Purchasing Division
Finance Department

Room 120
411 West First Street
Duluth, Minnesota 55802

218-730-5340
purchasing@duluthmn.gov

Addendum #1
Solicitation # 25-99480
Project #2317

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

1. City Utility drawings printed from GIS are attached. They show all city utilities, proposed boring locations and UDI (structure) labels.

2. A Storm Pipe List is attached with pipe lengths. Assume all storm pipes will be televised. Consultant will need to meet the requirements of section 3g for the length of pipe on the list.

3. A list with an approximate number of CB's, Sanitary MH's, Storm MH's and Valves is attached.

4. The current City Structure Inspection form is attached and should be filled out completely by consultant for each storm and sanitary structure in ROW. All culverts on the project will be visually assessed by the consultant, they will not be televised. All valves in the ROW need to be assessed by consultant whether they need parts or repair before concrete collars or adjusting occurs.

5. A partial sample plan from the 2023 Street Preservation is attached for reference.

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

Posted: **May 20, 2025**

1 West Duluth - 34th Ave W, Grand Ave to Superior St 1

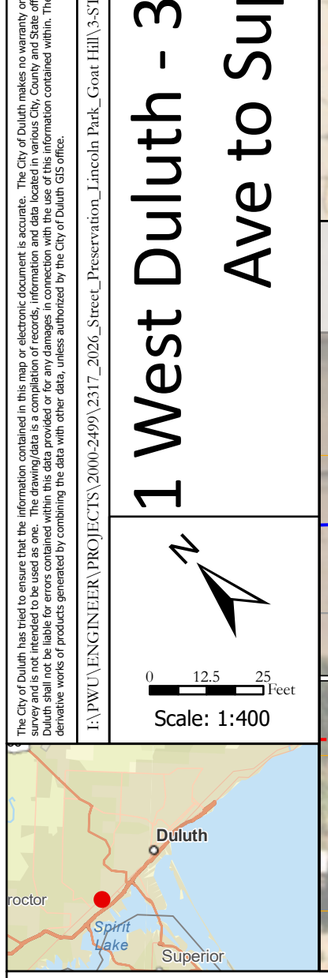
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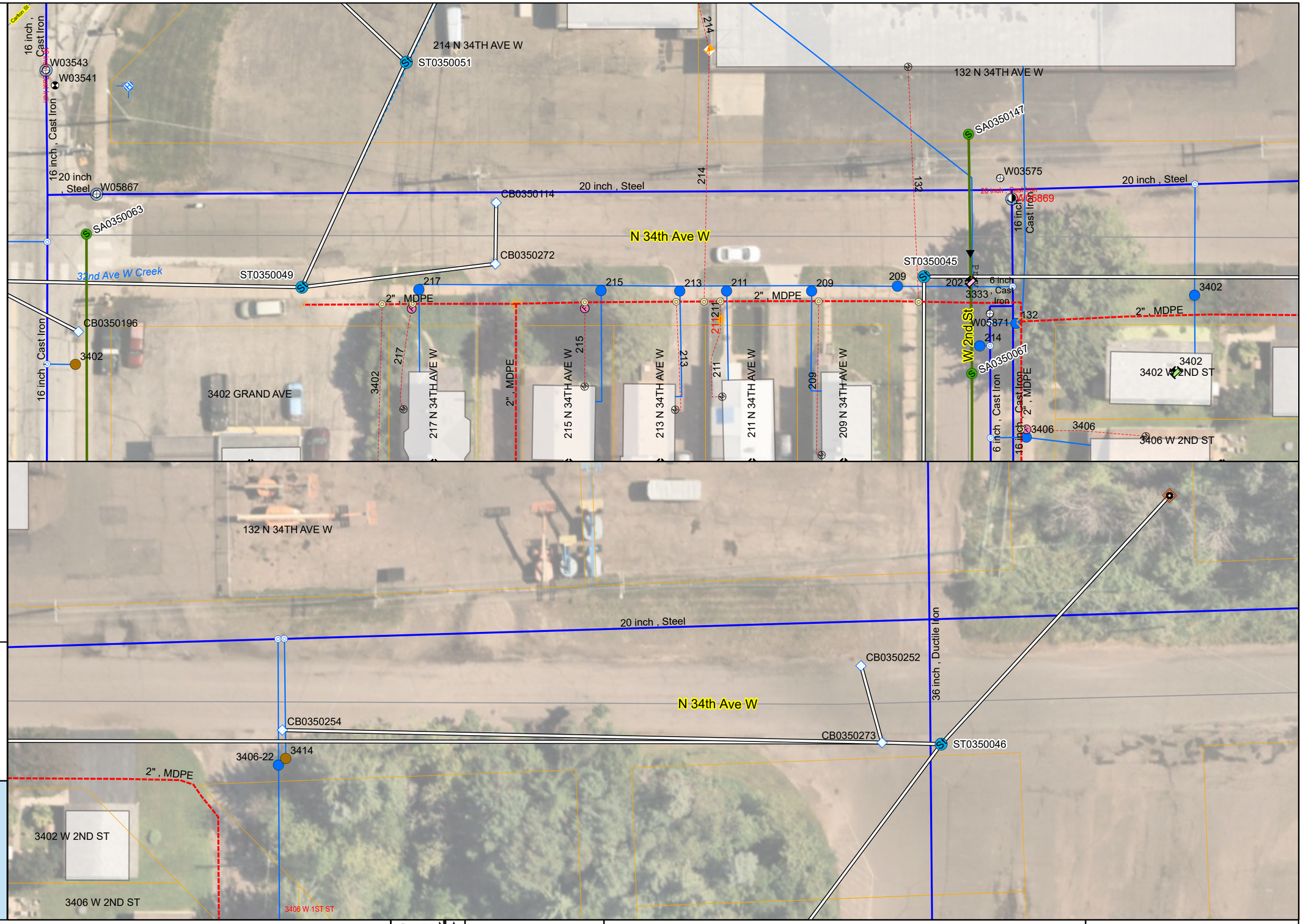
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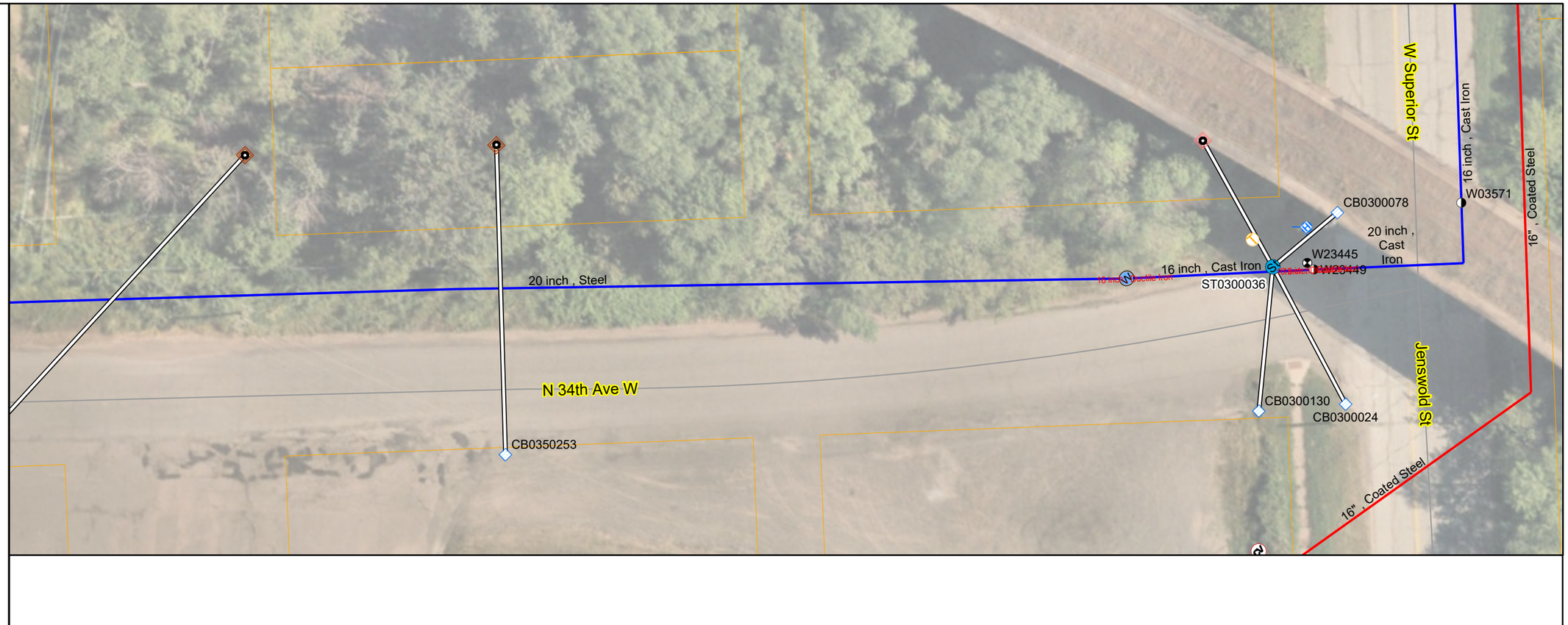
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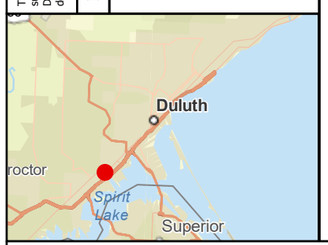
2 West Duluth - 34th Ave W, Grand Ave to Superior St 2



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3 West Superior St Duluth - Carlton St, W Superior St to Grand Ave 1

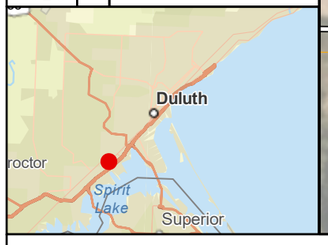
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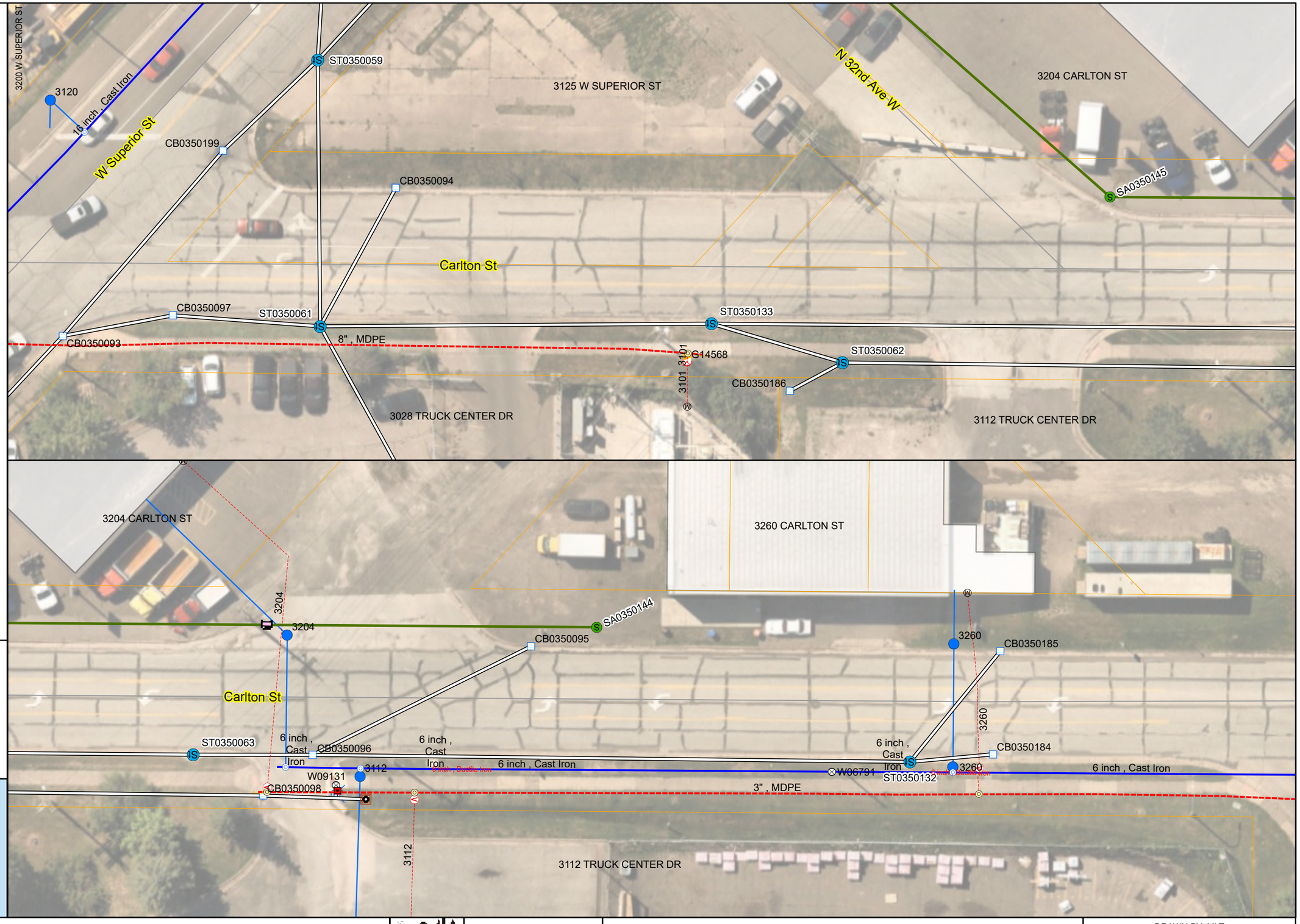
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4 West Duluth - Carlton St, W Superior St to Grand Ave 2

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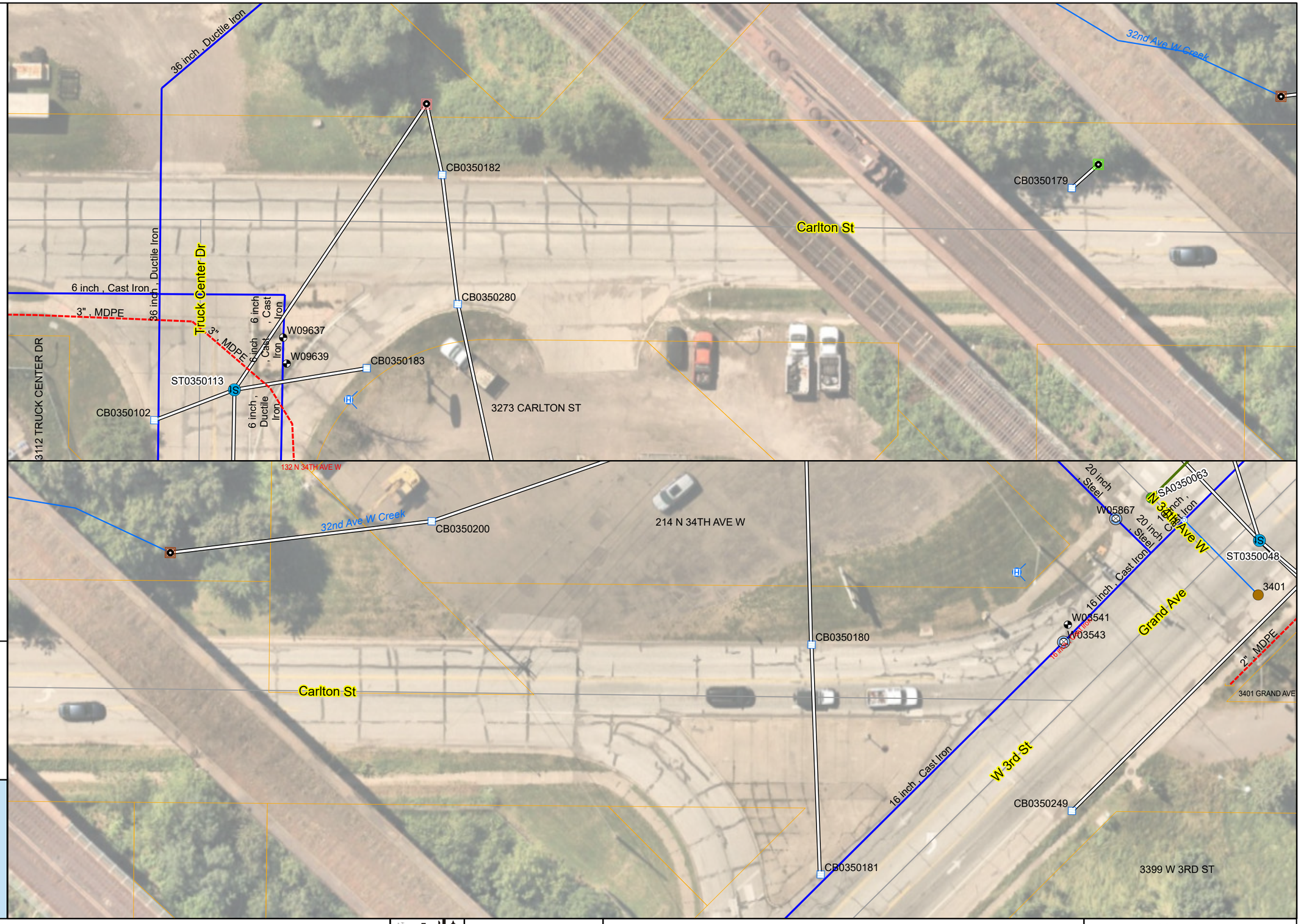
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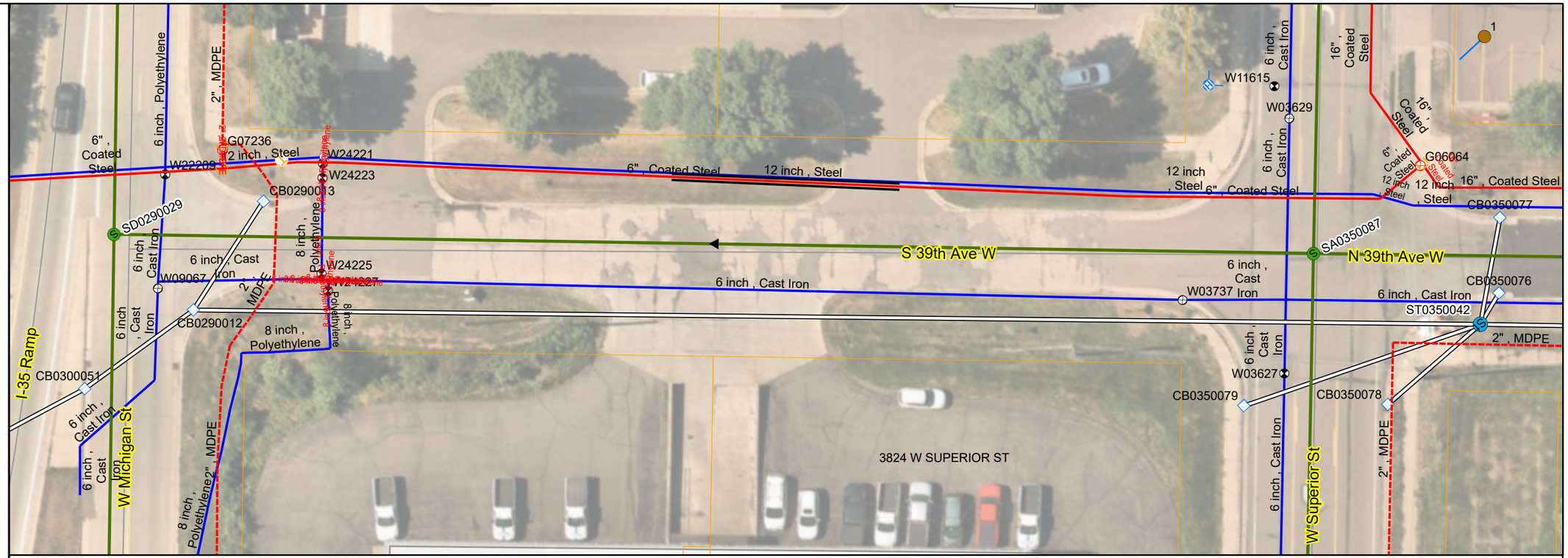
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5 West Duluth - 39th Ave W, from Michigan to Superior St



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SHEET NO. 5 OF 30

6 West Duluth - W Superior St, Carlton St to Jenswold 1

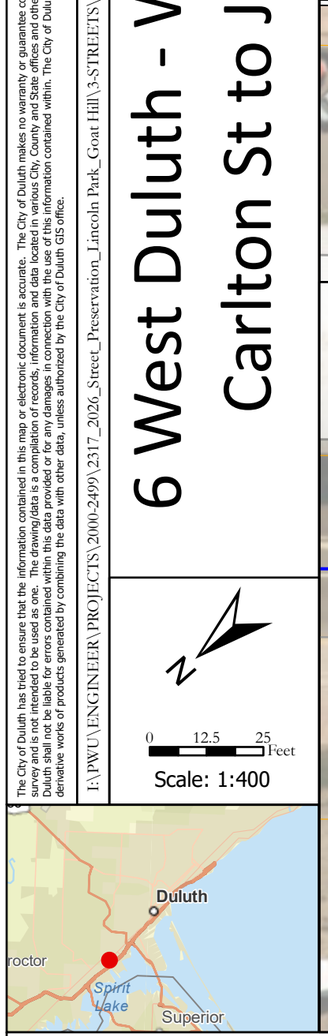
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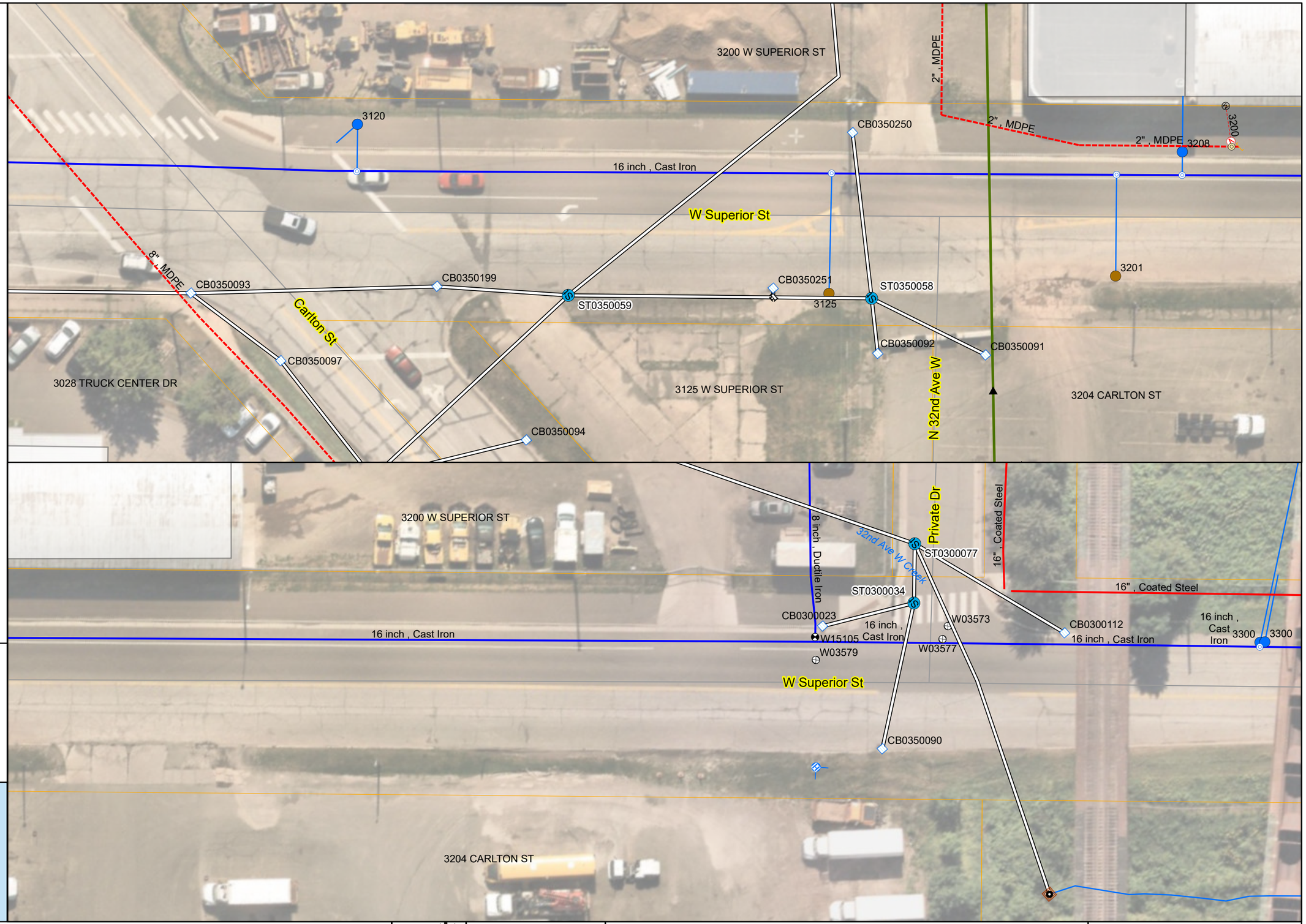
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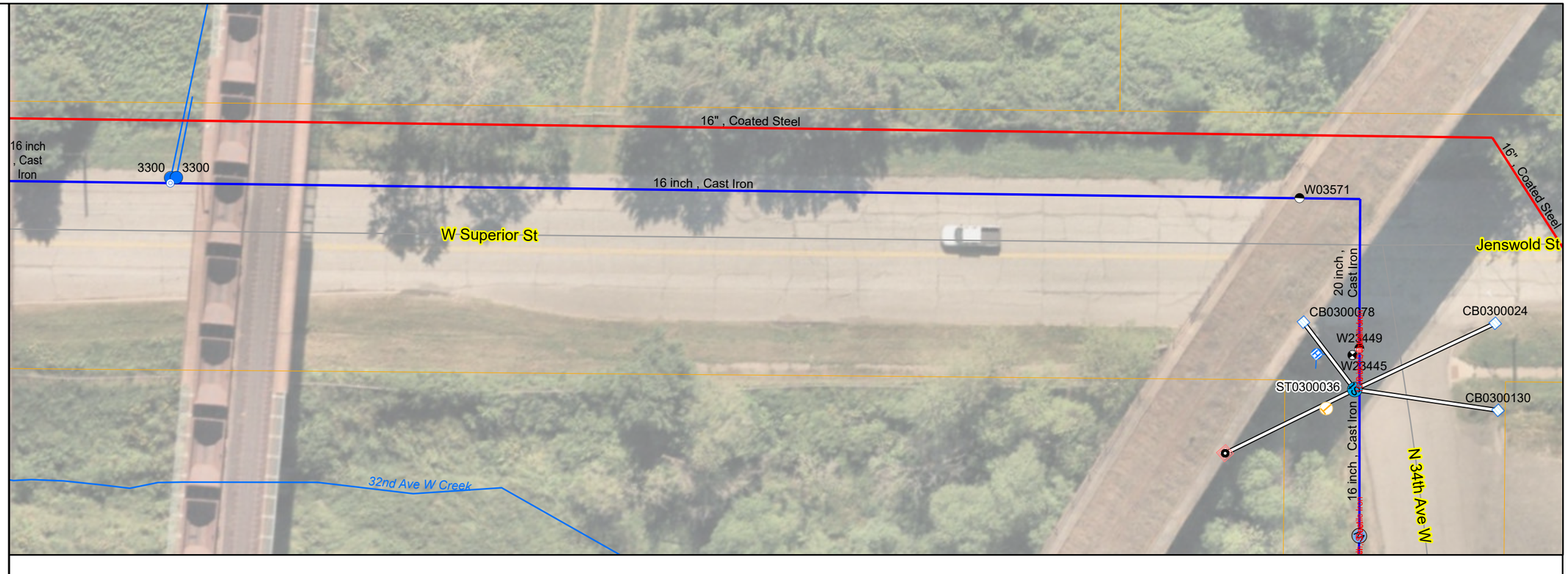
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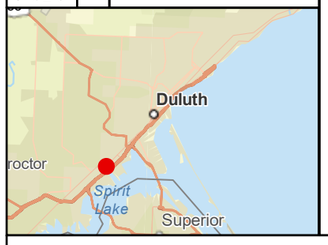
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7 West Duluth - W Superior St, Carlton St to Jenswold 2



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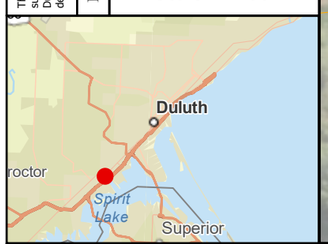
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SHEET NO. 7 OF 30

8 West Duluth - Jenswold, W Superior St to W Michigan





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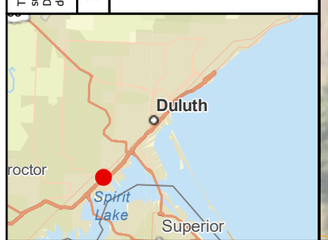
9 West Duluth - W Michigan St, Jenswold to 39th Ave W 1



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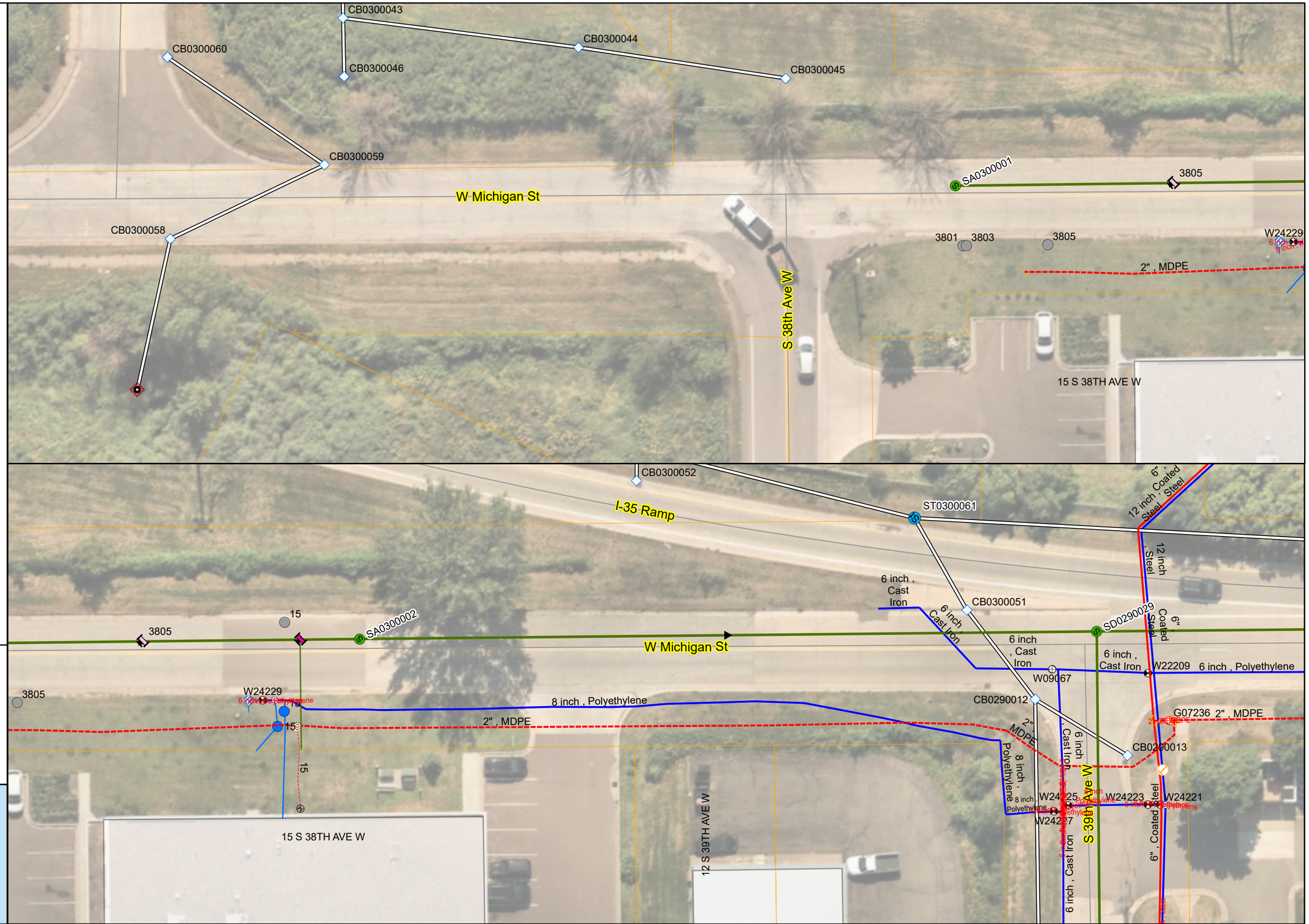
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10 West Duluth - W Michigan St, Jenswold to 39th Ave W 2



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11 Lincoln Pk - 21st Ave W, from 3rd to 6th St 1

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12 Lincoln Pk - 21st Ave W, from 3rd to 6th St 2

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13 Lincoln Pk - W 4th St, from 20th Ave W to 25th Ave W 1

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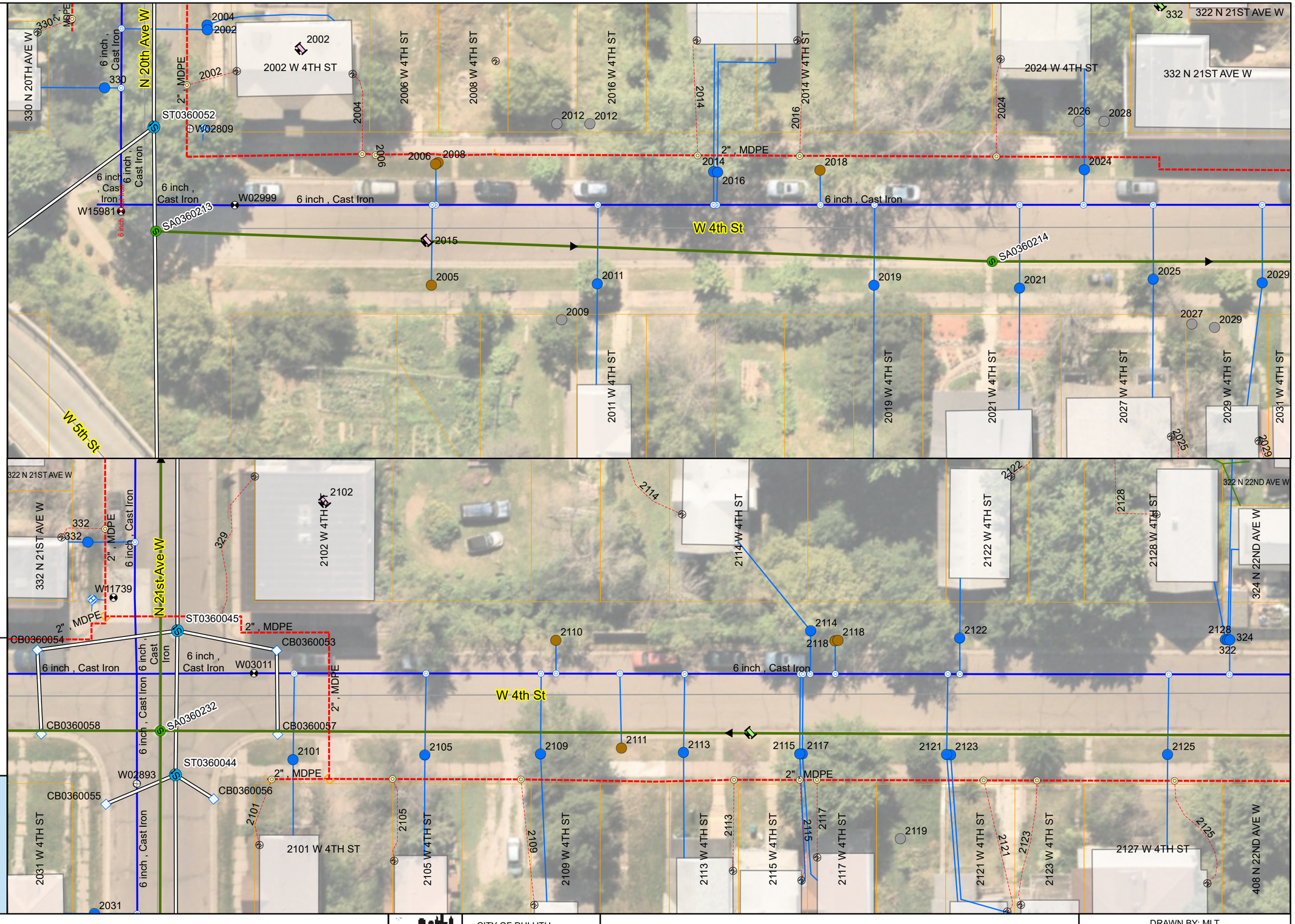
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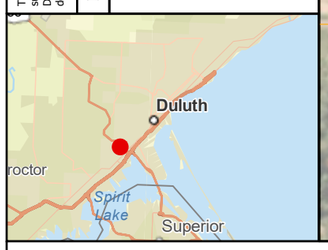
14 Lincoln Pk - W 4th St, from 20th Ave W to 25th Ave W 2

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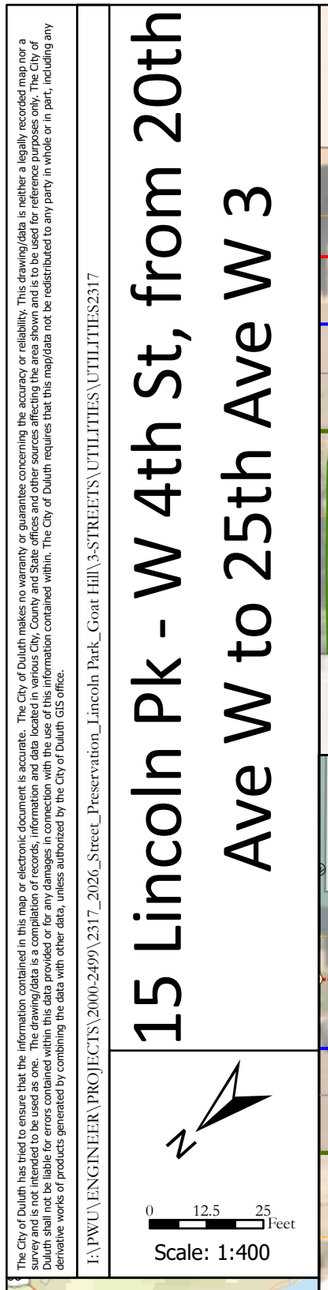
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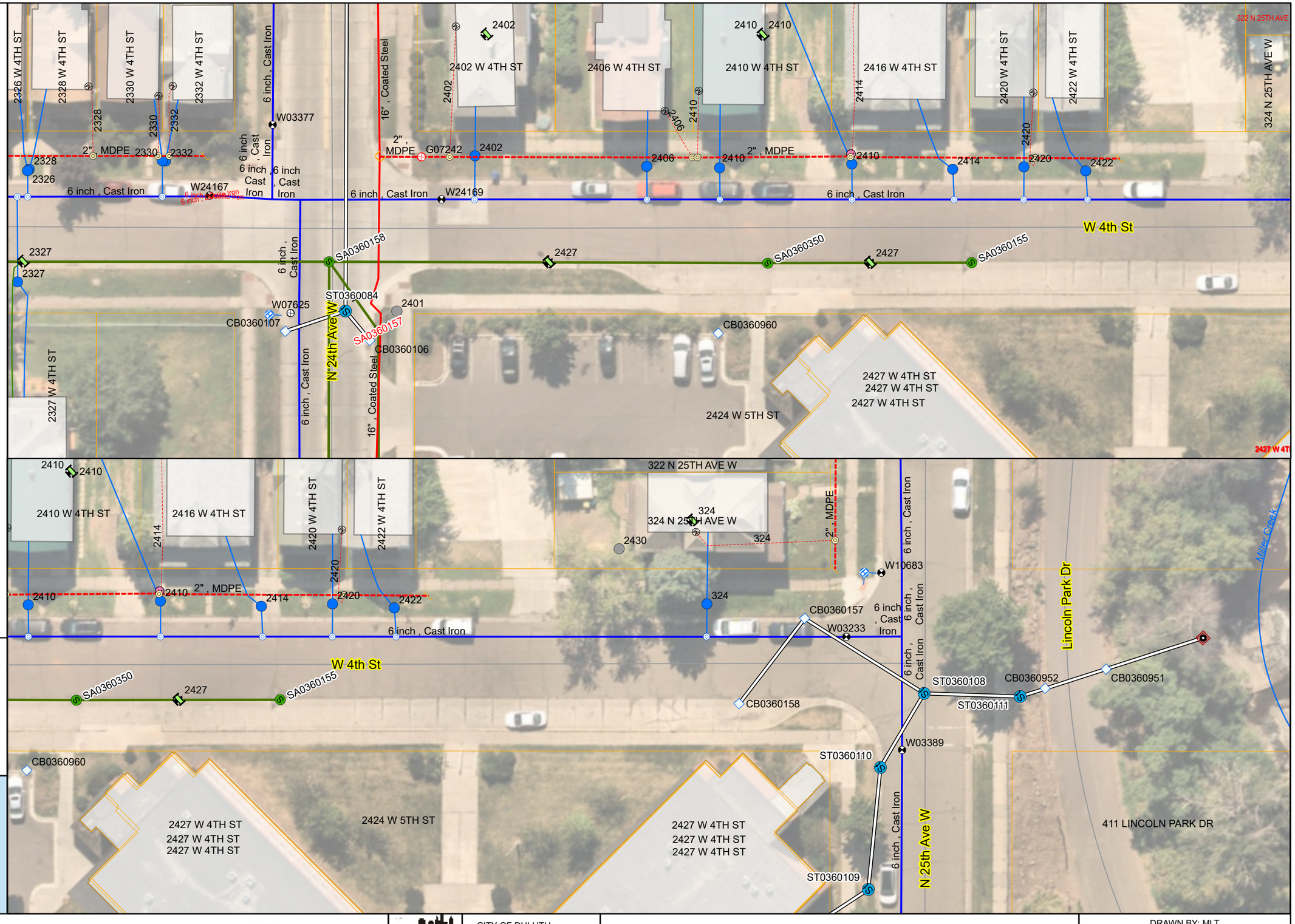
SHEET NO. 14 OF 30

