

Microwave Path Data Sheet

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COMSEARCH19700 Janelia Farm Boulevard, Ashburn, VA, 20147
(703)726-5824 www.comsearch.com

PCN Date: 07/06/2011

Job Number: 110131COMSFB02

Administrative Information		SL01 CA	SLO6 CA
City/County		/San Luis Obispo	/San Luis Obispo
Status / License Basis		Engineering Proposal / PRIMARY OPERATION	Engineering Proposal / PRIMARY OPERATION
Call Sign			
Licensee Code		NWCNLA	NWCNLA
Licensee Name		New Cingular Wireless PCS – Los Ang	New Cingular Wireless PCS – Los Ang
Radio Service / Station Class		CF -- Point-to-Point Microwave, Common Carrier	FXO -- Fixed
Site Information			
Latitude (NAD 83)		35 °21' 37.0" N	35 °16' 55.7" N
Longitude (NAD 83)		120 °39' 23.7" W	120 °48' 45.1" W
Ground Elevation (m/ft-AMSL)		747.37 / 2452.0	367.59 / 1206.0
Antenna Structure Registration #		1009393	
Path Azimuth (°)		238.605	58.515
Path Length (km / miles)		16.620 / 10.327	
Transmit Antenna		53302A	53302A
Manufacturer		ANDREW CORPORATION	ANDREW CORPORATION
Model		HP6-59K	HP6-59K
Gain(dBi) / Beamwidth(°) / Tilt(°)		38.9 / 1.80 / -1.38	38.9 / 1.80 / 1.26
Centerline (m / ft – AGL)		12.19 / 40.0	9.14 / 30.0
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		TEMS02	TEMS02
Manufacturer		Alcatel-Lucent USA, Inc.	Alcatel-Lucent USA, Inc.
Model		95MPR61-O128F30-160	95MPR61-O128F30-160
Model Description		9500 MPR Outdoor Fixed Modulation	9500 MPR Outdoor Fixed Modulation
Emission Designator / Modulation		30M0D7W 128 QAM	30M0D7W 128 QAM
Loading		1 CH DIG 160000.000	1 CH DIG 160000.000
Stability (%)		0.001	0.001
		Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm)		24.5	24.5
Received Level (dBm)		-32.4	-32.4
EIRP (dBm)		62.4	62.4
Fixed Loss: Tx / Common (dB)		0.0 / 1.0	0.0 / 1.0
Free Space Loss (dB)			132.7
Transmit Frequencies (MHz)		6034.1500V(14T)	6286.1900V(24T)

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PCN Date: 07/06/2011

Job Number 110131COMSFB02

Administrative Information		SL01 CA	SL15 CA
City/County		/San Luis Obispo	/San Luis Obispo
Status / License Basis		Engineering Proposal / PRIMARY OPERATION	Engineering Proposal / PRIMARY OPERATION
Call Sign			
Licensee Code		NWCNLA	NWCNLA
Licensee Name		New Cingular Wireless PCS – Los Ang	New Cingular Wireless PCS – Los Ang
Radio Service / Station Class		CF -- Point-to-Point Microwave, Common Carrier	FXO -- Fixed
Site Information			
Latitude (NAD 83)		35 °21' 37.0" N	35 °23' 33.2" N
Longitude (NAD 83)		120 °39' 23.7" W	120 °21' 8.9" W
Ground Elevation (m/ft-AMSL)		747.37 / 2452.0	1101.85 / 3615.0
Antenna Structure Registration #		1009393	
Path Azimuth (°)		82.528	262.704
Path Length (km / miles)		27.865 / 17.315	
Transmit Antenna		41729A	41729A
Manufacturer		ANDREW CORPORATION	ANDREW CORPORATION
Model		UHX6-59L RF	UHX6-59L RF
Gain(dBi) / Beamwidth(°) / Tilt(°)		38.8 / 1.80 / 0.61	38.8 / 1.80 / -0.80
Centerline (m / ft – AGL)		21.63 / 71.0	9.14 / 30.0
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		TEMW33	TEMW33
Manufacturer		Alcatel-Lucent USA, Inc.	Alcatel-Lucent USA, Inc.
Model		95MPR61-H128F30-160	95MPR61-H128F30-160
Model Description		9500 MPR Indoor Fixed Modulation HP	9500 MPR Indoor Fixed Modulation HP
Emission Designator / Modulation		30M0D7W 128 QAM	30M0D7W 128 QAM
Loading		1 CH DIG 160000.000	1 CH DIG 160000.000
Stability (%)		0.001	0.001
		Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm)		33.0	24.5
Received Level (dBm)		-37.1	-28.6
EIRP (dBm)		70.8	62.3
Fixed Loss: Tx / Common (dB)		0.0 / 1.0	0.0 / 1.0
Free Space Loss (dB)			137.2
Transmit Frequencies (MHz)		5945.2000V(11T)	6197.2400V(21T)

