Contract Number: CTN-IT-CMS140419-3
Effective Date : 2-10-15
Term Date : 3-7-20
Cost :
Revenue : ✓
Total : NTE:
Action
Renewal By : 1-1-20
Term : 3-7-20
Reviewed by:

BOARD OF SUPERVISORS AGENDA ITEM SUMMARY

Requested Board Meeting Date: 02/10/2015

ITEM SUMMARY, JUSTIFICATION &/or SPECIAL CONSIDERATIONS:

The Third Amendment to Lease between Pima County and Alltel Communications of the Southwest Holdings, Inc., updates insurance requirements and replaces Exhibit B "SITE PLANS AND SPEC SHEETS" to reflect modifications at the wireless facility at Rillito Racetrack, 4502 North First Avenue. Verizon intends to upgrade its equipment at this facility to enhance/improve telecommunication services to Pima County residents. There are no changes to the fee structure or basic terms of the contract. The Amendment is effective upon endorsement by the Pima County Board of Supervisors.

CONTRACT NUMBER (If applicable): CTN-IT-CMS140419 (formerly #04-14-A-140419-0305)

STAFF RECOMMENDATION(S):

The Information Technology Department recommends that the Pima County Board of Supervisors adopt and the Chairman sign the Third Amendment to Lease for Alltel Communications of the Southwest Holdings, Inc. dba Verizon Wireless.

CORPORATE HEADQUARTERS: Nevada

To PD: 1-26-15
COB: 1-28-15
BOS: 2-10-15

42 pgs(2)
Vend. 1
Ver. 4

Procure Dept 01/23/15 PM04:56

CLERK OF BOARD USE ONLY: BOS MTG. _____

ITEM NO. _____

PIMA COUNTY COST: N/A and/or REVENUE TO PIMA COUNTY:$ N/A

FUNDING SOURCE(S): *N/A*
(i.e. General Fund, State Grant Fund, Federal Fund, Stadium D. Fund, etc.)

Advertised Public Hearing:

		YES	***X***	***NO***

Board of Supervisors District:

1		*2*		*3*	*X*	*4*		*5*		*All*	

IMPACT:

IF APPROVED:

Alltel Communications of the Southwest Holdings, Inc. dba Verizon Wireless will modify/update their existing facility at Rillito Racetrack (4502 North First Avenue) to enhance/improve telecommunication services to Pima County residents.

IF DENIED:

Alltel Communications of the Southwest Holdings, Inc. dba Verizon Wireless will not be allowed to modify/update their existing facility at Rillito Racetrack (4502 North First Avenue) and telecommunication services will not be enhanced/improved for Pima County residents.

DEPARTMENT NAME: Information Technology

CONTACT PERSON: Julie K McWilliams TELEPHONE NO.: 724-8066

CONTRACT
NO. CTN-IT-CMS 140419
AMENDMENT NO. 3
This number must appear on all invoices, correspondence and documents pertaining to this contract.

PIMA COUNTY

THIRD AMENDMENT TO LEASE

CONTRACT No. CTN - IT - CMS140419

(Former Contract No. 04-14-A-140419-0305)

THIS AMENDMENT is entered into by and between Pima County ("County"), a political subdivision of the State of Arizona, and Alltel Communications Southwest Holdings, Inc., d/b/a Verizon Wireless ("Verizon"), a Delaware Corporation, and shall be effective upon execution by County.

RECITALS

County and Alltel Communications of the Southwest Limited Partnership entered into a Lease Agreement dated March 8, 2005, and recorded on November 16, 2007, in Docket 13183, Page 2324 in the office of the Pima County, Arizona, Recorder and assigned contract #04-14-A-140419-0305. The Lease was subsequently assumed by Alltel Communications Southwest Holdings, Inc., d/b/a Verizon Wireless and reassigned Contract # CTN-IT-CMS140419.

With this Third Amendment to Lease, the parties desire to modify the existing telecommunications facility located at the Rillito Racetrack, 4502 North First Avenue, Tucson, Arizona.

AGREEMENT

WHEREFORE, the parties agree as follows:

1. The effective date of this Third Amendment to Lease shall be upon execution by the Pima County Board of Supervisors.

2. Section 5 "**INSURANCE**" is revised to ADD the following:

"The Lessee's insurance shall be primary insurance and non-contributory with respect to all other available sources.

Any modification or variation from the insurance requirements in this Agreement shall be made by the contracting department in consultation with the Division of Risk Management. Such modification will not require a formal contract amendment, but may be made by administrative action, and without the consent of Lessee, upon notice by County. Lessee shall supply a certificate of insurance including the modification within thirty (30) days from the date notice of the modification is received by Lessee. Such notice will be given pursuant to the terms of the Agreement; if the Agreement does not specify a notice procedure, County may give notice by Certified U.S. Mail, E-Mail or Facsimile; Certified Receipt, E-Mail Receipt Confirmation or Facsimile Confirmation shall constitute proof of receipt of notice. Failure by Lessee to supply a modified certificate of insurance as required by this paragraph may constitute material breach by Lessee and grounds for immediate termination of the Agreement by County, however, County shall not terminate the Agreement so long as Lessee demonstrates a good-faith effort in obtaining a modified certificate of insurance."

3. Exhibit B "**SITE PLANS AND SPEC SHEETS**" is added.

4. Lessee will make the following modifications to the telecommunications facility located at the Rillito Racetrack, 4502 North First Avenue, Tucson, Arizona, in accordance with Exhibit B:
   a. Replace U700C Antel antenna (BXA-70063/6CFEDIN) with Antel Tri Band 6 ports antenna (CWWX063X19G00) in position #2 for all sectors
   b. Antenna #1 remain unchanged
   c. Add (1) 6x12 HYBRIFLEX main feedline for AWS and PCS & (1) junction box on top + (1) junction box in shelter
   d. Add (3) AWS 2x40W RRH, ADD (3) PCS 2x40W RRH; ADD (6) 1x1 HYBRIFLEX to connect RRHs from junction box
   e. Add (3) Antel TTA-CBG00J TMA for 700 LTE
   f. Install RET cabling kit for the new antennas
   g. No changes to existing coax run configuration

5. Construction and other work described herein must not/cannot/will not prevent, interfere, interrupt, or otherwise disrupt scheduled events at the facility.

6. All other provisions of the Lease shall remain in effect and continue to be binding upon the parties.

REMAINDER OF PAGE INTENTIONALLY LEFT BLANK

IN WITNESS WHEREOF, the parties have affixed their signatures to this Third Amendment to Lease on the dates written below.

PIMA COUNTY:

_____
Chair, Board of Supervisors

_____
Date

ATTEST:

_____
Clerk of the Board of Supervisors

_____
Date

APPROVED AS TO CONTENT:

_____
Jesse Rodriguez
Chief Information Officer

1/23/15
Date

APPROVED AS TO FORM:

_____
Tobin Rosen, Deputy County Attorney

8/13/14
Date

LICENSEE:

Alltel Communications Southwest Holdings, Inc, d/b/a Verizon Wireless

_____
Signature

BRIAN MECUM AREA VICE PRESIDENT NETWORK
Print Name and Title

1/12/15
Date

APPROVED AS TO CONTENT:

_____
Chris Cawein
Pima County Parks & Recreation Director

1/16/15
Date

EXHIBIT B

SITE PLANS AND SPEC LIST

verizonwireless

TUC MUSTANG

4502 N. 1ST AVENUE
TUCSON, AZ. 85718

GENERAL CONTRACTOR NOTES

DO NOT SCALE DRAWINGS IF NOT FULL-SIZE (24x36)

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

CLIENT:

NAME:	VERIZON WIRELESS
ADDRESS:	126 WEST GEMINI DRIVE
CITY, STATE, ZIP:	TEMPE, AZ 85283
CONTACT:	DAVID BUTTIKER
PHONE:	(602) 228-0081

REAL ESTATE

NAME:	VERIZON WIRELESS
ADDRESS:	126 WEST GEMINI DRIVE
CITY, STATE, ZIP:	TEMPE, AZ 85283
CONTACT:	CHERRY JACKSON
PHONE:	(480) 777-4357

ENGINEER:

COMPANY:	SMARTLINK, LLC
ADDRESS:	14432 SE EASTGATE WAY, SUITE 260
CITY, STATE, ZIP:	BELLEVUE, WA 98007-6493
CONTACT:	VLAD DIACONU
PHONE:	(425) 276-4444 x148
E-MAIL:	vlad.diaconu@smartlinkllc.com

PROJECT TEAM

VERIZON SIGNATURE BLOCK

DISCIPLINE:	SIGNATURE:	DATE:
SITE ACQUISITION:		
CONSTRUCTION:		
RADIO:		
MICROWAVE:		
TELCO:		
EQUIPMENT:		
PROJECT ADMINISTRATOR:		
WD ADMINISTRATOR:		

APPLICANT/LESSEE

verizonwireless
126 WEST GEMINI DR
TEMPE, AZ 85283
OFFICE: (480) 753-7296

LEGAL DESCRIPTION
SEE C-3 FOR LEGAL DESCRIPTION

ASSESSOR'S PARCEL NUMBER
108-18-004-A

COUNTY
PIMA COUNTY

APPLICANT'S REPRESENTATIVE

SMARTLINK, LLC
605 W. KNOX RD #210
TEMPE, AZ 85284
MICHAEL WARGO
(480) 797-6358

PROPERTY OWNER:

OWNER:	PIMA COUNTY NATURAL RESOURCES
ADDRESS:	3500 W RIVER ROAD TUCSON, AZ. 85741
CONTACT:	JULIE McWILLIAMS
PHONE:	(520) 740-8088
EMAIL:	TBD

TOWER OWNER:

OWNER:	VERIZON WIRELESS
ADDRESS:	126 W GEMINI DR TEMPE, AZ 85283
CONTACT:	DAVID BUTTIKER
PHONE:	(480) 777-4316

PROPERTY INFORMATION

SITE NAME:	TUC MUSTANG	LATITUDE:	32° 17' 19.68" N
SITE ADDRESS:	4502 N 1ST AVENUE TUCSON, AZ. 85718	LONGITUDE:	-110° 57' 10.79" W

CONSTRUCTION INFORMATION

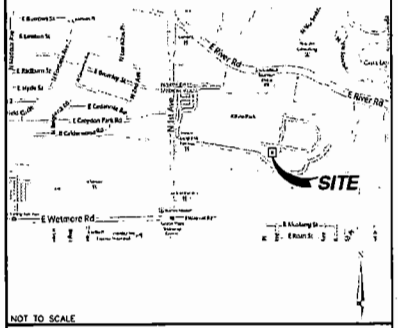
LEASE AREA:	240 S.F.
JURISDICTION:	COUNTY OF PIMA
CURRENT ZONING:	RX-1
CONSTRUCTION TYPE:	V-B, NON-RATED
OCCUPANCY:	S-2
TYPE OF CONSTRUCTION:	TELECOMMUNICATIONS FACILITY
HANDICAP REQUIREMENTS:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS NOT REQUIRED.

PROJECT SUMMARY

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

1. 2012 IBC ARIZONA BUILDING CODE
2. 2011 ARIZONA ELECTRICAL CODE ADOPTED 2008 NEC
3. 2006 IFC ARIZONA FIRE CODE
4. 2006 IMC ARIZONA MECHANICAL CODE
5. 2006 IPC ARIZONA PLUMBING CODE
6. 2006 IECC ARIZONA ENERGY CODE

CODE COMPLIANCE



NOT TO SCALE

VICINITY MAP

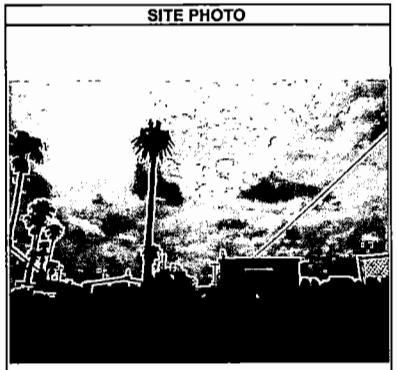
DEPART W GEMINI DR TOWARD S MAPLE AVE, TURN RIGHT ONTO S MAPLE AVE, TURN RIGHT ONTO W GUADALUPE RD, TURN LEFT ONTO S KYRENE RD, TURN RIGHT ONTO W ELLIOT RD, TAKE RAMP LEFT FOR I-10 E, AT EXIT 252, TAKE RAMP RIGHT FOR N CASA GRANDE HWY / N I-10 FRONTAGE RD TO WARD EL CAMINO DEL CERRO / RUTHRAUFF RD, BEAR LEFT ONTO W EL CAMINO DEL CERRO, ROAD NAME CHANGES TO W WETMORE RD, ROAD NAME CHANGES TO E WETMORE RD, TURN LEFT ONTO N 1ST AVE. TURN RIGHT TO STAY ON N 1ST AVE, ARRIVE AT 4502 N 1ST AVE, TUCSON, AZ 85718

DRIVING DIRECTIONS

THIS PROJECT WILL BE COMPRISED OF REPLACEMENT OF (3) EXISTING ANTENNAS WITH (3) NEW ANTENNAS MOUNTED TO EXISTING MONOPALM ALSO THE ADDITION OF (3) ANS NEW REMOTE RADIO HEADS, (3) P CS NEW REMOTE RADIO HEADS, (1) 4X12 HYBRIFLEX, (1) 12X HYBRIFLEX, (3) TMA AND (1) J-BOX MOUNTED BEHIND ANTENNAS.

PROJECT DESCRIPTION

SITE PHOTO



SHEET	DESCRIPTION
T-1	TITLE SHEET
T-2	GENERAL REQUIREMENTS ABBREVIATIONS & LEGEND
T-3	SPECIFICATIONS
A-1	OVERALL SITE PLAN
A-1.1	ENLARGED SITE PLAN
A-2	ANTENNA INFORMATION
A-3	EXISTING & NEW NORTHEAST ELEVATION
A-4	EXISTING & NEW SOUTHEAST ELEVATION
A-5	EXISTING & NEW SOUTHWEST ELEVATION
A-6	ARCHITECTURAL DETAILS

verizonwireless
126 WEST GEMINI DRIVE
TEMPE, AZ 85283

14432 SE EASTGATE WAY, SUITE 260
BELLEVUE, WA 98007-6493
TEL: 425.274.4444 FAX: 425.274.4449

REV.	DATE	REVISION DESCRIPTION
1	08.08.13	FINAL
0	07.26.13	FOR REVIEW

PROJECT INFORMATION:

TUC MUSTANG
4502 N. 1ST AVENUE
TUCSON, AZ, 85718
PIMA CO.

PROJECT NUMBER: **20130923908**

DRAWN BY: RT | CHECKED BY: VD

SHEET TITLE: **TITLE SHEET**

SHEET NUMBER: **T-1** | REV.: 1

EXHIBIT B - SITE PLANS AND SPEC LIST

GENERAL FIRE NOTES:

1. BUILDINGS UNDERGOING CONSTRUCTION, ALTERATION, OR DEMOLITION SHALL BE IN ACCORDANCE WITH 2010 CFC SECTION 1401.

2. ADDRESS SHALL BE PROVIDED FOR ALL NEW AND EXISTING BUILDINGS IN A POSITION AS TO BE PLAINLY VISIBLE AND LEGIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY. [2010 CFC SECTION 505.1]

3. DECORATIVE MATERIALS SHALL BE MAINTAINED IN A FLAME-RESISTANT CONDITION. [2010 CFC SECTION 807.1.3]

4. PORTABLE FIRE EXTINGUISHERS:
AT LEAST ONE FIRE EXTINGUISHER WITH A MINIMUM RATING OF 2-A-10B:C SHALL BE PROVIDED WITHIN 75 FEET MAXIMUM TRAVEL DISTANCE FOR EACH 6,000 SQUARE FEET OR PORTION THEREOF ON EACH FLOOR.
[2010 CFC SECTION 906.1.1 & 7 AND SECTION 906.3.1]

STORM WATER QUALITY NOTES CONSTRUCTION BMP'S:

NOTES 1-5 BELOW REPRESENT KEY MINIMUM REQUIREMENTS FOR CONSTRUCTION BMP'S

1. SUFFICIENT BMP'S MUST BE INSTALLED TO PREVENT SILT, MUD OR OTHER CONSTRUCTION DEBRIS FROM BEING TRACKED INTO THE ADJACENT STREET(S) OR STORM WATER CONVEYANCE SYSTEM DUE TO CONSTRUCTION VEHICLES OR ANY OTHER CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING ANY SUCH DEBRIS THAT MAY BE IN THE STREET AT THE END OF EACH WORK DAY OR AFTER A STORM EVENT THAT CAUSES A BREECH IN THE INSTALLED CONSTRUCTION BMP'S

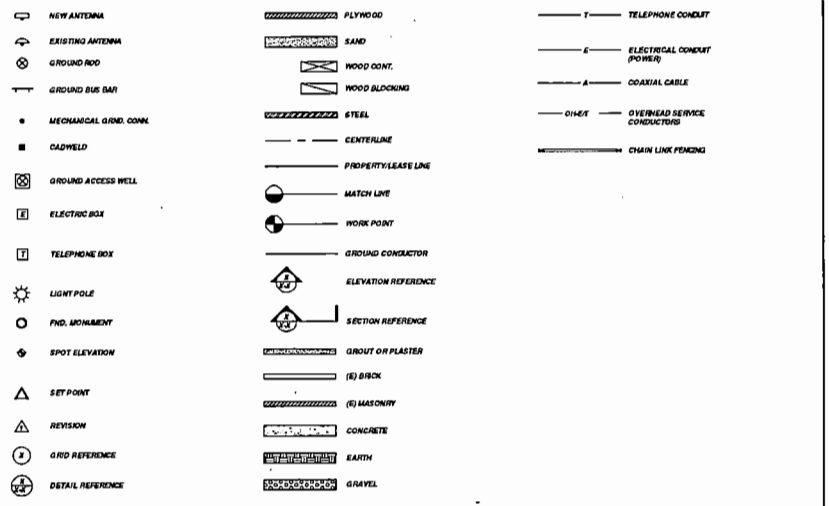
2. A CONCRETE WASHOUT SHALL BE PROVIDED ON ALL PROJECTS WHICH PROPOSE THE CONSTRUCTION OF ANY CONCRETE IMPROVEMENTS THAT ARE TO BE POURED INTO PLACE ON THE SITE.

3. ALL EROSION/SEDIMENT CONTROL DEVICES SHALL BE MAINTAINED IN WORKING ORDER AT ALL TIMES.

4. ALL SLOPES THAT ARE CREATED OR DISTURBED BY CONSTRUCTION ACTIVITY MUST BE PROTECTED AGAINST EROSION AND SEDIMENT TRANSPORT AT ALL TIMES.

