verizonwireless

PEPPERBROOK

16448 HALLIBURTON ROAD
HACIENDA HEIGHTS, CA 90745

(NCD - MCE DESIGN)

DIGALERT
DIAL BEFORE YOU DIG — TWO WORKING DAYS BEFORE YOU DIG
TOLL FREE 1-800-227-2600
A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

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 CONSTRUCTED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

1. 2013 CALIFORNIA ADMINISTRATIVE CODE
2. 2013 CALIFORNIA BUILDING CODE
3. 2013 CALIFORNIA ELECTRIC CODE
4. 2013 CALIFORNIA MECHANICAL CODE
5. 2013 CALIFORNIA PLUMBING CODE
6. 2013 CALIFORNIA FIRE CODE
7. ANY LOCAL BUILDING CODE AMENDMENTS TO THE ABOVE
8. CITY/COUNTY ORDINANCES

HANDICAP REQUIREMENTS:

FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS NOT REQUIRED IN ACCORDANCE WITH CALIFORNIA ADMINISTRATIVE STATE CODE PART 2, TITLE 24, CHAPTER 11B, SECTION 1103B.

CODE COMPLIANCE

OVERALL HEIGHT: 125'-0"

DO NOT SCALE DRAWING:

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

GENERAL CONTRACTOR NOTES

SITE ADDRESS:	16448 HALLIBURTON ROAD HACIENDA HEIGHTS, CA 91745
APN:	8207-019-802
LAND OWNER:	SOUTHERN CALIFORNIA EDISON 4900 RIVERGRADE ROAD,BLDG. 28-1, SUITE 120C IRWINDALE, CA 91706 CONTACT: PHIL HIGGERSON PHONE: (626) 695-5888
TOWER OWNER:	SOUTHERN CALIFORNIA EDISON 4900 RIVERGRADE ROAD,BLDG. 28-1, SUITE 120C IRWINDALE, CA 91706 CONTACT: PHIL HIGGERSON PHONE: (626) 695-5888
GROUND ELEVATION:	475' AMSL
HEIGHT OF STRUCTURE:	125' AGL
JURISDICTION:	COUNTY OF LOS ANGELES
ZONING:	A-1- LIGHT AGRICULTURAL

PROJECT INFORMATION

FROM: VERIZON WIRELESS OFFICE, IRVINE, CA

1. DEPART SAND CANYON AVE TOWARD BARRANCA PARKWAY
2. MAKE A U-TURN AT BARRANCA PKWY
3. TAKE RAMP LEFT I-5N
4. TAKE THE EXIT 107 TAKE RAMP RIGHT FOR CA-57 NORTH TOWARD POMONA
5. TAKE RAMP RIGHT CA-60 WEST TOWARD LOS ANGELES
6. AT EXIT 18 TAKE RAMP RIGHT TOWARD AZUSA AVE
7. TURN LEFT ONTO S AZUSA AVE
8. TURN RIGHT ONTO HALLIBURTON RD.
9. MAKE A U-TURN AT PASO VERDE DR
10. ARRIVE AT 16448 HALLIBURTON RD, HACIENDA HEIGHTS, CA 91745

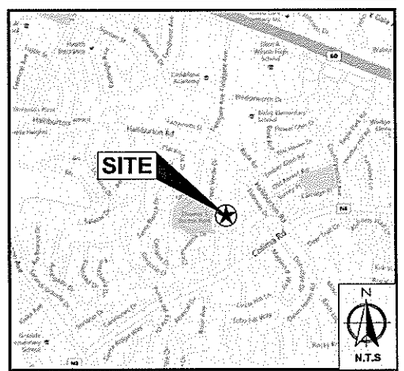
DRIVING DIRECTIONS

- INSTALLATION OF (2) VERIZON WIRELESS TELECOMMUNICATION EQUIPMENT CABINETS WITHIN A NEW 18'-0" x 18'-0" GROUND LEASE AREA
- INSTALLATION OF (9) PANEL ANTENNAS ON EXISTING SCE TOWER.
- INSTALLATION OF (6) RRUS W/ A2 MODULES ON EXISTING SCE TOWER.
- INSTALLATION OF (2) RAYCAPS ON EXISTING SCE TOWER.
- INSTALLATION OF (1) STAND BY GENERATOR WITH 54 GALLON FUEL TANK @ GRADE.

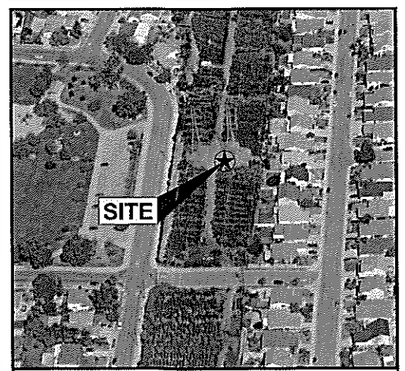
PROJECT DESCRIPTION

SHEET	DESCRIPTION	REV.
T-1	TITLE SHEET	0
LS-1	SITE SURVEY	1
A-1	SITE PLAN	0
A-2	ENLARGED SITE PLAN	0
A-3	PROPOSED EQUIPMENT LAYOUT	0
A-4	EXISTING / PROPOSED ANTENNA PLAN AND ANTENNA SCHEDULE	0
A-5	EXISTING / PROPOSED WEST ELEVATIONS	0
A-6	EXISTING / PROPOSED SOUTH ELEVATIONS	0
A-7	EXISTING / PROPOSED NORTH ELEVATIONS	0
A-8	EXISTING / PROPOSED EAST ELEVATIONS	0
A-9	EQUIPMENT DETAILS	0
A-10	EQUIPMENT SPECS	0
A-11	EQUIPMENT SPECS	0

SHEET INDEX



VICINITY MAP



AERIAL

APPLICANT/LESSEE:
VERIZON WIRELESS
15505 SAND CANYON AVE.,
BUILDING "D", 1ST FLOOR
IRVINE, CA 92618-3114
CONTACT: JAMIE SANDOVAL
PHONE: (714) 342-7577
EMAIL: jamie.sandoval@verizonwireless.com

APPLICANT/LESSEE:
EUKON GROUP
65 POST, SUITE 1000
IRVINE, CA 92618
CONTACT: HUMBERTO TAPIA
PHONE: (949) 553-8566
EMAIL: humberto.tapia@eukongroup.com

PLANNING CONTACT:
EUKON GROUP
65 POST, SUITE 1000
IRVINE, CA 92618
CONTACT: JOHN PAPPAS
PHONE: (949) 702-0696
EMAIL: john.pappas@eukongroup.com

LEASING MANAGER:
EUKON GROUP
65 POST, SUITE 1000
IRVINE, CA 92618
CONTACT: JON SILVA
PHONE: (714) 3937963
EMAIL: jon.silva@eukongroup.com

RF ENGINEER:
VERIZON WIRELESS
15505 SAND CANYON BLVD.
BUILDING "D", 1ST FLOOR
IRVINE, CA 92618-3114
CONTACT: SCOTT LEE
PHONE: (949) 286-0616
EMAIL: scott.lee@verizonwireless.com

CONSTRUCTION MANAGER:
SMARTLINK
18401 VON KARMAN AVE. #400
IRVINE, CA 92612
CONTACT: TRAVIS HAMPTON
PHONE: (714) 317-1316
EMAIL: thampton@smartlink.com

PROJECT TEAM

APPROVED BY:	INITIALS:	DATE:
LANDLORD:		
CONSTRUCTION MANAGER:		
RF ENGINEER:		
SITE ACQUISITION MANAGER:		
ZONING MANAGER:		
UTILITY COORDINATOR:		
PROGRAM REGIONAL MANAGER:		
NETWORK OPERATIONS MANAGER:		

APPROVALS

APPLICANT:

verizonwireless
15505 SAND CANYON AVE.
BUILDING "D", FIRST FLOOR
IRVINE, CA 92618

ENGINEER:

Eukon
www.eukongroup.com
65 POST, SUITE 1000
IRVINE, CA 92618
TEL: (949) 553-8566

DRAWN BY:	JR
CHECKED BY:	RB

REVISIONS:

REV	DATE	DESCRIPTION
0	08/21/15	100% ZONING DRAWING
A	08/14/15	90% ZONING DRAWING

LICENSER:

PROJECT INFORMATION:

PEPPERBROOK

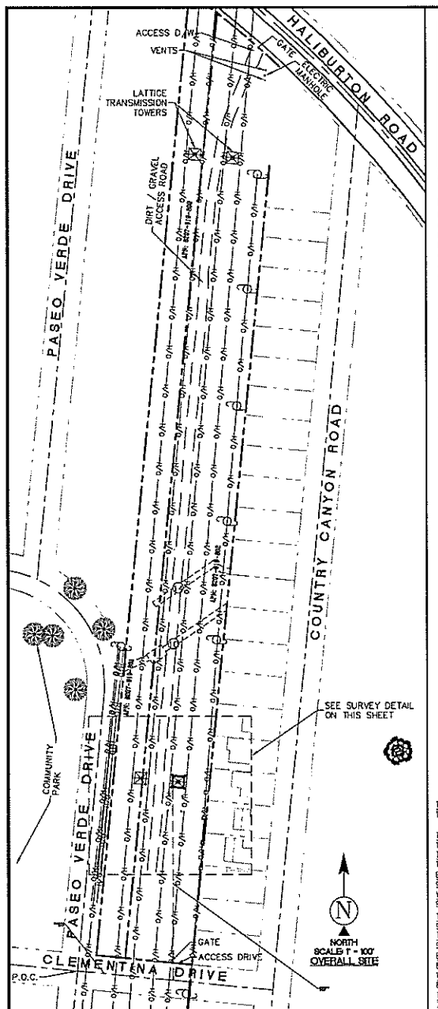
16448 HALLIBURTON ROAD
HACIENDA HEIGHTS, CA 91745

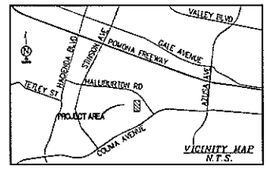
SHEET TITLE:

TITLE SHEET

SHEET NUMBER:

T-1





DIRECTIONS TO SITE

FROM THE VERIZON WIRELESS OFFICES IN IRVINE, CALIFORNIA HEAD SOUTHEAST TOWARD SAND CANYON SIDE PATH/SAND CANYON TRAIL; TURN RIGHT ONTO SAND CANYON AVENUE; USE THE LEFT TWO LANES TO TURN LEFT AT THE FIRST CROSS STREET ONTO BARRANCA PARKWAY; TURN RIGHT ONTO PACIFICA; TURN RIGHT ONTO THE STATE HIGHWAY 133 NORTH RAMP; MERGE ONTO CA-133 NORTH (PARTIAL TOLL ROAD); USE THE SECOND FROM THE LEFT LANE TO STAY ON CA-133 NORTH (TOLL ROAD); KEEP RIGHT AT THE FORK TO STAY ON CA-133 NORTH (TOLL ROAD), MERGE ONTO CA-241 NORTH (TOLL ROAD); USE THE LEFT TWO LANES TO TAKE EXIT 39B TO MERGE ONTO CA-91 WEST TOWARD LOS ANGELES (PARTIAL TOLL ROAD); KEEP RIGHT TO STAY ON CA-91 WEST, FOLLOW SIGNS FOR LOS ANGELES; USE THE RIGHT TWO LANES TO TAKE EXIT 31 TO MERGE ONTO CA-57 NORTH TOWARD POMONA; KEEP LEFT TO STAY ON CA-57 NORTH; TAKE EXIT 14 FOR DIAMOND BAR BOULEVARD; TURN LEFT ONTO BREA CANYON CUTOFF ROAD / SOUTH DIAMOND BAR BOULEVARD; CONTINUE TO FOLLOW BREA CANYON CUTOFF ROAD; CONTINUE ONTO FAIRWAY DRIVE; TURN LEFT TO MERGE ONTO CA-60 WEST / POMONA FREEWAY TOWARD LOS ANGELES; MERGE ONTO CA-60 WEST / POMONA FREEWAY; TAKE EXIT 18 FOR AZUSA AVENUE; USE THE LEFT TWO LANES TO TURN LEFT ONTO SOUTH AZUSA AVENUE; TURN RIGHT ONTO COLIMA ROAD; TURN RIGHT ONTO HALLIBURTON ROAD; MAKE A U-TURN AT PASEO VERDE DRIVE AND THE DESTINATION WILL BE ON THE RIGHT AT AYON NURSERY; 16448 HALLIBURTON ROAD; HACIENDA HEIGHTS, CALIFORNIA.

