

SHEET INDEX

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DRIVING DIRECTIONS

DEPART FROM SPRINT OFFICE:  
 8040 S 48TH ST, PHOENIX, AZ 85044  
 TURN RIGHT (EAST) ONTO W BASELINE RD  
 TAKE RAMP (RIGHT) ONTO I-10 E / TUCSON AT EXIT 164  
 TURN RIGHT ONTO RAMP SR-341 S / QUEEN CREEK RD  
 TURN RIGHT (WEST) ONTO SR-341 W QUEEN CREEK RD  
 TURN RIGHT (WEST) ONTO W HATHAWAY AVE  
 ARRIVE AT 44870 W. HATHAWAY AVE., MARICOPA, AZ 85239

VICINITY MAP



# Sprint



## PHOENIX MARKET

SITE NAME

FILL IN-PHX312

SITE NUMBER

PH63XC039

SITE ADDRESS

44870 W. HATHAWAY AVE.  
 MARICOPA, AZ 85139

STRUCTURE TYPE

MONOPOLE

PROJECT TYPE

NETWORK VISION MMBTS LAUNCH

PROJECT SUMMARY

SITE NAME: FILL IN-PHX312  
 SITE NO: PH63XC039  
 SITE ADDRESS: 44870 W. HATHAWAY AVE. MARICOPA, AZ 85139  
 COUNTY: MARICOPA  
 SITE COORDINATES: FROM FST  
 LATITUDE: 33.062986°  
 LONGITUDE: 112.049931°  
 GROUND ELEVATION: 1153' (AMSL)  
 STRUCTURE TYPE: MONOPOLE  
 OCCUPANCY: -  
 CONSTRUCTION TYPE: -  
 PARCEL#: 510-19-200D  
 ZONING: CB-2  
 JURISDICTION: CITY OF MARICOPA  
 APPLICANT: SPRINT/NEXTEL PROPERTY SERVICES  
 MAILSTOP: KSOPHT0101-22650  
 6391 SPRINT PARKWAY  
 OVERLAND PARK, KS 66251-2650  
 TOWER OWNER: VERIZON WIRELESS  
 BUILDING CODE: INTERNATIONAL BUILDING CODE 2009  
 ELECTRICAL CODE: NATIONAL ELECTRIC CODE 2008



9600 W. BRYN MAWR AVE., SUITE 200  
 ROSEMONT, ILLINOIS 60018  
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 FAX: 847-292-0206  
 FIRM REGISTRATION# 17190-0  
 www.FullertonEngineering.com

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#	DATE	DESCRIPTION	INT.
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B	4/20/13	PRELIMINARY FINAL	LA
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ENGINEER'S LICENSE

CERTIFICATION STATEMENT:  
 I CERTIFY THAT THESE DRAWINGS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND CONTROL AND TO THE BEST OF MY KNOWLEDGE AND BELIEF COMPLY WITH THE REQUIREMENTS OF INTERNATIONAL BUILDING CODE, 2009 EDITION  
 LICENSED ENGINEER - STATE OF ARIZONA



SIGNED DATE: 2/12/2014  
 EXPIRES: 12/31/2016  
 LICENSE#: 51588

APPROVALS

SPRINT CONST.	DATE
SPRINT RF	DATE
SPRINT OPS	DATE
LANDLORD	DATE

DRAWING SCALED TO 11"x17"

PROJECT TEAM



ALCATEL-LUCENT  
 2500 W UTOPIA ROAD  
 PHOENIX, AZ 85021

PROJECT MANAGER



GOODMAN NETWORKS  
 20783 N. 83rd AVE. #103-182  
 PEORIA, AZ 85382

SITE ACQUISITION



9600 W. BRYN MAWR AVE., SUITE 200  
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ENGINEER

SCOPE OF WORK:

- HANDICAP ACCESS REQUIREMENTS ARE NOT REQUIRED
- FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION
- FACILITY HAS NO PLUMBING OR REFRIGERANTS
- THIS FACILITY SHALL MEET OR EXCEED ALL FAA AND FCC REGULATORY REQUIREMENTS
- ALL NEW MATERIAL SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR UNLESS NOTED OTHERWISE. CABINETS, ANTENNAS/RRU AND CABLES FURNISHED BY OWNER AND INSTALLED BY CONTRACTOR
- REMOVE (6) EXISTING PANEL ANTENNAS (2 PER SECTOR)
- INSTALL (3) NEW PANEL ANTENNAS (1 PER SECTOR)
- RETROFIT (1) EXISTING MOD-CELL 4.0 CABINET
- REMOVE (1) EXISTING 60EC BATTERY CABINET
- INSTALL (1) NEW EMERSON #2012505 BATTERY CABINET
- INSTALL (1) NEW FIBER JUNCTION BOX
- INSTALL (1) GPS ANTENNA
- REMOVE (6) EXISTING SPRINT COAXIAL CABLES
- INSTALL (3) NEW HYBRIFLEX FIBER OPTIC CABLES
- INSTALL (9) NEW FRRHS & (6) NEW COMBINERS
- INSTALL 8' HIGH MASONRY WALL & PAINT TO MATCH EXISTING BUILDING WALL

SITE NAME

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 MARICOPA, AZ 85139

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TITLE SHEET

SHEET NUMBER

T-1

THE FOLLOWING NOTES ARE TAKEN FROM SPRINT'S "STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES", REV 4.0 DATED 2-15-2011. THIS SHALL NOT BE CONSTRUED AS THE ENTIRE DOCUMENT. THE CONTRACTOR IS RESPONSIBLE FOR MEETING THE REQUIREMENTS OF THE ABOVE REFERENCED SPECIFICATION DOCUMENT IN REGARDS TO ALL WORK COMPLETED.

**DIVISION 1 - GENERAL REQUIREMENTS**

1. **NATIONALLY RECOGNIZED CODES AND STANDARDS:** THE WORK SHALL COMPLY WITH APPLICABLE STANDARDS, PORTIONS THEREOF, INCLUDED BUT NOT LIMITED TO THE FOLLOWING:
  - A. GR-63-CORE NEBS REQUIREMENTS: PHYSICAL PROTECTION
  - B. GR-18-CORE GENERIC REQUIREMENTS FOR THE PHYSICAL DESIGN AND MANUFACTURE OF TELECOMMUNICATIONS EQUIPMENT
  - C. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
  - D. AMERICAN SOCIETY FOR TESTING OF MATERIALS (ASTM)
  - E. INSTITUTE OF ELECTRONIC AND ELECTRICAL ENGINEERS (IEEE)
2. **DEFINITIONS:**
  - A. WORK: THE SUM OF TASKS AND RESPONSIBILITIES IDENTIFIED IN THE CONTRACT DOCUMENTS
  - B. COMPANY: SPRINT NEXTEL CORPORATION
  - C. PROJECT MANAGER: COMPANY REPRESENTATIVE
  - D. ENGINEER: SYNONYMOUS WITH ARCHITECT & ENGINEER AND "A/E". THE DESIGN PROFESSIONAL HAVING PROFESSIONAL RESPONSIBILITY FOR DESIGN OF THE PROJECT
  - E. CONTRACTOR: CONSTRUCTION CONTRACTOR; CONSTRUCTION VENDOR; INDIVIDUAL OR ENTITY WHO AFTER EXECUTION OF A CONTRACT IS BOUND TO ACCOMPLISH THE WORK
  - F. THIRD PARTY VENDOR OR AGENCY: A VENDOR OR AGENCY ENGAGED SEPARATELY BY THE PROJECT MANAGER, A/E, OR CONTRACTOR TO PROVIDE MATERIALS OR TO ACCOMPLISH SPECIFIC TASKS RELATED TO BUT NOT INCLUDED IN THE WORK
3. **ON-SITE SUPERVISION:** THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL EMPLOY A COMPETENT SUPERINTENDENT WHO SHALL BE IN ATTENDANCE AT THE SITE AT ALL TIMES DURING PERFORMANCE OF THE WORK
4. **DRAWINGS, SPECIFICATIONS AND DETAILS REQUIRED AT JOBSITE:** THE CONSTRUCTION CONTRACTOR SHALL MAINTAIN A FULL SET OF THE CONSTRUCTION DRAWINGS AND THE STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES AT THE JOBSITE FROM MOBILIZATION THROUGH CONSTRUCTION COMPLETION
5. **THE JOBSITE DRAWINGS, SPECIFICATIONS AND DETAILS SHALL BE CLEARLY MARKED DAILY** IN PENCIL WITH ANY CHANGES IN CONSTRUCTION OVER WHAT IS DEPICTED IN THE DOCUMENTS. AT CONSTRUCTION COMPLETION, THIS JOBSITE MARKUP SET SHALL BE DELIVERED TO THE PROJECT MANAGER TO BE FORWARDED TO THE A/E VENDOR FOR PRODUCTION OF "AS-BUILT" DRAWINGS
6. **THE CONTRACTOR SHALL CONFINE ALL CONSTRUCTION AND RELATED OPERATIONS INCLUDING STAGING AND STORAGE OF MATERIALS AND EQUIPMENT, PARKING, TEMPORARY FACILITIES, AND WASTE STORAGE TO THE LEASE PARCEL UNLESS OTHERWISE PERMITTED BY THE CONTRACT DOCUMENTS**
7. **TEMPORARY UTILITIES AND FACILITIES:** THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY UTILITIES AND FACILITIES NECESSARY EXCEPT AS OTHERWISE INDICATED IN THE CONSTRUCTION DOCUMENTS. TEMPORARY UTILITIES AND FACILITIES INCLUDE, POTABLE WATER, HEAT, HVAC, ELECTRICITY, SANITARY FACILITIES, WASTE DISPOSAL FACILITIES, AND TELEPHONE/COMMUNICATION SERVICES. PROVIDE TEMPORARY UTILITIES AND FACILITIES IN ACCORDANCE WITH OSHA AND THE AUTHORITY HAVING JURISDICTION. CONTRACTOR MAY UTILIZE THE COMPANY ELECTRICAL SERVICE IN THE COMPLETION OF THE WORK WHEN IT BECOMES AVAILABLE. USE OF THE LESSORS OR SITE OWNER'S UTILITIES OR FACILITIES IS EXPRESSLY FORBIDDEN EXCEPT AS OTHERWISE ALLOWED IN THE CONTRACT DOCUMENTS
8. **TESTING:** REQUIREMENTS FOR TESTING BY THIS CONTRACTOR SHALL BE AS INDICATED HERewith, ON THE CONSTRUCTION DRAWINGS, AND IN THE INDIVIDUAL SECTIONS OF THESE SPECIFICATIONS. SHOULD PROJECT MANAGER CHOOSE TO ENGAGE ANY THIRD-PARTY TO CONDUCT ADDITIONAL TESTING, THE CONTRACTOR SHALL COOPERATE WITH AND PROVIDE A WORK AREA FOR TEST AGENCY
9. **COMPANY FURNISHED MATERIAL AND EQUIPMENT:** ALL HANDLING, STORAGE AND INSTALLATION OF COMPANY FURNISHED MATERIAL AND EQUIPMENT SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND WITH THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
10. **CONTRACTOR SHALL PROCURE ALL OTHER REQUIRED WORK RELATED MATERIALS NOT PROVIDED BY COMPANY TO SUCCESSFULLY CONSTRUCT A WIRELESS FACILITY**
11. **DIMENSIONS:** VERIFY DIMENSIONS INDICATED ON DRAWINGS WITH FIELD DIMENSIONS BEFORE FABRICATION OR ORDERING OF MATERIALS. DO NOT SCALE DRAWINGS
12. **EXISTING CONDITIONS:** NOTIFY THE PROJECT MANAGER OF EXISTING CONDITIONS DIFFERING FROM THOSE INDICATED ON THE DRAWINGS. DO NOT REMOVE OR ALTER STRUCTURAL COMPONENTS WITHOUT PRIOR WRITTEN APPROVAL FROM THE ARCHITECT AND ENGINEER

13. **RECEIPT OF MATERIAL AND EQUIPMENT:** CONTRACTOR IS RESPONSIBLE FOR COMPANY PROVIDED MATERIAL AND EQUIPMENT AND UPON RECEIPT SHALL:
  - A. ACCEPT DELIVERIES AS SHIPPED AND TAKE RECEIPT
  - B. VERIFY COMPLETENESS AND CONDITION OF ALL DELIVERIES
  - C. TAKE RESPONSIBILITY FOR EQUIPMENT AND PROVIDE INSURANCE PROTECTION AS REQUIRED IN AGREEMENT
  - D. RECORD ANY DEFECTS OR DAMAGES AND WITHIN TWENTY-FOUR HOURS AFTER RECEIPT, REPORT TO COMPANY OR ITS DESIGNATED PROJECT REPRESENTATIVE OF SUCH
  - E. PROVIDE SECURE AND NECESSARY WEATHER PROTECTED WAREHOUSING
  - F. COORDINATE SAFE AND SECURE TRANSPORTATION OF MATERIAL AND EQUIPMENT, DELIVERING AND OFF-LOADING FROM CONTRACTOR'S WAREHOUSE TO SITE
14. **NO WORK SHALL COMMENCE PRIOR TO PROJECT MANAGER AND WRITTEN NOTICE TO PROCEED**
15. **UPON RECEIVING NOTICE TO PROCEED, CONTRACTOR SHALL FULLY PERFORM ALL WORK NECESSARY TO PROVIDE PROJECT MANAGER WITH AN OPERATIONAL WIRELESS FACILITY**

**DIVISION 2 - SITE CONSTRUCTION:**

1. **PROTECTION OF EXISTING UTILITIES:** THE CONTRACTOR SHALL CHECK WITH THE LOCAL UTILITIES AND THE RESPECTIVE UTILITY LOCATOR COMPANIES PRIOR TO STARTING EXCAVATION OPERATIONS IN EACH RESPECTIVE AREA TO ASCERTAIN THE LOCATIONS OF KNOWN UTILITY LINES. THE LOCATIONS, NUMBER AND TYPES OF EXISTING UTILITY LINES DETAILED ON THE CONSTRUCTION DRAWINGS ARE APPROXIMATE AND DO NOT REPRESENT EXACT INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ALL LINES DAMAGED DURING EXCAVATION AND ALL ASSOCIATED OPERATIONS. ALL UTILITY LINES UNCOVERED DURING THE EXCAVATION OPERATIONS, SHALL BE PROTECTED FROM DAMAGE DURING EXCAVATION AND ASSOCIATED OPERATIONS. ALL REPAIRS SHALL BE APPROVED BY THE UTILITY COMPANY
2. **DURING EXCAVATION, MATERIAL SUITABLE FOR BACKFILLING SHALL BE STOCKPILED IN AN ORDERLY MANNER A SUFFICIENT DISTANCE FROM THE BANKS OF THE TRENCH TO AVOID OVERLOADING AND TO PREVENT SLIDES OR CAVE-INS.** ALL EXCAVATED MATERIALS NOT REQUIRED OR SUITABLE FOR BACKFILL SHALL BE REMOVED AND DISPOSED OF AT THE CONTRACTOR'S EXPENSE
3. **CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH.** AT THE COMPLETION OF THE WORK, CONTRACTOR SHALL REMOVE FROM THE SITE ALL REMAINING RUBBISH, IMPLEMENTS, TEMPORARY FACILITIES, AND SURPLUS MATERIALS
4. **CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO DISCOVER AND LOCATE ANY HAZARDOUS CONDITION**
  - A. IN THE EVENT CONTRACTOR ENCOUNTERS ANY HAZARDOUS CONDITION WHICH HAS NOT BEEN ABATED OR OTHERWISE MITIGATED, CONTRACTOR AND ALL OTHER PERSONS SHALL IMMEDIATELY STOP WORK IN THE AFFECTED AREA AND NOTIFY COMPANY IN WRITING. THE WORK IN THE AFFECTED AREA SHALL NOT BE RESUMED EXCEPT BY WRITTEN NOTIFICATION BY COMPANY
  - B. CONTRACTOR AGREES TO USE CARE WHILE ON THE SITE AND SHALL NOT TAKE ANY ACTION THAT WILL OR MAY RESULT IN OR CAUSE THE HAZARDOUS CONDITION TO BE FURTHER RELEASED IN THE ENVIRONMENT, OR TO FURTHER EXPOSE INDIVIDUALS TO THE HAZARD
5. **CONTRACTOR'S ACTIVITIES SHALL BE RESTRICTED TO THE PROJECT LIMITS. SHOULD AREAS OUTSIDE THE PROJECT LIMITS BE AFFECTED BY CONTRACTOR'S ACTIVITIES, CONTRACTOR SHALL IMMEDIATELY RETURN THEM TO ORIGINAL CONDITION**

**DIVISION 16 - ELECTRICAL**

ALL ELECTRICAL WORK SHALL MEET THE REQUIREMENTS OF SPRINT'S "STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES", REV 4.0 DATED 2-15-2011 IN ITS ENTIRETY.

