

**DELAWDER COMMUNICATIONS, INC.**

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**ENGINEERING REPORT**

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**Flanders, NY, Channel 231D FM Translator Application**

**EXHIBIT 1: LPFM PRECLUSION STUDY**

Juan Alberto Ayala ("Applicant") submits this technical minor amendment for its pending 1983 application for a new FM translator station at Flanders, NY. The pending application file number is BNPFT-20030317HGJ.

The corresponding minor change amendment includes a slight coordinate correction and a reduction in ERP. The changes are deemed minor changes pursuant to Section 74.1233(a) of the FCC Rules. This Exhibit 1 addresses only the LPFM Preclusion Study requirements of the technical amendment. (The other technical requirements of this amendment are address in a separate document of this on-line filing.)

**LPFM PRECLUSION STUDY RESULTS**

This Engineering Report demonstrates that this application meet the FCC's requirements for this Auction 83 FM translator pursuant to *Creation of a Low Power FM Service, Amendment of Service Rules and Eligibility Rules for FM Broadcast Translator Stations*, Fifth Order on Reconsideration and Sixth Report and Order, FCC 12-144 (re;. December 4, 2012) ("Fifth Order on Reconsideration"). Additionally, the FCC's LPFM spectrum availability program,

[http://www.fcc.gov/Bureaus/MB/Databases/source\\_code/lpfm6.20121206.zip](http://www.fcc.gov/Bureaus/MB/Databases/source_code/lpfm6.20121206.zip)

("LPFM6"), is used as support for this Engineering Report.

An LPFM Preclusion Study is required by this application (based on the location of the herein proposed transmitter site) to each of the following *Spectrum Limited* Arbitron Metro Markets:

New York, NY –

Mrkt # 1; 30 min. grid centered at N 40-42-51 W 74-00-23 (d,m,s; NAD 27);

Bridgeport, CT –

Mrkt # 125; 30 min. grid centered at N 41-10-01 W 73-12-19 (d,m,s; NAD 27);

New Haven, CT –

Mrkt # 116; 30 min. grid centered at N 41-18-29 W 72-55-43 (d,m,s; NAD 27).

(Note that there are no *Spectrum Available* Markets located within 39 kilometers of the proposed 231D transmitter site.)

### *Metro Area Preclusion Study Results*

#### New York Metro Spectrum Limited Grid Study

The nearest point in the New York Grid is located more than 90 kilometers from the proposed 231D transmitter site; therefore, no grid study to the New York Metro Grid is required.

Therefore, as required by the Fifth Order on Reconsideration, this FM translator will not preclude the future use of a LPFM application from a potential LPFM channel/point located within the 30-minute New York Grid.

#### Bridgeport Metro Spectrum Limited Grid Study

Figure 1, attached, is the complete LPFM6 output file for the Bridgeport Metro Market with the study centered at the grid center.

From Figure 1 it is shown that zero channels are available within the 30-minute Grid for future LPFM on the same or first adjacent channels of the herein proposed FM translator (channels 230, 231 and 232).

Therefore, as required by the Fifth Order on Reconsideration, this FM translator will not preclude the future use of a LPFM application from a potential LPFM channel/point located within the 30-minute Bridgeport Grid.

#### New Haven Metro Spectrum Limited Grid Study

Figure 2, attached, is the complete LPFM6 output file for the New Haven Metro Market with the study centered at the grid center.

From Figure 2 it is shown that zero channels are available within the 30-minute Grid for future LPFM on the same or first adjacent channels of the herein proposed FM translator (channels 230, 231 and 232).

Therefore, as required by the Fifth Order on Reconsideration, this FM translator will not preclude the future use of a LPFM application from a potential LPFM channel/point located within the 30-minute New Haven Grid.

#### *Transmitter Site Test Study Results*

Figure 3, attached, is the complete LPFM6 output file for a study centered at the herein proposed translator site. From this site, the center location is shown to be available for future LPFM on channels 227, 250, 251, 258, 271, 283, 285 and 298. Therefore, since at least one channel exists for future LPFM at the proposed transmitter site, the transmitter site test for this application is successfully passed.

