

**Engineering Statement**  
**WGKC(FM), WQQB(FM), WJEK(FM) & WSJK(FM)**  
**RADIO MULTIPLE OWNERSHIP STUDY**  
prepared for  
**S.J. Broadcasting, LLC**

## **Introduction**

*S.J. Broadcasting, LLC* (“*S.J. Broadcasting*”) is proposing to acquire four FM stations in Central Illinois. *S.J. Broadcasting* has no other attributable ownership in other radio broadcast stations in the area. The instant Engineering Statement has been prepared using information provided by *S.J. Broadcasting* and their representatives to demonstrate compliance with the Rules of the Federal Communications Commission as they govern common ownership of multiple radio stations serving the same markets.

*S.J. Broadcasting’s* proposed commonly owned stations are:

- WGKC(FM) Fac. ID: 10112 Mahomet, IL
- WQQB(FM) Fac. ID: 73229 Rantoul, IL
- WJEK(FM) Fac. ID: 57466 Rantoul, IL
- WSJK(FM) Fac. ID: 57471 Tuscola, IL

The Commission issued a Report and Order and Notice of Proposed Rulemaking (“R&O”)<sup>1</sup> for various multiple ownership issues. The R&O establishes a means of evaluating radio station multiple ownership issues utilizing existing Nielsen Audio<sup>®2</sup> and BIA<sup>®</sup> MEDIA Access Pro<sup>TM3</sup> market data for analysis of markets with established geographic boundaries.<sup>4</sup> There is a separate “interim” means for evaluating radio station multiple ownership issues beyond established Nielsen Audio radio markets. In cases where a station is not geographically within a Nielsen Audio boundary but is declared “home” to a Nielsen Audio market, ownership concentration must be studied using both the interim and the BIA methods. None of *S.J. Broadcasting’s* four (4) radio stations lie in any defined geographic radio market.

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<sup>1</sup> Report and Order in MB Docket No. 02-277 and MM Docket Nos. 01-235, 01-317, and 00-244, and Notice of Proposed Rulemaking for MB Docket 03-130 FCC-03-127, (adopted June 2, 2003)(released July 2, 2003).

<sup>2</sup> Nielsen Audio is a registered mark of Nielsen Holdings, N.V.

<sup>3</sup> MEDIA Access Pro is a trademark of BIA<sup>®</sup> Financial Network Inc.

<sup>4</sup> As an initial matter, the geographical boundaries of a market are established by reference to the boundaries of the markets established by Nielsen Audio. Within that market, the FCC requires that the BIA count of stations operating in the market be employed.

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Pursuant to §73.3555 of the Commission’s Rules, the number of stations that a licensee may own is based on the total number of stations in that particular market, regardless of the study methodology employed. There is also a limit on how many stations each licensee may own in any one service (AM or FM).

- Markets with 45 or more stations are limited to 8 total stations and 5 in any one service.
- Markets with 30-44 stations are limited to 7 total stations and 4 in any one service.
- Markets with 15-29 stations are limited to 6 total stations and 4 in any one service.
- Markets with 14 or fewer stations are limited to 5 total stations and 3 in any one service, but not more than 50% of the market stations.

### **Interim Method - Introduction**

Under the current Rules, any station with a principal community beyond the geographic boundary of a defined geographic radio market shall be studied under the Commission’s “interim,” contour overlap methodology. A “market” is defined as the area encompassed by the principal community contours of radio stations for which common ownership is proposed<sup>5</sup> and which have a mutual area of principal community contour overlap.

### **Interim Method – The Markets**

The principal community contours of the four (4) proposed commonly owned stations share three (3) instances of unique principal community contour overlap. The core common overlap areas of FM stations constitute the Markets, with boundaries delineated by the principal community contours of the respective stations. The proposed commonly owned stations are shown on **Map Figure 1** along with shading depicting the instances of principal community contour common overlap defining the composition of the three markets; Market 1: WGKC(FM), WQQB(FM) & WJEK(FM), Market 2: WGKC(FM), WQQB(FM) & WSJK(FM), and Market 3: WJSK(FM) & WJEK(FM). The overlap between WJSK(FM) and WJEK(FM) is barely visible without a significantly enlarged view (included on **Map Figure 1**). Out of an abundance of

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<sup>5</sup> Order in Implementation of Sections 202(a) and 202(b)(1) of the Telecommunications Act of 1996 (Broadcast Radio Ownership) FCC 96-90, released March 8, 1996 and Memorandum Opinion and Order in Revision of Radio Rules and Policies 7 FCC Rcd 6387, 6395 para. 39 (1992).