1. **CODES AND STANDARDS:**
  - A. THE CODES AND STANDARDS REFERENCED IN DIVISION 16 SHALL BE THE MOST CURRENT REVISION, REGARDLESS OF THE ACTUAL YEAR INDICATED HEREINAFTER, EXCEPT AS OTHERWISE REQUIRED BY DIVISION 1.
  - B. THE ENTIRE ELECTRICAL INSTALLATION SHALL COMPLY FULLY WITH THE REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION.
  - C. THE WORK SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF THE FOLLOWING:
    1. NATIONAL ELECTRICAL CODE (NEC),
    2. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) CODES AND STANDARDS,
    3. OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA),
2. **PERMITS, FEES AND LICENSES:** THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, FEES AND LICENSES TO COMPLETE THE SITE AND MAKE IT FULLY OPERATIONAL FOR THE INTENDED USE.
3. **ALL EQUIPMENT FURNISHED BY DIVISION 16 SHALL CARRY UL LABELS AND LISTINGS WHERE SUCH LABELS AND LISTINGS ARE AVAILABLE IN THE INDUSTRY.**



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PH63XC039

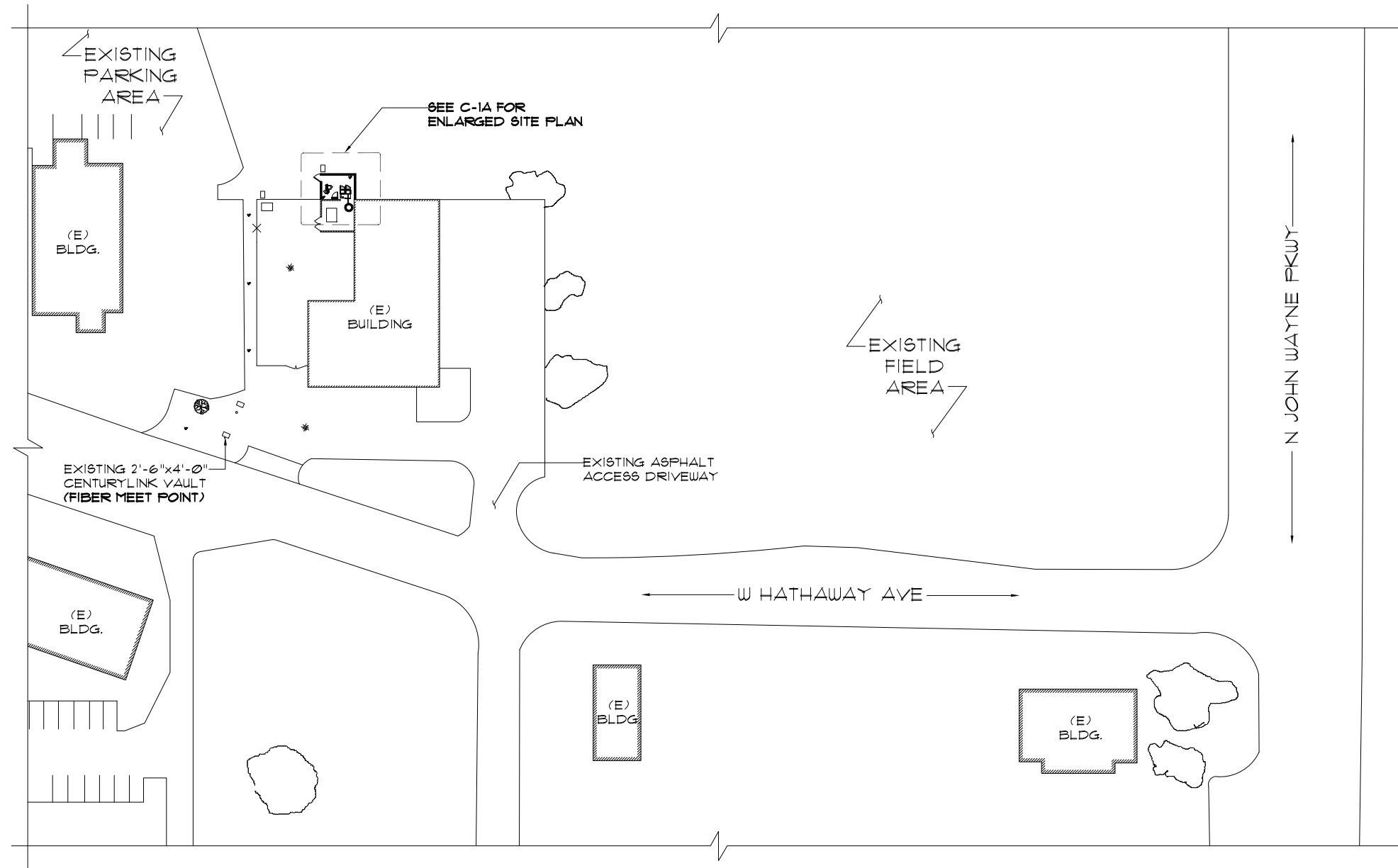
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MARIKOPE, AZ 85139

SHEET NAME  
GENERAL  
NOTES

SHEET NUMBER  
T-2

ABBREVIATIONS	
AFF	ABOVE FINISHED FLOOR
AGL	ABOVE GRADE LEVEL
AMSL	ABOVE MEAN SEA LEVEL
APPROX	APPROXIMATE
AWG	AMERICAN WIRE GAUGE
BBU	BATTERY BACKUP UNIT
BLDG	BUILDING
BTS	BASE TRANSCIEVER STATION
CLR	CLEAR
COL	COLUMN
CONC	CONCRETE
CND	CONDUIT
DWG	DRAWING
FT	FOOT(FEET)
EGB	EQUIPMENT GROUND BAR
ELEC	ELECTRICAL
EMT	ELECTRICAL METALLIC TUBING
ELEV	ELEVATION
EQUIP	EQUIPMENT
E	EXISTING
EXT	EXTERIOR
FND	FOUNDATION
GA	GAUGE
GALV	GALVANIZED
GPS	GLOBAL POSITIONING SYSTEM
GND	GROUND
LTE	LONG TERM EVOLUTION
MAX	MAXIMUM
MFR	MANUFACTURER
MGB	MASTER GROUND BAR
MIN	MINIMUM
MMBTS	MULTI MODAL BASE STATION
NTS	NOT TO SCALE
O.C.	ON CENTER
OE/OT	OVERHEAD ELECTRIC/TELCO
RFDS	RF DATA SHEET
RGS	RIGID GALVANIZED STEEL
IN	INCH(ES)
INT	INTERIOR
LB.(#)	POUND(S)
RRU	REMOTE RADIO UNIT
SF	SQUARE FOOT
STL	STEEL
TYP	TYPICAL
UE/UT	UNDERGROUND ELECTRIC/TELCO
UNO	UNLESS NOTED OTHERWISE
VIF	VERIFY IN FIELD
W/	WITH
XFMR	TRANSFORMER
PL	PLATE

SYMBOLS	
	CENTERLINE
	REVISION
	WORK POINT
	UTILITY POLE
	BRICK
	COMPRESSED STONE
	CONCRETE
	EARTH
	GRAVEL
	MASONRY
	STEEL
	CENTERLINE
	PROPERTY LINE
	LEASE LINE
	EASEMENT LINE
	CHAIN LINK FENCE
	WOOD FENCE
	BELOW GRADE ELECTRIC
	BELOW GRADE TELEPHONE
	OVERHEAD ELECTRIC/TELEPHONE
	SECTION REFERENCE



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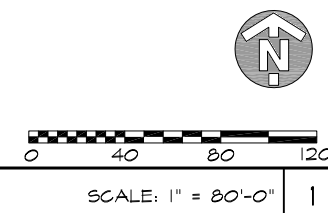
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SHEET NAME  
SITE PLAN

SHEET NUMBER  
C-1



SITE PLAN

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**NOTE:**  
NEW 8' HIGH CMU WALL TO BE PAINTED TO MATCH EXISTING BUILDING WALL

**NOTE:**  
CONTRACTOR TO CALL 811, 12 HOURS PRIOR TO EXCAVATING FOR UNDERGROUND UTILITY LOCATIONS. LOCATION SURROUNDING EXCAVATED AREA MUST BE PRIVATELY LOCATED FOR NON-PUBLIC UTILITIES



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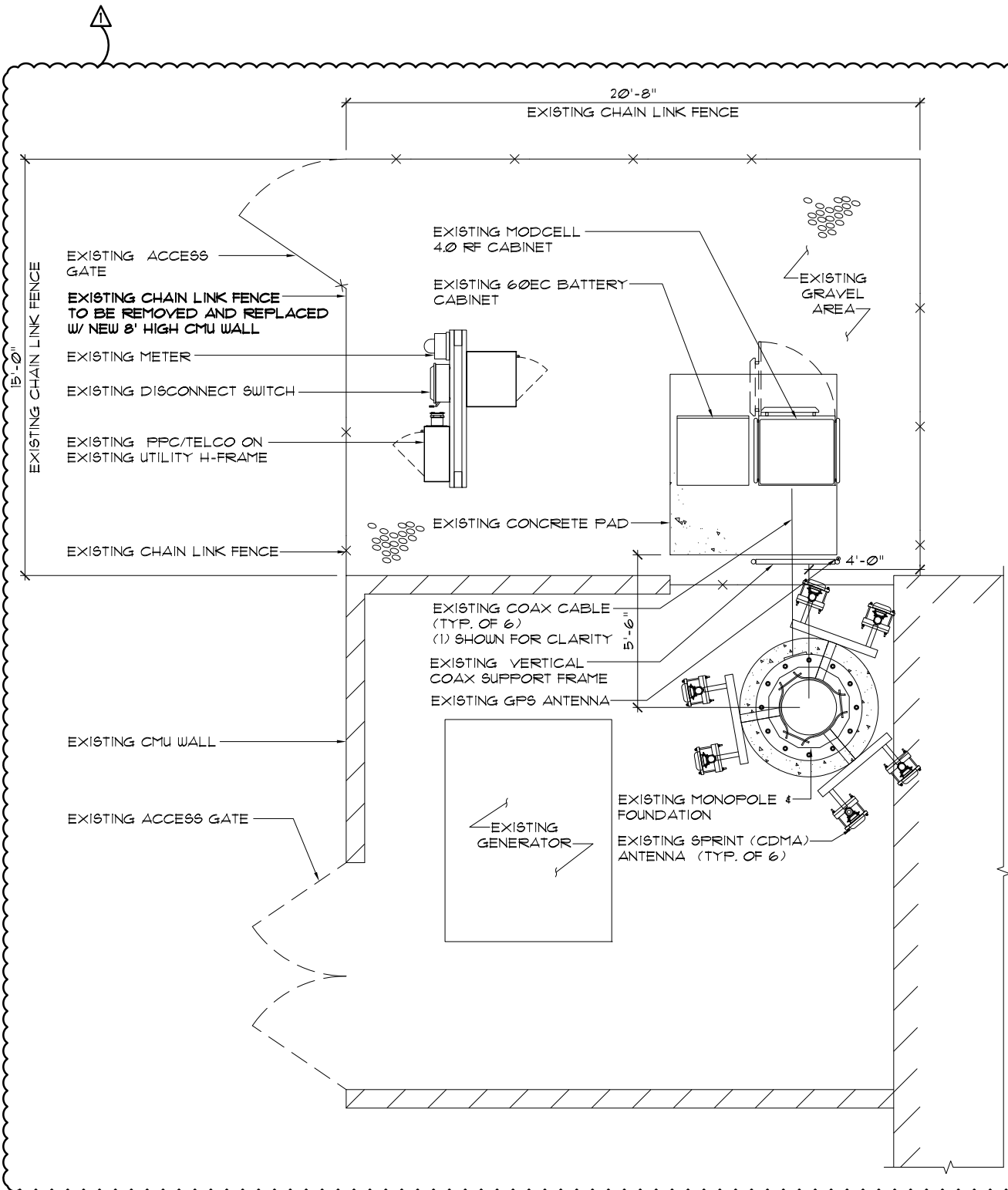
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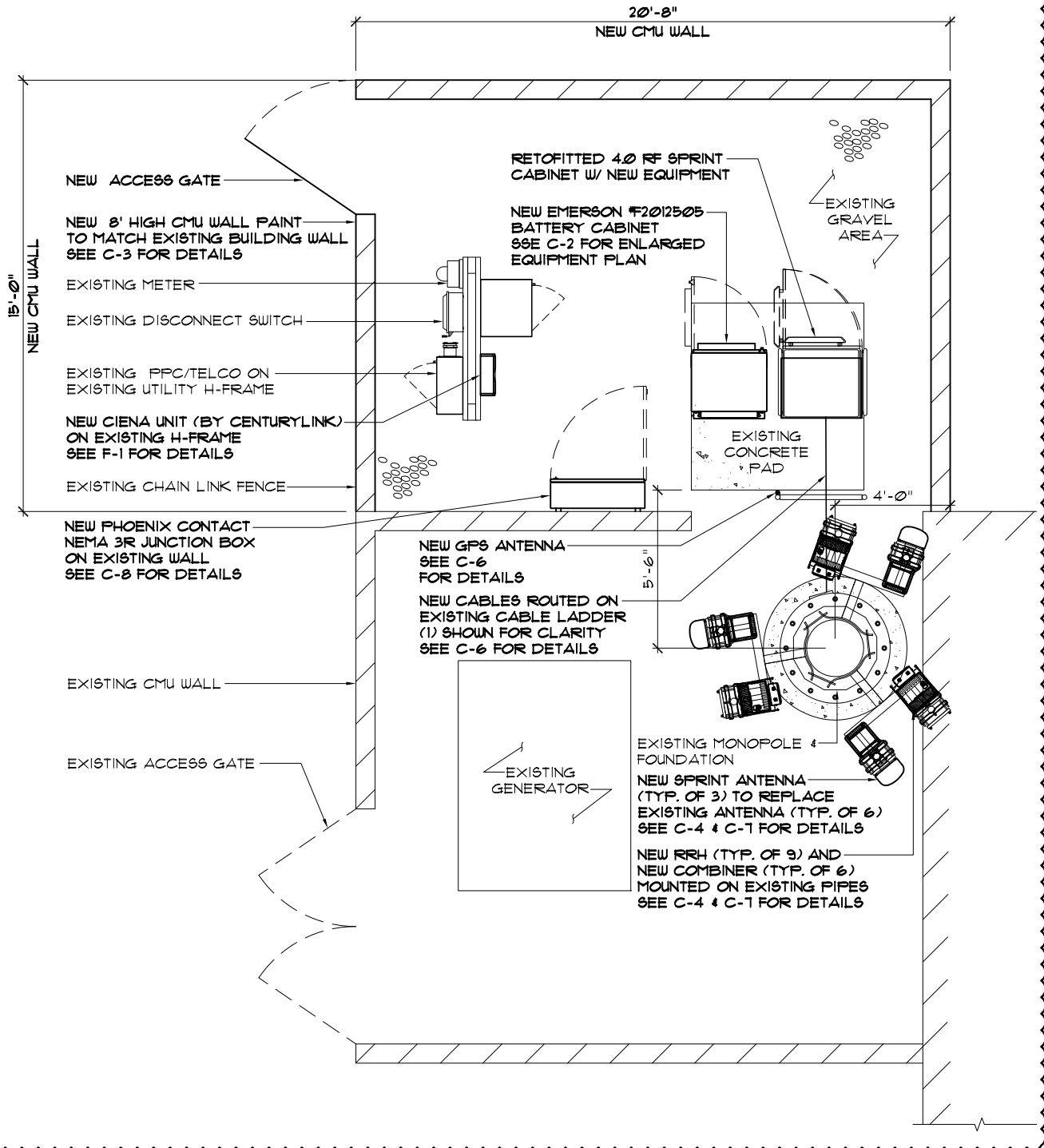
SHEET NAME  
ENLARGED SITE PLAN

