

**MINOR MODIFICATION APPLICATION  
W271CH, Bridgeport, CT**

December, 2015

**TECHNICAL STATEMENT**

This technical statement and attached exhibits have been prepared on behalf of Best Media, Inc. ("Best"), Permittee of translator station W271CH, Facility identifier 138034. The applicant proposes to modify construction permit BNPFT-20130830AAM to change frequency to 272D, modify the antenna pattern and increase power to 150 watts ERP. This translator will rebroadcast Facility ID 46968, WPLR (FM), as a fill-in translator in compliance with 47CFR 74.1203. The translator community of license will remain Bridgeport, CT. The proposed operation is MX to the original W271CH permit and the 60dBu contours intersect since there is no change in tower site proposed. Best has received permission from the licensee of WPLR (FM) to rebroadcast that station's programming.

**Facilities Proposed**

Location (NAD27)	41° 16' 44.4" N Latitude, 73° 11' 08" W Longitude
Channel	272D (102.3MHz)
Tower Overall AGL Height-	150m
Tower ASR (Attached Exhibit D)	1205267 (SEE EXHIBIT G)
Proposed Antenna	Kathrein Scala CL-FM-V, 2-level stack, 0.94 Wavelength Spc
Antenna AGL Height-	145m
Site AMSL Height-	159m
COR AMSL Height	309m
HAAT	118m
ERP	80w DIRECTIONAL (SEE EXHIBIT A)

## Interference Study

ComStudy 2.2 search of channel 272 (102.3 MHz Class D) at 41-16-44.4 N, 73-11-08.0 W.

CALL	CITY	ST CHN CL	DIST	SEP	BRNG	CLEARANCE
WDRC-FM	HARTFORD	CT 275 B	42.46	0.00	42.0	-4.47 dB See Exhibit C
WBAB	BABYLON	NY 272 A	54.73	0.00	193.3	3.03 dB See Exhibit B
W273CN	WESTPORT	CT 273 D	22.85	0.00	259.5	5.42 dB See Exhibit B
WWFS	NEW YORK	NY 274 B	89.49	0.00	229.0	9.55 dB
WFAN-FM	NEW YORK	NY 270 B	89.49	0.00	229.0	9.44 dB
W271BZ	RIVERHEAD	NY 271 D	59.11	0.00	143.3	11.02 dB
WAQY	SPRINGFIELD	MA 271 B	97.90	0.00	23.9	11.38 dB
WBAZ	BRIDGEHAMPTON	NY 273 A	79.38	0.00	121.9	13.40 dB
WMOS	STONINGTON	CT 272 A	113.72	0.00	82.4	18.07 dB
WXCI	DANBURY	CT 219 A	28.35	10.00	297.2	18.30 dB
WAQY	SPRINGFIELD	MA 271 B	104.02	0.00	31.6	19.56 dB
WBEA	SOUTHOLD	NY 269 A	68.45	0.00	131.6	21.53 dB
NEW	RHINEBECK	NY 273 A	91.72	0.00	313.2	29.26 dB
W271BF	HIGHLAND	NY 271 D	83.49	0.00	306.2	32.90 dB
WKLB-FM	WALTHAM	MA 273 B	198.36	0.00	54.0	34.84 dB

CDBS Data as of 12/17/2015

### COMPLIANCE, 74.1201(g), 74.1203(d), 74.1233(a)(1), and 74.1204(d)

Exhibit B demonstrates compliance with 74.1204(d). There are no impermissible contour overlaps to any other facilities.

As demonstrated in Exhibit C, there will be no location where the signal of W271CH will be in excess of 40dBu above the WDRC 3<sup>rd</sup> adjacent signal.

Exhibit D demonstrates compliance with 74.1201(g) governing the use of a translator as a fill-in for an FM station. The 60dBu contour of the proposed W271CH will be completely contained within the 1mV/m contour of WPLR (FM).

Exhibit E demonstrates that the proposed facility is compliant with 74.1233(a)(1). The 60dBu contours overlap and the proposed facility is MX to the current Construction Permit.

### **Environmental Exhibit**

The proposed W271CH facility as proposed on channel 272D will utilize a directional antenna located on an existing tower owned by Crown Castle Tower (ASR 1205267). The ASR for the tower is attached as Exhibit E. The RF density near the tower was calculated using a worst-case dipole antenna setting at 80 watts horizontal and vertical.

