

Channel Study

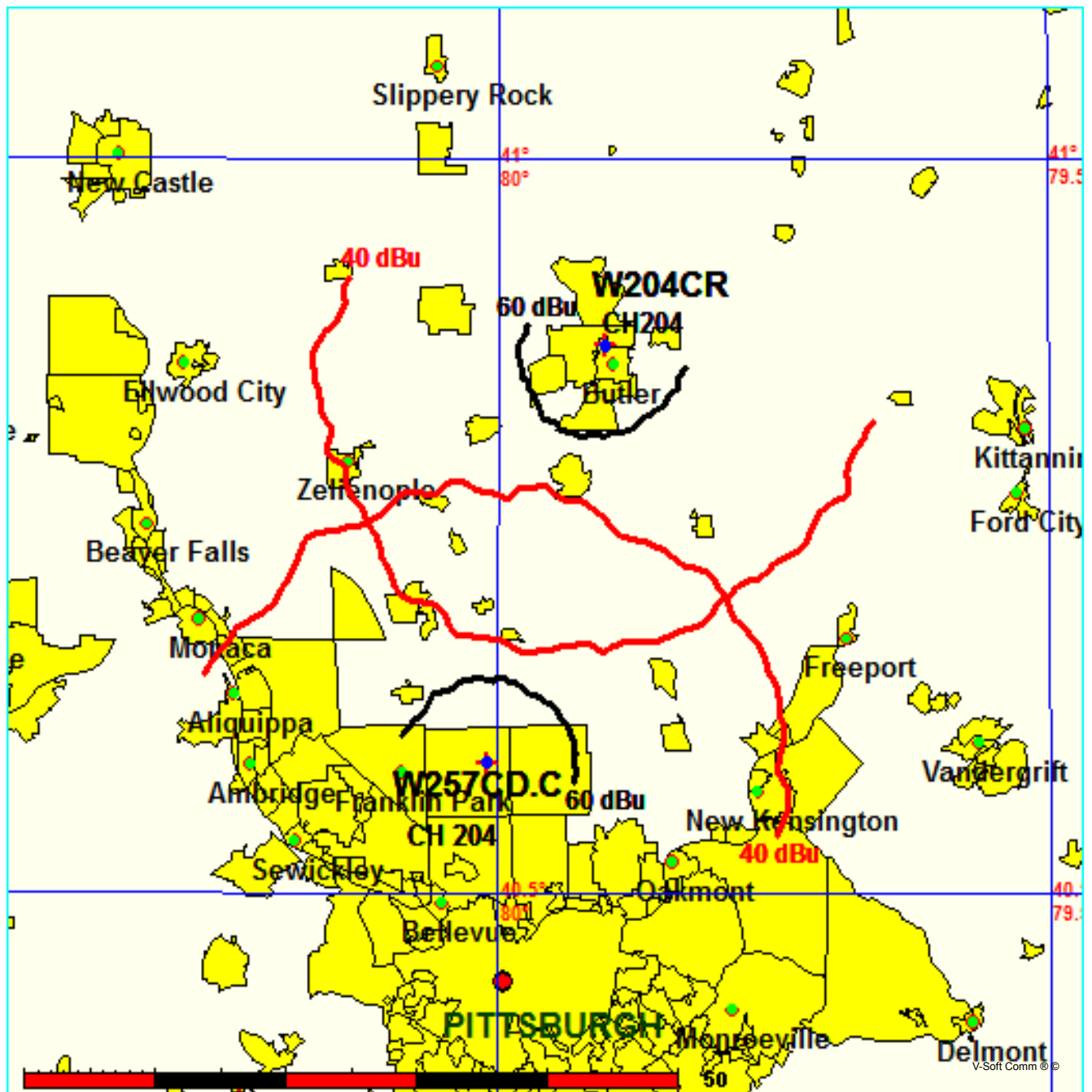
REFERENCE		CH# 204D - 88.7 MHz, Pwr= 0.01 kW, HAAT= 132.0 M, COR= 468 M								DISPLAY DATES		
40 35 25.0 N.		Average Protected F(50-50)= 6.7 km								DATA 11-04-16		
80 00 37.0 W.		Omni-directional								SEARCH 11-04-16		
CH CITY	CALL	TYPE	ANT STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*	
207B Pittsburgh	WQED-FM	LIC	C PA	166.3 346.3	16.47 BLED20010209AAG	40 26 46.0 79 57 51.0	28.000 199	5.6 505	50.7 Wqed Multimedia	3.5	-34.4*<	
204D Pittsburgh	W257CD!	CP	C PA	0.0 0.0	0.00 BPFT20160930AHN	40 35 25.0 80 00 37.0	0.010	21.1 476	6.4 Educational Media Foundati	-27.3	-26.7	
06-T Pittsburgh	WBPA-LP	AP	N PA	184.5 4.5	10.70 BDISTVL20090122ABF	40 29 39.0 80 01 13.0	3.000 242	6.4 491	25.4	31.7R	-21.0M	
06 D Weirton	WBPA-LD	CPM	N WV	184.5 4.5	10.70 BMPDVL20120810ABQ	40 29 39.0 80 01 13.0	3.000 242	6.4 491	25.4	31.7R	-21.0M	
204D Butler	W204CR	LIC	C PA	15.9 196.0	32.82 BLFT20160405ABN	40 52 27.8 79 54 10.8	0.013	24.2 480	7.2 Family Life Ministries, In	2.4	5.0	
202A Pittsburgh	WRCT	LIC	DCN PA	160.8 340.9	17.18 BLED19931202KKB	40 26 39.0 79 56 37.0	1.750 22	1.6 324	11.6 Wrct Radio, Inc.	8.1	5.3	
205B Johnstown	WFRJ	LIC	DVX PA	105.3 286.0	90.49 BMLED20130530AMH	40 22 17.0 78 58 56.0	5.500 370	76.8 897	50.9 Family Stations, Inc.	6.9	30.0	
204B1 Moundsville	WULV	LIC	DCX WV	217.7 37.2	104.09 BMLED20150427AAR	39 50 51.0 80 45 23.0	3.000 181	85.4 498	29.8 Educational Media Foundati	11.1	48.7	
