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ENGINEERING REPORT

Amended
Application for Construction Permit
for a New Transmitter Site,
Change of Community of License
and
Nighttime Power Increase

KRPI-AM
1550 kHz
Point Roberts, WA

Facility ID 21416
50 kW DA-2

BBC Broadcasting, Inc.
February 2012

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1. Purpose of Application

This Engineering Report is part of an amended application by BBC Broadcasting, Inc. for a Construction Permit to allow construction of a new transmitter site and increased nighttime power for KRPI-AM, Ferndale, Washington. This amendment specifies a new community of license for KRPI, Point Roberts, WA. The technical parameters specified in this amendment are identical to those of the previous KRPI application, file no. BP-20090226AAF.

2. Allocation Considerations

Daytime

The proposed 50 kW directional daytime operation of KRPI will not cause prohibited contour overlap with any licensed or proposed facility[1]. This allocation study is based on data from the January 30, 2012 edition of the Commission's AM database. The Region II digitized ground conductivity database was used in the plotting of all contours for the proposed Pont Roberts operation used in all daytime exhibits in this report[2]. Measured ground conductivity data was used for four radials from 1st-adjacent channel KXPA, Bellevue, WA. M3 digitized ground conductivity was used in all other cases. All measurements were taken by Steven Lockwood, P.E., Michael Mehigan, EIT and Thomas S. Gorton, P.E. The daytime allocation study contained in ths application contains no study maps for second or third adjacent channels, as there are no facilities on second or third adjacent channels within 100 km of the proposed KRPI operation.

[1]The Canadian facility on 1570 kHz at Nanaimo B.C. has been dark since 2001, and is not protected by this application. The technical facilities requested in this amendment are identical to those requested in BP-20090226AAF, which were accepted by Canada in Change List 3121.

[2]The Region II database was used because it includes the islands of Puget Sound, and Point Roberts, the location of the proposed transmitter site, while the M3 database does not.

Nighttime

The proposed 50 kW nighttime directional operation of KRPI will contribute to the 25% RSS interference level of two co-channel station; KMRI, West Valley City, UT and KKOV, Vancouver, WA. Existing skywave interference levels to both of these facilities will be reduced by this proposal, as demonstrated by Exhibit 17-1. Skywave interference toward KKOV will be reduced by 10% as required by §73.182.

3. Facilities Proposed

BBC Broadcasting, Inc. proposes construction of a new, five tower array for KRPI at Point Roberts, WA.

