18273

ORIGINAL

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July 19, 2013

BY HAND DELIVERY

Marlene H. Dortch, Esq.
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: **Second Amendment to Application for AM Broadcast Station License/ Request for Program Test Authority**
Multicultural Radio Broadcasting Licensee, LLC
Station KYPA(AM), Los Angeles, California
Facility Identifier Number 18273
File Number BMML-20111209KKR

0002151744

Dear Ms. Dortch:

Transmitted herewith on behalf of Multicultural Radio Broadcasting Licensee, LLC ("Multicultural"), the licensee of Station KYPA(AM), are an original and two copies of an amendment to the above-referenced application for an AM broadcast station license. This amendment was prepared by Ronald D. Rackley, P.E., Multicultural's consulting engineer, and completely replaces the technical portion of the previously submitted application to cover BP-20050228ACB.

In addition, pursuant to Special Operating Condition No. 6, a copy of the Multiplex Agreement between the stations sharing the same antenna system is provided.

If there are any questions about this Amendment, please contact undersigned counsel for Multicultural Radio Broadcasting Licensee, LLC.

Sincerely,

Mark Lipp

Mark Lipp
Enclosure

cc: Mr. Jerome J. Manarchuck, Media Bureau, Audio Division, FCC

13531232.1

ACCEPTED/FILED

JUL 19 2013

Federal Communications Commission
Office of the Secretary

Federal Communications Commission
Washington, D. C. 20554

Approved by OMB
3060-0627
Expires 01/31/98

FOR FCC USE ONLY

FCC 302-AM
APPLICATION FOR AM BROADCAST STATION LICENSE

(Please read instructions before filling out form.

FOR COMMISSION USE ONLY

FILE NO.

SECTION I - APPLICANT FEE INFORMATION

1. PAYOR NAME (Last, First, Middle Initial)

Multicultural Radio Broadcadting Licensee, LLC

MAILING ADDRESS (Line 1) (Maximum 35 characters)
27 William Street, 11th Floor

MAILING ADDRESS (Line 2) (Maximum 35 characters)

CITY	STATE OR COUNTRY (if foreign address)	ZIP CODE
New York	New York	10005

TELEPHONE NUMBER (include area code)	CALL LETTERS	OTHER FCC IDENTIFIER (If applicable)
212.431.4300	KYPA(AM)	18273

2. A. Is a fee submitted with this application? ☐ Yes ☑ No

B. If No, indicate reason for fee exemption (see 47 C.F.R. Section

☐ Governmental Entity ☐ Noncommercial educational licensee ☑ Other (Please explain):

C. If Yes, provide the following information: **Amendment**

Enter in Column (A) the correct Fee Type Code for the service you are applying for. Fee Type Codes may be found in the "Mass Media Services Fee Filing Guide." Column (B) lists the Fee Multiple applicable for this application. Enter fee amount due in Column (C).

(A) FEE TYPE CODE	(B) FEE MULTIPLE	(C) FEE DUE FOR FEE TYPE CODE IN COLUMN (A)	FOR FCC USE ONLY
	0001	$	

To be used only when you are requesting concurrent actions which result in a requirement to list more than one Fee Type Code.

(A)	(B)	(C)	FOR FCC USE ONLY
	0001	$	

ADD ALL AMOUNTS SHOWN IN COLUMN C, AND ENTER THE TOTAL HERE. THIS AMOUNT SHOULD EQUAL YOUR ENCLOSED REMITTANCE.	TOTAL AMOUNT REMITTED WITH THIS APPLICATION	FOR FCC USE ONLY
	$	

SECTION II - APPLICANT INFORMATION		
1. NAME OF APPLICANT Multicultural Radio Broadcasting Licensee, LLC		
MAILING ADDRESS 27 William Street, 11th Floor		
CITY New York	STATE New York	ZIP CODE 10005

2. This application is for:

☑ Commercial ☐ Noncommercial

☑ AM Directional ☐ AM Non-Directional

Call letters	Community of License	Construction Permit File No.	Modification of Construction Permit File No(s).	Expiration Date of Last Construction Permit
KYPA(AM)	Los Angeles, CA	BP-20050228ACB	N/A	12/19/2011

3. Is the station now operating pursuant to automatic program test authority in accordance with 47 C.F.R. Section 73.1620?

☐ Yes ☑ No

If No, explain in an Exhibit.

Exhibit No. A

4. Have all the terms, conditions, and obligations set forth in the above described construction permit been fully met?

☑ Yes ☐ No

If No, state exceptions in an Exhibit.

Exhibit No.

5. Apart from the changes already reported, has any cause or circumstance arisen since the grant of the underlying construction permit which would result in any statement or representation contained in the construction permit application to be now incorrect?

☐ Yes ☑ No

If Yes, explain in an Exhibit.

Exhibit No.

6. Has the permittee filed its Ownership Report (FCC Form 323) or ownership certification in accordance with 47 C.F.R. Section 73.3615(b)?

☐ Yes ☐ No

☑ Does not apply

If No, explain in an Exhibit.

Exhibit No.

7. Has an adverse finding been made or an adverse final action been taken by any court or administrative body with respect to the applicant or parties to the application in a civil or criminal proceeding, brought under the provisions of any law relating to the following: any felony; mass media related antitrust or unfair competition; fraudulent statements to another governmental unit; or discrimination?

☐ Yes ☑ No

If the answer is Yes, attach as an Exhibit a full disclosure of the persons and matters involved, including an identification of the court or administrative body and the proceeding (by dates and file numbers), and the disposition of the litigation. Where the requisite information has been earlier disclosed in connection with another application or as required by 47 U.S.C. Section 1.65(c), the applicant need only provide: (i) an identification of that previous submission by reference to the file number in the case of an application, the call letters of the station regarding which the application or Section 1.65 information was filed, and the date of filing; and (ii) the disposition of the previously reported matter.

Exhibit No.

8. Does the applicant, or any party to the application, have a petition on file to migrate to the expanded band (1605-1705 kHz) or a permit or license either in the existing band or expanded band that is held in combination (pursuant to the 5 year holding period allowed) with the AM facility proposed to be modified herein?

☐ Yes ☑ No

If Yes, provide particulars as an Exhibit.

Exhibit No.

The APPLICANT hereby waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because use of the same, whether by license or otherwise, and requests and authorization in accordance with this application. (See Section 304 of the Communications Act of 1934, as amended).

The APPLICANT acknowledges that all the statements made in this application and attached exhibits are considered material representations and that all the exhibits are a material part hereof and are incorporated herein as set out in full in

CERTIFICATION

1. By checking Yes, the applicant certifies, that, in the case of an individual applicant, he or she is not subject to a denial of federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. Section 862, or, in the case of a non-individual applicant (e.g., corporation, partnership or other unincorporated association), no party to the application is subject to a denial of federal benefits that includes FCC benefits pursuant to that section. For the definition of a "party" for these purposes, see 47 C.F.R. Section 1.2002(b).

☑ Yes ☐ No

2. I certify that the statements in this application are true, complete, and correct to the best of my knowledge and belief, and are made in good faith.

Name	Signature	
Arthur S. Liu		
Title	Date	Telephone Number
President	07. 16.2013	212.431.4300

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION

FCC NOTICE TO INDIVIDUALS REQUIRED BY THE PRIVACY ACT AND THE PAPERWORK REDUCTION ACT

The solicitation of personal information requested in this application is authorized by the Communications Act of 1934, as amended. The Commission will use the information provided in this form to determine whether grant of the application is in the public interest. In reaching that determination, or for law enforcement purposes, it may become necessary to refer personal information contained in this form to another government agency. In addition, all information provided in this form will be available for public inspection. If information requested on the form is not provided, the application may be returned without action having been taken upon it or its processing may be delayed while a request is made to provide the missing information. Your response is required to obtain the requested authorization.

Public reporting burden for this collection of information is estimated to average 639 hours and 53 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, can be sent to the Federal Communications Commission, Records Management Branch, Paperwork Reduction Project (3060-0627), Washington, D. C. 20554. Do NOT send completed forms to this address.

THE FOREGOING NOTICE IS REQUIRED BY THE PRIVACY ACT OF 1974, P.L. 93-579, DECEMBER 31, 1974, 5 U.S.C. 552a(e)(3), AND THE PAPERWORK REDUCTION ACT OF 1980, P.L. 96-511, DECEMBER 11, 1980, 44 U.S.C. 3507.

SECTION III - LICENSE APPLICATION ENGINEERING DATA

Name of Applicant

MULTICULTURAL RADIO BROADCASTING LICENSEE, LLC (AMENDMENT TO BMML-20111209KKR)

PURPOSE OF AUTHORIZATION APPLIED FOR: (check one)

☑ Station License ☐ Direct Measurement of Power

1. Facilities authorized in construction permit					
Call Sign	File No. of Construction Permit (if applicable)	Frequency (kHz)	Hours of Operation	Power in kilowatts	
				Night	Day
KYPA	BP -20050228ACB	1230	UNLIIMITED	1.0	1.0

2. Station location	
State	City or Town
CA	LOS ANGELES

3. Transmitter location			
State	County	City or Town	Street address (or other identification)
CA	LOS ANGELES	LOS ANGELES	1700 N. ALVARADO BLVD.