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PCN Date: 07/06/2011

Job Number 110131COMSFB02

Administrative Information		SL05 CA	SL11 CA
City/County		/San Luis Obispo	/San Luis Obispo
Status / License Basis		Engineering Proposal / PRIMARY OPERATION	Engineering Proposal / PRIMARY OPERATION
Call Sign			
Licensee Code		NWCNLA	NWCNLA
Licensee Name		New Cingular Wireless PCS – Los Ang	New Cingular Wireless PCS – Los Ang
Radio Service / Station Class		CF -- Point-to-Point Microwave, Common Carrier	FXO -- Fixed
Site Information			
Latitude (NAD 83)		35 °38' 45.4" N	35 °32' 5.0" N
Longitude (NAD 83)		120 °44' 16.7" W	120 °32' 59.7" W
Ground Elevation (m/ft-AMSL)		543.15 / 1782.0	361.49 / 1186.0
Antenna Structure Registration #			
Path Azimuth (°)		125.852	305.962
Path Length (km / miles)		21.042 / 13.075	
Transmit Antenna		41729A	41729A
Manufacturer		ANDREW CORPORATION	ANDREW CORPORATION
Model		UHX6-59L RF	UHX6-59L RF
Gain(dBi) / Beamwidth(°) / Tilt(°)		38.8 / 1.80 / -0.58	38.8 / 1.80 / 0.44
Centerline (m / ft – AGL)		13.72 / 45.0	9.14 / 30.0
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		TEMS02	TEMS02
Manufacturer		Alcatel-Lucent USA, Inc.	Alcatel-Lucent USA, Inc.
Model		95MPR61-O128F30-160	95MPR61-O128F30-160
Model Description		9500 MPR Outdoor Fixed Modulation	9500 MPR Outdoor Fixed Modulation
Emission Designator / Modulation		30M0D7W 128 QAM	30M0D7W 128 QAM
Loading		1 CH DIG 160000.000	1 CH DIG 160000.000
Stability (%)		0.001	0.001
		Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm)		24.5	24.5
Received Level (dBm)		-34.6	-34.6
EIRP (dBm)		62.3	62.3
Fixed Loss: Tx / Common (dB)		0.0 / 1.0	0.0 / 1.0
Free Space Loss (dB)			134.7
Transmit Frequencies (MHz)		6315.8400V(25T)	6063.8000V(15T)

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PCN Date: 07/06/2011

Job Number 110131COMSFB02

Administrative Information		SL05 CA	SL07 CA
City/County		/San Luis Obispo	/San Luis Obispo
Status / License Basis		Engineering Proposal / PRIMARY OPERATION	Engineering Proposal / PRIMARY OPERATION
Call Sign			
Licensee Code		NWCNLA	NWCNLA
Licensee Name		New Cingular Wireless PCS – Los Ang	New Cingular Wireless PCS – Los Ang
Radio Service / Station Class		CF -- Point-to-Point Microwave, Common Carrier	FXO -- Fixed
Site Information			
Latitude (NAD 83)		35 °38' 45.4" N	35 °39' 34.3" N
Longitude (NAD 83)		120 °44' 16.7" W	120 °31' 46.2" W
Ground Elevation (m/ft-AMSL)		543.15 / 1782.0	337.72 / 1108.0
Antenna Structure Registration #			
Path Azimuth (°)		85.375	265.496
Path Length (km / miles)		18.939 / 11.768	
Transmit Antenna		41729A	41729A
Manufacturer		ANDREW CORPORATION	ANDREW CORPORATION
Model		UHX6-59L RF	UHX6-59L RF
Gain(dBi) / Beamwidth(°) / Tilt(°)		38.8 / 1.80 / -0.67	38.8 / 1.80 / 0.54
Centerline (m / ft – AGL)		7.62 / 25.0	12.19 / 40.0
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		TEMS02	TEMS02
Manufacturer		Alcatel-Lucent USA, Inc.	Alcatel-Lucent USA, Inc.
Model		95MPR61-O128F30-160	95MPR61-O128F30-160
Model Description		9500 MPR Outdoor Fixed Modulation	9500 MPR Outdoor Fixed Modulation
Emission Designator / Modulation		30M0D7W 128 QAM	30M0D7W 128 QAM
Loading		1 CH DIG 160000.000	1 CH DIG 160000.000
Stability (%)		0.001	0.001
		Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm)		24.5	24.5
Received Level (dBm)		-33.7	-33.7
EIRP (dBm)		62.3	62.3
Fixed Loss: Tx / Common (dB)		0.0 / 1.0	0.0 / 1.0
Free Space Loss (dB)			133.8
Transmit Frequencies (MHz)		6375.1400V(27T)	6123.1000V(17T)

