

## **TECHNICAL NARRATIVE**

This Technical Narrative and attached exhibits were prepared on behalf of Alliance Radio, LLC (“Alliance”), licensee of WPNA-FM, Facility ID No. 74177, Channel 276A, Highland Park, Illinois. Alliance herein proposes an FCC minor change application to modify WPNA-FM to operate on Channel 276A (103.1 MHz) licensed to Niles, Illinois.

There will be no change to the transmit location, which is a rooftop site in Evanston, IL. The building is not registered with an FCC Antenna Registration Number ("ASR"). No changes are being made to the building, supporting master or antenna. Therefore, it is believed that a Section 106 review by the SHPO/THPO is not required. The proposed transmitting antenna is an ERI Model LP-2E 2 bay 0.7 wave spaced antenna operating at 6.0 kW ERP with a center of radiation of 90.0 meters above ground level. The proposed new WPNA-FM facility would operate on Channel 276A with an effective radiated power of 6.0 kW non-directional at 91.2 meters height above average terrain.

The WPNA-FM reference site is the same as the WPNA-FM licensed site as required with Section 73.213(a) grand fathered short spaced stations. That site is short spaced to full power co-channel FM station WCSJ-FM, Channel 276A, Facility ID No. 17038, Morris, Illinois. In order to facilitate the WPNA-FM allotment to Niles, a change must be made to the FCC FM database. Herein, Alliance is proposing new reference site coordinates for WCSJ-FM, Channel 276A, Facility ID No. 17038, Morris, Illinois. The proposed reference site coordinates for WCSJ-FM are 41° 10' 10" N. Latitude and 88° 24' 06" W. Longitude (NAD 83). These coordinates are fully spaced to all full power FM stations and allotments.

The WCSJ-FM hypothetical 70 dBu contour from the proposed reference site does not cover 100 percent of the Morris, IL community boundaries. Therefore, Alliance is requesting a Woodstock Exception also known as the Woodstock and Broadway policy<sup>1</sup> to demonstrate that a city grade contour does encompass 100 percent of Morris. Alliance has obtained reasonable assurance from the land owner, George Milton. An FAA Form 7460-1 application is on file to construct a 270 ft. tower at the reference site. That application is pending. See the Exhibit titled George Milton Reasonable Assurance letter included with the supplemental showing. Please refer to the Reference/Allotment Site Supplemental Showing for more details. A supplemental showing exhibit is provided showing the proposed WCSJ-FM allotment will provide city grade coverage of Morris based on and in compliance with the Woodstock and Broadway policy.

The coordinates of the proposed WPNA-FM application site are 42° 02' 50" North Latitude, 87° 39' 17" West Longitude (NAD 83). Based on the attached Channel Study, the site is fully spaced to all full power FM stations under Section 73.207 with three exceptions. WPNA-FM is short-spaced to second adjacent full power FM stations WVAZ, Channel 274B, Oak Park, IL and WKSC-FM, Channel 278B, Chicago, IL. WPNA-FM has been grandfather short-spaced to these two facilities since first signing on the air in November 1960. WPNA-FM is currently licensed under Section 73.213(a) with respect to WVAZ and WKSC-FM and will continue to do so following the proposed modification. No contour protections are required to second and third adjacent stations under Section 73.213(a). WPNA-FM is also short-spaced to co-channel full

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<sup>1</sup> <sup>1</sup> *Woodstock and Broadway, Virginia*, Memorandum Opinion and Order, 3 FCC Rcd 6398 (1988) (“*Woodstock and Broadway*” (stating that a rulemaking proponent seeking an upgrade of an existing station may use actual terrain data to calculate city-grade coverage if such petitioner has a reasonable assurance of the continued availability of its proposed transmitter site and has obtained FAA approval for the site).

power FM station WCSJ-FM, Channel 276A, Morris, IL. Alliance proposes to adopt Section 73.215 contour protection with respect to WCSJ-FM.

The WPNA-FM Application Site F(50,50) 70 dBu city grade contour reaches 99.4 percent percent of the Niles, IL corporate boundaries and 100 percent of the Niles population.

This application includes a comprehensive Section 307(b) analysis that demonstrates the proposed change of community of license would serve the public interest, as required by Section 307(b) of the Communications Act of 1934, under Priority 4 of Revision of FM Assignment Policies and Procedures, Second Report and Order, 90 FCC 2d 88 (1982). The Section 307(b) analysis demonstrates the proposed WPNA-FM modification would advance Section 307(b) under Priority 4 "Other public service matters" persons receiving an additional reception service. Because the community of license for both the licensed and proposed WPNA-FM facility are located in the Chicago, IL-IN Urbanized Area, the proposed modification of WPNA-FM should be considered an "Intra-Urbanized Area" move for purposes of a Section 307(b) analysis. The WPNA-FM proposed modification is believed to be consistent with the policies established in FCC 11-28, Second Report and Order in *Rural Radio*<sup>1</sup> released on March 3, 2011 and FCC 12-127 and Second Order on Reconsideration in *Rural Radio*<sup>2</sup> released on October 12, 2012.

<sup>1</sup> *Policies to Promote Rural Radio Service and to Streamline Allotment and Assignment Procedures*, Second Report and Order, First Order on Reconsideration, and Second Further Notice of Proposed Rulemaking, 26 FCC Rcd 2556 (2011) ("Second R&O").

<sup>2</sup> *Policies to Promote Rural Radio Service and to Streamline Allotment and Assignment Procedures*, Second Order on Reconsideration, FCC 12-127 (rel. Oct 12, 2012) ("Second Order").

Studies have been undertaken to show the proposed WPNA-FM facility is in compliance with the Commission's radio frequency emission standards and are included as exhibits.

The current licensed WPNA-FM Channel 276A facility serves within the FCC F(50,50) 60 dBu protected contour a population of 3,120,602 persons (2020 U.S. Census). The proposed WPNA-FM Channel 276A facility would serve within the FCC F(50,50) 60 dBu protected contour a population of 3,139,261 persons (2020 U.S. Census). Thus granting of this instant application will result in a public service interest with a net gain in population served of 18,659 persons.

A study has been undertaken to show the proposed WPNA-FM facility is in compliance with the Commission's radio frequency emission limits and the results are attached as exhibits.

# **WPNA-FM Niles, IL Ref. Site Channel Study**

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REFERENCE                                     DISPLAY DATES
42 02 50.0 N.                               CLASS = A   Int = AA   DATA   02-02-23
87 40 50.0 W.                               Current Spacings to 3rd Adj.   SEARCH 02-02-23
----- Channel 276 - 103.1 MHz -----
Call      Channel  Location      Azi      Dist      FCC      Margin
  Lat.      Lng.      Ant      Power      HAAT
-----
WPNA-FM    LIC-N 276A   Highland Park      IL    0.0      0.0    114.5   -114.5
42 02 50.0  87 40 50.0  NCN          6.000 kW          90 M
Alliance Radio, LLC          0000164962

WVAZ       LIC    274B   Oak Park           IL   163.9     17.1    68.5   -51.4
41 53 56.1  87 37 23.2   CN          3.800 kW          425 M
Ihm Licenses, LLC          BLH20150622AFI
Note: Section 73.213(a) Second adjacent grandfathered short-spaced station

WKSC-FM    LIC    278B   Chicago            IL   168.8     19.1    68.5   -49.4
41 52 44.1  87 38 08.2   CN          4.300 kW          472 M
Ihm Licenses, LLC          BLH20010413AAM
Note: Section 73.213(a) Second adjacent grandfathered short-spaced station