4. Main studio location			
State	County	City or Town	Street address (or other identification)
CA	LOS ANGELES	PASADENA	747 E. GREEN STREET

5. Remote control point location (specify only if authorized directional antenna)			
State	County	City or Town	Street address (or other identification)
CA	LOS ANGELES	PASADENA	747 E. GREEN STREET

6. Has type-approved stereo generating equipment been installed? ☐ Yes ☑ No

7. Does the sampling system meet the requirements of 47 C.F.R. Section 73.68? ☑ Yes ☐ No

☐ Not Applicable

Attach as an Exhibit a detailed description of the sampling system as installed.

Exhibit No.
TECH EXHIBIT

8. Operating constants:	
RF common point or antenna current (in amperes) without modulation for night system 4.65	RF common point or antenna current (in amperes) without modulation for day system 4.65
Measured antenna or common point resistance (in ohms) at operating frequency Night 50.0 Day 50.0	Measured antenna or common point reactance (in ohms) at operating frequency Night -j 6.0 Day -j 6.0

Antenna indications for directional operation

Towers	Antenna monitor Phase reading(s) in degrees		Antenna monitor sample current ratio(s)		Antenna base currents	
	Night	Day	Night	Day	Night	Day
1 UNUSED	N/A	N/A	N/A	N/A	N/A	N/A
2	-154.2	-154.2	0.403	0.403	N/A	N/A
3 UNUSED	N/A	N/A	N/A	N/A	N/A	N/A
4 UNUSED	N/A	N/A	N/A	N/A	N/A	N/A
5 UNUSED	N/A	N/A	N/A	N/A	N/A	N/A
6	0.0	0.0	1.000	1.000	N/A -	N/A

Manufacturer and type of antenna monitor: POTOMAC INSTRUMENTS AM-1901

SECTION III - Page 2

9. Description of antenna system ((f directional antenna is used, the information requested below should be given for each element of the array. Use separate sheets if necessary.)

Type Radiator	Overall height in meters of radiator above base insulator, or above base, if grounded.	Overall height in meters above ground (without obstruction lighting)	Overall height in meters above ground (include obstruction lighting)	If antenna is either top loaded or sectionalized, describe fully in an Exhibit.
UNIFORM CROSS-SECTION, GUYED	61.0	62.5	2: 62.5; 6: 63.4	Exhibit No. N/A

Excitation ☑ Series ☐ Shunt

Geographic coordinates to nearest second. For directional antenna give coordinates of center of array. For single vertical radiator give tower location.

North Latitude	West Longitude
34 ° 05 ' 08 "	118 ° 15 ' 24 "

If not fully described above, attach as an Exhibit further details and dimensions including any other antenna mounted on tower and associated isolation circuits. Exhibit No. N/A

Also, if necessary for a complete description, attach as an Exhibit a sketch of the details and dimensions of ground system. Exhibit No. N/A

10. In what respect, if any, does the apparatus constructed differ from that described in the application for construction permit or in the permit?

NONE

11. Give reasons for the change in antenna or common point resistance.

NEW TRANSMITTER SITE FOR KYPA

I certify that I represent the applicant in the capacity indicated below and that I have examined the foregoing statement of technical information and that it is true to the best of my knowledge and belief.

Name (Please Print or Type)	Signature
RONALD D. RACKLEY, P.E.	Ronald D. Rackley
Address (include ZIP Code)	Date
DUTREIL, LUNDIN & RACKLEY, INC. 201 FLETCHER AVENUE SARASOTA, FL 34237	JULY 08, 2013
	Telephone No. (Include Area Code) 941-329-6000

☐ Technical Director

☑ Registered Professional Engineer

☐ Chief Operator

☐ Technical Consultant

☐ Other (specify)

EXHIBIT A

Program Test Authority is not automatic because Station KYPA is an AM directional station.

APPLICATION FOR LICENSE INFORMATION
RADIO STATION KYPA
LOS ANGELES, CALIFORNIA

July 8, 2013

1230 KHZ 1 KW DA-1

APPLICATION FOR LICENSE INFORMATION

RADIO STATION KYPA
LOS ANGELES, CALIFORNIA

1230 KHZ 1 KW DA-1

Table of Contents

Executive Summary – KYPA

This engineering exhibit amends a pending application for license for the newly constructed antenna system of radio station KYPA in Los Angeles, California, file number BMML-20111209KKR. This amendment completely replaces the technical portion of the previous application.

KYPA is presently licensed to operate fulltime on 1230 kilohertz with 1 kilowatt, employing a nondirectional antenna. Construction permit BP-20050228ACB authorizes operation on 1230 kilohertz with 1 kilowatt and a directional antenna fulltime at a new location. This application for license is to cover that construction permit.

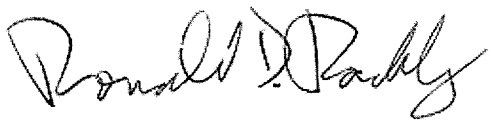
The new antenna system shares towers with two other stations that operate from the transmitter site, KHJ on 930 kilohertz and KBLA on 1580 kilohertz. Filters are employed at the tower bases to isolate the ATU outputs of each station from those of the others and at the phasor inputs to isolate the transmitters and avoid development of excessive spurious intermodulation products. KYPA uses two of the six KBLA towers. Towers that are not in use by KYPA are detuned at 1230 kilohertz. Proof of performance information on the other stations following installation of the new equipment to add KYPA at the transmitter site is being simultaneously filed with the FCC in an application for direct measurement of power for KBLA and an application for license for KHJ.

The towers and ground system are in accordance with the terms of the KYPA construction permit and specifications that were provided in the application for construction permit. New directional antenna phasing and coupling equipment has been installed and it has been adjusted to produce the authorized directional antenna patterns.

Information is provided herein demonstrating that the directional antenna parameters for the directional pattern have been determined in accordance with the requirements of section 73.151(c) of the FCC Rules. The antenna system has been adjusted to produce antenna monitor parameters within +/- 5 percent in ratio and +/- 3 degrees in phase of the modeled values, as required by the Rules.

Information regarding direct measurement of power for the directional antenna pattern and radiofrequency radiation protection measures at the site is also included herein.

Program test authority for the directional antenna is hereby requested.



Ronald D. Rackley, P.E.
July 8, 2013

Analysis of Tower Impedance Measurements to Verify Method of Moments Model – KYPA

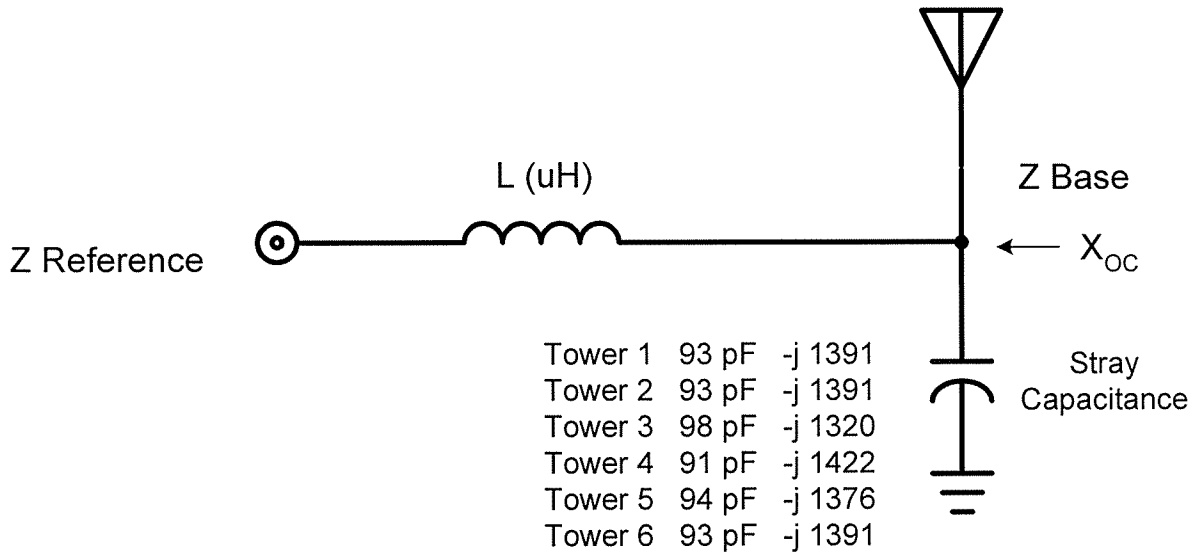
Tower base impedance measurements were made at the final J-plugs within the filter units using a Hewlett-Packard 8751A vector network analyzer and a Tunwall Radio directional coupler in a calibrated measurement system. The other towers were all open circuited at the same points where impedance measurements were made for them (the "reference points") for each of the measurements. There were no conductive paths to ground at any of the tower bases; the sampling line isolation coils were all temporarily disconnected for the measurements, as were the tower light isolation chokes at towers 1, 3, 4 and 6.

