

# Microwave Path Data Sheet

Page 1 of 18

## COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147

(703)726-5653 [www.comsearch.com](http://www.comsearch.com)

PCN Date: <03/28/2006>

Job Number: <060328COMSDS01>

New Path

RCN Number: <06032813>

### Administrative Information

#### PHOENIX AIR AZ

City/County Goodyear/Maricopa  
Status / License Basis Engineering Proposal / PRIMARY OPERATION  
Call Sign  
Licensee Code BOECOM  
Licensee Name BOEING COMMERCIAL SERVICES  
Radio Service / Station Class MG -- Microwave Industrial/Business Pool

#### PHOENIX RX AZ

City/County Goodyear/Maricopa  
Status / License Basis Engineering Proposal / PRIMARY OPERATION  
Call Sign  
Licensee Code BOECOM  
Licensee Name BOEING COMMERCIAL SERVICES  
Radio Service / Station Class FXO -- Fixed

### Site Information

|                                  |                   |                   |
|----------------------------------|-------------------|-------------------|
| Latitude (NAD 83)                | 33 ° 25' 48.0" N  | 33 ° 24' 53.3" N  |
| Longitude (NAD 83)               | 112 ° 21' 49.0" W | 112 ° 22' 59.2" W |
| Ground Elevation (m/ft-AMSL)     | 293.52 / 963.0    | 287.00 / 941.6    |
| Antenna Structure Registration # |                   |                   |
| Path Azimuth (°)                 | 227.108           | 47.097            |
| Path Length (km / miles)         | 2.476 / 1.538     |                   |

### Transmit Antenna

A24601  
ANDREW CORPORATION  
P8F-17C  
Gain (dBi) / Beamwidth (°) / Tilt (°) 31.1 / 4.50 / -0.16  
Centerline (m / ft - AGL) 6.00 / 19.7

### Receive Antenna

A24601  
ANDREW CORPORATION  
P8F-17C  
Gain (dBi) / Beamwidth (°) 31.1 / 4.50  
Centerline (m / ft - AGL) 6.00 / 19.7

### Diversity Receive Antenna

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

### Radio Information

TEMI95  
Agilent Technologies  
SIGNAL GENERATOR

999999  
RECEIVE  
ONLY

|              |                   |                                  |                      |            |                              |                      |           |             |         |
|--------------|-------------------|----------------------------------|----------------------|------------|------------------------------|----------------------|-----------|-------------|---------|
| Manufacturer | Model Description | Emission Designator / Modulation | 1M00N0N              | FM         | 1 CH MSG 0.000               | 0.001                | Nominal   | Coordinated | Maximum |
| Loading      | Stability (%)     | Power (dBm)                      | Received Level (dBm) | EIRP (dBm) | Fixed Loss: Tx / Common (dB) | Free Space Loss (dB) | 0.0 / 0.0 | 106.0       |         |
|              |                   |                                  |                      |            |                              |                      |           |             |         |

### Transmit Frequencies (MHz)

|               |                |
|---------------|----------------|
| 1860.0000V(1) | 1870.0000V(2)  |
| 1880.0000V(3) | 1890.0000V(4)  |
| 1900.0000V(5) | 1940.0000V(6)  |
| 1950.0000V(7) | 1960.0000V(8)  |
| 1970.0000V(9) | 1980.0000V(10) |

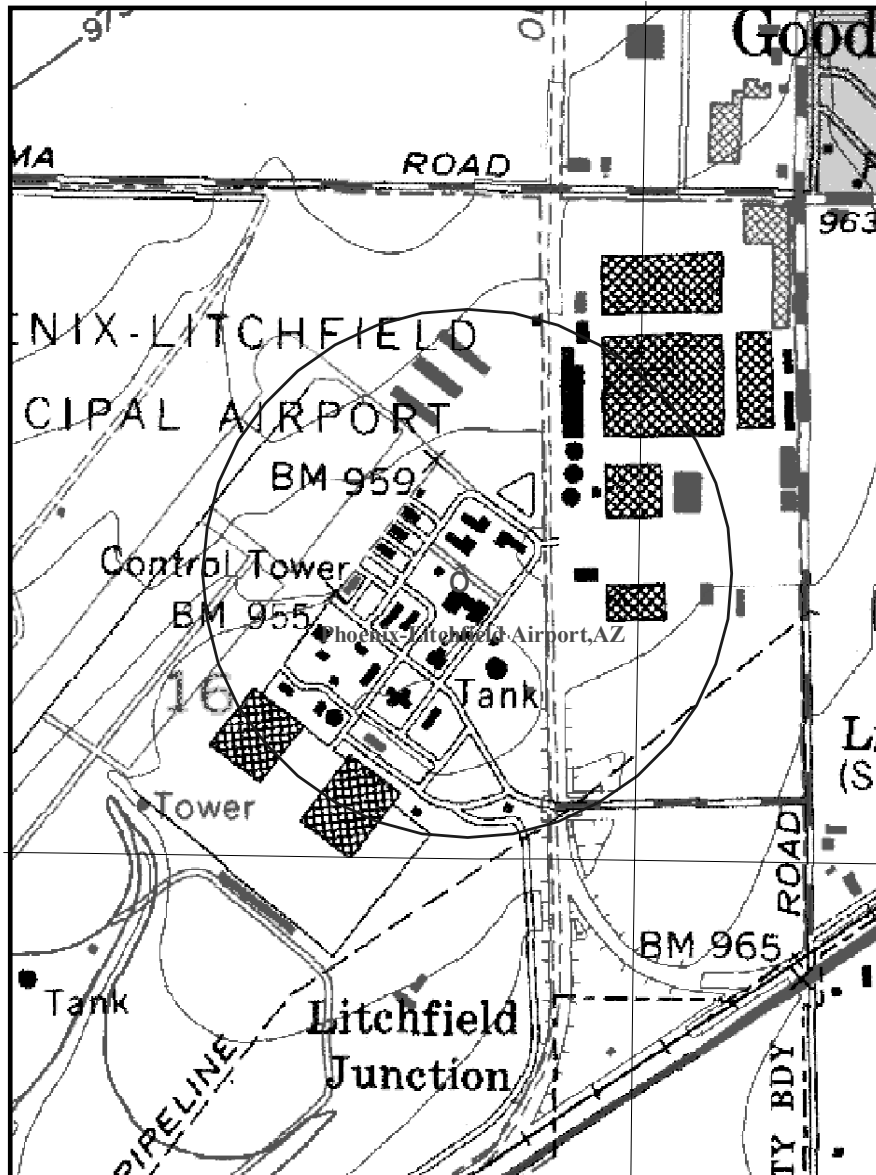
**Microwave Path Data Sheet**  
**COMSEARCH**

Page 2 of 18

19700 Janelia Farm Boulevard, Ashburn, VA, 20147

(703)726-5653 [www.comsearch.com](http://www.comsearch.com)

**Phoenix-Litchfield Airport, AZ**



***Phoenix-Litchfield Airport, AZ***

Map Series = 7.5 Minute (1:24,000)

Site Coordinates = 33 25 48N, 112 21 49W



# Microwave Path Data Sheet

Page 3 of 18

## COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147

(703)726-5653 [www.comsearch.com](http://www.comsearch.com)

PCN Date: <03/28/2006>

Job Number: <060328COMSDS01>

New Path

RCN Number: <06032813>

### Administrative Information

#### MARANA AIR AZ

City/County /Pinal  
Status / License Basis Engineering Proposal / PRIMARY OPERATION  
Call Sign  
Licensee Code BOECOM  
Licensee Name BOEING COMMERCIAL SERVICES  
Radio Service / Station Class MG -- Microwave Industrial/Business Pool

#### MARANA RX AZ

City/County /Pinal  
Status / License Basis Engineering Proposal / PRIMARY OPERATION  
Call Sign  
Licensee Code BOECOM  
Licensee Name BOEING COMMERCIAL SERVICES  
Radio Service / Station Class FXO -- Fixed

