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### GENERAL NOTES

THE ARCHITECTS/ENGINEERS HAVE MADE EVERY EFFORT AS SET FORTH IN THE CONSTRUCTION DRAWINGS, CONTRACT DOCUMENTS AND THE COMPLETE SCOPE OF WORK. CONTRACTORS BIDDING THE JOB ARE NEVERTHELESS CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS AND SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS. THE BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE ARCHITECT/ENGINEER OF ANY CONFLICTS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF THE CONTRACTOR'S PROPOSAL. IN THE EVENT OF DISCREPANCIES THE CONTRACTOR SHALL PRICE THE MORE COSTLY OR EXTENSIVE WORK UNLESS OTHERWISE DIRECTED.

### CODE COMPLIANCE

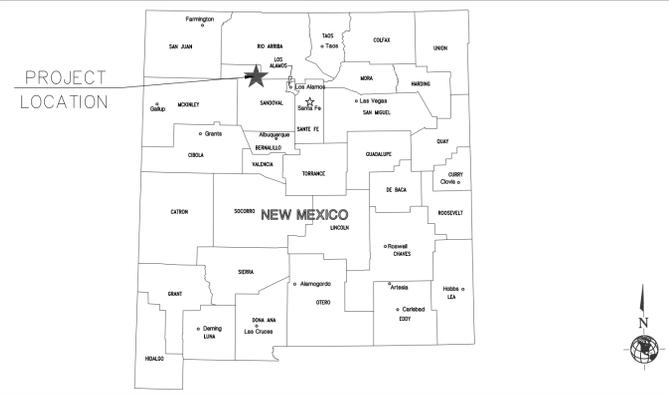
ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

- 2009 NEW MEXICO COMMERCIAL BUILDING CODE
- 2012 NEW MEXICO MECHANICAL CODE
- 2012 NEW MEXICO PLUMBING CODE
- 2014 NEW MEXICO ELECTRICAL CODE

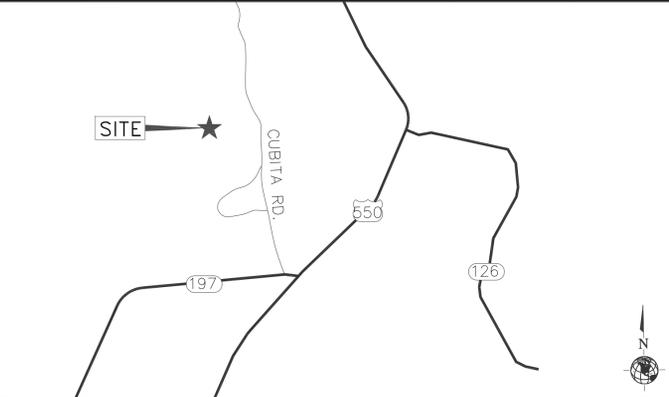
TIA/EIA-222-G STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES  
LOCAL BUILDING CODE(S)  
CITY AND/OR COUNTY AMENDED

**JURISDICTION: SANDOVAL COUNTY**

### STATE MAP



### VICINITY MAP



### DRIVING DIRECTIONS

FROM ALBUQUERQUE INTERNATIONAL AIRPORT: TAKE I-25 NORTH TO US-550 NORTH. TURN LEFT ONTO NM-197 S AND IMMEDIATELY TURN RIGHT ONTO CUBITA RD. SITE IS ON THE RIGHT (OFF ROAD)

### PROJECT DESCRIPTION

INSTALLING A NEW SELF-SUPPORT TOWER TO INCLUDE, NEW ANTENNAS, RRUs, MOUNTS, BASE EQUIPMENT CABINETS AND A METER SERVICE WITHIN A NEW CHAIN LINK FENCE.

SITE NAME:  
**CUBA DOWNTOWN  
NEW MEXICO**

PROJECT:  
**NEW BUILD**

### PROJECT TEAM

PROJECT OWNER: COMMNET WIRELESS, LLC  
1562 NORTH PARK STREET  
CASTLE ROCK, COLORADO 80109

PROJECT MANAGER: 1562 NORTH PARK STREET  
CASTLE ROCK, COLORADO 80109  
CONTACT: POLLY WIESE  
PHONE: (720) 733-5399  
EMAIL: pwiese@atni.com

RF ENGINEER: CONTACT: BRIAN McGOVERN  
1562 NORTH PARK STREET  
CASTLE ROCK, COLORADO 80109  
PHONE:  
EMAIL:

LEASE ACQUISITION: 1562 N. PARK STREET  
CASTLE ROCK, CO 80109  
CONTACT: TOM WALKER  
EMAIL: twalker@atni.com

TOWER OWNER: COMMNET WIRELESS, LLC  
1562 NORTH PARK STREET  
CASTLE ROCK, COLORADO 80109

ENGINEER: Abn ENGINEERING, LLC  
1317 E. THUNDERHILL PLACE  
PHOENIX, AZ 85048  
CONTACT: SANDEEP A. MANE, P.E.  
PHONE: (480) 213-8524  
EMAIL: smane@abneng.com

ELECTRICAL ENGINEERING: EE LLC  
12005 ANTELOPE TRAIL  
PARKER, CO 80138  
PHONE: (303) 748-1189

GEOTECHNICAL: TERRACON CONSULTANTS, INC.  
4905 HAWKINS ST. NE.  
ALBUQUERQUE, NM 87109  
PHONE: (505) 797-4287

### PROJECT INFORMATION

SITE NAME: CUBA DOWNTOWN

SITE ADDRESS: SECTION 29, TOWNSHIP 21 NORTH,  
RANGE 1 WEST  
N.M.P.M., NEW MEXICO

SITE COORDINATES: LATITUDE: 36° 1' 20.51" N (NAD 83)  
LONGITUDE: 116° 58' 36.2" W (NAD 83)  
ELEVATION: ±6,984.4' (AMSL) (NAVD 88)

APPLICANT: COMMNET WIRELESS, LLC  
1562 NORTH PARK STREET  
CASTLE ROCK, COLORADO 80109

CONTACT: DAVE TILLER  
(720) 234-2415

PROPERTY OWNER: JOHN OLIVER WIESE  
PHONE: (575) 568-4437

APN NUMBER: TBD

CURRENT ZONING: TBD

CONSTRUCTION TYPE: VB

NEW USE: U

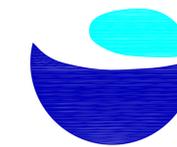
OCCUPANCY: UNMANNED TELECOMMUNICATIONS FACILITY

CURRENT USE: UNMANNED TELECOMMUNICATIONS FACILITY

LEASE AREA: 2500 SQ.FT.

### UTILITY TABLE

| UTILITY:        | PROVIDER:                                   |
|-----------------|---|
| WATER           | N/A   |
| SEWER           | N/A   |
| ELECTRICAL      | JEMEZ MOUNTAINS ELECTRIC COOPERATIVE (JMCC) |
| TELEPHONE/FIBER | TBD   |
| POLICE          | SANDOVAL COUNTY                             |
| FIRE            | SANDOVAL COUNTY                             |



**Commnet**  
Connecting Rural America



1317 E. THUNDERHILL PLACE  
PHOENIX, AZ 85048  
PHONE: (480) 213-8524

PE SEAL

### SHEET INDEX

| TITLE: | DESCRIPTION:                               |
|--------|--|
| T-1    | TITLE SHEET & PROJECT INFORMATION          |
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DESIGNER: JN

LEAD EE: SB

LEAD CE/SE: SAM

### SUBMITTALS

| REV. | DATE    | DESCRIPTION          | BY |
|------|---------|----------------------|----|
| B    | 8/2/16  | REVISED SPD          | JN |
| C    | 8/12/16 | REVISED PER COMMENTS | JN |
| D    | 10/5/16 | REVISED PER COMMENTS | JN |
| E    | 10/5/16 | REVISED PER COMMENTS | JN |
| F    | 10/7/16 | REVISED PER COMMENTS | JN |

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PLOT DATE: 10/7/16

SITE NAME

CUBA DOWNTOWN

PROJECT  
NEW BUILD

SITE ADDRESS:  
LAT: 36° 1' 20.51" N  
LONG: 116° 58' 36.2" W  
SECTION 29, TOWNSHIP 21 NORTH,  
RANGE 1 WEST  
N.M.P.M., NEW MEXICO

SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-1

### APPROVAL BOX

| DEPARTMENT:                   | SIGNATURE: | DATE: |
|-------------------------------|------------|-------|
| PROJECT MANAGER               |            |       |
| CONSTRUCTION MANAGER          |            |       |
| RF MANAGER                    |            |       |
| PROPERTY OWNER REPRESENTATIVE |            |       |

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**GENERAL NOTES – SCOPE OF WORK REVISION 9–19–16**

THE CONTRACTOR SHALL CONDUCT ALL ACTIVITIES WHETHER CONSTRUCTION RELATED OR AFTER-HOURS WITH A HIGH DEGREE OF ETHICS AND APPROPRIATE BEHAVIOR.

THE CONTRACTOR SHALL PROVIDE A COMPLETE INSTALLATION IN ACCORDANCE WITH THE CONSTRUCTION PLANS PROVIDED AND DIRECTION OF THE CONSTRUCTION/PROJECT MANAGERS.

THE GC WILL NOT START CONSTRUCTION UNTIL EACH OF THE FOLLOWING HAS BEEN COMPLETED: PRE-CONSTRUCTION MEETING HAS BEEN HELD; BUILDING PERMIT HAS BEEN SECURED, AND THE PROJECT ENGINEER HAS AUTHORIZED START OF CONSTRUCTION.

THE CONTRACTOR SHALL NOT BE EXPECTED TO POWER-UP, COMMISSION OR BRING ON-LINE ANY EQUIPMENT.

THE CONTRACTOR SHALL ENSURE SITE AREA IS CLEAN AND FREE OF CONSTRUCTION DEBRIS ON A DAILY BASIS.

THE CONTRACTOR MAY BE REQUIRED TO ASSIST WITH PERMIT APPLICATIONS AND PLAN SUBMITTALS.

THE CONTRACTOR SHALL CALL-IN AND COORDINATES ALL NECESSARY INSPECTIONS WITH THE PROPER CITY, COUNTY, STATE AUTHORITY.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IDENTIFIED BY OSHA REGULATIONS. UPON REQUEST, THE CONTRACTOR SHALL PROVIDE DOCUMENTS SHOWING COMPLIANCE.

THE CONTRACTOR SHALL SUPPLY ALL TOOLS NECESSARY TO COMPLETE CONSTRUCTION INCLUDING INSTALLATION OF GROUNDING SYSTEM, IN ACCORDANCE WITH THE PLANS.

THE CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS THAT DEMONSTRATE COMPLETION OF CONSTRUCTION AND THAT NOTE ANY DEVIATIONS FROM THE PLANS.

**BID WALK**

A BID WALK WILL BE HELD ON-SITE TO DISCUSS ANY QUESTIONS OR POSSIBLE SUGGESTIONS THAT GC'S MAY HAVE IN REGARDS TO THIS INSTALLATION. BID WALK IS OPTIONAL BUT NO CHANGE ORDERS WILL BE ALLOWED UNLESS APPROVED CM. BID WALK IS DESIGNED TO CLEAR UP ANY CONCERNS OR QUESTIONS THAT GC'S MAY HAVE ABOUT THE INSTALLATION.

DATE:  
TIME:  
GENERAL CONTRACTOR'S PROJECT MANAGER (CONTRACTOR PM) BEFORE THE COMMENCEMENT OF ANY WORK, THE GC WILL ASSIGN A CONTRACTOR PROJECT MANAGER (CONTRACTOR PM) WHO WILL ACT AS A SINGLE POINT OF CONTACT FOR ALL PERSONNEL INVOLVED IN THIS PROJECT. THIS CONTRACTOR PM WILL DEVELOP A MASTER SCHEDULE FOR THE PROJECT, WHICH WILL BE SUBMITTED TO THE CWL CM PRIOR TO THE COMMENCEMENT OF ANY WORK. THIS CONTRACTOR PM WILL ALSO:

SCHEDULE AN ON-SITE MEETING PRIOR TO PROJECT START, WITH ALL MAJOR PARTIES PRESENT. APPROPRIATE PARTIES INCLUDE (BUT ARE NOT LIMITED TO) CWL CM, CWL LOCAL OPERATIONS POC (MANAGER, SUPERVISOR OR TECHNICIAN), LOCAL POWER COMPANY, DESIGNATED ELECTRICIAN, LOCAL TELEPHONE COMPANY, GC CREW CHIEF / FOREMAN.  
THE CONTRACTOR PM WILL PROVIDE DAILY VERBAL UPDATES ON SITE WORK PROGRESS TO THE CWL CM.

**CIVIL**

THE CONTRACTOR SHALL VERIFY LOCATION OF UNDERGROUND PIPES/CONDUITS USING AN INDEPENDENT UNDERGROUND LOCATOR SERVICE.

THE CONTRACTOR SHALL COORDINATE EXCAVATION WORK WITH CM/OWNER SO AS NOT TO INTERFERE WITH COMPOUND ACCESS BY SITE OWNER AND/OR CURRENT TENANTS.

ALL EXCAVATION SHALL BE DONE WITH CARE TO AVOID DAMAGING UNDERGROUND PIPES/CONDUITS. ANY DAMAGE CAUSED BY CONSTRUCTION SHALL BE REPAIRED IMMEDIATELY AND MONITORED BY THE CONTRACTOR UNTIL REPAIRS ARE COMPLETED. THE CONTRACTOR SHALL NOTIFY THE CM BY PHONE IMMEDIATELY IF DAMAGE TO UNDERGROUND FACILITIES IS CAUSED BY CONSTRUCTION AND THE CONTRACTOR SHALL SUBMIT A WRITTEN REPORT OF THE INCIDENT TO THE CM AND TO THE OWNER OF THE DAMAGED FACILITIES WITHIN 24 HOURS.

THE CONTRACTOR SHALL ENSURE THAT THE SITE IS GRADED PROPERLY DURING CONSTRUCTION TO AVOID STANDING WATER AND USE APPROVED BACKFILL METHODS FOR ANY TRENCH WORK REQUIRED. THE CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS TO THEIR ORIGINAL CONDITIONS USING LIKE MATERIALS.

**ELECTRICAL**

THE CONTRACTOR SHALL INSTALL SECONDARY ELECTRICAL SERVICES ACCORDING TO THE PLANS AND CURRENT NEC AND LOCAL CODES. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED ELECTRICAL INSPECTIONS.

**TELCO – SHELTER (IF APPLICABLE)**

IT IS THE CONTRACTOR RESPONSIBILITY TO PROVIDE AND RUN TELEPHONE CABLE FROM THE TELCO BOX ON THE H-FRAME TO THE TELCO TERMINATION POINT INSIDE THE EQUIPMENT SHELTER. CABLE SHALL CONSIST OF TWO (2) EACH 25-PAIR SHIELDED TELEPHONE CABLES AND 1 PULL STRING. CABLE WILL BE RUN INSIDE A 3" PVC PIPE. CONDUITS WILL BE OUTFITTED WITH ABOVE-GROUND FROST-SLEEVES ON BOTH ENDS, AND INTERNAL CABLES MUST BE INSTALLED WITH ABOUT 8" OF SLACK TO ALLOW FOR POTENTIAL FROST-HEAVE RELIEF. ALSO, LEAVE ONE PULL-STRING INSIDE THE CONDUIT – TIED OFF AT BOTH ENDS – FOR POTENTIAL FUTURE USE.

**TELCO – OUTDOOR EQUIPMENT (IF APPLICABLE)**

IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSTALL 2 TELEPHONE CABLE (CAT5) AND A PULL STRING FROM THE TELCO BOX ON THE H-FRAME TO THE TELCO TERMINATION POINT INSIDE THE EQUIPMENT CABINET OR DSX LOCATION.

**EQUIPMENT SHELTER (IF APPLICABLE)**

THE CONTRACTOR PM MUST PREPARE A "SPREAD-FOOTING AND PERIMETER-TYPE" (OR PERIMETER WITH SLAB) FOUNDATION FOR THE SHELTER BASED ON SITE PLANS. DIMENSIONS AND SPECIFICATIONS (INCLUDING REBAR PLAN) WILL BE AS INDICATED ON APPROVED FINAL SITE DRAWINGS.

ALL CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH AS SPECIFIED IN THE BUILDING SPECIFICATIONS. CONCRETE SAMPLES ARE TO BE TESTED AND THE RESULTS PROVIDED TO THE SITE DEVELOPMENT ENGINEER. IF THE RESULTS DO NOT MEET MINIMUM REQUIREMENTS AND IS DETERMINED TO BE UNACCEPTABLE, CONTRACTOR IS RESPONSIBLE FOR CORRECTING THE DEFICIENCIES.

THE GC'S FOUNDATION INSTALLATION SHALL INCLUDE:

- FOUNDATION LAYOUT
- EXCAVATION
- REINFORCING STEEL
- CONCRETE
- CONCRETE TESTING
- PITCHING TO PREVENT WATER COLLECTION ON THE 4' X 4' SHELTER ENTRANCE
- BACK FILL AND COMPACTION

COORDINATION OF SHELTER DELIVERY, OFFLOAD, AND SET, ALONG WITH ALL NECESSARY PERMITS TO TRAVERSE PUBLIC ROADS AND GAIN ACCESS TO THE SITE, AND APPROPRIATE OFFLOAD TOOLS, ARE THE RESPONSIBILITY OF THE CONTRACTOR PM (THIS APPLIES TO THINGS SUCH AS: SHELTER DELIVERY VEHICLE(S), CRANE, CULVERTS, CURB-CUTS, TRAFFIC CONTROL, ROAD RESTRICTIONS, ETC).

THE CONTRACTOR PM WILL COMMUNICATE DIRECTLY WITH THE DRIVER OF THE SHELTER DELIVERY VEHICLE TO VERIFY ACTUAL SHELTER AND CONTENTS WEIGHT – AS WEIGHED BY HIGHWAY SCALES. THE CONTRACTOR PM IS RESPONSIBLE TO COORDINATE THE APPROPRIATELY SIZED / RATED CRANE AND LIFTING EQUIPMENT (IE: SPREADER BARS, LIFTING CABLES, LIFTING SHACKLES, ETC), BASED ON THE ACTUAL WEIGHT OF SHELTER AND CONTENTS.

**POWER AND EQUIPMENT BAYS (IF APPLICABLE)**

THE CONTRACTOR SHALL INSTALL ALL INTER-BAY CONNECTIONS ACCORDING TO THE PLANS, WHICH INCLUDE TELCO, DC CIRCUITS, ALARM CABLES, AND BATTERIES.

ALL EQUIPMENT BAY CONTACT AND SECURE POINTS ARE MADE OF ALUMINUM. IT IS EXPECTED THAT NO POWER TOOLS SHALL BE UTILIZED TO SECURE THE CARDS AND CABLES IN TO PLACE.

**ANTENNAS/COAX/POWER/FIBER**

THE CONTRACTOR SHALL USE TRUE NORTH TO SET ALL ANTENNA AZIMUTHS.

THE CONTRACTOR, IN ORDER TO MEET THE PERFORMANCE REQUIREMENTS FOR E-911 FOR COMMNET, AND OTHER PERFORMANCE/QUALITY CONTROL, SHALL USE AN ANTENNA ALIGNMENT TOOL IN ORDER TO ACCURATELY CAPTURE ALIGNMENT IN AZIMUTH, TILT, ROLL AND (OPTIONALLY) AGL HEIGHT. THE CONTRACTOR SHOULD USE EQUIPMENT OF GOOD QUALITY AND PREFERRED THOUGHT THE WIRELESS INDUSTRY.

THE CONTRACTOR SHALL TRANSPORT ANTENNAS IN A MANNER THAT WILL NOT DAMAGE OR EFFECT THE ANTENNAS PERFORMANCE AND PRE-SWEEP OR IF AVAILABLE PIM TEST PRIOR TO INSTALL.

THE CONTRACTOR SHALL INSPECT, CLEAN AND TEST FIBER CABLES PRIOR TO INSTALLING AND RECORD THE RESULTS TO CWL CM.

THE CONTRACTOR SHALL, BY USE OF A TORQUE WRENCH, PROPERLY TORQUE JUMPER, COAX ANTENNAS, CONNECTIONS TO INSURE A SECURE CONNECTION AND TO AVOID OVER TIGHTENING.

THE CONTRACTOR WILL ATTACH ANTENNAS USING PROPER MOUNTING BRACKETS.

THE CONTRACTOR SHALL VERIFY THAT PIPE MOUNTS ARE VERTICAL (PLUMB).

THE CONTRACTOR SHALL COLD GALVANIZE SPRAY ALL DAMAGED PARTS OF THE HOT DIP GALVANIZATION.

THE CONTRACTOR SHALL INSTALL GROUNDING IN ACCORDANCE WITH THE PLANS AND MANUFACTURER'S RECOMMENDATIONS. GROUNDING KITS TO BE INSTALLED AT INTERVALS OF 100' ON TOWER.

THE CONTRACTOR SHALL INSTALL ICE-BRIDGE FROM TOWER TO THE APPROPRIATE RF BAY OR EQUIPMENT SHELTER, IF REQUIRED.

THE CONTRACTOR SHALL ROUTE SPECIFIED COAX/POWER/FIBER CABLES ALONG CABLE TRAY/ICE-BRIDGE USING HANGERS ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

THE CONTRACTOR SHALL MARK EACH COAXIAL/POWER/FIBER CABLE IN ACCORDANCE WITH THE ANTENNA/FEEDLINE COLOR CODE SHEET AS SHOWN IN THE PLANS.

THE CONTRACTOR SHALL INSTALL HOISTING GRIPS, ACCORDING TO MANUFACTURER'S RECOMMENDATIONS (AS APPLICABLE).

THE CONTRACTOR SHALL INSTALL SURGE ARRESTORS/BIAS-T, IF REQUIRED, AND BUSS BARS IN APPROVED LOCATIONS.

THE CONTRACTOR SHALL WEATHERPROOF ALL COAX CONNECTIONS IN ACCORDANCE TO MANUFACTURER'S RECOMMENDATIONS.

THE CONTRACTOR SHALL PERFORM A "TAPE DROP" MEASUREMENT TO CONFIRM / VALIDATE ANTENNA CENTER LINE (ACL) HEIGHT.

**GROUNDING**

THE CONTRACTOR SHALL INSTALL THE GROUNDING SYSTEM IN ACCORDANCE WITH THE PLAN.

THE CONTRACTOR SHALL ROUTE GROUND LEADS TO ALL GROUNDING POINTS AND GROUND LEADS BY USING EXOTHERMIC WELDS OR APPROVED MECHANICAL COMPRESSION CONNECTIONS.

THE CONTRACTOR SHALL APPLY OXIDE-INHIBITING COMPOUND IN ALL REQUIRED LOCATIONS.

FOR NEW CONSTRUCTION, THE CONTRACTOR SHALL PERFORM A MEGGER TEST AFTER ALL ATTACHMENTS HAVE BEEN MADE TO THE EQUIPMENT AND PROVIDE READINGS TO THE CM FOR CLOSE OUT REPORTS.

IF REQUIRED, THE CONTRACTOR SHALL PROVIDE PHOTOS VERIFYING THAT ALL GROUND LEADS ARE IN PLACE AND CONNECTED TO SUBSURFACE GROUND RING PRIOR TO BACKFILLING GROUND SYSTEM EXCAVATION (CAD WELD OR BURNDY HY-GROUND CONNECTIONS BELOW GRADE).

