

Microwave Path Data Sheet

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COMSEARCH19700 Janelia Farm Boulevard, Ashburn, VA, 20147
(571)246-3097 www.comsearch.com

PCN Date: 03/30/2011

Job Number: 110330COMSFB03

New Path

RCN Number: 11033005

Administrative Information

HWY 580 CA
City/County /San Joaquin
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign
Licensee Code 5165A1
Licensee Name New Cingular Wireless PCS LLC – N C
Radio Service / Station Class CF -- Point-to-Point Microwave, Common Carrier

DT TRACY CA

Tracy/San Joaquin
Engineering Proposal / PRIMARY OPERATION
5165A1
New Cingular Wireless PCS LLC – N C
FXO -- Fixed

Site Information

Latitude (NAD 83)	37 °39' 34.4" N	37 °44' 20.3" N
Longitude (NAD 83)	121 °26' 0.4" W	121 °25' 7.3" W
Ground Elevation (m/ft-AMSL)	75.90 / 249.0	16.00 / 52.5
Antenna Structure Registration #	1224433	
Path Azimuth (°)	8.390	188.399
Path Length (km / miles)	8.910 / 5.536	

Transmit Antenna

77043A
Manufacturer ANDREW CORPORATION
Model VHLP4-11B
Gain(dBi) / Beamwidth(°) / Tilt(°) 40.4 / 1.50 / -0.43
Centerline (m / ft – AGL) 18.34 / 60.2

77043A
ANDREW CORPORATION
VHLP4-11B
40.4 / 1.50 / 0.37
16.76 / 55.0

Receive Antenna

Same As Transmit

Manufacturer
Model
Gain (dBi) / Beamwidth (°)
Centerline (m / ft – AGL)

Diversity Receive Antenna

Manufacturer
Model
Gain (dBi) / Beamwidth (°)
Centerline (m / ft – AGL)

Radio Information

TEMU52
Manufacturer Alcatel-Lucent USA, Inc.
Model 95MPR11-H32F30-114
Model Description 9500 MPR Indoor Fixed Modulation
Emission Designator / Modulation 30M0D7W 32 QAM
Loading 1 CH DIG 114200.000
Stability (%) 0.001
Nominal Coordinated Maximum
Power (dBm) 30.0
Received Level (dBm) -36.6
EIRP (dBm) 62.6
Fixed Loss: Tx / Common (dB) 0.0 / 7.8
Free Space Loss (dB) 132.4

TEMU52
Alcatel-Lucent USA, Inc.
95MPR11-H32F30-114
9500 MPR Indoor Fixed Modulation
30M0D7W 32 QAM
1 CH DIG 114200.000
0.001
Nominal Coordinated Maximum
30.0
-36.6
63.2
0.0 / 7.2

Transmit Frequencies (MHz) 11365.0000V(5)

10875.0000V(5)

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PCN Date: 03/30/2011

Job Number 110330COMSFB03

New Path

RCN Number: 11033005

Administrative Information**KANSAS&43 CA****CNTRLHANFORD CA**

City/County

/Kings

/Kings

Status / License Basis

Engineering Proposal / PRIMARY OPERATION

Engineering Proposal / PRIMARY OPERATION

Call Sign

Licensee Code

5165A1

5165A1

Licensee Name

New Cingular Wireless PCS LLC - N C

New Cingular Wireless PCS LLC - N C

Radio Service / Station Class

CF -- Point-to-Point Microwave, Common Carrier

FXO -- Fixed

Site Information

Latitude (NAD 83)

36 °12' 38.4" N

36 °19' 53.4" N

Longitude (NAD 83)

119 °36' 32.9" W

119 °38' 11.0" W

Ground Elevation (m/ft-AMSL)

67.70 / 222.1

72.80 / 238.8

Antenna Structure Registration #

1215603

1257494

Path Azimuth (°)

349.659

169.643

Path Length (km / miles)

13.630 / 8.469

Transmit Antenna

77043A

77043A

Manufacturer

ANDREW CORPORATION

ANDREW CORPORATION

Model

VHLP4-11B

VHLP4-11B

Gain(dBi) / Beamwidth(°) / Tilt(°)

