



CROWN CASTLE ID #
LV016

Redlined Construction
Drawings

Theresa Sianez

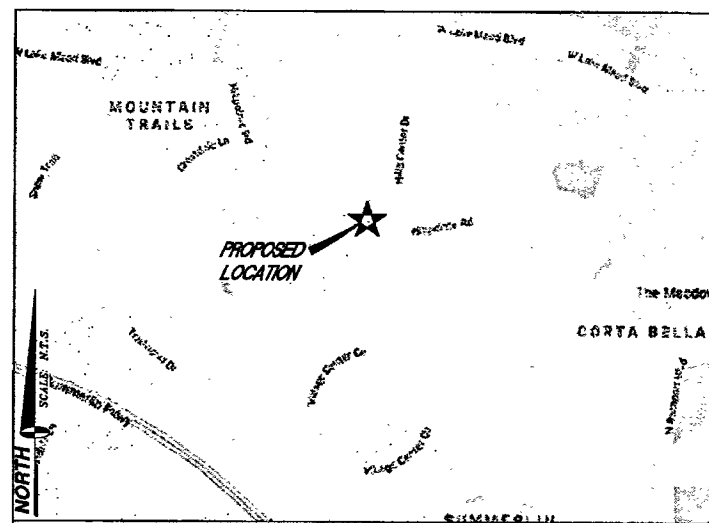
Theresa Sianez
Spectrum Services

Date
10/25/19

HILLPOINTE ROAD
LAS VEGAS, NEVADA 89134

- REPLACEMENT OF AN EXISTING CONCRETE POLE WITH A NEW CONCRETE POLE
- REPLACEMENT OF EXISTING ANTENNA AT TOP OF POLE AND POLE MOUNTED RADIO WITH NEW
- EXISTING 200A CITY OF LAS VEGAS DISTRIBUTION PANEL TO BE UPGRADED TO A NEW 200A (20) CIRCUIT DISTRIBUTION PANEL

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: PLANNED COMMUNITY DISTRICT (P-C)
JURISDICTION: CITY OF LAS VEGAS
APN: 138-19-697-006
LATITUDE: 36.19826
LONGITUDE: -115.30178
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	4
C2	SITE PHOTO, GENERAL & CONSTRUCTION NOTES	4
C3	SITE PLAN	4
C4	EXISTING AND PROPOSED NORTH ELEVATIONS	4
C5	CONSTRUCTION DETAILS	4
C6	CONCRETE FOUNDATION DETAILS	4
G1	GROUNDING LAYOUT, NOTES & DETAILS	4
G2	GROUNDING DETAILS	4
FOUNDATION AMERON CONCRETE POLES - FOUNDATION DESIGN		
AMERON DRAWING NO: 1811-033		
ISSUED FOR:		
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

9/16/19
DATE



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HILLPOINTE ROAD
LAS VEGAS, NEVADA 89134

CURRENT ISSUE DATE:

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REV.: DATE: DESCRIPTION: BY:

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3	09/04/19	POWER REVISION	J.Z.
2	04/04/19	POLE REVISION	R.C.
1	10/16/18	100% PERMITTING	C.P.
0	09/18/18	90% PERMITTING	R.S.

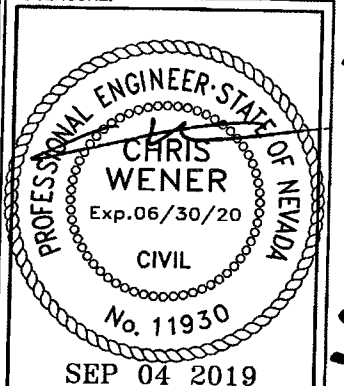
PLANS PREPARED BY:



DGS

CONSULTING ENGINEERING SERVICES LLC

LICENSURE:



SHEET TITLE:

TITLE SHEET

SHEET NUMBER: REVISION:

