





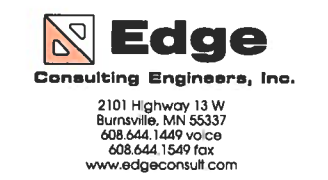
**A** **AERIAL OVERVIEW**

**QUALIFICATION OF WORKERS NOTE:**  
 ANY WORK ON EQUIPMENT WILL NEED TO BE DIRECTLY SUPERVISED OR PERFORMED BY A CONTRACTOR EMPLOYEE WHO IS MNDOT SIGNAL AND LIGHTING CERTIFIED.  
 MINNESOTA 2018 STANDARD SPECIFICATIONS 2545.1 DESCRIPTION  
 B QUALIFICATION OF WORKERS  
 PARSONS ELECTRIC  
 CONTACT: TORY  
 PHONE: 218-591-1621  
 HUNT ELECTRIC  
 CONTACT: JEFF  
 PHONE: 218-628-3323

**EXCAVATION NOTE:**  
 THE CITY OF DULUTH GAS UTILITY MUST BE NOTIFIED 2 WORKING DAYS PRIOR TO ANY EXCAVATION OR DIRECTIONAL DRILLING WITHIN 6 FEET OF A 6 INCH OR LARGER NATURAL GAS MAIN. DEPARTMENT PERSONNEL WILL BE ON SITE TO MONITOR EXCAVATION AND INSPECT ANY EXPOSED STEEL MAIN 6 INCHES OR LARGER. NOTIFY THE ENGINEERING DIVISION AT 730-5200 TO COORDINATE THIS INSPECTION.  
 THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY ANY TIME A STEEL NATURAL GAS MAIN SMALLER THAN 6 INCHES IS EXPOSED WITHIN AN EXCAVATION. CONTACT THE ENGINEERING DIVISION AT 730-5200 TO COORDINATE AN INSPECTION OF THE EXPOSED MAIN.

**NOTES:**  
 CONTRACTOR TO COMPLETE A UTILITY LOCATE PRIOR TO COMMENCING ALL CONSTRUCTION ACTIVITIES.  
 CONTRACTOR TO RE-SEED ANY AND ALL DISTURBED GRASS AREAS. REFER TO THE LOCAL MUNICIPALITY FOR SEEDING SPECIFICATIONS.

PERSUANT TO DIRECTION FROM DULUTH CITY ENGINEER, VERIZON ELECTRICAL SERVICE WILL BE ROUTED USING SEPARATE CONDUIT OUTSIDE OF CITY'S EXISTING CONDUIT. #10 AWG CONDUCTORS ARE NOT REQUIRED.



