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**THE RICHARD STOCKTON COLLEGE OF NEW JERSEY**

**POMONA, NEW JERSEY**

**LICENSEE OF**

**WLFR(FM), CHANNEL 219**

**POMONA, NEW JERSEY**

**FCC Facility ID #63469**

**FCC FILE No. BLET-19920327KG**

**MINOR CHANGE**

**APPLICATION FOR MODIFICATION OF LICENSE**

**TO SPECIFY A NEW TOWER, HAAT, AND ERP**

**REVISED ENGINEERING EXHIBIT 18**

**December 18, 2006**

**THE RICHARD STOCKTON COLLEGE OF NEW JERSEY**

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**REVISED ENGINEERING EXHIBIT 18**

**1. FACILITIES REQUESTED**

Exhibit 18 is hereby modified to address a telephonic discussion with the Media Bureau staff regarding the extent of the original Channel 6 showing with respect to 73.525(b)(2). The original application utilized a simple computer based area analysis of the “affected” population under 73.525. This revision utilizes detailed population analysis by census tract and demonstrates compliance with 73.525(b)(2). As a result of this analysis, no change in the proposed WLFR facility parameters as already on file is proposed.

The instant minor application is proposing to change the antenna supporting structure location and height, and the antenna C/R AMSL and HAAT, and the effective radiated power. The proposed antenna is a Shively Model 6812-2-SS ½ wavelength spaced 2 bay circularly polarized antenna with a power gain of 0.7x.

Distances to contours were calculated using a 3 second terrain database and we request processing utilizing 3 second data. HAAT was determined using the EDX 3 second database and routines.

## **2. PROTECTION OF CHANNEL 6**

WLFR(FM) is located within the 47 dBu F(50,50) service contour of WPVI-TV, Channel 6, located in Philadelphia, PA. This is the only “affected” Channel 6 per 73.525. WLFR(FM) is an existing facility proposing a minor change to a new tower. The tower continues to be located on the campus of RSCNJ and the new location is only a short distance from the currently licensed site and is co-incident with the current WLFR STA location. The changes proposed herein fall under the provisions of 73.525(b)(2) for existing stations. A detailed 73.525 study for existing stations was completed by this office to show that the changes proposed result in a net DECREASE in predicted interference to WPVI-TV of over two for one as stipulated in 73.525(b)(2).

The EDX computer program was used for this study using 3 - second terrain data and 1 degree spacing between azimuths. WPVI facilities were derived from the FCC CDBS database. The procedures outlined in 73.525 for existing stations was used. The F(50,50) WPVI field strength was found to be between 53.3 and 56.3 dBu near the proposed site. Using figure 73.599, the corresponding FM contours are 81.5; 81.5; 81.5; and 81.5 dBu respectively.

WLFR presently is authorized circular polarization at 0.9 kW ERP. The instant application proposes 0.82 kW (H & V) with a slight increase in HAAT. The intent was to maintain the 60 dBu coverage area essentially the same as currently authorized. Thus the equivalent horizontal power (P) used for the calculations is the sum of the vertical power divided by 40 or 20.5 watts plus the horizontal power 0.82 kW for a total of 0.845 kW. It should be noted that no portion of the present or proposed predicted interference area covers a city of 50,000 or more persons.

The resultant contour relationships and the interference area calculated per 73.525(e)(1)(v) are plotted and attached with this exhibit. The resulting interference area occurs in rural portion of southern Atlantic County, New Jersey. The interference (affected) area was then transposed to a US Census Bureau map which is also attached.

The interference area encompasses populated land areas in five Census Tracts. These Tracts are: 104.01 (part of Galloway Township), 104.03 (part of Galloway Township), 105.03 (part of Galloway Township), 105.04 (part of Egg Harbor Township), and 117.02 (part of Hamilton Township).

Uniform distribution of population within each tract was assumed as per 73.525(e)(2)(ii). Areas and "affected" areas were determined by use of a Polar Planimeter. Areas over water were subtracted and the resulting "affected" areas were determined as a percentage of the total tract land area. These percentage values were then multiplied by the total 2000 population for the Tract. A tabulation of populations and affected areas in each Tract follows below.

The application fully complies with 73.525 in that the number of persons that are predicted to receive new interference is 543 while the number of persons calculated to no longer receive interference is 1,419 with is a reduction of 2.6 to 1, meeting the requirement of 73.525(b)(2).

