

Exhibit 12—Contour Spacing

The proposed facility will operate with an ERP of 0.010kw @ 26m AGL. A Contour spacing study was conducted (see Exhibit 12A) and found no expected interference. All stations are clear and applicant expects to give no interference to any co-, first, second, third adjacent, channel 6 or IF stations. Clearance is illustrated in attached Exhibit 12B, Contour Spacing map.

To establish the correct power level, a 12-radial HAAT study was conducted (see Exhibit 12C). The MERP was found to be on the 030 degree radial which yielded a 202.2 meter HAAT. Power was then adjusted to 0.010 kW in accordance with CFR 74.1235(d). This was confirmed in a Translator Power Study (see Exhibit 12D).

All the statements, maps and data contained in the following pages are true and correct to the best of my knowledge and belief and were prepared by me or under my supervision. Unless otherwise noted, all data and maps are from *rFinvestigator V.3.524 by rFsoftware, Inc.* All maps utilize USGS rasterized data and terrain data is based on the USGS 3-second DEM(DMA) terrain database, ver. 2012. Scale is as described on each map and all co-ordinates are NAD 27 datum unless otherwise noted.



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FET Engineering
Haubstadt, IN 47639
8-28-2013

Exhibit 12A-Contour Spacing Study

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 Date: 8/27/2013 7:37:35 PM
 rInvestigator Version 3.5.25
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FET Engineering
 Job: Morrill TX.fmj
 Master Database: 2013_May_23.fmd
 Lat: N37:30:10 Lon: W084:13:09 NAD-27
 Channel: 282 Class: DX
 Status: Licensed, Construction Permit, Application
 Channels: Co-Channel, 1st Adj, 2nd Adj, 3rd Adj, IF
 Range: 99 km
 Comments: No Comments
 Description: Interference Contour Study Table

Callsign	City	State	Channel	Adjacency	Class	Latitude (NAD27)	Longitude (NAD27)	Status	ERP	HAAT	Distance	Bearing	73	207	Min	Sep	73	207	Clear
20030317MNO	MORRILL	KY	284 : 104.7 MHz	2nd Adj	DX	N37:30:10	W084:13:09	APP	0.01	144	0.00	180	0				0.00		
20030317MOI	MORRILL	KY	282 : 104.3 MHz	Co-Chan	DX	N37:30:10	W084:13:09	APP	0.01	144	0.00	180	0				0.00		
W283AI	MOUNT VERNON	KY	285 : 104.9 MHz	3rd Adj	DX	N37:18:57	W084:17:50	LIC	0.02	99	21.88	198	0				21.88		
WWEL	LONDON	KY	280 : 103.9 MHz	2nd Adj	A	N37:08:30	W084:04:45	LIC	5.40	106	41.96	163	0				41.96		
WSKV-FM	STANTON	KY	285 : 104.9 MHz	3rd Adj	A	N37:45:43	W083:50:36	LIC	0.72	207	43.91	049	0				43.91		
W285DT	LONDON	KY	285 : 104.9 MHz	3rd Adj	DX	N37:06:39	W084:02:47	LIC	0.02	0	46.12	161	0				46.12		
W283AH	MANCHESTER	KY	285 : 104.5 MHz	1st Adj	DX	N37:08:58	W083:45:08	LIC	0.01	202	57.02	133	0				57.02		
W286DO	LEXINGTON	KY	280 : 103.9 MHz	2nd Adj	DX	N38:00:54	W084:26:18	LIC	0.25	128	60.04	341	0				60.04		
WLKT	LEXINGTON-FAY	KY	283 : 104.5 MHz	1st Adj	C2	N38:04:09	W084:18:44	LIC	50.00142	63.39	353	0				63.39			
WCBJ	CAMPTON	KY	279 : 103.7 MHz	3rd Adj	A	N37:39:03	W083:26:21	LIC	4.10	121	70.84	077	0				70.84		
WRVG-LP	GEORGETOWN	KY	229 : 93.7 MHz	IF	L1	N38:12:27	W084:33:14	LIC	0.00	9	83.58	339	6				77.58		
W228CL	FRANKFORT	KY	228 : 93.5 MHz	IF	DX	N38:10:22	W084:47:27	CP	0.12	0	89.79	326	10				79.79		
WEZJ-FM	WILLIAMSBURG	KY	282 : 104.3 MHz	Co-Chan	C3	N36:44:43	W084:11:24	LIC	6.20	200	84.11	178	0				84.11		
WJRS	JAMESTOWN	KY	285 : 104.9 MHz	3rd Adj	A	N37:01:31	W085:04:23	LIC	2.00	110	92.44	235	0				92.44		
WAIN-FM	COLUMBIA	KY	228 : 93.5 MHz	IF	A	N37:06:26	W085:16:42	LIC	4.60	61	103.66	245	10				93.66		
WXYR-LP	MONTECELLO	KY	283 : 104.5 MHz	1st Adj	L1	N36:48:29	W084:50:46	LIC	0.00	199	95.11	216	0				95.11		
WJMD	HAZARD	KY	284 : 104.7 MHz	2nd Adj	A	N37:11:36	W083:11:04	LIC	0.48	346	97.91	111	0				97.91		