W276BM     LIC-D 276D   Tinley Park        IL   189.1     55.6    84.5   -28.9
41 33 10.0  87 47 09.0   DCN          0.100 kW    0 M
Polnet Communications, Ltd  0000097678

WCSJ-FM    LIC-Z 276A   Morris             IL   213.2     99.9   114.5   -14.6
41 17 35.1  88 20 04.2   ZCN          6.000 kW          100 M
Grundy County Broadcasters  BMLH20140205ACR
Note: See WCSJ-FM fully spaced reference site below

WCSJ-FM    REF    276A   Morris             IL   211.8     114.5   114.5    0.03
41 10 10.0   88 24 06.0   0.000 kW          100 M
Grundy County Broadcasters

WHQG       LIC    275B   Milwaukee          WI   347.6    113.8   112.5    1.3
43 02 49.0  87 58 52.3   CN          50.000 kW          130 M
Lakefront Communications,  BLH20080717ADP

WGFB       LIC    276A   Rockton            IL   287.5    121.5   114.5    7.0
42 22 02.1  89 05 13.4   CN          2.400 kW          160 M
Long Nine, Inc.          BLH20090713AAM

WVLP-LP    LIC    276L1  Valparaiso         IN   140.9     82.8    66.5   16.3
41 28 05.1  87 03 14.1   CN          0.100 kW          30 M
Neighbors, Corp.          BLL20151223BPW

WVLP-LP    CP     276L1  Valparaiso         IN   141.1     83.2    66.5   16.7
41 27 48.2  87 03 15.0   CY          0.082 kW          33 M
Neighbors, Corp.          0000198333

WHME       ALO    276A   South Bend         IN   111.6    131.4   114.5   16.9
41 36 11.2  86 12 51.0          0.000 kW          100 M
Family Broadcasting Corpor

WHME       LIC    276A   South Bend         IN   111.6    131.4   114.5   16.9
41 36 11.1  86 12 51.0   CN          3.000 kW          91 M
Family Broadcasting Corpor  BLH19831005AD

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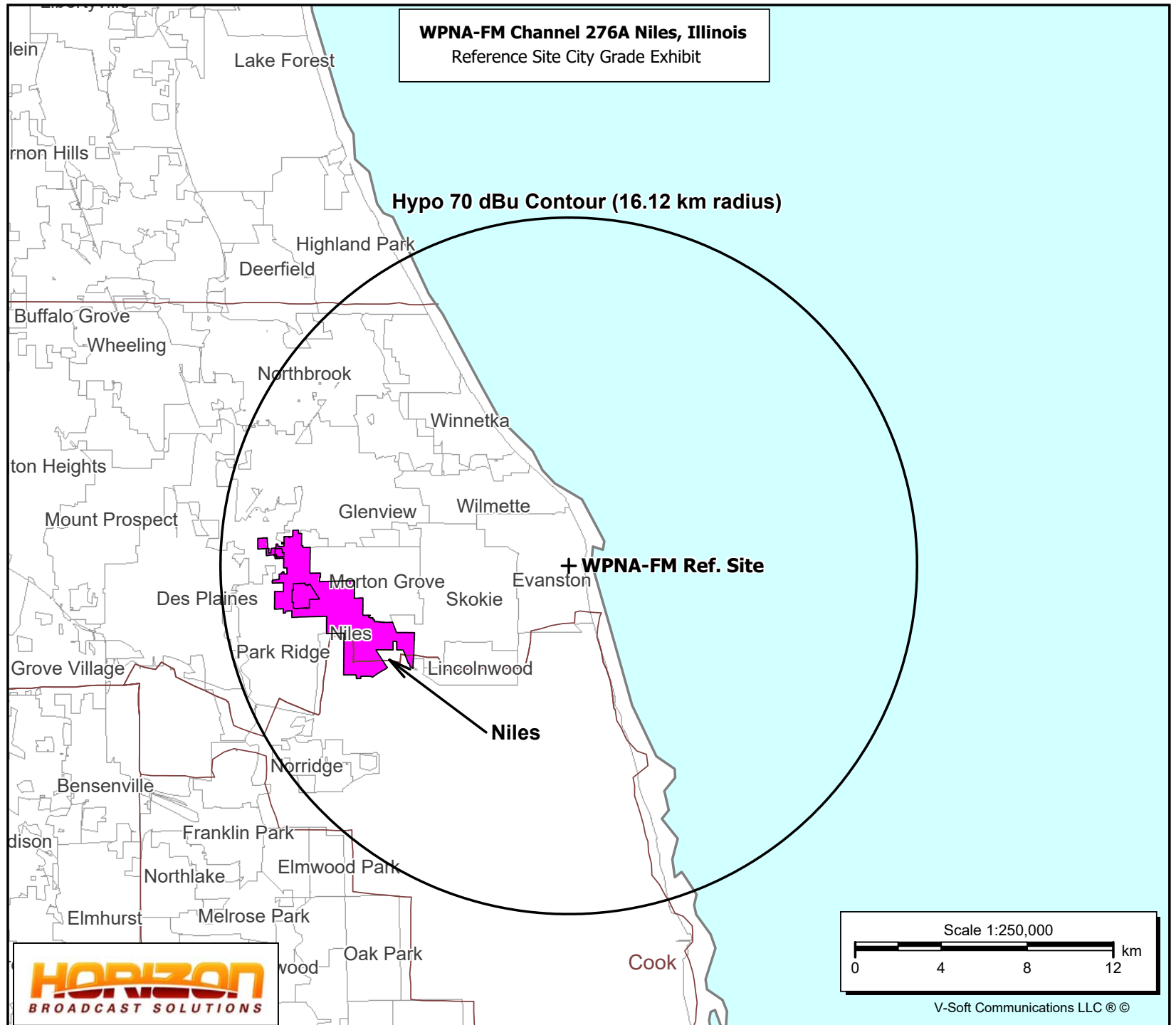
Call	Channel	Location		Azi	Dist	FCC	Margin
Lat.	Lng.	Ant	Power		HAAT		
WPWX	LIC-D 222B	Hammond		IN 164.7	48.0	14.5	33.5
41 37 50.1	87 31 40.2	DCN	50.000 kW		150 M		
	Dontron, Inc.		BMLH20110815ACZ				
W223CN	APP-D 223D	Zion		IL 325.0	53.8	9.5	44.3
42 26 34.8	88 03 25.8	DCN	0.250 kW	0 M			
	Polnet Communications, Ltd		0000208896				
WQBH-LP	LIC 275L1	St. Joseph		MI 86.7	101.3	55.5	45.8
42 05 34.1	86 27 28.0	CN	0.061 kW		38 M		
	Marriage And Family Commit		BLL20150721AAG				
WXSS	LIC 279B	Wauwatosa		WI 351.1	118.0	68.5	49.5
43 05 48.0	87 54 18.3	CN	19.500 kW		257 M		
	Audacy License, LLC		BMLH20010731ABY				
W277BM	LIC 277D	Lake Geneva		WI 315.6	88.2	33.5	54.7
42 36 38.1	88 26 03.3	CN	0.019 kW		74 M		
	Gateway Technical College		BLFT20070822ABK				
WMKB	LIC 275A	Earlville		IL 248.4	126.2	71.5	54.7
41 37 16.1	89 05 20.3	CN	2.150 kW		170 M		
	Km Radio Of Earlville, L.L		BLH20030203CNW				