**Tabulation of Tract areas (Sq. mile) and population**

<b>Tract No.</b>	<b>2000 Pop Total</b>	<b>Land Area</b>	<b>Affected Land Area</b>	<b>% of Total</b>	<b>Pop Affected</b>
104.01	4654	34.65	1.117	3.224	150 Loss
104.03	3974	3.54	0.014	0.395	16 Loss
105.03	7016	3.63	0.726	20.0	1253 Loss
104.03	3974	3.54	0.021	2.07	23 Gain
105.04	8449	13.45	0.365	2.717	230 Gain
117.02	3451	11.69	0.983	8.41	290 Gain

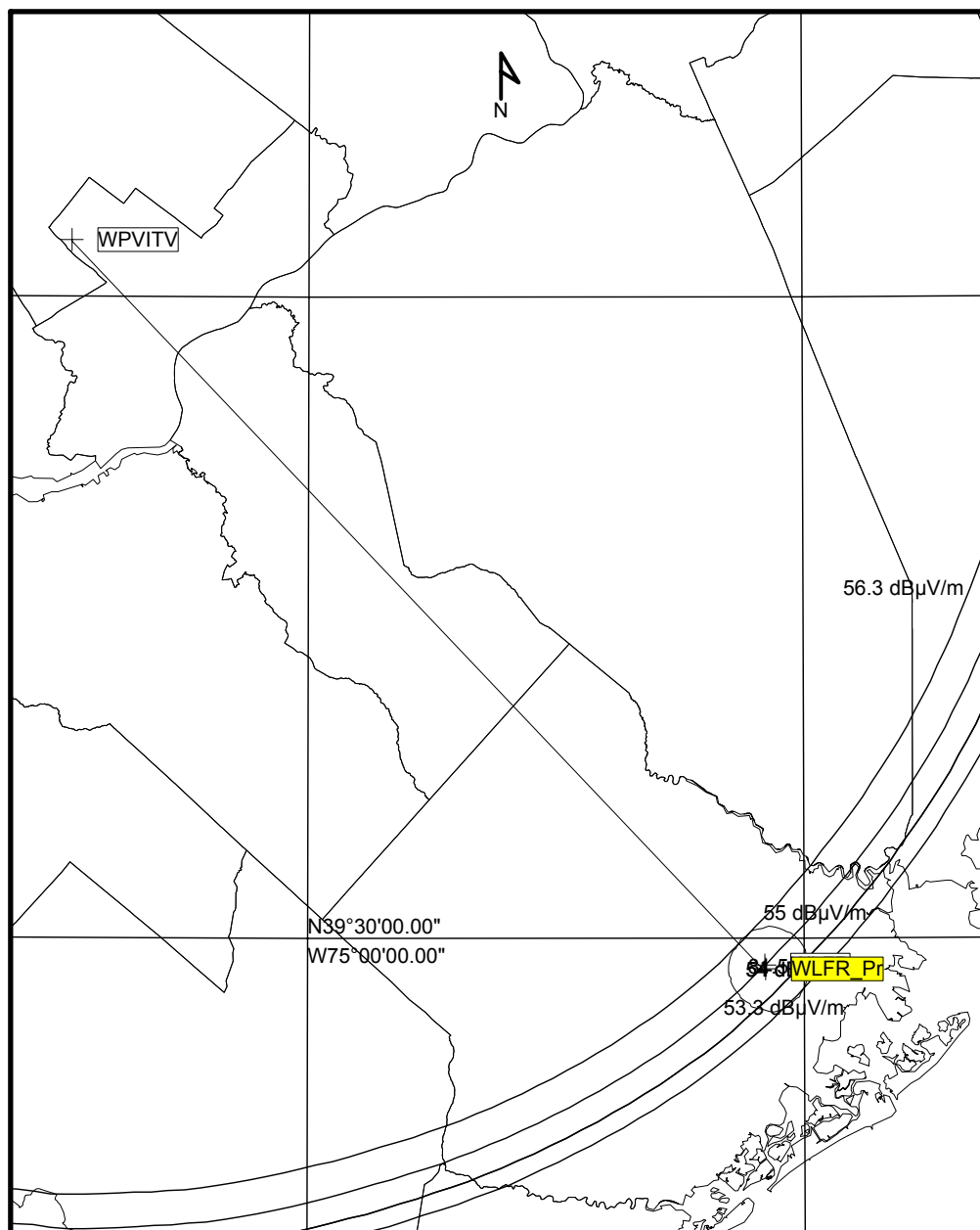
**TOTAL GAIN:** 543 persons

**TOTAL LOSS:** 1,419

See also the attached Tracts for Atlantic County, New Jersey which are listed on pages 1 and 2 of the page listing of all of Atlantic County, New Jersey.