201A Murrysville	WKGO	LIC	DEX PA	104.6 284.8	30.83 BLED20050413AAM	40 31 12.0 79 39 29.0	1.000 92	0.4 432	9.3 Broadcast Educational Comm	23.6	21.4	
203B Youngstown	WYSU	LIC	DCX OH	314.3 133.9	74.50 BLED20101105AIJ	41 03 23.2 80 38 43.7	50.000 115	46.7 437	29.8 Youngstown State Universit	21.5	35.9	
204B1 Beach City	WOFN	LIC	DE OH	270.7 89.7	132.67 BLED20000831ADQ	40 35 41.0 81 34 39.0	22.500 105	101.6 425	35.9 Creative Educational Media	24.4	74.4	
205A New Wilmington	WWNW	LIC	DEX PA	334.6 154.4	64.17 BLED20080915AEH	41 06 41.0 80 20 21.0	4.000 39	30.7 382	20.8 Westminster College Board	27.4	34.8	
203B1 Masontown	WYFU	LIC	DCX PA	178.9 358.9	89.21 BLED20130509AAC	39 47 13.0 79 59 23.0	16.000 106	49.6 439	32.1 Bible Broadcasting Network	32.8	47.4	
201B1 Bethany	WZUM-FM	CP	DCX WV	228.3 48.0	62.39 BPED20140128ADN	40 12 58.0 80 33 31.0	10.000 125	2.6 457	27.5 Pittsburgh Public Media	52.3	34.7	
205A Steubenville	WBJV	LIC	CX OH	247.8 67.4	65.67 BLED20020221AAE	40 21 56.0 80 43 36.0	0.125 78	17.0 403	11.6 American Family Associatio	41.9	44.5	
201A Bethany	WZUM-FM	LIC	CN WV	228.3 48.0	62.39 BLED19850206LM	40 12 58.0 80 33 31.0	1.100 125	1.7 457	19.8 Pittsburgh Public Media	53.3	42.4	
201A Slippery Rock	WSRU	LIC	CN PA	357.0 177.0	52.45 BLED19910415KA	41 03 43.0 80 02 35.0	0.100 24	0.7 413	5.6 Slippery Rock University B	45.5	46.6	