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C-1A



EXISTING ENLARGED SITE PLAN

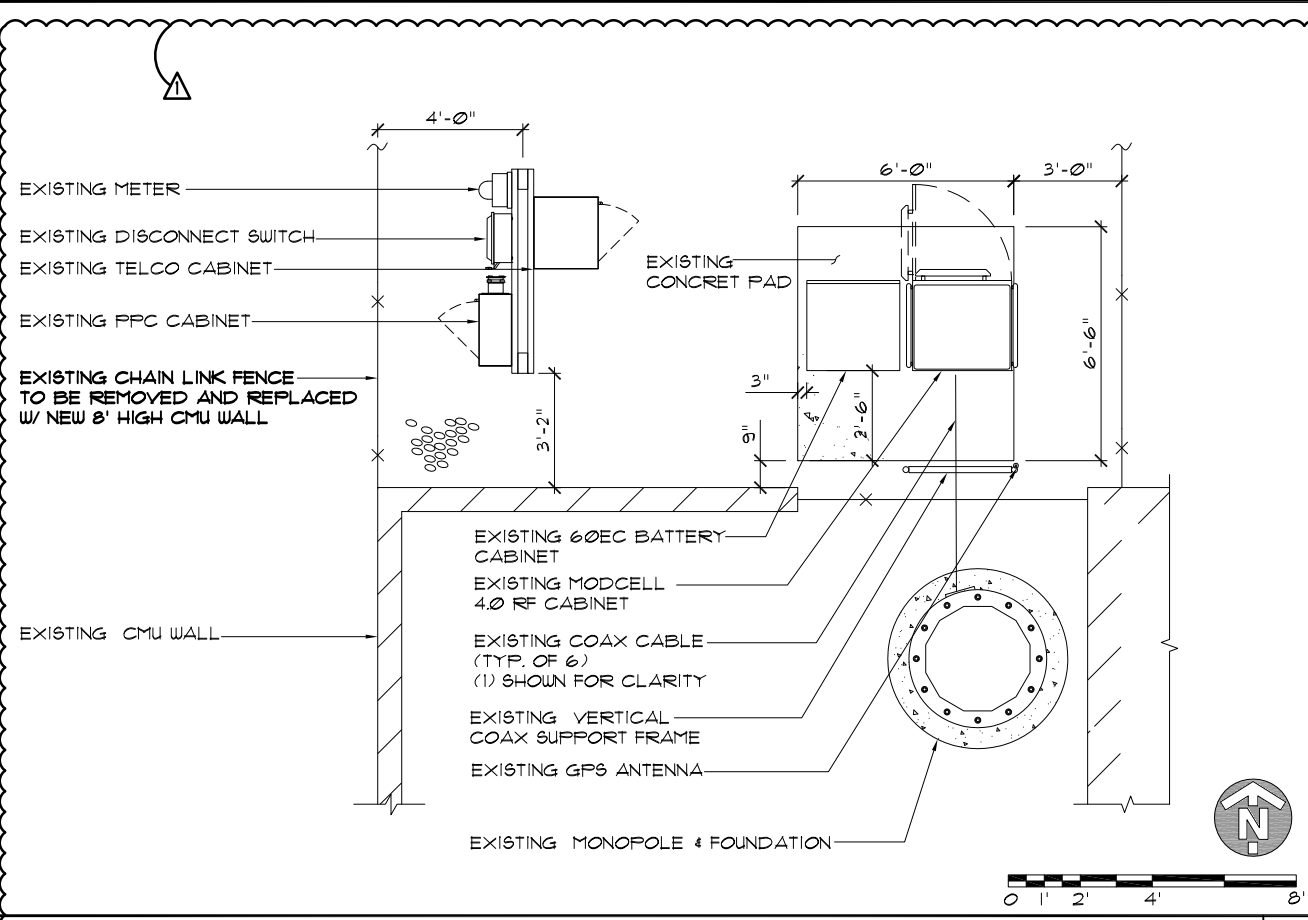
SCALE: 3/16" = 1'-0" 1



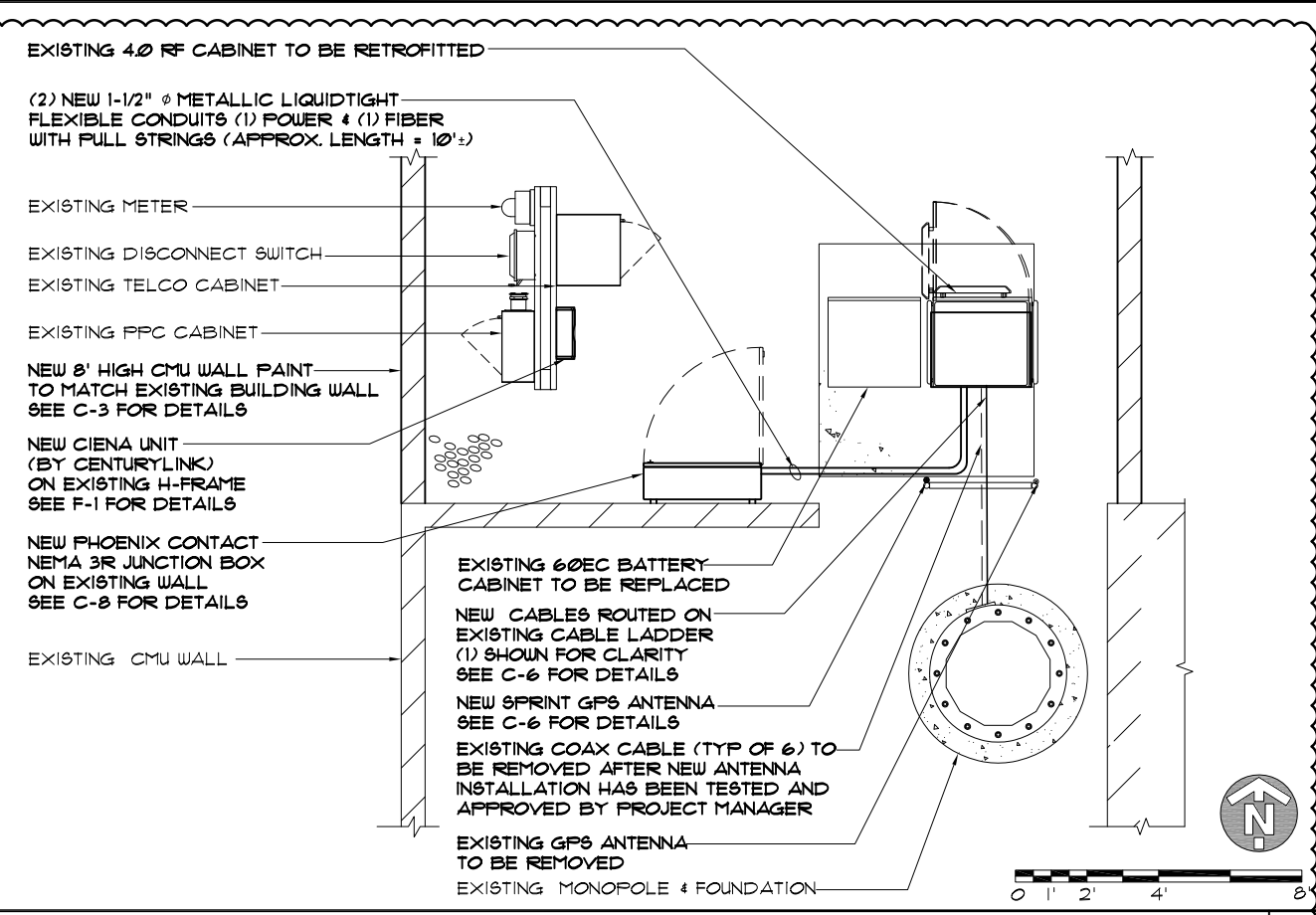
FINAL ENLARGED SITE PLAN

SCALE: 3/16" = 1'-0" 2

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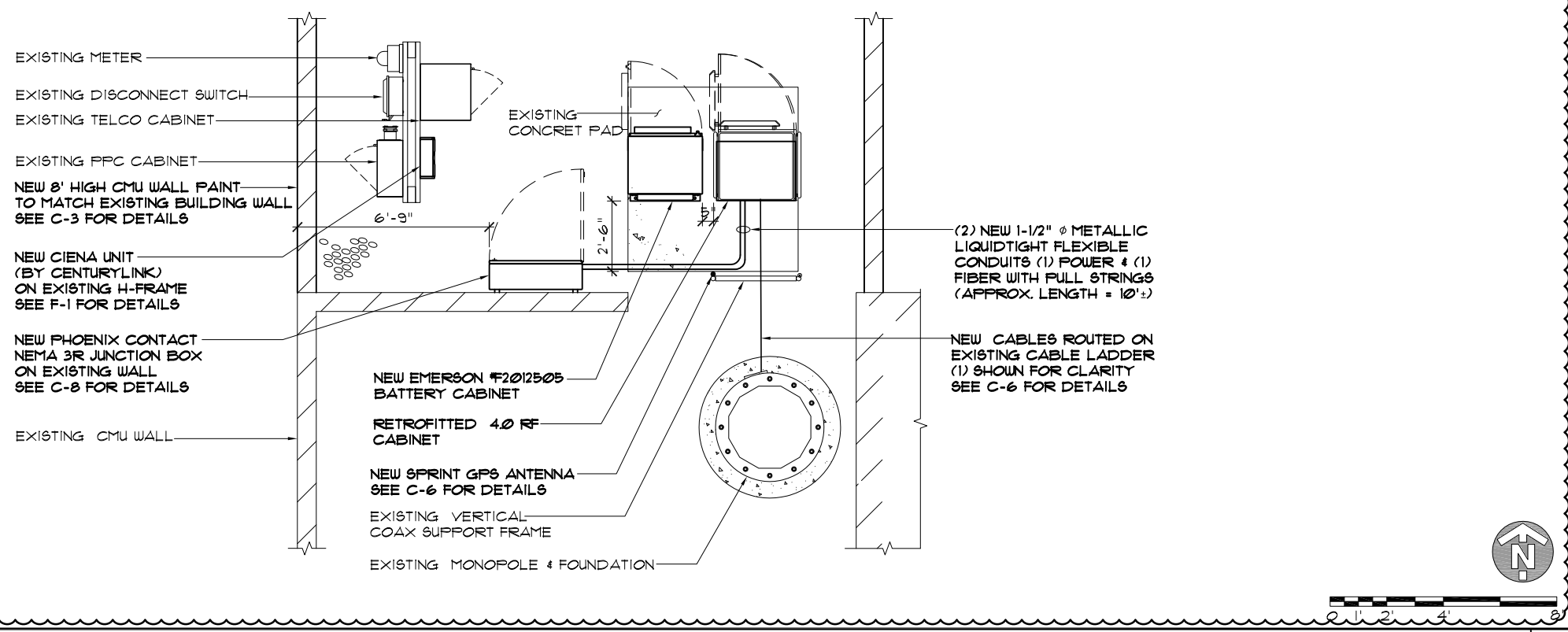


EXISTING EQUIPMENT PLAN SCALE: 3/16" = 1'-0" 1



INTERIM / TEMPORARY EQUIPMENT PLAN SCALE: 3/16" = 1'-0" 2

**NOTE:**  
NEW 8' HIGH CMU WALL TO BE PAINTED TO MATCH EXISTING BUILDING WALL



FINAL / PERMANENT EQUIPMENT PLAN SCALE: 3/16" = 1'-0" 3



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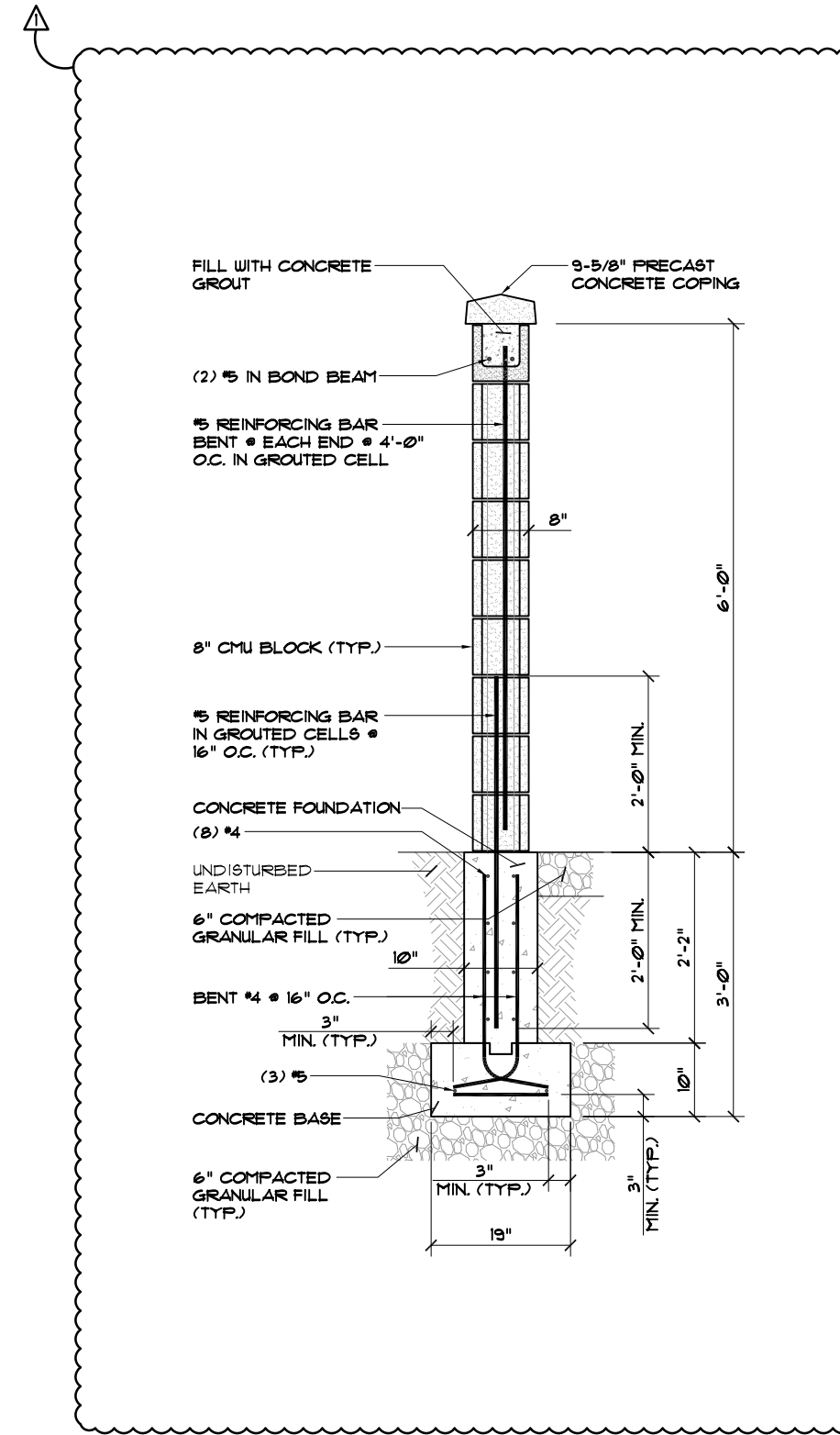
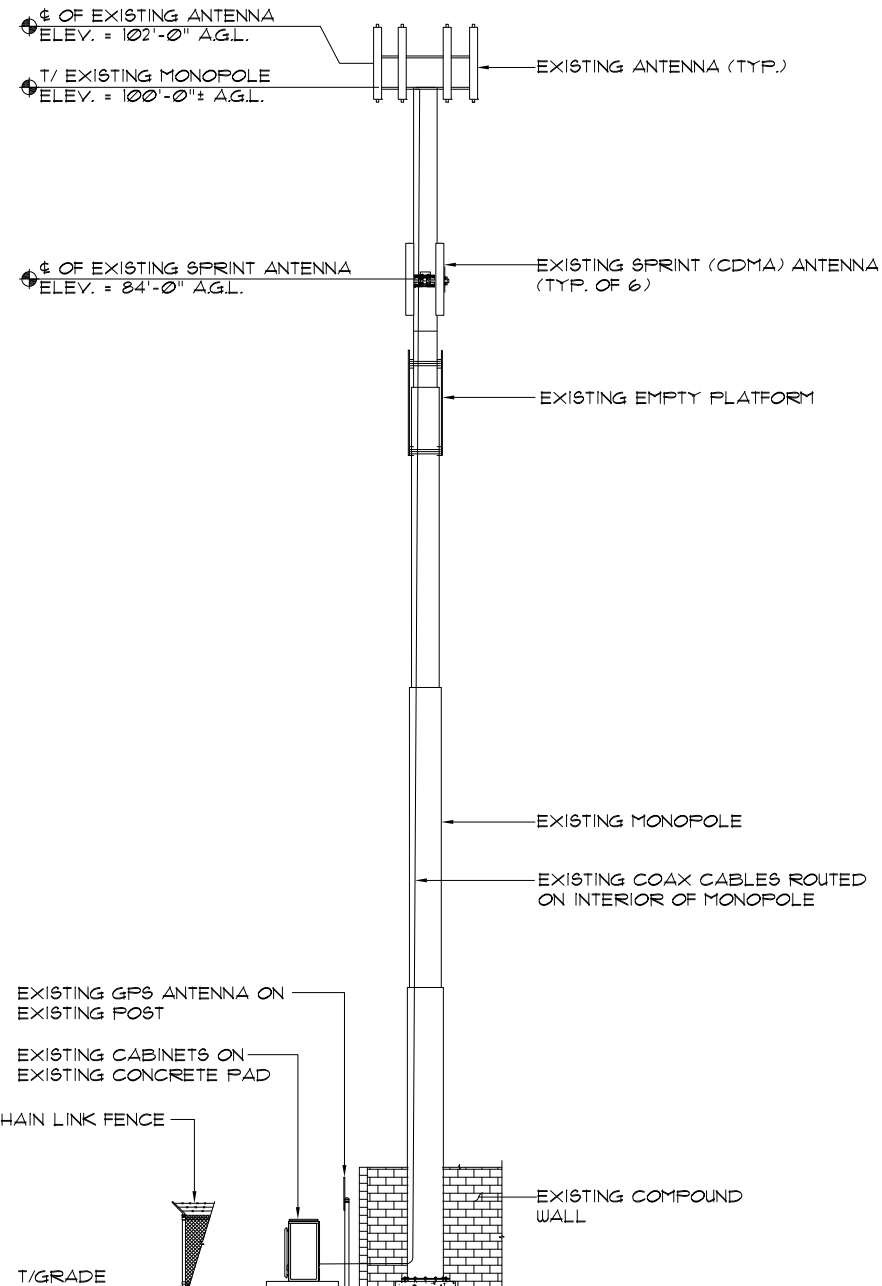
SHEET NAME

ENLARGED  
EQUIPMENT  
PLAN

SHEET NUMBER

C-2

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EXISTING ELEVATION

SCALE: 1/16" = 1'-0" 1

CMU WALL DETAIL

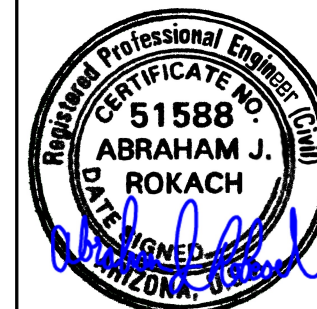
SCALE: N.T.S. 2



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APPROVED BY: AR

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C	4/11/13	PRELIMINARY FINAL	KB
D	8/23/13	FOR PERMITS	CB
E	9/19/13	PRELIMINARY FINAL	AA
Δ	2/12/14	REVISION	AA



DATE SIGNED: 2/12/2014  
SITE NAME

FILL IN-PHX312

SITE NO.  
PH63XC039

SITE ADDRESS  
44870 W. HATHAWAY AVE.  
MARICOPA, AZ 85139

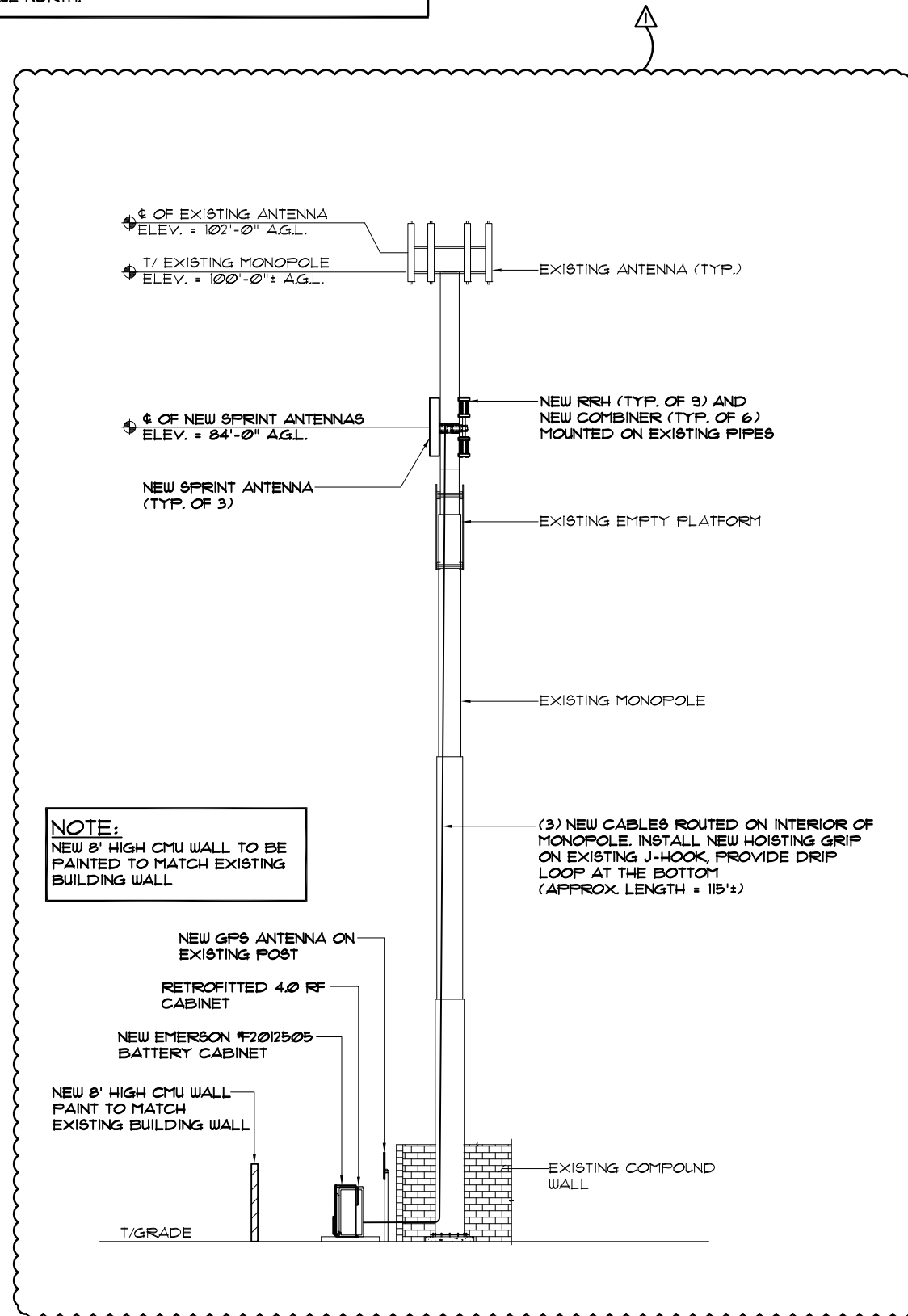
SHEET NAME  
SITE ELEVATION

SHEET NUMBER  
C-3



**ANTENNA NOTES:**

1. THE SIZE, HEIGHT AND DIRECTION OF THE ANTENNA SHALL BE ADJUSTED TO MEET SYSTEM REQUIREMENTS.
2. CONTRACTOR SHALL VERIFY HEIGHT OF ANTENNA WITH ALCATEL LUCENT REPRESENTATIVE OR LATEST RFDS.
3. ALL ANTENNA AZIMUTHS ARE TO BE TAKEN FROM THE TRUE NORTH.