**MATERIALS**

SECURITY AND PRESERVATION OF SITE MATERIALS AND EQUIPMENT ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. IN THE EVENT OF DAMAGE, THE CONTRACTOR SHALL PRESERVE THE ORIGINAL CONTAINER AND CONTACT CWL/CWL CM IMMEDIATELY.

THE CONTRACTOR SHALL COMPLETE INVENTORY VERIFICATION NO LATER THAN ONE (1) BUSINESS DAY AFTER RECEIPT OF MATERIALS. TO INDICATE COMPLETION OF INVENTORY, THE CONTRACTOR SHALL SIGN AND DATED A COPY OF MATERIAL LIST AND GIVE TO THE CM. ANY MISSING MATERIAL SHALL BE REPORTED THE CM IMMEDIATELY.

**NOTE:** FAILURE TO PERFORM INVENTORY VERIFICATION AS REQUIRED INDICATES ACKNOWLEDGEMENT FROM THE CONTRACTOR THAT THE MATERIALS AND EQUIPMENT WERE RECEIVED IN THEIR ENTIRETY AND THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY AND REPLACEMENT COSTS FOR EQUIPMENT SHORTAGES.

**MISCELLANEOUS NOTES**

THE CONTRACTOR SHALL REQUEST APPROVAL FROM THE CM FOR ANY CHANGES OR DEVIATIONS FROM THE PLANS.

FOR CHANGES THAT REQUIRED ADDITIONAL COSTS, THE CM WILL COMPLETE A CHANGE ORDER FORM OUTLINE THE REASON FOR THE CHANGE AND ITS COSTS.

**SWEEP/PIM/FIBER TEST**

AFTER THE INSTALLATION OF ANTENNAS & LINES, THE GENERAL CONTRACTOR SHALL SWEEP AND TEST ALL COMPONENTS AND PROVIDE A HARD COPY REPORT OF THE RESULTS. A GRAPH PRINTOUT IS TO BE PROVIDED TO THE LOCAL NETWORK OPERATIONS MANAGER AND CM BY THE GC FOR APPROVAL. SWEEP TESTS SHOULD BE PERFORMED BY THE GC TERMINATING EACH RUN OF COAX WITH A SHORT, 50 OHM LOAD, AND ANTENNA WITH JUMPER AND PROVIDING RETURN LOSS RESULTS.

AFTER THE INSTALLATION OF FIBER TRUNKS AND JUMPERS, THE GC SHOULD PROPERLY RE-TEST THE FIBER TO CONFIRM THE RESULTS ARE WITHIN TOLERANCE OF THE MANUFACTURES SUGGESTED LIMITS.

IF CONTRACTORS OFFER PIM TESTING, PIM TEST SHOULD BE CONDUCTED ON JUMPERS AND ANTENNAS TO CONFIRM THEY ARE IN TOLERANCE AND WORKING PROPERLY.

**PIM TESTING STANDARD**

**REQUIREMENTS FOR PIM TESTING TO A LOAD**  
PASSING: -103DBM OR -146DBC TO A LOAD  
REQUIRES APPROVAL: -102DBM TO -97DBM (-145DBC TO -140DBC) TO A LOAD  
FAILING: BELOW -96DBM (-139DBC) TO A LOAD

**SWEEP TEST REQUIRED PER EACH COAXIAL CABLE/ANTENNA SYSTEM**

- ANTENNA ON GROUND BEFORE INSTALLING ON TOWER
- RETURN LOSS WITH 50 OHM LOAD CONNECTED TO MAIN COAXIAL LINE AND JUMPER
- DISTANCE TO FAULT (DTF) WITH 50 OHM LOAD CONNECTED TO MAIN COAXIAL LINE AND JUMPER
- RETURN LOSS WITH PRECISION SHORT CONNECTED TO MAIN COAXIAL LINE AND JUMPER
- DISTANCE TO FAULT (DTF) WITH PRECISION SHORT CONNECTED TO MAIN COAXIAL LINE AND JUMPER
- RETURN LOSS SYSTEM W/ANTENNA CONNECTED TO MAIN COAXIAL LINE AND JUMPER
- DISTANCE TO FAULT (DTF) SYSTEM W/ANTENNA CONNECTED TO MAIN COAXIAL LINE AND JUMPER
- 18 IS THE PASS / FAIL LINE – ALL TESTS PERFORMED FROM THE POINT AT WHICH THE JUMPERS CONNECT TO THE DVPAS INSIDE THE GSM CABINET AND AT THE JUMPER GOING INTO THE CDMA CABINET. ALL LINES, REGARDLESS OF USE, ARE TO BE TESTED.

**LEGEND**

- NORTH ARROW
- ANTENNA
- GROUND ACCESS WELL
- GROUND ROD
- GROUND BUSS BAR
- MECHANICAL GRND. CONN.
- EXOTHERMIC WELD
- ELECTRIC BOX
- TELEPHONE BOX
- LIGHT POLE
- FND. MONUMENT
- SPOT ELEVATION
- SET POINT
- REVISION
- KEYED NOTE
- DETAIL REFERENCE
- ELEVATION REFERENCE
- SECTION REFERENCE
- GROUT OR PLASTER
- EXISTING BRICK
- EXISTING MASONARY
- CONCRETE
- EARTH
- GRAVEL
- PLYWOOD
- SAND
- WOOD CONT.
- WOOD BLOCKING
- STEEL
- CENTERLINE
- PROPERTY/LEASE LINE
- RIGHT OF WAY
- MATCH LINE
- WORK POINT
- GROUND CONDUCTOR
- TELEPHONE CONDUIT
- ELECTRICAL CONDUIT
- COAXIAL CABLE
- OVERHEAD SERVICE CONDUCTORS
- CHAIN LINK FENCING
- RET (REMOTE ELECTRICAL TILT)
- PDU (POWER DISTRIBUTION UNIT)
- ALARM
- RAILROAD TRACKS



PE SEAL

DESIGNER: JN

LEAD EE: SB

LEAD CE/SE: SAM

| SUBMITTALS |         |                      |    |
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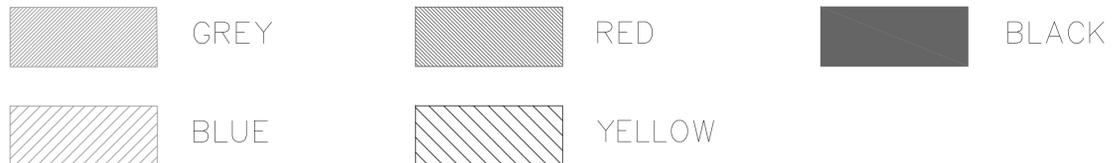
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SHEET TITLE  
GENERAL NOTES

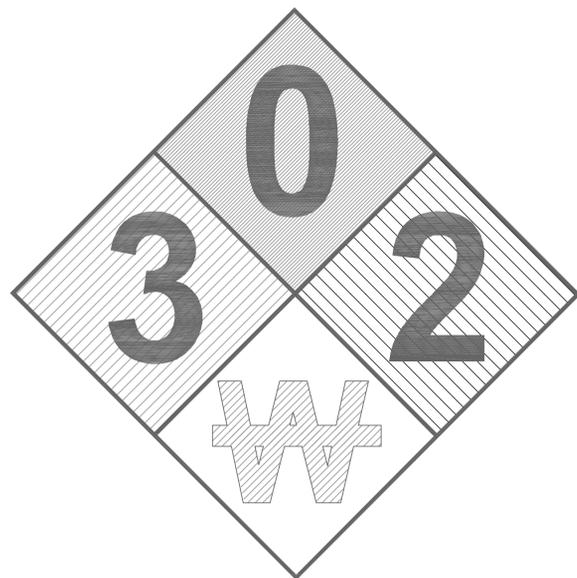
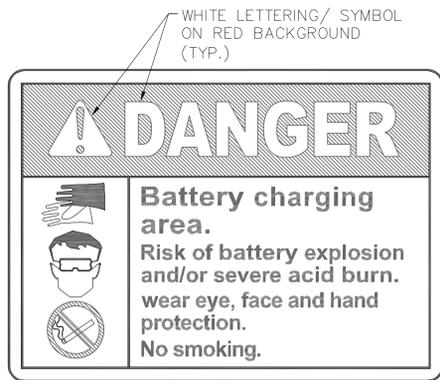
SHEET NUMBER  
GN-1

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**COLOR CODE**

SCALE: NTS **1**



**REQUIRED NFPA SIGNAGE**

SCALE: NTS **2**



WHITE LETTERING ON RED BACKGROUND (TYP.)



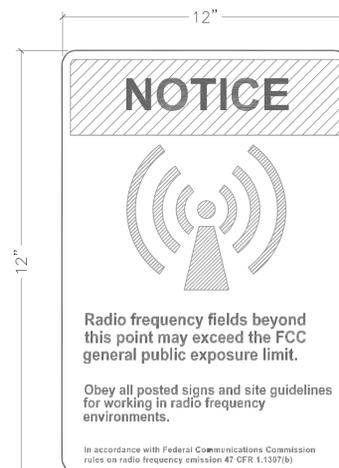
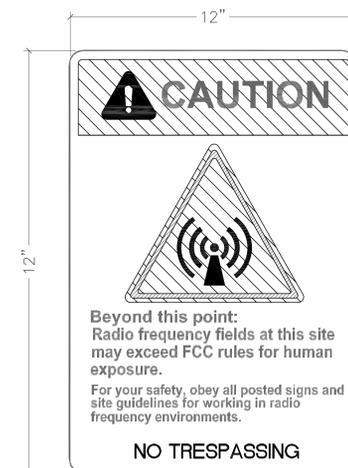
**FENCE SIGNAGE**

SCALE: NTS **3**

**HAZARDOUS MATERIALS SIGNAGE**

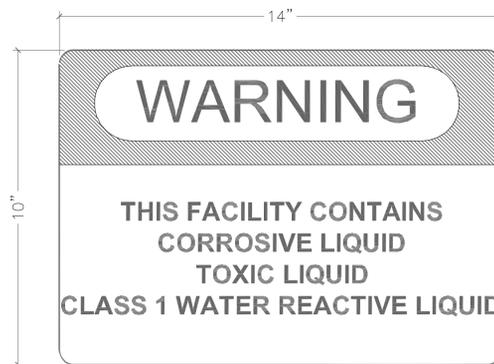
SCALE: NTS **4**

- NOTES:**
- SIGN MATERIAL: 18 GA SHEET ALUMINUM ALLOY 6061-T6, 5052-H38, 5154-H38 OR EQUIVALENT.
  - LETTERING COLOR: NON REFLECTIVE BLACK SCREENED, CUT OUT PERMANENT OR REMOVABLE LEGEND.
  - BACKGROUND COLORS: REFLECTIVE WHITE: SILVER WHITE ASTM TYPE III OR TYPE IV SHEETING U.N.O. NON REFLECTIVE YELLOW RED BLUE AND GREY TRANSPARENT PASTE APPLIED OVER THE SILVER WHITE SHEETING.
  - REFERENCE ANSI C95.2 FOR COLOR, SYMBOLS AND CONTENT CONVENTIONS
  - SIGNS SHALL BE POSTED ON ACCESS GATE AND SHELTER DOOR OR OUTDOOR EQUIPMENT CABINETS



**RF SIGNAGE**

SCALE: NTS **5**



1317 E. THUNDERHILL PLACE  
PHOENIX, AZ 85048  
PHONE: (480) 213-8524

PE SEAL

DESIGNER: JN

LEAD EE: SB

LEAD CE/SE: SAM

**SUBMITTALS**

| REV. | DATE    | DESCRIPTION          | BY |
|------|---------|----------------------|----|
| B    | 8/2/16  | REVISED SPD          | JN |
| C    | 8/12/16 | REVISED PER COMMENTS | JN |
| D    | 10/5/16 | REVISED PER COMMENTS | JN |
| E    | 10/5/16 | REVISED PER COMMENTS | JN |
| F    | 10/7/16 | REVISED PER COMMENTS | JN |

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PLOT DATE: 10/7/16

SITE NAME

CUBA DOWNTOWN

PROJECT

NEW BUILD

SITE ADDRESS:  
LAT: 36° 1' 20.51" N  
LONG: 116° 58' 36.2" W  
SECTION 29, TOWNSHIP 21 NORTH,  
RANGE 1 WEST  
N.M.P.M., NEW MEXICO

SHEET TITLE

SITE SIGNAGE DETAILS

SHEET NUMBER

SN-1



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PE SEAL

DESIGNER: JN  
 LEAD EE: SB  
 LEAD CE/SE: SAM

| SUBMITTALS |         |                      |    |
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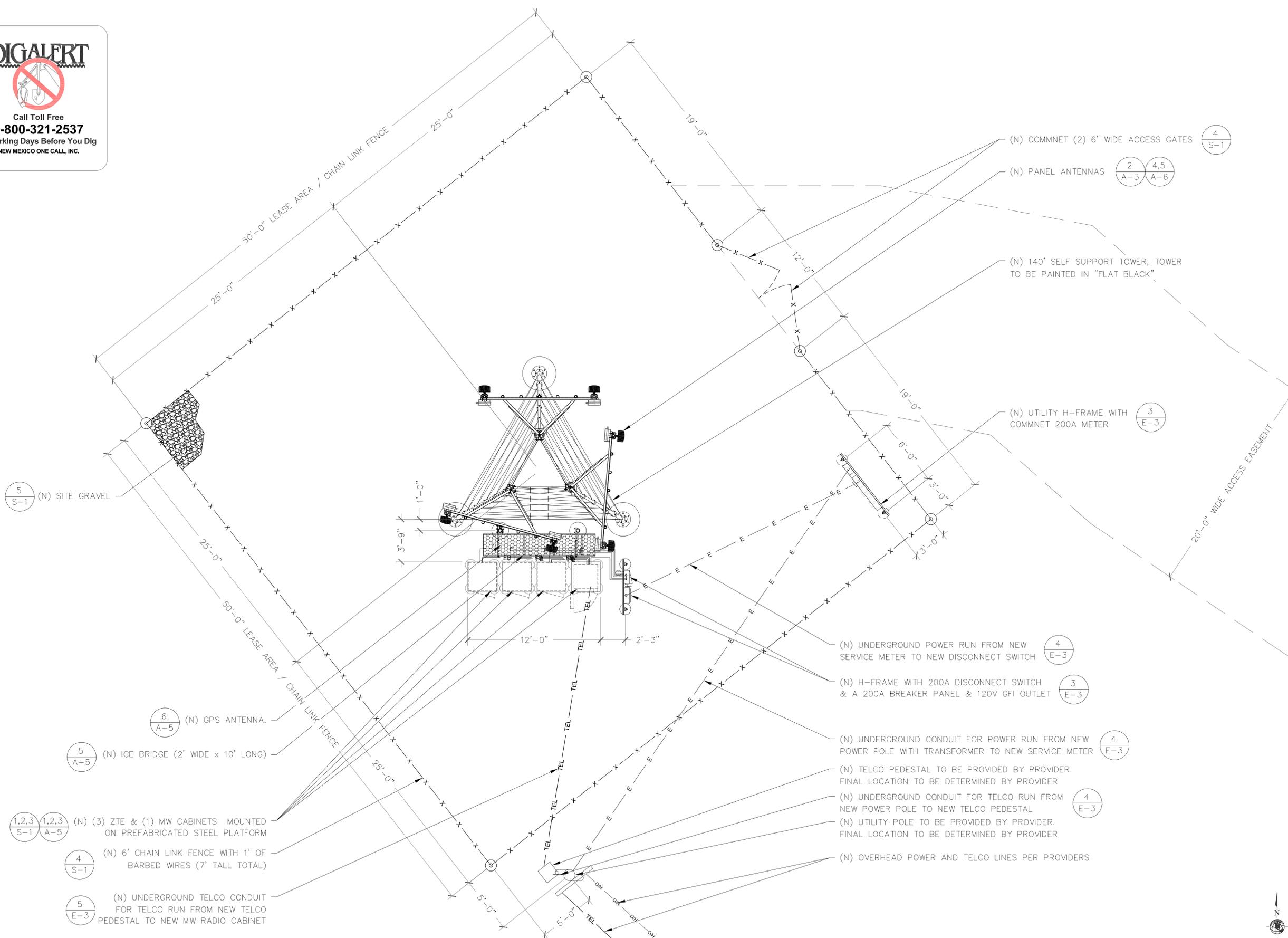
SITE NAME  
 CUBA DOWNTOWN

PROJECT  
 NEW BUILD

SITE ADDRESS  
 LAT: 36° 1' 20.51" N  
 LONG: 116° 58' 36.2" W  
 SECTION 29, TOWNSHIP 21 NORTH,  
 RANGE 1 WEST  
 N.M.P.M., NEW MEXICO

SHEET TITLE  
 ENLARGED SITE PLAN

SHEET NUMBER  
 A-2



22"x34" SCALE: 1/4" = 1'-0"  
 11"x17" SCALE: 1/8" = 1'-0"  
 4' 3' 2' 1' 0' 4' 1

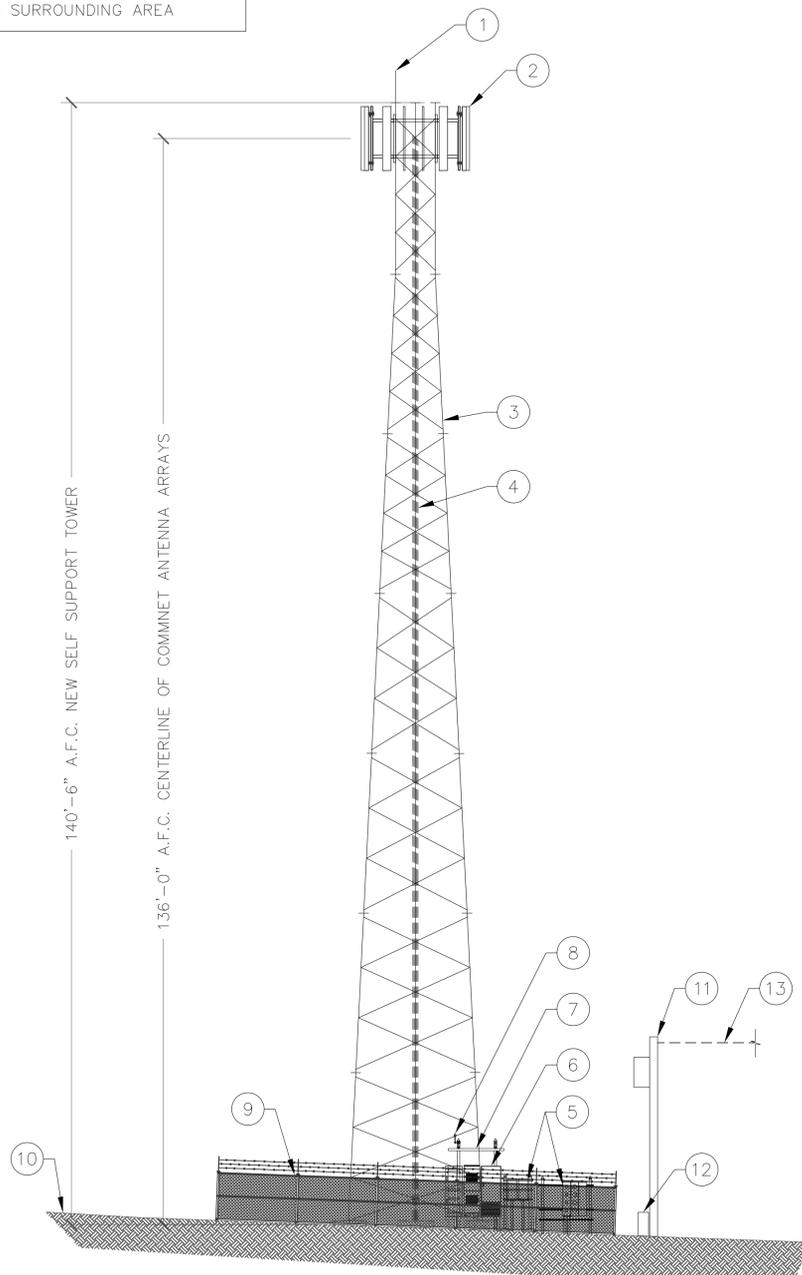
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**ELEVATION KEYED NOTES:** #

- (N) 4' LIGHTNING ROD
- (N) (2) RET QUAD POLE PANEL ANTENNAS, (3) SECTORS, TOTAL OF (6) ANTENNAS @ 0°, 95° & 195° AZIMUTH, MOUNTED ON (3) NEW SECTOR GATES @ 136' RAD CENTER. REFER TO SHEET A-4 FOR ANTENNA MODEL DETAILS.
- (N) 140' TALL SELF-SUPPORT TOWER, TOWER TO BE PAINTED IN "FLAT BLACK"
- (N) VERTICAL CABLE LADDER WITH (3) POWER AND (3) FIBER RUNS
- (N) UTILITY H-FRAME (TYP.) (BEYOND)
- (N) (3) ZTE & (1) MW CABINETS
- (N) ICE BRIDGE (2' WIDE)
- (N) GPS ANTENNA
- (N) 6' CHAIN LINK FENCE WITH 1' OF BARBED WIRES (7' TALL TOTAL)
- FINISHED GRADE
- (N) UTILITY POLE TO BE PROVIDED BY PROVIDER. FINAL LOCATION TO BE DETERMINED BY PROVIDER
- (N) TELCO PEDESTAL TO BE PROVIDED BY PROVIDER. FINAL LOCATION TO BE DETERMINED BY PROVIDER
- (N) OVERHEAD POWER AND TELCO LINES PER PROVIDERS

**NOTES:**

NEW ANTENNAS AND MOUNTS PAINTED TO MATCH SURROUNDING AREA



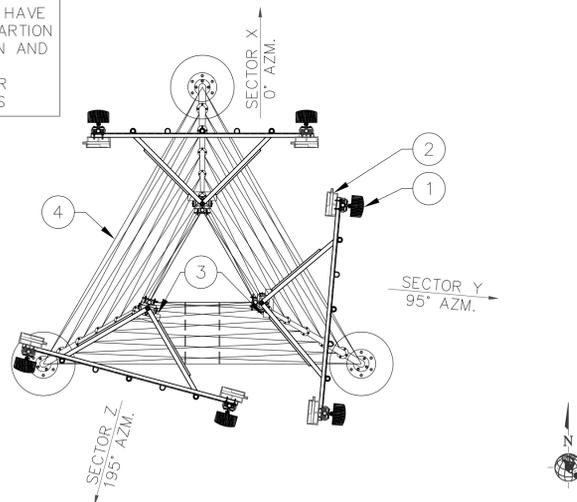
**SITE ELEVATION**

22"x34" SCALE: 3/32" = 1'-0"  
11"x17" SCALE: 3/64" = 1'-0"  
8' 4' 0' 8'

**ANTENNA LAYOUT KEYED NOTES:** #

- (N) (2) RET QUAD POLE PANEL ANTENNAS, (3) SECTORS, TOTAL OF (6) ANTENNAS @ 0°, 95° & 195° AZIMUTH, MOUNTED ON (3) NEW SECTOR GATES @ 136' RAD CENTER. REFER TO SHEET A-4 FOR ANTENNA MODEL DETAILS.
- (N) (2) RRU's PER SECTOR, (3) SECTORS, TOTAL OF (6) RRU's
- (N) (2) FTTA DISTRIBUTION BOXES
- (N) 140' TALL SELF-SUPPORT TOWER