FIGURE 1

Bridgeport, CT  
 Latitude 41-10-01  
 Longitude 073-12-19  
 Grid Size 31 x 31  
 Micro FM 100 Watts at 30m HAAT  
 Co-Channel and 1st Adjacent Protected  
 2nd Adjacent Channel Not Protected  
 3rd Adjacent Channel Not Protected  
 I.F. Not Protected  
 TV Channel 6 Protected  
 CP Records Protected  
 APP Records Protected  
 FM Translators Protected  
 TV Channel 6 Translators/LP Protected  
 Auc83 FX App Records Not Protected

Chan	Avail	Chan	Avail	Chan	Avail	Chan	Avail	Chan	Avail
200	0	220	0	240	0	260	0	280	0
201	0	221	0	241	0	261	0	281	0
202	0	222	0	242	0	262	0	282	0
203	0	223	0	243	0	263	0	283	0
204	0	224	0	244	0	264	0	284	0
205	0	225	16	245	127	265	0	285	0
206	0	226	0	246	0	266	0	286	0
207	0	227	25	247	0	267	0	287	0
208	0	228	0	248	0	268	0	288	4
209	0	229	0	249	0	269	0	289	0
210	0	230	0	250	0	270	0	290	0
211	0	231	0	251	0	271	0	291	0
212	0	232	0	252	0	272	2	292	0
213	0	233	0	253	0	273	109	293	0
214	0	234	0	254	3	274	0	294	0
215	0	235	0	255	0	275	0	295	0
216	0	236	0	256	0	276	0	296	0
217	0	237	0	257	0	277	116	297	3
218	0	238	0	258	0	278	3	298	3
219	0	239	0	259	0	279	90	299	0
								300	0
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Total		501							

NOTE THAT ACTUAL CHANNEL STUDIES ARE NOT INCLUDED SINCE CHANNELS 230, 231 AND 232 SHOW ZERO AVAILABILITY.

{End of Figure 1}

FIGURE 2

New Haven, CT  
 Latitude 41-18-29  
 Longitude 072-55-43  
 Grid Size 31 x 31  
 Micro FM 100 Watts at 30m HAAT  
 Co-Channel and 1st Adjacent Protected  
 2nd Adjacent Channel Not Protected  
 3rd Adjacent Channel Not Protected  
 I.F. Not Protected  
 TV Channel 6 Protected  
 CP Records Protected  
 APP Records Protected  
 FM Translators Protected  
 TV Channel 6 Translators/LP Protected  
 Auc83 FX App Records Not Protected

Chan	Avail	Chan	Avail	Chan	Avail	Chan	Avail	Chan	Avail
200	0	220	0	240	0	260	0	280	0
201	0	221	0	241	124	261	0	281	0
202	0	222	0	242	0	262	0	282	0
203	0	223	0	243	0	263	0	283	143
204	0	224	0	244	0	264	0	284	0
205	0	225	17	245	454	265	0	285	0
206	0	226	0	246	91	266	0	286	0
207	0	227	25	247	0	267	0	287	104
208	0	228	0	248	0	268	0	288	0
209	0	229	0	249	0	269	82	289	0
210	0	230	0	250	0	270	0	290	0
211	0	231	0	251	3	271	0	291	0
212	0	232	0	252	0	272	0	292	0
213	0	233	0	253	0	273	384	293	0
214	0	234	0	254	143	274	0	294	0
215	0	235	0	255	0	275	0	295	0
216	0	236	0	256	0	276	0	296	0
217	0	237	0	257	0	277	450	297	243
218	0	238	0	258	5	278	243	298	361
219	0	239	0	259	0	279	195	299	0
								300	0
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Total	3067								

NOTE THAT ACTUAL CHANNEL STUDIES ARE NOT INCLUDED SINCE CHANNELS 230, 231 AND 232 SHOW ZERO AVAILABILITY.

{End of Figure 2}

FIGURE 3 (7 Pages)

Flanders, NY  
Latitude 40-52-54  
Longitude 072-38-16  
Grid Size 11 x 11  
Micro FM 100 Watts at 30m HAAT  
Co-Channel and 1st Adjacent Protected  
2nd Adjacent Channel Not Protected  
3rd Adjacent Channel Not Protected  
I.F. Not Protected  
TV Channel 6 Protected  
CP Records Protected  
APP Records Protected  
FM Translators Protected  
TV Channel 6 Translators/LP Protected  
Auc83 FX App Records Not Protected

Chan	Avail	Chan	Avail	Chan	Avail	Chan	Avail	Chan	Avail
200	0	220	0	240	0	260	0	280	0
201	0	221	0	241	0	261	0	281	0
202	0	222	0	242	0	262	0	282	0
203	0	223	0	243	0	263	0	283	82
204	0	224	0	244	0	264	0	284	2
205	0	225	0	245	0	265	0	285	58
206	0	226	0	246	0	266	0	286	0
207	0	227	69	247	0	267	0	287	0
208	0	228	0	248	0	268	0	288	0
209	0	229	0	249	0	269	0	289	0
210	0	230	0	250	83	270	0	290	0
211	0	231	44	251	121	271	93	291	0
212	0	232	0	252	0	272	0	292	0
213	0	233	10	253	0	273	0	293	0
214	0	234	23	254	0	274	0	294	0
215	0	235	1	255	0	275	0	295	0
216	0	236	0	256	0	276	0	296	0
217	0	237	0	257	0	277	0	297	0
218	0	238	0	258	83	278	13	298	83
219	0	239	0	259	0	279	0	299	0
									300
									0
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Total		765							