### Site Information

|                                  |                   |                   |
|----------------------------------|-------------------|-------------------|
| Latitude (NAD 83)                | 32 ° 30' 42.0" N  | 32 ° 30' 58.1" N  |
| Longitude (NAD 83)               | 111 ° 19' 11.0" W | 111 ° 19' 59.1" W |
| Ground Elevation (m/ft-AMSL)     | 607.16 / 1992.0   | 569.00 / 1866.8   |
| Antenna Structure Registration # |                   |                   |
| Path Azimuth (°)                 | 291.559           | 111.551           |
| Path Length (km / miles)         |                   | 1.350 / 0.839     |

### Transmit Antenna

A24601  
ANDREW CORPORATION  
P8F-17C  
Gain (dBi) / Beamwidth (°) / Tilt (°) 31.1 / 4.50 / -1.62  
Centerline (m / ft - AGL) 6.00 / 19.7

### Receive Antenna

A24601  
ANDREW CORPORATION  
P8F-17C  
Gain (dBi) / Beamwidth (°) 31.1 / 4.50  
Centerline (m / ft - AGL) 6.00 / 19.7

### Diversity Receive Antenna

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

### Radio Information

TEMI95  
Agilent Technologies  
SIGNAL GENERATOR

999999  
RECEIVE  
ONLY

|              |                   |                                  |                      |            |                              |                      |           |             |         |
|--------------|-------------------|----------------------------------|----------------------|------------|------------------------------|----------------------|-----------|-------------|---------|
| Manufacturer | Model Description | Emission Designator / Modulation | 1M00N0N              | FM         | 1 CH MSG 0.000               | 0.001                | Nominal   | Coordinated | Maximum |
| Loading      | Stability (%)     | Power (dBm)                      | Received Level (dBm) | EIRP (dBm) | Fixed Loss: Tx / Common (dB) | Free Space Loss (dB) | 0.0 / 0.0 | 100.7       |         |
|              |                   |                                  |                      |            |                              |                      |           |             |         |

### Transmit Frequencies (MHz)

|               |                |
|---------------|----------------|
| 1860.0000V(1) | 1870.0000V(2)  |
| 1880.0000V(3) | 1890.0000V(4)  |
| 1900.0000V(5) | 1940.0000V(6)  |
| 1950.0000V(7) | 1960.0000V(8)  |
| 1970.0000V(9) | 1980.0000V(10) |

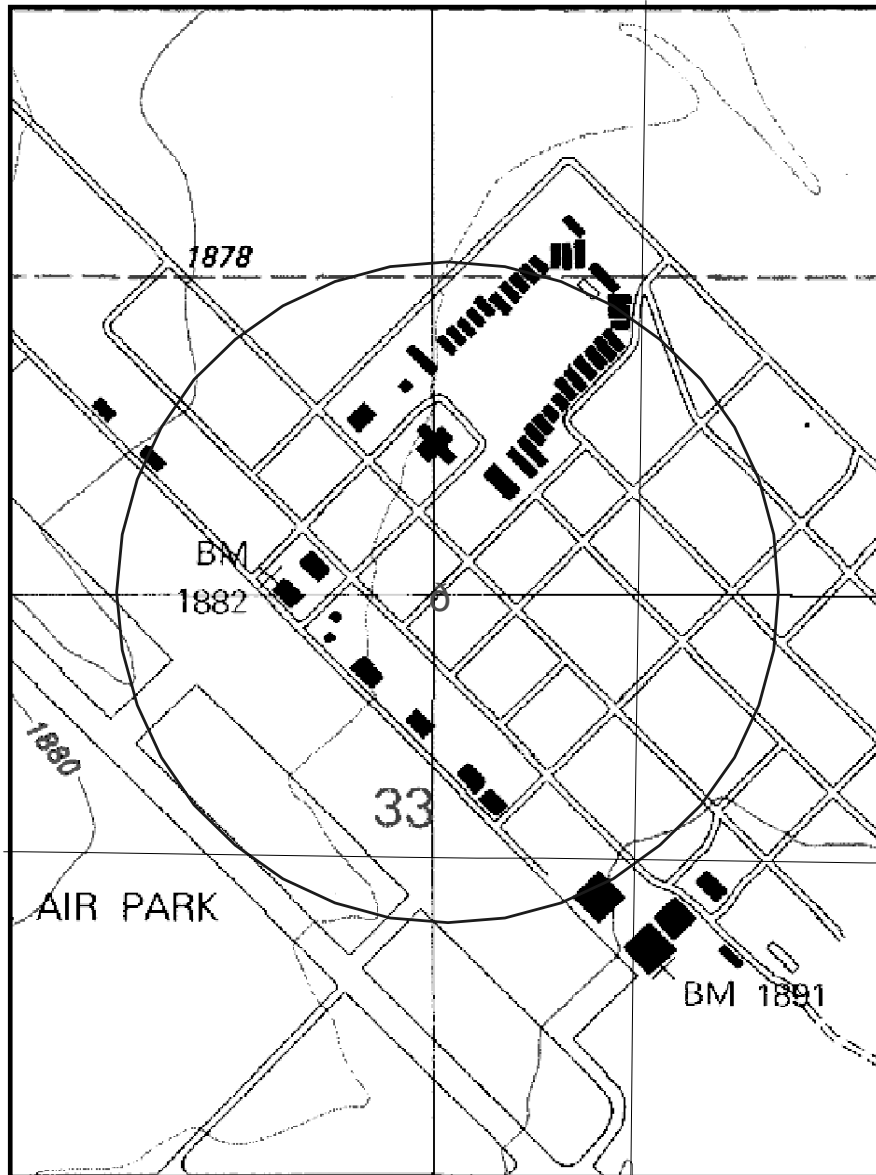
**Microwave Path Data Sheet**  
**COMSEARCH**

Page 4 of 18

19700 Janelia Farm Boulevard, Ashburn, VA, 20147

(703)726-5653 [www.comsearch.com](http://www.comsearch.com)

**Marana Air Park, Marana, AZ**



***Marana Air park, AZ***

Map Series = 7.5 Minute (1:24,000)



## Microwave Path Data Sheet

Page 5 of 18

## COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147

(703)726-5653 [www.comsearch.com](http://www.comsearch.com)

PCN Date: &lt;03/28/2006&gt;

Job Number: &lt;060328COMSDS01&gt;

New Path

RCN Number: &lt;06032813&gt;

**Administrative Information****MOJAVE AIR CA**

City/County Mojave/Kern  
 Status / License Basis Engineering Proposal / PRIMARY OPERATION  
 Call Sign  
 Licensee Code BOECOM  
 Licensee Name BOEING COMMERCIAL SERVICES  
 Radio Service / Station Class MG -- Microwave Industrial/Business Pool

**MOJAVEX CA**

Mojave/Kern  
 Engineering Proposal / PRIMARY OPERATION  
 BOECOM  
 BOEING COMMERCIAL SERVICES  
 FXO -- Fixed

**Site Information**

|                                  |                  |                  |
|----------------------------------|------------------|------------------|
| Latitude (NAD 83)                | 35 ° 3' 24.0" N  | 35 ° 2' 56.5" N  |
| Longitude (NAD 83)               | 118 ° 9' 26.0" W | 118 ° 8' 12.8" W |
| Ground Elevation (m/ft-AMSL)     | 840.33 / 2757.0  | 821.00 / 2693.6  |
| Antenna Structure Registration # |                  |                  |
| Path Azimuth (°)                 | 114.547          | 294.558          |
| Path Length (km / miles)         | 2.039 / 1.267    |                  |

**Transmit Antenna**

A24601  
 ANDREW CORPORATION  
 P8F-17C  
 Gain (dBi) / Beamwidth (°) / Tilt (°) 31.1 / 4.50 / -0.55  
 Centerline (m / ft - AGL) 6.00 / 19.7