15 Lincoln Pk - W 4th St, from 20th Ave W to 25th Ave W 3



0 12.5 25 Feet

Scale: 1:400



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DULUTH, MN 55802

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CITY PROJECT NO.: 2317 | STATE AID PROJECT NO.:

SHEET NO. 15 OF 30

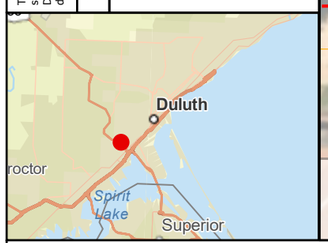
16 Lincoln Pk - W 5th St, from bridge over TH53 to 25th Ave W 1

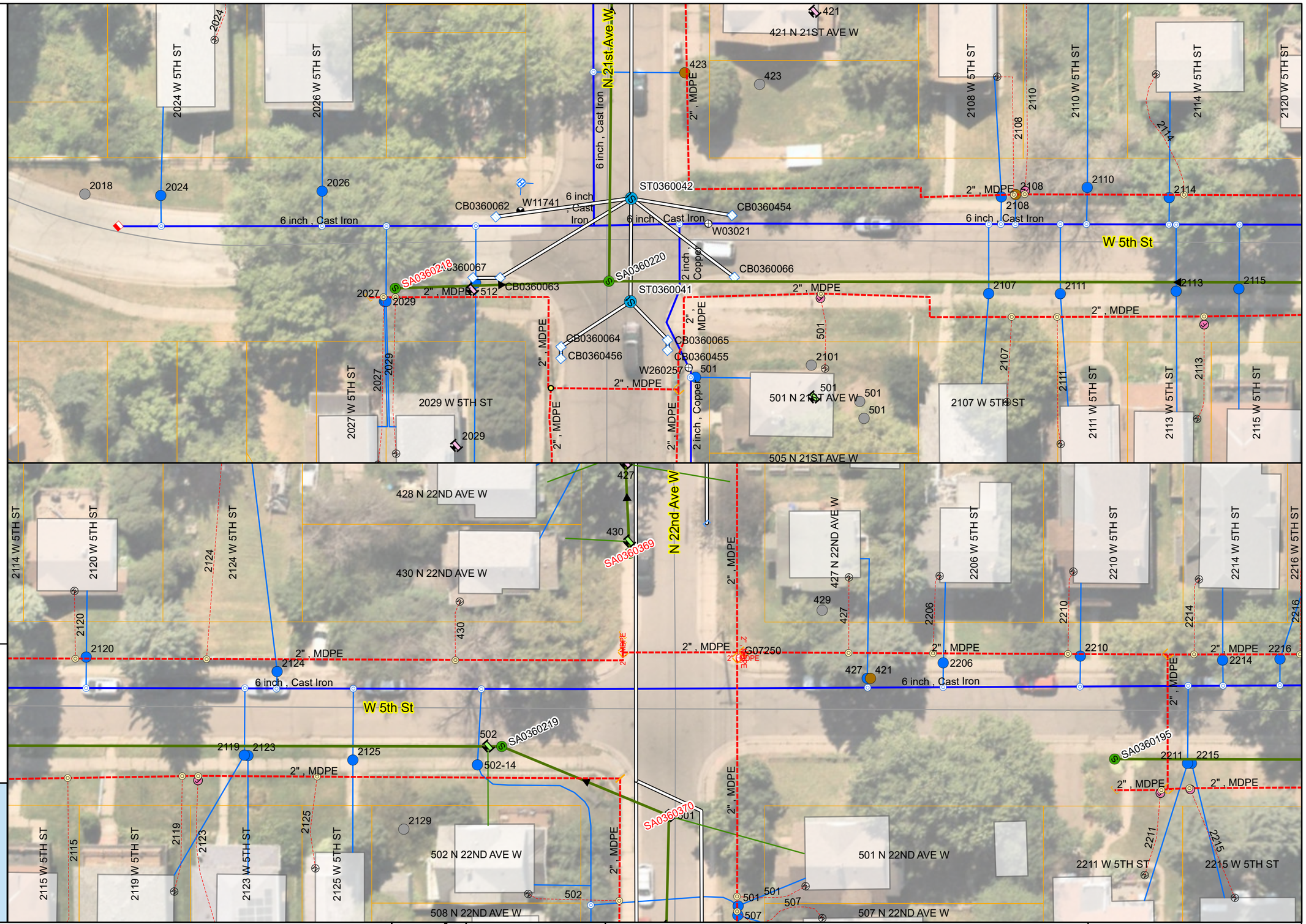
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0 12.5 25 Feet

Scale: 1:400





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2026 STREET PRESERVATION

CITY PROJECT NO.: 2317 | STATE AID PROJECT NO.:

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BORING

SHEET NO. 16 OF 30

17 Lincoln Pk - W 5th St, from bridge over TH53 to 25th Ave W 2

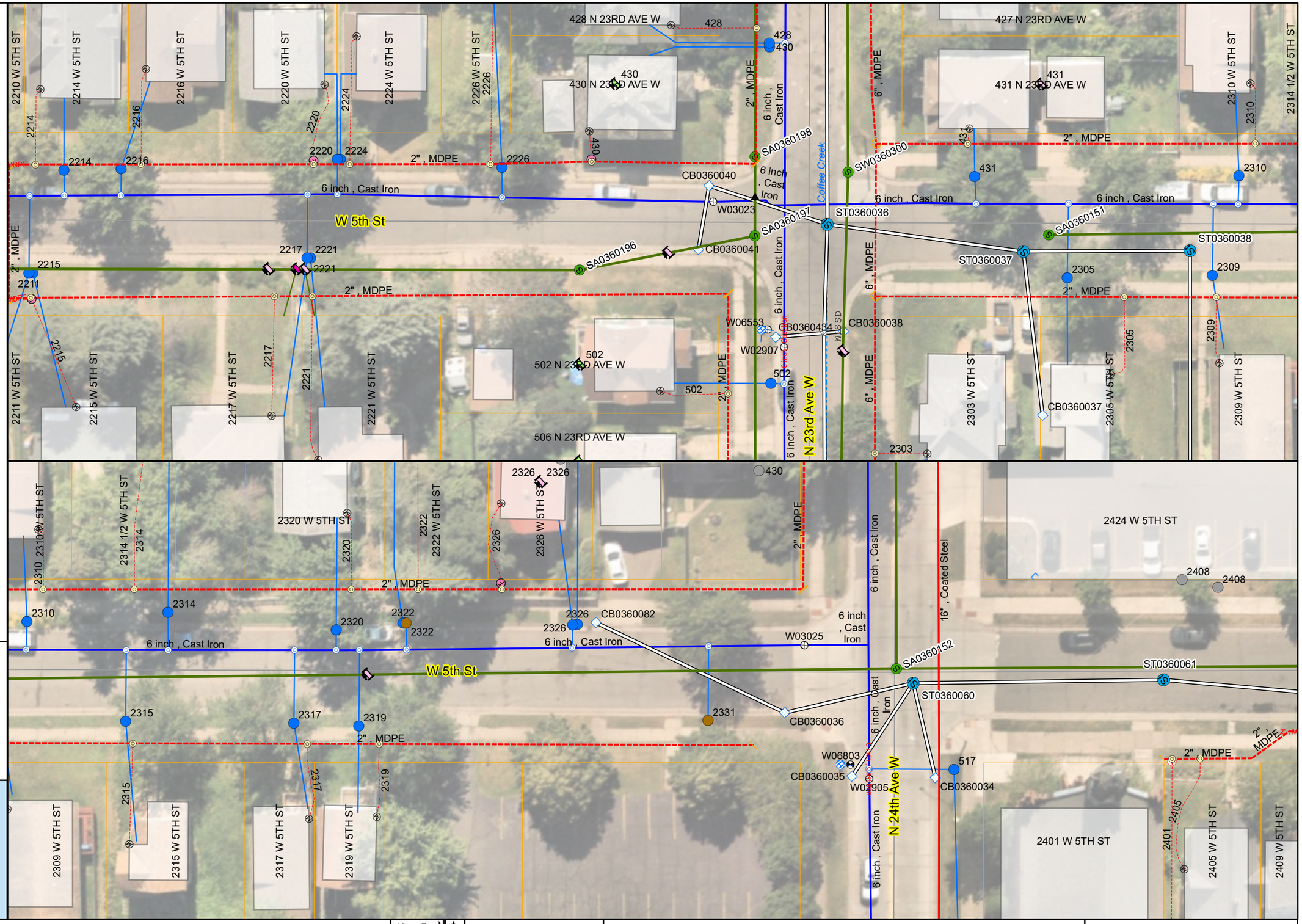
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Scale: 1:400





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2026 STREET PRESERVATION

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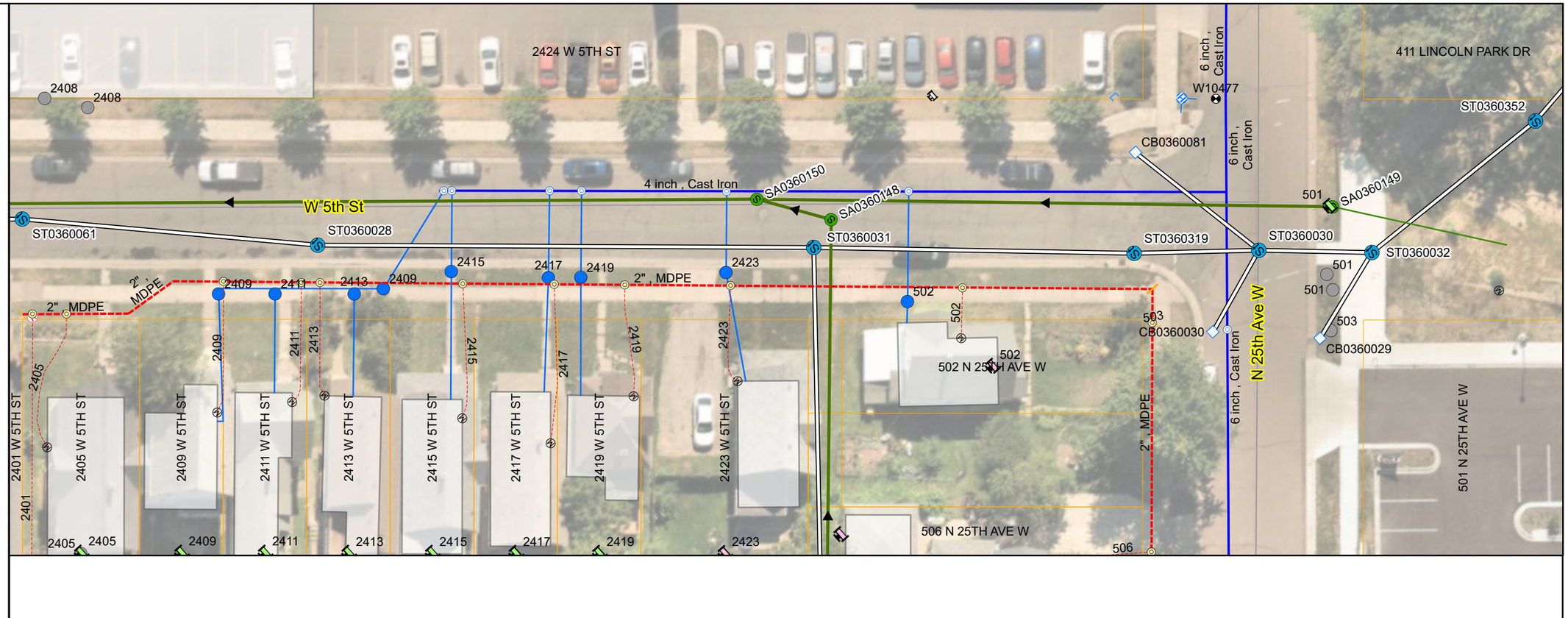
BORING

CITY PROJECT NO.: 2317

STATE AID PROJECT NO.:

SHEET NO. 17 OF 30

18 Lincoln Pk - W 5th St, from bridge over TH53 to 25th Ave W 3

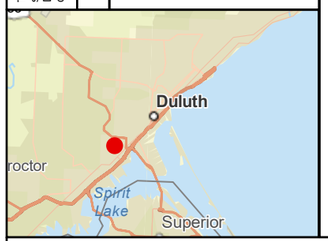


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Scale: 1:400



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2026 STREET PRESERVATION

CITY PROJECT NO.: 2317

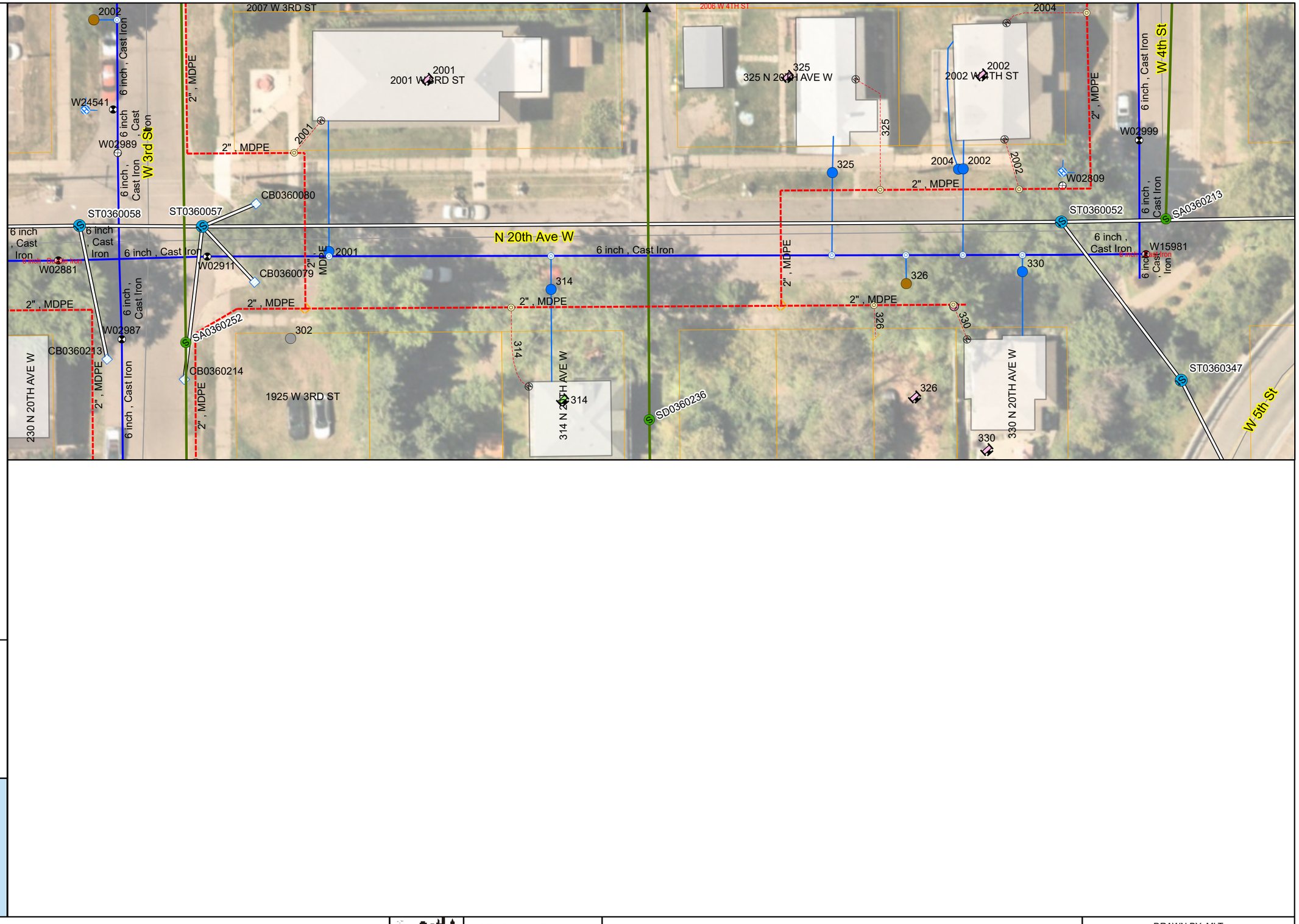
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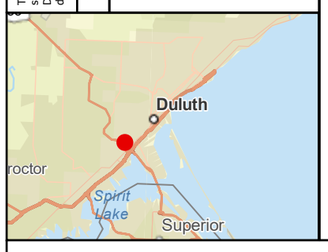
DRAWN BY: MLT

BORING

SHEET NO. 18 OF 30

19 Lincoln Pk - 20th Ave W, from 3rd to 4th Street





0 12.5 25 Feet

Scale: 1:400

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SHEET NO. 19 OF 30

20 Lincoln Pk - 22nd Ave W, from 3rd to 8th St 1

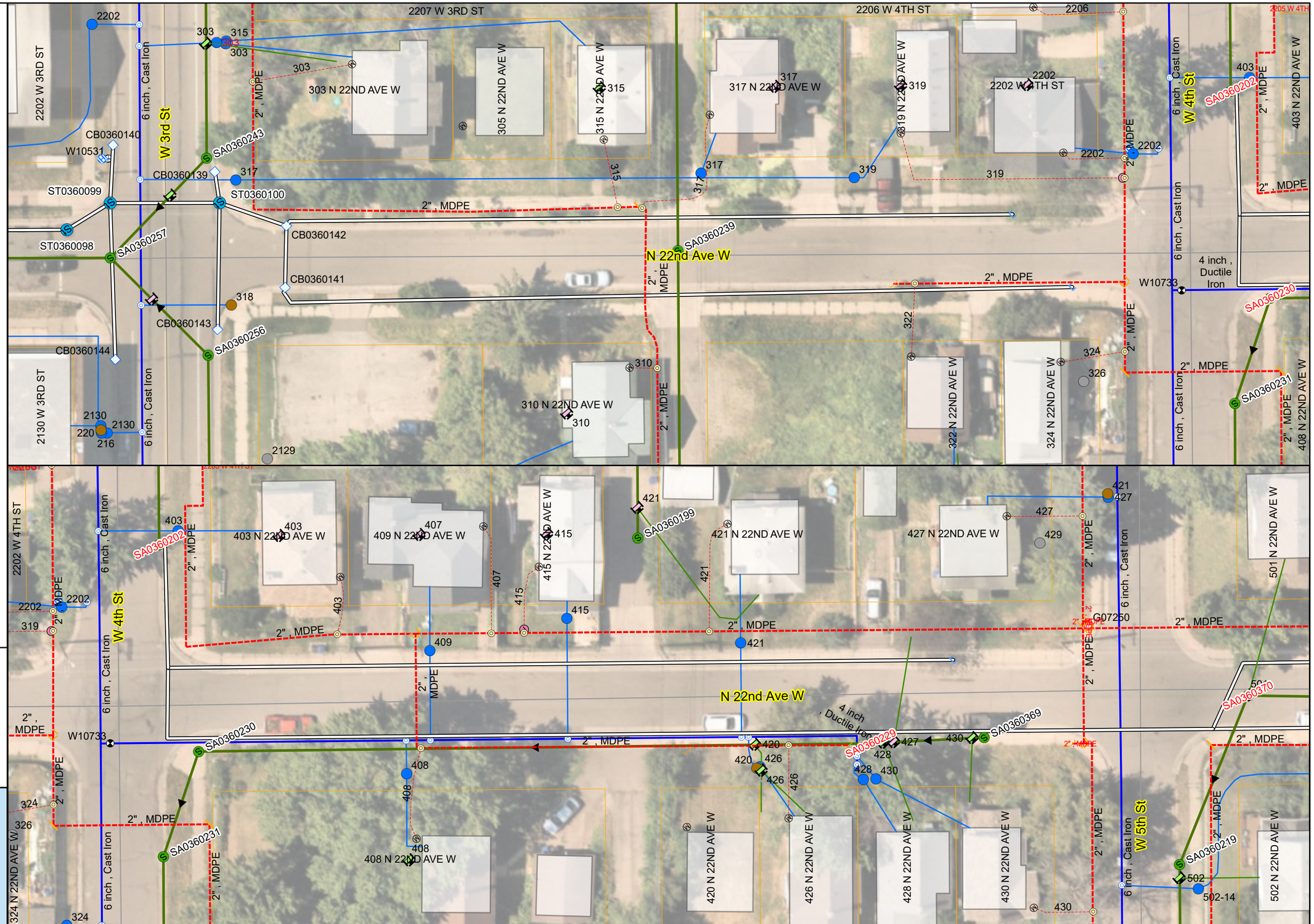
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2026 STREET PRESERVATION

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SHEET NO. 20 OF 30

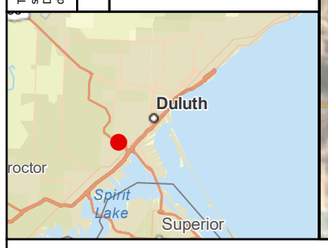
21 Lincoln Pk - 22nd Ave W, from 3rd to 8th St 2

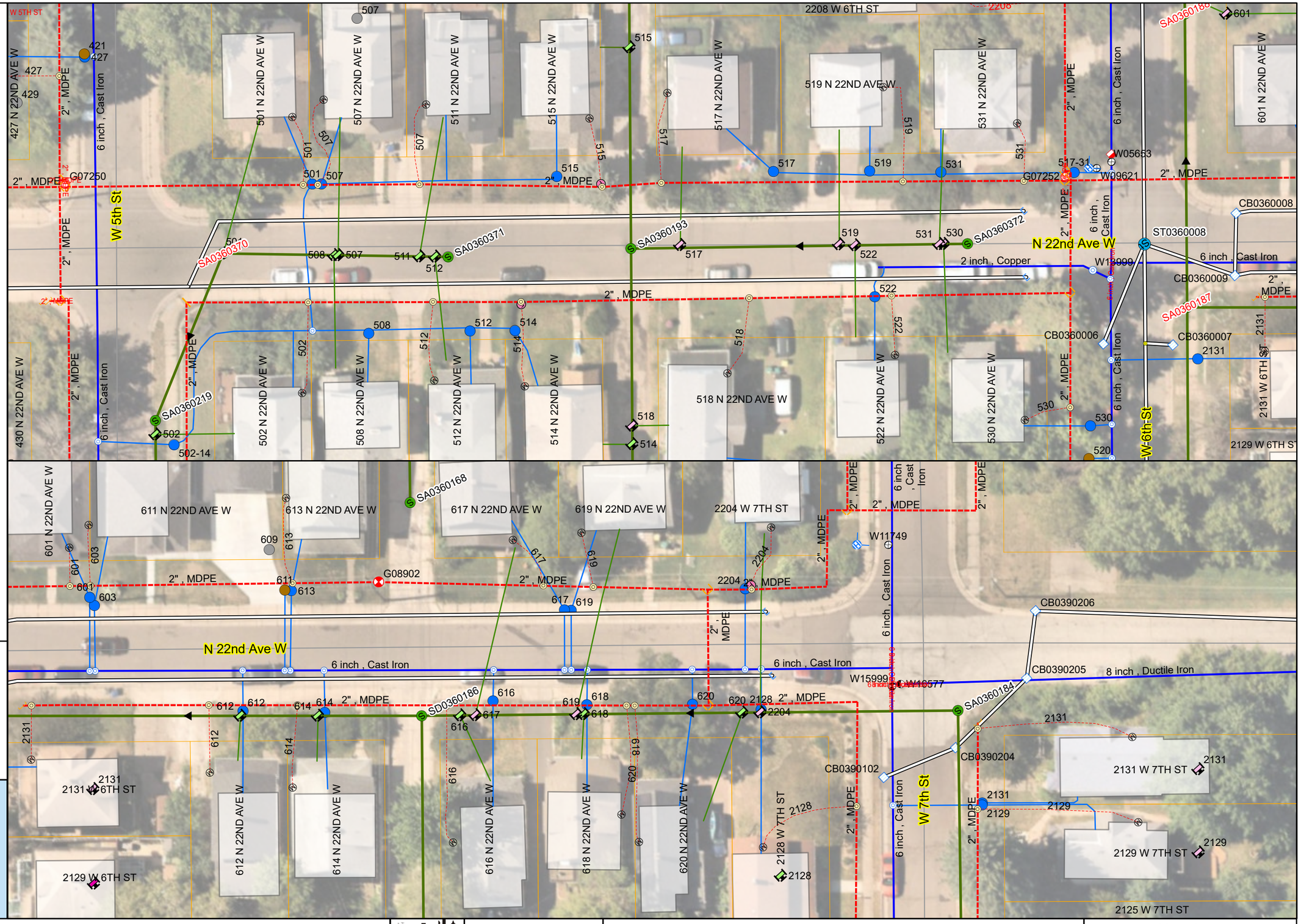
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CITY PROJECT NO.: 2317 | STATE AID PROJECT NO.:

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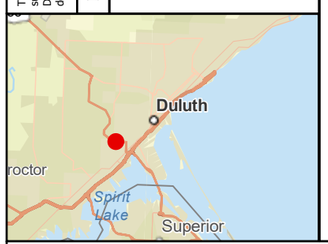
SHEET NO. 21 OF 30

22 Lincoln Pk - 22nd Ave W, from 3rd to 8th St 3



0 12.5 25 Feet

Scale: 1:400



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CITY PROJECT NO.: 2317

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SHEET NO. 22 OF 30

23 Lincoln Pk - 23rd Ave W, from 3rd to 5th St 1

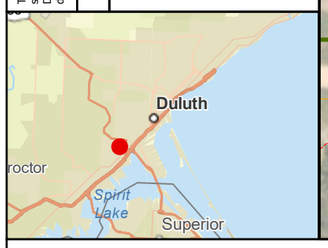
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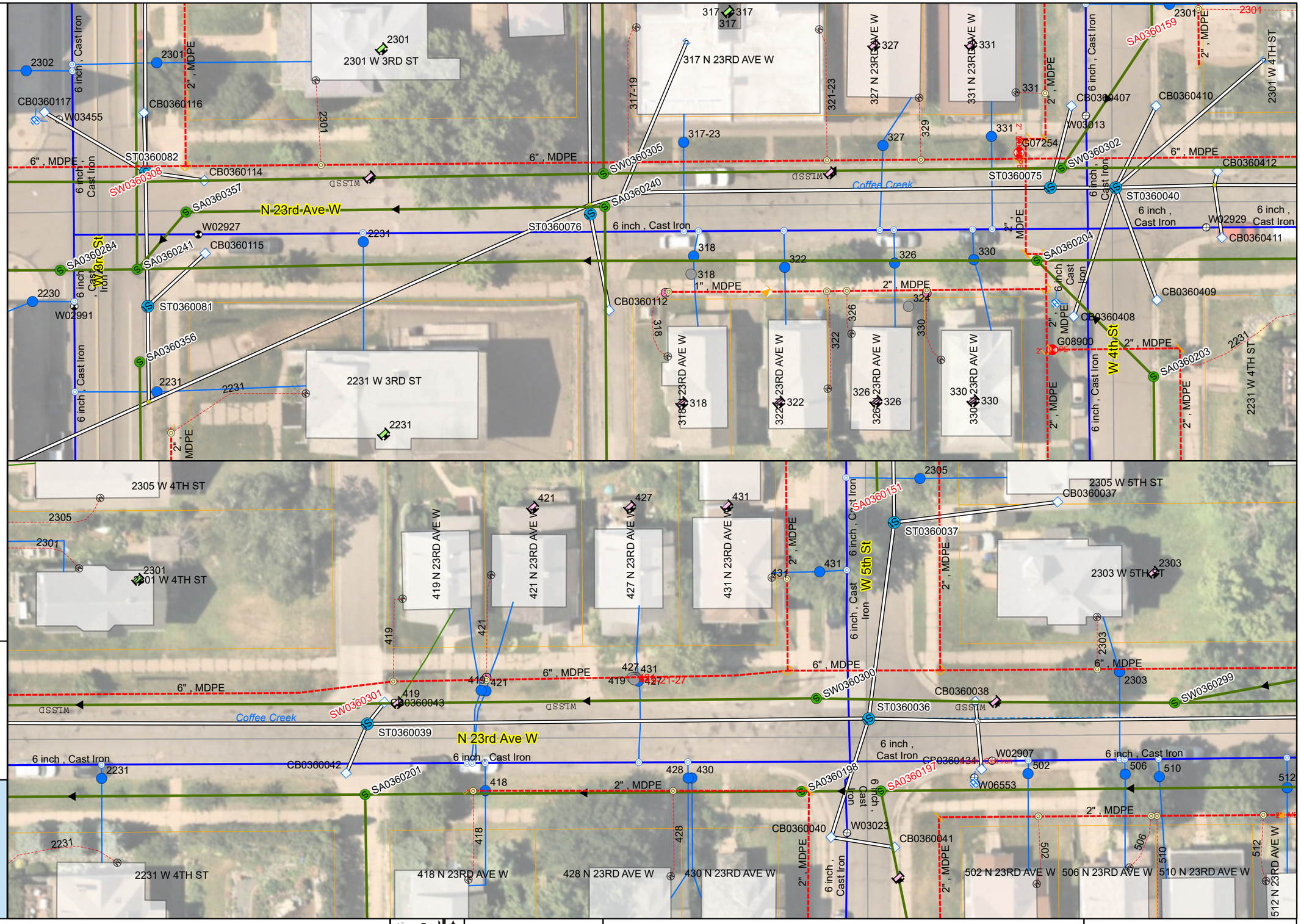
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SHEET NO. 23 OF 30

24 Lincoln Pk - 23rd Ave W, from 5th to 8th St 1

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25 Lincoln Pk - 23rd Ave W, from 5th to 8th St 2

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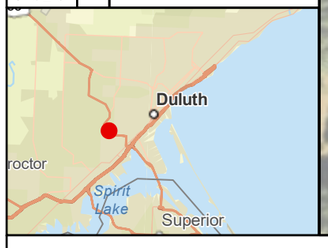
26 Goat Hill - W 12th St, TH53 to dead end E

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27 Goat Hill - W 11th St, TH53 to 22nd Ave W

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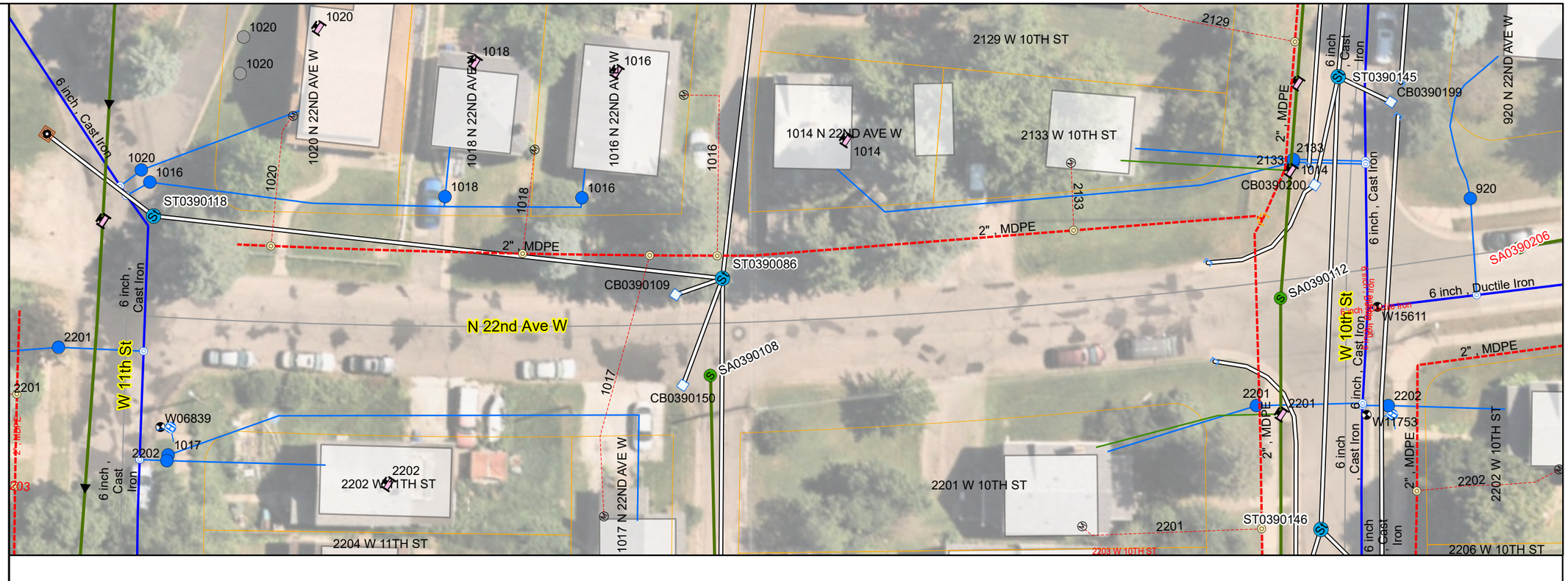
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411 W. 1ST ST. STE. 240
DULUTH, MN 55802

2026 STREET PRESERVATION

CITY PROJECT NO.: 2317 | STATE AID PROJECT NO.:

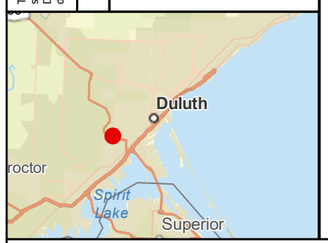
DRAWN BY: MLT
BORING
SHEET NO. 27 OF 30

28 Goat Hill - 22nd Ave W, W 11th St to W 10th St



0 12.5 25 Feet

Scale: 1:400



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SHEET NO. 28 OF 30

29 Goat Hill - W 13th St, from TH53 to dead end E

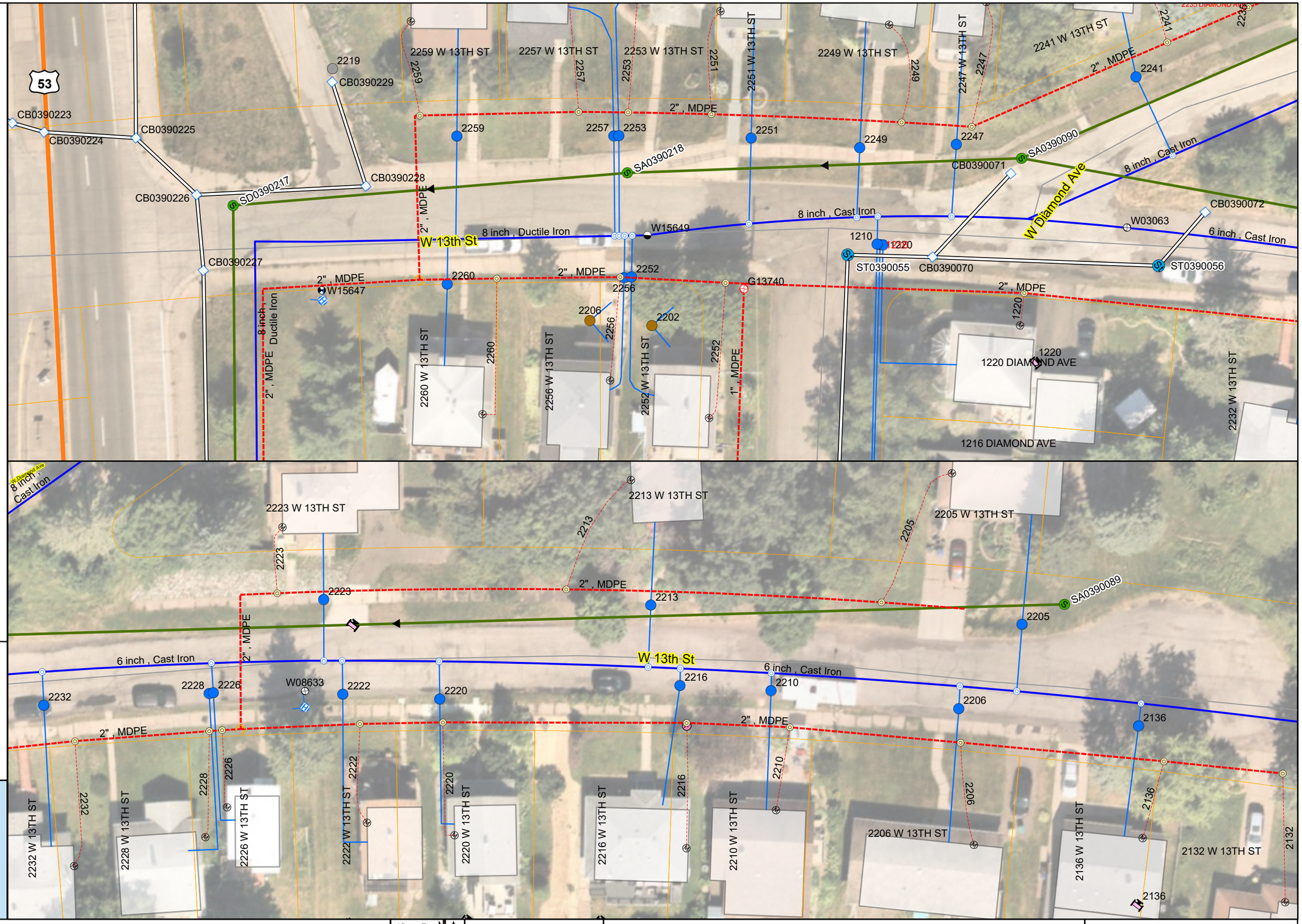
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2026 STREET PRESERVATION

CITY PROJECT NO.: 2317 | STATE AID PROJECT NO.:

DRAWN BY: MLT

BORING

SHEET NO. 29 OF 30

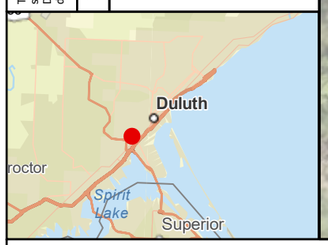
30 Point of Rocks - W 3rd St, 17th Ave W to 13th Ave W

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I:\PW\U\ENGINEER\PROJECTS\2000-2499\2317_2026_Street_Preservation_Lincoln Park_Goat Hill\3-STREETS\UTILITIES\UTILITIES2317

0 15 30 Feet

Scale: 1:500





SIGNATURE: _____ TYPE NAME

DATE: _____

LIC. NO: _____

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

2026 STREET PRESERVATION

CITY PROJECT NO.: 2317 | STATE AID PROJECT NO.:

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BORING

SHEET NO. 30 OF 30

Nominal Diameter	Material	UDI	UDI_From	UDI_To	Pipe Length
12 inch	Reinforced Concrete	SS0290001	CB0290013	CB0290012	39
18 inch	Reinforced Concrete	SS0290002	CB0290012	CB0300051	40
Unknown	Unknown	SS0300058	CB0300024	CB0300078	46
Unknown	Unknown	SS0300059	CB0300065	ST0300037	21
Unknown	Unknown	SS0300060	ST0300037	CB0300025	12
15 inch	Unknown	SS0300061	CB0300025	CB0300067	44
Unknown	Unknown	SS0300062	CB0300068	CB0300067	17
Unknown	Unknown	SS0300063	CB0300066	CB0300067	19
Unknown	Unknown	SS0300064	CB0300034	CB0300025	14
30 inch	Unknown	SS0300065	CB0300067	ST0300039	23
36 inch	Reinforced Concrete	SS0300068	ST0300043	ST0300044	37
18 inch	Reinforced Concrete	SS0300081	CB0300051	ST0300061	38
12 inch	Reinforced Concrete	SS0300118	CB0300060	CB0300059	68
12 inch	Reinforced Concrete	SS0300119	CB0300059	CB0300058	61
12 inch	Reinforced Concrete	SS0300120	CB0300058	AP0300062	56
30 inch	Reinforced Concrete	SS0300130	ST0300039	CB0300069	120
30 inch	Reinforced Concrete	SS0300133	CB0300069	ST0300043	67
12 inch	Reinforced Concrete	SS0300134	CB0300073	ST0300043	41
Unknown	Unknown	SS0300139	CB0300078	ST0300036	25
12 inch	Reinforced Concrete	SS0300172	CB0300109	CB0300072	20
12 inch	Reinforced Concrete	SS0300173	CB0300072	DS0300072	24
Unknown	Unknown	SS0300210	CB0300130	ST0300036	43
18 inch	Reinforced Concrete	SS0300211	ST0300036	AP0300081	43
12 inch	Reinforced Concrete	SS0350008	CB0350094	ST0350061	57
12 inch	Reinforced Concrete	SS0350009	CB0350095	CB0350096	88
12 inch	Unknown	SS0350010	CB0350096	ST0350063	43
12 inch	Reinforced Concrete	SS0350013	ST0350063	ST0350062	236
Unknown	Unknown	SS0350017	ST0350061	ST0350059	96
12 inch	Reinforced Concrete	SS0350021	CB0350093	CB0350097	40
12 inch	Reinforced Concrete	SS0350022	CB0350097	ST0350061	53
Unknown	Unknown	SS0350023	CB0350097	CB0350199	88
10 inch	Unknown	SS0350024	CB0350091	ST0350058	46
10 inch	Unknown	SS0350025	CB0350092	ST0350058	20
Unknown	Unknown	SS0350026	ST0350058	ST0350059	109
54 inch	Unknown	SS0350027	ST0350059	DS0300020	260
Unknown	Unknown	SS0350031	ST0350050	ST0350051	89
12 inch	Reinforced Concrete	SS0350032	CB0350114	ST0350051	22
30 inch	Reinforced Concrete	SS0350034	ST0350048	ST0350049	116
30 inch	Reinforced Concrete	SS0350035	ST0350049	ST0350050	70
12 inch	Reinforced Concrete	SS0350042	ST0350045	ST0350154	419
21 inch	Reinforced Concrete	SS0350059	ST0350042	CB0290012	385
Unknown	Unknown	SS0350225	CB0350103	ST0350113	124
Unknown	Unknown	SS0350310	CB0350184	ST0350132	24