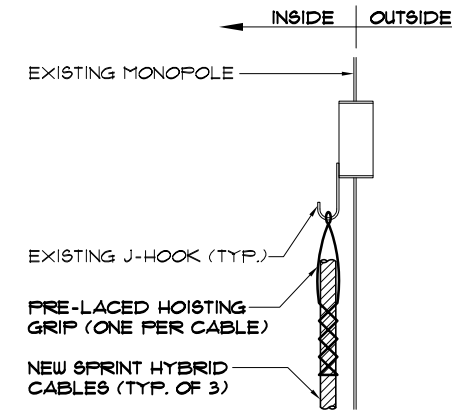


**NOTE:**  
NEW 8' HIGH CMU WALL TO BE PAINTED TO MATCH EXISTING BUILDING WALL

(3) NEW CABLES ROUTED ON INTERIOR OF MONOPOLE. INSTALL NEW HOISTING GRIP ON EXISTING J-HOOK, PROVIDE DRIP LOOP AT THE BOTTOM (APPROX. LENGTH = 115'±)

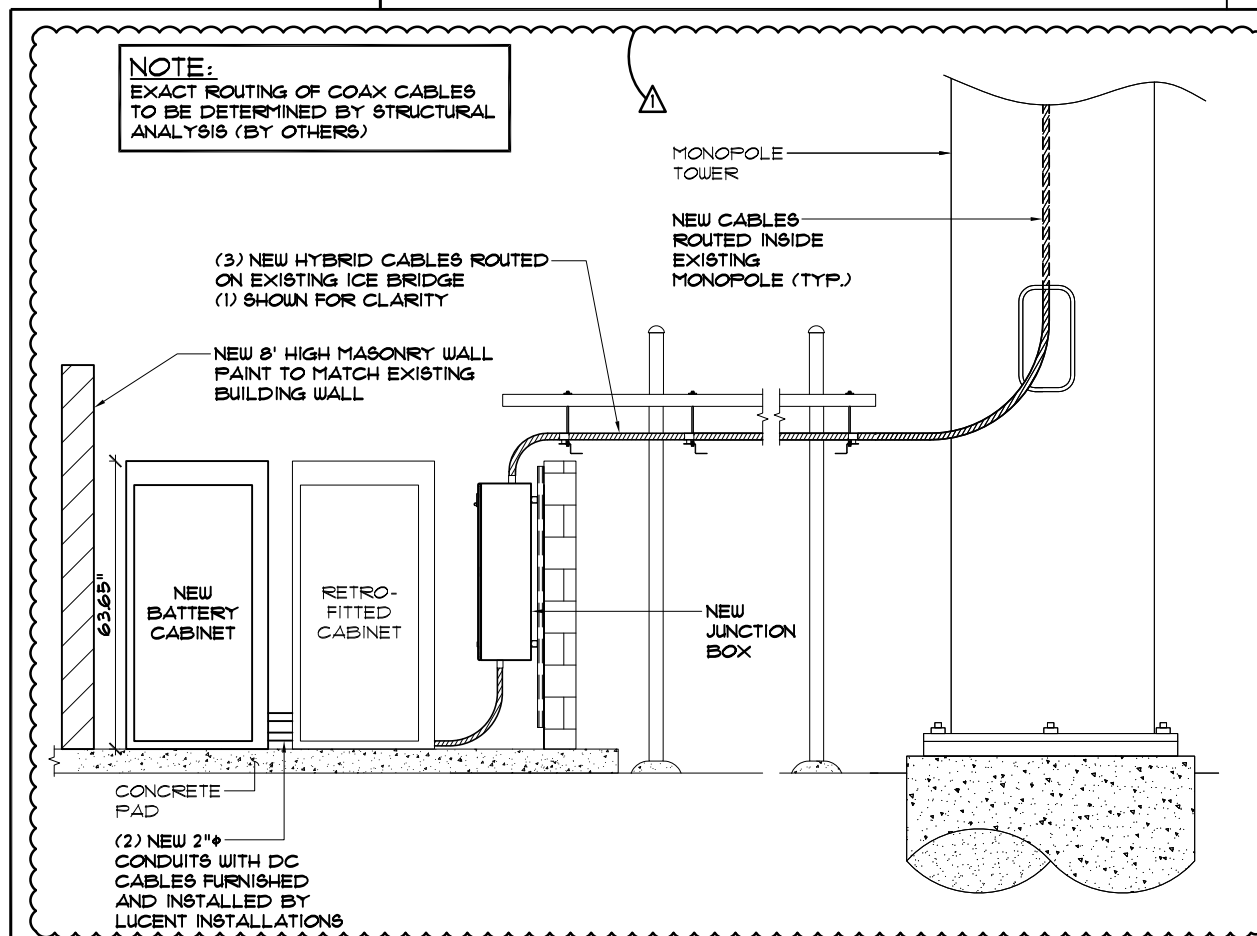
FINAL / PERMANENT ELEVATION

SCALE: 1/16" = 1'-0" 1



CABLE MOUNTING DETAIL

SCALE: N.T.S. 2



ICE BRIDGE DETAIL

SCALE: 1/4" = 1'-0" 3



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Δ	2/12/14	REVISION	AA



DATE SIGNED: 2/12/2014

SITE NAME  
FILL IN-PHX312

SITE NO.  
PH63XC039

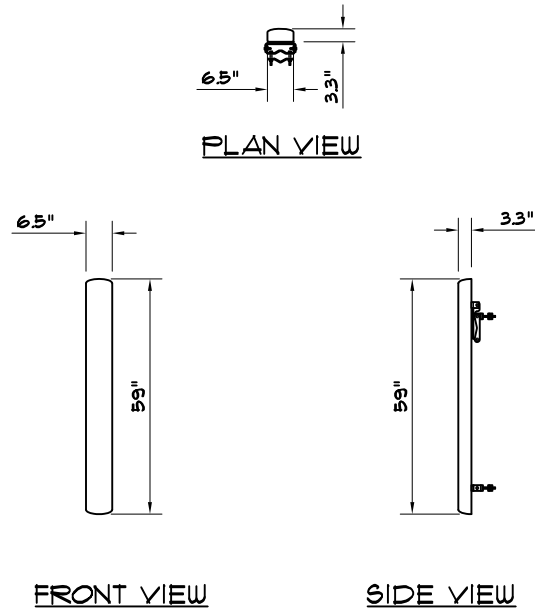
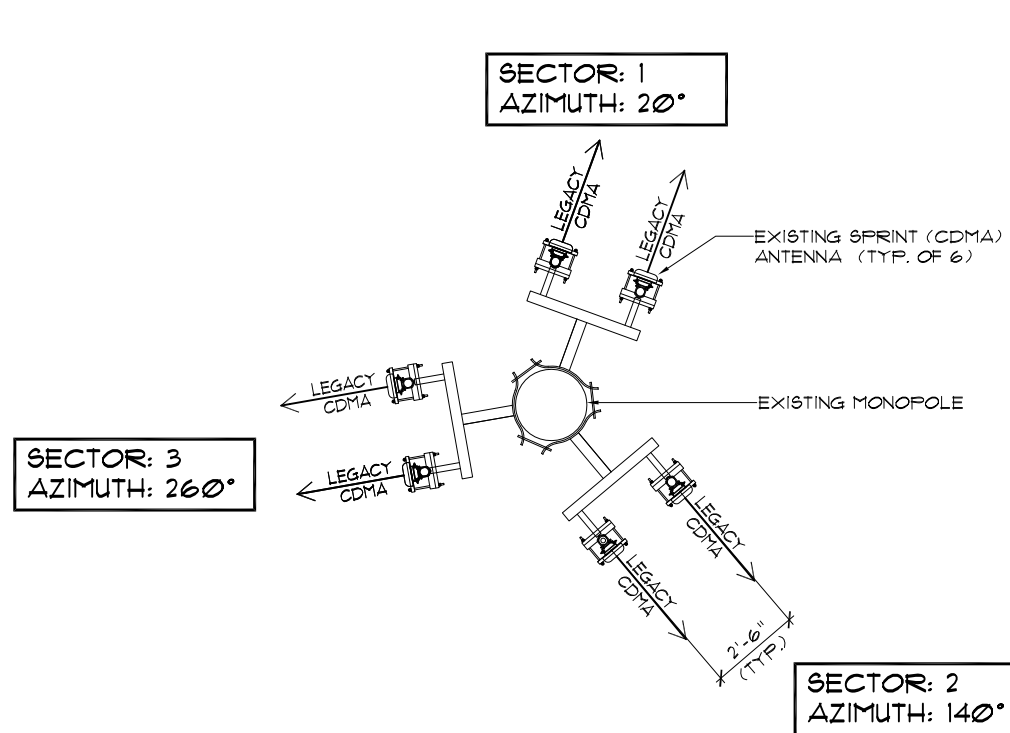
SITE ADDRESS  
44810 W. HATHAWAY AVE.  
MARICOPA, AZ 85139

SHEET NAME  
SITE ELEVATION AND DETAILS

SHEET NUMBER  
C-3A

**NOTE:**  
EXISTING MOUNTING PIPES TO BE REUSED/REPLACED/RELOCATED AS REQUIRED

**NOTE:**  
EXISTING ANTENNAS TO BE REMOVED DURING HOT SWAP OF ANTENNAS (TYP.)



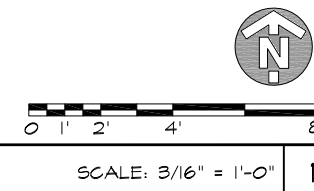
EMS FR90-16-XXXVL  
 FREQUENCY RANGE 1710-2155 MHz  
 WEIGHT 25.9 LBS



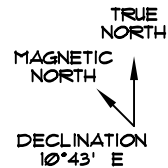
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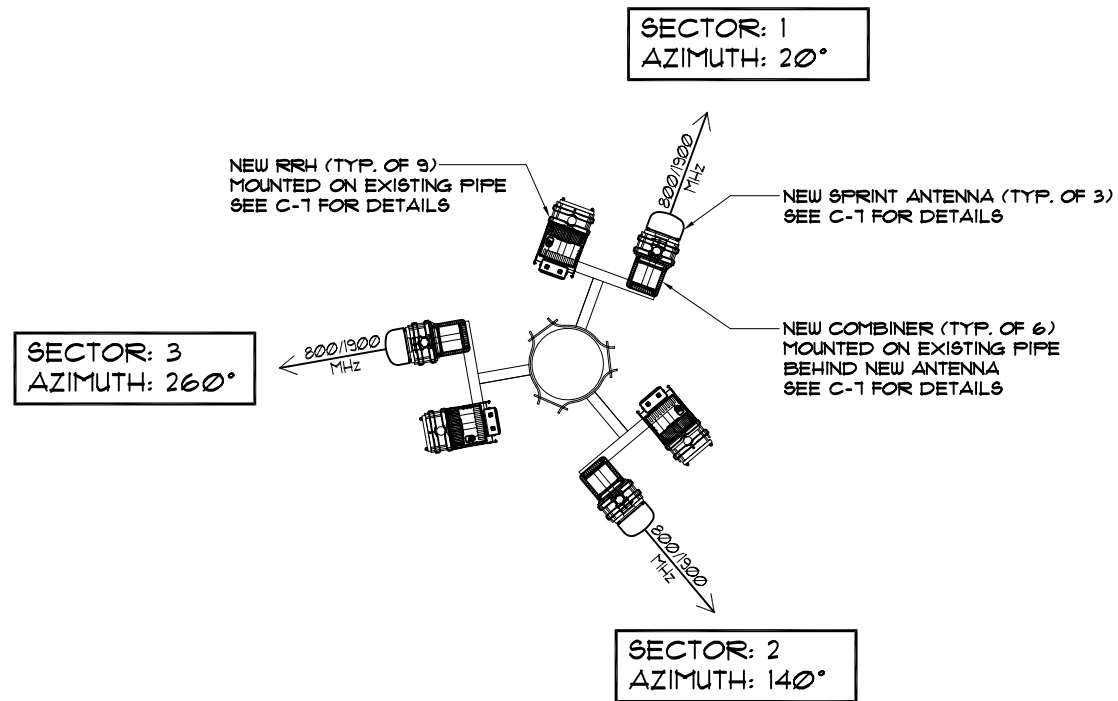
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EXISTING ANTENNA LAYOUT



**NOTE:**  
FINAL AZIMUTHS ARE SUBJECT TO REVISIONS AND ARE TO BE VERIFIED WITH LATEST RF DATA SHEET.

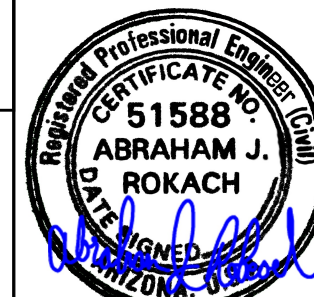


**ANTENNA AREA TABULATIONS**

**EXISTING:**  
 LxWxH = 59"x33"x6.5" = 1265.55 in<sup>3</sup>  
 1265.55 in<sup>3</sup> x 6 ANTENNAS = 7,593.30 in<sup>3</sup>

**NEW:**  
 LxWxH = 72"x17.0"x11.9" = 5,997.60 in<sup>3</sup>  
 5,997.60 in<sup>3</sup> x 3 ANTENNAS = 17,992.80 in<sup>3</sup>

**AREA OF ANTENNA INCREASED:**  
 7,593.30 in<sup>3</sup> / 17,992.80 in<sup>3</sup> = 137%



DATE SIGNED: 2/12/2014  
 SITE NAME

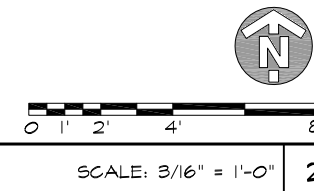
FILL IN-PHX312

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 PH63XC039

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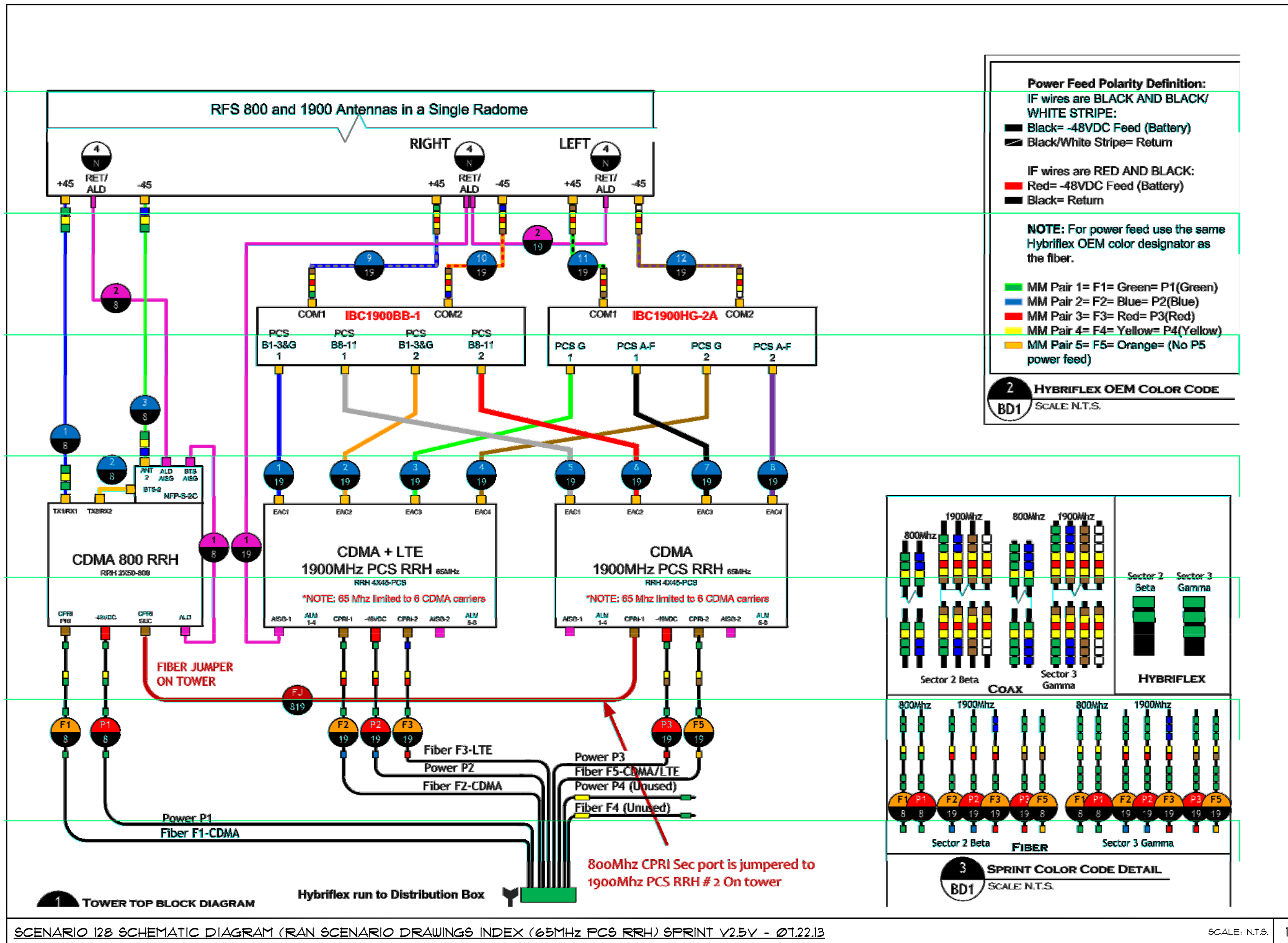
SHEET NAME  
 ANTENNA LAYOUTS

SHEET NUMBER  
 C-4



FINAL / PERMANENT ANTENNA LAYOUT





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FILL IN-PHX312

SITE NO.

PH63XC039

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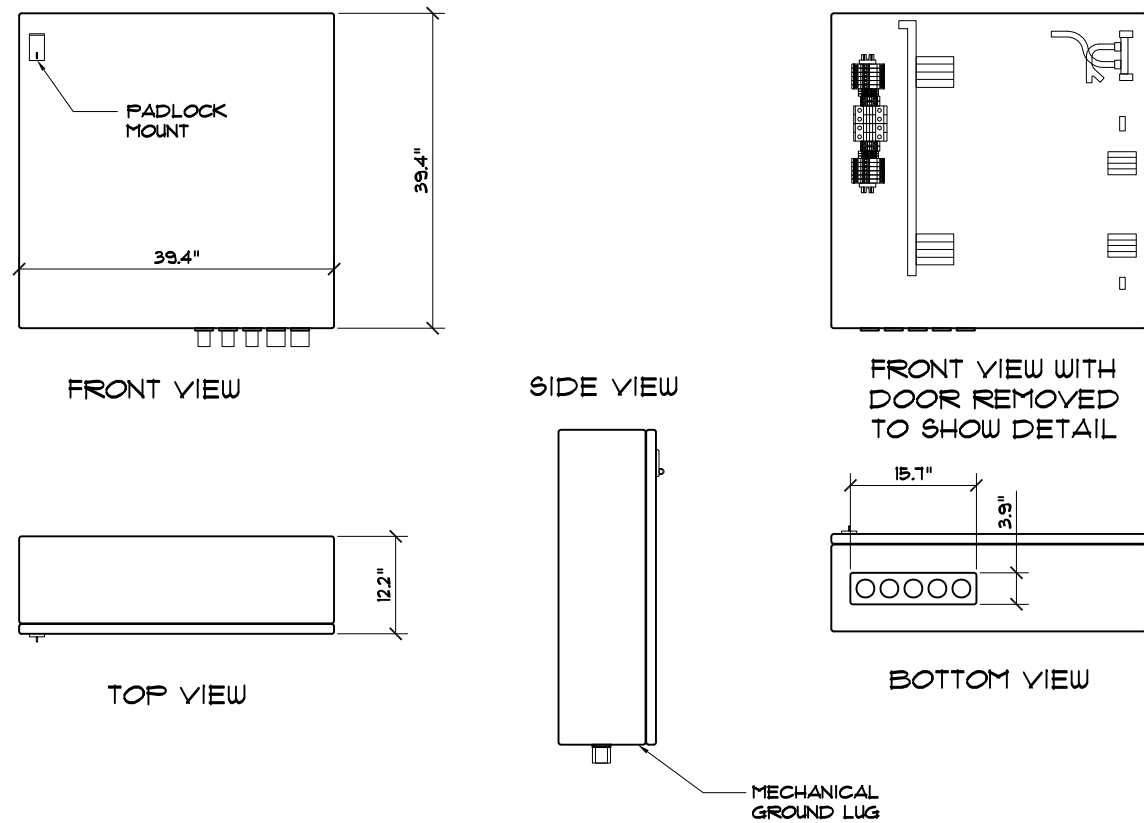
SHEET NAME