SURVEY DATE

08 / 03 / 2015

BASIS OF BEARING

BEARINGS SHOWN HEREON ARE BASED UPON U.S. STATE PLANE NAD83 COORDINATE SYSTEM CALIFORNIA STATE PLANE COORDINATE ZONE FIVE, DETERMINED BY GPS OBSERVATIONS.

BENCHMARK

PROJECT ELEVATIONS ESTABLISHED FROM GPS DERIVED ORTHOMETRIC HEIGHTS BY APPLICATION OF NGS "GEOID 12A" MODELED SEPARATIONS TO ELLIPSOID HEIGHTS DETERMINED BY OBSERVATIONS OF THE "SMARTNET" REAL TIME NETWORK. ALL ELEVATIONS SHOWN HEREON ARE REFERENCED TO NAVD88.

FLOOD ZONE

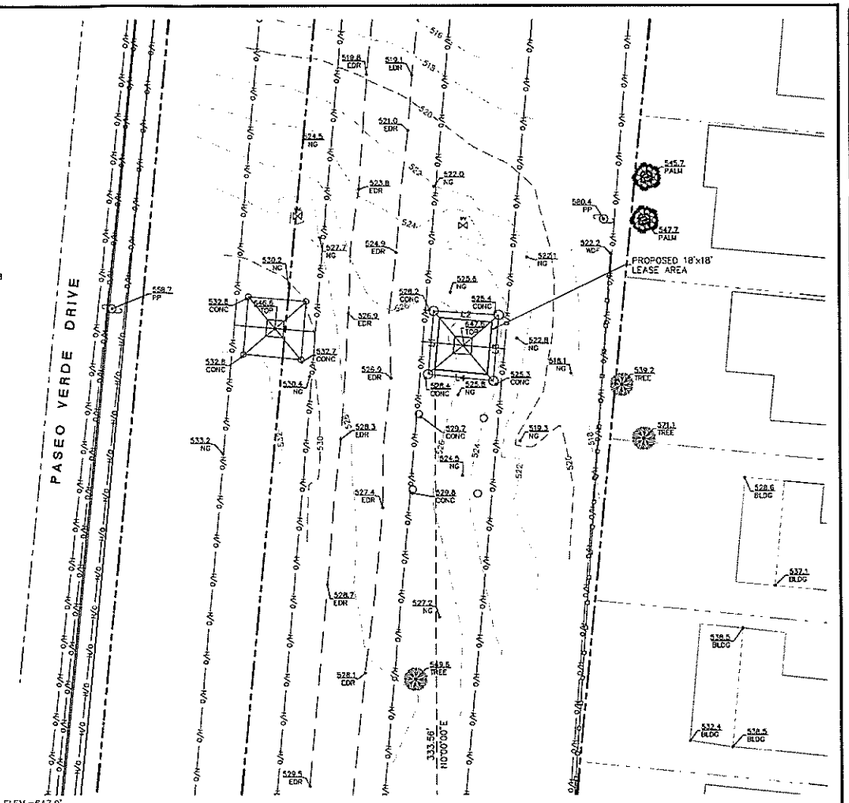
THIS PROJECT APPEARS TO BE LOCATED WITHIN FLOOD ZONE "X", AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN ACCORDING TO FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP(S), MAP ID #00000000000, DATED 00/00/0000

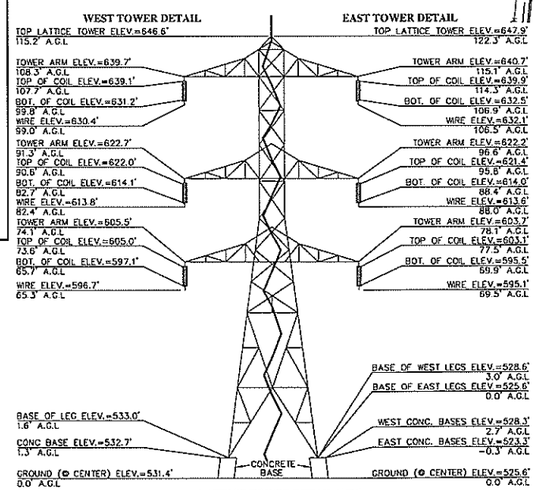
UTILITY NOTES

SURVEYOR DOES NOT GUARANTEE THAT ALL UTILITIES ARE SHOWN OR THEIR LOCATIONS ARE DEFINITE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND DEVELOPER TO CONTACT BLUE STAKE AND ANY OTHER INVOLVED AGENCIES TO LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION. REMOVAL, RELOCATION AND/ OR REPLACEMENT IS THE RESPONSIBILITY OF THE CONTRACTOR.

SURVEYOR'S NOTES

SURVEYOR HAS NOT PERFORMED A SEARCH OF PUBLIC RECORDS TO DETERMINE ANY DEFECT IN TITLE ISSUED. THE BOUNDARY SHOWN HEREON IS PLOTTED FROM RECORD INFORMATION AND DOES NOT CONSTITUTE A BOUNDARY SURVEY OF THE PROPERTY.

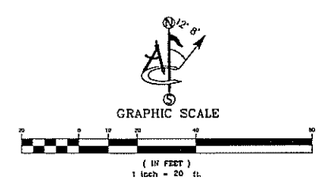




LATTICE TOWER DETAIL N.T.S.

LEGEND

AP	ASPHALT	WV	WATER CONTROL VALVE
BLDG	TOP OF BUILDING		LATTICE TOWER
D/W	ACCESS DRIVEWAY		TELEPHONE MANHOLE
EDR	EDGE OF DIRT ROAD		POWER POLE
FC	FACE OF CURB		UTILITY PEDESTAL
NG	NATURAL GRADE		POSITION OF GEODETIC COORDINATES
456.7	SPOT ELEVATION		PINE TREES
	TREES		PALM TREES
	WOOD FENCE		
	CURBLINES		
	EDGE OF DIRT ROAD		
	EXISTING BUILDINGS		
	OVERHEAD LINES		
	STREET CENTERLINES		
	SUBJECT PROPERTY LINE		
	ADJACENT PROPERTY LINE		
	LEASE AREA LIMITS		
	MAJOR CONTOUR INTERVAL		
	MINOR CONTOUR INTERVAL		



Line Tc	
Line #	Directi
L1	N5°23'3
L2	S84°36''

LEASE AREA LEGAL DESCRIPTION

A PORTION OF THE WESTERLY 115 FEET OF LOT 3 OF TRACT NO. 4380, IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 49 PAGES 46 AND 47 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
COMMENCING AT THE APPARENT CENTERLINE INTERSECTION OF CLEMENTINA DRIVE & PASEO VERDE DRIVE; THENCE SOUTH 84°20'41" EAST, ALONG THE CENTERLINE OF SAID CLEMENTINA DRIVE, A DISTANCE OF 165.47 FEET; THENCE DEPARTING SAID CENTERLINE NORTH 00°00'00" EAST, A DISTANCE OF 333.56 FEET TO THE POINT OF BEGINNING;
THENCE NORTH 05°23'38" EAST, A DISTANCE OF 18.00 FEET; THENCE SOUTH 84°36'22" EAST, A DISTANCE OF 18.00 FEET; THENCE SOUTH 05°23'38" WEST, A DISTANCE OF 18.00 FEET; THENCE NORTH 84°36'22" WEST, A DISTANCE OF 18.00 FEET TO THE POINT OF BEGINNING.

APPLICANT:

verizon wireless
15505 SAND CANYON AVENUE
BLDG. D, FIRST FLR.
IRVINE, CALIFORNIA 92618
949.286.7000

ENGINEER:

Eukon
www.eukongroup.com
65 POST, SUITE 1000
IRVINE, CA 92618
TEL: (949) 553-8566

Ambit Consulting
428 MAIN STREET SUITE 206
HUNTINGTON BEACH, CA 92648
(480)659-4072

PROJECT NO:	XXXXXX
DRAWN BY:	RC
CHECKED BY:	JG

REVISIONS:

REV	DATE	DESCRIPTION
1	08/14/15	FINAL SUBMITTAL
0	08/06/15	PRELIMINARY SUBMITTAL

PROJECT INFORMATION:

PEPPERBROOK
HACIENDA HEIGHTS, CA 91745
LOS ANGELES COUNTY

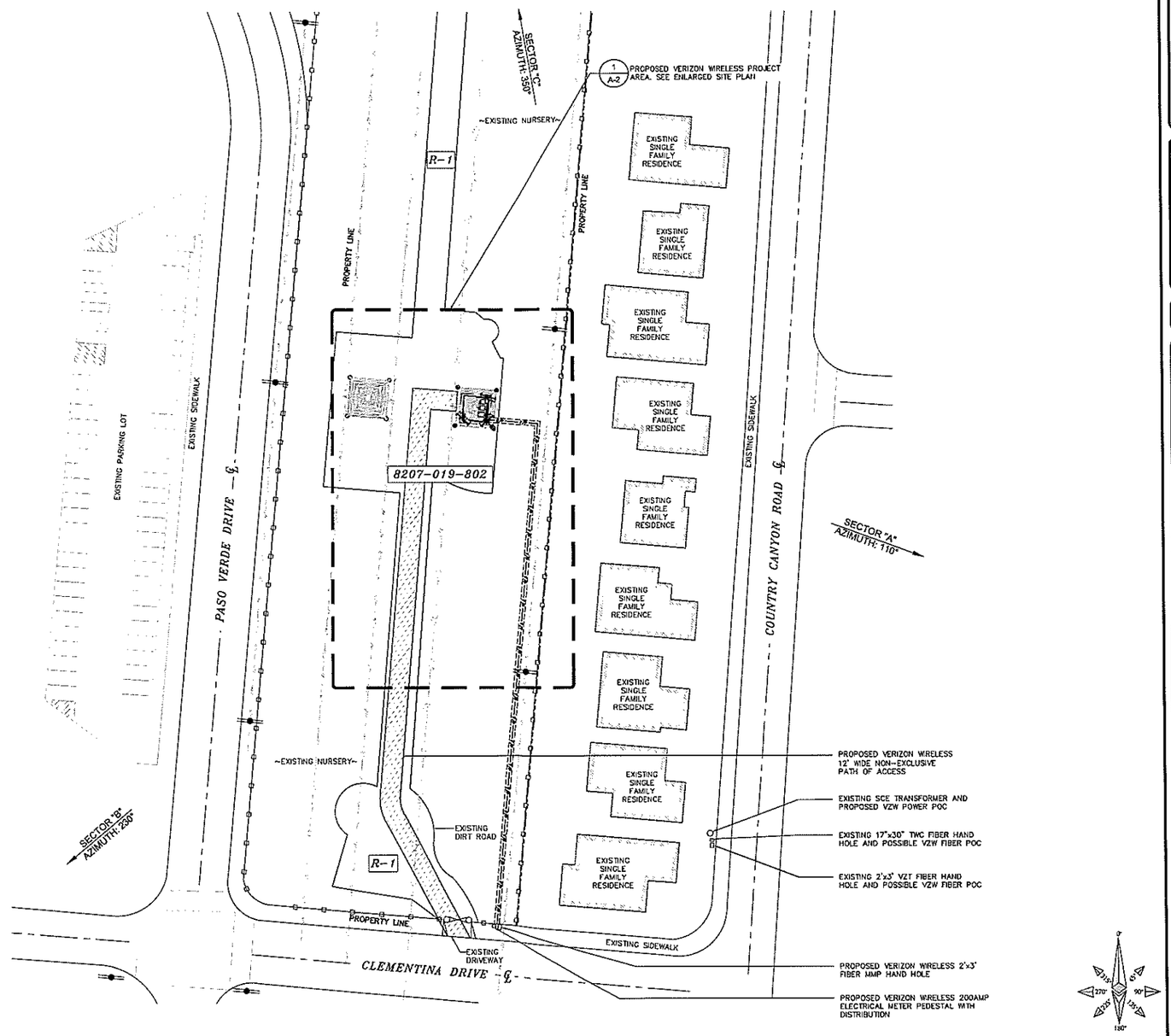
SHEET TITLE:

SITE SURVEY

SHEET NUMBER:

LS-1

SCALE NOTE:
IF DIMENSIONS SHOWN ON PLAN DO NOT SCALE CORRECTLY, CHECK FOR REDUCTION OR ENLARGEMENT FROM ORIGINAL PLANS.



SITE PLAN

SCALE 1"=30'-0"

30' 0 15' 30' 60' 120'

1

APPLICANT:

verizonwireless
15505 SAND CANYON AVE.
BUILDING "D", FIRST FLOOR
IRVINE, CA 92618

ENGINEER:

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IRVINE, CA 92618
TEL: (949) 553-8566

DRAWN BY:	JR
CHECKED BY:	RB

REVISIONS:

REV	DATE	DESCRIPTION
0	08/21/15	100% ZONING DRAWING
A	08/14/15	90% ZONING DRAWING

LICENSER:

PROJECT INFORMATION:

PEPPERBROOK

16448 HALLIBURTON ROAD
HACIENDA HEIGHTS, CA 91745

SHEET TITLE:

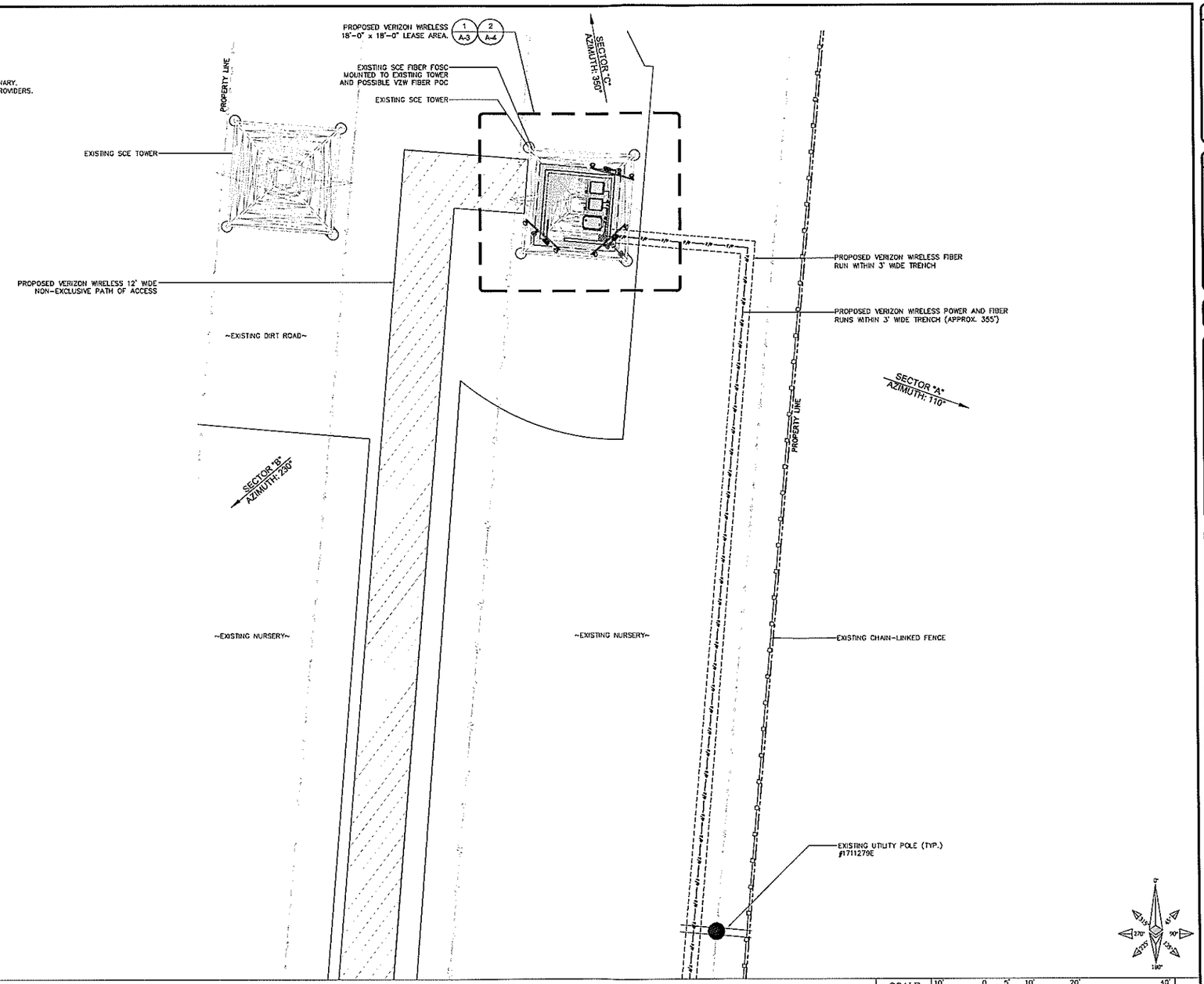
SITE PLAN

SHEET NUMBER:

A-1

SCALE NOTE:
IF DIMENSIONS SHOWN ON PLAN DO NOT SCALE CORRECTLY, CHECK FOR REDUCTION OR ENLARGEMENT FROM ORIGINAL PLANS.

UTILITY NOTE:
UTILITY DESIGN AND RUNS ARE PRELIMINARY. PENDING FINAL DESIGN FROM UTILITY PROVIDERS.



ENLARGED SITE PLAN

SCALE 1"=10'-0" | 10' 0 5' 10' 20' 40' | 1

APPLICANT:

verizonwireless
15505 SAND CANYON AVE.
BUILDING "D", FIRST FLOOR
IRVINE, CA 92618

ENGINEER:

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www.eukengroup.com
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IRVINE, CA 92618
TEL: (949) 553-8566

DRAWN BY:	JR
CHECKED BY:	RB

REVISIONS:

REV	DATE	DESCRIPTION
0	08/21/15	100% ZONING DRAWING
A	08/14/15	90% ZONING DRAWING

LICENSER:

PROJECT INFORMATION:

PEPPERBROOK

16448 HALLIBURTON ROAD
HACIENDA HEIGHTS, CA 91745

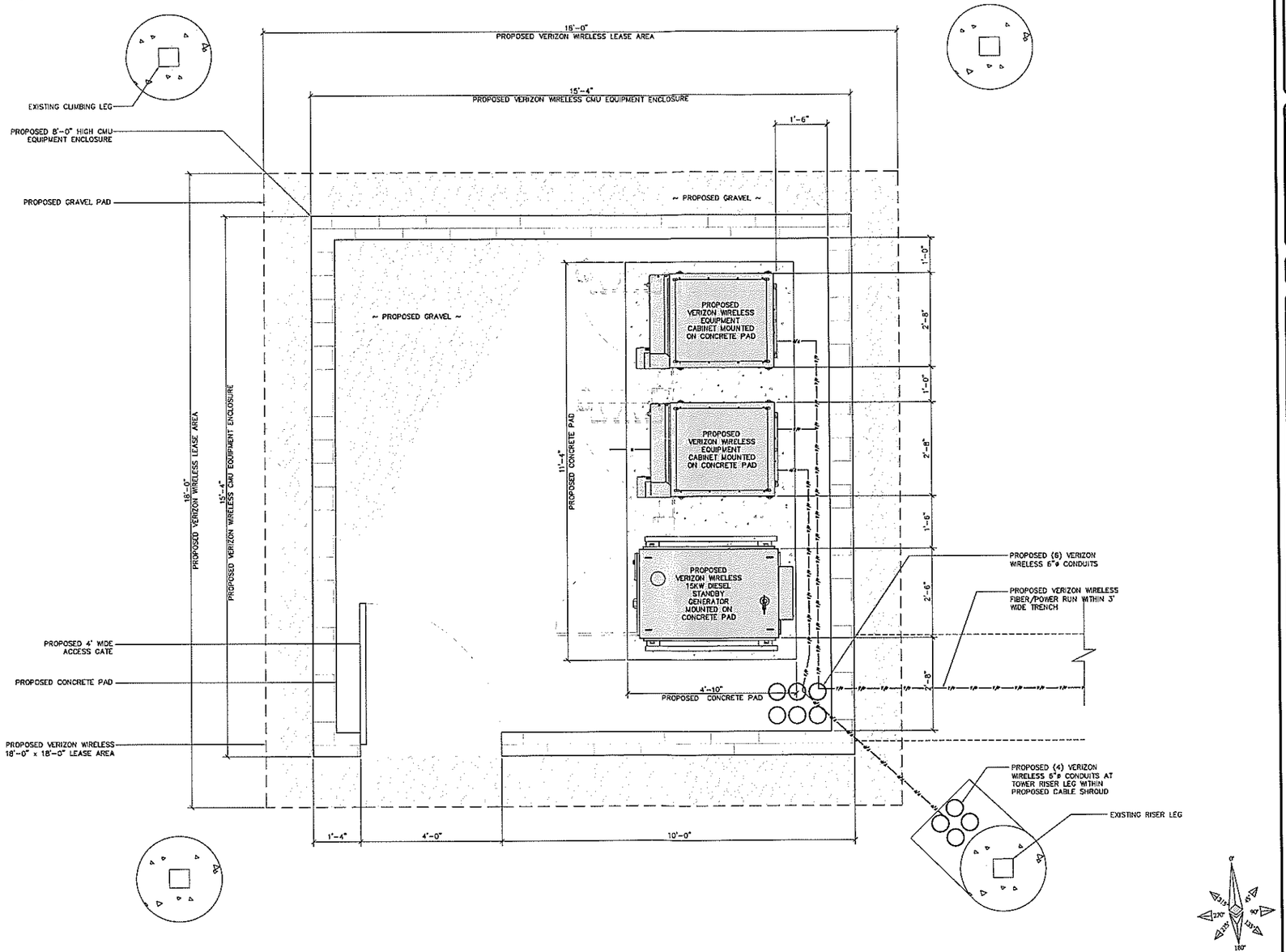
SHEET TITLE:

ENLARGED SITE PLAN

SHEET NUMBER:

A-2

SCALE NOTE:
IF DIMENSIONS SHOWN ON PLAN DO NOT SCALE CORRECTLY, CHECK FOR REDUCTION OR ENLARGEMENT FROM ORIGINAL PLANS.