**NOTE:**  
ANTENNAS TO HAVE MINIMUM SEPARATION PER RF DESIGN AND PER ANTENNA MANUFACTURER SPECIFICATIONS

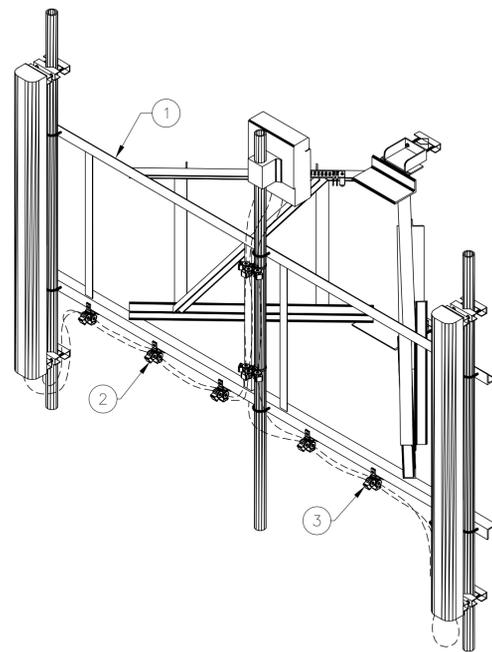


**ANTENNA LAYOUT**

SCALE: NTS **2**

**CABLE SECURED KEYED NOTES:** #

- SECTOR GATE
- TYPICAL CABLE DRESSING ALONG SETOR GATE
- FIBER OPTIC CABLE SECURED BY BLOCKS OR SNAP INS HELD TO THE SECTOR GATE BY ANGLE ADAPTOR CLAMPS

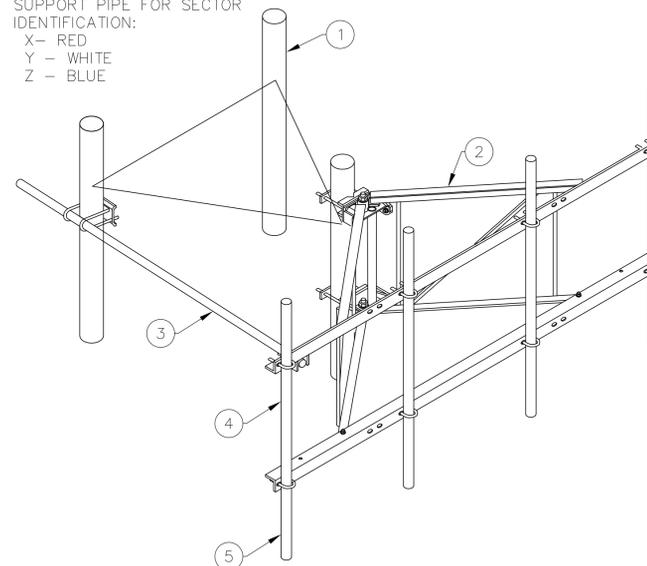


**1 CABLE SECURED DETAIL**

SCALE: NTS **4**

**ANTENNA MOUNT KEYED NOTES:** #

- TOWER LEG (ANGLE LEG SIMILAR) TYP.
- SECTOR GATE, CLOSELY MOUNTED TO THE TOWER
- TIE BACK TO TOWER LEG ONLY
- ANTENNA MOUNTING PIPES TYP.
- NOTE - CONTRACTOR SHALL COLOR CODE BOTTOM OF EACH ANTENNA SUPPORT PIPE FOR SECTOR IDENTIFICATION:  
X - RED  
Y - WHITE  
Z - BLUE

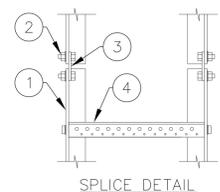


**GPS ANTENNA MOUNTING DETAIL**

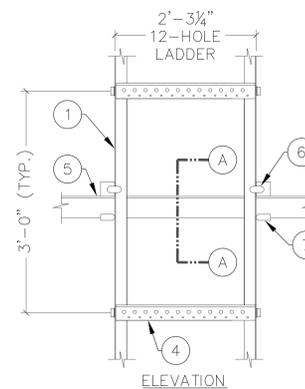
SCALE: NTS **3**

**ANTENNA MOUNT KEYED NOTES:** #

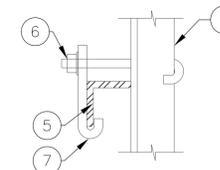
- ANGLE, WAVEGUIDE LADDER RAIL 10' (TYP.)
- 3/8" Ø BOLT ASSEMBLY (TYP.)
- LADDER SPLICE PLATE (TYP.)
- ANGLE WAVEGUIDE SUPPORT (12 HOLES)
- TOWER HORIZONTAL OR DIAGONALS
- 3/8" Ø J-BOLT ASSEMBLY (TYP.)
- LADDER ATTACHMENT CLIP



SPLICE DETAIL



ELEVATION



SECTION A-A

**4 VERTICAL CABLE TRAY DETAIL**

SCALE: NTS **5**



1317 E. THUNDERHILL PLACE  
PHOENIX, AZ 85048  
PHONE: (480) 213-8524

PE SEAL

DESIGNER: JN

LEAD EE: SB

LEAD CE/SE: SAM

| SUBMITTALS |         |                      |    |
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| B          | 8/2/16  | REVISED SPD          | JN |
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| F          | 10/7/16 | REVISED PER COMMENTS | JN |

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PLOT DATE: 10/7/16

SITE NAME  
CUBA DOWNTOWN

PROJECT  
NEW BUILD

SITE ADDRESS  
LAT: 36° 1' 20.51" N  
LONG: 116° 58' 36.2" W  
SECTION 29, TOWNSHIP 21 NORTH,  
RANGE 1 WEST  
N.M.P.M., NEW MEXICO

SHEET TITLE  
SITE ELEVATION  
& DETAILS

SHEET NUMBER  
A-3



1317 E. THUNDERHILL PLACE  
PHOENIX, AZ 85048  
PHONE: (480) 213-8524

PE SEAL

DESIGNER: JN

LEAD EE: SB

LEAD CE/SE: SAM

SUBMITTALS

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SITE NAME  
CUBA DOWNTOWN

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SECTION 29, TOWNSHIP 21 NORTH,  
RANGE 1 WEST  
N.M.P.M., NEW MEXICO

SHEET TITLE  
ENGINEERING  
DATA SHEET

SHEET NUMBER  
A-4

| RF DESIGN AND ENGINEERING SHEET  |                       |                    |                    |                      |  |                          |               |                                      |                       |                          |               |                    |  |
|--|-----------------------|--------------------|--------------------|----------------------|--|--------------------------|---------------|--------------------------------------|-----------------------|--------------------------|---------------|--------------------|--|
| SITE INFORMATION   |                       |                    |                    | SITE NAME            |  | STATE                    |               | COUNTY                               |                       | LOCATION INFORMATION     |               |                    |  |
| Market / Call Sign<br>Commnet Four Corners WPOK572 / WPT1719 / KNL278  |                       |                    |                    | Cuba Downtown        |  | NM                       |               | Sandoval                             |                       |                          |               |                    |  |
| FCC #/Site Identifier<br>Rawland   |                       |                    |                    | Latitude Deg         |  | Lat Min                  |               | Lat Sec                              |                       | Lat Decimal              |               |                    |  |
| Engineer<br>J.Hall   |                       |                    |                    | 36                   |  | 1                        |               | 20.51                                |                       | 36.022364                |               |                    |  |
| Date (mm/dd/yyyy)<br>6/6/16  |                       |                    |                    | Longitude Deg        |  | Long Min                 |               | Long Sec                             |                       | Long Decimal             |               |                    |  |
| Candidate Sheet Information<br>Site Candidate D  |                       |                    |                    | 106                  |  | 58                       |               | 36.2                                 |                       | -106.976722              |               |                    |  |
| Modified By<br>M. Fourie   |                       |                    |                    | Revision #<br>Rev 16 |  | Ground Elev (ft)<br>6984 |               | Structure Type<br>Self support tower |                       | Structure Ht (ft)<br>140 |               |                    |  |
| SYSTEM INFORMATION   |                       |                    |                    |                      |  | NOTES                    |               |                                      |                       |                          |               |                    |  |
| Technology   | UMTS                  | CDMA-1x            | EVDO               | LTE                  | New rawland site, all tower mounted RRU's. For all technologies, use both sides of dual RRU, follow port assignments below. UMTS and LTE to share RRU's, follow port assignments below to achieve 2x2 MIMO for LTE. Ground elevation and coordinates from 2C letter. Tower height preliminary. |                          |               |                                      |                       |                          |               |                    |  |
| BTS Vendor   | ZTE                   | ZTE                | ZTE                | ZTE                  |  |                          |               |                                      |                       |                          |               |                    |  |
| BTS Model / RRU model  | BS8900R8882           | BS8900R8882        | BS8900R8882        | BS8900R8882          |  |                          |               |                                      |                       |                          |               |                    |  |
| Switch Name  | Castle Rock           | Castle Rock        | Castle Rock        | Shbrook              |  |                          |               |                                      |                       |                          |               |                    |  |
| Radios on Tower or at Base   | Tower                 | Tower              | Tower              | Tower                |  |                          |               |                                      |                       |                          |               |                    |  |
| Frequency Band   | 1900MHz B5            | 1900MHz C1 Partial | 1900MHz C1 Partial | 1900 TBD             |  |                          |               |                                      |                       |                          |               |                    |  |
| Channel/Carrier Totals/Bandwidth   | 1-1-1                 | 1-1-1              | 1-1-1              | 1-1-1 / TBD          |  |                          |               |                                      |                       |                          |               |                    |  |
| # of Extended Range Radios (of total)  | 0                     | 0                  | 0                  | 0                    |  |                          |               |                                      |                       |                          |               |                    |  |
| Data   | Yes                   | Yes                | Yes                | Yes                  |  |                          |               |                                      |                       |                          |               |                    |  |
| MIMO   | n/a                   | n/a                | n/a                | 2x2                  |  |                          |               |                                      |                       |                          |               |                    |  |
| Capacity Req'd (of TT's or Mbps)   |                       |                    |                    |                      | 50Mbps   |                          |               |                                      |                       |                          |               |                    |  |
| Microwave or Interconnect  | Interconnect          |                    |                    |                      |  |                          |               |                                      |                       |                          |               |                    |  |
| Equipment Site Totals  | Base Cabinets         | RRU's              | Antennas           | Coax Lines           | Fiber Lines  | Power Lines              | TMA's         | FTTA Box                             |                       |                          |               |                    |  |
|  | 2                     | 6                  | 6                  | 0                    | 2  | 2                        | 0             | 2                                    |                       |                          |               |                    |  |
| Sector X   |                       |                    |                    | Sector Y             |  |                          |               | Sector Z                             |                       |                          |               |                    |  |
| Antenna Path Designation   | Ant1/Elm1             | Ant1/Elm2          | Ant1/Elm3          | Ant1/Elm4            | Ant1/Elm1  | Ant1/Elm2                | Ant1/Elm3     | Ant1/Elm4                            | Ant1/Elm1             | Ant1/Elm2                | Ant1/Elm3     | Ant1/Elm4          |  |
|  | 1900 Tx/Rx            | 1900 Tx/Rx         | 1900 Rx            | 1900 Rx              | 1900 Tx/Rx   | 1900 Tx/Rx               | 1900 Rx       | 1900 Rx                              | 1900 Tx/Rx            | 1900 Tx/Rx               | 1900 Rx       | 1900 Rx            |  |
| Antenna Type (panel, omn, RET)   | RET quad pole         | RET quad pole      | RET quad pole      | RET quad pole        | RET quad pole  | RET quad pole            | RET quad pole | RET quad pole                        | RET quad pole         | RET quad pole            | RET quad pole | RET quad pole      |  |
| Antenna Model  | WWX063X19G00          | WWX063X19G00       | WWX063X19G00       | WWX063X19G00         | QUAD456W0000L  | QUAD456W0000L            | QUAD456W0000L | QUAD456W0000L                        | WWX063X19G00          | WWX063X19G00             | WWX063X19G00  | WWX063X19G00       |  |
| Antenna Manufacturer   | Amphenol              | Amphenol           | Amphenol           | Amphenol             | Amphenol   | Amphenol                 | Amphenol      | Amphenol                             | Amphenol              | Amphenol                 | Amphenol      | Amphenol           |  |
| Antenna Center Line (FT)   | 136                   | 136                | 136                | 136                  | 136  | 136                      | 136           | 136                                  | 136                   | 136                      | 136           | 136                |  |
| Number of Coaxial Lines  | 1 and 1               |                    |                    |                      |  |                          |               |                                      |                       |                          |               |                    |  |
| Coax Type  | Shared Fiber/Power    |                    |                    |                      |  |                          |               |                                      |                       |                          |               |                    |  |
| Coax Length (FT)   | 156                   |                    |                    |                      |  |                          |               |                                      |                       |                          |               |                    |  |
| TMA Model  | n/a                   | n/a                | n/a                | n/a                  | n/a  | n/a                      | n/a           | n/a                                  | n/a                   | n/a                      | n/a           | n/a                |  |
| Remote Radio Unit (RRU) Mount Height   | 136                   |                    |                    |                      | 136  |                          |               |                                      | 136                   |                          |               |                    |  |
| Antenna Beamwidth  | 67                    | 67                 | 67                 | 67                   | 44   | 44                       | 44            | 44                                   | 67                    | 67                       | 67            | 67                 |  |
| Antenna Gain (dBi)   | 18.6                  | 18.6               | 18.6               | 18.6                 | 19   | 19                       | 19            | 19                                   | 18.6                  | 18.6                     | 18.6          | 18.6               |  |
| Antenna Azimuth  | 0                     | 0                  | 0                  | 0                    | 95   | 95                       | 95            | 95                                   | 195                   | 195                      | 195           | 195                |  |
| Antenna Fixed Elec Tilt or RET (Deg)   | 0                     | 0                  | 0                  | 0                    | 1  | 1                        | 1             | 1                                    | 1                     | 1                        | 1             | 1                  |  |
| Antenna Mechanical tilt (Deg)  | 0                     | 0                  | 0                  | 0                    | 0  | 0                        | 0             | 0                                    | 0                     | 0                        | 0             | 0                  |  |
| Number of TRX/Carriers   | 1 and 1               | 0                  | 0                  | 0                    | 1 and 1  | 0                        | 0             | 0                                    | 1 and 1               | 0                        | 0             | 0                  |  |
| Technology   | LTE Tx/Rx1:UMTS Tx/Rx | future             | EVDO               | CDMA                 | LTE Tx/Rx1:UMTS Tx/Rx  | future                   | EVDO          | CDMA                                 | LTE Tx/Rx1:UMTS Tx/Rx | future                   | EVDO          | CDMA               |  |
| RRU Port   | Tx0/Rx0               |                    | Rx3                | Rx2                  | Tx0/Rx0  |                          | Rx3           | Rx2                                  | Tx0/Rx0               |                          | Rx3           | Rx2                |  |
| Additional Equipment   |                       |                    |                    |                      |  |                          |               |                                      |                       |                          |               |                    |  |
| Antenna/Feedline Color Code  | red 1                 | red 2              | red 3              | red 4                | white 1  | white 2                  | white 3       | white 4                              | blue 1                | blue 2                   | blue 3        | blue 4             |  |
| Fiber Feedline Number Code   | 1                     |                    |                    |                      | 2  |                          |               |                                      | 3                     |                          |               |                    |  |
| Transmit Power / radio (Watts)   | 30                    |                    |                    |                      | 30   |                          |               |                                      | 30                    |                          |               |                    |  |
| Max EIRP / Pilot EIRP (Watts)  | 1862 / 186            |                    |                    |                      | 2042 / 204   |                          |               |                                      | 1862 / 186            |                          |               |                    |  |
| Max ERP / Pilot ERP (Watts)  | 1148 / 115            |                    |                    |                      | 1259 / 126   |                          |               |                                      | 1148 / 115            |                          |               |                    |  |
| Sector X   |                       |                    |                    | Sector Y             |  |                          |               | Sector Z                             |                       |                          |               |                    |  |
| Antenna Path Designation   | Ant2/Elm1             | Ant2/Elm2          | Ant2/Elm3          | Ant2/Elm4            | Ant2/Elm1  | Ant2/Elm2                | Ant2/Elm3     | Ant2/Elm4                            | Ant2/Elm1             | Ant2/Elm2                | Ant2/Elm3     | Ant2/Elm4          |  |
|  | 1900 Tx/Rx            | 1900 Tx/Rx         | 1900 Tx/Rx         | 1900 Tx/Rx           | 1900 Tx/Rx   | 1900 Tx/Rx               | 1900 Tx/Rx    | 1900 Tx/Rx                           | 1900 Tx/Rx            | 1900 Tx/Rx               | 1900 Tx/Rx    | 1900 Tx/Rx         |  |
| Antenna Type (panel, omn, RET)   | RET quad pole         | RET quad pole      | RET quad pole      | RET quad pole        | RET quad pole  | RET quad pole            | RET quad pole | RET quad pole                        | RET quad pole         | RET quad pole            | RET quad pole | RET quad pole      |  |
| Antenna Model  | WWX063X19G00          | WWX063X19G00       | WWX063X19G00       | WWX063X19G00         | QUAD456W0000L  | QUAD456W0000L            | QUAD456W0000L | QUAD456W0000L                        | WWX063X19G00          | WWX063X19G00             | WWX063X19G00  | WWX063X19G00       |  |
| Antenna Manufacturer   | Amphenol              | Amphenol           | Amphenol           | Amphenol             | Amphenol   | Amphenol                 | Amphenol      | Amphenol                             | Amphenol              | Amphenol                 | Amphenol      | Amphenol           |  |
| Antenna Center Line (FT)   | 136                   | 136                | 136                | 136                  | 136  | 136                      | 136           | 136                                  | 136                   | 136                      | 136           | 136                |  |
| Number of Coaxial Lines  | 1 and 1               |                    |                    |                      |  |                          |               |                                      |                       |                          |               |                    |  |
| Coax Type  | Shared Fiber/Power    |                    |                    |                      |  |                          |               |                                      |                       |                          |               |                    |  |
| Coax Length (FT)   | 156                   |                    |                    |                      |  |                          |               |                                      |                       |                          |               |                    |  |
| TMA Model  | n/a                   | n/a                | n/a                | n/a                  | n/a  | n/a                      | n/a           | n/a                                  | n/a                   | n/a                      | n/a           | n/a                |  |
| Remote Radio Unit (RRU) Mount Height   | 136                   |                    |                    |                      | 136  |                          |               |                                      | 136                   |                          |               |                    |  |
| Antenna Beamwidth  | 67                    | 67                 | 67                 | 67                   | 44   | 44                       | 44            | 44                                   | 67                    | 67                       | 67            | 67                 |  |
| Antenna Gain (dBi)   | 18.6                  | 18.6               | 18.6               | 18.6                 | 19   | 19                       | 19            | 19                                   | 18.6                  | 18.6                     | 18.6          | 18.6               |  |
| Antenna Azimuth  | 0                     | 0                  | 0                  | 0                    | 95   | 95                       | 95            | 95                                   | 195                   | 195                      | 195           | 195                |  |
| Antenna Fixed Elec Tilt or RET (Deg)   | 0                     | 0                  | 0                  | 0                    | 1  | 1                        | 1             | 1                                    | 1                     | 1                        | 1             | 1                  |  |
| Antenna Mechanical tilt (Deg)  | 0                     | 0                  | 0                  | 0                    | 0  | 0                        | 0             | 0                                    | 0                     | 0                        | 0             | 0                  |  |
| Number of TRX/Carriers   | 1                     | 1                  | 0                  | 1 and 0              | 1  | 1                        | 0             | 1 and 0                              | 1                     | 1                        | 0             | 1 and 0            |  |
| Technology   | CDMA                  | EVDO               | future             | LTE Tx/Rx2:UMTS Rx   | CDMA   | EVDO                     | CDMA          | LTE Tx/Rx2:UMTS Rx                   | CDMA                  | EVDO                     | future        | LTE Tx/Rx2:UMTS Rx |  |
| RRU Port   | Tx0/Rx0               | Tx1/Rx1            |                    | Tx1/Rx1              | Tx0/Rx0  | Tx1/Rx1                  |               | Tx1/Rx1                              | Tx0/Rx0               | Tx1/Rx1                  |               | Tx1/Rx1            |  |
| Additional Equipment   |                       |                    |                    |                      |  |                          |               |                                      |                       |                          |               |                    |  |
| Antenna/Feedline Color Code  | red 5                 | red 6              | red 7              | red 8                | white 5  | white 6                  | white 7       | white 8                              | blue 5                | blue 6                   | blue 7        | blue 8             |  |
| Fiber Feedline Number Code   | 4                     |                    |                    |                      | 5  |                          |               |                                      | 6                     |                          |               |                    |  |
| Transmit Power / radio (Watts)   | 20                    | 20                 |                    | 30                   | 20   | 20                       |               | 30                                   | 20                    | 20                       |               | 30                 |  |
| Max EIRP / Pilot EIRP (Watts)  | 1230 / 209            | 1230.00            |                    | 1862 / 186           | 1349 / 229   | 1349.00                  |               | 2042 / 204                           | 1230 / 209            | 1230.00                  |               | 1862 / 186         |  |
| Max ERP / Pilot ERP (Watts)  | 759 / 129             | 759.00             |                    | 1148 / 115           | 832 / 141  | 832.00                   |               | 1259 / 126                           | 759 / 129             | 759.00                   |               | 1148 / 115         |  |
| COMMENTS AND CHANGE HISTORY  |                       |                    |                    |                      |  |                          |               |                                      |                       |                          |               |                    |  |
| Sector X   |                       |                    |                    |                      |  |                          |               |                                      |                       |                          |               |                    |  |
| Sector Y   |                       |                    |                    |                      |  |                          |               |                                      |                       |                          |               |                    |  |
| Sector Z   |                       |                    |                    |                      |  |                          |               |                                      |                       |                          |               |                    |  |
| Additional Comments<br>New candidate. All previous revisions not implemented. 9/9/15 LTE added, spectrum tbd. 10/07/15 - Updated ground elevation and coordinates as per 2C letter. 4/4/16 - LTE changed to 1900 Mhz. UMTS power reduced, antennas and tilts changed, equipment site totals, power/fiber runs and ERP/EIRP updated. 6/6/16 - Backhaul updated. |                       |                    |                    |                      |  |                          |               |                                      |                       |                          |               |                    |  |

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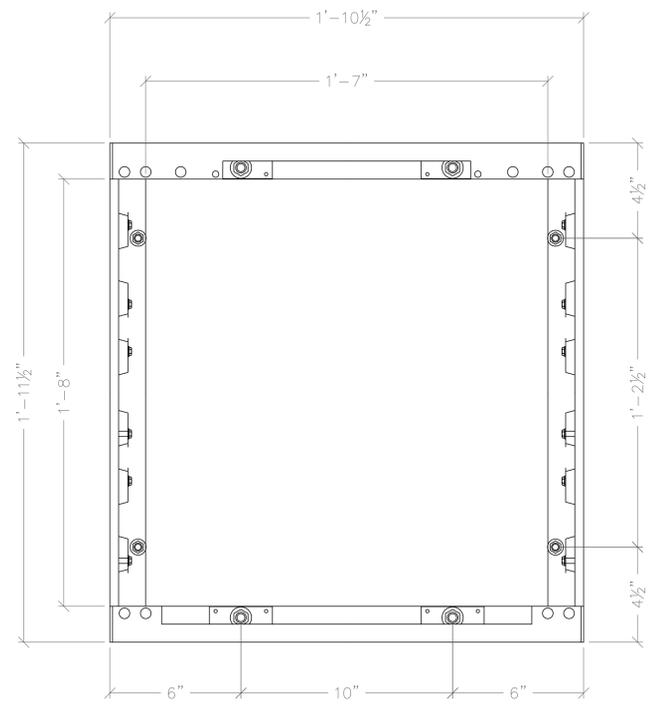
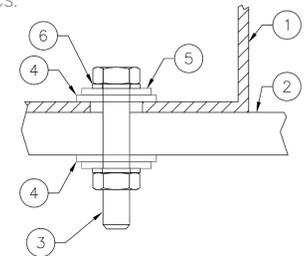
**SUMMARY:**  
WARNING WHEN DRILLING, WEAR THE NECESSARY PROTECTIVE GEAR, SUCH AS GLOVES AND SAFETY GLASSES.

