

Technical Narrative in Support of a Non-Adjacent Channel Change for KAWX-LP, Channel 238L1, Mena, Arkansas

This technical narrative and attached supporting exhibits are provided on behalf of Community Radio, Inc. ("Community"), licensee of KAWX-LP, Facility ID No. 193104, Channel 238L1, Mena, AR. Community has filed Form 318 Application for a Construction Permit for a Low Power FM Radio Station BPL-20170223ABG for a site change and non-adjacent channel change to Channel 226L1.

The application site coordinates are just 2.2 km. from the licensed site coordinates, which is well within the maximum of 5.6 km. limit for an LPFM station per FCC Section 73.870(a). However compliance with FCC Section 73.870(a)(1) which allows for a change to any frequency but requires a technical showing of reduced interference. Normally an exhibit showing FCC F(50,50) protected contours for the LPFM station and FCC F(50,10) interfering contours for the co or adjacent channel full power FM stations is provided for the current and proposed channel. However, the terrain around both the current and proposed KAWX-LP transmit sites is extremely irregular which renders FCC contours highly inaccurate and they do not reflect the actual interference. The ground elevation inside the KAWX-LP FCC F(50,50) 60 dBu contour varies from 277 meters AMSL to 695 meters AMSL, a difference of 418 meters or 1,370 feet! Six exhibits utilizing the Longley-Rice propagation methodology are provided to demonstrate that interference from co-channel and first adjacent channel stations will be reduced by moving to non-adjacent Channel 226L1. Also, Exhibit Seven is a channel study for the current licensed facility on Channel 238L1 and Exhibit Eight is a channel study for the proposed new transmit location on Channel 226L1 are included. It can clearly be shown the required spacing distances for KAWX-LP are greater on Channel 226 than Channel 238.