5. THE STORAGE OF ALL CONSTRUCTION MATERIALS AND EQUIPMENT MUST BE PROTECTED AGAINST ANY POTENTIAL RELEASE OF POLLUTANTS INTO THE ENVIRONMENT.

GENERAL REQUIREMENTS 1



LEGEND 2

ABBREVIATION	DEFINITION	ABBREVIATION	DEFINITION	ABBREVIATION	DEFINITION
A.B.	ANCHOR BOLT	FAB.	FABRICATION(OR)	PWR.	POWER (CABINET)
ABV.	ABOVE	F.F.	FINISH FLOOR	QTY.	QUANTITY
ACCA	ANTENNA CABLE COVER ASSEMBLY	F.G.	FINISH GRADE	RAD.(R)	RADIUS
ADD'L	ADDITIONAL	FIN.	FINISH(ED)	REF.	REFERENCE
A.F.F.	ABOVE FINISHED FLOOR	FLR.	FLOOR	REINF.	REINFORCEMENT(ING)
A.F.G.	ABOVE FINISHED GRADE	FDN.	FOUNDATION	REQ'D.	REQUIRED
ALUM.	ALUMINUM	F.O.C.	FACE OF CONCRETE	RGS.	RIGID GALVANIZED STEEL
ALT.	ALTERNATE	F.O.M.	FACE OF MASONRY	SCH.	SCHEDULE
ANT.	ANTENNA	F.O.S.	FACE OF STUD	SHT.	SHEET
APPROX.	APPROXIMATE(LY)	F.O.W.	FACE OF WALL	SIM.	SIMILAR
ARCH.	ARCHITECTURAL	F.S.	FINISH SURFACE	SPEC.	SPECIFICATION(S)
AWG.	AMERICAN WIRE GAUGE	FT.(')	FOOT(FEET)	SQ.	SQUARE
BLDG.	BUILDING	FTG.	FOOTING	S.S.	STAINLESS STEEL
BLK.	BLOCK	G.	GROWTH (CABINET)	STD.	STANDARD
BLK'G.	BLOCKING	GA.	GAUGE	STL.	STEEL
BM.	BEAM	GI.	GALVANIZED	STRUC.	STRUCTURAL
B.N.	BOUNDARY NAILING	G.F.I.	GROUND FAULT CIRCUIT INTERRUPTER	TEMP.	TEMPORARY
BTCW.	BARE TINNED COPPER WIRE	GLB.(GLU-LAM)	GLUE LAMINATED BEAM	THK.	THICK(NESS)
B.O.F.	BOTTOM OF FOOTING	GPS	GLOBAL POSITIONING SYSTEM	T.N.	TOE NAIL
B.U.	BACK-UP CABINET	GRND.	GROUND	T.O.A.	TOP OF ANTENNA
CAB.	CABINET	HDR.	HEADER	T.O.C.	TOP OF CURB
CANT.	CANTILEVER(ED)	HGR.	HANGER	T.O.F.	TOP OF FOUNDATION
C.I.P.	CAST IN PLACE	HT.	HEIGHT	T.O.P.	TOP OF PLATE (PARAPET)
CLG.	CEILING	ICGB.	ISOLATED COPPER GROUND BUS	T.O.S.	TOP OF STEEL
CLR.	CLEAR	IN.(")	INCH(ES)	T.O.W.	TOP OF WALL
COL.	COLUMN	INT.	INTERIOR	TYP.	TYPICAL
CONC.	CONCRETE	LB.(#)	POUND(S)	U.G.	UNDER GROUND
CONN.	CONNECTION(OR)	L.B.	LAG BOLTS	U.L.	UNDERWRITERS LABORATORY
CONST.	CONSTRUCTION	L.F.	LINEAR FEET (FOOT)	U.N.O.	UNLESS NOTED OTHERWISE
CONT.	CONTINUOUS	L.	LONG (TUDINAL)	V.I.F.	VERIFY IN FIELD
d	PENNY (NAILS)	MAS.	MASONRY	W	WIDE(WIDTH)
DBL.	DOUBLE	MAX.	MAXIMUM	W/	WITH
DEPT.	DEPARTMENT	M.B.	MACHINE BOLT	WD.	WOOD
D.F.	DOUGLAS FIR	MECH.	MECHANICAL	W.P.	WEATHERPROOF
DIA.	DIAMETER	MFR.	MANUFACTURER	WT.	WEIGHT
DIAG.	DIAGONAL	MIN.	MINIMUM	℄	CENTERLINE
DIM.	DIMENSION	MISC.	MISCELLANEOUS	∠	PLATE
DWG.	DRAWING(S)	MTL.	METAL		
DWL.	DOWEL(S)	(N)	NEW		
EA.	EACH	NO.(#)	NUMBER		
EL.	ELEVATION	N.T.S.	NOT TO SCALE		
ELEC.	ELECTRICAL	O.C.	ON CENTER		
ELEV.	ELEVATOR	OPNG.	OPENING		
EMT.	ELECTRICAL METALLIC TUBING	P.C.	PRECAST CONCRETE		
E.N.	EDGE NAIL	PCS	PERSONAL COMMUNICATION SERVICES		
ENGR.	ENGINEER	PLY.	PLYWOOD		
EQ.	EQUAL	PPC	POWER PROTECTION CABINET		
EXP.	EXPANSION	PRC	PRIMARY RADIO CABINET		
EXIST.(E)	EXISTING	P.S.F.	POUNDS PER SQUARE FOOT		
EXT.	EXTERIOR	P.S.I.	POUNDS PER SQUARE INCH		
		P.T.	PRESSURE TREATED		

ABBREVIATIONS 3

verizonwireless
126 WEST GEMINI DRIVE
TEMPE, AZ 85283

14432 SE EASTGATE WAY, SUITE 260
BELLEVUE, WA 98007-6403
TEL: 425.274.4444 FAX: 425.274.4449

REV.	DATE	REVISION DESCRIPTION
1	08.08.13	FINAL
0	07.26.13	FOR REVIEW

PROJECT INFORMATION:

TUC MUSTANG
4502 N. 1ST AVENUE
TUCSON, AZ. 85718
PIMA CO.

PROJECT NUMBER: 20130923908

DRAWN BY:	CHECKED BY:
RT	VD

SHEET TITLE:
GENERAL REQUIREMENTS, LEGEND & ABBREVIATIONS

SHEET NUMBER: **T-2** REV.: 1

GENERAL

1. THIS FACILITY IS AN UNMANNED CELLULAR TELEPHONE EQUIPMENT FACILITY. THE OCCUPANCY CLASSIFICATION IS U [2010 CBC, TITLE 24, PART 2, VOLUME 1, SECTION 312, AND SECTION 307.1 EXCEPTION #5].
2. THIS FACILITY IS EXEMPT FROM HANDICAP REQUIREMENTS PER 2010 CBC SECTION 11B-203.3.4 EXCEPTION #1 THIS FACILITY IS NON-OCCUPIABLE SPACE AND ENTERED ONLY BY SERVICE PERSONNEL. THIS SPACE IS NOT FOR HUMAN OCCUPANCY.
3. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO SUBMITTING HIS BID. ANY DISCREPANCIES, CONFLICTS OR OMISSIONS SHALL BE REPORTED TO THE ENGINEER PRIOR TO SUBMITTING BIDS, AND PROCEEDING WITH ANY WORK.
4. THE CONTRACTOR SHALL NOTIFY ENGINEER OF ANY ERRORS, OMISSIONS, OR DISCREPANCIES AS THEY MAY BE DISCOVERED IN THE PLANS, SPECIFICATIONS, & NOTES PRIOR TO STARTING CONSTRUCTION, INCLUDING BUT NOT LIMITED BY DEMOLITION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY ERRORS, OMISSION, OR INCONSISTENCY AFTER THE START OF CONSTRUCTION WHICH HAS NOT BEEN BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER AND SHALL INCUR ANY EXPENSES TO RECTIFY THE SITUATION. THE METHOD OF CORRECTION SHALL BE APPROVED BY THE ARCHITECT OR THE ENGINEER RESPONSIBLE OF THE PROJECT.
5. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR HAS THE RESPONSIBILITY TO LOCATE ALL EXISTING UTILITIES, WHETHER OR NOT SHOWN ON THE PLANS, AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR OR SUBCONTRACTOR SHALL BEAR THE EXPENSE OF REPAIRING OR REPLACING ANY DAMAGE TO THE UTILITIES CAUSED DURING THE EXECUTION OF THE WORK. CONTACT USA DIG ALERT @ 800-227-2600
6. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL PROTECT ALL AREAS FROM DAMAGE WHICH MAY OCCUR DURING CONSTRUCTION. ANY DAMAGE TO NEW OR EXISTING SURFACES, STRUCTURES OR EQUIPMENT SHALL BE IMMEDIATELY REPAIRED OR REPLACED TO THE SATISFACTION OF THE PROPERTY OWNER. THE CONTRACTOR SHALL BEAR THE EXPENSE OF REPAIRING OR REPLACING ANY DAMAGED AREAS.
7. A COPY OF THE APPROVED PLANS SHALL BE KEPT IN A PLACE SPECIFIED BY THE GOVERNING AGENCY, AND BY LAW SHALL BE AVAILABLE FOR INSPECTION AT ALL TIMES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE ALL CONSTRUCTION SETS REFLECT THE SAME INFORMATION AS THE APPROVED PLANS. THE CONTRACTOR SHALL ALSO MAINTAIN ONE SET OF PLANS AT THE SITE FOR THE PURPOSE OF DOCUMENTING ALL AS-BUILT CHANGES, REVISIONS, ADDENDA, OR CHANGE ORDERS. THE CONTRACTOR SHALL FORWARD THE AS-BUILT/RED DRAWINGS TO THE ARCHITECT OR THE ENGINEER RESPONSIBLE OF THE PROJECT AT THE CONCLUSION OF THE PROJECT.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE SECURITY OF THE SITE WHILE THE WORK IS IN PROGRESS UNTIL THE JOB IS COMPLETE.
9. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE TEMPORARY POWER, WATER, AND TOILET FACILITIES AS REQUIRED BY THE PROPERTY OWNER OR GOVERNING AGENCY.
10. ALL CONSTRUCTION THROUGH THE PROJECT SHALL CONFORM TO THE LATEST C.B.C. AND ALL OTHER GOVERNING CODES, INCLUDING THE CALIFORNIA ADMINISTRATIVE CODES TITLE 8, 19, AND 24. THE MOST RESTRICTIVE CODE SHALL GOVERN.
11. THE CONTRACTOR AND SUBCONTRACTOR SHALL COMPLY WITH ALL LOCAL AND STATE REGULATIONS INCLUDING ALL OSHA REQUIREMENTS.
12. WHEN REQUIRED STORAGE OF MATERIALS OCCURS, THEY SHALL BE EVENLY DISTRIBUTED OVER THE FLOOR OR ROOF SO AS NOT TO EXCEED THE DESIGNED LIVE LOADS FOR THE STRUCTURE. TEMPORARY SHORING OR BRACING SHALL BE PROVIDED WHERE THE STRUCTURE OR SOIL HAS NOT ATTAINED THE DESIGN STRENGTH FOR THE CONDITIONS PRESENT.
13. THE CONTRACTOR SHALL SUPERVISE AND COORDINATE ALL WORK, USING HIS PROFESSIONAL KNOWLEDGE AND SKILLS. HE IS SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, PROCEDURES AND SEQUENCING AND COORDINATING ALL PORTIONS OF THE WORK UNDER THE PROJECT.
14. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN AND PAY FOR ALL PERMITS, LICENSES AND INSPECTIONS WITH RESPECT TO THE WORK TO COMPLETE THE PROJECT. BUILDING PERMIT APPLICATIONS SHALL BE FILED BY THE OWNER OR AUTHORIZED AGENT. CONTRACTOR SHALL OBTAIN THE PERMIT AND MAKE FINAL PAYMENT OF SAID DOCUMENT.
15. ALL DIMENSIONS TAKE PRECEDENCE OVER SCALE. DRAWINGS ARE NOT TO BE SCALED UNDER ANY CIRCUMSTANCES.
16. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BLOCKING, BACKING, FRAMING, HANGERS OR SUPPORTS FOR INSTALLATION OF ITEMS INDICATED ON THE DRAWINGS.
17. THE CONTRACTOR SHALL PROVIDE THE FIRE MARSHALL OR U.L. APPROVED MATERIALS TO FILL/SEAL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES.
18. NEW CONSTRUCTION ADDED TO EXISTING CONSTRUCTION SHALL BE MATCHED IN FORM, TEXTURE, MATERIAL AND PAINT COLOR EXCEPT AS NOTED IN THE PLANS.
19. THE CONTRACTOR IS TO PROVIDE PORTABLE FIRE EXTINGUISHERS HAVING A MINIMUM 2A:10-B:C RATING WITHIN 75FT. OF TRAVEL TO ALL PORTIONS OF THE CONSTRUCTION AREA. [2010 CFC SECTION 906-1-1 & 7 AND SECTION 906.3.1]
20. MATERIALS TESTING SHALL BE TO THE LATEST STANDARDS AVAILABLE AS REQUIRED BY THE LOCAL GOVERNING AGENCY RESPONSIBLE FOR APPROVING THE RESULTS.
21. ALL GENERAL NOTES AND STANDARD DETAILS ARE THE MINIMUM REQUIREMENTS TO BE USED IN CONDITIONS WHICH ARE NOT SPECIFICALLY SHOWN OTHERWISE.
22. ALL DEBRIS AND REFUSE IS TO BE REMOVED FROM THE PROJECT. PREMISES SHALL BE LEFT IN A CLEAN BROOM FINISHED CONDITION AT ALL TIMES.
23. BUILDING INSPECTORS AND/OR OTHER BUILDING OFFICIALS ARE TO BE NOTIFIED PRIOR TO ANY GRADING AND CONSTRUCTION EFFORT AS MANDATED BY THE GOVERNING AGENCY.
24. ALL SYMBOLS AND ABBREVIATIONS ARE CONSIDERED CONSTRUCTION INDUSTRY STANDARDS. IF A CONTRACTOR HAS A QUESTION REGARDING THEIR EXACT MEANING THE ARCHITECT OR THE ENGINEER RESPONSIBLE OF THE PROJECT SHALL BE NOTIFIED FOR CLARIFICATIONS.

SPECIFICATIONS

SITEWORK

1. THE PREPARATION OF THE SITE FOR CONSTRUCTION SHALL INCLUDE THE REMOVAL OF ALL BROKEN CONCRETE, TREE TRUNKS AND ANY OTHER DEBRIS THAT WOULD BE DAMAGING TO THE FOOTINGS OF THE NEW STRUCTURE.
2. BACKFILLING AT NEW TRENCHES SHALL BE OF CLEAN, STERILE SOIL HAVING A SAND EQUIVALENT OF 30 OR GREATER. BACKFILLING SHALL BE DONE IN 6 INCH LAYERS, MOISTURE CONDITIONED AND PROPERLY COMPACTED TO SPECIFIED COMPACTION PERCENTAGE PER ASTM D1557 (90% MIN.). ADEQUATE DRAINAGE SHALL BE PROVIDED SUCH THAT NO PONDING OCCURS AFTER THESE RECOMMENDATIONS ARE APPROVED BY THE PROJECT MANAGER AND ARCHITECT OR THE ENGINEER RESPONSIBLE OF THE PROJECT.
3. ALL FOUNDATION FOOTINGS SHALL EXTEND INTO AND BEAR AGAINST NATURAL UNDISTURBED SOIL OR APPROVED COMPACTED FILL. FOOTINGS SHALL EXTEND INTO SOIL DEPTH INDICATED ON DETAILS.
4. SHOULD ANY LOOSE FILL, EXPANSIVE SOIL, GROUND WATER OR ANY OTHER DANGEROUS CONDITIONS BE ENCOUNTERED DURING THE EXCAVATION FOR THE NEW FOUNDATION, THE CONTRACTOR SHALL NOTIFY THE PROJECT MANAGER OR OWNER'S REPRESENTATIVE AND ALL FOUNDATION WORK SHALL CEASE IMMEDIATELY.

CONCRETE

REINFORCEMENT

1. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 40, DEFORMED UNLESS OTHERWISE NOTED. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES CLASS "B" AND ALL HOOKS SHALL BE STANDARD U.N.O.
2. LOW HYDROGEN WELDING RODS SHALL BE USED FOR ALL WELDING OF REINFORCING BARS.
3. BARS NOTED "CONT.", TYPICAL WALL REINFORCING, AND VERTICAL COLUMN REINFORCING SHALL HAVE A MINIMUM SPLICE EQUAL 40 BAR DIAMETERS LAP, OR 24" WHICHEVER IS GREATER.
4. REINFORCING SHALL BE SPLICED ONLY AS SHOWN OR NOTED. SPLICE AT OTHER LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
5. SPLICES IN ADJACENT HORIZONTAL WALL REINFORCING BARS SHALL BE STAGGERED 4'-0" MINIMUM UNLESS OTHERWISE NOTED.
6. ALL REINFORCING, ANCHOR BOLTS AND OTHER INSERTS SHALL BE SECURED IN PLACE PRIOR TO PLACING CONCRETE OR GROUTING MASONRY.
7. #5 OR LARGER REINFORCING BARS SHALL NOT BE RE-BENT WITHOUT APPROVAL OF THE ENGINEER.
8. PROVIDE THE FOLLOWING MINIMUM PROTECTIVE COVERING OF CONCRETE:

BELOW GRADE (UNFORMED)	3"	CLEAR
BELOW GRADE (FORMED)	2"	CLEAR
WALLS	1"	CLEAR
COLUMNS	1 1/2"	CLEAR
BEAMS AND GIRDERS	1 1/2"	CLEAR
STRUCTURAL SLAB (ABOVE GRADE)	3/4"	CLEAR

CONCRETE (GENERAL)

1. STRUCTURAL FILL AND BACKFILL SHOULD CONSIST OF A NON-EXPANSIVE GRANULAR MATERIAL APPROVED BY THE GEOTECHNICAL ENGINEER AND PLACED IN UNIFORM 8" LIFTS.
2. STRUCTURAL FILL PLACED FOR SUPPORT OF FOUNDATION SHALL BE COMPACTED TO AT LEAST 95% OF MAXIMUM DENSITY FROM ASTM D698 (STANDARD PROCTOR).
3. STRUCTURAL FILL UNDERNEATH FOUNDATIONS AND SLABS SHALL BE COMPACTED WITH A SMOOTH VIBRATORY COMPACTION DEVICE PRIOR TO CONCRETE PLACEMENT.
4. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH ACI 318.
5. ALL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 2500 PSI, UNLESS OTHERWISE SPECIFIED. WATER-CEMENTITIOUS MATERIAL RATIO AND AIR CONTENT SHALL COMPLY WITH ACI 318 SECTION 4.1 & 4.2.
6. CEMENT FOR CONCRETE OR MASONRY MORTAR SHALL BE TYPE V "PORTLAND CEMENT" AND CONFORM TO ASTM C-150 STANDARDS, UNLESS OTHERWISE SPECIFIED IN GEOTECH REPORT OR IN THE DRAWINGS.
7. AGGREGATE FOR CONCRETE SHALL CONFORM TO ASTM C-33 STANDARDS.
8. CONCRETE SHALL BE DEPOSITED IN ACCORDANCE WITH 318 SECTION 5.10 RECOMMENDED PRACTICE FOR CONSOLIDATION OF CONCRETE.
9. COLD WEATHER AND HOT WEATHER CONCRETE PLACEMENT SHALL BE IN ACCORDANCE WITH ACI 318 SECTION 4-2, AND SECTIONS 5-12 & 5-13.
10. AFTER PLACEMENT, THE CONCRETE SHALL BE COVERED WITH A PLASTIC VAPOR BARRIER FOR A 4 TO 7 DAY INITIAL CURING PERIOD.
11. A MINIMUM OF THREE CONCRETE TEST CYLINDERS SHALL BE TAKEN. ONE SHALL BE TESTED AT 7 DAYS, ONE AT 28 DAYS, AND ONE HOLD CYLINDER, UNLESS OTHERWISE SPECIFIED BY GOVERNING AGENCY.
12. FLOOR SLABS SHALL CONFORM TO ASTM C-33 STANDARDS AND SHALL BE 5 1/2 INCHES MINIMUM THICK - SEE FOUNDATION PLANS FOR REINFORCEMENT, BASE, UNDERLAYMENT, VAPOR BARRIER OR OTHER SPECIFIC REQUIREMENTS.
13. FLOOR SLABS SHALL BE LEVEL OR TRUE SLOPES AS SHOWN ON DRAWINGS. TOLERANCE: 1/8 INCH IN 10 FEET.
14. TOP OF CONCRETE SLAB TO BE 6" MINIMUM ABOVE FINISH GRADE, UNLESS OTHERWISE SPECIFIED IN THE DRAWINGS.
15. ALL EXPOSED EDGES OF CONCRETE SHALL HAVE A 3/4" CHAMFER.
16. ALL EXTERIOR CONCRETE WALLS, PORCHES AND PLATFORMS ON SITE TO HAVE A ROCK SALT FINISH. (U.O.N.)
17. CONTRACTOR SHALL BE RESPONSIBLE FOR ACCURATE PLACEMENT OF ALL ROUGH HARDWARE AND ALL ITEMS OF OTHER TRADES REQUIRED TO BE EMBEDDED IN CONCRETE WORK.