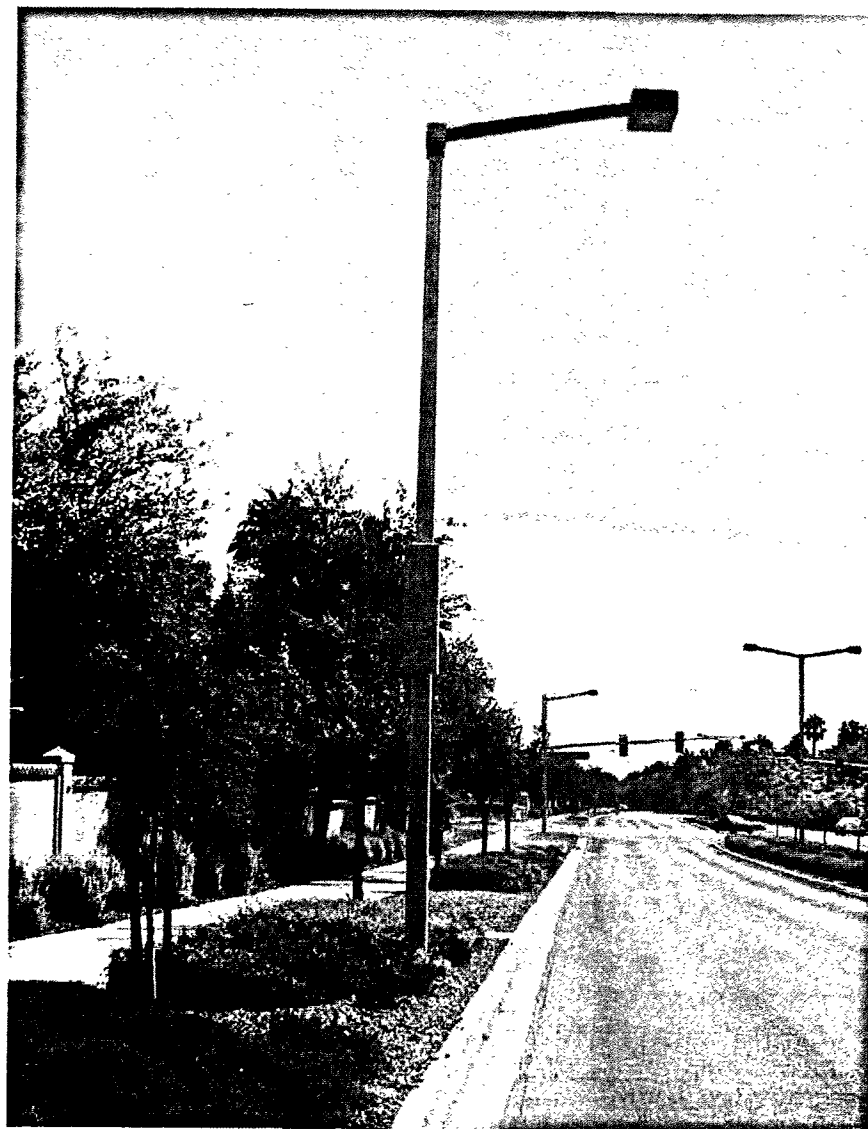
C1

4

107V8013-FIB

L19-01476 9/10/19

2nd



SITE PHOTO

Redlined Construction
Drawings

Theresa Sianez

Theresa Sianez Date
Spectrum Services 10/25/19

PROJECT GENERAL NOTES

1. THE FACILITY IS AN UNOCCUPIED SPECIALIZED MOBILE RADIO FACILITY.
2. PLANS ARE NOT TO BE SCALED AND ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY, UNLESS NOTED OTHERWISE. THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
3. PRIOR TO THE SUBMISSION OF BIDS, THE CONTRACTORS SHALL VISIT THE JOB SITE AND BE RESPONSIBLE FOR ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE PROJECT MANAGER.
4. THE CONTRACTOR SHALL RECEIVE IN WRITING, AUTHORIZATION TO PROCEED BEFORE STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.
5. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY OTHERWISE INDICATED OR WHERE LOCAL CODES, OR REGULATION TAKE PRECEDENCE.
6. ALL WORK PERFORMED AND MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY BEARING ON THE PERFORMANCE OF THE WORK. MECHANICAL AND ELECTRICAL SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
7. THE GENERAL CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK, USING BEST SKILLS AND ATTENTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT MANAGER AND WITH LANDLORD'S AUTHORIZED REPRESENTATIVE.
8. SEAL PENETRATIONS THROUGH FIRE RATED AREAS WITH U.L. LISTED AND FIRE CODE APPROVED MATERIALS.
9. PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 2-A OR 2-A10BC WITHIN 75 FEET TRAVEL DISTANCE TO ALL PORTIONS OF THE PROJECT AREA DURING CONSTRUCTION.
10. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CHAPTER 16 OF THE INTERNATIONAL BUILDING CODE REGARDING EARTHQUAKE PIPING. LIGHT FIXTURES, CEILING GRID, INTERIOR PARTITIONS AND MECHANICAL EQUIPMENT. ALL WORK MUST BE IN ACCORDANCE WITH LOCAL EARTHQUAKE CODES AND REGULATIONS.
11. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS ON THE SITE AND NOTIFY THE PROJECT MANAGER OF ANY DISCREPANCIES BEFORE STARTING ANY WORK.
12. DETAILS ARE INTENDED TO SHOW END RESULT OF DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK.
13. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, PAVING, CURBS, GALVANIZED SURFACES, ETC., AND UPON COMPLETION OF WORK, REPAIR ANY DAMAGE THAT OCCURRED DURING CONSTRUCTION TO THE SATISFACTION OF THE PROJECT MANAGER.
14. KEEP GENERAL AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. LEAVE PREMISES IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.
15. CONTRACTOR TO PROVIDE COMPLETE SET OF AS BUILT DRAWINGS WITHIN 10 WORKING DAYS OF PROJECT COMPLETION.
16. CONTRACTOR IS TO SPRAY WITH EPA APPROVED WEED CONTROL PRIOR TO PLACING 4" AGGREGATE BASE GEOTECH FABRIC AND CRUSHED ROCK. TYPICAL INSIDE ENTIRE SITE.

1. ELEVATIONS ARE NORTH AMERICAN VERTICAL DATUM 1988.
2. NO SURVEY PERFORMED; SITE MAPPING ONLY.
3. THE ENGINEER SPECTRUM SERVICES, INC. AND REPRESENTATIVES OF THE OWNER, MUST BE NOTIFIED AT LEAST TWO FULL DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION AT (702) 367-7705.
4. DO NOT EXCAVATE OR DISTURB BEYOND THE PROPERTY LINES OR LEASE LINES, UNLESS OTHERWISE NOTED.
5. DO NOT SCALE BUILDING DIMENSIONS FROM DRAWINGS.
6. ANY DRAIN AND/OR FIELD TILE ENCOUNTERED DURING CONSTRUCTION SHALL BE RETURNED TO ITS ORIGINAL CONDITION PRIOR TO COMPLETION OF WORK. SIZE, LOCATION AND TYPE OF ANY UNDERGROUND UTILITIES OR IMPROVEMENTS SHALL BE ACCURATELY NOTED AND PLACED ON AS-CONSTRUCTED DRAWINGS BY GENERAL CONTRACTOR AND ISSUED TO ARCHITECT/ENGINEER AT COMPLETION OF PROJECT.
7. ALL EXISTING UTILITIES, FACILITIES, CONDITIONS, AND THEIR DIMENSIONS SHOWN ON PLANS HAVE BEEN PLOTTED FROM AVAILABLE RECORDS. THE ARCHITECT/ENGINEER AND OWNER ASSUME NO RESPONSIBILITY WHATSOEVER AS TO THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN ON THE PLANS OR THE MANNER OF THEIR REMOVAL OR ADJUSTMENT. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL EXISTING UTILITIES AND FACILITIES PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL ALSO OBTAIN FROM EACH UTILITY COMPANY DETAILED INFORMATION RELATIVE TO WORKING SCHEDULES AND METHODS OF REMOVING OR ADJUSTING EXISTING UTILITIES.
8. CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES BOTH HORIZONTALLY AND VERTICALLY PRIOR TO START OF CONSTRUCTION. ANY DISCREPANCIES OR DOUBTS AS TO THE INTERPRETATION OF PLANS SHOULD BE IMMEDIATELY REPORTED TO THE ARCHITECT/ENGINEER FOR RESOLUTION AND INSTRUCTION. NO FURTHER WORK SHALL BE PERFORMED UNTIL THE DISCREPANCY IS CHECKED AND CORRECTED BY THE ARCHITECT/ENGINEER. FAILURE TO SECURE SUCH INSTRUCTION MEANS CONTRACTOR WILL HAVE WORKED AT HIS/HER OWN RISK AND EXPENSE. CONTRACTOR SHALL CALL LOCAL DIGGER HOT LINE FOR UTILITY LOCATIONS 48 HOURS PRIOR TO START OF CONSTRUCTION.
9. ALL NEW AND EXISTING UTILITY STRUCTURES ON SITE AND IN AREAS TO BE DISTURBED BY CONSTRUCTION SHALL BE ADJUSTED TO FINISH ELEVATIONS PRIOR TO FINAL INSPECTION OF WORK.
10. THE BUILDING DEPARTMENT ISSUING THE BUILDING PERMIT SHALL BE NOTIFIED AT LEAST TWO WORKING DAYS PRIOR TO THE COMMENCEMENT OF WORK OR AS STIPULATED BY THE CODE ENFORCEMENT OFFICIAL HAVING JURISDICTION.
11. GRADING OF THE SITE WORK AREA IS TO BE SMOOTH AND CONTINUOUS IN SLOPE AND IS TO FEATHER INTO EXISTING GRADES AT THE GRADING LIMITS.
12. ALL TEMPORARY EXCAVATIONS FOR THE INSTALLATION OF FOUNDATIONS, UTILITIES, ETC., SHALL BE PROPERLY LAID BACK OR BRACED IN ACCORDANCE WITH CORRECT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REQUIREMENTS.
13. STRUCTURAL FILLS SUPPORTING PAVEMENTS SHALL BE COMPACTED TO 100% OF MAXIMUM STANDARD PROCTOR DRY DENSITY.
14. NEW GRADES NOT IN BUILDING AND DRIVEWAY IMPROVEMENT AREA TO BE ACHIEVED BY FILLING WITH APPROVED CLEAN FILL AND COMPACTED TO 95% OF STANDARD PROCTOR DENSITY.
15. ALL FILL SHALL BE PLACED IN UNIFORM LIFTS. THE LIFTS THICKNESS SHOULD NOT EXCEED THAT WHICH CAN BE PROPERLY COMPACTED THROUGHOUT ITS ENTIRE DEPTH WITH THE EQUIPMENT AVAILABLE.
16. ANY FILLS PLACED ON EXISTING SLOPES THAT ARE STEEPER THAN 10 HORIZONTAL TO 1 VERTICAL SHALL BE PROPERLY BENCHED INTO THE EXISTING SLOPE AS DIRECTED BY A GEOTECHNICAL ENGINEER.
17. THE GRADES WITHIN THE FENCED IN AREA ARE TO BE ACHIEVED BY COMPACTING CLEAN FILL TO A DENSITY OF 90% OF STANDARD PROCTOR AND REPAVING WITH ASPHALT CONCRETE TO MATCH EXISTING.
18. CONTRACTOR SHALL CLEAN ENTIRE SITE AFTER CONSTRUCTION SUCH THAT NO PAPERS, TRASH, WEEDS, BRUSH OR ANY OTHER DEPOSITS WILL REMAIN. ALL MATERIALS COLLECTED DURING CLEANING OPERATIONS SHALL BE DISPOSED OF OFF-SITE BY THE GENERAL CONTRACTOR.
19. DRIVEWAY CONSTRUCTION, GRADING AND DRAINAGE WORK SHALL CONFORM TO NEVADA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATION FOR THE ROAD AND BRIDGE CONSTRUCTION", LATEST EDITIONS, AND ALL APPLICABLE PROVISIONS OR LOCAL COUNTY ORDINANCES.
20. ALL SITE WORK SHALL BE CAREFULLY COORDINATED BY GENERAL CONTRACTOR WITH LOCAL UTILITY COMPANY, TELEPHONE COMPANY, AND ANY OTHER UTILITY COMPANIES HAVING JURISDICTION OVER THIS LOCATION.
21. SPECIAL INSPECTION: SPECIAL INSPECTIONS ARE REQUIRED FOR HIGH STRENGTH BOLTING BY THIRD PARTY INSPECTOR.
22. CONCRETE: IF THE CONCRETE MIX ACHIEVES ITS DESIGN STRENGTH PRIOR TO 28 DAY BREAK TEST, IT IS ACCEPTABLE FOR FINAL REPORT.
23. COMPRESSIVE STRENGTH TEST SPECIMENS WITH DIMENSIONS OF 4" X 8" MAY BE USED.