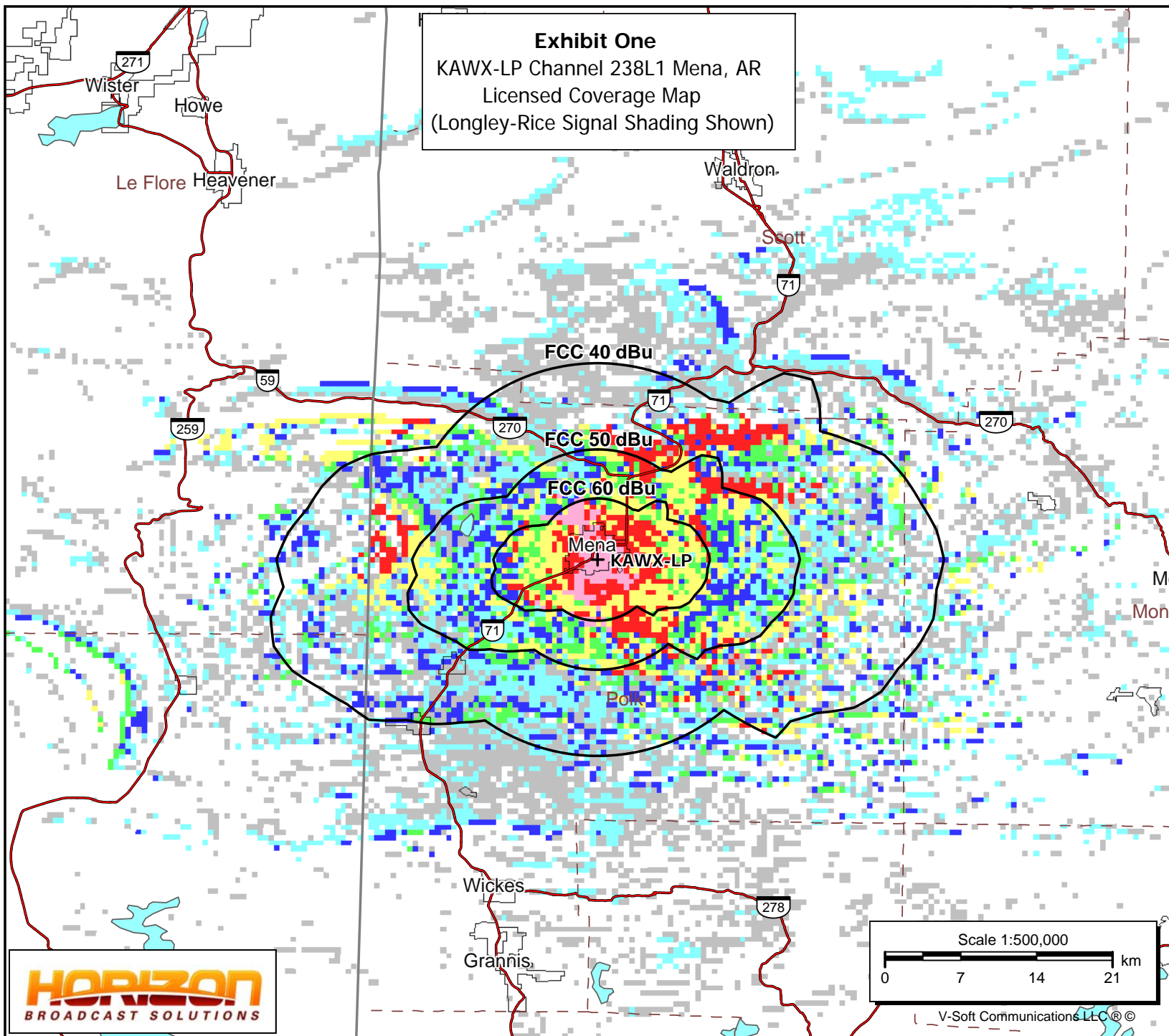
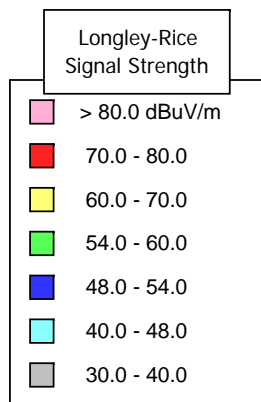
Exhibit One is a coverage map showing the FCC F(50,50) contours of the licensed KAWX-LP on Channel 238L1. The most important highway that provides Mena residents with access to Fort Smith, AR, the nearest metro area is US Highway 71 North. Because US 71 follows a high ridge it is possible to hear KAWX-LP well beyond what would be possible with normal terrain. Exhibit Two is a co-channel interference map for Channel 238. KAWX-LP does receive some co-channel interference from KITX, Channel 238C2, Ashdown, AR in a small area NNW of Mena just south of US Highway 270. Exhibit Three is a first adjacent channel interference map which shows interference received from KERX, Channel 237C2, Paris, AR. The KERX Longley-Rice signal strength is in excess of 80 dBu in an area just a few miles north of Mena and includes area along and near US Highway 71. This creates noticeable interference to KAWX-LP in these areas. Exhibit Four is a proposed coverage map for the KAWX-LP Form 318 application BPL-20170223ABG on Channel 226L1. The KAWX-LP ERP has been adjusted to 77 watts to reflect the calculated HAAT of 34.61 meters from the application site. Exhibit Five is a co-channel interference map for Channel 226. The Longley-Rice co-channel signals received in the KAWX-LP listening area are shown to be reduced when compared to Channel 238. Exhibit Six is the first adjacent interference map for Channel 226. There is a significant decrease in first adjacent channel interference received, especially in and along the important US Highway 71 North corridor. The proposed change to Channel 226L1 will allow KAWX-LP to be listenable in more areas than the current licensed Channel 238. For this reason, it is believed the proposed KAWX-LP non-adjacent channel change complies with FCC Section 73.870(a)(1).

