



BUELL CONSULTING INC. 1360 ENERGY PARK DRIVE, SUITE 210 ST. PAUL, MN 55108 (651) 225-0793 www.buellconsulting.com

TERRA CONSULTING GROUP, LTD. 600 BUSSE HIGHWAY PARK RIDGE, IL 60068 (847) 698-6400



MOBILITIE ID/ CASCADE ID

TYPICAL INSTALLATION #2

> ADDRESS SAINT PAUL, MN

DRAWN BY:

CHECKED BY:

DATE:

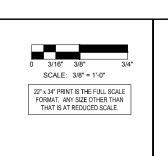
PROJECT #:

SHEET TITLE

EXISTING & PROPOSED ELEVATIONS

SHEET NUMBER

ANT-1



COMMSCOPE V360QS-C3-M

MM 2500 MHZ RADAR REJECT 2582-2609

IR460 UE RELAY

AIRHARMONY AH4000

TALLYSMAN TW3012

RAYCAP RSTAC-3111-P-120 AC DISTRIBUTION PANEL

EXISTING SOUTHWEST ELEVATION

1) SCALE: 3/8" = 1'-0" ±

NOTE:
PROJECT SCOPE OF WORK DOES NOT INCLUDE A
STRUCTURAL EVALUATION OF THIS POLE OR
STRUCTURE. NEW EQUIPMENT SHOWN ON THIS PLAN
HAVE NOT BEEN EVALUATED TO VERIFY THE POLE OR
STRUCTURE HAS THE CAPACITY TO ADEQUATELY
SUPPORT THE EQUIPMENT. PRIOR TO ANY INSTALLATION,
A STRUCTURAL EVALUATION OF THE POLE OR
STRUCTURAL EVALUATION OF THE POLE OR
STRUCTURE SHOULD BE PERFORMED.



22" x 34" PRINT IS THE FULL SCALE FORMAT. ANY SIZE OTHER THAN THAT IS AT REDUCED SCALE.