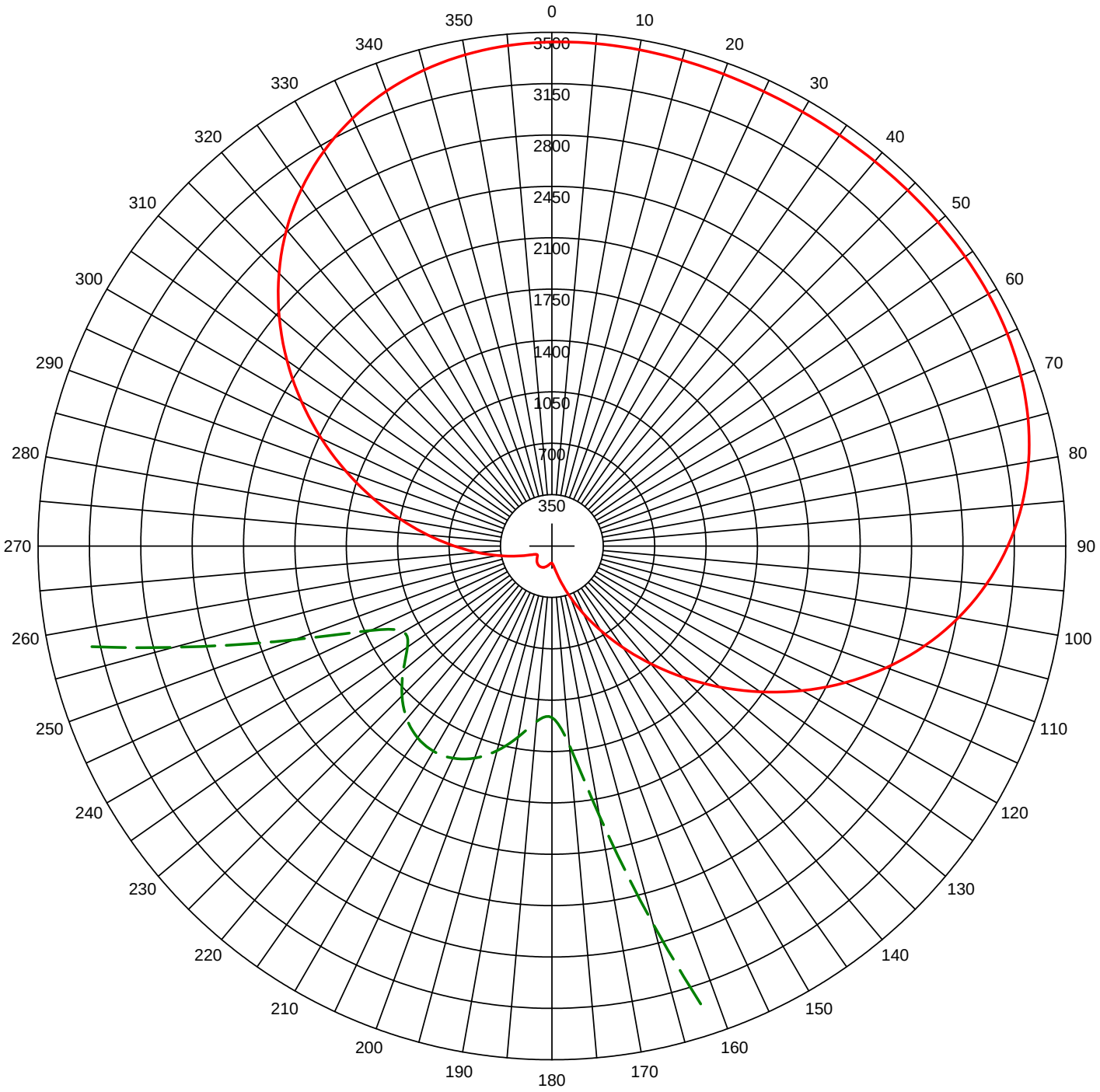
The populations within the proposed daytime and nighttime blanketing contours are 304 and 111 persons respectively. (2010 US Census data) Both these figures are significantly less than the populations within the presently licensed blanketing contours, which are 4,060 and 2,017 respectively. Waiver of §73.24(g) is respectfully requested. One of the major reasons for this facilities change is to move the station from the core of the city of Ferndale where the blanketing inference has been a serious source of contention between the station and the local residents and city. For more information on this see the most recent license renewal. It should also be noted that the application for the construction permit to be modified, BP-20090226AAF, was filed in 2009, prior to the 2010 census. Under the previous (2000) census, the population in the daytime blanketing contour was 299 persons, thus meeting the requirements of §73.24(g).

The proposed daytime 5 mV/m and nighttime 37.5 mV/m NIF contours will cover 100% of Point Roberts. The predicted field strengths from the proposed operation of KRPI at the FCC protected field office at Ferndale, WA are 11 mV/m daytime and 1.5 mV/m nighttime. Both of these are below the field strengths created by the licensed operation of KRPI, which are 20 mV/m and 15 mV/m respectively.

There are no Class A stations entitled to Critical Hours protection operating on 1550 kHz in the United States or Canada, therefore this application does not specify a Critical Hours operation different from the specified daytime operation.

Antenna tower access will be restricted by fences with locked gates that will be at least 4 meters from the tower bases, as required by OET Bulletin 65. The antenna towers will be posted with warning signs, and all station personnel and contractors will be required to follow appropriate safety procedures before any work is commenced on the antenna tower, including reduction in power or discontinuance of operation before any maintenance work is undertaken.

AM Directional Pattern



Theo RMS: 2185.2 mV/m@1km
Std RMS: 2295.661 mV/m@1km
Q: 70.711 mV/m@1km

Standard Horizontal Plane Pattern

Pattern (mV/m @ 1km)
Pattern X10

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	80.0	0	0	0.0	0.0	0.0	0.0
2	0.700	-84.0	90.0	30.0	80.0	0	0	0.0	0.0	0.0	0.0
3	0.400	77.0	90.0	210.0	80.0	0	0	0.0	0.0	0.0	0.0

Call: KRPI
Freq: 1550 kHz
PT ROBERTS, WA, US
Hours: D
Lat: 48-59-54 N
Lng: 123-04-08 W
Power: 50.0 kW
Theo RMS: 2185.20 mV/m@1km
@ 50.0 kW