12 inch	Reinforced Concrete	SS0350311	CB0350185	ST0350132	52
12 inch	Reinforced Concrete	SS0350312	ST0350132	CB0350096	215
Unknown	Unknown	SS0350315	CB0350182	DS0350056	26
12 inch	Reinforced Concrete	SS0350316	ST0350133	ST0350061	141
18 inch	Reinforced Concrete	SS0350351	CB0350180	CB0350181	83
Unknown	Unknown	SS0350354	CB0350199	ST0350059	47
12 inch	Reinforced Concrete	SS0350414	ST0350154	ST0350046	21
12 inch	Reinforced Concrete	SS0350415	ST0350046	DS0350137	122
10 inch	Unknown	SS0350430	CB0350250	ST0350058	3
10 inch	Unknown	SS0350431	CB0350251	DS0350256	60
12 inch	Polyvinyl Chloride	SS0350432	CB0350252	ST0350154	29
12 inch	Polyvinyl Chloride	SS0350433	CB0350253	AP0350237	93
12 inch	Polyvinyl Chloride	SS0350434	CB0350254	ST0350154	216
30 inch	Reinforced Concrete	SS0350484	CB0350280	CB0350182	47
12 inch	Reinforced Concrete	SS0360014	CB0360009	ST0360008	35
12 inch	Reinforced Concrete	SS0360015	CB0360008	CB0360009	22
Unknown	Unknown	SS0360027	ST0360015	ST0360010	24
Unknown	Unknown	SS0360030	ST0360016	ST0360017	33
18 inch	Reinforced Concrete	SS0360032	ST0360018	ST0360017	18
26 inch	Brick	SS0360033	ST0360017	ST0360009	166
12 inch	Reinforced Concrete	SS0360034	CB0360017	ST0360009	26
12 inch	Reinforced Concrete	SS0360036	CB0360020	CB0360019	20
12 inch	Reinforced Concrete	SS0360037	CB0360019	ST0360019	22
12 inch	Reinforced Concrete	SS0360060	ST0360060	ST0360061	90
12 inch	Reinforced Concrete	SS0360061	ST0360061	ST0360028	89
12 inch	Reinforced Concrete	SS0360062	CB0360081	ST0360030	49
12 inch	Reinforced Concrete	SS0360067	ST0360028	ST0360031	148
12 inch	Reinforced Concrete	SS0360068	CB0360033	ST0360031	100
Unknown	Unknown	SS0360076	CB0360038	DS0360351	7
12 inch	Reinforced Concrete	SS0360078	CB0360041	CB0360040	23
12 inch	Reinforced Concrete	SS0360079	CB0360040	ST0360036	45
12 inch	Reinforced Concrete	SS0360080	CB0360032	ST0360038	50
12 inch	Reinforced Concrete	SS0360081	ST0360038	ST0360037	60
Unknown	Unknown	SS0360082	CB0360037	ST0360037	59
12 inch	Reinforced Concrete	SS0360083	ST0360037	ST0360036	71
Unknown	Unknown	SS0360085	CB0360043	ST0360039	14
12 inch	Reinforced Concrete	SS0360086	CB0360042	ST0360039	19
12 inch	Reinforced Concrete	SS0360092	CB0360064	ST0360041	30
12 inch	Reinforced Concrete	SS0360093	CB0360065	ST0360041	19
12 inch	Reinforced Concrete	SS0360094	ST0360041	ST0360042	37
12 inch	Reinforced Concrete	SS0360096	CB0360063	ST0360042	55
12 inch	Reinforced Concrete	SS0360097	CB0360066	CB0360062	47
12 inch	Reinforced Concrete	SS0360098	CB0360062	ST0360042	49
15 inch	Reinforced Concrete	SS0360099	ST0360042	ST0360043	169

12 inch	Reinforced Concrete	SS0360101	CB0360060	ST0360043	42
12 inch	Reinforced Concrete	SS0360102	CB0360061	ST0360043	26
15 inch	Reinforced Concrete	SS0360103	ST0360043	ST0360044	149
12 inch	Reinforced Concrete	SS0360104	CB0360055	ST0360044	27
12 inch	Reinforced Concrete	SS0360105	CB0360056	ST0360044	16
18 inch	Reinforced Concrete	SS0360106	ST0360044	ST0360045	52
12 inch	Reinforced Concrete	SS0360107	CB0360058	CB0360054	30
12 inch	Reinforced Concrete	SS0360108	CB0360054	ST0360045	51
12 inch	Reinforced Concrete	SS0360109	CB0360057	CB0360053	30
12 inch	Reinforced Concrete	SS0360110	CB0360053	ST0360045	37
18 inch	Reinforced Concrete	SS0360111	ST0360045	ST0360046	209
12 inch	Reinforced Concrete	SS0360112	CB0360052	CB0360051	21
12 inch	Reinforced Concrete	SS0360113	CB0360051	ST0360046	37
12 inch	Reinforced Concrete	SS0360114	DS0360375	ST0360046	27
18 inch	Reinforced Concrete	SS0360115	ST0360046	ST0360047	99
18 inch	Reinforced Concrete	SS0360137	ST0360052	ST0360057	310
Unknown	Unknown	SS0360138	CB0360079	ST0360057	28
Unknown	Unknown	SS0360139	CB0360080	ST0360057	21
12 inch	Reinforced Concrete	SS0360142	CB0360082	CB0360036	75
12 inch	Reinforced Concrete	SS0360143	CB0360036	ST0360060	47
12 inch	Reinforced Concrete	SS0360144	CB0360035	ST0360060	40
12 inch	Reinforced Concrete	SS0360145	CB0360034	ST0360060	35
12 inch	Reinforced Concrete	SS0360189	CB0360114	ST0360082	23
12 inch	Reinforced Concrete	SS0360192	CB0360115	ST0360081	29
24 inch	Unknown	SS0360199	ST0360085	CB0360113	50
24 inch	Unknown	SS0360200	CB0360113	DS0360379	50
Unknown	Unknown	SS0360201	CB0360112	ST0360076	34
12 inch	Reinforced Concrete	SS0360237	CB0360141	CB0360142	22
12 inch	Reinforced Concrete	SS0360238	CB0360142	ST0360100	25
12 inch	Reinforced Concrete	SS0360257	CB0360158	CB0360157	53
12 inch	Reinforced Concrete	SS0360258	CB0360157	ST0360108	18
12 inch	Reinforced Concrete	SS0360643	CB0360355	DS0360325	5
15 inch	Reinforced Concrete	SS0360720	ST0360031	ST0360319	96
15 inch	Reinforced Concrete	SS0360721	ST0360319	ST0360030	40
12 inch	Reinforced Concrete	SS0360748	CB0360407	ST0360075	30
12 inch	Reinforced Concrete	SS0360749	CB0360408	ST0360040	49
12 inch	Reinforced Concrete	SS0360750	CB0360409	ST0360040	43
12 inch	Reinforced Concrete	SS0360751	CB0360410	ST0360040	33
12 inch	Reinforced Concrete	SS0360753	CB0360412	DS0360323	11
72 inch	Stone	SS0360754	DS0360323	ST0360040	60
18 inch	Reinforced Concrete	SS0360756	ST0360047	ST0360324	22
12 inch	Reinforced Concrete	SS0360757	ST0360050	DS0360325	19
12 inch	Reinforced Concrete	SS0360759	CB0360417	ST0360043	39
12 inch	Reinforced Concrete	SS0360840	CB0360434	DS0360351	17

12 inch	Reinforced Concrete	SS0360848	CB0360435	ST0360016	7
12 inch	Reinforced Concrete	SS0360849	CB0360436	ST0360017	37
6 inch	Polyvinyl Chloride	SS0360853	DS0360361	CB0360436	16
12 inch	Reinforced Concrete	SS0360889	CB0360456	CB0360064	4
12 inch	Reinforced Concrete	SS0360890	CB0360455	CB0360065	4
12 inch	Reinforced Concrete	SS0360891	CB0360454	ST0360042	37
24 inch	Reinforced Concrete	SS0360925	ST0360344	ST0360052	207
12 inch	Reinforced Concrete	SS0360930	ST0360347	ST0360052	72
26 inch	Brick	SS0360965	DS0360375	ST0360040	50
72 inch	Stone	SS0360969	DS0360371	ST0360019	24
12 inch	Reinforced Concrete	SS0360993	<Null>	<Null>	15
Unknown	Unknown	SS0390101	CB0390072	ST0390056	26
15 inch	Unknown	SS0390102	ST0390056	CB0390070	80
Unknown	Unknown	SS0390103	CB0390071	CB0390070	41
Unknown	Unknown	SS0390104	CB0390070	ST0390055	32
Unknown	Unknown	SS0390107	CB0390067	ST0390051	36
12 inch	Dual Wall High-Density Polyethylene	SS0390108	CB0390069	ST0390051	74
10 inch	Unknown	SS0390109	CB0390068	ST0390051	51
Unknown	Unknown	SS0390110	CB0390066	ST0390051	28
12 inch	Unknown	SS0390111	ST0390051	ST0390052	191
24 inch	Reinforced Concrete	SS0390140	ST0390064	ST0390065	60
24 inch	Unknown	SS0390150	ST0390066	ST0390065	81
24 inch	Reinforced Concrete	SS0390151	ST0390065	ST0390070	139
12 inch	Reinforced Concrete	SS0390152	CB0390085	ST0390070	36
12 inch	Reinforced Concrete	SS0390153	CB0390086	ST0390070	37
24 inch	Reinforced Concrete	SS0390154	ST0390070	ST0390071	141
6 inch	Polyvinyl Chloride	SS0390155	CB0390084	ST0390071	25
6 inch	Polyvinyl Chloride	SS0390156	CB0390083	ST0390071	12
Unknown	Unknown	SS0390157	ST0390071	ST0360010	68
Unknown	Unknown	SS0390160	CB0390104	ST0390074	26
18 inch	Reinforced Concrete	SS0390162	ST0390074	ST0390077	194
15 inch	Unknown	SS0390165	ST0390073	ST0390077	129
12 inch	Unknown	SS0390175	CB0390160	ST0390086	100
Unknown	Unknown	SS0390239	CB0390150	CB0390109	49
12 inch	Reinforced Concrete	SS0390252	CB0390157	ST0390077	33
12 inch	Reinforced Concrete	SS0390253	CB0390156	ST0390077	30
Unknown	Unknown	SS0390254	CB0390161	ST0390077	50
12 inch	Reinforced Concrete	SS0390262	CB0390168	ST0390070	32
12 inch	Reinforced Concrete	SS0390356	<Null>	<Null>	36
12 inch	Reinforced Concrete	SS0390358	<Null>	<Null>	24
18 inch	Reinforced Concrete	SS0390380	CB0390228	CB0390226	61
30 inch	Reinforced Concrete	SS0390381	CB0390226	CB0390227	27
18 inch	Reinforced Concrete	SS0390391	CB0390242	CB0390244	44
18 inch	Reinforced Concrete	SS0390393	CB0390243	CB0390245	42

30 inch	Reinforced Concrete	SS0390394	CB0390241	CB0390245	33
Unknown	Unknown	SS0390495	CB0390109	ST0390086	15
12 inch	Reinforced Concrete	SS0450060	CB0450040	CB0450041	26
12 inch	Reinforced Concrete	SS0450061	CB0450041	ST0450026	41
12 inch	Reinforced Concrete	SS0450062	ST0450026	AP0450027	18
12 inch	Vitreous Clay Pipe	SS0450351	CB0450212	AP0450190	18.9
15 inch	Corrugated Metal Pipe (Iron or Steel)	SS0450352	CB0450231	CB0450212	39.8
12 inch	Vitreous Clay Pipe	SS0450353	AP0450189	CB0450213	12.9
					10943.6

2317 Street List

Project	Year	Neighborhood	Street Segment	Mileage	Treatment
2317	2026	Lincoln Park	34th Ave W, Grand Ave to Superior St	0.23	Mill & Overlay
2317	2026	Lincoln Park	Carlton St, W Superior St to Grand Ave	0.33	Overlay
2317	2026	Lincoln Park	39th Ave W, from Michigan to Superior St	0.07	Mill & Overlay
2317	2026	Lincoln Park	W Superior St, Carlton St to Jenswold	0.29	Mill & Overlay
2317	2026	Lincoln Park	Jenswold, W Superior St to W Michigan	0.07	Mill & Overlay
2317	2026	Lincoln Park	W Michigan St, Jenswold to 39th Ave W	0.32	Mill & Overlay
2317	2026	Lincoln Park	21st Ave W, from 3rd to 6th St	0.21	Mill & Overlay
2317	2026	Lincoln Park	W 4th St, from 20th Ave W to 25th Ave W	0.45	Mill&Overlay
2317	2026	Lincoln Park	W 5th St, from bridge over TH53 to 25th Ave W	0.43	Mill&Overlay
2317	2026	Lincoln Park	20th Ave W, from 3rd to 4th Street	0.07	Mill&Overlay
2317	2026	Lincoln Park	22nd Ave W, from 3rd to 8th St	0.35	Overlay
2317	2026	Lincoln Park	23rd Ave W, from 3rd to 5th St	0.14	Mill&Overlay
2317	2026	Lincoln Park	23rd Ave W, from 5th to 8th St	0.21	overlay
2317	2026	Lincoln Park	W 12th St, TH53 to dead end E	0.13	Mill & Overlay
2317	2026	Lincoln Park	W 11th St, TH53 to 22nd Ave W	0.11	Mill & Overlay
2317	2026	Lincoln Park	22nd Ave W, W 11th St to W 10th St	0.07	Mill & Overlay
2317	2026	Lincoln Park	W 13th St, from TH53 to dead end E	0.14	Mill & Overlay
2317	2026	Lincoln Park	W 3rd St, 13th Ave W to 17th Ave W	0.35	Reclaim
				3.97	

2317 Approximate MH/CB/valve counts

San MH	Storm MH	Storm Aprons	CB	Valves
2	4	0	6	4
2	5		10	4
			1	5
0	3		7	7
0	3		8	0
3	0		5	1
5	9		26	5
14	7		16	12
12	10		16	8
1	2		2	3
8	3		14	5
9	5		12	5
13	12		17	8
3	2		6	1
3	0		5	1
2	2		2	1
4	2		6	1
0	0		0	1
81	69	0	159	72

THE CITY OF DULUTH MINNESOTA

ASSET# :

MANHOLE / CB INSPECTION FORM

DATE:

INSPECTOR:

STREET NAME:

PICTURES ON J DRIVE: Yes / No

SANITARY / STORM

IMMEDIATE WORK NEEDED: YES / NO

CLEANING **REPAIRS**

NOTIFIED: **UTILITY OPS / ENGINEERING**

EAM:

DATE:

NEED GPS OF STRUCTURE	Yes / No
REQUESTED	Yes / No
DATE ENTERED INTO EAM	
GIS UPDATE EAM No.	
DATE ENTERED INTO GIS	

OVERALL CONDITION RATING (1-3)

1 - GOOD CONDITION - NO ISSUES
2 - REPAIRS NEEDED
3 - NEEDS IMMEDIATE REPAIRS - FAILED

STRUCTURE CHARACTERISTICS	**(CIRCLE ALL THAT APPLY)**	**NOTES**
STRUCTURE TYPE	Manhole / Catch Basin	
LID TYPE AND CONDITION	Solid / Vented / Other || Good / Fair / Poor	
GRATE TYPE AND CONDITION	Square / Rectangle / Round / Other / NA || Good / Fair / Poor	
CASTING FRAME TYPE AND CONDITION	Square / Rectangle / Round / Other || Good / Fair / Poor	
ADJUSTMENT RING TYPE AND CONDITION	Concrete / Brick / Plastic / Other / NA || Good / Fair / Poor	
WATER INFILTRATION ?	Casting / Rings / Structure / Pipe Connection / NONE	
SEDIMENT AND WOODY DEBRIS / TRASH	Good / Needs Cleaning / Obstructed	
STRUCTURE	**(CIRCLE ALL THAT APPLY)**	
STRUCTURE MATERIAL	Pre-Cast / Cast in Place / Block / Brick / Other	
VOIDS	Yes / No	
CRACKS	Yes / No	
LOSS OF BRICK / BLOCK	Yes / No	
SPALLING	Yes / No	
EXPOSED REBAR	Yes / No	
SOIL VISIBLE	Yes / No	
JOINT CONDITION - LOSS OF MORTOR	Good / Fair / Poor	
BOTTOM / FLOW LINE - SCOUR	Good / Fair / Poor	
STRUCTURE DEPTH (FEET)	**2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 11 / 12 / 13 / 14**	
PIPE / INVERT CONDITION	**(CIRCLE ALL THAT APPLY)**	**LIST LINE NUMBER IF BAD PIPE CONNECTION**
NUMBER OF PIPE CONNECTIONS	1 / 2 / 3 / 4 / 5 / 6 / 7+	
PIPE CONNECTIONS CONDITION	Good / Fair / Poor	
TROUGH / INVERT CONDITION	Good / Fair / Poor	

FINAL CONDITION RATING	**(CIRCLE ALL THAT APPLY)**	
Rebuild Top _____ FT	Tuckpointing - Rehab	Unable To Inspect - Need Structure Entry
Line Entire Structure From Interior	Replacement of Structure	
Casting Assembly Replacement	Good Condition, No Issues	
Good Condition, Needs Cleaning	Immediate Work Needed	

GENERAL STRUCTURE COMMENTS **NOTES**

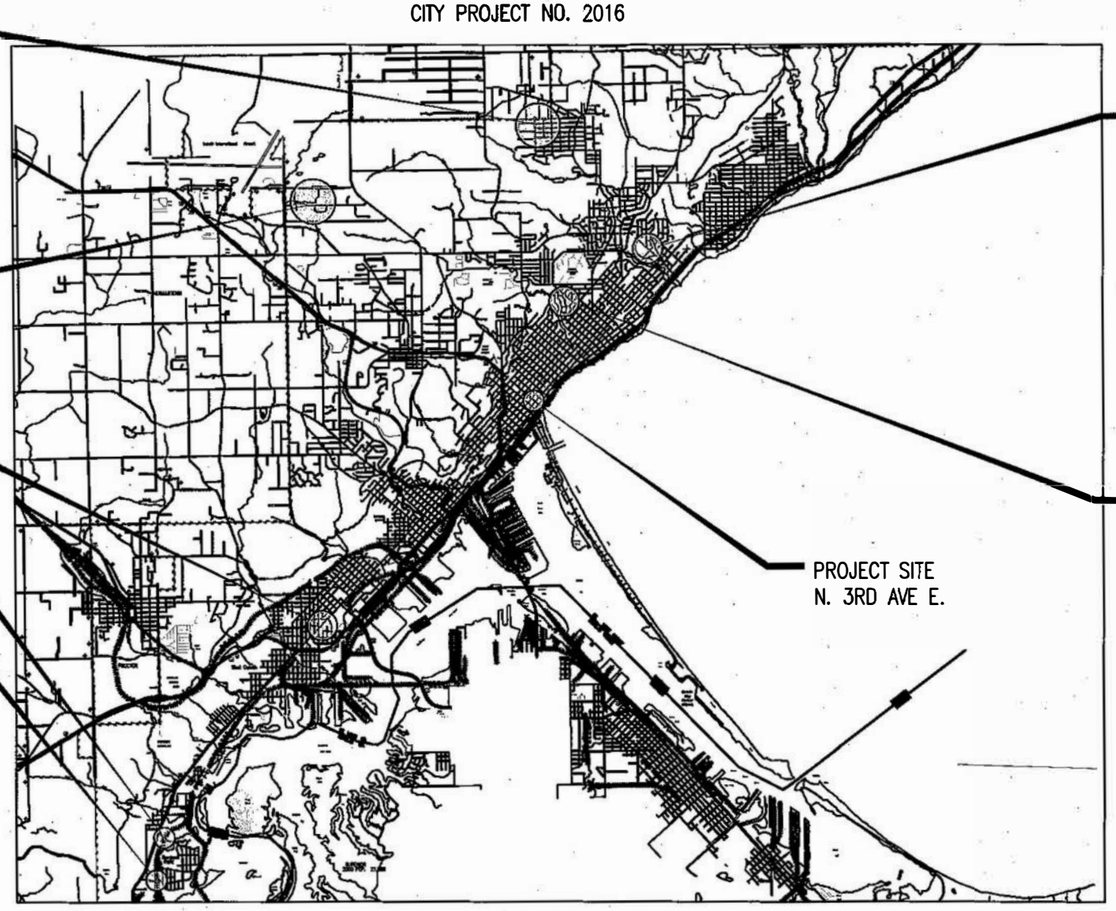
CITY OF DULUTH

DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION

2023 STREET PRESERVATION PROJECT

CONSTRUCTION PLANS FOR: MIILLING, FULL DEPTH RECLAMATION, BITUMINOUS OVERLAY, CONCRETE CURB & GUTTER, CONCRETE DRIVEWAY, CONCRETE WALK AND ADA IMPROVEMENTS

CITY PROJECT NO. 2016



TRAFFIC CONTROL NOTE
ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM AND BE INSTALLED IN ACCORDANCE WITH THE CURRENT "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MnMUTCD), INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.

PLAN REVISIONS		
DATE	SHEET NO.	APPROVED

CITY OF DULUTH PROJECT NO. 2016

GROSS LENGTH	19,759	FEET	3.742 MILES
BRIDGES–LENGTH	60	FEET	0.011 MILES
EXCEPTIONS–LENGTH	60	FEET	0.011 MILES
NET LENGTH	19,699	FEET	3.731 MILES

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

SCALES
PLAN 1"=40', 1"=20'
SITE MAP 1:12,000


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".

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

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2-3	STATEMENT OF ESTIMATED QUANTITIES
4	SEQ NOTES, STD PLATES/DETAILS
5	LEGEND AND GENERAL NOTES
6	STREET INDEX
7-10	SITE LOCATION MAPS
11-26	STANDARD PLANS
27-32	CONSTRUCTION DETAILS
33-63	MILL & OVERLAY: TABULATIONS, TYPICAL SECTIONS, CONSTRUCTION PLANS.
64-116	FULL DEPTH RECLAMATION: TABULATIONS, TYPICAL SECTIONS, CONSTRUCTION PLANS.
117-125	STORM WATER AND SANITARY DRAINAGE REPAIR TRAFFIC CONTROL

THIS PLAN CONTAINS 125 SHEETS

DESIGN TEAM: P.LOOMIS, S.ANDERSON, Z.ERICKSON, D.KRATOCHWILL, N.LAVINE

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.

PATRICK F. LOOMIS
PROJECT ENGINEER (TYPED OR PRINTED NAME)

Patrick F Loomis 04/20/2023 49099
PROJECT ENGINEER DATE LIC. NO.

CITY APPROVAL

4/21/2023
APPROVED CHIEF ENGINEER OF TRANSPORTATION DATE

4-21-23
APPROVED CHIEF ENGINEER OF UTILITIES DATE

4-21-23
APPROVED CITY ENGINEER DATE

CITY OF DULUTH PROJECT NO. 2016 | DRAWN BY: DJK | SHEET NO. 1 OF 125

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4/24/2023 4:10 PM

STATEMENT OF ESTIMATED QUANTITIES

ITEM NO.	SEQ NOTES	SPEC. NO.	ITEM DESCRIPTION	UNIT	TOTAL ESTIMATED QUANTITY	MILL & OVERLAY						FULL DEPTH RECLAMATION						
						IDAHO ST	88TH AVE W	RAMSEY ST	W 6TH ST	3RD AVE E	GRAND VIEW AVE	AIRPARK BLVD	VENTURE AVE	ALDEN AVE	W REDWING ST	E 4TH ST	OLD HOWARD MILL RD	N 36TH AVE E
1		2021.501	MOBILIZATION	LUMP SUM	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2		2104.502	REMOVE CATCH BASIN	EACH	6				1			4				1		
3		2104.502	REMOVE CASTING	EACH	20			4							16			
4		2104.502	REMOVE VALVE BOX	EACH	6			4				1			1			
5	1	2104.502	SALVAGE SIGN	EACH	4			2							2			
6	2, 3	2104.503	SAWING CONCRETE PAVEMENT (FULL DEPTH)	LIN FT	5,660	120	234	2331	146	406	1861	52	23	343	84	60		
7		2104.503	SAWING BITUMINOUS PAVEMENT	LIN FT	569	102	84	233	150									
8	3	2104.503	SAWING BIT PAVEMENT (FULL DEPTH)	LIN FT	9,133					89		3536	1108		4212	86	50	52
9		2104.503	REMOVE SEWER PIPE (STORM)	LIN FT	122							122						
10	3	2104.503	REMOVE CURB & GUTTER	LIN FT	12,703	80	150	1439	111		1822	2577	654	107	3547	1383	696	137
11	3, 5	2104.503	SALVAGE STONE CURB	LIN FT	260					260								
12	3, 4	2104.504	REMOVE PAVEMENT	SQ YD	222			222										
13	3	2104.504	REMOVE CONCRETE PAVEMENT	SQ YD	1,045		21		52	96	60	317	40		417	10	32	
14	3	2104.504	REMOVE BITUMINOUS PAVEMENT	SQ YD	846					8		356	199	24	249	10		
15	2, 3	2104.518	REMOVE CONCRETE WALK	SQ FT	37,166			6731	4463	968	7831				11165	5484	52	472
16	3, 6	2104.618	REMOVE STONE PAVERS	SQ FT	520					520								
17		2105.607	COMMON EXCAVATION	CU YD	255											247		8
18		2118.507	AGGREGATE SURFACING (CV) CLASS 5	CU YD	31									3	2	26		
19	7	2131.506	CALCIUM CHLORIDE SOLUTION	GALLON	12,702							5918	919	528	3026	1487	638	186
20	8, 9	2215.504	FULL DEPTH RECLAMATION	SQ YD	50,119							23670	3676	2110	12102	5509	2362	690
21	10	2215.507	HAUL FULL DEPTH RECLAMATION (LV)	CU YD	1,585							900	70	50	175	160	170	60
22		2232.504	MILL BITUMINOUS SURFACE (1.0")	SQ YD	1,201											1201		
23		2232.504	MILL BITUMINOUS SURFACE (2.0")	SQ YD	29,301				1838			9830		2110	12102	3421		
24		2232.504	MILL BITUMINOUS SURFACE (3.0")	SQ YD	2,311					568	1743							
25		2232.504	MILL BITUMINOUS SURFACE (3.5")	SQ YD	7,135	2764	4371											
26		2232.504	MILL BITUMINOUS SURFACE (4.0")	SQ YD	26,801			6782				13840	3676			2503		
27	11	2357.506	BITUMINOUS MATERIAL FOR TACK COAT	GALLON	5,541	276	437	339	93	29	84	2384	375	102	645	587	118	72
28	11	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (3,B)	TON	3,453	580	917	1017	222	89	253					375		
29	11	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (3,C)	TON	14,348							7873	1243	424	2695	1464	496	153
30		2501.502	12" RC PIPE APRON	EACH	1							1						
31		2501.603	CLEAN DRAINAGE DITCH	LIN FT	464							90		374				
32		2502.503	8" PERF PE PIPE DRAIN	LIN FT	2,117							253	222		1442	200		
33		2503.503	12" RC PIPE SEWER DES. 3006 CL V	LIN FT	212							212						
34		2503.603	12" HDPE PIPE SEWER	LIN FT	45									45				
35	12	2504.602	ADJUST VALVE BOX	EACH	9			1					4			4		
36		2504.602	ADJUST CURB BOX	EACH	19			3					1		15			
37		2504.602	CONCRETE ENCASED VALVE BOX COLLAR	EACH	64			10				33	3		10	7	1	
38	13	2506.502	CASTING ASSEMBLY	EACH	22			4				1			16	1		
39		2506.503	CONST DRAINAGE STRUCTURE DESIGN SD-48	LIN FT	15.0							15						
40	13	2506.503	RECONSTRUCT DRAINAGE STRUCTURE	LIN FT	82.0	11	6	5	1		6	14	2	2	6	18	9	3

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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: Patrick Loomis

PATRICK F. LOOMIS
TYPE NAME

DATE: 04/20/2023

LIC. NO: 49099

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

2023 STREET PRESERVATION PROJECT

CITY PROJECT NO.: 2016

STATE AID PROJECT NO.: N/A

DRAWN BY: ZAE/DJK/SCA/NML

STATEMENT OF ESTIMATED QUANTITIES

SHEET NO. 2 OF 125

4/24/2023 4:10 PM

STATEMENT OF ESTIMATED QUANTITIES						MILL & OVERLAY						FULL DEPTH RECLAMATION						
ITEM NO.	SEQ NOTES	SPEC. NO.	ITEM DESCRIPTION	UNIT	TOTAL ESTIMATED QUANTITY	IDAHO ST	88TH AVE W	RAMSEY ST	W 6TH ST	3RD AVE E	GRAND VIEW AVE	AIRPARK BLVD	VENTURE AVE	ALDEN AVE	W REDWING ST	E 4TH ST	OLD HOWARD MILL RD	N 36TH AVE E
41		2506.602	INSTALL CATCH BASIN	EACH	3				1					1		1		
42	13	2506.602	ADJUST FRAME RING & CASTING	EACH	92	8	6	4	1	9	4	29	2	2	2	15	8	2
43	14	2506.602	CONNECT INTO EXISTING STORM SEWER	EACH	5							4				1		
44	15	2506.602	CONNECT INTO EXISTING MH OR CB	EACH	12							4	1	1	5	1		
45	13	2506.602	CONCRETE ENCASED CASTING COLLAR	EACH	68	3		2			3	21	3	2	24	6	3	1
46	16	2521.518	4" CONCRETE WALK	SQ FT	18,140			3583	4463	742	970				4975	3055	42	310
47	16	2521.518	6" CONCRETE WALK	SQ FT	18,722			2935			8885				6531	371		
48	17, 18	2521.518	6" CONCRETE WALK SPECIAL	SQ FT	226					226								
49	17	2531.503	CONCRETE CURB & GUTTER DESIGN B624	LIN FT	7,904			271	132			2344	516	508	2402	759	931	41
50	17	2531.503	CONCRETE CURB & GUTTER DESIGN B624 (MOD)	LIN FT	1,764	80	150	943		260						331		
51	16	2531.503	CONCRETE CURB DESIGN V8 (MOD)	LIN FT	50										50			
52	17, 19	2531.602	SILL CURB TYPE B624 (SPECIAL)	LIN FT	3,149			151			1833				1165			
53	20	2531.504	7" CONCRETE DRIVEWAY PAVEMENT	SQ YD	612		21		30		39			42	411	29	40	
54	20	2531.504	8" CONCRETE DRIVEWAY PAVEMENT	SQ YD	229			229										
55	20	2531.604	8" CONCRETE VALLEY GUTTER	SQ YD	871					96		568	207					
56		2531.618	TRUNCATED DOMES	SQ FT	414			156			63				135	60		
57		2540.602	CONSTRUCT SURVEY MONUMENT	EACH	1			1										
58		2563.601	TRAFFIC CONTROL	LUMP SUM	1	0	0	0	0	0	0	0	0	0	0	0	0	0
59	21	2564.502	INSTALL SIGN TYPE C	EACH	2			2										
60		2564.518	SIGN PANELS TYPE C	SQ FT	13.38										13			
61	22	2564.602	RELOCATE SIGN	EACH	14			6			4				3	1		
62	23	2564.602	INSTALL SIGN TYPE SPECIAL	EACH	2										2			
63		2573.602	EROSION CONTROL MOBILIZATION	LUMP SUM	1	0	0	0	0	0	0	0	0	0	0	0	0	0
64	24	2575.602	SITE RESTORATION	EACH	13	1	1	1	1	1	1	1	1	1	1	1	1	1
65		2582.503	4" SOLID LINE PAINT	LIN FT	2,577	2460						117						
66		2582.503	12" SOLID LINE PAINT	LIN FT	481				406	75								
67		2582.503	24" SOLID LINE PAINT	LIN FT	61				24	15		22						
68		2582.503	4" DOUBLE SOLID LINE PAINT	LIN FT	11,479	159	876	1154		137		6069			3084			
69		2582.518	CROSSWALK PAINT	SQ FT	90										90			

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ENGINEERING DIVISION
411 W. 1ST ST. STE. 240
DULUTH, MN 55802

2023 STREET PRESERVATION PROJECT

CITY PROJECT NO.: 2016

STATE AID PROJECT NO.: N/A

DRAWN BY: ZAE/DJK/SCA/NML

STATEMENT OF ESTIMATED QUANTITIES

4/24/2023 4:11 PM

STATEMENT OF ESTIMATED QUANTITIES NOTES

1. THE SIGNS SALVAGED UNDER THE PAY ITEM SALVAGE SIGN SHALL BE REINSTALLED AND PAID FOR UNDER PAY ITEMS INSTALL SIGN TYPE C OR INSTALL SIGN TYPE SPECIAL PER TABULATION SHEETS (G – SIGNAGE AND PAVEMENT MARKING), FOR EACH STREET SEGMENT.
2. SAWING OF CONCRETE SIDEWALKS FOR REMOVAL IS INCIDENTAL.
3. LATERAL SAWCUTTING ON CONCRETE CURB AND GUTTER FOR REMOVAL IS INCIDENTAL. LONGITUDINAL SAWCUTTING IS PAID FOR WITH SAWING CONCRETE PAVEMENT (FULL DEPTH) OR SAWING BIT PAVEMENT (FULL DEPTH). ALL LATERAL AND LONGITUDINAL SAWCUTTING SHALL BE DONE BEFORE THE REMOVAL PROCESS BEGINS.
4. REMOVE PAVEMENT INCLUDES ALL IN–PLACE COMPOSITE PAVEMENT. ±4" BITUMINOUS OVER ±8" CONCRETE. SEE IN–PLACE TYPICAL SECTIONS ON EXISTING CONCRETE STREETS.
5. SALVAGED STONE CURBS ON 3RD AVE. E SHALL REMAIN PROPERTY OF CITY AND BE DELIVERED TO: 3527 RILEY ROAD. CONTACT ROSS YOUNG AT (218) 591–1237 OR CHRIS MOE AT (218) 387–7512.
6. SEE CONSTRUCTION DETAIL 5.
7. CALCIUM CHLORIDE QUANTITIES ARE COMPUTED USING AN APPLICATION RATE OF 0.25 GAL/SQ YD.
8. DEPTH OF RECLAMATION ON ALL STREETS IS EIGHT (8) INCHES. VERIFY DEPTH OF EACH STREET WITH ENGINEER BEFORE STARTING OPERATION.
9. ON RECLAMATION STREETS, GRADING AND COMPACTION FOR ROADWAY AND SHOULDERS IS INCIDENTAL TO FULL DEPTH RECLAMATION; SEE SPECIAL PROVISIONS AND MNDOT SPEC 2215.
10. FOR THE PAY ITEM HAUL FULL DEPTH RECLAMATION, EXCESS RECLAIM CAN BE HAULED TO THE FOLLOWING LOCATIONS:

    3527 RILEY ROAD – 1000 CU YD, CONTACT ROSS YOUNG AT (218) 591–1237 OR CHRIS MOE AT (218) 387–7512 723;
    KENWOOD AVE – 300 CU YD, CONTACT ROSS YOUNG AT (218) 591–1237 OR CHRIS MOE AT (218) 387–7512;
    105 N 40TH AVE WEST– 500 CU YD, CONTACT BRUCE KELLERHUIS AT (218) 591–0317.

    THE CONTRACTOR SHALL COORDINATE WITH ENGINEER AND SITE MANAGER FOR EACH LOCATION.
11. BITUMINOUS TONNAGE COMPUTED AT 120 LBS/SQ YD/INCH OF THICKNESS. CALCULATIONS FOR TACK APPLICATION RATE WERE COMPUTED USING 0.05 GALLONS/SQ YD EXCEPT FOR 88TH AVE W AND IDAHO ST IN MORGAN PARK WHERE A TACK RATE OF 0.10 GALLONS/SQ YD WAS USED. THE TACK RATE IN MORGAN PARK IS REQUIRED DUE TO NON–CONFORMING CONCRETE BASE (POROUS).
12. ALL VALVE BOX ADJUSTMENTS SHALL BE PAID FOR UNDER ADJUST VALVE BOX REGARDLESS OF TYPE OF UTILITY (WATER, GAS, OR SANITARY).
13. PAY HEIGHT FOR RECONSTRUCT DRAINAGE STRUCTURE (LIN FT) IS MEASURED FROM TOP OF CASTING TO BOTTOM OF THE RECONSTRUCTION MINUS ONE (1) LIN FT PAY HEIGHT FOR ANY OF THE FOLLOWING ITEMS PAID AT THE SAME LOCATION: CONCRETE ENCASED CASTING COLLAR (EACH), CASTING ASSEMBLY (EACH), OR ADJUST FRAME AND RING CASTING (EACH).
14. INCLUDES PIPE TO PIPE CONNECTIONS.
15. INCLUDES CONNECTING TO ANY IN–PLACE MANHOLE OR CATCH BASIN.
16. INCLUDES 4" AGGREGATE BASE CLASS 5 (MNDOT SPEC. 2211). SEE DETAILS.
17. INCLUDES 6" AGGREGATE BASE CLASS 5 (MNDOT SPEC. 2211). SEE DETAILS.
18. WORK INCLUDES THE FOOTING ON THE RIGHT–OF–WAY SIDE OF WALK. SEE DETAIL ON 3RD STREET TYPICAL SECTION.
19. SEE MNDOT STANDARD PLAN 5–297.254 – DRIVEWAY AND SIDEWALK DETAILS.
20. INCLUDES 12" AGGREGATE BASE CLASS 5 (MNDOT SPEC. 2211). SEE DETAILS.
21. ALL SIGNS INSTALLED ON CONCRETE SURFACES SHALL USE BREAKAWAY MOUNT POSTS SPECIFIED ON DETAIL T–2. FOR POST MOUNTED SIGNS IN SOIL, SEE CONSTRUCTION DETAIL 10.
22. INCLUDES REMOVAL AND REINSTALLATION OF SIGN WITH EXISTING POST AND HARDWARE.
23. THIS BID ITEM SHALL INCLUDE THE INSTALLATION OF STREET NAME SIGNS ACCORDING TO CITY DETAIL T–3.
24. SITE RESTORATION (EA) PERTAINS TO EACH ROADWAY SEGMENT. SITE RESTORATION INCLUDES 4" BOULEVARD TOPSOIL BORROW, TYPE 3 FERTILIZER, 25–131 SEED MIX AND ROLLED EROSION PREVENTION CATEGORY 20 BLANKET ON ALL AREAS INDICATED ON PLAN AND DETAILS. SEE MNDOT SPECIAL PROVISIONS FOR EACH INDIVIDUAL PAY ITEM. IF SEEDING PAST SEPTEMBER 20TH, CONSULT ENGINEER FOR APPROPRIATE SEED MIX FOR DORMANT SEEDING.