**WPNA-FM Ref. Site**

Niles, IL  
Latitude: 42-02-49.89 N  
Longitude: 087-40-49.79 W  
ERP: 6.00 kW  
HAAT: 100  
Channel: 276  
Frequency: 103.1 MHz

**WPNA-FM Channel 276A Niles, Illinois**

Reference Site City Grade Exhibit



## **WCSJ-FM Section 73.315 Supplemental Showing Hypothetical Reference Site City Grade Coverage of Morris, Illinois**

Alliance Radio, LLC (“Alliance”), licensee of WPNA-FM, Highland Park, Illinois is filing this minor modification application requesting to change community of license to Niles, IL. This Supplemental Showing is required in order to create a fully spaced allotment site for WPNA-FM. The allotment site is the WPNA-FM licensed site, as required in the Commission’s policy for Section 73.213(a) grand-fathered short-spaced stations. This showing includes a request for a Woodstock Exception also known as the Woodstock and Broadway policy<sup>1</sup> to demonstrate that a city grade contour does encompass 100 percent of Morris. The 2020 Census boundaries for Morris, IL are used on all maps. Alliance has received reasonable assurance from the land owner for the proposed reference site tower site. Alliance has also filed an FAA Form 7460-1 application to construct a 270 ft. tower at the WCSJ-FM reference site.

The WCSJ-FM reference site coordinates are 41-10-10 North ~ 88-24-06 (NAD 83) and are fully spaced to all full power FM stations, including WPNA-FM.

This Supplemental Showing is based in part on the standards established in the FCC DA-10-1760 Skytower Communications decision. This supplemental showing uses Longley-Rice signal shading and the Longley-Rice mean occurrence 70 dBu contour to show city coverage of Morris, IL. The WCSJ-FM Longley-Rice 70 dBu mean occurrence contour distance was calculated using the standard settings established in OET Bulletin No. 69. The Longley-Rice coverage map was created using V-soft Probe Version 4.120a Professional. The specific software settings are listed on the map in the upper left hand corner of the map. The NED 3 second terrain database was used for all calculations. Signal values were not interpolated. The cell size was set at 0.1 km and profile increment was set at 0.1 km.

The signal Map shows the FCC F(50,50) 60 dBu reaches 100 percent of the total area of Morris. The Longley-Rice mean occurrence 70 dBu contour reaches 100 percent of Morris. The Longley-Rice 70 dBu signal strength reaches 96.7 of the population of Morris.

Table Two, “Comparison of FCC F(50,50) 70 dBu contour distance vs. Longley-Rice mean occurrence 70 dBu contour distance” shows the distances to the FCC 70 dBu contour and Longley-Rice 70 dBu mean occurrence contour distance every three degrees for 13 of the 19 radials that cross over Morris. This table clearly establishes that the Longley-Rice mean 70 dBu contours along the radials that cross the corporate boundaries of Morris are more than 10% greater than the FCC F(50,50) 70 dBu contours. 100% of Morris is contained in the FCC F(50,50) 60 dBu contour.

Therefore, it is believed that this WCSJ-FM modification application is in compliance with the Section 73.315 of the Commission’s Community Coverage rules.

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<sup>1</sup> *Woodstock and Broadway, Virginia*, Memorandum Opinion and Order, 3 FCC Rcd 6398 (1988) (“*Woodstock and Broadway*”) (stating that a rulemaking proponent seeking an upgrade of an existing station may use actual terrain data to calculate city-grade coverage if such petitioner has a reasonable assurance of the continued availability of its proposed transmitter site and has obtained FAA approval for the site).



# WCSJ-FM Reference Site Channel Study

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REFERENCE                                     DISPLAY DATES
41 10 10.0 N.                               CLASS = A   Int = AA   DATA 02-02-23
88 24 06.0 W.                               Current Spacings to 3rd Adj.  SEARCH 02-02-23
----- Channel 276 - 103.1 MHz -----
Call      Channel  Location      Azi      Dist      FCC      Margin
   Lat.    Lng.      Ant         Power    HAAT
-----
WCSJ-FM   LIC-Z 276A   Morris        IL  22.2    14.8    114.5    -99.7
41 17 35.1 88 20 04.2 ZCN        6.000 kW    100 M
    Grundy County Broadcasters      BMLH20140205ACR

W276BM    LIC-D 276D   Tinley Park    IL  50.1    66.8    84.5    -17.7
41 33 10.0 87 47 09.0 DCN        0.100 kW    0 M
    Polnet Communications, Ltd      0000097678

WIVQ      LIC   277A   Spring Valley    IL 282.2    71.5    71.5     0.03
41 18 09.1 89 14 11.3 CN        4.900 kW    110 M
    Mendota Broadcasting, Inc      BLH19991227AAP

WPNA-FM   LIC-N 276A   Highland Park    IL  31.3    114.5    114.5     0.03
42 02 50.0 87 40 50.0 NCN        6.000 kW     90 M
    Alliance Radio, LLC            0000164962

WMKB      LIC   275A   Earlville        IL 311.4    76.3    71.5     4.8
41 37 16.1 89 05 20.3 CN        2.150 kW    170 M
    Km Radio Of Earlville, L.L      BLH20030203CNW

WYUR      LIC   279A   Gilman          IL 131.7    45.3    30.5    14.8
40 53 53.4 87 59 58.0 CN        3.600 kW    132 M
    Milner Media Partners, LLC      BLH20110503ACU

WGNN      RSV   273B1   Fisher          IL 172.1    70.9    47.5    23.4
40 32 14.1 88 17 09.2 N         0.000 kW    100 M
    From CDBS

WKZS      LIC   276A   Covington        IN 144.6    139.0    114.5    24.6
40 08 46.1 87 27 15.0 CN        3.000 kW     91 M
    Benton-Weatherford Broadca      BLH19820610AN

WGFB      LIC   276A   Rockton          IL 337.1    144.7    114.5    30.2
42 22 02.1 89 05 13.4 CN        2.400 kW    160 M
    Long Nine, Inc.                BLH20090713AAM

W273CZ    LIC-D 273D   Plano          IL 345.3    57.0    25.5    31.5
41 39 55.1 88 34 34.3 DVN        0.025 kW    0 M
    American Education Foundat      BLFT20190220ABG

WKSC-FM   LIC   278B   Chicago          IL  38.7    101.5    68.5    33.0
41 52 44.1 87 38 08.2 CN        4.300 kW    472 M
    Ihm Licenses, LLC              BLH20010413AAM

WZND-LP   LIC   277L1   Bloomington     IL 214.1    88.5    55.5    33.1
40 30 30.1 88 59 19.2 CN        0.011 kW     87 M
    Illinois State University      BLL20150817AAO

WVAZ      LIC   274B   Oak Park         IL  38.4    103.9    68.5    35.4
41 53 56.1 87 37 23.2 CN        3.800 kW    425 M
    Ihm Licenses, LLC              BLH20150622AFI