NEW EQUIPMENT LAYOUT

SCALE 3/4"=1'-0"

1' 0 6" 1' 2' 4'

1

APPLICANT:

verizonwireless
15505 SAND CANYON AVE.
BUILDING "D", FIRST FLOOR
IRVINE, CA 92618

ENGINEER:

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IRVINE, CA 92618
TEL: (949) 553-8566

DRAWN BY:	JR
CHECKED BY:	RB

REVISIONS:

REV	DATE	DESCRIPTION
0	08/21/15	100% ZONING DRAWING
A	08/14/15	90% ZONING DRAWING

LICENSER:

PROJECT INFORMATION:

PEPPERBROOK

16448 HALLIBURTON ROAD
HACIENDA HEIGHTS, CA 91745

SHEET TITLE:

PROPOSED EQUIPMENT LAYOUT

SHEET NUMBER:

A-3

NOTES TO CONTRACTOR

1. CONTRACTOR IS TO REFER TO VERIZON'S MOST CURRENT RF DESIGN PRIOR TO CONSTRUCTION.
2. CABLE LENGTHS WERE DETERMINED BASED ON A VISUAL INSPECTION DURING SITE WALK. CONTRACTOR TO VERIFY ACTUAL LENGTH DURING PRE-CONSTRUCTION WALK.
3. CONTRACTOR TO USE MANUFACTURER'S FIBER LINE HANGER COMPONENTS (OR ENGINEER APPROVED EQUAL).
4. CONTRACTOR TO USE CABLES SPECIFIED (OR ENGINEER APPROVED EQUAL).

ANTENNA AND COAX SCHEDULE

	SECTOR	ANTENNA TYPE	ANTENNA SIZE	AZIMUTH	RAD CENTER	SIZE	QTY. OF CABLE	CABLE LENGTH
ALPHA SECTOR	A1	SBNHH-1D65B	72"L x 11.85"W x 7.1"D	110°	48'-0"	1.5" DIA.	(1) 6x12 HYBRID CABLE	±80'
	A2	ERICSSON AIR 32	55.98"L x 12.08"W x 7.87"D	110°	48'-8"			
	A3	–	–	–	–			
	A4	SBNHH-1D65B	72"L x 11.85"W x 7.1"D	110°	48'-0"			
BETA SECTOR	B1	SBNHH-1D65B	72"L x 11.85"W x 7.1"D	230°	48'-0"			
	B2	ERICSSON AIR 32	55.98"L x 12.08"W x 7.87"D	230°	48'-8"			
	B3	–	–	–	–	1.5" DIA.	(1) 6x12 HYBRID CABLE	±80'
	B4	SBNHH-1D65B	72"L x 11.85"W x 7.1"D	230°	48'-0"			
GAMMA SECTOR	C1	SBNHH-1D65B	72"L x 11.85"W x 7.1"D	350°	48'-0"			
	C2	ERICSSON AIR 32	55.98"L x 12.08"W x 7.87"D	350°	48'-8"			
	C3	–	–	–	–			
	C4	SBNHH-1D65B	72"L x 11.85"W x 7.1"D	350°	48'-0"			

REMOTE RADIO UNITS (RRU'S)

	SECTOR	RRU TYPE	COUNT	RRU LOCATION (DISTANCE FROM ANTENNA)	MINIMUM CLEARANCES ABOVE	BELOW	SIDES
ALPHA SECTOR	A1	–	–	–	–	–	–
	A2	ERICSSON AIR 32 INTEGRATED RRU	1	< 15'-0"	16"	8"	0"
	A3	ERICSSON RRUS-12 W/ A2 MODULE	2	< 15'-0"	16"	8"	0"
	A4	–	–	–	–	–	–
BETA SECTOR	B1	–	–	–	–	–	–
	B2	ERICSSON AIR 32 INTEGRATED RRU	1	< 15'-0"	16"	8"	0"
	B3	ERICSSON RRUS-12 W/ A2 MODULE	2	< 15'-0"	16"	8"	0"
	B4	–	–	–	–	–	–
GAMMA SECTOR	C1	–	–	–	–	–	–
	C2	ERICSSON AIR 32 INTEGRATED RRU	1	< 15'-0"	16"	8"	0"
	C3	ERICSSON RRUS-12 W/ A2 MODULE	2	< 15'-0"	16"	8"	0"
	C4	–	–	–	–	–	–

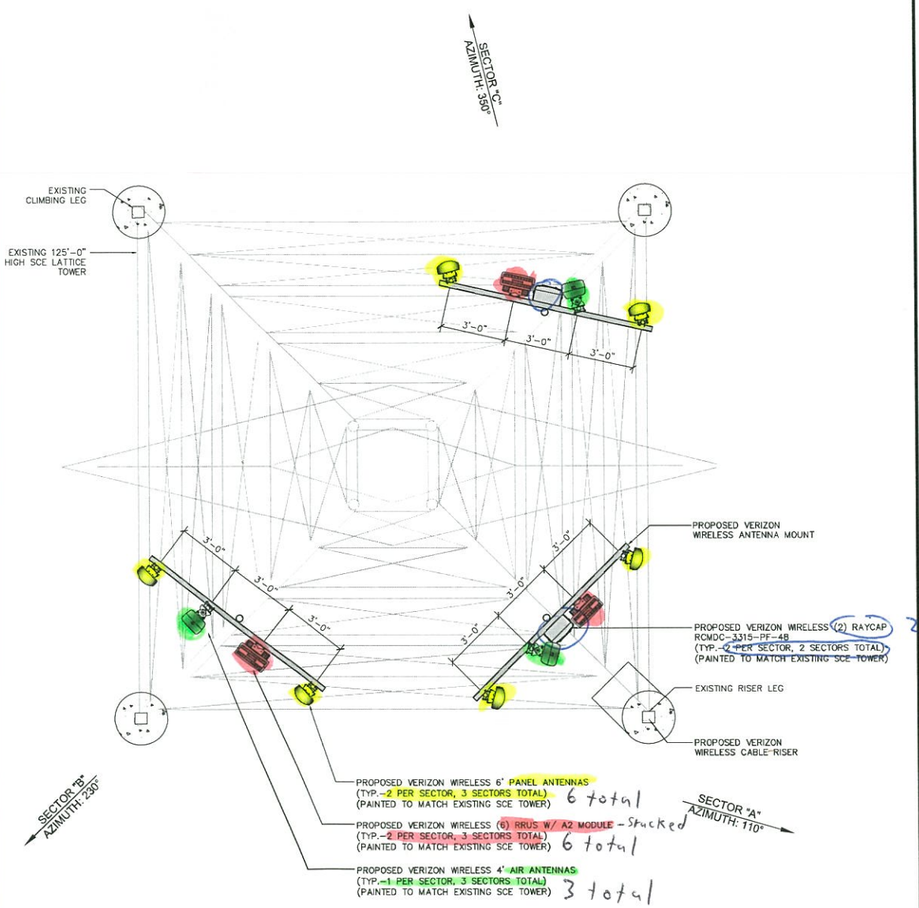
SURGE SUPPRESSION SYSTEM

	MANUFACTURER	PART NUMBER	QTY	LOCATION
SYSTEM	RAYCAP	DC12-48-60-RM	2	MOUNTED INSIDE NEW EQUIPMENT CABINET
	–	–	–	–
	RAYCAP	RCMDC-3315-PF-48	2	MOUNTED NEAR ANTENNAS ON EXISTING TOWER

ANTENNA AND RRU'S SCHEDULE | SCALE NONE | 1

SCALE NOTE:
IF DIMENSIONS SHOWN ON PLAN DO NOT SCALE CORRECTLY, CHECK FOR REDUCTION OR ENLARGEMENT FROM ORIGINAL PLANS.

NOTES:
1. ALL PROPOSED PANEL ANTENNAS AND ASSOCIATIVE EQUIPMENT SHALL BE PAINTED TO MATCH EXISTING TOWER.



NEW ANTENNA PLAN | SCALE 3/8"=1'-0" | 2'' 0 1' 2' 4' 8' | 2

APPLICANT:
verizonwireless
15505 SAND CANYON AVE.
BUILDING "D", FIRST FLOOR
IRVINE, CA 92618

ENGINEER:
Eukon
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IRVINE, CA 92618
TEL: (949) 553-8566

DRAWN BY:	JR
CHECKED BY:	RB

REVISIONS:

REV	DATE	DESCRIPTION
0	08/21/15	100% ZONING DRAWING
A	08/14/15	90% ZONING DRAWING

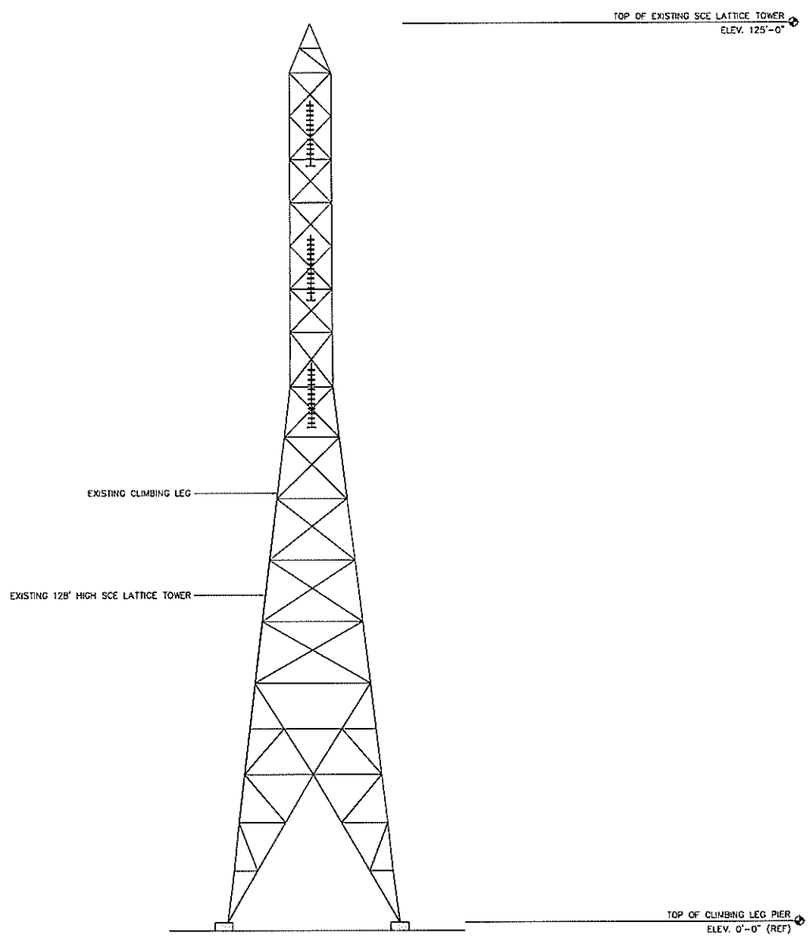
LICENSER:

PROJECT INFORMATION:
PEPPERBROOK
16448 HALLIBURTON ROAD
HACIENDA HEIGHTS, CA 91745

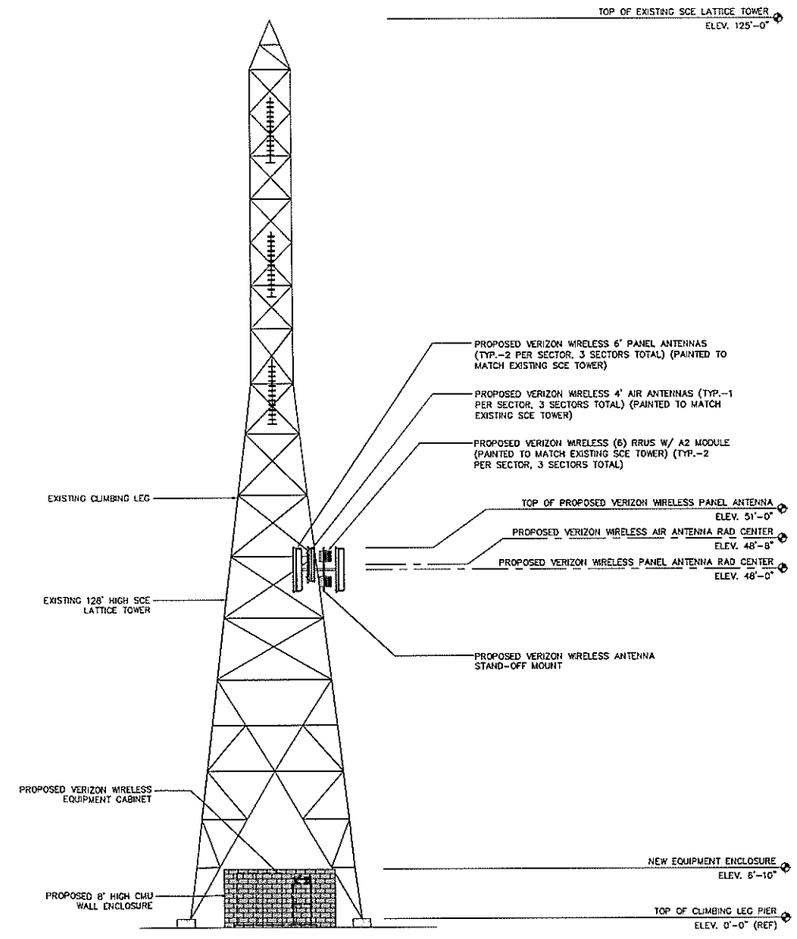
SHEET TITLE:
EXISTING / PROPOSED ANTENNA PLAN AND ANTENNA SCHEDULE

SHEET NUMBER:
A-4

SCALE NOTE:
IF DIMENSIONS SHOWN ON PLAN DO NOT SCALE CORRECTLY, CHECK FOR REDUCTION OR ENLARGEMENT FROM ORIGINAL PLANS.



EXISTING WEST ELEVATION | SCALE 1/8"=1'-0" | 8' 0 4' 8' 16' 32' | 1



PROPOSED WEST ELEVATION | SCALE 1/8"=1'-0" | 8' 0 4' 8' 16' 32' | 2

APPLICANT:

verizonwireless
15505 SAND CANYON AVE.
BUILDING "D", FIRST FLOOR
IRVINE, CA 92618

ENGINEER:

Eukon
www.eukongroup.com
65 POST, SUITE 1000
IRVINE, CA 92618
TEL: (949) 553-8566

DRAWN BY:	JR
CHECKED BY:	RB

REVISIONS:

REV	DATE	DESCRIPTION
0	08/21/15	100% ZONING DRAWING
A	08/14/15	90% ZONING DRAWING

LICENSER:

PROJECT INFORMATION:

PEPPERBROOK
16448 HALLIBURTON ROAD
HACIENDA HEIGHTS, CA 91745

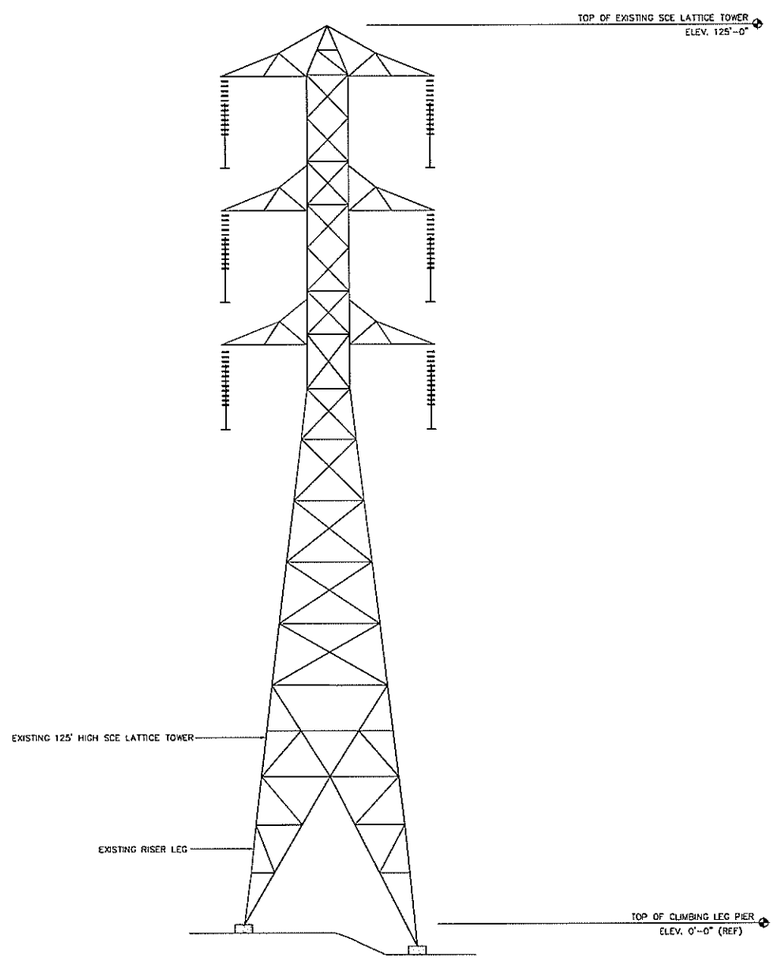
SHEET TITLE:

EXISTING / PROPOSED WEST ELEVATIONS

SHEET NUMBER:

A-5

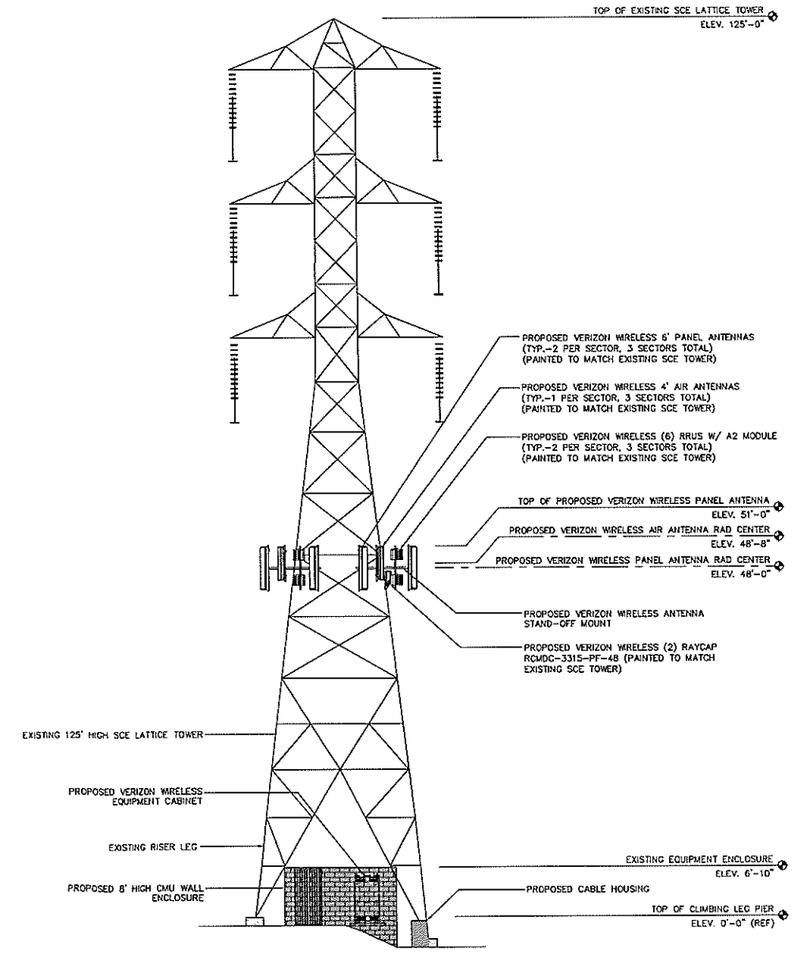
SCALE NOTE:
IF DIMENSIONS SHOWN ON PLAN DO NOT SCALE CORRECTLY, CHECK FOR REDUCTION OR ENLARGEMENT FROM ORIGINAL PLANS.



EXISTING SOUTH ELEVATION

SCALE 1/8"=1'-0"

1



PROPOSED SOUTH ELEVATION

SCALE 1/8"=1'-0"

2

APPLICANT:

verizonwireless
15505 SAND CANYON AVE.
BUILDING "D", FIRST FLOOR
IRVINE, CA 92618

ENGINEER:

Eukon
www.eukongroup.com
65 POST, SUITE 1000
IRVINE, CA 92618
TEL: (949) 553-8566

DRAWN BY:	JR
CHECKED BY:	RB

REVISIONS:

REV	DATE	DESCRIPTION
0	08/21/15	100% ZONING DRAWING
A	08/14/15	90% ZONING DRAWING

LICENSER:

PROJECT INFORMATION:

PEPPERBROOK

16448 HALLIBURTON ROAD
HACIENDA HEIGHTS, CA 91745

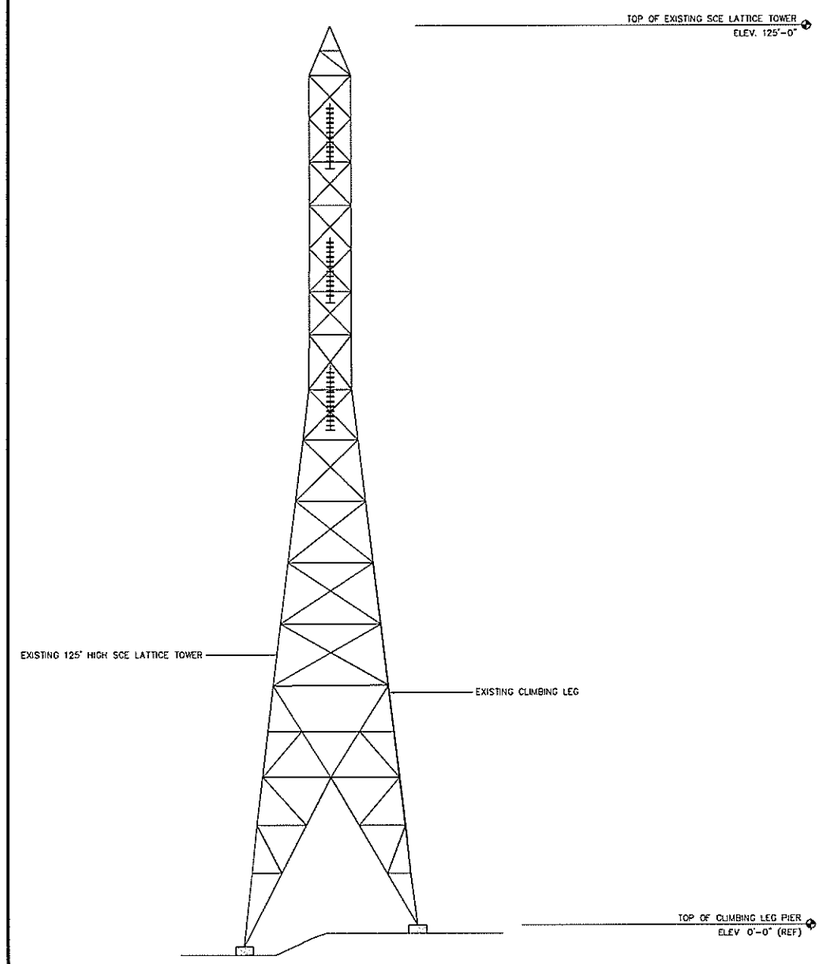
SHEET TITLE:

EXISTING / PROPOSED SOUTH ELEVATIONS

SHEET NUMBER:

A-6

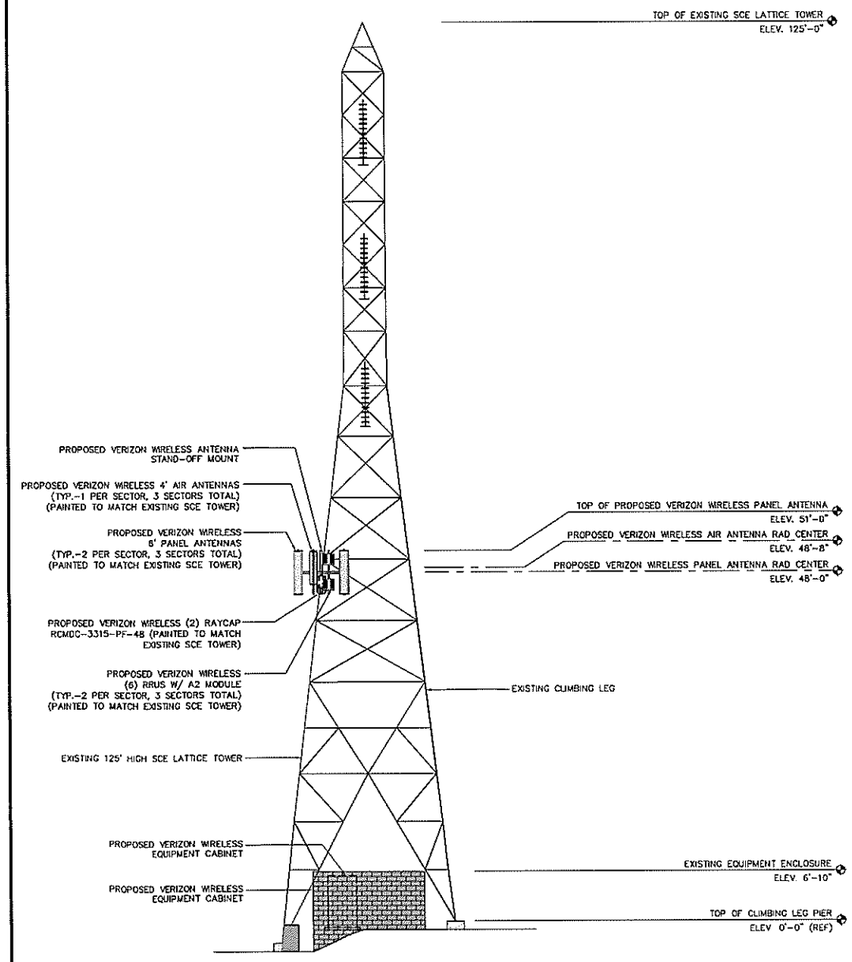
SCALE NOTE:
IF DIMENSIONS SHOWN ON PLAN DO NOT SCALE CORRECTLY, CHECK FOR REDUCTION OR ENLARGEMENT FROM ORIGINAL PLANS.



EXISTING NORTH ELEVATION

SCALE 1/8"=1'-0"

1



PROPOSED NORTH ELEVATION

SCALE 1/8"=1'-0"

2

APPLICANT:

verizonwireless
15505 SAND CANYON AVE.
BUILDING "D", FIRST FLOOR
IRVINE, CA 92618

ENGINEER:

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www.eukongroup.com
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TEL: (949) 553-8566

DRAWN BY:	JR
CHECKED BY:	RB

REVISIONS:

REV	DATE	DESCRIPTION
0	08/21/15	100% ZONING DRAWING
A	08/14/15	90% ZONING DRAWING

LICENSER:

PROJECT INFORMATION:

PEPPERBROOK

16448 HALLIBURTON ROAD
HACIENDA HEIGHTS, CA 91745

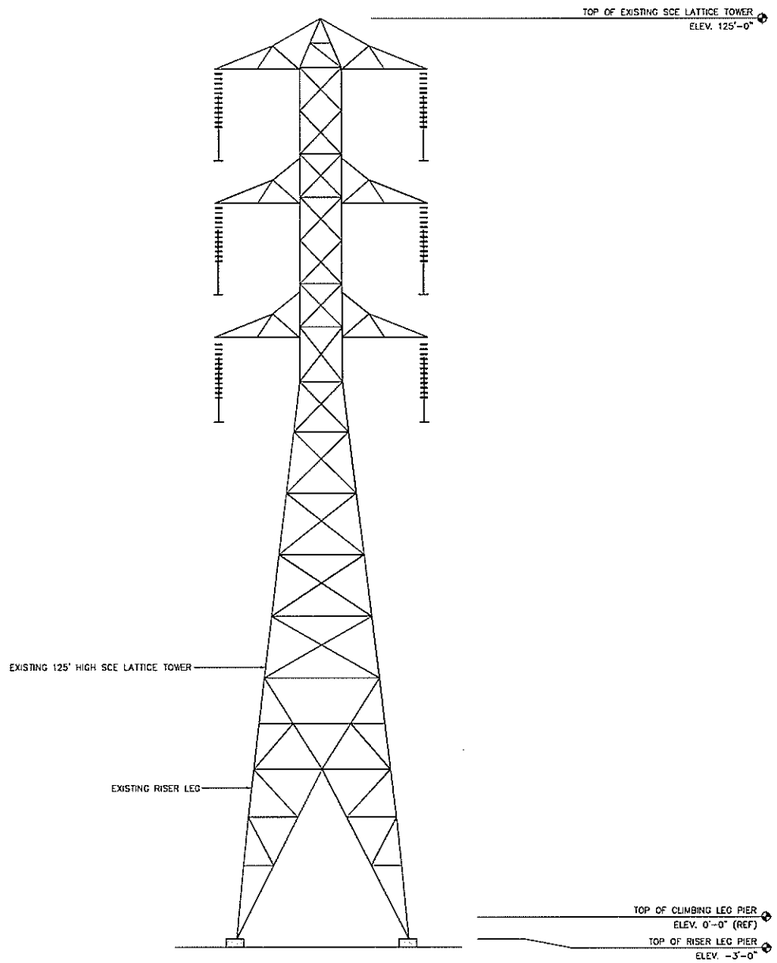
SHEET TITLE:

EXISTING / PROPOSED NORTH ELEVATIONS

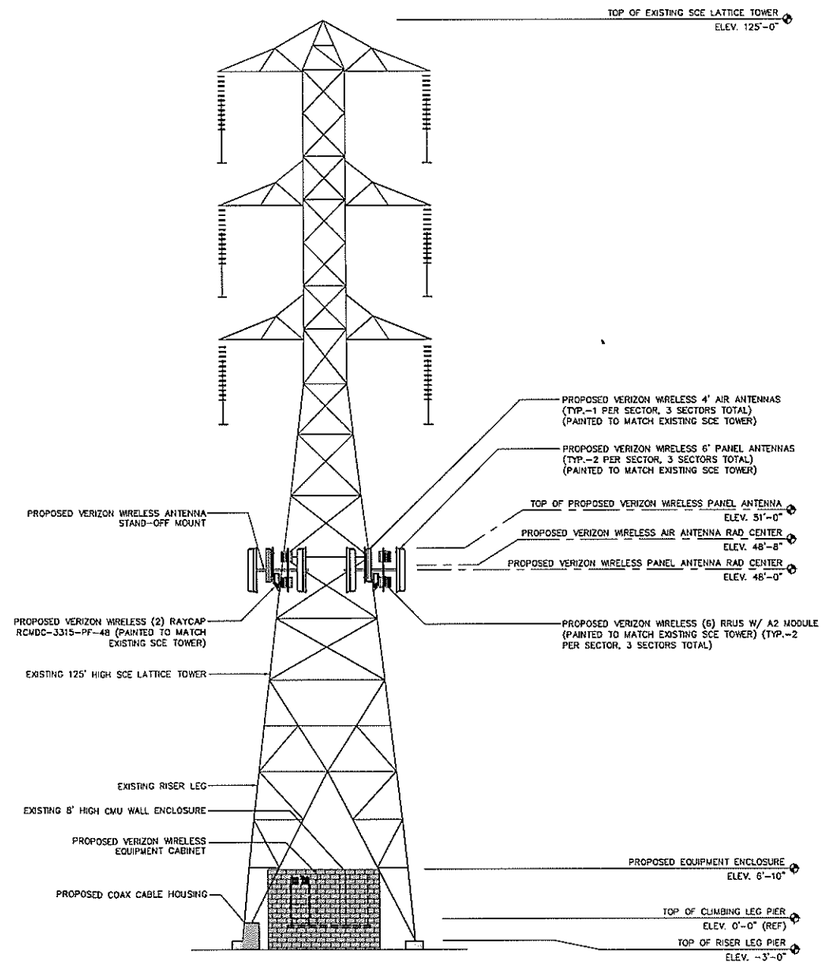
SHEET NUMBER:

A-7

SCALE NOTE:
IF DIMENSIONS SHOWN ON PLAN DO NOT SCALE CORRECTLY, CHECK FOR REDUCTION OR ENLARGEMENT FROM ORIGINAL PLANS.