PROJECT NO: 20181847132  
 LOCATION CODE: 504066  
 EDGE PROJECT NO: 20096  
 CHECKED BY: OGD

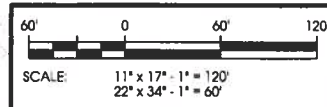
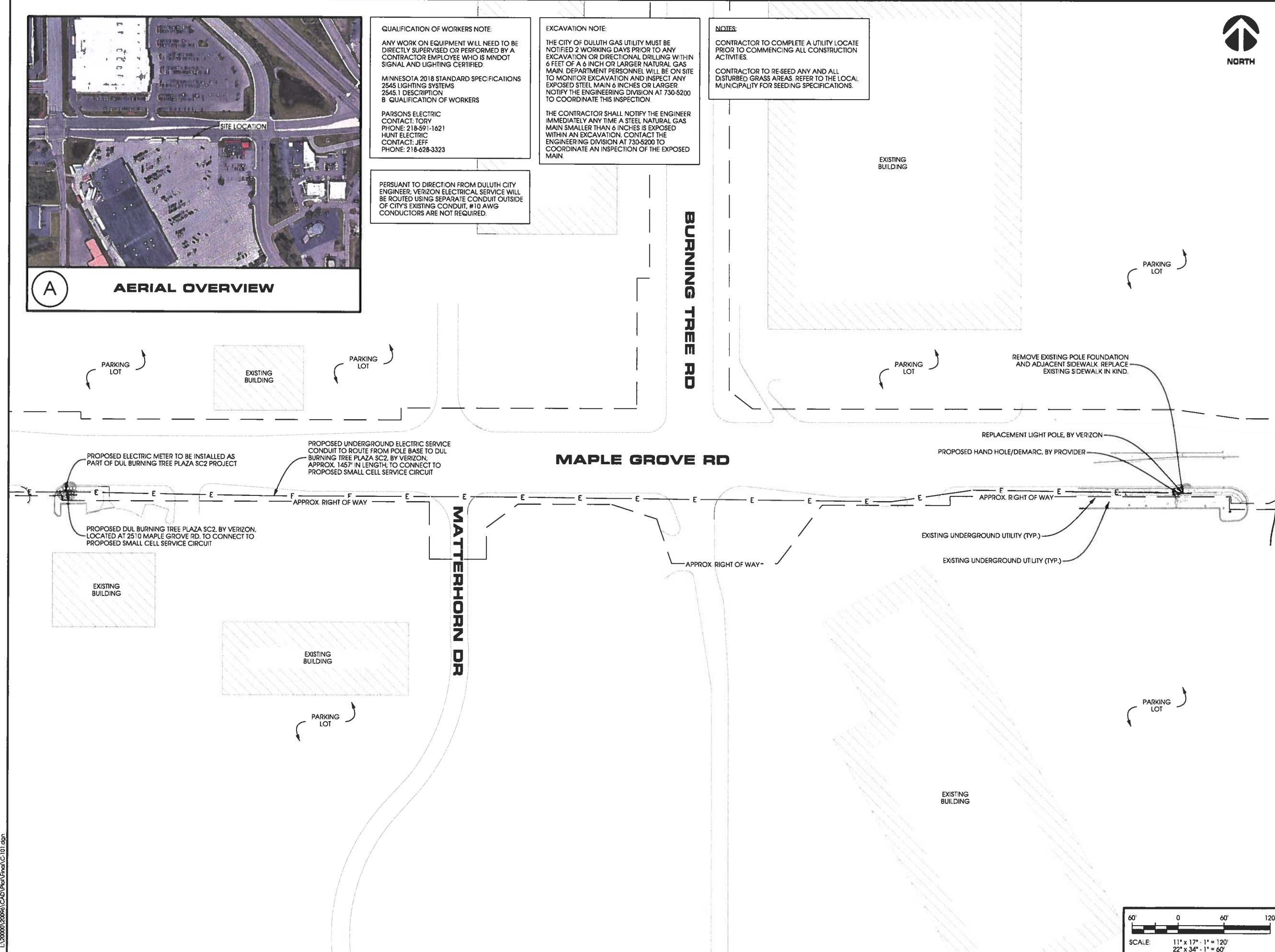
REV	DATE	DESCRIPTION	INT.
A	08/29/2018	PRELIM SMALL CELL DWGS	JMK
0	09/10/2018	FINAL SMALL CELL DWGS	JMK
1	10/08/2018	FINAL SMALL CELL DWGS	JMK

OTTO G. DINGFELDER  
 LICENSED PROFESSIONAL ENGINEER  
 49720  
*Otto G. Dingfelder*  
 10/9/2018  
 I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DUL BURNING TREE PLAZA SC3  
 DULUTH, MN  
 REPLACEMENT LIGHT POLE  
 SMALL CELL DRAWINGS

SHEET TITLE  
**SITE PLAN**

SHEET NUMBER  
**C-101**



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**A** AERIAL OVERVIEW

**EXCAVATION NOTE:**  
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 THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY ANY TIME A STEEL NATURAL GAS MAIN SMALLER THAN 6 INCHES IS EXPOSED WITHIN AN EXCAVATION. CONTACT THE ENGINEERING DIVISION AT 730-5200 TO COORDINATE AN INSPECTION OF THE EXPOSED MAIN.



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 Jacobs Engineering Group, Inc  
 2727 Patton Road  
 Roseville, Minnesota 55113  
 www.jacobs.com