Using the FCC program "FM Model for Windows", it was calculated that the proposed antenna contributes approximately  $0.16 \mu\text{W}/\text{cm}^2$  or 0.08% of the total allowable  $200 \mu\text{W}/\text{cm}^2$ . The maximum was found to be 39 meters from the base of the tower.

There are no non-excluded RF sources on the tower.

The proposed W271CH operation is categorically excluded from further environmental review under §1.1306 of the FCC rules and regulations.

Respectfully Submitted



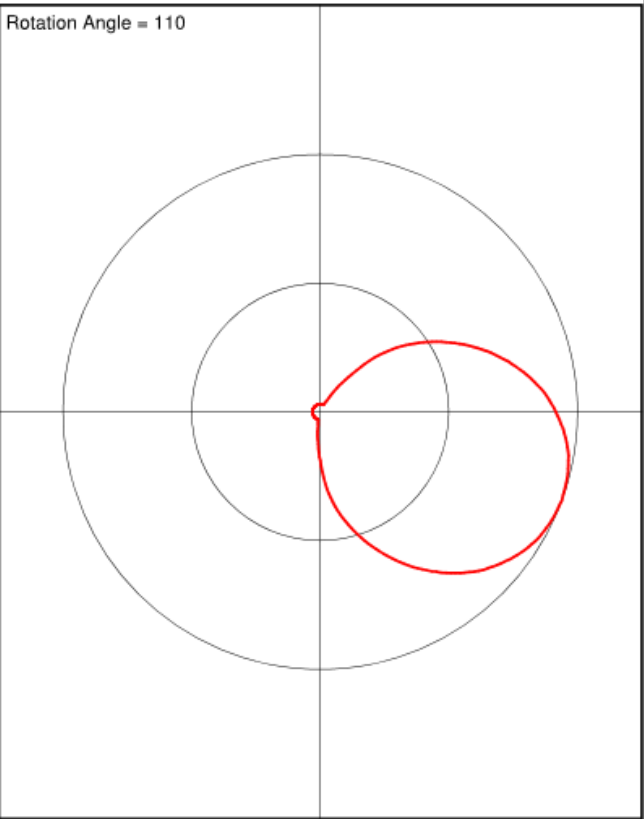
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EXHIBIT A: 2-Level CL-FM-V

W271CH Pattern on 272  
Pre-Rotation Antenna Pattern....

Azimuth (deg)	Relative Field
0.0	1.0
5.0	0.993
10.0	0.98
15.0	0.952
20.0	0.916
25.0	0.873
30.0	0.817
35.0	0.756
40.0	0.69
45.0	0.618
50.0	0.544
55.0	0.467
60.0	0.39
65.0	0.3
70.0	0.19
75.0	0.11
80.0	0.05
85.0	0.03
90.0	0.03
95.0	0.03
100.0	0.03
105.0	0.03
110.0	0.03
115.0	0.03
120.0	0.03
125.0	0.03
130.0	0.03
135.0	0.03
140.0	0.03
145.0	0.03
150.0	0.03
155.0	0.03
160.0	0.03
165.0	0.03
170.0	0.03
175.0	0.03
180.0	0.03
185.0	0.03
190.0	0.03
195.0	0.03
200.0	0.03
205.0	0.03
210.0	0.03
215.0	0.03
220.0	0.03
225.0	0.03
230.0	0.03
235.0	0.03
240.0	0.03
245.0	0.03
250.0	0.03
255.0	0.03
260.0	0.03
265.0	0.03
270.0	0.03
275.0	0.03
280.0	0.05
285.0	0.11
290.0	0.19
295.0	0.3
300.0	0.39
305.0	0.467
310.0	0.544
315.0	0.618