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caution, Market 3 is also considered herein. The extent of the land area of the individual markets, with yellow shading, is shown with other stations contributing to the “markets” on **Map Figures 2-4.**

**Map Figure 2** illustrates that an “interim contour overlap study” of **Market 1** with three (3) commonly owned FM stations (*WGKC(FM)*, *WQQB(FM)*, and *WJEK(FM)*) identifies 20 operating commercial and noncommercial stations with principal community contours that overlap some portion of the Market, as defined by principal community coverage area of these three stations. Of the twenty (20) stations, four (4) FM stations have ownership interest attributable to *S.J. Broadcasting* but only three of those share some common overlap. The one excluded from the common overlap (*WSJK(FM)*) is not countable for market total purposes. The total station count for the proposed market is thus nineteen (19) when including only three (3) commonly owned overlapping stations. All stations shown have transmitter locations that are situated less than 92 km from the nearest edge of the mutual principal community contour overlap. The proposed common ownership of these *S.J. Broadcasting* stations, *WGKC(FM)*, *WQQB(FM)*, and *WJEK(FM)*, complies with FCC Rules, which state that a licensee may own up to six stations or four stations in any one service in markets with 15 to 29 stations.

**Map Figure 3** illustrates that an “interim contour overlap study” of **Market 2** with three (3) commonly owned FM stations (*WGKC(FM)*, *WQQB(FM)*, and *WSJK(FM)*) identifies 21 operating commercial and noncommercial stations with principal community contours that overlap some portion of the Market, as defined by principal community coverage area of these three stations. Of the twenty-one (21) stations, four (4) FM stations have ownership interest attributable to *S.J. Broadcasting* but only three of those share some common overlap. The one excluded from the common overlap (*WJEK(FM)*) is not countable for market total purposes. The total station count for the proposed market is thus twenty (20) when including only three (3) commonly owned overlapping stations. All stations shown have transmitter locations that are situated less than 92 km from the nearest edge of the mutual principal community contour overlap. The proposed

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common ownership of these *S.J. Broadcasting* stations, WGKC(FM), WQQB(FM), and WSJK(FM), complies with FCC Rules, which state that a licensee may own up to six stations or four stations in any one service in markets with 15 to 29 stations.

**Map Figure 4** illustrates that an “interim contour overlap study” of **Market 3** with two (2) commonly owned FM stations (*WJEK(FM)* and *WSJK(FM)*) identifies 20 operating commercial and noncommercial stations with principal community contours that overlap some portion of the Market, as defined by principal community coverage area of these two stations. Of the twenty (20) stations, four (4) FM stations have ownership interest attributable to *S.J. Broadcasting* but only two of those share some common overlap. The two excluded from the common overlap (WGKC(FM) and WQQB(FM)) are not countable for market total purposes. The total station count for the proposed market is thus eighteen (18) when including only the two (2) commonly owned overlapping stations comprising **Market 3**. All stations shown have transmitter locations that are situated less than 92 km from the nearest edge of the mutual principal community contour overlap. The proposed common ownership of these *S.J. Broadcasting* stations, WJEK(FM) and WSJK(FM), complies with FCC Rules, which state that a licensee may own up to six stations or four stations in any one service in markets with 15 to 29 stations.

### Summary

In preparing the attached maps and tables, pertinent station data were extracted from the Commission's engineering databases. For AM stations, these included the operating power, radiation efficiency, directional antenna data (where appropriate), and geographic coordinates. The distances to the 5 mV/m contours were then determined using the digitized version of the *Atlas of Ground Conductivity* published in 1981 by the International Telecommunication Union along with a computer program which simulates the FCC's AM groundwave propagation curves. For the FM stations, pertinent data for determining the distances to the contour included the antenna elevation above mean sea level, geographic coordinates, effective radiated power, and, where appropriate, directional antenna patterns. The requisite 3.16 mV/m (70 dBμ) contours were determined using

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digitized 3 arc-second U.S.G.S. terrain data along radials spaced every degree from the transmitter site and an implementation of the Commission's TVFMFS computer program which simulates the FM propagation curves. The detailed distances to the principal community contours were then used with a GIS mapping program to generate the attached maps.