**CAUTION:**  
UNEVEN BOLT INSTALLATION CAN DAMAGE CABINET FLOOR.

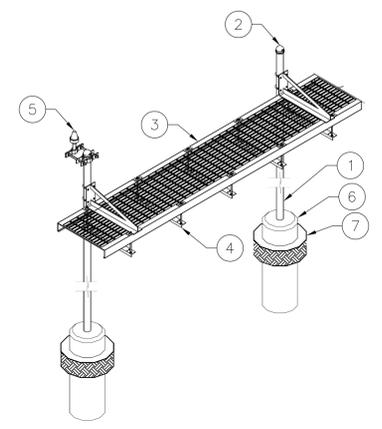
**NOTE:**  
1. THE DIAMETER OF THE ANCHOR HOLE IN THE CABINET FLOOR IS 9/16" THE ANCHOR BOLT SIZE IS 1/2" X 2" - 13 TPI (N.C.)  
2. CONTRACTOR CAN MARK ANCHOR HOLE LOCATIONS THROUGH THE FLOOR WITH THE CABINET IN PLACE OR USING A CARDBOARD TEMPLATE. CONTRACTOR CAN MAKE THE TEMPLATE BY TRACING THE OUTLINE OF THE CABINET BOTTOM INCLUDING THE ANCHOR HOLES.

**MOUNTING THE CABINET STEPS:**  
1. LIFT THE CABINET INTO PLACE ON THE STEEL PLATFORM TO MARK BOLT HOLE LOCATIONS.  
2. MARK THE BASE THROUGH THE MOUNTING BOLT HOLES.  
3. MOVE THE CABINET OFF THE BASE, IF NECESSARY.  
4. DRILL THE ANCHOR HOLES MARKED ON THE PLATFORM AND CLEAR ANY DEBRIS.  
5. LIFT THE CABINET INTO PLACE AND ALIGN IT OVER THE DRILLED HOLES.  
6. INSERT WASHER ON BOLT AND INSERT BOLT/ WASHER THROUGH HOLE.  
7. ON EACH BOLT (UNDERNEATH) INSTALL A FLAT WASHER AND SECURE IT WITH A NUT.  
8. TIGHTEN THE NUTS.

**EQUIPMENT ANCHORAGE KEYED NOTES: (#)**  
1. CABINET FRAMING  
2. PLATFORM  
3. 1/2" DIA. THRU BOLT (TOTAL 4); VERIFY SIZE W/ MANUFACTURER SPECS.  
4. 1/2" WASHER (SERIES W)  
5. FLAT WASHER  
6. LOCK WASHER



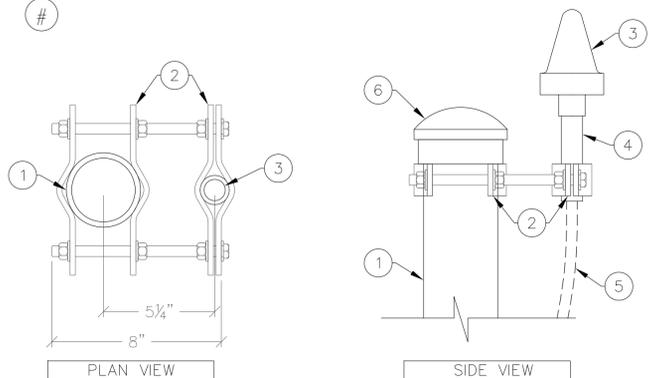
**ICE BRIDGE KEYED NOTES: (#)**  
1. 3" SCH. 40 PIPE COLUMN,  
2. 3 1/2" FENCE POST CAP  
3. 24"X10' GRIP SPAN BRIDGE CHANNEL  
4. TRAPEZE KIT (TYP.)  
5. GPS ANTENNA  
6. 1 1/2" Ø CONCRETE FORM TUBE 4" ABOVE GRADE & 36" BELOW GRADE (CONCRETE 3000 PSI COMP. STRENGTH MINIMUM)  
7. FINISHED GRADE MATCH EXISTING SURFACING



**NOTE:**  
1. FOR MORE INFORMATION AND INSTALLATION PLEASE REFER THE MANUFACTURER

**ICE BRIDGE DETAILS**

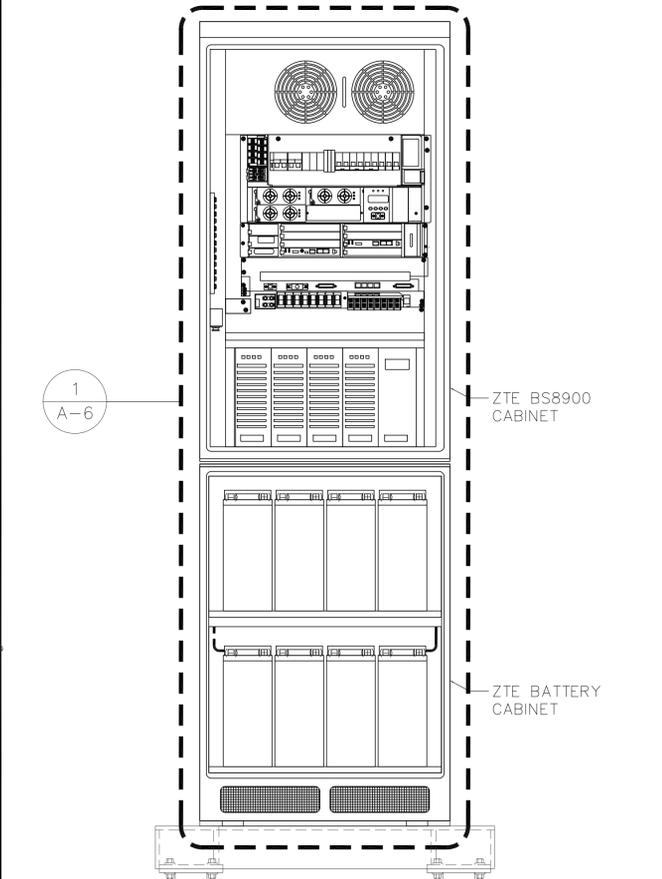
**GPS ANTENNA MOUNT KEYED NOTES: (#)**  
1. ICEBRIDGE SUPPORT PIPE  
2. PIPE TO PIPE MOUNTING KIT BY SUPPLIER  
3. GPS ANTENNA  
4. GPS ANTENNA MOUNTING PIPE  
5. GPS ANTENNA COAXIAL CABLE  
6. SUPPORT PIPE CAP



**CABINET BOLTING DETAIL** SCALE: N.T.S. **1**

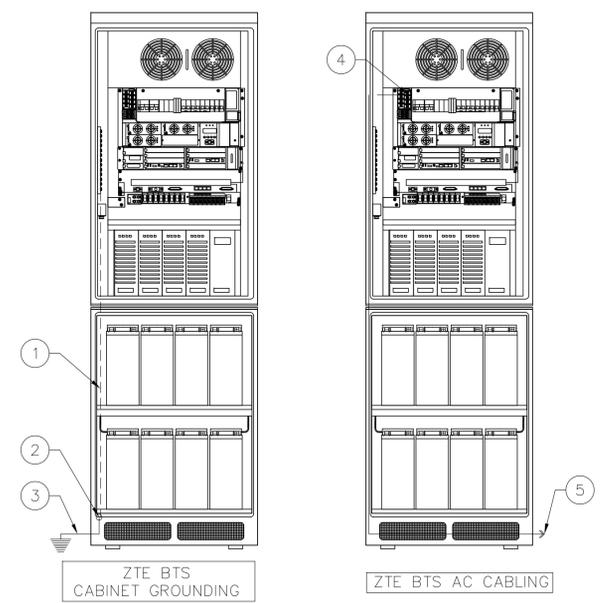
**ZTE CABINET BOLTING** SCALE: N.T.S. **3**

**GPS ANTENNA MOUNTING DETAIL** SCALE: N.T.S. **6**



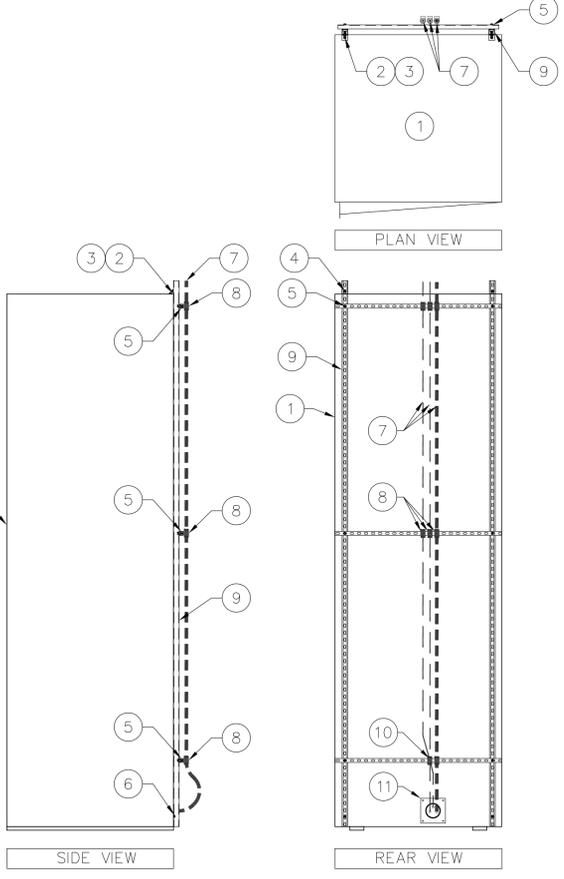
**ZTE CABINET WIRING KEYED NOTES: (#)**  
1. #2 AWG STRANDED GROUND WIRE TO CABINET BUSS BAR  
2. #2 AWG SOLID TINNED GROUND RING TAIL  
3. SINGLE HOLE GROUND TERMINATION- USE STAR WASHERS  
4. AC CONNECTION  
5. 3 X #8 AWG CABLES INSTALLED INSIDE A 1" L/T FLEX CONDUIT FROM A 40 AMP BREAKER/ AC PANEL

**ALL INSTALLS**  
AC WIRE FROM BREAKER PANEL TO ZTE CABINET IN 1 INCH LT FLEX CONDUIT



**COAX SUPPORT AT EQUIPMENT CABINET KEYED NOTES: (#)**

1. ZTE CABINET  
2. 3/8"Øx16 TPI ALL W/ NUT & WASHERS THROUGH CABINET TOP  
3. UNISTRUT P1068 L BRACKET  
4. 3/8"Øx16 TPI ALL THREAD W/ WASHERS & BOLTS UNISTRUT P3300T 24" LONG MIN. W/ CHANNEL NUT, BOLT & SPRING ATTACHED TO VERTICAL UNISTRUT (TYP.)  
5. 3/8"Øx16 TPI ALL W/ NUT & WASHERS THROUGH PREDRILLED HOLES IN CABINET BASE FRAME  
6. FIBER / JUMPER / COAXIAL CABLE  
7. UNIVERSAL SNAP IN HANGER WITH RUBBER CABLE GROMMET (TYP.)  
8. VERTICAL UNISTRUT P1068L (TYP.)  
9. UNIVERSAL DOUBLE SNAP IN HANGER WITH RUBBER CABLE GROMMET  
10. SINGLE ENTRY PORT WITH ENTRY PORT BOOT



**CABINET ELEVATION** SCALE: N.T.S. **2**

**ZTE CABINET WIRING** SCALE: N.T.S. **4**

**COAX SUPPORT AT EQUIPMENT CABINET** SCALE: N.T.S. **7**



1317 E. THUNDERHILL PLACE  
PHOENIX, AZ 85048  
PHONE: (480) 213-8524

DESIGNER: JN  
LEAD EE: SB  
LEAD CE/SE: SAM

PE SEAL

**SUBMITTALS**

| REV. | DATE    | DESCRIPTION          | BY |
|------|---------|----------------------|----|
| B    | 8/2/16  | REVISED SPD          | JN |
| C    | 8/12/16 | REVISED PER COMMENTS | JN |
| D    | 10/5/16 | REVISED PER COMMENTS | JN |
| E    | 10/5/16 | REVISED PER COMMENTS | JN |
| F    | 10/7/16 | REVISED PER COMMENTS | JN |

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PLOT DATE: 10/7/16

SITE NAME  
CUBA DOWNTOWN

PROJECT  
NEW BUILD

SITE ADDRESS  
LAT: 36° 1' 20.51" N  
LONG: 116° 58' 36.2" W  
SECTION 29, TOWNSHIP 21 NORTH,  
RANGE 1 WEST  
N.M.P.M., NEW MEXICO

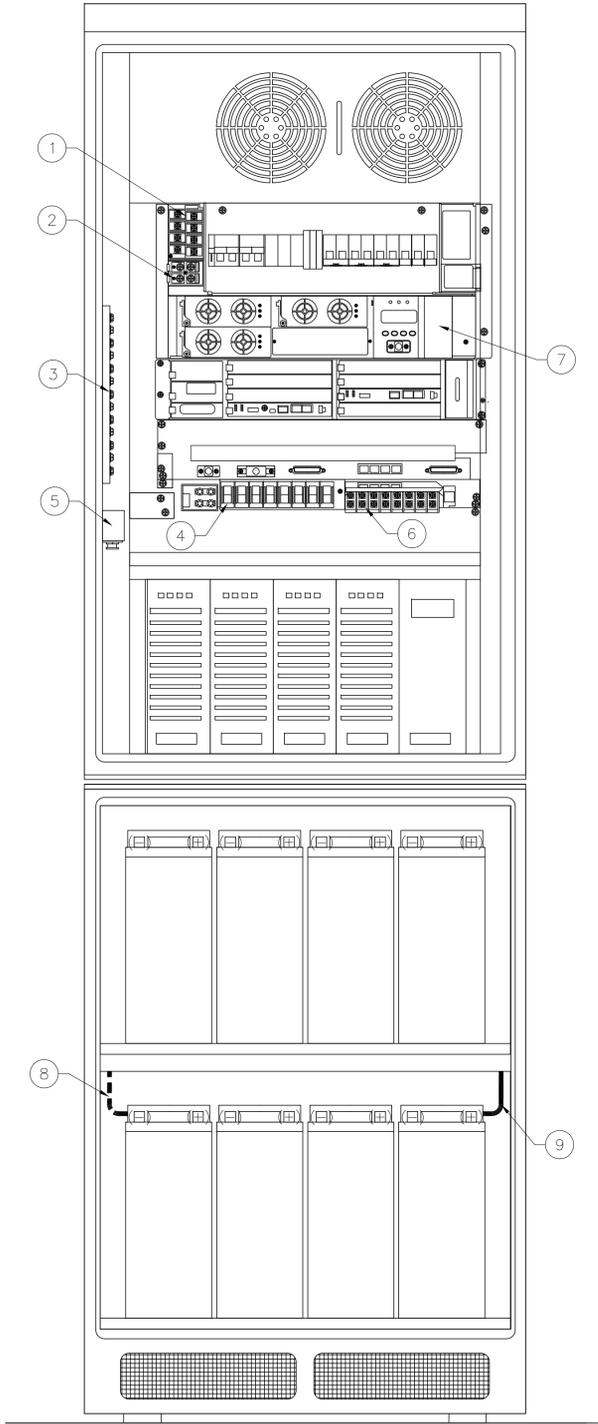
SHEET TITLE  
ZT CABINET & DETAILS

SHEET NUMBER  
A-5

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**ZTE BATTERY HOOKUPS KEYED NOTES: #**

1. AC CIRCUIT FROM BREAKER PANEL
2. BATTERY CONNECTIONS FROM BATTERY STRING – SEE 2/A-6
3. GROUND BAR
4. RRU BREAKERS
5. GPS CONNECTION
6. RRU CONNECTION SEE 4/A-6
7. ALARM CONNECTION
8. BLUE WIRE GOING TO THE -48 VOLT
9. BLACK WIRE GOING TO THE -48 VOLT RETURN

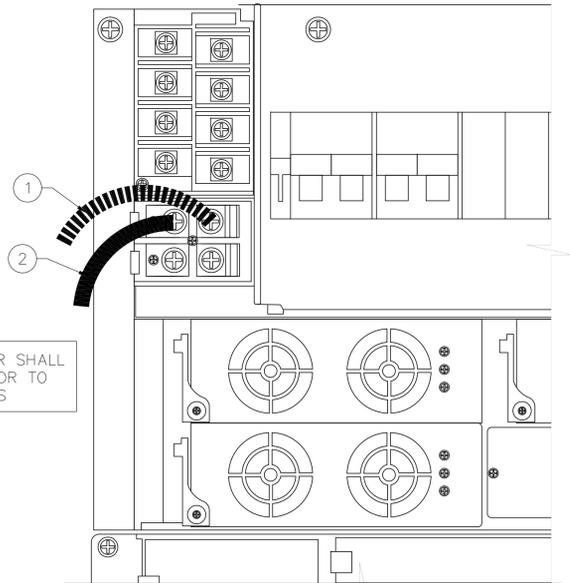


**ZTE CABINET CONNECTIONS & BATT. HOOKUPS**

SCALE: N.T.S. **1**

**ZTE BATTERY HOOKUPS KEYED NOTES: #**

1. BLUE WIRE FROM (-) SIDE OF BATTERY
2. BLACK WIRE FROM (+) SIDE OF BATTERY



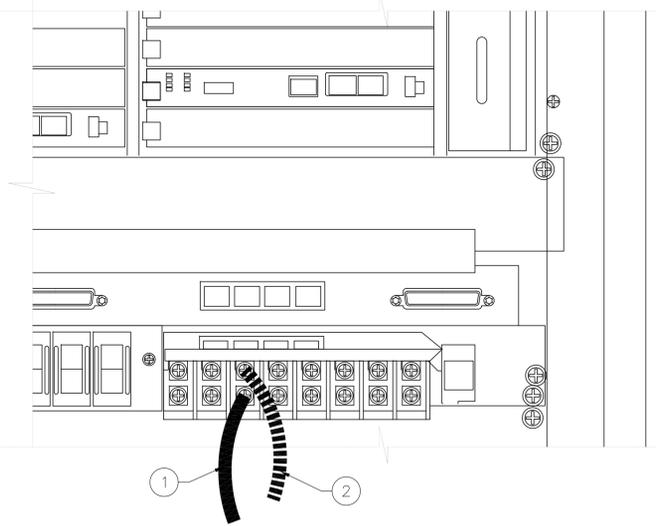
NOTE – CONTRACTOR SHALL VERIFY VOLTAGE PRIOR TO MAKING CONNECTIONS

**ZTE BATTERY HOOKUPS**

SCALE: N.T.S. **2**

**ZTE\_CDP4\_CONNECTION KEYED NOTES: #**

1. BLACK WIRE -48V RETURN GOING UP TOWER TO FTTA BOX AND LANDED ON BLACK BLOCK IN FTTA BOX
2. RED WIRE -48V GOING UP TOWER TO FTTA BOX AND LANDED ON RED BLOCK IN FTTA BOX

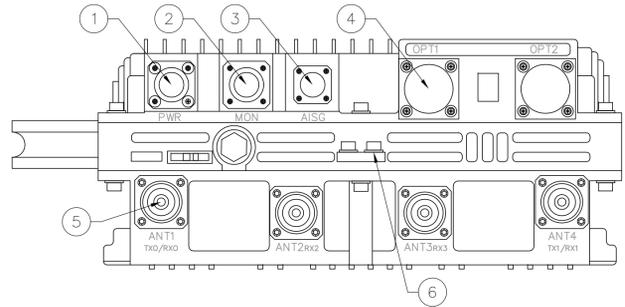


**ZTE DCPD4 CONNECTIONS**

SCALE: N.T.S. **3**

**RRU\_JUMPER & FIBER CONNECTION KEYED NOTES: #**

1. POWER WIRE WITH GROUND TO FTTA BOX (TOWER MOUNTED) OR TO DCPD4 (BASE MOUNTED)
2. EXTERNAL ALARMS (IF REQUIRED)
3. RET CONNECTIONS
4. FIBER CONNECTION FROM FTTA BOX (TOWER MOUNTED) OR INSIDE OF ZTE CABINET (BASE MOUNTED)
5. JUMPER CONNECTION – SEE SDP
6. #2 GROUND WIRE TO EITHER TOWER TOP BUSS BAR (IF TOWER MOUNTED) OR BASE MOUNTED BUSS BAR (IF BASE MOUNTED)



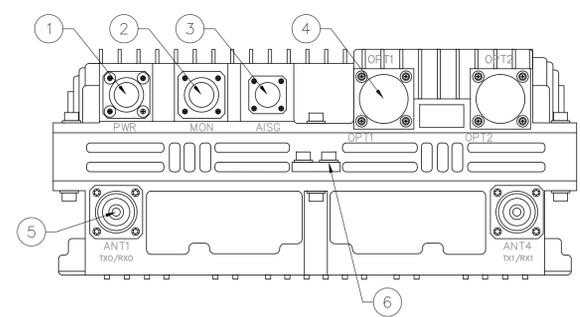
BOTTOM VIEW OF CDMA/GU REMOTE RADIO UNIT (RRU)

**RRU JUMPER & FIBER CONNECTIONS**

SCALE: N.T.S. **4**

**RRU\_JUMPER & FIBER CONNECTION KEYED NOTES: #**

1. POWER WIRE WITH GROUND TO FTTA BOX (TOWER MOUNTED) OR TO DCPD4 (BASE MOUNTED)
2. EXTERNAL ALARMS (IF REQUIRED)
3. RET CONNECTIONS
4. FIBER CONNECTION FROM FTTA BOX (TOWER MOUNTED) OR INSIDE OF ZTE CABINET (BASE MOUNTED)
5. JUMPER CONNECTION – SEE SDP
6. #2 GROUND WIRE TO EITHER TOWER TOP BUSS BAR (IF TOWER MOUNTED) OR BASE MOUNTED BUSS BAR (IF BASE MOUNTED)



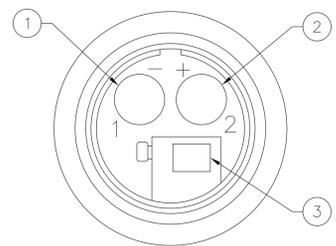
BOTTOM VIEW OF LTE REMOTE RADIO UNIT (RRU)