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Administrative Information		SL10 CA	SL04 CA
City/County		/San Luis Obispo	/San Luis Obispo
Status / License Basis		Engineering Proposal / PRIMARY OPERATION	Engineering Proposal / PRIMARY OPERATION
Call Sign			
Licensee Code		NWCNLA	NWCNLA
Licensee Name		New Cingular Wireless PCS – Los Ang	New Cingular Wireless PCS – Los Ang
Radio Service / Station Class		CF -- Point-to-Point Microwave, Common Carrier	FXO -- Fixed
Site Information			
Latitude (NAD 83)		35 °30' 19.1" N	35 °32' 6.0" N
Longitude (NAD 83)		120 °37' 21.9" W	120 °48' 48.0" W
Ground Elevation (m/ft-AMSL)		466.04 / 1529.0	472.74 / 1551.0
Antenna Structure Registration #			
Path Azimuth (°)		280.845	100.735
Path Length (km / miles)		17.598 / 10.935	
Transmit Antenna		41729A	53302A
Manufacturer		ANDREW CORPORATION	ANDREW CORPORATION
Model		UHX6-59L RF	HP6-59K
Gain(dBi) / Beamwidth(°) / Tilt(°)		38.8 / 1.80 / -0.07	38.9 / 1.80 / -0.05
Centerline (m / ft – AGL)		21.34 / 70.0	10.67 / 35.0
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		TEMS02	TEMS02
Manufacturer		Alcatel-Lucent USA, Inc.	Alcatel-Lucent USA, Inc.
Model		95MPR61-O128F30-160	95MPR61-O128F30-160
Model Description		9500 MPR Outdoor Fixed Modulation	9500 MPR Outdoor Fixed Modulation
Emission Designator / Modulation		30M0D7W 128 QAM	30M0D7W 128 QAM
Loading		1 CH DIG 160000.000	1 CH DIG 160000.000
Stability (%)		0.001	0.001
		Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm)		24.5	24.5
Received Level (dBm)		-33.2	-33.2
EIRP (dBm)		62.1	62.4
Fixed Loss: Tx / Common (dB)		0.0 / 1.2	0.0 / 1.0
Free Space Loss (dB)			133.2
Transmit Frequencies (MHz)		6315.8400V(25T)	6063.8000V(15T)

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19700 Janelia Farm Boulevard, Ashburn, VA, 20147
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PCN Date: 07/06/2011

Job Number 110131COMSFB02

Administrative Information		SL09 CA	SL38 CA
City/County		/San Luis Obispo	Cambria/San Luis Obispo
Status / License Basis		Engineering Proposal / PRIMARY OPERATION	Engineering Proposal / PRIMARY OPERATION
Call Sign			
Licensee Code		NWCNLA	NWCNLA
Licensee Name		New Cingular Wireless PCS – Los Ang	New Cingular Wireless PCS – Los Ang
Radio Service / Station Class		CF -- Point-to-Point Microwave, Common Carrier	FXO -- Fixed
Site Information			
Latitude (NAD 83)		35 °23' 48.1" N	35 °31' 27.5" N
Longitude (NAD 83)		120 °51' 2.0" W	121 °3' 42.8" W
Ground Elevation (m/ft-AMSL)		170.69 / 560.0	210.62 / 691.0
Antenna Structure Registration #			
Path Azimuth (°)		306.490	126.368
Path Length (km / miles)		23.843 / 14.815	
Transmit Antenna		53302A	53302A
Manufacturer		ANDREW CORPORATION	ANDREW CORPORATION
Model		HP6-59K	HP6-59K
Gain(dBi) / Beamwidth(°) / Tilt(°)		38.9 / 1.80 / 0.02	38.9 / 1.80 / -0.18
Centerline (m / ft – AGL)		7.62 / 25.0	9.14 / 30.0
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		TEMW33	TEMW33
Manufacturer		Alcatel-Lucent USA, Inc.	Alcatel-Lucent USA, Inc.
Model		95MPR61-H128F30-160	95MPR61-H128F30-160
Model Description		9500 MPR Indoor Fixed Modulation HP	9500 MPR Indoor Fixed Modulation HP
Emission Designator / Modulation		30M0D7W 128 QAM	30M0D7W 128 QAM
Loading		1 CH DIG 160000.000	1 CH DIG 160000.000
Stability (%)		0.001	0.001
		Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm)		33.0	33.0
Received Level (dBm)		-27.0	-27.0
EIRP (dBm)		70.9	70.9
Fixed Loss: Tx / Common (dB)		0.0 / 1.0	0.0 / 1.0
Free Space Loss (dB)			135.8
Transmit Frequencies (MHz)		6315.8400H(25T)	6063.8000H(15T)

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COMSEARCH19700 Janelia Farm Boulevard, Ashburn, VA, 20147
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PCN Date: 07/06/2011