EXISTING EAST ELEVATION | SCALE 1/8"=1'-0" | 8' 0 4' 8' 16' 32' | 1



PROPOSED EAST ELEVATION | SCALE 1/8"=1'-0" | 8' 0 4' 8' 16' 32' | 2

APPLICANT:

verizonwireless
15505 SAND CANYON AVE.
BUILDING "D", FIRST FLOOR
IRVINE, CA 92618

ENGINEER:

Eukon
www.eukongroup.com
65 POST, SUITE 1000
IRVINE, CA 92618
TEL: (949) 553-8566

DRAWN BY:	JR
CHECKED BY:	RB

REVISIONS:

REV	DATE	DESCRIPTION
0	08/21/15	100% ZONING DRAWING
A	08/14/15	90% ZONING DRAWING

LICENSER:

PROJECT INFORMATION:

PEPPERBROOK
1644B HALLIBURTON ROAD
HACIENDA HEIGHTS, CA 91745

SHEET TITLE:

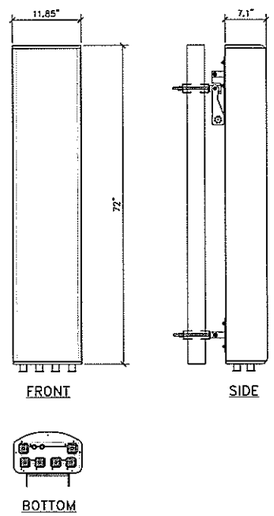
EXISTING / PROPOSED EAST ELEVATIONS

SHEET NUMBER:

A-8

SBNHH-1D65B

RADOME COLOR/MATERIAL:	LIGHT GRAY / FIBERGLASS, UV RESISTANT
CONNECTOR INTERFACE / LOCATION / QUANTITY:	7-16 DIN FEMALE/BOTTOM/6
WIND LOADING, MAXIMUM:	617.7 N @ 150 km/h 138.9 lbf @ 150 km/h
WIND SPEED, MAXIMUM:	241.4 km/h / 150.0 mph
DEPTH:	181.0 mm / 7.1 in
LENGTH:	1828.80 mm / 72 in
WIDTH:	301.00 mm / 11.85 in
NET WEIGHT:	23.00 kg / 50.71 lbs
RET INTERFACE:	RS-485 Female (daisy chain port, 1) RS-485 Male (input port, 1)

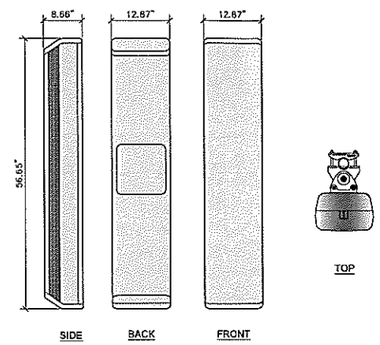


ANTENNA SPECIFICATIONS — SCALE NONE — 1

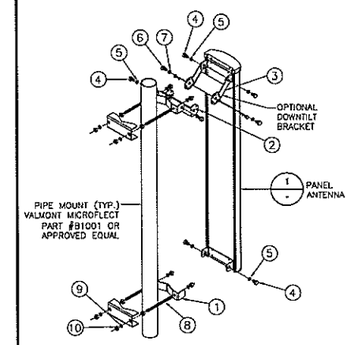
ERICSSON AIR 32 MECHANICAL SPECIFICATIONS

DIMENSIONS (LxWxD): 56.65 x 12.87 x 8.66 INCHES

WEIGHT (WITHOUT MOUNTING): 107 lbs



ANTENNA SPECIFICATIONS — SCALE NONE — 2



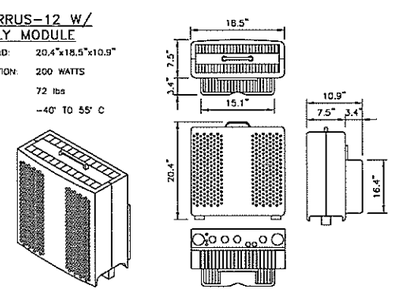
NOTES:
1. INSERT SCISSOR BRACKETS BETWEEN THE UPPER ANTENNA MOUNTING BRACKET AND THE UPPER POLE ADAPTER BRACKET. SECURE USING 1/2 INCH HARDWARE PROVIDED.
2. TO SET THE DEGREE OF DOWNTILT, ALIGN THE DESIRED HOLES ON THE SCISSOR BRACKETS AND SECURE USING 5/16 INCH HARDWARE PROVIDED.
3. THE NUMBER OF CONNECTORS WILL VARY BASED ON ANTENNA TYPE.

ITEM	QTY	DESCRIPTION
1	1	ADAPTER, POLE, LOWER
2	1	BRACKET, DOWNTILT, POLE
3	1	BRACKET, DOWNTILT, ANTENNA
4	6	1/2 x 1 HEX HEAD BOLT
5	6	1/2 SPLIT WASHER
6	2	5/16 x 1 HEX HEAD BOLT
7	2	5/16 SPLIT WASHER
8	4	1/2" THREADED ROD
9	8	1/2" SPLIT WASHER
10	12	1/2" NUT

ANTENNA MOUNTING DETAIL — SCALE NONE — 3

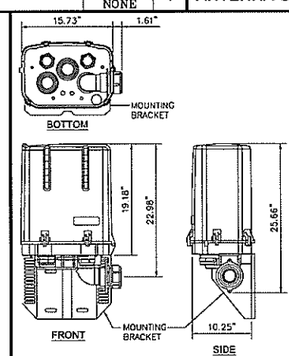
ERICSSON RRUS-12 W/ A2 RX-ONLY MODULE

DIMENSIONS, HxWxD:	20.4"x18.5"x10.9"
POWER CONSUMPTION:	200 WATTS
TOTAL WEIGHT:	72 lbs
TEMPERATURE:	-40° TO 55° C



RRUS DETAIL — SCALE NONE — 4

RAYCAP - RCMDC-3315-PF-48



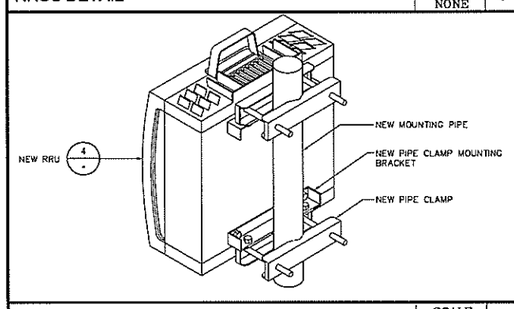
ELECTRICAL

NOMINAL OPERATING VOLTAGE:	48 VDC
NOMINAL DISCHARGE CURRENT:	20 kA 8/20 µs
MAXIMUM SURGE CURRENT:	60 kA 8/20 µs
MAXIMUM IMPULSE (LIGHTNING) CURRENT PER IEC 61643-1:	5 kA 10/350 µs
MAXIMUM CONTINUOUS OPERATING VOLTAGE (Uc)	75 VDC
VOLTAGE PROTECTION RATING (VPR) PER UL 1449 3RD EDITION:	400V
PROTECTION CLASS AS PER IEC 61643-1:	CLASS I
SPD ALARM:	UPON SACRIFICE
INTRUSION SENSOR:	MICROSWITCH
MOISTURE SENSOR:	INFRARED MOISTURE DETECTOR
STRIKESOR MODULE TYPE:	30-V1-RV STRIKESORB MODULES INSTALLED TO PROTECT 6 REMOTE RADIO HEADS

MECHANICAL

OPERATING TEMPERATURE:	-40° C TO +80° C
UV RESISTANT:	YES
WEIGHT:	SYSTEM: 21.4 lbs (9.70 kg) MOUNT: 5.5 lbs (2.49 kg) TOTAL: 26.9 lbs (12.20 kg)

FIBER / POWER BOX — SCALE NONE — 5



RRUS MOUNTING DETAIL — SCALE NONE — 6

NOT USED — SCALE NONE — 7

NOT USED — SCALE NONE — 8

APPLICANT:

verizonwireless
15505 SAND CANYON AVE.
BUILDING "D", FIRST FLOOR
IRVINE, CA 92618

ENGINEER:

Eukon
www.eukengroup.com
65 POST, SUITE 1000
IRVINE, CA 92618
TEL: (949) 553-8566

DRAWN BY:	JR
CHECKED BY:	RB

REVISIONS:

REV	DATE	DESCRIPTION
0	08/21/15	100% ZONING DRAWING
A	08/14/15	90% ZONING DRAWING

LICENSER:

PROJECT INFORMATION:

PEPPERBROOK
16448 HALLIBURTON ROAD
HACIENDA HEIGHTS, CA 91745

SHEET TITLE:

EQUIPMENT DETAILS

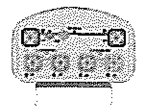
SHEET NUMBER:

A-9

Product Specifications

COMMSCOPE®

on the go



Andrew Solutions

SBNHH-1D65B

Andrew® DualPol® Tri-band Teletilt® SmartBeam® Antenna, 1 x 698–896 MHz and 2 x 1710–2360 MHz, 65° horizontal beamwidth, RET compatible

- Three DualPol® antennas under one radome
- Interleaved dipole technology providing for attractive, low wind load mechanical package

Electrical Specifications

Frequency Band, MHz	698–806	806–896	1710–1880	1850–1990	1920–2180	2300–2360
Gain, dBi	14.3	14.6	17.9	17.2	17.3	17.3
Beamwidth, Horizontal, degrees	68	64	70	67	66	62
Beamwidth, Vertical, degrees	12.9	10.7	5.7	5.4	4.8	4.5
Beam Tilt, degrees	0–14	0–14	0–7	0–7	0–7	0–7
USLS (typical), dB	15	15	14	14	14	14
Front-to-Back Ratio, Copolarization (180° ± 30°), dB	24	27	25	25	25	20
CPR at Boresight, dB	26	20	20	20	18	18
CPR at Sector, dB	13	13	10	6	10	6
Isolation, dB	28	28	29	29	29	29
Isolation, Intersystem, dB	30	30	30	30	30	30
VSWR | Return Loss, dB	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-150	-150	-150	-150	-150	-150
Input Power per Port, maximum, watts	400	400	350	350	350	350
Polarization	±45°	±45°	±45°	±45°	±45°	±45°
Impedance	50 ohm	50 ohm	50 ohm	50 ohm	50 ohm	50 ohm
Lightning Protection	dc Ground	dc Ground	dc Ground	dc Ground	dc Ground	dc Ground

Mechanical Specifications

Color | Radome Material	Light gray | Fiberglass, UV resistant
Connector Interface | Location | Quantity	7-16 DIN Female | Bottom | 6
Wind Loading, maximum	652.7 N @ 150 km/h 126.9 lbf @ 150 km/h
Wind Speed, maximum	241.4 km/h | 150.0 mph

Dimensions

Depth	185.0 mm | 7.3 in
Length	1828.80 mm | 72.00 in
Width	301.00 mm | 11.85 in
Net Weight	23.09 kg | 50.74 lb

Remote Electrical Tilt (RET) Information

Annual Failure Rate, maximum	0.10%
Power Consumption, during motor movements, maximum	13.0 W
Power Consumption, idle state, maximum	2.0 W
Power Input	10–30 V
Protocol	3GPP/AISG 2.0 Multi-RET

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Product Specifications

COMMSCOPE®

on the go

SBNHH-1D65B

RET Interface	RS-485 Female (daisy chain port, 1) | RS-485 Male (input port, 1)

Regulatory Compliance/Certifications

Agency	Classification
RoHS 2011/65/EU	Compliant by Exemption
China RoHS SJ/T 11364-2006	Above Maximum Concentration Value (MCV)
ISO 9001:2008	Designed, manufactured and/or distributed under this quality management system

Included Products

DB380-5083 — Standard two point mounting system to secure BSA panels to pipes with an OD measuring 2.4–4.5 in (60–115 mm). Includes locking downtilt brackets and heavy gauge pipe brackets to provide superior windload performance.