PROPOSED COMMSCOPE V360QS-C3-M

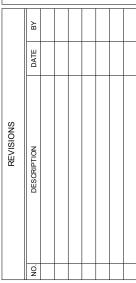
PROPOSED SOUTHWEST ELEVATION

2) SCALE: 3/8" = 1'-0" ±



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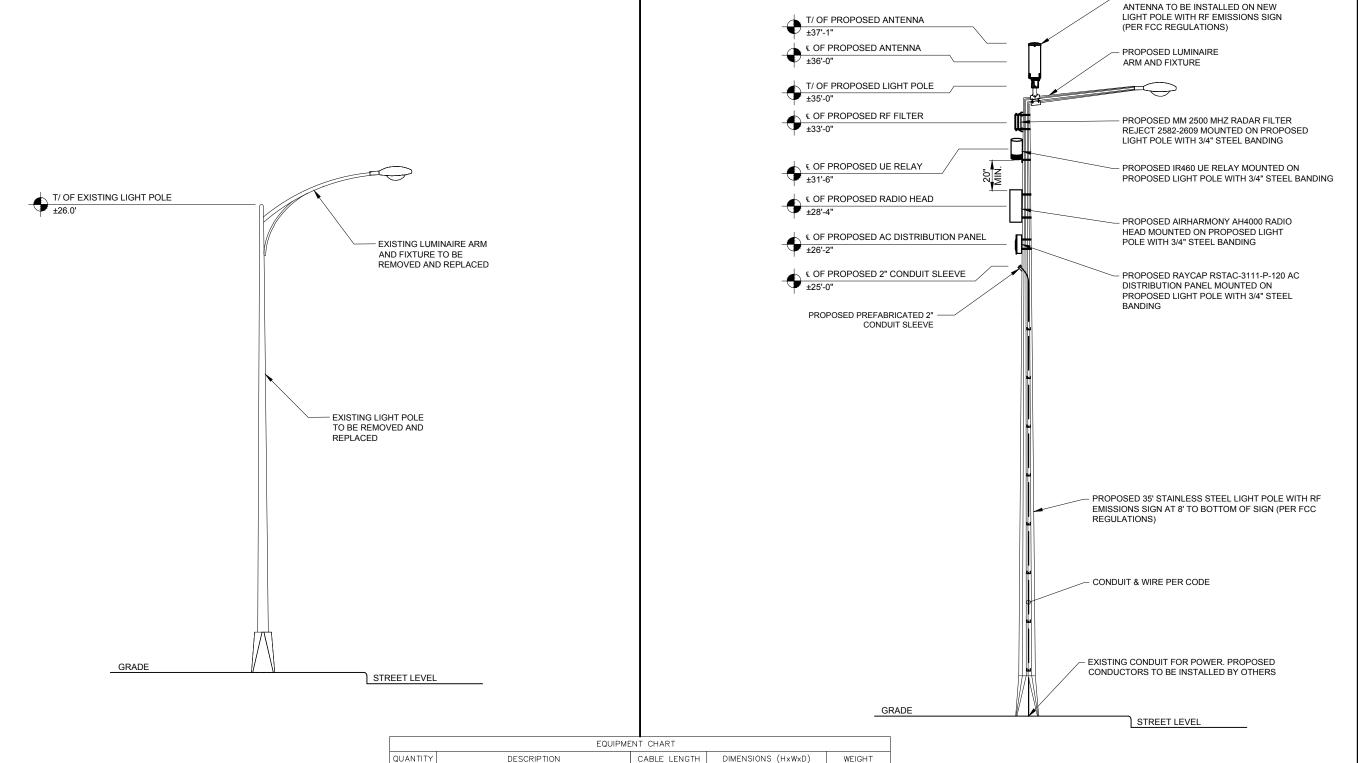
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SHEET NUMBER

ANT-2



TBD

TBD

TBD

TBD

TBD

TBD

23.5" X 7.9" DIAMETER

13.58" X 8.07" X 2.4"

12.99" X 7.87" DIAMETER

23.0" X 10.7" X 8.9"

1.96" X 2.6" DIAMETER

13.13" X 11.38" X 4.38"

