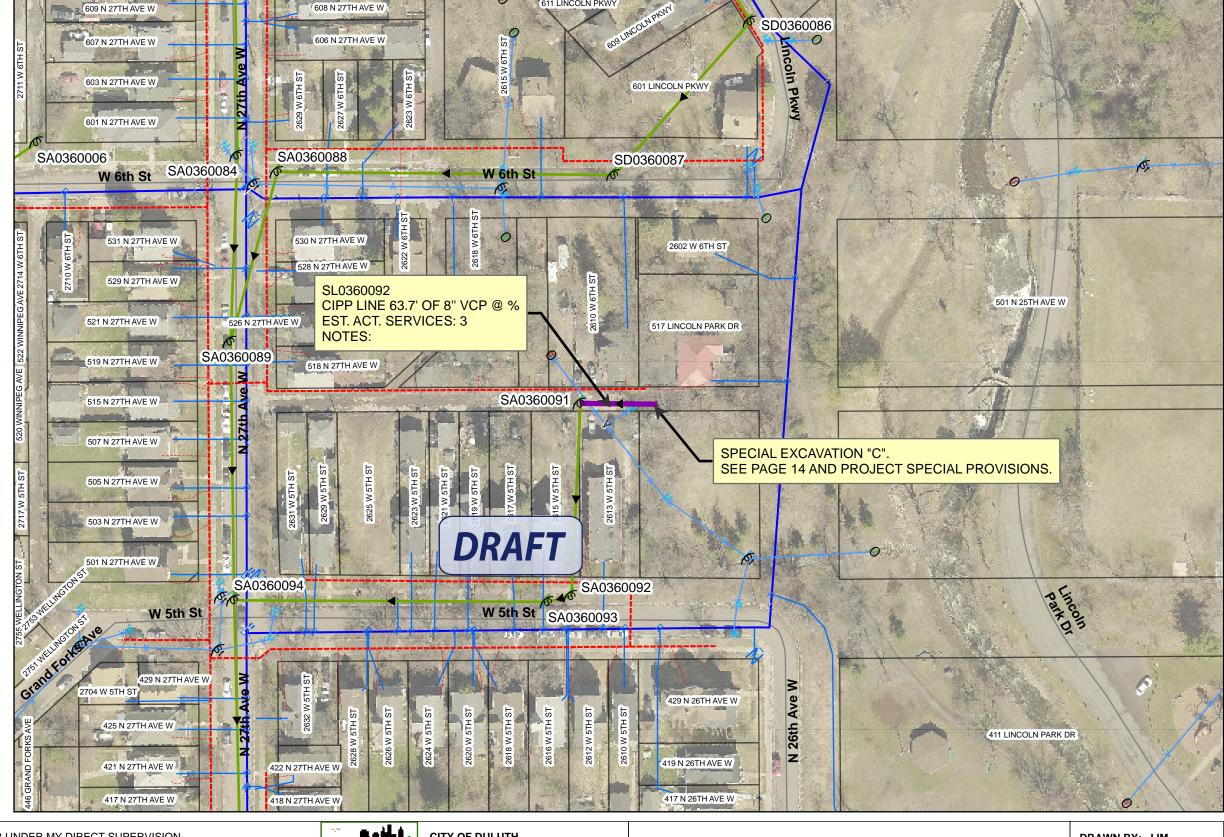
**CITY PROJECT NO.: 1955** 

### Tyrol St Tyr

### **PLAN**







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 MINNNESOTA.