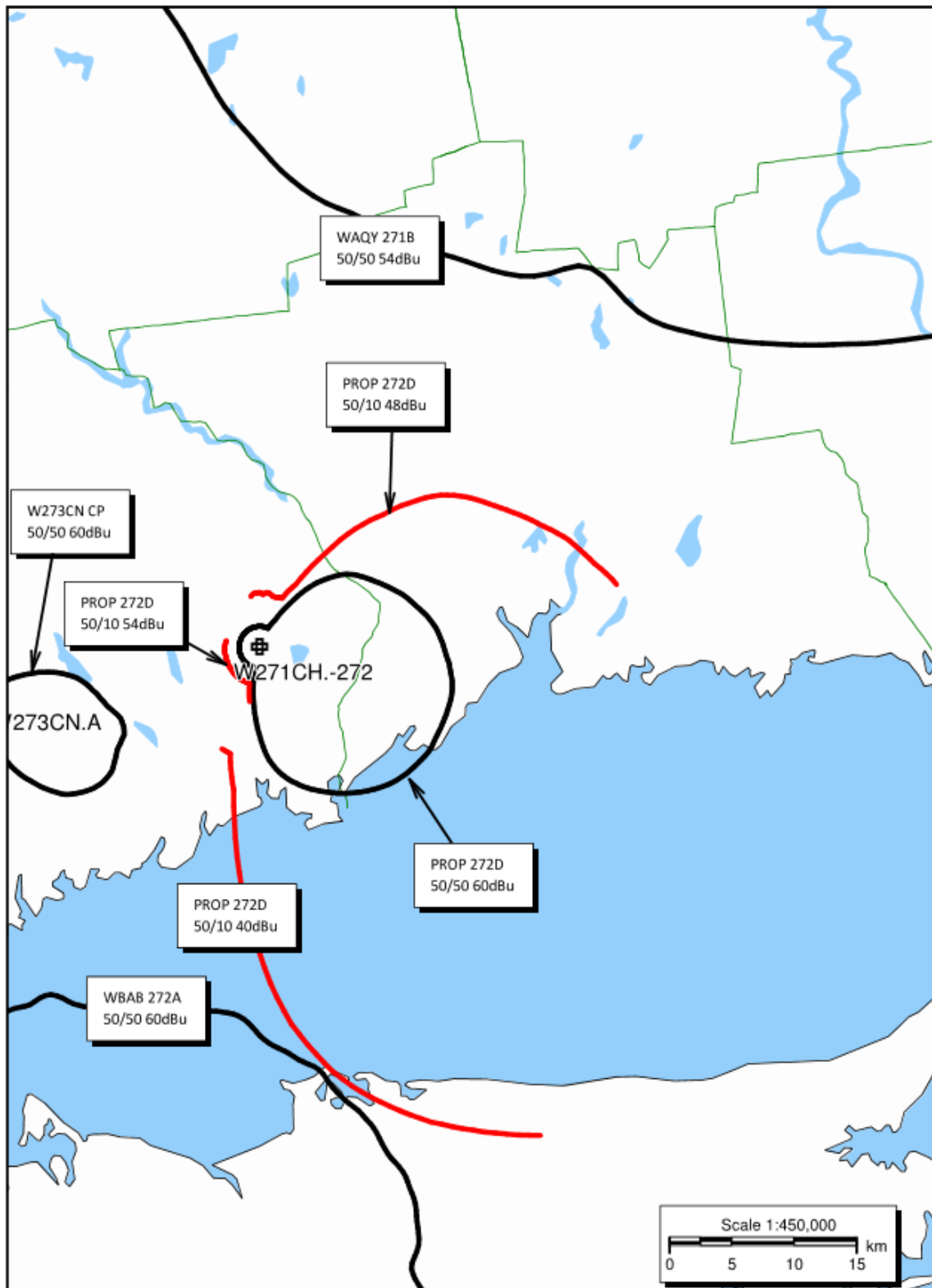
Rotation Angle = 110



320.0	0.69
325.0	0.756
330.0	0.817
335.0	0.873
340.0	0.916
345.0	0.952
350.0	0.98
355.0	0.993

## EXHIBIT B- 74.1204(d) Compliance

W271CH- PROP, 80 Watts, 145m AGL, Existing CP site- 2-stack Scala CL-FM-V Antenna



# EXHIBIT C 3<sup>rd</sup> Adjacent Interference Compliance to WDRC-FM

W271CH Bridgeport, CT  
 74.1204(d) Showing  
 Translator or LPFM Maximum Licensed ERP = 0.08  
 Translator or LPFM Antenna Height AG = 145 Meters  
 W271CH Antenna Model = 2-CL-FM V STACK 0.94 WL SPC

Protected Station's Contour = 57.88659 dBu  
 Translator's or LPFM's full Interference contour 97.88659

Review Azimuth = 0 Degrees True  
 Relative Field on the horizon at Review Azimuth = 1.000  
 Translator/LPFM ERP on the horizon at Review Azimuth = 0.08 kW  
 Distance between stations = 42.4 km  
 Protected Station= WDRC-F, 19.54 kW, 345 M Meters COR AMSL