## **CONCLUSIONS**

Specifically, and utilizing the 2000 census data, the new WLFR(FM) facilities result in a net REDUCTION of predicted interference in the “existing predicted interference area” of 1,419 persons and NEW interference in the “proposed predicted interference area” of 543 persons. Thus the instant proposal satisfies the requirements of 73.525(b)(2) and thus granting this minor change would be in the public interest.



SIGNAL™: WLFRFM\_Move\_TVI\_3\_WIDE\_VIEW.map

#### Sites

Site: WLFR Proposed\_2  
N39°28'34.30" W74°32'20.30" 19.2 m  
WLFR\_Pr Tx.Ht.AGL: 38.0 m Total ERPd: -0.73dBkW  
Grp: 1 omni-horizontal/0.0° 91.7000 MHz

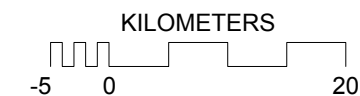
quick contours

#### Interference contour study

Propagation methods:  
service contour : FCC-FCC 10.0%  
= 81.5 dBµV/m service contour

#### Notes

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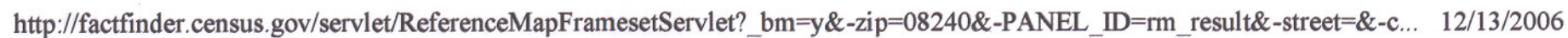


## WLFR - CH 6 STUDY MAP

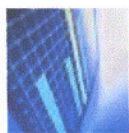
WPVI-WLFR WIDE VIEW

Figure 5

12/18/2006







**Atlantic County, New Jersey -- Census Tract**  
**GCT-PH1. Population, Housing Units, Area, and Density: 2000**  
**Data Set: Census 2000 Summary File 1 (SF 1) 100-Percent Data**

NOTE: For information on confidentiality protection, nonsampling error, definitions, and count corrections see <http://factfinder.census.gov/home/en/datanotes/expsf1u.htm>.

Geographic area	Population	Housing units	Area in square miles			Density per square mile of land area	
			Total area	Water area	Land area	Population	Housing units
Atlantic County	252,552	114,090	671.45	110.37	561.07	450.1	203.3
<b>CENSUS TRACT</b>							
Tract 0	0	0	55.12	55.12	0.00	(X)	(X)
Tract 1	2,266	957	0.83	0.15	0.69	3,308.0	1,397.0
Tract 2	3,230	1,965	0.46	0.27	0.19	17,373.3	10,569.2
Tract 3	3,424	1,400	0.16	0.02	0.14	24,855.8	10,163.0
Tract 4	3,100	2,504	0.65	0.38	0.27	11,657.0	9,415.8
Tract 5	2,941	1,049	0.14	0.03	0.11	27,886.6	9,946.6
Tract 11	1,889	1,024	0.11	0.00	0.11	16,897.0	9,159.6
Tract 12	3,208	1,366	0.54	0.04	0.50	6,465.3	2,753.0
Tract 13	2,112	888	11.04	4.00	7.03	300.3	126.2
Tract 14	4,031	1,689	1.01	0.28	0.73	5,525.7	2,315.3
Tract 15	1,957	1,030	0.12	0.00	0.12	16,784.9	8,834.2
Tract 19	2,047	1,099	0.28	0.17	0.11	18,050.5	9,691.0
Tract 23	2,785	1,081	0.45	0.14	0.32	8,779.4	3,407.7
Tract 24	2,998	1,970	0.97	0.32	0.65	4,646.7	3,053.4
Tract 25	4,529	2,197	0.60	0.19	0.41	11,159.9	5,413.6
Tract 101.01	4,373	2,710	7.10	2.67	4.43	986.9	611.6
Tract 101.02	2,444	2,274	0.75	0.08	0.67	3,626.7	3,374.4
Tract 101.03	5,777	4,320	1.93	0.61	1.32	4,364.2	3,263.5
Tract 102	5,656	2,138	4.67	1.16	3.51	1,610.8	608.9
Tract 103	1,982	764	2.26	0.05	2.21	898.5	346.4
Tract 104.01	4,654	1,841	35.09	0.45	34.65	134.3	53.1
Tract 104.02	2,030	22	2.72	0.06	2.66	763.7	8.3
Tract 104.03	3,974	1,331	3.54	0.00	3.54	1,123.1	376.2
Tract 105.01	6,123	2,812	57.97	18.42	39.55	154.8	71.1
Tract 105.03	7,016	2,936	3.65	0.01	3.63	1,930.2	807.7
Tract 105.04	8,449	2,853	19.87	6.42	13.45	628.2	212.1
Tract 106	4,545	1,770	11.54	0.43	11.11	409.2	159.4
Tract 107	5,912	2,176	56.94	0.36	56.58	104.5	38.5
Tract 108	2,614	934	7.54	0.06	7.48	349.4	124.9
Tract 109	4,945	2,023	22.60	0.14	22.46	220.2	90.1
Tract 110	2,229	851	6.72	0.02	6.70	332.5	126.9
Tract 111	2,816	1,035	4.61	0.00	4.61	610.3	224.3
Tract 112.01	1,972	702	8.46	0.19	8.27	238.5	84.9
Tract 112.02	7,436	2,827	41.53	0.16	41.36	179.8	68.3
Tract 113	3,873	1,553	7.61	0.00	7.61	509.1	204.1
Tract 114.01	4,542	1,598	46.11	1.09	45.02	100.9	35.5
Tract 114.02	9,900	3,842	25.37	0.34	25.03	395.6	153.5
Tract 115	6,057	2,127	41.51	0.27	41.24	146.9	51.6
Tract 116	4,310	1,659	76.46	2.81	73.66	58.5	22.5
Tract 117.01	6,350	2,450	4.96	0.00	4.96	1,279.4	493.6