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Call	Channel	Location		Azi	Dist	FCC	Margin
Lat.	Lng.	Ant	Power		HAAT		
WSOY-FM	LIC 275B	Decatur	IL 197.8	150.5	112.5	38.0	
39 52 41.1	88 56 32.3	CN	54.000 kW	135 M			
Neuhoff Media Decatur, LLC			BLH19990512KB				
WSOY-FM	ALO 275B	Decatur	IL 197.8	150.6	112.5	38.1	
39 52 40.1	88 56 30.3		0.000 kW	150 M			
Neuhoff Media Decatur, LLC							
WGNN	CP -Z 273B1	Fisher	IL 180.2	92.2	47.5	44.7	
40 20 21.0	88 24 18.0	ZCN	25.000 kW	88 M			
Good News Radio, Inc.			0000189363				
WVLP-LP	CP 276L1	Valparaiso	IN 73.4	117.5	66.5	51.0	
41 27 48.2	87 03 15.0	CY	0.082 kW	33 M			
Neighbors, Corp.			0000198333				
WVLP-LP	LIC 276L1	Valparaiso	IN 73.1	117.6	66.5	51.1	
41 28 05.1	87 03 14.1	CN	0.100 kW	30 M			
Neighbors, Corp.			BLL20151223BPW				

**WCSJ-FM Ref.**

Latitude: 41-10-10 N  
Longitude: 088-24-06 W  
ERP: 6.00 kW  
HAAT: 78.63  
Channel: 276  
Frequency: 103.1 MHz  
AMSL Height: 264.32 m  
Elevation: 182.6 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: None