SIGNATURE:\_\_\_\_\_ LIC. NO: 50401 DATE: 3/1/2022

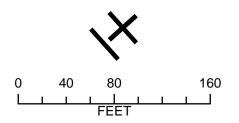


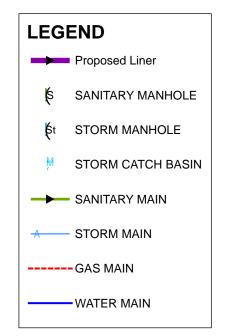
CITY OF DULUTH ENGINEERING DIVISION 411 W. 1ST ST. RM. 240 DULUTH, MN 55802

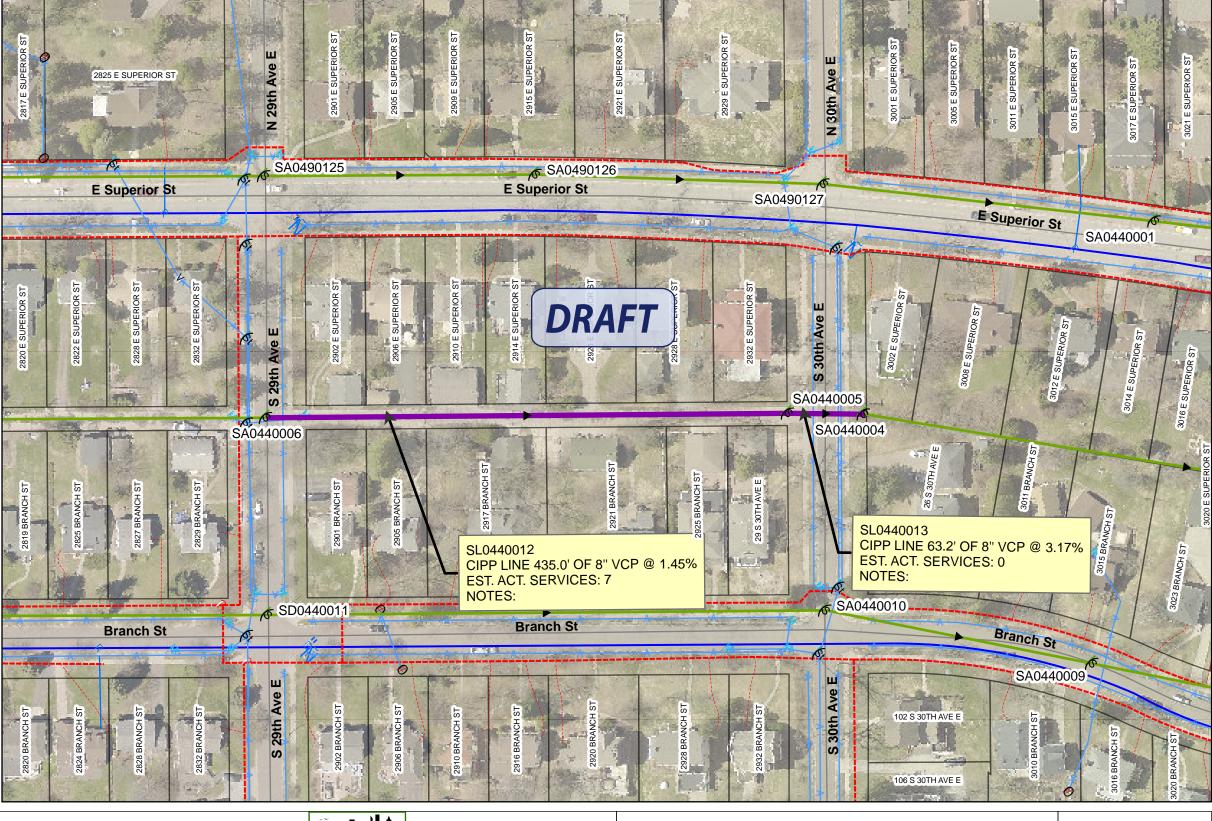
2021 CITYWIDE SANITARY SEWER CIPP LINING CITY PROJECT NO.: 1955

### **PLAN**









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

2021 CITYWIDE SANITARY SEWER CIPP LINING **CITY PROJECT NO.: 1955** 

### **OVERVIEW MAP** W 2nd St W 2nd St E 2nd St SA0460148 SA0460147 400 24 W 2ND ST 2 E 2ND ST 120 N 1ST AVE W SA0460157 6 SA0460171 (0 SA0460156 SL0460174 SL0460173 CIPP LINE 174.5' OF 10" VCP @ 1.46% CIPP LINE 289.8' OF 10" VCP @ 1.47% EST. ACT. SERVICES: 3 EST. ACT. SERVICES: 3 **NOTES: VERIFY SERVICES** NOTES: VERIFY SERVICES 114 N 1ST AVE W 160 105 W 1ST ST SA0460165 SA0460164 W 1st St W 1st St

Proposed Liner

SANITARY MANHOLE

STORM MANHOLE

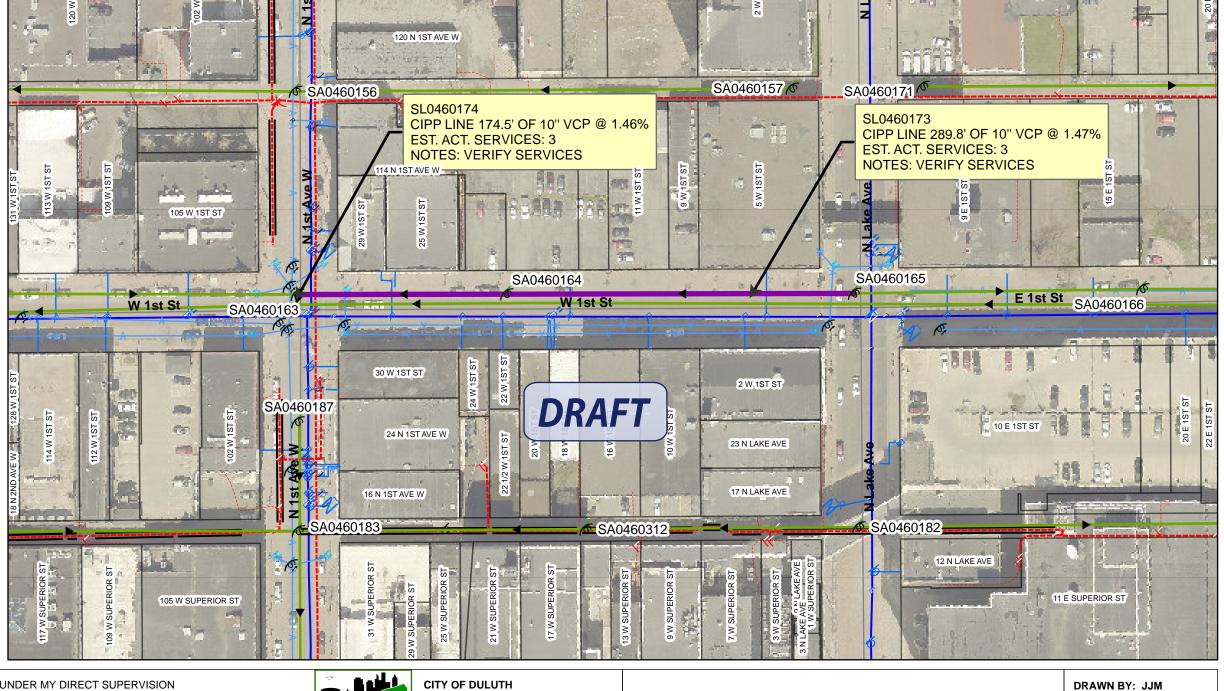
STORM CATCH BASIN

SANITARY MAIN

STORM MAIN

GAS MAIN

WATER MAIN



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 MINNNESOTA.