Job Number 110131COMSFB02

Administrative Information		SL38 CA	SL39 CA
City/County		Cambria/San Luis Obispo	/San Luis Obispo
Status / License Basis		Engineering Proposal / PRIMARY OPERATION	Engineering Proposal / PRIMARY OPERATION
Call Sign			
Licensee Code		NWCNLA	NWCNLA
Licensee Name		New Cingular Wireless PCS – Los Ang	New Cingular Wireless PCS – Los Ang
Radio Service / Station Class		CF -- Point-to-Point Microwave, Common Carrier	FXO -- Fixed
Site Information			
Latitude (NAD 83)		35 °31' 27.5" N	35 °41' 10.3" N
Longitude (NAD 83)		121 °3' 42.8" W	121 °10' 16.1" W
Ground Elevation (m/ft-AMSL)		210.62 / 691.0	470.31 / 1543.0
Antenna Structure Registration #			
Path Azimuth (°)		331.171	151.108
Path Length (km / miles)		20.509 / 12.744	
Transmit Antenna		53302A	53302A
Manufacturer		ANDREW CORPORATION	ANDREW CORPORATION
Model		HP6-59K	HP6-59K
Gain(dBi) / Beamwidth(°) / Tilt(°)		38.9 / 1.80 / 0.67	38.9 / 1.80 / -0.80
Centerline (m / ft – AGL)		11.58 / 38.0	15.24 / 50.0
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		TEMS02	TEMS02
Manufacturer		Alcatel-Lucent USA, Inc.	Alcatel-Lucent USA, Inc.
Model		95MPR61-O128F30-160	95MPR61-O128F30-160
Model Description		9500 MPR Outdoor Fixed Modulation	9500 MPR Outdoor Fixed Modulation
Emission Designator / Modulation		30M0D7W 128 QAM	30M0D7W 128 QAM
Loading		1 CH DIG 160000.000	1 CH DIG 160000.000
Stability (%)		0.001	0.001
		Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm)		24.5	24.5
Received Level (dBm)		-34.2	-34.2
EIRP (dBm)		62.4	62.4
Fixed Loss: Tx / Common (dB)		0.0 / 1.0	0.0 / 1.0
Free Space Loss (dB)			134.5
Transmit Frequencies (MHz)		6004.5000V(13T)	6256.5400V(23T)

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Job Number 110131COMSFB02

Administrative Information		SLO1 CA	SL28 CA
City/County		/San Luis Obispo	/San Luis Obispo
Status / License Basis		Engineering Proposal / PRIMARY OPERATION	Engineering Proposal / PRIMARY OPERATION
Call Sign			
Licensee Code		NWCNLA	NWCNLA
Licensee Name		New Cingular Wireless PCS – Los Ang	New Cingular Wireless PCS – Los Ang
Radio Service / Station Class		CF -- Point-to-Point Microwave, Common Carrier	FXO -- Fixed
Site Information			
Latitude (NAD 83)		35 °21' 37.0" N	35 °20' 7.6" N
Longitude (NAD 83)		120 °39' 23.7" W	120 °44' 50.5" W
Ground Elevation (m/ft-AMSL)		747.37 / 2452.0	111.50 / 365.8
Antenna Structure Registration #		1009393	1252446
Path Azimuth (°)		251.563	71.510
Path Length (km / miles)		8.700 / 5.406	
Transmit Antenna		70709A	70709A
Manufacturer		ANDREW CORPORATION	ANDREW CORPORATION
Model		VHLP800-11C	VHLP800-11C
Gain(dBi) / Beamwidth(°) / Tilt(°)		37.4 / 2.10 / -4.20	37.4 / 2.10 / 4.14
Centerline (m / ft – AGL)		10.67 / 35.0	12.19 / 40.0
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		TEMT56	TEMT56
Manufacturer		Alcatel-Lucent USA, Inc.	Alcatel-Lucent USA, Inc.
Model		95MPR11-O128F30-160	95MPR11-O128F30-160
Model Description		9500 MPR Outdoor Fixed Modulation	9500 MPR Outdoor Fixed Modulation
Emission Designator / Modulation		30M0D7W 128 QAM	30M0D7W 128 QAM
Loading		1 CH DIG 160170.000	1 CH DIG 160170.000
Stability (%)		0.001	0.001
		Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm)		20.0	20.0
Received Level (dBm)		-41.6	-41.6
EIRP (dBm)		55.4	55.2
Fixed Loss: Tx / Common (dB)		0.0 / 2.0	0.0 / 2.2
Free Space Loss (dB)			132.2
Transmit Frequencies (MHz)		10955.0000V(7)	11445.0000V(7)