CONSTRUCTION NOTES



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LAS VEGAS, NEVADA 89134

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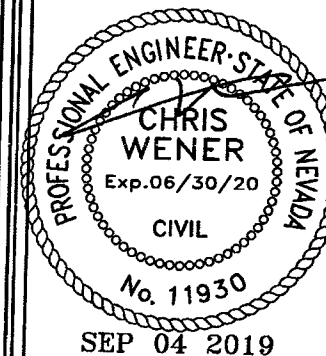
4	09/04/19	BP COMMENTS	D.S.
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1	10/16/18	100% PERMITTING	C.P.
0	09/18/18	90% PERMITTING	R.S.

PLANS PREPARED BY:



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

LICENSURE:



SHEET TITLE:

SITE PHOTO, GENERAL &
CONSTRUCTION NOTES

SHEET NUMBER: REVISION:

C2 4

LEGEND

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

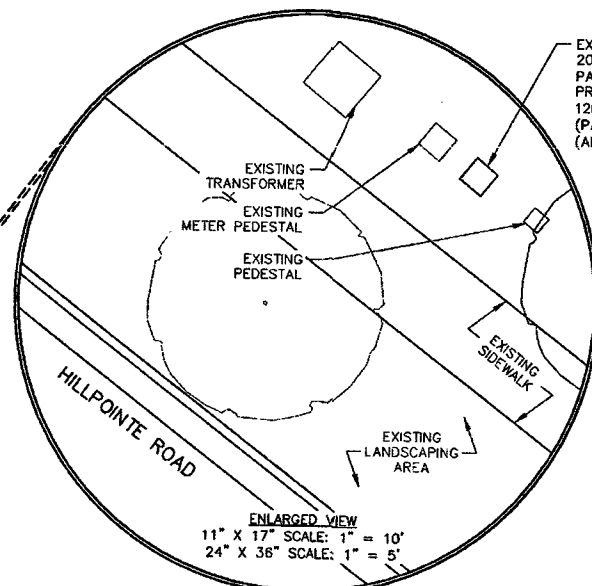


Redlined Construction Drawings

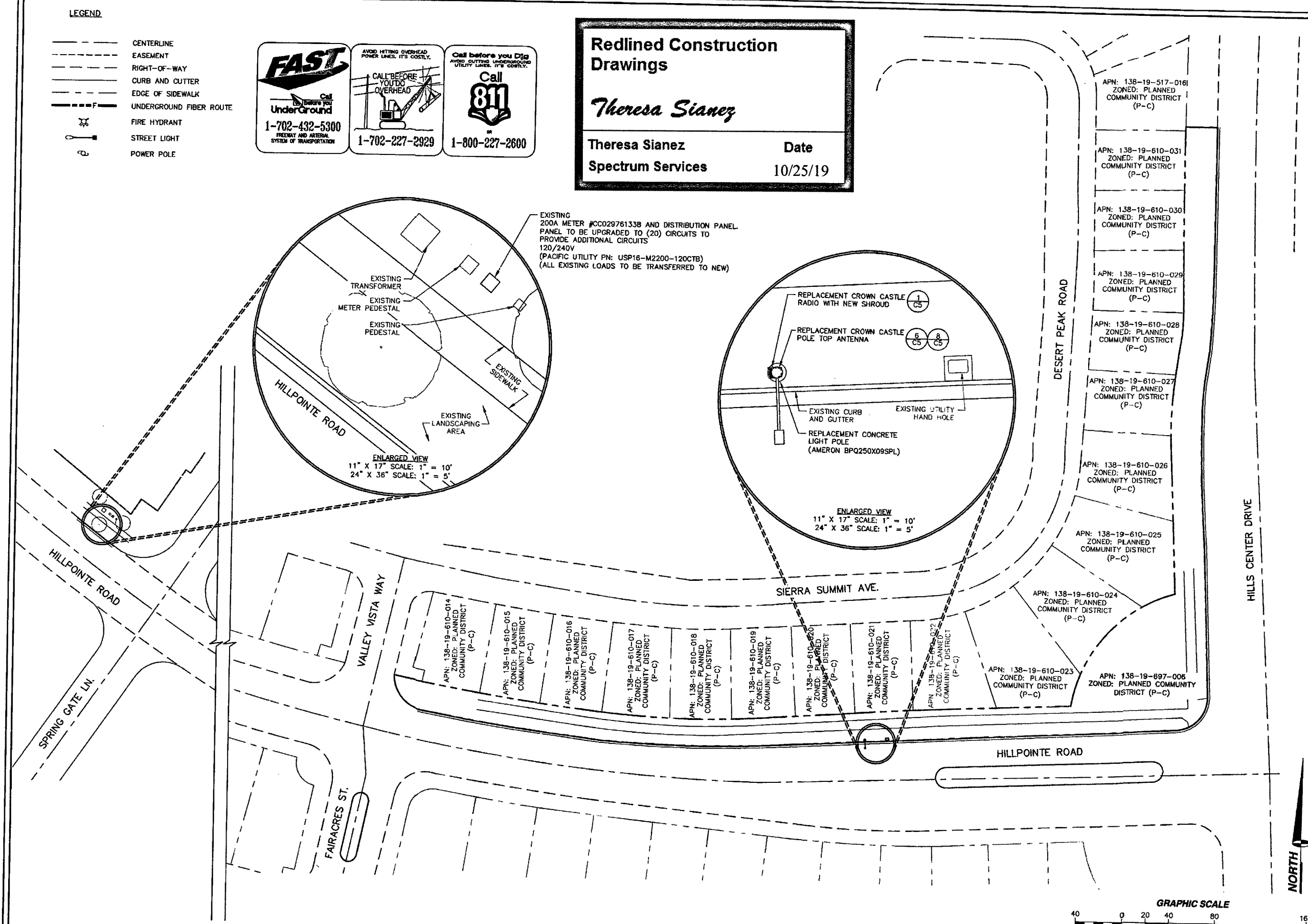
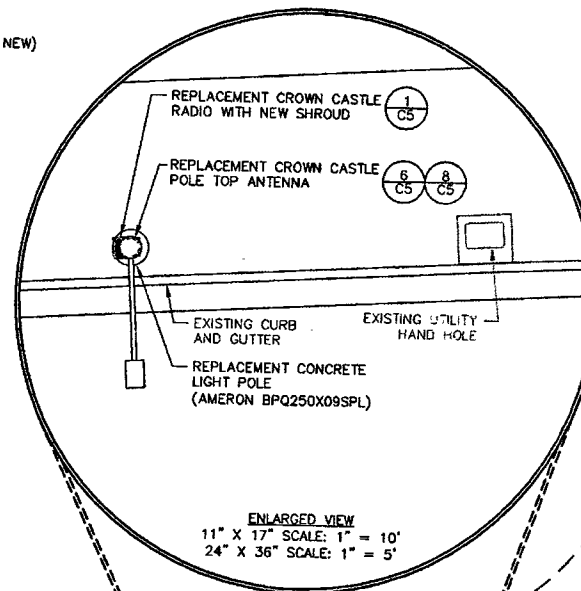
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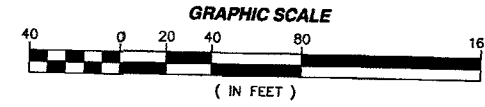
Date
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EXISTING 200A METER #CC029761338 AND DISTRIBUTION PANEL. PANEL TO BE UPGRADED TO (20) CIRCUITS TO PROVIDE ADDITIONAL CIRCUITS 120/240V (PACIFIC UTILITY PN: USP16-M2200-120CTB) (ALL EXISTING LOADS TO BE TRANSFERRED TO NEW)