**Receive Antenna**

A24601  
 ANDREW CORPORATION  
 P8F-17C  
 Gain (dBi) / Beamwidth (°) 31.1 / 4.50  
 Centerline (m / ft - AGL) 6.00 / 19.7

**Diversity Receive Antenna**

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

**Radio Information**

TEMI95  
 Agilent Technologies  
 SIGNAL GENERATOR

999999

|                                  |                             |
|----------------------------------|-----------------------------|
| Manufacturer                     | RECEIVE                     |
| Model                            | ONLY                        |
| Model Description                |                             |
| Emission Designator / Modulation | 1M00N0N FM                  |
| Loading                          | 1 CH MSG 0.000              |
| Stability (%)                    | 0.001                       |
|                                  | Nominal Coordinated Maximum |
| Power (dBm)                      | 30.0                        |
| Received Level (dBm)             | -35.1                       |
| EIRP (dBm)                       | 38.1                        |
| Fixed Loss: Tx / Common (dB)     | 23.0 / 0.0                  |
| Free Space Loss (dB)             | 104.3                       |

**Transmit Frequencies (MHz)**

|               |                |
|---------------|----------------|
| 1860.0000V(1) | 1870.0000V(2)  |
| 1880.0000V(3) | 1890.0000V(4)  |
| 1900.0000V(5) | 1940.0000V(6)  |
| 1950.0000V(7) | 1960.0000V(8)  |
| 1970.0000V(9) | 1980.0000V(10) |

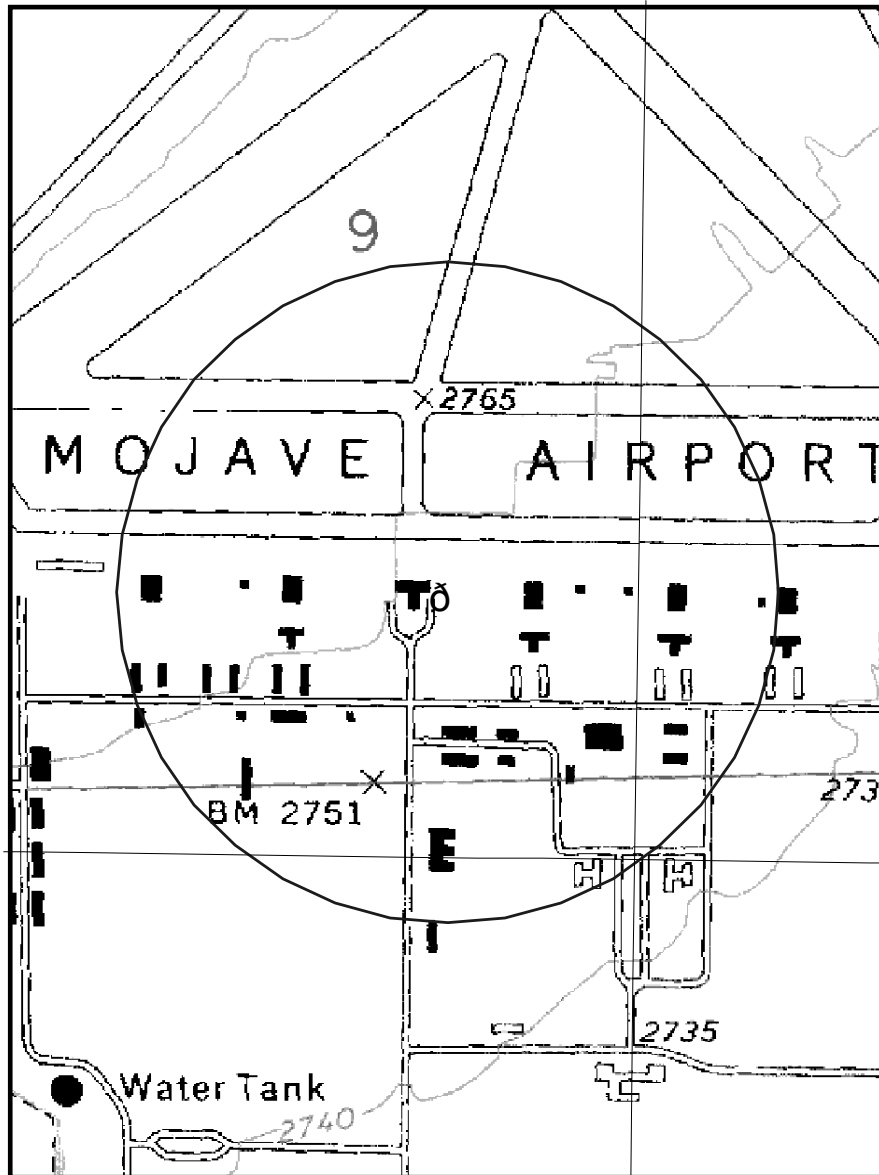
**Microwave Path Data Sheet**  
**COMSEARCH**

Page 6 of 18

19700 Janelia Farm Boulevard, Ashburn, VA, 20147

(703)726-5653 [www.comsearch.com](http://www.comsearch.com)

**Mojave Airport, Mojave, CA**



*Mohave Airport, Mojave, CA*



# Microwave Path Data Sheet

Page 7 of 18

## COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147

(703)726-5653 [www.comsearch.com](http://www.comsearch.com)

PCN Date: <03/28/2006>

Job Number: <060328COMSDS01>

New Path

RCN Number: <06032813>

### Administrative Information

**GEORGE AFB CA**  
City/County Victorville/San Bernardino  
Status / License Basis Engineering Proposal / PRIMARY OPERATION  
Call Sign  
Licensee Code BOECOM  
Licensee Name BOEING COMMERCIAL SERVICES  
Radio Service / Station Class MG -- Microwave Industrial/Business Pool

### GEORGE RX CA

Victorville/San Bernardino  
Engineering Proposal / PRIMARY OPERATION  
BOECOM  
BOEING COMMERCIAL SERVICES  
FXO -- Fixed

### Site Information

|                                  |                   |                   |
|----------------------------------|-------------------|-------------------|
| Latitude (NAD 83)                | 34 ° 35' 16.0" N  | 34 ° 36' 27.9" N  |
| Longitude (NAD 83)               | 117 ° 22' 31.0" W | 117 ° 23' 11.1" W |
| Ground Elevation (m/ft-AMSL)     | 827.53 / 2715.0   | 861.00 / 2824.8   |
| Antenna Structure Registration # |                   |                   |
| Path Azimuth (°)                 | 335.243           | 155.237           |
| Path Length (km / miles)         | 2.440 / 1.516     |                   |

### Transmit Antenna

A24601  
Manufacturer ANDREW CORPORATION  
Model P8F-17C  
Gain (dBi) / Beamwidth (°) / Tilt (°) 31.1 / 4.50 / 0.78  
Centerline (m / ft - AGL) 6.00 / 19.7

### Receive Antenna

A24601  
Manufacturer ANDREW CORPORATION  
Model P8F-17C  
Gain (dBi) / Beamwidth (°) 31.1 / 4.50  
Centerline (m / ft - AGL) 6.00 / 19.7

### Diversity Receive Antenna

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

### Radio Information

|                                  |                             |                             |
|----------------------------------|-----------------------------|-----------------------------|
| Manufacturer                     | TEMI95                      | 999999                      |
| Model                            | Agilent Technologies        | RECEIVE                     |
| Emission Designator / Modulation | SIGNAL GENERATOR            | ONLY Model Description      |
| Loading                          | 1M00N0N FM                  |                             |
| Stability (%)                    | 1 CH MSG 0.000              | 1 CH MSG 0.000              |
|                                  | 0.001                       | 0.001                       |
|                                  | Nominal Coordinated Maximum | Nominal Coordinated Maximum |
| Power (dBm)                      | 30.0                        |                             |
| Received Level (dBm)             |                             | -33.7                       |
| EIRP (dBm)                       | 41.1                        |                             |
| Fixed Loss: Tx / Common (dB)     | 20.0 / 0.0                  | 0.0 / 0.0                   |
| Free Space Loss (dB)             |                             | 105.9                       |

