



CROWN CASTLE ID #
LV024

8998 LAKE NORTH DRIVE
LAS VEGAS, NEVADA 89117

CROWN CASTLE
CROWN CASTLE NG WEST LLC
2055 SOUTH STEARMAN DRIVE
CHANDLER, ARIZONA 85286

PROJECT INFORMATION:

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CURRENT ISSUE DATE:

04/09/19

ISSUED FOR:

PROPOSED WORK

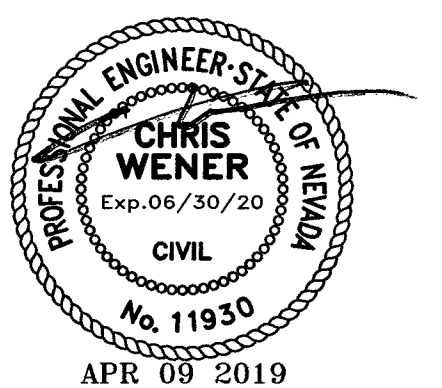
REV.: DATE: DESCRIPTION: BY:

3	04/09/19	LAND DEV. COMMENTS	R.S.
2	02/05/19	POLE REVISION	R.C.
1	10/16/18	100% PERMITTING	R.C.
0	09/28/18	90% PERMITTING	R.S.

PLANS PREPARED BY:

SPECTRUM
SPECTRUM SERVICES, INC.
4850 WEST OQUENDO ROAD
LAS VEGAS, NEVADA 89118
PHONE: (702) 367-7705
FAX: (702) 367-8733

LICENSURE:



SHEET TITLE:

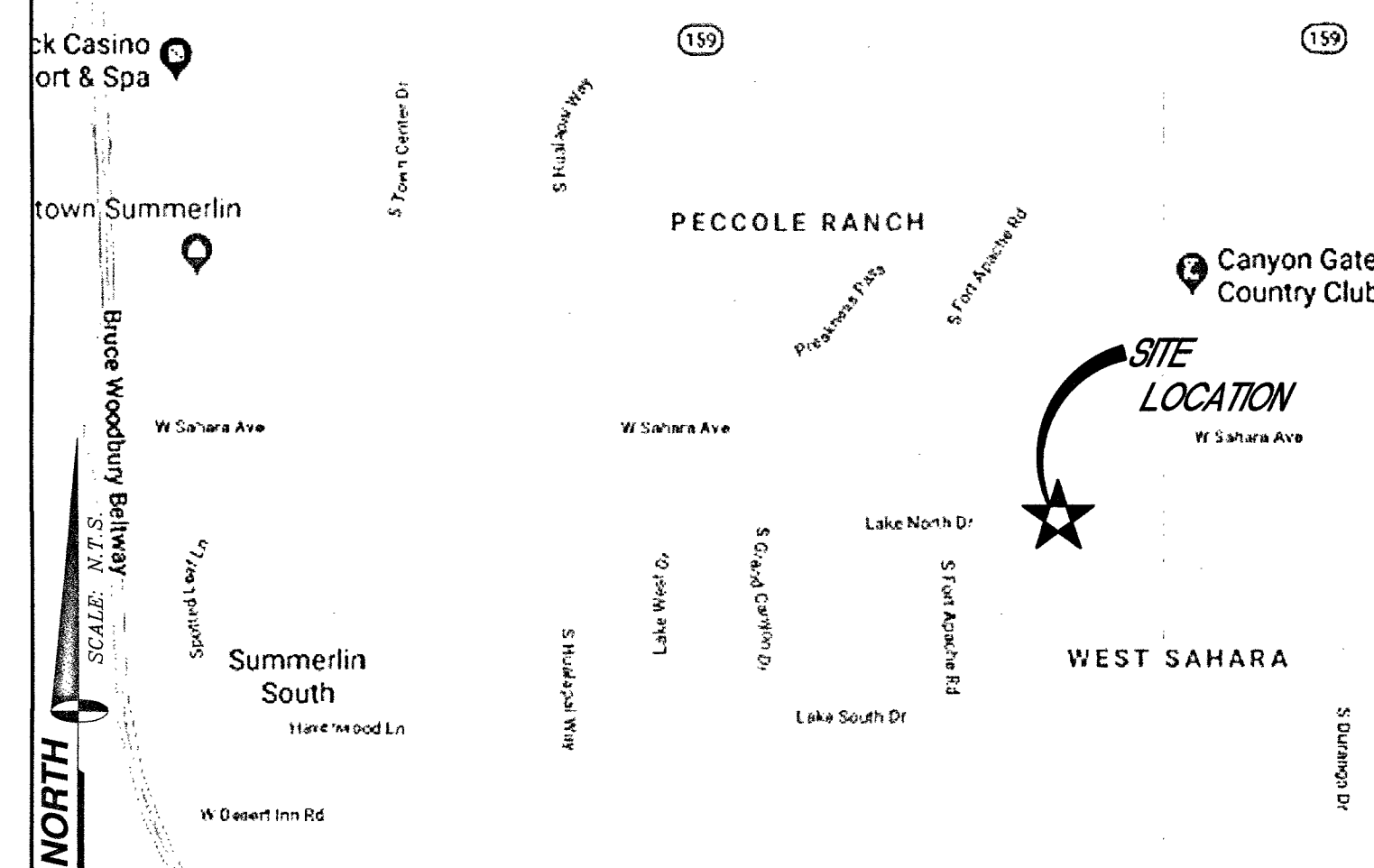
TITLE SHEET

SHEET NUMBER: REVISION:

C1 3

- REPLACEMENT OF AN EXISTING CONCRETE LIGHT POLE WITH A NEW RADIO AND ANTENNA AT THE TOP

TOTAL ENCROACHMENT NOTE



VICINITY MAP

APPLICANT/LESSEE
CROWN CASTLE NG WEST LLC
2055 SOUTH STEARMAN DRIVE
CHANDLER, ARIZONA 85286

CONTACT: MATT BOND
MOBILE: (480) 586-4306

PROPERTY INFORMATION

OWNER: PUBLIC RIGHT-OF-WAY
OCCUPANCY TYPE: U
CONSTRUCTION TYPE: V-B
CURRENT ZONING: N/A
JURISDICTION: CITY OF LAS VEGAS
APN: 163-08-199-014
LATITUDE: 36.14099
LONGITUDE: -115.29224
HANDICAP REQUIREMENTS: FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS NOT REQUIRED.

PROJECT SUMMARY

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

- INTERNATIONAL BUILDING CODE 2018 W/STATE AMENDMENTS
- INTERNATIONAL EXISTING BUILDING CODE 2018 W/STATE AMENDMENTS
- INTERNATIONAL ENERGY CONSERVATION CODE 2018
- UNIFORM MECHANICAL CODE 2018
- UNIFORM PLUMBING CODE 2018
- NATIONAL ELECTRIC CODE 2017
- INTERNATIONAL FIRE CODE 2018
- ANSI/EIA-222-G LIFE SAFETY CODE
- LOCAL BUILDING CODE(S)
- CITY AND/OR COUNTY ORDINANCES

CODE COMPLIANCE

SPECIAL INSPECTIONS ARE REQUIRED FOR THE TYPES OF WORK DESCRIBED BELOW:

- HIGH-STRENGTH BOLTS. (IF REQUIRED)
- WELDING: FIELD WELDING OF STRUCTURAL STEEL AND REINFORCING STEEL. (IF REQUIRED)
- STRUCTURAL STEEL. (IF REQUIRED)
- CONCRETE: REINFORCING STEEL AND PLACEMENT.
- CONCRETE WITH DESIGN GREATER THAN 2500 PSI.
- PILE, PIER OR CAISSON FOUNDATIONS.
- SOILS: SITE PREPARATION, FILL PLACEMENT, IN-PLACE DENSITY.

SPECIAL INSPECTIONS

CIVIL ENGINEER

SPECTRUM SERVICES, INC.
4850 WEST OQUENDO ROAD
LAS VEGAS, NEVADA 89118
CHRIS WENER
PHONE: (702) 367-7705
FAX: (702) 367-8733

ELECTRICAL ENGINEER

DGS CONSULTING ENGINEERING SERVICES LLC
9811 W. CHARLESTON BOULEVARD, SUITE 2539
LAS VEGAS, NEVADA 89117
PHONE: (702) 885-1552

PROJECT TEAM

SHEET	DESCRIPTION	REV.
C1	TITLE SHEET	3
C2	SITE PHOTO, LEGEND, GENERAL & CONSTRUCTION NOTES	2
C3	SITE PLAN	2
C4	EXISTING AND PROPOSED EAST ELEVATIONS	3
C5	CONSTRUCTION DETAILS	2
C6	CONCRETE FOUNDATION DETAILS	3
E1	GROUNDING LAYOUT, NOTES & DETAILS	2
SHEET INDEX		PERMIT

CITY OF LAS VEGAS
APPROVED FOR CONSTRUCTION

THIS APPROVAL IS FOR WORK IN CITY OF LAS VEGAS EASEMENT ONLY. OBTAINING PERMISSION OR EASEMENTS FOR WORK SHOWN ON PRIVATE PROPERTY IS THE RESPONSIBILITY OF THE UTILITY.