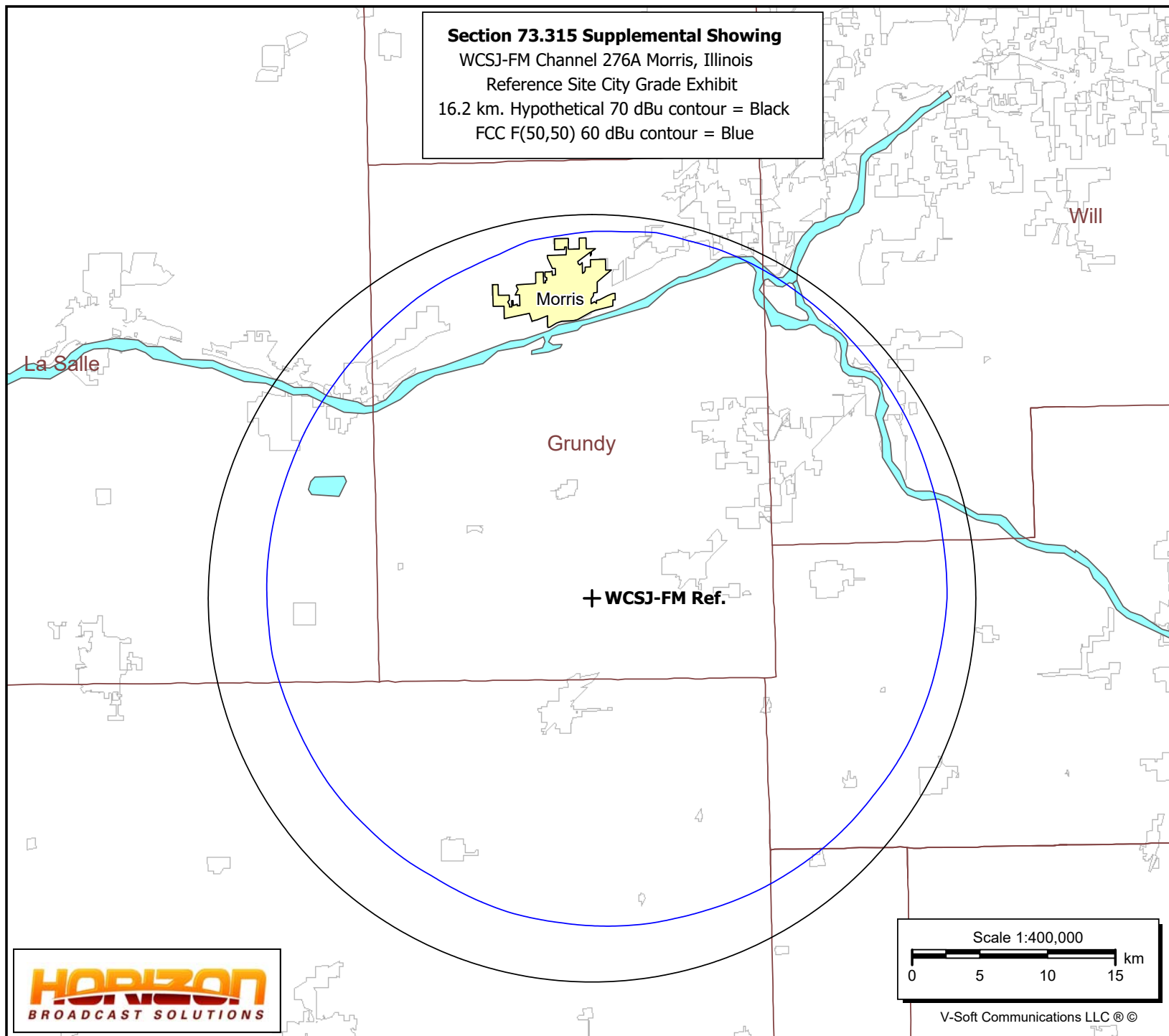
**Section 73.315 Supplemental Showing**

WCSJ-FM Channel 276A Morris, Illinois

Reference Site City Grade Exhibit

16.2 km. Hypothetical 70 dBu contour = Black

FCC F(50,50) 60 dBu contour = Blue

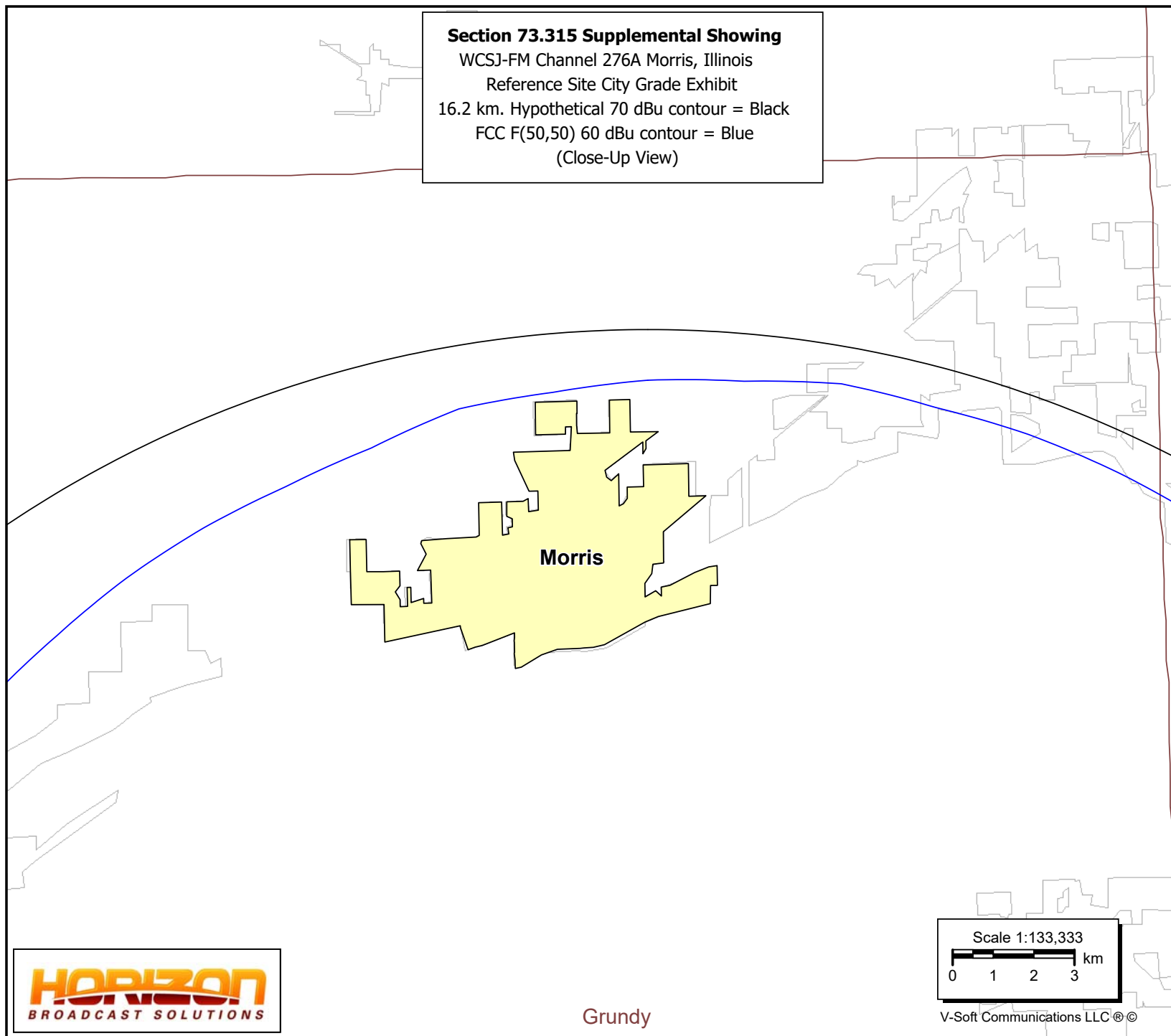


**WCSJ-FM Ref.**

Latitude: 41-10-10 N  
Longitude: 088-24-06 W  
ERP: 6.00 kW  
HAAT: 78.63  
Channel: 276  
Frequency: 103.1 MHz  
AMSL Height: 264.32 m  
Elevation: 182.6 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: None

**Section 73.315 Supplemental Showing**

WCSJ-FM Channel 276A Morris, Illinois  
Reference Site City Grade Exhibit  
16.2 km. Hypothetical 70 dBu contour = Black  
FCC F(50,50) 60 dBu contour = Blue  
(Close-Up View)

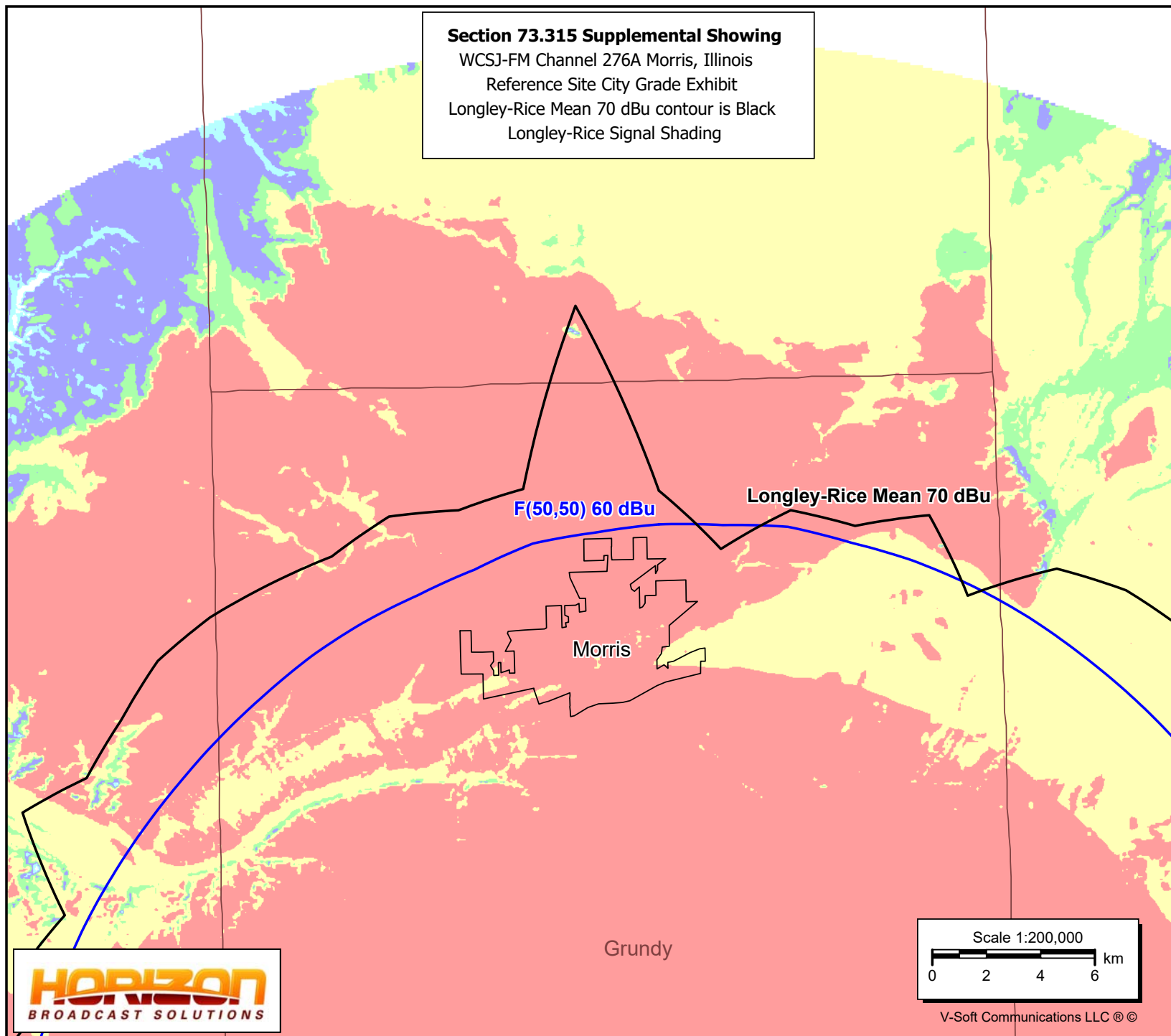


**WCSJ-FM Ref.**

Latitude: 41-10-10 N  
Longitude: 088-24-06 W  
ERP: 6.00 kW  
HAAT: 78.63  
Channel: 276  
Frequency: 103.1 MHz  
AMSL Height: 264.32 m  
Elevation: 182.6 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: Longley-Rice  
Climate: Cont temperate  
Conductivity: 0.0050  
Dielec Const: 15.0  
Refractivity: 311.0  
Receiver Ht AG: 9.1 m  
Receiver Gain: 0 dB  
Time Variability: 50.0%  
Sit. Variability: 50.0%  
ITM Mode: Broadcast

**Section 73.315 Supplemental Showing**

WCSJ-FM Channel 276A Morris, Illinois  
Reference Site City Grade Exhibit  
Longley-Rice Mean 70 dBu contour is Black  
Longley-Rice Signal Shading