### Transmit Frequencies (MHz)

|               |                |
|---------------|----------------|
| 1860.0000V(1) | 1870.0000V(2)  |
| 1880.0000V(3) | 1890.0000V(4)  |
| 1900.0000V(5) | 1940.0000V(6)  |
| 1950.0000V(7) | 1960.0000V(8)  |
| 1970.0000V(9) | 1980.0000V(10) |

# Microwave Path Data Sheet

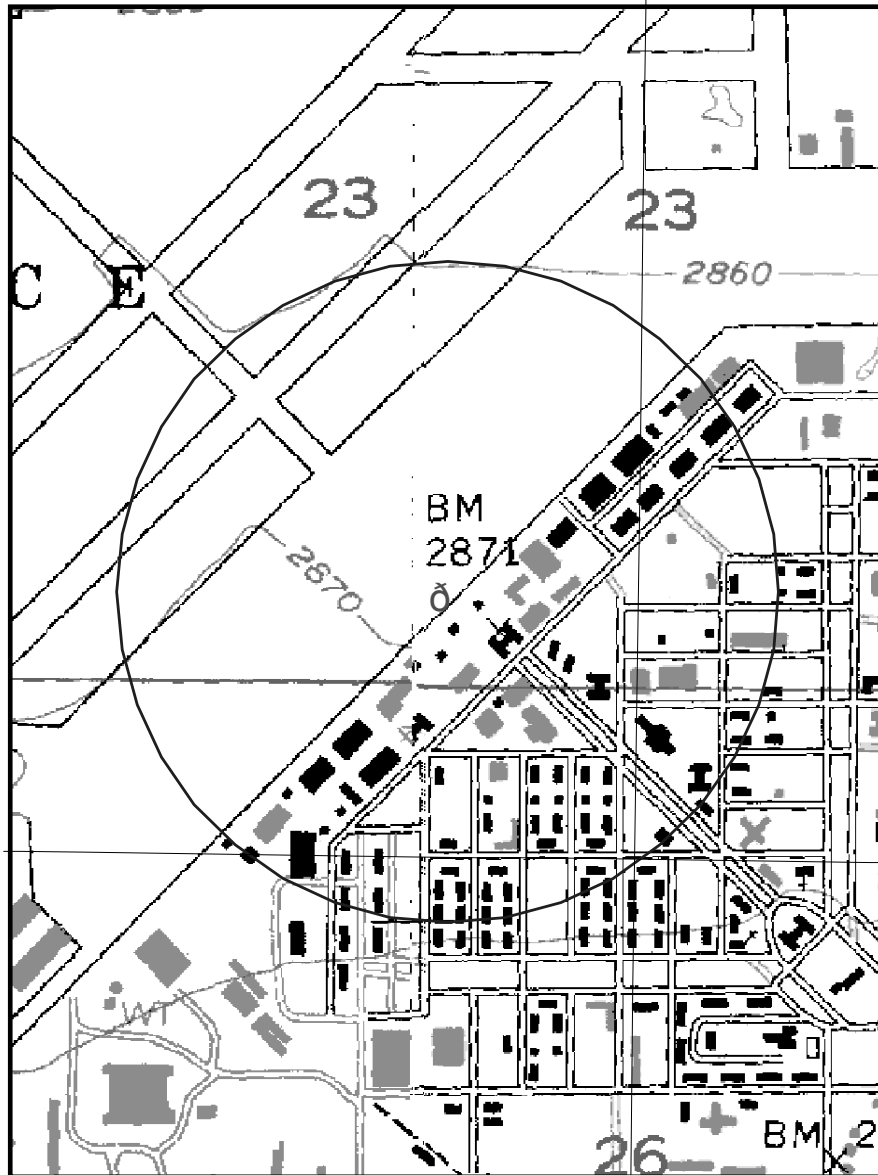
Page 8 of 18

## COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147

(703)726-5653 [www.comsearch.com](http://www.comsearch.com)

**George Air Force Base, Victorville, CA**



***George Air Force Base, Victorville, CA***





# Microwave Path Data Sheet

Page 9 of 18

## COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147

(703)726-5653 [www.comsearch.com](http://www.comsearch.com)

PCN Date: <03/28/2006>

Job Number: <060328COMSDS01>

New Path

RCN Number: <06032813>

### Administrative Information

**BOEING FIELD WA**  
City/County Seattle/King  
Status / License Basis Engineering Proposal / PRIMARY OPERATION  
Call Sign  
Licensee Code BOECOM  
Licensee Name BOEING COMMERCIAL SERVICES  
Radio Service / Station Class MG -- Microwave Industrial/Business Pool

### BOEING RX WA

Seattle/King  
Engineering Proposal / PRIMARY OPERATION  
BOECOM  
BOEING COMMERCIAL SERVICES  
FXO -- Fixed

### Site Information

|                                  |                   |                  |
|----------------------------------|-------------------|------------------|
| Latitude (NAD 83)                | 47 ° 32' 20.0" N  | 47 ° 31' 48.0" N |
| Longitude (NAD 83)               | 122 ° 18' 46.0" W | 122 ° 18' 3.0" W |
| Ground Elevation (m/ft-AMSL)     | 4.57 / 15.0       | 3.00 / 9.8       |
| Antenna Structure Registration # |                   |                  |
| Path Azimuth (°)                 | 137.692           | 317.701          |
| Path Length (km / miles)         |                   | 1.336 / 0.830    |

### Transmit Antenna

A24601  
Manufacturer ANDREW CORPORATION  
Model P8F-17C  
Gain (dBi) / Beamwidth (°) / Tilt (°) 31.1 / 4.50 / -0.07  
Centerline (m / ft - AGL) 6.00 / 19.7

### Receive Antenna

A24601  
Manufacturer ANDREW CORPORATION  
Model P8F-17C  
Gain (dBi) / Beamwidth (°) 31.1 / 4.50  
Centerline (m / ft - AGL) 6.00 / 19.7

### Diversity Receive Antenna

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

### Radio Information

|                                  |                             |                             |
|----------------------------------|-----------------------------|-----------------------------|
| Manufacturer                     | TEMI95                      | 999999                      |
| Model                            | Agilent Technologies        | RECEIVE                     |
| Emission Designator / Modulation | SIGNAL GENERATOR            | ONLY Model Description      |
| Loading                          | 1M00N0N FM                  |                             |
| Stability (%)                    | 1 CH MSG 0.000              | 1 CH MSG 0.000              |
|                                  | 0.001                       | 0.001                       |
|                                  | Nominal Coordinated Maximum | Nominal Coordinated Maximum |
| Power (dBm)                      | 30.0                        |                             |
| Received Level (dBm)             |                             | -38.5                       |
| EIRP (dBm)                       | 31.1                        |                             |
| Fixed Loss: Tx / Common (dB)     | 30.0 / 0.0                  | 0.0 / 0.0                   |
| Free Space Loss (dB)             |                             | 100.7                       |

### Transmit Frequencies (MHz)

|               |                |
|---------------|----------------|
| 1860.0000V(1) | 1870.0000V(2)  |
| 1880.0000V(3) | 1890.0000V(4)  |
| 1900.0000V(5) | 1940.0000V(6)  |
| 1950.0000V(7) | 1960.0000V(8)  |
| 1970.0000V(9) | 1980.0000V(10) |