Total allotments, least preclusive spacing:	14
Total allotments, most preclusive spacing:	11
Flanders, NY	Flanders, NY
Latitude 40-52-54	Latitude 40-52-54

Longitude 072-38-16  
Least preclusive siting  
Availability of Channel 227 (X)

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Longitude 072-38-16  
Most preclusive siting  
Availability of Channel 227 (X)

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Point #061 at 40-52-54 072-38-16  
Flanders, NY  
Latitude 40-52-54  
Longitude 072-38-16  
Least preclusive siting  
Availability of Channel 231 (X)

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Point #061 at 40-52-54 072-38-16  
Flanders, NY  
Latitude 40-52-54  
Longitude 072-38-16  
Most preclusive siting  
Availability of Channel 231 (X)

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Point #050 at 40-52-54 072-37-16  
Flanders, NY  
Latitude 40-52-54  
Longitude 072-38-16  
Least preclusive siting  
Availability of Channel 233 (X)

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Point #050 at 40-52-54 072-37-16  
Flanders, NY  
Latitude 40-52-54  
Longitude 072-38-16  
Most preclusive siting  
Availability of Channel 233 (X)

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Point #036 at 40-49-54 072-36-16  
 Flanders, NY  
 Latitude 40-52-54  
 Longitude 072-38-16  
 Least preclusive siting  
 Availability of Channel 234 (X)

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Flanders, NY  
 Latitude 40-52-54  
 Longitude 072-38-16  
 Most preclusive siting  
 Availability of Channel 234 (X)

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Point #066 at 40-57-54 072-38-16  
 Flanders, NY  
 Latitude 40-52-54  
 Longitude 072-38-16  
 Least preclusive siting  
 Availability of Channel 235 (X)

O

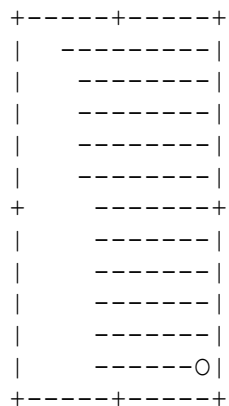
Point #051 at 40-53-54 072-37-16  
 Flanders, NY  
 Latitude 40-52-54  
 Longitude 072-38-16  
 Most preclusive siting  
 Availability of Channel 235 (X)

O

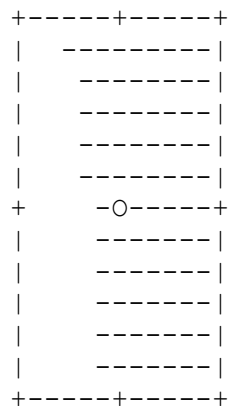
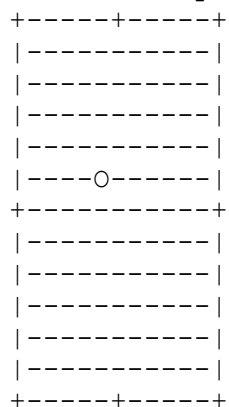
Point #111 at 40-47-54 072-43-16  
 Flanders, NY  
 Latitude 40-52-54  
 Longitude 072-38-16  
 Least preclusive siting  
 Availability of Channel 250 (X)

Point #111 at 40-47-54 072-43-16  
 Flanders, NY  
 Latitude 40-52-54  
 Longitude 072-38-16  
 Most preclusive siting  
 Availability of Channel 250 (X)

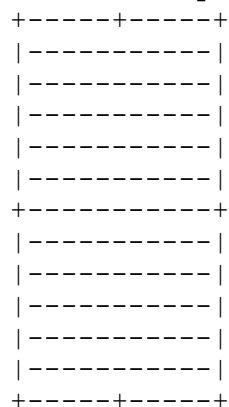




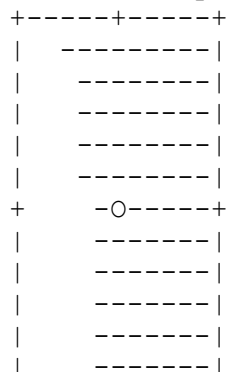
Point #001 at 40-47-54 072-33-16  
 Flanders, NY  
 Latitude 40-52-54  
 Longitude 072-38-16  
 Least preclusive siting  
 Availability of Channel 251 (X)



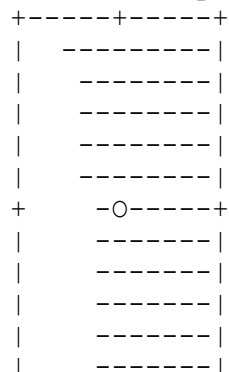
Point #061 at 40-52-54 072-38-16  
 Flanders, NY  
 Latitude 40-52-54  
 Longitude 072-38-16  
 Most preclusive siting  
 Availability of Channel 251 (X)