**Conclusion**

As shown herein, *S.J. Broadcasting, LLC*'s proposed common ownership of the four FM stations studied herein (*WGKC(FM)*, *WQQB(FM)*, *WJEK(FM)*, and *WSJK(FM)*) complies with §73.3555 of the Commission's Rules regarding the multiple ownership of radio stations. This conclusion is based on the interim, contour-overlap method.

**Certification**

Under the penalty of perjury, the undersigned hereby certifies that the foregoing statement was prepared by him or under his direction on behalf of *S.J. Broadcasting* and that it is true and correct to the best of his knowledge and belief. Mark Peabody is a senior consultant in the firm of *Cavell, Mertz & Associates, Inc.* and has submitted numerous engineering exhibits to the Federal Communications Commission. His qualifications are a matter of record with the Commission.



Mark Peabody  
January 25, 2021

Cavell, Mertz & Associates, Inc.  
7724 Donegan Dr.  
Manassas, Virginia 20109  
(703) 392-9090

FM 70 dBμ Contours  
of Proposed Commonly Owned Stations

- WGKC(FM) Fac. ID: 10112 MAHOMET, IL
- WJEK(FM) Fac. ID: 57466 RANTOUL, IL
- WQQB(FM) Fac. ID: 73229 RANTOUL, IL
- WSJK(FM) Fac. ID: 57471 TUSCOLA, IL



Green Shading Represents Core  
Common Overlapping Areas of  
Stations Comprising Proposed Markets

Map Figure 1  
Principal Community Contours of  
Proposed Commonly Owned Stations

Prepared on Behalf of  
S.J. BROADCASTING, LLC  
January, 2021

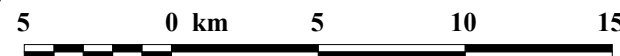
Enlarged View  
Common Overlap  
2 FM Stations:  
WJSK(FM) & WJEK(FM)

Common Overlap Cores  
of 3 Proposed Markets

3 FM Stations:  
WGKC(FM),  
WQQB(FM) & WJEK(FM)

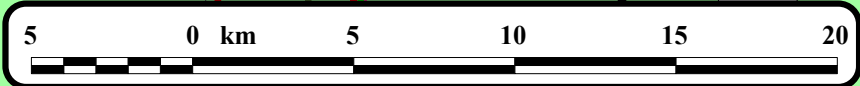
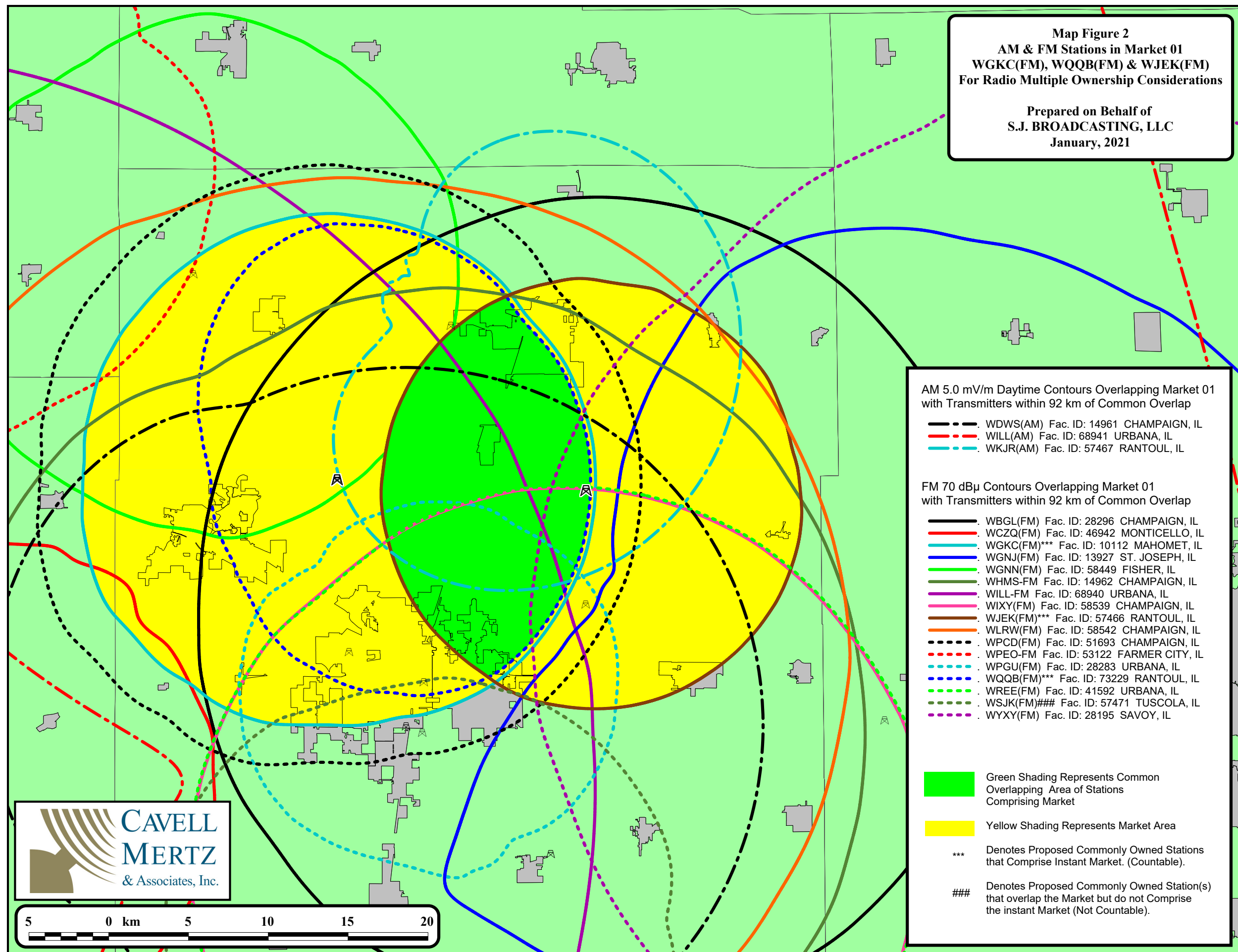
3 FM Stations:  
WGKC(FM),  
WQQB(FM) & WSJK(FM)