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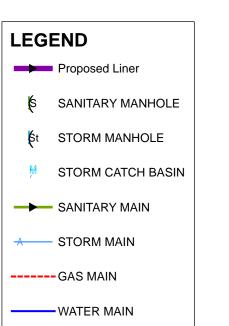
CITY OF DULUTH ENGINEERING DIVISION 411 W. 1ST ST. RM. 240 DULUTH, MN 55802

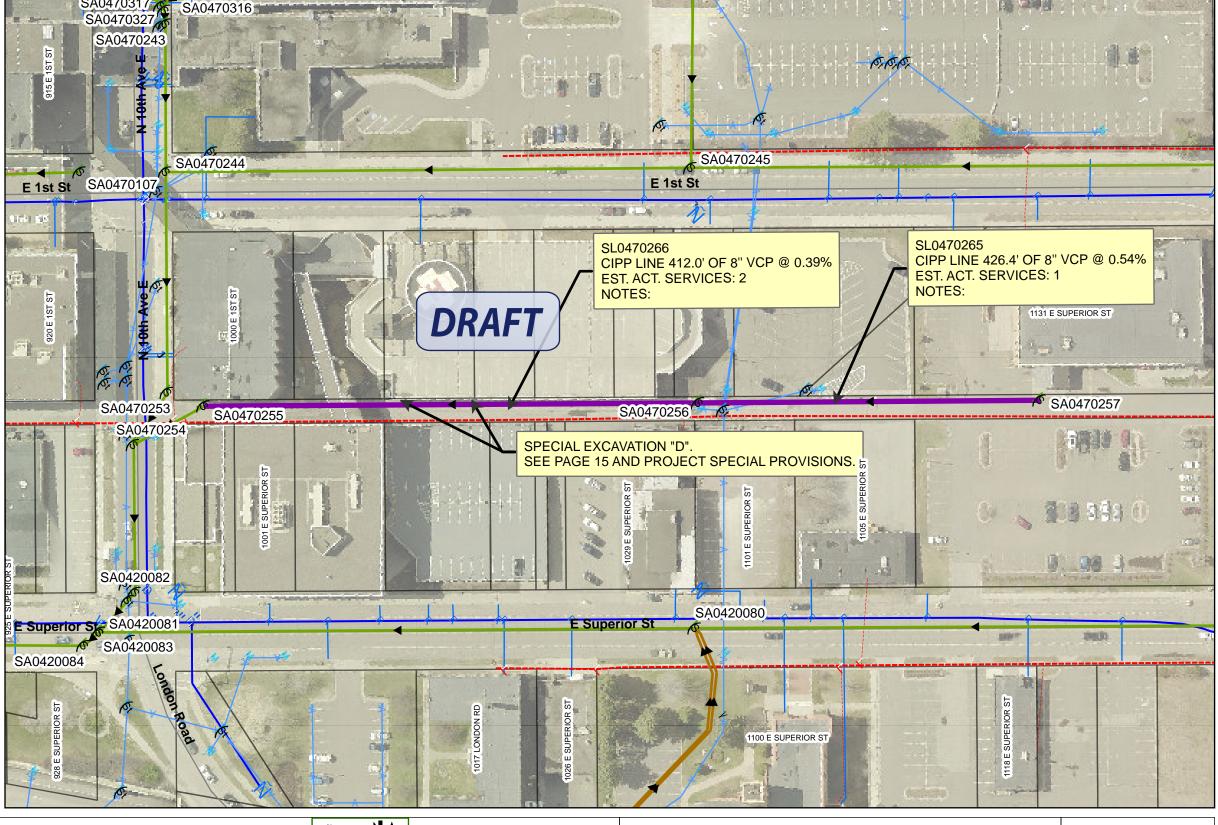
2021 CITYWIDE SANITARY SEWER CIPP LINING CITY PROJECT NO.: 1955





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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 MINNNESOTA.