Point #073 at 40-53-54 072-39-16  
 Flanders, NY  
 Latitude 40-52-54  
 Longitude 072-38-16  
 Least preclusive siting  
 Availability of Channel 258 (X)



Flanders, NY  
 Latitude 40-52-54  
 Longitude 072-38-16  
 Most preclusive siting  
 Availability of Channel 258 (X)



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Point #061 at 40-52-54 072-38-16  
Flanders, NY  
Latitude 40-52-54  
Longitude 072-38-16  
Least preclusive siting  
Availability of Channel 271 (X)

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Point #061 at 40-52-54 072-38-16  
Flanders, NY  
Latitude 40-52-54  
Longitude 072-38-16  
Most preclusive siting  
Availability of Channel 271 (X)

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Point #061 at 40-52-54 072-38-16  
Flanders, NY  
Latitude 40-52-54  
Longitude 072-38-16  
Least preclusive siting  
Availability of Channel 278 (X)

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Point #061 at 40-52-54 072-38-16  
Flanders, NY  
Latitude 40-52-54  
Longitude 072-38-16  
Most preclusive siting  
Availability of Channel 278 (X)

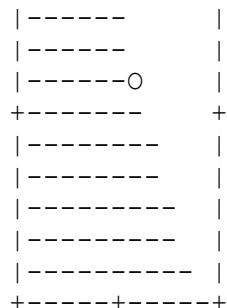
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Point #071 at 40-51-54 072-39-16  
Flanders, NY  
Latitude 40-52-54  
Longitude 072-38-16  
Least preclusive siting  
Availability of Channel 283 (X)

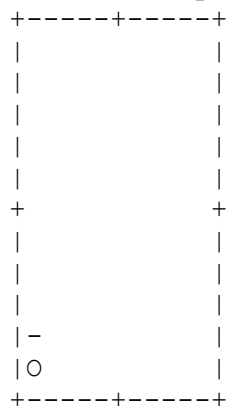
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Point #071 at 40-51-54 072-39-16  
Flanders, NY  
Latitude 40-52-54  
Longitude 072-38-16  
Most preclusive siting  
Availability of Channel 283 (X)

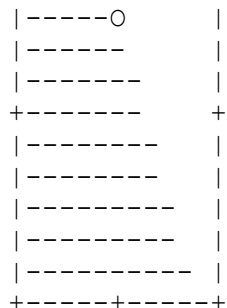
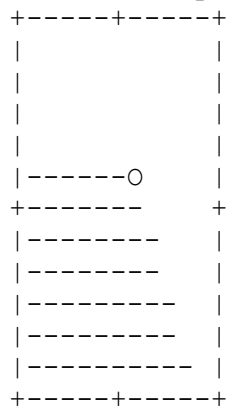
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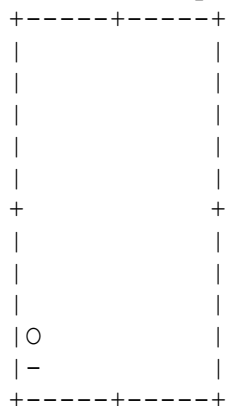
Point #051 at 40-53-54 072-37-16  
 Flanders, NY  
 Latitude 40-52-54  
 Longitude 072-38-16  
 Least preclusive siting  
 Availability of Channel 284 (X)



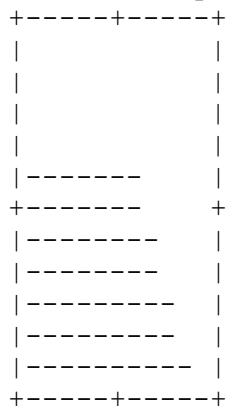
Point #111 at 40-47-54 072-43-16  
 Flanders, NY  
 Latitude 40-52-54  
 Longitude 072-38-16  
 Least preclusive siting  
 Availability of Channel 285 (X)



Point #064 at 40-55-54 072-38-16  
 Flanders, NY  
 Latitude 40-52-54  
 Longitude 072-38-16  
 Most preclusive siting  
 Availability of Channel 284 (X)



Point #112 at 40-48-54 072-43-16  
 Flanders, NY  
 Latitude 40-52-54  
 Longitude 072-38-16  
 Most preclusive siting  
 Availability of Channel 285 (X)



Point #051 at 40-53-54 072-37-16

Flanders, NY

Latitude 40-52-54

Longitude 072-38-16

Least preclusive siting

Availability of Channel 298 (X)

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Flanders, NY

Latitude 40-52-54

Longitude 072-38-16

Most preclusive siting

Availability of Channel 298 (X)

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Point #061 at 40-52-54 072-38-16

Point #061 at 40-52-54 072-38-16

{End of Figure 3}