METALS

STRUCTURAL FRAMING SYSTEM AND EQUIPMENT

1. CABLE LADDERS AT INTERIOR SPACES WHERE INDICATED SHALL BE 1-1/2" SOLID BAR STRINGERS TYPE
2. ALL UNISTRUT SHALL BE P1000 (1-5/8").
3. MICROFLECT SHALL BE D 1 1 8 (U.N.O.) TO MATCH CABLE TRAY.
4. CABLE RUNS ON ROOF TOP AND OUTDOOR APPLICATIONS, SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.
5. ALL ANTENNA SPECS. PER RF DATA SHEET.

STRUCTURAL METAL

1. ALL STRUCTURAL STEEL SHALL COMPLY WITH MOST RECENT ASTM A-36 STANDARDS.
2. ALL CONNECTIONS AND FABRICATIONS SHALL COMPLY WITH MOST RECENT A.I.S.C. SPECIFICATIONS.
3. ALL WELDING SHALL BE PERFORMED BY OPERATORS WHO HAVE BEEN RECENTLY QUALIFIED AS PRESCRIBED IN MOST RECENT "QUALIFICATION PROCEDURE" OF THE AMERICAN WELDING SOCIETY.

METALS - CONT.

4. USE ALL MEANS NECESSARY TO PROTECT STRUCTURAL STEEL BEFORE, DURING AND AFTER INSTALLATION AND TO PROTECT THE INSTALLED WORK AND MATERIALS OF ALL OTHER TRADES. IN THE EVENT OF DAMAGE IMMEDIATELY MAKE ALL REPAIRS AND REPLACEMENTS NECESSARY TO THE APPROVAL OF AND AT NO ADDITIONAL COST TO THE OWNER.
5. HIGH-STRENGTH BOLTS SHALL COMPLY WITH ASTM A-325 N, BEARING TYPE CONNECTION WITH THREADS INCLUDED IN SHEAR PLANE.
6. OTHER MACHINE BOLTS AND ANCHOR BOLTS SHALL MEET THE REQUIREMENTS OF ASTM A-307 7. WELDS SHALL BE MADE WITH ASTM-233, E-70 SERIES ELECTRODES FOR STEEL TO STEEL CONNECTIONS. WELDING OF REINFORCING BARS SHALL BE DONE WITH ELECTRODES AS APPROVED BY A CERTIFIED TESTING LABORATORY.
8. ALL FRAMING CONNECTORS SUCH AS CONCRETE ANCHORS, HOLD-DOWNS, POST BASES, FRAMING CAP, HANGER AND OTHER MISCELLANEOUS STRUCTURAL METALS SHALL BE AS MANUFACTURED BY SIMPSON STRONG TIE CO. OR APPROVED EQUIVALENT.
9. ALL EXTERIOR STRUCTURAL STEEL PERMANENTLY EXPOSED TO THE WEATHER SHALL BE HOT-DIP GALVANIZING AFTER FABRICATION. 12. ALL WELDING DONE AFTER GALVANIZING SHALL BE PROTECTED WITH TWO (2) COATS OF "GALVANIZED" OR GALVALOY

MECHANICAL

1. REFER TO DRAWINGS FOR SITE SPECIFIC INFORMATION.
2. ALL MECHANICAL EQUIPMENT AND INSTALLATION TO COMPLY TO LATEST EDITION OF THE CALIFORNIA MECHANICAL CODE. (REFER TO THE COVER SHEET)
3. ALL PLUMBING TO COMPLY WITH THE LATEST EDITION OF THE CALIFORNIA PLUMBING CODE. (REFER TO THE COVER SHEET)
4. BEFORE STARTING TRENCHING, THE CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL EXISTING LINES AFFECTED BY THE CONTRACT AND IMMEDIATELY NOTIFY THE PROJECT MANAGER IF ANY REROUTING OF EXISTING LINES IS NECESSARY.
5. HVAC SYSTEM (REFER TO DRAWINGS)

ELECTRICAL

1. REFER TO DRAWINGS FOR SITE SPECIFIC INFORMATION
2. ALL ELECTRIC WORK TO COMPLY WITH THE LATEST EDITION OF THE CALIFORNIA ELECTRICAL CODE. (REFER TO THE COVER SHEET)
3. ALL INTERIOR SEISMIC UNISTRUT SHALL BE GROUNDED WITH #6 STRANDED COPPER WITH GREEN JACKET. ALL CONNECTIONS TO BE DOUBLE LUG.
4. BEFORE STARTING TRENCHING, THE CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL EXISTING LINES AFFECTED BY THE CONTRACT AND IMMEDIATELY NOTIFY THE PROJECT MANAGER IF ANY REROUTING OF EXISTING LINES IS NECESSARY.

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REV.	DATE	REVISION DESCRIPTION
1	08.08.13	FINAL
0	07.26.13	FOR REVIEW

PROJECT INFORMATION:

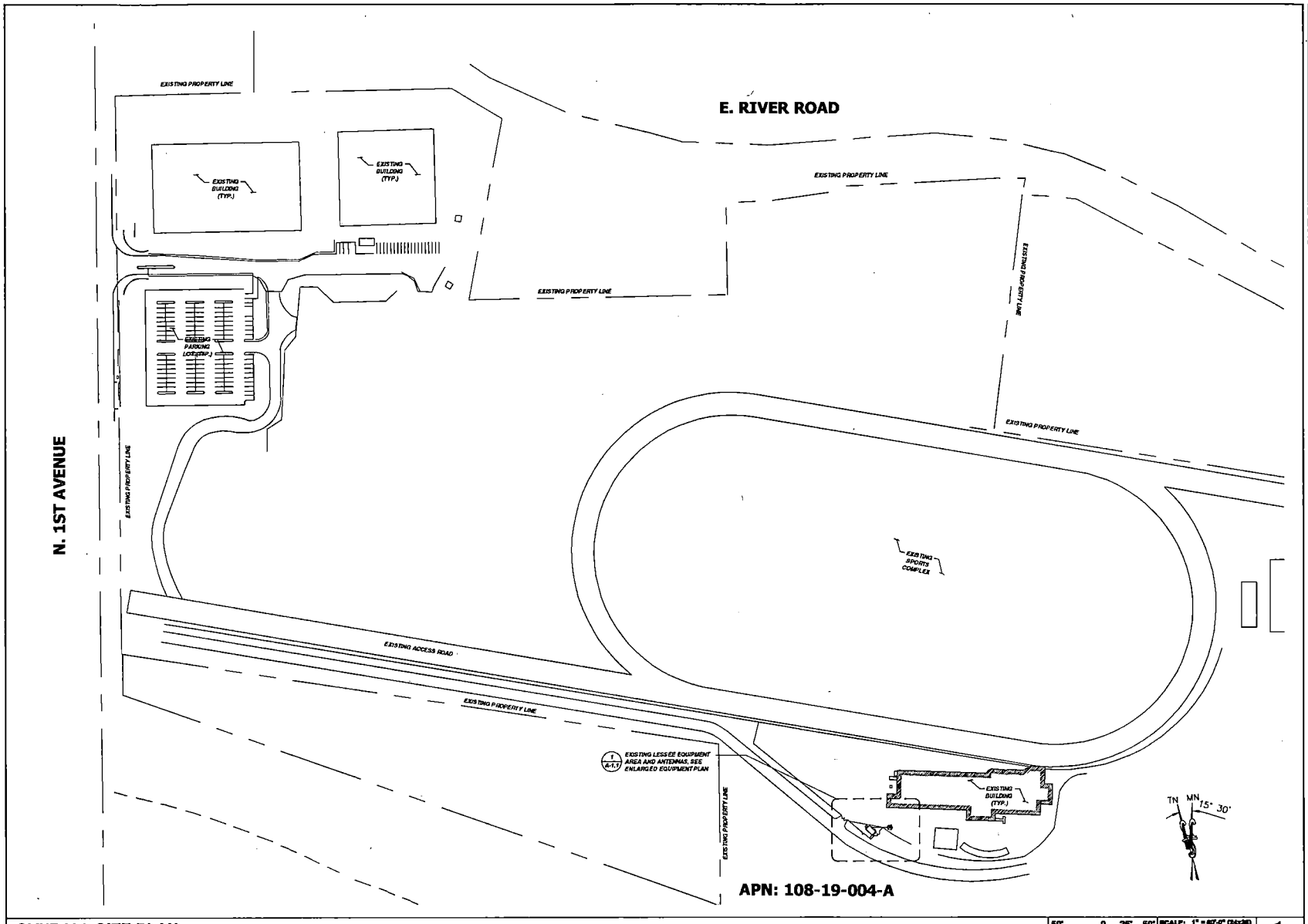
TUC MUSTANG
4502 N. 1ST AVENUE
TUCSON, AZ. 85718
PIMA CO.

PROJECT NUMBER: **20130923908**

DRAWN BY:	CHECKED BY:
RT	VD

SHEET TITLE: **SPECIFICATIONS**

SHEET NUMBER: **T-3** REV.: **1**



OVERALL SITE PLAN

50' 0 25' 50' SCALE: 1" = 50'-0" (24x36) (OR) 1/2" = 50'-0" (11x17) 1

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REV.	DATE	REVISION DESCRIPTION
1	09.06.13	FINAL
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PROJECT INFORMATION:

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4502 N. 1ST AVENUE
TUCSON, AZ. 85718
PIMA CO.

PROJECT NUMBER: 20130923908

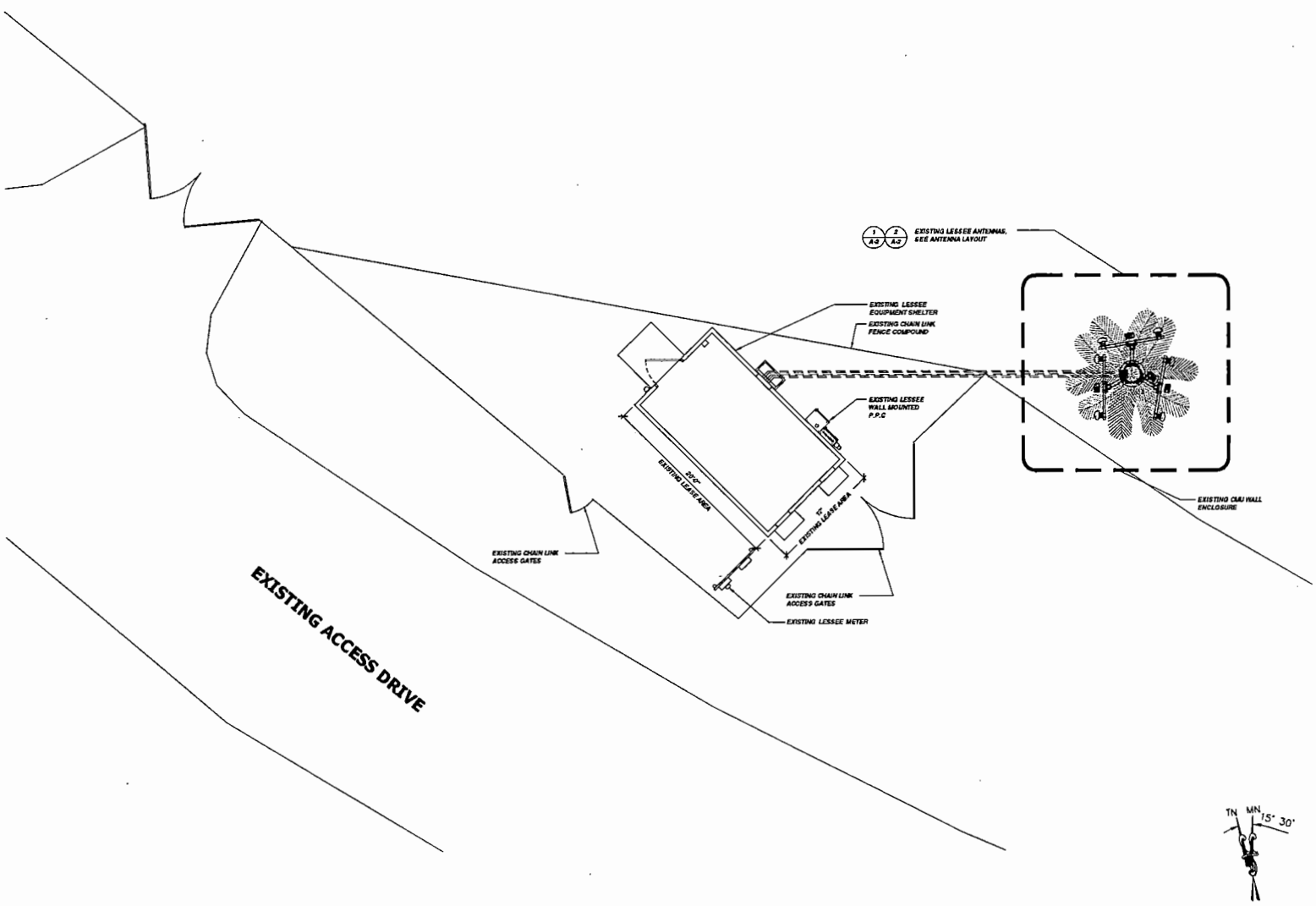
DRAWN BY:	CHECKED BY:
RT	VD

SHEET TITLE:

OVERALL SITE PLAN

SHEET NUMBER: **A-1**

REV.: 1



ENLARGED SITE PLAN

50' 0 25' 50' SCALE: 1" = 50'-0" (24x36) (OR) 1/2" = 50'-0" (11x17) 1

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REV.	DATE	REVISION DESCRIPTION
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PROJECT INFORMATION:

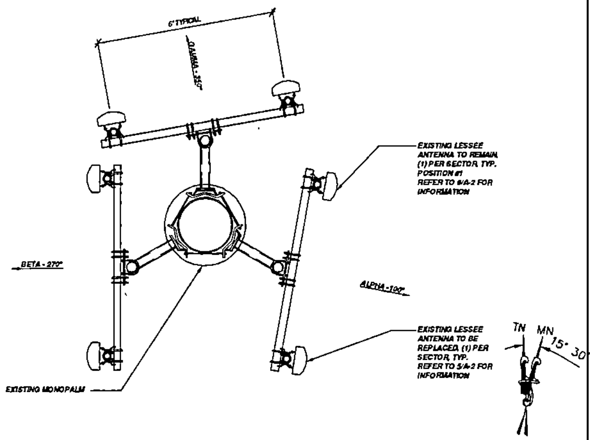
TUC MUSTANG
4502 N. 1ST AVENUE
TUCSON, AZ. 85718
PIMA CO.

PROJECT NUMBER: 20130923908

DRAWN BY: RT | CHECKED BY: VD

SHEET TITLE: ENLARGED SITE PLAN

SHEET NUMBER: A-1.1 | REV.: 1

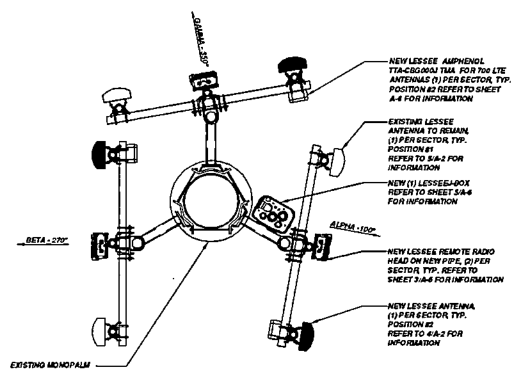


(E) ANTENNA LAYOUT

0 1' 2' 4' | SCALE: 1/4" = 1'-0" (24x36) (OR) 1/8" = 1'-0" (11x17) | 1

NOTE:

SEE PAGE A-6 DETAIL FOR J-BOX, TMA AND RRH MOUNTING



NEW ANTENNA LAYOUT

0 1' 2' 4' | SCALE: 1/4" = 1'-0" (24x36) (OR) 1/8" = 1'-0" (11x17) | 2

ANTENNA CHANGE & VERIZON AWS CONFIGURATION

1. REPLACE U700C ANTEL ANTENNA (BXA-70063/6CFEDIN) WITH ANTEL TRI BAND 6 PORTS ANTENNA (CWW3063X19G00) IN POSITION #2 FOR ALL SECTORS.
2. ANTENNA #1 REMAIN UNCHANGED
3. ADD (1) 6X12 HYBRIFLEX MAIN FEEDLINE FOR AWS AND PCS & (1) JUCTION BOX ON TOP + (1) JUCTION BOX IN SHELTER.
4. ADD (3) AWS 2X40W RRHS, ADD (3) PCS 2X40W RRHS.
5. ADD (6) 1x1 HYBRIFLEX TO CONECT RRHs FROM JUNCTION BOX
6. ADD (3) AMPHENOL TTA-CBG000J TMA FOR 700 LTE
7. INSTALL RET CABLING KIT FOR THE NEW ANTENNAS
8. NO CHANGES TO EXISTING COAX RUN CONFIGURATION.
9. DO NOT CONNECT THE JUMPERS FROM THE RRH TO THE ANTENNA PORT FOR PCS.