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PCN Date: 07/06/2011

Job Number 110131COMSFB02

Administrative Information		SLO1 CA	SL23 CA
City/County		/San Luis Obispo	/San Luis Obispo
Status / License Basis		Engineering Proposal / PRIMARY OPERATION	Engineering Proposal / PRIMARY OPERATION
Call Sign			
Licensee Code		NWCNLA	NWCNLA
Licensee Name		New Cingular Wireless PCS – Los Ang	New Cingular Wireless PCS – Los Ang
Radio Service / Station Class		CF -- Point-to-Point Microwave, Common Carrier	FXO -- Fixed
Site Information			
Latitude (NAD 83)		35 °21' 37.0" N	35 °19' 11.1" N
Longitude (NAD 83)		120 °39' 23.7" W	120 °36' 4.0" W
Ground Elevation (m/ft-AMSL)		747.37 / 2452.0	792.48 / 2600.0
Antenna Structure Registration #		1009393	
Path Azimuth (°)		131.705	311.737
Path Length (km / miles)		6.756 / 4.198	
Transmit Antenna			
Manufacturer		77083A	77083A
Model		ANDREW CORPORATION	ANDREW CORPORATION
Gain(dBi) / Beamwidth(°) / Tilt(°)		VHLP2-11A	VHLP2-11A
Centerline (m / ft – AGL)		34.4 / 3.30 / 0.40	34.4 / 3.30 / -0.44
		15.24 / 50.0	19.51 / 64.0
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			
Manufacturer		TEMT60	TEMT60
Model		Alcatel-Lucent USA, Inc.	Alcatel-Lucent USA, Inc.
Model Description		95MPR11-O128F40-214	95MPR11-O128F40-214
Emission Designator / Modulation		9500 MPR Outdoor Fixed Modulation	9500 MPR Outdoor Fixed Modulation
Loading		40M0D7W 128 QAM	40M0D7W 128 QAM
Stability (%)		1 CH DIG 213940.000	1 CH DIG 213940.000
		0.001	0.001
		Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm)		20.0	20.0
Received Level (dBm)		-46.6	-46.6
EIRP (dBm)		51.9	51.5
Fixed Loss: Tx / Common (dB)		0.0 / 2.5	0.0 / 2.9
Free Space Loss (dB)			130.0
Transmit Frequencies (MHz)		10975.0000V(7)	11465.0000V(7)

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PCN Date: 07/06/2011

Job Number 110131COMSFB02

Administrative Information		SL05 CA	SL10 CA
City/County		/San Luis Obispo	/San Luis Obispo
Status / License Basis		Engineering Proposal / PRIMARY OPERATION	Engineering Proposal / PRIMARY OPERATION
Call Sign			
Licensee Code		NWCNLA	NWCNLA
Licensee Name		New Cingular Wireless PCS – Los Ang	New Cingular Wireless PCS – Los Ang
Radio Service / Station Class		CF -- Point-to-Point Microwave, Common Carrier	FXO -- Fixed
Site Information			
Latitude (NAD 83)		35 °38' 45.4" N	35 °30' 19.1" N
Longitude (NAD 83)		120 °44' 16.7" W	120 °37' 21.9" W
Ground Elevation (m/ft-AMSL)		543.15 / 1782.0	466.04 / 1529.0
Antenna Structure Registration #			
Path Azimuth (°)		146.171	326.238
Path Length (km / miles)		18.777 / 11.667	
Transmit Antenna		77043A	77043A
Manufacturer		ANDREW CORPORATION	ANDREW CORPORATION
Model		VHLP4-11B	VHLP4-11B
Gain(dBi) / Beamwidth(°) / Tilt(°)		40.4 / 1.50 / -0.28	40.4 / 1.50 / 0.16
Centerline (m / ft – AGL)		7.62 / 25.0	12.19 / 40.0
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		TEMT56	TEMT56
Manufacturer		Alcatel-Lucent USA, Inc.	Alcatel-Lucent USA, Inc.
Model		95MPR11-O128F30-160	95MPR11-O128F30-160
Model Description		9500 MPR Outdoor Fixed Modulation	9500 MPR Outdoor Fixed Modulation
Emission Designator / Modulation		30M0D7W 128 QAM	30M0D7W 128 QAM
Loading		1 CH DIG 160170.000	1 CH DIG 160170.000
Stability (%)		0.001	0.001
		Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm)		20.0	20.0
Received Level (dBm)		-42.0	-42.0
EIRP (dBm)		58.7	58.2
Fixed Loss: Tx / Common (dB)		0.0 / 1.7	0.0 / 2.2
Free Space Loss (dB)			138.9
Transmit Frequencies (MHz)		10715.0000V(1)	11215.0000V(1)

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PCN Date: 07/06/2011

Job Number 110131COMSFB02

Administrative Information		SL05 CA	SL31 CA
City/County		/San Luis Obispo	San Miguel/San Luis Obispo
Status / License Basis		Engineering Proposal / PRIMARY OPERATION	Engineering Proposal / PRIMARY OPERATION
Call Sign			
Licensee Code		NWCNLA	NWCNLA
Licensee Name		New Cingular Wireless PCS – Los Ang	New Cingular Wireless PCS – Los Ang
Radio Service / Station Class		CF -- Point-to-Point Microwave, Common Carrier	FXO -- Fixed
Site Information			
Latitude (NAD 83)		35 ° 38' 45.4" N	35 ° 45' 8.9" N
Longitude (NAD 83)		120 ° 44' 16.7" W	120 ° 41' 4.3" W
Ground Elevation (m/ft-AMSL)		543.15 / 1782.0	217.93 / 715.0
Antenna Structure Registration #			
Path Azimuth (°)		22.240	202.272
Path Length (km / miles)		12.771 / 7.936	
Transmit Antenna		77045A	77043A
Manufacturer		ANDREW CORPORATION	ANDREW CORPORATION
Model		VHLP6-11A	VHLP4-11B
Gain(dBi) / Beamwidth(°) / Tilt(°)		43.8 / 1.10 / -1.51	40.4 / 1.50 / 1.42
Centerline (m / ft – AGL)		10.67 / 35.0	9.14 / 30.0
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		TEMT59	TEMT59
Manufacturer		Alcatel-Lucent USA, Inc.	Alcatel-Lucent USA, Inc.
Model		95MPR11-O32F40-152	95MPR11-O32F40-152
Model Description		9500 MPR Outdoor Fixed Modulation	9500 MPR Outdoor Fixed Modulation
Emission Designator / Modulation		40M0D7W 32 QAM	40M0D7W 32 QAM
Loading		1 CH DIG 152290.000	1 CH DIG 152290.000
Stability (%)		0.001	0.001
		Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm)		21.5	21.5
Received Level (dBm)		-33.8	-33.8
EIRP (dBm)		63.3	60.0
Fixed Loss: Tx / Common (dB)		0.0 / 2.0	0.0 / 1.9
Free Space Loss (dB)			135.6
Transmit Frequencies (MHz)		10895.0000V(5)	11385.0000V(5)