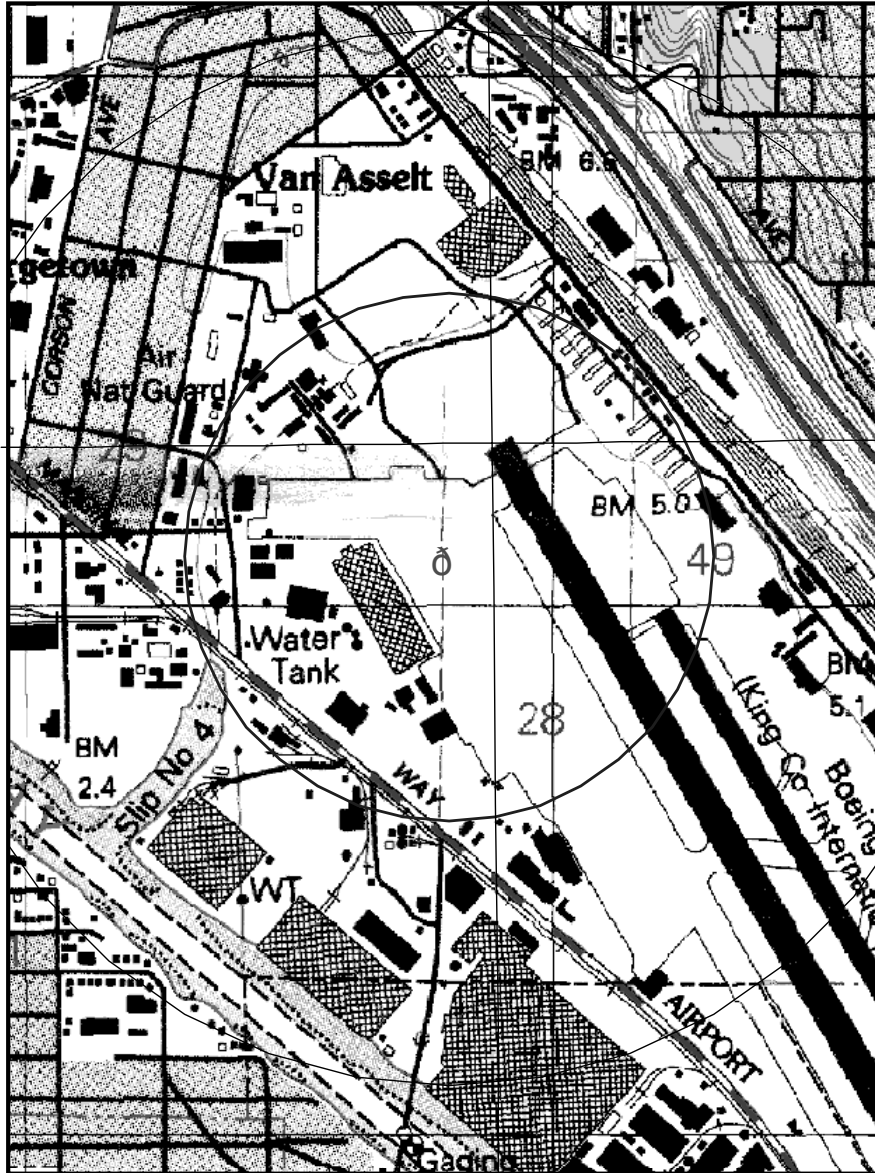
**Microwave Path Data Sheet**  
**COMSEARCH**

Page 10 of 18

19700 Janelia Farm Boulevard, Ashburn, VA, 20147

(703)726-5653 [www.comsearch.com](http://www.comsearch.com)

**Boeing Field, Seattle, WA**



**Boeing Field, Seattle, WA**



# Microwave Path Data Sheet

Page 11 of 18

## COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147

(703)726-5653 [www.comsearch.com](http://www.comsearch.com)

PCN Date: <03/28/2006>

Job Number: <060328COMSDS01>

New Path

RCN Number: <06032813>

| Administrative Information    | GLASGOW MT                               | GLASGOW RX MT                            |
|-------------------------------|------------------------------------------|------------------------------------------|
| City/County                   | /Valley                                  | /Valley                                  |
| Status / License Basis        | Engineering Proposal / PRIMARY OPERATION | Engineering Proposal / PRIMARY OPERATION |
| Call Sign                     |                                          |                                          |
| Licensee Code                 | BOECOM                                   | BOECOM                                   |
| Licensee Name                 | BOEING COMMERCIAL SERVICES               | BOEING COMMERCIAL SERVICES               |
| Radio Service / Station Class | MG -- Microwave Industrial/Business Pool | FXO -- Fixed                             |

### Site Information

|                                  |                  |                   |
|----------------------------------|------------------|-------------------|
| Latitude (NAD 83)                | 48 ° 12' 58.0" N | 48 ° 12' 31.3" N  |
| Longitude (NAD 83)               | 106 ° 37' 6.0" W | 106 ° 37' 44.7" W |
| Ground Elevation (m/ft-AMSL)     | 697.00 / 2286.7  | 691.00 / 2267.1   |
| Antenna Structure Registration # |                  |                   |
| Path Azimuth (°)                 | 224.096          | 44.088            |
| Path Length (km / miles)         | 1.148 / 0.713    |                   |

### Transmit Antenna

|                                       |                     |
|---------------------------------------|---------------------|
| Manufacturer                          | A24601              |
| Model                                 | ANDREW CORPORATION  |
| Gain (dBi) / Beamwidth (°) / Tilt (°) | P8F-17C             |
| Centerline (m / ft - AGL)             | 31.1 / 4.50 / -0.30 |
|                                       | 6.00 / 19.7         |

### Receive Antenna

|                            |                    |
|----------------------------|--------------------|
| Manufacturer               | A24601             |
| Model                      | ANDREW CORPORATION |
| Gain (dBi) / Beamwidth (°) | P8F-17C            |
| Centerline (m / ft - AGL)  | 31.1 / 4.50        |
|                            | 6.00 / 19.7        |

### Diversity Receive Antenna

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

### Radio Information

|                                  |                             |                             |
|----------------------------------|-----------------------------|-----------------------------|
| Manufacturer                     | TEMI95                      | 999999                      |
| Model                            | Agilent Technologies        | RECEIVE                     |
| Emission Designator / Modulation | SIGNAL GENERATOR            | ONLY Model Description      |
| Loading                          | 1M00N0N FM                  |                             |
| Stability (%)                    | 1 CH MSG 0.000              | 1 CH MSG 0.000              |
|                                  | 0.001                       | 0.001                       |
|                                  | Nominal Coordinated Maximum | Nominal Coordinated Maximum |
| Power (dBm)                      | 30.0                        |                             |
| Received Level (dBm)             |                             | -27.1                       |
| EIRP (dBm)                       | 41.1                        |                             |
| Fixed Loss: Tx / Common (dB)     | 20.0 / 0.0                  | 0.0 / 0.0                   |
| Free Space Loss (dB)             |                             | 99.3                        |

| Transmit Frequencies (MHz) | 1860.0000V(1) | 1870.0000V(2)  |
|----------------------------|---------------|----------------|
|                            | 1880.0000V(3) | 1890.0000V(4)  |
|                            | 1900.0000V(5) | 1940.0000V(6)  |
|                            | 1950.0000V(7) | 1960.0000V(8)  |
|                            | 1970.0000V(9) | 1980.0000V(10) |