15.4 LBS

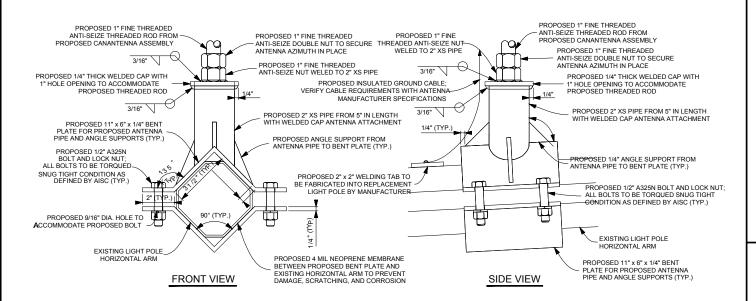
7.28 LBS

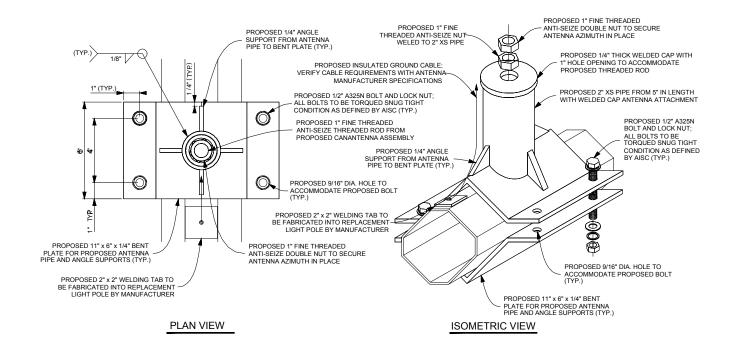
8.8 LBS

46.3 LBS

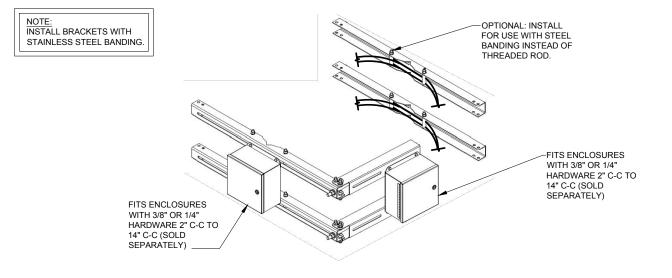
0.33 LBS

TBD



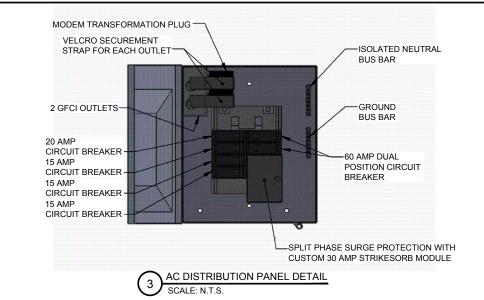


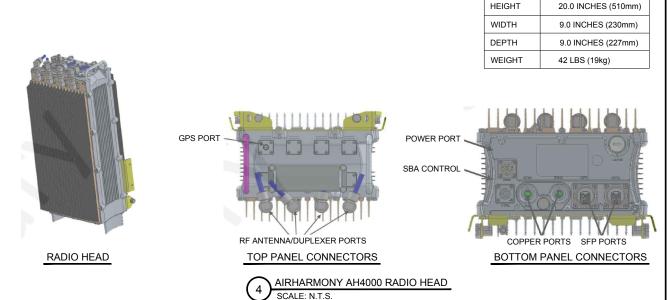




EQUIPMENT BANDING DETAIL

SCALE: N.T.S.

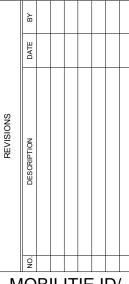






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TYPICAL INSTALLATION #2

SPECIFICATIONS

ADDRESS SAINT PAUL, MN

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PROJECT #:

SHEET TITLE

ANTENNA & EQUIPMENT DETAILS

SHEET NUMBER

ANT-3

UTILITY NOTES:

THESE NOTES AND ACCOMPANYING DRAWINGS COMPLEMENT THE PROVISIONS AND INSTALLATIONS BY THE ELECTRICAL CONTRACTOR, OF ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO INSTALL THE ELECTRICAL WORK COMPLETE IN CONNECTION WITH THIS CELLULAR SITE AND SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:

- 1. THE PROVISIONS, INSTALLATION AND CONNECTION OF A GROUNDING ELECTRODE SYSTEM COMPLETE WITH SECONDARY GROUNDING, AND CONNECTIONS TO THE INCOMING ELECTRICAL DISTRIBUTION EQUIPMENT.
- 2. THE PROVISION AND INSTALLATION OF AN OVERHEAD ELECTRICAL SERVICE OR UNDERGROUND ELECTRICAL SERVICE AND ALL ASSOCIATED WIRE AND CONDUIT AS REQUIRED AND/OR INDICATED
- 3. THE PROVISION AND INSTALLATION OF CONDUIT AND CONNECTIONS FOR LOCAL FIBER SERVICE. 4. THE FURNISHING AND INSTALLATION OF THE ELECTRICAL SERVICE ENTRANCE CONDUCTORS.
- CONDUITS, METER SOCKET, AND CONNECTIONS TO THE SERVICE EQUIPMENT.
- 5. ALL CONDUITS SHOULD BE LEFT WITH NYLON PULL CORD FOR FUTURE USE
- 6. EXCAVATION, TRENCHING, AND BACKFILLING FOR CONDUIT(S), CABLE(S) AND EXTERNAL GROUNDING SYSTEM