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PCN Date: 07/06/2011

Job Number 110131COMSFB02

Administrative Information		SL02 CA	SL22 CA
City/County		/San Luis Obispo	/San Luis Obispo
Status / License Basis		Engineering Proposal / PRIMARY OPERATION	Engineering Proposal / PRIMARY OPERATION
Call Sign			
Licensee Code		NWCNLA	NWCNLA
Licensee Name		New Cingular Wireless PCS – Los Ang	New Cingular Wireless PCS – Los Ang
Radio Service / Station Class		CF -- Point-to-Point Microwave, Common Carrier	FXO -- Fixed
Site Information			
Latitude (NAD 83)		35 °6' 26.3" N	35 °9' 23.9" N
Longitude (NAD 83)		120 °31' 1.2" W	120 °38' 13.9" W
Ground Elevation (m/ft-AMSL)		377.95 / 1240.0	198.12 / 650.0
Antenna Structure Registration #			
Path Azimuth (°)		296.582	116.513
Path Length (km / miles)		12.246 / 7.609	
Transmit Antenna		70440A	70440A
Manufacturer		ANDREW CORPORATION	ANDREW CORPORATION
Model		VHLPX4-11B	VHLPX4-11B
Gain(dBi) / Beamwidth(°) / Tilt(°)		40.4 / 1.50 / -0.94	40.4 / 1.50 / 0.85
Centerline (m / ft – AGL)		18.90 / 62.0	7.62 / 25.0
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		TEMT56	TEMT56
Manufacturer		Alcatel-Lucent USA, Inc.	Alcatel-Lucent USA, Inc.
Model		95MPR11-O128F30-160	95MPR11-O128F30-160
Model Description		9500 MPR Outdoor Fixed Modulation	9500 MPR Outdoor Fixed Modulation
Emission Designator / Modulation		30M0D7W 128 QAM	30M0D7W 128 QAM
Loading		1 CH DIG 160170.000	1 CH DIG 160170.000
Stability (%)		0.001	0.001
		Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm)		20.0	20.0
Received Level (dBm)		-39.0	-39.0
EIRP (dBm)		57.5	58.7
Fixed Loss: Tx / Common (dB)		0.0 / 2.9	0.0 / 1.7
Free Space Loss (dB)			135.2
Transmit Frequencies (MHz)		10995.0000V(8)	11485.0000V(8)

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PCN Date: 07/06/2011

Job Number 110131COMSFB02

Administrative Information		SL02 CA	SL16 CA
City/County		/San Luis Obispo	/San Luis Obispo
Status / License Basis		Engineering Proposal / PRIMARY OPERATION	Engineering Proposal / PRIMARY OPERATION
Call Sign			
Licensee Code		NWCNLA	NWCNLA
Licensee Name		New Cingular Wireless PCS – Los Ang	New Cingular Wireless PCS – Los Ang
Radio Service / Station Class		CF -- Point-to-Point Microwave, Common Carrier	FXO -- Fixed
Site Information			
Latitude (NAD 83)		35 ° 6' 26.3" N	35 ° 10' 43.6" N
Longitude (NAD 83)		120 ° 31' 1.2" W	120 ° 29' 21.6" W
Ground Elevation (m/ft-AMSL)		377.95 / 1240.0	450.49 / 1478.0
Antenna Structure Registration #			
Path Azimuth (°)		17.631	197.647
Path Length (km / miles)		8.321 / 5.170	
Transmit Antenna		70709A	70709A
Manufacturer		ANDREW CORPORATION	ANDREW CORPORATION
Model		VHLP800-11C	VHLP800-11C
Gain(dBi) / Beamwidth(°) / Tilt(°)		37.4 / 2.10 / 0.45	37.4 / 2.10 / -0.51
Centerline (m / ft – AGL)		10.67 / 35.0	7.62 / 25.0
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		TEMT56	TEMT56
Manufacturer		Alcatel-Lucent USA, Inc.	Alcatel-Lucent USA, Inc.
Model		95MPR11-O128F30-160	95MPR11-O128F30-160
Model Description		9500 MPR Outdoor Fixed Modulation	9500 MPR Outdoor Fixed Modulation
Emission Designator / Modulation		30M0D7W 128 QAM	30M0D7W 128 QAM
Loading		1 CH DIG 160170.000	1 CH DIG 160170.000
Stability (%)		0.001	0.001
		Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm)		20.0	20.0
Received Level (dBm)		-40.8	-40.8
EIRP (dBm)		55.4	55.7
Fixed Loss: Tx / Common (dB)		0.0 / 2.0	0.0 / 1.7
Free Space Loss (dB)			131.9
Transmit Frequencies (MHz)		10995.0000H(8)	11485.0000H(8)