ANTENNA DETAILS

SHEET NUMBER

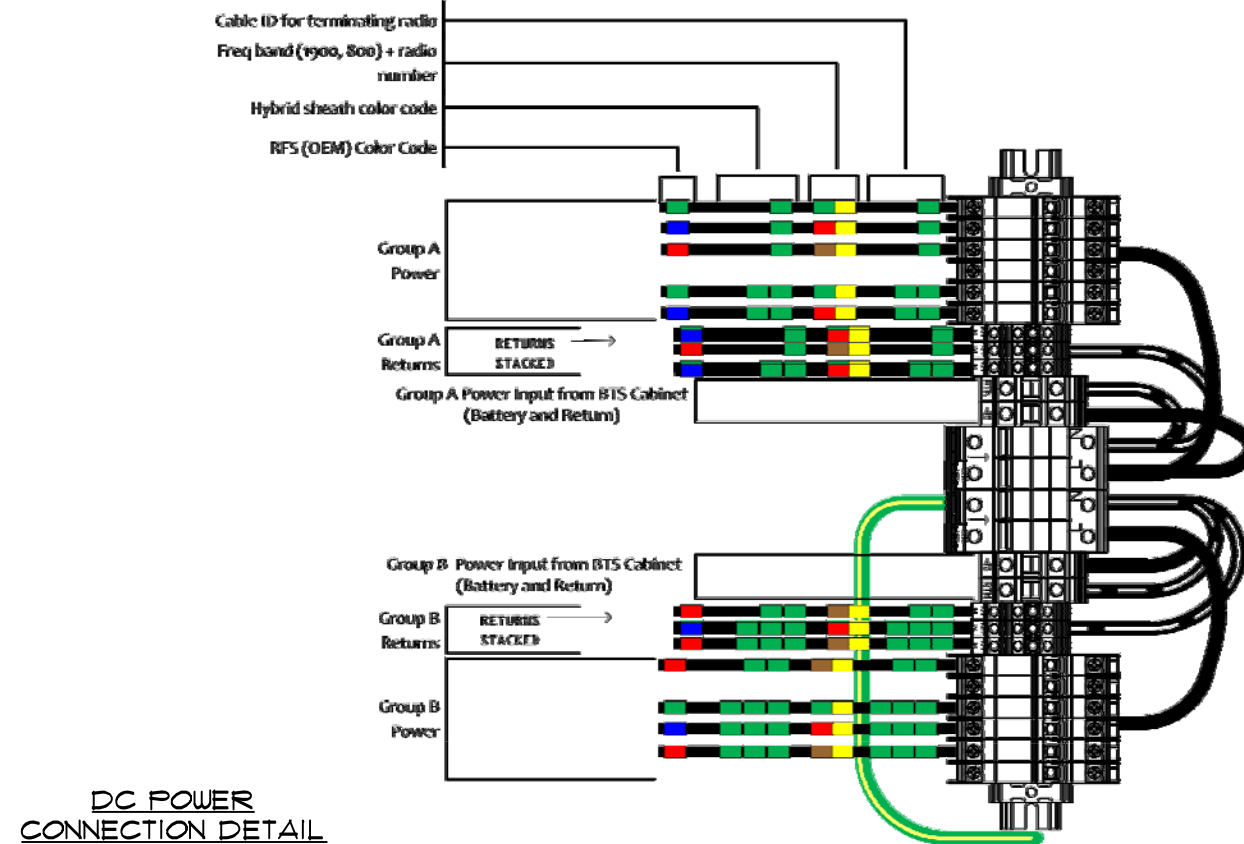
C-5

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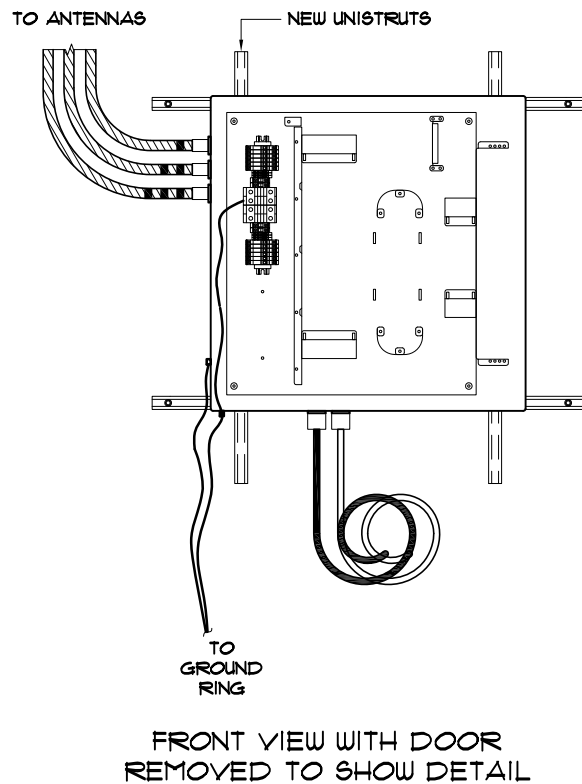


DISTRIBUTION BOX DETAIL

SCALE: N.T.S. 1



DC POWER CONNECTION DETAIL



DISTRIBUTION BOX INSTALL COMPLETE VIEW

SCALE: N.T.S.

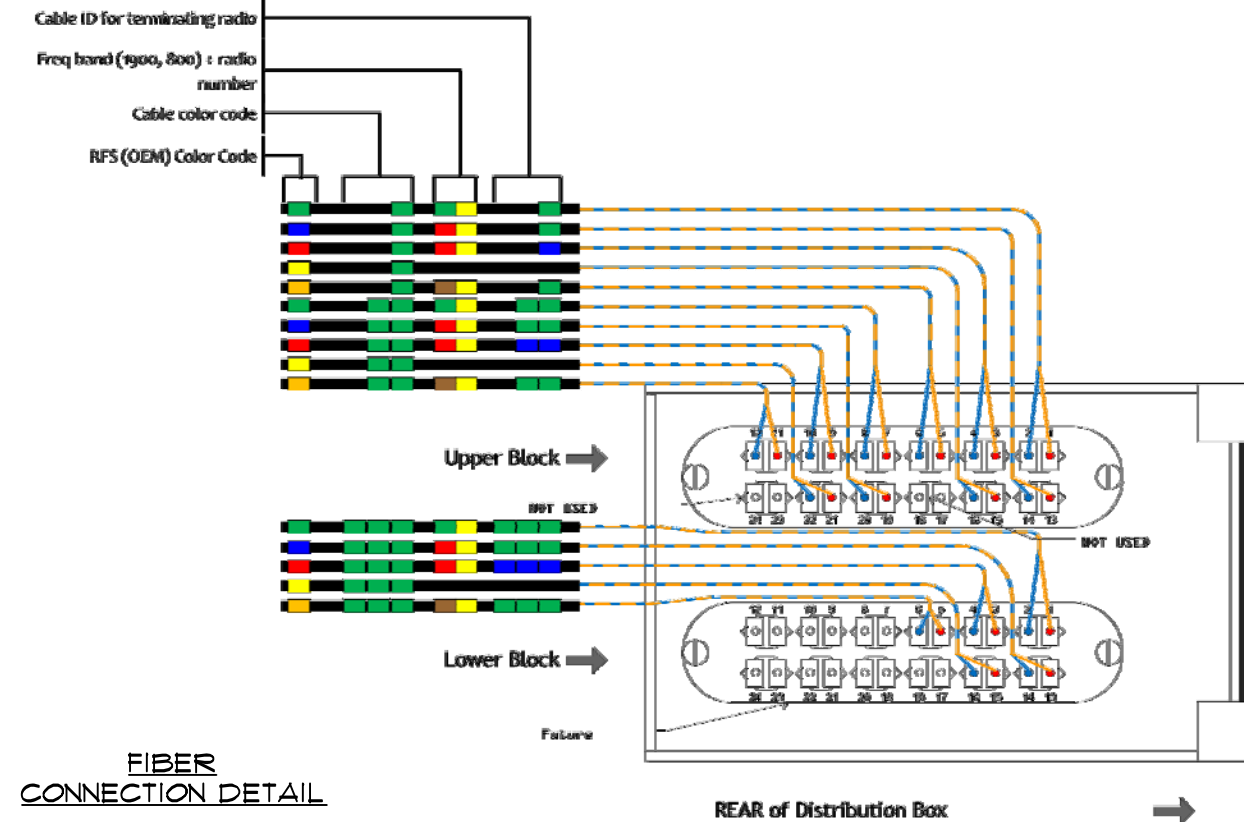
3

- NOTES**
- DISTRIBUTION BOX IS KITTED WITH 50' OF 1-1/2" LIQUID-TIGHT CONDUIT AND CONNECTORS. THIS SHOULD BE -
    - SPLIT IN HALF (25')
    - TERMINATED TO THE DISTRIBUTION BOX AS SHOWN
    - RAN TO AND COILED AS CLOSE TO WHERE THE CABINET IS GOING TO BE MOUNTED AS POSSIBLE
  - DISTRIBUTION BOX IS KITTED WITH 2AWG, POWER CABLE 35' X 2 EACH. RUNS RED AND 2 EACH. RUNS BLACK THIS SHOULD BE COILED AND LEFT INSIDE DISTRIBUTION BOX.
  - INSTALLATION TEAM WILL TERMINATE LIQUID-TIGHT, RUN THE FIBER -JUMPERS AND POWER CABLES FROM MMBTS CABINET TO DISTRIBUTION BOX.

NOTES

SCALE: N.T.S.

4



FIBER CONNECTION DETAIL

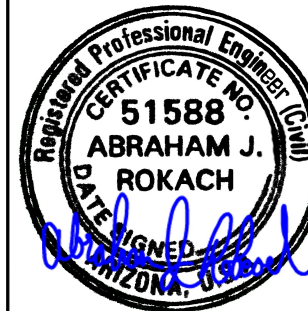
SCENARIO 128 DISTRIBUTION BOX (65MHz PCS RRH) SPRINT V2.5V - 07.22.13 SCALE: N.T.S.

2



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SITE NAME

FILL IN-PHX312

SITE NO.

PH63XC039

SITE ADDRESS

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SHEET NAME

JUNCTION BOX SPECIFICATION

SHEET NUMBER

C-5A

RFDS SHOWN PROVIDED BY SPRINT, DATED: 11/09/12  
(CONTRACTOR SHALL COORDINATE ANTENNA INSTALLATION WITH FINAL SPRINT RFDS)

Market	Phoenix		
Cascade ID	PH63XC039		
	SECTOR 1	SECTOR 2	SECTOR 3
Split sector present	No	No	No
1900MHz_Azimuth	20	140	260
1900MHz_No_of_Antennas	1	1	1
1900MHz_RADCenter(ft)	84	84	84
1900MHz_Antenna Make	RFS	RFS	RFS
1900MHz_Antenna Model	APXV9ERR18-C-A20	APXV9ERR18-C-A20	APXV9ERR18-C-A20
1900MHz_Horizontal_Beamwidth	80	80	80
1900MHz_Vertical_Beamwidth	5.5	5.5	5.5
1900MHz_AntennaHeight (ft)	6	6	6
1900MHz_AntennaGain(dBd)	14.9	14.9	14.9
1900MHz_E_Tilt	0	0	0
1900MHz_M_Tilt	0	0	0
1900MHz_Carrier_Forecast_Year_2013	8	8	8
1900MHz_RRH Manufacturer	ALU	ALU	ALU
1900MHz_RRH Model	RRH 1900 4X45 65MHz	RRH 1900 4X45 65MHz	RRH 1900 4X45 65MHz
1900MHz_RRH Count	2	2	2
1900MHz_RRH Location	Top of the Pole/Tower	Top of the Pole/Tower	Top of the Pole/Tower
1900MHz_Combiner Model	IBC1900BB-1 and IBC1900HG-2A	IBC1900BB-1 and IBC1900HG-2A	IBC1900BB-1 and IBC1900HG-2A
1900MHz_Top_Jumper #1_Length (RRH or Combiner-to-Antenna for TT or Main Coax to	10	10	10
1900MHz_Top_Jumper #1_Cable_Model (RRH or Combiner-to-Antenna for TT or Main Coax	LCF12-50J	LCF12-50J	LCF12-50J
1900MHz_Top_Jumper #2_Length (RRH to Combiner for TT if applicable, ft)	6	6	6
1900MHz_Top_Jumper #2_Cable_Model (RRH to Combiner for TT if applicable)	LCF12-50J	LCF12-50J	LCF12-50J
1900MHz_Main_Coax_Cable_Length (ft)	N/A	N/A	N/A
1900MHz_Main_Coax_Cable_Model	N/A	N/A	N/A
1900MHz_Bottom_Jumper #1_Length (Ground based RRH to Combiner-OR-Main Coax, ft)	N/A	N/A	N/A
1900MHz_Bottom_Jumper #1_Cable_Model (Ground based RRH to Combiner-OR-Main Coax)	N/A	N/A	N/A
1900MHz_Bottom_Jumper #2_Length (Ground based-Combiner to Main Coax, ft)	N/A	N/A	N/A
1900MHz_Bottom_Jumper #2_Cable_Model (Ground based-Combiner to Main Coax)	N/A	N/A	N/A
800MHz_Azimuth	20	140	260
800MHz_No_of_Antennas	0	0	0
800MHz_RADCenter(ft)	84	84	84
800MHz_AntennaMake	RFS	RFS	RFS
800MHz_AntennaModel	APXV9ERR18-C-A20 (Shared w/1900)	APXV9ERR18-C-A20 (Shared w/1900)	APXV9ERR18-C-A20 (Shared w/1900)
800MHz_Horizontal_Beamwidth	80	80	80
800MHz_Vertical_Beamwidth	10.5	10.5	10.5
800MHz_AntennaHeight (ft)	6	6	6
800MHz_AntennaGain (dBd)	11.9	11.9	11.9
800MHz_E_Tilt	-8	-8	0
800MHz_M_Tilt	0	0	0
800MHz_RRH Manufacturer	ALU	ALU	ALU
800MHz_RRH Model	800 MHz RRH 2x50W	800 MHz RRH 2x50W	800 MHz RRH 2x50W
800MHz_RRH Count	1	1	1
800MHz_RRH Location	Top of the Pole/Tower	Top of the Pole/Tower	Top of the Pole/Tower
800_Top_Jumper #1_Length (RRH to Antenna for TT or Main Coax to Antenna for GM)	10	10	10
800_Top_Jumper #1_Cable_Model (RRH to Antenna for TT or Main Coax to Antenna for GM)	LCF12-50J	LCF12-50J	LCF12-50J
800MHz_Main_Coax_Cable_Length (ft)	N/A	N/A	N/A
800MHz_Main_Coax_Cable_Model	N/A	N/A	N/A
800_Bottom_Jumper #1_Length (Ground based RRH to Main Coax)	N/A	N/A	N/A
800_Bottom_Jumper #1_Cable_Model (Ground based RRH to Main Coax)	N/A	N/A	N/A
Plumbing Scenario *	128	128	128

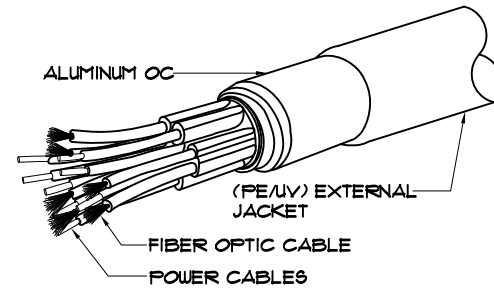
Comments \* If plumbing scenario does not match the material received, please contact your Construction Manager  
11/9/2012

RFDS

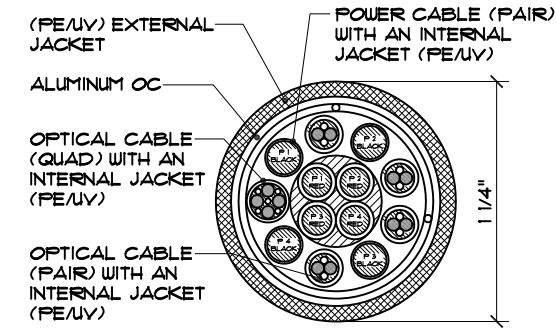
SCALE: N.T.S. 1

GPS ANTENNA DETAILS

SCALE: N.T.S. 3



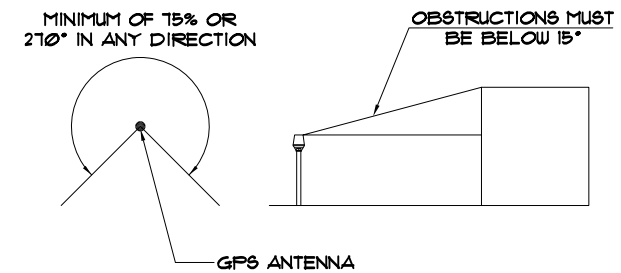
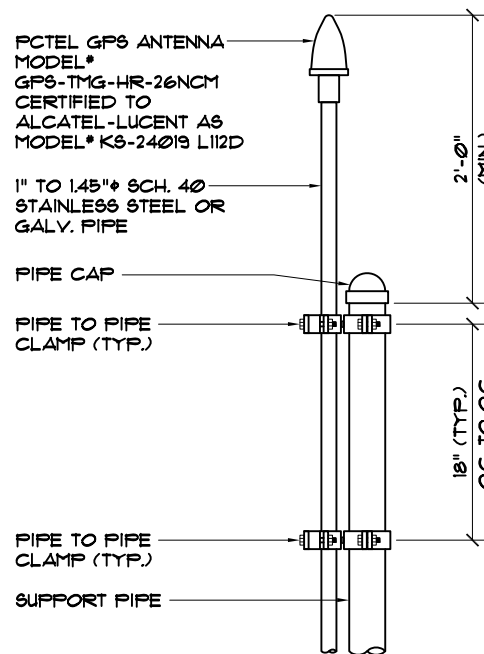
**NOTE:**  
ALL CABLE CONNECTIONS SHALL BE WEATHERPROOFED PER MANUFACTURER'S RECOMMENDATIONS AND SPRINT SPECIFICATIONS



**FIBER OPTIC PROPERTIES:**  
QUANTITY 6, FIBER COUNT (4 PAIRS, 1 QUAD)  
**DC POWER CABLE PROPERTIES:**  
QUANTITY 2, WIRE COUNT (4 PAIRS)

HYBRIFLEX CABLE DETAIL

SCALE: N.T.S. 2



GPS MINIMUM SKY VIEW REQUIREMENTS

- NOTES:**
- THE ELEVATION AND LOCATION OF THE GPS ANTENNA SHALL BE IN ACCORDANCE WITH THE FINAL RF REPORT.
  - THE GPS ANTENNA MOUNT IS DESIGNED TO FASTEN TO A STANDARD 1-1/4" O.D. SCHEDULE 40, GALVANIZED STEEL OR STAINLESS STEEL PIPE. THE PIPE MUST NOT BE THREADED AT THE ANTENNA MOUNT END. THE PIPE SHALL BE CUT TO THE REQUIRED LENGTH (MINIMUM OF 18 INCHES) USING A HAND OR ROTARY PIPE CUTTER TO ASSURE A SMOOTH AND PERPENDICULAR CUT. A HACK SAW SHALL NOT BE USED. THE CUT PIPE END SHALL BE DEBURRED AND SMOOTH IN ORDER TO SEAL AGAINST THE NEOPRENE GASKET ATTACHED TO THE ANTENNA MOUNT.
  - IT IS CRITICAL THAT THE GPS ANTENNA IS MOUNTED SUCH THAT IT IS WITHIN 2 DEGREES OF VERTICAL AND THE BASE OF THE ANTENNA IS WITHIN 2 DEGREES OF LEVEL.
  - DO NOT SWEEP TEST GPS ANTENNA.