The reference point at each tower is adjacent to where the feedline exits the filter unit at the output of its enclosure. The current passes directly from that point over conductors through the enclosure insulator and on to the tower above the base insulator. An assumed value for the sum of the base insulator and base region stray capacitances across the ATU output was employed in the base circuit calculations for each tower. Circuit calculations were performed to relate the method of moments modeled impedances of the tower feedpoints to the filter unit output measurement (reference) points as shown on the following pages. The Xoc shown for each tower, which was calculated for the assumed base conditions, was used in the method of moments model as a load at ground level for the open circuited case.

In addition to the page showing the schematic of the assumed circuit and tabulation of calculated values, pages showing the results of calculations using the WCAP network analysis program from Westberg Consulting are provided. WCAP performs such calculations using nodal analysis, as do other modern circuit analysis programs such as the commonly available ones based on SPICE software.

In each of the WCAP tabulations, node 2 represents the filter unit output reference point and node 3 represents the tower feedpoint. Node 0 represents ground potential. The numerals in the file names shown on the tabulations correspond to the tower numbers. It should be noted that the calculated reference point impedances appear under the "TO NODE IMPEDANCE" columns of the WCAP tabulations, following the phantom 1.0 ohm resistors (R 1 - 2) that were included in series with the drive current sources (I 0 -1)) to provide calculation points for the impedances. The tower base impedances from the method of moments model are represented by complex loads from node 3 to ground (R 3 - 0). The shunt capacitances shown for the towers on the schematic were used for the calculations, although they only appear to the nearest 0.0001 microfarad on the WCAP printout due to rounding.

The modeled and measured base impedances at the reference points with the other towers open circuited at their filter unit output jacks agree within +/- 2 ohms and +/- 4 percent for resistance and reactance, as required by the FCC Rules.



TOWER	L (uH)	X_L	X_{OC}	Z Base (Modeled)	Z Reference (Modeled)	Z Reference (Measured)
1	1.30	+ j 10.0	- j 1391	42.89 +j 45.88	45.82 +j 56.03	47.2 +j 55.5
2	0.80	+ j 6.2	- j 1391	38.33 +j 37.33	40.44 +j 43.40	43.5 +j 46.7
3	0.90	+ j 7.0	- j 1320	46.78 +j 51.25	50.57 +j 58.41	49.0 +j 58.8
4	1.30	+ j 10.0	- j 1422	46.54 +j 50.35	49.96 +j 60.55	46.2 +j 56.9
5	1.30	+ j 10.0	- j 1376	38.57 +j 38.22	40.77 +j 48.18	41.9 +j 50.0
6	1.30	+j 10.0	- j 1391	42.10 +j 43.41	44.81 +j 53.45	43.1 +j 51.0

ANALYSIS OF TOWER IMPEDANCE MEASUREMENTS TO VERIFY METHOD OF MOMENTS MODEL

RADIO STATION KYPA
LOS ANGELES, CALIFORNIA
1230 KHZ 1 KW U DA-1

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

Tower 1 Individually Driven Base Circuit Analysis

WESTBERG CIRCUIT ANALYSIS PROGRAM

FILE NAME = KYPA1OC.TXT

I	1.0000	0	1	0.0000	0.0000	0.0000
R	1.0000	1	2	0.0000	0.0000	0.0000
L	1.3000	2	3	0.0000	0.0000	0.0000
C	0.0001	3	0	0.0000	0.0000	0.0000
R	42.8890	3	0	45.8780	0.0000	0.0000
EX	0.0000	0	0	0.0000	0.0000	0.0000

FREQ = 1.230

NODE	VOLT MAG	VOLT PHASE
1	73.0141	50.1181
2	72.3770	50.7256
3	64.9118	45.1028

				BRANCH VOLTAGE MAG	BRANCH VOLTAGE PHASE	BRANCH CURRENT MAG	BRANCH CURRENT PHASE	FROM NODE IMPEDANCE RESISTANCE	FROM NODE IMPEDANCE REACTANCE	TO NODE IMPEDANCE RESISTANCE	TO NODE IMPEDANCE REACTANCE
R	1-	2	1.000	1.00	0.000	1.00	0.000	46.82	56.03	45.82	56.03
L	2-	3	1.300	10.05	90.000	1.00	0.000	45.82	56.03	45.82	45.98
C	3-	0	0.000	64.91	45.103	0.05	135.103	0.00	-1391.34	0.00	-1391.34
R	3-	0	42.889	64.91	45.103	1.03	-1.826	42.89	45.88	42.89	45.88

Tower 2 Individually Driven Base Circuit Analysis

WESTBERG CIRCUIT ANALYSIS PROGRAM

FILE NAME = KYPA2OC.TXT

I	1.0000	0	1	0.0000	0.0000	0.0000
R	1.0000	1	2	0.0000	0.0000	0.0000
L	0.8000	2	3	0.0000	0.0000	0.0000
C	0.0001	3	0	0.0000	0.0000	0.0000
R	38.3310	3	0	37.3300	0.0000	0.0000
EX	0.0000	0	0	0.0000	0.0000	0.0000

FREQ = 1.230

NODE	VOLT MAG	VOLT PHASE
1	60.0056	46.3206
2	59.3194	47.0191
3	54.9582	42.6205

				BRANCH VOLTAGE MAG	BRANCH VOLTAGE PHASE	BRANCH CURRENT MAG	BRANCH CURRENT PHASE	FROM NODE IMPEDANCE RESISTANCE	FROM NODE IMPEDANCE REACTANCE	TO NODE IMPEDANCE RESISTANCE	TO NODE IMPEDANCE REACTANCE
R	1-	2	1.000	1.00	0.000	1.00	0.000	41.44	43.40	40.44	43.40
L	2-	3	0.800	6.18	90.000	1.00	0.000	40.44	43.40	40.44	37.21
C	3-	0	0.000	54.96	42.620	0.04	132.620	0.00	-1391.34	0.00	-1391.34
R	3-	0	38.331	54.96	42.620	1.03	-1.622	38.33	37.33	38.33	37.33

Tower 3 Individually Driven Base Circuit Analysis

WESTBERG CIRCUIT ANALYSIS PROGRAM

FILE NAME = KYPA3OC.TXT

I	1.0000	0	1	0.0000	0.0000	0.0000
R	1.0000	1	2	0.0000	0.0000	0.0000
L	0.9000	2	3	0.0000	0.0000	0.0000
C	0.0001	3	0	0.0000	0.0000	0.0000
R	46.7800	3	0	51.2490	0.0000	0.0000
EX	0.0000	0	0	0.0000	0.0000	0.0000

FREQ = 1.230

NODE	VOLT MAG	VOLT PHASE
1	77.9152	48.5612
2	77.2570	49.1172
3	72.1421	45.4992

			BRANCH VOLTAGE		BRANCH CURRENT		FROM NODE IMPEDANCE		TO NODE IMPEDANCE	
			MAG	PHASE	MAG	PHASE	RESISTANCE	REACTANCE	RESISTANCE	REACTANCE
R	1- 2	1.000	1.00	0.000	1.00	0.000	51.57	58.41	50.57	58.41
L	2- 3	0.900	6.96	90.000	1.00	0.000	50.57	58.41	50.57	51.45
C	3- 0	0.000	72.14	45.499	0.05	135.499	0.00	-1320.35	0.00	-1320.35
R	3- 0	46.780	72.14	45.499	1.04	-2.111	46.78	51.25	46.78	51.25

Tower 4 Individually Driven Base Circuit Analysis

WESTBERG CIRCUIT ANALYSIS PROGRAM

FILE NAME = KYPA4OC.TXT

I	1.0000	0	1	0.0000	0.0000	0.0000
R	1.0000	1	2	0.0000	0.0000	0.0000
L	1.3000	2	3	0.0000	0.0000	0.0000
C	0.0001	3	0	0.0000	0.0000	0.0000
R	46.5350	3	0	50.3520	0.0000	0.0000
EX	0.0000	0	0	0.0000	0.0000	0.0000

FREQ = 1.230

NODE	VOLT MAG	VOLT PHASE
1	79.1404	49.9182
2	78.5002	50.4767
3	71.0388	45.3129

			BRANCH VOLTAGE		BRANCH CURRENT		FROM NODE IMPEDANCE		TO NODE IMPEDANCE	
			MAG	PHASE	MAG	PHASE	RESISTANCE	REACTANCE	RESISTANCE	REACTANCE
R	1- 2	1.000	1.00	0.000	1.00	0.000	50.96	60.55	49.96	60.55
L	2- 3	1.300	10.05	90.000	1.00	0.000	49.96	60.55	49.96	50.51
C	3- 0	0.000	71.04	45.313	0.05	135.313	0.00	-1421.92	0.00	-1421.92
R	3- 0	46.535	71.04	45.313	1.04	-1.943	46.54	50.35	46.54	50.35