Terrain database is GLOBE 30 Sec, R= 73.215 qualifying spacings or FCC minimum spacings in KM, M= Margin in KM
 Contour distances are on direct line to and from reference station. Reference Zone= East Zone, Co to 3rd adjacent.
 Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
 "*"affixed to 'IN' or 'OUT' values = site inside restricted contour.
 < = Contour Overlap

FMCommander Single Allocation Study - 11-04-2016 - GLOBE 30 Sec
W257CD.C's Overlaps (In= 2.42 km, Out= 5.0 km)

W257CD.C CH 204 D
Lat= 40 35 25.0, Lng= 80 00 37.0
0.01 kW 132 m HAAT, 468 m COR
Prot.= 60 dBu, Intef.= 40 dBu

W204CR CH 204 D BLFT20160405ABN
Lat= 40 52 27.8, Lng= 79 54 10.8
0.013 kW 0 m HAAT, 480 m COR
Prot.= 60 dBu, Intef.= 40 dBu



FMCommander Single Allocation Study - 11-04-2016 - GLOBE 30 Sec
W257CD.C's Overlaps (In= 8.08 km, Out= 5.33 km)

W257CD.C CH 204 D

Lat= 40 35 25.0, Lng= 80 00 37.0

0.01 kW 132 m HAAT, 468 m COR

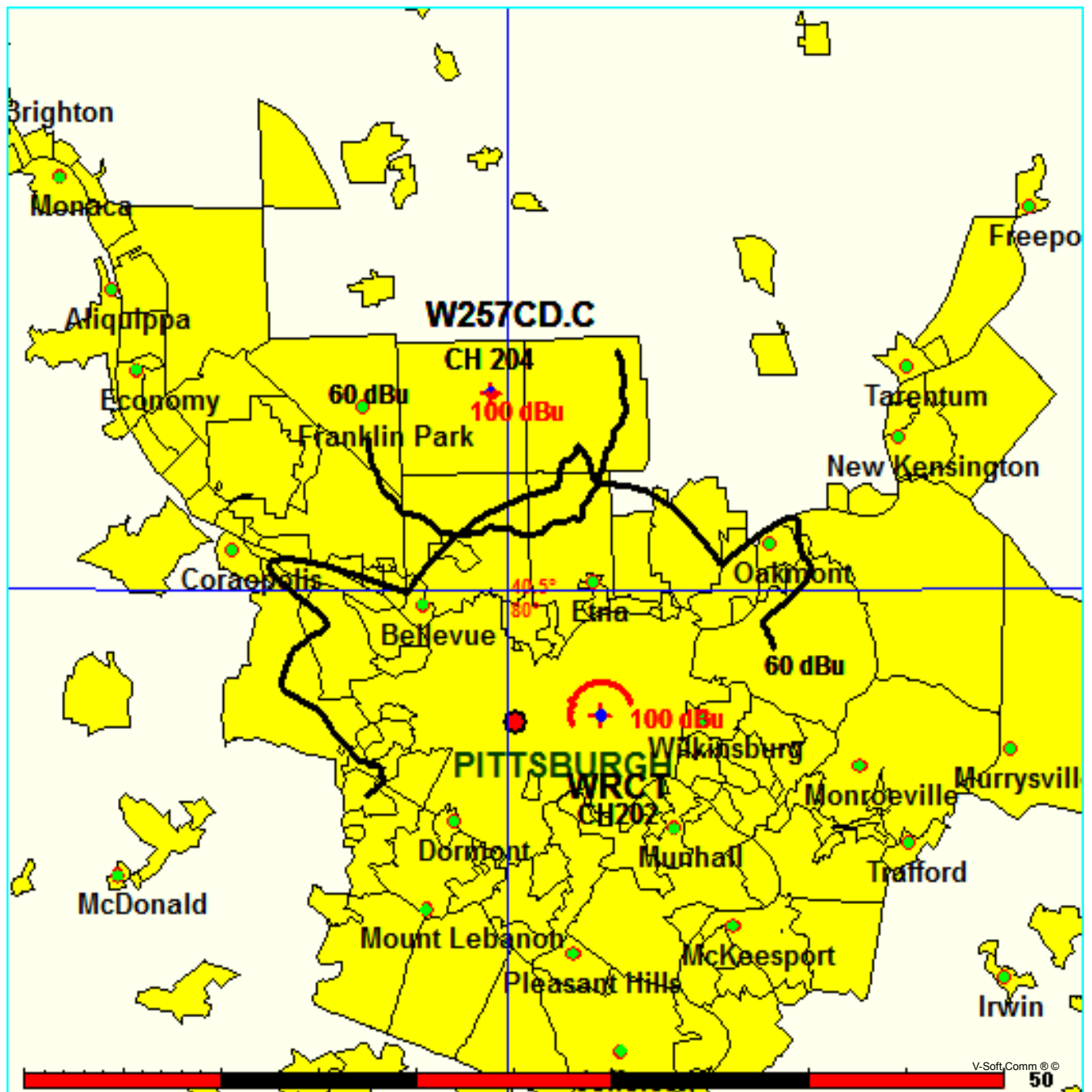
Prot.= 60 dBu, Intef.= 100 dBu

WRCT CH 202 A DA BLED19931202KB

Lat= 40 26 39.0, Lng= 79 56 37.0

1.75 kW 22 m HAAT, 324 m COR

Prot.= 60 dBu, Intef.= 100 dBu



Educational Media Foundation

5700 W Oaks Blvd
Rocklin, CA 95765

*Exhibit 13-A
Pittsburgh, Pa*

Compliance with C.F.R. 74.1204

The proposed FM Translator to operate on channel 204 is located within the protected 60dBu contour of third adjacent channel station WQED-FM, channel 207B, Pittsburgh, Pa. According to 74.1204(a)(3), in order to protect second and third adjacent facilities, the difference in dBu between the two facilities must not exceed 40dBu.

The proposed ERP for W257CD.P:	10 watts
The proposed COR for W257CD.P:	105 meters
WQED F(50/50) contour at proposed site:	81.7dBu
The F(50/10) contour of proposed W257CD.P:	121.7dBu

The predicted distance to the 121.7dbu interfering contour is 18.24 meters. Taking into account the vertical elevation pattern of the Jampro JLCP single bay antenna and the height above ground of 105M, it has been determined that the interfering contour of 121.7dbu does not reach the ground. As seen in Exhibit 13-A1, the lowest elevation for this interfering contour is 96.6M above ground at a distance of 11.9m from the antenna.

As can be seen in Exhibit 13–A2 there are no surrounding structures which are tall enough to enter the interfering contour within the 18.24 m distance from the antenna.