Tabulation of Daytime Directional Antenna Pattern
KRPI-AM
Point Roberts, WA

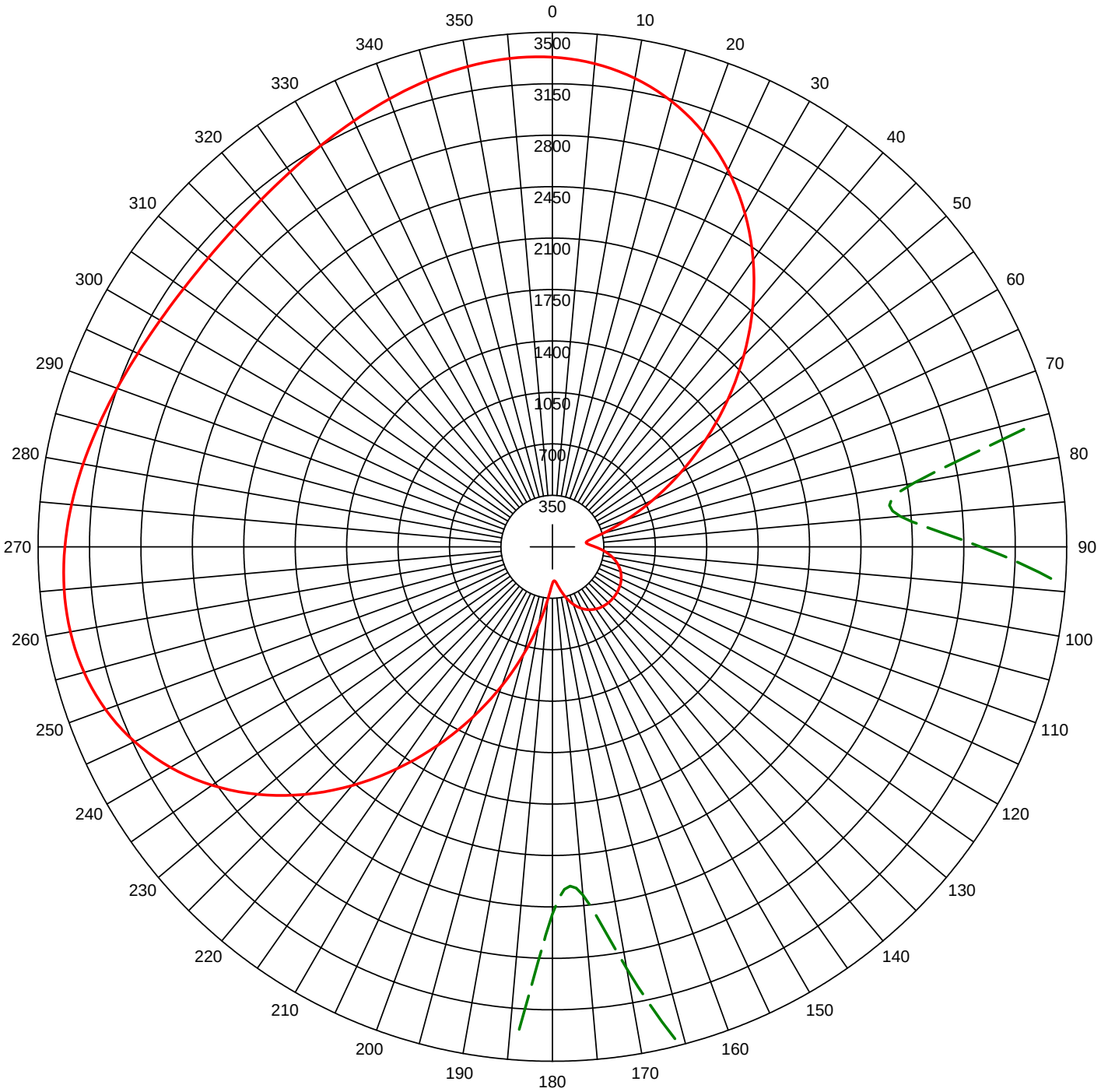
Call: KRPI
Freq: 1550 kHz
POINT ROBERTS, WA, US
Hours: D
Lat: 48-59-54 N
Lng: 123-04-08 W
Power: 50.0 kW
Theo RMS: 2185.20 mV/m @ 1km @ 50.0 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	80.0	0	0	0.0	0.0	0.0	0.0
2	0.700	-84.0	90.0	30.0	80.0	0	0	0.0	0.0	0.0	0.0
3	0.400	77.0	90.0	210.0	80.0	0	0	0.0	0.0	0.0	0.0