Tower 5 Individually Driven Base Circuit Analysis

WESTBERG CIRCUIT ANALYSIS PROGRAM

FILE NAME = KYPA5OC.TXT

I	1.0000	0	1	0.0000	0.0000	0.0000
R	1.0000	1	2	0.0000	0.0000	0.0000
L	1.3000	2	3	0.0000	0.0000	0.0000
C	0.0001	3	0	0.0000	0.0000	0.0000
R	38.5740	3	0	38.2160	0.0000	0.0000
EX	0.0000	0	0	0.0000	0.0000	0.0000

FREQ = 1.230

NODE	VOLT MAG	VOLT PHASE
1	63.7677	49.0723
2	63.1171	49.7582
3	55.8267	43.0819

				BRANCH VOLTAGE		BRANCH CURRENT	FROM NODE IMPEDANCE		TO NODE IMPEDANCE	
				MAG	PHASE	MAG	PHASE	RESISTANCE	REACTANCE	RESISTANCE	REACTANCE
R	1-	2	1.000	1.00	0.000	1.00	0.000	41.77	48.18	40.77	48.18
L	2-	3	1.300	10.05	90.000	1.00	0.000	40.77	48.18	40.77	38.13
C	3-	0	0.000	55.83	43.082	0.04	133.082	0.00	-1376.53	0.00	-1376.53
R	3-	0	38.574	55.83	43.082	1.03	-1.651	38.57	38.22	38.57	38.22

Tower 6 Individually Driven Base Circuit Analysis

WESTBERG CIRCUIT ANALYSIS PROGRAM

FILE NAME = KYPA6OC.TXT

I	1.0000	0	1	0.0000	0.0000	0.0000
R	1.0000	1	2	0.0000	0.0000	0.0000
L	1.3000	2	3	0.0000	0.0000	0.0000
C	0.0001	3	0	0.0000	0.0000	0.0000
R	42.0960	3	0	43.4070	0.0000	0.0000
EX	0.0000	0	0	0.0000	0.0000	0.0000

FREQ = 1.230

NODE	VOLT MAG	VOLT PHASE
1	70.3949	49.4043
2	69.7483	50.0281
3	62.3836	44.0897

				BRANCH VOLTAGE		BRANCH CURRENT	FROM NODE IMPEDANCE		TO NODE IMPEDANCE	
				MAG	PHASE	MAG	PHASE	RESISTANCE	REACTANCE	RESISTANCE	REACTANCE
R	1-	2	1.000	1.00	0.000	1.00	0.000	45.81	53.45	44.81	53.45
L	2-	3	1.300	10.05	90.000	1.00	0.000	44.81	53.45	44.81	43.41
C	3-	0	0.000	62.38	44.090	0.04	134.090	0.00	-1391.34	0.00	-1391.34
R	3-	0	42.096	62.38	44.090	1.03	-1.789	42.10	43.41	42.10	43.41

Derivation of Operating Parameters for Directional Antenna - KYPA

The method of moments model of the array, following verification with the measured individual open circuited base impedances, was utilized for directional antenna calculations. Calculations were made to determine the complex voltage values for sources located at ground level under each tower of the array to produce current moment sums for the towers that, when normalized, equated to the theoretical field parameters of the authorized directional antenna pattern. With these voltage sources, the tower currents were calculated. Twelve segments were used for each tower, so that the modeled current pulse between the fourth and fifth segments above ground level corresponds to the sampling loop location on each tower – at 1/3 of the total tower height above the base insulator. As the tower structures, sampling loops and sampling lines are identical, the antenna monitor ratios and phases corresponding to the theoretical parameters were calculated directly from the modeled tower currents.

Tower	Modeled Current Pulse	Modeled Current Magnitude (amperes)	Modeled Current Phase (degrees)	Modeled Antenna Monitor Ratio	Modeled Antenna Monitor Phase (degrees)
1	5	0.0030	17.3	Nulled	--
2	17	2.1107	205.8	0.403	-154.2
3	29	0.0058	309.4	Nulled	--
4	41	0.0023	40.5	Nulled	--
5	53	0.0068	311.9	Nulled	--
6	65	5.2337	0.0	1.0000	0.0

Method of Moments Model Details for Towers Driven Individually – KYPA

The array of towers was modeled using Expert MININEC Broadcast Professional Version 14.5. One wire was used to represent each tower. The tower geometry was specified using the geographic coordinate system. Each tower was modeled using 12 wire segments. The towers are all physically 90.0 degrees in electrical height and their segment length is 7.5 electrical degrees.

The individual tower characteristics were adjusted to provide a match of their modeled impedances, when presented to a circuit model which included branches representing the shunt capacitances and feedline hookup inductances, with the base impedances that were measured at the output jacks of the filter units while the other towers of the array were open circuited. All towers were completely open circuited, with their sampling line isolation coils and lighting chokes disconnected. The method of moments model assumed loads at ground level having the reactances that were calculated for them using the base circuit models for the open circuited towers of the array.

Each tower's modeled height relative to its physical height falls within the required range of 75 to 125 percent and each modeled radius falls within the required range of 80 percent to 150 percent of the radius of a circle having a circumference equal to the sum of the widths of the tower sides. The array consists of triangular uniform cross section towers having a face width of 19 nches.

TOWER	Physical Height (meters)	Modeled Height (meters)	Modeled Percent of Height	Modeled Radius (meters)	Percent Equivalent Radius
1	61.0	64.5	105.7	0.240	104.2
2	61.0	64.0	104.9	0.240	104.2
3	61.0	65.0	106.6	0.240	104.2
4	61.0	64.9	106.4	0.240	104.2
5	61.0	64.1	105.1	0.240	104.2
6	61.0	64.2	105.2	0.240	104.2

The following pages show the details of the method of moments models for the individually driven towers. The numerals in the file names shown on the tabulations correspond to the tower numbers.

Tower 1 Driven Individually

C:\MBPRO14.5\KHJ MBPRO 14.5 FILES(MWF)\KYPAOC1 06-20-2013 14:09:55

IMPEDANCE
normalization = 50.

freq (KHz)	resist (ohms)	react (ohms)	imped (ohms)	phase (deg)	VSWR	S11 dB	S12 dB
source = 1; node 1, sector 1							
1,230.	42.889	45.878	62.804	46.9	2.624	-6.972	-.97353

GEOMETRY
Dimensions in meters
Environment: perfect ground

wire	caps	Distance	Angle	Z	radius	segs
1	none	0	0	0	.24	12
		0	0	64.5		
2	none	42.16	20.	0	.24	12
		42.16	20.	64.		
3	none	84.33	20.	0	.24	12
		84.33	20.	65.		
4	none	42.16	127.	0	.24	12
		42.16	127.	64.9		
5	none	50.18	73.5	0	.24	12
		50.18	73.5	64.1		
6	none	82.54	49.3	0	.24	12
		82.54	49.3	64.2		

Number of wires = 6
current nodes = 72

	minimum		maximum	
Individual wires	wire	value	wire	value
segment length	2	5.33333	3	5.41667
segment/radius ratio	2	22.2222	3	22.5694
radius	1	.24	1	.24

ELECTRICAL DESCRIPTION
Frequencies (KHz)

	frequency		no. of	segment length (wavelengths)	
no.	lowest	step	steps	minimum	maximum
1	1,230.	0	1	.0218813	.0222232

Sources

source	node	sector	magnitude	phase	type
1	1	1	1.	0	voltage

Lumped loads

load	node	resistance (ohms)	reactance (ohms)	inductance (mH)	capacitance (uF)	passive circuit
1	13	0	-1,391.	0	0	0
2	25	0	-1,320.	0	0	0
3	37	0	-1,422.	0	0	0
4	49	0	-1,376.	0	0	0
5	61	0	-1,391.	0	0	0

Tower 2 Driven Individually

C:\MBPRO14.5\KHJ MBPRO 14.5 FILES(MWF)\KYPAOC2 06-20-2013 14:10:51

IMPEDANCE
normalization = 50.

freq (KHz)	resist (ohms)	react (ohms)	imped (ohms)	phase (deg)	VSWR	S11 dB	S12 dB
source = 1; node 13, sector 1							
1,230.	38.331	37.33	53.505	44.2	2.3776	-7.7898	-.79016

GEOMETRY
Dimensions in meters
Environment: perfect ground

wire	caps	Distance	Angle	Z	radius	segs
1	none	0	0	0	.24	12
		0	0	64.5		
2	none	42.16	20.	0	.24	12
		42.16	20.	64.		
3	none	84.33	20.	0	.24	12
		84.33	20.	65.		
4	none	42.16	127.	0	.24	12
		42.16	127.	64.9		
5	none	50.18	73.5	0	.24	12
		50.18	73.5	64.1		
6	none	82.54	49.3	0	.24	12
		82.54	49.3	64.2		