# Microwave Path Data Sheet

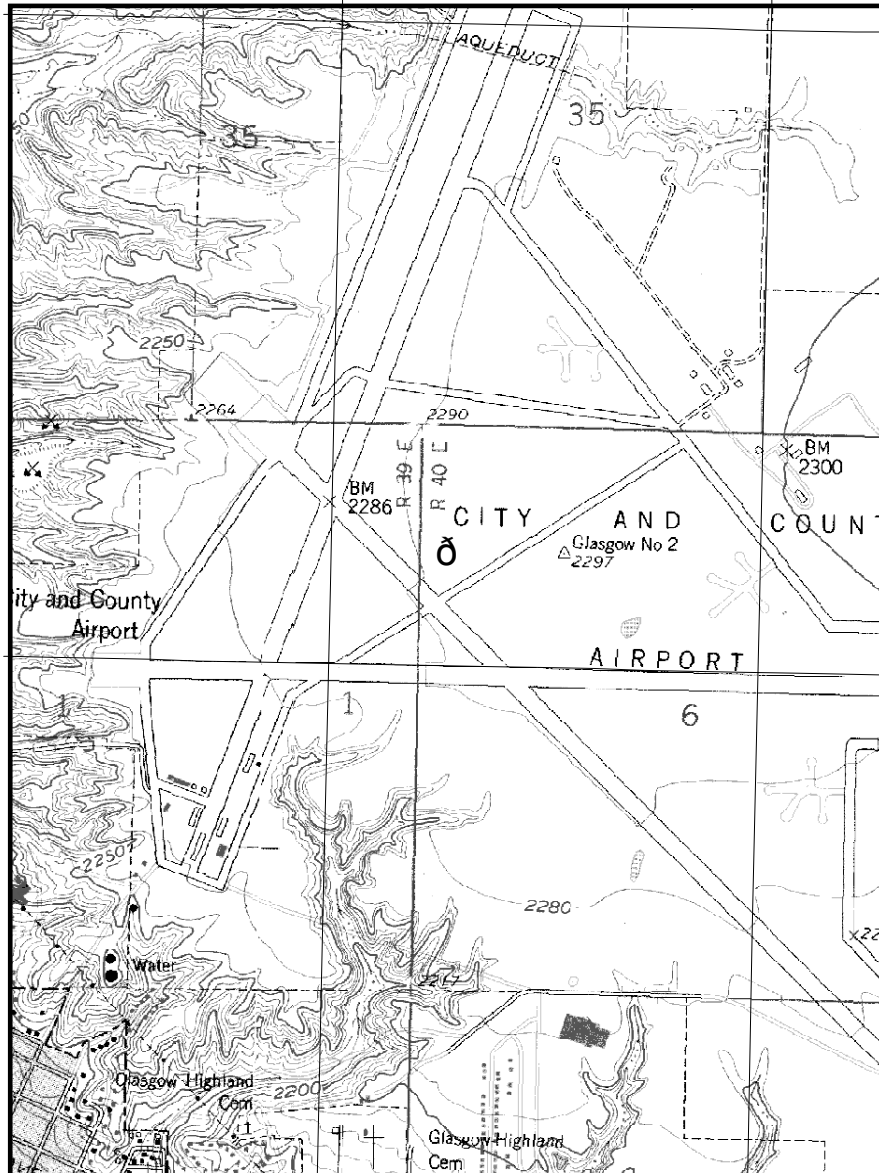
Page 12 of 18

## COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147

(703)726-5653 [www.comsearch.com](http://www.comsearch.com)

## Glasgow, MT



## Glasgow, MT

Map Series = 7.5 Minute (1:24,000)



## Microwave Path Data Sheet

Page 13 of 18

## COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147

(703)726-5653 [www.comsearch.com](http://www.comsearch.com)

PCN Date: &lt;03/28/2006&gt;

Job Number: &lt;060328COMSDS01&gt;

New Path

RCN Number: &lt;06032813&gt;

**Administrative Information**

**MOSES LAKE WA**  
City/County Moses Lake/Grant  
Status / License Basis Engineering Proposal / PRIMARY OPERATION  
Call Sign  
Licensee Code BOECOM  
Licensee Name BOEING COMMERCIAL SERVICES  
Radio Service / Station Class MG -- Microwave Industrial/Business Pool

**MOSES RX WA**

Moses Lake/Grant  
Engineering Proposal / PRIMARY OPERATION  
BOECOM  
BOEING COMMERCIAL SERVICES  
FXO -- Fixed

**Site Information**

|                                  |                   |                   |
|----------------------------------|-------------------|-------------------|
| Latitude (NAD 83)                | 47 ° 8' 32.0" N   | 47 ° 7' 56.4" N   |
| Longitude (NAD 83)               | 119 ° 14' 31.0" W | 119 ° 16' 42.9" W |
| Ground Elevation (m/ft-AMSL)     | 331.00 / 1086.0   | 321.00 / 1053.1   |
| Antenna Structure Registration # |                   |                   |
| Path Azimuth (°)                 | 248.433           | 68.407            |
| Path Length (km / miles)         | 2.989 / 1.857     |                   |

**Transmit Antenna**

A24601  
Manufacturer ANDREW CORPORATION  
Model P8F-17C  
Gain (dBi) / Beamwidth (°) / Tilt (°) 31.1 / 4.50 / -0.20  
Centerline (m / ft - AGL) 6.00 / 19.7

**Receive Antenna**

A24601  
Manufacturer ANDREW CORPORATION  
Model P8F-17C  
Gain (dBi) / Beamwidth (°) 31.1 / 4.50  
Centerline (m / ft - AGL) 6.00 / 19.7

**Diversity Receive Antenna**

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

**Radio Information**

|                                  |                             |                             |
|----------------------------------|-----------------------------|-----------------------------|
| Manufacturer                     | TEMI95                      | 999999                      |
| Model                            | Agilent Technologies        | RECEIVE                     |
| Model Description                | SIGNAL GENERATOR            | ONLY                        |
| Emission Designator / Modulation | 1M00N0N FM                  |                             |
| Loading                          | 1 CH MSG 0.000              | 1 CH MSG 0.000              |
| Stability (%)                    | 0.001                       | 0.001                       |
|                                  | Nominal Coordinated Maximum | Nominal Coordinated Maximum |
| Power (dBm)                      | 30.0                        |                             |
| Received Level (dBm)             |                             | -74.4                       |
| EIRP (dBm)                       | 2.1                         |                             |
| Fixed Loss: Tx / Common (dB)     | 59.0 / 0.0                  | 0.0 / 0.0                   |
| Free Space Loss (dB)             |                             | 107.6                       |

**Transmit Frequencies (MHz)**

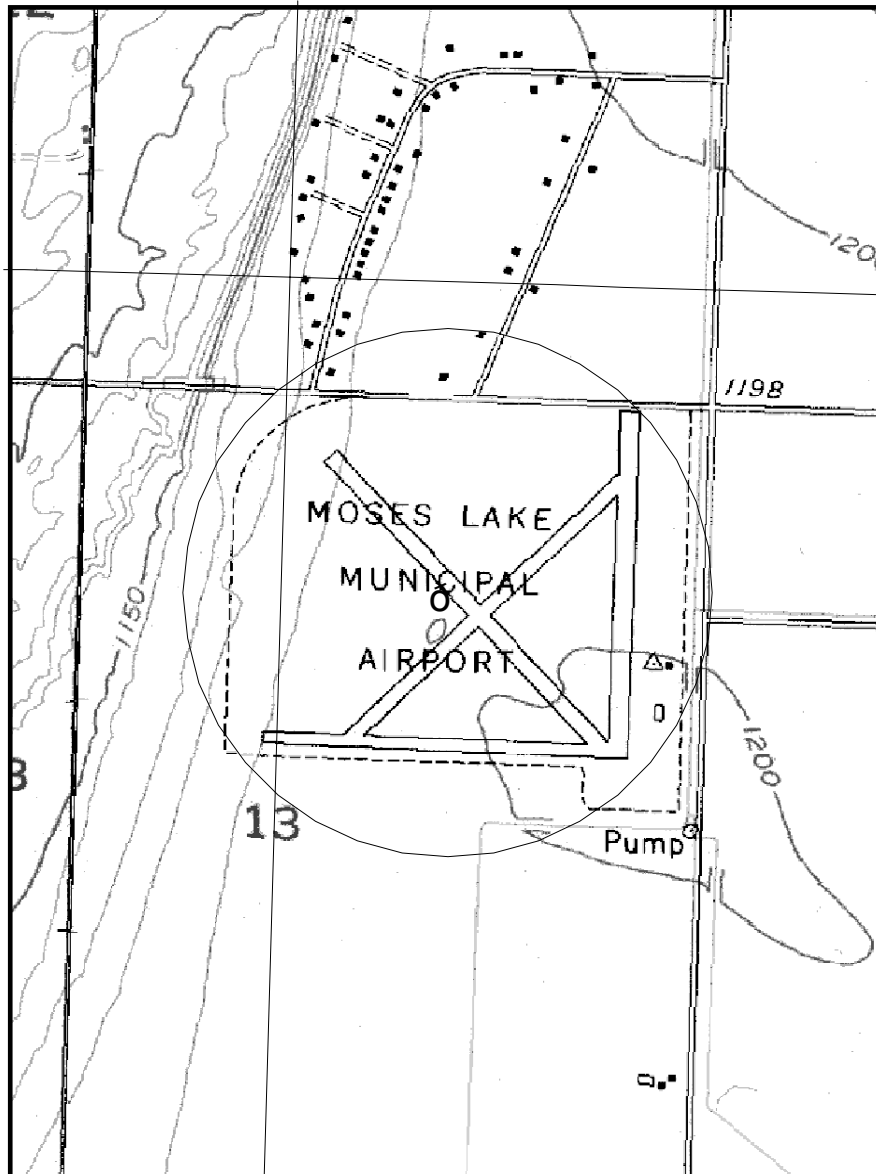
|               |                |
|---------------|----------------|
| 1860.0000V(1) | 1870.0000V(2)  |
| 1880.0000V(3) | 1890.0000V(4)  |
| 1900.0000V(5) | 1940.0000V(6)  |
| 1950.0000V(7) | 1960.0000V(8)  |
| 1970.0000V(9) | 1980.0000V(10) |