40.4 / 1.50 / 0.00

40.4 / 1.50 / -0.10

Centerline (m / ft - AGL)

10.97 / 36.0

17.85 / 58.6

Receive Antenna

Same As Transmit

Manufacturer

Model

Gain (dBi) / Beamwidth (°)

Centerline (m / ft - AGL)

Diversity Receive Antenna

Manufacturer

Model

Gain (dBi) / Beamwidth (°)

Centerline (m / ft - AGL)

Radio Information

TEMU52

TEMU52

Manufacturer

Alcatel-Lucent USA, Inc.

Alcatel-Lucent USA, Inc.

Model

95MPR11-H32F30-114

95MPR11-H32F30-114

Model Description

9500 MPR Indoor Fixed Modulation

9500 MPR Indoor Fixed Modulation

Emission Designator / Modulation

30M0D7W 32 QAM

30M0D7W 32 QAM

Loading

1 CH DIG 114200.000

1 CH DIG 114200.000

Stability (%)

0.001

0.001

Nominal Coordinated Maximum

Nominal Coordinated Maximum

Power (dBm)

30.0

30.0

Received Level (dBm)

-39.7

-39.7

EIRP (dBm)

63.2

63.2

Fixed Loss: Tx / Common (dB)

0.0 / 7.2

0.0 / 7.2

Free Space Loss (dB)

136.1

Transmit Frequencies (MHz)

11365.0000V(5)

10875.0000V(5)

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PCN Date: 03/30/2011

Job Number 110330COMSFB03

New Path

RCN Number: 11033005

Administrative Information

ST LUCIA PRE CA
City/County /Monterey
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign
Licensee Code 5165A1
Licensee Name New Cingular Wireless PCS LLC – N C
Radio Service / Station Class CF -- Point-to-Point Microwave, Common Carrier

HIDDEN HILLS CA

City/County /Monterey
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign
Licensee Code 5165A1
Licensee Name New Cingular Wireless PCS LLC – N C
Radio Service / Station Class FXO -- Fixed

Site Information

Latitude (NAD 83)	36 °29' 21.7" N	36 °33' 8.5" N
Longitude (NAD 83)	121 °47' 20.4" W	121 °47' 20.9" W
Ground Elevation (m/ft-AMSL)	661.34 / 2169.8	363.63 / 1193.0
Antenna Structure Registration #		1049885
Path Azimuth (°)	359.898	179.898
Path Length (km / miles)		6.991 / 4.344

Transmit Antenna

Manufacturer	70709A	70709A
Model	ANDREW CORPORATION	ANDREW CORPORATION
Gain(dBi) / Beamwidth(°) / Tilt(°)	VHLP800-11C	VHLP800-11C
Centerline (m / ft – AGL)	37.4 / 2.10 / -2.43	37.4 / 2.10 / 2.38
	3.05 / 10.0	7.07 / 23.2

Receive Antenna

Same As Transmit

Manufacturer
Model
Gain (dBi) / Beamwidth (°)
Centerline (m / ft – AGL)

Diversity Receive Antenna

Manufacturer
Model
Gain (dBi) / Beamwidth (°)
Centerline (m / ft – AGL)

Radio Information

Manufacturer	TEMU52	TEMU52
Model	Alcatel-Lucent USA, Inc.	Alcatel-Lucent USA, Inc.
Model Description	95MPR11-H32F30-114	95MPR11-H32F30-114
Emission Designator / Modulation	9500 MPR Indoor Fixed Modulation	9500 MPR Indoor Fixed Modulation
Loading	30M0D7W 32 QAM	30M0D7W 32 QAM
Stability (%)	1 CH DIG 114200.000	1 CH DIG 114200.000
	0.001	0.001
	Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm)	30.0	30.0
Received Level (dBm)	-37.6	-37.6
EIRP (dBm)	61.8	60.9
Fixed Loss: Tx / Common (dB)	0.0 / 5.6	0.0 / 6.5
Free Space Loss (dB)		130.3

Transmit Frequencies (MHz) 11325.0000V(4)