SIGNATURE:\_\_\_\_\_ LIC. NO: 50401 DATE: 3/1/2022



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

2021 CITYWIDE SANITARY SEWER CIPP LINING CITY PROJECT NO.: 1955

### **OVERVIEW MAP** Howtz St

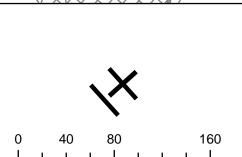
### PLAN

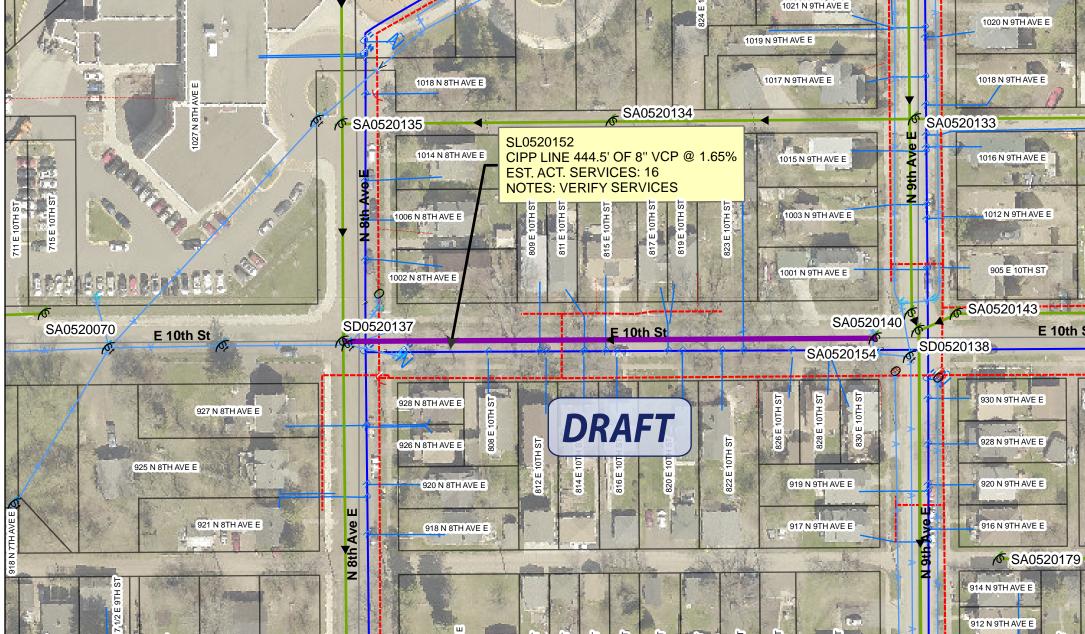
1023 N 9TH AVE E

1030 N 9TH AVE E

E 10th St

0





### **LEGEND** Proposed Liner SANITARY MANHOLE STORM MANHOLE STORM CATCH BASIN → SANITARY MAIN STORM MAIN ---- GAS MAIN -WATER MAIN

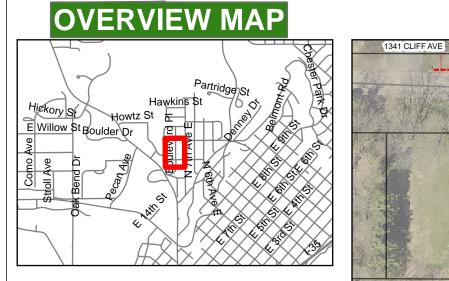
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNNESOTA.

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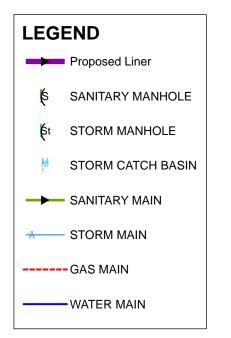


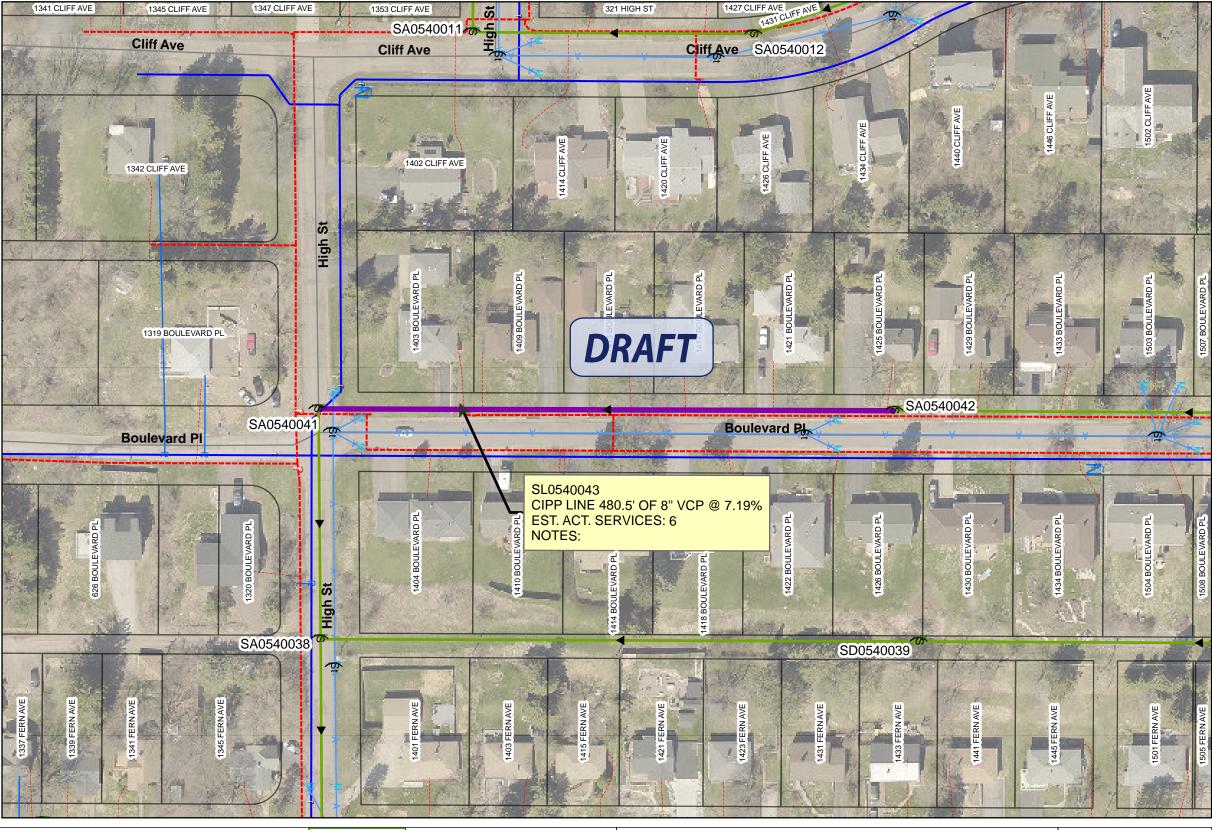
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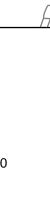