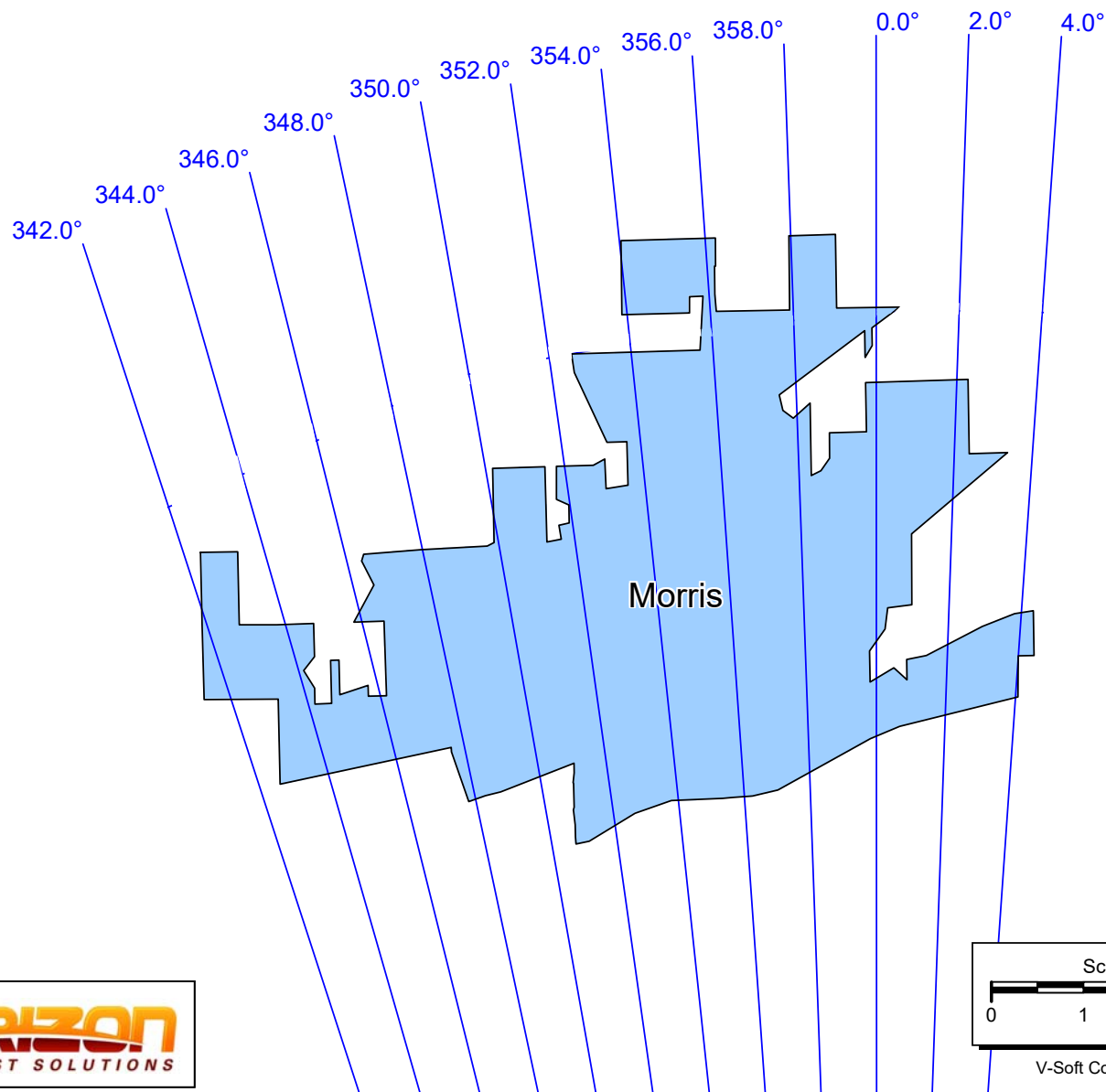


**WCSJ-FM Ref.**

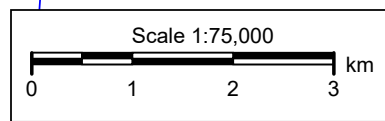
Latitude: 41-10-10 N  
Longitude: 088-24-06 W  
ERP: 6.00 kW  
HAAT: 78.63  
Channel: 276  
Frequency: 103.1 MHz  
AMSL Height: 264.32 m  
Elevation: 182.6 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: Longley-Rice  
Climate: Cont temperate  
Conductivity: 0.0050  
Dielec Const: 15.0  
Refractivity: 311.0  
Receiver Ht AG: 9.1 m  
Receiver Gain: 0 dB  
Time Variability: 50.0%  
Sit. Variability: 50.0%  
ITM Mode: Broadcast

**Section 73.315 Supplemental Showing**

WCSJ-FM Channel 276A Morris, Illinois  
Reference Site City Grade Exhibit  
(12 of 19 radials which cross Morris are shown)



**HORIZON**  
BROADCAST SOLUTIONS



V-Soft Communications LLC ©

TABLE TWO  
WCSJ-FM Supplemental Coverage Showing:  
Comparison of FCC F(50,50) 70 dBu contour distance  
vs.  
Longley-Rice median occurrence 70 dBu contour distance  
(12 of 19 radials which cross Morris are shown)

Site:	WCSJ-FM Reference Site				
Coordinates:	41-10-10 N ~ 88-24-06 W (NAD 83)				
Freq:	103.1 MHz				
ERP:	6.0 kW				
HAAT:	78.63 m				
Bearing (degrees)	ERP kW	HAAT (m)	FCC 70 dBu Distance (km)	Longley-Rice mean 70 dBu contour distance (km)	Percentage Increase
342	6.0	84	14.6	29.50	102.1%
344	6.0	85	14.7	28.95	96.9%
346	6.0	86	14.8	30.90	108.8%
348	6.0	87	14.9	28.95	94.3%
350	6.0	88	15.0	28.75	91.7%
352	6.0	88	15.0	37.45	149.7%
354	6.0	89	15.1	29.05	92.4%
356	6.0	89	15.1	36.30	140.4%
358	6.0	90	15.2	28.80	89.5%
0	6.0	90	15.2	28.25	85.9%
2	6.0	91	15.3	28.35	85.3%
4	6.0	91	15.3	27.75	81.4%
<b>Average</b>	<b>6.0</b>	<b>87.91</b>	<b>14.99</b>	<b>27.94</b>	<b>94.7%</b>

# **WPNA-FM Niles, IL Appl. Site Channel Study**

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REFERENCE                                     DISPLAY DATES
42 02 50.0 N.                               CLASS = A   Int = AA   DATA 02-02-23
87 40 50.0 W.                               Current Spacings to 3rd Adj.  SEARCH 02-02-23
----- Channel 276 - 103.1 MHz -----

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Call	Channel	Location	Azi	Dist	FCC	Margin
Lat.	Lng.	Ant	Power	HAAT		

WPNA-FM	LIC-N 276A	Highland Park	IL	0.0	0.0	114.5	-114.5
42 02 50.0	87 40 50.0	NCN	6.000 kW		90 M		
Alliance Radio, LLC			0000164962				

WVAZ	LIC	274B	Oak Park	IL	163.9	17.1	68.5	-51.4
41 53 56.1	87 37 23.2	CN	3.800 kW		425 M			
Ihm Licenses, LLC			BLH20150622AFI					

**Note: Section 73.213(a) Second adjacent grandfathered short-spaced station**

WKSC-FM	LIC	278B	Chicago	IL	168.8	19.1	68.5	-49.4
41 52 44.1	87 38 08.2	CN	4.300 kW		472 M			
Ihm Licenses, LLC			BLH20010413AAM					

**Note: Section 73.213(a) Second adjacent grandfathered short-spaced station**

W276BM	LIC-D 276D	Tinley Park	IL	189.1	55.6	84.5	-28.9
41 33 10.0	87 47 09.0	DCN	0.100 kW	0 M			
Polnet Communications, Ltd			0000097678				

WCSJ-FM	LIC-Z 276A	Morris	IL	213.2	99.9	114.5	-14.6
41 17 35.1	88 20 04.2	ZCN	6.000 kW		100 M		
Grundy County Broadcasters			BMLH20140205ACR				