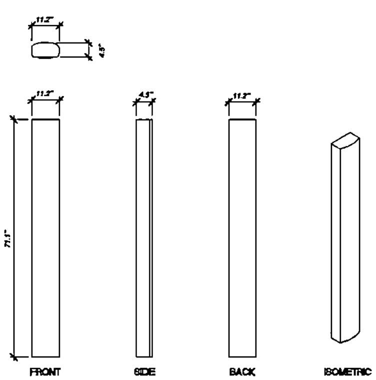
NOTE:

STRUCTURAL CAPACITY OF TOWER AND MOUNT TO SUPPORT NEW EQUIPMENT TO BE DETERMINED BY OTHERS

NEW MODIFICATION

3

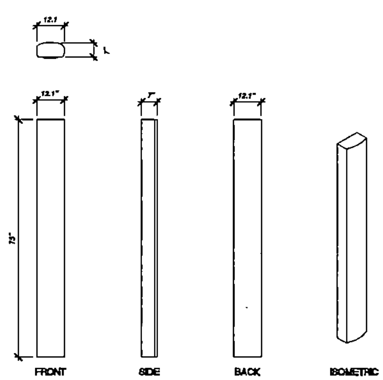
ANTENNA MODEL:
"ANTEL" BXA-80063/6CFDIN



(E) ANTENNA

SCALE N.T.S. | 4

ANTENNA MODEL:
CWWX063X19G00



(N) ANTENNA

SCALE N.T.S. | 5

NOT USED

SCALE N.T.S. | 6

NOT USED

SCALE N.T.S. | 7

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1	08.08.13	FINAL
0	07.26.13	FOR REVIEW

PROJECT INFORMATION:

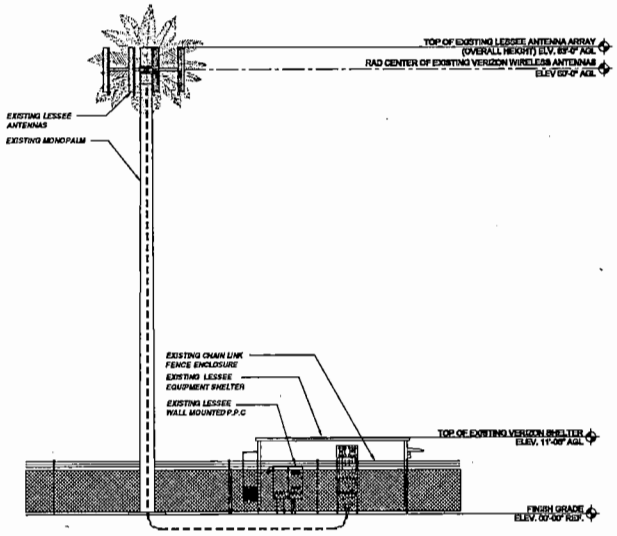
TUC MUSTANG
4502 N. 1ST AVENUE
TUCSON, AZ. 85718
PIMA CO.

PROJECT NUMBER: 20130923908

DRAWN BY: RT | CHECKED BY: VD

SHEET TITLE: ANTENNA INFORMATION

SHEET NUMBER: A-2 | REV.: 1

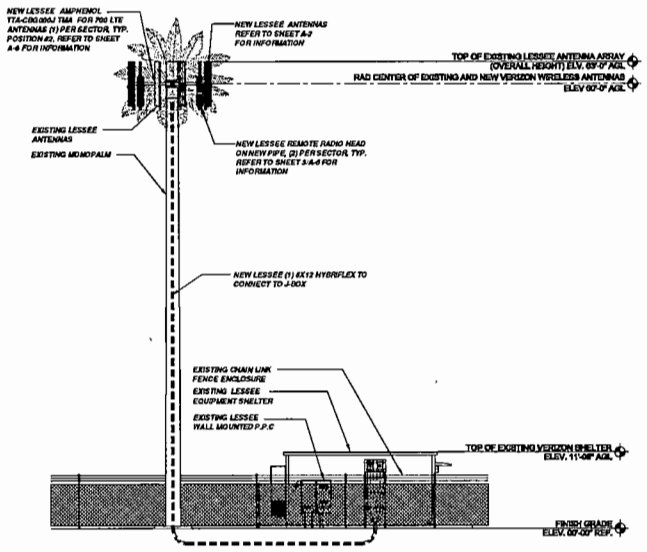


EXISTING NORTHEAST ELEVATION

0 1" 2" 4"

SCALE: 1/4" = 1'-0" (24x36)
(OR) 1/8" = 1'-0" (11x17)

1



NEW NORTHEAST ELEVATION

0 1" 2" 4"

SCALE: 1/4" = 1'-0" (24x36)
(OR) 1/8" = 1'-0" (11x17)

2

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REV.	DATE	REVISION DESCRIPTION
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PROJECT INFORMATION:

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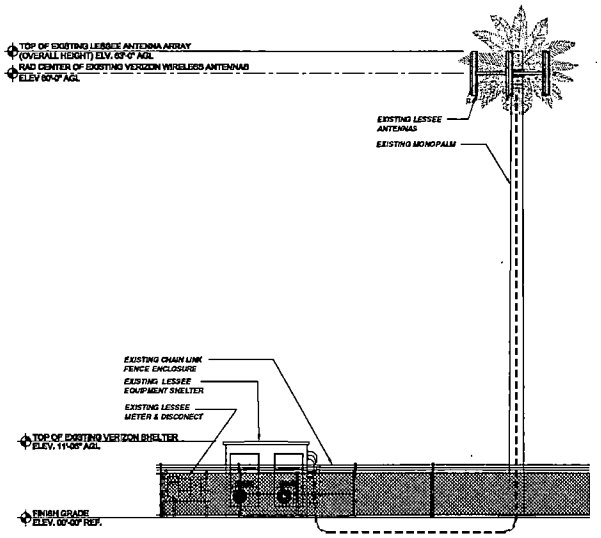
4502 N. 1ST AVENUE
TUCSON, AZ. 85718
PIMA CO.

PROJECT NUMBER: **20130923908**

DRAWN BY: **RT** | CHECKED BY: **VD**

SHEET TITLE: **NORTHEAST ELEVATIONS**

SHEET NUMBER: **A-3** | REV.: **1**

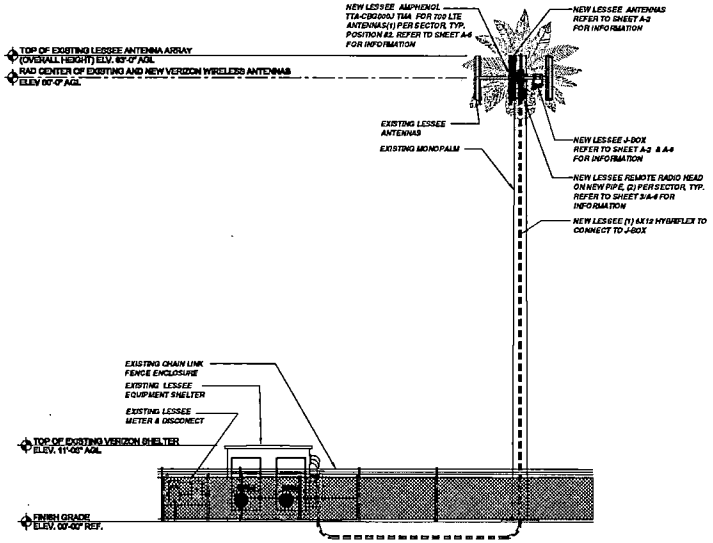


EXISTING SOUTHEAST ELEVATION

0 1" 2" 4"

SCALE: 1/4" = 1'-0" (24x36)
(OR) 1/8" = 1'-0" (11x17)

2



NEW SOUTHEAST ELEVATION

0 1" 2" 4"

SCALE: 1/4" = 1'-0" (24x36)
(OR) 1/8" = 1'-0" (11x17)

1

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REV.	DATE	REVISION DESCRIPTION
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PROJECT INFORMATION:

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4502 N. 1ST AVENUE
TUCSON, AZ. 85718
PIMA CO.

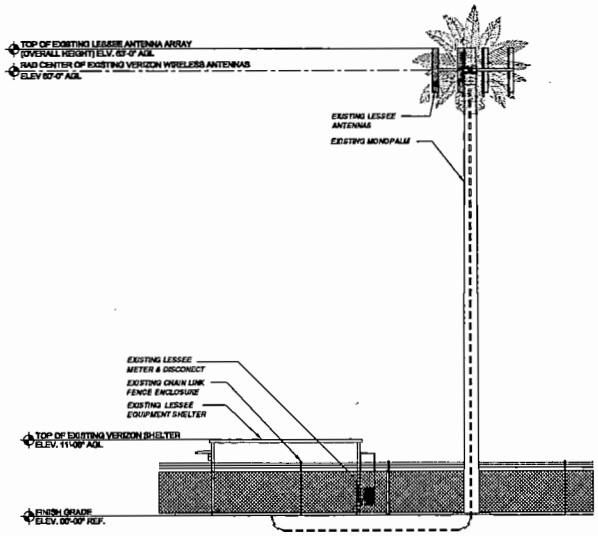
PROJECT NUMBER: 20130923908

DRAWN BY:	CHECKED BY:
RT	VD

SHEET TITLE:
SOUTHEAST ELEVATIONS

SHEET NUMBER: A-4

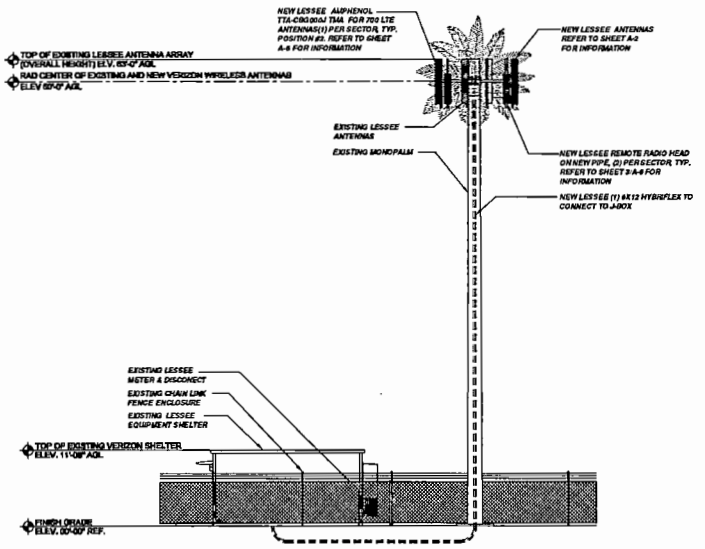
REV.: 1



EXISTING SOUTHWEST ELEVATION

SCALE: 1/4" = 1'-0" (24x36)
(OR) 1/8" = 1'-0" (11x17)

2



NEW SOUTHWEST ELEVATION

SCALE: 1/4" = 1'-0" (24x36)
(OR) 1/8" = 1'-0" (11x17)

1

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PROJECT INFORMATION:

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TUCSON, AZ. 85718
PIMA CO.

PROJECT NUMBER: **20130923908**

DRAWN BY: **RT** | CHECKED BY: **VD**

SHEET TITLE: **SOUTHWEST ELEVATIONS**

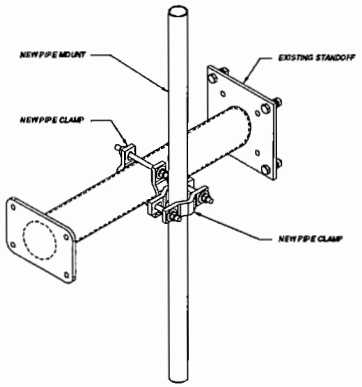
SHEET NUMBER: **A-5** | REV.: **1**

EXISTING/NEW COAXIAL CABLE TABLE									
SECTOR	NO.	AZIMUTH	LENGTHT	COAX QTY.	SIZE	TYPE	COAX QTY.	SIZE	TYPE
ALPHA	1	100°	±130'	(2)	7/8"	AVA5-50	(2)	7/8"	AVA5-50
ALPHA	2	100°	±130'	(2)	7/8"	AVA5-50	(2)	7/8"	AVA5-50
BETA	1	270°	±130'	(2)	7/8"	AVA5-50	(2)	7/8"	AVA5-50
BETA	2	270°	±130'	(2)	7/8"	AVA5-50	(2)	7/8"	AVA5-50
GAMMA	1	350°	±130'	(2)	7/8"	AVA5-50	(2)	7/8"	AVA5-50
GAMMA	2	350°	±130'	(2)	7/8"	AVA5-50	(2)	7/8"	AVA5-50

NOTE:
1. ADD 1 RUN OF 8x12 HYBRIFLEX CABLE
2. NO ADDITIONAL COAX NEEDED

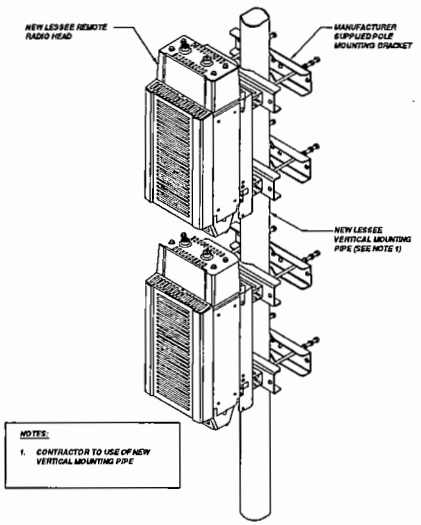
COAX CABLE TABLE

SCALE N.T.S. 1



TYPICAL J-BOX MOUNTING

SCALE N.T.S. 2



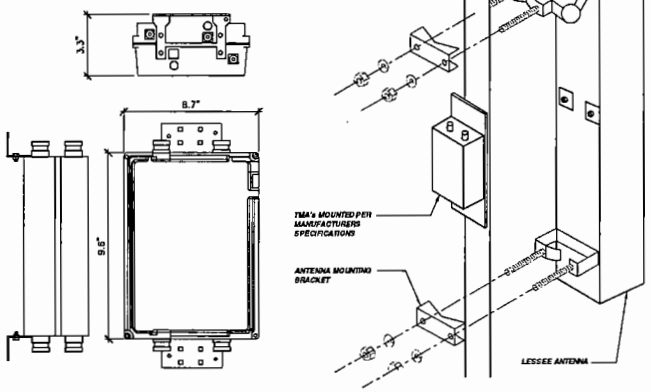
NOTES:
1. CONTRACTOR TO USE OF NEW VERTICAL MOUNTING PIPE

RRH MOUNTING

SCALE N.T.S. 3

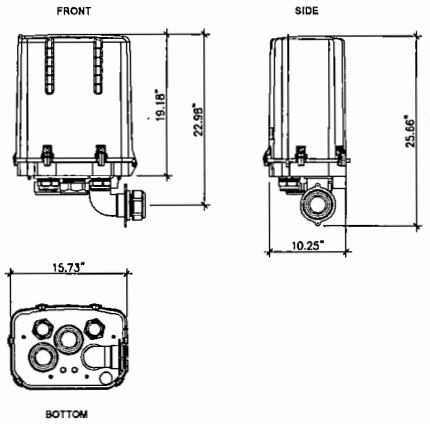
NOTE:
ANTENNA MOUNTING FOR REFERENCE ONLY. ACTUAL ANTENNA MAY VARY.

MANUFACTURER: AMPHENOL
MODEL: TTA-C8G000J
WEIGHT: 16 LBS
DIMENSIONS: 9.5" X 8.7" X 3.3"



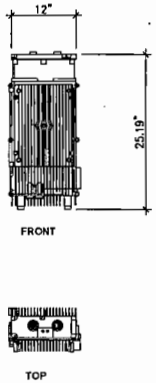
TMA MOUNT DETAIL

SCALE N.T.S. 4



NEW J-BOX

SCALE N.T.S. 5



NEW REMOTE RADIO HEAD(S)

SCALE N.T.S. 6

verizonwireless
126 WEST GEMINI DRIVE
TEMPE, AZ 85283

14432 SE EASTGATE WAY, SUITE 260
BELLEVUE, WA 98007-6493
TEL: 425.274.4444 FAX: 425.274.4449

REV.	DATE	REVISION DESCRIPTION
1	08.06.13	FINAL
0	07.26.13	FOR REVIEW

PROJECT INFORMATION:

TUC MUSTANG
4502 N. 1ST AVENUE
TUCSON, AZ. 85718
PIMA CO.

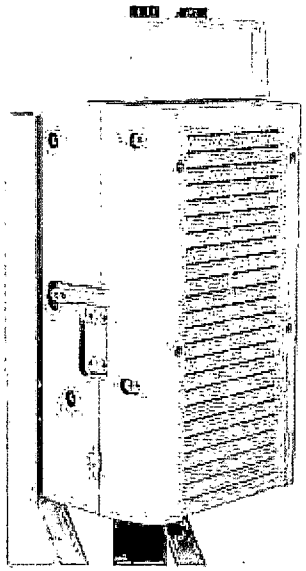
PROJECT NUMBER: **20130923908**

DRAWN BY: **RT** | CHECKED BY: **VD**

SHEET TITLE: **ARCHITECTURAL DETAILS**

SHEET NUMBER: **A-6** | REV.: **1**

RRH2x40-AWS



9442 RRH2x40-AWS

- **IBW: 20 MHz**
- **2x40W output power**
- **24" x 10.6" x 6.7"**
- **22 lbs**
- **-48 V**

Slant ±45° Dual Polarized, Panel 63° / 14.5 dBd
696-900 MHz

Mechanical specifications

Length	1804	mm	71.0	in
Width	285	mm	11.2	in
Depth	114	mm	4.5	in
Depth with z-bracket	154	mm	6.1	in
Weight [4]	7.9	kg	17.0	lbs
Wind Area Fore/Aft	0.51	m^2	5.5	ft^2
Wind Area Side	0.21	m^2	2.2	ft^2
Max Wind Survivability	>201	km/hr	>125	mph
Wind Load @ 100 mph (161 km/hr)				
Fore/Aft	753	N	169	lbf
Side	351	N	79	lbf

Antenna consisting of aluminum alloy with brass feedlines covered by a UV safe fiber-glass radome.