10835.0000V(4)

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COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147
(571)246-3097 www.comsearch.com

PCN Date: 03/30/2011

Job Number 110330COMSFB03

New Path

RCN Number: 11033005

Administrative Information

STEVINSON CA
City/County /Merced
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign
Licensee Code 5165A1
Licensee Name New Cingular Wireless PCS LLC – N C
Radio Service / Station Class CF -- Point-to-Point Microwave, Common Carrier

NEWMAN CA

Newman/Stanslaus
Engineering Proposal / PRIMARY OPERATION
5165A1
New Cingular Wireless PCS LLC – N C
FXO -- Fixed

Site Information

Latitude (NAD 83)	37 °18' 44.2" N	37 °18' 31.9" N
Longitude (NAD 83)	120 °50' 29.4" W	121 °1' 2.7" W
Ground Elevation (m/ft-AMSL)	25.00 / 82.0	25.60 / 84.0
Antenna Structure Registration #		
Path Azimuth (°)	268.660	88.554
Path Length (km / miles)	15.599 / 9.693	

Transmit Antenna

77043A	77043A
Manufacturer ANDREW CORPORATION	ANDREW CORPORATION
Model VHLP4-11B	VHLP4-11B
Gain(dBi) / Beamwidth(°) / Tilt(°) 40.4 / 1.50 / -0.06	40.4 / 1.50 / -0.05
Centerline (m / ft – AGL) 12.56 / 41.2	10.40 / 34.1

Receive Antenna

Same As Transmit

Manufacturer
Model
Gain (dBi) / Beamwidth (°)
Centerline (m / ft – AGL)

Diversity Receive Antenna

Manufacturer
Model
Gain (dBi) / Beamwidth (°)
Centerline (m / ft – AGL)

Radio Information

TEMU52	TEMU52
Manufacturer Alcatel-Lucent USA, Inc.	Alcatel-Lucent USA, Inc.
Model 95MPR11-H32F30-114	95MPR11-H32F30-114
Model Description 9500 MPR Indoor Fixed Modulation	9500 MPR Indoor Fixed Modulation
Emission Designator / Modulation 30M0D7W 32 QAM	30M0D7W 32 QAM
Loading 1 CH DIG 114200.000	1 CH DIG 114200.000
Stability (%) 0.001	0.001
Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm) 30.0	30.0
Received Level (dBm) -40.7	-40.7
EIRP (dBm) 63.2	63.4
Fixed Loss: Tx / Common (dB) 0.0 / 7.2	0.0 / 7.0
Free Space Loss (dB) 137.3	

Transmit Frequencies (MHz) 11365.0000V(5)

10875.0000V(5)

Microwave Path Data Sheet

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COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147
(571)246-3097 www.comsearch.com

PCN Date: 03/30/2011

Job Number 110330COMSFB03

New Path

RCN Number: 11033005

Administrative Information

HWY17&VINE CA
City/County /Santa Cruz
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign
Licensee Code 5165A1
Licensee Name New Cingular Wireless PCS LLC – N C
Radio Service / Station Class CF -- Point-to-Point Microwave, Common Carrier

SCOTTSVALLEY CA

Scotts Valley/Santa Cruz
Engineering Proposal / PRIMARY OPERATION
Licensee Code 5165A1
Licensee Name New Cingular Wireless PCS LLC – N C
Radio Service / Station Class FXO -- Fixed

Site Information

Latitude (NAD 83)	37 °5' 30.0" N	37 °2' 56.1" N
Longitude (NAD 83)	121 °58' 37.6" W	122 °1' 0.4" W
Ground Elevation (m/ft-AMSL)	449.35 / 1474.2	170.91 / 560.7
Antenna Structure Registration #		
Path Azimuth (°)	216.644	36.620
Path Length (km / miles)	5.912 / 3.674	

Transmit Antenna

Manufacturer	87204A	87204A
Model	ANDREW CORPORATION	ANDREW CORPORATION
Gain(dBi) / Beamwidth(°) / Tilt(°)	VHLP2-18B	VHLP2-18B
Centerline (m / ft – AGL)	38.9 / 2.10 / -2.86	38.9 / 2.10 / 2.82
	24.61 / 80.7	9.65 / 31.7