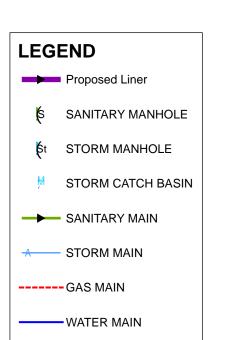
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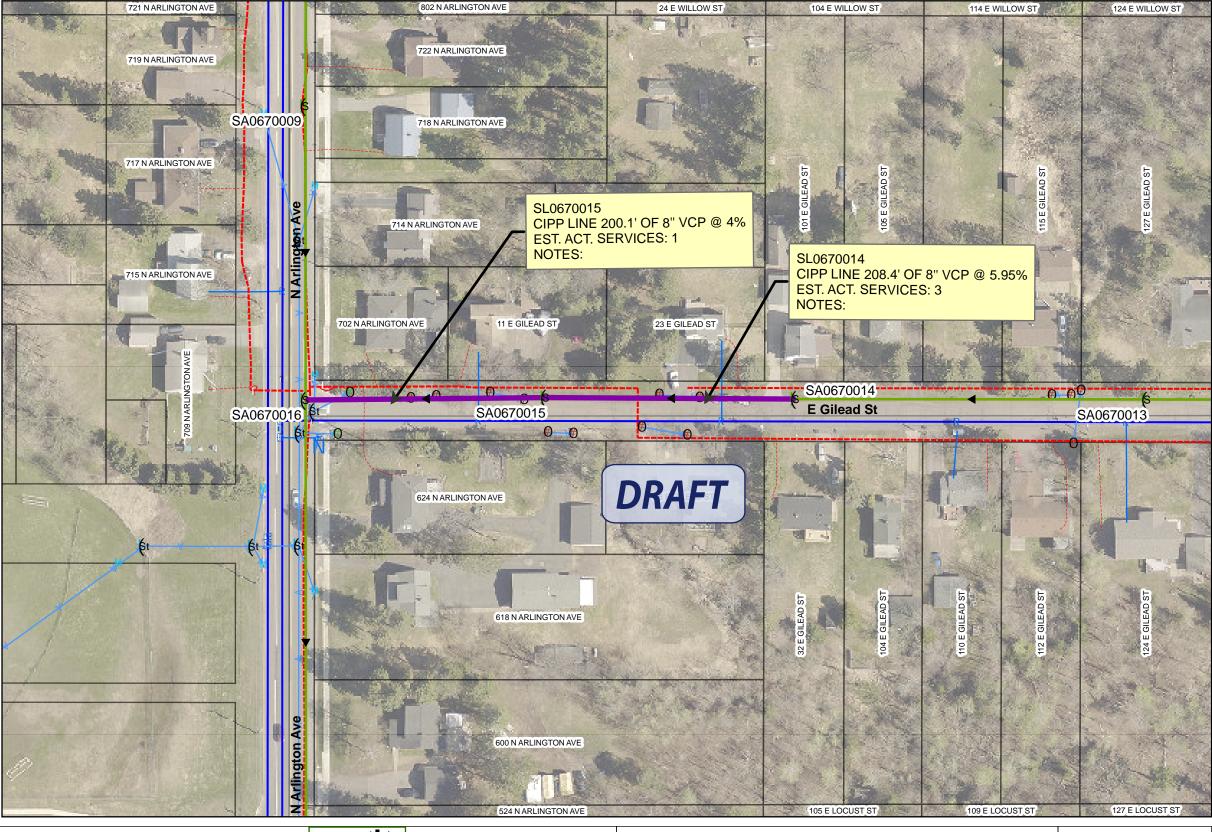
2021 CITYWIDE SANITARY SEWER CIPP LINING CITY PROJECT NO.: 1955

### W Ideal St Willow St Worange St Worange St Quince St Worange St Willow St E Myrtle St Worange St Quince St Worange St Worange St Quince St









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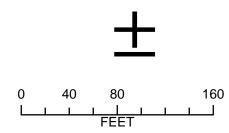
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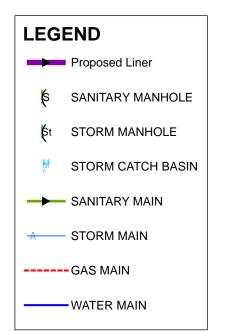