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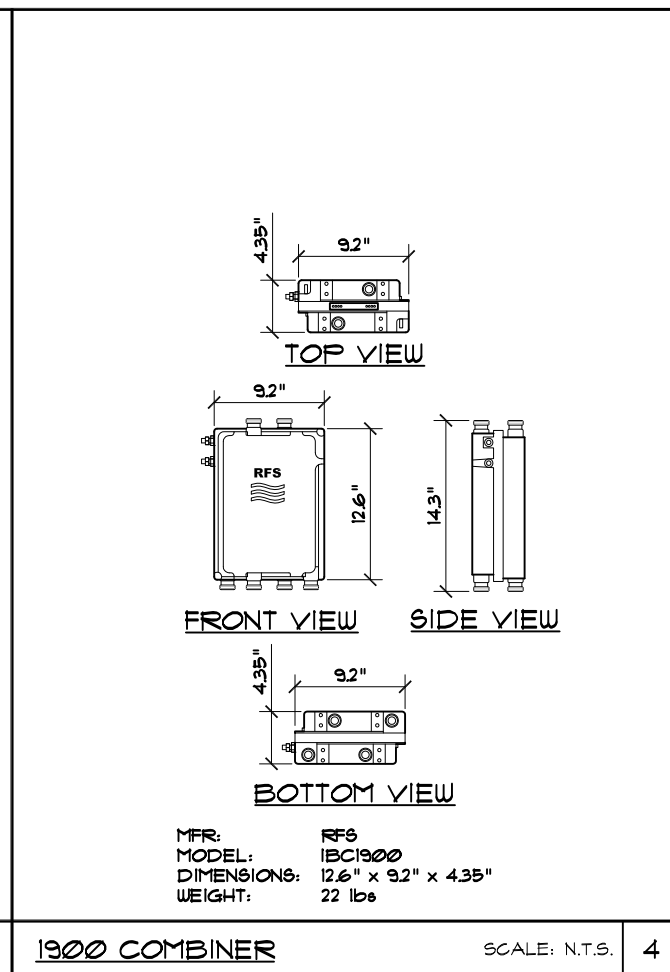
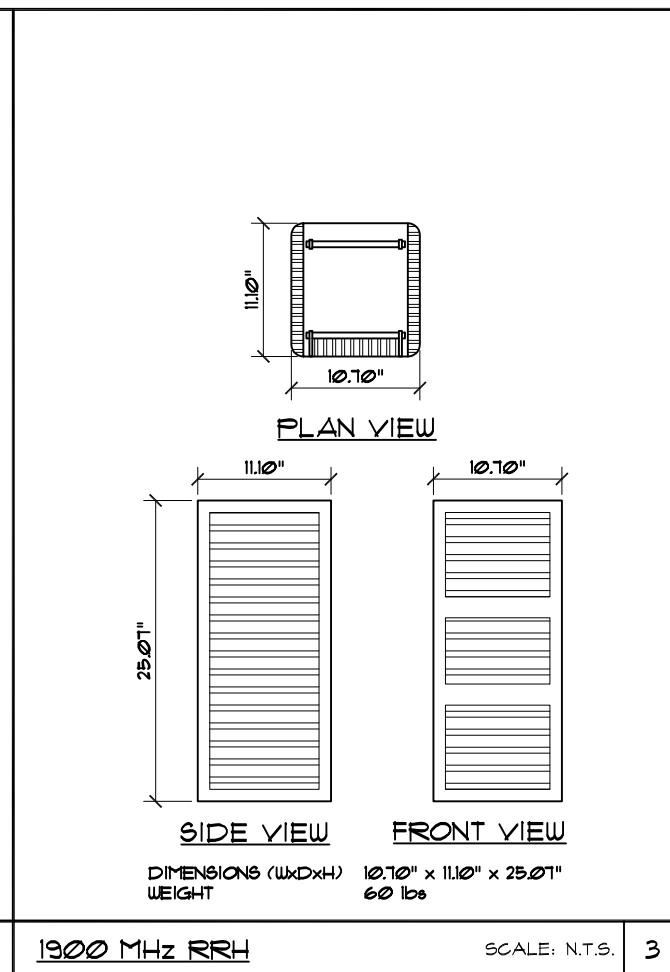
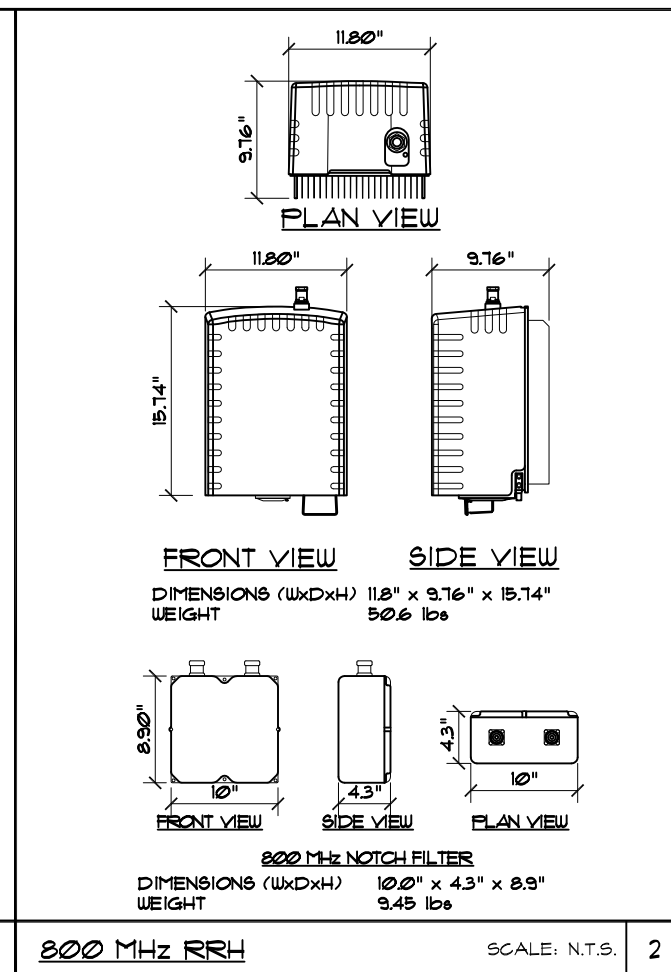
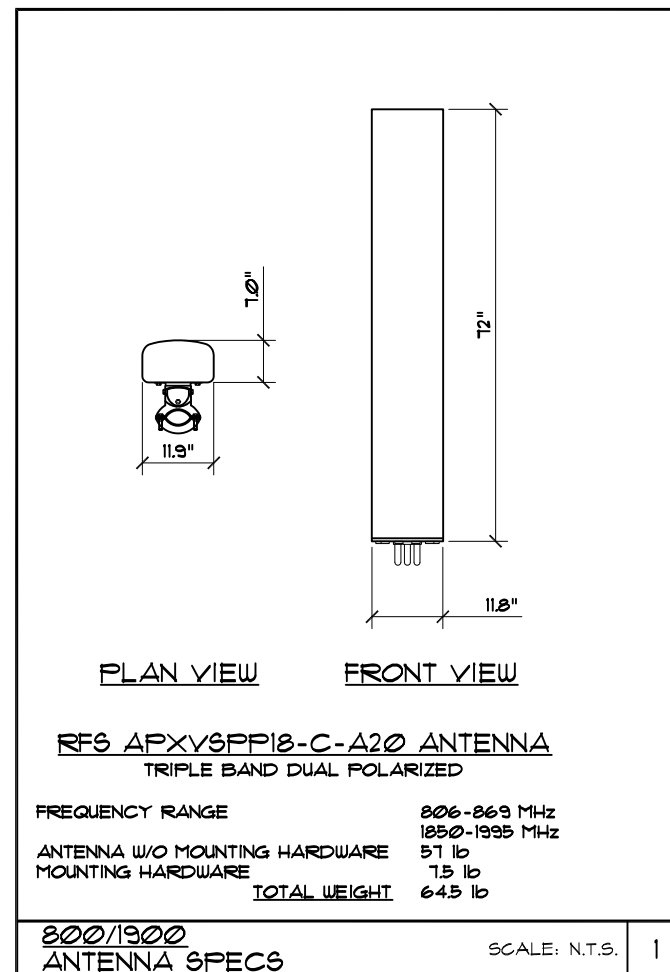
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SHEET NAME  
RF AND CABLE  
DETAILS

SHEET NUMBER  
C-6

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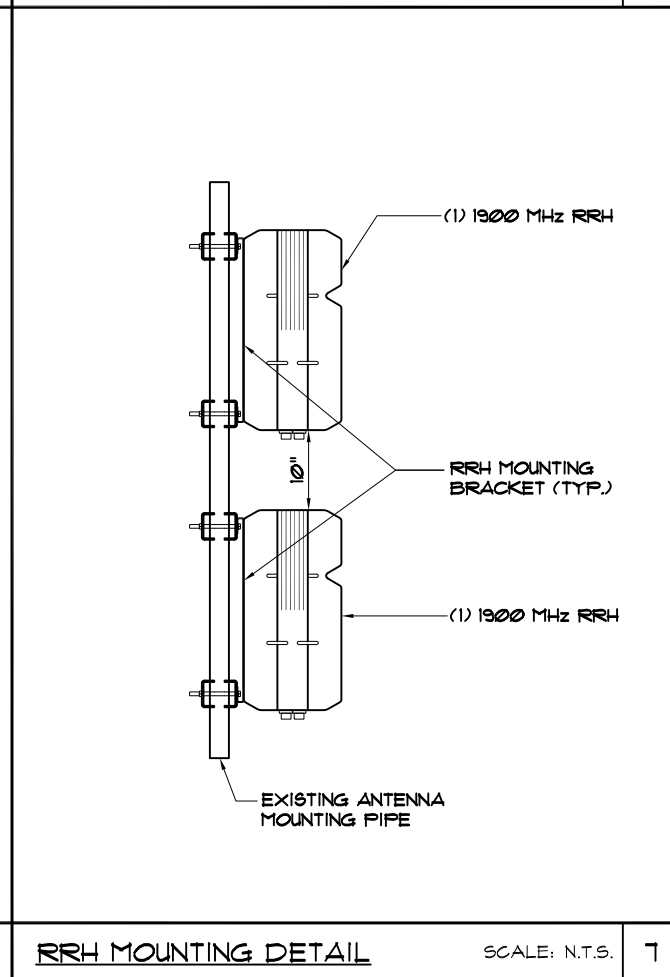
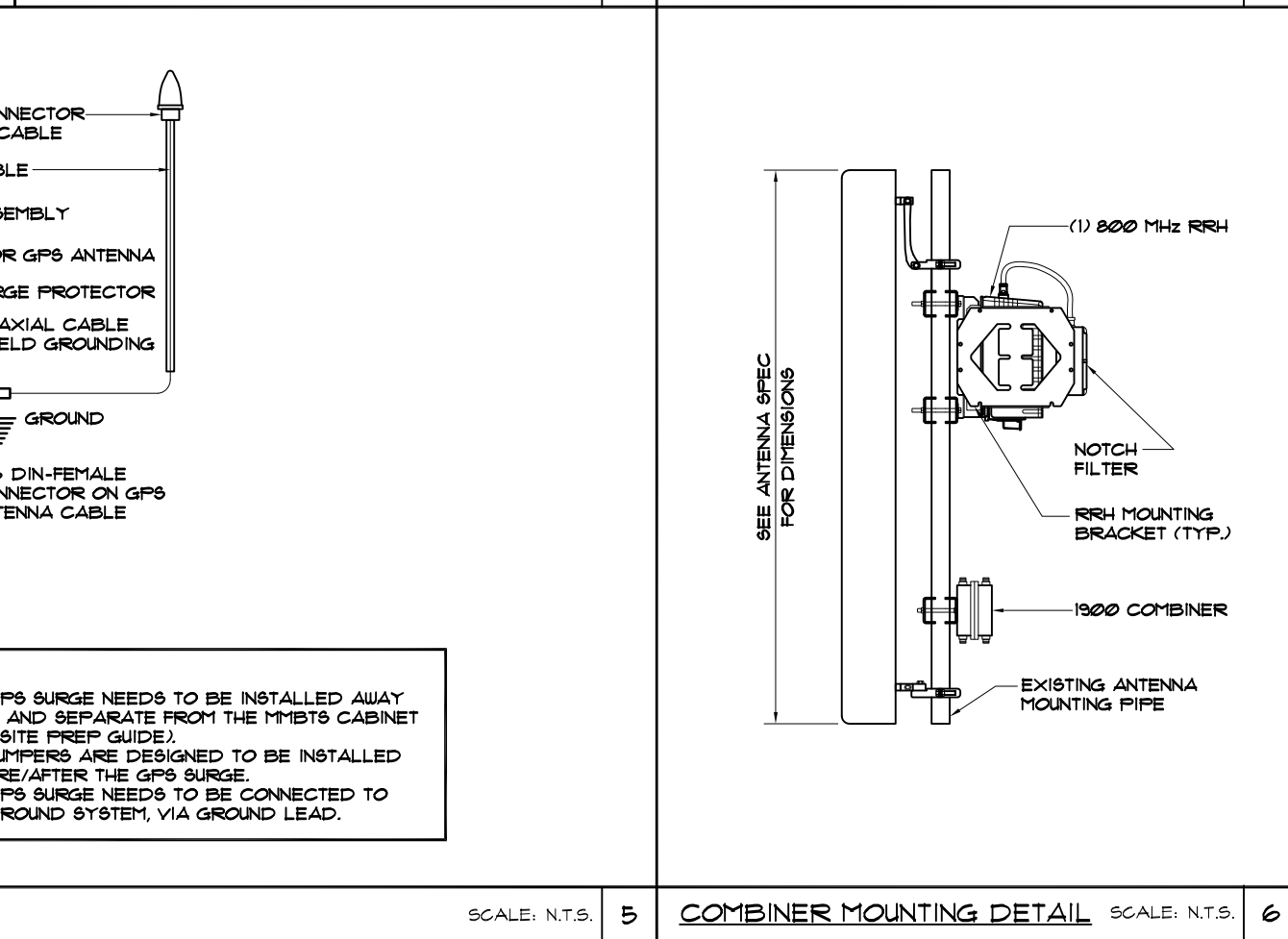
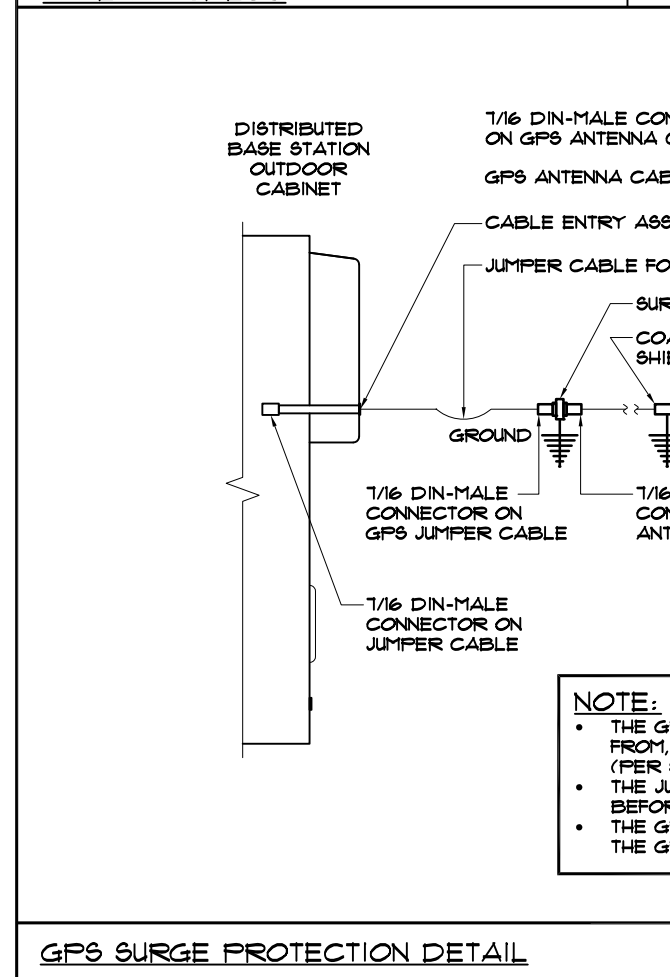




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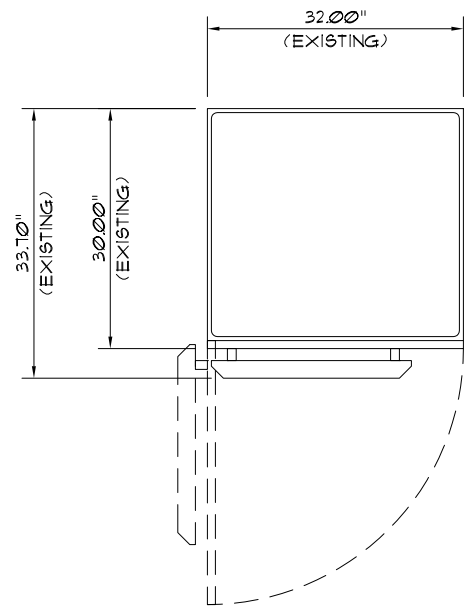
SITE NAME: **FILL IN-PHX312**

SITE NO.: **PH63XC039**

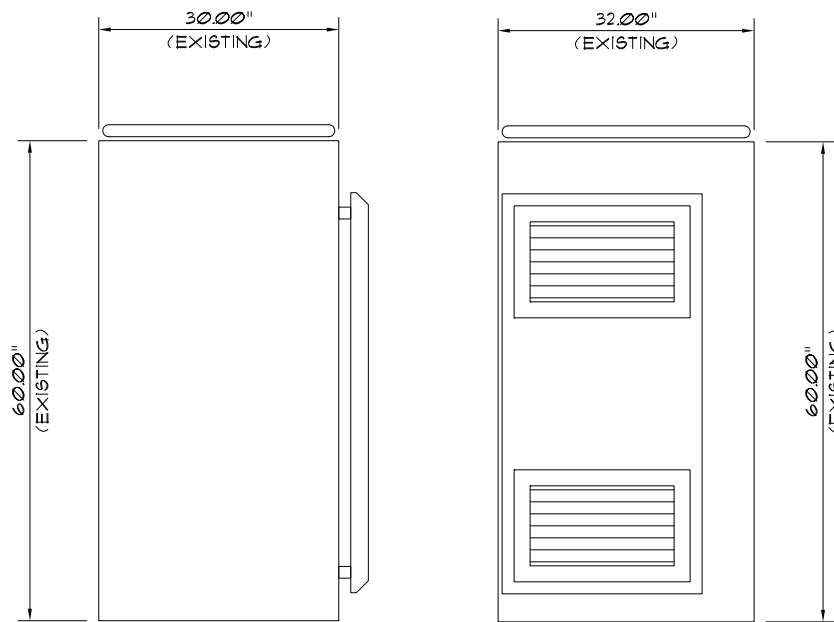
SITE ADDRESS: **44870 W. HATHAWAY AVE. MARICOPA, AZ 85139**

SHEET NAME: **ANTENNA SPECIFICATION & DETAILS**

SHEET NUMBER: **C-7**



TOP VIEW

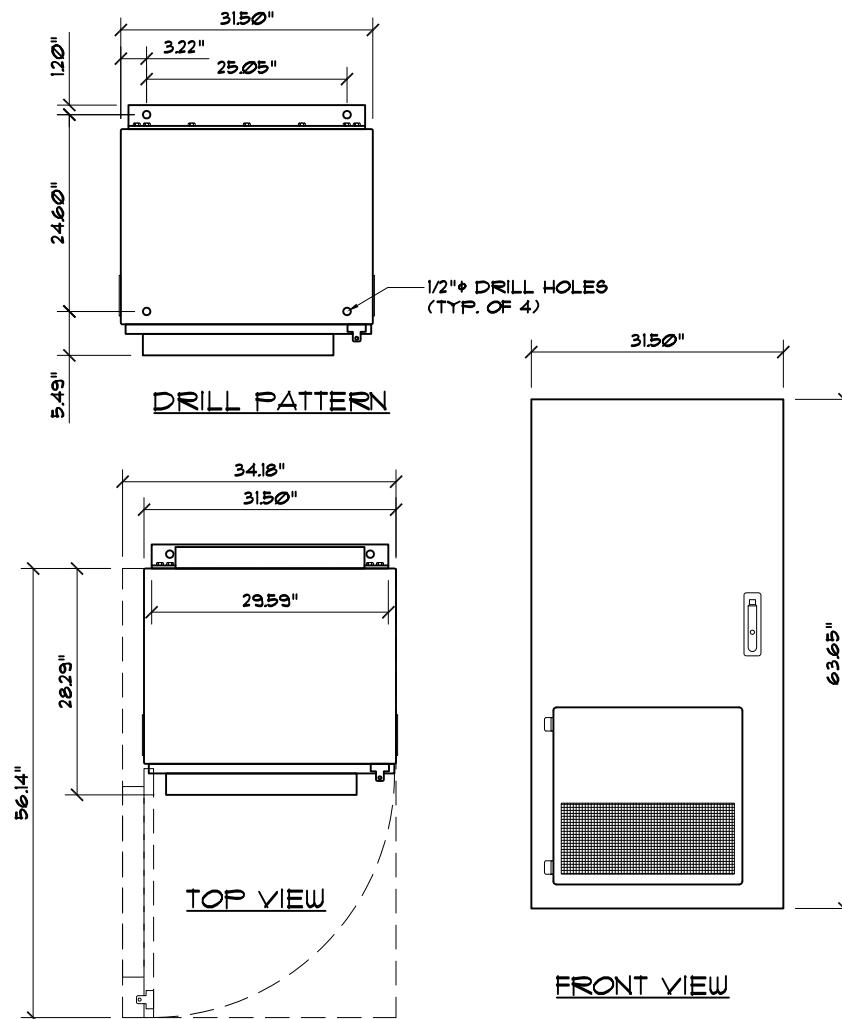


LEFT SIDE

FRONT VIEW

ALCATEL LUCENT MODEL# 4.0/9218 RF CABINET  
(RETROFIT OF INTERNAL ELECTRONIC COMPONENTS ONLY  
INSIDE EXISTING 4.0 RF CABINET)

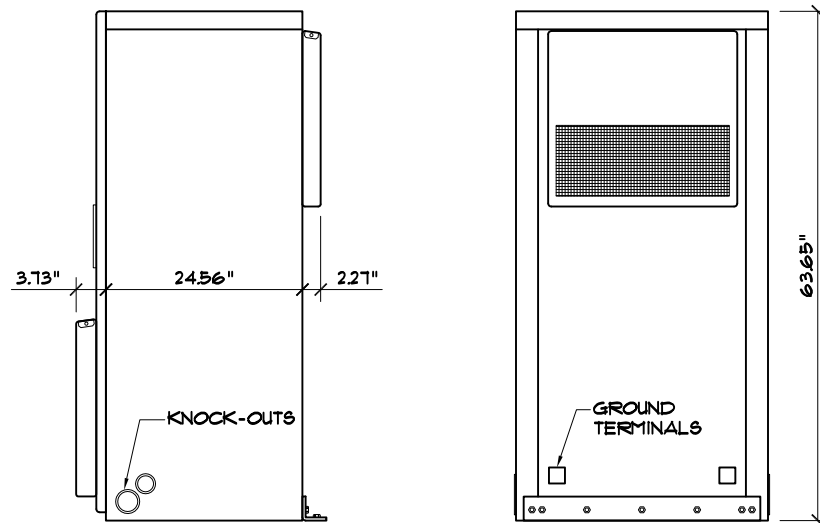
MAXIMUM INSTALLED WEIGHT (ESTIMATE)  
WITHOUT INTEGRATED POWER  
1 CARRIER  
359 kg (790 lbs.)