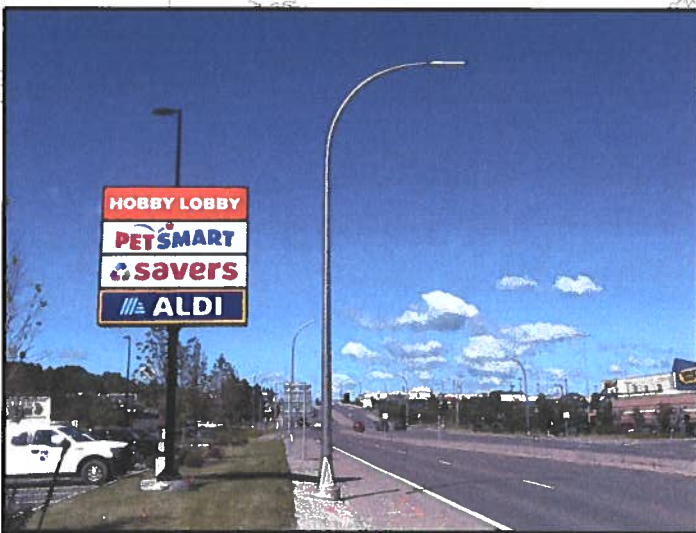
Edge  
 Consulting Engineers, Inc.  
 2101 Highway 13 W  
 Burnsville, MN 55337  
 608.644.1449 voice  
 608.644.1549 fax  
 www.edgeconsult.com

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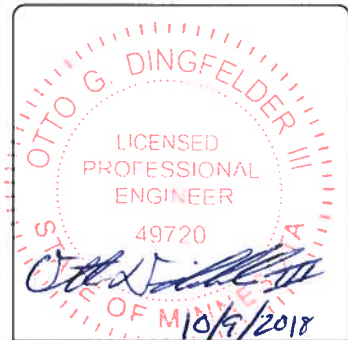
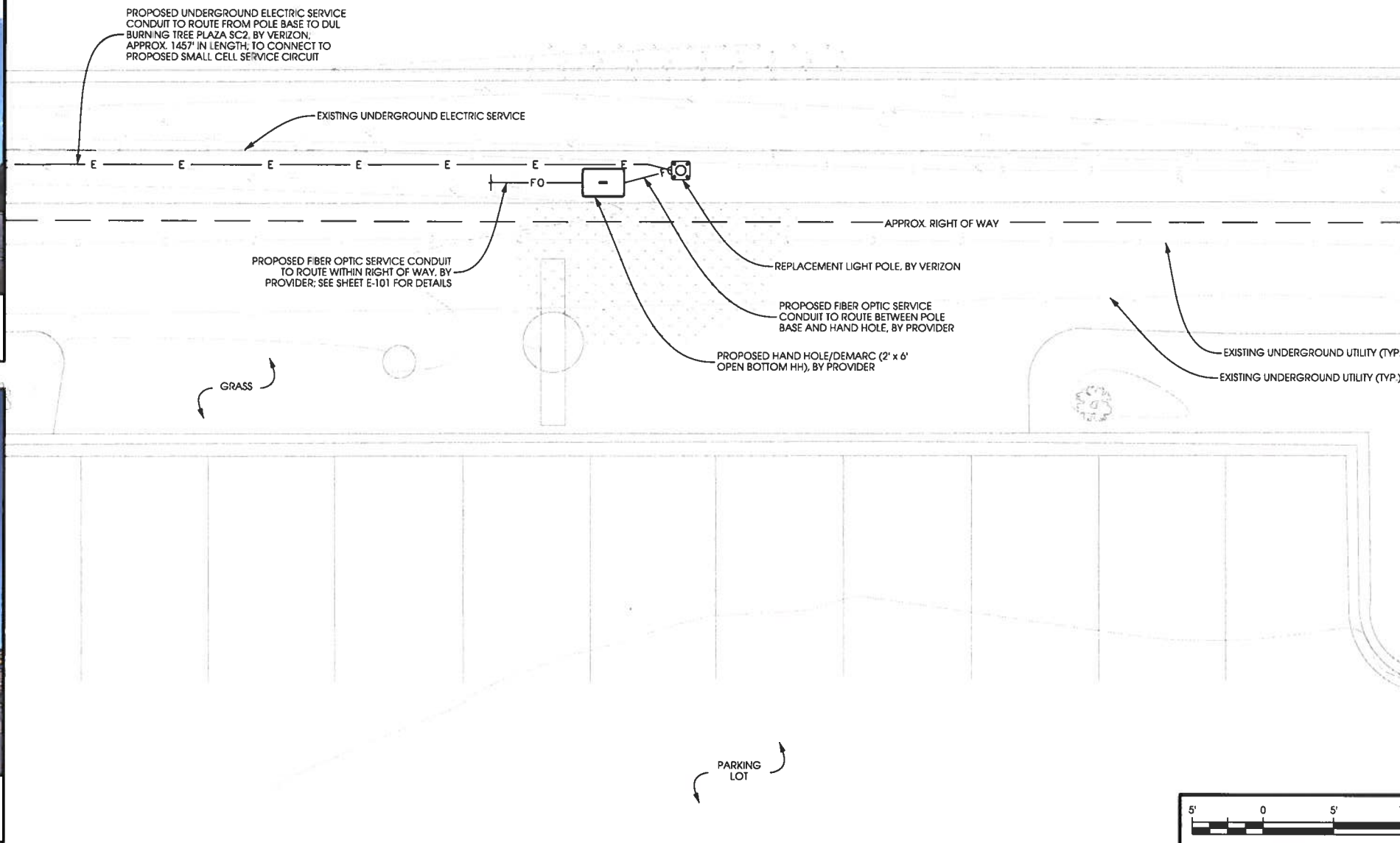