APPROVAL

L19-00256

DATE

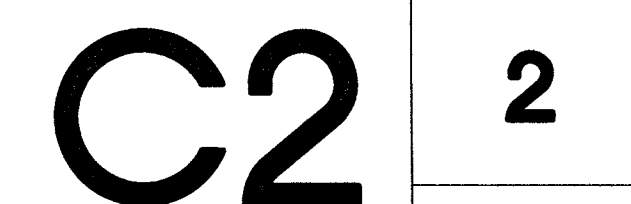
10/17/2019-FIB

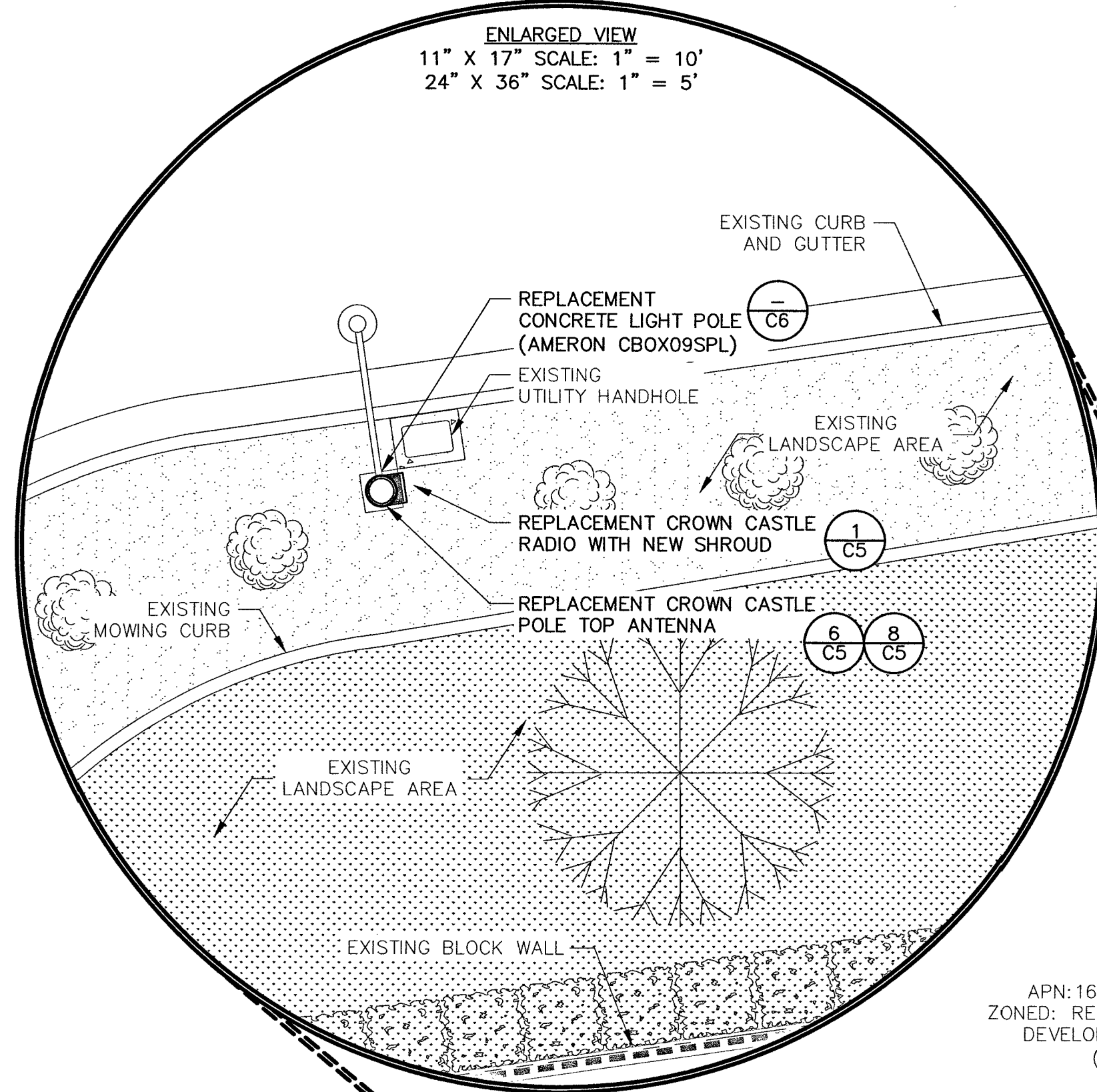
L19-00256 4/15/19



- ## PROJECT GENERAL NOTES

- ## CONSTRUCTION NOTES





APN: 163-08-114-000
ZONED: RESIDENTIAL PLANNED
DEVELOPMENT DISTRICT
(R-PD12)

APN: 163-08-197-010
ZONED: RESIDENTIAL PLANNED
DEVELOPMENT DISTRICT
(R-PD12)

APN: 163-08-199-021
ZONED: PUBLIC RIGHT
OF WAY

APN: 163-08-199-013
ZONED: PUBLIC RIGHT OF WAY

APN: 163-08-199-014
ZONED: PUBLIC RIGHT OF WAY

APN: 163-08-197-017
ZONED: RESIDENTIAL PLANNED
DEVELOPMENT DISTRICT
(R-PD12)

APN: 163-08-197-015
ZONED: RESIDENTIAL PLANNED
DEVELOPMENT DISTRICT
(R-PD12)

APN: 163-08-197-016
ZONED: RESIDENTIAL PLANNED
DEVELOPMENT DISTRICT
(R-PD12)

APN: 163-08-119-012
ZONED: RESIDENTIAL PLANNED
DEVELOPMENT DISTRICT (R-PD12)

LAKE NORTH DRIVE

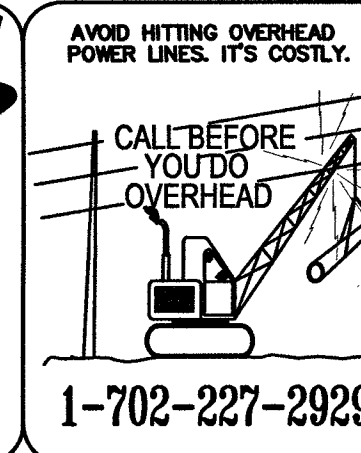
LODESTONE DRIVE

WATERVIEW DRIVE

FERRIN ROAD

LEGEND

- CENTERLINE
- EASEMENT
- RIGHT-OF-WAY
- CURB AND CUTTER
- EDGE OF SIDEWALK
- F --- UNDERGROUND FIBER ROUTE
- FIRE HYDRANT
- STREET LIGHT



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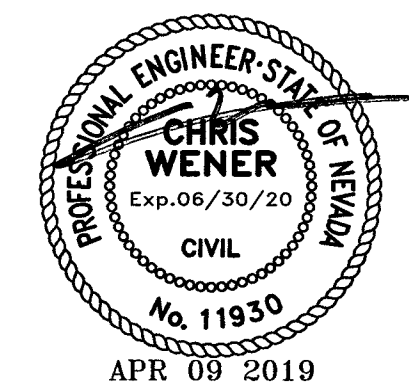
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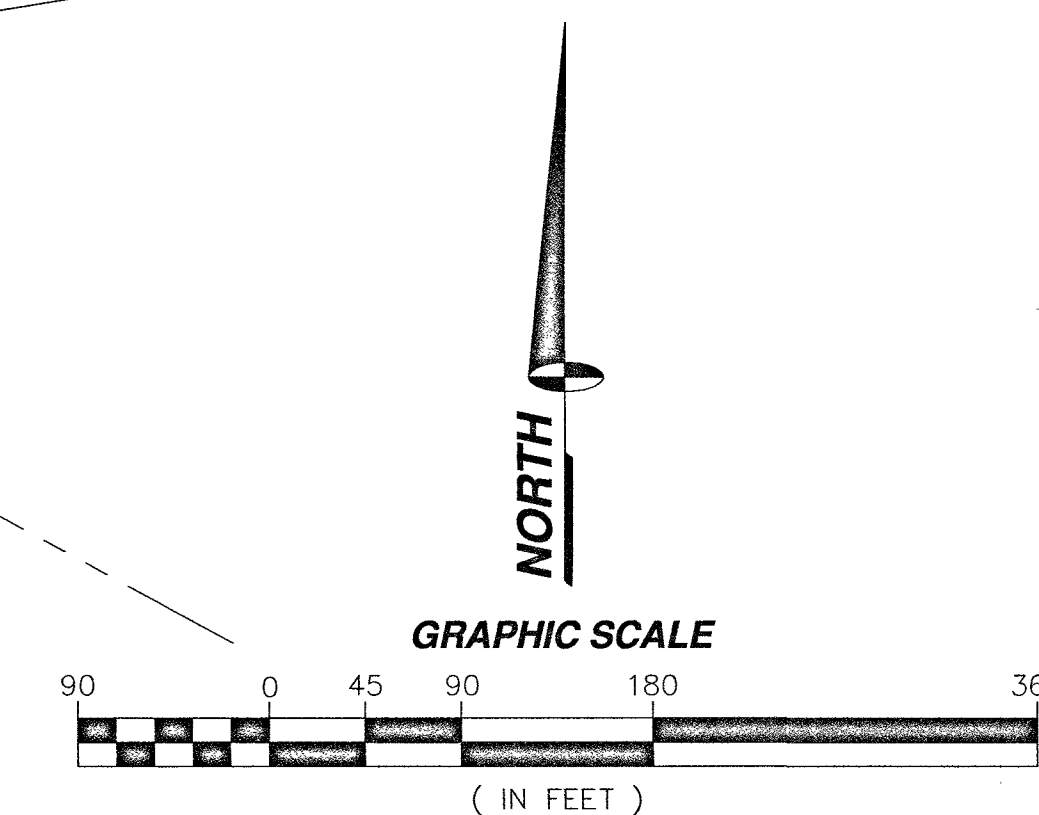
SHEET TITLE:

SITE PLAN

SHEET NUMBER: REVISION:

C3 2

SITE PLAN



11" X 17" SCALE: 1" = 10'
24" X 36" SCALE: 1" = 5'

1

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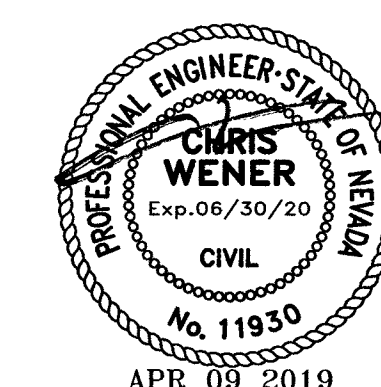
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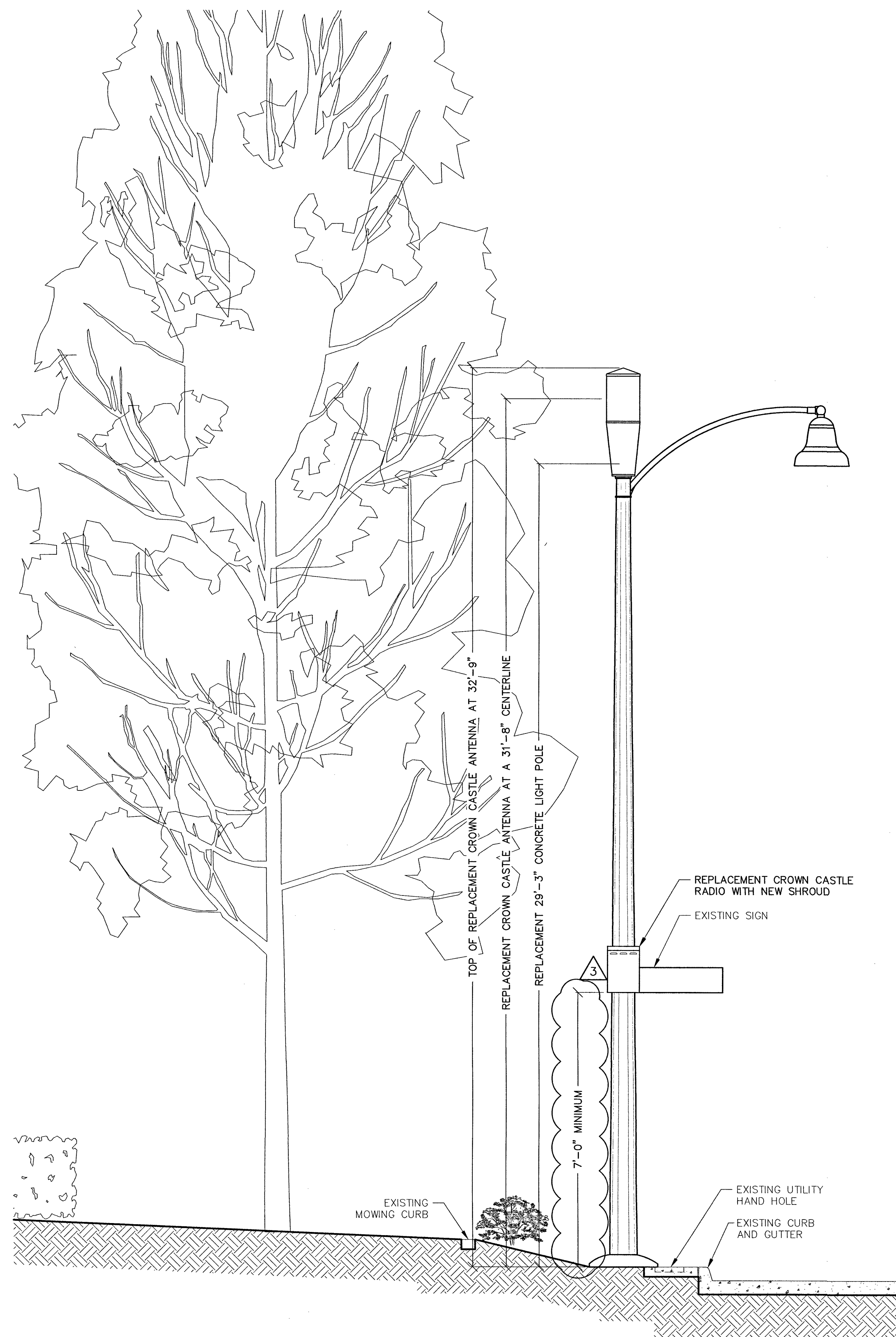


SHEET TITLE:

EXISTING AND PROPOSED
EAST ELEVATION

SHEET NUMBER: REVISION:

C4 **3**

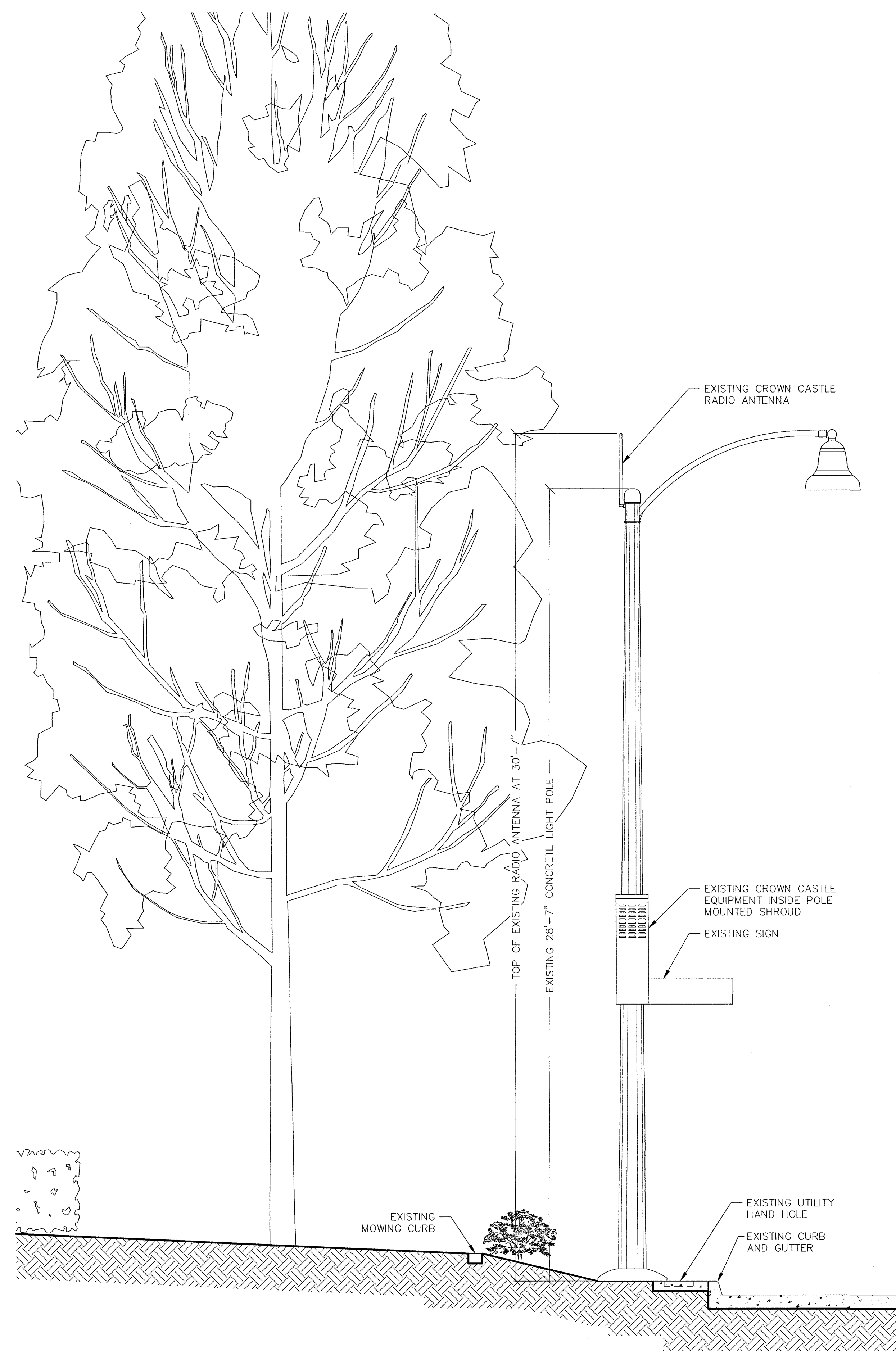


PROPOSED EAST ELEVATION

11" X 17" SCALE 24" X 36" SCALE
1" = 5' 1" = 2'-6"

2

EXISTING EAST ELEVATION



11" X 17" SCALE 24" X 36" SCALE
1" = 5' 1" = 2'-6"

1

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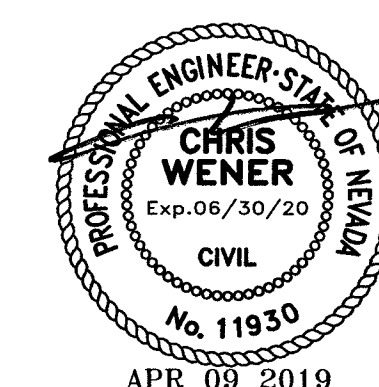
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SHEET TITLE:

CONSTRUCTION DETAILS

SHEET NUMBER: REVISION:

C5 2

AMPHENOL 2C2U3MT360X06FY70 ANTENNA SPECIFICATIONS
INPUT CONNECTOR (2X) 4.3/10 OR 7/16-DIN / FEMALE / BOTTOM
DIMENSION (H x DIA.) 24.0 x 14.6 IN.
ANTENNA WEIGHT 22.1 LBS
LIGHTNING PROTECTION DIRECT GROUND

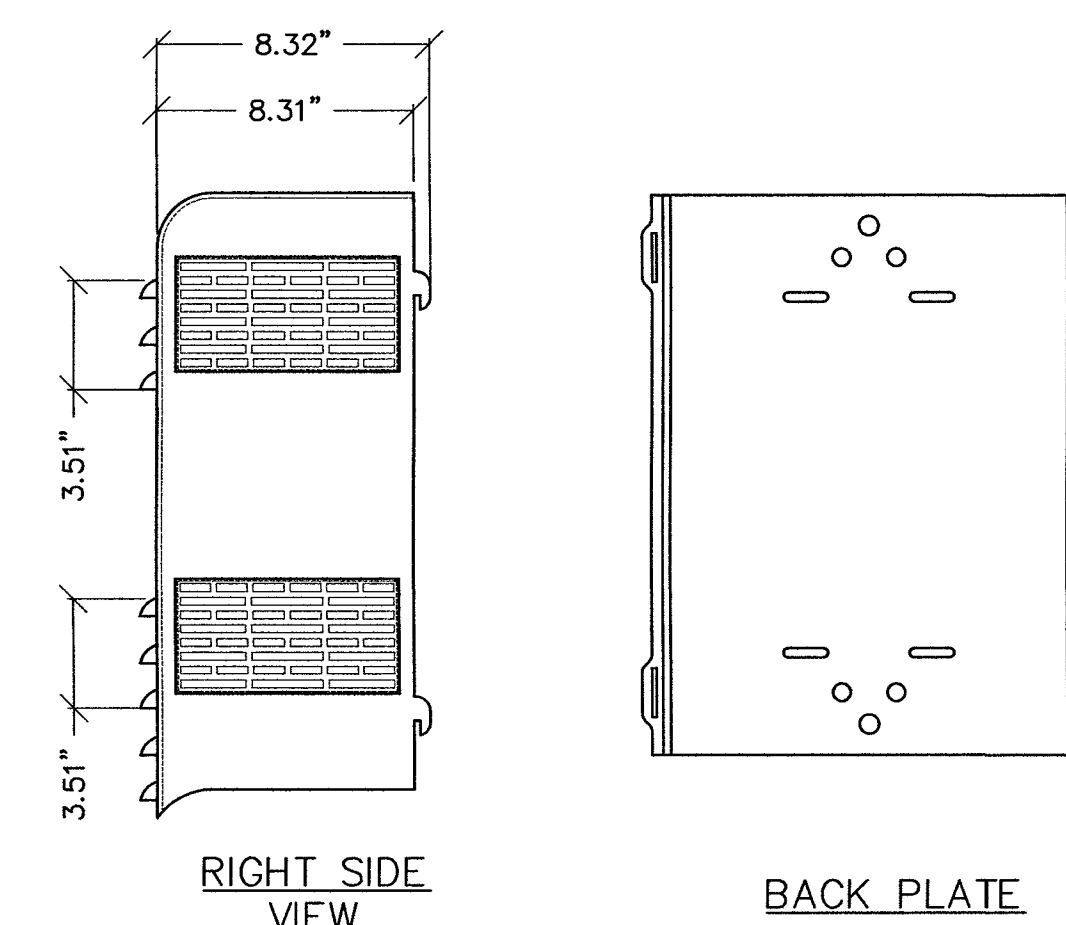
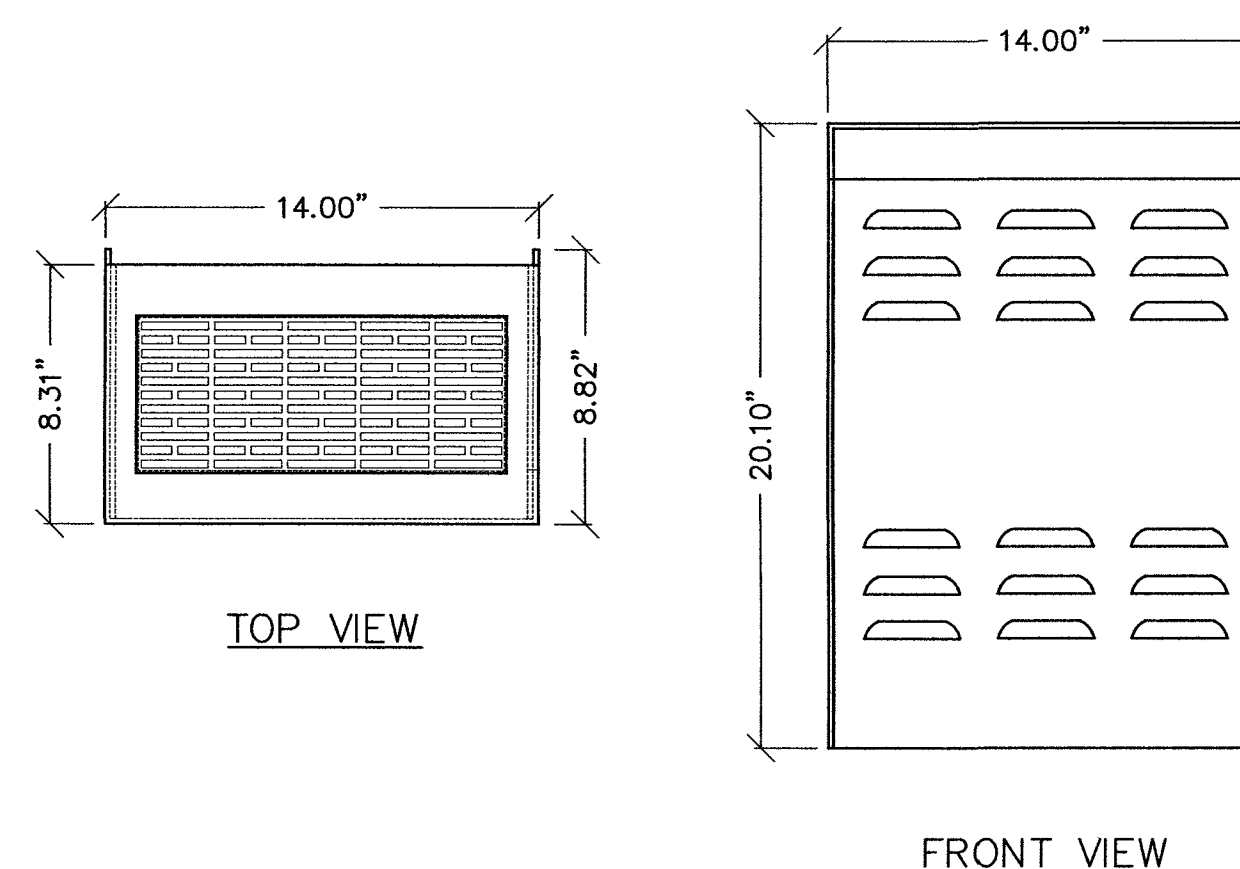
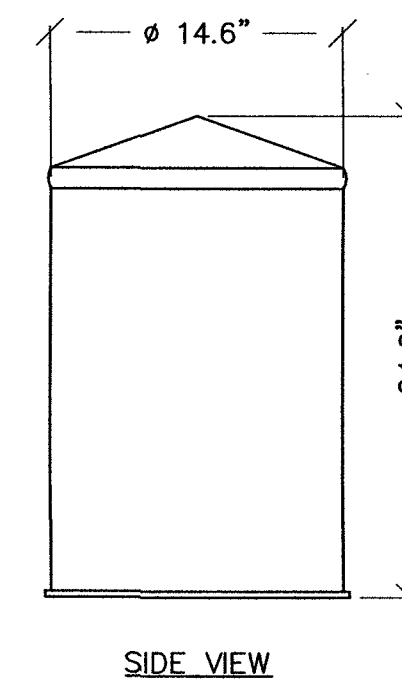
WIND SURVIVAL SPEED
241 KM/HR - 150 MPH