Depression IX Angle From Horizon(Deg) (m)	Vertical Relative Field	Horizontal Relative Field	ERP (kw)	Dist to IX Contour Along Dep. Angle(m)	Dist to IX Contour From Tower Base(m)	Height Above Ground
00.00	1.0	1.0	0.0800	800.2312	800.2312	145.000
01.00	0.983	1.0	0.0773	786.4673	786.3475	131.274
02.00	0.966	1.0	0.0746	772.7033	772.2326	118.033
03.00	0.948	1.0	0.0720	758.9393	757.8992	105.280
04.00	0.931	1.0	0.0694	745.1753	743.3601	093.019
05.00	0.914	1.0	0.0668	731.4114	728.6281	081.253
06.00	0.897	1.0	0.0643	717.6473	713.7160	069.985
07.00	0.88	1.0	0.0619	703.8834	698.6367	059.218
08.00	0.862	1.0	0.0595	690.1194	683.4032	048.954
09.00	0.845	1.0	0.0571	676.3554	668.0284	039.195
10.00	0.828	1.0	0.0548	662.5915	652.5252	029.942
11.00	0.789	1.0	0.0498	631.2224	619.6251	024.557
12.00	0.75	1.0	0.0450	599.8533	586.7451	020.283
13.00	0.71	1.0	0.0404	568.4843	553.9140	017.119
14.00	0.671	1.0	0.0360	537.1152	521.1606	015.060
15.00	0.632	1.0	0.0320	505.7461	488.5132	014.103
16.00	0.593	1.0	0.0281	474.3771	456.0005	014.244
17.00	0.554	1.0	0.0245	443.0080	423.6507	015.477
18.00	0.514	1.0	0.0212	411.6389	391.4919	017.797
19.00	0.475	1.0	0.0181	380.2699	359.5522	021.196
20.00	0.436	1.0	0.0152	348.9008	327.8595	025.669
21.00	0.399	1.0	0.0127	318.8921	297.7115	030.719
22.00	0.361	1.0	0.0104	288.8835	267.8481	036.782
23.00	0.324	1.0	0.0084	258.8748	238.2955	043.850
24.00	0.286	1.0	0.0065	228.8661	209.0796	051.912
25.00	0.249	1.0	0.0049	198.8575	180.2261	060.959
26.00	0.211	1.0	0.0036	168.8488	151.7603	070.982
27.00	0.174	1.0	0.0024	138.8401	123.7075	081.968
28.00	0.136	1.0	0.0015	108.8314	096.0924	093.907
29.00	0.099	1.0	0.0008	078.8228	068.9400	106.786
30.00	0.061	1.0	0.0003	048.8141	042.2742	120.593
31.00	0.036	1.0	0.0001	028.4082	024.3506	130.369
32.00	0.01	1.0	0.0000	008.0023	006.7863	140.759
33.00	0.028	1.0	0.0001	022.0064	018.4561	133.014
34.00	0.045	1.0	0.0002	036.0104	029.8540	124.863
35.00	0.063	1.0	0.0003	050.0145	040.9694	116.313
36.00	0.08	1.0	0.0005	064.0185	051.7921	107.371