KAWX-LP Lic.

Mena, AR
BMLL20150413AAR
Latitude: 34-34-26 N
Longitude: 094-14-03 W
ERP: 0.10 kW
HAAT: 29.9 m
Channel: 238
Frequency: 95.5 MHz

Exhibit One

KAWX-LP Channel 238L1 Mena, AR
Licensed Coverage Map
(Longley-Rice Signal Shading Shown)



KAWX-LP Lic.

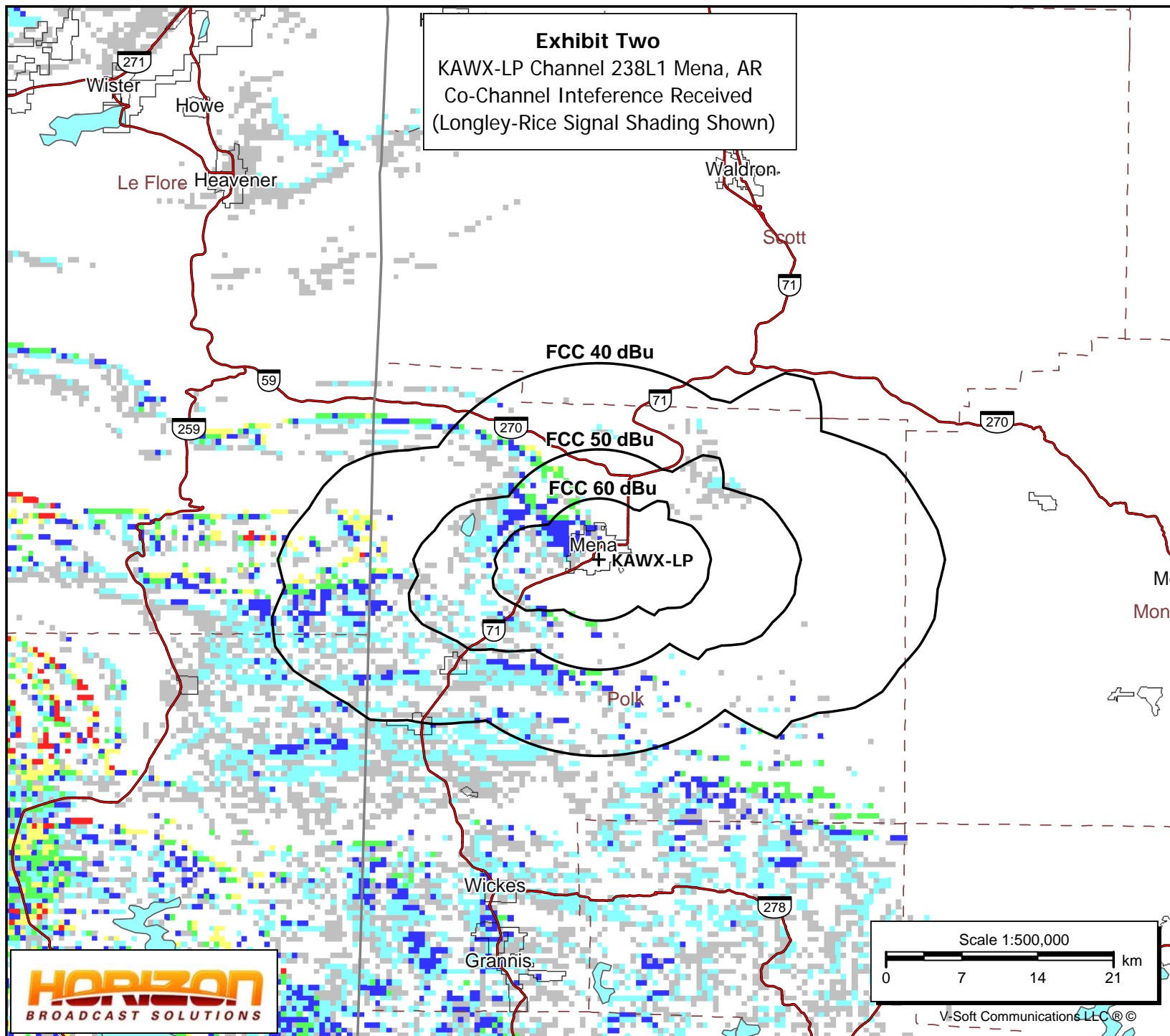
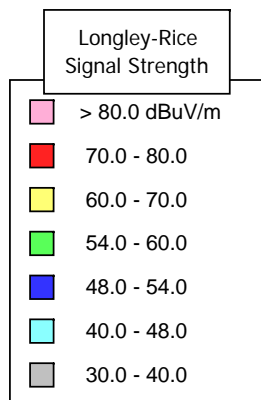
Mena, AR
BMLL20150413AAR
Latitude: 34-34-26 N
Longitude: 094-14-03 W
ERP: 0.10 kW
HAAT: 29.9 m
Channel: 238
Frequency: 95.5 MHz

KITX

Ashdown, AR
BLH19890828KC
Latitude: 33-54-56 N
Longitude: 095-28-04 W
ERP: 50.00 kW
HAAT: 150.0 m
Channel: 238
Frequency: 95.5 MHz

Exhibit Two

KAWX-LP Channel 238L1 Mena, AR
Co-Channel Interference Received
(Longley-Rice Signal Shading Shown)



KAWX-LP Lic.

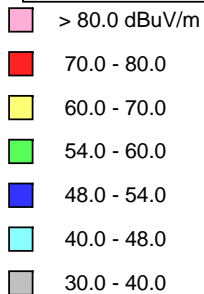
Mena, AR
BMLL20150413AAR
Latitude: 34-34-26 N
Longitude: 094-14-03 W
ERP: 0.10 kW
HAAT: 29.9 m
Channel: 238
Frequency: 95.5 MHz