Receive Antenna

Same As Transmit

Manufacturer
Model
Gain (dBi) / Beamwidth (°)
Centerline (m / ft – AGL)

Diversity Receive Antenna

Manufacturer
Model
Gain (dBi) / Beamwidth (°)
Centerline (m / ft – AGL)

Radio Information

Manufacturer	TEMT63	TEMT63
Model	Alcatel-Lucent USA, Inc.	Alcatel-Lucent USA, Inc.
Model Description	95MPR18-O32F30-114	95MPR18-O32F30-114
Emission Designator / Modulation	9500 MPR Outdoor Fixed Modulation HP	9500 MPR Outdoor Fixed Modulation HP
Loading	30M0D7W 32 QAM	30M0D7W 32 QAM
Stability (%)	1 CH DIG 114000.000	1 CH DIG 114000.000
	0.001	0.001
	Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm)	17.0	17.0
Received Level (dBm)	-44.7	-44.7
EIRP (dBm)	52.8	52.8
Fixed Loss: Tx / Common (dB)	0.0 / 3.1	0.0 / 3.1
Free Space Loss (dB)		133.3

Transmit Frequencies (MHz) 17815.0000V(3)

19375.0000V(3)

Microwave Path Data Sheet

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COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147
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PCN Date: 03/30/2011

Job Number 110330COMSFB03

New Path

RCN Number: 11033005

Administrative Information

TAYLOR MON CA
City/County /Yolo
Status / License Basis Engineering Proposal / PRIMARY OPERATION
Call Sign
Licensee Code 5165A1
Licensee Name New Cingular Wireless PCS LLC – N C
Radio Service / Station Class CF -- Point-to-Point Microwave, Common Carrier

NATOMAS AIR CA

Sacramento/Sacramento
Engineering Proposal / PRIMARY OPERATION
Licensee Code 5165A1
Licensee Name New Cingular Wireless PCS LLC – N C
Radio Service / Station Class FXO -- Fixed

Site Information

Latitude (NAD 83)	38 °37' 31.1" N	38 °37' 42.6" N
Longitude (NAD 83)	121 °33' 54.0" W	121 °30' 53.9" W
Ground Elevation (m/ft-AMSL)	9.00 / 29.5	4.00 / 13.1
Antenna Structure Registration #		
Path Azimuth (°)	85.331	265.362
Path Length (km / miles)	4.371 / 2.716	

Transmit Antenna

Manufacturer	87205A	87205A
Model	ANDREW CORPORATION	ANDREW CORPORATION
Gain(dBi) / Beamwidth(°) / Tilt(°)	VHLP2-23B	VHLP2-23B
Centerline (m / ft – AGL)	40.5 / 1.70 / 0.04	40.5 / 1.70 / -0.07
	8.20 / 26.9	17.04 / 55.9

Receive Antenna

Same As Transmit

Manufacturer
Model
Gain (dBi) / Beamwidth (°)
Centerline (m / ft – AGL)

Diversity Receive Antenna

Manufacturer
Model
Gain (dBi) / Beamwidth (°)
Centerline (m / ft – AGL)

Radio Information

Manufacturer	TENC44	TENC44
Model	Alcatel-Lucent USA, Inc.	Alcatel-Lucent USA, Inc.
Model Description	95MPR23-O32F30-114	95MPR23-O32F30-114
Emission Designator / Modulation	9500 MPR Outdoor Fixed Modulation	9500 MPR Outdoor Fixed Modulation
Loading	30M0D7W 32 QAM	30M0D7W 32 QAM
Stability (%)	1 CH DIG 114000.000	1 CH DIG 114000.000
	0.001	0.001
	Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm)	17.0	17.0
Received Level (dBm)	-40.4	-40.4
EIRP (dBm)	54.4	54.4
Fixed Loss: Tx / Common (dB)	0.0 / 3.1	0.0 / 3.1
Free Space Loss (dB)		132.2

Transmit Frequencies (MHz) 23185.0000V(4)

21985.0000V(4)