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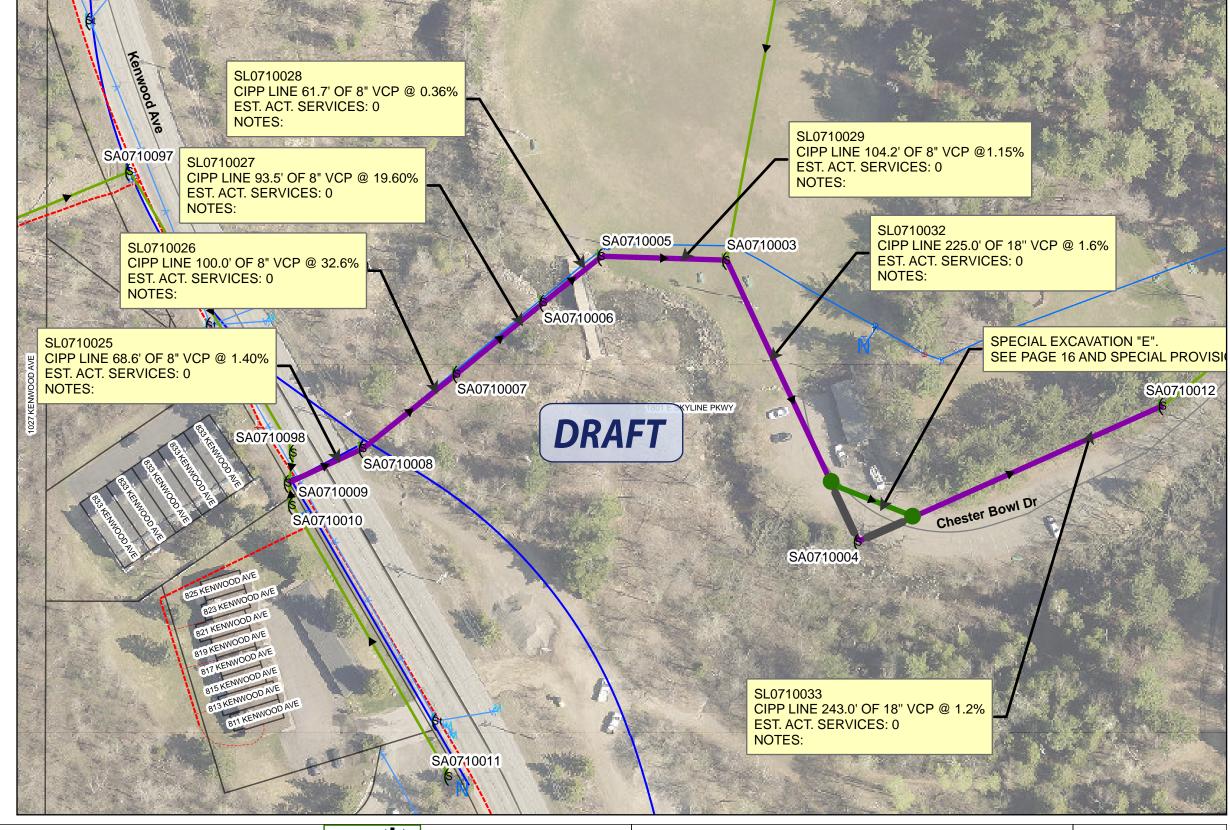
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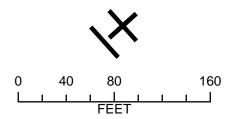
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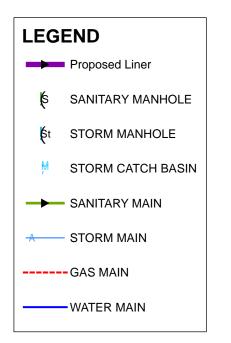


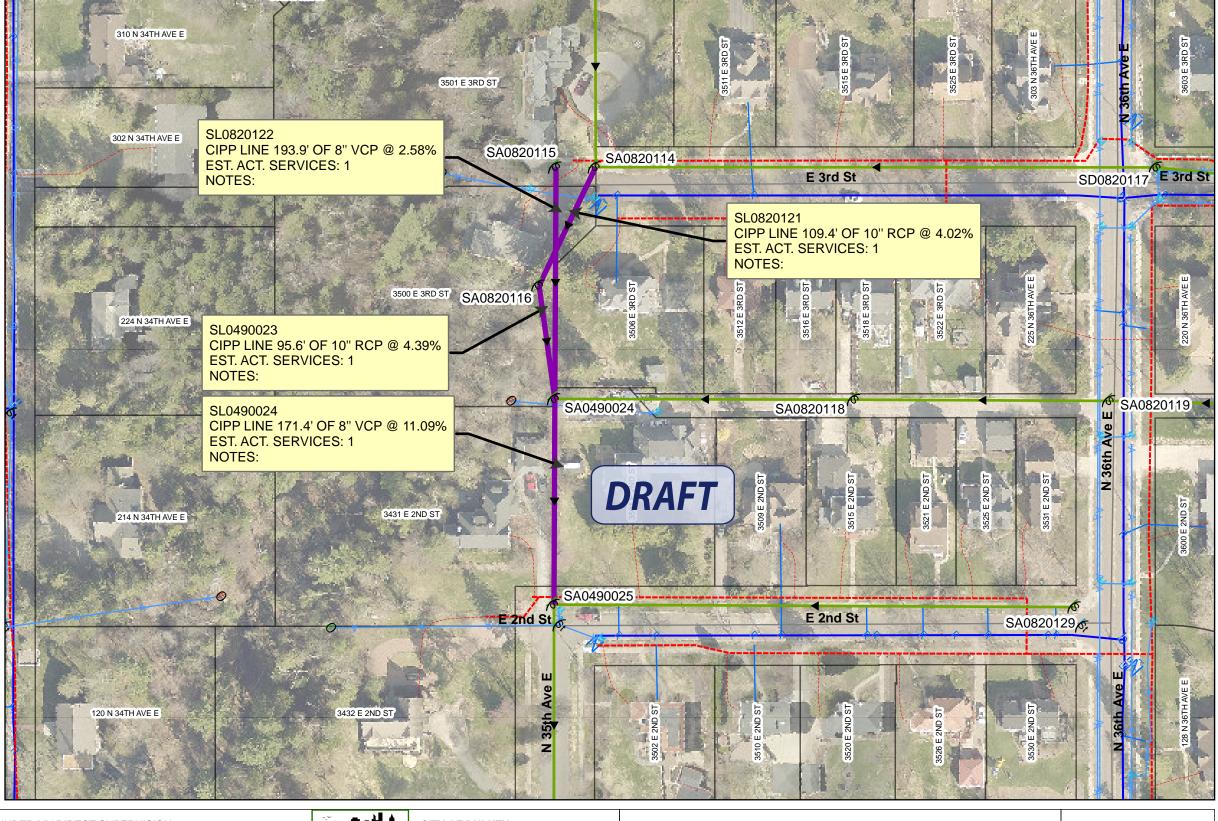
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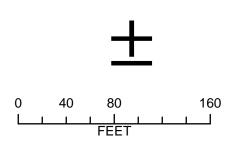