Number of wires = 6
current nodes = 72

	minimum		maximum	
Individual wires	wire	value	wire	value
segment length	2	5.33333	3	5.41667
segment/radius ratio	2	22.2222	3	22.5694
radius	1	.24	1	.24

ELECTRICAL DESCRIPTION
Frequencies (KHz)

no.	frequency lowest	step	no. of steps	segment length (wavelengths) minimum	maximum
1	1,230.	0	1	.0218813	.0222232

Sources

source	node	sector	magnitude	phase	type
1	13	1	1.	0	voltage

Lumped loads

load	node	resistance (ohms)	reactance (ohms)	inductance (mH)	capacitance (uF)	passive circuit
1	1	0	-1,391.	0	0	0
2	25	0	-1,320.	0	0	0
3	37	0	-1,422.	0	0	0
4	49	0	-1,376.	0	0	0
5	61	0	-1,391.	0	0	0

Tower 3 Driven Individually

C:\MBPRO14.5\KHJ MBPRO 14.5 FILES(MWF)\KYPAOC3 06-20-2013 14:11:53

IMPEDANCE
   normalization = 50.

freq (KHz)	resist (ohms)	react (ohms)	imped (ohms)	phase (deg)	VSWR	S11 dB	S12 dB
source = 1; node 25, sector 1							
1,230.	46.78	51.249	69.388	47.6	2.7658	-6.5784	-1.0783

GEOMETRY
Dimensions in meters
Environment: perfect ground

wire	caps	Distance	Angle	Z	radius	segs
1	none	0	0	0	.24	12
		0	0	64.5		
2	none	42.16	20.	0	.24	12
		42.16	20.	64.		
3	none	84.33	20.	0	.24	12
		84.33	20.	65.		
4	none	42.16	127.	0	.24	12
		42.16	127.	64.9		
5	none	50.18	73.5	0	.24	12
		50.18	73.5	64.1		
6	none	82.54	49.3	0	.24	12
		82.54	49.3	64.2		

Number of wires = 6
current nodes = 72

	minimum		maximum	
Individual wires	wire	value	wire	value
segment length	2	5.33333	3	5.41667
segment/radius ratio	2	22.2222	3	22.5694
radius	1	.24	1	.24

ELECTRICAL DESCRIPTION
Frequencies (KHz)

no.	frequency lowest	step	no. of steps	segment length (wavelengths) minimum	maximum
1	1,230.	0	1	.0218813	.0222232

Sources

source	node	sector	magnitude	phase	type
1	25	1	1.	0	voltage

Lumped loads

load	node	resistance (ohms)	reactance (ohms)	inductance (mH)	capacitance (uF)	passive circuit
1	1	0	-1,391.	0	0	0
2	13	0	-1,391.	0	0	0
3	37	0	-1,422.	0	0	0
4	49	0	-1,376.	0	0	0
5	61	0	-1,391.	0	0	0

Tower 4 Driven Individually

C:\MBPRO14.5\KHJ MBPRO 14.5 FILES(MWF)\KYPAOC4 06-20-2013 14:12:41

IMPEDANCE
normalization = 50.

freq (KHz)	resist (ohms)	react (ohms)	imped (ohms)	phase (deg)	VSWR	S11 dB	S12 dB
source = 1; node 37, sector 1							
1,230.	46.535	50.352	68.563	47.3	2.7283	-6.6779	-1.0507

GEOMETRY
Dimensions in meters
Environment: perfect ground

wire	caps	Distance	Angle	Z	radius	segs
1	none	0	0	0	.24	12
		0	0	64.5		
2	none	42.16	20.	0	.24	12
		42.16	20.	64.		
3	none	84.33	20.	0	.24	12
		84.33	20.	65.		
4	none	42.16	127.	0	.24	12
		42.16	127.	64.9		
5	none	50.18	73.5	0	.24	12
		50.18	73.5	64.1		
6	none	82.54	49.3	0	.24	12
		82.54	49.3	64.2		

Number of wires = 6
current nodes = 72

	minimum		maximum	
Individual wires	wire	value	wire	value
segment length	2	5.33333	3	5.41667
segment/radius ratio	2	22.2222	3	22.5694
radius	1	.24	1	.24

ELECTRICAL DESCRIPTION
Frequencies (KHz)

	frequency		no. of	segment length (wavelengths)	
no.	lowest	step	steps	minimum	maximum
1	1,230.	0	1	.0218813	.0222232

Sources

source	node	sector	magnitude	phase	type
1	37	1	1.	0	voltage

Lumped loads

load	node	resistance (ohms)	reactance (ohms)	inductance (mH)	capacitance (uF)	passive circuit
1	1	0	-1,391.	0	0	0
2	13	0	-1,391.	0	0	0
3	25	0	-1,320.	0	0	0
4	49	0	-1,376.	0	0	0
5	61	0	-1,391.	0	0	0

Tower 5 Driven Individually

```
C:\MBPRO14.5\KHJ MBPRO 14.5 FILES(MWF)\KYPAOC5  06-20-2013   14:14:05

IMPEDANCE
   normalization = 50.
freq      resist    react     imped     phase     VSWR     S11       S12
(KHz)     (ohms)    (ohms)    (ohms)    (deg)              dB        dB
source =  1; node 49, sector 1
1,230.    38.574    38.216    54.299    44.7      2.41    -7.6708   -.81429

GEOMETRY
Dimensions in meters
Environment: perfect ground

wire  caps Distance     Angle        Z            radius      segs
 1    none 0            0            0            .24          12
           0            0            64.5
 2    none 42.16        20.          0            .24          12
           42.16        20.          64.
 3    none 84.33        20.          0            .24          12
           84.33        20.          65.
 4    none 42.16        127.         0            .24          12
           42.16        127.         64.9
 5    none 50.18        73.5         0            .24          12
           50.18        73.5         64.1
 6    none 82.54        49.3         0            .24          12
           82.54        49.3         64.2

Number of wires          =  6
          current nodes  =  72

                         minimum                  maximum
Individual wires       wire    value             wire  value
segment length          2      5.33333            3    5.41667
segment/radius ratio    2      22.2222            3    22.5694
radius                  1      .24                1    .24


ELECTRICAL DESCRIPTION
Frequencies (KHz)
     frequency                 no. of  segment length (wavelengths)
 no. lowest       step         steps   minimum        maximum
 1   1,230.       0             1      .0218813       .0222232

Sources
source node    sector  magnitude      phase          type
 1      49      1       1.             0              voltage

Lumped loads
              resistance    reactance     inductance  capacitance passive
load  node    (ohms)        (ohms)        (mH)        (uF)        circuit
 1     1      0             -1,391.       0           0            0
 2     13     0             -1,391.       0           0            0
 3     25     0             -1,320.       0           0            0
 4     37     0             -1,422.       0           0            0
 5     61     0             -1,391.       0           0            0
```

Tower 6 Driven Individually

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IMPEDANCE
normalization = 50.

freq (KHz)	resist (ohms)	react (ohms)	imped (ohms)	phase (deg)	VSWR	S11 dB	S12 dB
source = 1; node 61, sector 1							
1,230.	42.096	43.407	60.467	45.9	2.5295	-7.2632	-.90333

GEOMETRY
Dimensions in meters
Environment: perfect ground

wire	caps	Distance	Angle	Z	radius	segs
1	none	0	0	0	.24	12
		0	0	64.5		
2	none	42.16	20.	0	.24	12
		42.16	20.	64.		
3	none	84.33	20.	0	.24	12
		84.33	20.	65.		
4	none	42.16	127.	0	.24	12
		42.16	127.	64.9		
5	none	50.18	73.5	0	.24	12
		50.18	73.5	64.1		
6	none	82.54	49.3	0	.24	12
		82.54	49.3	64.2		

Number of wires = 6
current nodes = 72

	minimum		maximum	
Individual wires	wire	value	wire	value
segment length	2	5.33333	3	5.41667
segment/radius ratio	2	22.2222	3	22.5694
radius	1	.24	1	.24

ELECTRICAL DESCRIPTION
Frequencies (KHz)

	frequency		no. of	segment length (wavelengths)	
no.	lowest	step	steps	minimum	maximum
1	1,230.	0	1	.0218813	.0222232

Sources

source	node	sector	magnitude	phase	type
1	61	1	1.	0	voltage

Lumped loads

load	node	resistance (ohms)	reactance (ohms)	inductance (mH)	capacitance (uF)	passive circuit
1	1	0	-1,391.	0	0	0
2	13	0	-1,391.	0	0	0
3	25	0	-1,320.	0	0	0
4	37	0	-1,422.	0	0	0
5	49	0	-1,376.	0	0	0

Method of Moments Model Details for Directional Antenna- KYPA

The array of towers was modeled using Expert MININEC Broadcast Professional Version 14.5 with the individual towers characteristics that were verified by the individual tower impedance measurements. Calculations were made to determine the complex voltage values for sources located at ground level under each tower of the array to produce current moment sums for the towers that, when normalized, equated to the theoretical field parameters of the authorized directional antenna pattern. The following pages contain details of the method of moments model of the directional antenna pattern.