CODES, PERMITS AND FEES:

- . ALL REQUIRED PERMITS, LICENSES, INSPECTIONS AND APPROVALS SHALL BE SECURED AND ALL FEES FOR SAME PAID BY CONTRACTOR.
- 2. THE INSTALLATION SHALL COMPLY WITH ALL APPLICABLE CODES: STATE, LOCAL AND NATIONAL AND THE DESIGN, PERFORMANCE CHARACTERISTICS AND METHODS OF CONSTRUCTION OF ALL ITEMS AND EQUIPMENT SHALL BE IN ACCORDANCE WITH THE LATEST ISSUE OF THE VARIOUS APPLICABLE STANDARD SPECIFICATIONS OF THE FOLLOWING AUTHORITIES:
 - NATIONAL ELECTRICAL CODE
 - AMERICAN NATIONAL STANDARDS INSTITUTE A.N.S.I
 - I.E.E.E. INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
 - A.S.T.M. AMERICAN SOCIETY FOR TESTING MATERIALS
 - NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION N.E.M.A.
 - UNDERWRITERS LABORATORIES, INC.
 - NATIONAL FIRE PROTECTION ASSOCIATION N.F.P.A.

RACEWAYS AND WIRING:

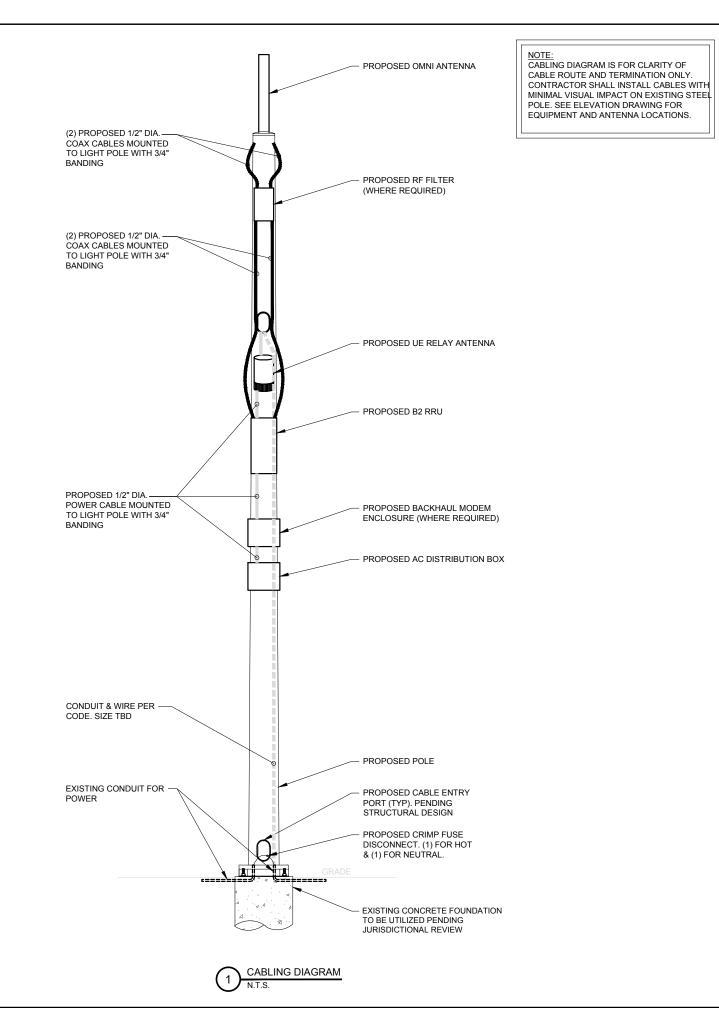
- WIRING OF EVERY KIND MUST BY INSTALLED IN CONDUIT, UNLESS NOTED OTHERWISE, OR AS APPROVED BY THE ARCHITECT/ENGINEER.
- 2. UNLESS OTHERWISE SPECIFIED, ALL WIRING SHALL BE COPPER (CU) TYPE THWN, SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND LOCAL CODES.
- 3. RACEWAYS SHALL BE GALVANIZED STEEL, SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND LOCAL CODES UNLESS OTHERWISE NOTED. ALL RACEWAYS SHALL BE APPROVED FOR THE INSTALLATION. 4. PULL OR JUNCTION BOXES SHALL BE PROVIDED AS REQUIRED TO FACILITATE INSTALLATION OF
- RACEWAYS AND WIRING. PROVIDE JUNCTION AND PULLBOXES FOR CONDUIT RUNS WITH MORE THAN (360) DEGREES OF BENDS 5. PROVIDE A COMPLETE RACEWAY AND WIRING INSTALLATION, PERMANENTLY AND EFFECTIVELY
- GROUNDED IN ACCORDANCE WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE AND LOCAL
- 6. ALL STEEL CONDUIT SHALL BE BONDED AT BOTH ENDS WITH GROUNDING BUSHING.