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PCN Date: 07/06/2011

Job Number 110131COMSFB02

Administrative Information		SL13 CA	SL35 CA
City/County		/San Luis Obispo	/San Luis Obispo
Status / License Basis		Engineering Proposal / PRIMARY OPERATION	Engineering Proposal / PRIMARY OPERATION
Call Sign			
Licensee Code		NWCNLA	NWCNLA
Licensee Name		New Cingular Wireless PCS – Los Ang	New Cingular Wireless PCS – Los Ang
Radio Service / Station Class		CF -- Point-to-Point Microwave, Common Carrier	FXO -- Fixed
Site Information			
Latitude (NAD 83)		35 ° 46' 38.0" N	35 ° 40' 17.5" N
Longitude (NAD 83)		120 ° 55' 54.0" W	120 ° 59' 28.7" W
Ground Elevation (m/ft-AMSL)		480.06 / 1575.0	649.53 / 2131.0
Antenna Structure Registration #			
Path Azimuth (°)		204.725	24.691
Path Length (km / miles)		12.909 / 8.021	
Transmit Antenna		70709A	70709A
Manufacturer		ANDREW CORPORATION	ANDREW CORPORATION
Model		VHLP800-11C	VHLP800-11C
Gain(dBi) / Beamwidth(°) / Tilt(°)		37.4 / 2.10 / 0.70	37.4 / 2.10 / -0.79
Centerline (m / ft – AGL)		11.28 / 37.0	9.14 / 30.0
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		TEMT59	TEMT59
Manufacturer		Alcatel-Lucent USA, Inc.	Alcatel-Lucent USA, Inc.
Model		95MPR11-O32F40-152	95MPR11-O32F40-152
Model Description		9500 MPR Outdoor Fixed Modulation	9500 MPR Outdoor Fixed Modulation
Emission Designator / Modulation		40M0D7W 32 QAM	40M0D7W 32 QAM
Loading		1 CH DIG 152290.000	1 CH DIG 152290.000
Stability (%)		0.001	0.001
		Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm)		21.5	21.5
Received Level (dBm)		-41.5	-41.5
EIRP (dBm)		57.8	57.9
Fixed Loss: Tx / Common (dB)		0.0 / 1.1	0.0 / 1.0
Free Space Loss (dB)			135.7
Transmit Frequencies (MHz)		10855.0000V(4)	11345.0000V(4)

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PCN Date: 07/06/2011

Job Number 110131COMSFB02

Administrative Information		SL03 CA	SL42 CA
City/County		/San Luis Obispo	/San Luis Obispo
Status / License Basis		Engineering Proposal / PRIMARY OPERATION	Engineering Proposal / PRIMARY OPERATION
Call Sign			
Licensee Code		NWCNLA	NWCNLA
Licensee Name		New Cingular Wireless PCS – Los Ang	New Cingular Wireless PCS – Los Ang
Radio Service / Station Class		CF -- Point-to-Point Microwave, Common Carrier	FXO -- Fixed
Site Information			
Latitude (NAD 83)	35 °23' 40.2" N		35 °27' 17.0" N
Longitude (NAD 83)	120 °42' 29.0" W		120 °44' 45.7" W
Ground Elevation (m/ft-AMSL)	839.72 / 2755.0		490.73 / 1610.0
Antenna Structure Registration #			
Path Azimuth (°)	332.712		152.690
Path Length (km / miles)		7.519 / 4.672	
Transmit Antenna			
Manufacturer	77083A		77083A
Model	ANDREW CORPORATION		ANDREW CORPORATION
Gain(dBi) / Beamwidth(°) / Tilt(°)	VHLP2-11A		VHLP2-11A
Centerline (m / ft – AGL)	34.4 / 3.30 / –2.68		34.4 / 3.30 / 2.63
	9.14 / 30.0		9.14 / 30.0
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			
Manufacturer	TEMT56		TEMT56
Model	Alcatel-Lucent USA, Inc.		Alcatel-Lucent USA, Inc.
Model Description	95MPR11-O128F30-160		95MPR11-O128F30-160
Emission Designator / Modulation	9500 MPR Outdoor Fixed Modulation		9500 MPR Outdoor Fixed Modulation
Loading	30M0D7W 128 QAM		30M0D7W 128 QAM
Stability (%)	1 CH DIG 160170.000		1 CH DIG 160170.000
	0.001		0.001
	Nominal Coordinated Maximum		Nominal Coordinated Maximum
Power (dBm)	20.0		20.0
Received Level (dBm)	–46.0		–46.0
EIRP (dBm)	52.5		52.5
Fixed Loss: Tx / Common (dB)	0.0 / 1.9		0.0 / 1.9
Free Space Loss (dB)		131.0	
Transmit Frequencies (MHz)		10835.0000V(4)	11325.0000V(4)