SITE PLAN



11" X 17" SCALE 24" X 36" SCALE
1" = 80' 1" = 40' 1



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

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

LICENSURE:

PROFESSIONAL ENGINEER-STATE OF NEVADA
CHRIS WENER
Exp. 06/30/20
CIVIL
No. 11930
SEP 04 2019

SHEET TITLE:

SITE PLAN

SHEET NUMBER: REVISION:

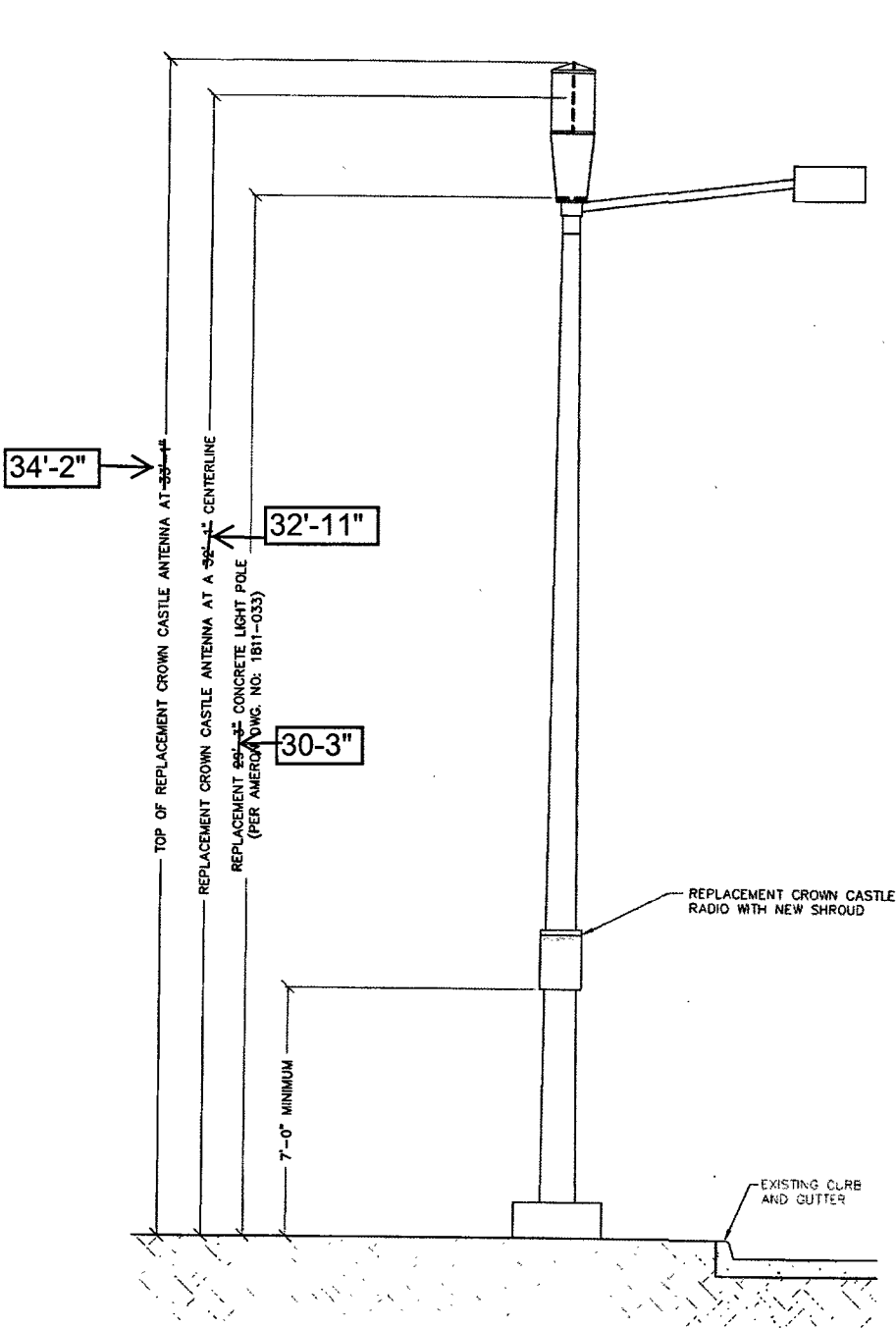
C3 4

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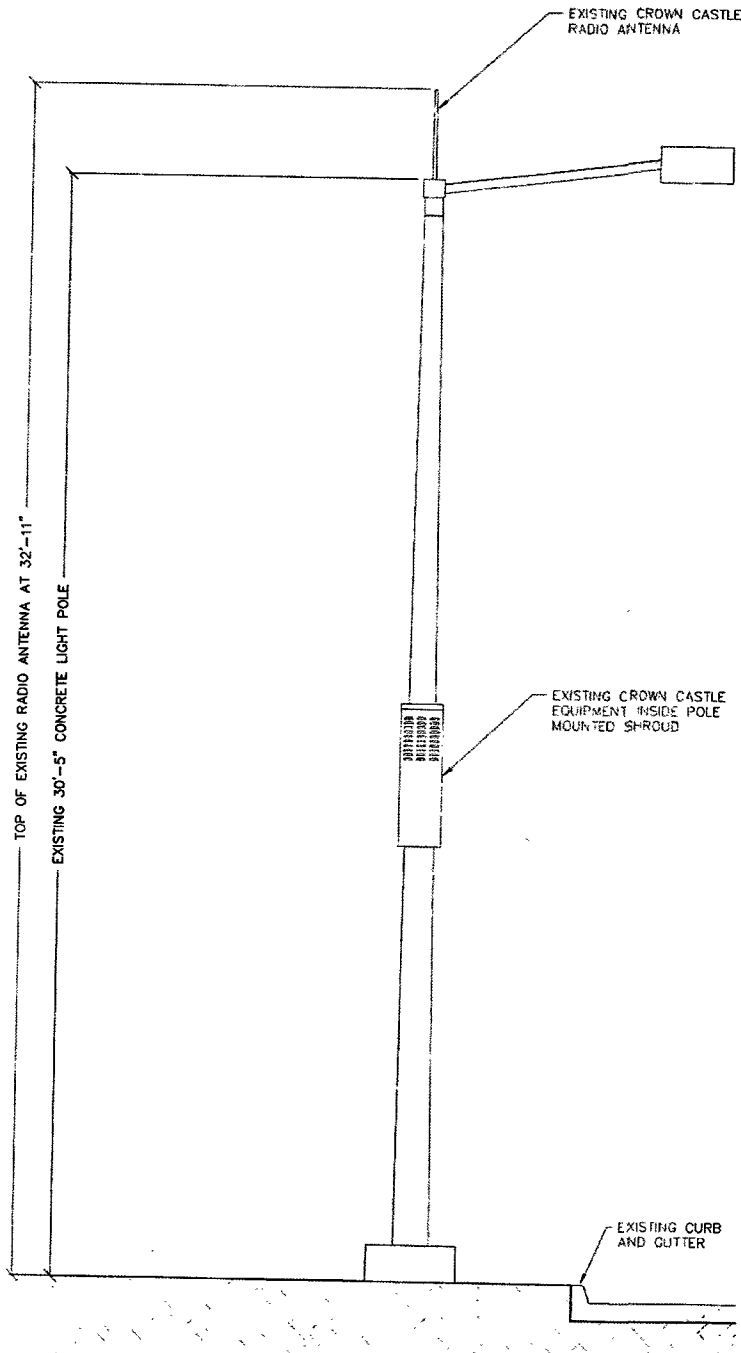