GENERAL NOTES:

SEE DETAILS, SCHEDULES AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND INFORMATION. CHECK ARCHITECTURAL, STRUCTURAL, AND OTHER MECHANICAL AND ELECTRICAL DRAWINGS FOR SCALE, SPACE LIMITATIONS, COORDINATION, AND ADDITIONAL INFORMATION, ETC. REPORT ANY DISCREPANCIES, CONFLICTS, ETC. TO ARCHITECT/ENGINEER BEFORE SUBMITTING BID. ALL EQUIPMENT FURNISHED BY OTHERS (FBO) SHALL BE PROVIDED WITH PROPER MOTOR STARTERS, DISCONNECTS, CONTROLS, ETC. BY THE ELECTRICAL CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE. THE ELECTRICAL CONTRACTOR SHALL INSTALL AND COMPLETELY WIRE ALL ASSOCIATED EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S WIRE DIAGRAMS AND AS REQUIRED FOR A COMPLETE OPERATING INSTALLATION. ELECTRICAL CONTRACTOR SHALL VERIFY AND COORDINATE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF (FBO) EQUIPMENT PRIOR TO ROUGH-IN OF CONDUIT AND WIRING TO AVOID CONFLICTS.

COORDINATION WITH UTILITY COMPANY:

THE ELECTRICAL CONTRACTOR SHALL COORDINATE COMPLETE ELECTRICAL SERVICE WITH LOCAL UTILITY COMPANY FOR A COMPLETE OPERATIONS SYSTEM, INCLUDING TRANSFORMER CONNECTIONS, CONCRETE TRANSFORMER PADS, IF REQUIRED, METER SOCKETS, PRIMARY CABLE RACEWAY REQUIREMENTS, SECONDARY SERVICE, ETC. PRIOR TO SUBMITTING BID TO INCLUDE ALL LABOR AND MATERIALS. THE ELECTRICAL CONTRACTOR SHALL INCLUDE IN THE BID ANY OPTIONAL OR EXCESS FACILITY CHARGES ASSOCIATED WITH PROVIDING ELECTRICAL SERVICE FROM LOCAL UTILITY COMPANY. VERIFY BEFORE BIDDING TO INCLUDE ALL COSTS. THE ELECTRICAL CONTRACTOR SHALL VERIFY THE AVAILABLE FAULT CURRENT WITH THE LOCAL UTILITY COMPANY PRIOR TO SUBMITTING BID. ADJUST A.I.C. RATINGS OF ALL OVER CURRENT PROTECTION DEVICES IN DISTRIBUTION EQUIPMENT AS REQUIRED TO COORDINATE WITH AVAILABLE FAULT CURRENT FROM LOCAL UTILITY COMPANY





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