**Microwave Path Data Sheet**  
**COMSEARCH**

Page 14 of 18

19700 Janelia Farm Boulevard, Ashburn, VA, 20147  
(703)726-5653 [www.comsearch.com](http://www.comsearch.com)

**Moses Lake, WA**



**Mose Lake, WA**

Map Series = 7.5 Minute (1:24,000)



# Microwave Path Data Sheet

Page 15 of 18

## COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147

(703)726-5653 [www.comsearch.com](http://www.comsearch.com)

PCN Date: <03/28/2006>

Job Number: <060328COMSDS01>

New Path

RCN Number: <06032813>

### Administrative Information

**PAINE FIELD WA**  
City/County Everett/Snohomish  
Status / License Basis Engineering Proposal / PRIMARY OPERATION  
Call Sign  
Licensee Code BOECOM  
Licensee Name BOEING COMMERCIAL SERVICES  
Radio Service / Station Class MG -- Microwave Industrial/Business Pool

### PAINE RX WA

Paine Field-Lake Stickney/Snohomish  
Engineering Proposal / PRIMARY OPERATION  
BOECOM  
BOEING COMMERCIAL SERVICES  
FXO -- Fixed

### Site Information

|                                  |                   |                  |
|----------------------------------|-------------------|------------------|
| Latitude (NAD 83)                | 47 ° 54' 43.0" N  | 47 ° 53' 48.1" N |
| Longitude (NAD 83)               | 122 ° 16' 20.0" W | 122 ° 17' 6.6" W |
| Ground Elevation (m/ft-AMSL)     | 177.70 / 583.0    | 164.00 / 538.1   |
| Antenna Structure Registration # |                   |                  |
| Path Azimuth (°)                 | 209.721           | 29.711           |
| Path Length (km / miles)         |                   | 1.952 / 1.213    |

### Transmit Antenna

A24601  
Manufacturer ANDREW CORPORATION  
Model P8F-17C  
Gain (dBi) / Beamwidth (°) / Tilt (°) 31.1 / 4.50 / -0.41  
Centerline (m / ft - AGL) 6.00 / 19.7

### Receive Antenna

A24601  
Manufacturer ANDREW CORPORATION  
Model P8F-17C  
Gain (dBi) / Beamwidth (°) 31.1 / 4.50  
Centerline (m / ft - AGL) 6.00 / 19.7

### Diversity Receive Antenna

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

### Radio Information

|                                  |                             |                             |
|----------------------------------|-----------------------------|-----------------------------|
| Manufacturer                     | TEMI95                      | 999999                      |
| Model                            | Agilent Technologies        | RECEIVE                     |
| Model Description                | SIGNAL GENERATOR            | ONLY                        |
| Emission Designator / Modulation | 1M00N0N FM                  |                             |
| Loading                          | 1 CH MSG 0.000              | 1 CH MSG 0.000              |
| Stability (%)                    | 0.001                       | 0.001                       |
|                                  | Nominal Coordinated Maximum | Nominal Coordinated Maximum |
| Power (dBm)                      | 30.0                        |                             |
| Received Level (dBm)             |                             | -35.7                       |
| EIRP (dBm)                       | 37.1                        |                             |
| Fixed Loss: Tx / Common (dB)     | 24.0 / 0.0                  | 0.0 / 0.0                   |
| Free Space Loss (dB)             |                             | 103.9                       |

### Transmit Frequencies (MHz)

|               |                 |
|---------------|-----------------|
| 1860.0000V(1) | 1870.0000V(2)   |
| 1880.0000V(3) | 1890.0000V(4)   |
| 1900.0000V(5) | 1940.0000V(6)   |
| 1950.0000V(7) | 1960.0000V(8)   |
| 1970.0000V(9) | 1980.0000V(10)) |

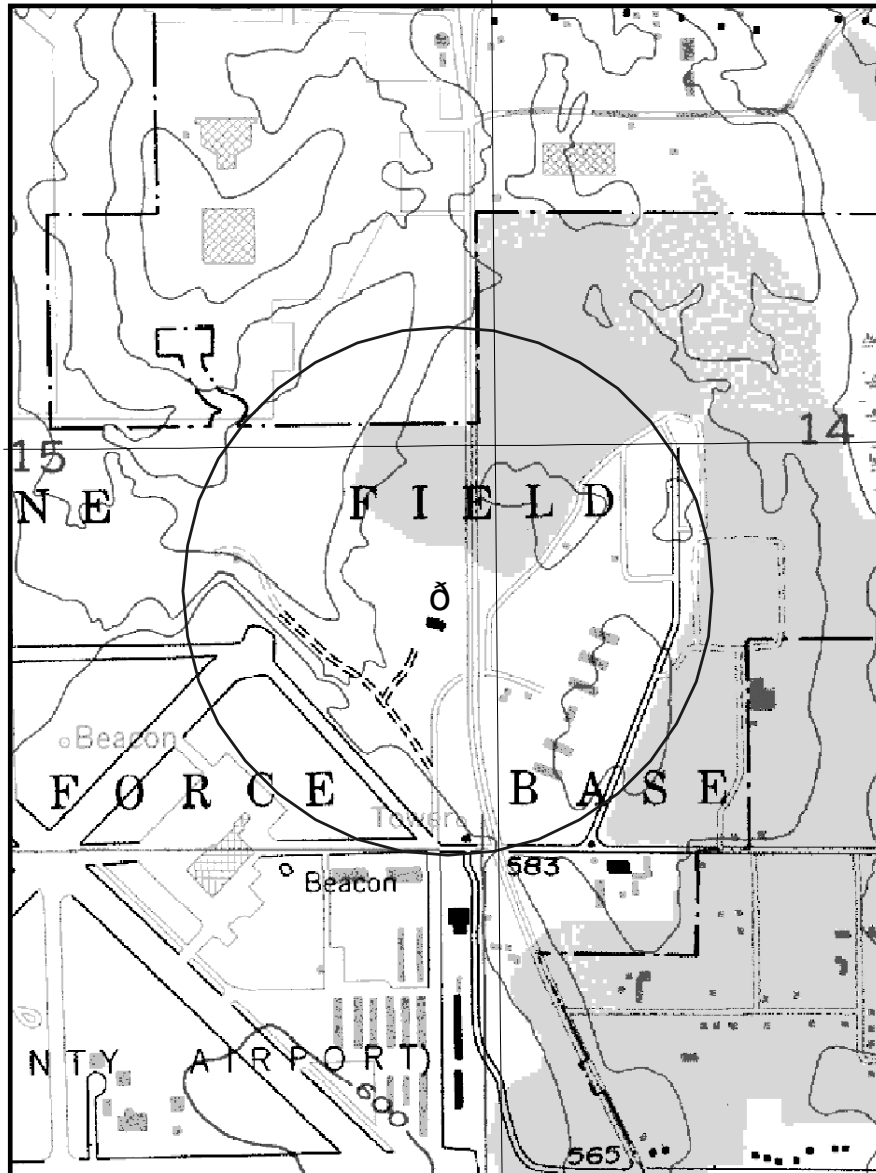
**Microwave Path Data Sheet**  
**COMSEARCH**