PROPOSED WEST ELEVATION

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

2

EXISTING WEST ELEVATION



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

1



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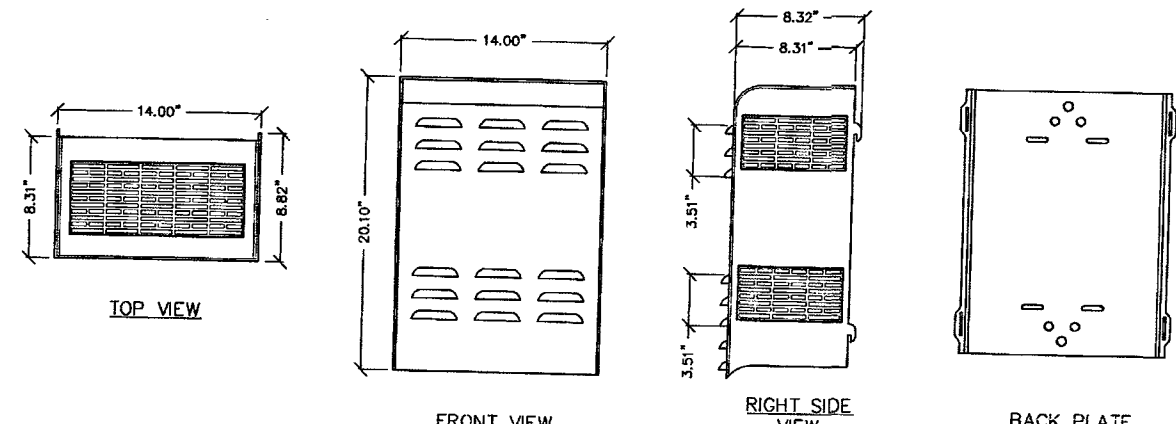
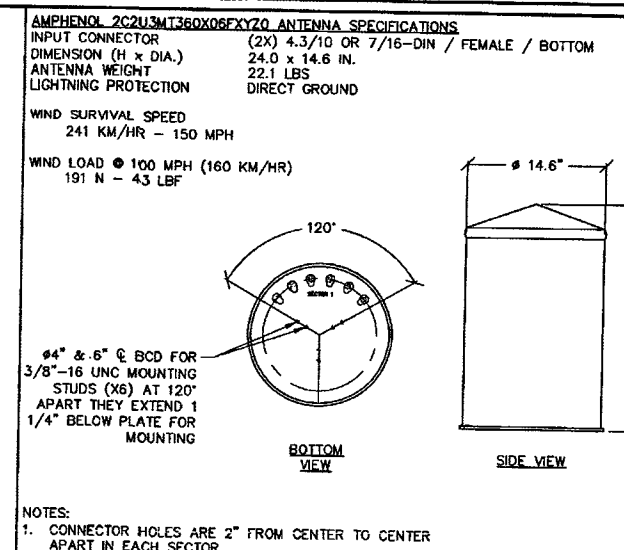
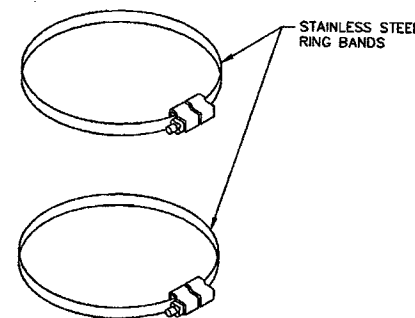
PROFESSIONAL ENGINEER STATE OF NEVADA
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EXISTING AND PROPOSED
WEST ELEVATION

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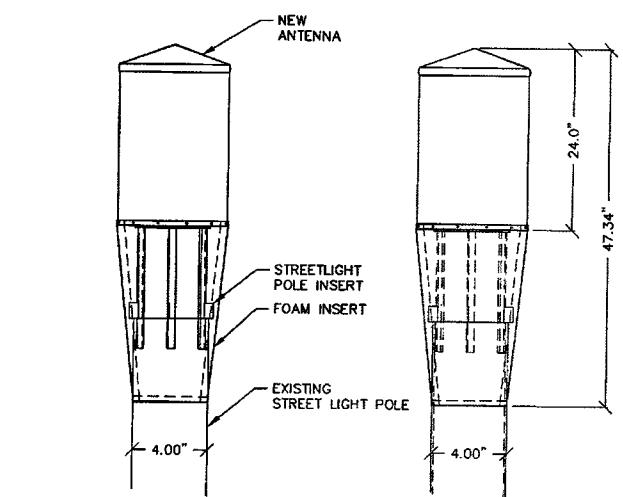
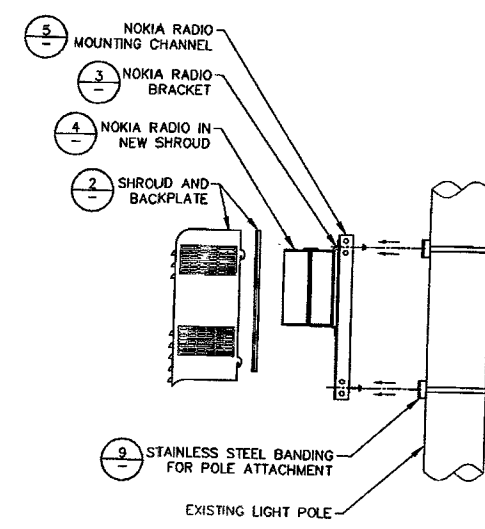
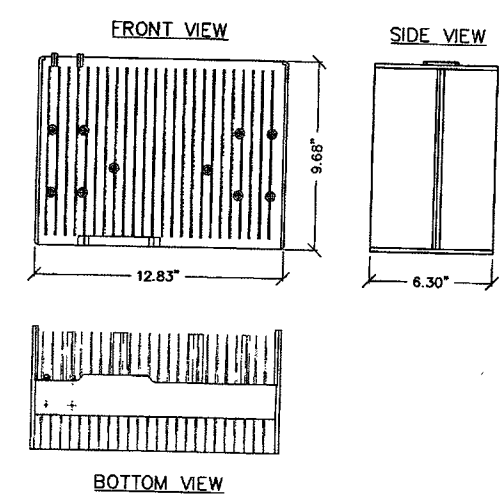
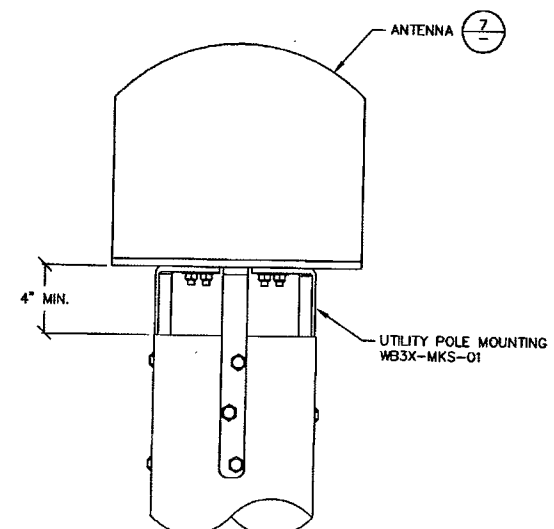
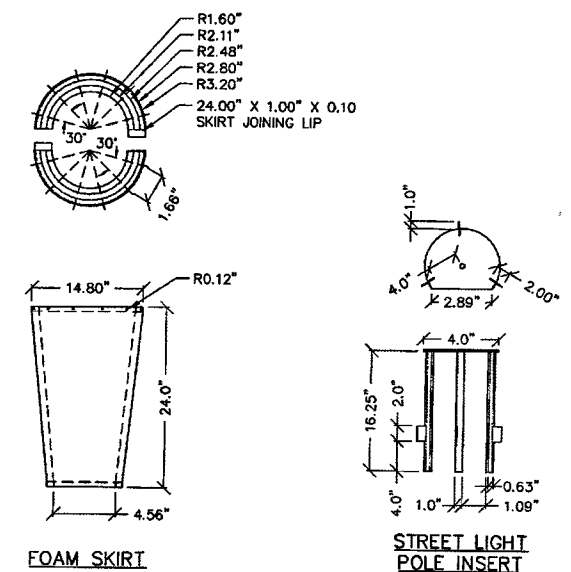
C4 4