DRILL PATTERN

TOP VIEW

FRONT VIEW

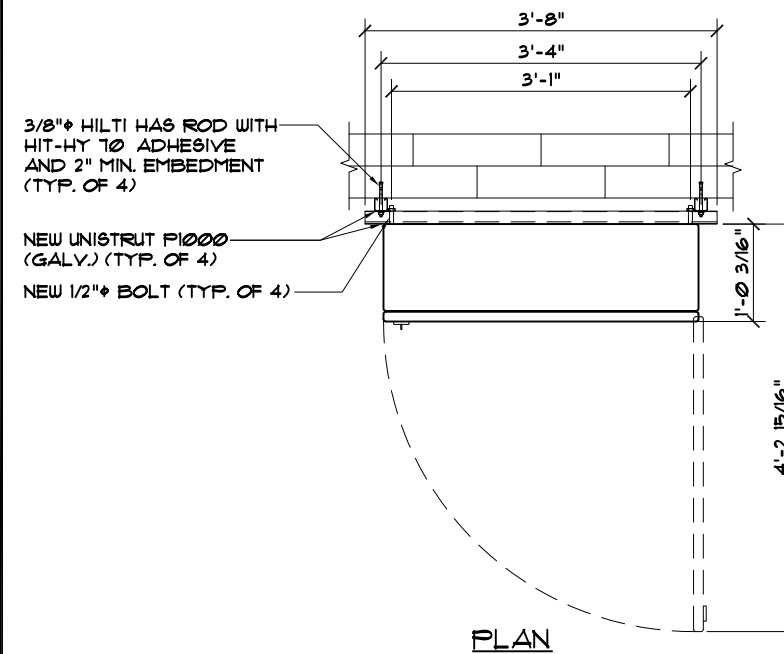


SIDE

RIGHT SIDE

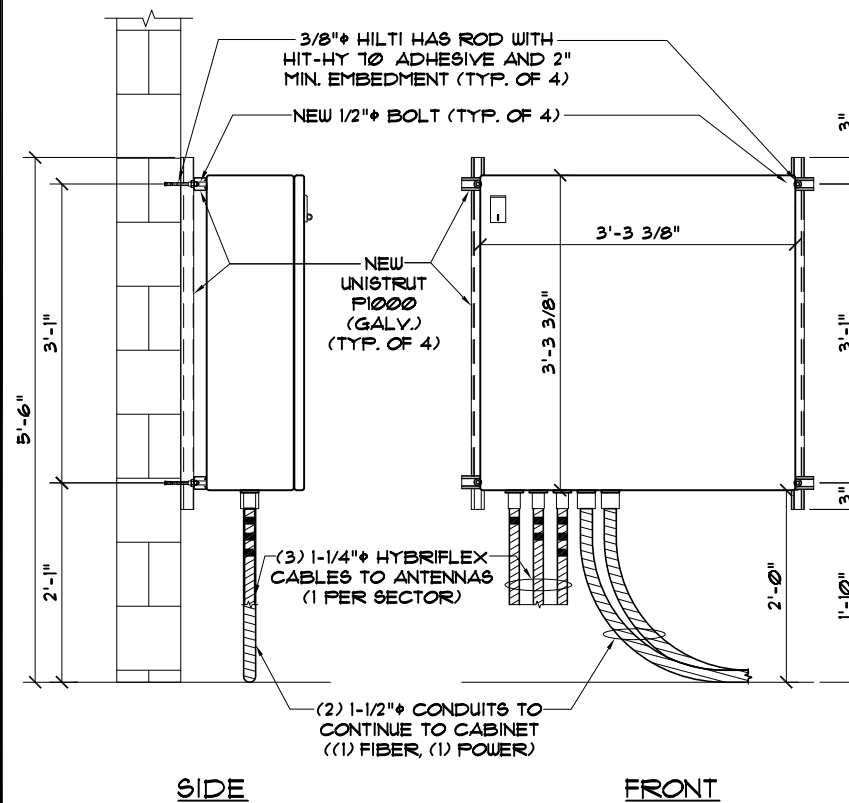
EMERSON #F2012505 BATTERY CABINET  
DIMENSIONS: (DxHxW) 31.29" x 63.65" x 31.29"  
WEIGHT: 2640 LBS (WITH BATTERIES)

NOTES:  
• SEE C-1 OR C-2 FOR SITE LOCATION OF JUNCTION BOX  
• JUNCTION BOX SHALL BE NEMA 3R RATED



PLAN

3/8" HILTI HAS ROD WITH  
HIT-HY 70 ADHESIVE  
AND 2" MIN. EMBEDMENT  
(TYP. OF 4)  
NEW UNISTRUT P1000  
(GALV.) (TYP. OF 4)  
NEW 1/2" BOLT (TYP. OF 4)



SIDE

FRONT

3/8" HILTI HAS ROD WITH  
HIT-HY 70 ADHESIVE AND 2"  
MIN. EMBEDMENT (TYP. OF 4)  
NEW 1/2" BOLT (TYP. OF 4)  
NEW UNISTRUT P1000  
(GALV.) (TYP. OF 4)

(3) 1-1/4" HYBRIFLEX  
CABLES TO ANTENNAS  
(1 PER SECTOR)

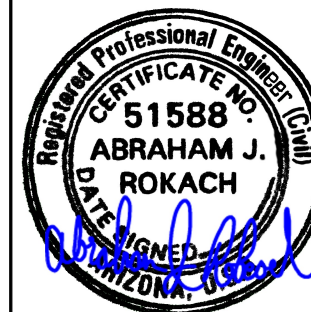
(2) 1-1/2" CONDUITS TO  
CONTINUE TO CABINET  
(1) FIBER, (1) POWER



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C	4/1/13	PRELIMINARY FINAL	KB
D	8/23/13	FOR PERMITS	CB
E	9/19/13	PRELIMINARY FINAL	AA
Δ	2/12/14	REVISION	AA



DATE SIGNED: 2/12/2014  
SITE NAME

FILL IN-PHX312

SITE NO.  
PH63XC039

SITE ADDRESS  
44870 W. HATHAWAY AVE.  
MARICOPA, AZ 85139

SHEET NAME  
EQUIPMENT  
SPECIFICATION

SHEET NUMBER

C-8

**NOTE:**  
 CONTRACTOR TO CALL 811, 12 HOURS PRIOR TO EXCAVATING FOR UNDERGROUND UTILITY LOCATIONS. LOCATION SURROUNDING EXCAVATED AREA MUST BE PRIVATELY LOCATED FOR NON-PUBLIC UTILITIES



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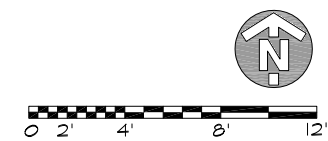
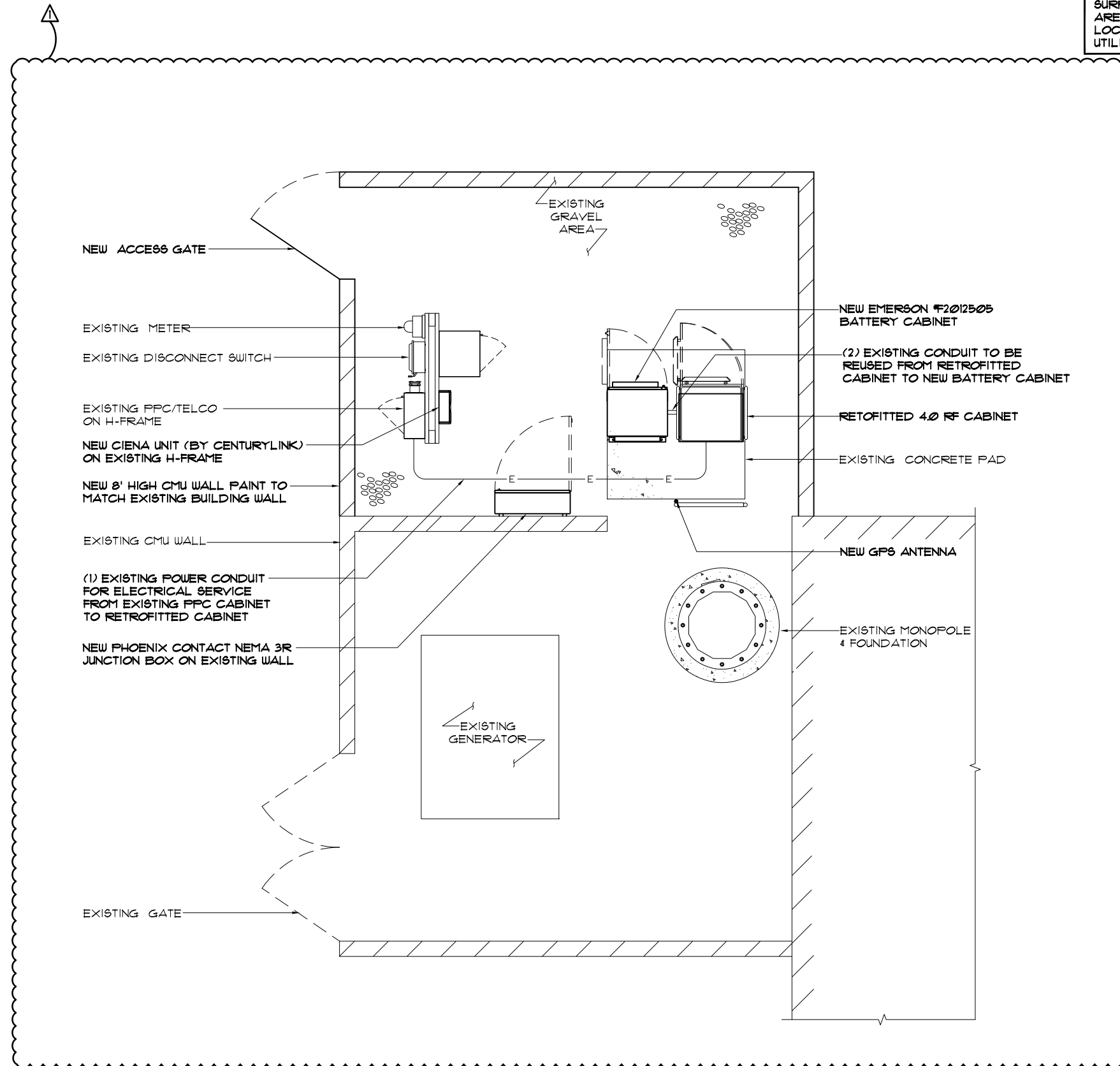
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 FILL IN-PHX312

SITE NO.  
 PH63XC039

SITE ADDRESS  
 44870 W. HATHAWAY AVE.  
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SHEET NAME  
 UTILITY PLAN

SHEET NUMBER  
 E-1



SCALE: 3/16" = 1'-0" |

UTILITY PLAN

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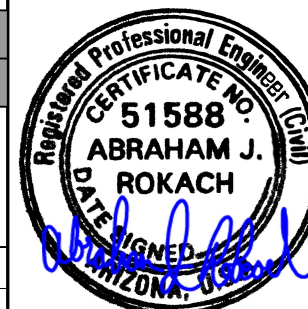




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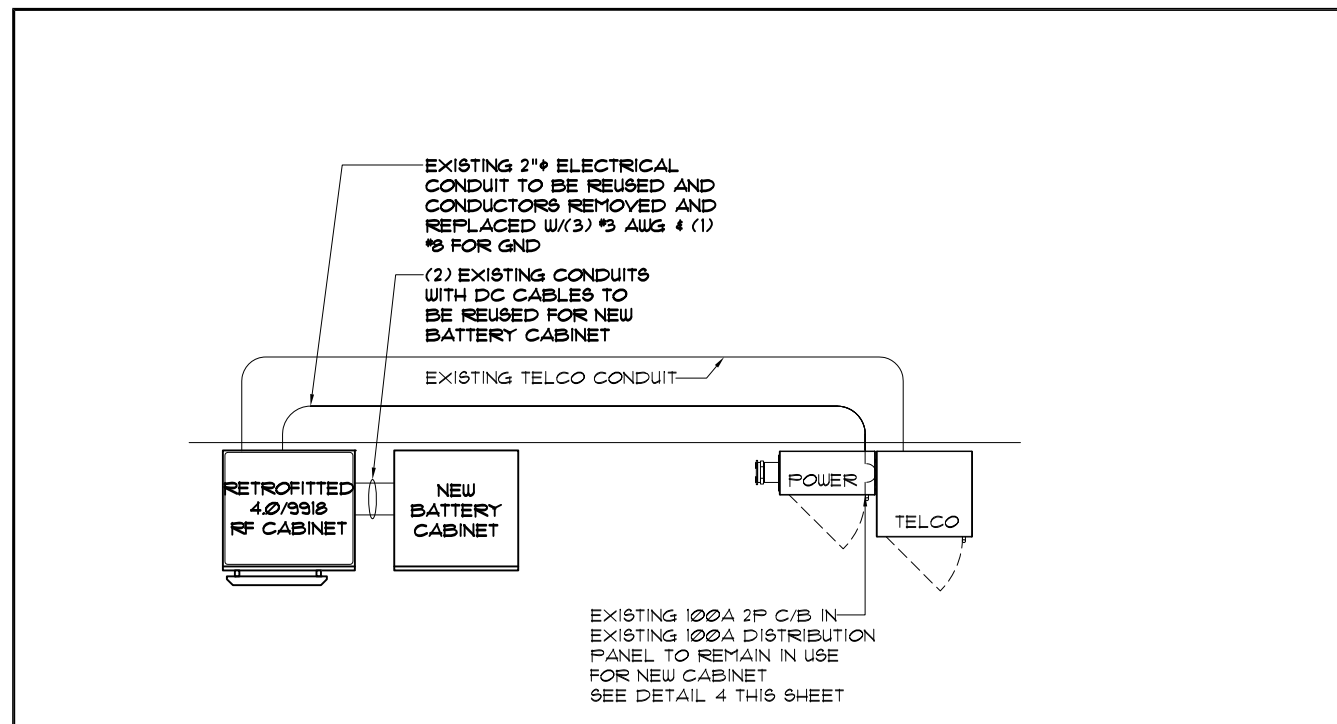
SHEET NAME

UTILITY  
DETAILS

SHEET NUMBER

E-2

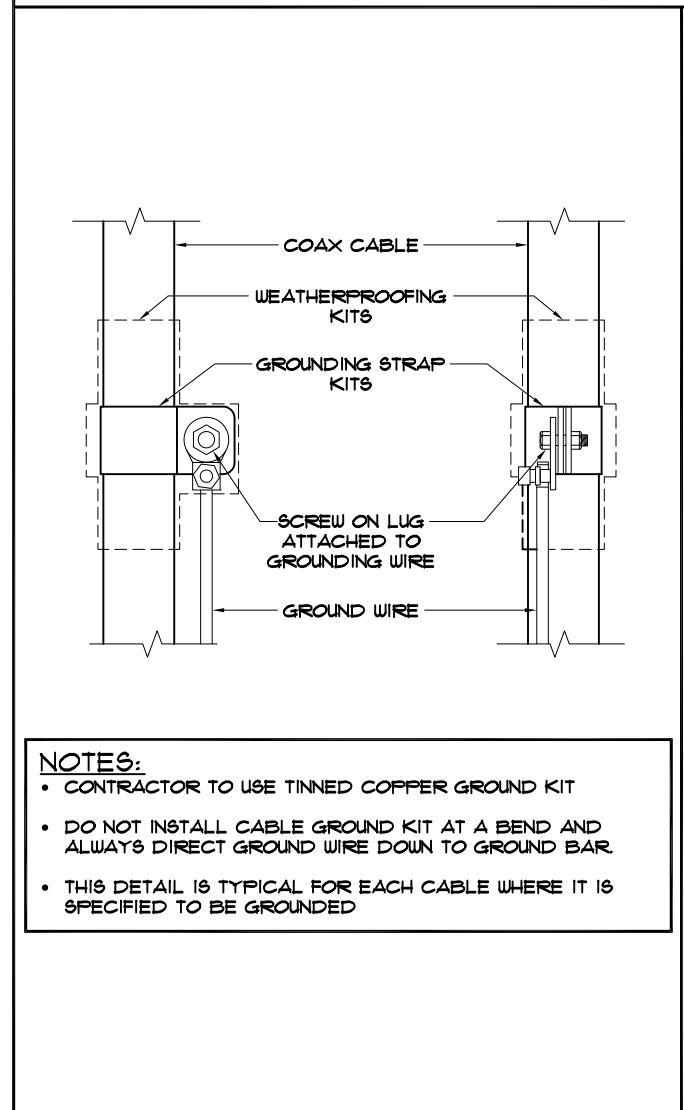
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EXISTING PANEL													
MAIN CB	VOLTAGE				PHASE				WIRE				
100A	120/240V				1φ				3				
REMARKS	BREAKER				LOADS PER PHASE		LOADS PER PHASE		BREAKER				REMARKS
	WIRE	POLES	AMPS	CIRCUIT	LOAD A	LOAD B	LOAD A	LOAD B	CIRCUIT	AMPS	POLES	WIRE	
SURGER ARRESTER	3	2	60	1	0		200		2	10	1	12	UNKNOWN
-				3		0		200	4	15	1	12	GFCI
BTS	3	2	100	5	4800				6				SPACE
-				7		4800			8				SPACE
SPACE				9					10				SPACE
SPACE				11					12				SPACE
SPACE				13					14				SPACE
SPACE				15					16				SPACE
SPACE				17					18				SPACE
SPACE				19					20				SPACE
SPACE				21					22				SPACE
SPACE				23					24				SPACE

LOAD LOAD/PHASE (VA)	4800	4800	200	200
TOTAL LOAD x 130% (VA)	13000			
TOTAL AMPS @ 240 (A)	54.17			

ONE LINE RISER DIAGRAM SCALE: N.T.S. 1



PPC PANEL SCALE: N.T.S. 3

FINAL PANEL													
MAIN CB	VOLTAGE				PHASE				WIRE				
100A	120/240V				1φ				3				
REMARKS	BREAKER				LOADS PER PHASE		LOADS PER PHASE		BREAKER				REMARKS
	WIRE	POLES	AMPS	CIRCUIT	LOAD A	LOAD B	LOAD A	LOAD B	CIRCUIT	AMPS	POLES	WIRE	
SURGER ARRESTER	3	2	60	1	0		200		2	10	1	12	UNKNOWN
-				3		0		200	4	15	1	12	GFCI
RETROFITTED	3	2	100	5	4800		4800		6	100	2	3	BTS
-				7		4800		4800	8				
SPACE				9					10				SPACE
SPACE				11					12				SPACE
SPACE				13					14				SPACE
SPACE				15					16				SPACE
SPACE				17					18				SPACE
SPACE				19					20				SPACE
SPACE				21					22				SPACE
SPACE				23					24				SPACE

LOAD LOAD/PHASE (VA)	4800	4800	5000	5000
TOTAL LOAD x 130% (VA)	25480			
TOTAL AMPS @ 240 (A)	106.17			

DISTRIBUTION PANEL SCALE: N.T.S. 4

**SERVICE EQUIPMENT NOTES:**

- ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT ENGRAVED PLASTIC LABELS.
- PATCH, REPAIR AND PAINT ANY AREA THAT HAS BEEN DAMAGED IN THE COURSE OF THE ELECTRICAL WORK.