WIND LOAD @ 100 MPH (160 KM/HR)
191 N - 43 LBF

Ø4" & 6" Ø BCD FOR
3/8"-16 UNC MOUNTING
STUDS (X6) AT 120°
APART THEY EXTEND 1
1/4" BELOW PLATE FOR
MOUNTING

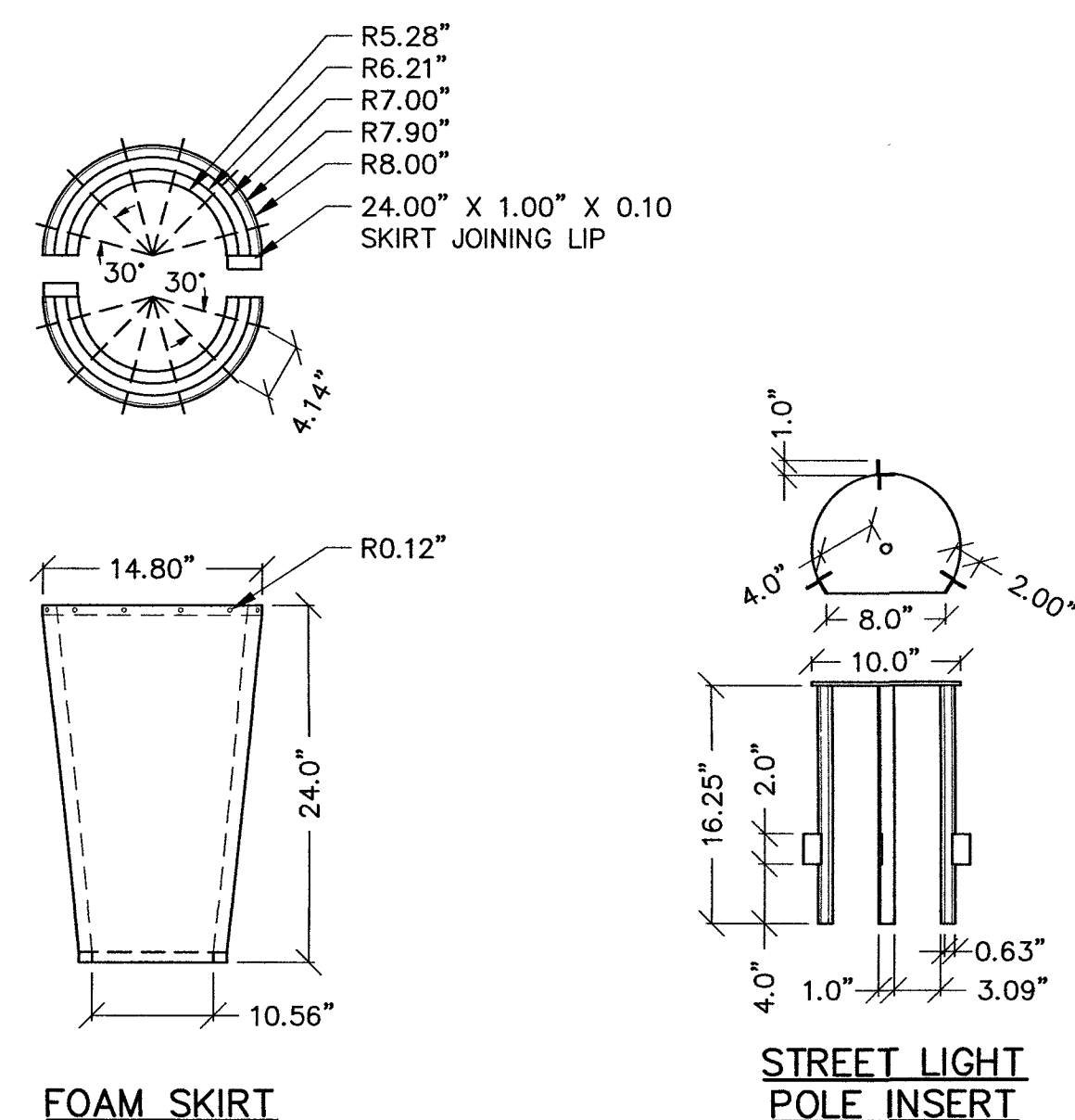
NOTES:

1. CONNECTOR HOLES ARE 2" FROM CENTER TO CENTER
APART IN EACH SECTOR



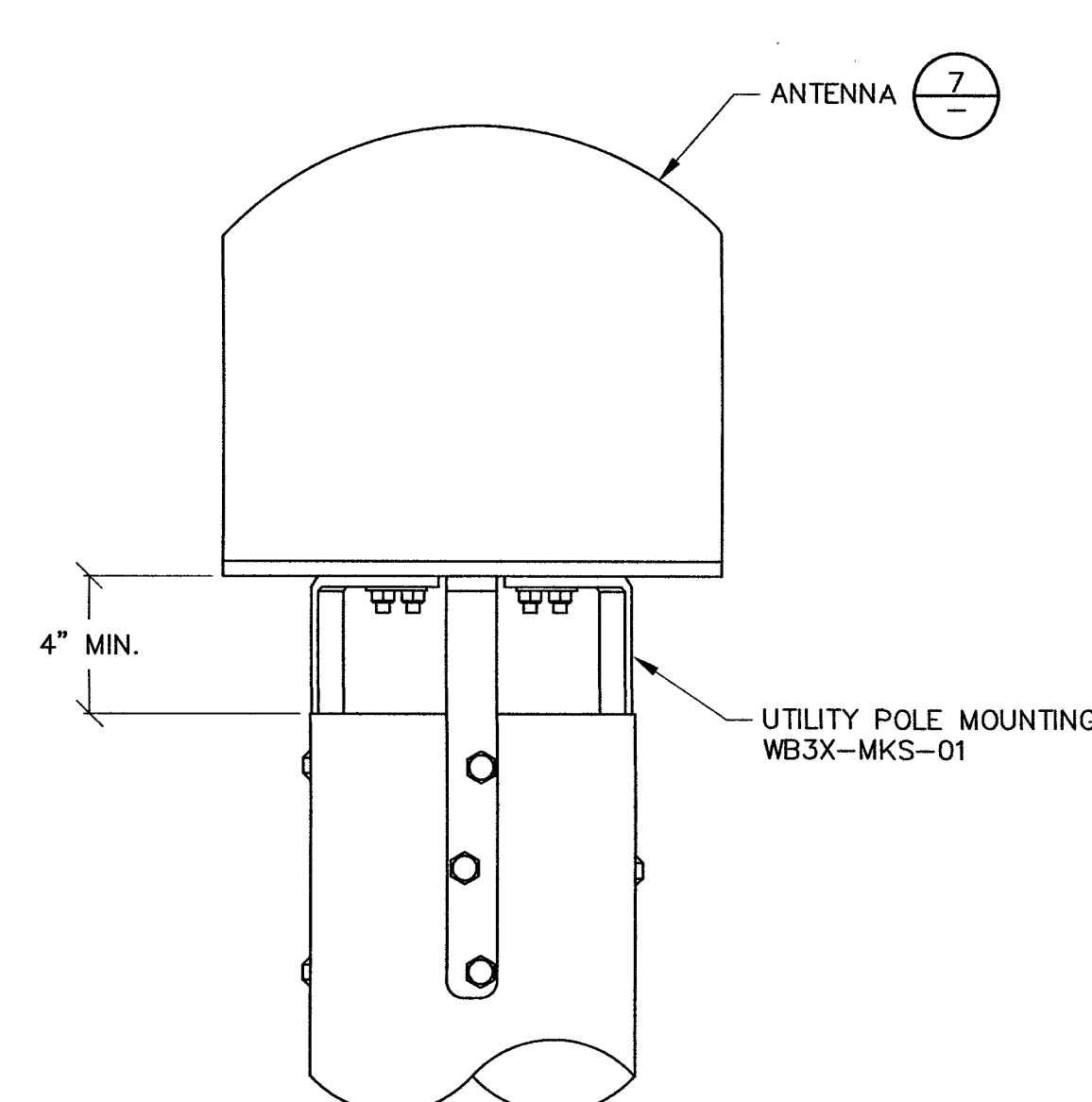
STAINLESS STEEL RING BAND

SCALE: NONE 9



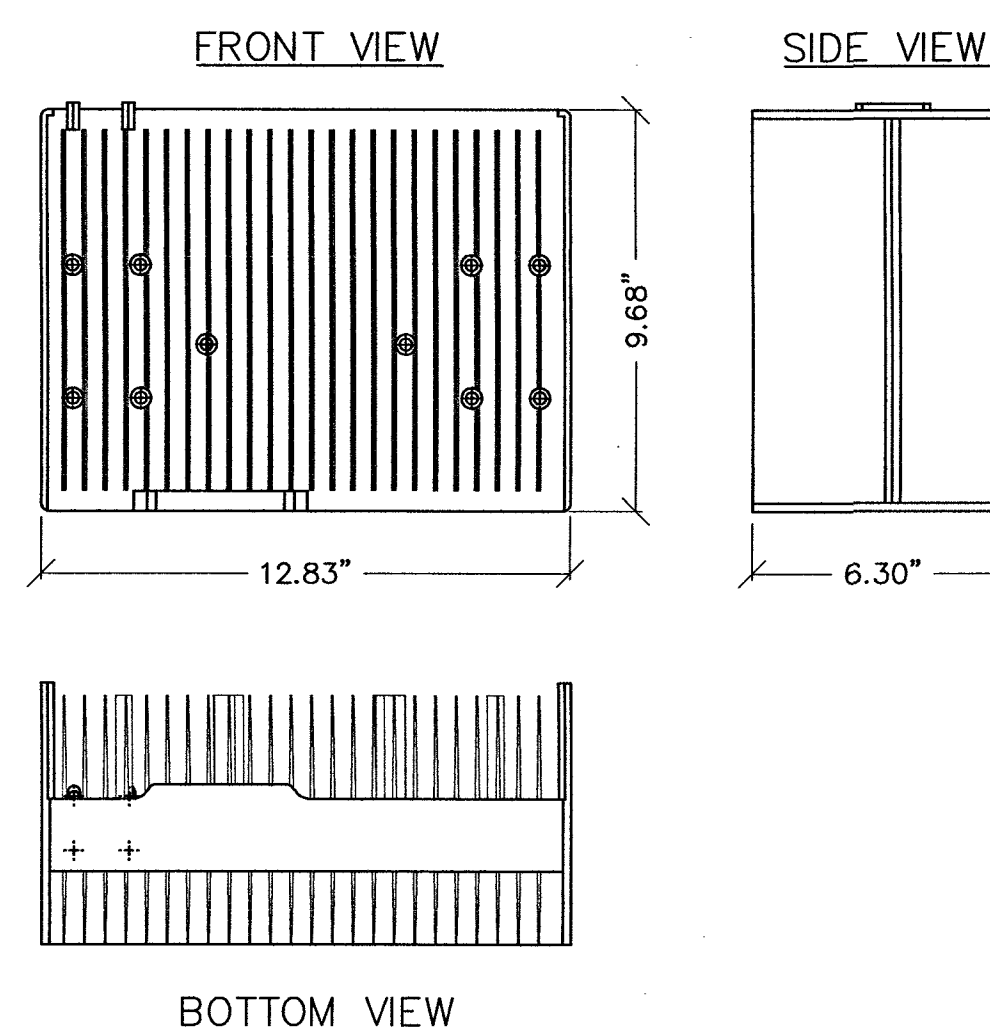
ANTENNA DETAIL

SCALE: NONE 7



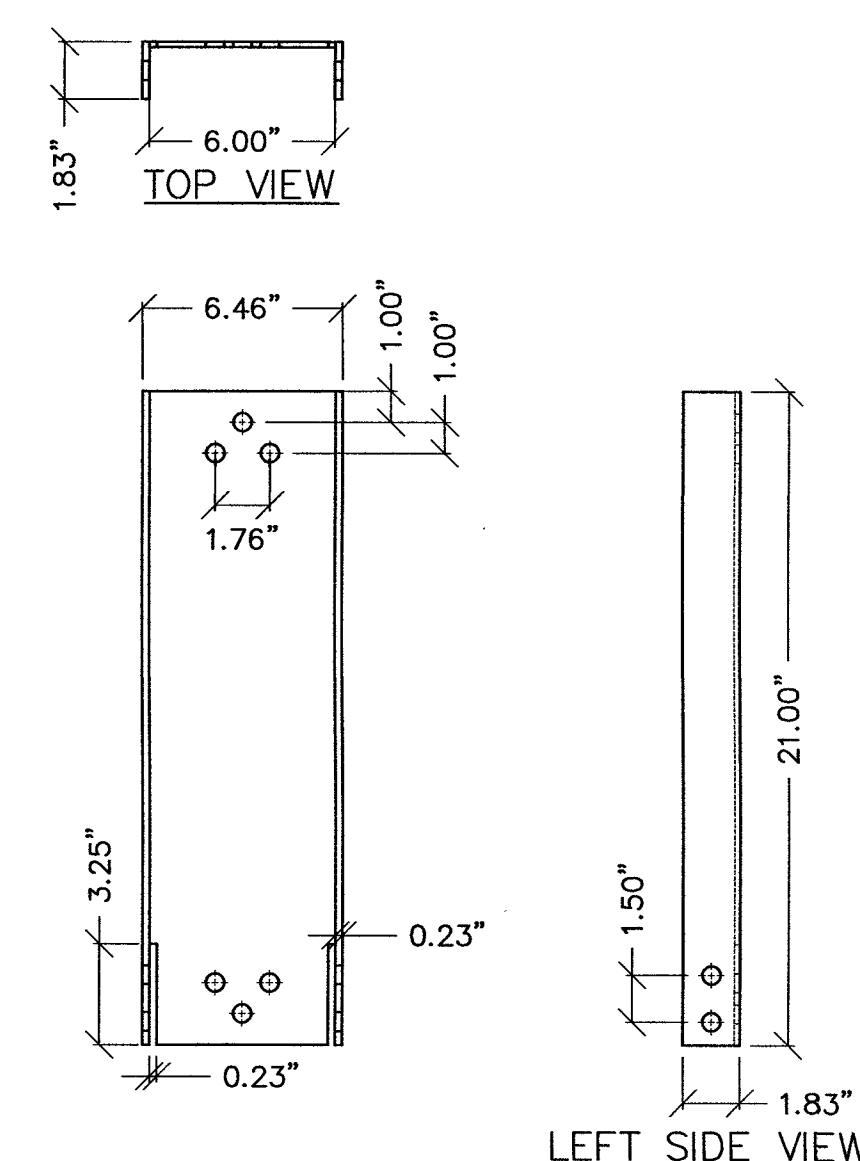
RADIO SHROUD

SCALE: NONE 2



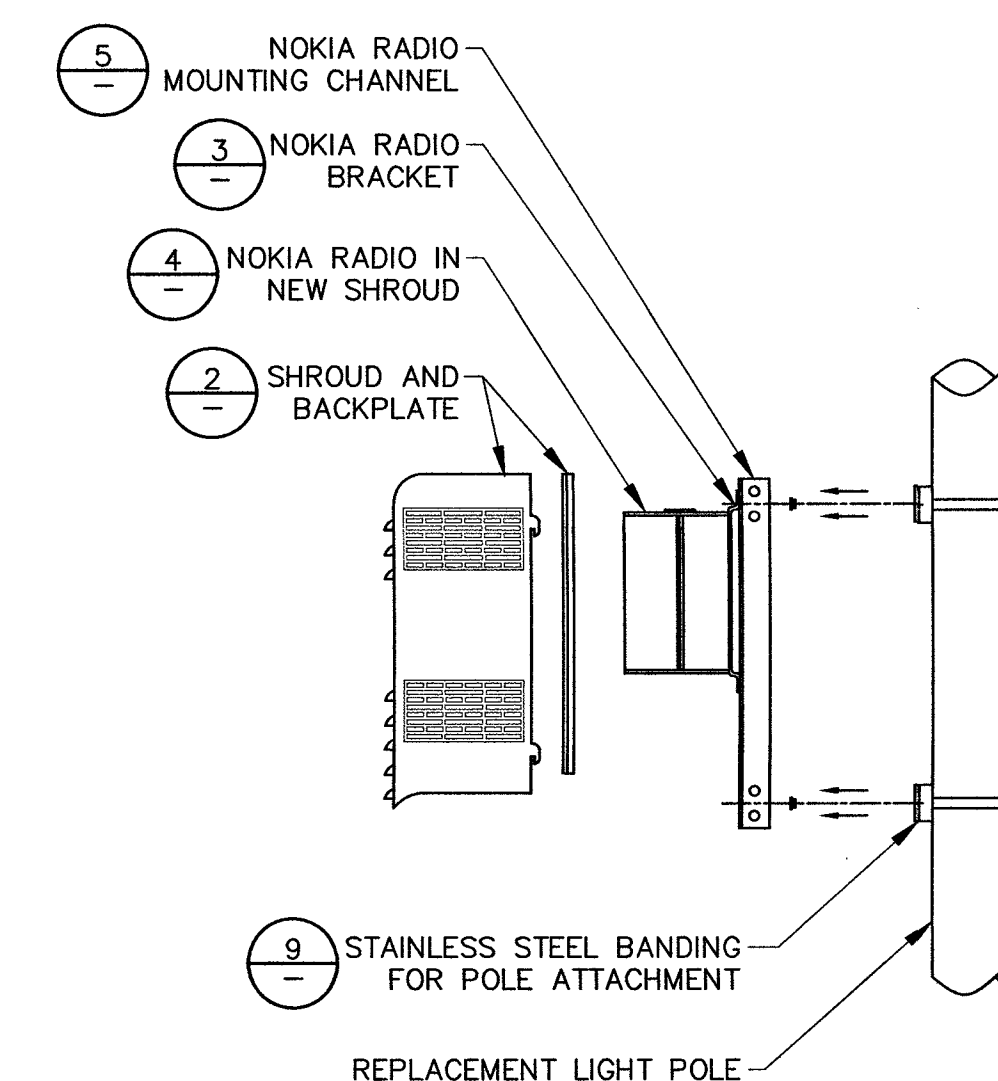
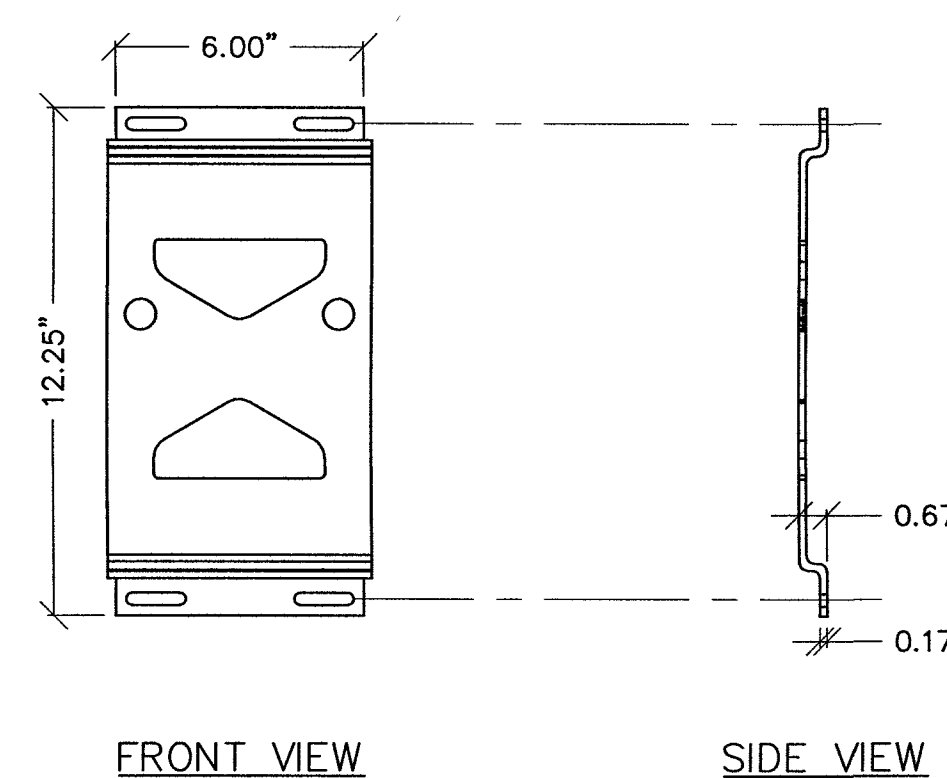
ANTENNA MOUNTING DETAIL