Tower	Wire	Base Node
1	1	1
2	2	13
3	3	25
4	4	37
5	5	49
6	6	61

It should be noted that voltages and currents shown on the tabulations that are not specified as “rms” values are the corresponding peak values.

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MEDIUM WAVE ARRAY SYNTHESIS FROM FIELD RATIOS

Frequency = 1230 KHz

tower	field ratio magnitude	phase (deg)
1	.001	0
2	.4	206.
3	.001	0
4	.001	0
5	.001	0
6	1.	0

VOLTAGES AND CURRENTS - rms

source node	voltage magnitude	phase (deg)	current magnitude	phase (deg)
1	145.953	267.9	.303438	357.7
13	242.579	302.4	1.92989	204.3
25	133.105	333.7	.269092	65.
37	109.095	271.9	.225325	1.2
49	132.501	333.8	.263906	65.4
61	319.752	56.1	5.4606	3.8

Sum of square of source currents = 67.6551
Total power = 1,000. watts

NOTE: The array synthesis calculations (above) were performed to solve for the base voltage drives required to produce the specified field parameters, including the detuned condition for towers 1, 3, 4 and 5, which are unused by KYPA. A field ratio of 1/10th of a percent was used to represent the vanishingly small, and negligible, residual field contribution of each detuned tower in the array synthesis calculations. The base impedances were calculated and the model was revised to have voltage drives only for the towers of the directional antenna pattern, towers 2 and 6, and detuning reactances to ground for the remaining towers. The detuning reactances are equal in magnitude and opposite in sign to the reactive component of the operating impedances that were determined using the voltage sources from the array synthesis calculations. The final model does not include voltage sources for the detuned towers because their base voltages are developed across the detuning reactances. The specified detuning reactances represent how the towers were detuned for normal operation. The following information is from the final model.

GEOMETRY
Dimensions in meters
Environment: perfect ground

wire	caps	Distance	Angle	Z	radius	segs
1	none	0	0	0	.24	12
		0	0	64.5		
2	none	42.16	20.	0	.24	12
		42.16	20.	64.		
3	none	84.33	20.	0	.24	12
		84.33	20.	65.		
4	none	42.16	127.	0	.24	12
		42.16	127.	64.9		
5	none	50.18	73.5	0	.24	12
		50.18	73.5	64.1		
6	none	82.54	49.3	0	.24	12
		82.54	49.3	64.2		

Number of wires = 6
current nodes = 72

	minimum		maximum	
Individual wires	wire	value	wire	value
segment length	2	5.33333	3	5.41667
segment/radius ratio	2	22.2222	3	22.5694
radius	1	.24	1	.24

ELECTRICAL DESCRIPTION
Frequencies (KHz)

	frequency		no. of	segment length (wavelengths)	
no.	lowest	step	steps	minimum	maximum
1	1,230.	0	1	.0218813	.0222232

Sources

source	node	sector	magnitude	phase	type
1	13	1	343.058	302.4	voltage
2	61	1	452.197	56.1	voltage

Lumped loads

load	node	resistance (ohms)	reactance (ohms)	inductance (mH)	capacitance (uF)	passive circuit
1	1	0	481.	0	0	0
2	25	0	494.6	0	0	0
3	37	0	484.2	0	0	0
4	49	0	502.1	0	0	0

IMPEDANCE
normalization = 50.

freq (KHz)	resist (ohms)	react (ohms)	imped (ohms)	phase (deg)	VSWR	S11 dB	S12 dB
source = 1; node 13, sector 1							
1,230.	-18.062	124.23	125.54	98.3	****	****	****
source = 2; node 61, sector 1							
1,230.	35.855	46.336	58.588	52.3	2.9728	-6.0803	-1.2297

CURRENT rms
Frequency = 1230 KHz
Input power = 1,000. watts
Efficiency = 100. %
coordinates in meters

current no.	X	Y	Z	mag (amps)	phase (deg)	real (amps)	imaginary (amps)
GND	0	0	0	.303077	357.9	.30287	-.0112158
2	0	0	5.375	.188001	357.9	.187875	-6.87E-03
3	0	0	10.75	.112624	358.	.112558	-3.85E-03
4	0	0	16.125	.0518646	358.6	.0518491	-1.27E-03
5	0	0	21.5	3.03E-03	17.3	2.9E-03	9.01E-04
6	0	0	26.875	.0353325	175.8	-.0352358	2.61E-03
7	0	0	32.25	.0629816	176.5	-.0628658	3.82E-03
8	0	0	37.625	.080206	176.8	-.0800805	4.48E-03
9	0	0	43.	.0869943	177.	-.0868719	4.61E-03
10	0	0	48.375	.0832729	177.1	-.0831655	4.23E-03
11	0	0	53.75	.0688359	177.2	-.0687538	3.36E-03
12	0	0	59.125	.0430365	177.3	-.0429885	2.03E-03
END	0	0	64.5	0	0	0	0
GND	39.6174	-14.4196	0	1.93177	204.1	-1.763	-.789657
14	39.6174	-14.4196	5.33333	2.10041	204.9	-1.90578	-.883027
15	39.6174	-14.4196	10.6667	2.16429	205.3	-1.95719	-.923887
16	39.6174	-14.4196	16.	2.1656	205.6	-1.95335	-.935028
17	39.6174	-14.4196	21.3333	2.11067	205.8	-1.89975	-.919723
18	39.6174	-14.4196	26.6667	2.00334	206.1	-1.79981	-.879811
19	39.6174	-14.4196	32.	1.847	206.2	-1.65657	-.816796
20	39.6174	-14.4196	37.3333	1.64512	206.4	-1.47321	-.732156
21	39.6174	-14.4196	42.6667	1.40126	206.6	-1.25297	-.62737
22	39.6174	-14.4196	48.	1.11878	206.8	-.998941	-.503777
23	39.6174	-14.4196	53.3333	.799828	206.9	-.713133	-.362169
24	39.6174	-14.4196	58.6667	.442534	207.1	-.394004	-.201488
END	39.6174	-14.4196	64.	0	0	0	0
GND	79.2443	-28.8426	0	.269309	63.9	.118527	.241824
26	79.2443	-28.8426	5.41667	.163912	63.8	.0724592	.147027
27	79.2443	-28.8426	10.8333	.0954583	63.	.0432654	.0850905
28	79.2443	-28.8426	16.25	.0410297	59.6	.0207608	.0353896
29	79.2443	-28.8426	21.6667	5.75E-03	309.4	3.64E-03	-4.44E-03
30	79.2443	-28.8426	27.0833	.0362631	256.1	-8.7E-03	-.0352049
31	79.2443	-28.8426	32.5	.0595778	253.7	-.0167124	-.0571857
32	79.2443	-28.8426	37.9167	.0735128	253.5	-.0208575	-.0704919
33	79.2443	-28.8426	43.3333	.0782035	253.9	-.0216281	-.0751533
34	79.2443	-28.8426	48.75	.0737859	254.6	-.0195561	-.0711472
35	79.2443	-28.8426	54.1667	.0602817	255.4	-.0151627	-.0583436
36	79.2443	-28.8426	59.5833	.0373083	256.3	-8.85E-03	-.0362426
END	79.2443	-28.8426	65.	0	0	0	0
GND	-25.3725	-33.6705	0	.224876	1.9	.224747	7.61E-03
38	-25.3725	-33.6705	5.40833	.138726	2.	.138642	4.81E-03
39	-25.3725	-33.6705	10.8167	.0825936	2.2	.0825307	3.22E-03
40	-25.3725	-33.6705	16.225	.0376983	3.3	.0376355	2.17E-03
41	-25.3725	-33.6705	21.6333	2.33E-03	40.5	1.77E-03	1.52E-03