Mounting & Downtilting

Mounting hardware attaches to pipe diameter Ø50-160 mm; Ø2.0-6.3 in

Mounting Bracket Kit	36210002
Downtilt Bracket Kit	36114003

Electrical specifications

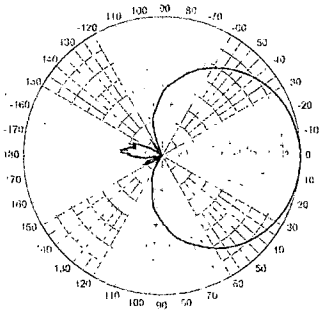
Frequency Range	696-900 MHz
Impedance	50Ω
Connector [3]	NE or E-DIN Female 2 ports / Center
VSWR [1]	≤ 1.4:1
Polarization	Slant ±45°
Isolation Between Ports [1]	< -25 dB
Gain [1]	14.5 dBd
Power Rating [2]	500 W
Half Power Angle [1]	
Horizontal Beamwidth	63°
Vertical Beamwidth	11°
Electrical downtilt [5]	0°
Null fill [1]	5%
Lightning protection	Direct ground

Patented Dipole Design: U.S. Patent No. 6,608,600 B2

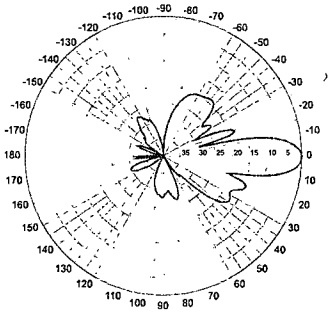
1) Typical values.
2) Power rating limited by connector only.
3) NE indicates an elongated N connector. E-DIN indicates an elongated DIN connector.
4) Antenna weight does not include brackets.
5) Add'l downtilts may be available. Check website for details.

Improvements to mechanical and/or electrical performance of the antenna may be made without notice.

Radiation-pattern[1]
750 MHz

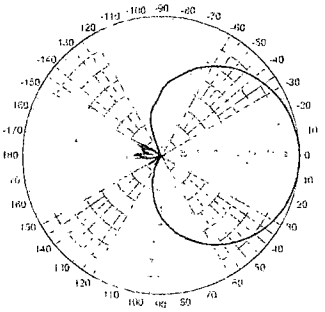


Horizontal

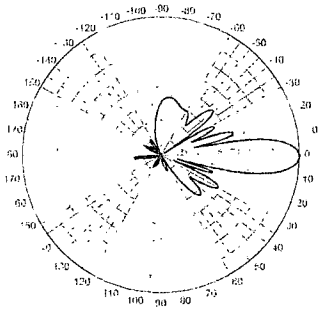


Vertical

850 MHz



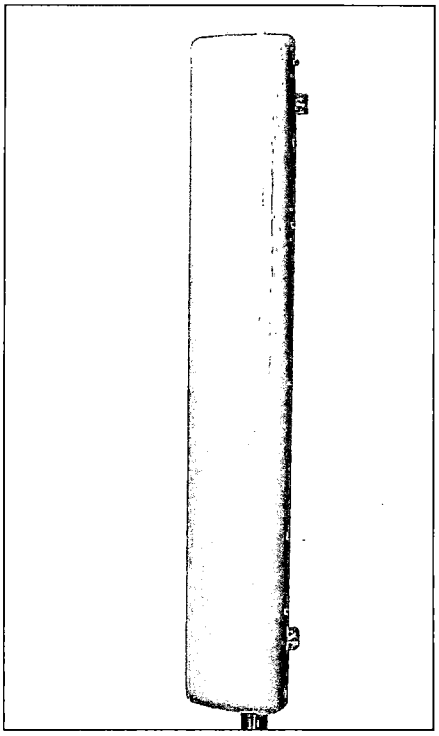
Horizontal



Vertical

BXA-70063/6CF __

When ordering replace "__" with connector type.



Featuring our Exclusive 3T Technology™ Antenna Design:

- Watercut brass feedline assembly for consistent performance.
- Unique feedline design eliminates the need for conventional solder joints in the signal path.
- A non-collinear system with access to every radiating element for broad band-width and superior performance.
- Air as insulation for virtually no internal signal loss.

Warranty:
This antenna is under a five-year limited warranty for repair or replacement.

Revision Date: 08/07/08

815.399.0001 • antel@antelinc.com • www.antelinc.com

Amphenol Antel, Inc. The Antenna Technology Company

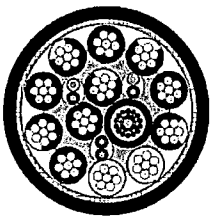
Product Specifications

Rosenberger
Rosenberger Site Solutions, LLC

RSS 6-12 Hybrid Cable

HC-612LCSM6GAA-xxxF

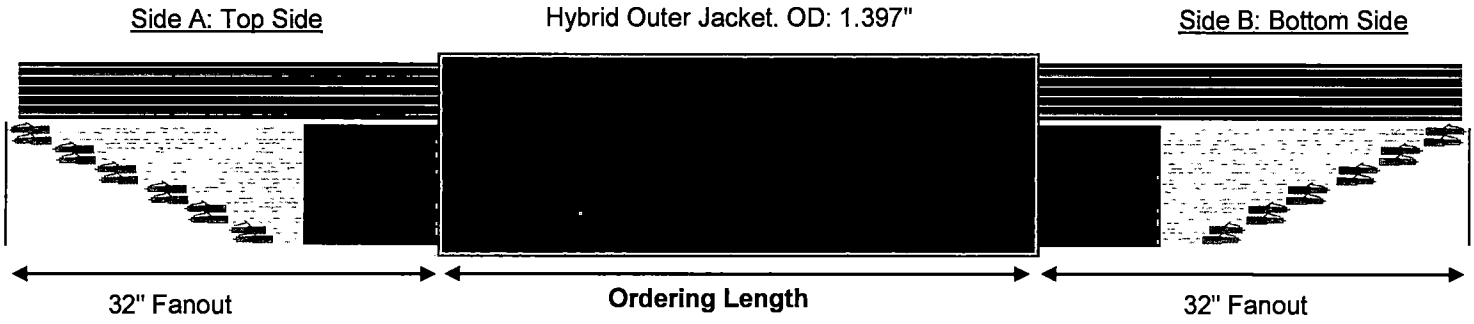
6 AWG 12C (6 pairs) Copper wire with 24 (12 pairs) Single Mode Fiber.



Ordering Part Number: **HC-612XXX (Substitute XXX with Ordering Length - *See diagram*)**
Example: For 100 ft of this cable, the part number will be HC-612100

Dimensions

Conceptual images only - not drawn to scale



General Specifications

Jacket OD	1.397"
Nominal Jacket Thickness	0.080", Tube/Sleeve Extruded
Color	Black Polyvinylchloride
Temperature Range	-40°C to 90°C
Weight	1.680 lbs/ft

Fiber Cable

- 12 pairs (24 fibers), Single Mode
- 900micron XB fiber cable Indoor/Outdoor Riser Rated
- Nominal Diameter: 0.327"
- Connector Top: 12xLC Duplex
- Connector Bottom: 12xLC Duplex

Power Cable

- 6 AWG 12 Conductors Bare Copper with Polyvinylchloride/Nylon Insulation
- Wire Size & Stranding: 6 AWG 7/0.0612
- Metal Type: Annealed Bare Copper
- Nominal Wire Diameter: 0.184
- Insulation Type: Polyvinylchloride/Nylon per UL 83
- Nominal Insulation Thickness: 0.030 / 0.006
- Nominal Conductor Diameter: 0.256
- Color Code: Black, Black/White, Blue, Blue/White, Yellow, Yellow/White, Brown, Brown/White, Red, Red/White, Violet, Violet/White

- Alarm Wire:
  18 AWG 3 Pair Bare Copper with Polyvinylchloride/Nylon Insulation.
  Wire Size & Stranding: 18 AWG 7/0.0152
  Color Code: Black/Red, Black/White & Black/Green

Corporate Headquarters
Rosenberger Hochfrequenztechnik GmbH & Co. KG
P.O. Box 1260 D-84526 Tittmoning Germany

Rosenberger Site Solutions, LLC
102 Dupont Dr.
Lake Charles, LA 70607

Phone: (337)598-5250
Fax: (337) 598-5290
Web: www.rlss.us e-mail: rlss@rlss.us

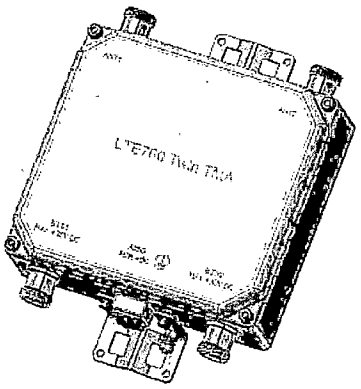
Tower Mounted Amplifier

Amphenol ANTENNA SOLUTIONS

TTA-CBG000J

700 MHz (Upper Band) | Twin TMA | AISG 2.0

- Designed for use in 700 MHz networks
- Dual duplex twin TMA for improved BTS sensitivity through noise performance, high linearity and gain
- Hardware and software configuration using AISG "Personality" upload
- AISG and current dump compatible
- Fail safe bypass mode and full lightning protection



RF Characteristics	
Downlink (TX) Path	
Passband	746-757 MHz
Insertion loss	0.3 dB typical
Return loss (into 50Ω)	18 dB min
Uplink band rejection	45 dB
Maximum input power	200W (average) / 1.6kW (PEP)
Intermodulation @ antenna port	< -120 dBm, 5th order with 2 x 20 W carriers
Uplink (RX) Path	
Passband	776-787 MHz
Gain	12 dB ± 1 dB
Return loss (into 50Ω)	18 dB minimum operating, 12 dB in bypass
Noise figure	1.5 dB typical
Bypass loss	2.3 dB typical
Output IP3	+20 dBm typical
Maximum input power with no damage	+12 dBm

Current Alarm Mode (Default Mode Selected on the Absence of AISG Packets)

Current Window Alarm mode (CWA) is the default TMA operating mode and can be configured to specific customer requirements. The Generic Personality is configured so that both channels are independently powered and monitored via the respective BTS port. The BTS port sinks additional current to indicate an alarm state in its uplink path. Normal operating and alarm current values are configured independently and are alterable via a field-loadable personality file.

DC supply voltage	7.5 to 30 V DC, case is DC ground
DC supply	Each BTS port powered individually (programmable)
Supply current, normal operation	150 ± 20 mA per port (programmable)
Supply current, alarm mode	220 ± 20 mA per port (programmable)

AISG Mode of Operation (Auto Selected on Valid AISG 2.0 Frames)

AISG signals can be applied to either BTS1 or BTS2 port. The TMA unit switches to AISG mode when valid frames are detected on one of the BTS ports. Both LNAs take DC power from the port with AISG frames or, if DC is present on both ports, both channels supply equal power to the TMA.

Version	2.0 (1.1 optional)
Supply current, AISG mode	220 mA @ 7.5V, 65 mA @ 30V typical
AISG connector, current rating	IEC60130-9, 8-pin female, < 4A peak, 2A continuous, pin 6
Field firmware upgradable	Yes

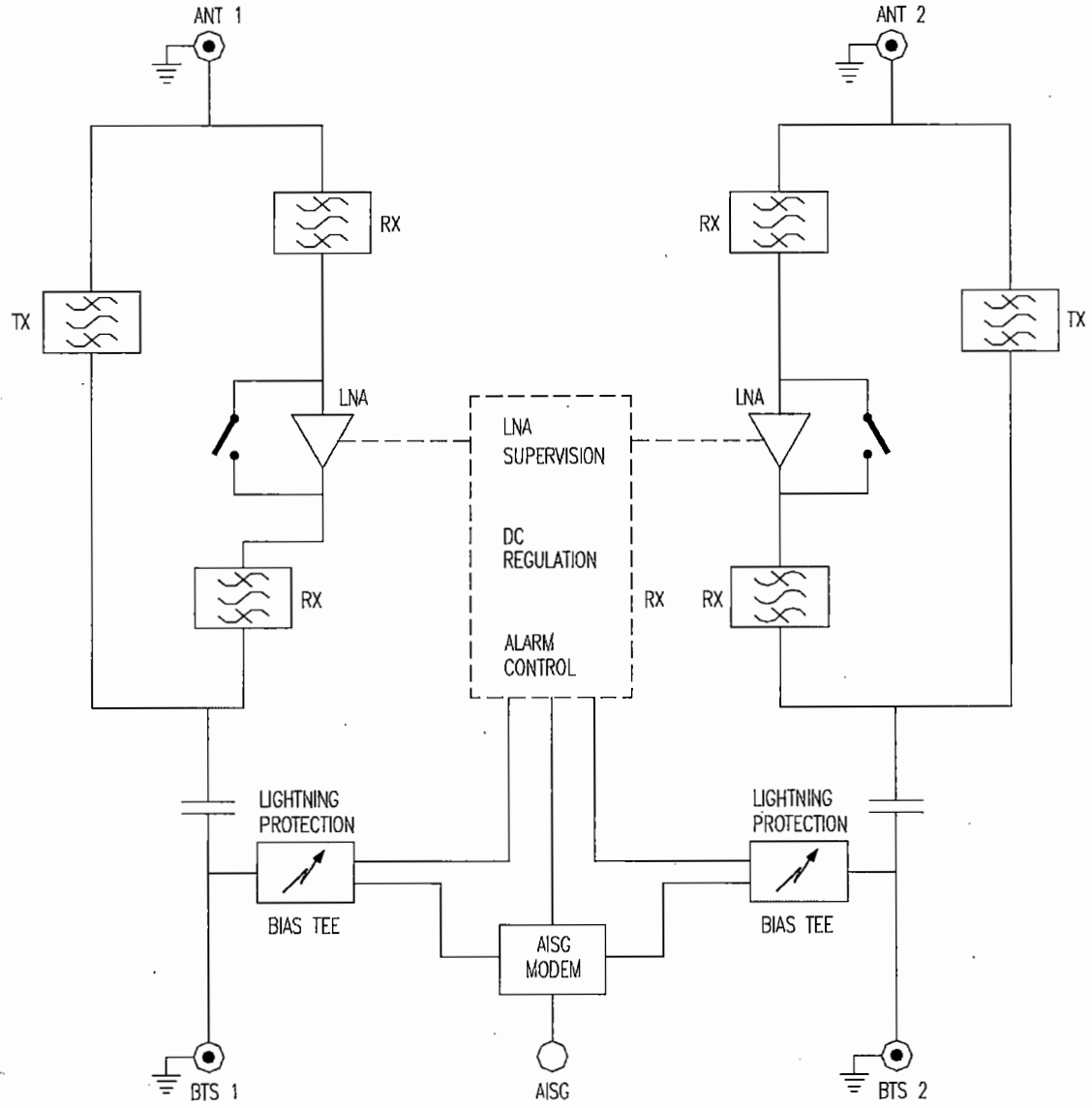
Environmental	
Operating remperature range	-40° C to +65° C (-40° F to +149° F)
Ingress protection	IP67
Altitude	2,000 m (6,561 ft)
Lightning protection	RF port: ±5kA max (8/20us), AISG port: ±2kA max (8/20us) IEC61312-1
MTBF	> 1,000,000 hours
Compliance	EMC: EN301 489, ETSI EN 300 019 class 4.1, RoHS

TTA-CBG000J

700 MHz (Upper Band) | Twin TMA | AISG 2.0

Mechanical		
Dimensions WxHxD	243 x 221 x 85 mm	9.6 x 8.7 x 3.3 in
Weight	7.2 kg	16 lbs
Finish	RAL7035, light grey (painted)	
Connectors	4 x 7/16 - DIN Female Long Neck	
Mounting	Pole / wall bracket supplied, with two metal clamps for use with 45-178 mm (1.8-7.0 in) diameter poles.	

Electrical Block Diagram

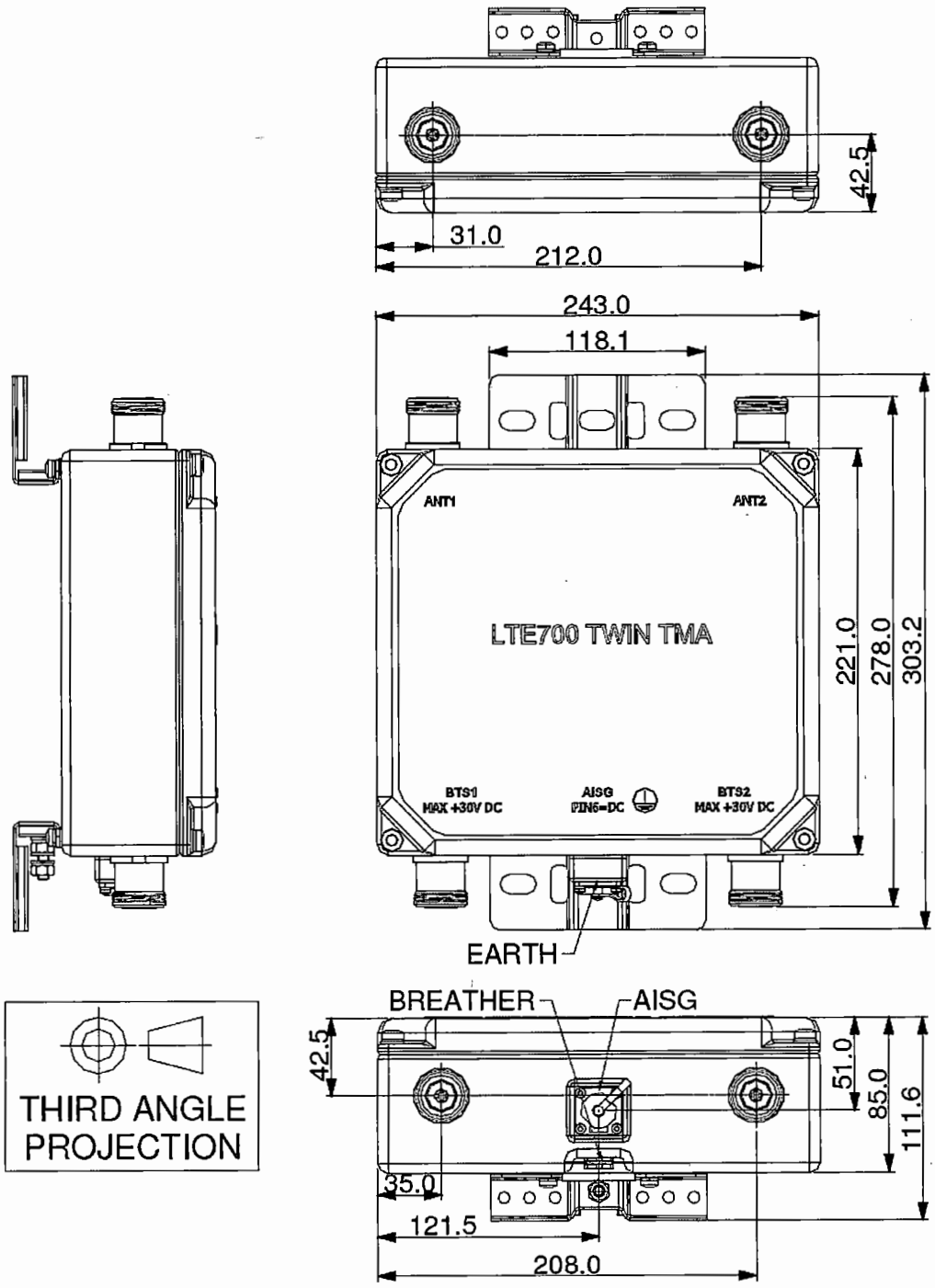


Quoted performance parameters are provided to offer typical or range values only and may vary as a result of normal manufacturing and operational conditions. Extreme operational conditions and/or stress on structural supports is beyond our control. Such conditions may result in damage to this product. Improvements to product may be made without notice.