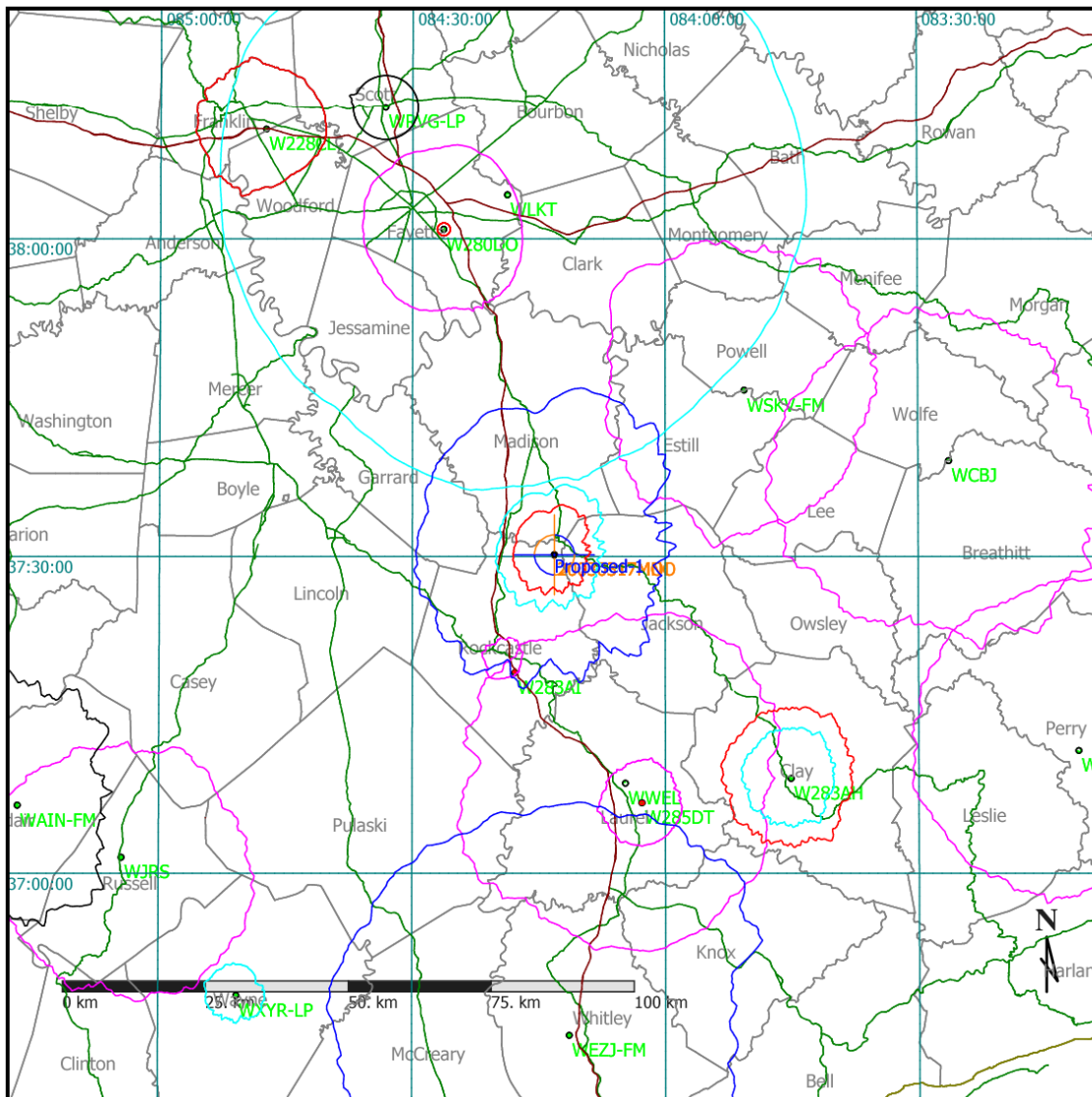
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Exhibit 12B-Contour Spacing Study