Standard Horizontal Plane Pattern

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	3434.06	120.0	1970.16	240.0	116.86
5.0	3436.38	125.0	1732.07	245.0	136.28
10.0	3433.07	130.0	1494.74	250.0	186.72
15.0	3427.13	135.0	1264.23	255.0	266.88
20.0	3421.06	140.0	1046.07	260.0	374.07
25.0	3416.67	145.0	844.92	265.0	506.91
30.0	3415.08	150.0	664.37	270.0	664.37
35.0	3416.67	155.0	506.91	275.0	844.92
40.0	3421.06	160.0	374.07	280.0	1046.07
45.0	3427.13	165.0	266.88	285.0	1264.23
50.0	3433.07	170.0	186.72	290.0	1494.74
55.0	3436.38	175.0	136.28	295.0	1732.07
60.0	3434.06	180.0	116.86	300.0	1970.16
65.0	3422.65	185.0	120.10	305.0	2202.80
70.0	3398.48	190.0	132.09	310.0	2424.04
75.0	3357.86	195.0	144.35	315.0	2628.61
80.0	3297.35	200.0	153.76	320.0	2812.22
85.0	3214.06	205.0	159.48	325.0	2971.87
90.0	3105.90	210.0	161.38	330.0	3105.90
95.0	2971.87	215.0	159.48	335.0	3214.06
100.0	2812.22	220.0	153.76	340.0	3297.35
105.0	2628.61	225.0	144.35	345.0	3357.86
110.0	2424.04	230.0	132.09	350.0	3398.48
115.0	2202.80	235.0	120.10	355.0	3422.65

AM Directional Pattern



Theo RMS: 2155.39 mV/m@1km
Std RMS: 2264.377 mV/m@1km
Q: 70.711 mV/m@1km

Standard Horizontal Plane Pattern

Pattern (mV/m @ 1km)
Pattern X10

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	80.0	0	0	0.0	0.0	0.0	0.0
2	0.840	-70.0	100.0	310.0	80.0	0	0	0.0	0.0	0.0	0.0
3	0.575	67.0	100.0	130.0	80.0	0	0	0.0	0.0	0.0	0.0

Call: KRPI
Freq: 1550 kHz
PT ROBERTS, WA, US
Hours: N
Lat: 48-59-54 N
Lng: 123-04-08 W
Power: 50.0 kW
Theo RMS: 2155.39 mV/m@1km
@ 50.0 kW

Tabulation of Nighttime Directional Antenna Pattern
KRPI-AM
Point Roberts, WA

Call: KRPI
Freq: 1550 kHz
POINT ROBERTS, WA, US
Hours: N
Lat: 48-59-54 N
Lng: 123-04-08 W
Power: 50.0 kW
Theo RMS: 2155.39 mV/m @ 1km @ 50.0 kW

#	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	Ref Swtch	TL Swtch	A (deg)	B (deg)	C (deg)	D (deg)
1	1.000	0.0	0.0	0.0	80.0	0	0	0.0	0.0	0.0	0.0
2	0.840	-70.0	100.0	310.0	80.0	0	0	0.0	0.0	0.0	0.0
3	0.575	67.0	100.0	130.0	80.0	0	0	0.0	0.0	0.0	0.0

Standard Horizontal Plane Pattern

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	3330.86	120.0	530.73	240.0	3001.21
5.0	3299.50	125.0	538.42	245.0	3137.34
10.0	3236.16	130.0	540.85	250.0	3236.16
15.0	3137.34	135.0	538.42	255.0	3299.50
20.0	3001.21	140.0	530.73	260.0	3330.86
25.0	2828.02	145.0	516.59	265.0	3335.07
30.0	2620.14	150.0	494.19	270.0	3317.80
35.0	2382.12	155.0	461.35	275.0	3285.06
40.0	2120.42	160.0	416.09	280.0	3242.90
45.0	1842.97	165.0	357.91	285.0	3196.93
50.0	1558.66	170.0	291.43	290.0	3152.20
55.0	1276.78	175.0	237.71	295.0	3112.94
60.0	1006.48	180.0	249.84	300.0	3082.49
65.0	756.65	185.0	359.21	305.0	3063.25
70.0	536.58	190.0	536.58	310.0	3056.68
75.0	359.21	195.0	756.65	315.0	3063.25
80.0	249.84	200.0	1006.48	320.0	3082.49
85.0	237.71	205.0	1276.78	325.0	3112.94
90.0	291.43	210.0	1558.66	330.0	3152.20
95.0	357.91	215.0	1842.97	335.0	3196.93
100.0	416.09	220.0	2120.42	340.0	3242.90
105.0	461.35	225.0	2382.12	345.0	3285.06
110.0	494.19	230.0	2620.14	350.0	3317.80
115.0	516.59	235.0	2828.02	355.0	3335.07