37.00	0.098	1.0	0.0008	078.0225	062.3116	098.045
38.00	0.115	1.0	0.0011	092.0266	072.5179	088.343
39.00	0.133	1.0	0.0014	106.0306	082.4013	078.273
40.00	0.15	1.0	0.0018	120.0347	091.9519	067.843
41.00	0.156	1.0	0.0019	124.5160	093.9734	063.310
42.00	0.161	1.0	0.0021	128.9973	095.8637	058.684
43.00	0.167	1.0	0.0022	133.4786	097.6200	053.968
44.00	0.172	1.0	0.0024	137.9599	099.2400	049.165
45.00	0.178	1.0	0.0025	142.4412	100.7211	044.279
46.00	0.174	1.0	0.0024	139.4003	096.8356	044.724
47.00	0.17	1.0	0.0023	136.3594	092.9969	045.273
48.00	0.167	1.0	0.0022	133.3185	089.2075	045.925
49.00	0.163	1.0	0.0021	130.2776	085.4698	046.678
50.00	0.159	1.0	0.0020	127.2368	081.7862	047.531
51.00	0.15	1.0	0.0018	120.3548	075.7417	051.467
52.00	0.142	1.0	0.0016	113.4728	069.8608	055.582
53.00	0.133	1.0	0.0014	106.5908	064.1479	059.873
54.00	0.125	1.0	0.0012	099.7088	058.6074	064.334
55.00	0.116	1.0	0.0011	092.8268	053.2433	068.961
56.00	0.107	1.0	0.0009	085.6247	047.8807	074.014
57.00	0.098	1.0	0.0008	078.4227	042.7120	079.229
58.00	0.089	1.0	0.0006	071.2206	037.7412	084.602
59.00	0.08	1.0	0.0005	064.0185	032.9720	090.125
60.00	0.071	1.0	0.0004	056.8164	028.4082	095.796
61.00	0.066	1.0	0.0003	052.6552	025.5278	098.947
62.00	0.061	1.0	0.0003	048.4940	022.7666	102.182
63.00	0.055	1.0	0.0002	044.3328	020.1267	105.499
64.00	0.05	1.0	0.0002	040.1716	017.6101	108.894
65.00	0.045	1.0	0.0002	036.0104	015.2187	112.363
66.00	0.04	1.0	0.0001	031.8492	012.9542	115.904
67.00	0.035	1.0	0.0001	027.6880	010.8186	119.513
68.00	0.029	1.0	0.0001	023.5268	008.8133	123.186
69.00	0.024	1.0	0.0000	019.3656	006.9400	126.921
70.00	0.019	1.0	0.0000	015.2044	005.2002	130.713
71.00	0.018	1.0	0.0000	014.4842	004.7156	131.305
72.00	0.017	1.0	0.0000	013.7640	004.2533	131.910
73.00	0.016	1.0	0.0000	013.0438	003.8136	132.526
74.00	0.015	1.0	0.0000	012.3236	003.3968	133.154
75.00	0.015	1.0	0.0000	011.6034	003.0032	133.792
76.00	0.014	1.0	0.0000	010.8831	002.6329	134.440
77.00	0.013	1.0	0.0000	010.1629	002.2862	135.098
78.00	0.012	1.0	0.0000	009.4427	001.9633	135.764
79.00	0.011	1.0	0.0000	008.7225	001.6643	136.438
80.00	0.01	1.0	0.0000	008.0023	001.3896	137.119
81.00	0.01	1.0	0.0000	008.0023	001.2518	137.096
82.00	0.01	1.0	0.0000	008.0023	001.1137	137.076
83.00	0.01	1.0	0.0000	008.0023	000.9752	137.057
84.00	0.01	1.0	0.0000	008.0023	000.8365	137.042
85.00	0.01	1.0	0.0000	008.0023	000.6974	137.028
86.00	0.01	1.0	0.0000	008.0023	000.5582	137.017
87.00	0.01	1.0	0.0000	008.0023	000.4188	137.009
88.00	0.01	1.0	0.0000	008.0023	000.2793	137.003
89.00	0.01	1.0	0.0000	008.0023	000.1397	136.999
90.00	0.01	1.0	0.0000	008.0023	000.0000	136.998

EXHIBIT E- 74.1201(g) Compliance to WPLR (FM)