Contour Analysis

FET Engineering
 Job: Morrill TX.fmj
 Master Database: 2013_May_23.fmd
 Lat: N37:30:10 Lon: W084:13:09 NAD-27
 Scale: 1:1000000
 Channel: 282 Class: DX
 Status: Licensed, Construction Permit, Application
 Channels: Co-Channel, 1st Adj, 2nd Adj, 3rd Adj, IF
 Range: 99 km, Clearance: FCC
 Comments: No Comments
 Description: Interference Contour Map

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 Date: 8/27/2013 7:36:30 PM
 Key:
 City Grade
 Protected
 Co-Channel
 1st Adj
 2nd/3rd Adj





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Exhibit 12C-HAAT Radial Study

12 Radial Average Terrain Report

FET Engineering

Job: Morrill TX.fmj:*Proposed-1
N37:30:10 W084:13:09 NAD-27
Channel: 279 Class: DX
Description: HAAT Radial Report

Site Elevation: 361.3 meters AMSL Rad Center: 506.9 meters AMSL

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Date: 8/27/2013 7:29:50 PM
USGS 3-Sec DEM(DMA)

Radial Details

Bearing Degrees True	Average Height 3.0 to 16.0 km meters (feet)	Antenna Height HAAT meters (feet)	Min Height AMSL meters (feet)	Max Height AMSL meters (feet)
000	307.7 (1,009)	199.3 (654)	268.2 (880)	457.0 (1,499)
030	304.8 (1,000)	202.2 (663)	228.5 (750)	455.8 (1,496)
060	388.7 (1,275)	118.3 (388)	243.8 (800)	465.4 (1,527)
090	397.1 (1,303)	109.8 (360)	306.0 (1,004)	464.8 (1,525)
120	409.4 (1,343)	97.5 (320)	337.6 (1,108)	457.8 (1,502)
150	397.8 (1,305)	109.1 (358)	306.2 (1,005)	457.0 (1,499)
180	404.0 (1,325)	102.9 (338)	335.0 (1,099)	457.3 (1,500)
210	360.0 (1,181)	146.9 (482)	285.2 (936)	448.3 (1,471)
240	356.0 (1,168)	151.0 (495)	298.8 (980)	426.9 (1,401)
270	351.2 (1,152)	155.8 (511)	305.0 (1,001)	427.0 (1,401)
300	341.6 (1,121)	165.4 (543)	268.9 (882)	457.3 (1,500)
330	317.6 (1,042)	189.3 (621)	274.9 (902)	457.4 (1,501)

Average of -N- Radials

8 Radials	358.1 (1,175)	148.8 (488)
12 Radials	361.3 (1,185)	145.6 (478)
72 Radials	362.7 (1,190)	144.2 (473)
360 Radials	359.4 (1,179)	147.6 (484)