2 FM Stations:  
WJSK(FM) & WJEK(FM)





**Map Figure 2**  
**AM & FM Stations in Market 01**  
**WGKC(FM), WQQB(FM) & WJEK(FM)**  
**For Radio Multiple Ownership Considerations**  
  
**Prepared on Behalf of**  
**S.J. BROADCASTING, LLC**  
**January, 2021**



**Map Figure 2a (Overview\*)**  
**AM & FM Stations in Market 01**  
**WGKC(FM), WQQB(FM) & WJEK(FM)**  
**For Radio Multiple Ownership Considerations**

**Prepared on Behalf of**  
**S.J. BROADCASTING, LLC**  
**January, 2021**


*\* (Overview Included to Clearly Show  
All Stations Are Within 92 km of Common Overlap Area)*


**AM 5.0 mV/m Daytime Contours Overlapping Market 01  
with Transmitters within 92 km of Common Overlap**


- WDSW(AM) Fac. ID: 14961 CHAMPAIGN, IL
- WILL(AM) Fac. ID: 68941 URBANA, IL
- WKJR(AM) Fac. ID: 57467 RANTOUL, IL

**FM 70 dBμ Contours Overlapping Market 01  
with Transmitters within 92 km of Common Overlap**

- WBGL(FM) Fac. ID: 28296 CHAMPAIGN, IL
- WCZQ(FM) Fac. ID: 46942 MONTICELLO, IL
- WGKC(FM)\*\*\* Fac. ID: 10112 MAHOMET, IL
- WGNJ(FM) Fac. ID: 13927 ST. JOSEPH, IL
- WGNN(FM) Fac. ID: 58449 FISHER, IL
- WHMS-FM Fac. ID: 14962 CHAMPAIGN, IL
- WILL-FM Fac. ID: 68940 URBANA, IL
- WIXY(FM) Fac. ID: 58539 CHAMPAIGN, IL
- WJEK(FM)\*\*\* Fac. ID: 57466 RANTOUL, IL
- WLRW(FM) Fac. ID: 58542 CHAMPAIGN, IL
- WPCD(FM) Fac. ID: 51693 CHAMPAIGN, IL
- WPEO-FM Fac. ID: 53122 FARMER CITY, IL
- WPGU(FM) Fac. ID: 28283 URBANA, IL
- WQQB(FM)\*\*\* Fac. ID: 73229 RANTOUL, IL
- WREE(FM) Fac. ID: 41592 URBANA, IL
- WSJK(FM)### Fac. ID: 57471 TUSCOLA, IL
- WYXY(FM) Fac. ID: 28195 SAVOY, IL

 Green Shading Represents Common  
Overlapping Area of Stations  
Comprising Market

 Yellow Shading Represents Market Area

 Green Dotted Unique Line Represents  
92 km Limit from Common Overlap Area

\*\*\* Denotes Proposed Commonly Owned Stations  
that Comprise Instant Market. (Countable).