MnDOT STANDARD PLATES	
THE FOLLOWING STANDARD PLATES SHALL APPLY ON THIS PROJECT	
PLATE NO.	DESCRIPTION
3000M	REINFORCED CONCRETE PIPE
3006H	GASKET JOINT FOR R.C. PIPE
4006L	MANHOLE OR CATCH BASIN
4024A	48" DIA. PRECAST SHALLOW DEPTH CATCH BASIN
4132G	CATCH BASIN FRAME CASTING
4154B	CATCH BASIN GRATE CASTING
7000E	INTEGRANT CURBS
7038A	DETECTABLE WARNING SURFACE
7100H	CONCRETE CURB AND GUTTER – DESIGN B AND DESIGN V
7111J	INSTALLATION OF CATCH BASIN CASTINGS
8000K	TEMPORARY CHANNELIZERS

CITY OF DULUTH STANDARD DETAILS	
THE FOLLOWING STANDARD DETAILS SHALL APPLY ON THIS PROJECT	
DETAIL NO.	DESCRIPTION
EX–3	PVC AND CORRUGATED POLYETHYLENE SEWER PIPE BEDDING
EX–4	CONCRETE STORM SEWER BEDDING
STR–3	4" OR 6" CONCRETE WALK WITH CONCRETE CURB DESIGN V8 (MODIFIED)
STR–11	SILL CURB TYPE B624 (SPECIAL)
STRM–1	STORM MANHOLE CASTING
STRM–3	CATCH BASIN CASTINGS
STRM–5	STORM MANHOLE NON–PAVED AREAS
STRM–5A	CONCRETE ENCASED CASTING COLLAR FOR STORM MH IN ROADWAY, WALKS, & DRIVES
STRM–7	GUTTER STAMP
SUR–1	SURVEY MONUMENT
SUR–2	CONCRETE ENCASED CASTING COLLAR IN ROADWAY
T–2	SIGN & BREAKAWAY MOUNT INSTALLATION
T–3	STREET NAME SIGN FOOTING DETAIL
W–19	CONCRETE ENCASED VALVE BOX COLLAR IN ROADWAY

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2023 STREET PRESERVATION PROJECT

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SEQ NOTES, STD PLATES & DETAILS

4/24/2023 4:11 PM

PLAN LEGEND

RIGHT OF WAY LINE
DITCH CENTERLINE
FENCE LINE
RETAINING WALL
GRAVEL LINE
GUARD RAIL
RAILROAD TRACK
TREE LINE
STREAM FLOW LINE
WETLAND LIMIT
LAKESHORE
EX SANITARY SEWER
PR SANITARY SEWER
AB SANITARY SEWER
EX FORCE MAIN
PR FORCE MAIN
AB FORCE MAIN
EX STORM SEWER
PR STORM SEWER
AB STORM SEWER
EX WATER MAIN
PR WATER MAIN
AB WATER MAIN
EX GAS MAIN
PR GAS MAIN
AB GAS MAIN
EX STEAM LINE
PR STEAM LINE
AB STEAM LINE
UG TV CABLE
OH TV CABLE
AB TV CABLE
UG ELECTRIC LINE
OH ELECTRIC LINE
AB ELECTRIC
UG FIBER OPTIC CABLE
OH FIBER OPTIC CABLE
AB FIBER OPTIC CABLE
UG TELEPHONE
OH TELEPHONE
AB TELEPHONE

GENERAL NOTES

1. WITHIN THE PLAN WHEREVER THE WORD "INCIDENTAL" IS USED, IT SHALL MEAN NO DIRECT PAYMENT SHALL BE MADE FOR THAT ITEM.
2. ALL LAYOUT ASSOCIATED WITH REMOVAL & CONSTRUCTION OF PEDESTRIAN RAMPS SHALL BE DONE BY THE CONTRACTOR.
3. ALL PED RAMPS SHALL BE DESIGNED BY THE CONTRACTOR AND CONSTRUCTED TO MEET ADA REGULATIONS. PED RAMP LAYOUTS SHOWN ON PLAN SHEETS ARE SCHEMATIC REPRESENTATIONS OF THE PROPOSED WORK. LAYOUTS SHALL BE MODIFIED WHERE NECESSARY TO MEET ADA GRADES IN THE FIELD.
4. IN-PLACE BITUMINOUS PAVEMENT AND AGGREGATE BASE THICKNESSES SHOWN IN THIS PLAN ARE APPROXIMATE. VALUES INDICATED IN THE TYPICAL SECTIONS MAY NOT REFLECT ACTUAL FIELD CONDITIONS. DISCREPANCIES FOUND IN THE FIELD SHALL BE DISCUSSED WITH THE ENGINEER PRIOR TO COMMENCEMENT OF MILLING AND RECLAIMING OPERATIONS.
5. THERE SHALL BE NO TEMPORARY OR PERMANENT STORAGE OF SALVAGED TOPSOIL OR REMOVED ITEMS SUCH AS CURB CONCRETE, SIDEWALK CONCRETE OR ANY OTHER REMOVALS THAT ARE PROPERTY OF CONTRACTOR ON THE CONSTRUCTION LIMITS INCLUDUNG BOULEVARDS AND ROW WITHOUT APPROVAL OF ENGINEER.
6. THERE SHALL BE NO STOCKPILING OF MATERIALS OUTSIDE THE CONSTRUCTION LIMITS UNLESS OTHERWISE NOTED IN THE PLANS AND PRIOR APPROVAL BY ENGINEER.
7. WHENEVER THE PHRASE "MIN." IS USED IN THIS PLAN, IT SHALL MEAN THE WORD MINIMUM.
8. PLACE 1/2" BIT FELT (FULL HEIGHT) AT ALL JOINTS WHERE PROPOSED CONCRETE DRIVEWAYS AND SIDEWALKS MEET EXISTING CONCRETE DRIVEWAYS, SIDEWALKS, OR RETAINING WALLS.
9. ALL AREAS DISTURBED BY THE CONTRACTORS EQUIPMENT WHICH ARE OUTSIDE THE PLANNED CONSTRUCTION LIMITS SHALL BE RESTORED, AS APPROVED BY THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.
10. BITUMINOUS SURFACING, CONCRETE ITEMS, ABANDONED UTILITY ITEMS, OR ANY OTHER MATERIAL WHICH MAY BE ENCOUNTERED DURING CONSTRUCTION THAT ARE NOT SUITABLE FOR SALVAGE OR FOR ROADWAY CONSTRUCTION SHALL BE DISPOSED OF BY THE CONTRACTOR AT AN APPROVED DISPOSAL SITE AND SHALL BE INCIDENTAL.
11. THE CONTRACTOR SHALL PROVIDE A CONCRETE WASHOUT AND WASHOUT LOCATION AND CONTAINER ON THE PROJECT AND IT SHALL BE APPROVED BY THE ENGINEER PRIOR TO THE RELATED WORK. THE CONTRACTOR SHALL MAINTAIN THE CONTAINER AND DISPOSE OF ITS CONTENTS IN ACCORDANCE WITH MPCA REQUIREMENTS. THIS WORK SHALL BE CONSIDERED INCIDENTAL, FOR WHICH NO DIRECT COMPENSATION SHALL BE MADE.
12. THE RIGHT-OF-WAY SHOWN IN THIS PLAN IS GRAPHICAL AND BASED UPON THE CITY OF DULUTH GIS.
13. CARE SHALL BE TAKEN BY THE CONTRACTOR SO AS NOT TO DAMAGE THE REMAINING MATERIALS DIRECTLY ADJACENT TO THE MATERIALS TO BE REMOVED. ANY DAMAGE TO THE EXISTING MATERIAL RESULTING FROM THE MATERIAL REMOVAL OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
14. THE CONTRACTOR SHALL PROTECT AND RESTRICT USE OF PEDESTRIAN RAMPS UNTIL THEY CAN BE USED SAFELY AND SUPPLY A SAFE ROUTE FOR PEDESTRIANS DURING CONSTRUCTION AND COMPLY WITH THE LATEST TEMPORARY TRAFFIC CONTROL FIELD MANUAL. REFER TO THE SPECIAL PROVISIONS FOR ADDITIONAL REQUIREMENTS. (INCIDENTAL)
15. REINFORCING BARS, COMMON EXCAVATION, AGGREGATE BASE, CLASS 5 AND SITE RESTORATION ARE INCIDENTAL TO THE INSTALLATION OF WALKS, DRIVEWAY APRONS, AND CURB & GUTTER.
16. TEMPORARY PEDESTRIAN ACCESS ROUTES SHALL BE MAINTAINED AT ALL TIMES WHILE WORKING ON ADA IMPROVEMENTS. ALL INPLACE PEDESTRIAN ADA RAMPS SHALL BE MADE SAFE FOR CROSSING AT ALL TIMES WITH A BITUMINOUS PATCH RAMP PLACED BETWEEN THE CONCRETE AND BITUMINOUS SURFACES. WORK FOR PLACEMENT, MAINTENANCE AND REMOVAL OF THE BITUMINOUS PATCH RAMP SHALL BE CONSIDERED INCIDENTAL.
17. ALL SURFACES RECEIVING OR ABUTTING NEW BITUMINOUS PAVEMENT SHALL RECEIVE TACK COAT IN ACCORDANCE WITH MNDOT SPECIFICATIONS AND APPLICATION RATES.
18. MILLING DEPTHS SPECIFIED ARE APPROXIMATE. ENGINEER RESERVES RIGHT TO MAKE ADJUSTMENTS TO MILLING DEPTHS WITHOUT RECLASSIFYING PAY ITEM FOR CHANGES IN MILLING DEPTH.
19. PIPE ELEVATIONS, OFFSETS, AND COORDINATES AS SHOWN IN THE PLAN, ARE TO THE CENTER OF THE STRUCTURE.

SURVEYS AND RIGHT OF WAY

1. THE CONTRACTOR SHALL PRESERVE ALL LAND AND PROPERTY CORNERS, VERTICAL & HORIZONTAL CONTROLS, SURVEY AND RIGHT OF WAY MONUMENTS. THE RIGHT OF WAY SHOWN IN THIS PLAN GIVES A GRAPHICAL LOCATION WITH RESPECT TO THE PLAN ALIGNMENTS. FOR EXACT RIGHT OF WAY LIMITS, SEE MAP ON FILE WITH THE CITY OF DULUTH.

ABBREVIATIONS USED IN THIS PLAN

AB = ABANDONED	REM = REMOVE
EX = EXISTING OR INPLACE	IDMH = INPLACE DRAINAGE MANHOLE
PR = PROPOSED	ICB = INPLACE CATCH BASIN
UG = UNDERGROUND	PCB = PROPOSED CATCH BASIN
OH = OVERHEAD	ISMH = IN-PLACE SANITARY MANHOLE
PL = PLACE	

PLAN HATCHING

= 8" CONC. VALLEY GUTTER OR CONC. DRIVEWAY.
= BITUMINOUS WORK AREA.
= 4" SIDEWALK (NO HATCH)
= 6" CONCRETE SIDEWALK
= CURB & GUTTER (NO HATCH)
= DWS DOMES.

THE FOLLOWING UTILITY OWNERS HAVE ASSETS ON THIS PROJECT.

	MARKING	DAMAGE
CHARTER COMMUNICATIONS -	(800)778-9140	(833)493-4939
CITY OF DULUTH - ENGINEERING -	(218)730-5200	(218)730-5200
CITY OF DULUTH - TRAFFIC -	(218)730-4420	(218)730-4150
DULUTH ENERGY SYSTEMS - STEAM -	(218)723-3601	(218)723-3601
LUMEN TECHNOLOGIES (CENTURYLINK)	(800)778-9140	(800)778-9140
DULUTH N SHORE SANITARY DIST -	(218)590-5911	(218)590-5911
CONSOLIDATED COMMUNICATIONS -	(800)778-9140	(888)608-7822
MINNESOTA POWER -	(320)582-7725	(320)582-7700
NORTHEAST SERVICE COOPERATIVE -	(218)368-8460	(218)368-8460
ST MARY'S DULUTH CLINIC HEALTH -	(218)786-4384	(218)786-4384
WESTERN LAKE SUPERIOR SANITARY -	(218)722-3336	(218)722-3336

PLAN SYMBOLS

EX SANITARY MANHOLE
EX SANITARY CLEANOUT
EX STORM MANHOLE
EX STORM CATCHBASIN
EX WATER MANHOLE
EX WATER VALVE
EX WATER HYDRANT
EX. WATER SHUTOFF
EX. WATER & GAS MH
EX. GAS MANHOLE
EX. GAS VALVE
EX. GAS SHUTOFF
EX. STEAM MANHOLE
EX. TELEPHONE MANHOLE
EX. ELECTRIC MANHOLE
EX. UTILITY POLE
EX. LIGHT POLE
EX. ELECTRIC VAULT
EX. GUY ANCHOR
EX. ELECTRIC TRANSFORMER
EX. STREET LIGHT
EX. SIGNAL W/STREET LIGHT
EX. HAND HOLE
EX. TELEPHONE PEDESTAL
EX. WELL
EX. SIGN
EX. DECIDUOUS TREE
EX. CONIFEROUS TREE
EX. PARKING METER
BENCHMARK
CONTROL POINT
FOUND CI MONUMENT
SOIL BORING — SB#: ?? ELEV: ??

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: Patrick Loomis — PATRICK F. LOOMIS, TYPE NAME — DATE: 04/20/2023 — LIC. NO: 49099

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

2023 STREET PRESERVATION PROJECT

CITY PROJECT NO.: 2016 | STATE AID PROJECT NO.: N/A

DRAWN BY: ZAE/DJK/SCA/NML
LEGEND & GENERAL NOTES
SHEET NO. 5 OF 125

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4/24/2023 4:11 PM

CITY OF DULUTH
2023 STREET PRESERVATION PROJECT
CITY PROJECT NO. 2016

MILL & OVERLAY

LOCATED ON	IDAHO ST	FROM 300' WEST OF RR BRIDGE	TO 355' EAST OF RR BRIDGE	SHEETS	35 TO 38	LENGTH	655	FEET	0.124 MILES
LOCATED ON	88TH AVE W	FROM 240' WEST OF RR BRIDGE	TO 635' EAST OF RR BRIDGE	SHEETS	39 TO 41	LENGTH	875	FEET	0.166 MILES
LOCATED ON	RAMSEY ST	FROM CENTRAL AVE	TO 51ST AVE W	SHEETS	42 TO 51	LENGTH	1,315	FEET	0.249 MILES
LOCATED ON	W 6TH ST	FROM 57TH AVE W	TO CENTRAL AVE	SHEETS	52 TO 56	LENGTH	956	FEET	0.181 MILES
LOCATED ON	3RD AVE E	FROM 2ND ST ALLEY	TO 2ND ST	SHEETS	57 TO 60	LENGTH	176	FEET	0.033 MILES
LOCATED ON	GRAND VIEW AVE	FROM 18TH AVE E	TO KENT RD	SHEETS	61 TO 65	LENGTH	910	FEET	0.172 MILES
						LENGTH	4,887	FEET	0.926 MILES

FULL DEPTH RECLAMATION

LOCATED ON	AIRPARK BLVD	FROM HAINES RD	TO RICE LAKE RD	SHEETS	66 TO 79	LENGTH	6,521	FEET	1.235 MILES
LOCATED ON	VENTURE AVE	FROM AIRPORT RD	TO AIRPARK BLVD	SHEETS	80 TO 84	LENGTH	1,161	FEET	0.220 MILES
LOCATED ON	ALDEN AVE	FROM W FARIBAULT ST	TO W REDWING ST	SHEETS	85 TO 88	LENGTH	769	FEET	0.146 MILES
LOCATED ON	W REDWING ST	FROM MAXWELL AVE	TO WOODLAND AVE	SHEETS	90 TO 102	LENGTH	3,248	FEET	0.615 MILES
LOCATED ON	E 4TH ST	FROM N HAWTHORNE RD	TO OLD HOWARD MILL RD	SHEETS	108 TO 127	LENGTH	2,003	FEET	0.379 MILES
LOCATED ON	OLD HOWARD MILL RD	FROM E 4TH ST	TO N 36TH AVE E	SHEETS	108 TO 127	LENGTH	791	FEET	0.150 MILES
LOCATED ON	N 36TH AVE E	FROM OLD HOWARD MILL RD	TO CRESCENT VIEW AVE	SHEEETS	108 TO 127	LENGTH	379	FEET	0.072 MILES
						LENGTH	14,872	FEET	2.817 MILES

TOTAL ALL STREETS:	LENGTH	19,759	FEET	3.742 MILES

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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: _____ PATRICK F. LOOMIS (TYPE NAME)

DATE: 04/20/2023

LIC. NO: 49099

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

2023 STREET PRESERVATION PROJECT

CITY PROJECT NO.: 2016

STATE AID PROJECT NO.: N/A

DRAWN BY: ZAE/DJK/SCA/NML

STREET INDEX

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Mill and Overlay Project Locations

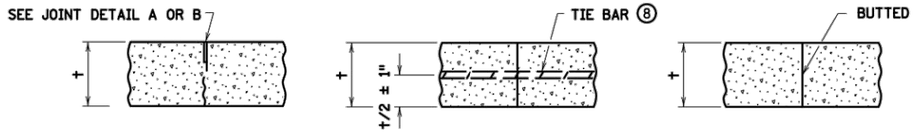
Reclaim Project Locations

The City of Duluth has tried to ensure that the information contained in this map or electronic document is accurate. The City of Duluth makes no warranty or guarantee concerning the accuracy or reliability. This drawing/data is neither a legally recorded map nor a survey and is not intended to be used as one. The drawing/data is a compilation of records, information and data located in various City, County and State offices and other sources affecting the area shown and is to be used for reference purposes only. The City of Duluth shall not be liable for errors contained within this data provided or for any damages in connection with the use of this information contained within.

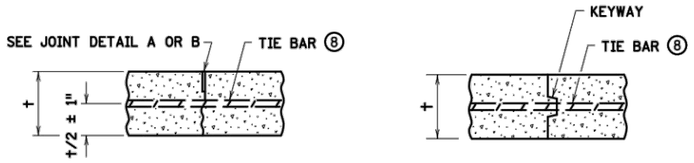
2023 Street Preservation
City of Duluth Project No. 2016
WEST A

Date Created: 4/12/2023

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L1U & L1H | L2TU ② | L3U



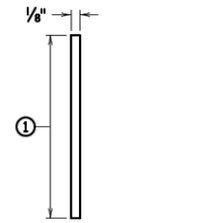
L1TU & L1TH ① | L2KTU ② ⑥

LONGITUDINAL JOINT REFERENCE, DETAIL & SEALER SPECIFICATION TABLE

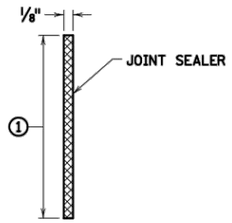
JOINT REFERENCE			JOINT DETAIL	JOINT SEALER SPEC	JOINT WIDTH
WITHOUT TIE BARS	WITH TIE BARS	WITH KEYWAY & TIE BARS			
L1U	L1TU		A	UNSEALED	1/8"
L1H	L1TH		B	3725	1/8"
	L2TU	L2KTU	NONE	UNSEALED	
L3U			NONE	UNSEALED	

LEGEND — EXAMPLE: L2KTU

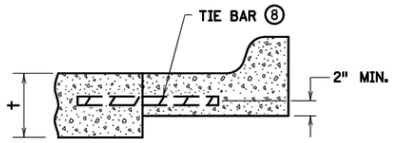
- L = LONGITUDINAL JOINT
- NO. = JOINT REFERENCE
  - 1 = PAVED CONSTRUCTION JOINT
  - 2 = TIED CONSTRUCTION JOINT
  - 3 = BUTTED CONSTRUCTION JOINT
- K = KEYWAY
- T = TIE BARS
- U = UNSEALED
- H = HOT POURED



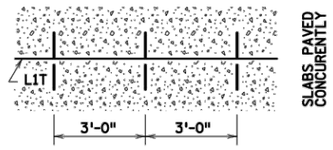
JOINT DETAIL A ③⑤
SAWED & UNSEALED



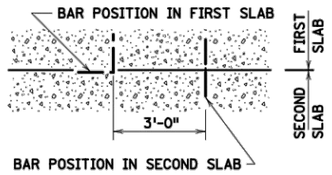
JOINT DETAIL B ④⑤
SAWED & SEALED



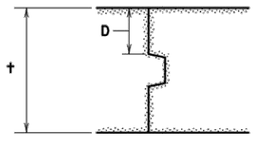
SECTION THRU CURB ⑦



L1T PAVING DETAIL



L2T & L2KT TIE BAR BENDING ② AND PAVING DETAIL



PAVEMENT KEYWAY DETAIL ⑥

FIXED FORM KEYWAY TABLE ⑥

t PAVEMENT THICKNESS	D (MIN. DEPTH)
< 7"	2-1/2"
7" TO 7-1/2"	3"
8" TO 9-1/2"	4"
≥ 10"	5"

SLIPFORM KEYWAY TABLE ⑥

t PAVEMENT THICKNESS	D (MIN. DEPTH)
< 10"	NO KEYWAY
≥ 10"	5"

NOTES:

PROVIDE EPOXY-COATED TIE BARS COMPLYING WITH SPEC. 3301.

FURNISH AND INSTALL ALL JOINT SEALER IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

SEE STANDARD PLANS 5-297.217 AND 5-297.219 FOR CONCRETE MAINLINE AND RAMP PAVEMENT.

SEE PAVING LAYOUTS IN THE PLANS FOR JOINT CLASS DESIGNATION TO BE USED AND SPECIAL REINFORCEMENT REQUIRED.

LONGITUDINAL JOINTS SAWED WIDER THAN 1/8", CONTACT THE CONCRETE UNIT FOR SEALING RECOMMENDATIONS.

① JOINT DEPTH AND TOLERANCE: t/3 ± 1/4".

② BEND TIE BARS 90 DEGREES WHEN INSERTED IN THE L2 JOINTS, EXCEPT WHEN NOTED OTHERWISE IN THE PLANS.

③ CLEAN JOINT FACES WITH WATER DURING THE SAW CUTTING OPERATION OR BY WATER BLASTING AFTER SAWING.

④ CLEAN AND DRY JOINT FACES BY SANDBLASTING AND AIR BLASTING, WHEN SEALING IS REQUIRED.

⑤ JOINT WIDTH TOLERANCE IS $+1/16$" TO $-1/32$".

⑥ CONTRACTOR'S OPTION TO USE KEYWAY WHEN:
- PLACING FIXED FORM CONSTRUCTION.
- PLACING SLIPFORM CONSTRUCTION WHEN t ≥ 10".

USE OF KEYWAY FOR ANY OTHER APPLICATION REQUIRES APPROVAL BY THE ENGINEER. OTHER KEYWAY SHAPES MAY BE USED WITH THE APPROVAL OF THE CONCRETE ENGINEER.

⑦ WHEN CURB AND GUTTER IS NOT CONSTRUCTED AT THE SAME DEPTH AS ADJACENT CONCRETE, PLACE TIE BAR MINIMUM OF 2" ABOVE THE CURB AND GUTTER GRADE.

⑧ PROVIDE NO. 4 TIE BAR, 30" LONG, SPACED AT 3' ON CENTER.

LEAD EXPERT OFFICE

GLENN ENGSTROM
DIRECTOR
OFFICE OF MATERIALS AND ROAD RESEARCH

MINNESOTA DEPARTMENT OF TRANSPORTATION

THOMAS STYRBICKI
STATE DESIGN ENGINEER

STANDARD PLAN 5-297.221 | 3 OF 4

APPROVED: 10-03-2022
REVISED:

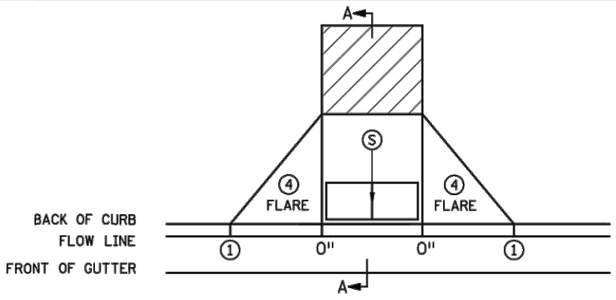
PAVEMENT JOINTS

LONGITUDINAL (DESIGN L)

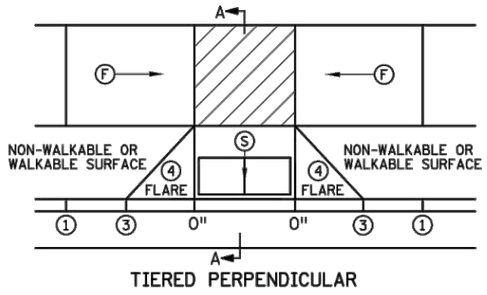
CITY PROJECT NO.: 2016 | STATE AID PROJECT NO.: N/A | SHEET NO. 11 OF 125

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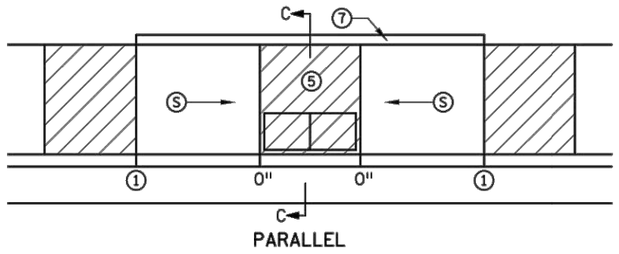
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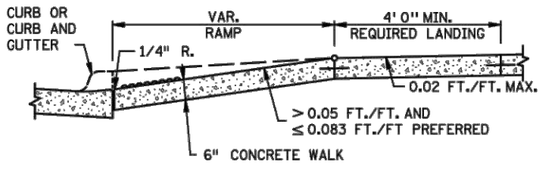
PERPENDICULAR



TIERED PERPENDICULAR

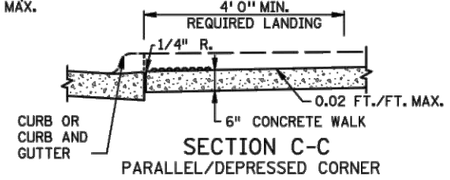


PARALLEL



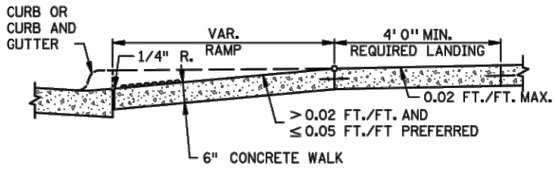
SECTION A-A

PERPENDICULAR/TIERED/DIAGONAL



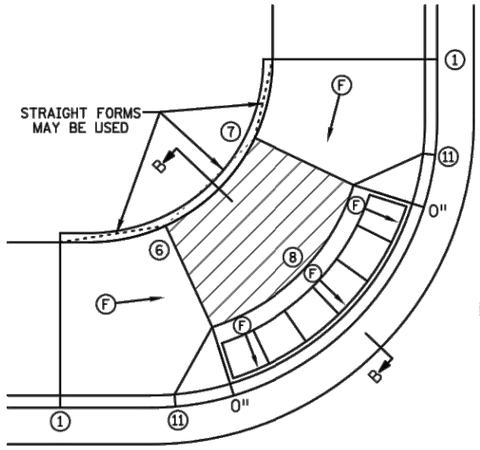
SECTION C-C

PARALLEL/DEPRESSED CORNER

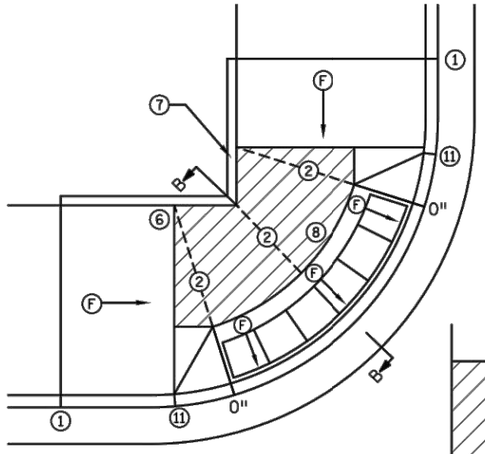


SECTION B-B

FAN

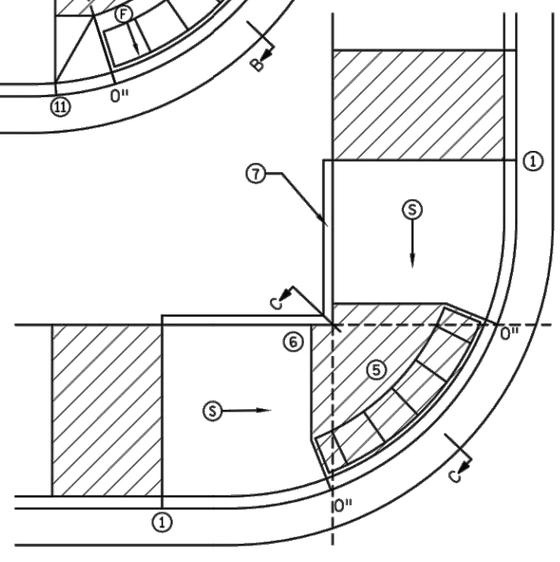


FAN⑩

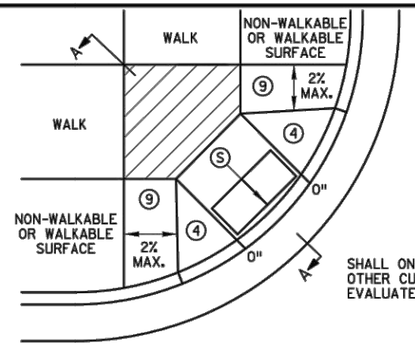


MODIFIED FAN ⑩

USED WHEN RIGHT-OF-WAY
IS CONSTRAINED



DEPRESSED CORNER



DIAGONAL

SHALL ONLY BE USED AFTER ALL OTHER CURB RAMP TYPES HAVE BEEN EVALUATED AND DEEMED IMPRACTICAL

NOTES:

LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE (PAR) CHANGES DIRECTION, AT THE TOP OF RAMPS THAT HAVE RUNNING SLOPES GREATER THAN 5.0%, AND IF THE APPROACHING WALK IS INVERSE GRADE GREATER THAN 2%.

INITIAL CURB RAMP LANDINGS SHALL BE CONSTRUCTED WITHIN 15' FROM THE BACK OF CURB, WITH 6' FROM THE BACK OF CURB BEING THE PREFERRED DISTANCE, ONLY APPLICABLE WHEN THE INITIAL RAMP RUNNING SLOPE IS OVER 5.0%.

SECONDARY CURB RAMP LANDINGS ARE REQUIRED FOR EVERY 30" OF VERTICAL RISE WHEN THE LONGITUDINAL RUNNING SLOPE IS GREATER THAN 5.0%.

CONTRACTION JOINTS SHALL BE CONSTRUCTED ALONG ALL GRADE BREAKS WITHIN THE PAR. 1/4" DEEP VISUAL JOINTS SHALL BE USED AT THE TOPS OF CONCRETE FLARES ADJACENT TO WALKABLE SURFACES.

ALL GRADE BREAKS WITHIN THE PAR SHALL BE PERPENDICULAR TO THE PATH OF TRAVEL, THUS BOTH SIDES OF A SLOPED WALKING SURFACE MUST BE EQUAL LENGTH. (EXCEPT AS STATED IN ⑥ BELOW.

TO ENSURE RAMPS AND LANDINGS ARE PROPERLY CONSTRUCTED, ALL INITIAL LANDINGS AT A TOP OF A RAMPED SURFACE (RUNNING SLOPE GREATER THAN 2%) SHALL BE FORMED AND PLACED SEPARATELY IN AN INDEPENDENT CONCRETE POUR. FOLLOW SIDEWALK REINFORCEMENT DETAILS ON SHEET 6 OF 6 FOR ALL SEPARATELY POURED INITIAL LANDINGS.

WHEN SIDEWALK IS AT BACK OF CURB, TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE.

MAINTAIN POSITIVE BOULEVARD DRAINAGE TO TOP OF CURB.

ALL RAMP TYPES SHOULD HAVE A MINIMUM 3' LONG RAMP LENGTH.

4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS. DETECTABLE WARNINGS SHALL CONTINUOUSLY EXTEND FOR A MIN. OF 24" IN THE PATH OF TRAVEL. DETECTABLE WARNING TO COVER THE ENTIRE PAR WIDTH OF SHARED-USE PATHS AND THE ENTIRE PAR WIDTH OF THE WALK WITH THE EXCEPTION OF 3" MAXIMUM ON EACH OUTSIDE EDGE WHICH ENSURES THE DETECTABLE WARNINGS ARE ENCASED IN CONCRETE WHEN ADJACENT TO TURF. WHEN ADJACENT TO CONCRETE FLARES 0" - 3" OFFSET IS ALLOWED.

WHEN DESIGNING OR ORDERING RECTANGULAR DETECTABLE WARNING SURFACES SHOULD BE 6" LESS THAN THE INCOMING PAR. ARC LENGTH OF THE RADIAL DETECTABLE WARNINGS SHOULD NOT BE GREATER THAN 20 FEET.

RECTANGULAR DETECTABLE WARNINGS SHALL BE SETBACK 3" FROM THE BACK OF CURB. RADIAL DETECTABLE WARNINGS SHALL BE SETBACK 3" MINIMUM TO 6" MAXIMUM FROM THE BACK OF CURB.

① MATCH FULL HEIGHT CURB.
② 4' MINIMUM DEPTH LANDING REQUIRED ACROSS TOP OF RAMP.
③ 3" HIGH CURB WHEN USING A 3' LONG RAMP, 4" HIGH CURB WHEN USING A 4' LONG RAMP.
④ SEE SHEET 4 OF 6, TYPICAL SIDE TREATMENT OPTIONS, FOR DETAILS ON FLARES AND RETURNED CURBS.
⑤ DETECTABLE WARNINGS MAY BE PART OF THE 4' X 4' MIN. LANDING AREA IF IT IS NOT FEASIBLE TO CONSTRUCT THE LANDING OUTSIDE OF THE DETECTABLE WARNING AREA.
⑥ THE GRADE BREAK SHALL BE PERPENDICULAR TO THE BACK OF WALK. THIS WILL ENSURE THAT THE GRADE BREAK IS PERPENDICULAR TO THE DIRECTION OF TRAVEL. (TYPICAL FOR ALL)
⑦ WHEN ADJACENT TO GRASS, GRADING SHALL ALWAYS BE USED WHEN FEASIBLE. V CURB, IF USED, SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS. WHEN ADJACENT TO PARKING LOTS, CONCRETE OR BITUMINOUS TAPERS LESS THAN 5% RUNNING SLOPE SHOULD BE USED OVER V CURB TO REDUCE TRIPPING HAZARDS AND FACILITATE SNOW & ICE REMOVAL.
⑧ A 7' MIN TOP RADIUS GRADE BREAK IS REQUIRED TO BE CONSTRUCTIBLE.
⑨ PAVE FULL WALK WIDTH.
⑩ "S" SLOPES ON FANS SHALL ONLY BE USED WHEN ALL OTHER FEASIBLE OPTIONS HAVE BEEN EVALUATED AND DEEMED IMPRACTICAL.
⑪ INTERMEDIATE CURB HEIGHTS TAPER SHALL RISE AT 8-10% TO A MINIMUM 3" CURB HEIGHT. REDUCE INTERMEDIATE CURB HEIGHT TO 2+ INCHES IF NECESSARY TO MATCH ADJACENT BOULEVARD OR SIDEWALK GRADES.

LEGEND

THESE LONGITUDINAL SLOPE RANGES SHALL BE THE STARTING POINT. IF SITE CONDITIONS WARRANT, LONGITUDINAL SLOPES UP TO 8.3% OR FLATTER ARE ALLOWED.

(S) INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%.

(F) INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%.

LANDING AREA - 4' X 4' MIN. (5' X 5' MIN. PREFERRED) DIMENSIONS AND MAX 2.0% SLOPE IN ALL DIRECTIONS. LANDING SHALL BE FULL WIDTH OF INCOMING PARS.

X" CURB HEIGHT

REVISION:

APPROVED: 11-04-2021

JEFFREY PERKINS
OPERATIONS DIVISION

MINNESOTA DEPARTMENT OF TRANSPORTATION

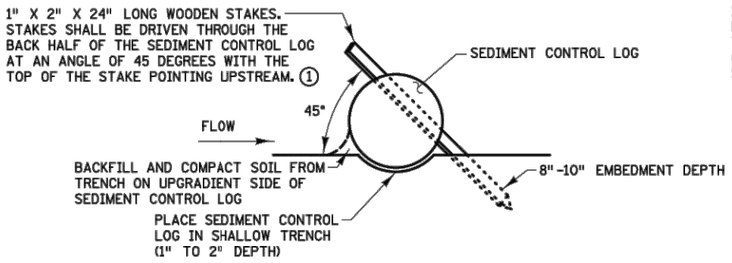
STANDARD PLAN 5-297.250 | 1 OF 6

APPROVED: 11-04-2021
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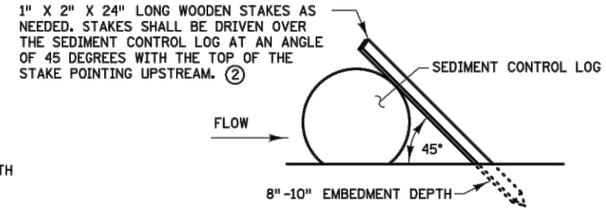
THOMAS STYRBICKI
STATE DESIGN ENGINEER

PEDESTRIAN CURB RAMP DETAILS

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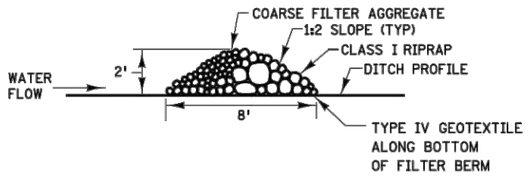


TYPES: STRAW, WOOD FIBER, OR COIR

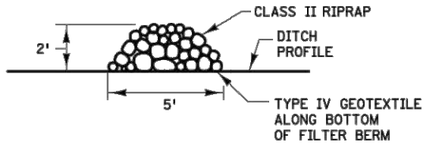


TYPES: WOOD CHIP, COMPOST, OR ROCK

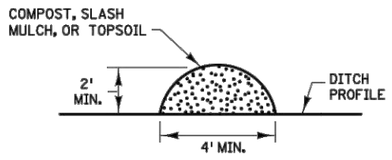
SEDIMENT CONTROL LOGS



TYPE 3 (ROCK WEEPER)

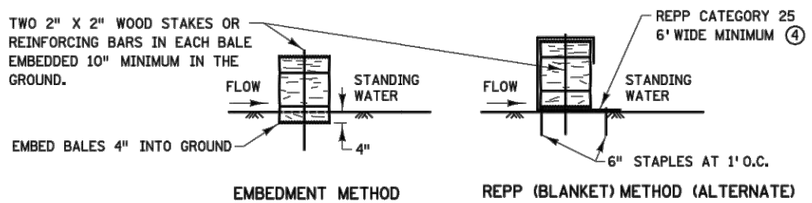


TYPE 5 (ROCK)



TYPE 1 (COMPOST), TYPE 2 (SLASH MULCH), OR TYPE 4 (TOPSOIL)

FILTER BERMS



EMBEDMENT METHOD

REPP (BLANKET) METHOD (ALTERNATE)

BALE BARRIERS(3)

NOTES:

REPP = ROLLED EROSION PREVENTION PRODUCT.

SEE SPECS. 2573, 3149, 3874, 3882, 3885, 3886, AND 3897.

(1) SPACE BETWEEN STAKES SHALL BE A MAXIMUM OF 1' FOR DITCH CHECKS OR 2' FOR OTHER APPLICATIONS.

(2) PLACE STAKES AS NEEDED TO PREVENT MOVEMENT OF SEDIMENT CONTROL LOGS PLACED ON SLOPES OR AS NEEDED DUE TO OTHER FACTORS. STAKES SHALL BE INCIDENTAL.

(3) TO BE USED FOR CRITICAL PERIMETER CONTROL AREAS WHERE STANDING WATER OCCURS (6" MAXIMUM DEPTH). BALES SHALL CONSIST OF TYPE 1 MULCH OF APPROXIMATELY 14" X 18" X 36" LONG. BALES SHALL BE PLACED ON EDGE AND BUTTED TIGHT TO ADJACENT BALES.

(4) INSTEAD OF TRENCHING, PLACE BALE ON THE REPP (BLANKET) AND WRAP BLANKET AROUND THE BALE. PLACE STAKE THROUGH BALE AND BLANKET.