Page 16 of 18

19700 Janelia Farm Boulevard, Ashburn, VA, 20147

(703)726-5653 [www.comsearch.com](http://www.comsearch.com)

**Paine Field, Everett, WA**



***Paine Field, Everett, WA***





**Microwave Path Data Sheet**

Page 17 of 18

**COMSEARCH**

19700 Janelia Farm Boulevard, Ashburn, VA, 20147

(703)726-5653 [www.comsearch.com](http://www.comsearch.com)

PCN Date: &lt;03/28/2006&gt;

Job Number: &lt;060328COMSDS01&gt;

New Path

RCN Number: &lt;06032813&gt;

**Administrative Information****ROSEBUD MT**

City/County /Rosebud  
Status / License Basis Engineering Proposal / PRIMARY OPERATION  
Call Sign  
Licensee Code BOECOM  
Licensee Name BOEING COMMERCIAL SERVICES  
Radio Service / Station Class MG -- Microwave Industrial/Business Pool

**ROSEBUD RX MT**

/Rosebud  
Engineering Proposal / PRIMARY OPERATION  
BOECOM  
BOEING COMMERCIAL SERVICES  
FXO -- Fixed

**Site Information**

|                                  |                   |                   |
|----------------------------------|-------------------|-------------------|
| Latitude (NAD 83)                | 46 ° 16' 28.0" N  | 46 ° 16' 6.1" N   |
| Longitude (NAD 83)               | 106 ° 20' 46.0" W | 106 ° 27' 46.9" W |
| Ground Elevation (m/ft-AMSL)     | 757.00 / 2483.6   | 785.00 / 2575.5   |
| Antenna Structure Registration # |                   |                   |
| Path Azimuth (°)                 | 265.752           | 85.667            |
| Path Length (km / miles)         | 9.038 / 5.616     |                   |

**Transmit Antenna**

A24601  
ANDREW CORPORATION  
P8F-17C  
Gain (dBi) / Beamwidth (°) / Tilt (°) 31.1 / 4.50 / 0.15  
Centerline (m / ft - AGL) 6.00 / 19.7

**Receive Antenna**

A24601  
ANDREW CORPORATION  
P8F-17C  
Gain (dBi) / Beamwidth (°) 31.1 / 4.50  
Centerline (m / ft - AGL) 6.00 / 19.7

**Diversity Receive Antenna**

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

**Radio Information**

TEMI95  
Agilent Technologies  
SIGNAL GENERATOR

999999

|                                  |                             |                             |
|----------------------------------|-----------------------------|-----------------------------|
| Manufacturer                     | Agilent Technologies        | RECEIVE                     |
| Model                            | SIGNAL GENERATOR            | ONLY                        |
| Model Description                |                             |                             |
| Emission Designator / Modulation | 1M00N0N FM                  |                             |
| Loading                          | 1 CH MSG 0.000              | 1 CH MSG 0.000              |
| Stability (%)                    | 0.001                       | 0.001                       |
|                                  | Nominal Coordinated Maximum | Nominal Coordinated Maximum |
| Power (dBm)                      | 30.0                        |                             |
| Received Level (dBm)             |                             | -90.1                       |
| EIRP (dBm)                       | -3.9                        |                             |
| Fixed Loss: Tx / Common (dB)     | 65.0 / 0.0                  | 0.0 / 0.0                   |
| Free Space Loss (dB)             |                             | 117.3                       |

**Transmit Frequencies (MHz)**

|               |                |
|---------------|----------------|
| 1860.0000V(1) | 1870.0000V(2)  |
| 1880.0000V(3) | 1890.0000V(4)  |
| 1900.0000V(5) | 1940.0000V(6)  |
| 1950.0000V(7) | 1960.0000V(8)  |
| 1970.0000V(9) | 1980.0000V(10) |

# Microwave Path Data Sheet

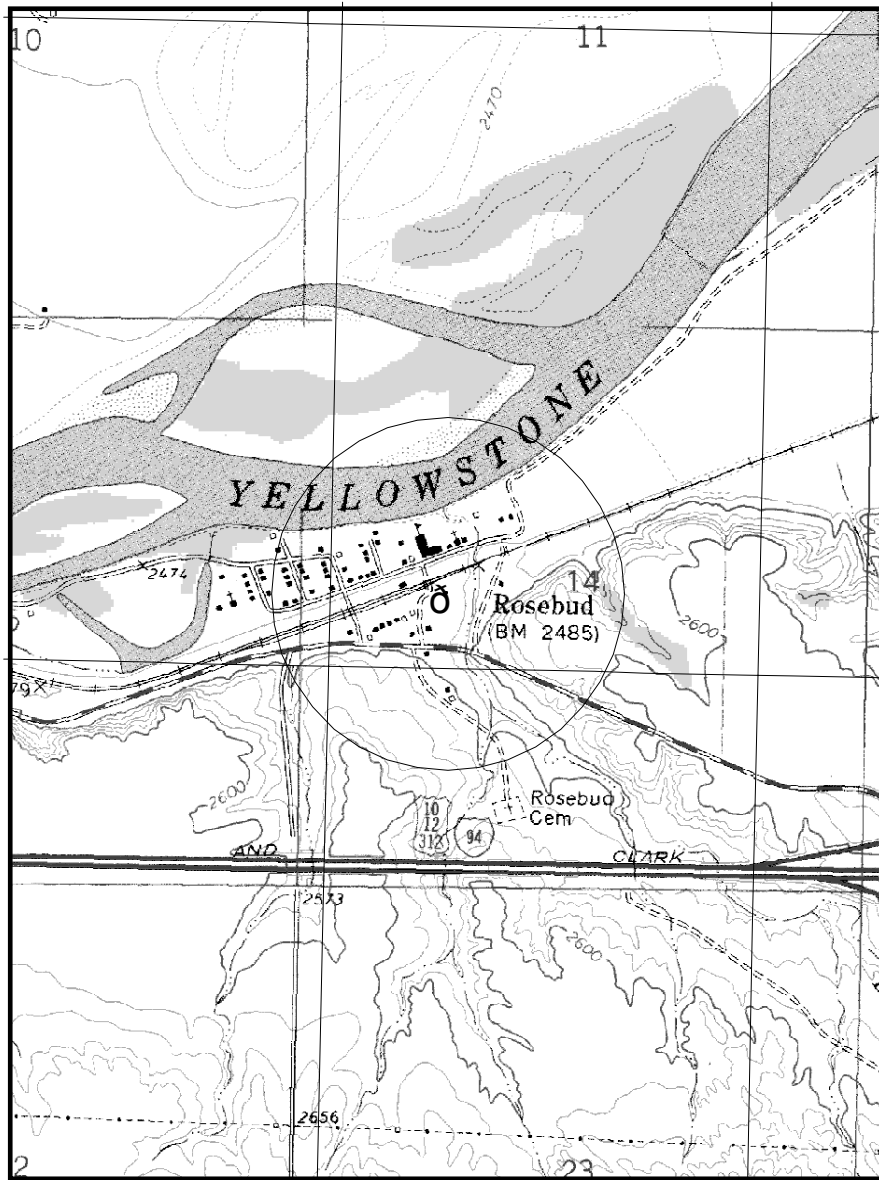
Page 18 of 18

## COMSEARCH

19700 Janelia Farm Boulevard, Ashburn, VA, 20147

(703)726-5653 [www.comsearch.com](http://www.comsearch.com)

## Rosebud, MT



## Rosebud, MT

Map Series = 7.5 Minute (1:24,000)