### Denotes Proposed Commonly Owned Station(s)  
that overlap the Market but do not Comprise  
the instant Market (Not Countable).

 **CAVELL  
MERTZ**  
& Associates, Inc.

10 0 km 10 20 30 40 50 60 70 80



**Map Figure 3**  
**AM & FM Stations in Market 02**  
**WGKC(FM), WQQB(FM) & WSJK(FM)**  
**For Radio Multiple Ownership Considerations**

**Prepared on Behalf of**  
**S.J. BROADCASTING, LLC**  
**January, 2021**

AM 5.0 mV/m Daytime Contours Overlapping Market 02  
with Transmitters within 92 km of Common Overlap

- WDWS(AM) Fac. ID: 14961 CHAMPAIGN, IL
- WILL(AM) Fac. ID: 68941 URBANA, IL
- WKJR(AM) Fac. ID: 57467 RANTOUL, IL

FM 70 dBu Contours Overlapping Market 02  
with Transmitters within 92 km of Common Overlap

- WBGL(FM) Fac. ID: 28296 CHAMPAIGN, IL
- WCZQ(FM) Fac. ID: 46942 MONTICELLO, IL
- WGKC(FM)\*\*\* Fac. ID: 10112 MAHOMET, IL
- WGNJ(FM) Fac. ID: 13927 ST. JOSEPH, IL
- WGNM(FM) Fac. ID: 58449 FISHER, IL
- WHMS-FM Fac. ID: 14962 CHAMPAIGN, IL
- WILL-FM Fac. ID: 68940 URBANA, IL
- WIXY(FM) Fac. ID: 58539 CHAMPAIGN, IL
- WJEK(FM)### Fac. ID: 57466 RANTOUL, IL
- WKIO(FM) Fac. ID: 57469 ARCOLA, IL
- WLRW(FM) Fac. ID: 58542 CHAMPAIGN, IL
- WPCD(FM) Fac. ID: 51693 CHAMPAIGN, IL
- WPEO-FM Fac. ID: 53122 FARMER CITY, IL
- WPGU(FM) Fac. ID: 28283 URBANA, IL
- WQQB(FM)\*\*\* Fac. ID: 73229 RANTOUL, IL
- WREE(FM) Fac. ID: 41592 URBANA, IL
- WSJK(FM)\*\*\* Fac. ID: 57471 TUSCOLA, IL
- WYXY(FM) Fac. ID: 28195 SAVOY, IL

Green Shading Represents Common  
Overlapping Area of Stations  
Comprising Market

Yellow Shading Represents Market Area

\*\*\* Denotes Proposed Commonly Owned Stations  
that Comprise Instant Market. (Countable).

### Denotes Proposed Commonly Owned Station(s)  
that overlap the Market but do not Comprise  
the instant Market (Not Countable).



**Map Figure 3a (Overview\*)**  
**AM & FM Stations in Market 02**  
**WGKC(FM), WQQB(FM) & WSJK(FM)**  
**For Radio Multiple Ownership Considerations**

**Prepared on Behalf of**  
**S.J. BROADCASTING, LLC**  
**January, 2021**


*\* (Overview Included to Clearly Show  
 All Stations Are Within 92 km of Common Overlap Area)*