42	-25.3725	-33.6705	27.0417	.0258534	177.5	-.025828	1.15E-03
43	-25.3725	-33.6705	32.45	.0455183	178.8	-.045508	9.67E-04
44	-25.3725	-33.6705	37.8583	.0574654	179.1	-.0574584	8.98E-04
45	-25.3725	-33.6705	43.2667	.0618299	179.2	-.0618237	8.72E-04
46	-25.3725	-33.6705	48.675	.0587234	179.2	-.0587175	8.31E-04
47	-25.3725	-33.6705	54.0833	.0481726	179.1	-.0481671	7.22E-04
48	-25.3725	-33.6705	59.4917	.0298926	179.1	-.0298886	4.9E-04
END	-25.3725	-33.6705	64.9	0	0	0	0
GND	14.2519	-48.1136	0	.263956	64.	.115606	.237293
50	14.2519	-48.1136	5.34167	.16012	63.9	.0705258	.143751
51	14.2519	-48.1136	10.6833	.0929866	63.	.0422748	.0828213
52	14.2519	-48.1136	16.025	.0398263	58.6	.0207365	.0340019
53	14.2519	-48.1136	21.3667	6.81E-03	311.9	4.55E-03	-5.07E-03
54	14.2519	-48.1136	26.7083	.0358857	258.8	-6.99E-03	-.0351977
55	14.2519	-48.1136	32.05	.0584906	255.7	-.0144074	-.0566884
56	14.2519	-48.1136	37.3917	.0719987	255.4	-.018207	-.0696586
57	14.2519	-48.1136	42.7333	.0765231	255.7	-.0189198	-.0741473
58	14.2519	-48.1136	48.075	.0721883	256.3	-.0170843	-.0701376
59	14.2519	-48.1136	53.4167	.0589959	257.1	-.0132098	-.057498
60	14.2519	-48.1136	58.7583	.0365447	257.9	-7.69E-03	-.0357268
END	14.2519	-48.1136	64.1	0	0	0	0
GND	53.8242	-62.5764	0	5.45615	3.8	5.44394	.364785
62	53.8242	-62.5764	5.35	5.60919	2.3	5.60469	.224527
63	53.8242	-62.5764	10.7	5.59948	1.4	5.5979	.132849
64	53.8242	-62.5764	16.05	5.47164	.6	5.47132	.0591117
65	53.8242	-62.5764	21.4	5.23365	360.	5.23365	-1.55E-04
66	53.8242	-62.5764	26.75	4.89167	359.5	4.89145	-.0460947
67	53.8242	-62.5764	32.1	4.4521	359.	4.4514	-.0791078
68	53.8242	-62.5764	37.45	3.92198	358.5	3.92072	-.0993448
69	53.8242	-62.5764	42.8	3.30874	358.1	3.30702	-.106867
70	53.8242	-62.5764	48.15	2.6194	357.8	2.61743	-.101682
71	53.8242	-62.5764	53.5	1.85835	357.4	1.85646	-.0836483
72	53.8242	-62.5764	58.85	1.02086	357.1	1.01953	-.0520889
END	53.8242	-62.5764	64.2	0	0	0	0

Sampling System Measurements – KYPA

Impedance measurements were made of the antenna monitor sampling system using a Hewlett-Packard 8751A network analyzer and a Tunwall Radio directional coupler in a calibrated measurement system. The measurements were made looking into the antenna monitor ends of the sampling lines for two conditions – with and without them connected to the sampling loops on the towers. The measurements were made where the sampling lines connect to the filtered antenna monitor system, at the location of the co-located KBLA antenna monitor. The entire runs, including the sampling line isolation coils at the tower bases and the sections on the towers, were measured.

The following table shows two adjacent frequencies where resonance – zero reactance corresponding with low resistance – was found with the open circuited measurements. As the length of a distortionless transmission line is 180 electrical degrees at the difference frequency between adjacent frequencies of resonance, and frequencies of resonance occur at odd multiples of 90 degrees electrical length, the sampling line length at the resonant frequency below carrier frequency was found to be 270 electrical degrees and the length at the resonant frequency above carrier frequency was found to be 450 electrical degrees. As the resonant frequencies below carrier frequency are the closest to carrier frequency, in terms of their ratios to carrier frequency, the electrical lengths at carrier frequency appearing in the table below were calculated by ratioing them to carrier frequency.

Tower	Sampling Line Open-Circuited Resonance Below 1230 kHz (kHz)	Sampling Line Open-Circuited Resonance Above 1230 kHz (kHz)	Sampling Line Calculated Electrical Length at 1230 kHz (degrees)	1230 KHz Measured Impedance with Sampling Loop Connected (Ohms)
2	1067.88	1787.75	311.0	4.1 –j 46.5
6	1067.31	1786.63	311.2	4.1 –j 46.6

The sampling line lengths meet the requirement that they be equal in length within 1 electrical degree.

The characteristic impedance was calculated using the following formula, where $R_1 + j X_1$ and $R_2 + j X_2$ are the measured impedances at the +45 and –45 degree offset frequencies, respectively:

$$Zo = ((R_1^2 + X_1^2)^{1/2} \bullet (R_2^2 + X_2^2)^{1/2})^{1/2}$$

The impedances for the characteristic impedance calculations were measured at frequencies offset from the resonant frequency that is below the carrier frequency, as it is the closest to carrier frequency in terms of ratio, to give the 45 degree length differences.

Tower	-45 Degree Offset Frequency (kHz)	-45 Degree Measured Impedance (Ohms)	+45 Degree Offset Frequency (kHz)	+45 Degree Measured Impedance (Ohms)	Calculated Characteristic Impedance (Ohms)
2	889.90	3.60 –j 49.85	1245.85	5.58 +j 49.40	49.9
6	889.43	3.64 –j 49.93	1245.20	5.70 +j 49.41	49.9

The sampling line measured characteristic impedances meet the requirement that they be equal within 2 ohms.

Reference Field Strength Measurements – KYPA

Reference field strength measurements were made for the directional antenna pattern at three locations along each radial specified for monitoring by the construction permit, 4 and 143 degrees true, and also on pattern lobe radials at 73.5 and 253.5 degrees true. The measured field strengths, descriptions and GPS coordinates for the reference measurement points are shown on the following page.

KYPA 1230 KHz. Los Angeles, CA - 1000 Watts DA-1

Reference Field Strength Measurements

Radial	Point	Distance (km)	Field (mv/m)	Coordinates (NAD 83)		Description
4°	1	1.34	135	34 05 52.5	118 15 24.0	At Stop Sign. Corner of Bancroft and Hildago.
	2	1.59	105	34 06 00.3	118 15 23.3	N side Brier Ave. On sidewalk in driveway at #2203.
	3	1.90	100	34 06 10.8	118 15 22.4	On water meter cover. S side India St opposite # 2243.
73.5°	1	0.82	200	34 05 16.9	118 14 56.8	W side Valentine St opposite #2012 at "No Stopping" sign.
	2	0.98	195	34 05 18.3	118 14 50.9	Midway along rock wall SW side in 2000 block of Avon St.
	3	1.33	110	34 05 21.5	118 14 37.8	East End of Avon Park Ter (Right fork) at curb marker 1408.
143°	1	1.02	140	34 04 42.8	118 15 04.0	South side of Scott Ave and Elysian at light pole.
	2	1.40	80	34 04 32.8	118 14 55.3	W side Stadium Way opp big tree at entrance to Barlow Hospital.
	3	1.65	95	34 04 27.0	118 14 48.5	SE side N Boylson St opposite light pole.
253.5°	1	0.94	375	34 05 00.6	118 16 02.7	Middle of street in front of 1418 McCollum.
	2	1.06	325	34 04 59.6	118 16 07.3	In driveway at 1359 N Benton Way.
	3	1.19	215	34 04 58.5	118 16 12.4	Middle of street in front of 1315 Angelus Ave.

Measurements were made June 14, 2013 by George D Butch using
Potomac Instruments FIM-41, SN 1432, factory calibrated July 29, 1998.
Accuracy was field checked June 14, 2013 against FIM-41, SN 1924, calibrated May 21, 2012.

Direct Measurement of Power - KYPA

Common point impedance measurements were made using the permanently installed Delta Electronics CPB-1 Common Point Bridge. The bridge is located in the circuit adjacent to the common point current meter that is used to determine operating power. The bridge readings were confirmed by comparison with those made by a calibrated network analyzer measurement system employing a Hewlett-Packard 8751A vector network analyzer and a Tunwall Radio directional coupler. The common point impedance was adjusted to 50.0 – j 6.0 ohms for the directional pattern. The reactance was set to – j 6.0 to compensate for series inductance in the circuit between the transmitter and the common point in the phasor cabinet, including the main-auxiliary transmitter switching contactor, in order to provide a non-reactive load for the transmitter's output port at carrier frequency.

Section 73.51(b)(1) of the FCC Rules specifies that the authorized antenna input power of a directional antenna for up to five kilowatts nominal power shall be increased by 8 percent above the nominal power. For the 1,000 watt directional pattern, the common point current was calculated for 1,080 watts antenna input power.

Antenna Monitor and Sampling System - KYPA

The antenna monitor is a Potomac Instruments model AM-1901 with factory-installed filters to select the KYPA carrier frequency (1230 KHz) and reject the KHJ (930 KHz) and KBLA (1580 KHz) carrier frequencies. Single turn, unshielded sampling loops are installed at 67 feet above the base insulator on each of the 200 foot tall towers of the array to serve the antenna monitors of all three stations. The loops are connected through equal length ½ inch foam heliax sampling lines to the antenna monitor system at the location of the KBLA antenna monitor. Additional equal length sections of sampling line extend from there to the KHJ and KYPA antenna monitors and finally to a panel containing terminating resistors. All three of the antenna monitors have high impedance bridging inputs that appear across the sampling lines where they are connected and the terminating resistor panel provides matching for the transmission lines coming from the sampling loops in one place.

The complete antenna monitor system, including the three antenna monitors, interconnecting cables and terminating resistor panel, was factory calibrated by Potomac Instruments in February of 2013. Immediately thereafter, it was shipped to the transmitter site and installed.