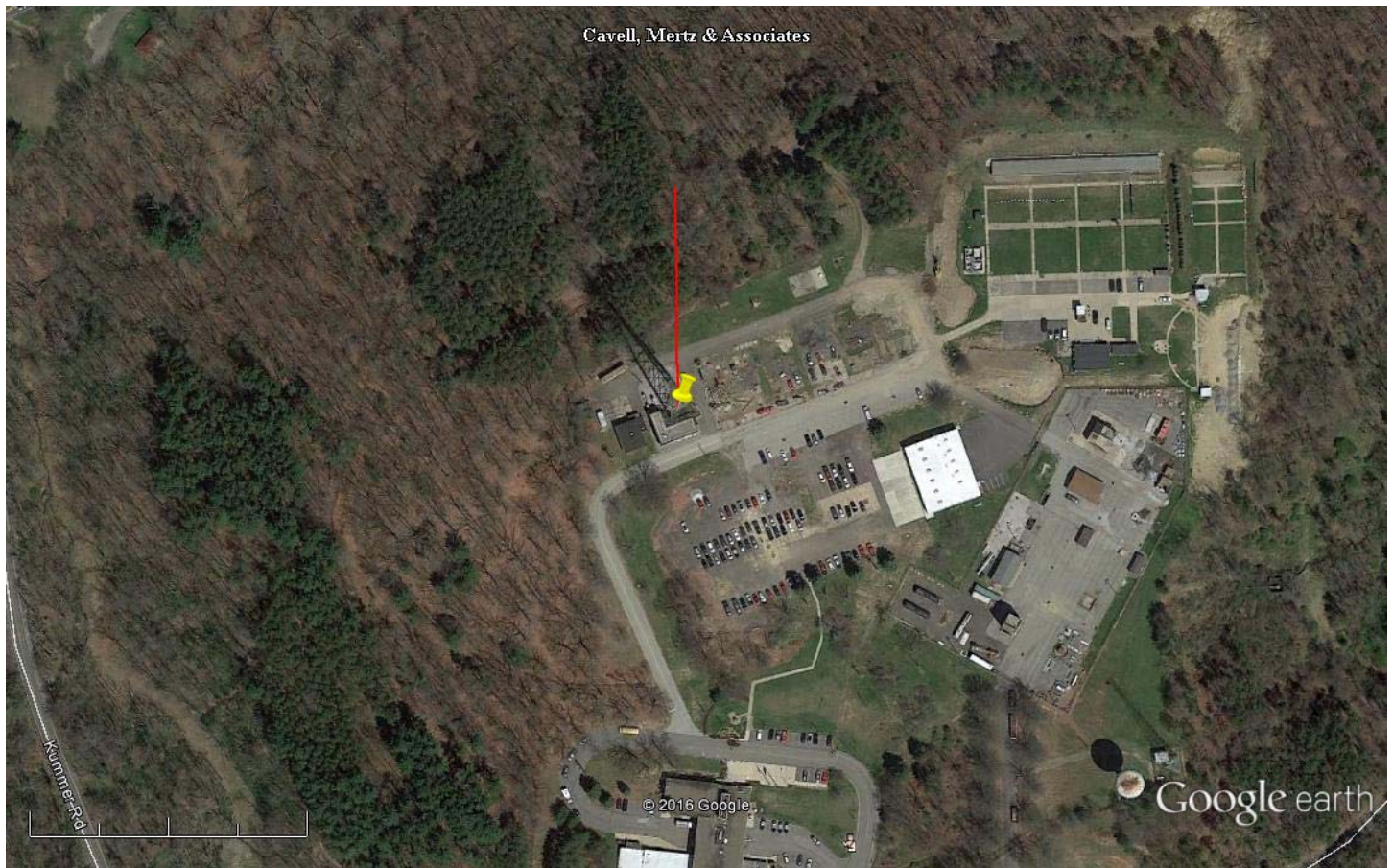
Therefore, EMF respectfully requests a waiver of C.F.R. 74.1204 based on no population within the area of predicted interference.

EXHIBIT 13 - A1
74.1204(d) Showing
W25I CD
Pittsburgh, Pa

ERP (kw): 0.01
Height of Antenna above Ground (m): 105
Translator's IX Contour: 121.7
Antenna Type: JLCP-1BAY

<u>Depression Angle from Horizon</u>	<u>Antenna Relative Field</u>	<u>ERP (kw) from the Antenna RF</u>	<u>Dist. To IX Contour (m)</u>	<u>Height IX Contour Above Ground (m)</u>
0	1.000	0.0100	18.2390	105.000
5	0.994	0.0099	18.1295	103.420
10	0.975	0.0095	17.7830	101.912
15	0.940	0.0088	17.1446	100.563
20	0.910	0.0083	16.5975	99.323
25	0.880	0.0077	16.0503	98.217
30	0.840	0.0071	15.3207	97.340
35	0.770	0.0059	14.0440	96.945
40	0.710	0.0050	12.9497	96.676
45	0.650	0.0042	11.8553	96.617
50	0.600	0.0036	10.9434	96.617
55	0.520	0.0027	9.4843	97.231
60	0.450	0.0020	8.2075	97.892
65	0.380	0.0014	6.9308	98.719
70	0.320	0.0010	5.8365	99.516
75	0.250	0.0006	4.5597	100.596
80	0.180	0.0003	3.2830	101.767
85	0.140	0.0002	2.5535	102.456
90	0.010	0.0000	0.1824	104.818

Exhibit 13-A2



Google earth

feet 1000
meters 300



Yellow Pin Marker

NAD 27

40 35' 25.0" N 80 00' 37.0" W

Red Line Marker

100m at zero degrees true north