SCALE: NONE 6



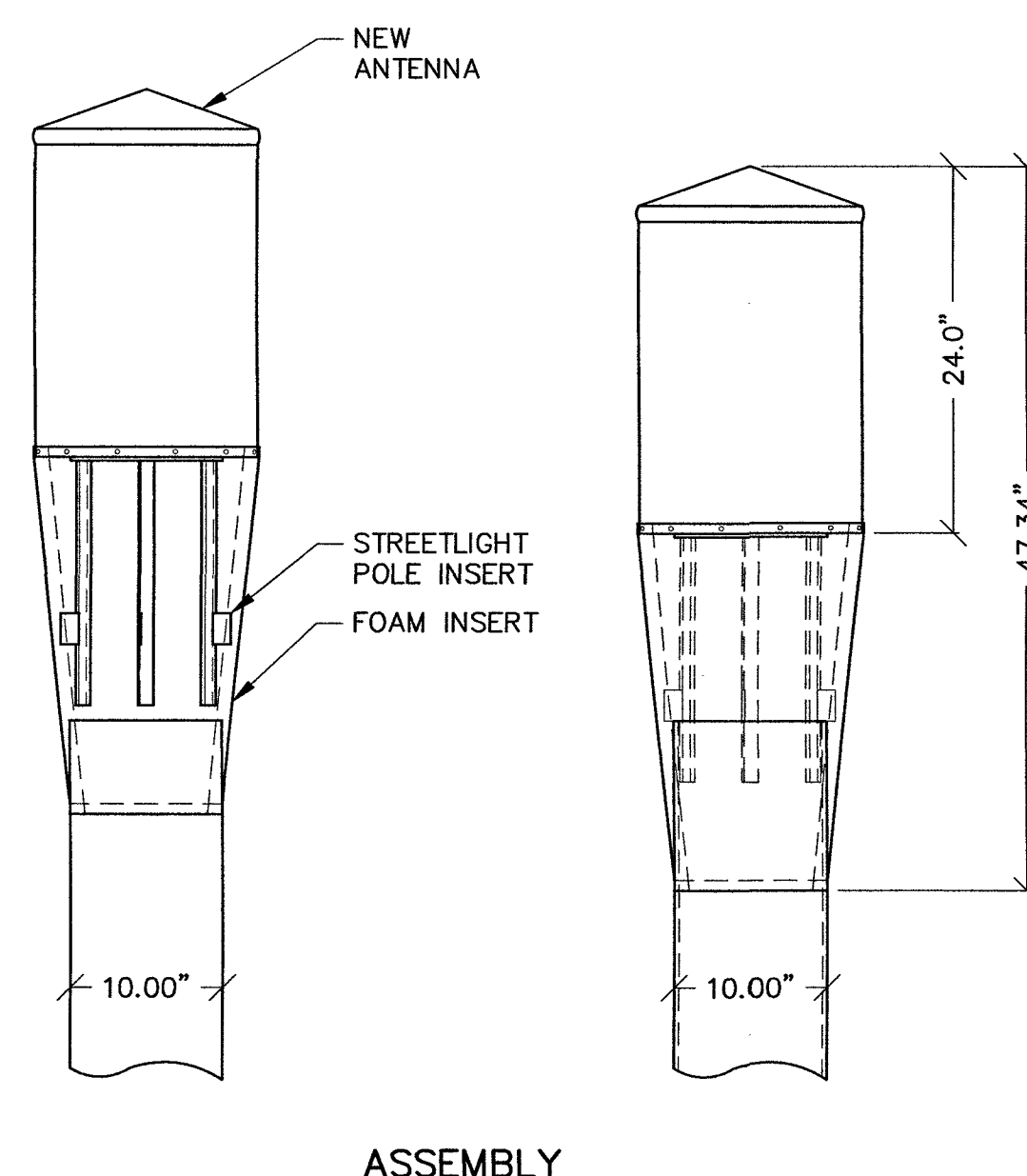
NOKIA 20W RADIO

SCALE: NONE 4



ANTENNA SHROUD

SCALE: NONE 8



NOKIA 20W RADIO MOUNTING CHANNEL

SCALE: NONE 5

NOKIA 20W RADIO BRACKET

SCALE: NONE 3

SHROUD ASSEMBLY

SCALE: NONE 1



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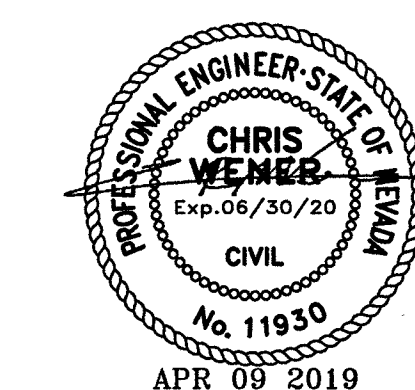
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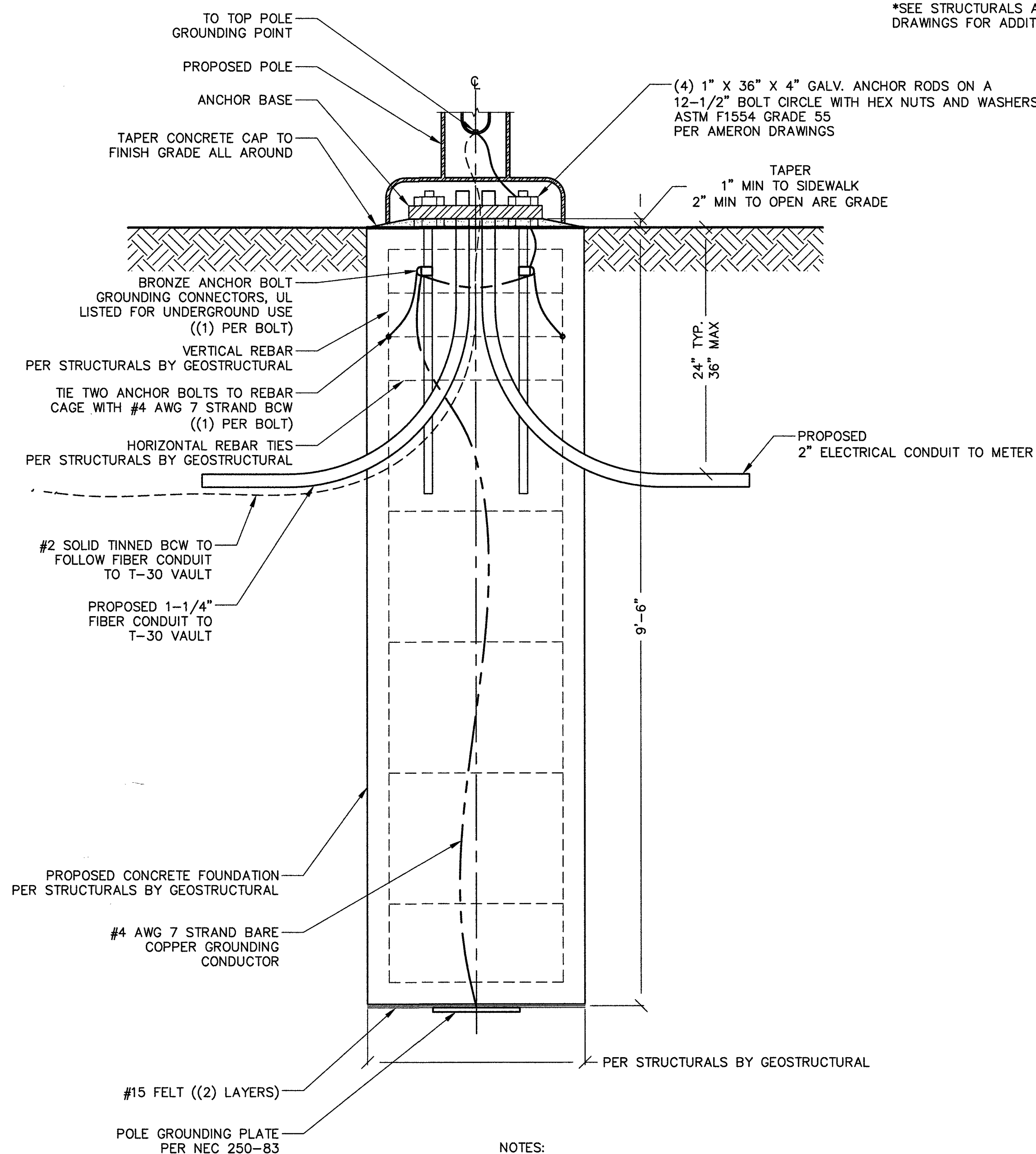
SHEET TITLE:

CONCRETE FOUNDATION
DETAILS

SHEET NUMBER: REVISION:

C6 3

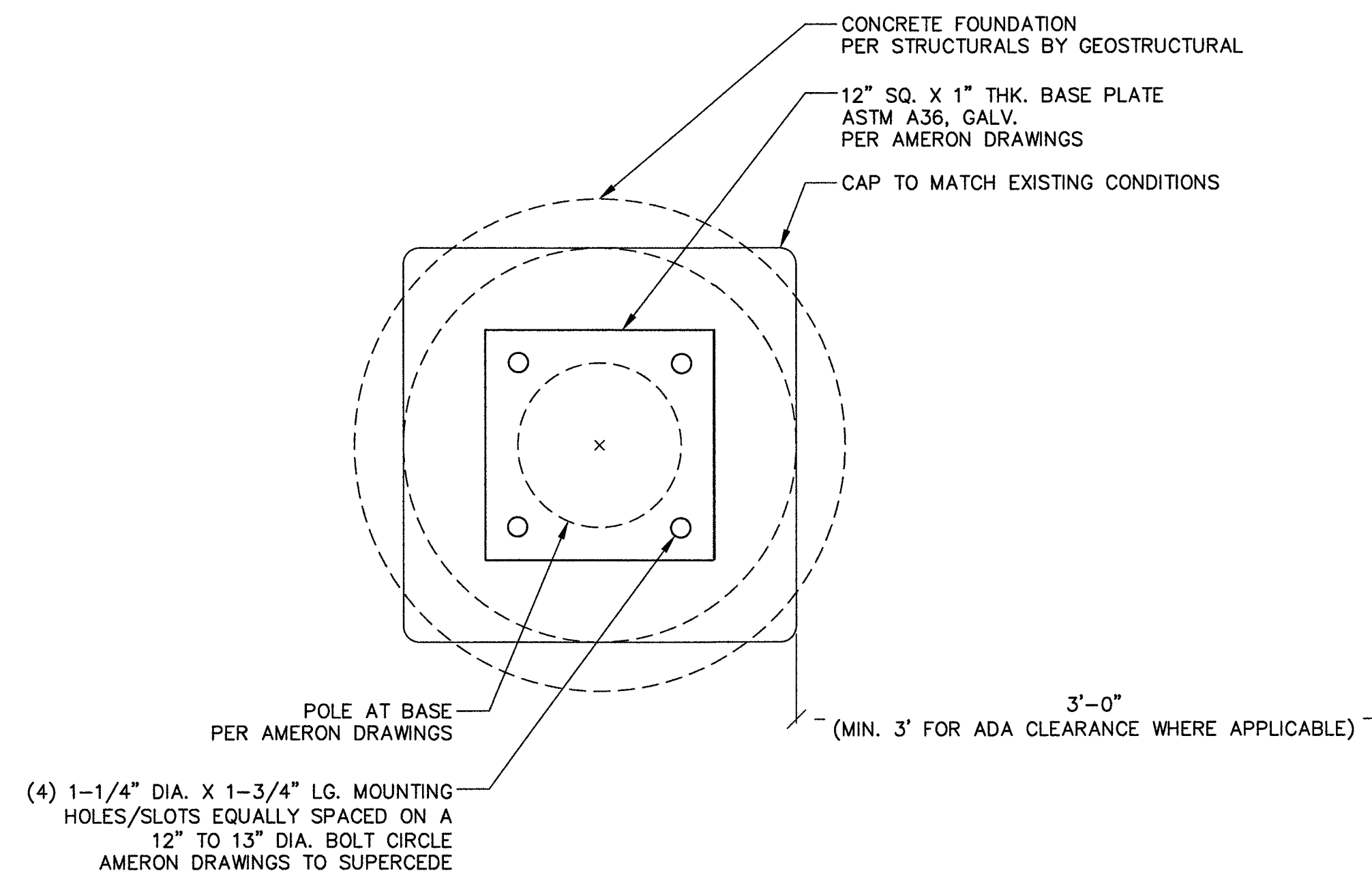
*SEE STRUCTURALS AND AMERON
DRAWINGS FOR ADDITIONAL INFORMATION

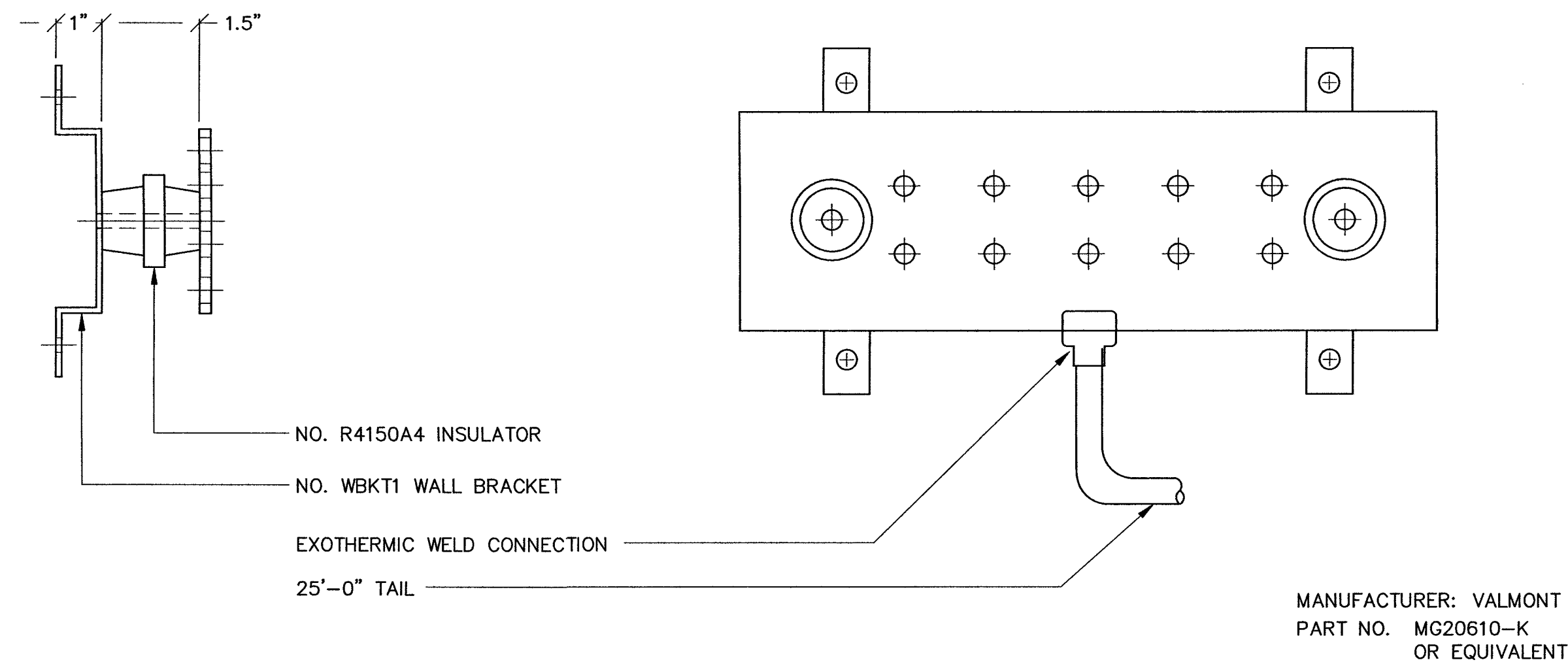
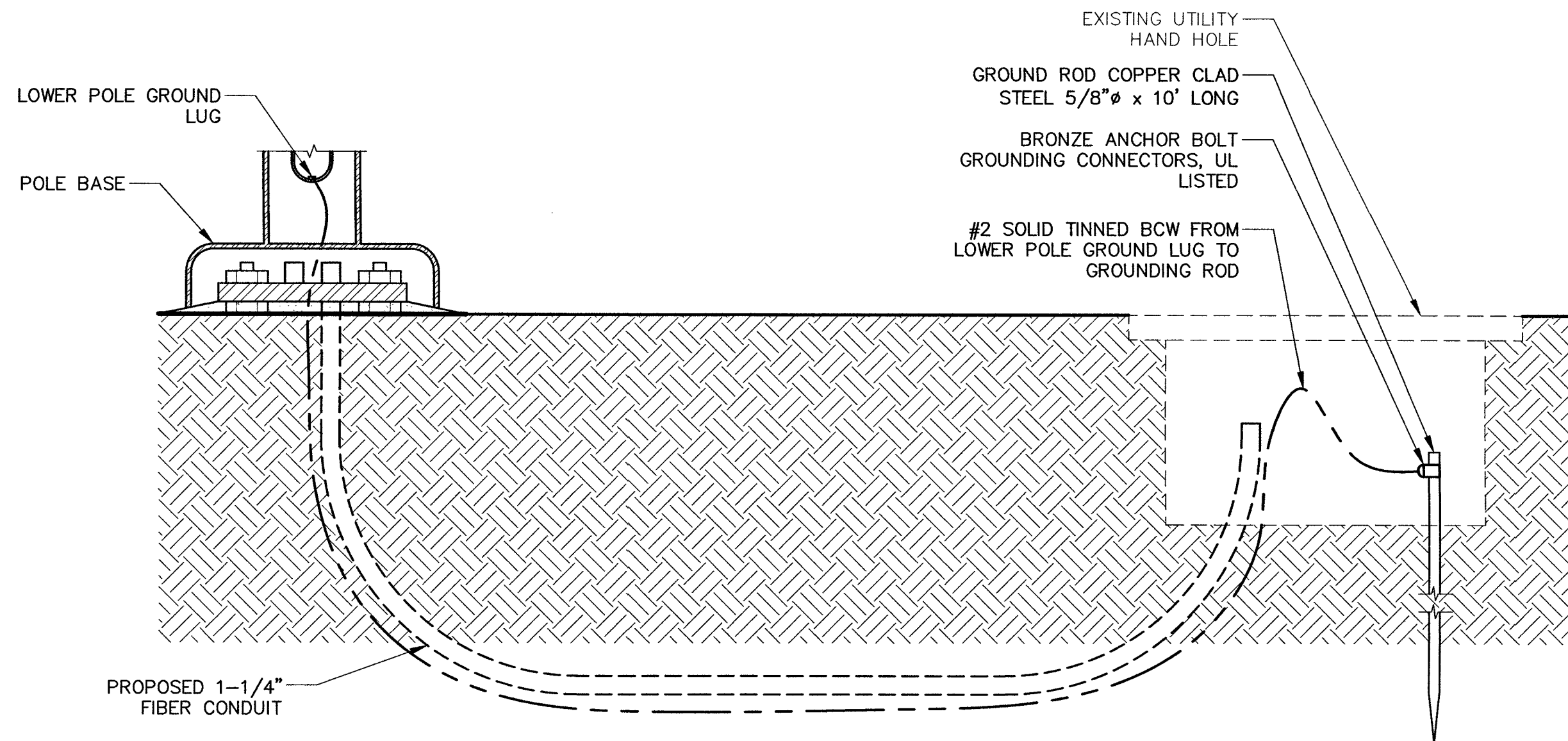


NOTES:

1. CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4500 PSI, IN ACCORDANCE WITH ACI 318-11. BASE PLATE GROUT STRENGTH AT 8000 PSI.
2. USE TYPE V PORTLAND CEMENT AND A MAXIMUM WATER-CEMENT RATIO OF 0.45.
3. REBAR TO CONFORM TO ASTM SPECIFICATION A615 GRADE 60.
4. ALL REBAR TO HAVE A MINIMUM OF 3" CONCRETE COVER.
5. ALL EXPOSED CONCRETE CORNERS TO BE CHAMFERED 3/4".
6. SEE THE GEOTECHNICAL REPORT FOR DRILLED PIER INSTALLATION REQUIREMENTS, IF SPECIFIED.
7. ANCHOR RODS ARE TO BE (4) 1" DIAMETER ASTM F1554 GRADE 55 ON A 12"-1/2" DIAMETER BOLT CIRCLE. MINIMUM LENGTH OF ANCHOR RODS IS 36", WITH A MAXIMUM PROJECTION OF 5" ABOVE CONCRETE. AMERON DRAWINGS TO SUPERCEDE THIS NOTE.