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ANTENNA SPEC — SCALE: NONE — 1

SPECIFICATIONS

DC Surge Protection for RRH/Integrated Antenna Radio Head
RCMDC-4750-PF-48 • RCMDC-3315-PF-48

Tower / Base / Rooftop / Rooftop Distribution Models

Electrical

Model Numbers	RCMDC-4750-PF-48	RCMDC-3315-PF-48
Nominal Operating Voltage	48 VDC	48 VDC
Nominal Discharge Current	[illegible]	[illegible]
Maximum Surge Current	[illegible]	[illegible]
Maximum Impulse Lightning Current per IEC 61643-1	[illegible]	[illegible]
Maximum Continuous Operating Voltage	[illegible]	[illegible]
Voltage Protection Rating	[illegible]	[illegible]
Protection Class as per IEC 61643-1	Class I	Class I
SPD Alarm	[illegible]	[illegible]
Intrusion Sensor	[illegible]	[illegible]
Moisture Sensor	[illegible]	[illegible]
Strikesorb Module Type	[illegible]	[illegible]

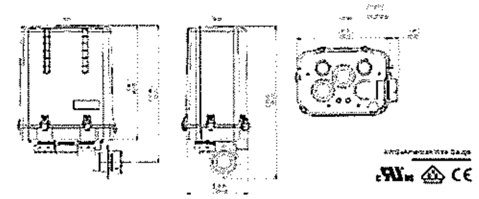
Mechanical

Surge Module Connection Method	[illegible]
Fiber Connection Method	[illegible]
Pressure Equalizing Vent	[illegible]
Environmental Rating	IP 67
Operating Temperature	[illegible]
UV Resistant	Yes
Weight	[illegible]
Combined Wind Loading	[illegible]

Strikesorb modules are compliant to the following Surge Protective Device (SPD) Standards

Standards	ANSI/UL 1449 3rd Edition
	IEEE C62.41
	[illegible]
	IEC 61643-11
	[illegible]

Product Diagram



Raycap

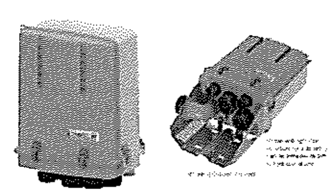
www.raycapsurgeprotection.com

DATA SHEET

DC Surge Protection for RRH/Integrated Antenna Radio Head
RCMDC-4750-PF-48 • RCMDC-3315-PF-48

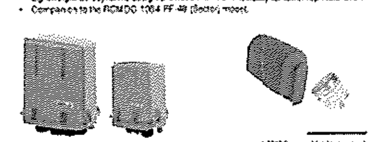
Tower / Base / Rooftop / Rooftop Distribution Models

Raycap's flexible Tower, Base Stations and Rooftop protection and Distribution products provide protection for up to 6 Remote Radio Heads/Integrated Antennas. This solutions mitigate the risk of damage due to lightning and provide high levels of availability and reliability to radio equipment.



Features
- Employs the Strikesorb® 30-V1-HV Surge Protective Device (SPD) specifically designed for the Remote Radio Head (RRH) installation environment and certified for use in DC applications and at low DC operating voltages (48V)
- The Strikesorb 30-V1-HV is a Class I SPD, certified by VDE per the IEC 61643-1 standard as suitable for installation in areas where direct lightning exposure is expected. Strikesorb 30-V1-HV is able to withstand direct lightning currents of up to 5kA (10/350) and induced surge currents of up to 60kA (8/20).
- Provides very low let through / clamping voltage - unique for a Class I product - as it does not employ spark gaps or other switching elements. Strikesorb offers unique protection levels to the RRH equipment as well as the Base Band Units
- Alarms for SPD sacrifice, Moisture detection and Intrusion.
- Fully recognized to the UL 1449 3rd Edition Safety Standard
- Patent pending design

Benefits
- Offers unique maintenance-free protection against direct lightning currents
- Protects up to 6 Remote Radio Heads and connects up to 12 fiber pairs
- Utilizes an IP 67 rated enclosure, allowing for indoor or outdoor installation on a roof or tower top
- Configurable cable ports are designed to accommodate varying diameters of hybrid (combined power and fiber optic) or standard cables with diameters up to 2" (will fit most standard 1-5/8" coax class cables) depending upon port configuration.
- Lightweight aerodynamic design provides maximum flexibility for tower top installation
- Companion to the RCMDC-1064-PF-48 (Sector) model



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Raycap

www.raycapsurgeprotection.com

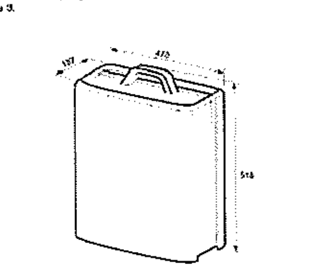
RAYCAP SPEC — SCALE: NONE — 2

Description	Value
Number of carriers	WCDMA and LTE: One to four carriers. GSM: One to eight carriers. CDMA: One to eight carriers. (subject to license handling)
Frequency[2]	1,920 to 1,980 MHz uplink 2,110 to 2,170 MHz downlink B1 for WCDMA and LTE
	1,850 to 1,910 MHz uplink 1,930 to 1,990 MHz downlink B2 for GSM, WCDMA, and LTE
	1,710 to 1,785 MHz uplink 1,805 to 1,880 MHz downlink B3 for GSM, WCDMA, and LTE
	1,710 to 1,755 MHz uplink 2,110 to 2,155 MHz downlink B4 for WCDMA, and LTE
	824 to 849 MHz uplink 869 to 894 MHz downlink B5 for GSM, WCDMA, and LTE
	2,500 to 2,570 MHz uplink 2,620 to 2,690 MHz downlink B7 for LTE
	880 to 915 MHz uplink 925 to 960 MHz downlink B8 for GSM, WCDMA, and LTE
Dimensions with Solar Shield and Handle and Feet	
Height	518 mm
Width	470 mm
Depth	190 mm
Dimensions without Solar Shield and without Handle or Feet	
Height	416 mm

Description	Value
Width	458 mm
Depth	159 mm
Weight	
RRUS 12 B1, RRUS 12 B2, RRUS 12 B4, and RRUS 12 B7	22.4 kg
RRUS 12 B3, RRUS 12 B5, and RRUS 12 B8	20.3 kg
Color	
Gray	

(1) RRUS 12 B2 supports only horizontal mounting for 2x20 W and 2x40 W power levels.
(2) RRUS 12 B7 supports only 2x20 W, 2x30 W, and 2x40 W power levels.
(3) Information about ERV can be found in RRUS Configurations.

The RRUS 12 size, height, width, and depth with solar shield, is shown in Figure 3.



Unit of measurement: mm

Figure 3 RRUS 12 Height, Width, and Depth with Solar Shield

RRU SPEC — SCALE: NONE — 3

APPLICANT:

verizonwireless

15505 SAND CANYON AVE.
BUILDING "D", FIRST FLOOR
IRVINE, CA 92618

ENGINEER:

Eukon
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IRVINE, CA 92618
TEL: (949) 553-8566

DRAWN BY:	JR
CHECKED BY:	RB

REVISIONS:

REV	DATE	DESCRIPTION
0	08/21/15	100% ZONING DRAWING
A	08/14/15	90% ZONING DRAWING

LICENSER:

PROJECT INFORMATION:

PEPPERBROOK

16448 HALLIBURTON ROAD
HACIENDA HEIGHTS, CA 91745

SHEET TITLE:

EQUIPMENT SPECS

SHEET NUMBER:

A-10

NOT USED

SCALE	
NONE	1

NOT USED

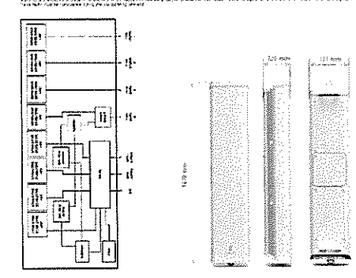
SCALE	
NONE	2

TECHNICAL SPECIFICATIONS AIR 32 B4A B2P 1.4M

PRODUCT NUMBER	KRD 901 044/1	
RADIO		
Active frequency band	3GPP Band 4: 1710 - 1755 / 2110 - 2155 MHz	
Downlink EIRP at band edge		
direction for the active band	2 x 60 Watt	
Multi-antenna techniques*	2x2 MIMO	
	2x2 Receive diversity (MRC) and interference rejection (IRC)	
Instantaneous bandwidth	40 MHz	
Carrier capacity		
single standard per sector	Up to 40 MHz LTE with 4 x 4 DL spatial multiplexing (SFBC) and 4 antenna receivers	
ANTENNA		
Active system		
Frequency band	1710 - 1755 MHz	2110 - 2155 MHz
Average gain	17.2 - 17.2 - 16.8 dBi	18.1 - 18.2 - 17.7 dBi
Tilt	2 - 7 - 12°	2 - 7 - 12°
Horizontal pattern		
Half power beam width	61°	61°
Front to back ratio (180°±30°)	> 25 dB	> 25 dB
Cross polar ratio, Main direction	> 20 dB	> 20 dB
Sector HPBW ±30°	> 8 dB	> 8 dB
Tracking error	± 0.5 dB	± 0.5 dB
Gain*	± 1	± 1
Vertical pattern		
Half power beam width	7°	6.8°
Electrical continuously adjustable	2 - 12°	2 - 12°
Sidelobe suppression for first sidelobe	> 15 dB	> 15 dB
Isolation, intra system	> 28 dB	
Isolation, inter system	> 28 dB	
Intermodulation	The transmit (Tx) and receive (Rx) ports are provided for secure intermodulation performance. Receiver noise figure is measured at 0 - 100 dBm at WCDMA 5 MHz with full output power	
Passive system		
Frequency band	1696 - 1810 MHz	1920 - 2180 MHz
Average gain	17.4 - 17.7 - 17.6 dBi	17.7 - 17.8 - 17.6 dBi
Tilt	2 - 7 - 12°	2 - 7 - 12°
Horizontal pattern		
Half power beam width	64°	62°
Front to back ratio (180°±30°)	> 25 dB	> 25 dB
Cross polar ratio, Main direction	> 22 dB	> 22 dB
Sector HPBW	65° ± 4 dB	> 9 dB
Tracking error	± 0.5 dB	± 0.5 dB
Gain*	± 1°	± 1°
Vertical pattern		
Half power beam width	6.6°	6.2°
Electrical continuously adjustable	2 - 12°	2 - 12°
Sidelobe suppression for first sidelobe	> 15 dB	> 15 dB
Impedance	50 Ω	
VSWR	< 1.5	
Isolation, intra system	> 28 dB	
Isolation, inter system	> 28 dB	
Intermodulation (IM3 @43 dBm carrier)	< -100 dBc	
Max. power per passive port at 55° C ambient temp	50 W	
Max. power for all passive inputs at 55° C ambient temp	200 W	

TECHNICAL SPECIFICATIONS AIR 32 B4A B2P 1.4M

MECHANICAL SPECIFICATION		
Weight	47.7 kg (including mechanical kit)	107 lbs
Dimensions W x D	1.4 m x 327 mm x 220 mm	55.5" x 12.87" x 8.66"
Wind load thermal transceiver only	640 N/200 N/640 N @ 42 m/s wind speed	
Survival wind speed	60 m/s **	
INTERFACES		
AIR - DU	Data 1, Data 2, CPRI 614 (LC connr)	
Power	-48 V DC	
RET control	According to 3GPP AISG 2.0	
	Controlled via CPRI Radio or supervised on passive antenna RF ports	
Passive antenna RF ports	4x7/16 female	
SUPPORTING BASE BAND	Ericsson Radio System RBS 6000 Series Band	
	One or two units depending on configuration	
ACCESSORIES	Mounting accessories are available from the "Multi Remote Site Products" product package	
	FAP 130 1120	



APPLICANT:

verizon wireless
15505 SAND CANYON AVE.
BUILDING "D", FIRST FLOOR
IRVINE, CA 92618

ENGINEER:

Eukon
www.eukongroup.com
65 POST, SUITE 1000
IRVINE, CA 92618
TEL: (949) 553-8566

DRAWN BY:	JR
CHECKED BY:	RB

REVISIONS:

REV	DATE	DESCRIPTION
0	08/21/15	100% ZONING DRAWING
A	08/14/15	90% ZONING DRAWING

LICENSER:

PROJECT INFORMATION:

PEPPERBROOK
16448 HALLIBURTON ROAD
HACIENDA HEIGHTS, CA 91745

SHEET TITLE:

EQUIPMENT SPECS

SHEET NUMBER:

A-11