**B** SITE OVERVIEW [LOOKING EAST]



**C** SITE OVERVIEW [LOOKING WEST]

**MAPLE GROVE RD**

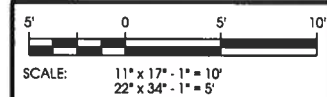


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DUL BURNING TREE PLAZA SC3  
 DULUTH, MN  
 REPLACEMENT LIGHT POLE  
 SMALL CELL DRAWINGS

SHEET TITLE  
**ENLARGED SITE PLAN**

SHEET NUMBER  
**C-102**



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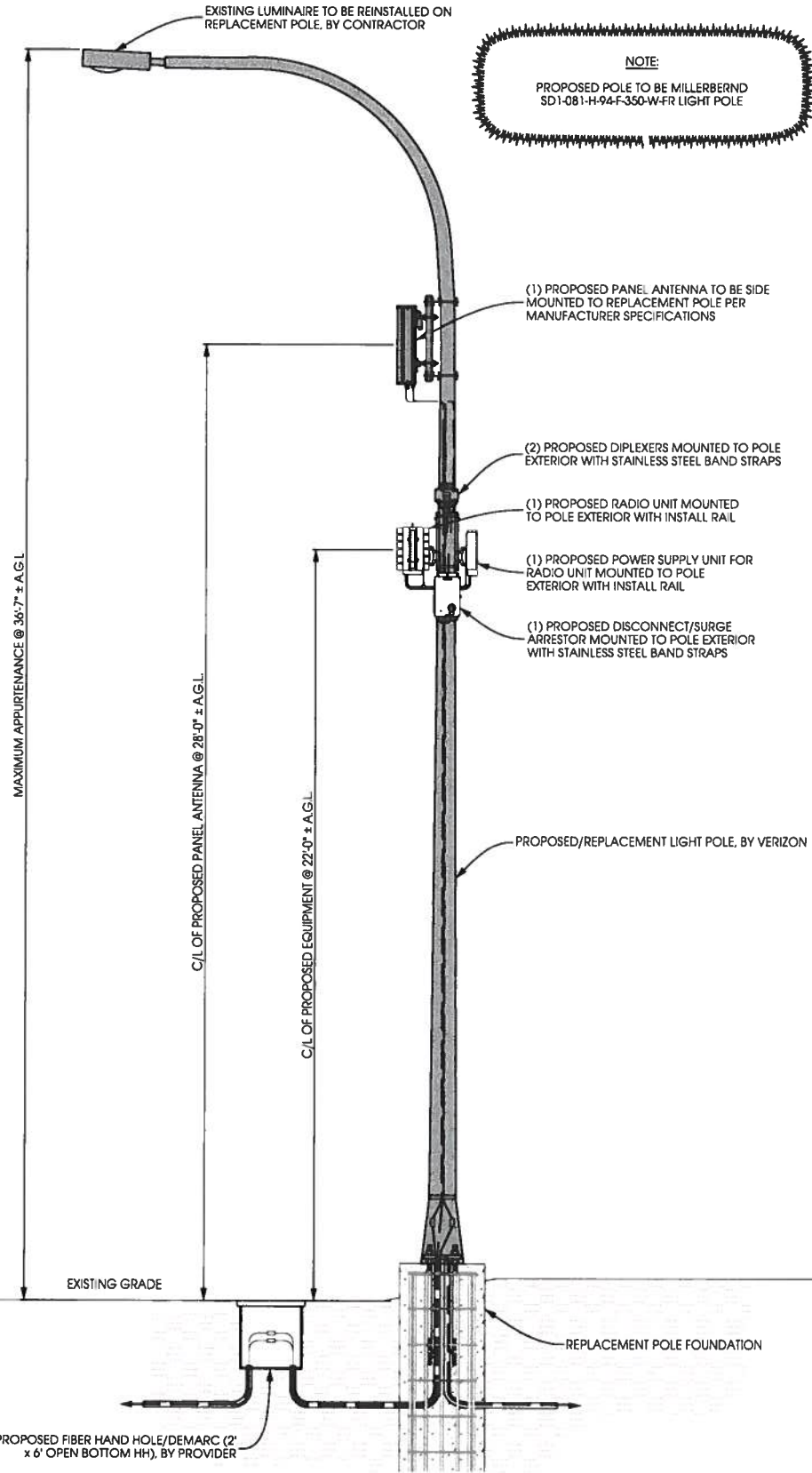
EXISTING POLE	
POLE HEIGHT:	34'-7" T.O.C.
MAXIMUM APPURTENANCE HEIGHT:	35'-1" A.G.L.