Standard Pattern
Calculated at 5.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	3313.03	120.0	525.33	240.0	2983.27
5.0	3281.03	125.0	533.16	245.0	3118.75
10.0	3217.42	130.0	535.64	250.0	3217.42
15.0	3118.75	135.0	533.16	255.0	3281.03
20.0	2983.27	140.0	525.33	260.0	3313.03
25.0	2811.19	145.0	510.99	265.0	3318.16
30.0	2604.90	150.0	488.36	270.0	3301.98
35.0	2368.87	155.0	455.34	275.0	3270.46
40.0	2109.47	160.0	410.03	280.0	3229.50
45.0	1834.52	165.0	352.10	285.0	3184.68
50.0	1552.79	170.0	286.54	290.0	3140.97
55.0	1273.41	175.0	235.17	295.0	3102.55
60.0	1005.41	180.0	250.90	300.0	3072.72
65.0	757.53	185.0	361.91	305.0	3053.88
70.0	538.86	190.0	538.86	310.0	3047.44
75.0	361.91	195.0	757.53	315.0	3053.88
80.0	250.90	200.0	1005.41	320.0	3072.72
85.0	235.17	205.0	1273.41	325.0	3102.55
90.0	286.54	210.0	1552.79	330.0	3140.97
95.0	352.10	215.0	1834.52	335.0	3184.68
100.0	410.03	220.0	2109.47	340.0	3229.50
105.0	455.34	225.0	2368.87	345.0	3270.46
110.0	488.36	230.0	2604.90	350.0	3301.98
115.0	510.99	235.0	2811.19	355.0	3318.16

Standard Pattern
Calculated at 10.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	3259.84	120.0	509.00	240.0	2929.97
5.0	3226.03	125.0	517.22	245.0	3063.54
10.0	3161.68	130.0	519.84	250.0	3161.68
15.0	3063.54	135.0	517.22	255.0	3226.03
20.0	2929.97	140.0	509.00	260.0	3259.84
25.0	2761.23	145.0	494.09	265.0	3267.61
30.0	2559.64	150.0	470.86	270.0	3254.63
35.0	2329.51	155.0	437.36	275.0	3226.60
40.0	2076.92	160.0	392.01	280.0	3189.18
45.0	1809.37	165.0	334.99	285.0	3147.71
50.0	1535.24	170.0	272.42	290.0	3106.98
55.0	1263.27	175.0	228.50	295.0	3071.02
60.0	1002.09	180.0	254.72	300.0	3043.03
65.0	760.00	185.0	370.05	305.0	3025.31
70.0	545.56	190.0	545.56	310.0	3019.25
75.0	370.05	195.0	760.00	315.0	3025.31
80.0	254.72	200.0	1002.09	320.0	3043.03
85.0	228.50	205.0	1263.27	325.0	3071.02
90.0	272.42	210.0	1535.24	330.0	3106.98
95.0	334.99	215.0	1809.37	335.0	3147.71
100.0	392.01	220.0	2076.92	340.0	3189.18
105.0	437.36	225.0	2329.51	345.0	3226.60
110.0	470.86	230.0	2559.64	350.0	3254.63
115.0	494.09	235.0	2761.23	355.0	3267.61

Standard Pattern
Calculated at 15.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	3172.21	120.0	481.42	240.0	2842.91
5.0	3135.69	125.0	490.19	245.0	2973.23
10.0	3070.34	130.0	493.01	250.0	3070.34
15.0	2973.23	135.0	490.19	255.0	3135.69
20.0	2842.91	140.0	481.42	260.0	3172.21
25.0	2679.69	145.0	465.72	265.0	3184.04
30.0	2485.77	150.0	441.66	270.0	3176.03
35.0	2265.20	155.0	407.64	275.0	3153.46
40.0	2023.64	160.0	362.58	280.0	3121.58
45.0	1768.05	165.0	307.62	285.0	3085.40
50.0	1506.22	170.0	250.99	290.0	3049.38
55.0	1246.24	175.0	220.58	295.0	3017.32
60.0	996.12	180.0	262.93	300.0	2992.23
65.0	763.53	185.0	383.64	305.0	2976.31
70.0	556.17	190.0	556.17	310.0	2970.85
75.0	383.64	195.0	763.53	315.0	2976.31
80.0	262.93	200.0	996.12	320.0	2992.23
85.0	220.58	205.0	1246.24	325.0	3017.32
90.0	250.99	210.0	1506.22	330.0	3049.38
95.0	307.62	215.0	1768.05	335.0	3085.40
100.0	362.58	220.0	2023.64	340.0	3121.58
105.0	407.64	225.0	2265.20	345.0	3153.46
110.0	441.66	230.0	2485.77	350.0	3176.03
115.0	465.72	235.0	2679.69	355.0	3184.04