KERX

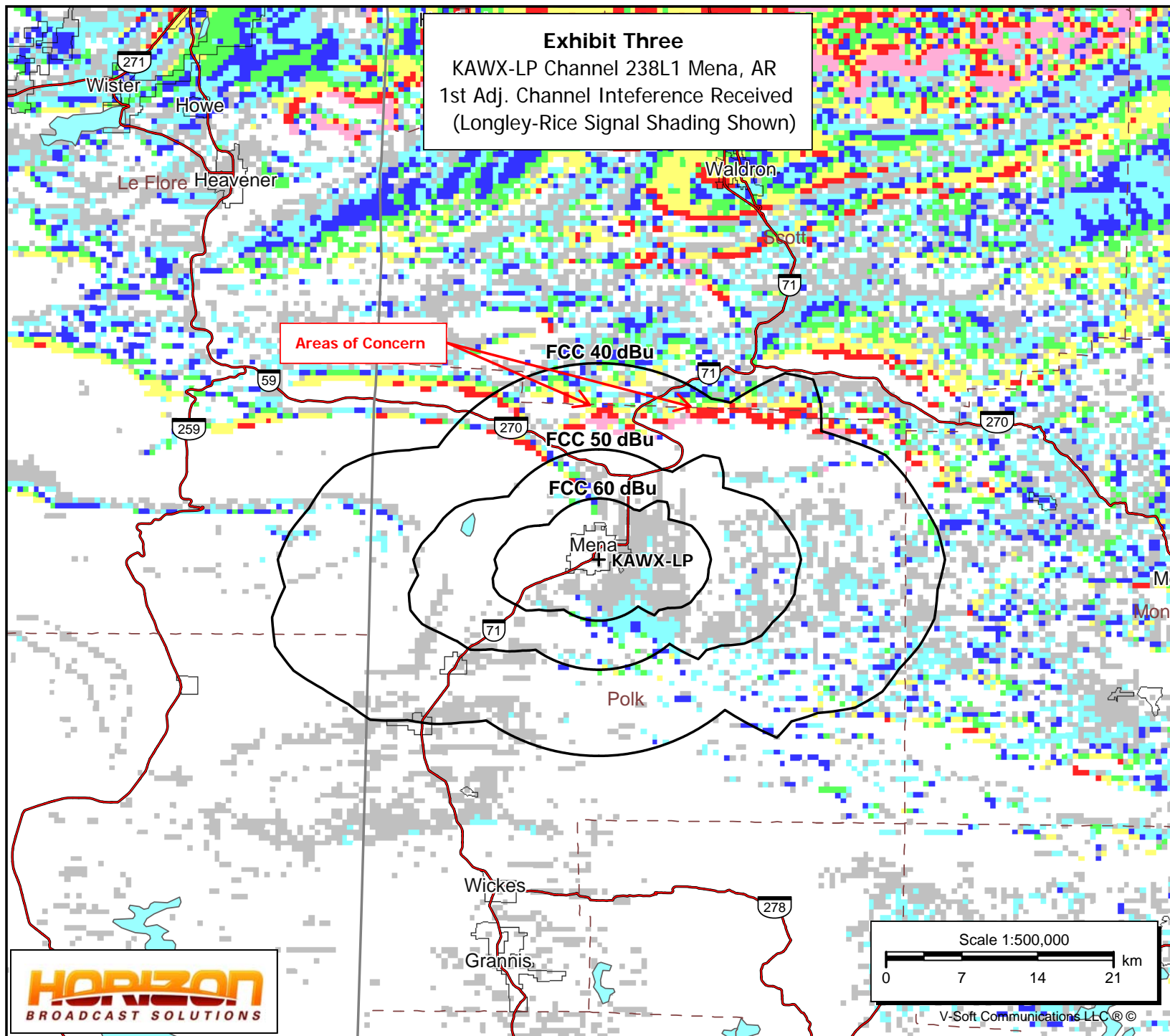
Paris, AR
BLH20020418AAQ
Latitude: 35-17-13 N
Longitude: 094-02-51 W
ERP: 50.00 kW
HAAT: 140.0 m
Channel: 237
Frequency: 95.3 MHz

KSSN

Little Rock, AR
BLH19831117BH
Latitude: 34-47-57 N
Longitude: 092-29-29 W
ERP: 100.00 kW
HAAT: 507.0 m
Channel: 239
Frequency: 95.7 MHz