**RRU JUMPER & FIBER CONNECTIONS**

SCALE: N.T.S. **5**

**R8882\_RRU\_POWER\_CONNECTOR KEYED NOTES: #**

1. BLUE WIRE FROM THE FTTA BOX ON RED BLOCK TO HERE
2. BLACK WIRE FROM FTTA BOX ON BLACK BLOCK TO HERE
3. GROUND WIRE



**R8882 RRU POWER CONNECTOR**

SCALE: N.T.S. **6**



1317 E. THUNDERHILL PLACE  
PHOENIX, AZ 85048  
PHONE: (480) 213-8524

PE SEAL

|             |     |
|-------------|-----|
| DESIGNER:   | JN  |
| LEAD EE:    | SB  |
| LEAD CE/SE: | SAM |

| SUBMITTALS |         |                      |    |
|------------|---------|----------------------|----|
| REV.       | DATE    | DESCRIPTION          | BY |
| B          | 8/2/16  | REVISED SPD          | JN |
| C          | 8/12/16 | REVISED PER COMMENTS | JN |
| D          | 10/5/16 | REVISED PER COMMENTS | JN |
| E          | 10/5/16 | REVISED PER COMMENTS | JN |
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PLOT DATE: 10/7/16

SITE NAME  
CUBA DOWNTOWN

PROJECT  
NEW BUILD

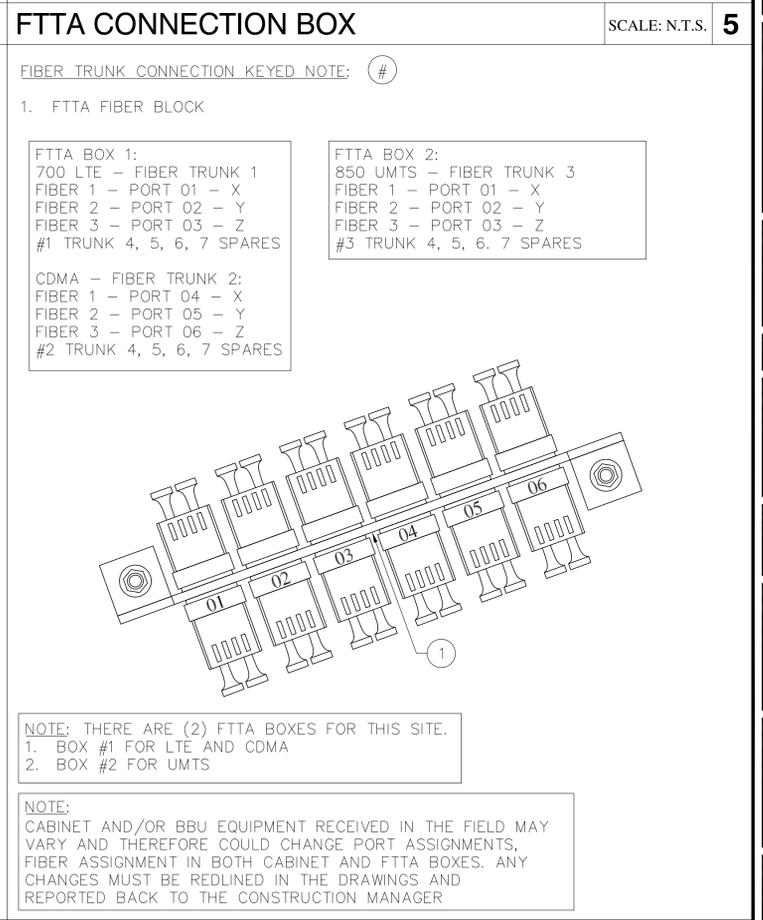
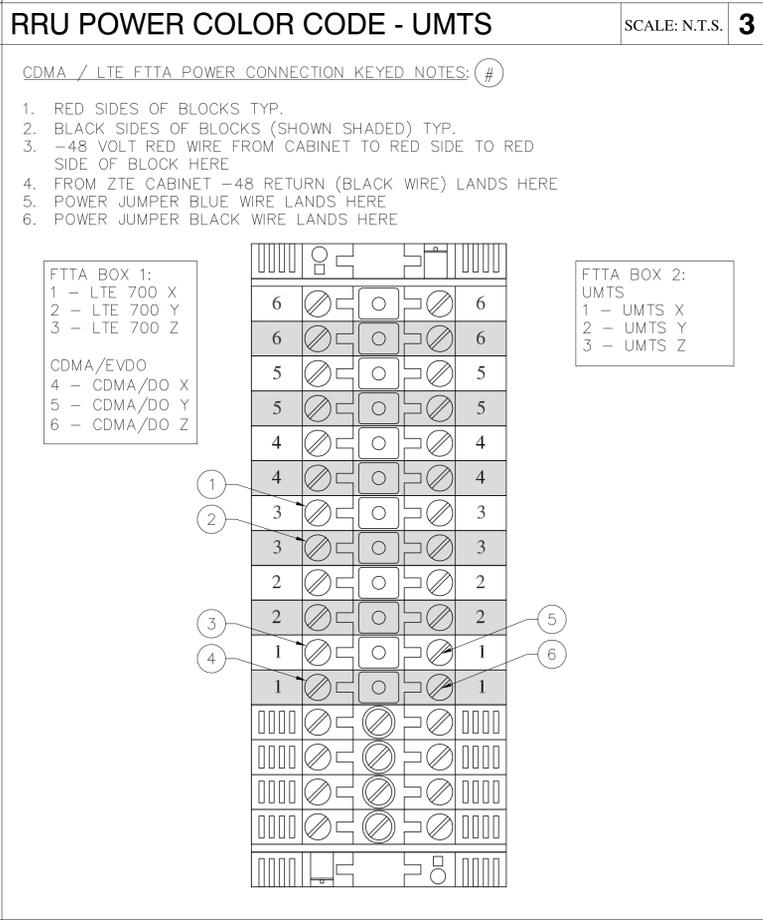
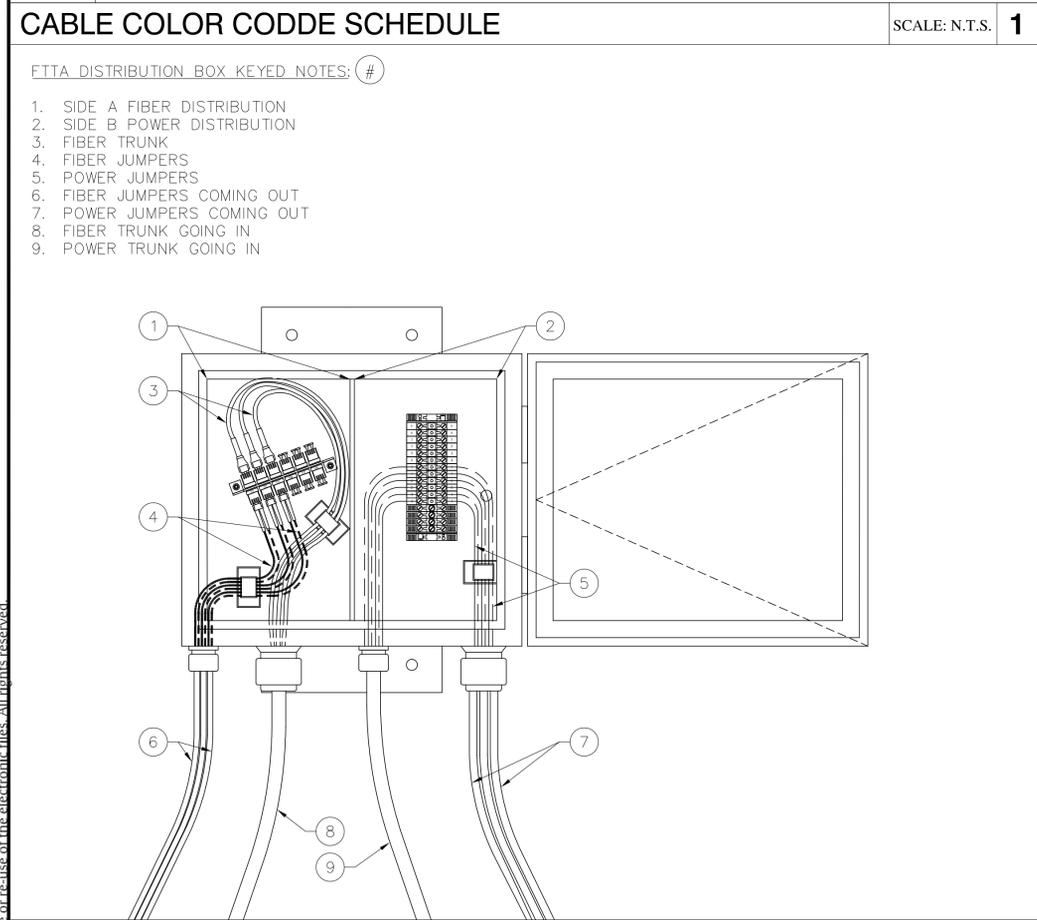
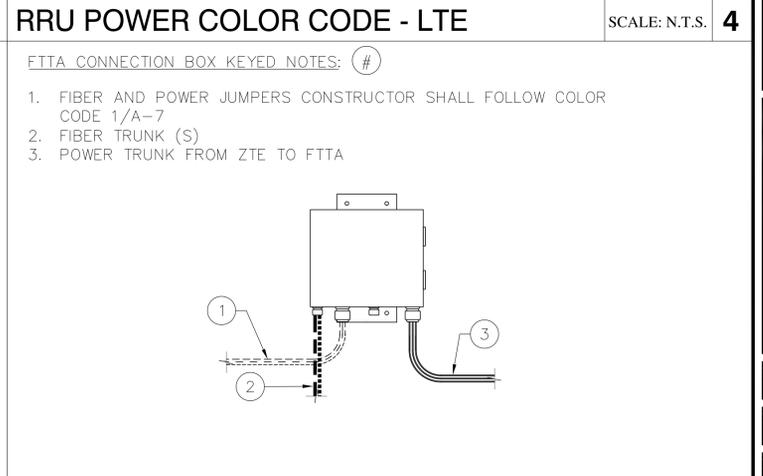
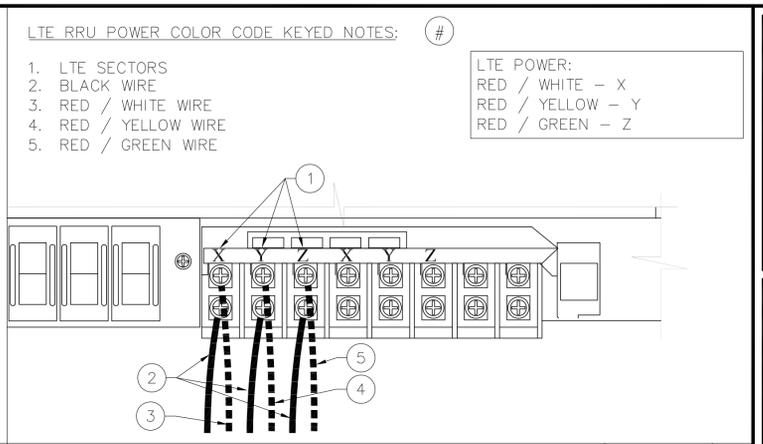
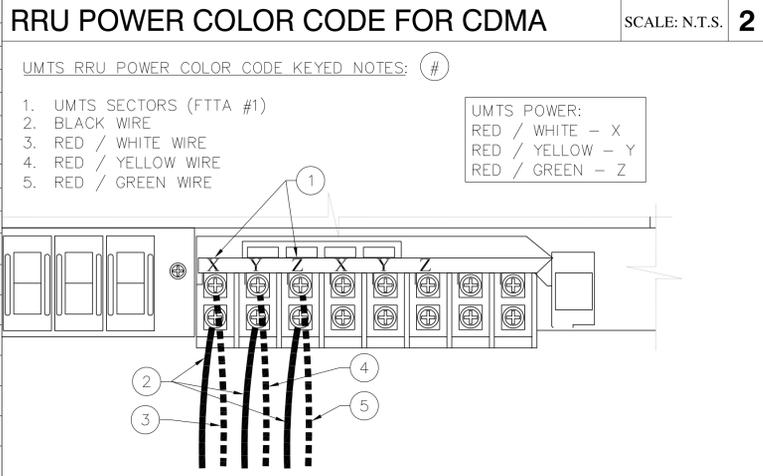
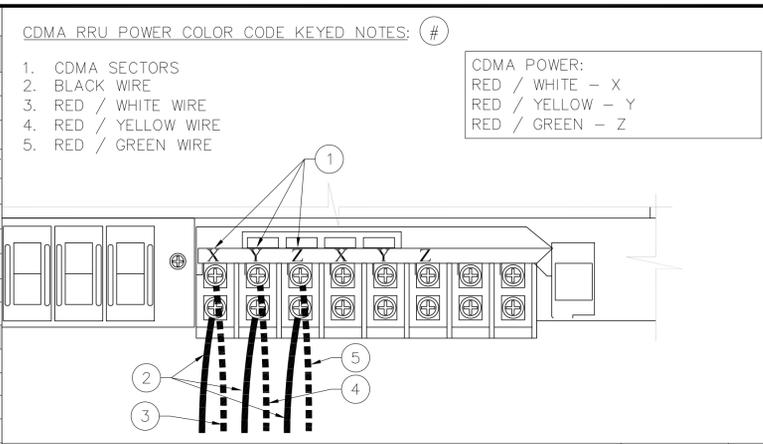
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N.M.P.M., NEW MEXICO

SHEET TITLE  
ZTE CABINET & RRU  
CONNECTION DETAILS

SHEET NUMBER  
A-6

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| CABLE COLOR CODE SCHEDULE                                   |   |                      |  |   |
|---|---|----------------------|--|---|
| TECHNOLOGY  | CABLE TYPE  | TAPE COLOR           | COMMENTS   | RRU P/N CODE (LOCATED ON RRU TAG)                         |
| LTE   | POWER TRUNK   | 1 ORANGE WRAP        | ADDITIONAL POWER OR FIBER TRUNKS FOR LTE, ADD 1 ADDITIONAL WRAP      | 12955731012 ZXSDR R88 S8500 (B6B) 850 CDMA&LTE DUAL MODE  |
| LTE   | FIBER TRUNK   | 1 ORANGE WRAP        | ADDITIONAL POWER OR FIBER TRUNKS FOR LTE, ADD 1 ADDITIONAL WRAP      | 12955731009 ZXSDR R88 S8500 (B6A) 850 STANDARD CDMA ONLY  |
| GSM/UMTS  | POWER TRUNK   | 1 YELLOW WRAP        | ADDITIONAL POWER OR FIBER TRUNKS FOR GSM/UMTS, ADD 1 ADDITIONAL WRAP | 12955731011 ZXSDR R88 S1900 (B6B) 1900 CDMA&LTE DUAL MODE |
| GSM/UMTS  | FIBER TRUNK   | 1 YELLOW WRAP        | ADDITIONAL POWER OR FIBER TRUNKS FOR GSM/UMTS, ADD 1 ADDITIONAL WRAP | 12955731010 ZXSDR R88 S8500 (B6B) 1900 STANDARD CDMA ONLY |
| CDMA  | POWER TRUNK   | 1 GREEN WRAP         | ADDITIONAL POWER OR FIBER TRUNKS FOR CDMA, ADD 1 ADDITIONAL WRAP     | 12955731037 850 CDMA R8882 NEW SINGLE MODE                |
| CDMA  | FIBER TRUNK   | 1 GREEN WRAP         | ADDITIONAL POWER OR FIBER TRUNKS FOR CDMA, ADD 1 ADDITIONAL WRAP     | 12955731035 1900 CDMA R8882 NEW SINGLE MODE               |
| UMTS  | POWER TRUNK   | 1 PURPLE WRAP        | ADDITIONAL POWER OR FIBER TRUNKS FOR UMTS, ADD 1 ADDITIONAL WRAP     | 12955731023 ZXSDR R8882 S8500(B6B) - 850 GSM/UMTS         |
| UMTS  | FIBER TRUNK   | 1 PURPLE WRAP        | ADDITIONAL POWER OR FIBER TRUNKS FOR UMTS, ADD 1 ADDITIONAL WRAP     | 12955731024 ZXSDR R8882 S1900(B6B) - 1900 GSM/UMTS        |
| DO  | POWER TRUNK   | 1 WHITE WRAP         | ADDITIONAL POWER OR FIBER TRUNKS FOR DO, ADD 1 ADDITIONAL WRAP       |   |
| DO  | FIBER TRUNK   | 1 WHITE WRAP         | ADDITIONAL POWER OR FIBER TRUNKS FOR DO, ADD 1 ADDITIONAL WRAP       |   |
| TECHNOLOGY  | CABLE TYPE  | TAPE COLOR           | COMMENTS   |   |
| LTE   | POWER TRUNK   | 1 ORANGE+FREQ+SECTOR |  |   |
| LTE   | FIBER TRUNK   | 1 ORANGE+FREQ+SECTOR |  |   |
| GSM/UMTS  | POWER TRUNK   | 1 YELLOW+FREQ+SECTOR |  |   |
| GSM/UMTS  | FIBER TRUNK   | 1 YELLOW+FREQ+SECTOR |  |   |
| CDMA  | POWER TRUNK   | 1 GREEN+FREQ+SECTOR  |  |   |
| CDMA  | FIBER TRUNK   | 1 GREEN+FREQ+SECTOR  |  |   |
| UMTS  | POWER TRUNK   | 1 PURPLE+FREQ+SECTOR |  |   |
| UMTS  | FIBER TRUNK   | 1 PURPLE+FREQ+SECTOR |  |   |
| DO  | POWER TRUNK   | 1 WHITE+FREQ+SECTOR  |  |   |
| DO  | FIBER TRUNK   | 1 WHITE+FREQ+SECTOR  |  |   |
| FREQUENCY   | COLOR   |                      |  |   |
| 700   | BLACK/BLANK   |                      |  |   |
| 850   | GREY  |                      |  |   |
| 1900  | BROWN   |                      |  |   |
| SECTOR  | CABLE TYPE  | COLOR                |  |   |
| X   | COAX JUMPER   | RED                  |  |   |
| Y   | COAX JUMPER   | WHITE                |  |   |
| Z   | COAX JUMPER   | BLUE                 |  |   |
| EXAMPLE   | COLOR CODE FOR LTE FOR 700MHz - 1 ORANGE WRAP, 1 BLACK OR LEAVE BLANK (CABLE COLOR IS ALREADY BLACK) ON POWER / FIBER TRUNK |                      |  |   |
| COLOR CODE FOR GSM/UMTS FOR 850 MHz - 1 YELLOW WRAP, 1 GREY |   |                      |  |   |



FTFA DISTRIBUTION BOX CONNECTION DETAIL SCALE: N.T.S. 6

CDMA / LTE FTFA POWER CONNECTION SCALE: N.T.S. 7

FIBER TRUNK CONNECTION SCALE: N.T.S. 8



**Commnet**  
Connecting Rural America



**Abn ENGINEERING**

1317 E. THUNDERHILL PLACE  
PHOENIX, AZ 85048  
PHONE: (480) 213-8524

---

PE SEAL

---

DESIGNER: JN

LEAD EE: SB

LEAD CE/SE: SAM

---

SUBMITTALS

| REV. | DATE    | DESCRIPTION          | BY |
|------|---------|----------------------|----|
| B    | 8/2/16  | REVISED SPD          | JN |
| C    | 8/12/16 | REVISED PER COMMENTS | JN |
| D    | 10/5/16 | REVISED PER COMMENTS | JN |
| E    | 10/5/16 | REVISED PER COMMENTS | JN |
| F    | 10/7/16 | REVISED PER COMMENTS | JN |

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---

PLOT DATE: 10/7/16

---

SITE NAME  
CUBA DOWNTOWN

---

PROJECT  
NEW BUILD

---

SITE ADDRESS  
LAT: 36° 1' 20.51" N  
LONG: 116° 58' 36.2" W  
SECTION 29, TOWNSHIP 21 NORTH,  
RANGE 1 WEST  
N.M.P.M., NEW MEXICO

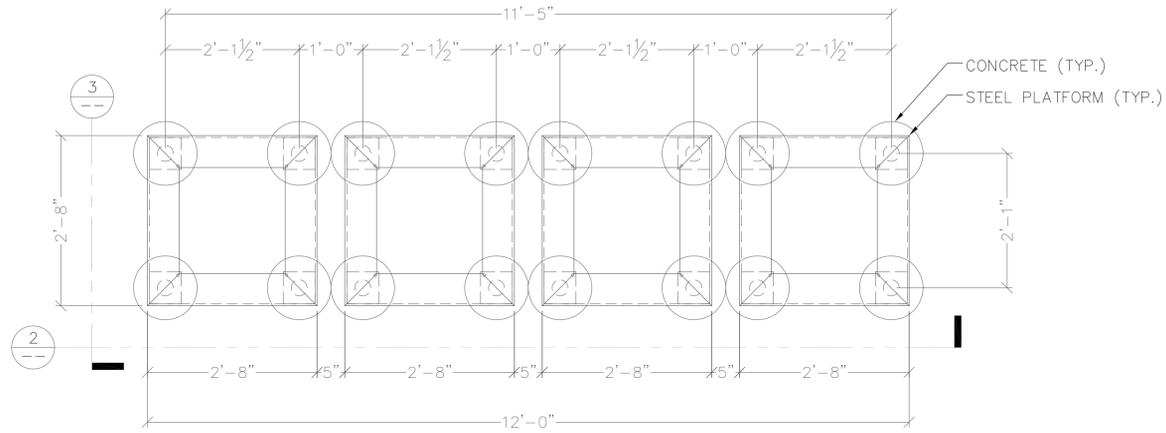
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SHEET TITLE  
CONSTRUCTION DETAILS

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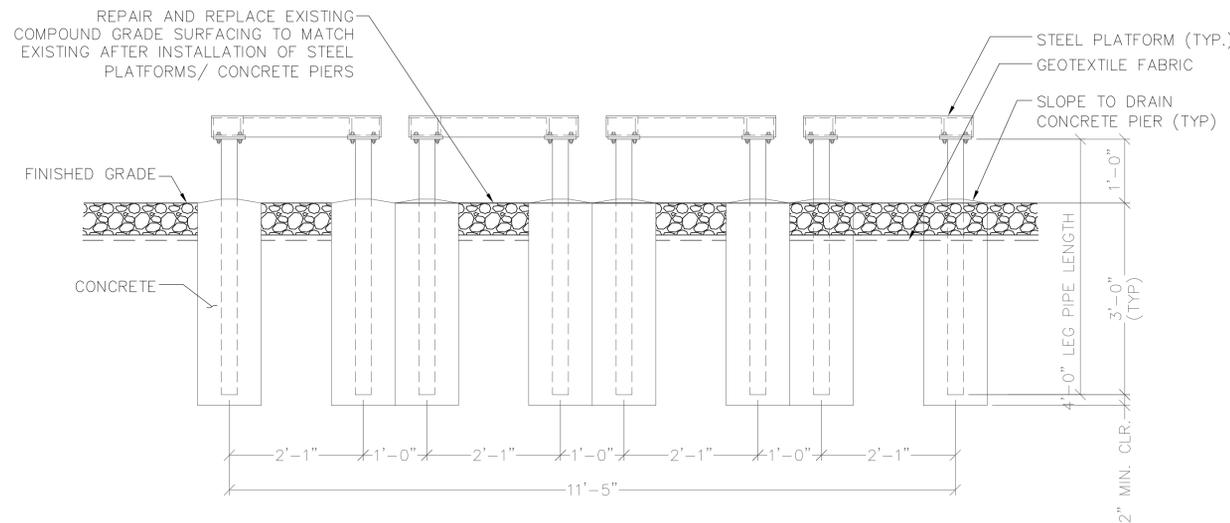
SHEET NUMBER  
A-7