Standard Pattern
Calculated at 20.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	3051.71	120.0	442.31	240.0	2724.65
5.0	3011.98	125.0	451.68	245.0	2850.33
10.0	2945.71	130.0	454.71	250.0	2945.71
15.0	2850.33	135.0	451.68	255.0	3011.98
20.0	2724.65	140.0	442.31	260.0	3051.71
25.0	2569.03	145.0	425.81	265.0	3068.52
30.0	2385.52	150.0	401.04	270.0	3066.75
35.0	2177.80	155.0	366.87	275.0	3051.09
40.0	1951.00	160.0	323.02	280.0	3026.31
45.0	1711.41	165.0	272.19	285.0	2996.90
50.0	1466.03	170.0	226.04	290.0	2966.95
55.0	1222.14	175.0	216.18	295.0	2939.93
60.0	986.93	180.0	277.40	300.0	2918.62
65.0	767.25	185.0	402.39	305.0	2905.02
70.0	569.82	190.0	569.82	310.0	2900.35
75.0	402.39	195.0	767.25	315.0	2905.02
80.0	277.40	200.0	986.93	320.0	2918.62
85.0	216.18	205.0	1222.14	325.0	2939.93
90.0	226.04	210.0	1466.03	330.0	2966.95
95.0	272.19	215.0	1711.41	335.0	2996.90
100.0	323.02	220.0	1951.00	340.0	3026.31
105.0	366.87	225.0	2177.80	345.0	3051.09
110.0	401.04	230.0	2385.52	350.0	3066.75
115.0	425.81	235.0	2569.03	355.0	3068.52

Standard Pattern
Calculated at 25.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	2900.51	120.0	391.85	240.0	2578.55
5.0	2857.60	125.0	401.67	245.0	2698.16
10.0	2790.86	130.0	404.87	250.0	2790.86
15.0	2698.16	135.0	401.67	255.0	2857.60
20.0	2578.55	140.0	391.85	260.0	2900.51
25.0	2432.47	145.0	374.85	265.0	2922.66
30.0	2261.77	150.0	349.91	270.0	2927.74
35.0	2069.72	155.0	316.60	275.0	2919.83
40.0	1860.84	160.0	275.87	280.0	2903.06
45.0	1640.59	165.0	232.94	285.0	2881.38
50.0	1415.10	170.0	204.20	290.0	2858.39
55.0	1190.72	175.0	220.88	295.0	2837.18
60.0	973.70	180.0	299.18	300.0	2820.22
65.0	769.99	185.0	425.48	305.0	2809.32
70.0	585.24	190.0	585.24	310.0	2805.56
75.0	425.48	195.0	769.99	315.0	2809.32
80.0	299.18	200.0	973.70	320.0	2820.22
85.0	220.88	205.0	1190.72	325.0	2837.18
90.0	204.20	210.0	1415.10	330.0	2858.39
95.0	232.94	215.0	1640.59	335.0	2881.38
100.0	275.87	220.0	1860.84	340.0	2903.06
105.0	316.60	225.0	2069.72	345.0	2919.83
110.0	349.91	230.0	2261.77	350.0	2927.74
115.0	374.85	235.0	2432.47	355.0	2922.66

Standard Pattern
Calculated at 30.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	2721.46	120.0	331.29	240.0	2408.62
5.0	2675.93	125.0	341.18	245.0	2520.69
10.0	2609.56	130.0	344.43	250.0	2609.56
15.0	2520.69	135.0	341.18	255.0	2675.93
20.0	2408.62	140.0	331.29	260.0	2721.46
25.0	2273.82	145.0	314.49	265.0	2748.64
30.0	2117.94	150.0	290.61	270.0	2760.52
35.0	1943.81	155.0	260.22	275.0	2760.47
40.0	1755.25	160.0	226.26	280.0	2751.96
45.0	1556.91	165.0	197.79	285.0	2738.33
50.0	1353.94	170.0	194.87	290.0	2722.66
55.0	1151.71	175.0	238.41	295.0	2707.58
60.0	955.50	180.0	327.80	300.0	2695.24
65.0	770.30	185.0	451.41	305.0	2687.20
70.0	600.74	190.0	600.74	310.0	2684.41
75.0	451.41	195.0	770.30	315.0	2687.20
80.0	327.80	200.0	955.50	320.0	2695.24
85.0	238.41	205.0	1151.71	325.0	2707.58
90.0	194.87	210.0	1353.94	330.0	2722.66
95.0	197.79	215.0	1556.91	335.0	2738.33
100.0	226.26	220.0	1755.25	340.0	2751.96
105.0	260.22	225.0	1943.81	345.0	2760.47
110.0	290.61	230.0	2117.94	350.0	2760.52
115.0	314.49	235.0	2273.82	355.0	2748.64