REVISION:

APPROVED: JANUARY 8, 2020

MARNI KARNOWSKI
CHIEF ENVIRONMENTAL OFFICER

MINNESOTA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN 5-297.405 | 2 OF 8

APPROVED: 1-8-2020
REVISED:

THOMAS STYRBICKI
STATE DESIGN ENGINEER

TEMPORARY SEDIMENT CONTROL

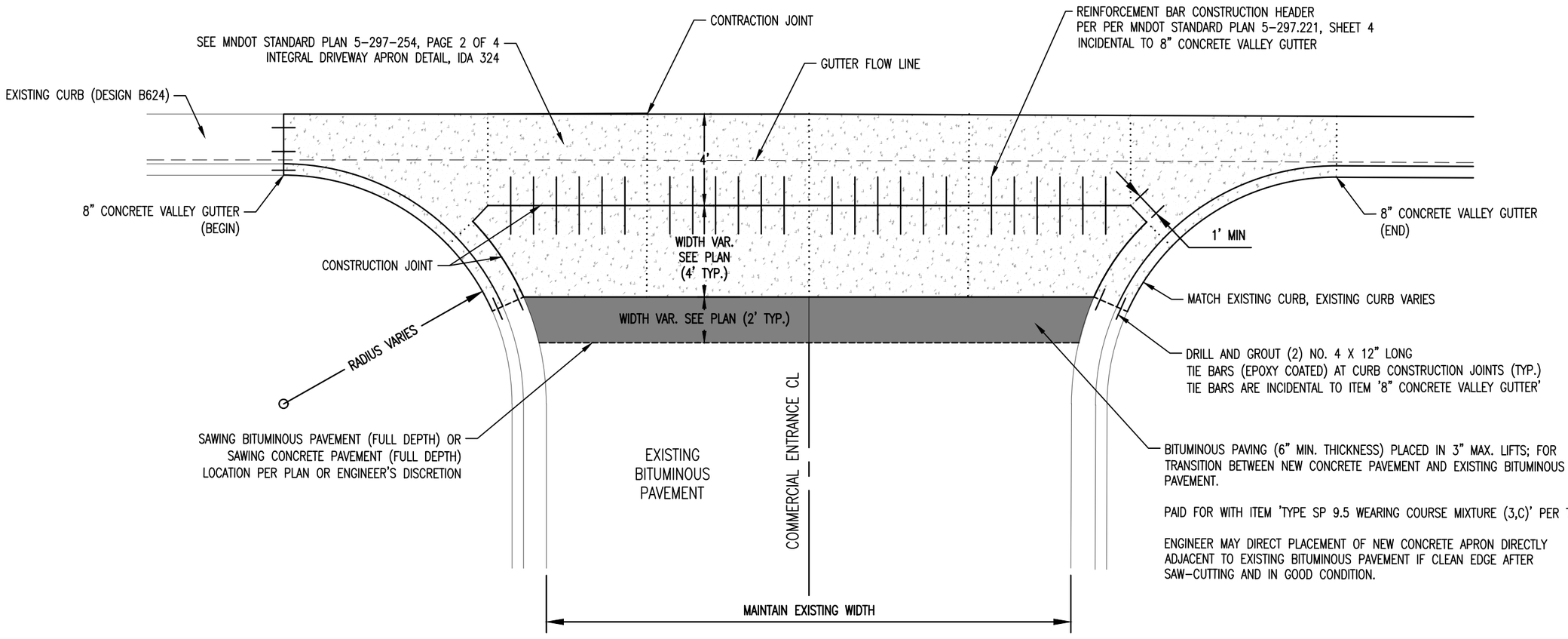
FILTER BERMS, SEDIMENT CONTROL LOGS, AND BALE BARRIERS

CITY PROJECT NO.: 2016 | STATE AID PROJECT NO.: N/A | SHEET NO. 23 OF 125

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MAINLINE



= PAY LIMITS FOR 8" CONCRETE VALLEY GUTTER (SY) AND
12" AGGREGATE BASE CLASS 5 (INCIDENTAL)

NOTE: SEE MNDOT STANDARD PLAN 5-297.254 FOR ADDITIONAL REQUIREMENTS

(1) CURB RADIUS ENTRANCES

AIRPARK BOULEVARD
VENTURE AVENUE
3RD AVE E

0 2.5 5
SCALE IN FEET

I:\PWU\ENGINEER\PROJECTS\2000-2499\2016_2023_Street_Preservation\23-ACAD-DRAWINGS\2016_CD

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: Patrick Loomis

PATRICK F. LOOMIS
TYPE NAME

DATE: 04/20/2023

LIC. NO: 49099

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

2023 STREET PRESERVATION PROJECT

CITY PROJECT NO.: 2016

STATE AID PROJECT NO.: N/A

DRAWN BY: ZAE/DJK/SCA/NML

CONSTRUCTION DETAILS

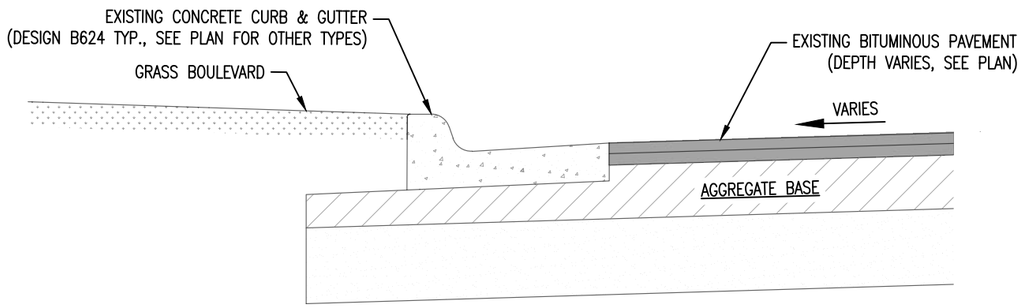
SHEET NO. 27 OF 125

4/24/2023 4:13 PM

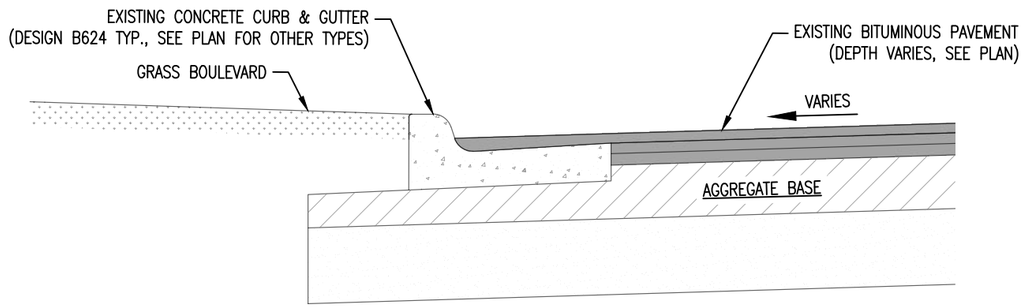
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(2) SPOT CURB & GUTTER REPLACEMENT – MILL & OVERLAY ON EXISTING BITUMINOUS PAVEMENT

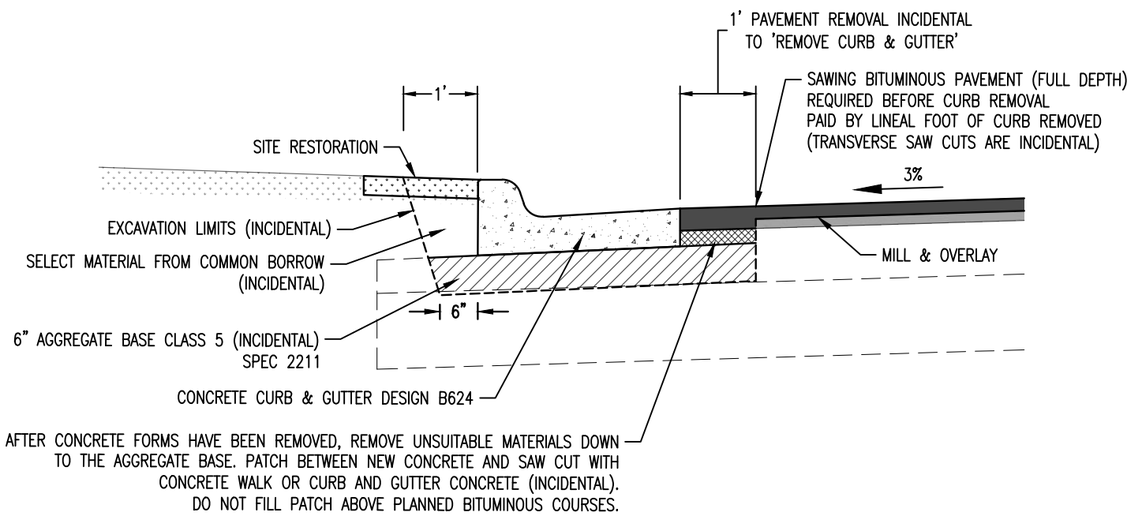
EXISTING CONDITION – EXPOSED GUTTER PAN



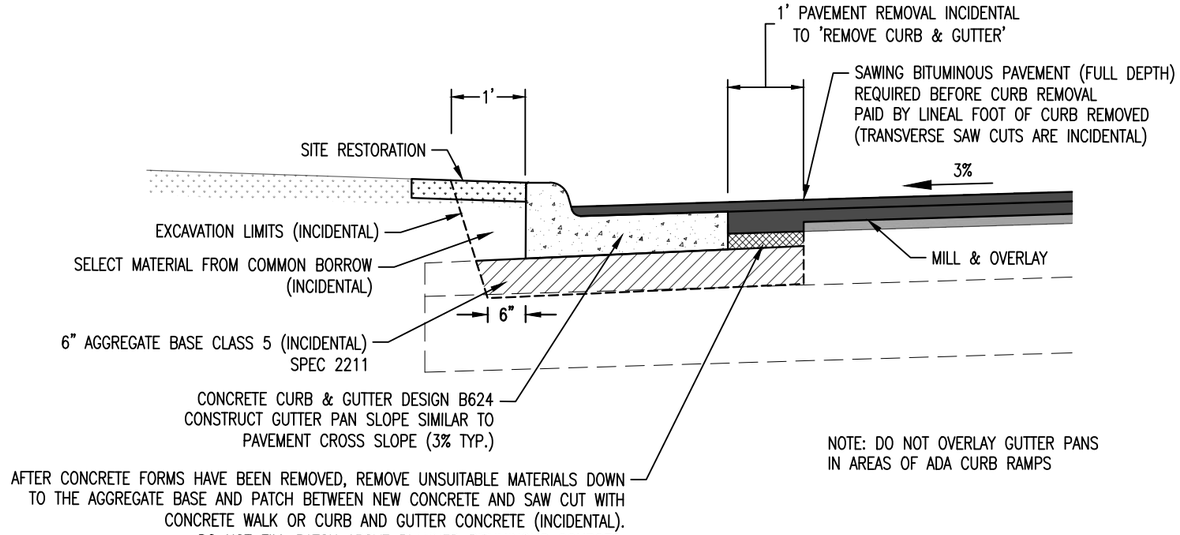
EXISTING CONDITION – OVERLAIN GUTTER PAN



(2A) CURB & GUTTER REPLACEMENT – EXPOSED GUTTER PAN



(2B) CURB & GUTTER REPLACEMENT – OVERLAID GUTTER PAN



NOTE: DO NOT OVERLAY GUTTER PANS
IN AREAS OF ADA CURB RAMPS

0 1 2
SCALE IN FEET

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2023 STREET PRESERVATION PROJECT

CITY PROJECT NO.: 2016

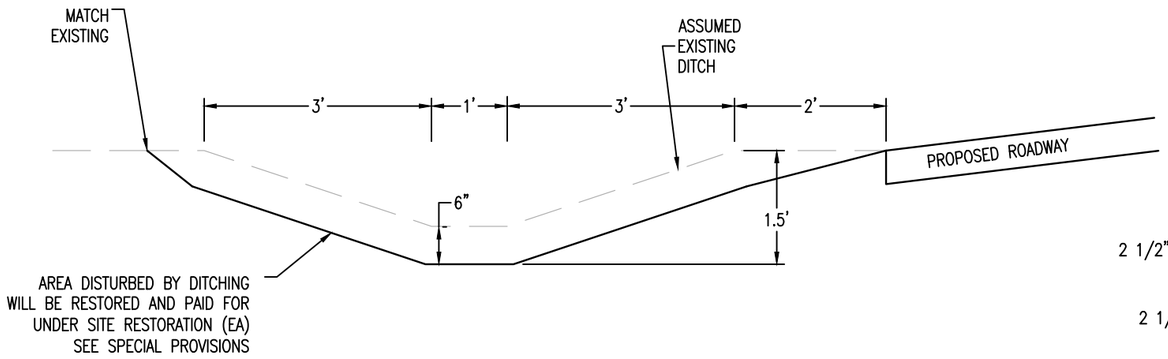
STATE AID PROJECT NO.: N/A

DRAWN BY: ZAE/DJK/SCA/NML

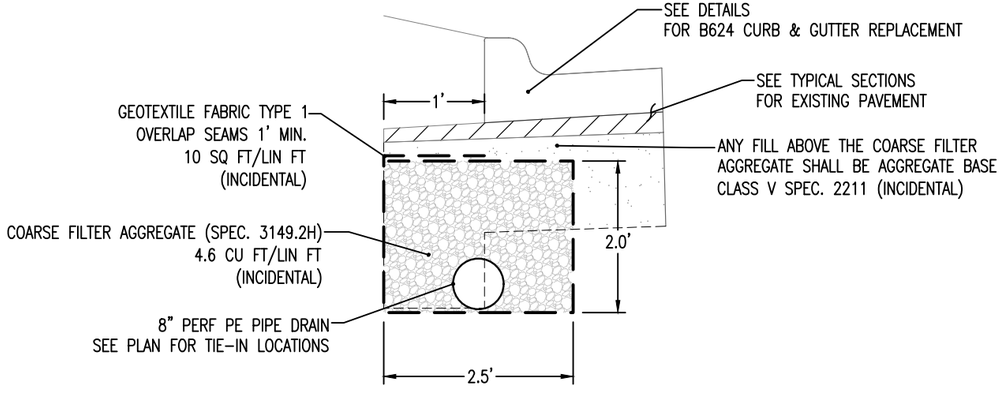
CONSTRUCTION DETAILS

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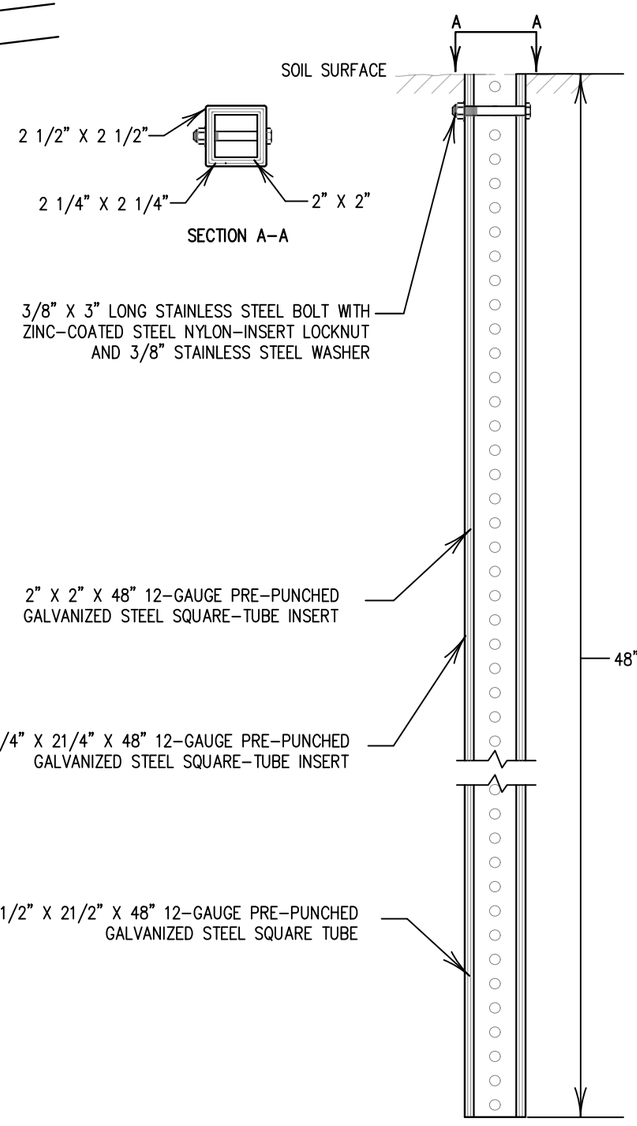
8 DITCH CLEANING

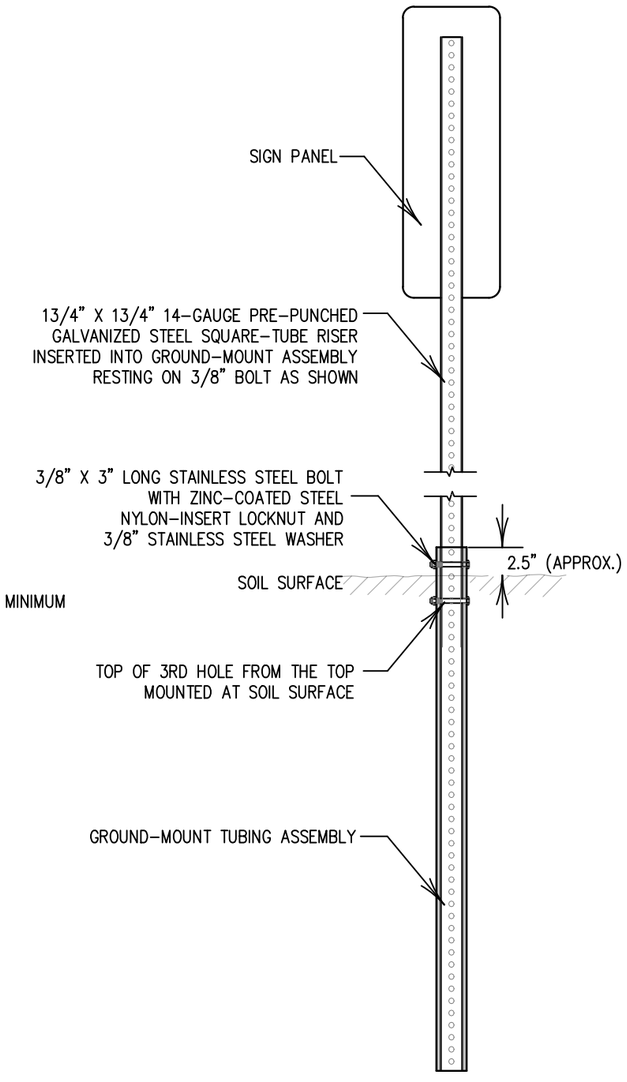


9 8" PERF PE PIPE DRAIN (LIN FT)



10 POST MOUNTED SIGNS





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DULUTH, MN 55802

2023 STREET PRESERVATION PROJECT

CITY PROJECT NO.: 2016

STATE AID PROJECT NO.: N/A

DRAWN BY: ZAE/DJK/SCA/NML

CONSTRUCTION DETAILS

SHEET NO. 32 OF 125

I:\PWU\ENGINEER\PROJECTS\2000-2499\2016_2023_Street_Preservation\23-ACAD-DRAWINGS\2016_CD_1T02

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REMOVALS					A
STATION TO STATION	LT / RT	SPEC. 2104 SAWING CONCRETE PAVEMENT (FULL DEPTH) LIN FT	SPEC. 2104 SAWING BITUMINOUS PAVEMENT LIN FT	SPEC. 2104 REMOVE CURB & GUTTER LIN FT	REMARKS
IDAHO ST.					
103+50	LT / RT		47		BEGINNING OF MILLING
105+14 TO 105+24	2' LT	15		10	
105+14 TO 105+24	20' LT	15		10	
105+20 TO 105+30	19' RT	15		10	
105+20 TO 105+30	33' RT	15		10	
107+16 TO 107+26	20' LT	15		10	
107+17 TO 107+27	2' LT	15		10	
107+17 TO 107+27	33' RT	15		10	
107+18 TO 107+28	19' RT	15		10	
110+05	LT / RT		55		END OF MILLING
	TOTAL	**120**	**102**	**80**	

MILLING AND RECLAMATION OPERATIONS			C
STATION TO STATION	LT / RT	SPEC. 2232 MILL BITUMINOUS SURFACE (3.5") SQ YD	REMARKS
IDAHO ST.			
103+50 TO 110+05	LT / RT	2764	
	TOTAL	**2764**	

BITUMINOUS PAVEMENT				D
STATION TO STATION	LT / RT	SPEC. 2357 BITUMINOUS MATERIAL FOR TACK COAT GALLON	SPEC. 2360 TYPE SP 9.5 WEARING COURSE MIXTURE (3,B) TON	REMARKS
IDAHO ST.				
103+50 TO 110+05	LT / RT	276	580	TACK SHALL BE APPLIED AT 0.10 GAL/SQ YD
	TOTAL	**276**	**580**	

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2023 STREET PRESERVATION PROJECT

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DRAWN BY: ZAE/DJK/SCA/NML

IDAHO ST – TABULATIONS

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ENCASEMENT AND REPAIR					E
STATION TO STATION	LT / RT	SPEC. 2506 RECONSTRUCT DRAINAGE STRUCTURE	SPEC. 2506 ADJUST FRAME & RING CASTING	SPEC. 2506 CONCRETE ENCASED CASTING COLLAR	REMARKS
		LIN FT	EACH	EACH	
IDAHO ST.					
105+19	2' LT	1	1		ICB 0080008
105+19	20' LT	1	1		ICB 0080009
105+30	11' LT	1		1	IDMH 0080016
105+25	19' RT	1	1		ICB 0080006
105+25	33' RT	1	1		ICB 0080007
107+17	12' LT	1		1	IDMH 0080017
107+21	2' LT	1	1		ICB 0080011
107+21	20' LT	1	1		ICB 0080010
107+22	33' RT	1	1		ICB 0080012
107+23	19' RT	1	1		ICB 0080013
107+46	22' RT	1		1	IDMH 0080018
	TOTAL	**11**	**8**	**3**	

PROPOSED CONCRETE			F
STATION TO STATION	LT / RT	SPEC. 2531 CONCRETE CURB & GUTTER DESIGN B624 (MOD)	REMARKS
		LIN FT	
IDAHO ST.			
105+14 TO 105+24	2' LT	10	
105+14 TO 105+24	20' LT	10	
105+20 TO 105+30	19' RT	10	
105+20 TO 105+30	33' RT	10	
107+16 TO 107+26	20' LT	10	
107+17 TO 107+27	2' LT	10	
107+17 TO 107+27	33' RT	10	
107+18 TO 107+28	19' RT	10	
	TOTAL	**80**	

SIGNAGE AND PAVEMENT MARKING				G
STATION TO STATION	LT / RT	SPEC. 2582 4" SOLID LINE PAINT	SPEC. 2582 4" DOUBLE SOLID PAINT	REMARKS
		LIN FT	LIN FT	
IDAHO ST.				
103+50 TO 103+95	1' LT		45	YELLOW
103+50 TO 104+03	6' - 13' RT		53	YELLOW
103+50 TO 109+98	25' - 35' RT	651		YELLOW
104+03 TO 109+72	14' - 18' RT	570		YELLOW
103+95 TO 109+73	1' LT - 5' RT	579		YELLOW
103+50 TO 110+11	20' - 18' LT	660		YELLOW
109+72 TO 110+05	17' - 18' RT		30	YELLOW
109+73 TO 110+05	6' - 14' RT		31	YELLOW
	TOTAL	**2460**	**159**	

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2023 STREET PRESERVATION PROJECT

CITY PROJECT NO.: 2016

STATE AID PROJECT NO.: N/A

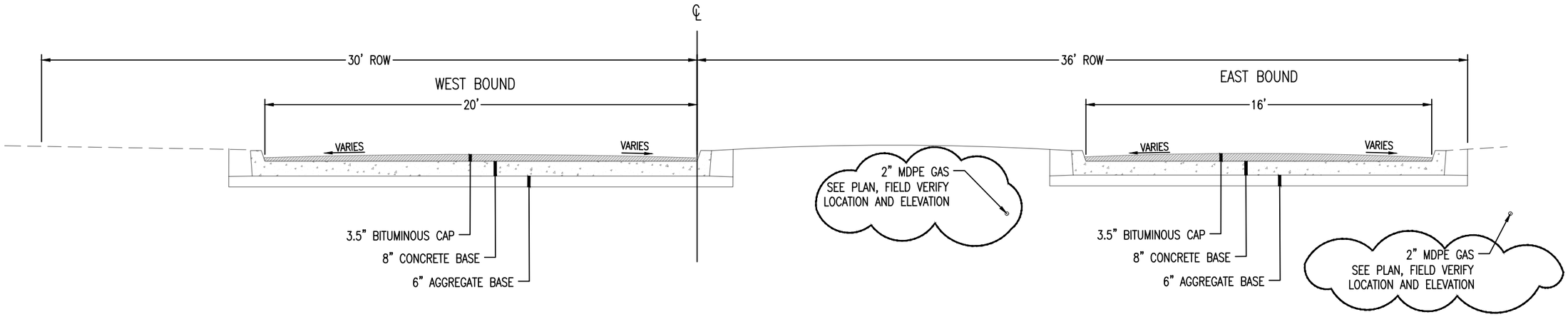
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IDAHO ST – TABULATIONS

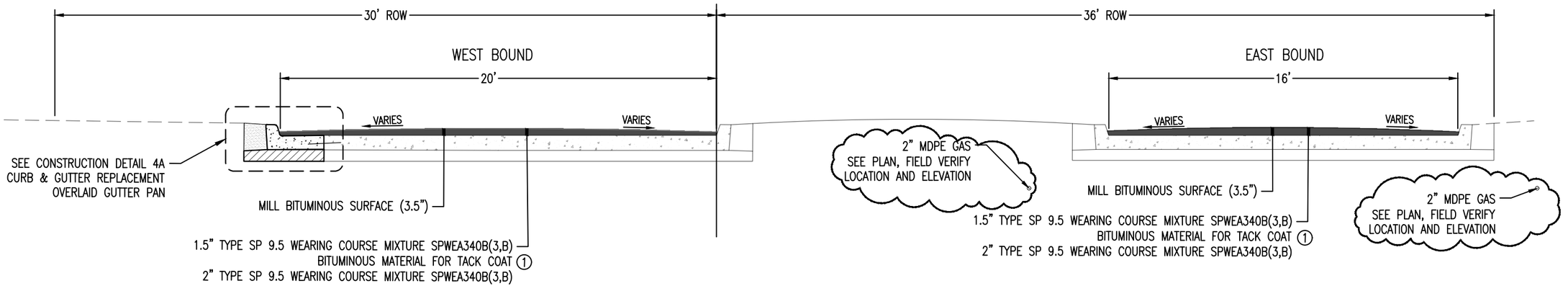
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INPLACE TYPICAL SECTION
IDAHO ST.
STATION 103+50 TO 105+74
STATION 107+13 TO 110+05
CONSTRUCTION ALIGNMENT



INPLACE TYPICAL SECTION
IDAHO ST.
STATION 103+50 TO 105+74 ②
STATION 107+13 TO 110+05
CONSTRUCTION ALIGNMENT



NOTES:

① BITUMINOUS MATERIAL FOR TACK COAT SHALL BE APPLIED AT 2X THE NORMAL RATE.

② BITUMINOUS DEPTH VARIES STA. 105+74 TO 107+13 – TAPER TO 1" LIFT UNDER BRIDGE AS DIRECTED BY ENGINEER

0 2.5 5
SCALE IN FEET

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2023 STREET PRESERVATION PROJECT

CITY PROJECT NO.: 2016 | STATE AID PROJECT NO.: N/A

DRAWN BY: DJK/ZAE/SCA/NML

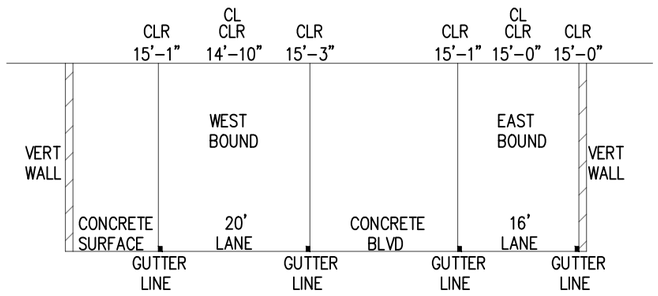
IDAHO ST. – TYPICAL SECTIONS

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OVERPASS R.R. BRIDGE

STA: 105+74

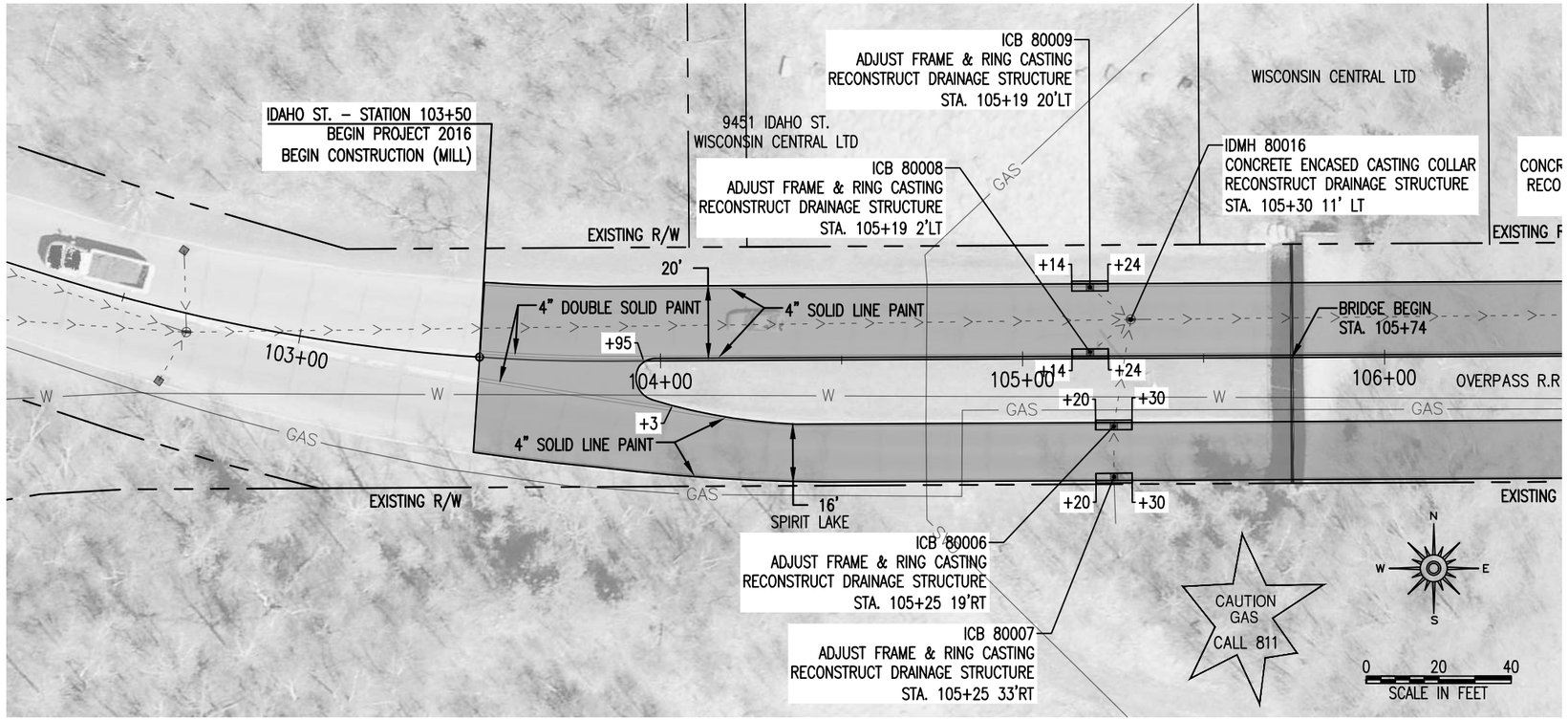
15'–3" MAX CLEARANCE

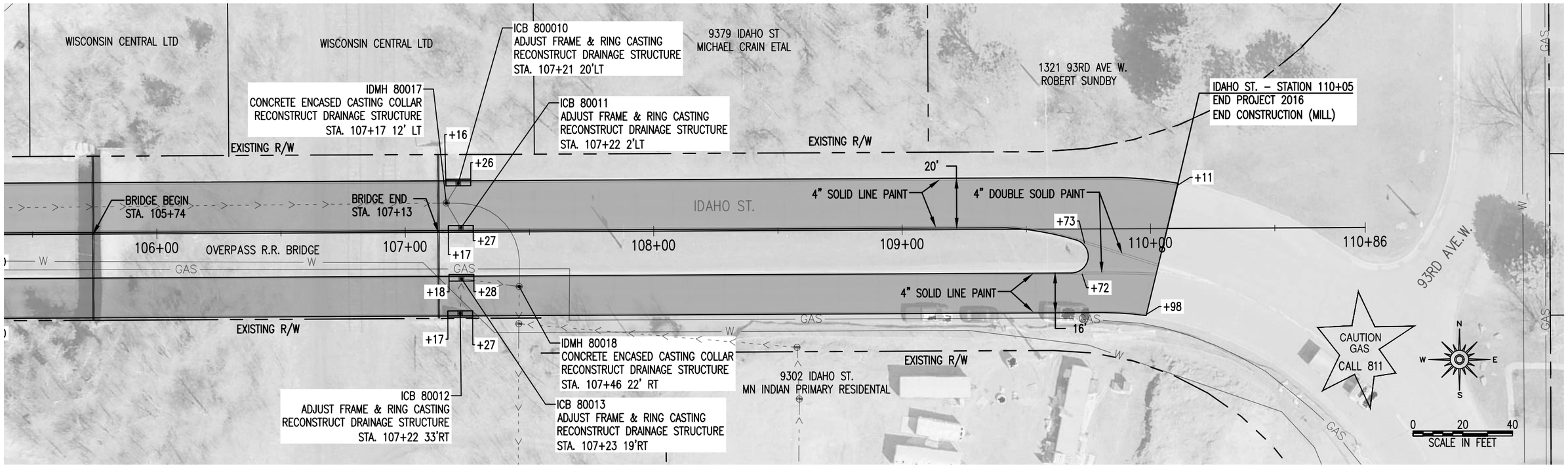


NOTE:

LEAST CLEARANCES ARE ENTERING MORGAN PARK TO THE EAST.

REDUCED VERTICAL CLEARANCE FROM STA. 105+74 TO STA. 107+13 THE CONTRACTOR SHALL REDUCE THE THICKNESS OF THE PAVEMENT THICKNESS AS DIRECTED BY THE ENGINEER.





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IDAHO ST – CONSTRUCTION PLAN

SHEET NO. 36 OF 125

REMOVALS (1 OF 2)							A
STATION TO STATION	LT / RT	SPEC. 2104 SAWING CONCRETE PAVEMENT (FULL DEPTH) LIN FT	SPEC. 2104 SAWING BITUMINOUS PAVEMENT LIN FT	SPEC. 2104 REMOVE CURB & GUTTER LIN FT	SPEC. 2104 REMOVE PAVEMENT SQ YD	SPEC. 2104 REMOVE CONCRETE WALK SQ FT	REMARKS
RAMSEY ST. (N CENTRAL AVE TO N 53RD AVE W)							
11+55	CL		40				BEGINNING OF MILLING
11+51 TO 11+70	RT	24		19			
12+02 TO 12+14	RT	17		12			
12+51 TO 12+74	RT	27		23			
11+51 TO 12+74	RT	144				1247	SIDE WALK PARALLEL TO PARKING LOT
11+57 TO 12+54	LT	102		97			
11+57 TO 12+63	LT	111				519	SIDE WALK PARALLEL TO CURB OS 5'
12+54 TO 12+89	LT	52			33		CENTRAL AVE ALLEY
12+82 TO 12+94	LT	5				59	
12+89 TO 13+36	LT	53		47			
12+96 TO 13+50	RT	59		54			
13+86 TO 14+31	LT	62		57			
14+02 TO 14+09	RT	20				70	
14+09 TO 14+29	LT	10				152	
14+34 TO 14+58	LT		24				54th AVE W - NORTH LIMIT
14+34 TO 14+58	RT		24				54th AVE W - SOUTH LIMIT
14+60 TO 16+00	LT	157		152			
14+63 TO 16+10	LT	5				865	
16+00 TO 16+37	LT	37			33		54th AVE W ALLEY - NORTH SIDE
14+61 TO 16+00	RT	156		151			
14+63 TO 14+81	RT	10				135	
15+68 TO 15+78	RT	10				50	
16+03 TO 16+11	RT	5				32	
16+00 TO 16+37	RT	58			35		54th AVE W ALLEY - SOUTH SIDE
16+28 TO 16+38	RT	5				43	
16+28 TO 16+35	LT	5				31	
16+37 TO 17+71	LT	147		142			
17+11 TO 17+69	LT	10				323	
17+26 TO 17+71	RT	57		52			
17+56 TO 17+69	RT	10				77	
CHART SUBTOTAL		**1358**	**88**	**806**	**101**	**3603**	

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2023 STREET PRESERVATION PROJECT

CITY PROJECT NO.: 2016

STATE AID PROJECT NO.: N/A

DRAWN BY: ZAE/DJK/SCA/NML

RAMSEY ST – TABULATIONS

REMOVALS							A
STATION TO STATION	LT / RT	SPEC. 2104 SAWING CONCRETE PAVEMENT (FULL DEPTH)	SPEC. 2104 SAWING BITUMINOUS PAVEMENT	SPEC. 2104 REMOVE CURB & GUTTER	SPEC. 2104 REMOVE PAVEMENT	SPEC. 2104 REMOVE CONCRETE WALK	REMARKS
		LIN FT	LIN FT	LIN FT	SQ YD	SQ FT	
RAMSEY ST. (N 53RD AVE W TO 51ST AVE W)							
17+74 TO 17+96	RT		22				53rd AVE W - SOUTH LIMIT
17+74 TO 17+96	LT		22				53rd AVE W - NORTH LIMIT
17+99 TO 18+65	LT	80		75			
18+01 TO 18+20	LT	13				166	
18+50 TO 19+42	LT	8				508	
17+98 TO 18+21	RT	34		29			
18+01 TO 18+23	RT	10				186	
18+53 TO 18+94	RT	10				231	
19+22 TO 19+43	RT	5				115	
19+30 TO 19+33	RT	8		3			
19+33 TO 19+69	RT	52			34		53rd AVE W ALLEY - SOUTH SIDE
19+59 TO 19+76	RT	5				86	
19+69 TO 19+74	RT	10		5			
19+94 TO 21+04	LT	129		124			
20+79 TO 21+02	LT	10				147	
20+69 TO 21+00	RT	10				205	
20+71 TO 21+04	RT	49		44			
21+07 TO 21+27	RT		20				52nd AVE W - SOUTH LIMIT
21+07 TO 21+27	LT		20				52nd AVE W - NORTH LIMIT
21+30 TO 22+67	LT	155		150			
21+32 TO 22+75	LT	5				713	
22+67 TO 23+01	LT	34			28		52nd AVE W ALLEY - NORTH SIDE
21+30 TO 21+52	RT	38		33			
21+34 TO 21+52	RT	10				146	
22+63 TO 22+75	RT	5				60	
22+67 TO 23+01	RT	37			30		52nd AVE W ALLEY - SOUTH SIDE
23+01 TO 23+18	RT	22		17			
23+53 TO 23+72	RT	24		19			
24+16 TO 24+42	RT	31		26			
24+16 TO 24+42	RT	10				118	
22+91 TO 23+44	LT	5				257	
23+01 TO 23+77	LT	81		76			
23+15 TO 23+43	LT	33			29		5103 RAMSEY ST - DRIVEWAY ENT
24+00 TO 24+19	LT	13				190	
24+00 TO 24+21	LT	37		32			
24+21 TO 24+37	LT		24				51st AVE W - NORTH LIMIT
24+66	CL		37				END OF MILLING
CHART SUBTOTAL		**973**	**145**	**633**	**121**	**3128**	
TOTAL		**2331**	**233**	**1439**	**222**	**6731**	

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2023 STREET PRESERVATION PROJECT

CITY PROJECT NO.: 2016

STATE AID PROJECT NO.: N/A

DRAWN BY: ZAE/DJK/SCA/NML

RAMSEY ST – TABULATIONS

I:\PW\ENGINEER\PROJECTS\2000-2499\2016_2023_Street_Preservation\23-ACAD-DRAWINGS\Ramsey St\2016_RamseySt_Charts

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I:\PW\ENGINEER\PROJECTS\2000-2499\2016_2023_Street_Preservation\23-ACAD-DRAWINGS\Ramsey St\2016_RamseySt_Charts

MILLING AND RECLAIMATION OPERATIONS — C

STATION TO STATION	LT / RT	SPEC. 2232 MILL BITUMINOUS SURFACE (4") SQ YD	REMARKS
RAMSEY ST.			
11+55 TO 24+66		6782	
	TOTAL	**6782**	

BITUMINOUS PAVEMENT — D

STATION TO STATION	LT / RT	SPEC. 2357 BITUMINOUS MATERIAL FOR TACK COAT GALLON	SPEC. 2360 TYPE SP 9.5 WEARING COURSE MIXTURE (3,B) TON	REMARKS
RAMSEY ST.				
11+55 TO 24+66	CL	339	1017	
	TOTAL	**339**	**1017**	

ENCASEMENT AND REPAIR — E

STATION TO STATION	LT / RT	SPEC. 2104 REMOVE CASTING EACH	SPEC. 2104 REMOVE VALVE BOX EACH	SPEC. 2504 ADJUST VALVE BOX EACH	SPEC. 2504 ADJUST CURB BOX EACH	SPEC. 2504 CONCRETE ENCASED VALVE BOX COLLAR EACH	SPEC. 2506 CASTING ASSEMBLY EACH	SPEC. 2506 RECONSTRUCT DRAINAGE STRUCTURE LIN FT	SPEC. 2506 ADJUST FRAME & RING CASTING EACH	SPEC. 2506 CONCRETE ENCASED CASTING COLLAR EACH	SPEC. 2540 CONSTRUCT SURVEY MONUMENT EACH	REMARKS
RAMSEY ST.												
12+15	28' RT				1							WATER SERVICE - NO RECORD
12+34	25' LT				1							WATER SERVICE 402-404 CENTRAL AVE
12+47	31' RT								1			TRAFFIC HAND HOLE
12+62	31' RT								1			TRAFFIC HAND HOLE
12+67	16' LT									1		TELEPHONE MAN HOLE
12+73	11' LT									1		ISMH 340045
12+73	24' LT								1			IDMH 340132
12+82	13' RT		1									GV (ABAND) LP
14+04	21' LT	1					1	1				ICB 340004 (Neenah R-3349-A)
15+78	12' RT					1						WATER SERVICE - 5316 RAMSEY ST
17+44	21' LT	1					1	1				ICB 340005 (Neenah R-3349-A)
17+50	21' RT	1					1	1				ICB 340006 (Neenah R-3349-A)
17+85	CL										1	SURVEY MON 53rd AVE W
17+94	34' LT					1						WV 04059
17+94	35' LT		1									GV (ABAND) LP
17+94	33' RT					1						WV 04057
19+34	28' LT			1								GV 13562
20+78	20' LT	1					1	1				ICB 340007 (Neenah R-3349-A)
20+79	21' RT							1	1			ICB 250074
20+85	10' RT					1						WV 03921
21+25	34' LT					1						WV - NOT IN GIS
21+26	35' RT					1						WV 04035
21+53	10' RT					1						WV 06323
22+46	27' LT				1							WATER SERVICE - 5115 RAMSEY ST
23+17	23' LT		1			1						GAS SERVICE (ABAND)
24+25	42' LT		1									GV (ABAND) LP
24+26	12' RT					1						WV 06919
24+39	51' LT					1						WV 03847
	TOTAL	**4**	**4**	**1**	**3**	**10**	**4**	**5**	**4**	**2**	**1**	

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: Patrick Loomis

PATRICK F. LOOMIS
TYPE NAME

DATE: 04/20/2023

LIC. NO: 49099

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

2023 STREET PRESERVATION PROJECT

CITY PROJECT NO.: 2016

STATE AID PROJECT NO.: N/A

DRAWN BY: ZAE/DJK/SCA/NML

RAMSEY ST – TABULATIONS

PROPOSED CONCRETE (1 OF 2)