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**PLATFORM PLAN**

SCALE: N.T.S. **1**



**FRONT ELEVATION**

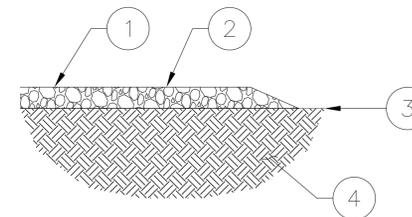
SCALE: N.T.S. **2**

**CHAIN LINK FENCE DETAILS**

SCALE: N.T.S. **4**

GRAVEL KEYED NOTES: #

1. 3" OF ¾" MINUS BASE GRAVEL, SLOPE AWAY FROM THE SITE
2. FINISHED GRADE LEVEL
3. NATURAL SUB-GRADE
4. NATURAL SOIL



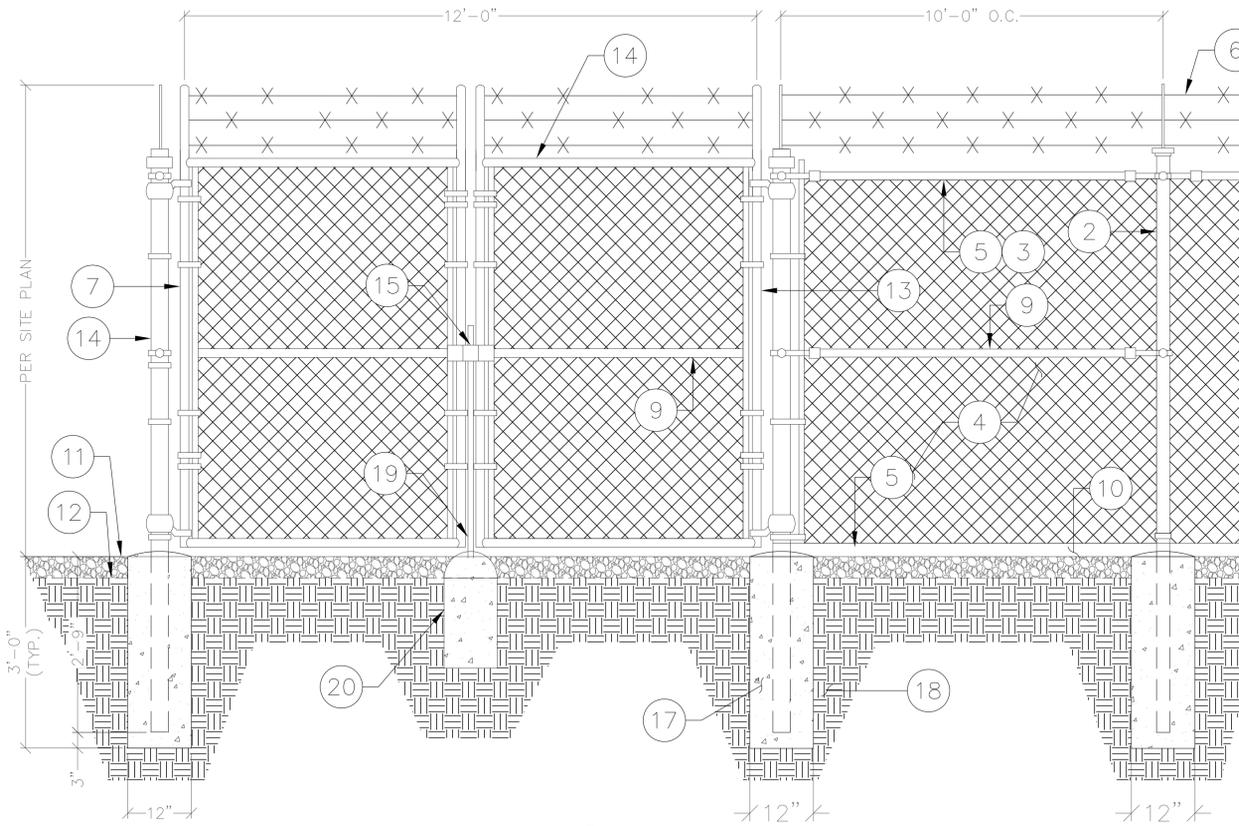
**NOTE:**  
CONTRACTOR SHALL STRIP SUPERFICIAL, SOFT, WET, ORGANIC OR DELETERIOUS SOILS TO EXPOSE FIRM AND UNYIELDING SOIL. IF STRIPPING IS REQUIRED DEEPER THAN 6", CONTRACTOR SHALL CONTACT THE SITE CONSTRUCTION MANAGER TO DETERMINE THE APPROPRIATE STRIPPING DEPTH AT THE TIME OF CONSTRUCTION.

**END ELEVATION**

SCALE: N.T.S. **3**

**SITE GRAVEL DETAILS**

SCALE: N.T.S. **5**



TYPICAL DOUBLE CHAIN LINK FENCE ACCESS GATE KEYED NOTES: #

1. 3" NOMINAL CORNER POST SCHEDULE 40 PIPE.
2. LINE POST: 2½" SCHEDULE 40 PIPE, PER ASTM-F1083 SPACED AT MAXIMUM 10'-0" O.C.
3. TOP RAIL & BRACE RAIL: 1½" (1.875" O.D) PIPE, 2.72 LBS/LIN PER PER ASTM-F1083.
4. FABRIC: 9 GA. CORE WIRE SIZE 2" MESH, CONFORMING TO ASTM-A392.
5. TENSION WIRE: 9 GA. GALVANIZED STEEL.
6. BARBED WIRE: DOUBLE STRAND 12½" O.D. TWISTED WIRE TO MATCH WITH FABRIC 14 GA., 4 PT. BARBS SPACED ON APPROXIMATELY 5" ON CENTER.
7. STRETCHER BAR.
8. ⅜" DIAGONAL ROD WITH GALVANIZED STEEL.
9. POST BRACE: 1½" DIA. AT CORNERS AND GATES.
10. 2" MAXIMUM CLEARANCE FROM GRADE.
11. FINISHED GRADE SHALL BE UNIFORM AND LEVEL.
12. SUB-GRADE.
13. GATE POST 3". SCHEDULE 40 PIPE, FOR GATE WIDTHS UP TO 8 FEET USE SINGLE SWING GATE PER ASTM-F1083.
14. GATE FRAME: 1½" PIPE, PER ASTM-F1083.
15. TYP. GATE LATCH VERIFY IN FIELD.
16. NOT USED.
17. POST CONCRETE FOUNDATION (2500 PSI)
18. NATURAL SOIL
19. GATE LATCH: 1½" O.D. PLUNGER ROD W/MUSHROOM TYPE CATCH AND LOCK, KEYED ALIKE FOR ALL SITES IN A GIVEN MTA.
20. CONCRETE MUSHROOM



1317 E. THUNDERHILL PLACE  
PHOENIX, AZ 85048  
PHONE: (480) 213-8524

PE SEAL

DESIGNER: JN

LEAD EE: SB

LEAD CE/SE: SAM

**SUBMITTALS**

| REV. | DATE    | DESCRIPTION          | BY |
|------|---------|----------------------|----|
| B    | 8/2/16  | REVISED SPD          | JN |
| C    | 8/12/16 | REVISED PER COMMENTS | JN |
| D    | 10/5/16 | REVISED PER COMMENTS | JN |
| E    | 10/5/16 | REVISED PER COMMENTS | JN |
| F    | 10/7/16 | REVISED PER COMMENTS | JN |

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PLOT DATE: 10/7/16

SITE NAME

CUBA DOWNTOWN

PROJECT

NEW BUILD

SITE ADDRESS:  
LAT: 36° 1' 20.51" N  
LONG: 116° 58' 36.2" W  
SECTION 29, TOWNSHIP 21 NORTH,  
RANGE 1 WEST  
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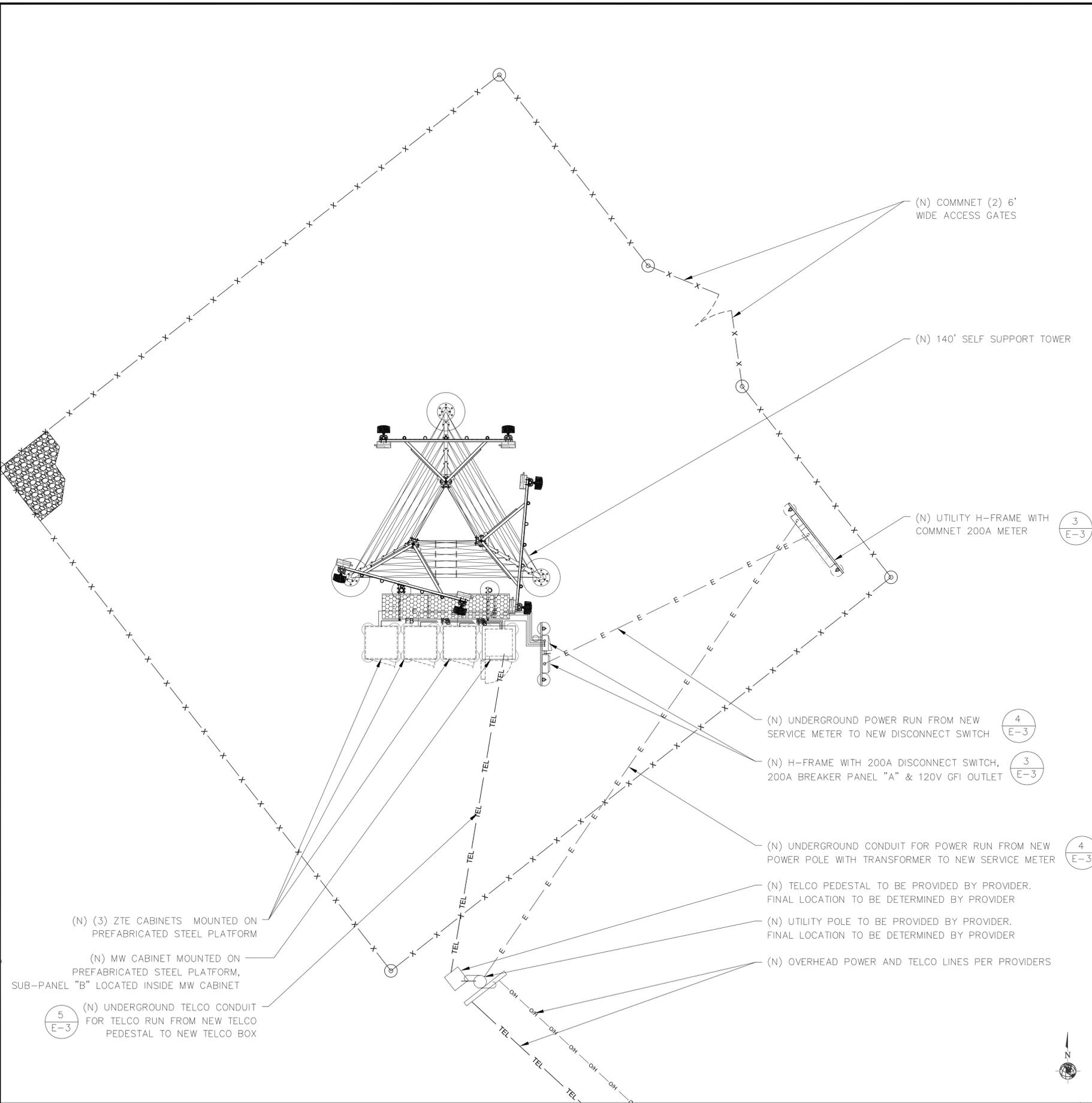
SHEET TITLE

STEEL PLATFORM &  
FENCE DETAILS

SHEET NUMBER

S-1

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**ELECTRICAL GENERAL NOTES:**

1. SUBMITTAL OF BID INDICATES CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED UNDER THIS CONTRACT. CONTRACTOR IS RESPONSIBLE FOR ALL FIELD VERIFICATION.
2. THESE PLANS ARE DIAGRAMMATIC ONLY, AND ARE NOT TO BE SCALED.
3. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, INSURANCE, EQUIPMENT, INSTALLATION, CONSTRUCTION TOOLS, TRANSPORTATION, ETC. AS REQUIRED FOR A COMPLETE AND PROPERLY OPERABLE SYSTEM ENERGIZED THROUGHOUT AND AS INDICATED ON DRAWINGS, AS SPECIFIED HEREIN AND/OR AS OTHERWISE REQUIRED.
4. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN PERFECT CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT. MATERIALS SHALL BE LISTED AND APPROVED BY UNDERWRITER'S LABORATORY (UL) AND SHALL BEAR THE INSPECTION LABEL "J" WHERE SUBJECT TO SUCH APPROVAL. MATERIALS SHALL MEET WITH APPROVAL OF THE DIVISION OF INDUSTRIAL SAFETY AND ALL GOVERNING BODIES HAVING JURISDICTION (AHJ). MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA, AND NBFU. ALL CONDUIT INSTALLED SHALL BE SURFACE MOUNTED UNLESS OTHERWISE NOTED.
5. ELECTRICAL CONTRACTOR SHALL CARRY OUT HIS WORK IN ACCORDANCE WITH ALL GOVERNING STATE, COUNTY, LOCAL CODES AND O.S.H.A.
6. ELECTRICAL CONTRACTOR SHALL SECURE ALL NECESSARY ELECTRICAL PERMITS, AND PAY ALL REQUIRED FEES.
7. COMPLETE JOB SHALL BE GUARANTEED FOR A PERIOD OF NO LESS THAN ONE YEAR AFTER THE DATE OF JOB COMPLETION. DATE OF COMPLETION SHALL BE THE DATE ON THE CONTRACTOR'S "NOTICE OF COMPLETION" SUBMITTED TO THE OWNER. ANY WORK, MATERIAL, OR EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE ELECTRICAL CONTRACTOR.
8. ALL CONDUIT ONLY (C.O.) SHALL HAVE A PULL WIRE OR ROPE, AND TRUE TAPE.
9. ELECTRICAL CONTRACTOR SHALL PROVIDE THE OWNER WITH ONE SET OF COMPLETE ELECTRICAL "AS BUILT" DRAWINGS, SHOWING ACTUAL DIMENSIONS AND CIRCUITS, WITHIN 10 WORKING DAYS OF PROJECT COMPLETION.
10. ALL BROCHURES, OPERATING MANUALS, CATALOGS, SHOP DRAWINGS, ETC. SHALL BE TURNED OVER TO PROJECT MANAGER AT JOB COMPLETION.
11. USE T-TAP CONNECTIONS ON ALL MULTI-CIRCUITS WITH COMMON NEUTRAL CONDUCTOR FOR LIGHTING FIXTURE. ALL CONDUCTORS SHALL BE COPPER.
12. THE EXTERIOR GROUND RING SHALL BE TESTED PER COMMNET WIRELESS SPECIFICATIONS USING A 3-POINT FALL OF POTENTIAL TEST. IF THE GROUNDING SYSTEM RESISTANCE TO EARTH IS GREATER THAN 5 OHMS, THE ELECTRICAL CONTRACTOR SHALL NOTIFY THE RESPONSIBLE ENGINEER.
13. ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE AN AMP INTERRUPT RATING (AIC) NOT LESS THAN THE MAXIMUM SHORT CIRCUIT CURRENT TO WHICH THEY MAY BE SUBJECTED, AND A MINIMUM OF 10,000 A.I.C.
14. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED AS REQUIRED BY ALL APPLICABLE CODES.
15. PATCH, REPAIR AND PAINT ANY AREA THAT HAS BEEN DAMAGED IN THE COURSE OF THE ELECTRICAL WORK.
16. IN DRILLING HOLES INTO CONCRETE (WHETHER FOR FASTENING OR ANCHORING PURPOSES OR PENETRATIONS THROUGH THE FLOOR FOR CONDUIT RUNS, PIPE RUNS, ETC.) IT MUST BE CLEARLY UNDERSTOOD THAT TENDONS AND REBARS WILL NOT BE DRILLED INTO, CUT, OR DAMAGED UNDER ANY CIRCUMSTANCES.
17. LOCATION OF TENDONS AND REBARS ARE NOT DEFINITELY KNOWN AND THEREFORE MUST BE SEARCHED FOR BY APPROPRIATE METHODS AND EQUIPMENT VIA X-RAY, OR OTHER DEVICES THAT CAN ACCURATELY LOCATE THE REINFORCING STEEL TENDONS.
18. PENETRATIONS IN FIRE RATED WALLS SHALL BE FIRE STOPPED IN ACCORDANCE WITH APPLICABLE LOCAL BUILDING CODES, USING U.L. RATED MATERIALS.
19. ELECTRICAL CONTRACTOR IS TO COORDINATE WITH UTILITY COMPANY FOR CONNECTION OF TEMPORARY AND PERMANENT POWER TO THE SITE. THE TEMPORARY POWER AND ALL HOOK-UP COSTS SHALL BE PAID BY THE CONTRACTOR.
20. ELECTRICAL CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND/OR CATALOG CUT-SHEETS ON ALL NON-SPECIFIED ORIGINAL MATERIALS AND EQUIPMENT, TO PROJECT MANAGER PRIOR TO COMMENCEMENT OF THE WORK.
21. ALL GROUNDING SYSTEM LEADS SHALL BE TESTED FOR CONTINUITY WITH THE GROUND LOOP CONDUCTOR. ALL FAULTY CONNECTIONS OR CONDUCTORS SHALL BE REPAIRED OR REPLACED AS REQUIRED.
22. CLEAN PREMISES DAILY OF ALL DEBRIS RESULTING FROM WORK AND LEAVE WORK PREMISES IN A COMPLETE AND UNDAMAGED CONDITION.
23. ALL EXTERIOR WALL PENETRATIONS SHALL BE SEALED WITH POLYSEAM SEALANT.
24. ALL #2 TINNED BARE COPPER DOWNLEADS TO BE PROTECTED BY 1/2" P.V.C. PIPE AND SECURED.
25. COMPRESSION FITTINGS TO BE USED ON ALL CONDUITS (NO SETSCREWS).
26. ALL #6 STRANDED COPPER WITH GREEN INSULATION TO BE ATTACHED WITH CRIMPED DOUBLE LUG, ATTACHED WITH NUTS, BOLTS AND STAR WASHERS TYPICAL AND NO-OX GREASE BETWEEN LUG AND BUSS BAR.
27. ALL ABOVE GROUND CONDUIT SHALL BE SCHEDULE 80 PVC WITH UV PROTECTION OR GRC.



1317 E. THUNDERHILL PLACE  
PHOENIX, AZ 85048  
PHONE: (480) 213-8524

PE SEAL

DESIGNER: JN

LEAD EE: SB

LEAD CE/SE: SAM

| SUBMITTALS |         |                      |    |
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PROJECT  
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N.M.P.M., NEW MEXICO

SHEET TITLE  
OVERALL ELECTRICAL  
PLAN & ELECTRICAL  
NOTES

SHEET NUMBER  
E-1

**OVERALL ELECTRICAL PLAN**

22"x34" SCALE: 1/4" = 1'-0"  
11"x17" SCALE: 1/8" = 1'-0"  
4' 3' 2' 1' 0' 4'

**1 ELECTRICAL NOTES** SCALE: NTS **2**

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| PANEL SCHEDULE "A"       |      |              |      |   |              |   |               |           |      |                 |       |               |     |        |   |              |      |      |     |                 |    |  |  |
|--------------------------|------|--------------|------|---|--------------|---|---------------|-----------|------|-----------------|-------|---------------|-----|--------|---|--------------|------|------|-----|-----------------|----|--|--|
| VOLTAGE: 240 / 120 VOLTS |      |              |      |   |              | BUSS RATING (AMPS): 200                             |               |           |      |                 |       | REMARKS:      |     |        |   |              |      |      |     |                 |    |  |  |
| MOUNTING: SURFACE        |      |              |      |   |              | PHASE: 1 MAIN LUGS ONLY                             |               |           |      |                 |       |               |     |        |   |              |      |      |     |                 |    |  |  |
| ENCLOSURE: NEMA 3R       |      |              |      |   |              | WIRE: 3 SHORT CIRCUIT RATING: 22,000 AMPS (RMS-SYM) |               |           |      |                 |       |               |     |        |   |              |      |      |     |                 |    |  |  |
| CIRCUIT BREAKER          |      | CIRCUIT NAME |      |   |              | FEEDER  |               | CKT. LOAD |      | LOAD/PHASE (VA) |       | CKT. LOAD     |     | FEEDER |   | CIRCUIT NAME |      |      |     | CIRCUIT BREAKER |    |  |  |
| No.                      | AMPS | POLE         | MOD. | C | WIRE         | GRD   | DEMAND FACTOR | WATTS     | ØA   | ØB              | WATTS | DEMAND FACTOR | GRD | WIRE   | C | MOD.         | POLE | AMPS | No. |                 |    |  |  |
| 1                        | 40   | 2            | -    |   | CDMA CABINET | 1"  | #8            | #8        | 1.00 | 3,720           | 3,900 |               |     |        |   |              |      |      | 20  | 2               |    |  |  |
| 3                        | -    | -            | -    |   | -            | -   | #8            | -         | 1.00 | 3,720           |       |               |     |        |   |              |      |      |     |                 | 4  |  |  |
| 5                        | 40   | 2            | -    |   | LTE CABINET  | 1"  | #8            | #8        | 1.00 | 3,720           | 3,720 |               |     |        |   |              |      |      |     |                 | 6  |  |  |
| 7                        | -    | -            | -    |   | -            | -   | #8            | -         | 1.00 | 3,720           |       |               |     |        |   |              |      |      |     |                 | 8  |  |  |
| 9                        | 40   | 2            | -    |   | UMTS CABINET | 1"  | #8            | #8        | 1.00 | 3,720           | 3,720 |               |     |        |   |              |      |      |     |                 | 10 |  |  |
| 11                       | -    | -            | -    |   | -            | -   | #8            | -         | 1.00 | 3,720           |       |               |     |        |   |              |      |      |     |                 | 12 |  |  |
| 13                       | 100  | 2            | -    |   | SUBPANEL "B" | 1-1/4"  | #1            | #8        | 1.00 | 5,755           | 5,755 |               |     |        |   |              |      |      |     |                 | 14 |  |  |
| 15                       | -    | -            | -    |   | -            | -   | #1            | -         | 1.00 | 4,268           |       |               |     |        |   |              |      |      |     |                 | 16 |  |  |
| 17                       | -    | -            | -    |   | SPACE        | -   | -             | -         |      | 0               |       |               |     |        |   |              |      |      |     |                 | 18 |  |  |
| 19                       | -    | -            | -    |   | SPACE        | -   | -             | -         |      | 0               |       |               |     |        |   |              |      |      |     |                 | 20 |  |  |
| 21                       | -    | -            | -    |   | SPACE        | -   | -             | -         |      | 0               |       |               |     |        |   |              |      |      |     |                 | 22 |  |  |
| 23                       | -    | -            | -    |   | SPACE        | -   | -             | -         |      | 0               |       |               |     |        |   |              |      |      |     |                 | 24 |  |  |

- NOTES:**
- ALL INSULATION ON CONDUCTORS TO BE THHN UNLESS NOTED OTHERWISE. INSULATION ON ALL UNDERGROUND EXTERIOR CONDUCTORS SHALL BE THHW.
  - LOAD DEMANDS CALCULATED AS PER SECTIONS 210 & 220 OF THE NATIONAL ELECTRICAL CODE.
  - PANEL COVER SHALL BE FIELD MARKED FOR FLASH PROTECTION WITH A PERMANENT LABEL AS REQUIRED BY THE NATIONAL ELECTRICAL CODE SECTION 110. LABEL SHALL READ: "DANGER: POTENTIAL ARC FLASH HAZARD"
  - ABBREVIATIONS: CO-CONVENIENCE OUTLET, RR-RESTROOM, (N)ORTH, (S)OUTH, (E)AST, (W)EST.

| ØA     | ØB     | TOTALS |
|--------|--------|--------|
| 17,095 | 15,428 | 32,523 |
|        |        | 136    |
| 0      | 0      | 0      |
| 17,095 | 15,428 | 32,523 |
| 142    | 129    |        |
|        |        | 136    |
| 53%    | 47%    |        |

| FAULT CURRENT CALCULATION TABLE  |                      |        |                         |                |                   |               |                    |                      |       |     |    |                            |                      |  |            |
|----------------------------------|----------------------|--------|-------------------------|----------------|-------------------|---------------|--------------------|----------------------|-------|-----|----|----------------------------|----------------------|--|------------|
| MAIN UTILITY COMPANY TRANSFORMER |                      |        | TRANSFORMER KVA         | AFC AT UTILITY |                   |               |                    |                      |       |     |    |                            |                      |  |            |
| 1Ø 120/240V -200A                |                      |        | 25                      | 7,443 A        |                   |               |                    |                      |       |     |    |                            |                      |  |            |
| CONFIGURATION                    |                      |        | FEEDER                  |                |                   | SYSTEM        |                    |                      |       |     |    | FAULT CURRENT AT EQUIPMENT | FULL OR SERIES RATED | MINIMUM SYMMETRICAL EQUIPMENT AIC RATING |            |
| FROM                             | TO                   | LENGTH | AVAILABLE FAULT CURRENT | FEEDER SIZE    | FEEDERS PER PHASE | WIRE CONSTANT | LINE TO LINE VOLTS | XFMR SECONDARY VOLTS | PHASE | KVA | %Z |                            |                      |  | MOTOR LOAD |
| TRANSFORMER                      | UTILITY METER        | 80'-0" | 7,443 AIC               | 3/0 CU         | 1                 | 13,923        | 240 V              |                      | 1Ø    | -   | -  | OHP                        | 4,481 AIC            | FULL                                     | 22,000 AIC |
|                                  | METER PANELBOARD 'A' | 45'-0" | 4,481 AIC               | 3 CU           | 1                 | 4,774         | 240 V              |                      | 1Ø    | -   | -  | OHP                        | 3,314 AIC            | FULL                                     | 22,000 AIC |

NOTE: DISTANCES INDICATED ARE FOR FAULT-CURRENT ANALYSIS ONLY. CONTRACTOR SHALL USE FIELD MEASUREMENTS ESTABLISH CONDUCTOR LENGTHS FOR ORDERING PURPOSES. CALCULATIONS ARE BASED ON A 25KVA TRANSFORMER, PLEASE CONTACT ENGINEER IF SIZE IS DIFFERENT.