Standard Pattern
Calculated at 35.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	2518.02	120.0	263.96	240.0	2219.26
5.0	2470.92	125.0	273.16	245.0	2322.39
10.0	2406.13	130.0	276.24	250.0	2406.13
15.0	2322.39	135.0	273.16	255.0	2470.92
20.0	2219.26	140.0	263.96	260.0	2518.02
25.0	2097.24	145.0	248.78	265.0	2549.33
30.0	1957.74	150.0	228.32	270.0	2567.26
35.0	1803.12	155.0	204.86	275.0	2574.48
40.0	1636.54	160.0	184.42	280.0	2573.79
45.0	1461.80	165.0	179.57	285.0	2567.90
50.0	1283.11	170.0	205.85	290.0	2559.32
55.0	1104.84	175.0	268.27	295.0	2550.25
60.0	931.30	180.0	361.13	300.0	2542.45
65.0	766.55	185.0	477.98	305.0	2537.24
70.0	614.30	190.0	614.30	310.0	2535.42
75.0	477.98	195.0	766.55	315.0	2537.24
80.0	361.13	200.0	931.30	320.0	2542.45
85.0	268.27	205.0	1104.84	325.0	2550.25
90.0	205.85	210.0	1283.11	330.0	2559.32
95.0	179.57	215.0	1461.80	335.0	2567.90
100.0	184.42	220.0	1636.54	340.0	2573.79
105.0	204.86	225.0	1803.12	345.0	2574.48
110.0	228.32	230.0	1957.74	350.0	2567.26
115.0	248.78	235.0	2097.24	355.0	2549.33

Standard Pattern
Calculated at 40.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	2294.21	120.0	197.68	240.0	2015.11
5.0	2247.00	125.0	204.71	245.0	2108.00
10.0	2185.22	130.0	207.14	250.0	2185.22
15.0	2108.00	135.0	204.71	255.0	2247.00
20.0	2015.11	140.0	197.68	260.0	2294.21
25.0	1907.03	145.0	186.92	265.0	2328.25
30.0	1784.97	150.0	174.61	270.0	2350.89
35.0	1650.81	155.0	165.38	275.0	2364.17
40.0	1507.08	160.0	167.32	280.0	2370.22
45.0	1356.77	165.0	189.56	285.0	2371.16
50.0	1203.20	170.0	236.38	290.0	2368.95
55.0	1049.82	175.0	306.24	295.0	2365.31
60.0	900.02	180.0	395.88	300.0	2361.67
65.0	756.98	185.0	502.46	305.0	2359.05
70.0	623.61	190.0	623.61	310.0	2358.11
75.0	502.46	195.0	756.98	315.0	2359.05
80.0	395.88	200.0	900.02	320.0	2361.67
85.0	306.24	205.0	1049.82	325.0	2365.31
90.0	236.38	210.0	1203.20	330.0	2368.95
95.0	189.56	215.0	1356.77	335.0	2371.16
100.0	167.32	220.0	1507.08	340.0	2370.22
105.0	165.38	225.0	1650.81	345.0	2364.17
110.0	174.61	230.0	1784.97	350.0	2350.89
115.0	186.92	235.0	1907.03	355.0	2328.25

Standard Pattern
Calculated at 45.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	2054.58	120.0	150.63	240.0	1800.79
5.0	2008.95	125.0	152.64	245.0	1882.36
10.0	1951.72	130.0	153.49	250.0	1951.72
15.0	1882.36	135.0	152.64	255.0	2008.95
20.0	1800.79	140.0	150.63	260.0	2054.58
25.0	1707.45	145.0	149.24	265.0	2089.57
30.0	1603.34	150.0	151.71	270.0	2115.15
35.0	1489.92	155.0	162.52	275.0	2132.79
40.0	1369.14	160.0	185.96	280.0	2144.02
45.0	1243.27	165.0	224.44	285.0	2150.39
50.0	1114.81	170.0	278.21	290.0	2153.37
55.0	986.38	175.0	346.46	295.0	2154.24
60.0	860.56	180.0	428.06	300.0	2154.06
65.0	739.77	185.0	521.76	305.0	2153.63
70.0	626.21	190.0	626.21	310.0	2153.44
75.0	521.76	195.0	739.77	315.0	2153.63
80.0	428.06	200.0	860.56	320.0	2154.06
85.0	346.46	205.0	986.38	325.0	2154.24
90.0	278.21	210.0	1114.81	330.0	2153.37
95.0	224.44	215.0	1243.27	335.0	2150.39
100.0	185.96	220.0	1369.14	340.0	2144.02
105.0	162.52	225.0	1489.92	345.0	2132.79
110.0	151.71	230.0	1603.34	350.0	2115.15
115.0	149.24	235.0	1707.45	355.0	2089.57