**CONDUCTOR NOTES:**

- ALL CONDUCTORS SHALL BE COPPER
- ALL WIRING SHALL BE COPPER WITH THIN/THIN DUAL RATED 600 VOLTS INSULATION
- GROUNDING CONDUCTORS SHALL BE SOLID TINNED COPPER UNLESS OTHERWISE NOTED.

**CONDUIT NOTES:**

- RIGID GALVANIZED STEEL (RGS) CONDUIT SHALL BE USED FOR EXTERIOR LOCATIONS ABOVE GROUND, UNDER CONCRETE SLABS, AND IN UNFINISHED INTERIOR LOCATIONS. RIGID CONDUIT SHALL BE STEEL, COATED WITH ZINC EXTERIOR AND INTERIOR BY THE HOT DIP GALVANIZING PROCESS. CONDUIT SHALL BE PRODUCED TO ANSI SPECIFICATIONS C90.1, FEDERAL SPECIFICATION WW-C-581 AND SHALL BE LISTED WITH THE UNDERWRITERS' LABORATORIES.
- EXTERIOR UNDERGROUND CONDUIT AND CONDUIT IN CONCRETE SHALL BE POLYVINYL CHLORIDE (PVC) SCHEDULE 40. JOINTS SHALL BE BELLED, AND FLUSH SOLVENT WELDED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- UNDERGROUND ELBOW, SWEEPS, AND TRANSITIONS TO ABOVE GROUND SHALL BE SCHEDULE 80 PVC OR SCHEDULE 40 GALVANIZED.
- EMT SHALL BE USED ONLY FOR INTERIOR RUNS AND SHALL HAVE COMPRESSION TYPE FITTINGS
- METALIC SEALTITE FLEXIBLE CONDUIT MAY BE USED WHERE CODE PERMITS. ALL CONDUIT SHALL HAVE FULL SIZE EQUIPMENT GROUND WIRE
- FOR FLEXIBLE LIQUID TIGHT CONDUIT PROVIDE GLAND TYPE COMPRESSION FITTINGS. SET SCREW OR QUICK-CONNECT FITTINGS SHALL NOT BE ACCEPTABLE.
- CONDUITS SHALL BE RIGIDLY CLAMPED TO BOXES BY GALVANIZED MALLEABLE IRON BUSHING ON INSIDE AND GALVANIZED MALLEABLE IRON LOCKNUT ON OUTSIDE AND INSIDE.
- SERVICE CONDUITS SHALL HAVE NO MORE THAN (3) - 90° BENDS IN ANY SINGLE RUN. THE CONTRACTOR SHALL PROVIDE FULL BOXES AS NEEDED WHERE CONDUIT REQUIREMENTS EXCEED THESE CONDITIONS
- ALL COAX, POWER AND TELEPHONE SYSTEM CONDUITS SHALL HAVE A MINIMUM 24" RADIUS SWEEPS TO EQUIPMENT, FULL BOXES, ETC., UNLESS OTHERWISE NOTED, OR AS REQUIRED BY UTILITY COMPANIES

**NEW CABLE GROUNDING NOTES:**

- CONTRACTOR SHALL CONNECT GROUND KITS TO THE EXISTING GROUND BARS AT THE TOP AND BASE OF TOWER
- CONTRACTOR SHALL CONNECT GROUND KITS TO THE NEW GROUND BAR BEFORE ENTRY TO CABINET
- NO BACK TO BACK LUGGING OF SPRINT GROUNDS

**GENERAL GROUNDING NOTES:**

- VERTICAL DROPS SHALL BE 20'-0" OF #2 AWG SOLID TINNED COPPER WIRE. CADWELDED TO GROUND BAR
- ALL BENDS MINIMUM 8" RADIUS.
- APPLY ANTI-OXIDATION COMPOUND TO ALL CONNECTIONS.
- BARE COPPER CONDUCTORS SHALL NOT BE IN CONTACT WITH ANY DISSIMILIAR MATERIAL. PLACE ON STANDOFFS, IF NECESSARY TO ALLOW FOR PROPER INSTALLATION.
- SHARP BENDS IN GROUNDING CONDUCTORS SHALL BE AVOIDED. 90° BENDS SHALL NOT BE USED.
- ALL GROUNDING CONDUCTORS SHALL BE KEPT AS SHORT AS POSSIBLE. THE SHORTEST PRACTICAL ROUTE SHALL BE CHOSEN WITH THE LEAST AMOUNT OF BENDS AND SPLICES. USE THIS RULE AT ALL TIMES.
- ALL CONNECTIONS TO GROUND BARS SHALL BE WITH A 2-HOLE LONG BARREL LUG UNLESS OTHERWISE SPECIFIED, WITH 3/8" STAINLESS STEEL HARDWARE.
- WHEN GROUNDING MORE THAN ONE PIECE OF EQUIPMENT, DO NOT USE THE EQUIPMENT AS A GROUNDING CONDUCTOR. DOUBLE-STACKING OF LUGS SHALL BE USED TO GET FROM EQUIPMENT TO EQUIPMENT.
- REMOVE ALL PAINT BENEATH THE SURFACE OF GROUND LUGS.
- ALL NEW GROUND BUSS BARS TO BE GALVANIZED.
- HARDWARE TO SECURE GROUND LUGS SHALL BE 3/8" STAINLESS STEEL.
- ALL SHAVINGS, KNOCK OUTS AND DEBRIS TO BE REMOVED FROM SITE.

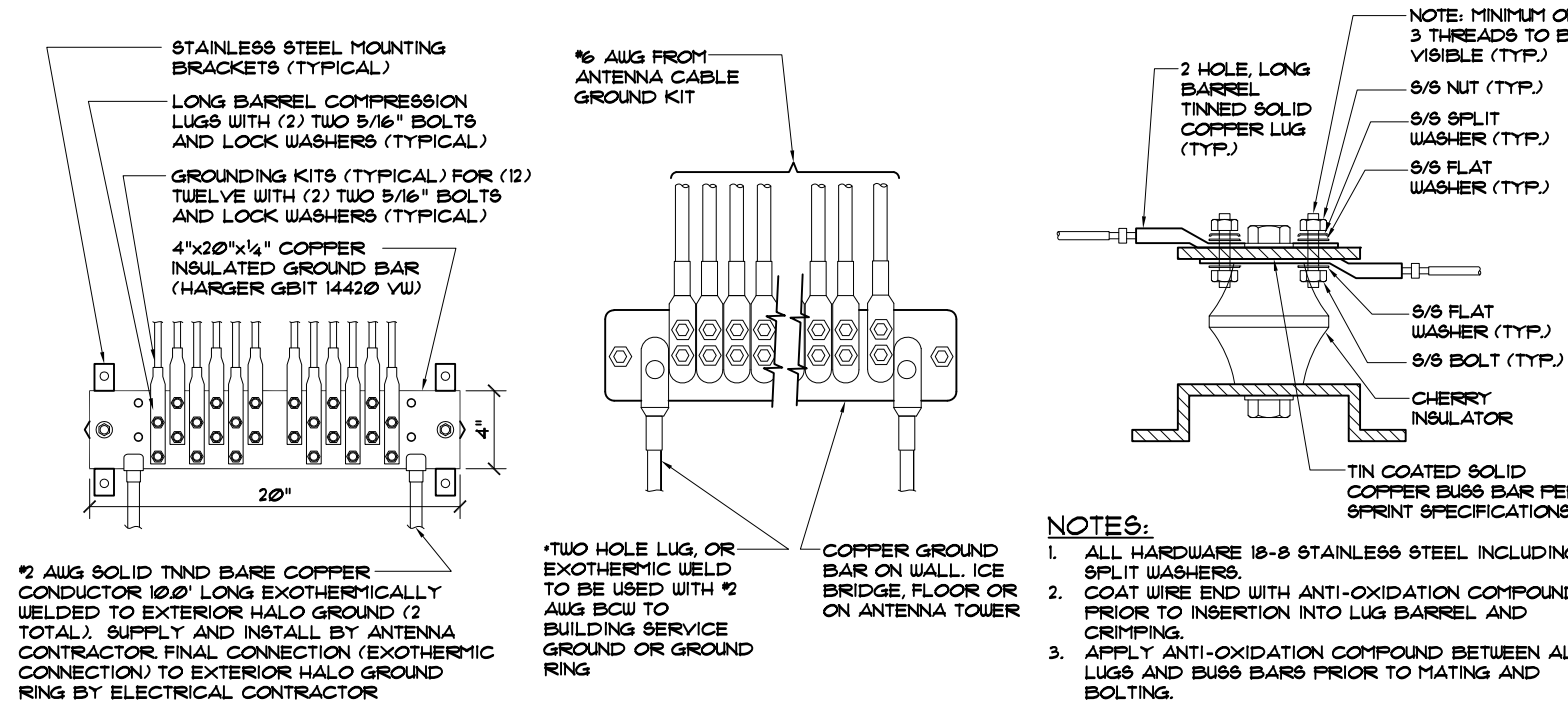
**CONSTRUCTION NOTES:**

ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF SPRINT'S "STANDARD CONSTRUCTION SPECIFICATIONS FOR WIRELESS SITES", REV 4.0 DATED 2-15-2011.

NOTES

SCALE: N.T.S. 1

NOT USED

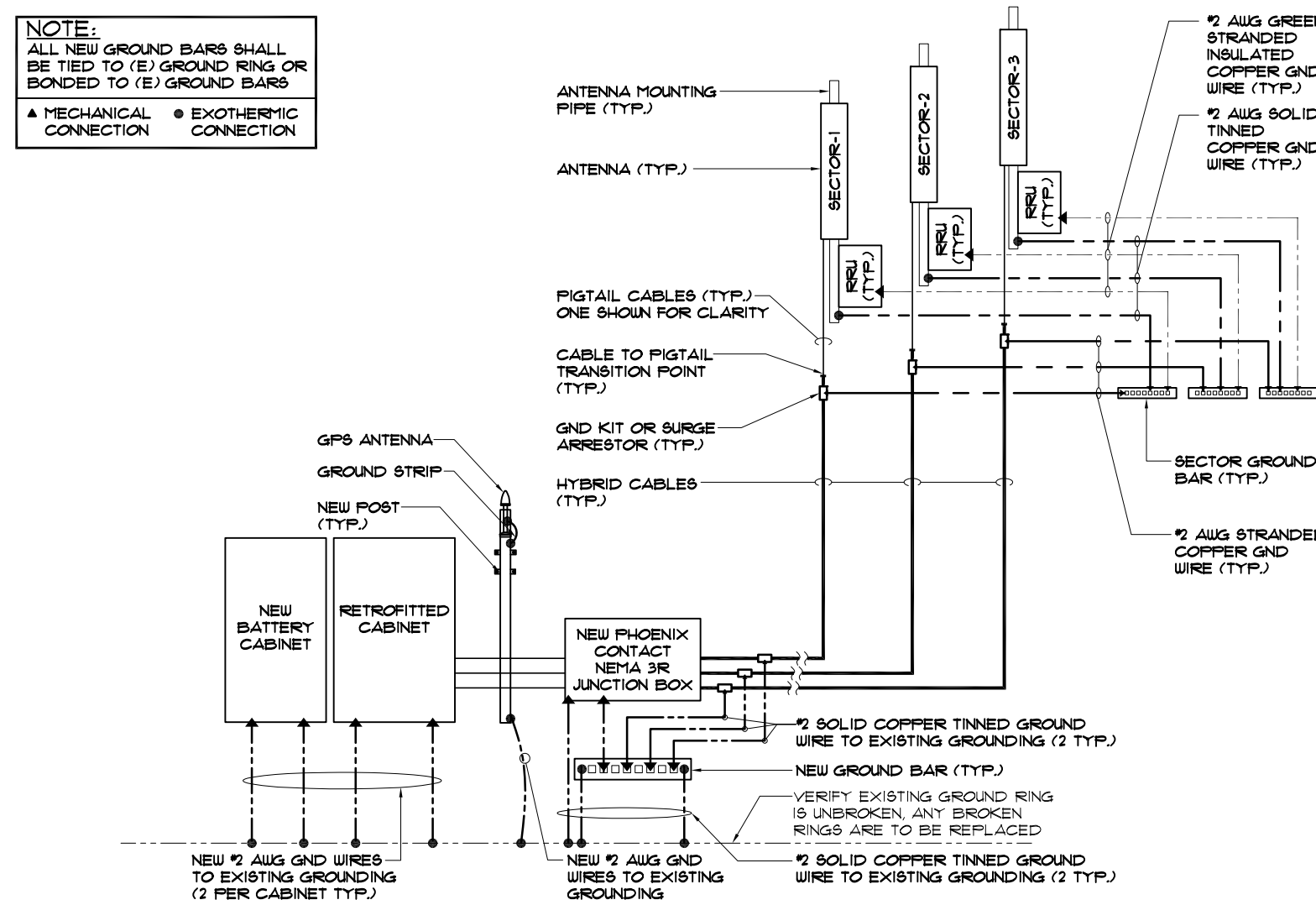


**TYPICAL GROUNDING DETAILS**

SCALE: N.T.S. 2

**NOTE:**  
 ALL NEW GROUND BARS SHALL BE TIED TO (E) GROUND RING OR BONDED TO (E) GROUND BARS

▲ MECHANICAL CONNECTION    ● EXOTHERMIC CONNECTION



SCALE: N.T.S. 3



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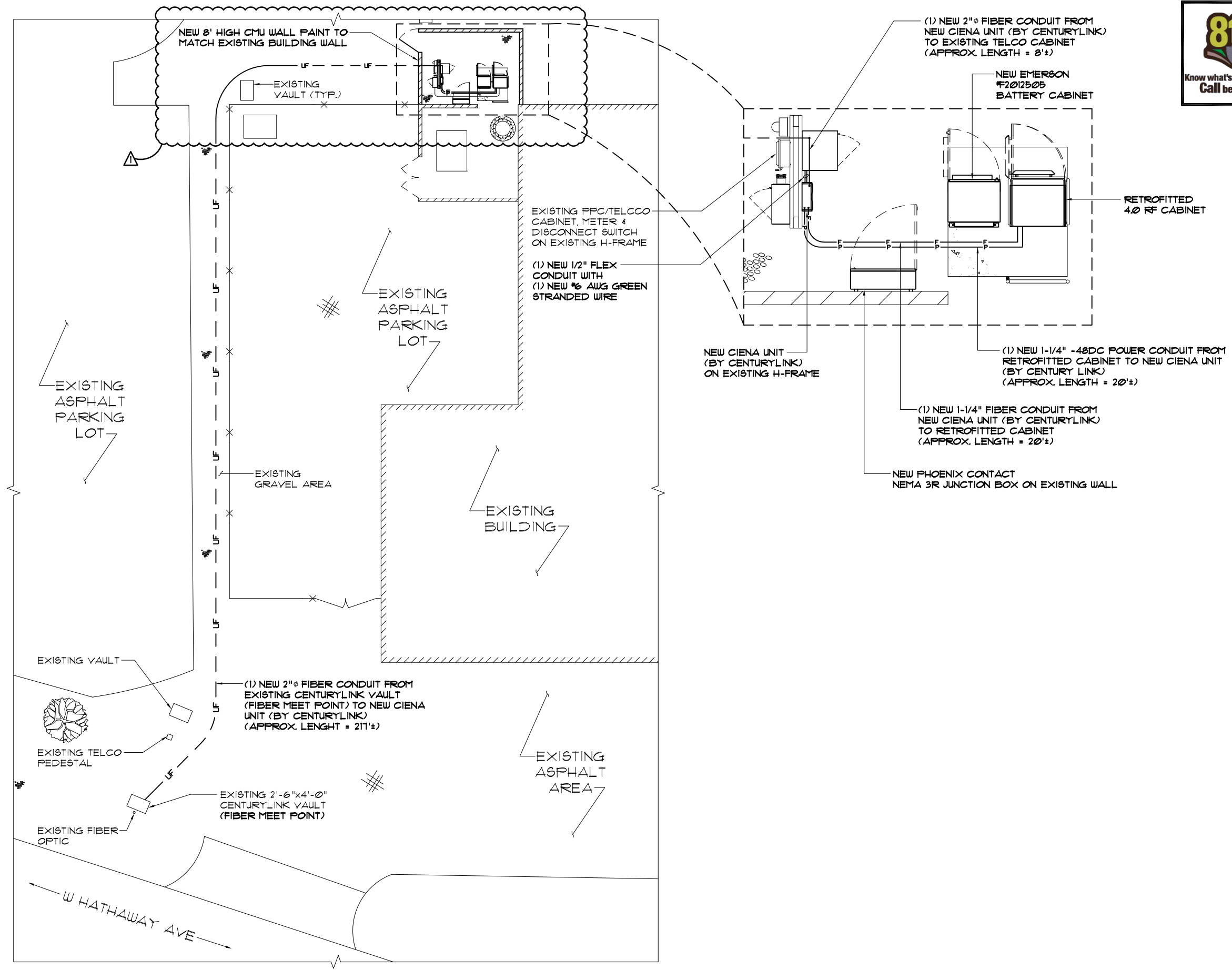
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SHEET NAME  
 GROUNDING RISER DIAGRAM AND NOTES

SHEET NUMBER  
 E-3

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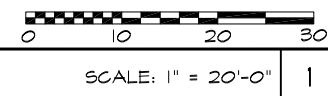


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SHEET NAME  
FIBER  
SITE PLAN

SHEET NUMBER  
F-1



UTILITY PLAN

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