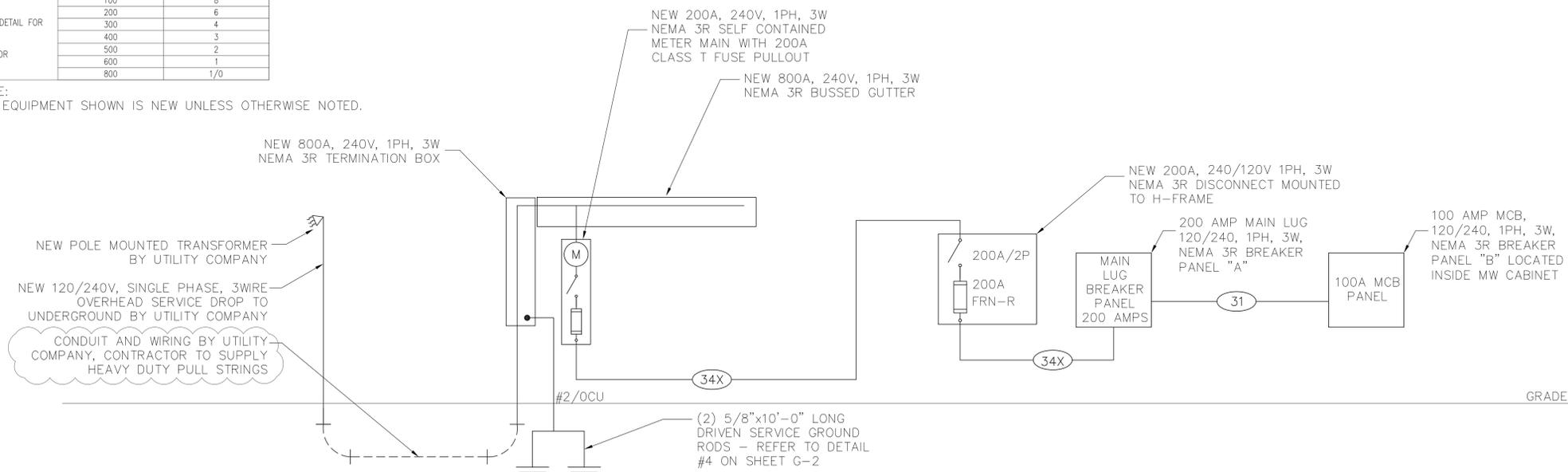
**PANEL SCHEDULE 'A'**

**PANEL SCHEDULE 'B'**

SCALE: N.T.S. **3**

| COPPER FEEDER SCHEDULE  |              |        |            |      |                 |       |              |        |            |      |                 |       |  |        |            |      |                 |     |
|---|--------------|--------|------------|------|-----------------|-------|--------------|--------|------------|------|-----------------|-------|--|--------|------------|------|-----------------|-----|
| TYPE  | CONDUIT SIZE |        | CONDUCTORS |      | 75°C AMP RATING | TYPE  | CONDUIT SIZE |        | CONDUCTORS |      | 75°C AMP RATING | TYPE  | CONDUIT SIZE                                   |        | CONDUCTORS |      | 75°C AMP RATING |     |
|   | PVC          | EMT    | QUAN.      | SIZE |                 |       | PVC          | EMT    | QUAN.      | SIZE |                 |       | PVC  | EMT    | QUAN.      | SIZE |                 | PVC |
| (38)  | 3/4"         | 3/4"   | 3          | #8   | 50              | (33X) | 2"           | 2"     | 3          | 3/0  | 200             | (35D) | 3"   | 2-1/2" | 3          | 500  | KCMIL           | 380 |
| (33)  | 1"           | 1"     | 3          | #3   | 100             | (34X) | 2"           | 2"     | 3          | 4/0  | 230             | (36D) | 3-1/2"   | 3-1/2" | 3          | 600  | KCMIL           | 420 |
| (32)  | 1-1/4"       | 1-1/4" | 3          | #2   | 115             | (32S) | 2"           | 2"     | 3          | 250  | KCMIL           | 255   | <b>EQUIPMENT GROUNDING CONDUCTORS SCHEDULE</b> |        |            |      |                 |     |
| (31)  | 1-1/4"       | 1-1/4" | 3          | #1   | 130             | (33D) | 2-1/2"       | 2-1/2" | 3          | 300  | KCMIL           | 285   | <b>OVERCURRENT DEVICE COPPER</b>               |        |            |      |                 |     |
| (31X)   | 1-1/2"       | 1-1/2" | 3          | 1/0  | 150             | (33S) | 2-1/2"       | 2-1/2" | 3          | 350  | KCMIL           | 310   | 15   | 14     |            |      |                 |     |
| (32X)   | 1-1/2"       | 1-1/2" | 3          | 2/0  | 175             | (34D) | 2-1/2"       | 2-1/2" | 3          | 400  | KCMIL           | 335   | 20   | 12     |            |      |                 |     |
| NOTE:   |              |        |            |      |                 |       |              |        |            |      |                 |       |  | 30     | 10         |      |                 |     |
| 1. SEE EQUIPMENT GROUND CONDUCTOR SCHEDULES OR SERVICE GROUNDING DETAIL FOR GROUND CONDUCTORS RATING. |              |        |            |      |                 |       |              |        |            |      |                 |       |  | 40     | 10         |      |                 |     |
| 2. ALL INSULATION SHALL BE THHN UNLESS NOTED OTHERWISE.   |              |        |            |      |                 |       |              |        |            |      |                 |       |  | 60     | 10         |      |                 |     |
| 3. PVC CONDUIT SIZE IS BASED ON SCHEDULE 40 PVC. PVC IS APPROVED FOR UNDERGROUND FEEDERS ONLY.        |              |        |            |      |                 |       |              |        |            |      |                 |       |  | 100    | 8          |      |                 |     |
|   |              |        |            |      |                 |       |              |        |            |      |                 |       |  | 200    | 6          |      |                 |     |
|   |              |        |            |      |                 |       |              |        |            |      |                 |       |  | 300    | 4          |      |                 |     |
|   |              |        |            |      |                 |       |              |        |            |      |                 |       |  | 400    | 3          |      |                 |     |
|   |              |        |            |      |                 |       |              |        |            |      |                 |       |  | 500    | 2          |      |                 |     |
|   |              |        |            |      |                 |       |              |        |            |      |                 |       |  | 600    | 1          |      |                 |     |
|   |              |        |            |      |                 |       |              |        |            |      |                 |       |  | 800    | 1/0        |      |                 |     |

- NOTE:** ALL EQUIPMENT SHOWN IS NEW UNLESS OTHERWISE NOTED.
- ALL CONDUCTORS SHALL BE COPPER WITH (THHN)-INSULATION ABOVE GROUND IN CONDUIT (THWN)-IN CONDUIT BELOW GRADE (USE)-DIRECT BURIAL (RHH-RHW)- INDOORS OPEN RACEWAY



**ONE-LINE DIAGRAM**

SCALE: N.T.S. **2**

| PANEL SCHEDULE "B"       |      |              |      |   |                 |   |               |           |      |                 |       |  |     |        |   |              |      |      |     |                 |    |  |  |
|--------------------------|------|--------------|------|---|-----------------|---|---------------|-----------|------|-----------------|-------|--|-----|--------|---|--------------|------|------|-----|-----------------|----|--|--|
| VOLTAGE: 240 / 120 VOLTS |      |              |      |   |                 | BUSS RATING (AMPS): 100                             |               |           |      |                 |       | REMARKS: PANEL "B" LOCATED INSIDE MW CABINET |     |        |   |              |      |      |     |                 |    |  |  |
| MOUNTING: SURFACE        |      |              |      |   |                 | PHASE: 1 MAIN BREAKER:                              |               |           |      |                 |       |  |     |        |   |              |      |      |     |                 |    |  |  |
| ENCLOSURE: NEMA 3R       |      |              |      |   |                 | WIRE: 3 SHORT CIRCUIT RATING: 22,000 AMPS (RMS-SYM) |               |           |      |                 |       |  |     |        |   |              |      |      |     |                 |    |  |  |
| CIRCUIT BREAKER          |      | CIRCUIT NAME |      |   |                 | FEEDER  |               | CKT. LOAD |      | LOAD/PHASE (VA) |       | CKT. LOAD                                    |     | FEEDER |   | CIRCUIT NAME |      |      |     | CIRCUIT BREAKER |    |  |  |
| No.                      | AMPS | POLE         | MOD. | C | WIRE            | GRD   | DEMAND FACTOR | WATTS     | ØA   | ØB              | WATTS | DEMAND FACTOR                                | GRD | WIRE   | C | MOD.         | POLE | AMPS | No. |                 |    |  |  |
| 1                        | 15   | 2            | -    |   | HVAC (OPTIONAL) | 3/4"  | #12           | #12       | 1.00 | 1,440           | 1,440 |  |     |        |   |              |      |      | 2   | 2               |    |  |  |
| 3                        | -    | -            | -    |   | -               | -   | #12           | -         | 1.00 | 1,440           |       |  |     |        |   |              |      |      |     |                 | 4  |  |  |
| 5                        | 15   | 2            | -    |   | ICEQUEBE        | 3/4"  | #12           | #12       | 1.00 | 1,440           | 1,820 |  |     |        |   |              |      |      |     |                 | 6  |  |  |
| 7                        | -    | -            | -    |   | -               | -   | #12           | -         | 1.00 | 1,440           |       |  |     |        |   |              |      |      |     |                 | 8  |  |  |
| 9                        | 15   | 1            | -    |   | RECTIFIER #1    | 3/4"  | #12           | #12       | 1.00 | 1,200           | 2,400 |  |     |        |   |              |      |      |     |                 | 10 |  |  |
| 11                       | -    | -            | -    |   | SPACE           | -   | -             | -         |      | 1,200           |       |  |     |        |   |              |      |      |     |                 | 12 |  |  |

- NOTES:**
- ALL INSULATION ON CONDUCTORS TO BE THHN UNLESS NOTED OTHERWISE. INSULATION ON ALL UNDERGROUND EXTERIOR CONDUCTORS SHALL BE THHW.
  - LOAD DEMANDS CALCULATED AS PER SECTIONS 210 & 220 OF THE NATIONAL ELECTRICAL CODE.
  - PANEL COVER SHALL BE FIELD MARKED FOR FLASH PROTECTION WITH A PERMANENT LABEL AS REQUIRED BY THE NATIONAL ELECTRICAL CODE SECTION 110. LABEL SHALL READ: "DANGER: POTENTIAL ARC FLASH HAZARD"
  - ABBREVIATIONS: CO-CONVENIENCE OUTLET, RR-RESTROOM, (N)ORTH, (S)OUTH, (E)AST, (W)EST.
  - GENERATOR BREAKER IS MANUALLY INTERLOCKED WITH 100A MAIN BREAKER

| ØA    | ØB    | TOTALS |
|-------|-------|--------|
| 5,660 | 4,230 | 9,890  |
|       |       | 41     |
| 95    | 36    | 0      |
| 5,755 | 4,268 | 10,023 |
| 48    | 36    |        |
|       |       | 42     |
| 57%   | 43%   |        |

CONNECTED LOAD (VA)  
CONNECTED LOAD (A)  
DEMAND FACTOR ADJUSTMENTS (VA)  
TOTAL LOAD (VA)  
TOTAL LOAD (A)  
MAXIMUM LOAD (A)  
PHASE BALANCE



1317 E. THUNDERHILL PLACE  
PHOENIX, AZ 85048  
PHONE: (480) 213-8524

PE SEAL

DESIGNER: JN

LEAD EE: SB

LEAD CE/SE: SAM

| SUBMITTALS |         |                      |    |
|------------|---------|----------------------|----|
| REV.       | DATE    | DESCRIPTION          | BY |
| B          | 8/2/16  | REVISED SPD          | JN |
| C          | 8/12/16 | REVISED PER COMMENTS | JN |
| D          | 10/5/16 | REVISED PER COMMENTS | JN |
| E          | 10/5/16 | REVISED PER COMMENTS | JN |
| F          | 10/7/16 | REVISED PER COMMENTS | JN |

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PLOT DATE: 10/7/16

SITE NAME  
CUBA DOWNTOWN

PROJECT  
NEW BUILD

SITE ADDRESS  
LAT: 36° 1' 20.51" N  
LONG: 116° 58' 36.2" W  
SECTION 29, TOWNSHIP 21 NORTH,  
RANGE 1 WEST  
N.M.P.M., NEW MEXICO

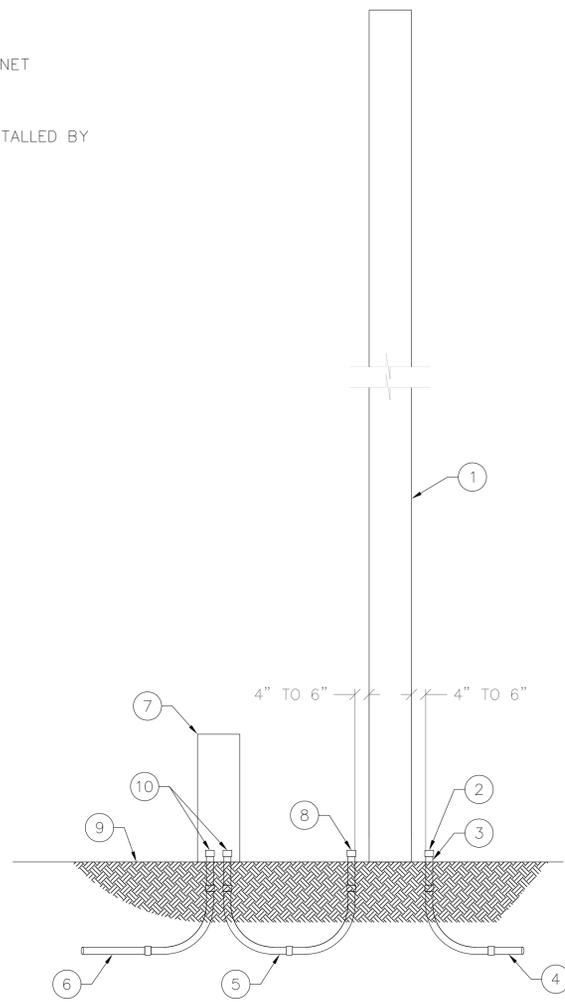
SHEET TITLE  
PANEL SCHEDULE &  
ONE LINE DIAGRAM

SHEET NUMBER  
E-2

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**POWER & FIBER ROUTING KEYED NOTES: #**

1. POWER POLE
2. REDUCER COUPLING FROM 3" TO 2" PROVIDED BY CONTRACTOR
3. POWER STUB-UP INSTALLED BY CONTRACTOR
4. CONDUIT RUN TO POWER POLE FROM METER
5. CONDUIT PER DETAILS
6. CONDUIT RUN TO TELCO PEDESTAL FROM CABINET
7. TELCO PEDESTAL
8. TELCO STUB-UP INSTALLED BY CONTRACTOR
9. FINISHED GRADE
10. (2) TELCO STUB UPS TO TELCO PEDESTAL INSTALLED BY CONTRACTOR

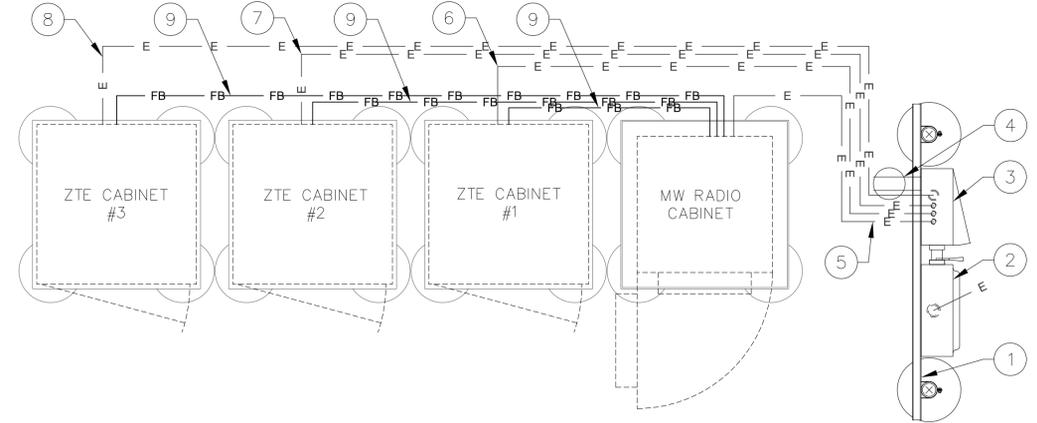


**SCHEMATIC DIAGRAM FOR POWER AND FIBER ROUTING FORM POLE**

SCALE: N.T.S. **1**

**INTERCABINET CONNECTIONS LAYOUT KEYED NOTES: #**

1. (N) UTILITY H-FRAME, SEE ELECTRICAL
2. (N) DISCONNECT, SEE ELECTRICAL
3. (N) AC PANEL, SEE ELECTRICAL
4. (N) GFI USE DUPLEX RECEPTACLE W/ ENCLOSURE, SEE ELECTRICAL
5. (N) CONDUIT FROM AC PANEL TO SUB-PANEL ON MW RADIO CABINET, SEE ELECTRICAL
6. (N) CONDUIT FROM AC PANEL TO ZTE CABINET #1, SEE ELECTRICAL
7. (N) CONDUIT FROM AC PANEL TO ZTE CABINET #2, SEE ELECTRICAL
8. (N) CONDUIT FROM AC PANEL TO ZTE CABINET #3, SEE ELECTRICAL
9. (N) 1" LIQUID TIGHT METALLIC CONDUIT FROM FIBER ROUTER LOCATED IN FIBER CABINET TO ZTE CABINET #1, #2 AND #3 SEPARATE CONDUIT RUNS

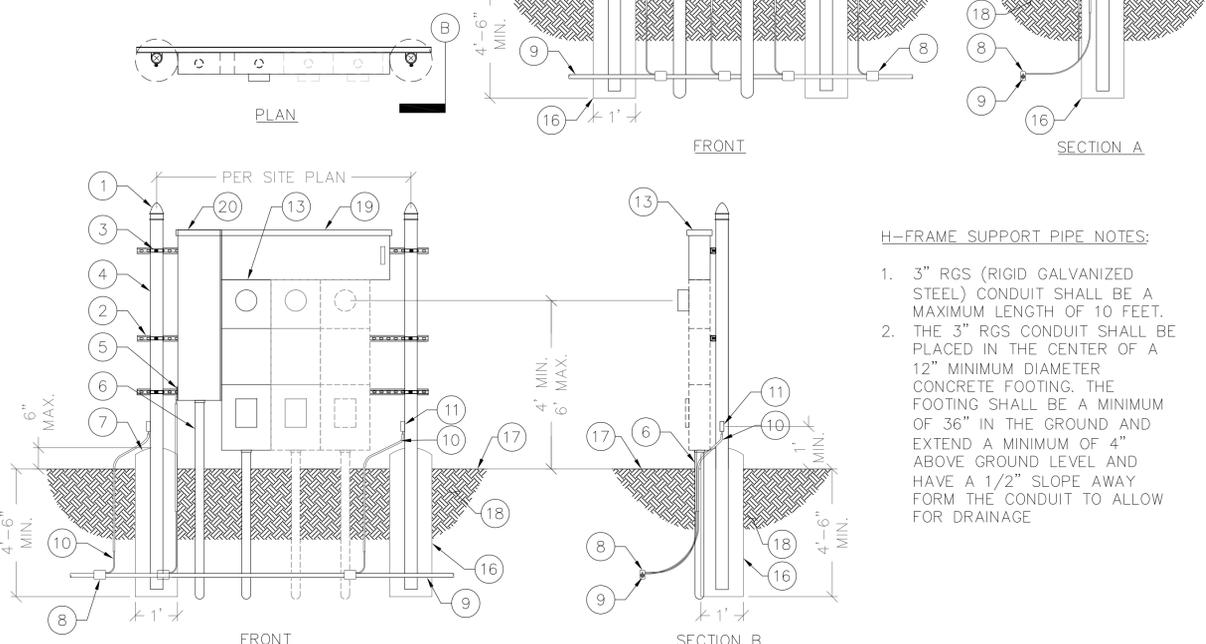


**INTERCABINET CONNECTIONS LAYOUT**

SCALE: N.T.S. **2**

**H-FRAME POST KEYED NOTES: #**

1. PIPE CAP 3 1/2" (TYP.)
- 1 5/8"x1 5/8"x12 GAUGE GALV. CHANNEL (TYP.)
3. UNISTRUT P-1119 GALV. SUPPORT PIPE CLAMP (TYP.)
4. H-FRAME DIRECT BURIAL 3 1/2" PIPE COLUMN (TYP.)
5. MECHANICAL GROUND BONDING (TYPE YA-2) (TYP.)
6. RIGID CONDUIT
7. ROUND TOP OF FOUNDATION
8. EXOTHERMIC WELD (TYPE PT) (TYP.)
9. GROUND RING
10. #2 AWG SOLID TINNED BARE COPPER CONDUCTOR ROUTED IN FLEXIBLE NON-METALLIC LIQUID TIGHT CONDUIT (CARFLEX) (TYP.)
11. EXOTHERMIC WELD (TYPE VS)
12. GFI USE DUPLEX RECEPTACLE W/ ENCLOSURE
13. METER GANG - MILBANK #U224MTB-P
14. 200A, 240V, DISCONNECT SWITCH, NEMA 3R
15. 200A AC PANEL "A", NEMA 3R
16. CONCRETE FOUNDATION, 2500 PSI
17. FINISHED GRADE OR ASPHALT
18. NATURAL SOIL
19. BUSSED GUTTER - MILBANK #BC318
20. TERMINATION BOX - MILBANK #PB-018