F

STATION TO STATION	LT / RT	SPEC. 2521 4" CONCRETE WALK SQ FT	SPEC. 2521 6" CONCRETE WALK SQ FT	SPEC. 2531 CONCRETE CURB & GUTTER DESIGN B624 LIN FT	SPEC. 2531 CONCRETE CURB & GUTTER DESIGN B624 (MOD) LIN FT	SPEC. 2531 SILL CURB TYPE B624 (MOD) LIN FT	SPEC. 2531 8" CONCRETE DRIVEWAY PAVEMENT SQ YD	SPEC. 2531 TRUNCATED DOMES SQ FT	REMARKS
RAMSEY ST. (N CENTRAL AVE TO N 53RD AVE W)									
11+51 TO 11+70	RT					19			
12+02 TO 14+14	RT					12			
12+51 TO 12+74	RT					23			
11+51 TO 12+74	RT		1247						
11+57 TO 12+54	LT					97			
11+57 TO 12+63	LT		519						
12+54 TO 12+91	LT						35		CENTRAL AVE ALLEY - NORTH SIDE
12+82 TO 12+94	LT	55							
12+91 TO 13+36	LT				45				
12+96 TO 13+50	RT				54				
13+86 TO 14+18	LT				32				
14+18 TO 14+31	LT			26					
14+09 TO 14+18	LT	44							
14+18 TO 14+28	LT		57					12	54th AVE W - NW QUAD (SQUARE DOMES)
14+19 TO 14+24	LT	52							
14+02 TO 14+09	RT		70						
14+60 TO 14+81	LT			33					
14+64 TO 14+81	LT		100					12	54th AVE W - NE QUAD (SQUARE DOMES)
14+81 TO 16+00	LT				120				
14+81 TO 16+10	LT	644							
14+61 TO 14+83	RT			34					
14+63 TO 14+81	RT		135					12	54th AVE W - SE QUAD (SQUARE DOMES)
15+24 TO 16+00	RT				76				
15+68 TO 15+78	RT	50							
16+00 TO 16+37	RT						35		54th AVE W ALLEY - SOUTH SIDE
16+03 TO 16+10	RT	33							
16+28 TO 16+38	RT	45							
16+00 TO 16+37	LT						35		54th AVE W ALLEY - NORTH SIDE
16+27 TO 16+35	LT	35							
16+37 TO 17+71	LT				144				
17+11 TO 17+56	LT	223							
17+56 TO 17+61	LT	36							
17+56 TO 17+69	LT		71					12	53rd AVE W - NW QUAD (SQUARE DOMES)
17+26 TO 17+51	RT				25				
17+51 TO 17+55	RT	24							
17+51 TO 17+71	RT			28					
17+55 TO 17+69	RT		72					12	53rd AVE W - SW QUAD (SQUARE DOMES)
CHART SUBTOTAL		**1241**	**2271**	**121**	**496**	**151**	**105**	**60**	

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DRAWN BY: ZAE/DJK/SCA/NML

RAMSEY ST – TABULATIONS

PROPOSED CONCRETE (2 OF 2)

F

STATION TO STATION	LT / RT	SPEC. 2521 4" CONCRETE WALK SQ FT	SPEC. 2521 6" CONCRETE WALK SQ FT	SPEC. 2531 CONCRETE CURB & GUTTER DESIGN B624 LIN FT	SPEC. 2531 CONCRETE CURB & GUTTER DESIGN B624 (MOD) LIN FT	SPEC. 2531 SILL CURB TYPE B624 (MOD) LIN FT	SPEC. 2531 8" CONCRETE DRIVEWAY PAVEMENT SQ YD	SPEC. 2531 TRUNCATED DOMES SQ FT	REMARKS
RAMSEY ST. (N 53RD AVE W TO 51ST AVE W)									
17+98 TO 18+09	RT				18				
18+01 TO 18+14	RT		69					12	53rd AVE W - SE QUAD (SQUARE DOMES)
18+09 TO 18+14	RT	59							
18+09 TO 18+21	RT			12					
18+14 TO 18+23	RT	46							
17+99 TO 18+65	LT				76				
18+01 TO 18+20	LT		117					12	53rd AVE W - NE QUAD (SQUARE DOMES)
18+05 TO 18+10	LT	52							
18+30 TO 19+42	LT	508							
18+53 TO 18+94	RT	205							
19+22 TO 19+43	RT	100							
19+30 TO 19+33	RT				3				
19+33 TO 19+69	RT						34		53rd AVE W ALLEY - SOUTH SIDE
19+59 TO 19+76	RT	81							
19+69 TO 19+74	RT				5				
20+69 TO 20+90	RT	103							
20+71 TO 20+90	RT				19				
20+90 TO 20+95	RT	42							
20+90 TO 21+01	RT		54					12	52nd AVE W - SW QUAD (SQUARE DOMES)
20+90 TO 21+04	RT			26					
19+94 TO 20+86	LT				92				
20+79 TO 20+86	LT	36							
20+86 TO 21+02	LT		100					12	52nd AVE W - NW QUAD (SQUARE DOMES)
20+86 TO 21+04	LT			33					
20+89 TO 20+94	LT	21							
21+30 TO 21+45	LT			31					
21+32 TO 21+45	LT		68					12	52nd AVE W - NE QUAD (SQUARE DOMES)
21+40 TO 21+45	LT	57							
21+45 TO 22+67	LT				120				
21+45 TO 22+75	LT	645							
21+30 TO 21+45	RT			26					
21+33 TO 21+45	RT		56					12	52nd AVE W - SE QUAD (SQUARE DOMES)
21+45 TO 21+52	RT	37							
21+45 TO 21+52	RT				8				
22+63 TO 22+74	RT	53							
22+67 TO 23+01	RT						30		52nd AVE W ALLEY - SOUTH SIDE
22+91 TO 23+01	RT	44							
23+01 TO 23+18	RT				17				
23+53 TO 23+72	RT				19				
22+67 TO 23+01	LT						30		52nd AVE W ALLEY - NORTH SIDE
22+91 TO 23+19	LT	126							
23+01 TO 23+15	LT				14				
23+15 TO 23+43	LT						30		5103 RAMSEY ST. ENTRANCE
23+39 TO 23+44	LT	19							
23+43 TO 23+77	LT				24				
24+00 TO 24+19	LT		82					12	51st AVE W - NW QUAD (SQUARE DOMES)
24+00 TO 24+21	LT				32				
24+09 TO 24+13	LT	108							
24+18 TO 24+43	RT		118					12	51st AVE W - SOUTH SIDE (SQUARE DOMES)
24+18 TO 24+43	RT			22					
CHART SUBTOTAL		**2342**	**664**	**150**	**447**	**0**	**124**	**96**	
TOTAL		**3583**	**2935**	**271**	**943**	**151**	**229**	**156**	

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DULUTH, MN 55802

2023 STREET PRESERVATION PROJECT

CITY PROJECT NO.: 2016

STATE AID PROJECT NO.: N/A

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RAMSEY ST – TABULATIONS

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SIGNAGE AND PAVEMENT MARKING						G
STATION TO STATION	LT / RT	SPEC. 2104 SALVAGE SIGN	SPEC. 2564 RELOCATE SIGN	SPEC. 2564 INSTALL SIGN TYPE C	SPEC. 2582 4" DOUBLE SOLID PAINT	REMARKS
		EACH	EACH	EACH	LIN FT	
RAMSEY ST.						
11+78	24' RT	1		1		CONCRETE SURFACE MOUNT (DETAIL T-2)
12+20	26' LT	1		1		CONCRETE SURFACE MOUNT (DETAIL T-2)
11+51 TO 24+66	LT & RT		6			UNDISTRIBUTED
11+55 TO 14+23	CL				268	YELLOW
14+65 TO 17+62	CL				297	YELLOW
18+05 TO 20+97	CL				292	YELLOW
21+48 TO 24+34	CL				286	YELLOW
24+34 TO 24+66	CL				11	YELLOW
	TOTAL	**2**	**6**	**2**	**1154**	

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

2023 STREET PRESERVATION PROJECT

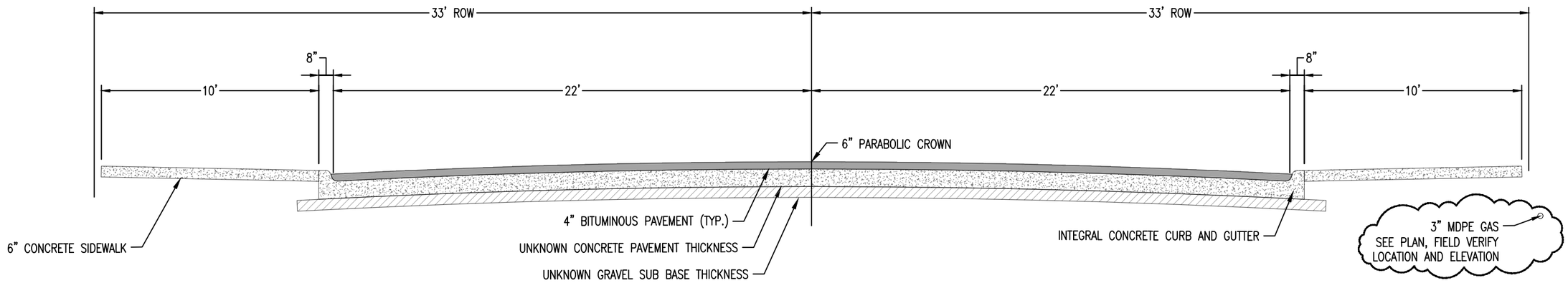
CITY PROJECT NO.: 2016 | STATE AID PROJECT NO.: N/A

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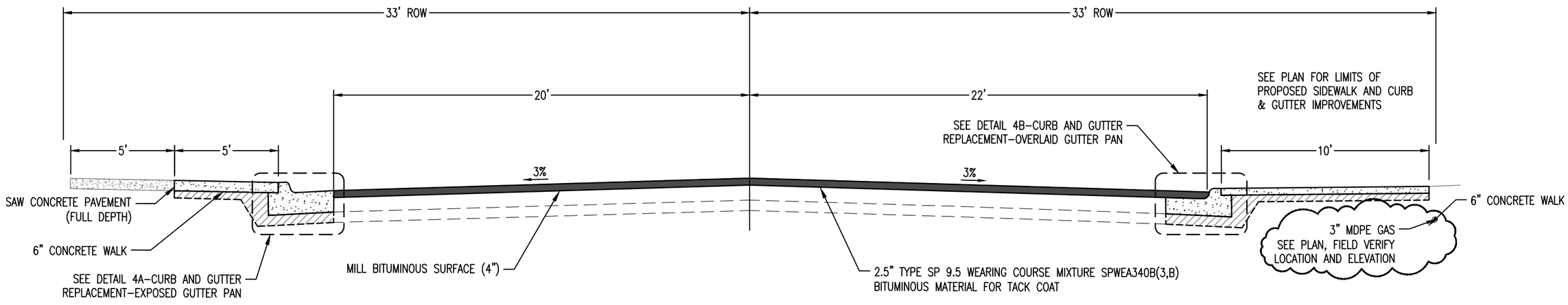
RAMSEY ST – TABULATIONS

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EXISTING TYPICAL SECTION
CENTRAL AVE. TO CENTRAL AVE ALLEY.
STATION 11+51 TO 12+73



PROPOSED TYPICAL SECTION
CENTRAL AVE. TO CENTRAL AVE ALLEY.
STATION 11+51 TO 12+73



0 2.5 5
SCALE IN FEET

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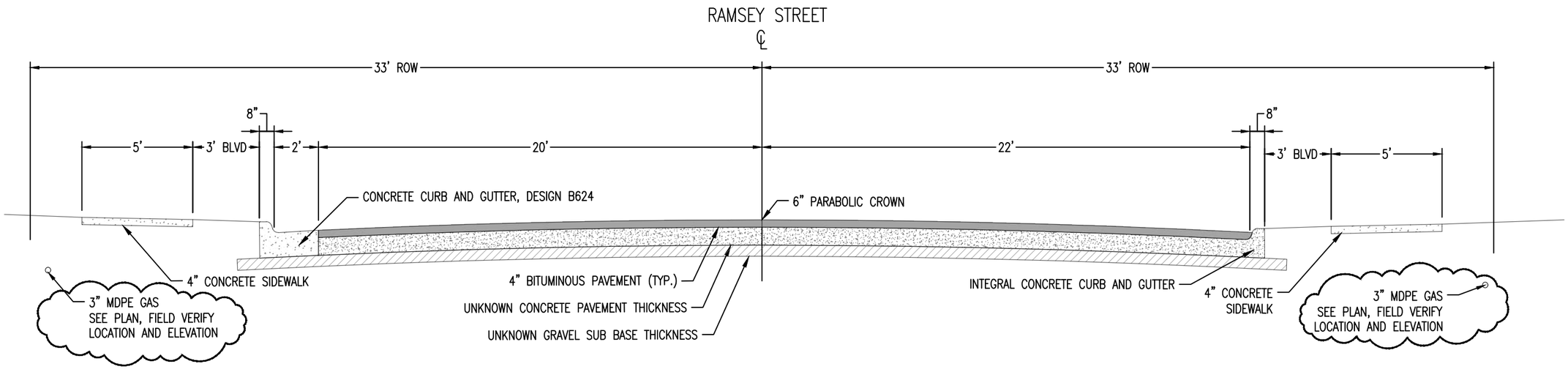
RAMSEY ST – TYPICAL SECTIONS

SHEET NO. 46 OF 125

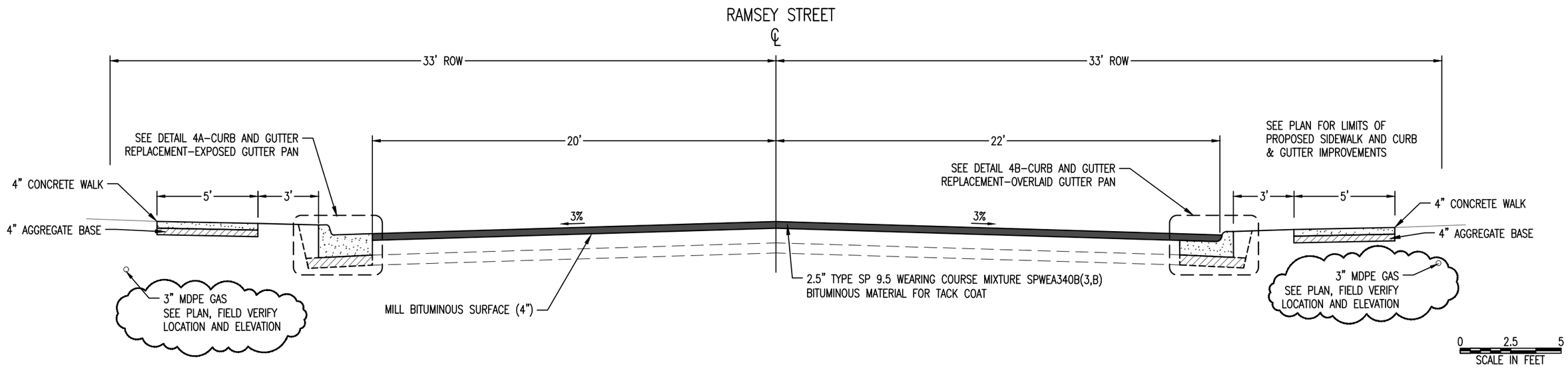
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EXISTING TYPICAL SECTION
CENTRAL AVE ALLEY. TO 76' WEST OF 51st AVE. W.
STATION 12+73 TO 24+66



PROPOSED TYPICAL SECTION
CENTRAL AVE ALLEY. TO 76' WEST OF 51st AVE. W.
STATION 12+73 TO 24+66



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DULUTH, MN 55802

2023 STREET PRESERVATION PROJECT

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STATE AID PROJECT NO.: N/A

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RAMSEY ST – TYPICAL SECTIONS

SHEET NO. 47 OF 125

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KIM MAI & IHU

VALLEY BUILDING LLC

CENTRAL AVE

402-404 CENTRAL AVE
ADJUST CURB BOX
STA. 12+34 25'LT

SALVAGE SIGN
INSTALL SIGN TYPE C
STA. 12+20 26'LT

TELE MH
CONCRETE ENCASED
CASTING COLLAR
STA. 12+67 16' LT

IDMH 340132
ADJUST FRAME &
RING CASTING
STA. 12+73 24'LT

5409 RAMSEY ST

ICB 340004
CASTING ASSEMBLY
RECONSTRUCT DRAINAGE STRUCTURE (1 LF)
STA. 14+04 21'LT

406 N 54TH AVE W

402 N 54TH AVE W

EXISTING R/W

PROTECT SIGNAL LOOP

RAMSEY ST.

ISMH 340042
CONCRETE ENCASED
CASTING COLLAR
STA. 12+73 11'LT

CT-10; BIT. 3.75"

4" DOUBLE SOLID PAINT

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 15+78 12'RT

RAMSEY ST. – STATION 11+51
BEGIN PROJECT 2016
BEGIN CONSTRUCTION (MILL)

SALVAGE SIGN
INSTALL SIGN TYPE C
STA. 11+78 24'RT

ADJUST CURB BOX
STA. 12+15 28'RT

TRAFFIC HAND HOLE
ADJUST FRAME &
RING CASTING
STA. 12+47 31'RT

REMOVE VALVE BOX
(ABANDONED GAS)
STA. 12+82 13'RT

TRAFFIC HAND HOLE
ADJUST FRAME &
RING CASTING
STA. 12+62 31'RT

GOAD & LAPLANTE REAL ESTATE LLC

N CENTRAL AVE.

5402 RAMSEY ST

N 54TH AVE. W

5316 RAMSEY ST

CAUTION
GAS
CALL 811

SCALE IN FEET

REMOVE VALVE BOX
(ABANDONED GAS)
STA. 17+94 35'LT

ICB 340005
CASTING ASSEMBLY
RECONSTRUCT DRAINAGE STRUCTURE (1 LF)
STA. 17+44 21'LT

ADJUST VALVE BOX
STA. 19+34 28'LT

ICB 340007
CASTING ASSEMBLY
RECONSTRUCT DRAINAGE STRUCTURE (1 LF)
STA. 20+78 20'LT

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 21+25 34'LT

ADJUST CURB BOX
STA. 22+46 27'LT

CONSTRUCT SURVEY
MONUMENT
STA. 17+85 0'LT

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 17+94 34'LT

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 20+85 10'RT

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 21+53 10'RT

RAMSEY ST.

CI-11; BIT. 4"

4" DOUBLE SOLID PAINT

ICB 340006
CASTING ASSEMBLY
RECONSTRUCT DRAINAGE STRUCTURE (1 LF)
STA. 17+50 21'RT

ICB 250074
ADJUST FRAME & RING CASTING
RECONSTRUCT DRAINAGE STRUCTURE (1 LF)
STA. 20+79 21'RT

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 17+94 33'RT

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 21+26 35'RT

N 53RD AVE. W

N 52ND AVE. W

5308 RAMSEY ST

5302 RAMSEY ST

328 N 53RD AVE W

5220 RAMSEY ST

327 N 52ND AVE W

5116 RAMSEY ST

GASKILL JAMES R

5119 RAMSE

5117 RAMSE

5115 RAMSE

CAUTION
GAS
CALL 811

SCALE IN FEET

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CITY PROJECT NO.: 2016

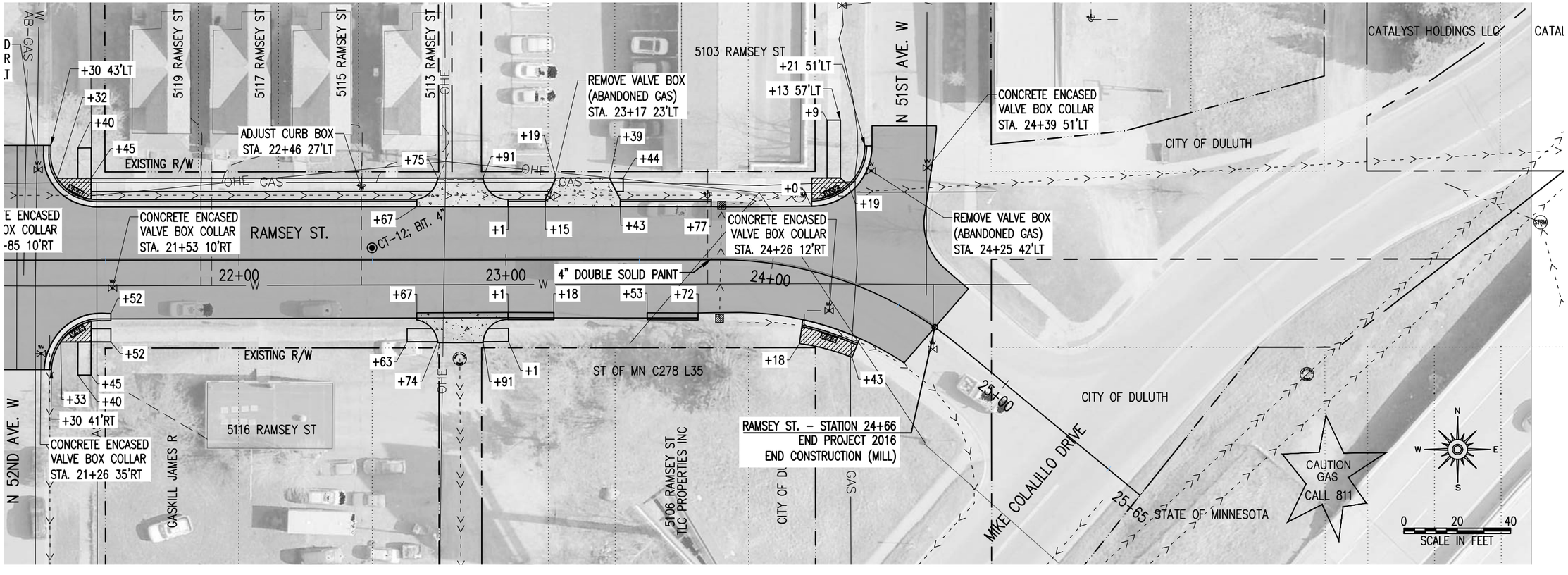
STATE AID PROJECT NO.: N/A

DRAWN BY: ZAE/DJK/SCA/NML

RAMSEY ST – CONSTRUCTION PLAN

SHEET NO. 48 OF 125

4/24/2023 4:15 PM



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DULUTH, MN 55802

2023 STREET PRESERVATION PROJECT

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DRAWN BY: ZAE/DJK/SCA/NML

RAMSEY ST – CONSTRUCTION PLAN

SHEET NO. 49 OF 125

4/24/2023 4:15 PM

REMOVALS — A

STATION TO STATION	LT / RT	SPEC. 2104 SAWING CONCRETE PAVEMENT (FULL DEPTH) LIN FT	SPEC. 2104 SAWING BITUMINOUS PAVEMENT (FULL DEPTH) LIN FT	SPEC. 2104 SALVAGE STONE CURB LIN FT	SPEC. 2104 REMOVE CONCRETE PAVEMENT SQ YD	SPEC. 2104 REMOVE BITUMINOUS PAVEMENT SQ YD	SPEC. 2104 REMOVE CONCRETE WALK SQ FT	SPEC. 2104 REMOVE STONE PAVERS SQ FT	REMARKS
3rd AVE E.									
31+98 TO 32+35	LT	40	22		54	4			WEST ALLEY APRON
31+98 TO 32+31	RT	36	24		42	4			EAST ALLEY APRON
32+02 TO 32+05	LT	9					28		
32+02 TO 32+05	RT	7					22		
32+25 TO 32+31	RT						32		TRAFFIC HAND HOLE
32+27 TO 32+32	LT	6					26		
32+38 TO 32+42	LT						28		TRAFFIC HAND HOLE
32+53 TO 32+88	RT	12					250		
32+91 TO 33+30	LT	12					226		
32+31 TO 33+58	RT	127		127				254	
32+35 TO 33+68	LT	133		133				266	
33+18 TO 33+68	RT	12					322		
33+52 TO 33+56	RT	12					34		
33+74	LT/RT		43						END OF PROJECT
	TOTAL	**406**	**89**	**260**	**96**	**8**	**968**	**520**	

MILLING AND RECLAMATION OPERATIONS — C

STATION TO STATION	LT / RT	SPEC. 2232 MILL BITUMINOUS SURFACE (3") SQ YD	REMARKS
3rd AVE E.			
32+06 TO 33+74	CL	568	
	TOTAL	**568**	

BITUMINOUS PAVEMENT — D

STATION TO STATION	LT / RT	SPEC. 2357 BITUMINOUS MATERIAL FOR TACK COAT GALLON	SPEC. 2360 TYPE SP 9.5 WEARING COURSE MIXTURE (3,B) TON	REMARKS
3rd AVE E.				
32+06 TO 33+74	CL	28	85	2.5" BIT., 1 LIFTS
31+98 TO 32+35	LT	0.5	2	6" BIT., 2 LIFTS WEST ALLEY APRON
31+98 TO 33+31	RT	0.5	2	6" BIT., 2 LIFTS EAST ALLEY APRON
	TOTAL	**29**	**89**	

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: _____ PATRICK F. LOOMIS (TYPE NAME)

DATE: 04/20/2023

LIC. NO: 49099

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

2023 STREET PRESERVATION PROJECT

CITY PROJECT NO.: 2016 | STATE AID PROJECT NO.: N/A

DRAWN BY: ZAE/DJK/SCA/NML

3RD AVE E – TABULATIONS

SHEET NO. 55 OF 125

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ENCASEMENT AND REPAIR — E

STATION TO STATION	LT / RT	SPEC. 2506 ADJUST FRAME & RING CASTING (EACH)	REMARKS
3rd AVE E.			
32+10	6' LT	1	IDMH 0460016
32+28	22' RT	1	TRAFFIC HANDHOLE
32+15	11' LT	1	ISMH 0460240
32+23	14' RT	1	ITMH
32+40	21' LT	1	TRAFFIC HANDHOLE
33+40	11' LT	1	ISMH 0460241
33+54	21' RT	1	TRAFFIC HANDHOLE
33+59	1' LT	1	ISMH 0460242
33+70	13' RT	1	ITMH
	TOTAL	**9**	

PROPOSED CONCRETE — F

STATION TO STATION	LT / RT	SPEC. 2521 4" CONCRETE WALK (SQ FT)	SPEC. 2521 6" CONCRETE WALK SPECIAL (SQ FT)	SPEC. 2531 CONCRETE CURB & GUTTER DESIGN B624 (MOD) (LIN FT)	SPEC. 2531 8" CONCRETE VALLEY GUTTER (SQ YD)	REMARKS
3rd Ave E.						
32+02 TO 32+05	LT	28				
32+02 TO 32+05	RT	22				
32+25 TO 32+31	RT	32				
32+27 TO 32+32	LT	26				
32+98 TO 33+35	LT				54	WEST ALLEY APRON
32+98 TO 33+31	RT				42	EAST ALLEY APRON
32+38 TO 33+42	LT	28				
32+53 TO 32+88	RT	250				
32+91 TO 33+30	LT		226			SEE 3rd AVE E. TYPICALS
33+18 TO 33+68	RT	322				
33+52 TO 33+56	RT	34				
32+31 TO 33+58	RT			127		
32+35 TO 33+68	LT			133		
	TOTAL	**742**	**226**	**260**	**96**	

SIGNAGE AND PAVEMENT MARKING — G

STATION TO STATION	LT / RT	SPEC. 2582 12" SOLID LINE PAINT (LIN FT)	SPEC. 2582 24" SOLID LINE PAINT (LIN FT)	SPEC. 2582 4" DOUBLE SOLID PAINT (LIN FT)	REMARKS
3rd AVE E.					
32+25 TO 33+62	CL			137	YELLOW
33+61	RT		15		STOP BAR - WHITE
33+67	LT / RT	34			CROSS WALK - WHITE
33+73	LT / RT	41			CROSS WALK - WHITE
	TOTAL	**75**	**15**	**137**	

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ENGINEERING DIVISION
411 W. 1ST ST. STE. 240
DULUTH, MN 55802

2023 STREET PRESERVATION PROJECT

CITY PROJECT NO.: 2016 | STATE AID PROJECT NO.: N/A

DRAWN BY: ZAE/DJK/SCA/NML

3RD AVE E – TABULATIONS

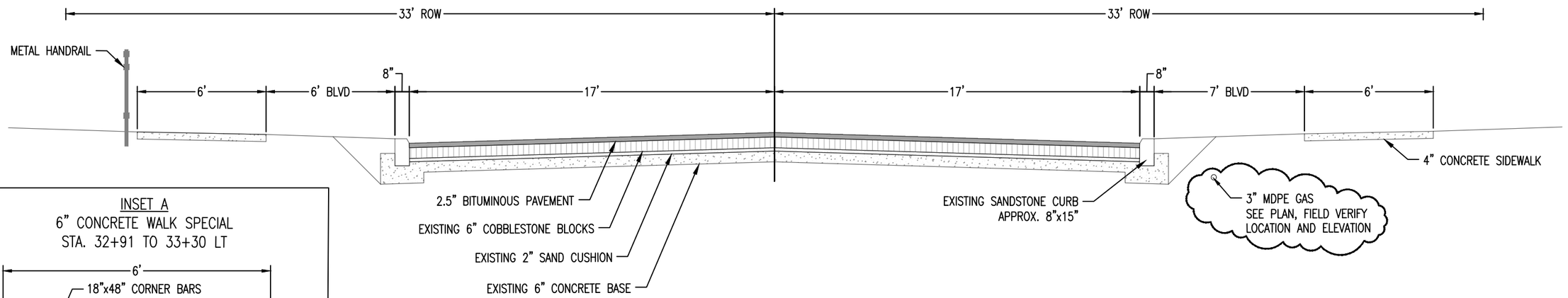
SHEET NO. 56 OF 125

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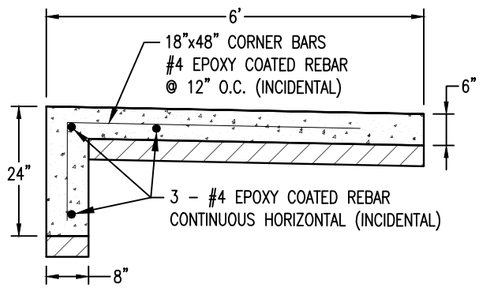
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EXISTING TYPICAL SECTION
N. 3rd AVENUE EAST
STATION 31+98 TO 33+74



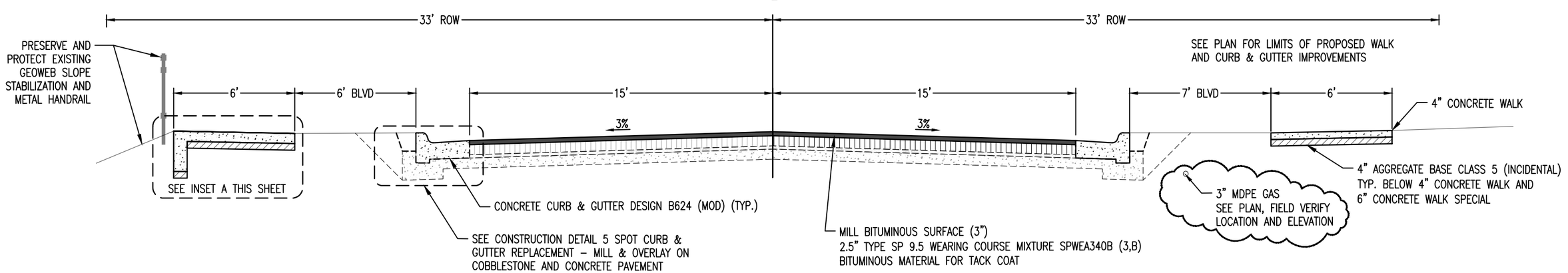
INSET A
6" CONCRETE WALK SPECIAL
STA. 32+91 TO 33+30 LT



NOTE: PLACE ¾" CHAMFER AT ALL VERTICAL JOINTS (24" DIMENSION) TO MATCH SIDEWALK CONTROL JOINTS

0 2.5 5
SCALE IN FEET

PROPOSED TYPICAL SECTION
N. 3rd AVENUE EAST
STATION 31+98 TO 33+74



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DULUTH, MN 55802

2023 STREET PRESERVATION PROJECT

CITY PROJECT NO.: 2016

STATE AID PROJECT NO.: N/A

DRAWN BY: ZAE/DJK/SCA/NML

3RD AVE E – TYPICAL SECTIONS

SHEET NO. 57 OF 125

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222 E 2ND ST

229 E 1ST ST

E. SECOND ST

300 E 2ND ST

TRAFFIC HAND HOLE
ADJUST FRAME AND
RING CASTING
32+40 20' LT

ISMH 0460241
ADJUST FRAME AND
RING CASTING
33+40 11' LT

ISMH 0460242
ADJUST FRAME AND
RING CASTING
33+59 1' LT

6" CONCRETE WALK (SPECIAL)
SEE TYPICAL SECTION

ISMH 0460240
ADJUST FRAME AND
RING CASTING
32+15 11' LT

IDMH 0460242
ADJUST FRAME AND
RING CASTING
32+10 6' LT

EXISTING R/W

PRESERVE AND PROTECT PARKING METERS (3)

12" SOLID LINE PAINT

3RD AVE E. – STATION 31+98
BEGIN PROJECT 2016
BEGIN CONSTRUCTION

3RD AVE E.

24" SOLID LINE PAINT

4" DOUBLE SOLID PAINT

EXISTING CONCRETE HEADER

TELE MH
ADJUST FRAME AND
RING CASTING
32+23 14' RT

3RD AVE E. – STATION 33+74
END PROJECT 2016
END CONSTRUCTION

TELE MH
ADJUST FRAME AND
RING CASTING
33+70 13' RT

TRAFFIC HAND HOLE
ADJUST FRAME AND
RING CASTING
32+28 22' RT

TRAFFIC HAND HOLE
ADJUST FRAME AND
RING CASTING
33+54 20' RT

CAUTION
GAS
CALL 811

0 10 20
SCALE IN FEET

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2023 STREET PRESERVATION PROJECT

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3RD AVE E – CONSTRUCTION PLAN

SHEET NO. 58 OF 125

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REMOVALS						A
STATION TO STATION	LT / RT	SPEC. 2104 SAWING CONCRETE PAVEMENT (FULL DEPTH)	SPEC. 2104 REMOVE CURB & GUTTER	SPEC. 2104 REMOVE CONCRETE PAVEMENT	SPEC. 2104 REMOVE CONCRETE WALK	REMARKS
		LIN FT	LIN FT	SQ YD	SQ FT	
GRAND VIEW AVENUE						
100+78 TO 103+64	RT	307	307		1,080	4' X 4" WALK
101+16	RT				26	902 GRAND VIEW - FRONT WALK
101+71	RT				29	906 GRAND VIEW - FRONT WALK
102+15	RT				29	908 GRAND VIEW - FRONT WALK
102+58	RT				30	912 GRAND VIEW - FRONT WALK
102+85	RT				30	916 GRAND VIEW - FRONT WALK
103+18	RT				30	918 GRAND VIEW - FRONT WALK
103+64 to 103+87	RT	23				E. 10TH ST LIMIT
103+87 TO 109+84	RT	603	601		1,673	
104+31	RT				29	1002 GRAND VIEW - FRONT WALK
104+61	RT				29	1004 GRAND VIEW - FRONT WALK
105+01	RT				31	1006 GRAND VIEW - FRONT WALK
105+39	RT				33	1008 GRAND VIEW - FRONT WALK
105+80	RT				26	1014 GRAND VIEW - FRONT WALK
106+18	RT				35	1016 GRAND VIEW - FRONT WALK
106+56	RT				28	1018 GRAND VIEW - FRONT WALK
107+12	RT				30	1022 GRAND VIEW - FRONT WALK
107+68	RT				31	1028 GRAND VIEW - FRONT WALK
108+18	RT				27	1030 GRAND VIEW - FRONT WALK
108+27 TO 108+41	RT	14		21		ALLEY APRON
108+42 TO 109+90	RT				610	4' X 4" WALK
108+82	RT				45	1032 GRAND VIEW - FRONT WALK
109+41	RT				32	1036 GRAND VIEW - FRONT WALK
100+78 TO 109+90	LT	914	914		3,375	4' X 4" WALK
101+26	LT			39		DRIVEWAY APRON
102+01	LT				31	909 GRAND VIEW - FRONT WALK
102+43	LT				35	913 GRAND VIEW - FRONT WALK
102+85	LT				28	915 GRAND VIEW - FRONT WALK
103+21	LT				37	919 GRAND VIEW - FRONT WALK
103+41	LT				14	919 GRAND VIEW - FRONT WALK
103+61	LT				33	925 GRAND VIEW - FRONT WALK
104+02	LT				33	927 GRAND VIEW - FRONT WALK
104+40	LT				34	1001 GRAND VIEW - FRONT WALK
104+80	LT				30	1005 GRAND VIEW - FRONT WALK
105+19	LT				33	1009 GRAND VIEW - FRONT WALK
105+67	LT				32	1011 GRAND VIEW - FRONT WALK
106+12	LT				34	1015 GRAND VIEW - FRONT WALK
106+92	LT				31	1021 GRAND VIEW - FRONT WALK
107+68	LT				28	1027 GRAND VIEW - FRONT WALK
108+29	LT				34	1029 GRAND VIEW - FRONT WALK
108+99	LT				43	1033 GRAND VIEW - FRONT WALK
109+36	LT				33	1035 GRAND VIEW - FRONT WALK
	TOTAL	1,861	1,822	60	7,831	

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PATRICK F. LOOMIS
TYPE NAME

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

2023 STREET PRESERVATION PROJECT

CITY PROJECT NO.: 2016

STATE AID PROJECT NO.: N/A

DRAWN BY: DJK

GRAND VIEW AVE – TABULATIONS

SHEET NO. 59 OF 125

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MILLING AND RECLAMATION — C

STATION TO STATION	LT / RT	SPEC. 2232 MILL BITUMINOUS SURFACE (3") SQ YD	REMARKS
GRAND VIEW AVENUE			
100+53 TO 109+88	C/L	1,743	
TOTAL		1,743	

BITUMINOUS PAVEMENT — D

STATION TO STATION	LT / RT	SPEC. 2357 BITUMINOUS MATERIAL FOR TACK COAT GALLON	SPEC. 2360 TYPE SP 9.5 WEARING COURSE MIXTURE (3,B) TON	REMARKS
GRAND VIEW AVENUE				
100+78 TO 109+88	C/L	84	253	
TOTAL		84	253	

ENCASEMENT AND REPAIR — E

STATION TO STATION	LT / RT	SPEC. 2506 RECONSTRUCT DRAINAGE STRUCTURE LIN FT	SPEC. 2506 ADJUST FRAME & RING CASTING EACH	SPEC. 2506 CONCRETE ENCASED CASTING COLLAR EACH	REMARKS
GRAND VIEW AVENUE					
100+54	18' LT			1	ISMH 0530025
100+62	13' LT			1	ISMH 0530009
100+84	9' LT	1	1		ICB 0530047
100+85	9' RT	1	1		ICB 0530046
103+89	5' RT	2		1	ISTMH 0530023
104+05	9' RT	1	1		ICB 0530054
104+07	9' LT	1	1		ICB 0530053
TOTAL		6	4	3	

SIGNAGE AND PAVEMENT MARKING — G

STATION TO STATION	LT / RT	SPEC. 2564 RELOCATE SIGN EACH	REMARKS
GRAND VIEW AVENUE			
104+75	LT / RT	2	RES PRKG
108+60	LT / RT	2	RES PRKG
TOTAL		4	

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SIGNATURE: Patrick Loomis — PATRICK F. LOOMIS (TYPE NAME) — DATE: 04/20/2023 — LIC. NO: 49099

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ENGINEERING DIVISION
411 W. 1ST ST. STE. 240
DULUTH, MN 55802

2023 STREET PRESERVATION PROJECT

CITY PROJECT NO.: 2016 | STATE AID PROJECT NO.: N/A

DRAWN BY: DJK

GRAND VIEW AVE – TABULATIONS

SHEET NO. 60 OF 125

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PROPOSED CONCRETE							F
		SPEC. 2521	SPEC. 2521	SPEC. 2531	SPEC. 2531	SPEC. 2531	
STATION TO STATION	LT / RT	4" CONCRETE WALK	6" CONCRETE WALK	SILL CURB TYPE B624 (SPECIAL)	7" CONCRETE DRIVEWAY PAVEMENT	TRUNCATED DOMES	REMARKS
		SQ FT	SQ FT	LIN FT	SQ YD	SQ FT	
GRAND VIEW AVENUE							
100+64 TO 109+84	LT			924			
100+64 TO 101+20	LT		300			9	NW QUAD GRAND VIEW - 18TH AVE E (20' R)
101+20 TO 101+32	LT				9		
101+32 TO 101+47	LT		58				
101+47 TO 101+59	LT				9		
100+65 TO 103+61	RT		1,515	308			
100+70	RT					9	NE QUAD GRAND VIEW - 18TH AVE E (20' R)
101+16	RT	25					902 FRONT WALK
101+71	RT	27					906 FRONT WALK
102+15	RT	26					908 FRONT WALK
102+58	RT	28					912 FRONT WALK
102+85	RT	27					916 FRONT WALK
103+18	RT	27					918 FRONT WALK
103+ 61	RT					9	SE QUAD - GRAND VIEW - E. 10TH ST.
103+87 TO 109+84	RT			601			
103+87 TO 108+27	RT		2,228				
103+96	RT					9	NE QUAD - GRAND VIEW - E. 10TH ST.
104+31	RT	26					1002 FRONT WALK
104+61	RT	26					1004 FRONT WALK
105+01	RT	29					1006 FRONT WALK
105+39	RT	30					1008 FRONT WALK
105+80	RT	28					1014 FRONT WALK
106+18	RT	33					1016 FRONT WALK
106+56	RT	26					1018 FRONT WALK
107+12	RT	27					1022 FRONT WALK
107+68	RT	28					1028 FRONT WALK
108+18	RT	24					1030 FRONT WALK
108+27 TO 108+41	RT				21		
108+41 TO 109+84	RT		710				
108+82	RT	41					1032 FRONT WALK
109+41	RT	29					1036 FRONT WALK
109+78						9	SE QUAD - GRAND VIEW - KENT RD
101+59 TO 109+84	LT		4,074				
102+01	LT	26					909 FRONT WALK
102+43	LT	30					913 FRONT WALK
102+85	LT	24					915 FRONT WALK
103+21	LT	33					919 FRONT WALK
103+41	LT	12					919 FRONT WALK
103+54	LT					9	SW QUAD - GRAND VIEW - E 10TH ST.
103+61	LT	28					925 FRONT WALK
104+02	LT	29					927 FRONT WALK
104+40	LT	28					1001 FRONT WALK
104+80	LT	26					1005 FRONT WALK
105+19	LT	28					1009 FRONT WALK
105+67	LT	27					1011 FRONT WALK
106+12	LT	28					1015 FRONT WALK
106+92	LT	26					1021 FRONT WALK
107+68	LT	23					1027 FRONT WALK
108+29	LT	30					1029 FRONT WALK
108+99	LT	36					1033 FRONT WALK
109+36	LT	29					1035 FRONT WALK
109+80	LT					9	SW QUAD - GRAND VIEW - KENT RD
	TOTAL	970	8,885	1,833	39	63	