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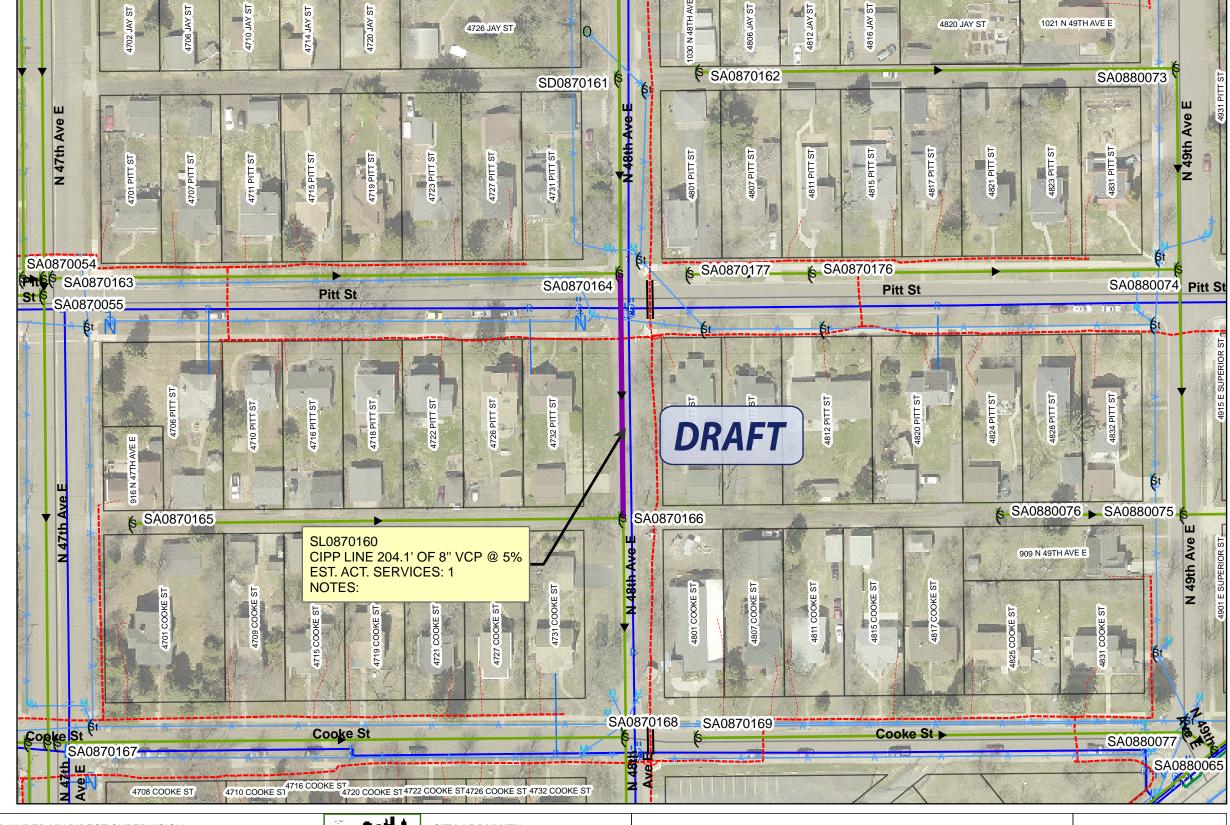
2021 CITYWIDE SANITARY SEWER CIPP LINING **CITY PROJECT NO.: 1955** 

### Glenwood St Glenwood St Oneida St Otsego St Tidga St Tidg

### **PLAN**



# Proposed Liner (\$ SANITARY MANHOLE (\$t STORM MANHOLE M STORM CATCH BASIN → SANITARY MAIN A STORM MAIN GAS MAIN WATER MAIN



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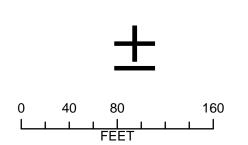