TTA-CBG000J

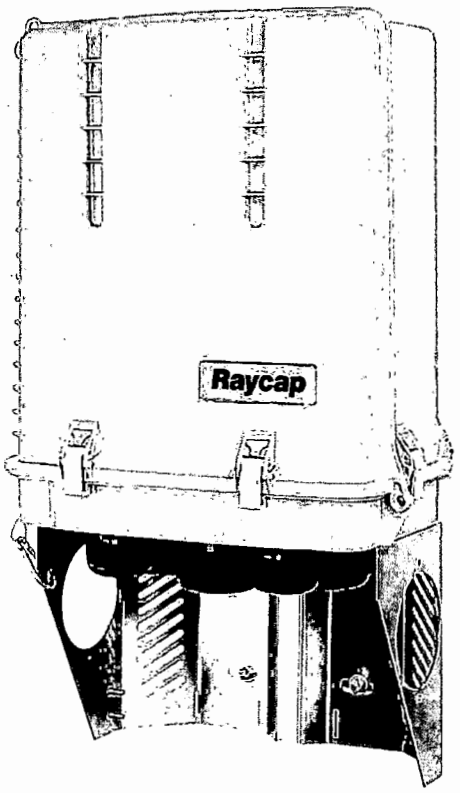
700 MHz (Upper Band) | Twin TMA | AISG 2.0

Mechanical Diagram



Installation Instructions:

RxxDC-3315-PF-48



Contents

1.0 Copyright

1.1 Disclaimer

The information in this document is subject to change without notice and describes only the product defined in the introduction of this documentation. This documentation is intended for the use of Raycap customers only for the purposes of the agreement under which the document is submitted, and no part may be used, reproduced, modified or transmitted in any form or means without the prior written permission of Raycap. The documentation has been prepared to be used by professional and properly trained personnel, and the customer assumes full responsibility when using it. Raycap welcomes customer comments as part of the process of continuous development and improvement of the documentation.

Raycap has made all reasonable efforts to ensure that the instructions contained in this document are adequate and free of material errors and omissions. Raycap will, if deemed necessary, explain issues which may not be covered by this document.

The contents of this document are subject to revision without notice due to continued progress in methodology, design and manufacturing. Raycap shall have no liability for any error damage of any kind resulting from the use of this document.

1.2 Warnings

Please read this manual prior to use to become familiar with the product's numerous features and operating procedures. To maintain the maximum degree of safety, follow the sequences as outlined.

Before using the product, read all instructions and cautionary markings on the product and on any equipment connected to the product.

CAUTION – Unless otherwise noted, product usage that is not recommended or sold by the product manufacturer can result in risk of fire, electric shock, or injury to persons.

CAUTION – Do not operate the product if it has been damaged in any way. Return damaged products to Raycap for repair or replacement.

CAUTION – Do not disassemble the product. Incorrect re-assembling can cause the risk of electrical shock or fire.

WARNING – Disconnect or disable the DC power source to the product prior to beginning its installation. Ensure that the DC power source to the product remains de-energized until the completion of the installation and after all connections have been verified to be correctly configured.

For conditions other than those described above, please contact a Raycap Account Representative at (208) 777-1166, (800) 890-2569 or www.raycapsurgeprotection.com

Thank you for choosing quality products from Raycap.

2.0 Introduction

In a split Radio Base Station (RBS) architecture the typical RBS consists of a Base Band Unit (BBU) and Remote Radio Heads (RRH) connected by cabling. Power to the RRH is provided through copper cables traveling from the base station to the top of the tower or roof top. This creates a conductive path, making the active equipment at the top and the base of the site vulnerable to damage by direct lightning strikes. Protection systems installed in front of both the BBU and the RRH must be able to withstand direct lightning currents in order to protect the sensitive equipment.

Raycap's RRH solutions featuring Strikesorb® SPD technology significantly enhance the reliability & availability of the RRH site by providing superior electrical protection at the RRH and BBU, and also enable flexible fiber optic and power cable management solutions.

3.0 Overvoltage Protection Package Contents

- One (1) Enclosure including the SPDs, cable glands, the DC distribution and fiber management parts.
- Incorporated Mounting bracket and related accessories.
- Mounting hardware accessories (bolts, washers and nuts).

3.1 Prerequisites

This document describes how to install the RxxDC-3315-PF-48 on-site and how to mount, and connect it to external interfaces.

Installers of Raycap's RRH surge protective and fiber/power management solutions must be industry professionals who have attended training on the proper installation of the equipment by Raycap and/or the mobile operator. Installers are required to read this installation guide thoroughly prior to installation of the Raycap RRH protection equipment.

Installers shall obey all general and regional installation and safety regulations related to work on high voltage installations, as well as regulations covering correct use of tools and personal protective equipment. Use this equipment only for the purpose specified by the manufacturer. Do not carry out any modifications or fit any parts that are not recommended by the manufacturer. This could cause electric shock or other injuries.

3.2 Required Tools & Supplies

Wire cutter

Wire strippers

Flat head screwdriver

Small flat head screwdriver

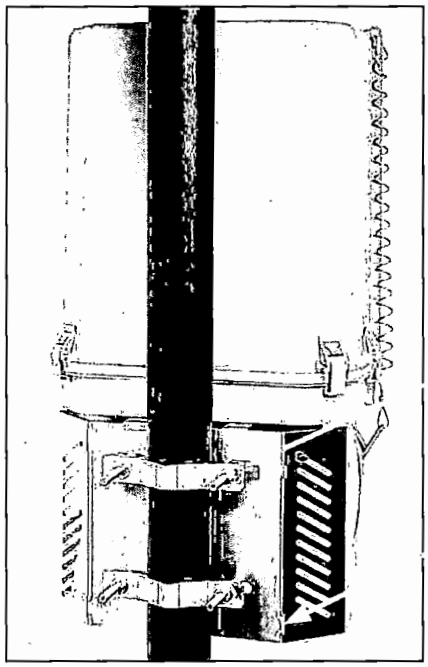
Cross head screwdriver

Adjustable wrench

Procedure

Mounting Procedures

4.1 A mounting base is delivered with the unit. The base allows either wall/ladder or pole mounted installation. See picture to identify the holes for each installation method.



- Pole Mount
- Unistrut
- Monopole

4.2 ***Option 1: Pole Mount***
Using Pre-Installed Existing Hardware, mount Bracket to 2" to 4" diameter pole.

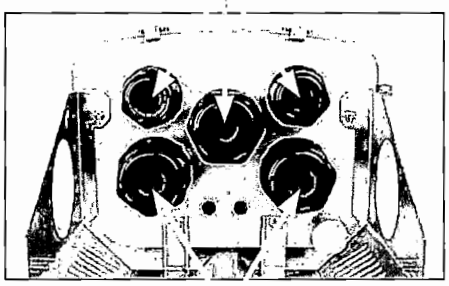
4.3 ***Option 2: Unistrut***
Using hardware from mounting bracket, mount to Unistrut (not supplied).

4.4 ***Option 3: Monopole***
Remove supplied Nut and Bolt Pole Hardware from Bracket. Use 1" stainless steel bands (not supplied) through slots on bracket to mount to Monopole.

Port Definitions / Options

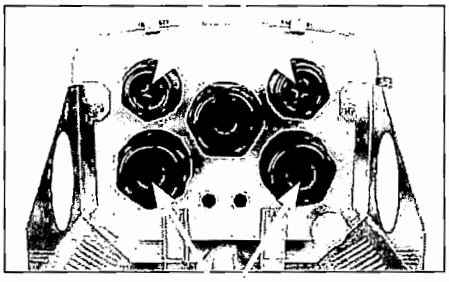
5.1 See picture to identify Base Port Assembly Definitions.

4x4 Hybrid Cables



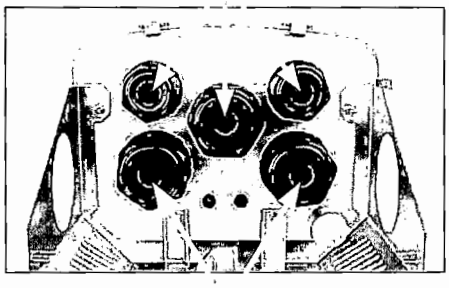
8x8 Hybrid Cables

1x1 Hybrid Jumpers

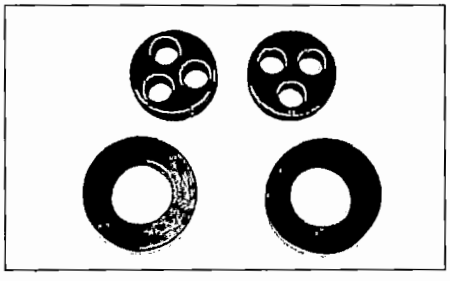


8x8 Hybrid Cables

4x4 Hybrid Cables



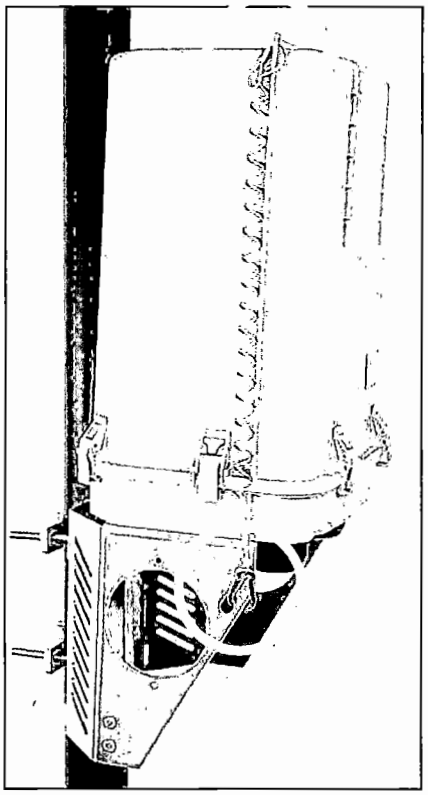
4x4 Hybrid Cables



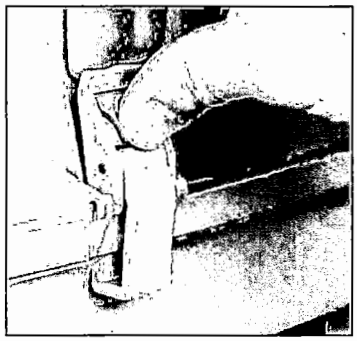
Inserts from kit included with Unit

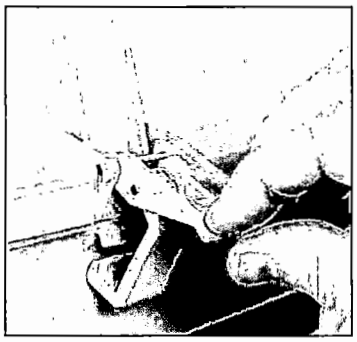
Pre-wiring Preparation Procedure

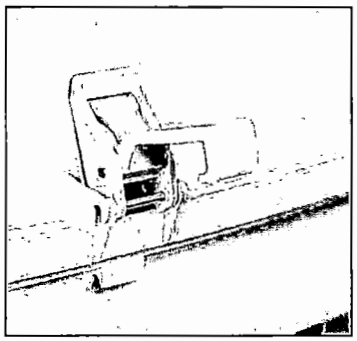
6.1 Ensure the lanyard from enclosure lid to enclosure base is secure.



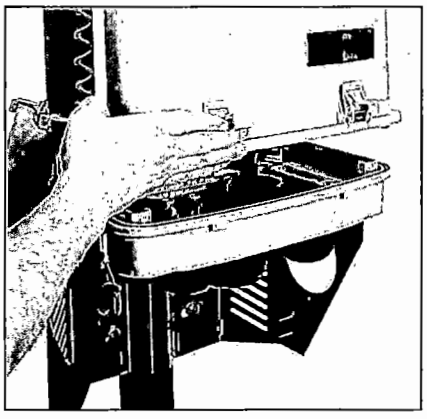
6.2 Open up clamps on all sides of the enclosure cabinet by lifting the hinged clamp tabs.