**AM 5.0 mV/m Daytime Contours Overlapping Market 02  
 with Transmitters within 92 km of Common Overlap**


- WDWS(AM) Fac. ID: 14961 CHAMPAIGN, IL
- WILL(AM) Fac. ID: 68941 URBANA, IL
- WKJR(AM) Fac. ID: 57467 RANTOUL, IL

**FM 70 dBμ Contours Overlapping Market 02  
 with Transmitters within 92 km of Common Overlap**

- WBGL(FM) Fac. ID: 28296 CHAMPAIGN, IL
- WCZQ(FM) Fac. ID: 46942 MONTICELLO, IL
- WGKC(FM)\*\*\* Fac. ID: 10112 MAHOMET, IL
- WGNJ(FM) Fac. ID: 13927 ST. JOSEPH, IL
- WGNN(FM) Fac. ID: 58449 FISHER, IL
- WHMS-FM Fac. ID: 14962 CHAMPAIGN, IL
- WILL-FM Fac. ID: 68940 URBANA, IL
- WIXY(FM) Fac. ID: 58539 CHAMPAIGN, IL
- WJEK(FM)### Fac. ID: 57466 RANTOUL, IL
- WKIO(FM) Fac. ID: 57469 ARCOLA, IL
- WLRW(FM) Fac. ID: 58542 CHAMPAIGN, IL
- WPCD(FM) Fac. ID: 51693 CHAMPAIGN, IL
- WPEO-FM Fac. ID: 53122 FARMER CITY, IL
- WPGU(FM) Fac. ID: 28283 URBANA, IL
- WQQB(FM)\*\*\* Fac. ID: 73229 RANTOUL, IL
- WREE(FM) Fac. ID: 41592 URBANA, IL
- WSJK(FM)\*\*\* Fac. ID: 57471 TUSCOLA, IL
- WYXY(FM) Fac. ID: 28195 SAVOY, IL

 Green Shading Represents Common Overlapping Area of Stations Comprising Market

 Yellow Shading Represents Market Area

 Green Dotted Unique Line Represents 92 km Limit from Common Overlap Area

\*\*\* Denotes Proposed Commonly Owned Stations that Comprise Instant Market. (Countable).

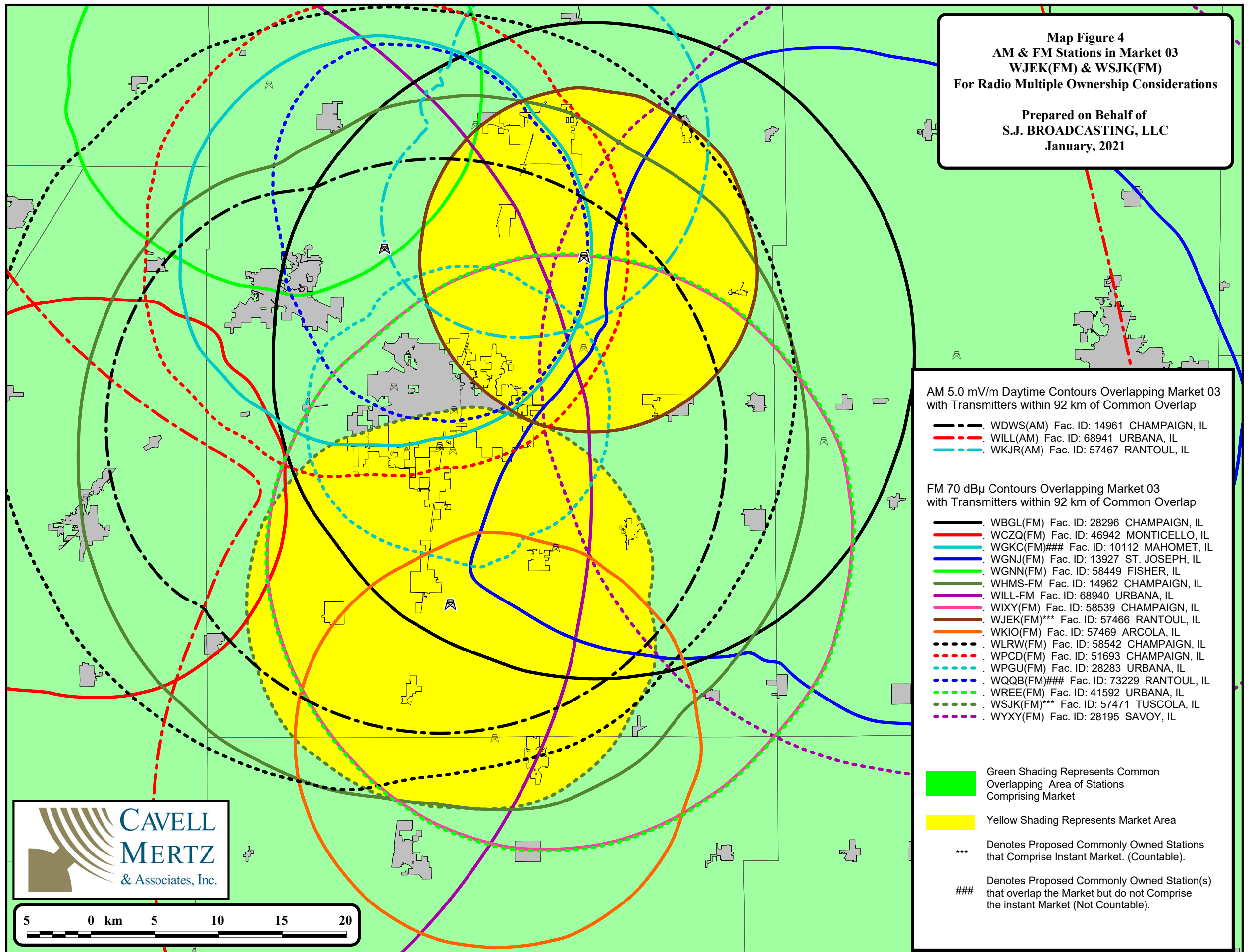
### Denotes Proposed Commonly Owned Station(s) that overlap the Market but do not Comprise the instant Market (Not Countable).