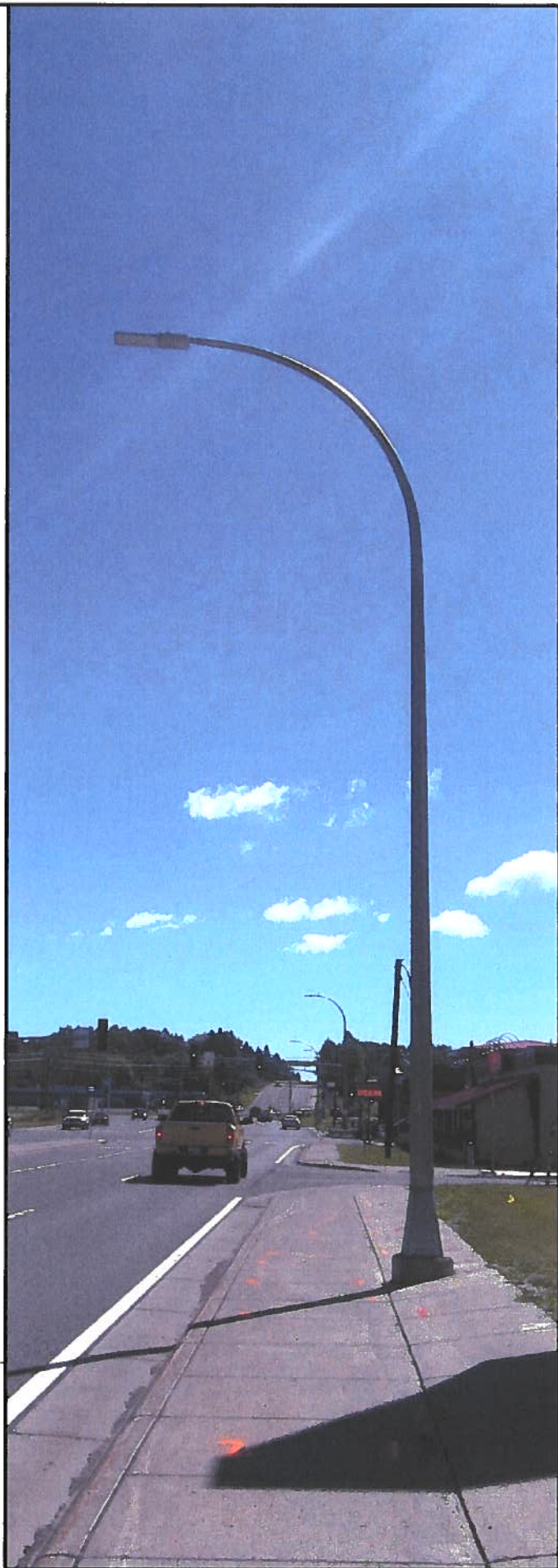
PROPOSED POLE	
POLE HEIGHT:	35'-0" T.O.C.
ANTENNA TIP HEIGHT:	29'-2" A.G.L.
MAXIMUM APPURTENANCE HEIGHT:	36'-7" A.G.L.