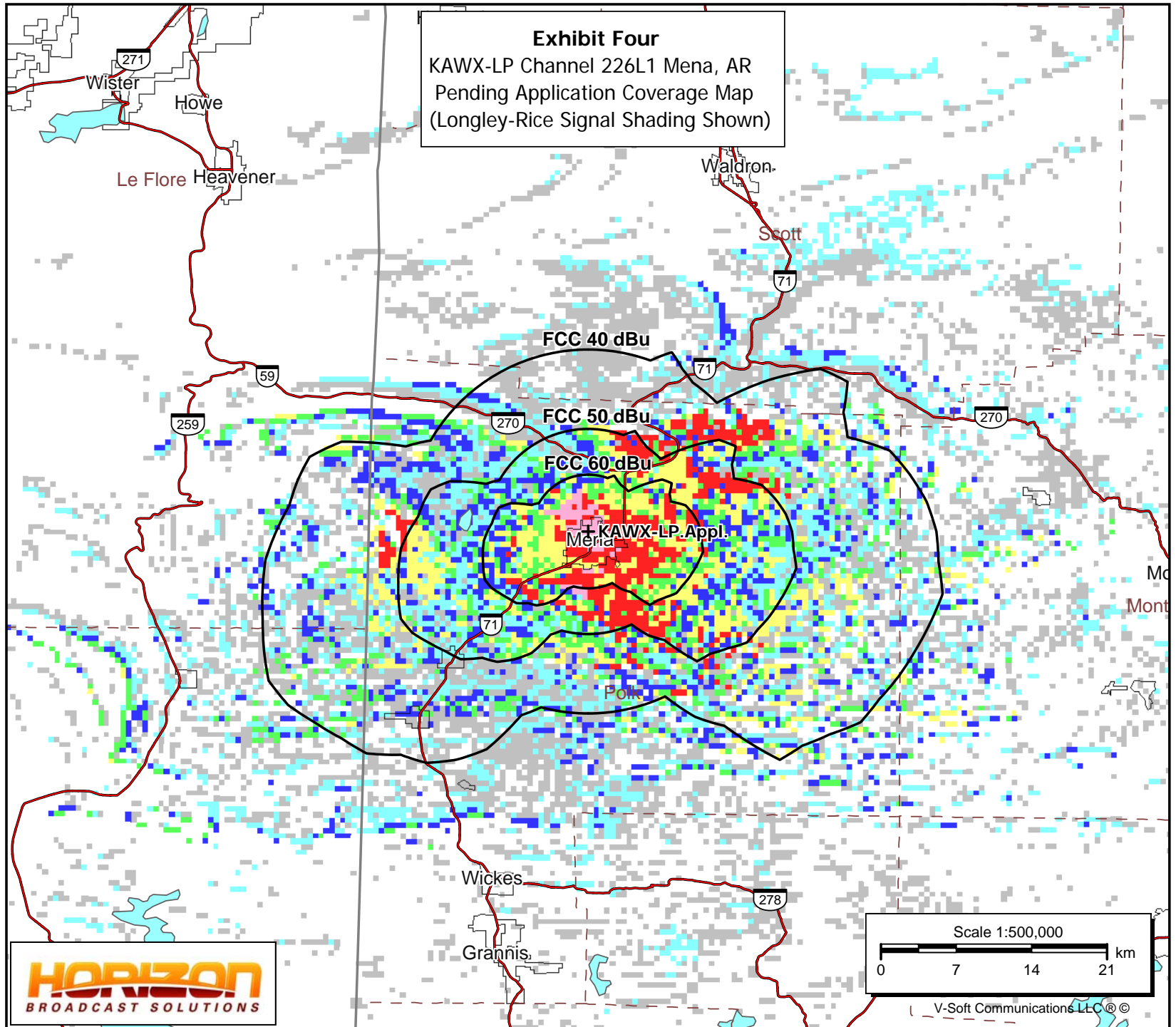
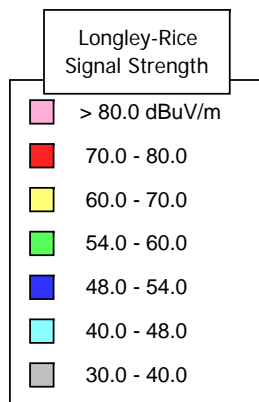
**Longley-Rice
Signal Strength****Exhibit Three**

KAWX-LP Channel 238L1 Mena, AR
1st Adj. Channel Interference Received
(Longley-Rice Signal Shading Shown)



KAWX-LP.Appl.
Mena, AR
BPL20170223ABG
Latitude: 34-35-34.10 N
Longitude: 094-14-28.70 W
ERP: 0.077 kW
HAAT: 34.61 m
Channel: 226
Frequency: 93.1 MHz

Exhibit Four
KAWX-LP Channel 226L1 Mena, AR
Pending Application Coverage Map
(Longley-Rice Signal Shading Shown)