Exhibit 12D-Translator Power Study pg.1

ERP							
'ID'	'Key'	'Site Latitu	'Site Longi	'Site AMSL	'Radials U:	'Antenna'	'Antenna /
*Proposed	-999	37.50286	-84.2191	361.3214	360	Omni	506.9431
'Bearing'	'Ant Gain'	'HAT (met	'HAAT (met	'erp (kW)'	'Max East	'Max Other (kW)'	
0	1	307.696	199.247	0.01	0.01	0.062	
5	1	286.183	220.76	0.01	0.01	0.062	
10	1	274.622	232.321	0.01	0.01	0.062	
15	1	281.443	225.5	0.01	0.01	0.062	
20	1	284.068	222.876	0.01	0.01	0.062	
25	1	284.493	222.45	0.01	0.01	0.062	
30	1	304.824	202.119	0.01	0.01	0.062	
35	1	302.309	204.634	0.01	0.01	0.062	
40	1	296.251	210.692	0.01	0.01	0.062	
45	1	332.487	174.457	0.01	0.01	0.062	
50	1	343.046	163.897	0.01	0.013	0.205	
55	1	347.087	159.856	0.01	0.013	0.205	
60	1	388.709	118.234	0.01	0.013	0.205	
65	1	420.618	86.325	0.01	0.013	0.205	
70	1	408.291	98.652	0.01	0.013	0.205	
75	1	386.179	120.764	0.01	0.013	0.205	
80	1	411.588	95.356	0.01	0.019	0.205	
85	1	386.548	120.395	0.01	0.019	0.205	
90	1	397.128	109.815	0.01	0.019	0.205	
95	1	417.053	89.89	0.01	0.019	0.205	
100	1	410.069	96.874	0.01	0.019	0.205	
105	1	408.028	98.915	0.01	0.019	0.205	
110	1	410.242	96.702	0.01	0.019	0.25	
115	1	407.739	99.205	0.01	0.019	0.25	
120	1	409.377	97.566	0.01	0.019	0.25	
125	1	399.529	107.414	0.01	0.019	0.25	
130	1	386.039	120.904	0.01	0.019	0.25	
135	1	376.945	129.998	0.01	0.019	0.25	
140	1	363.13	143.813	0.01	0.019	0.205	
145	1	384.129	122.814	0.01	0.019	0.205	
150	1	397.843	109.1	0.01	0.019	0.205	
155	1	409.977	96.966	0.01	0.019	0.205	
160	1	395.226	111.717	0.01	0.019	0.205	
165	1	386.627	120.316	0.01	0.019	0.205	
170	1	376.844	130.1	0.01	0.019	0.25	
175	1	386.873	120.07	0.01	0.019	0.25	
180	1	403.998	102.945	0.01	0.019	0.25	
185	1	401.911	105.033	0.01	0.019	0.25	
190	1	376.08	130.864	0.01	0.019	0.25	
195	1	353.623	153.32	0.01	0.019	0.25	
200	1	372.251	134.693	0.01	0.01	0.115	
205	1	388.905	118.038	0.01	0.01	0.115	
210	1	360.072	146.871	0.01	0.01	0.115	
215	1	333.038	173.905	0.01	0.01	0.115	

Exhibit 12D-Translator Power Study pg.2

220	1	349.229	157.714	0.01	0.01	0.115
225	1	366.509	140.434	0.01	0.01	0.115
230	1	355.707	151.237	0.01	0.01	0.115
235	1	353.114	153.829	0.01	0.01	0.115
240	1	355.965	150.978	0.01	0.01	0.115
245	1	368.248	138.695	0.01	0.01	0.115
250	1	362.538	144.405	0.01	0.01	0.115
255	1	349.217	157.726	0.01	0.01	0.115
260	1	352.242	154.701	0.01	0.01	0.115
265	1	350.279	156.664	0.01	0.01	0.115
270	1	351.18	155.763	0.01	0.01	0.115
275	1	353.927	153.016	0.01	0.01	0.115
280	1	352.579	154.364	0.01	0.01	0.115
285	1	359.05	147.893	0.01	0.01	0.115
290	1	358.687	148.257	0.01	0.01	0.092
295	1	342.311	164.633	0.01	0.01	0.092
300	1	341.552	165.392	0.01	0.01	0.092
305	1	334.341	172.602	0.01	0.01	0.092
310	1	330.554	176.389	0.01	0.01	0.092
315	1	328.848	178.095	0.01	0.01	0.092
320	1	324.238	182.706	0.01	0.01	0.075
325	1	325.269	181.674	0.01	0.01	0.075
330	1	317.651	189.292	0.01	0.01	0.075
335	1	306.684	200.259	0.01	0.01	0.075
340	1	311.037	195.906	0.01	0.01	0.075
345	1	322.286	184.657	0.01	0.01	0.075
350	1	334.584	172.359	0.01	0.01	0.062
355	1	337.69	169.253	0.01	0.01	0.062