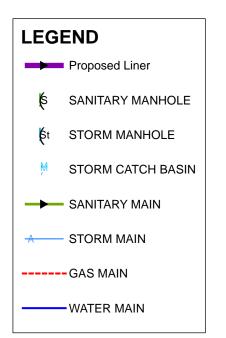
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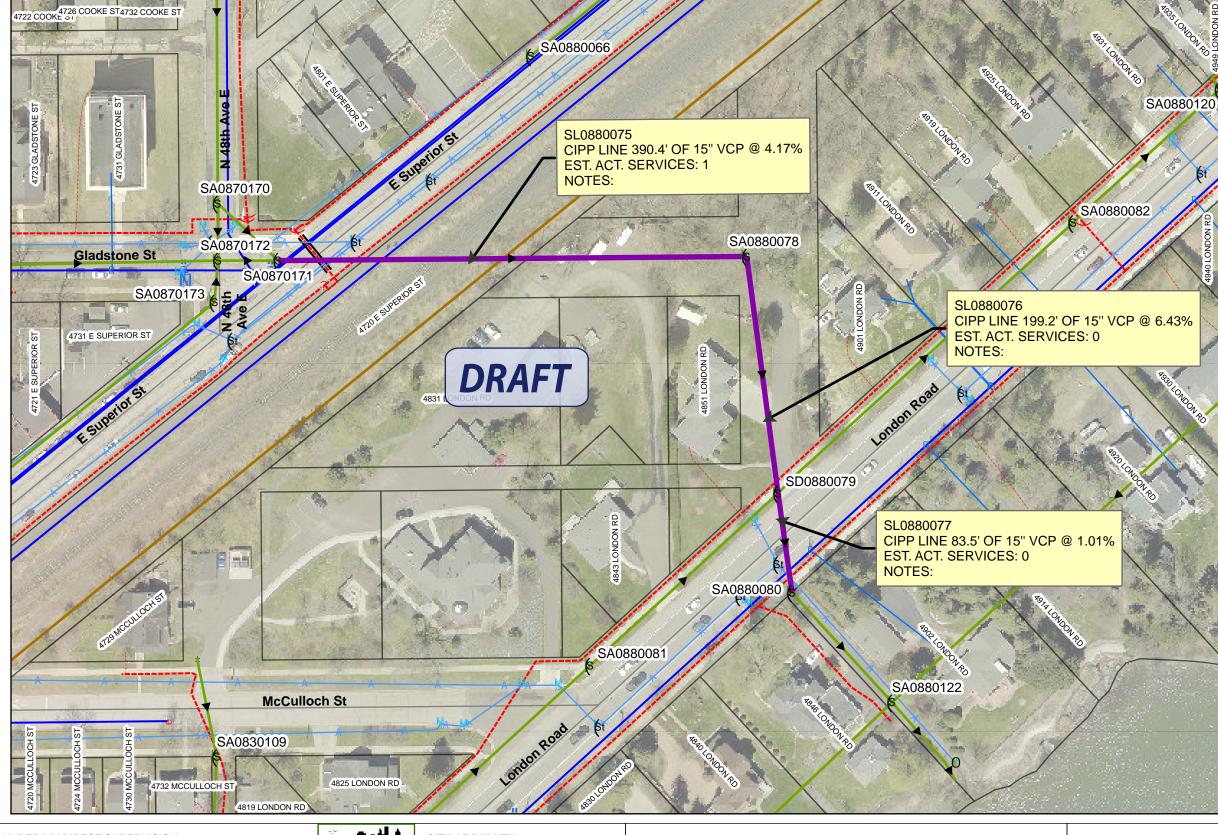
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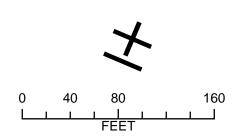


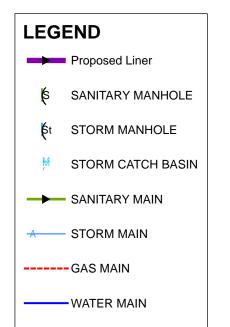
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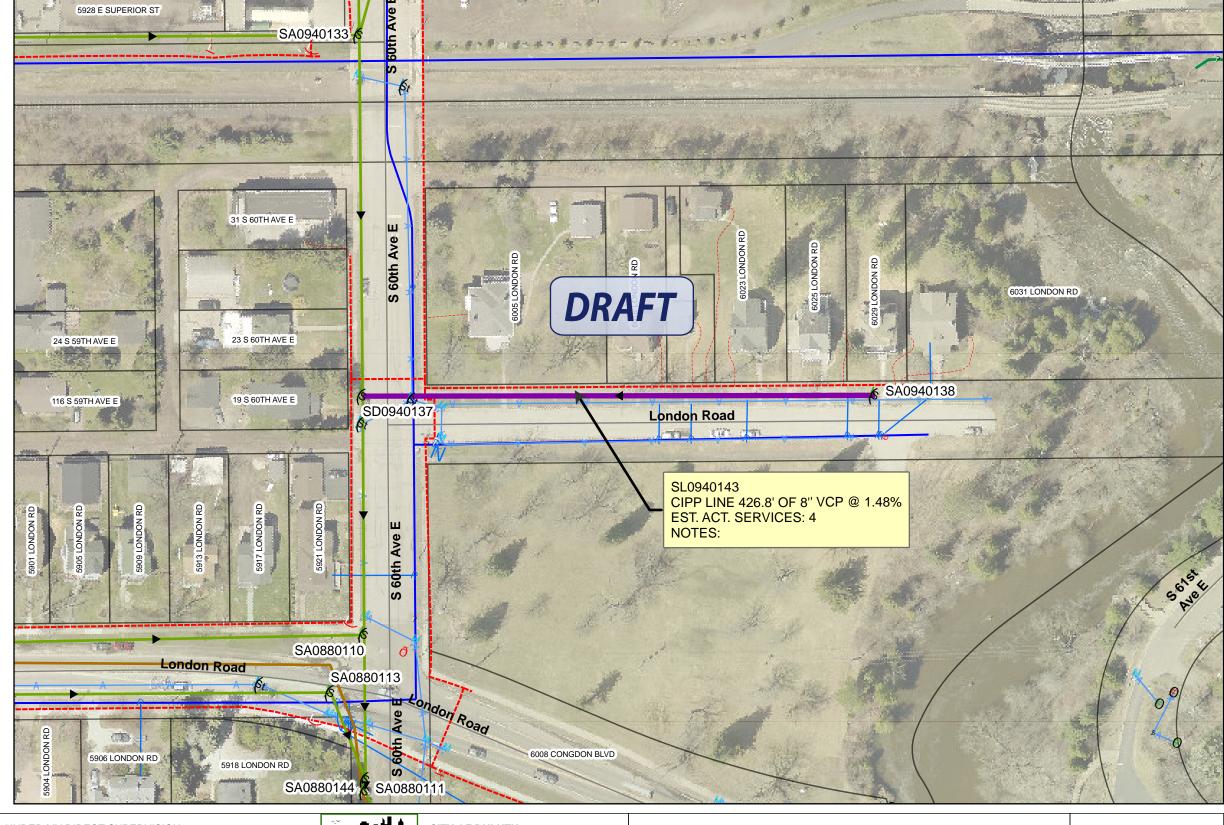
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# Glendale St Wyoming St Glenwood St Tidga St Tidga St Pitt St Order Pitt St









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