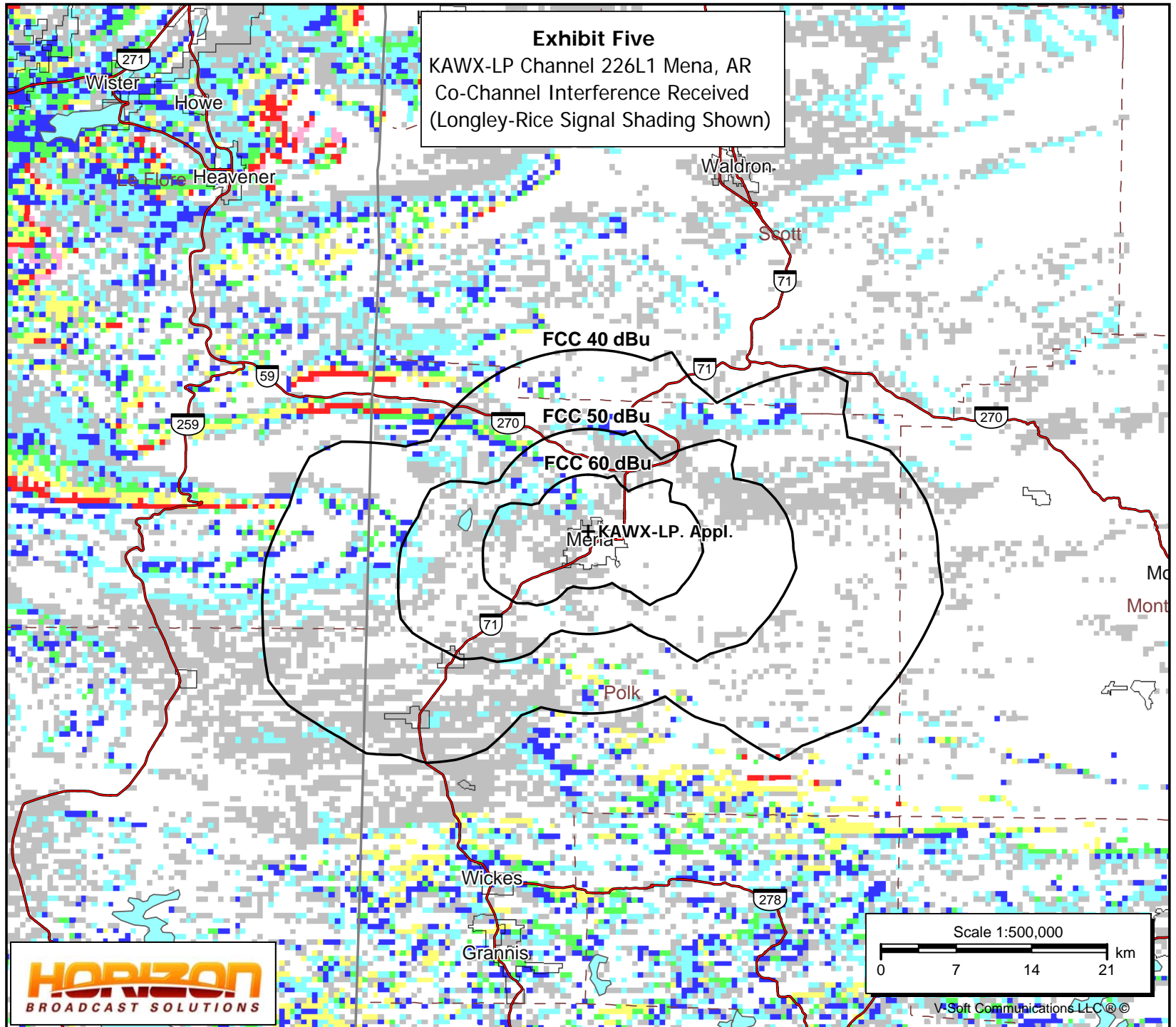
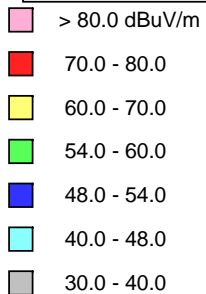


KAWX-LP. Appl.
Mena, AR
BPL20170223ABG
Latitude: 34-35-34.10 N
Longitude: 094-14-28.70 W
ERP: 0.077 kW
HAAT: 34.61 m
Channel: 226
Frequency: 93.1 MHz

KWLB
Red Oak, OK
BLH20150128ABD
Latitude: 34-55-02 N
Longitude: 095-19-51 W
ERP: 19.50 kW
HAAT: 76.0 m
Channel: 226

KMJI
Ashdown, AR
BLH20140515AGH
Latitude: 33-30-14.80 N
Longitude: 094-12-26.30 W
ERP: 7.70 kW
HAAT: 182.0 m
Channel: 227
Frequency: 93.3 MHz

Longley-Rice
Signal Strength



KAWX-LP. Appl.
Mena, AR
BPL20170223ABG
Latitude: 34-35-34.10 N
Longitude: 094-14-28.70 W
ERP: 0.077 kW
HAAT: 34.61 m
Channel: 226
Frequency: 93.1 MHz

KVRE
Hot Springs Village, AR
BLH20051207AAA
Latitude: 34-38-34 N
Longitude: 093-04-08 W
ERP: 25.00 kW
HAAT: 100.0 m
Channel: 225
Frequency: 92.9 MHz
AMSL Height: 338.9 m

KMJI
Ashdown, AR
BLH20140515AGH
Latitude: 33-30-14.80 N
Longitude: 094-12-26.30 W
ERP: 7.70 kW
HAAT: 182.0 m
Channel: 227
Frequency: 93.3 MHz]