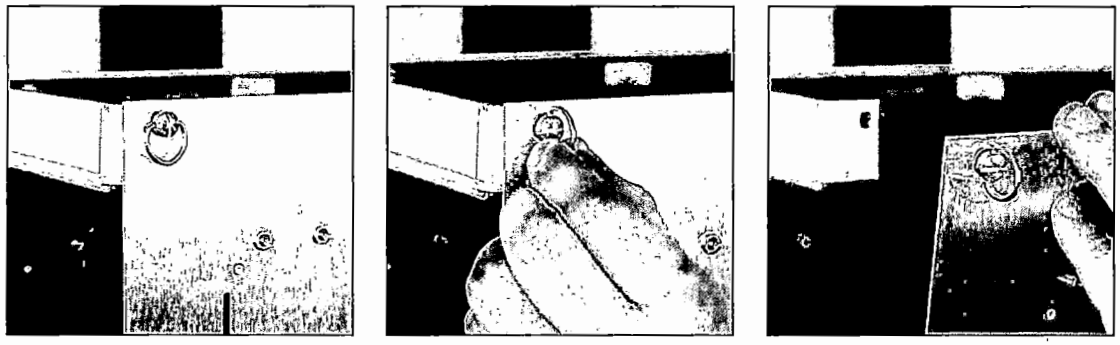


6.3 Remove enclosure lid.

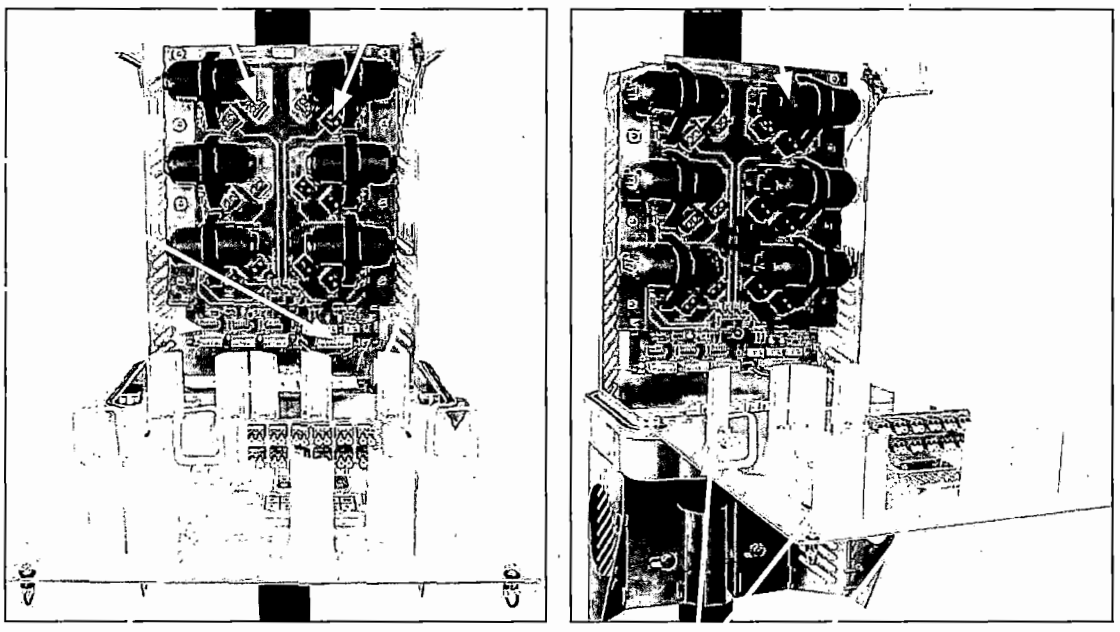


Pre-wiring preparation procedure

6.4 To access power and fiber connections, unclasp 1/4 turn latches, then fold down fiber tray.

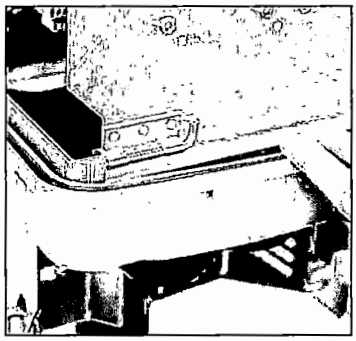


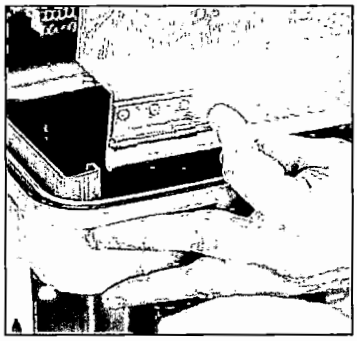
6.5

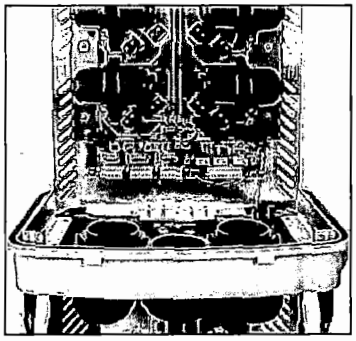


Installing DC Power Trunk

7.1 For more access to the printed circuit boards, the Fiber Panel can be temporarily removed. See illustrations below.



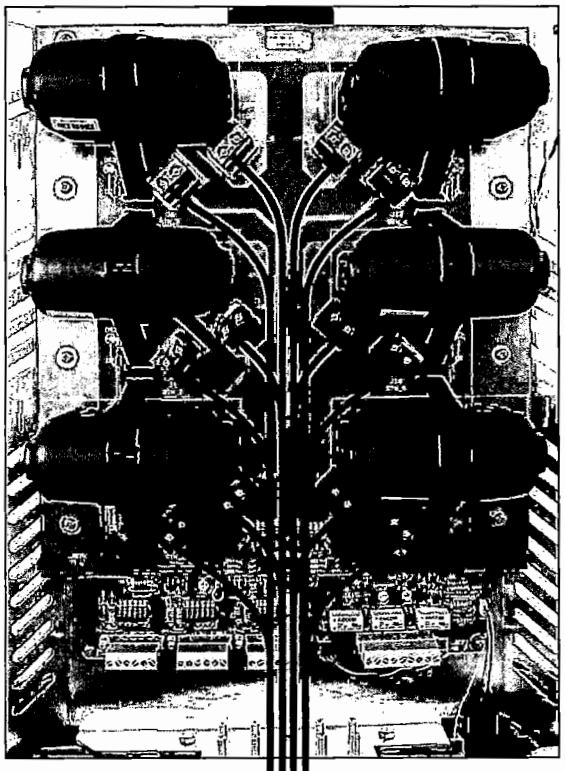




7.2 Feed DC power trunk through gasket.

7.3 Feed enough of the cable to strip and connect to power connectors.

7.4 Connect wires according to the *Verizon Wireless established color guide.*

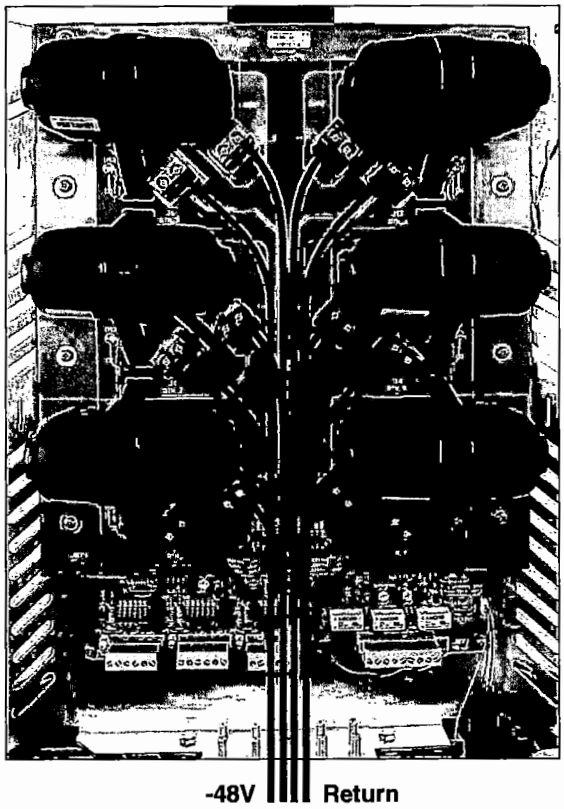


Installing DC Power Jumpers

8.1 Feed DC power jumpers through gasket.

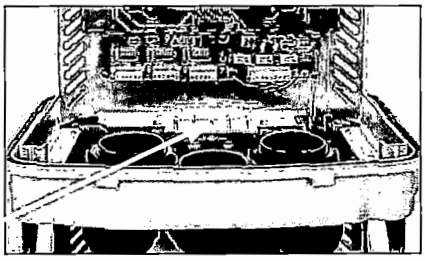
8.2 Feed enough of the cable to strip and connect to power connectors.

8.3 Connect wires according to the *Verizon Wireless established color guide.*

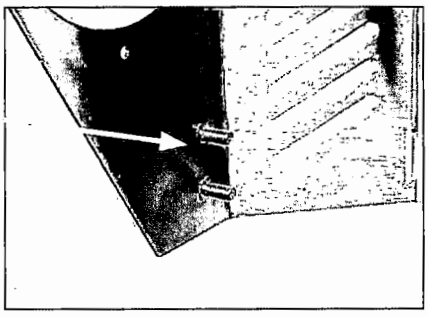


Installing Ground Cable

9.1 There are two grounding placement options available. See below.



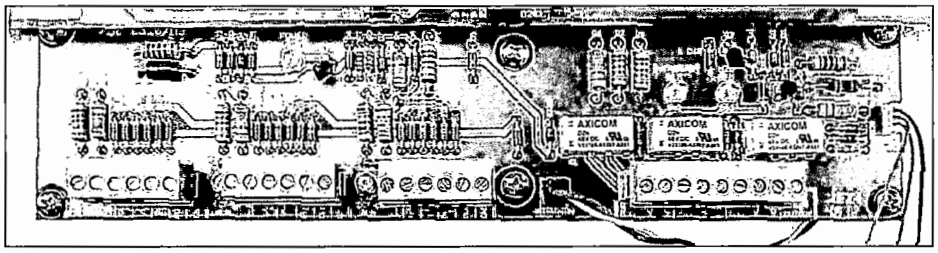
Optional Cable Grounds

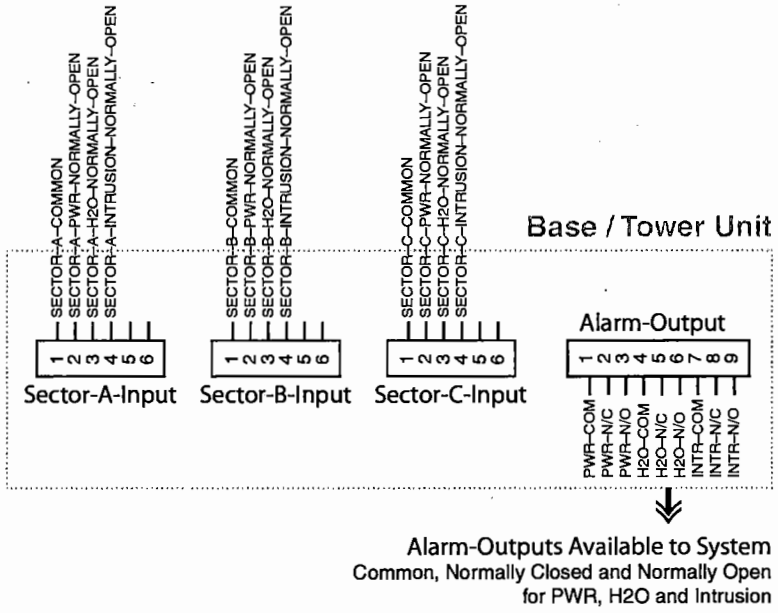


Main Ground

Installing Alarm for RxxDC-3315-PF-48

10.1 Alarm connections for RxxDC-3315-PF-48

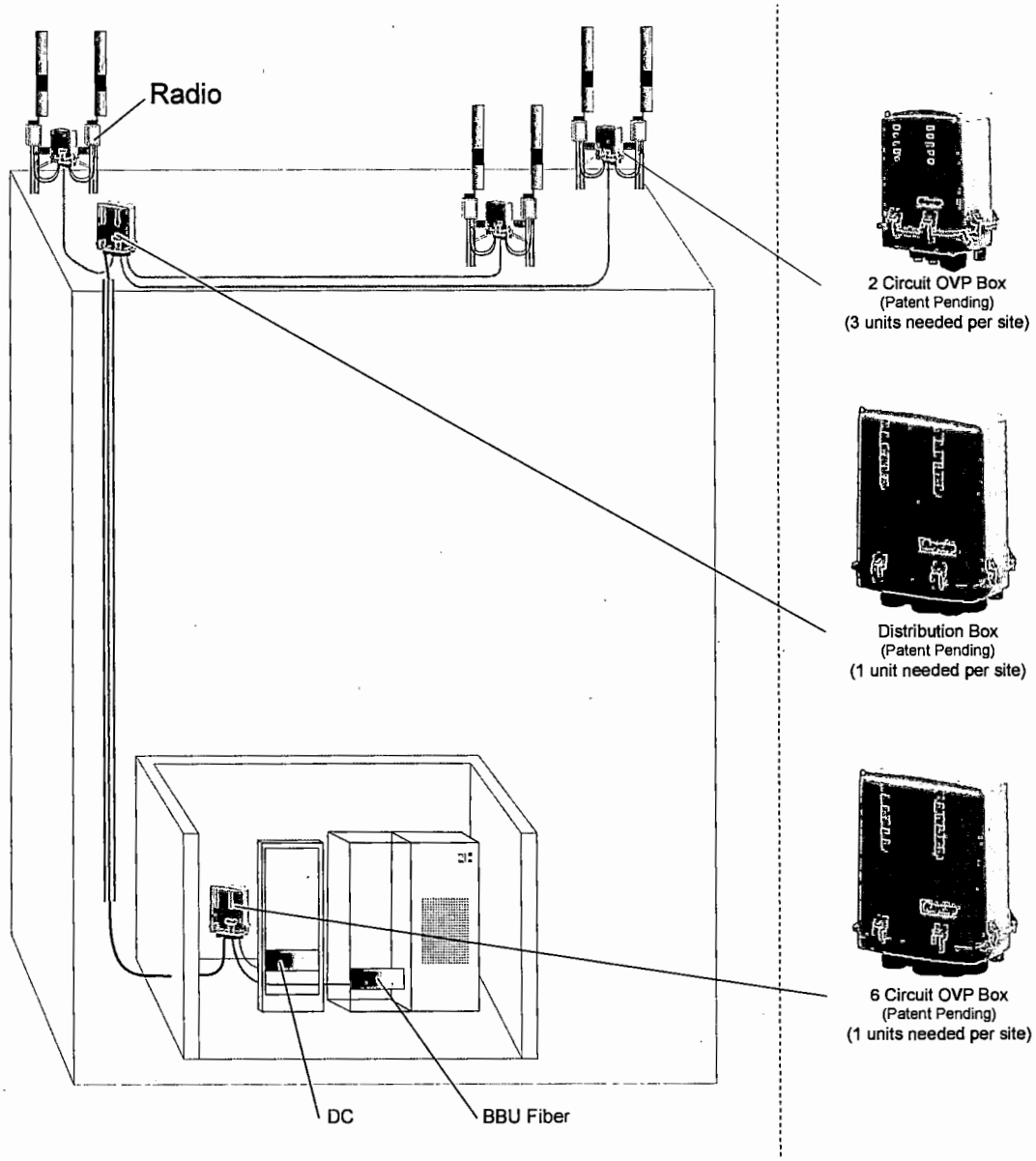




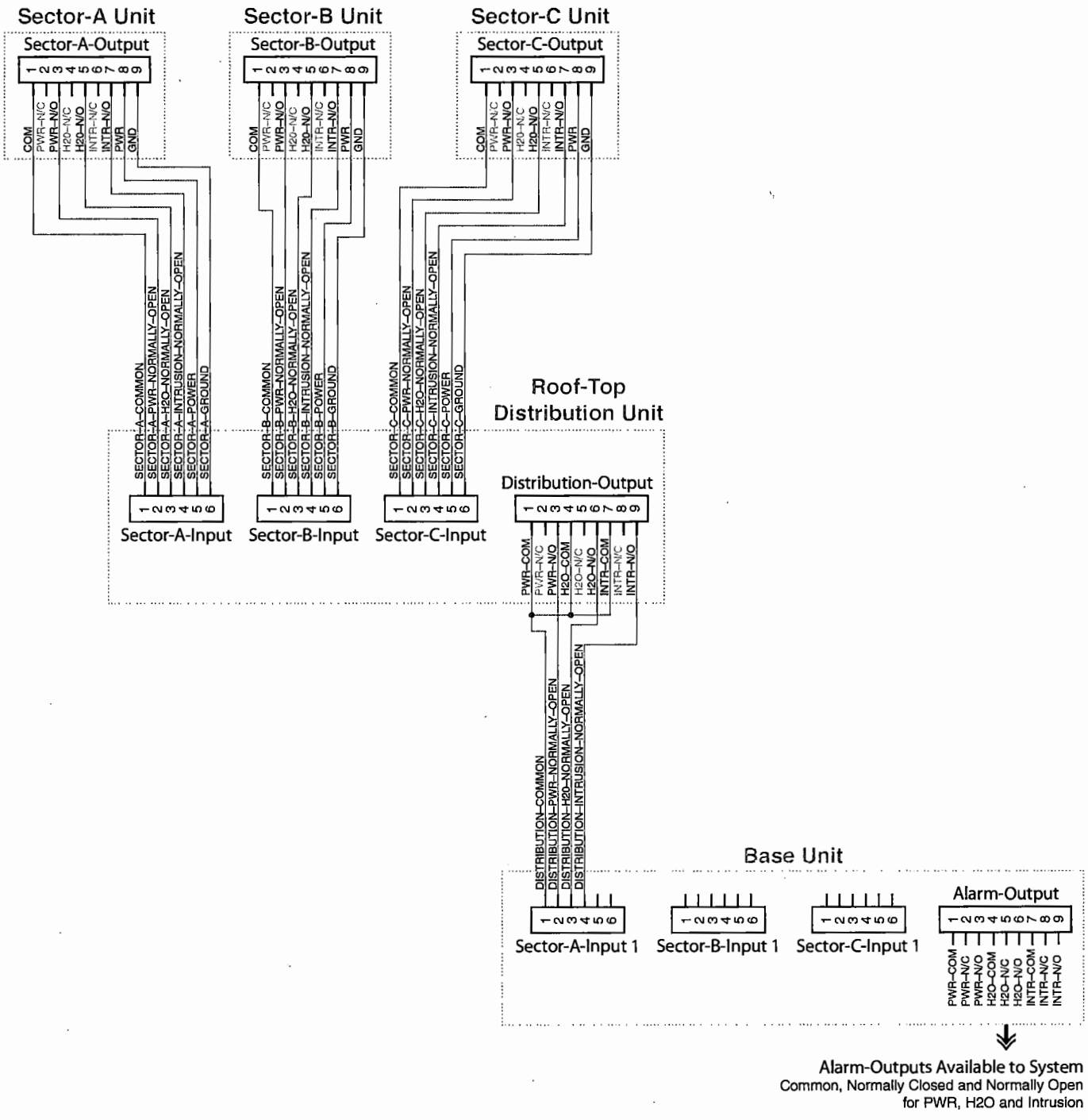
Installing Alarm for Rooftop (Tenant Improvement)

10.2 Refer to diagram 10.4 for Alarm wiring connections.

10.3 Rooftop (Tenant Improvement) Application Guide.



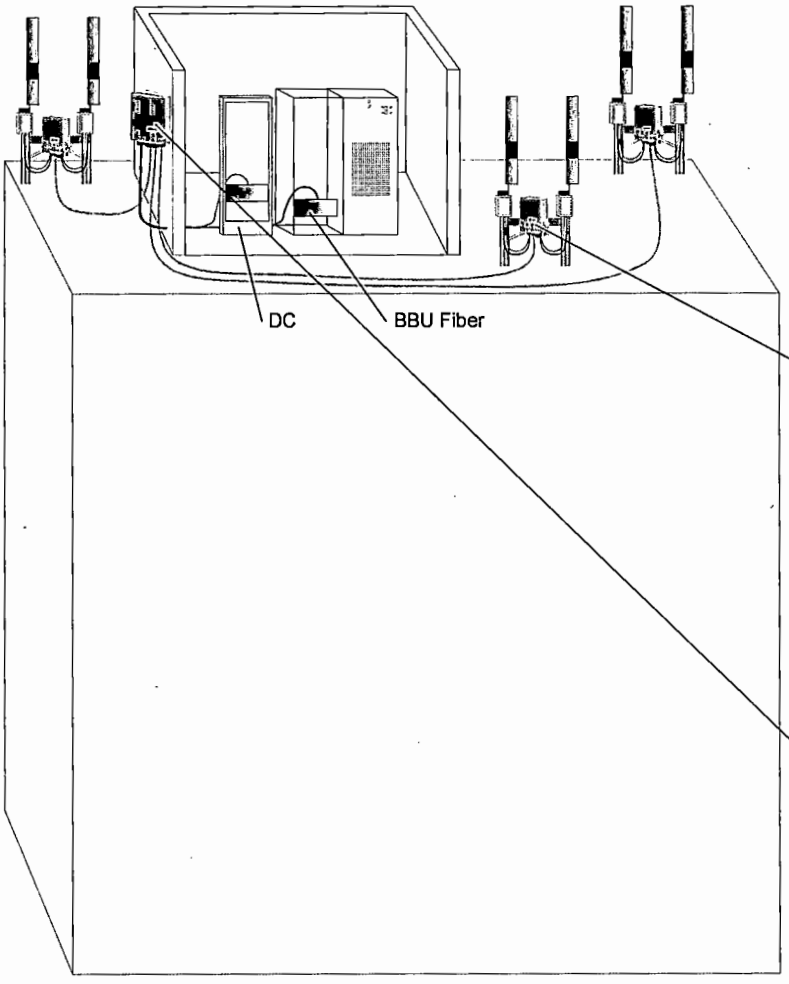
10.4 Rooftop (Tenant Improvement) Wiring Diagram.

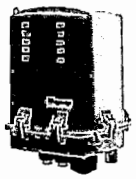


Installing Alarm for Rooftop (Penthouse)

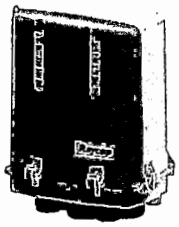
10.5 Refer to diagram 10.7 for Alarm wiring connections.