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PCN Date: 07/06/2011

Job Number 110131COMSFB02

Administrative Information		SL03 CA	SL09 CA
City/County		/San Luis Obispo	/San Luis Obispo
Status / License Basis		Engineering Proposal / PRIMARY OPERATION	Engineering Proposal / PRIMARY OPERATION
Call Sign			
Licensee Code		NWCNLA	NWCNLA
Licensee Name		New Cingular Wireless PCS – Los Ang	New Cingular Wireless PCS – Los Ang
Radio Service / Station Class		CF -- Point-to-Point Microwave, Common Carrier	FXO -- Fixed
Site Information			
Latitude (NAD 83)	35 °23' 40.2" N		35 °23' 48.1" N
Longitude (NAD 83)	120 °42' 29.0" W		120 °51' 2.0" W
Ground Elevation (m/ft-AMSL)	839.72 / 2755.0		170.69 / 560.0
Antenna Structure Registration #			
Path Azimuth (°)	271.119		91.036
Path Length (km / miles)		12.948 / 8.045	
Transmit Antenna			
Manufacturer	77043A		77043A
Model	ANDREW CORPORATION		ANDREW CORPORATION
Gain(dBi) / Beamwidth(°) / Tilt(°)	VHLP4-11B		VHLP4-11B
Centerline (m / ft – AGL)	40.4 / 1.50 / -2.99		40.4 / 1.50 / 2.91
	10.67 / 35.0		12.19 / 40.0
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			
Manufacturer	TEMT56		TEMT56
Model	Alcatel-Lucent USA, Inc.		Alcatel-Lucent USA, Inc.
Model Description	95MPR11-O128F30-160		95MPR11-O128F30-160
Emission Designator / Modulation	9500 MPR Outdoor Fixed Modulation		9500 MPR Outdoor Fixed Modulation
Loading	30M0D7W 128 QAM		30M0D7W 128 QAM
Stability (%)	1 CH DIG 160170.000		1 CH DIG 160170.000
	0.001		0.001
	Nominal Coordinated Maximum		Nominal Coordinated Maximum
Power (dBm)	20.0		20.0
Received Level (dBm)	-39.0		-39.0
EIRP (dBm)	58.4		58.3
Fixed Loss: Tx / Common (dB)	0.0 / 2.0		0.0 / 2.1
Free Space Loss (dB)		135.7	
Transmit Frequencies (MHz)		11075.0000V(10)	11565.0000V(10)

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PCN Date: 07/06/2011

Job Number 110131COMSFB02

Administrative Information		SL05 CA	SL29 CA
City/County		/San Luis Obispo	El Paso de Robles (P/San Luis Obispo
Status / License Basis		Engineering Proposal / PRIMARY OPERATION	Engineering Proposal / PRIMARY OPERATION
Call Sign			
Licensee Code		NWCNLA	NWCNLA
Licensee Name		New Cingular Wireless PCS – Los Ang	New Cingular Wireless PCS – Los Ang
Radio Service / Station Class		CF -- Point-to-Point Microwave, Common Carrier	FXO -- Fixed
Site Information			
Latitude (NAD 83)		35 °38' 45.4" N	35 °39' 10.7" N
Longitude (NAD 83)		120 °44' 16.7" W	120 °41' 10.0" W
Ground Elevation (m/ft-AMSL)		543.15 / 1782.0	237.13 / 778.0
Antenna Structure Registration #			
Path Azimuth (°)		80.558	260.589
Path Length (km / miles)		4.761 / 2.958	
Transmit Antenna		87204A	87204A
Manufacturer		ANDREW CORPORATION	ANDREW CORPORATION
Model		VHLP2-18B	VHLP2-18B
Gain(dBi) / Beamwidth(°) / Tilt(°)		38.9 / 2.10 / -3.77	38.9 / 2.10 / 3.73
Centerline (m / ft – AGL)		13.72 / 45.0	7.62 / 25.0
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		TEMT64	TEMT64
Manufacturer		Alcatel-Lucent USA, Inc.	Alcatel-Lucent USA, Inc.
Model		95MPR18-O128F30-160	95MPR18-O128F30-160
Model Description		9500 MPR Outdoor Fixed Modulation	9500 MPR Outdoor Fixed Modulation
Emission Designator / Modulation		30M0D7W 128 QAM	30M0D7W 128 QAM
Loading		1 CH DIG 160000.000	1 CH DIG 160000.000
Stability (%)		0.001	0.001
		Nominal Coordinated Maximum	Nominal Coordinated Maximum
Power (dBm)		17.5	17.5
Received Level (dBm)		-36.2	-36.2
EIRP (dBm)		56.4	56.4
Fixed Loss: Tx / Common (dB)		0.0 / 0.0	0.0 / 0.0
Free Space Loss (dB)			131.5
Transmit Frequencies (MHz)		17785.0000V(2)	19345.0000V(2)