STAINLESS STEEL RING BAND

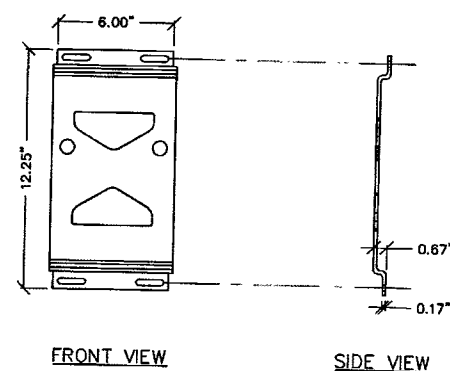
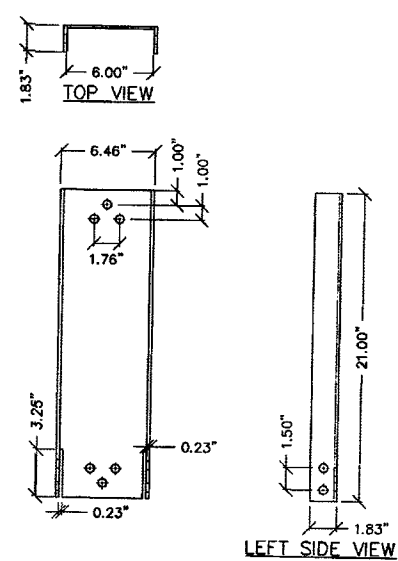
ANTENNA DETAIL

RADIO SHROUD



ANTENNA MOUNTING DETAIL

NOKIA 20W RADIO



ANTENNA SHROUD

NOKIA 20W RADIO MOUNTING CHANNEL

NOKIA 20W RADIO BRACKET

SHROUD ASSEMBLY

CROWN CASTLE

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CHRIS WENER
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CIVIL
No. 11930

SEP 04 2019

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CONSTRUCTION DETAILS

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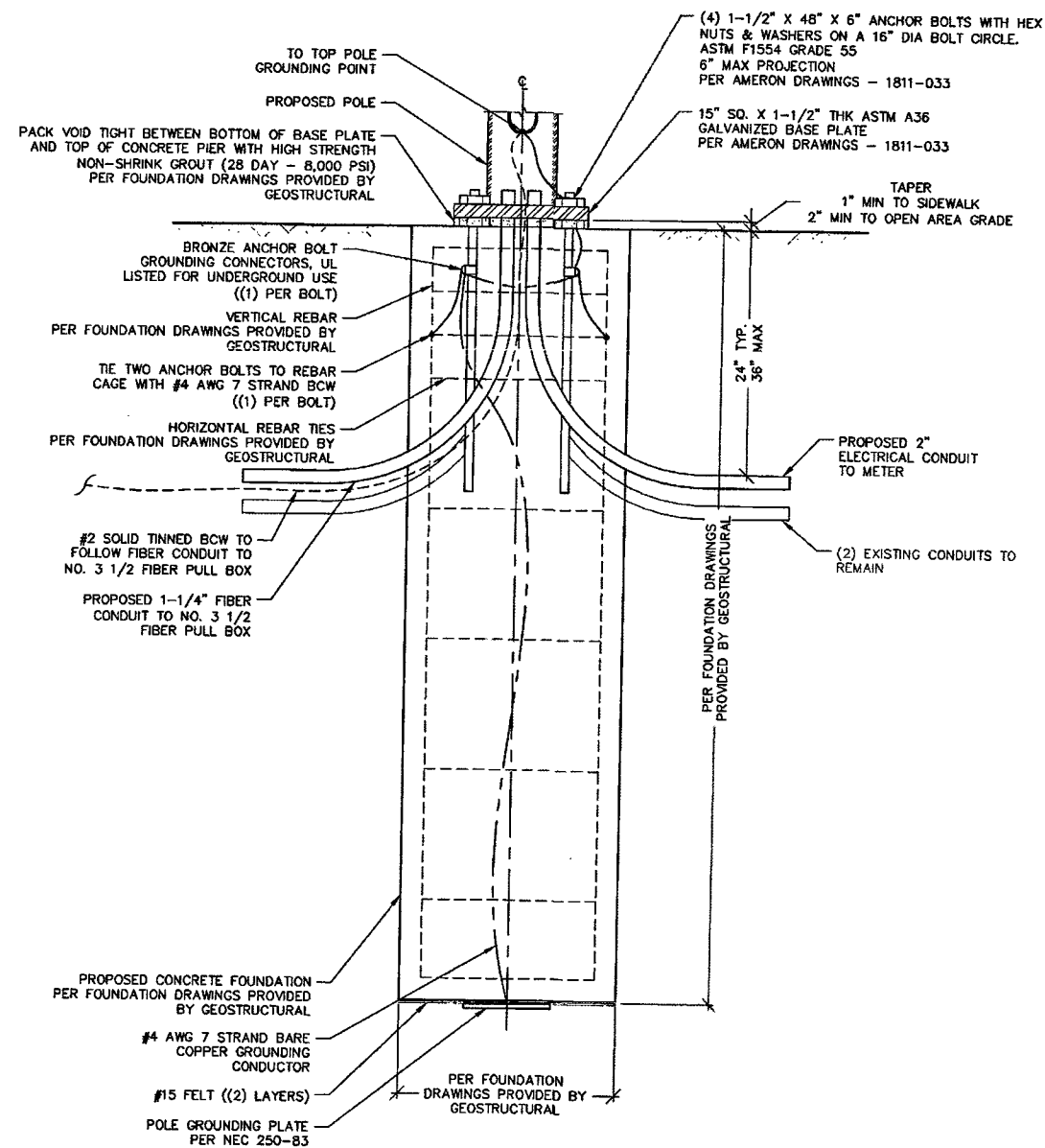
C5 4