**Note: Adopt Section 73.215 Contour Protection with respect to WCSJ-FM**

WHQG	LIC	275B	Milwaukee	WI	347.6	113.8	112.5	1.3
43 02 49.0	87 58 52.3	CN	50.000 kW		130 M			
Lakefront Communications,			BLH20080717ADP					

WGFB	LIC	276A	Rockton	IL	287.5	121.5	114.5	7.0
42 22 02.1	89 05 13.4	CN	2.400 kW		160 M			
Long Nine, Inc.			BLH20090713AAM					

WVLP-LP	LIC	276L1	Valparaiso	IN	140.9	82.8	66.5	16.3
41 28 05.1	87 03 14.1	CN	0.100 kW		30 M			
Neighbors, Corp.			BLL20151223BPW					

WVLP-LP	CP	276L1	Valparaiso	IN	141.1	83.2	66.5	16.7
41 27 48.2	87 03 15.0	CY	0.082 kW		33 M			
Neighbors, Corp.			0000198333					

WHME	ALO	276A	South Bend	IN	111.6	131.4	114.5	16.9
41 36 11.2	86 12 51.0		0.000 kW		100 M			
Family Broadcasting Corpor								

WHME	LIC	276A	South Bend	IN	111.6	131.4	114.5	16.9
41 36 11.1	86 12 51.0	CN	3.000 kW		91 M			
Family Broadcasting Corpor			BLH19831005AD					



Call	Channel	Location		Azi	Dist	FCC	Margin
Lat.	Lng.	Ant	Power		HAAT		
WPWX	LIC-D 222B	Hammond		IN 164.7	48.0	14.5	33.5
41 37 50.1	87 31 40.2	DCN	50.000 kW		150 M		
	Dontron, Inc.		BMLH20110815ACZ				
W223CN	APP-D 223D	Zion		IL 325.0	53.8	9.5	44.3
42 26 34.8	88 03 25.8	DCN	0.250 kW	0 M			
	Polnet Communications, Ltd		0000208896				
WQBH-LP	LIC 275L1	St. Joseph		MI 86.7	101.3	55.5	45.8
42 05 34.1	86 27 28.0	CN	0.061 kW		38 M		
	Marriage And Family Commit		BLL20150721AAG				
WXSS	LIC 279B	Wauwatosa		WI 351.1	118.0	68.5	49.5
43 05 48.0	87 54 18.3	CN	19.500 kW		257 M		
	Audacy License, LLC		BMLH20010731ABY				
W277BM	LIC 277D	Lake Geneva		WI 315.6	88.2	33.5	54.7
42 36 38.1	88 26 03.3	CN	0.019 kW		74 M		
	Gateway Technical College		BLFT20070822ABK				
WMKB	LIC 275A	Earlville		IL 248.4	126.2	71.5	54.7
41 37 16.1	89 05 20.3	CN	2.150 kW		170 M		
	Km Radio Of Earlville, L.L		BLH20030203CNW				

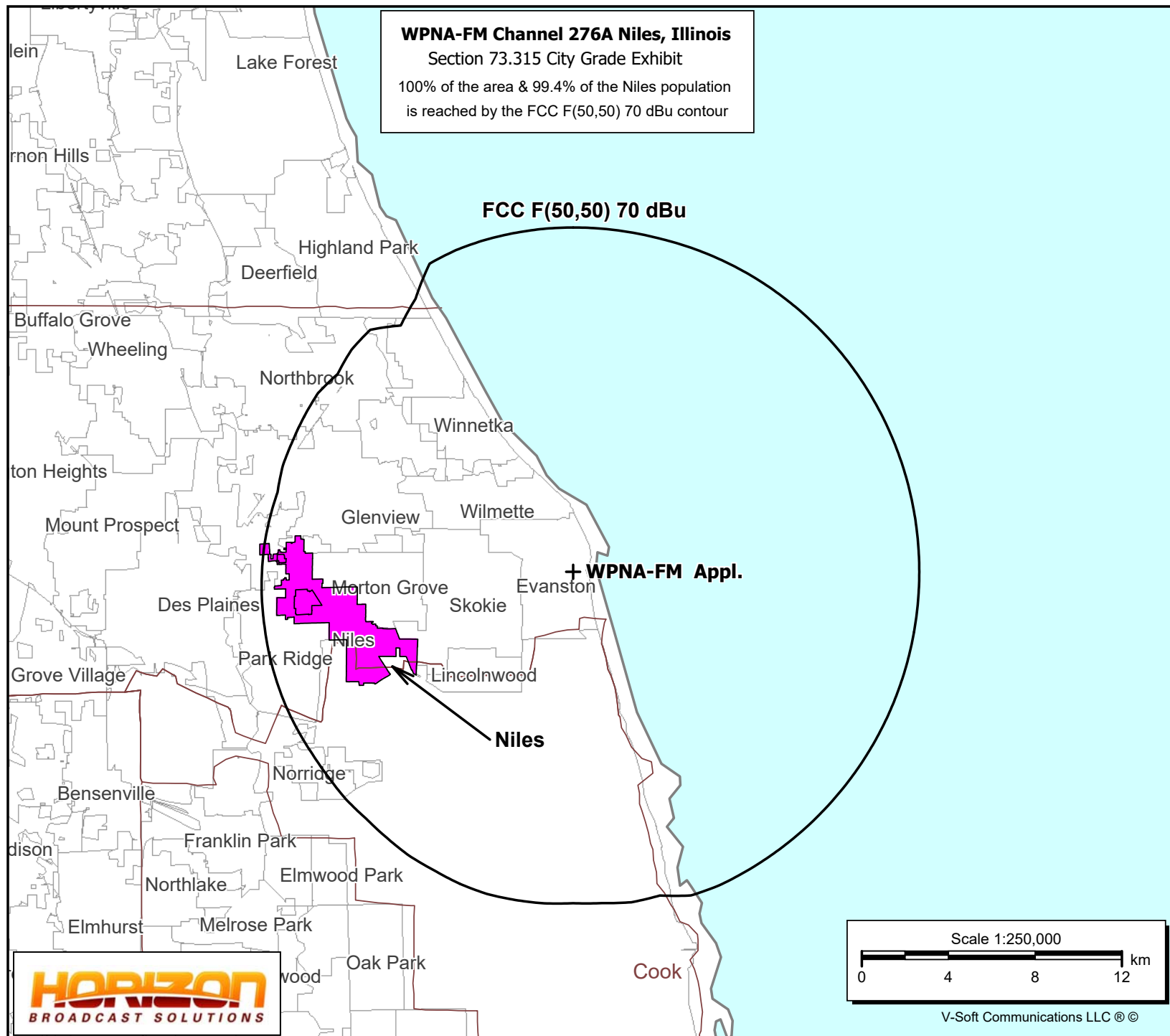
**WPNA-FM Appl.**

Park Ridge, IL  
Latitude: 42-02-49.89 N  
Longitude: 087-40-49.79 W  
ERP: 6.00 kW  
HAAT: 91.24  
Channel: 276  
Frequency: 103.1 MHz  
AMSL Height: 274.0 m  
Elevation: 184.0 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Cell Size: 0.1 km.  
Profile Increment: 0.1 km.  
Prop Model: FCC Model  
Loc. Variability: 50.0%  
Time Variability: 50.0%  
HAAT Mthd: FCC