10.6 Rooftop (Penthouse) Application Guide.



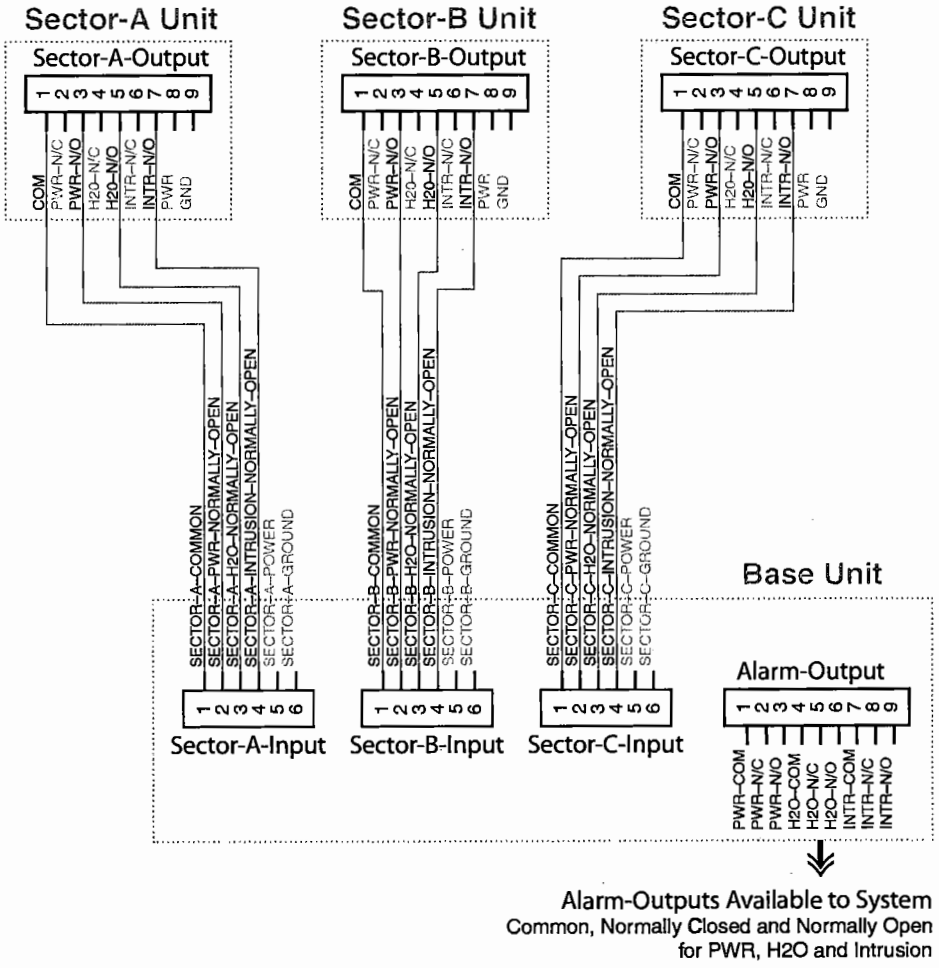


2 Circuit OVP Box
(Patent Pending)
(3 units needed per site)



6 Circuit OVP Box
(Patent Pending)
(1 units needed per site)

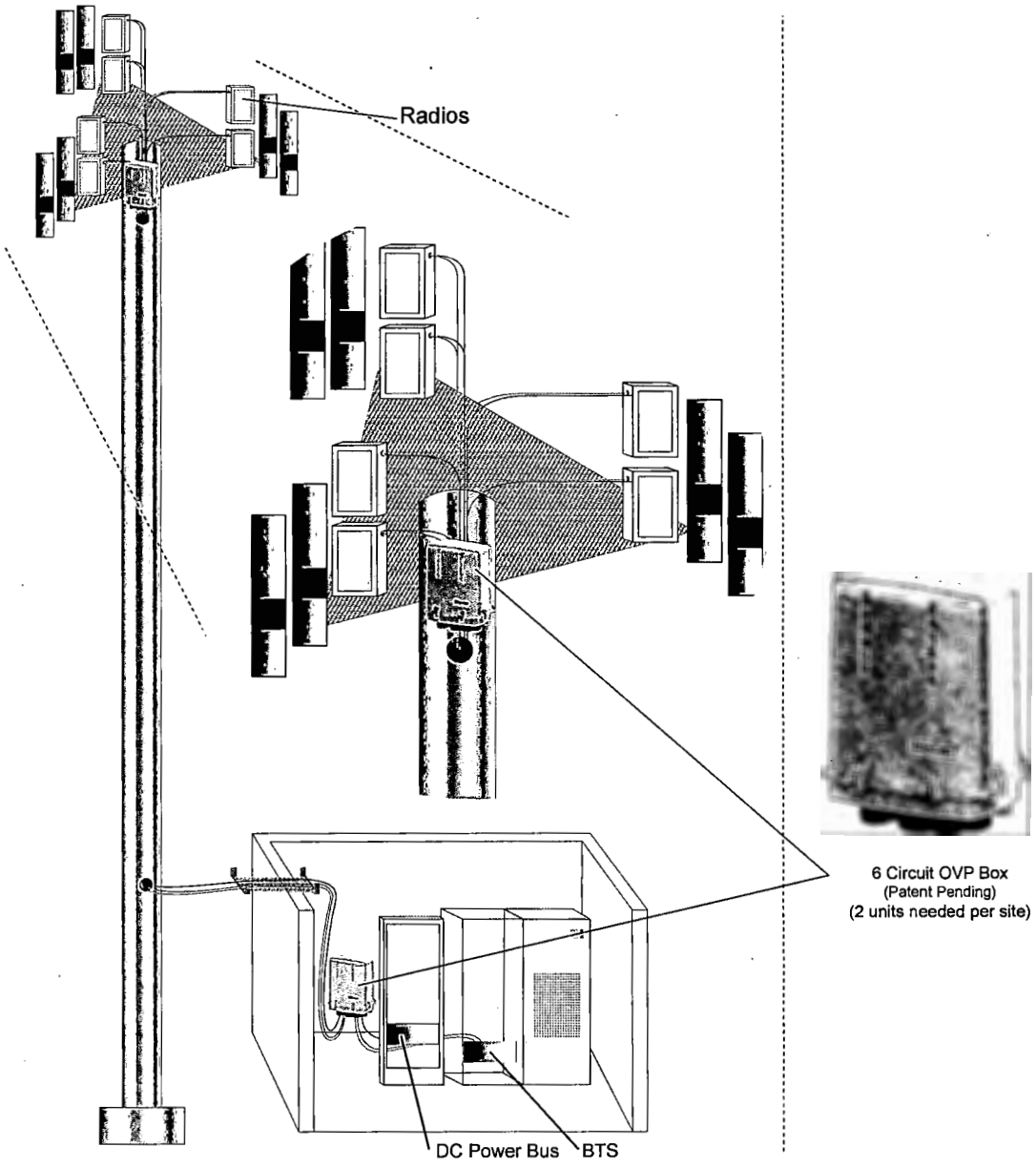
10.7 Rooftop (Penthouse) Wiring Diagram.



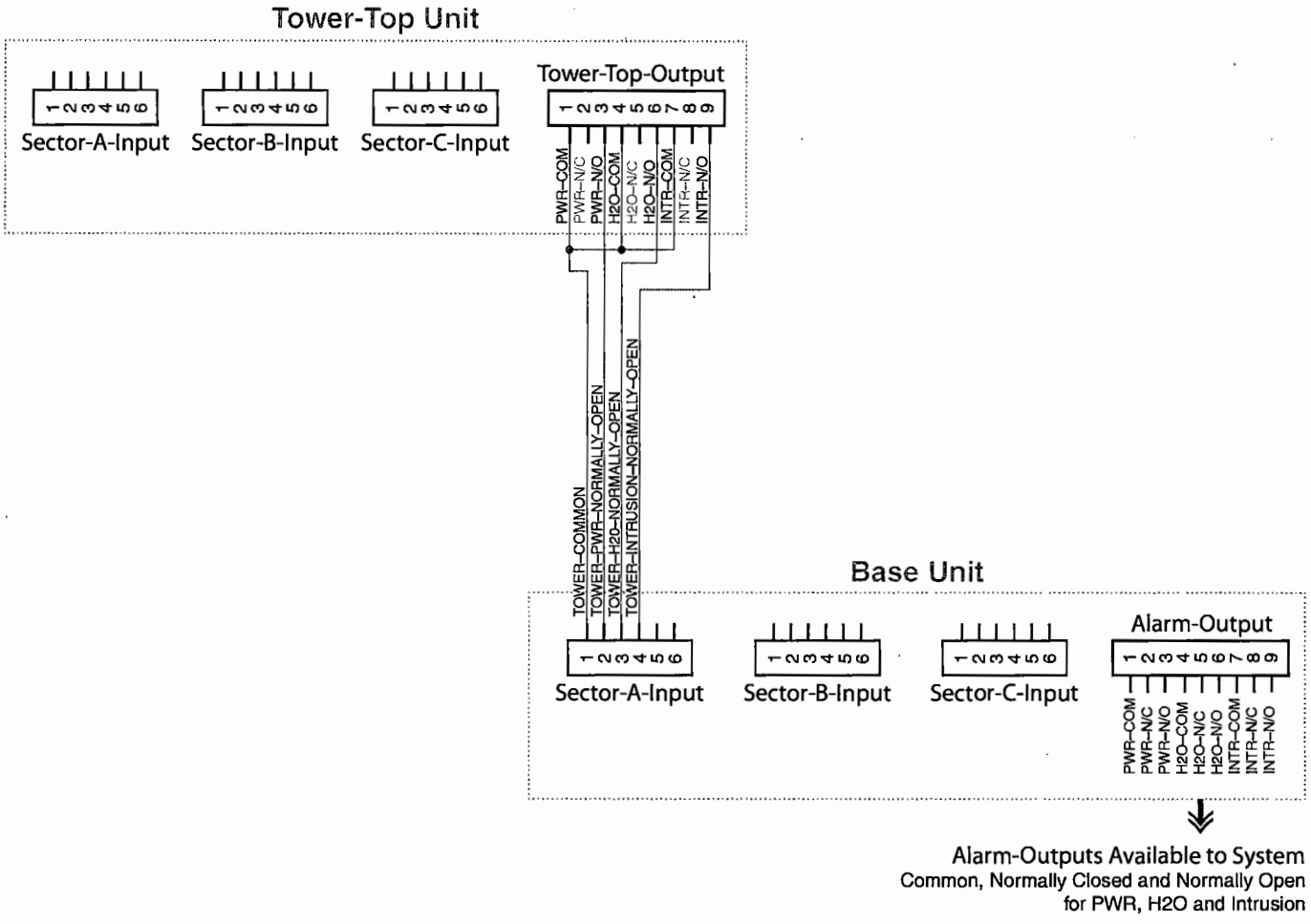
Installing Alarm for Tower Top

10.8 Refer to diagram 10.10 for Alarm wiring connections.

10.9 Tower Top Application Guide.

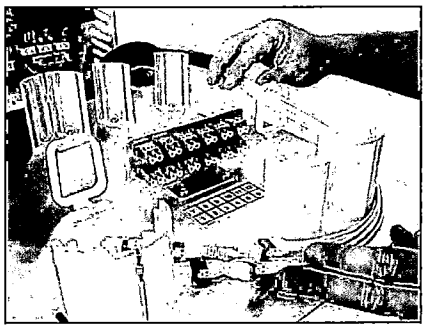


10.10 Tower Top Wiring Diagram.



Installing Fiber Trunk

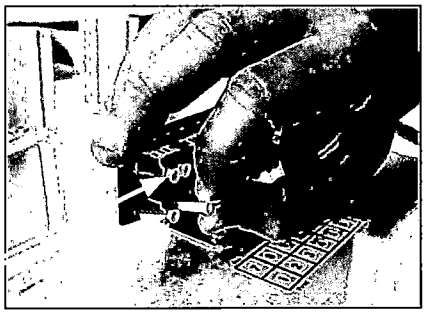
11.1 Feed cable through the fiber trunk port, and loosely route fiber cables around the cable guides.



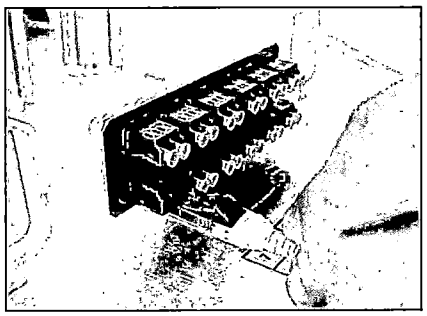
11.2 Remove the plugs in the fiber connectors to be used – To avoid contamination, do not remove any plugs until fiber is immediately ready to be installed.

Example: pull one plug, plug in fiber, repeat.

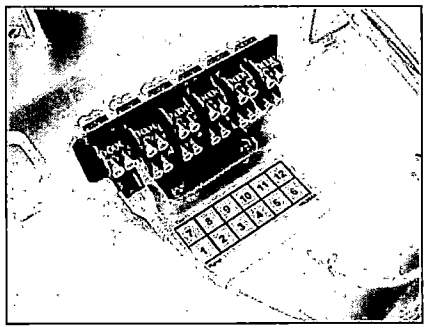
Plugs



11.3 Connect the cables into the fiber connection panel starting with the row closest to the back plate, and feed through the cable guides.

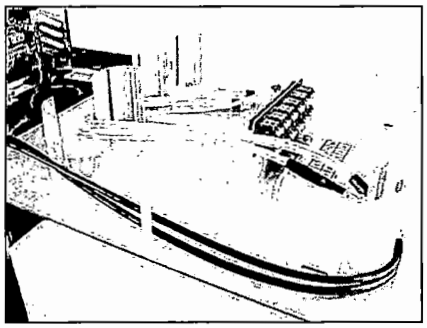


11.4 Connect fiber according to the *Verizon Wireless established guide.*



Installing Fiber Jumpers

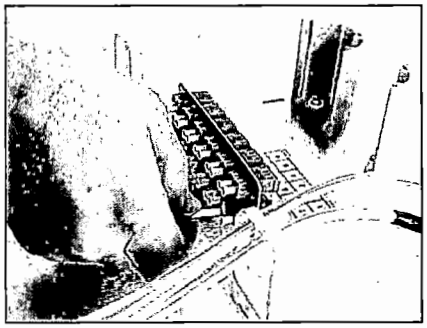
12.1 Feed cables through port cap assembly.



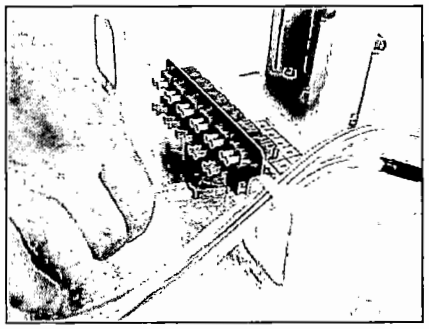
12.2 Remove plugs in fiber connectors that will be used – To avoid contamination, do not remove any plugs until fiber is immediately ready to be installed.

Example: pull one plug, plug in fiber, then do the next one, repeat.

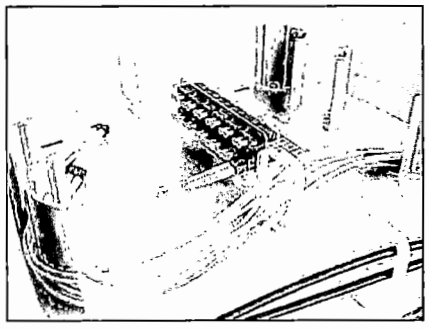
Note: Always keep un-used connectors plugged.



12.3 Connect the cables into the fiber connection bar starting with the row closest to the back plate, and feed through the cable guides as shown.

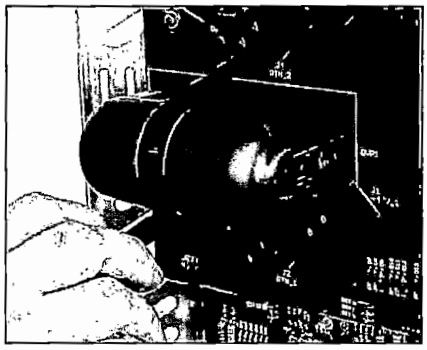


12.4 Connect fiber according to the *Verizon Wireless established guide.*

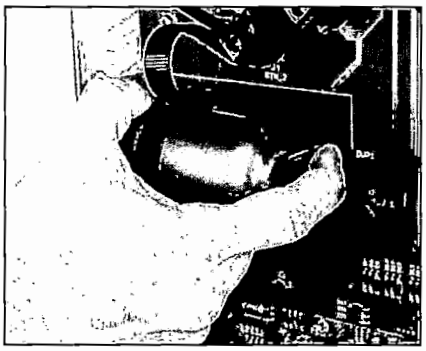


Removing a Strikesorb Module

13.1 Release Velcro strap from Strikesorb Module.

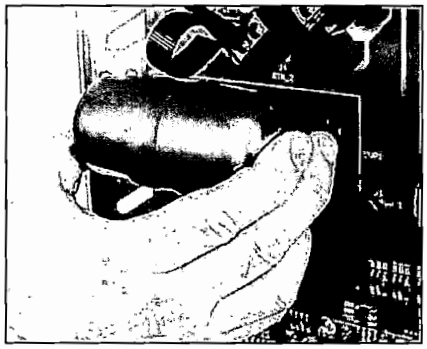


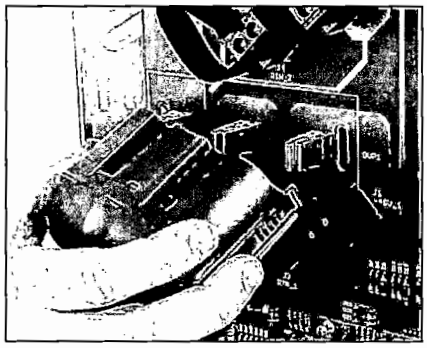
13.2 Grab the Strikesorb module by ends and depress lever on both sides.



13.3 Rock the Strikesorb module up and down, and pull it out.

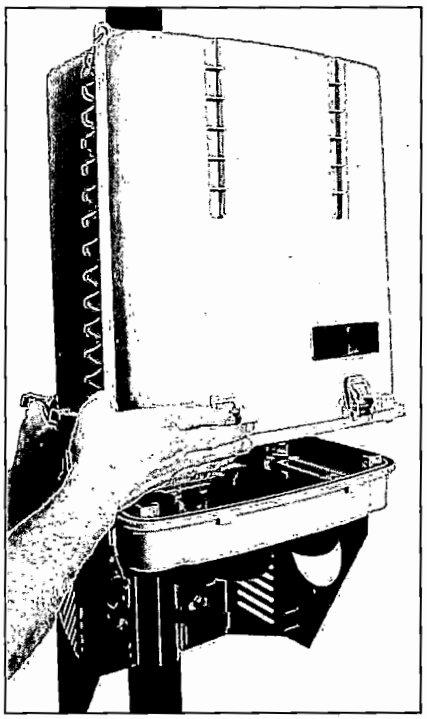
Note: You have to overcome a strong spring contact to remove module.



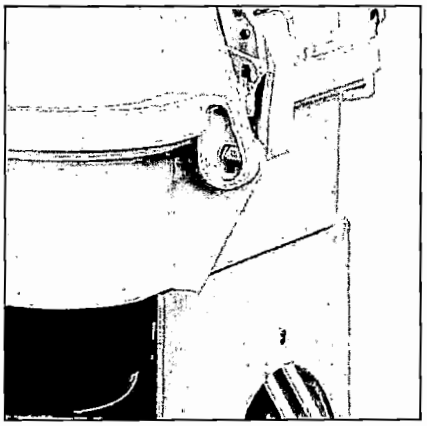


Installation Complete.
Closing and Securing Unit.

14.1 Slide enclosure lid into place.

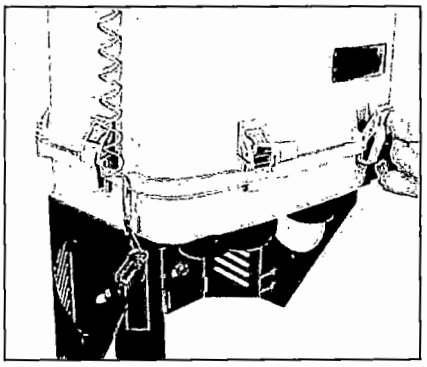


14.2 If installation requires padlocks, (not provided) secure "bottom right" of enclosure.



14.3 Close and secure all clamps.

Installation complete.



Notes