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DULUTH, MN 55802

2023 STREET PRESERVATION PROJECT

CITY PROJECT NO.: 2016

STATE AID PROJECT NO.: N/A

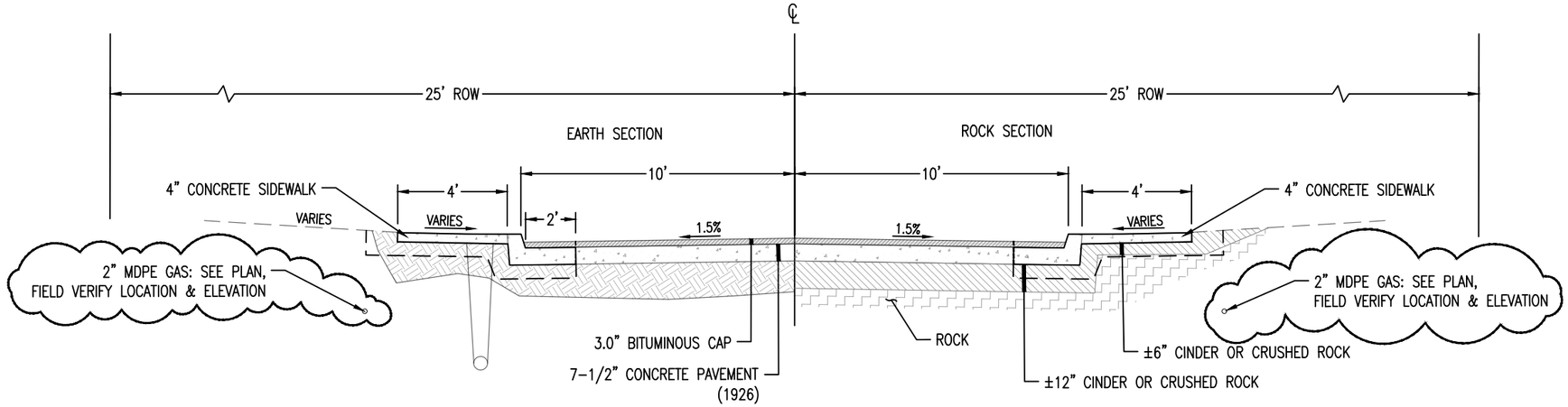
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GRAND VIEW AVE – TABULATIONS

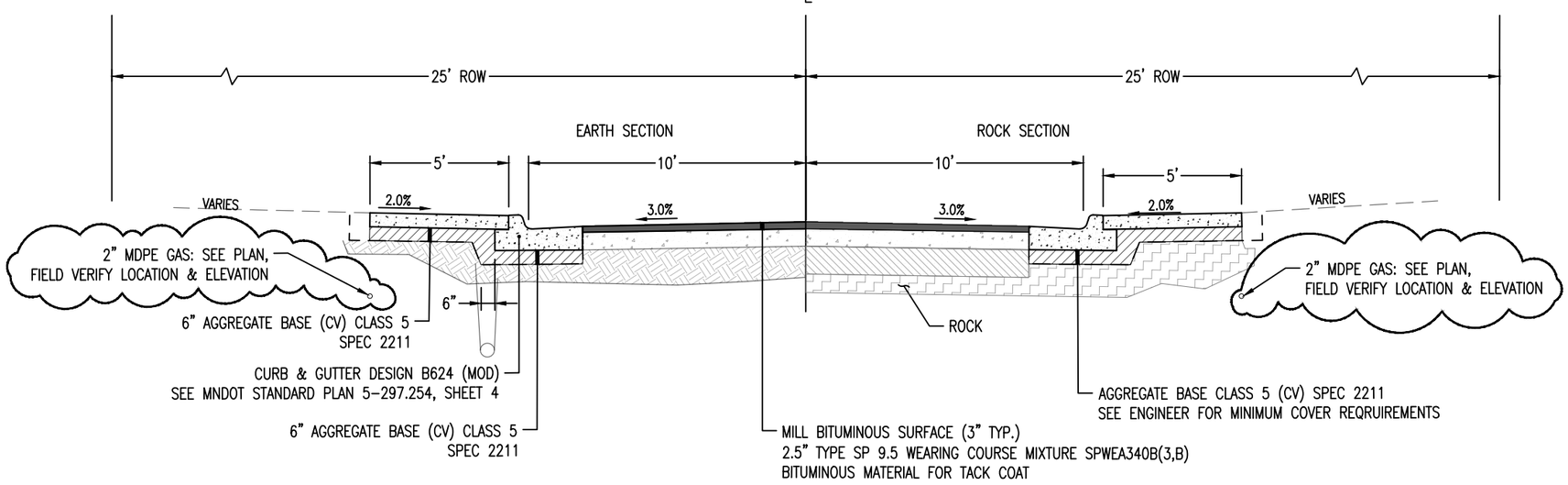
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INPLACE TYPICAL SECTION
GRAND VIEW AVENUE
STATION 100+53 TO 109+84



PROPOSED TYPICAL SECTION
GRAND VIEW AVENUE
STATION 100+53 TO 109+84



0 2.5 5
SCALE IN FEET

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2023 STREET PRESERVATION PROJECT

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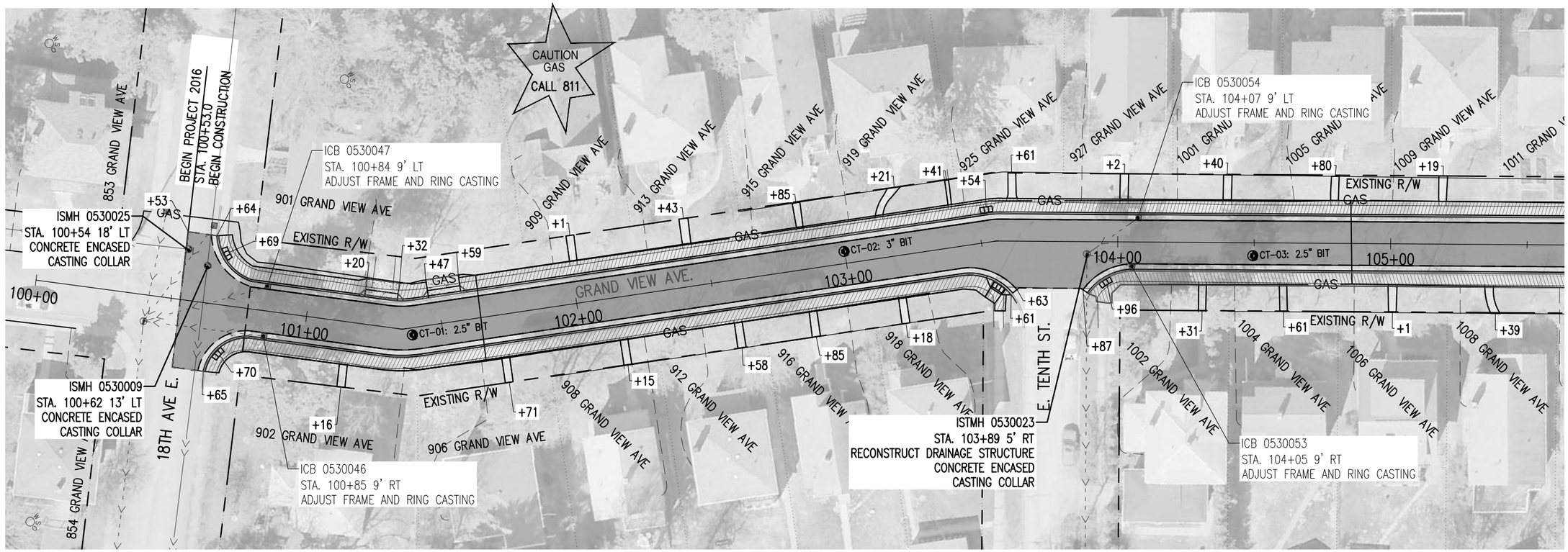
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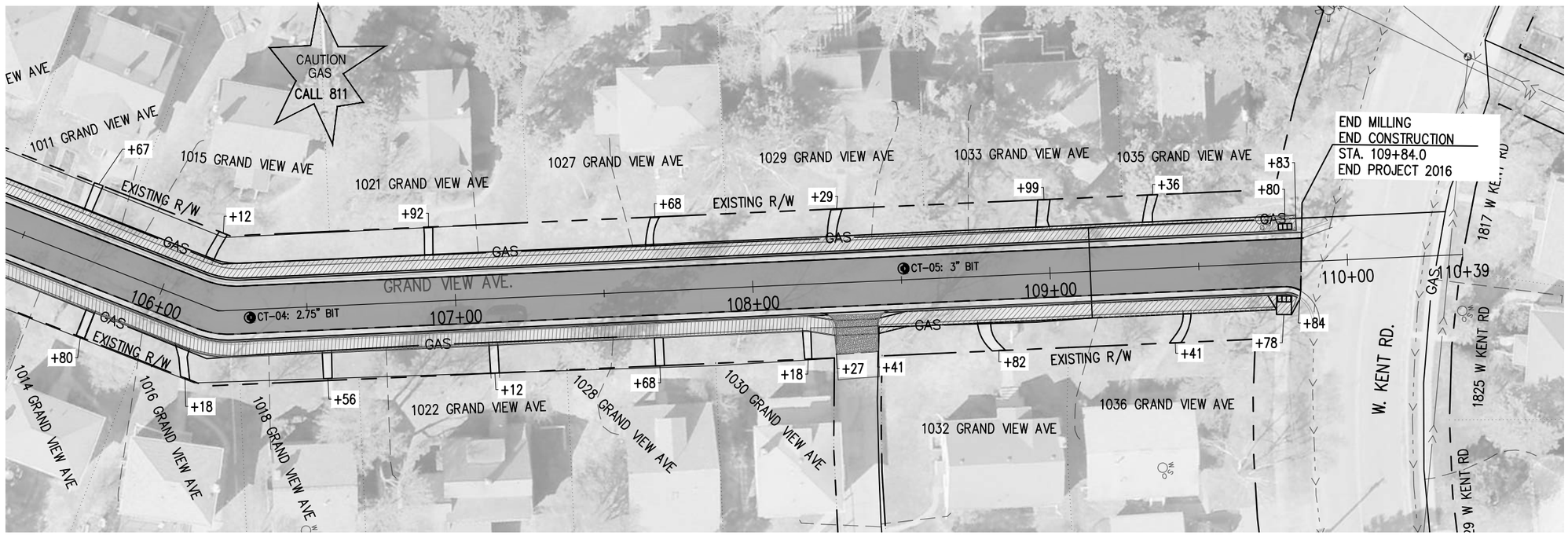
GRAND VIEW AVE – TYPICAL SECTIONS

SHEET NO. 62 OF 125

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2023 STREET PRESERVATION PROJECT

CITY PROJECT NO.: 2016 | STATE AID PROJECT NO.: N/A

DRAWN BY: DJK

GRAND VIEW AVE – CONSTRUCTION PLAN

SHEET NO. 63 OF 125

REMOVALS							A
STATION TO STATION	LT / RT	SPEC. 2104 SAWING CONCRETE PAVEMENT (FULL DEPTH)	SPEC. 2104 SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	SPEC. 2104 REMOVE CURB & GUTTER	SPEC. 2104 REMOVE CONCRETE PAVEMENT	SPEC. 2104 REMOVE BITUMINOUS PAVEMENT	REMARKS
		LIN FT	LIN FT	LIN FT	SQ YD	SQ YD	
AIRPARK BOULEVARD							
0+50	CL		32				BEGIN PROJECT BUTT JOINT
0+58 TO 2+50	LT		120	162		45	4424 HAINES RD
0+60 TO 0+70	RT		10	10			
3+43 TO 4+21	LT		106	47	32	14	4424 HAINES RD
4+11 TO 4+74	RT		86	39	18	29	4618 AIRPARK BLVD
7+01 TO 7+75	RT		74	74			
8+03 TO 8+15	29' TO 46' LT		20	20			
8+20 TO 8+49	73' RT		29				VENTURE AVE BUTT JOINT
8+52 TO 8+64	45' TO 28' LT		20	20			
8+71 TO 11+00	RT		227	227		0	
9+25 TO 11+90	LT		268	268			
9+57 TO 9+85	RT		21			16	4530 AIRPARK BLVD
10+19 TO 10+52	RT		25		21	8	4530 AIRPARK BLVD
11+65 TO 11+85	RT		20	20			
12+47 TO 12+76	LT		29	29			
16+00 TO 16+50	RT		50	50			
16+33 TO 16+93	LT		60	60			
19+65 TO 21+00	LT		133	133	16		4433 AIRPARK BLVD
19+55 TO 19+86	RT		30	30			
20+23 TO 20+76	RT		53	53			
21+28 TO 22+08	RT		104	30	49	6	4402 AIRPARK BLVD
21+73 TO 22+33	LT		40	40			
23+74 TO 23+80	26' TO 34' RT		8	8			
23+92 TO 25+40	RT		148	148			
23+97 TO 24+25	75' RT		28				ENTERPRISE CIR BUTT JOINT
24+28 TO 24+31	49' TO 63' RT		15	15			
24+75 TO 26+00	RT		146	82	31	5	4302 AIRPARK BLVD
27+20 TO 27+69	LT		43	9	8	21	4305 AIRPARK BLVD
27+87 TO 27+97	RT		10	10			
28+78 TO 29+84	LT		150	57	46	48	4223 AIRPARK BLVD
30+32 TO 30+51	LT		19	19			
30+32 TO 32+01	RT	24	151	121	16		4214 AIRPARK BLVD
30+98 TO 31+94	LT		129	70	37	38	4223 AIRPARK BLVD
32+50 TO 32+57	41' TO 58' RT		18	18			
32+61 TO 32+89	75' RT		28				ENTERPRISE CIR BUTT JOINT
32+68 TO 32+93	LT		25	25			
32+92 TO 33+07	32' TO 59' RT		32	32			
33+30 TO 34+43	LT		141	97	10	23	4209 AIRPARK BLVD
34+30 TO 34+50	RT		20	20			
35+85 TO 36+53	LT		88	55	9	16	4209 AIRPARK BLVD
35+93 TO 36+36	RT	6	43	43	1		4206 AIRPARK BLVD
36+59 TO 36+67	RT	6	8	8	1		4206 AIRPARK BLVD
37+79 TO 38+26	LT		74	47		22	4015 AIRPARK BLVD
42+00 TO 42+72	LT		98	72		20	4015 AIRPARK BLVD
44+39 TO 44+55	LT		16	16			
44+46 TO 44+54	RT		8	8			
46+83 TO 47+06	RT		23	23			
49+49 TO 49+99	33' LT		50				ENDEAVOR DR. BUTT JOINT
48+41 TO 49+15	RT		112	74		37	3930 AIRPARK BLVD
50+28 TO 50+53	RT		25	25			
51+12 TO 51+28	RT	6	16	16	3		3920 AIRPARK BLVD
52+70 TO 53+19	RT	10	63		19	8	3920 AIRPARK BLVD
55+78 TO 56+08	LT		30	30			
55+40 TO 55+87	16' TO 72' RT		83	83			
55+90 TO 56+18	75' RT		28				PROSPERITY RD BUTT JOINT
56+21	63' TO 72' RT		9	9			
56+59 TO 56+84	RT		25	25			
65+71	CL		69				END PROJECT BUTT JOINT
	TOTAL	**52**	**3536**	**2577**	**317**	**356**	

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: Patrick Loomis

PATRICK F. LOOMIS
TYPE NAME

DATE: 04/20/2023

LIC. NO: 49099

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

2023 STREET PRESERVATION PROJECT

CITY PROJECT NO.: 2016

STATE AID PROJECT NO.: N/A

DRAWN BY: ZAE/DJK/SCA/NML

AIRPARK BLVD – TABULATIONS

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EXCAVATION AND GRADING			B
STATION TO STATION	LT / RT	SPEC 2501 CLEAN DRAINAGE DITCH LIN FT	REMARKS
AIRPARK BOULEVARD			
4+05 TO 4+36	LT	30	DITCH FOR NEW CB CASTING IDMH 1160031
15+94 TO 16+44	RT	50	AROUND NEW CULVERT APRON AT ICB 1160031
61+23 TO 61+33	LT	10	ROAD EDGE TO DRAINAGE DITCH
	TOTAL	**90**	

MILLING AND RECLAMATION OPERATIONS							C
STATION TO STATION	LT / RT	SPEC. 2131 CALCIUM CHLORIDE SOLUTION GALLON	SPEC. 2215 FULL DEPTH RECLAMATION SQ YD	SPEC. 2215 HAUL FULL DEPTH RECLAMATION (LV) CU YD	SPEC. 2232 MILL BITUMINOUS SURFACE (2") SQ YD	SPEC. 2232 MILL BITUMINOUS SURFACE (4") SQ YD	REMARKS
AIRPARK BOULEVARD							
0+50 (BOP) TO 36+00	CL	3460	13840	200		13840	
36+00 TO 65+71 (EOP)	CL	2458	9830	700	9830		
	TOTAL	**5918**	**23670**	**900**	**9830**	**13840**	

BITUMINOUS PAVEMENT				D
STATION TO STATION	LT / RT	SPEC. 2357 BITUMINOUS MATERIAL FOR TACK COAT GALLON	SPEC. 2360 TYPE SP 9.5 WEARING COURSE MIXTURE (3,C) TON	REMARKS
AIRPARK BOULEVARD				
0+24 TO 36+00	CL	1384	4568	5.5" BIT., 3 LAYERS
36+00 TO 65+71	CL	983	3244	5.5" BIT., 3 LAYERS
0+58 TO 2+50	LT	1	3	4424 HAINES RD
3+43 TO 4+21	LT	1	3	4424 HAINES RD
4+11 TO 4+74	RT	1	7	4618 AIRPARK BLVD
9+57 TO 9+85	RT	1	2	4530 AIRPARK BLVD
10+19 TO 10+52	RT	1	3	4530 AIRPARK BLVD
21+28 TO 21+78	RT	1	2	4402 AIRPARK BLVD
24+75 TO 26+00	RT	1	2	4302 AIRPARK BLVD
27+20 TO 27+69	LT	1	3	4305 AIRPARK BLVD
28+78 TO 29+84	LT	2	12	4223 AIRPARK BLVD
30+98 TO 31+94	LT	2	10	4223 AIRPARK BLVD
33+30 TO 34+43	LT	1	3	4209 AIRPARK BLVD
35+85 TO 36+53	LT	1	2	4209 AIRPARK BLVD
37+79 TO 38+26	LT	1	3	4015 AIRPARK BLVD
42+09 TO 42+72	LT	1	3	4015 AIRPARK BLVD
52+70 TO 53+19	RT	1	3	3920 AIRPARK BLVD
	TOTAL	**2384**	**7873**	

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AIRPARK BLVD – TABULATIONS

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ENCASEMENT AND REPAIR (1 OF 2)

E

STATION TO STATION	LT / RT	SPEC. 2104 REMOVE VALVE BOX (EACH)	SPEC. 2504 CONCRETE ENCASED VALVE BOX COLLAR (EACH)	SPEC. 2506 CASTING ASSEMBLY (EACH)	SPEC. 2506 RECONSTRUCT DRAINAGE STRUCTURE (LIN FT)	SPEC. 2506 ADJUST FRAME & RING CASTING (EACH)	SPEC. 2506 CONCRETE ENCASED CASTING COLLAR (EACH)	REMARKS
AIRPARK BOULEVARD								
0+63	17' LT					1		ICB 1160022
0+65	17' RT				1	1		ICB 1160023
1+21	5' RT		1					WATER SERVICE VALVE
1+53	7' RT		1					WATER SERVICE VALVE
3+90	8' LT		1					GAS VALVE
3+90	9' LT		1					GAS TEST POINT
4+09	14' RT		1					GAS VALVE
4+13	25' LT					1		COD TO PROVIDE NEW GRATE
4+14	17' LT					1		ICB 1160024
4+15	18' RT					1		ICB 1160025
4+25	CL						1	ISMH 1160005
5+80	10' RT		1					GAS VALVE
8+08	13' RT		1					GAS VALVE
8+09	38' LT					1		ICB 1160026
8+19	19' LT				1		1	IDMH 1160033
8+20	17' RT					1		IBC 1160027 (ROUND)
8+22	47' LT							GAS VALVE (INSTALLED BY COD IN SPRING 2023)
8+28	2' RT		1					WATER VALVE
8+30	6' RT		1					WATER VALVE
8+46	10' RT		1					WATER VALVE
8+37	4' LT						1	ISMH 1160006
8+58	36' LT					1		IBC 1160028
9+03	17' RT			1				PCB-1
11+75	18' RT					1		IBC 1160030
11+86	16' LT					1		IBC 1160029
11+89	4' LT						1	ISMH 1160010
12+58	10' RT		1					WATER SERVICE VALVE
14+31	14' LT						1	IDMH 116003X
14+75	6' RT		1					WATER VALVE
14+82	2' LT				1		1	ISMH 1160024
15+40	10' LT						1	ISMH 1160011
16+19	18' RT					1		ICB 1160031 / PCB-3
16+63	17' LT					1		ICB 1160032 / PCB-2
18+97	15' RT		1					WATER VALVE
19+70	17' RT					1		ICB 1160033 / PCB-4
19+70	17' LT				1	1		ICB 1160034 / PCB-5
19+80	5' RT						1	ISMH 1160012
CHART SUBTOTAL		**0**	**13**	**1**	**4**	**14**	**8**	

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AIRPARK BLVD – TABULATIONS

ENCASEMENT AND REPAIR (2 OF 2)

E

STATION TO STATION	LT / RT	SPEC. 2104 REMOVE VALVE BOX (EACH)	SPEC. 2504 CONCRETE ENCASED VALVE BOX COLLAR (EACH)	SPEC. 2506 CASTING ASSEMBLY (EACH)	SPEC. 2506 RECONSTRUCT DRAINAGE STRUCTURE (LIN FT)	SPEC. 2506 ADJUST FRAME & RING CASTING (EACH)	SPEC. 2506 CONCRETE ENCASED CASTING COLLAR (EACH)	REMARKS
AIRPARK BOULEVARD								
23+77	30' RT				0.5	1		ICB 1160002
23+94	17' RT						1	IDMH 1160040
23+95	17' LT				1.5	1		ICB 1160004
24+00	23' RT						1	IDMH 1160002
24+06	7' RT		1					WATER VALVE
24+22	5' LT						1	ISMH 1160013
24+28	56' RT				2	1		ICB 1160003
25+01	3' RT		1					WATER VALVE
25+05	9' RT		1					GAS VALVE
27+92	17' RT				0.5	1		ICB 1160006
28+25	5' LT				1			ISMH 1160017
30+07	6' RT		1					GAS VALVE
30+42	3' RT		1					WATER SERVICE VALVE
30+60	6' RT		1					WATER SERVICE VALVE
32+53	44' LT					1		ICB 1160008
32+70	7' RT		1					WATER VALVE
32+78	18' RT						1	IDMH 1160006
32+79	17' LT					1		ICB 1160007
32+95	11' RT		1					GAS VALVE
32+99	39' RT					1		ICB 1160009
34+26	3' RT		1					WATER VALVE
37+36	3' RT		1					WATER SERVICE VALVE
37+45	5' RT		1					WATER OR GAS VALVE
37+48	6' LT				1		1	ISMH 1160020
37+53	5' RT		1					WATER OR GAS VALVE
37+55	1' RT		1					WATER VALVE
37+95	6' LT						1	ISMH 1160033
38+46	6' RT		1					GAS VALVE
42+13	15' LT					1		ICB 1160020
42+61	11' LT		1					WATER SERVICE VALVE
44+50	15' LT					1		ICB 1160018
44+50	15' RT					1		IBC 1160019
46+99	15' RT					1		ICB 1160016
49+63	15' LT		1					WATER VALVE
49+73	9' RT						1	ISMH 1160031
50+30	4' LT		1					GAS VALVE (CURRENTLY UNDER PAVEMENT)
50+44	15' RT					1		ICB 1160015
52+89	9' RT				1		1	ISMH 1160032
55+89	68' RT					1		ICB 1500003
55+93	7' LT		1					WATER VALVE
55+96	10' LT		1					WATER VALVE
56+02	7' RT						1	ISMH 1500007
56+19	68' RT					1		ICB 1500004
56+73	15' RT					1		ICB 1500002
59+53	9' RT						1	ISMH 1500008
61+75	9' RT							ISMH 1500009
63+19	CL						1	ISMH 1500010
64+39	CL				1		1	ISMH 1500011
64+80	6' RT		1					GAS VALVE
65+40	7' RT	1						GAS VALVE BOX
65+56	CL				1		1	ISMH 1500012
CHART SUBTOTAL		**1**	**20**	**0**	**9.5**	**15**	**13**	
TOTAL		**1**	**33**	**1**	**13.5**	**29**	**21**	

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PATRICK F. LOOMIS
TYPE NAME

DATE: 04/20/2023

LIC. NO: 49099

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

2023 STREET PRESERVATION PROJECT

CITY PROJECT NO.: 2016

STATE AID PROJECT NO.: N/A

DRAWN BY: ZAE/DJK/SCA/NML

AIRPARK BLVD – TABULATIONS

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PROPOSED CONCRETE				F
		SPEC. 2531	SPEC. 2531	
STATION TO STATION	LT / RT	CONCRETE CURB & GUTTER DESIGN B624	8" CONCRETE VALLEY GUTTER	REMARKS
		LIN FT	SQ YD	
AIRPARK BOULEVARD				
0+58 TO 2+50	LT	134	45	4424 HAINES RD
0+60 TO 0+70	RT	10		
3+43 TO 4+21	LT	21	45	4424 HAINES RD
4+11 TO 4+74	RT	24	32	4618 AIRPARK BLVD
7+01 TO 7+75	RT	74		
8+03 TO 8+15	29' TO 46' LT	20		
8+52 TO 8+64	45' TO 28' LT	20		
8+71 TO 11+00	RT	227		
9+25 TO 11+90	LT	268		
9+57 TO 9+85	RT		12	4530 AIRPARK BLVD
10+19 TO 10+52	RT		13	4530 AIRPARK BLVD
11+65 TO 11+85	RT	20		
12+47 TO 12+76	LT	29		
16+00 TO 16+50	RT	50		
16+33 TO 16+93	LT	60		
19+65 TO 21+00	LT	133	16	4433 AIRPARK BLVD
19+55 TO 19+86	RT	30		
20+23 TO 20+76	RT	53		
21+28 TO 22+08	RT	30	49	4402 AIRPARK BLVD
21+73 TO 22+33	LT	40		
23+74 TO 23+80	26' TO 34' RT	8		
23+92 TO 25+40	RT	148		
24+28 TO 24+31	49' TO 63' RT	15		
24+75 TO 26+00	RT	82	31	4302 AIRPARK BLVD
27+20 TO 27+69	LT	15	18	4305 AIRPARK BLVD
27+87 TO 27+97	RT	10		
28+78 TO 29+84	LT	21	69	4223 AIRPARK BLVD
30+32 TO 30+51	LT	19		
30+32 TO 32+01	RT	128	16	4214 AIRPARK BLVD
30+98 TO 31+94	LT	40	57	4223 AIRPARK BLVD
32+50 TO 32+57	41' TO 58' RT	18		
32+68 TO 32+93	LT	25		
32+92 TO 33+07	32' TO 59' RT	32		
33+30 TO 34+43	LT	69	35	4209 AIRPARK BLVD
34+30 TO 34+50	RT	20		
35+85 TO 36+53	LT	35	26	4209 AIRPARK BLVD
35+93 TO 36+36	RT	43	1	4206 AIRPARK BLVD
36+59 TO 36+67	RT	8	1	4206 AIRPARK BLVD
37+79 TO 38+26	LT	47	15	4015 AIRPARK BLVD
42+00 TO 42+72	LT	72	14	4015 AIRPARK BLVD
44+39 TO 44+55	LT	16		
44+46 TO 44+54	RT	8		
46+83 TO 47+06	RT	23		
48+41 TO 49+15	RT	11	51	3930 AIRPARK BLVD
50+28 TO 50+53	RT	25		
51+12 TO 51+28	RT	16	3	3920 AIRPARK BLVD
52+70 TO 53+19	RT		19	3920 AIRPARK BLVD
55+78 TO 56+08	LT	30		
55+40 TO 55+87	16' TO 72' RT	83		
55+21	63' TO 72' RT	9		
56+59 TO 56+84	RT	25		
	TOTAL	**2344**	**568**	

SIGNAGE AND PAVEMENT MARKING					G
		SPEC. 2582	SPEC. 2582	SPEC. 2582	
STATION TO STATION	LT / RT	4" SOLID LINE PAINT	24" SOLID LINE PAINT	4" DOUBLE SOLID PAINT	REMARKS
		LIN FT	LIN FT	LIN FT	
AIRPARK BOULEVARD					
0+50 TO 7+83	CL			744	YELLOW
8+97 TO 23+73	CL			1476	YELLOW
24+59 TO 32+33	CL			774	YELLOW
33+22 TO 49+37	CL			1615	YELLOW
50+21 TO 55+66	CL			545	YELLOW
56+49 TO 65+64	CL			915	YELLOW
65+16 TO 65+71	LT	58			BIT. RADIUS - WHITE
65+16 TO 65+71	RT	59			BIT. RADIUS - WHITE
65+63	RT		22		STOP BAR - WHITE
	TOTAL	**117**	**22**	**6069**	

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SIGNATURE: _____ PATRICK F. LOOMIS (TYPE NAME)

DATE: 04/20/2023

LIC. NO: 49099

CITY OF DULUTH
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411 W. 1ST ST. STE. 240
DULUTH, MN 55802

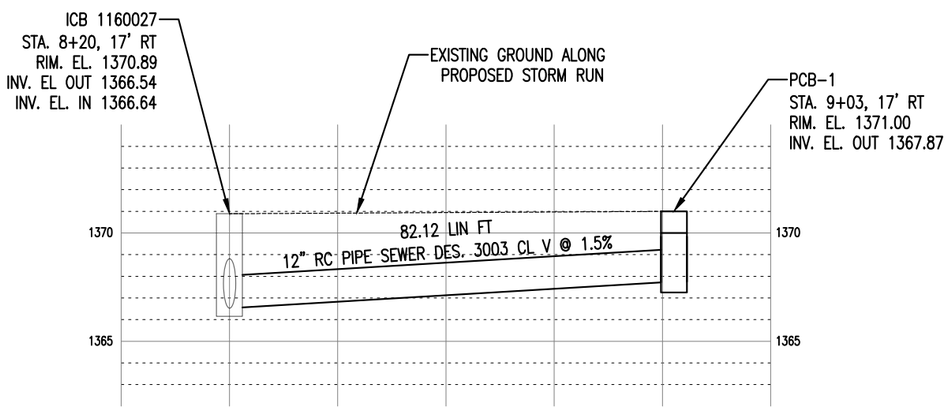
2023 STREET PRESERVATION PROJECT

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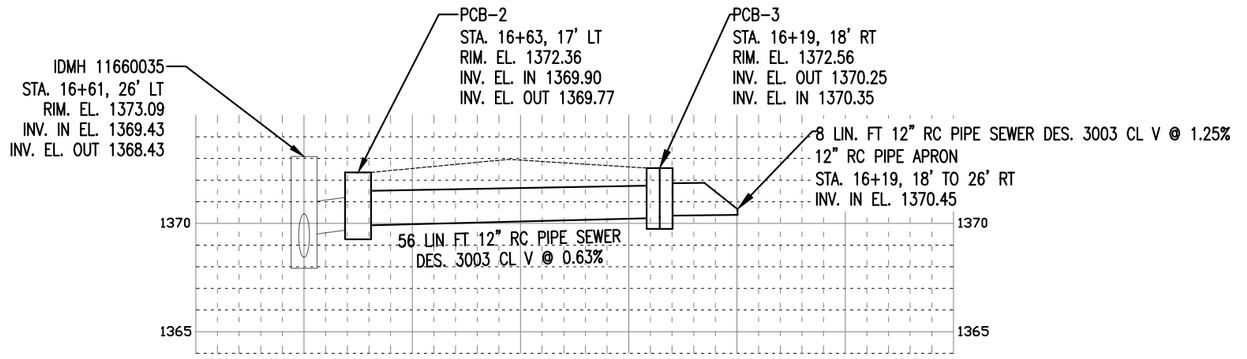
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AIRPARK BLVD – TABULATIONS

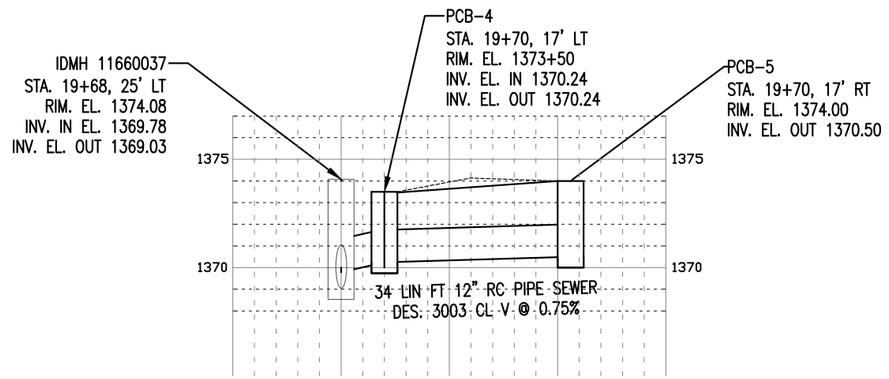
DRAINAGE CONSTRUCTION										H
STATION TO STATION	LT / RT	SPEC. 2104 REMOVE CATCH BASIN EACH	SPEC. 2104 REMOVE SEWER PIPE (STORM) LIN FT	SPEC. 2501 12" RC PIPE APRON EACH	SPEC. 2502 8" PERF PE PIPE DRAIN LIN FT	SPEC. 2503 12" RC PIPE SEWER DES 3006 CL V LIN FT	SPEC. 2506 CONNECT INTO EXISTING STORM SEWER EACH	SPEC. 2506 CONNECT INTO EXISTING MH OR CB EACH	SPEC. 2506 CONST DRAINAGE STRUCTURE DES SD-48 LIN FT	REMARKS
AIRPARK BOULEVARD										
8+20 TO 9+03	17' RT					82		1	3	PCB-1 TO ICB 1160027, SEE STORM PROFILE A - A'
8+58 TO 8+71	20' RT				198			1		CONNECT INTO ICB 1160028
9+02 TO 11+00	36' TO 29' LT				15			1		CONNECT INTO PCB-1
16+19 TO 16+63	18' RT TO 17' LT	2	56			56	1		6	PCB-2 TO PCB 3, SEE STORM PROFILE B - B'
16+19	18' RT TO 24' RT			1		8				PCB-3 TO DITCH
19+34 TO 19+70	37' TO 16' RT				40			1		CONNECT INTO PCB-5
19+70	17' LT TO 17' RT	2	34			34	1		6	PCB-4 TO ICB 5, SEE STORM PROFILE C - C'
19+70	16' LT TO 16' RT		32			32	2			ICB 1160012 TO ICB1160034
	TOTAL	**4**	**122**	**1**	**253**	**212**	**4**	**4**	**15**	



STORM PROFILE A – A'
1"= 5' VERT., 20' HORIZ.