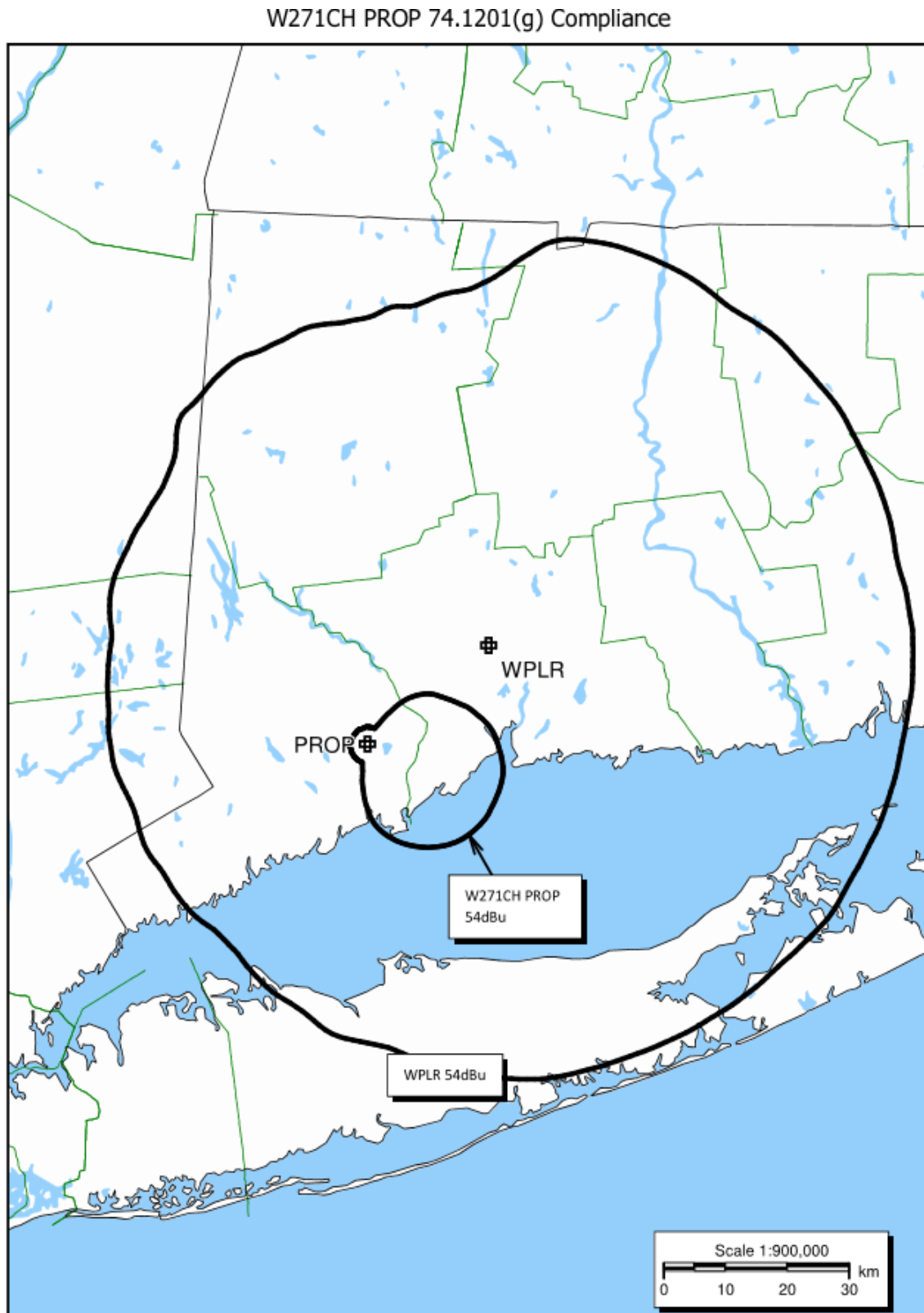
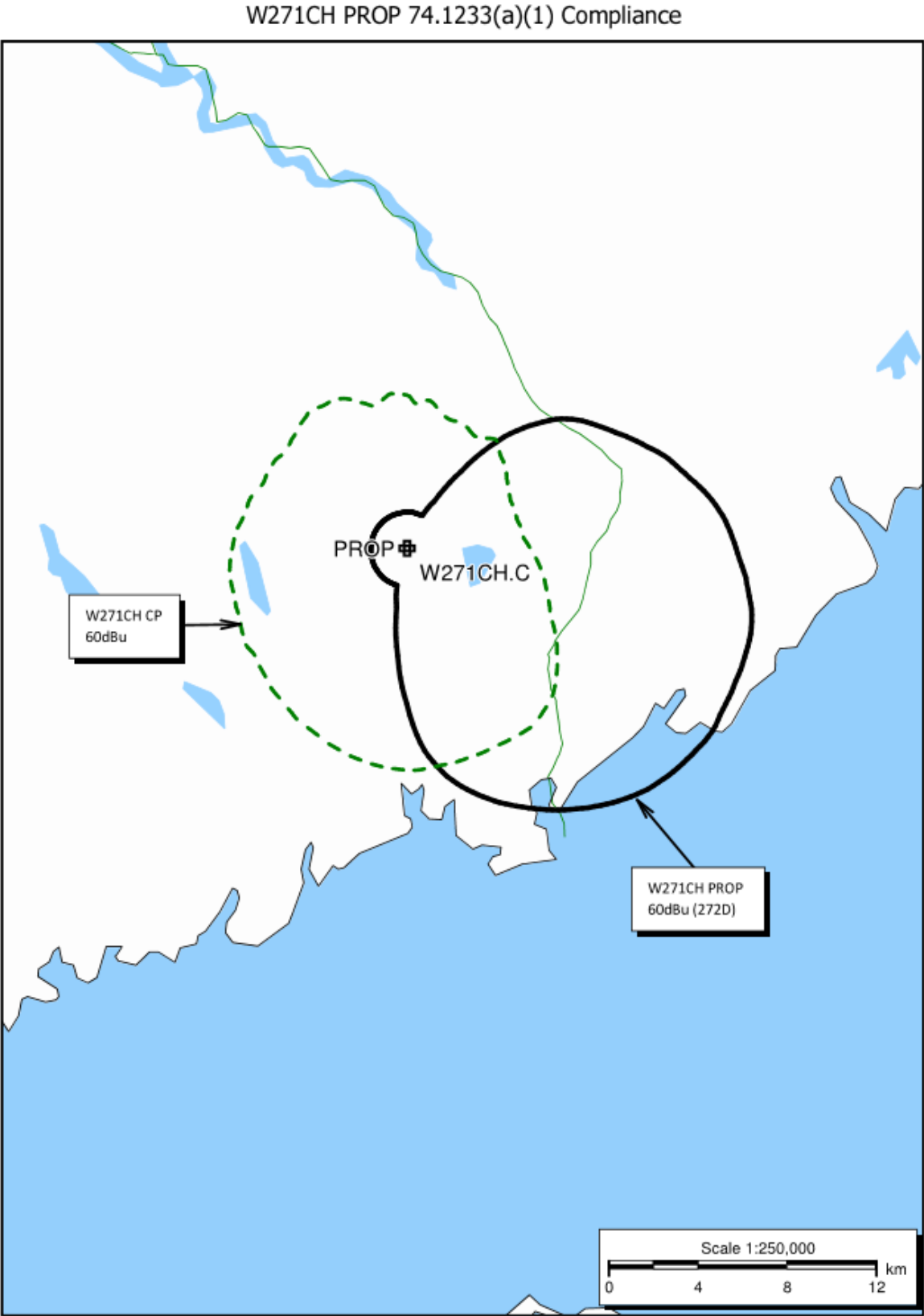