Geographic area	Population	Housing units	Area in square miles			Density per square mile of land area	
			Total area	Water area	Land area	Population	Housing units
Tract 117.02	3,451	1,404	11.98	0.28	11.69	295.1	120.1
Tract 118.01	8,389	3,039	29.31	2.12	27.19	308.5	111.8
Tract 118.02	7,203	2,612	14.49	0.08	14.41	499.8	181.2
Tract 118.03	4,657	2,152	2.70	0.08	2.61	1,782.0	823.5
Tract 119	7,630	2,886	1.78	0.00	1.78	4,289.9	1,622.6
Tract 120	4,149	1,691	3.10	0.53	2.57	1,614.2	657.9
Tract 121	2,913	1,028	2.29	1.55	0.74	3,934.4	1,388.5
Tract 122	4,795	1,650	1.13	0.00	1.13	4,254.4	1,464.0
Tract 123.02	2,675	985	1.72	0.02	1.70	1,576.0	580.3
Tract 124.01	2,936	1,110	1.04	0.00	1.04	2,827.1	1,068.8
Tract 124.02	2,114	827	0.69	0.00	0.69	3,063.6	1,198.5
Tract 125.01	2,419	994	0.71	0.04	0.67	3,629.3	1,491.3
Tract 125.02	1,631	630	0.81	0.03	0.78	2,089.9	807.2
Tract 126.01	1,748	759	12.67	4.71	7.95	219.7	95.4
Tract 126.02	1,575	565	1.17	0.04	1.13	1,390.5	498.8
Tract 127.01	3,692	1,562	1.11	0.10	1.01	3,639.4	1,539.7
Tract 127.02	1,825	817	1.36	0.32	1.04	1,757.6	786.8
Tract 128.01	4,413	2,131	1.01	0.02	0.98	4,491.9	2,169.1
Tract 128.02	1,684	892	1.64	0.69	0.95	1,771.9	938.6
Tract 129	1,054	1,574	1.63	1.24	0.38	2,765.2	4,129.5
Tract 130	4,400	3,018	0.85	0.06	0.79	5,561.8	3,814.9
Tract 131	3,793	3,988	0.73	0.12	0.62	6,164.3	6,481.2
Tract 132	5,991	3,648	1.38	0.51	0.87	6,874.1	4,185.8
Tract 133	6,919	4,361	2.17	0.90	1.27	5,440.1	3,428.8

(X) Not applicable

Source: U.S. Census Bureau, Census 2000 Summary File 1