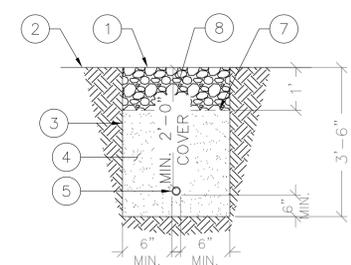


**TYPICAL H-FRAME DETAILS**

SCALE: N.T.S. **3**

**HIGH VOLTAGE TRENCH KEYED NOTES: #**

1. MATCH EXISTING SURFACE
2. FINISHED GRADE
3. VERT. DEPTH W/O SHORING PER GOVERNING CODES
4. CLEAR BEDDING W/ MIN. 12" COVERAGE OVER CONDUIT
5. PVC SCH. 40 HIGH VOLTAGE POWER CONDUIT SIZED PER ELECTRICAL ENGINEER; 12" SEPARATION FROM OTHER LINES; CONDUIT W/ GAS & FUEL LINES IN SEPARATE TRENCH; COORDINATE W/ LOCAL UTILITIES
6. NOT USED
7. WARNING TAPE 12" ABOVE CONDUIT
8. ENGINEERING FILL MATERIAL



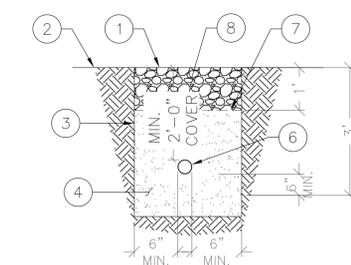
NOTE: THIS DETAIL NOT APPLICABLE TO WATER LINE(S)

**POWER TRENCH DETAILS**

SCALE: N.T.S. **4**

**TELCO/FIBER TRENCH KEYED NOTES: #**

1. MATCH EXISTING SURFACE
2. FINISHED GRADE
3. VERT. DEPTH W/O SHORING PER GOVERNING CODES
4. CLEAR BEDDING W/ MIN. 12" COVERAGE OVER CONDUIT
5. NOT USED
6. 4" SCH. 40 PVC FOR TELCO OR FIBER AS APPLICABLE
7. WARNING TAPE 12" ABOVE CONDUIT
8. ENGINEERING FILL MATERIAL



NOTE: THIS DETAIL NOT APPLICABLE TO WATER LINE(S)

**TELCO TRENCH DETAILS**

SCALE: N.T.S. **5**

1317 E. THUNDERHILL PLACE  
PHOENIX, AZ 85048  
PHONE: (480) 213-8524

DESIGNER: JN  
LEAD EE: SB  
LEAD CE/SE: SAM

| SUBMITTALS |         |                      |    |
|------------|---------|----------------------|----|
| REV.       | DATE    | DESCRIPTION          | BY |
| B          | 8/2/16  | REVISED SPD          | JN |
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| D          | 10/5/16 | REVISED PER COMMENTS | JN |
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PLOT DATE: 10/7/16  
SITE NAME: CUBA DOWNTOWN

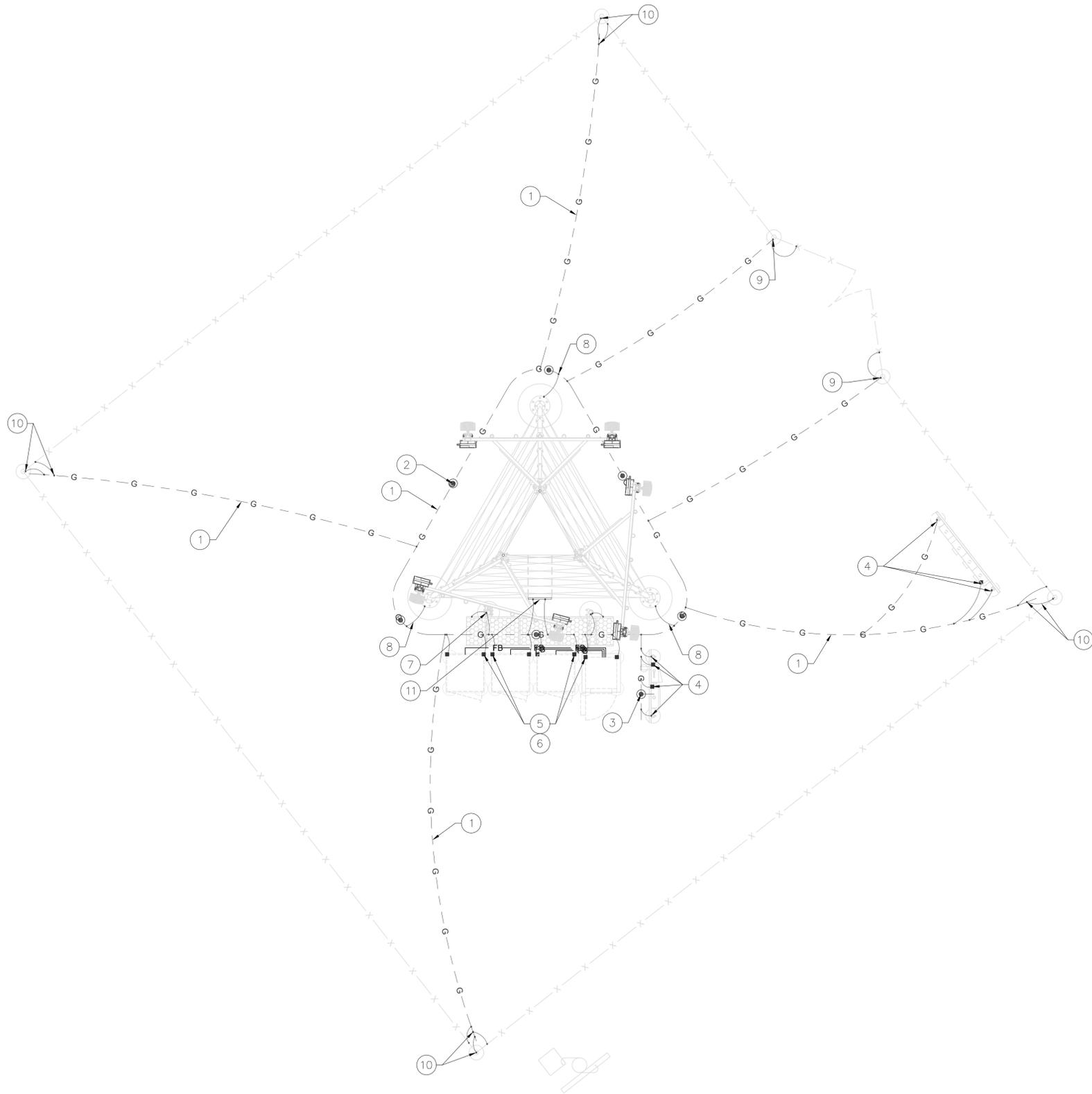
PROJECT: NEW BUILD

SITE ADDRESS:  
LAT: 36° 1' 20.51" N  
LONG: 116° 58' 36.2" W  
SECTION 29, TOWNSHIP 21 NORTH,  
RANGE 1 WEST  
N.M.P.M., NEW MEXICO

SHEET TITLE: DETAILS

SHEET NUMBER: E-3

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- LEGEND:**
- TGB— TINNED SOLID ALLOY 110 COPPER TOWER BUSS BAR BONDED TO TOWER STEEL.
  - 5/8" DIA. x 10' COPPER CLAD GROUND ROD. REFER TO DETAIL 7 ON SHEET G-2.
  - G— GROUND RING, REFER TO DETAIL 6 ON SHEET G-2.
  - EXOTHERMIC WELD OR IRREVERSIBLE HIGH-COMPRESSION CRIMP.
  - MECHANICAL CONNECTION.

- GENERAL NOTES:**
- A. THESE DRAWINGS REPRESENT THE GENERAL EXTENT AND ARRANGEMENT OF SYSTEMS, BUT ARE NOT TO BE CONSIDERED FABRICATION DRAWINGS. COORDINATE WITH OTHER TRADES, AND PROVIDE EACH SYSTEM COMPLETE, INCLUDING ALL NECESSARY COMPONENTS, FITTINGS AND OFFSETS.
  - B. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
  - C. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
  - D. REFER TO G-2 FOR GROUNDING DETAILS.
  - E. ALL METALLIC SURFACES SHALL BE PREPARED PRIOR TO BONDING, COLD GALV. SPRAY SHALL BE USED ON ANY EXOTHERMIC WELD TO PREVENT CORROSION, ANY AREA TO BE COLD GALV. SPRAY SHALL BE TAPED OFF PRIOR TO APPLICATION.

- CONSTRUCTION KEYED NOTES: #**
1. GROUNDING ELECTRODE CONDUCTOR SYSTEM (GROUND RING), #2 AWG SOLID BARE TINNED COPPER CONDUCTOR. GROUNDING ELECTRODE CONDUCTOR SHALL BE BURIED 30" BELOW GRADE WHERE APPLICABLE. ABOVE GRADE GROUNDING ELECTRODE CONDUCTOR TO BE ROUTED IN FLEXIBLE NON-METALLIC LIQUID TIGHT CONDUIT & FASTENED TO CONCRETE SURFACE EVERY 3' MAX. FASTENERS SHALL BE FLEXIBLE CONDUIT HALF STRAPS W/ 1/4"Ø x 2" (L) RED HEAD HAMMER-SET NAIL DRIVE ANCHOR OR EQUIV. (TYP.)
  2. 5/8" DIA. x 10' LONG COPPER CLAD GROUND ROD PLACED MINIMUM EVERY 10' APART (TYP.). REFER TO DETAIL 4 ON SHEET G-2.
  3. SERVICE 5/8" DIA. x 10' LONG COPPER CLAD GROUND ROD PLACED MINIMUM EVERY 10' APART (TYP. OF 2). REFER TO DETAIL 4 ON SHEET G-2.
  4. BOND H-FRAME & ELECTRICAL BOX TO GROUND RADIAL (TYP.), REFER TO DETAIL 3 ON SHEET E-2.
  5. BOND EQUIPMENT CABINET PLATFORM TO GROUND RING WITH #2 AWG SOLID TINNED BARE COPPER CONDUCTOR (TYP.). REFER TO DETAIL 11 IN SHEET G-2.
  6. BOND EQUIPMENT CABINET TO GROUND RING WITH #2 AWG SOLID TINNED BARE COPPER CONDUCTOR (TYP.). REFER TO DETAIL 11 IN SHEET G-2.
  7. BOND ICE BRIDGE POST TO TOWER GROUND RING.
  8. BOND TOWER LEGS (AT MANUFACTURER INSTALLED BONDING TAB) TO GROUND RING. UNDER NO CIRCUMSTANCES WILL EXOTHERMIC WELDING BE PERMITTED ON THE TOWER LEG MEMBER, TYPICAL 3 LOCATIONS.
  9. BOND GATE TO GATE POST VIA #2 GATE BOND JUMPER (TYP.). REFER TO DETAIL 5 ON SHEET G-2
  10. BOND TO FENCE FABRIC SUPPORT POST. REFER TO DETAIL 5 ON SHEET G-2 (TYP.)
  11. BOND TOWER GROUND BUSS BAR TO TOWER GROUND RING WITH #2 AWG, TYP. OF 2 CONNECTIONS



1317 E. THUNDERHILL PLACE  
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PHONE: (480) 213-8524

PE SEAL

DESIGNER: JN

LEAD EE: SB

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PLOT DATE: 10/7/16

SITE NAME  
CUBA DOWNTOWN

PROJECT  
NEW BUILD

SITE ADDRESS  
LAT: 36° 1' 20.51" N  
LONG: 116° 58' 36.2" W  
SECTION 29, TOWNSHIP 21 NORTH,  
RANGE 1 WEST  
N.M.P.M., NEW MEXICO

SHEET TITLE  
GROUNDING PLAN

SHEET NUMBER  
G-1

**GROUNDING PLAN**

22"x34" SCALE: 1/4" = 1'-0"  
11"x17" SCALE: 1/8" = 1'-0"



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**NOTE:**  
ERICO CADWELD "MOLD TYPES" SHOWN HERE ARE EXAMPLES. CONSULT WITH PROJECT MANAGER OR CONSTRUCTION MANAGER FOR SPECIFIC MOLDS TO BE USED FOR THIS PROJECT.

TYPE VS    TYPE TA    TYPE HS    TYPE SS    TYPE PT  
TYPE GT    TYPE HS    TYPE XA    TYPE VS    TYPE YA-2  
TYPE 2-YA-2

**GROUND ROD INSTALLATION KEYED NOTES: #**

1. FINISHED GRADE
2. EXOTHERMIC CONNECTION (TYPE GT)
3. 5/8" x 10' LONG COPPER CLAD GROUND ROD WITH EXOTHERMIC CONNECTION TO GROUND RING
4. #2 AWG SOLID TINNED BARE COPPER WIRE (GROUND RING 30" BELOW GRADE)
5. EXOTHERMIC CONNECTION TO GROUND RING (TYPE PT)
6. #8CU AWG SOLID TINNED BARE COPPER WIRE GROUND CONDUCTOR ROUTED IN FLEXIBLE NON-METALLIC LIQUID TIGHT CONDUIT (CARFLEX)
7. #8CU AWG COPPER MAIN EQUIPMENT BONDING JUMPER
8. #8CU AWG COPPER MAIN BONDING JUMPER
9. DISCONNECT SWITCH

**NOTES:**

1. ALL GROUNDING AND BONDING AT THE SERVICE ENTRANCE SHALL COMPLY WITH NEC 250.28, 250.50, 250.66, 250.92, 250.102(C) & 250.56
2. GROUNDING SYSTEM RESISTANCE IS 25 OHMS OR LESS

**SELF SUPPORT TOWER GROUNDING KEYED NOTES: #**

1. EXOTHERMIC WELD TO MANUFACTURER INSTALLED BONDING TAB (TYP. FOR EACH LEG)
2. PVC OR FLEXIBLE NON-METALLIC CONDUIT (CARFLEX)
3. #2 AWG SOLID TINNED BARE COPPER CONDUCTOR (GROUND RING)
4. EXOTHERMIC WELD OR IRREVERSIBLE HIGH COMPRESSION FITTING
5. 5/8" x 10' LONG COPPER CLAD GROUND ROD
6. WEEP HOLE

**NOTES:**

1. REFER TO TOWER MANUFACTURER SPECIFICATIONS FOR ADDITIONAL BONDING AND GROUNDING REQUIREMENTS UNDER NO CIRCUMSTANCES WILL EXOTHERMIC WELDING BE PERMITTED ON THE TOWER LEG

**GROUND LUG KEYED NOTES: #**

1. NUT
2. LOCK WASHER
3. FLAT WASHER
4. BOLT
5. BURNDY GROUND LUG (SEE TABLE FOR SIZE AND MODEL)
6. HEAT SHRINK (CLEAR)
7. GROUNDING CONDUCTOR
8. GROUND BUSS BAR OR METALLIC BONDING SURFACE
9. BURNDY 2-HOLE LUG W/ LONG BARREL FOR #6 AWG STRANDED ENDS
11. HEAT SHRINK
12. #6 AWG THHN COPPER WIRE

| WIRE SIZE       | BURNDY LUG  | BOLT SIZE             |
|-----------------|-------------|-----------------------|
| #6 AWG          | YA6C-2TC38  | 3/8" - 16 NC S 3 BOLT |
| #2 AWG SOLID    | YA3C-2TC38  | 3/8" - 16 NC S 3 BOLT |
| #2 AWG STRANDED | YA2C-2TC381 | 3/8" - 16 NC S 3 BOLT |
| #2/0 AWG        | YA26-2TC38  | 3/8" - 16 NC S 3 BOLT |
| #4/0 AWG        | YA28-2N     | 1/2" - 16 NC S 3 BOLT |

**EXOTHERMIC WELD DETAILS**    SCALE: N.T.S. **1**

| GROUNDING CONDUCTOR SIZING    |                           |
|-------------------------------|---------------------------|
| CONDUCTOR LENGTH IN LINEAR FT | CONDUCTOR SIZE IN AWG/MCM |
| < 33                          | 2                         |
| 34 - 41                       | 1                         |
| 42 - 53                       | 1/0                       |
| 54 - 66                       | 2/0                       |
| 67 - 84                       | 3/0                       |
| 85 - 105                      | 4/0                       |
| 106 - 125                     | 250 MCM                   |
| 126 - 150                     | 300 MCM                   |
| 151 - 175                     | 350 MCM                   |
| 176 - 250                     | 500 MCM                   |
| 251 - 300                     | 600 MCM                   |
| > 300                         | 750 MCM                   |

**GROUND ROD DETAIL**    SCALE: N.T.S. **4**

**CORNER FENCE GROUNDING KEYED NOTES: #**

1. ERICO EXOTHERMIC WELD CONNECTION "VB" OR EQUIVALENT
2. DETERRENT WIRE GROUNDING CLAMP (HARGER FGC2) TRIM LEAD AS CLOSE TO GROUNDING CLAMP AS POSSIBLE
3. ERICO EXOTHERMIC WELD CONNECTION "HA" OR EQUIVALENT
4. #2 AWG SOLID TINNED BARE COPPER WIRE, BOND FENCE FABRIC TO GROUND CONDUCTOR
5. FENCE FABRIC GROUNDING CLAMP (TYP.)
6. GROUND CONDUCTOR WITH ERICO EXOTHERMIC WELD "VS" OR EQUIVALENT
7. CONNECT FENCE BONDING CONDUCTOR TO EXTERNAL GROUNDING ELECTRODE SYSTEM USING EXOTHERMIC WELD OR IRREVERSIBLE HIGH COMPRESSION FITTING
8. ERICO EXOTHERMIC WELD CONNECTION "PC" OR EQUIVALENT TO GROUND RING
9. GROUNDING RADIAL TO SYSTEM GROUND RING
10. GATE JUMPER WITH ERICO EXOTHERMIC WELD "VS" OR EQUIVALENT

**TOWER GROUNDING DETAIL**    SCALE: N.T.S. **7**

**WEATHERPROOFING KEYED NOTES: #**

1. COAX
2. COAX TO JUMPER CONNECTION (TYP.)
3. JUMPER (TYP.)
4. 3M SCOTCH SUPER 33+ VINYL ELECTRICAL TAPE (OR EQUIVALENT)
5. VAPOR WRAP SEALANT

**GROUNDING LUG DETAIL**    SCALE: N.T.S. **10**

**GROUND ROD INSTALLATION KEYED NOTES: #**

1. GPS ANTENNA
2. ICE BRIDGE SUPPORT PIPE
3. NOT USED
4. NOT USED
5. EQUIPMENT CABINET
6. BOND EQUIPMENT CABINET WITH #2 AWG SOLID TINNED BARE COPPER CONDUCTOR ROUTED IN FLEXIBLE NON-METALLIC LIQUID TIGHT CONDUIT (CARFLEX) (TYP.)
7. BOND EQUIPMENT PLATFORM WITH #2 AWG SOLID TINNED BARE COPPER CONDUCTOR ROUTED IN FLEXIBLE NON-METALLIC LIQUID TIGHT CONDUIT (CARFLEX) (TYP.)
8. BOND ICE BRIDGE SUPPORT PIPE WITH #2 AWG SOLID TINNED BARE COPPER CONDUCTOR ROUTED IN FLEXIBLE NON-METALLIC LIQUID TIGHT CONDUIT (CARFLEX) (TYP.)
9. EXOTHERMIC WELD (TYPE PT) (TYP.)
10. GROUND RING
11. FINISHED GRADE

**GRND. CONDUCTOR SIZE DETAIL**    SCALE: N.T.S. **2**

**GROUND RING TRENCHING KEYED NOTES: #**

1. BACKFILL PER SPECIFICATIONS
2. FINISHED GRADE
3. #2 AWG SOLID TINNED BARE COPPER WIRE

**NOTES:**

1. DEPTH TO BE 30" OR 6" BELOW FROST LINE, WHICHEVER IS GREATER.
2. GROUND RINGS SHOULD CONSIST OF AT LEAST 20' OF #2 AWG OR LARGER BARE COPPER CONDUCTOR.
3. BURY THE RINGS IN DIRECT CONTACT WITH SOIL.

**FENCE GROUNDING DETAIL**    SCALE: N.T.S. **5**

**TOWER GROUNDING KEYED NOTES: #**

1. HYBRID
2. HYBRID GROUNDING KIT
3. HEX BOLTS; APPROVED TWO HOLE LUG CONNECTION WITH STAINLESS HARDWARE
4. EXOTHERMIC WELD #2 AWG STRANDED TINNED COPPER
5. TINNED COPPER TOWER GROUND BUSS BAR

**WEATHERPROOF DETAIL**    SCALE: N.T.S. **8**

**ANTENNA BUSS BAR KEYED NOTES: #**

1. #2 AWG STRANDED Cu WIRE WITH GREEN, 600V, THWN INSULATION OR BLACK MARKED AS REQUIRED BY NEC
2. TINNED COPPER TOWER BUSS BAR ATTACHED DIRECTLY TO TOWER STEEL

**SITE GROUNDING DETAIL**    SCALE: N.T.S. **11**

**GROUND RING TRENCH**    SCALE: N.T.S. **3**

**TOWER GROUND BUSS BAR**    SCALE: N.T.S. **6**

**ANTENNA BUSS BAR DETAIL**    SCALE: N.T.S. **9**

**SITE GROUNDING DETAIL**    SCALE: N.T.S. **11**



DESIGNER: JN  
LEAD EE: SB  
LEAD CE/SE: SAM

**SUBMITTALS**

| REV. | DATE    | DESCRIPTION          | BY |
|------|---------|----------------------|----|
| B    | 8/2/16  | REVISED SPD          | JN |
| C    | 8/12/16 | REVISED PER COMMENTS | JN |
| D    | 10/5/16 | REVISED PER COMMENTS | JN |
| E    | 10/5/16 | REVISED PER COMMENTS | JN |
| F    | 10/7/16 | REVISED PER COMMENTS | JN |

THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO COMMNET WIRELESS IS STRICTLY PROHIBITED.

PLOT DATE: 10/7/16

SITE NAME  
CUBA DOWNTOWN

PROJECT  
NEW BUILD

SITE ADDRESS  
LAT: 36° 1' 20.51" N  
LONG: 116° 58' 36.2" W  
SECTION 29, TOWNSHIP 21 NORTH,  
RANGE 1 WEST  
N.M.P.M., NEW MEXICO

SHEET TITLE  
GROUNDING DETAILS

SHEET NUMBER  
G-2