STORM PROFILE B – B'
1"= 5' VERT., 20' HORIZ



STORM PROFILE C – C'
1"= 5' VERT., 20' HORIZ

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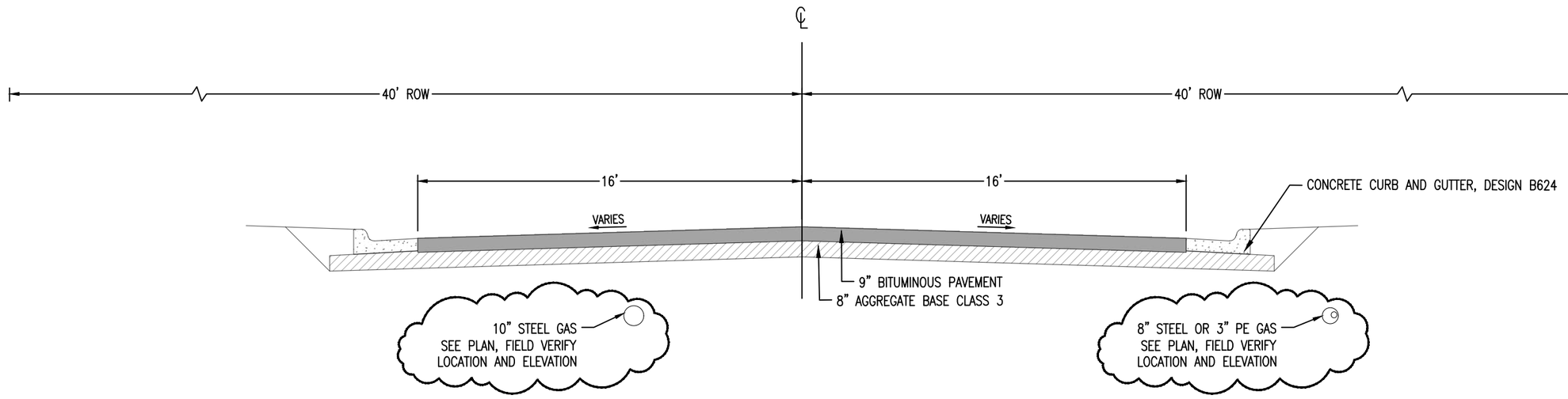
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AIRPARK BLVD – TABULATIONS

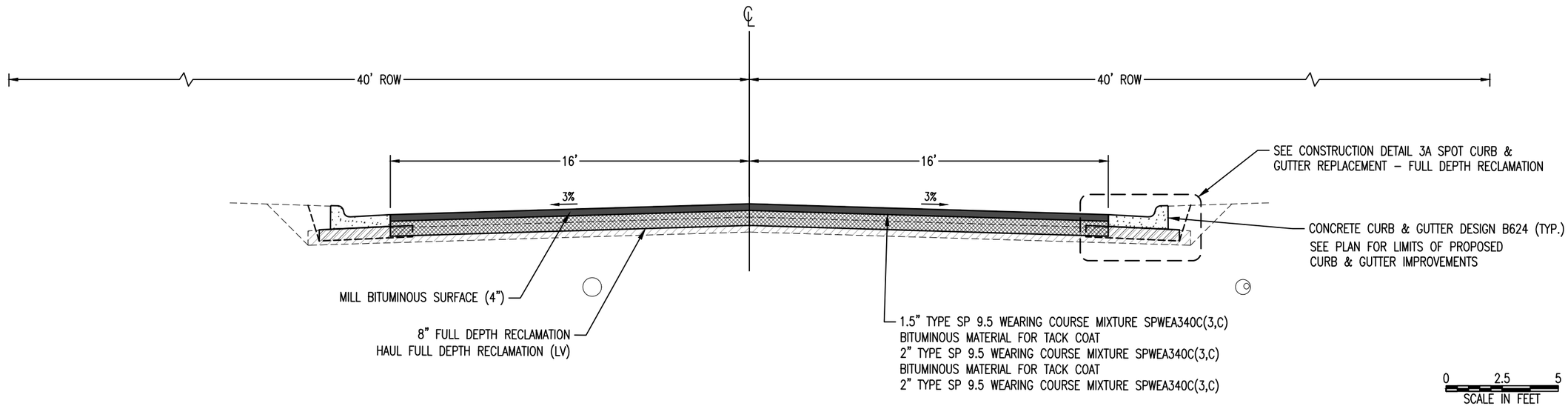
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EXISTING TYPICAL SECTION
AIRPARK BOULEVARD
STATION 0+50 TO 36+00



PROPOSED TYPICAL SECTION
AIRPARK BOULEVARD
STATION 0+50 TO 36+00



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2023 STREET PRESERVATION PROJECT

CITY PROJECT NO.: 2016

STATE AID PROJECT NO.: N/A

DRAWN BY: ZAE/DJK/SCA/NML

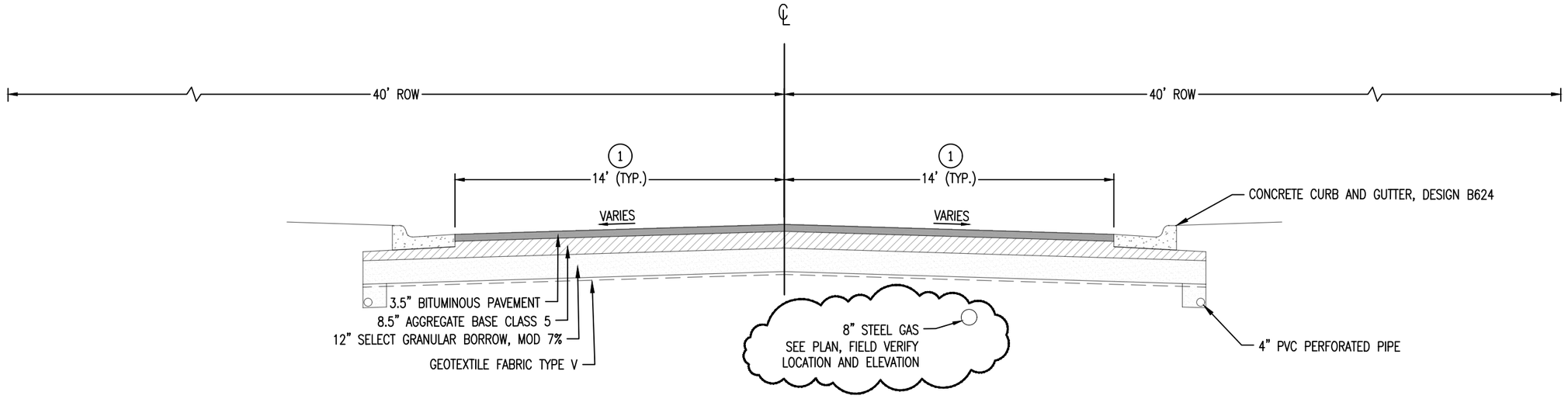
AIRPARK BLVD – TYPICAL SECTIONS

SHEET NO. 70 OF 125

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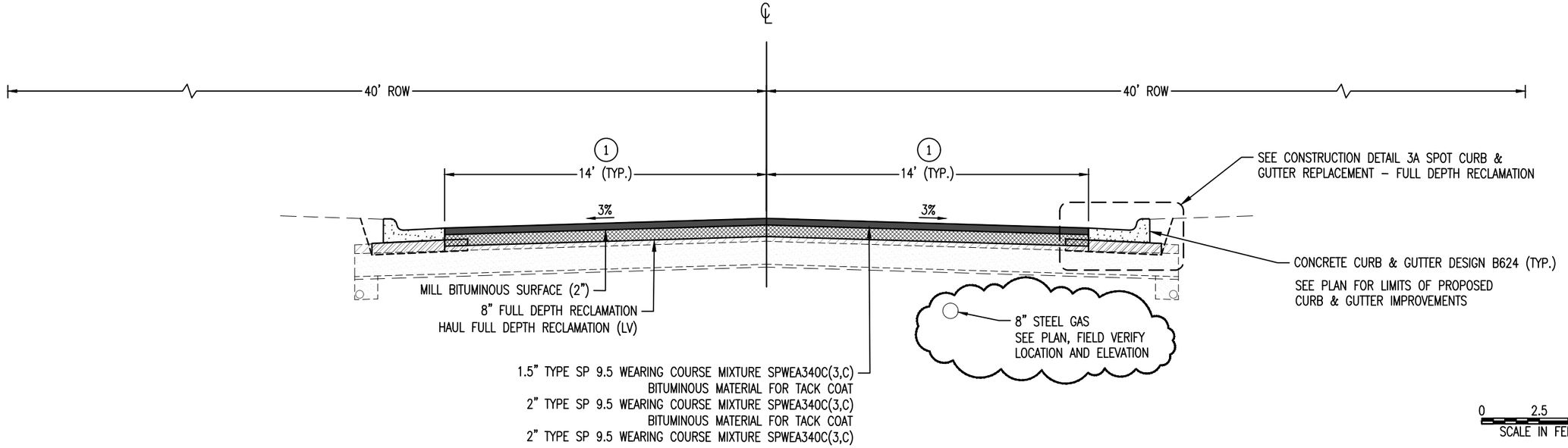
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EXISTING TYPICAL SECTION
AIRPARK BOULEVARD
STATION 36+00 TO 65+71



(1) BITUMINOUS PAVEMENT WIDTH TAPERS FROM 16' TO 14'
STATION 36+67 TO 37+67

PROPOSED TYPICAL SECTION
AIRPARK BOULEVARD
STATION 36+00 TO 65+71



0 2.5 5
SCALE IN FEET

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: Patrick Loomis

PATRICK F. LOOMIS
TYPE NAME

DATE: 04/20/2023

LIC. NO: 49099

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

2023 STREET PRESERVATION PROJECT

CITY PROJECT NO.: 2016

STATE AID PROJECT NO.: N/A

DRAWN BY: ZAE/DJK/SCA/NML

AIRPARK BLVD – TYPICAL SECTIONS

SHEET NO. 71 OF 125

AIRPARK BLVD
STA=-0+00.00
HAINES RD
STA=197+97.00

AIRPARK SQUARE LLC
4424 HAINES RD

OLSON PARTNERHIP LLP

ICB 1160022
ADJUST FRAME &
RING CASTING
STA. 0+63 17'LT

EXISTING R/W

4" DOUBLE SOLID PAINT

L=350.00'
R=1432.40'
Δ=13.9999

CLEAN DRAINAGE DITCH
STA. 4+05 TO 4+36 LT

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 3+90 9'LT

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 3+90 8'LT

IDMH 1160031
ADJUST FRAM & RING CASTING
NOTE: CITY OF DULUTH TO PROVIDE NEW GRATE
STA. 4+13 25'LT

ICB 1160024
ADJUST FRAME &
RING CASTING
STA. 4+14 17'LT

ISMH 1160005
CONCRETE ENCASED
CASTING COLLAR
STA. 4+25 0'RT

MATCH LINE=5+60

PT 5+74.12

PC 2+24.12

26.0'LT

26.0'LT

+58 +85 +43 +50 +43 +51 +5 +36 +8 +21

1+00 2+00 3+00 4+00 5+00

SB-1, BIT. 9.5"

AIRPARK BLVD

AIRPARK BLVD. – STATION 0+50
BEGIN PROJECT 2016
BEGIN CONSTRUCTION (RECLAIM)

+60 +70

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 1+21 5'RT

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 1+53 7'RT

EXISTING R/W

+26 +65 +74

+11

31.0'RT

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 4+09 14'RT

ICB 1160023
ADJUST FRAME & RING CASTING
RECONSTRUCT DRAINAGE STRUCTURE (1 LF)
STA. 0+65 17'RT

ICB 1160025
ADJUST FRAME &
RING CASTING
STA. 4+15 18'RT

HAINES RD

TITANIUM PARTNERS LLC
4418 HAINES RD

QUILLEN ENTERPRISES LLC
4618 AIRPARK BLVD

OLSON PARTNERHIP LLP
4611 AIRPARK BLVD

CAUTION
GAS
CALL 811

VENTURE AVE. – STATION 0+66
BEGIN PROJECT 2016
BEGIN CONSTRUCTION (RECLAIM)

ICB 1160026
ADJUST FRAME & RING CASTING
STA. 8+09 38'LT

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 8+22 47'LT

ICB 1160028
ADJUST FRAME &
RING CASTING
STA. 8+58 36'LT

ISMH 1160006
CONCRETE ENCASED CASTING COLLAR
STA. 8+37 4'LT

BEGIN 8" PERF PE PIPE DRAIN
CONNECT TO ICB 1160028
SEE CONSTRUCTION DETAIL 9

MELLIN PROMOTIONAL ADVERTISING INC

IDMH 1160033
CONCRETE ENCASED CASTING COLLAR
RECONSTRUCT DRAINAGE STRUCTURE (1 LF)
NOTE: MH CASTING CURRENTLY UNDER PAVEMENT
STA. 8+19 19'LT

EXISTING R/W

VENTURE AVE

PC: 8+34.12

+15 +52 +64

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 8+30 6'RT

4" DOUBLE SOLID PAINT

PT 5+74.12

AIRPARK BLVD
STA=8+34.12
VENTURE AVE
STA=0+00.00

+3

0+00

+25

MATCH LINE=5+60

6+00 7+00 8+00 9+00 10+00 11+00

AIRPARK BLVD

+1 +75

+57 +85 +19 +52 +00

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 8+08 13'RT

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 8+28 2'RT

+71 27.3'RT

24.7'RT

24.7'RT

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 8+46 10'RT

PCB-1
CONST DRAINAGE STRUCTURE DES SD-48
CASTING ASSEMBLY
STA. 9+03 17'RT
SEE PROFILE A-A' ON SHEET 69

EXISTING R/W

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 5+80 10'RT

ICB 1160027
ADJUST FRAME &
RING CASTING
STA. 8+20 17'RT

72.7'RT

12" RC PIPE SEWER DES 3006 CL V

BEGIN 8" PERF PE PIPE DRAIN
CONNECT TO PCB-1
SEE CONSTRUCTION DETAIL 9

ICB 1160047
STA. 8+20 70'RT

ICB 1160046
STA. 8+50 71'RT

QUILLEN ENTERPRISES LLC
4618 AIRPARK BLVD

JOHNSON ALICIA
4602 AIRPARK BLVD

AMERIPRIDE SERVICES INC
4530 AIRPARK BLVD

QUILLEN ENTERPRISES LLC
4618 AIRPARK BLVD

0 20 40
SCALE IN FEET

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AIRPARK BLVD – CONSTRUCTION PLAN

SHEET NO. 72 OF 125

4/24/2023 4:17 PM

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ICB 1160029
ADJUST FRAME &
RING CASTING
STA. 11+86 16'LT

ISMH 1160010
CONCRETE ENCASED
CASTING COLLAR
STA. 11+89 4'LT

KLEIMAN JOSEPH H & ROS
4503 AIRPARK BLVD

ISMH 1160024
CONCRETE ENCASED CASTING COLLAR
RECONSTRUCT DRAINAGE STRUCTURE (1 LF)
STA. 14+82 2'LT

IDMH 116003X
ADJUST FRAM & RING CASTING
STA. 14+31 14'LT

EXISTING R/W

SEAWAY PORT AUTHORITY
OF DULUTH

ISMH 1160011
CONCRETE ENCASED
CASTING COLLAR
STA. 15+40 10'LT

UNITED PIPING INC

ICB 1160032 / PCB-2
REMOVE CATCH BASIN
CONST DRAINAGE STRUCTURE DES SD-48
ADJUST FRAME & RING CASTING
SEE PROFILE B-B' ON SHEET 69
STA. 16+63 17'LT

IDMH 1160035
STA. 16+61 26'LT

CONNECT INTO EXISTING
STORM SEWER (12" RCP)

REMOVE SEWER PIPE (STORM)
12" RC PIPE SEWER DES 3006 CL V

EXISTING R/W

+90 +47 +76 +33 +93

SB-2, BIT. 9"

AIRPARK BLVD

12+00 13+00 14+00 15+00 16+00 17+00

MATCH LINE=11+50

MATCH LINE=17+40

+65 +85 +00 +50 +94 +44

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 12+58 10'RT

4" DOUBLE SOLID PAINT

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 14+75 6'RT

ICB 1160030
ADJUST FRAME &
RING CASTING
STA. 11+75 18'RT

L=700.00'
R=1432.40'
Δ=27.9999

SCHOKKER PROPERTIES LLC
4502 AIRPARK BLVD

ICB 1160031 / PCB-3
REMOVE CATCH BASIN
CONST DRAINAGE STRUCTURE DES SD-48
ADJUST FRAME & RING CASTING
SEE PROFILE B-B' ON SHEET 69
STA. 16+19 18'RT

CLEAN DRAINAGE DITCH
STA. 15+94 TO 16+44 RT

TIMS PROPERTIES LLC
4444 AIRPARK BLVD

UNITED PIPING INC

IDMH 1160037
STA. 19+68 25'LT

ICB 1160034 / PCB-4
REMOVE CATCH BASIN
CONST DRAINAGE STRUCTURE DES SD-48
ADJUST FRAME & RING CASTING
SEE PROFILE C-C' ON SHEET 69
STA. 19+70 17'LT

L=350.00'
R=1432.40'
Δ=13.9999

CONNECT INTO EXISTING
STORM SEWER (12" RCP)

REMOVE SEWER PIPE (STORM)
12" RC PIPE SEWER DES 3006 CL V

UNITED PIPING INC
4433 AIRPARK BLVD

EXISTING R/W

PC: 17+94.12

PT: 21+44.12

+65 +50 22.8'LT +0 +73 +13

18+00 19+00 20+00 21+00 22+00 23+00

AIRPARK BLVD

MATCH LINE=17+40

MATCH LINE=23+30

+55 +85 +23 +76 +28 +78 +8

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 18+97 15'RT

BEGIN 8" PERF PE PIPE DRAIN
CONNECT TO PCB-3
SEE CONSTRUCTION DETAIL 9

ICB 1160033 / PCB-5
REMOVE CATCH BASIN
CONST DRAINAGE STRUCTURE DES SD-48
ADJUST FRAME & RING CASTING
SEE PROFILE C-C' ON SHEET 69
STA. 19+70 17'RT

ISMH 1160012
CONCRETE ENCASED CASTING COLLAR
STA. 19+80 5'RT

4" DOUBLE SOLID PAINT

31.0'RT

EXISTING R/W

TIMS PROPERTIES LLC
4444 AIRPARK BLVD

PLUMBERS & STEAMFITTERS
4402 AIRPARK BLVD

CAUTION
GAS
CALL 811

0 20 40
SCALE IN FEET

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DRAWN BY: ZAE/DJK/SCA/NML

AIRPARK BLVD – CONSTRUCTION PLAN

SHEET NO. 73 OF 125

4/24/2023 4:17 PM

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FORUM COMMUNICATIONS COMPANY
4305 AIRPARK BLVD

P & D DEVELOPMENT LLC
4223 AIRPARK BLVD

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 24+06 7'RT

AIRPARK BLVD
STA=24+11.06
ENTERPIRSE CIR
STA=0+00.00

ICB 1160004
RECONSTRUCT DRAINAGE
STRUCTURE (1.5 LF)
ADJUST FRAME & RING CASTING
STA. 23+95 17'LT

ICB 1160005
STA. 27+92 17'LT

ISMH 1160017
CONCRETE ENCASED CASTING COLLAR
RECONSTRUCT DRAINAGE STRUCTURE (1 LF)
NOTE: MH CASTING CURRENTLY UNDER PAVEMENT
STA. 28+25 5'LT

IDMH 1160040
CONCRETE ENCASED
CASTING COLLAR
STA. 23+94 17'RT

ISMH 1160013
CONCRETE ENCASED
CASTING COLLAR
STA. 24+22 5'LT

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 25+01 3'RT

EXISTING R/W

29.4'LT

30.0'LT

SB-3, BIT. 4.75"

AIRPARK BLVD

MATCH LINE=23+30

MATCH LINE=29+30

24+00 25+00 26+00 27+00 28+00 29+00

+92 +40 +20 +69 +35 +78 +84

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 23+79 11'RT

+74 +80 33.8'RT

+75 +0 +43 +00 28.0'RT

+87 +97

4" DOUBLE SOLID PAINT

IDMH 1160002
CONCRETE ENCASED
CASTING COLLAR
STA. 24+00 23'RT

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 25+05 9'RT

+31 49.2'RT

ICB 1160002
RECONSTRUCT DRAINAGE
STRUCTURE (0.5 LF)
ADJUST FRAME & RING CASTING
STA. 23+77 30'RT

ICB 1160003
RECONSTRUCT DRAINAGE STRUCTURE (2 LF)
ADJUST FRAME & RING CASTING
STA. 24+28 56'RT

+28 63.3'RT

75.0'RT

ENTERPRISE CIR

EXISTING R/W

ICB 1160006
ADJUST FRAME & RING CASTING
RECONSTRUCT DRAINAGE STRUCTURE (0.5 LF)
STA. 27+92 17'RT

DEY BROTHERS PROPERTIES
4302 AIRPARK BLVD

LUND KEVIN J
4214 AIRPARK BLVD

N W E S

P & D DEVELOPMENT LLC
4223 AIRPARK BLVD

OWATONNA PROPERTIES LLC

OWATONNA PROPERTIES LLC
4209 AIRPARK BLVD

ICB 1160007
ADJUST FRAME &
RING CASTING
STA. 32+79 17'LT

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 32+95 11'RT

ISMH 1160018
CONCRETE ENCASED
CASTING COLLAR
STA. 33+06 6'LT

AIRPARK BLVD
STA=32+74.67
ENTERPIRSE CIR
STA=17+81.16

EXISTING R/W

30.0'LT

26.0'LT

4" DOUBLE SOLID PAINT

AIRPARK BLVD

MATCH LINE=29+30

MATCH LINE=35+20

30+00 31+00 32+00 33+00 34+00 35+00

+84 +32 +51 +98 +94 +68 +93 +30 +38 +82 +43

+69 +6 +78

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 30+07 6'RT

+32 +52 +71 +41 +82 +1 28.0'RT

+7 31.7'RT

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 32+70 7'RT

+50 41.1'RT

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 34+26 3'RT

+30 +50

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 30+42 3'RT

EXISTING R/W

EXISTING R/W

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 30+60 6'RT

ICB 1160008
ADJUST FRAME &
RING CASTING
STA. 32+53 44'RT

+57 57.5'RT

IDMH 1160006
CONCRETE ENCASED
CASTING COLLAR
STA. 32+78 18'RT

+92 59.2'RT

ICB 1160009
ADJUST FRAME &
RING CASTING
STA. 32+99 39'RT

75.0'RT

ENTERPRISE CIR

CAUTION
GAS
CALL 811

SHAMROCK PROPERTIES
4210 AIRPARK BLVD

LUND KEVIN J
4214 AIRPARK BLVD

0 20 40
SCALE IN FEET

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STATE AID PROJECT NO.: N/A

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AIRPARK BLVD – CONSTRUCTION PLAN

SHEET NO. 74 OF 125

4/24/2023 4:17 PM

OWATONNA PROPERTIES LLC
4209 AIRPARK BLVD

SEAWAY PORT AUTHORITY
OF DULUTH

STATE OF MINNESOTA
4015 AIRPARK BLVD

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 37+55 1'RT

ISMH 1160020
CONCRETE ENCASED CASTING COLLAR
RECONSTRUCT DRAINAGE STRUCTURE (1 LF)
NOTE: MH CASTING CURRENTLY UNDER PAVEMENT
STA. 37+48 6'LT

ISMH 1160033
CONCRETE ENCASED
CASTING COLLAR
STA. 37+95 6'LT

EXISTING R/W

26.0'LT

+67 16.0'LT

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 37+36 3'RT

+67 14.0'LT

22.7'LT

+85

+29

+53

+79

+26

+96

SB-4; BIT. 3.5", 4" S&G, BIT. 2.5"

AIRPARK BLVD

MATCH LINE=35+20

36+00

37+00

38+00

39+00

40+00

41+00

MATCH LINE=41+10

+67 16.0'RT

+93

+36 22.0'RT

+59 21.0'RT

PAVEMENT WIDTH TAPERS 32' TO 28'

+67 14.0'RT

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 38+46 6'RT

4" DOUBLE SOLID PAINT

EXISTING R/W

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 37+53 5'RT

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 37+45 5'RT

ROTHMAN WILLIAM J
4206 AIRPARK BLVD

HOLMGREN JASON C
4000 AIRPARK BLVD

STATE OF MINNESOTA
4015 AIRPARK BLVD

DULUTH CBP INVESTORS LP

DULUTH CBP INVESTORS LP

ICB 1160020
ADJUST FRAME &
RING CASTING
STA. 42+13 15'LT

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 42+61 11'LT

ICB 1160018
ADJUST FRAME &
RING CASTING
STA. 44+50 15'LT

ICB 1160017
STA. 46+99 15'LT

EXISTING R/W

22.7'LT

+0

+72

+39

+55

SB-5; BIT. 4.5"

AIRPARK BLVD

41+00

42+00

43+00

44+00

45+00

46+00

47+00

MATCH LINE=41+10

MATCH LINE=47+00

+46

+54

+83

+6

4" DOUBLE SOLID PAINT

ICB 1160021
STA. 42+11 14'RT

EXISTING R/W

ICB 1160019
ADJUST FRAME &
RING CASTING
STA. 44+50 15'RT

ICB 1160016
ADJUST FRAME &
RING CASTING
STA. 46+99 15'RT

CAUTION
GAS
CALL 811

0 20 40
SCALE IN FEET

KROPF CAROL L

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AIRPARK BLVD – CONSTRUCTION PLAN

SHEET NO. 75 OF 125

4/24/2023 4:18 PM
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DULUTH CBP INVESTORS LP

SEAWAY PORT AUTHORITY OF DULUTH

ENDEAVOR DRIVE

AIRPARK BLVD
STA=49+75.33
ENDEVER DR
STA=0+15.00

CONCRETE ENCASED VALVE BOX COLLAR
STA. 50+30 4'LT

EXISTING R/W

33.0'LT

CONCRETE ENCASED VALVE BOX COLLAR
STA. 49+63 12'LT

ICB 1160014
STA. 50+43 15'LT

AIRPARK BLVD

MATCH LINE=47+00

MATCH LINE=53+00

47+00 48+00 49+00 50+00 51+00 52+00 53+00

+6

4" DOUBLE SOLID PAINT

+41 +4 +15 +28 +53 +28 +70 14.0'RT

+77 24.0'RT

+12 21.4'RT

CONCRETE ENCASED VALVE BOX COLLAR
STA. 52+72 20'RT

ISMH 1160031
CONCRETE ENCASED CASTING COLLAR
STA. 49+73 9'RT

ICB 1160015
ADJUST FRAME & RING CASTING
STA. 50+44 15'RT

ISMH 1160032
CONCRETE ENCASED CASTING COLLAR
RECONSTRUCT DRAINAGE STRUCTURE (1 LF)
NOTE: MH CASTING CURRENTLY UNDER PAVEMENT
STA. 52+89 9'RT

AW KUETTAL & SONS
3930 AIRPARK BLVD

C & C
3920 AIRPARK BLVD

SEAWAY PORT AUTHORITY OF DULUTH

CONCRETE ENCASED VALVE BOX COLLAR
STA. 55+96 10'LT

CONCRETE ENCASED VALVE BOX COLLAR
STA. 55+93 7'LT

AIRPARK BLVD
STA=56+03.86
PROSPERITY RD
STA=0+15.00

ICB 11500001
STA. 56+73 15'LT

EXISTING R/W

SB-6; BIT. 4.75"

AIRPARK BLVD

MATCH LINE=53+00

MATCH LINE=58+90

53+00 54+00 55+00 56+00 57+00 58+00 59+00

+3 19.0'RT

4" DOUBLE SOLID PAINT

+8 +78 +40 +59 +84

PROSPERITY RD

ISMH 1500007
CONCRETE ENCASED CASTING COLLAR
STA. 56+02 7'RT

ICB 1500002
ADJUST FRAME & RING CASTING
STA. 56+73 15'RT

+21 63.0'RT

ICB 1500003
ADJUST FRAME & RING CASTING
STA. 55+89 68'RT

+87 72.0'RT

72.0'RT

75.0'RT

ICB 1500004
ADJUST FRAME & RING CASTING
STA. 56+19 68'RT

C & C ENTERPRISES OF DULUTH LLC

AMERICAN PRECISION ASSEMBLERS

CAUTION GAS CALL 811

0 20 40
SCALE IN FEET

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WEERES FAMILY LLC
3801 AIRPARK BLVD

WEERES FAMILY LLC
3801 AIRPARK BLVD

EXISTING R/W

EXISTING R/W

MATCH LINE=58+90

MATCH LINE=64+80

L=322.75'
R=358.10'
Δ=51.6398

PC: 61+75.11

PT: 64+97.86

59+00

60+00

61+00

62+00

63+00

64+00

+23

+33

SB-7; BIT. 5.5"

ISMH 1500008
CONCRETE ENCASED
CASTING COLLAR
STA. 59+53 9'RT

4" DOUBLE SOLID PAINT

ISMH 1500009
CONCRETE ENCASED
CASTING COLLAR
STA. 61+75 9'RT

ISMH 1500010
CONCRETE ENCASED
CASTING COLLAR
STA. 63+19 CL

ISMH 1500011
CONCRETE ENCASED CASTING COLLAR
RECONSTRUCT DRAINAGE STRUCTURE (1 LF)
STA. 64+39 CL

CONCRETE ENCASED
VALVE BOX COLLAR
STA. 64+80 6'RT

REMOVE VALVE
STA. 65+40

AIRPARK BLVD

AMERICAN PRECISION ASSEMBLERS

SEAWAY PORT AUTHORITY
OF DULUTH

N
W
E
S

63+00

64+00

65+00

66+00

66+05

WEERES FAMILY LLC
3801 AIRPARK BLVD

4" SOLID LINE PAINT

ISMH 1500012
CONCRETE ENCASED CASTING COLLAR
RECONSTRUCT DRAINAGE STRUCTURE (1 LF)
STA. 65+56 CL

PT: 64+97.86

AIRPARK BLVD
STA=66+05.38
RICE LAKE RD
STA=45+48.00

4" DOUBLE SOLID PAINT

AIRPARK BLVD

MATCH LINE=64+80

REMOVE VALVE BOX
STA. 65+40 7'RT

AIRPARK BLVD. – STATION 65+71
END PROJECT 2016
END CONSTRUCTION (RECLAIM)

4" SOLID LINE PAINT

24" SOLID LINE PAINT

RICE LAKE RD

SEAWAY PORT AUTHORITY
OF DULUTH

CAUTION
GAS
CALL 811

0 20 40
SCALE IN FEET

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: Patrick Loomis

PATRICK F. LOOMIS
TYPE NAME

DATE: 04/20/2023

LIC. NO: 49099

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

2023 STREET PRESERVATION PROJECT

CITY PROJECT NO.: 2016

STATE AID PROJECT NO.: N/A

DRAWN BY: ZAE/DJK/SCA/NML

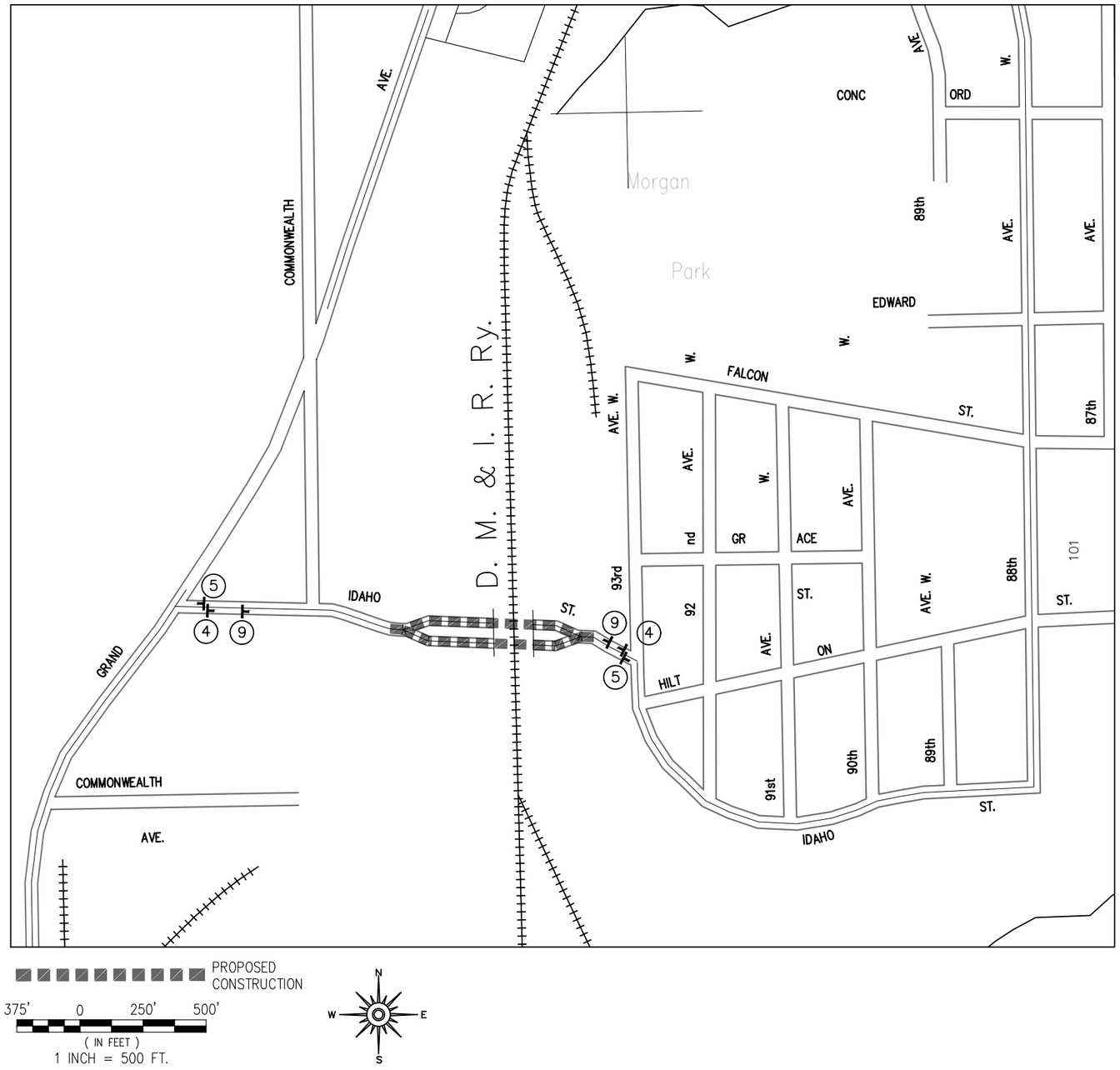
AIRPARK BLVD – CONSTRUCTION PLAN

SHEET NO. 77 OF 125

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TRAFFIC CONTROL – IDAHO ST.

DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION



TRAFFIC SIGN LEGEND

NOTE	SIGN	QNTY
①	ONE LANE ROAD AHEAD 36" X 36" W20-4	AS REQ'D
②	36" X 36" W20-7a	AS REQ'D
③	BE PREPARED TO STOP 36" X 36" W20-X5	AS REQ'D
④	ROAD WORK AHEAD 36" X 36" W21-4	2
⑤	END ROAD WORK G20-2A 48" X 24"	2
⑥	ROAD WORK AHEAD 36" X 36" W21-4 STREET NAME VARIES X 8"	AS REQ'D
⑦	ROAD CLOSED R11-2 30"X18"	AS REQ'D
⑧	SIDEWALK CLOSED AHEAD CROSS HERE R9-11(R OR L) 24"X12"	AS REQ'D
⑨	CITY OF DULUTH TRANSPORTATION SALES TAX PROJECT SPECIAL SIGN	2 SEE NOTE 22
⑩	BUMP 36"X36" WB-1	AS REQ'D
⑪	UNEVEN LANES 36"X36" WB-11	AS REQ'D
⊥	SIGN	6

TRAFFIC CONTROL NOTES

1. THE CONTRACTOR SHALL FURNISH, INSTALL AND MAINTAIN THE DEVICES IN THIS TRAFFIC CONTROL PLAN UNLESS OTHERWISE NOTED.
2. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD) INCLUDING " "TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS" DATED JANUARY 2018. AVAILABLE AT: (http://www.dot.state.mn.us/trafficeng/publ/fieldmanual/index.html)
3. FIELD CONDITIONS MAY REQUIRE MODIFICATIONS OF THIS LAYOUT AS DEEMED NECESSARY BY THE ENGINEER.
4. THE NUMBER AND PLACEMENT OF TRAFFIC CONTROL DEVICES WILL DEPEND UPON THE SEQUENCE OF THE CONTRACTOR'S OPERATION.
5. ANY DISTANCES DEPICTED ARE APPROXIMATE.
6. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ANY WORK AREAS NEAR TRAFFIC IN ACCORDANCE WITH THE MMUTCD.
7. IF THE CONTRACTOR DECIDES TO PERFORM THE CONSTRUCTION WORK IN A SEQUENCE OTHER THAN SHOWN IN THIS TRAFFIC CONTROL PLAN, THE CONTRACTOR SHALL PROVIDE COMPLETE REVISED TRAFFIC CONTROL PLANS TO BE APPROVED BY THE ENGINEER.
8. ALL TRAFFIC CONTROL DEVICES, INCLUDING OVERHEAD SIGNS ON ROADS OPEN TO TRAFFIC THAT ARE NOT CONSISTENT WITH TRAFFIC OPERATION, SHALL BE COVERED, REMOVED OR REVISED AS DIRECTED BY THE ENGINEER.
9. "ROAD WORK AHEAD" SIGNS SHALL BE MOUNTED APPROX. 300 FT (1 BLOCK) IN ADVANCE OF THE CONSTRUCTION AND SHALL HAVE A TYPE "A" LOW INTENSITY FLASHING AMBER WARNING LIGHT MOUNTED ON THEM.
10. "ROAD CLOSED AHEAD" SIGNS SHALL BE ERECTED APPROX. 300 FT (1 BLOCK) IN ADVANCE OF THE CLOSURE.
11. TYPE "A" LOW INTENSITY AMBER WARNING LIGHTS SHALL BE MOUNTED ON ALL ADVANCE WARNING SIGNS AND ON ALL TYPE I AND TYPE III BARRICADES WHEN USED AT NIGHT OR TO IDENTIFY HAZARDS.
12. ADDITIONAL SIGNING WILL BE REQUIRED FOR SEPARATE LANE CLOSURES REQUIRED FOR CONSTRUCTION OPERATIONS. THE SIGNING SHALL BE IN CONFORMANCE WITH "TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS" FIELD MANUAL DATED JANUARY 2018 AND SHALL BE CONSIDERED INCIDENTAL.
13. THE CONTRACTOR SHALL PLACE DRUMS THROUGHOUT THE PROJECT TO DELINEATE HAZARDOUS AREAS AND FACILITATE DAY-TO-DAY CHANNELIZATION OF TRAFFIC. QUANTITY AS REQUIRED (INCIDENTAL).
14. STREET NAME PLACARDS SHALL DISPLAY THE NAME OF THE STREET ASSOCIATED WITH THE PRIMARY SIGN.
15. ALL TRAFFIC CONTROL SIGNS SHALL BE DOUBLE POST MOUNTED.
16. TRAFFIC CONTROL SIGNS FOR VEHICLE TRAFFIC SHALL NOT BE PLACED ON SIDEWALKS
17. SIGN PLACEMENT AND LOCATION ON MnDOT ROW MAY REQUIRE COORDINATION WITH MnDOT
18. SIDEWALK CLOSED SIGNS SHALL BE PLACED IN ADVANCE OF SIDEWALK CLOSURES WHILE UNDER CONSTRUCTION
19. ALL SIDEWALK CLOSED SIGNS SHALL BE MOUNTED ON TYPE II BARRICADES.
20. SIDEWALK CLOSED AHEAD CROSS HERE SIGNS SHALL BE PLACED WHERE SIDEWALK EXISTS ON THE OPPOSITE SIDE OF THE ROAD AND SHALL BE PLACED AT THE PRECEDING EXISTING INTERSECTION MARKED OR UNMARKED CROSSWALK.
21. CONSTRUCTION OF PED RAMPS SHALL OCCUR ONLY IN ONE QUADRANT AT A TIME IN ORDER TO FACILITATE PEDESTRIAN TRAFFIC UNLESS APPROVED BY THE ENGINEER.
22. TRANSPORTATION SALES TAX SIGNS WILL BE SUPPLIED BY THE CITY OF DULUTH. THE CONTRACTOR WILL TEMPORARILY INSTALL THE SIGNS AT EACH END OF STREET ACCORDING TO THE TRAFFIC CONTROL PLANS. CONTRACTOR WILL PROVIDE ALL POSTS, BASES, SANDBAGS AND HARDWARE TO COMPLETE TEMPORARY INSTALLATION. SIGNS SHALL BE PRESENT STARTING AT INITIAL CONSTRUCTION ACTIVITIES AND BE REMOVED ONCE ALL OPERATIONS HAVE BEEN CONCLUDED. SIGNS WILL BE REMOVED FROM ANY HARDWARE AND RETURNED TO ENGINEER AT COMPLETION OF PROJECT. THE 2022 STREET PRESERVATION PROJECT REQUIRES 37 TRANSPORTATION SALES TAX SIGNS. ANY MISSING SIGNS AT THE END OF PROJECT WILL BE ASSESSED TO THE CONTRACTOR AT $200 PER SIGN.

I:\PW\ENGINEER\PROJECTS\2000-2499\2016_2023_Street_Preservation\23-ACAD-DRAWINGS\2016_TC

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SIGNATURE: Patrick Loomis

PATRICK F. LOOMIS
TYPE NAME

DATE: 04/20/2023

LIC. NO: 49099

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

2023 STREET PRESERVATION PROJECT

CITY PROJECT NO.: 2016

STATE AID PROJECT NO.: N/A

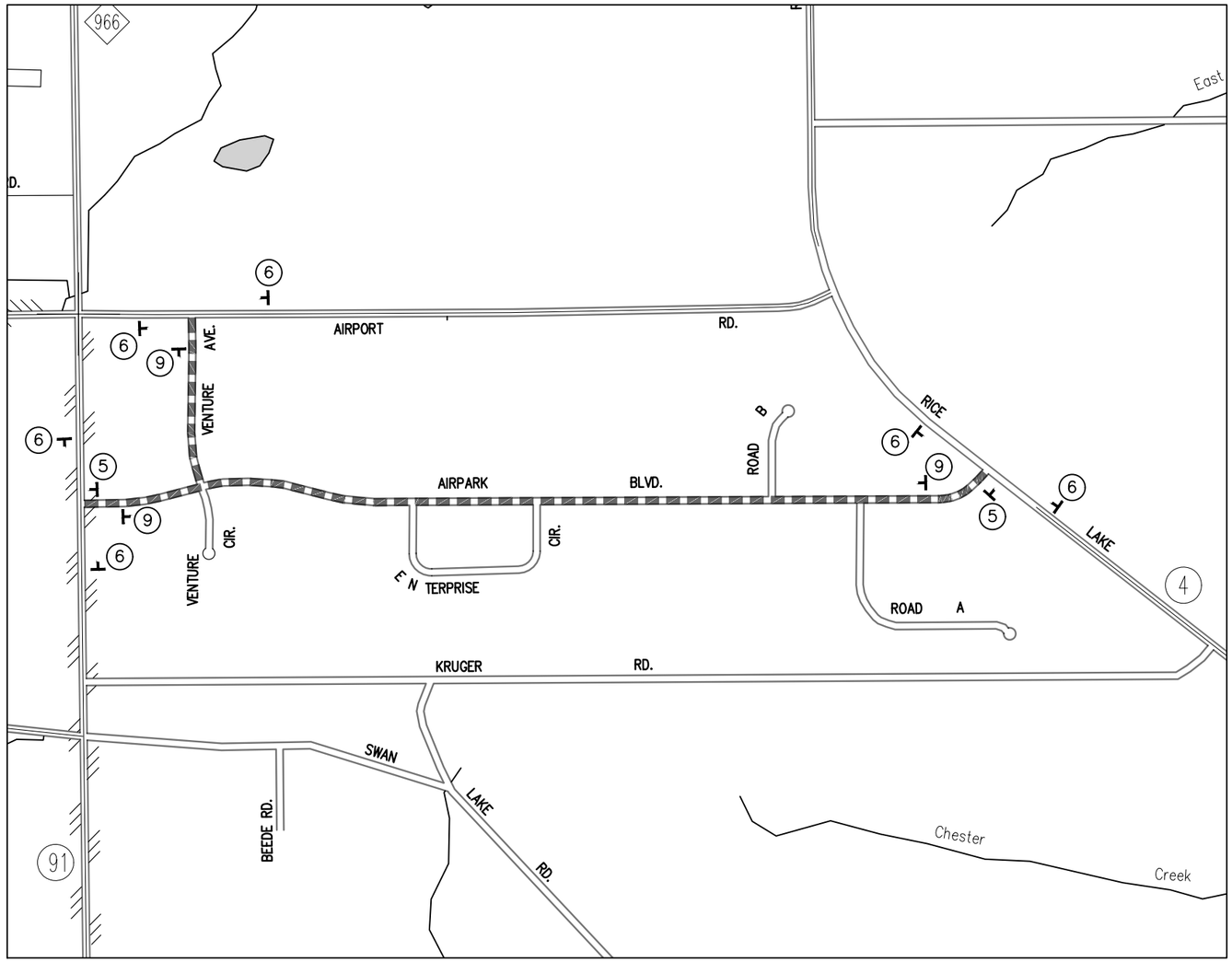
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IDAHO ST – TRAFFIC CONTROL

SHEET NO. 117 OF 125

TRAFFIC CONTROL – AIRPARK BLVD. & VENTURE AVE.

DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION



PROPOSED CONSTRUCTION

500' 0 500' 1000'
(IN FEET)
1 INCH = 1000 FT.

N W E S

TRAFFIC SIGN LEGEND

NOTE	SIGN	QNTY
1	ONE LANE ROAD AHEAD 36" X 36" W20-4	AS REQ'D
2	36" X 36" W20-7a	AS REQ'D
3	BE PREPARED TO STOP 36" X 36" W20-X5	AS REQ'D
4	ROAD WORK AHEAD 36" X 36" W21-4	AS REQ'D
5	END ROAD WORK G20-2A 48" X 24"	2
6	ROAD WORK AHEAD 36" X 36" W21-4 + STREET NAME VARIES X 8"	6
7	ROAD CLOSED R11-2 30"X18"	AS REQ'D
8	SIDEWALK CLOSED AHEAD CROSS HERE R9-11(R OR L) 24"X12"	AS REQ'D
9	CITY OF DULUTH TRANSPORTATION SALES TAX PROJECT SPECIAL SIGN	3 SEE NOTE 22
10	BUMP 36"X36" W8-1	AS REQ'D
11	UNEVEN LANES 36"X36" W8-11	AS REQ'D
⊥	SIGN	13

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SIGNATURE: _____ PATRICK F. LOOMIS (TYPE NAME) DATE: 04/20/2023 LIC. NO: 49099

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

2023 STREET PRESERVATION PROJECT

CITY PROJECT NO.: 2016 | STATE AID PROJECT NO.: N/A

DRAWN BY: ZAE/DJK/SCA/NML
AIRPARK – TRAFFIC CONTROL
SHEET NO. 123 OF 125

4/24/2023 4:23 PM
I:\PWU\ENGINEER\PROJECTS\2000-2499\2016_2023_Street_Preservation\23-ACAD-DRAWINGS\2016_TC