Redlined Construction Drawings

Theresa Sianez

Theresa Sianez
Spectrum Services

Date
10/25/19



*SEE STRUCTURALS 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. SEE USD NO. 320, 320.1, 313 AND 321 FOR REFERENCE.
 8. ANCHOR RODS ARE TO BE (4) 1-1/2" DIAMETER ASTM F1554 GRADE 55 ON A 16" DIAMETER BOLT CIRCLE. MINIMUM LENGTH OF ANCHOR RODS IS 48", WITH A MAXIMUM PROJECTION OF 6" ABOVE CONCRETE.
 9. FOR ADDITIONAL GROUNDING FOR CROWN EQUIPMENT, SEE SHEET G1

Redlined Construction Drawings

Theresa Sianez

Theresa Sianez
Spectrum Services

Date
10/25/19

STREETLIGHT FOUNDATION WITH CONDUIT DESIGN

SCALE:
NONE 2

STREETLIGHT PLACEMENT ON CONCRETE FOUNDATION

SCALE:
NONE 1



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

PROJECT INFORMATION:

CROWN CASTLE ID #
LV016

HILLPOINTE ROAD
LAS VEGAS, NEVADA 89134

CURRENT ISSUE DATE:

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PROPOSED WORK

REV.: DATE: DESCRIPTION: BY:

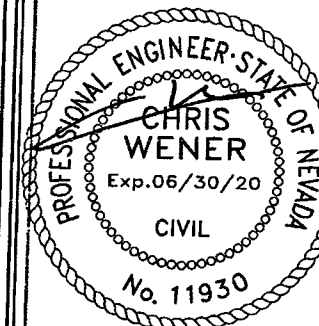
REV.	DATE	DESCRIPTION	BY
4	09/04/19	BP COMMENTS	D.S.
3	09/04/19	POWER REVISION	J.Z.
2	04/04/19	POLE REVISION	R.C.
1	10/16/18	100% PERMITTING	C.P.
0	09/18/18	90% PERMITTING	R.S.

PLANS PREPARED BY:



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

LICENSURE:



SEP 04 2019

SHEET TITLE:

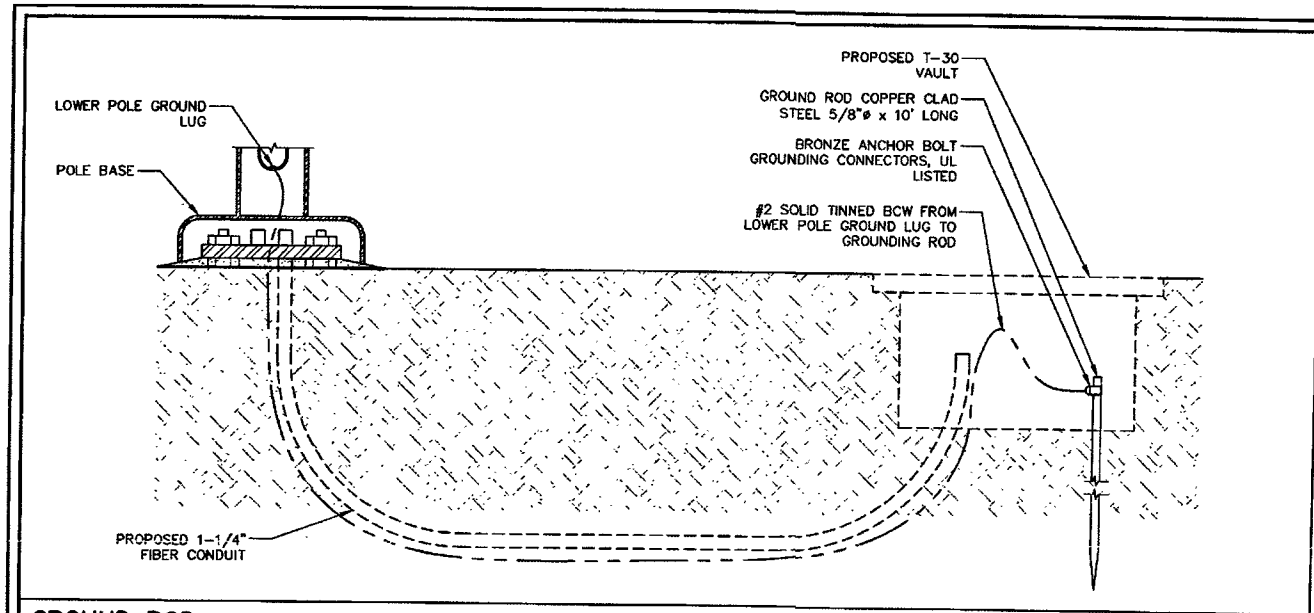
CONCRETE FOUNDATION
DETAILS

SHEET NUMBER: REVISION:

C6

4

NOTE:
BOLT HOLES IN BASE PLATE MUST BE AT LEAST
4" EDGE DISTANCE FROM SIDE OF FOUNDATION



GROUND ROD

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.

GROUNDING NOTES

Redlined Construction Drawings

Theresa Sianez

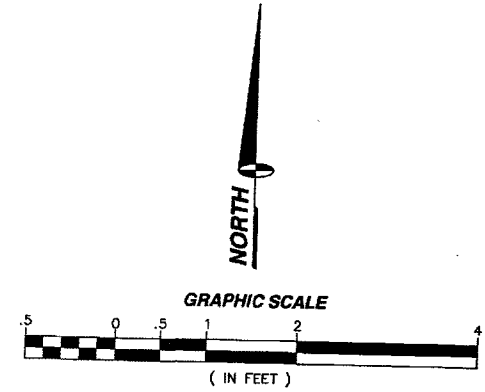
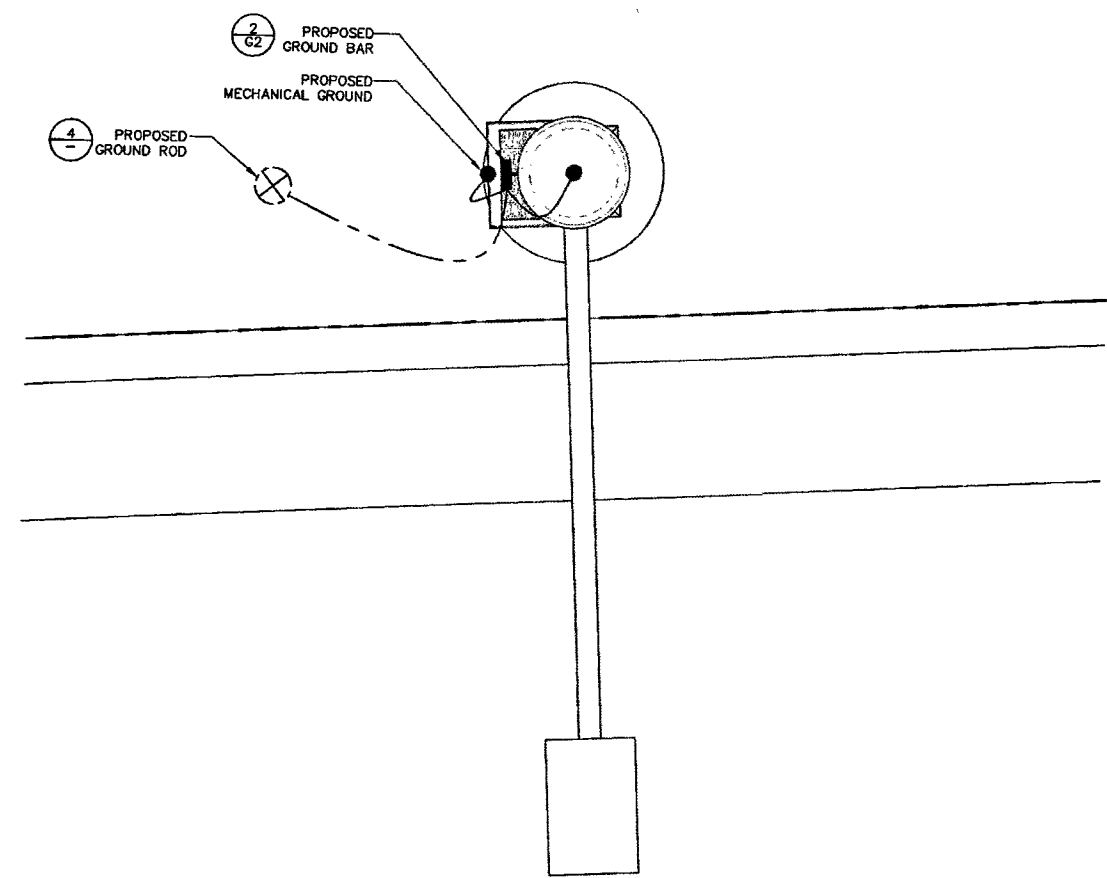
Theresa Sianez
Spectrum Services