*SEE STRUCTURALS AND AMERON
DRAWINGS FOR ADDITIONAL INFORMATION





GROUND ROD

SCALE: NONE

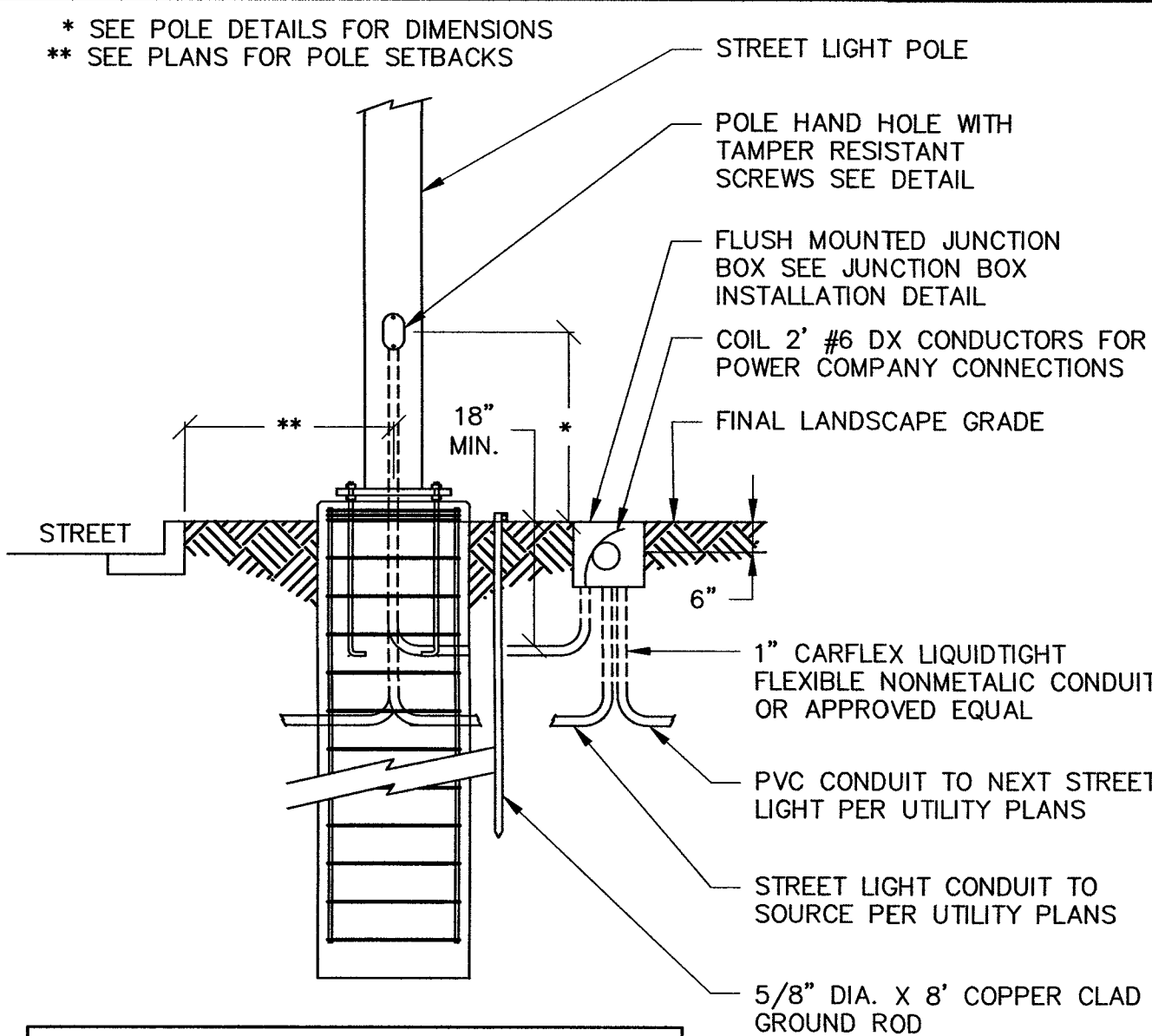
4

GROUND BAR

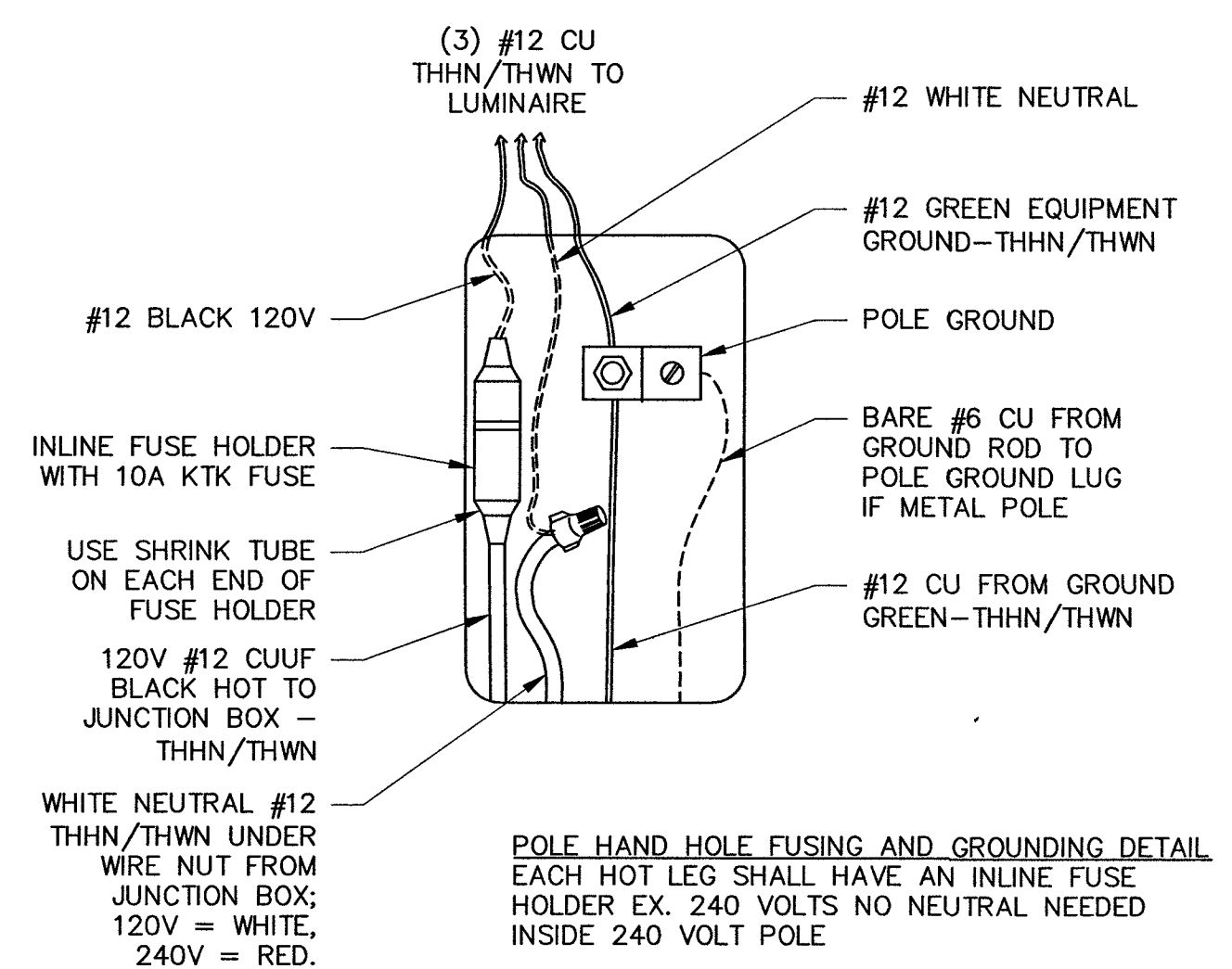
SCALE: NONE

2

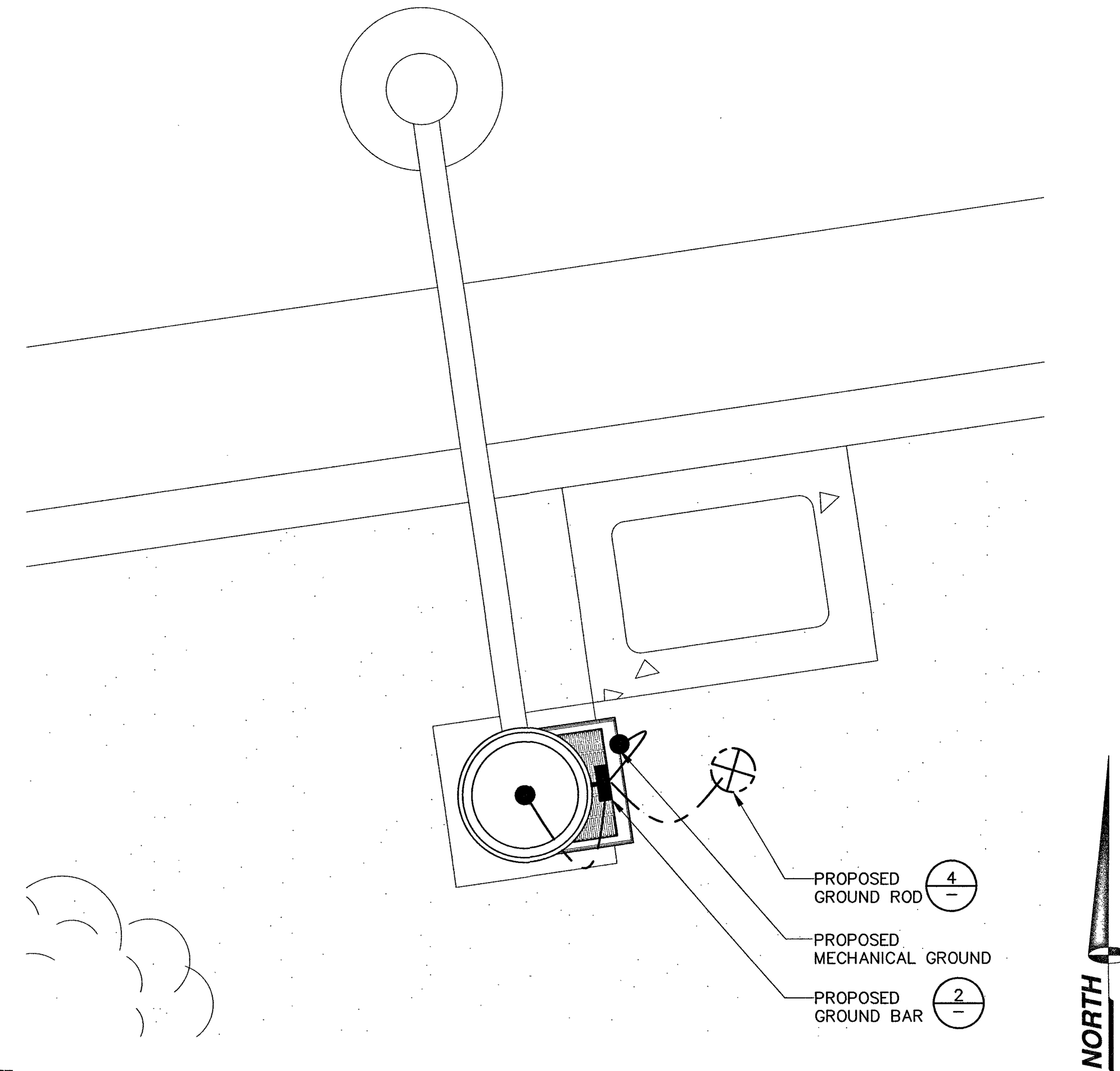
1. ALL DETAILS ARE SHOWN IN GENERAL TERMS. ACTUAL GROUNDING INSTALLATION REQUIREMENTS AND CONSTRUCTION ACCORDING TO SITE CONDITIONS AND CARRIER GROUNDING STANDARD, LATEST REVISION.
2. ALL GROUNDING CONDUCTORS: #2 AWG SOLID BARE TINNED COPPER WIRE UNLESS OTHERWISE NOTED.
3. GROUND RING TO GROUND BAR CONNECTIONS SHALL BE CADWELED QTY. (2) #2 AWG SOLID BARE TINNED COPPER WIRE UNLESS OTHERWISE NOTED.
4. GROUND BAR TO EQUIPMENT AND CABLES SHALL BE #2 AWG BTCW W/ DOUBLE LUG CONNECTIONS.
5. GROUND BAR LOCATED IN BASE OF EQUIPMENT WILL BE PROVIDED, FURNISHED AND INSTALLED BY THE VENDOR.
6. GROUND BAR LOCATED BELOW WAVEGUIDE ENTRY PORT. CABLES SHALL BE #2 AWG BTCW/DOUBLE LUG CONNECTIONS. TWO PATHS TO GROUND RING.
7. ALL BELOW GRADE CONNECTIONS: EXOTHERMIC WELD TYPE, ABOVE GRADE CONNECTIONS: EXOTHERMIC WELD TYPE.
8. EXTERIOR GROUNDING CONDUCTORS: BURIED TO A MINIMUM DEPTH OF 1'-6" BELOW FINISHED GRADE TO ALLOW FOR FUTURE CONSTRUCTION.
9. INSTALL GROUND CONDUCTORS AND GROUND ROD MINIMUM OF 1'-0" FROM EQUIPMENT CONCRETE SLAB, SPREAD FOOTING, OR FENCE.
10. EXOTHERMIC WELD GROUND CONNECTION TO FENCE POST: TREAT WITH A COLD GALVANIZED SPRAY.
11. GROUND BARS:
EQUIPMENT GROUND BUSS BAR (EGB) LOCATED AT BOTTOM OF ANTENNA POLE/MAST FOR MAKING GROUNDING JUMPER CONNECTIONS TO COAX FEEDER CABLES SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. JUMPERS (FURNISHED BY OWNERS) SHALL BE INSTALLED AND CONNECTED BY ELECTRICAL CONTRACTOR.
MAIN GROUND BUSS BAR (MGB) LOCATED NEAR THE BASE OF THE RADIO EQUIPMENT CABINET(S) SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
12. ALL GROUNDING INSTALLATIONS AND CONNECTIONS SHALL BE MADE BY ELECTRICAL CONTRACTOR.
13. ALL BOLTED TORQUE CONNECTORS SHALL BE LONG-BARRELED TYPES AND HAVE TWO HOLES FOR CONNECTION TO SURFACE AND NON-OXIDIZING AGENT APPLIED TO INHIBIT CORROSION.



NOTES:
THIS DETAIL IS DIAGRAMMATIC ONLY.
CONTRACTOR SHALL REFER TO POLE DRAWINGS AND CALCULATIONS FOR EXACT DETAIL.



- NOTE:
1. ALL GROUNDING TO BE INSTALLED IN ACCORDANCE WITH VERIZON WIRELESS STANDARD NSTD 46
 2. CONTRACTOR TO MODIFY OR ADD NECESSARY GROUNDING TO PROVIDE A MAX. RESISTANCE OF 5 OHMS



GROUNDING NOTES

SCALE: NONE

5

STREET LIGHT WIRING AND GROUNDING

SCALE: NONE

3

GROUNDING LAYOUT

11" X 17" SCALE 24" X 36" SCALE

1" = 2'

1" = 1"

1



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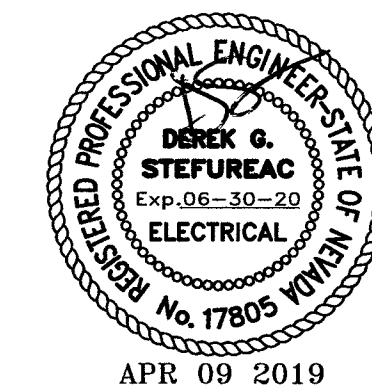
PLANS PREPARED BY:



DGS

CONSULTING ENGINEERING SERVICES LLC

LICENSURE:



SHEET TITLE:

GROUNDING LAYOUT,
NOTES & DETAILS

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E1 2