**NOTES:**  
 TYPICAL INSTALLATION SHOWN  
 ALL ELEVATIONS ARE ASSUMED TO BE MEASURED FROM ABOVE GRADE LEVEL.  
 ALL PROPOSED POLE-MOUNTED EQUIPMENT TO BE PAINTED TO MATCH POLE

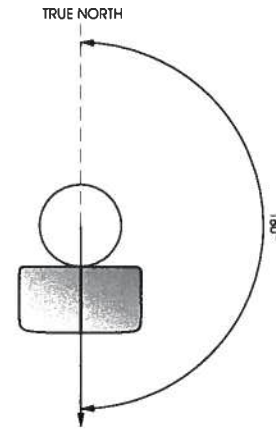
**NOTE:**  
 PROPOSED POLE TO BE MILLERBERND SD1-081-H-94-F-350-W-FR LIGHT POLE



**A POLE ELEVATION**  
 SCALE: 11" x 17" - 1" = 5'-0"  
 22" x 34" - 1" = 2'-6"



**B SITE ELEVATION**



**C ANTENNA ORIENTATION**  
 SCALE: NTS

ANTENNAS					
QUANTITY	MAKE	MODEL	CENTERLINE	TIP HEIGHT	AZIMUTH
1	ANDREW	HBXX-6513DS-A2M	28'-0" AGL	29'-2" AGL	180°

EQUIPMENT			
QUANTITY	TYPE	MAKE	MODEL
1	RRU	ERICSSON	RRUS8843
1	PSU	ERICSSON	PSU 6302
2	DIPLEXER	COMMSCOPE	CBC1923T-4310 E11F13PO6

CABLING			
QUANTITY	TYPE	MAKE	MODEL
12	COAX	COMMSCOPE	F4-HMDM-1M-D

**D ANTENNA AND CABLING**  
 SCALE: NTS

**CAUTION**

Transmitting Antennas  
 Radio frequency fields beyond this point MAY EXCEED the FCC Occupational Exposure Limit.  
 Obey all posted signs and site guidelines.  
 Call Verizon Wireless at 1-800-254-0820 PRIOR to working beyond this point.

**WARNING**

Beyond this point, Radio frequency fields at this site exceed the FCC rules for human exposure.  
 Failure to obey all posted signs and site guidelines for working in radio frequency environments could result in serious injury or death.

**NOTICE**

Transmitting Antennas  
 Radio frequency fields beyond this point MAY EXCEED the FCC General Population Exposure Limit.  
 Obey all posted signs and site guidelines.  
 Call Verizon Wireless at 1-800-254-0820 PRIOR to working beyond this point.

**E RF WARNING SIGNS**  
 SCALE: NTS



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OTTO G. DINGFELDER  
 LICENSED PROFESSIONAL ENGINEER  
 40720  
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DUL BURNING TREE PLAZA SC3  
 DULUTH, MN  
 REPLACEMENT LIGHT POLE  
 SMALL CELL DRAWINGS

SHEET TITLE  
**SITE ELEVATION**

SHEET NUMBER  
**T-201**



- NOTES:
- CONTRACTOR TO COMPLETE UTILITY LOCATE PRIOR TO COMPLETING ANY CONSTRUCTION ACTIVITIES.
  - CONTRACTOR TO MAINTAIN A MINIMUM 48" OF COVER BETWEEN DIRECTIONAL CORE AND ROADWAY PAVEMENT TO THE EXTENT PRACTICAL.
  - CONTRACTOR TO PROVIDE A MINIMUM OF 12" OF CLEARANCE BETWEEN PROPOSED CONDUIT AND EXISTING UTILITIES.
  - ALL CONCRETE DAMAGED AS PART OF THIS WORK TO BE REPAIRED/REPLACED TO ITS ORIGINAL CONDITION.
  - ALL ASPHALT REMOVED DURING CONSTRUCTION IS TO BE PATCHED AND REPAIRED TO ITS ORIGINAL CONDITION.
  - TEMPORARY HARD SURFACE TO BE PROVIDED IMMEDIATELY UPON BACK FILL UNTIL PERMANENT REPAIR IS MADE.
  - NOTIFY CITY OF DULUTH, 218.730.4130, 2 WORKING DAYS PRIOR TO EXCAVATION OR DIRECTIONAL DRILLING WITHIN 6FT OF NATURAL GAS MAINS.
  - OBTAIN PERMIT FROM ST. LOUIS COUNTY FOR ELECTRIC CONDUIT.



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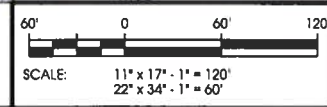
DUL BURNING TREE PLAZA SC3  
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 REPLACEMENT LIGHT POLE  
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SHEET TITLE  
**UTILITY PLAN**

SHEET NUMBER  
**E-101**



**A UTILITY PLAN**



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