Date
10/25/19

NOT USED

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 LAYOUT



CROWN CASTLE

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PLANS PREPARED BY:
SPECTRUM

DGS
CONSULTING ENGINEERING SERVICES LLC

LICENSURE:

REGISTERED PROFESSIONAL ENGINEER STATE OF NEVADA
DEREK G. STEFUREAC
Exp. 06-30-20
ELECTRICAL
No. 17805
SEP 04 2019

SHEET TITLE:

GROUNDING LAYOUT,
NOTES & DETAILS

SHEET NUMBER: REVISION:

G1 4

11" X 17" SCALE 24" X 36" SCALE
1" = 2' 1" = 1'

1

NOT USED

SCALE: NONE

10

NOT USED

SCALE: NONE

7

GROUND BAR

SCALE: NONE

2

NOT USED

SCALE: NONE

9

NOT USED

SCALE: NONE

6

NOT USED

SCALE: NONE

4

NOT USED

SCALE: NONE

8

NOT USED

SCALE: NONE

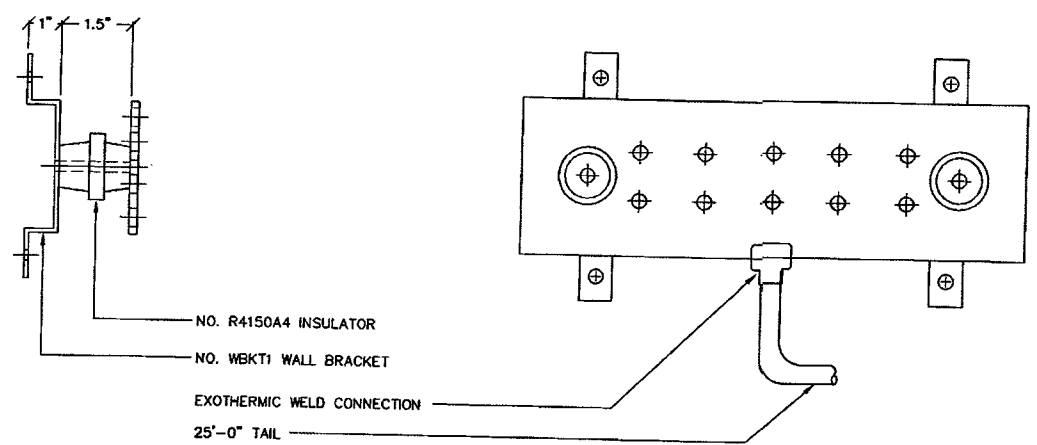
5

NOT USED

SCALE: NONE

3

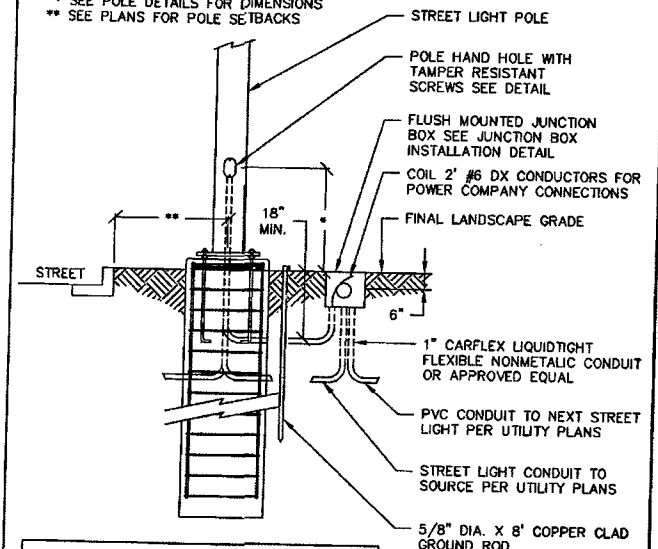
1"1.5"



NO. R4150A4 INSULATOR
NO. WBKT1 WALL BRACKET
EXOTHERMIC WELD CONNECTION
25'-0" TAIL

MANUFACTURER: VALMONT
PART NO. MG20610-K
OR EQUIVALENT

SEE POLE DETAILS FOR DIMENSIONS
** SEE PLANS FOR POLE SETBACKS



STREET LIGHT POLE
POLE HAND HOLE WITH TAMPER RESISTANT SCREWS SEE DETAIL
FLUSH MOUNTED JUNCTION BOX SEE JUNCTION BOX INSTALLATION DETAIL
COIL 2' #6 DX CONDUCTORS FOR POWER COMPANY CONNECTIONS
FINAL LANDSCAPE GRADE
1" CARFLEX LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT OR APPROVED EQUAL
PVC CONDUIT TO NEXT STREET LIGHT PER UTILITY PLANS
STREET LIGHT CONDUIT TO SOURCE PER UTILITY PLANS
5/8" DIA. X 8' COPPER CLAD GROUND ROD

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

(3) #12 CU THHN/THWN TO LUMINAIRE

#12 WHITE NEUTRAL

#12 GREEN EQUIPMENT GROUND-THHN/THWN

POLE GROUND

BARE #6 CU FROM GROUND ROD TO POLE GROUND LUG IF METAL POLE

#12 CU FROM GROUND GREEN-THHN/THWN

120V #12 CUUF BLACK HOT TO JUNCTION BOX - THHN/THWN

WHITE NEUTRAL #12 THHN/THWN UNDER WIRE NUT FROM JUNCTION BOX: 120V = WHITE, 240V = RED.

POLE HAND HOLE FUSING AND GROUNDING DETAIL
EACH HOT LEG SHALL HAVE AN INLINE FUSE HOLDER EX. 240 VOLTS NO NEUTRAL NEEDED INSIDE 240 VOLT POLE

Redlined Construction Drawings

Theresa Sianez

Theresa Sianez

Date

Spectrum Services

10/25/19

NOT USED

SCALE: NONE

8

NOT USED

SCALE: NONE

5

NOT USED

SCALE: NONE

3

STREET LIGHT WIRING AND GROUNDING

SCALE: NONE

1

CROWN CASTLE

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REGISTERED PROFESSIONAL ENGINEER-STATE OF NEVADA

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ELECTRICAL

No. 17805

SEP 04 2019

SHEET TITLE:

GROUNDING DETAILS

SHEET NUMBER:

4

G2

4