Longley-Rice
Signal Strength

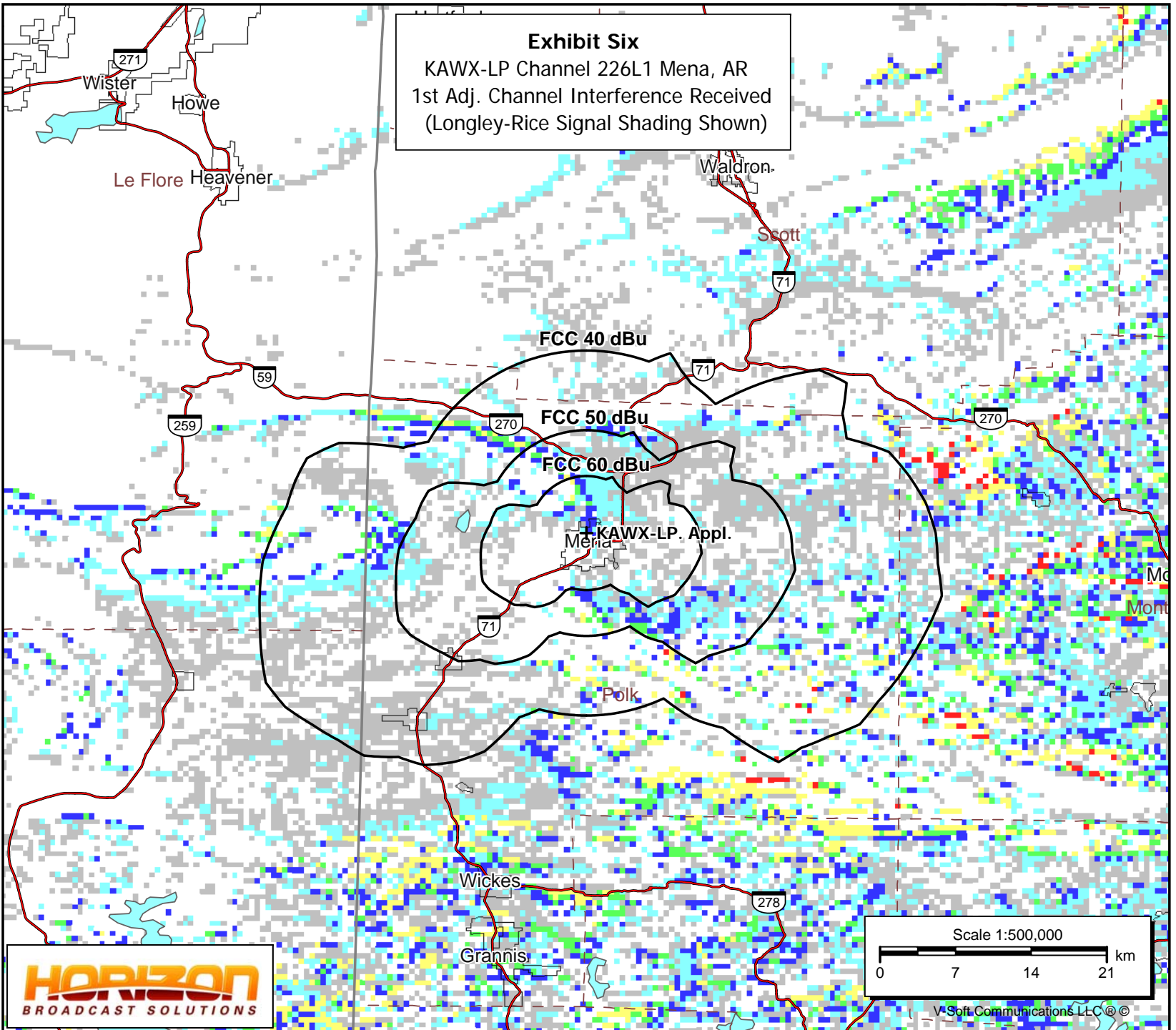
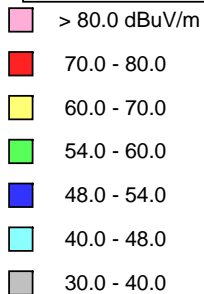


Exhibit Seven
KAWX-LP Licensed Facility Channel 238L1 Study

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REFERENCE                                     DISPLAY DATES
34 34 26.0 N.                                CLASS = L1 Int = AA      DATA 02-28-17
94 14 03.0 W.                                Current Spacings to 3rd Adj.  SEARCH 02-28-17
----- Channel 238 - 95.5 MHz -----
Call      Channel  Location      Azi      Dist      FCC      Margin
  Lat.      Lng.      Ant      Power
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KAWX-LP    LIC    238L1  Mena          AR    0.0      0.0      23.5     -23.5
  34 34 26.0    94 14 03.0      0.100 kW      30 M
    Community Radio, Inc.      BMLL20150413AAR

KERX       LIC    237C2  Paris          AR    12.1     80.9     79.5      1.4
  35 17 13.0    94 02 51.0  CX      50.000 kW     140 M
    Pearson Broadcasting Of Pa  BLH20020418AAQ

Note: KAWX-LP receives some 1st adjacent interference from KERX.