EXHIBIT F- 74.1233(a)(1) Compliance



## EXHIBIT G- ANTENNA STRUCTURE REGISTRATION

### Registration 1205267

 [Map Registration](#)

#### Registration Detail

Reg Number	1205267	Status	Constructed
File Number	A0962698	Constructed	06/01/1953
EMI	No	Dismantled	
NEPA	No		

#### Antenna Structure

Structure Type TOWER - Free standing or Guyed Structure used for Commu

#### Location (in NAD83 Coordinates)

Lat/Long	41-16-44.3 N 073-11-06.4 W	Address	Booth Hill Road
City, State	Trumbull , CT		
Zip	06611	County	FAIRFIELD
Center of AM Array		Position of Tower in Array	

#### Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
158.5	149.7
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
308.2	140.2

#### Painting and Lighting Specifications

FAA Chapters 3, 4, 5, 12

Paint and Light in Accordance with FAA Circular Number 70/7460-1K

#### FAA Notification

FAA Study	2011-ANE-612-OE	FAA Issue Date	04/27/2011
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#### Owner & Contact Information

FRN	0006156111	Owner Entity Type	Limited Liability Company
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#### Owner

Pinnacle Towers LLC  
2000 Corporate Drive  
Canonsburg , PA 15317

P: (724)416-2000  
F:  
E: Regulatory.Department@Crowncastle.com

#### Contact

Minney , Lisa M  
2000 Corporate Drive  
Canonsburg , PA 15317

P: (724)416-2257  
F:  
E: Lisa.Minney@Crowncastle.com

"

#### Last Action Status

Status	Constructed	Received	05/03/2015
Purpose	Admin Update	Entered	05/03/2015
Mode	Interactive		

(ASR 1205267 Cont'd)

#### Related Applications

05/03/2015      A0962698 - Admin Update (AU)

04/28/2011      A0726415 - Modification (MD)

04/28/2011      A0726416 - Notification (NT)

Related applications (14)

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#### Comments

##### Comments

None

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#### History

##### Date

##### Event

05/05/2015      Registration Printed

05/04/2015      ASR Application receipt email sent: Tower email

05/03/2015      Administrative Update Received

All History (29)

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#### Automated Letters

05/05/2015      Authorization, Reference

04/29/2011      Authorization, Reference

02/26/2011      Authorization, Reference

All letters (10)

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