Standard Pattern
Calculated at 50.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	1804.04	120.0	150.22	240.0	1580.71
5.0	1761.73	125.0	145.68	245.0	1650.19
10.0	1710.55	130.0	144.32	250.0	1710.55
15.0	1650.19	135.0	145.68	255.0	1761.73
20.0	1580.71	140.0	150.22	260.0	1804.04
25.0	1502.50	145.0	159.14	265.0	1838.05
30.0	1416.32	150.0	174.15	270.0	1864.58
35.0	1323.30	155.0	196.93	275.0	1884.58
40.0	1224.85	160.0	228.74	280.0	1899.10
45.0	1122.64	165.0	270.29	285.0	1909.19
50.0	1018.48	170.0	321.74	290.0	1915.88
55.0	914.28	175.0	382.95	295.0	1920.05
60.0	811.91	180.0	453.47	300.0	1922.47
65.0	713.15	185.0	532.66	305.0	1923.69
70.0	619.60	190.0	619.60	310.0	1924.06
75.0	532.66	195.0	713.15	315.0	1923.69
80.0	453.47	200.0	811.91	320.0	1922.47
85.0	382.95	205.0	914.28	325.0	1920.05
90.0	321.74	210.0	1018.48	330.0	1915.88
95.0	270.29	215.0	1122.64	335.0	1909.19
100.0	228.74	220.0	1224.85	340.0	1899.10
105.0	196.93	225.0	1323.30	345.0	1884.58
110.0	174.15	230.0	1416.32	350.0	1864.58
115.0	159.14	235.0	1502.50	355.0	1838.05

Standard Pattern
Calculated at 55.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	1547.74	120.0	191.73	240.0	1358.98
5.0	1510.37	125.0	184.62	245.0	1415.99
10.0	1466.49	130.0	182.29	250.0	1466.49
15.0	1415.99	135.0	184.62	255.0	1510.37
20.0	1358.98	140.0	191.73	260.0	1547.74
25.0	1295.79	145.0	204.00	265.0	1578.93
30.0	1227.01	150.0	221.94	270.0	1604.39
35.0	1153.44	155.0	246.05	275.0	1624.70
40.0	1076.07	160.0	276.74	280.0	1640.51
45.0	996.08	165.0	314.28	285.0	1652.48
50.0	914.71	170.0	358.76	290.0	1661.25
55.0	833.28	175.0	410.08	295.0	1667.41
60.0	753.11	180.0	467.96	300.0	1671.44
65.0	675.42	185.0	531.93	305.0	1673.71
70.0	601.36	190.0	601.36	310.0	1674.44
75.0	531.93	195.0	675.42	315.0	1673.71
80.0	467.96	200.0	753.11	320.0	1671.44
85.0	410.08	205.0	833.28	325.0	1667.41
90.0	358.76	210.0	914.71	330.0	1661.25
95.0	314.28	215.0	996.08	335.0	1652.48
100.0	276.74	220.0	1076.07	340.0	1640.51
105.0	246.05	225.0	1153.44	345.0	1624.70
110.0	221.94	230.0	1227.01	350.0	1604.39
115.0	204.00	235.0	1295.79	355.0	1578.93

Standard Pattern
Calculated at 60.0 Degrees Elevation

Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)	Azimuth (Deg)	Field (mV/m @1km)
0.0	1290.92	120.0	242.81	240.0	1139.22
5.0	1259.75	125.0	236.13	245.0	1183.84
10.0	1224.06	130.0	233.92	250.0	1224.06
15.0	1183.84	135.0	236.13	255.0	1259.75
20.0	1139.22	140.0	242.81	260.0	1290.92
25.0	1090.49	145.0	254.05	265.0	1317.71
30.0	1038.05	150.0	269.98	270.0	1340.32
35.0	982.45	155.0	290.72	275.0	1359.06
40.0	924.38	160.0	316.37	280.0	1374.29
45.0	864.58	165.0	346.98	285.0	1386.37
50.0	803.89	170.0	382.49	290.0	1395.66
55.0	743.18	175.0	422.78	295.0	1402.50
60.0	683.29	180.0	467.60	300.0	1407.17
65.0	625.07	185.0	516.59	305.0	1409.88
70.0	569.27	190.0	569.27	310.0	1410.77
75.0	516.59	195.0	625.07	315.0	1409.88
80.0	467.60	200.0	683.29	320.0	1407.17
85.0	422.78	205.0	743.18	325.0	1402.50
90.0	382.49	210.0	803.89	330.0	1395.66
95.0	346.98	215.0	864.58	335.0	1386.37
100.0	316.37	220.0	924.38	340.0	1374.29
105.0	290.72	225.0	982.45	345.0	1359.06
110.0	269.98	230.0	1038.05	350.0	1340.32
115.0	254.05	235.0	1090.49	355.0	1317.71

6. Statement of Engineer

This Engineering Report, relative to an application for a new transmitter site for KRPI-AM, Ferndale, WA has been prepared by the undersigned. All representations contained herein are true to the best of my knowledge. I am an experienced radio engineer whose qualifications are a matter of record with the Federal Communications Commission. I am a partner in the firm of Hatfield and Dawson Consulting Engineers and am Registered as a Professional Engineer in the States of Washington and Alaska.

Signed this 1st day of February 2011

Steven S. Lockwood, P.E.