10 0 km 10 20 30 40 50 60 70 80

**Map Figure 4**  
**AM & FM Stations in Market 03**  
**WJEK(FM) & WSJK(FM)**  
**For Radio Multiple Ownership Considerations**

**Prepared on Behalf of**  
**S.J. BROADCASTING, LLC**  
**January, 2021**





**Map Figure 4a (Overview\*)**  
**AM & FM Stations in Market 03**  
**WJEK(FM) & WSJK(FM)**  
**For Radio Multiple Ownership Considerations**

**Prepared on Behalf of**  
**S.J. BROADCASTING, LLC**  
**January, 2021**

*\* (Overview Included to Clearly Show  
 All Stations Are Within 92 km of Common Overlap Area)*


**AM 5.0 mV/m Daytime Contours Overlapping Market 03  
 with Transmitters within 92 km of Common Overlap**


- WDWS(AM) Fac. ID: 14961 CHAMPAIGN, IL
- WILL(AM) Fac. ID: 68941 URBANA, IL
- WKJR(AM) Fac. ID: 57467 RANTOUL, IL

**FM 70 dBμ Contours Overlapping Market 03  
 with Transmitters within 92 km of Common Overlap**

- WBGL(FM) Fac. ID: 28296 CHAMPAIGN, IL
- WCZQ(FM) Fac. ID: 46942 MONTICELLO, IL
- WGKC(FM)### Fac. ID: 10112 MAHOMET, IL
- WGNJ(FM) Fac. ID: 13927 ST. JOSEPH, IL
- WGNN(FM) Fac. ID: 58449 FISHER, IL
- WHMS-FM Fac. ID: 14962 CHAMPAIGN, IL
- WILL-FM Fac. ID: 68940 URBANA, IL
- WIXY(FM) Fac. ID: 58539 CHAMPAIGN, IL
- WJEK(FM)\*\*\* Fac. ID: 57466 RANTOUL, IL
- WKIO(FM) Fac. ID: 57469 ARCOLA, IL
- WLRW(FM) Fac. ID: 58542 CHAMPAIGN, IL
- WPCD(FM) Fac. ID: 51693 CHAMPAIGN, IL
- WPGU(FM) Fac. ID: 28283 URBANA, IL
- WQQB(FM)### Fac. ID: 73229 RANTOUL, IL
- WREE(FM) Fac. ID: 41592 URBANA, IL
- WSJK(FM)\*\*\* Fac. ID: 57471 TUSCOLA, IL
- WYXY(FM) Fac. ID: 28195 SAVOY, IL

 Green Shading Represents Common  
 Overlapping Area of Stations  
 Comprising Market

 Yellow Shading Represents Market Area

 Green Dotted Unique Line Represents  
 92 km Limit from Common Overlap Area

\*\*\* Denotes Proposed Commonly Owned Stations  
 that Comprise Instant Market. (Countable).

### Denotes Proposed Commonly Owned Station(s)  
 that overlap the Market but do not Comprise  
 the instant Market (Not Countable).