KSSN       LIC    239C   Little Rock      AR    80.6    161.6    119.5     42.2
  34 47 57.0    92 29 29.0  CY      100.000 kW     507 M
    Cc Licenses, Llc          BLH19831117BH

KITX       LIC    238C2  Hugo          OK    237.5    135.1     90.5     44.6
  33 54 56.0    95 28 04.0  CN      50.000 kW     150 M
    K95.5, Inc.              BLH19890828KC

KITX       CP -N 238C2  Hugo          OK    238.0    137.9     90.5     47.4
  33 54 39.0    95 30 03.0  NCX     50.000 kW     134 M
    K95.5, Inc.              BPH20161220AAG

KKBD       LIC    240C2  Sallisaw      OK    336.0    101.4     52.5     48.9
  35 24 26.0    94 41 25.0  CN      30.000 kW     190 M
    Capstar Tx, Llc          BLH19930326KB

KKBI       LIC    291C2  Broken Bow      OK    234.2     62.2     11.5     50.7
  34 14 45.0    94 46 58.0  CN      17.000 kW     249 M
    J.d.c. Radio, Inc.       BLH19921013KB

KPGC-LP    LIC    236L1  Norman          AR    104.0     52.9     -0.5     53.4
  34 27 26.7    93 40 31.3      0.090 kW     32 M
    His Will, Inc.          BLL20170123GET
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Exhibit Eight
KAWX-LP Proposed Channel 226L1 Study

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REFERENCE                                     DISPLAY DATES
34 35 34.1 N.                               CLASS = L1 Int = AA      DATA 02-28-17
94 14 28.7 W.                               Current Spacings to 3rd Adj.  SEARCH 02-28-17
----- Channel 226 - 93.1 MHz -----
Call      Channel  Location      Azi      Dist      FCC      Margin
   Lat.      Lng.      Ant      Power
-----
KAWX-LP   APP    226L1   Mena      AR    0.0      0.0      23.5     -23.5
  34 35 34.1   94 14 28.7      0.014 kW      78 M
    Community Radio, Inc.      BPL20170223ABG

KISR      LIC    229C    Fort Smith  AR    352.5    104.1    92.5      11.6
  35 31 22.0   94 23 32.0  CN      100.000 kW    381 M
    Stereo 93 Inc.      BLH19800714AG

KPRV-FM   LIC    223A    Heavener   OK    318.2    45.6     28.5      17.1
  34 53 54.0   94 34 30.0  CN      1.550 kW     195 M
    Leroy Billy      BLH19970822KD

KWLBB     LIC-N 226C3   Red Oak    OK    290.2    106.1    77.5      28.6
  34 55 02.0   95 19 51.0  NCX     19.500 kW     76 M
    Eastern Oklahoma State Col  BLH20150128ABD

KVRE      LIC    225C3   Hot Springs Village AR    86.7     107.4    66.5      40.9
  34 38 32.0   93 04 17.0  C       25.000 kW     99 M
    Caddo Broadcasting Company  BLH20140828ACW

KVRE      LIC    225C3   Hot Springs Village AR    86.7     107.7    66.5      41.2
  34 38 34.0   93 04 08.0  CX      25.000 kW    100 M
    Caddo Broadcasting Company  BLH20051207AAA

K226BS    LIC    226D    Fort Smith  AR    348.5    86.2     38.5      47.8
  35 21 15.5   94 25 53.3  C       0.250 kW     165 M
    Fred H. Baker, Jr.      BLFT20141209AAE

KISR      APP    229C1   Fort Smith  AR     4.3     124.3    72.5      51.8
  35 42 35.7   94 08 15.3  CX      83.000 kW    324 M
    Stereo 93 Inc.      BPH20160817AAE

KMJI      LIC-N 227C3   Ashdown    AR    178.5    120.8    66.5      54.3
  33 30 14.8   94 12 26.3  NC      7.700 kW     182 M
    Townsquare Media Texarkana  BLH20140515AGH

KYRC      LIC-N 228C3   Bismarck   AR    114.2    97.1     39.5      57.6
  34 13 52.3   93 16 46.1  NCX     11.500 kW    147 M
    Houston Christian Broadcas  BMLED20161219AAV

KMJI      CP -N 227C3   Ashdown    AR    177.5    126.1    66.5      59.6
  33 27 25.0   94 10 59.0  NCX      8.000 kW    148 M
    Townsquare Media Texarkana  BPH20160815ABL
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