**WPNA-FM Channel 276A Niles, Illinois**

Section 73.315 City Grade Exhibit

100% of the area & 99.4% of the Niles population  
is reached by the FCC F(50,50) 70 dBu contour



**WPNA-FM Appl.**

Niles, IL  
Latitude: 42-02-49.89 N  
Longitude: 087-40-49.79 W  
ERP: 6.00 kW  
HAAT: 91.24  
Channel: 276  
Frequency: 103.1 MHz  
AMSL Height: 274.0 m  
Elevation: 184.0 m  
Horiz. Pattern: Omni  
Vert. Pattern: No  
Prop Model: FCC Model  
Loc. Variability: 50.0%  
Time Variability: 50.0%  
HAAT Mthd: FCC

**WCSJ-FM**

Morris, IL  
BMLH20140205ACR  
Latitude: 41-17-34.98 N  
Longitude: 088-20-03.97 W  
ERP: 6.00 kW  
HAAT: 100.0  
Channel: 276  
Frequency: 103.1 MHz  
AMSL Height: 266.0 m  
Elevation: 168.0 m  
Horiz. Pattern: Directional  
Vert. Pattern: No  
Prop Model: FCC Model  
Loc. Variability: 50.0%  
Time Variability: 50.0%  
HAAT Mthd: FCC

**FCC Section 73.215 Contour Protection**

WCSJ-FM Channel 276A Morris, Illinois

Contours at closest point  
Contours do not overlap

**WPNA-FM Appl.**

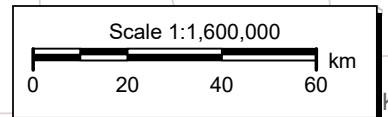
**WCSJ-FM+**

**FCC Contours Legend:**

F(50,50) 60 dBu = Black

F(50,10) 40 dBu = Red

**HORIZON**  
BROADCAST SOLUTIONS



V-Sat Communications LLC ©

## **Human Exposure to Radiofrequency Electromagnetic Field And Section 106 Compliance (Environmental)**

Alliance Radio, LLC ("Alliance") is the licensee of WPNA-FM, Facility ID No. 74177, Channel 276A, Highland Park, IL. Alliance herein proposes an FCC minor modification application to modify WPNA-FM to operate from a new transmit location, licensed to Niles, Illinois. The proposed transmit location is a 22 story office building with mast. The building including appurtenances is 92 meters in overall height above ground level and is not registered with an Antenna Registration Number ("ASR"). No changes are being made to the structure. Therefore, it is believed a Section 106 review by the SHPO/THPO is not required. The coordinates of the proposed application site are 42° 02' 50" North Latitude, 87° 40' 50" West Longitude (NAD 83). The proposed transmitting antenna is an ERI Model LP-2E side mounted 2 bay 0.70 wave spaced circularly polarized antenna operating at 6.0 kW ERP non-directional with a center of radiation of 274.0 meters AMSL and 90.0 meters above ground level.

The ERI LP antenna is included in the revised OET FM Model Program under Type 3, opposed "U" dipole. Using the FM Model for Windows program, the proposed operation was evaluated for human exposure to RF energy using the procedures outlined in the Commission's OET Bulletin Number 65. The proposed rooftop site has restricted access and is not available to the general public. The proposed antenna center of radiation is 90.0 meters above ground level. The building has 22 floors above ground level. The two top floors are unoccupied and are used for equipment storage. The highest occupied floor level is the 20th floor and it is 70.0 meters above ground level. Therefore, the height used on the FM Model program is 20.0 meters. The maximum calculated signal density near the tower at two meters above ground level attributable to the proposed facility is  $67.07 \mu\text{W}/\text{cm}^2$  at 45.8 meters, which is 33.54 percent of the general population/uncontrolled maximum permitted exposure limit. It should be noted that 45.8 meters from the antenna is beyond the perimeter of the building. The RFR levels experienced in the upper floors of the building will be substantially lower.

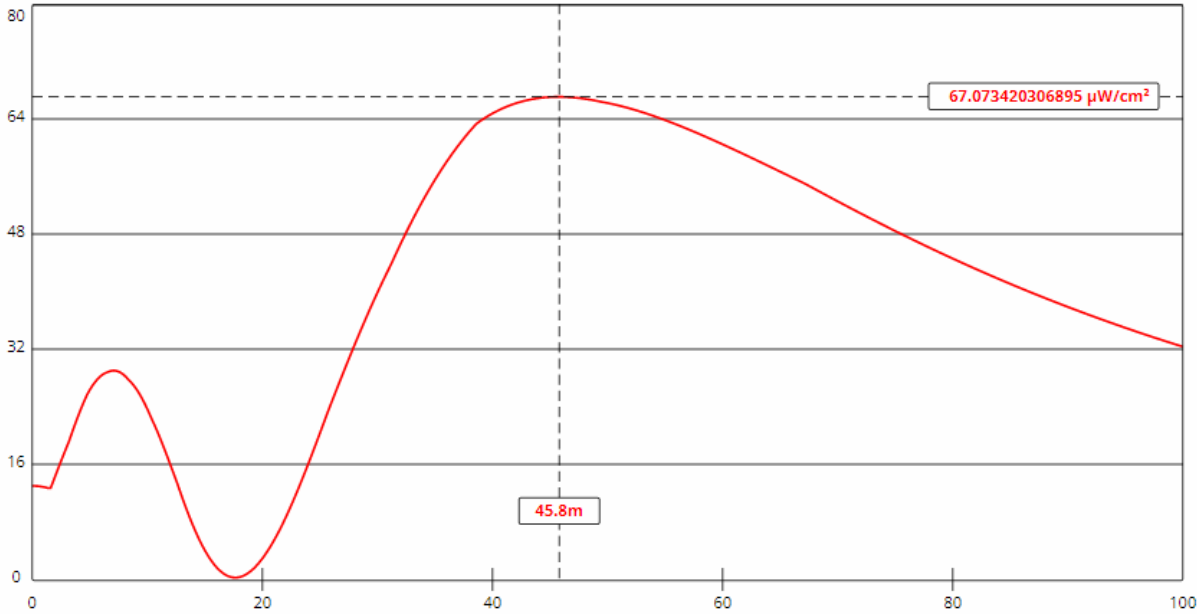
The applicant will see that signs are posted in the vicinity of the tower, warning of potential radio frequency hazards at the site. The applicant will cooperate with other users of the rooftop site to reduce power of the facility, or discontinue operation, as necessary to limit human exposure to levels less than specified by the Federal Communications Commission should anyone be required to access the rooftop area for maintenance or inspection.

# FM Model

- Radio Frequency Safety
- FM Model
- FCC Policy on Human Exposure
- RF Safety FAQ
- Body Tissue Dielectric Parameters
- RF Safety Highlighted Releases

The FM Model calculator determines the potential exposure from radiofrequency (RF) electromagnetic fields produced by FM broadcast station antennas at ground level. The FM Model software was originally developed by the FCC in 1997 as a standalone executable program and this improved version provides more precise predictions and runs via a JavaScript enabled web browser. The FM Model is originally based on measured data published in 1985 by the EPA.

[Show More....](#)



View Tabular Results +

Channel Selection	Channel 250 (97.9 MHz)		
Antenna Type +	EPA Type 3: Opposed U Dipole		
Height (m)	20	Distance (m)	100
ERP-H (W)	6000	ERP-V (W)	6000
Num of Elements	2	λ	0.7
Num of Points	500	Apply	

Bureau/Office:  
[Engineering & Technology](#)