RFR Protection - KYPA

The operation of KYPA at the site shared with KHJ and KBLA will not result in the exposure of workers or the general public to levels of radio frequency radiation in excess of the limits specified in 47 CFR 1.1310. Metal fences are in place about the tower bases to restrict access to distances beyond those necessary to prevent electric and magnetic field exposure above their required maximum levels. Equipment enclosures within the transmitter building provide effective shielding to contain the radiofrequency fields within them. The effectiveness of both have been verified by measurement.

The fences restrict access to areas with fields that exceed the requirements of the Rules with both stations operating normally at full power. If it is necessary for workers to be inside the restricted areas of the tower base area fences for extended periods of time, the stations may switch to nondirectional operation with KHJ using either tower 4 or tower 5, KYPA using either tower 2 or tower 6, and KBLA using either tower 1 or tower 5 to de-energize other towers, as needed.

Measurements were made to verify that the protection requirements are met with a Holiday Industries model HI-3002 broadband survey meter, using a model STE-02 probe for the electric field component and a model LFH-02 probe for the magnetic field component. The manufacturer's specified probe factors were applied to the meter readings. Observations were made at distances 20 centimeters or more from nearby conducting objects, following the procedures outlined in the FCC's "OET Bulletin 65, Edition 97-01."

At the KHJ and KYPA carrier frequencies, 930 kHz and 1230 KHz, the specified maximum electric and magnetic field values are 614 V/m and 1.63 A/m, respectively. At the KBLA carrier frequency, 1580 KHz, the specified maximum values are 521 V/m and 1.39 A/m. For worst-case analysis, the 1580 KHz maximum specified values were used for comparison with the measured field levels with both stations operating to determine compliance since they are lower than the values for the other two frequencies.

Measurements were made with all three stations operating at their full power levels into their authorized directional antenna systems for both daytime and nighttime modes. No field levels in excess of, or even approaching, the worst-case analysis values were found in any unrestricted areas of the transmitter site. No spatially-averaged measurements were necessary. The following were the highest observed field levels between ground and two meters above ground outside the tower base fences:

Daytime Mode RFR Measurement Results		
Tower	Maximum Measured Electric Field (V/m)	Maximum Measured Magnetic Field (A/m)
1	173	NIL
2	212	0.548
3	332	0.883
4	346	0.424
5	235	0.883
6	134	NIL

Nighttime Mode RFR Measurement Results		
Tower	Maximum Measured Electric Field (V/m)	Maximum Measured Magnetic Field (A/m)
1	387	0.548
2	360	0.735
3	292	0.548
4	255	0.379
5	265	0.812
6	141	0.346

KYPA Intermodulation Product Observations Involving KHJ and KBLA

The KYPA transmitter site is shared with stations KHJ and KBLA. Filters are employed at the tower bases to isolate the antenna system equipment of the three stations from interaction and also at the antenna system inputs to isolate the transmitters from each other's signals. The most critical purpose of the filters is to avoid the production of spurious emissions through the development of intermodulation products of the three stations' frequencies.

Upon completion of final tuning of the new KHJ (930 KHz) antenna system, with both KYPA (1230 KHz) and KBLA (1580 KHz) also operating at full power with their authorized daytime antennas, a field strength meter was utilized to search for intermodulation products of the three stations operating at the transmitter site. The observations were made approximately 0.75 kilometer from the transmitter site at an azimuth of approximately 218 degrees true, a direction within the major lobes of both the KYPA and KBLA directional antenna patterns. The location is near the center of the front parking lot of the Rite Aid Pharmacy located at 1433 N Alvarado Boulevard, Los Angeles, California. It is clear of overhead wires and as clear of nearby reradiating objects as possible in the area.

Observations were made at the three stations' carrier frequencies and at all second and third order intermodulation product frequencies involving KYPA and falling within the frequency range of the field strength meter. Signals that were found to be intermodulation products that may be generated in the transmitting equipment, coming from the direction of the transmitter site and carrying the modulation of one or more of the stations, were analyzed relative to the field strengths at their component carrier frequencies. The following tabulation shows the results of the intermodulation product observations.

KYPA INTERMODULATION PRODUCT OBSERVATIONS					
Frequency (KHz)	Product of Frequencies (KHz)	Field Strength (mV/m)	Relative to KHJ (dB)	Relative to KYPA (dB)	Relative to KBLA (dB)
580	930 + 1230 - 1580	N/O	--	--	--
630	2 X 930 - 1230	N/O	--	--	--
880	2 X 1230 - 1580	N/O	--	--	--
930	KHJ Carrier	1,280	0.0	N/P	N/P
1230	KYPA Carrier	670	N/P	0.0	N/P
1280	930 - 1230 + 1580	N/O	--	--	--
1530	930 - 2 X 1230	N/O	--	--	--
1580	KBLA Carrier	7,300	N/P	N/P	0.0
1880	930 - 1230 - 1580	N/O	--	--	--
1930	1230 - 2 X 1580	0.105	N/P	-76.1	-96.8
2160	930 + 1230	N/O	--	--	--
2810	1230 + 1580	0.035	N/P	-85.6	-106.4
3090	2 X 930 + 1230	N/O	--	--	--
3390	930 + 2 X 1230	N/O	--	--	--
3740	930 + 1230 + 1580	0.022	-95.3	-89.7	-110.4
4040	2 X 1230 + 1580	N/O	--	--	--
4390	1230 + 2 X 1580	0.028	N/P	-87.6	-108.3
N/O – None Observed N/P – Station frequency is not involved in this product.					

The field strength measurements were made with a Potomac Instruments FIM-41 field strength meter, serial number 1205. It was most recently calibrated by its manufacturer on May 21, 2012.

Section 73.44(b) of the FCC Rules specifies that emissions more than 75 KHz from carrier frequency must be at least 80 dB below the radiation pattern RMS carrier level of 5 kilowatt station KHJ, 73 dB below the radiation pattern RMS carrier level of 1.0 kilowatt station KYPA and 80 dB below the radiation pattern RMS carrier level of 50 kilowatt station KBLA.

As KHJ employs a nondirectional daytime antenna, it has no gain to be considered in analyzing the spurious emission observations. There is a margin of 15.3 dB with reference to the highest spurious signal that was observed at a product frequency involving KYPA and KHJ, at 3740 KHz, relative to the KHJ signal.

The standard unattenuated field of the 1.0 kilowatt KYPA directional antenna pattern at 218 degrees true is 425 mV/m, while the standard unattenuated RMS of the directional antenna pattern is 333 mV/m, making the KYPA directional antenna pattern gain at 218 degrees true 2.1 dB. Following the procedure outlined in Section 73.44(d)(2) of the FCC Rules to account for directional antenna pattern gain, there is a margin of 1.0 dB with reference to the highest spurious signal that was observed at a product frequency involving KYPA with KHJ and/or KBLA, at 1930 KHz, relative to the KYPA signal.

The standard unattenuated field of the 50 kilowatt KBLA directional antenna pattern at 218 degrees true is 5059 mV/m, while the standard unattenuated RMS of the directional antenna pattern is 2873 mV/m, making the KBLA directional antenna pattern gain at 218 degrees true 4.9 dB. Following the procedure outlined in Section 73.44(d)(2) of the FCC Rules to account for directional antenna pattern gain, there is a margin of 11.9 dB with reference to the highest spurious signal that was observed at a product frequency involving KYPA and KBLA, at 1930 KHz, relative to the KBLA signal.

The measurements indicate that the filtering equipment employed is functioning satisfactorily.

Derivation of Inverted Directional Antenna Parameters - KYPA

The KYPA directional antenna pattern, in its implementation, has been adjusted to antenna monitor parameters based on an inversion of the theoretical construction permit pattern parameters. As the array employs equal height towers, the embedded design pairs can be inverted (having their field ratios changed to their inverse values) in any combination to achieve different base impedance, power division and pattern bandwidth characteristics.[1] By mathematical analysis, the directional pattern parameters of the two towers were found to be from inversion of the tower pair that defines null locations of the resulting pattern shape. The analysis herein is based on them.

To demonstrate the equivalence of the pattern shape for the field parameters to which the directional antenna system was adjusted - as shown in the analysis contained herein - to the pattern shape calculated for the parameters shown on the construction permit, tabulations for both appear on the following pages. For direct comparison, the towers are numbered as they appear on the construction permit, 1 and 2, although they are towers 2 and 6 of the KBLA array as explained by Item 12 of this report. As the directional antenna is employed by KYPA fulltime, calculations were done for vertical radiation patterns up to 60 degrees above the horizon as is required for nighttime directional antennas.

It can be seen that the patterns are identical within the range allowed by rounding of the normalized field ratios and phases, with no difference in standard field approaching two percent at any azimuth. As the accuracy required by 47 CFR 73.1215 for the indicating instruments used to determine the power of broadcast stations is two percent of their full scale value, there is no significant difference between the inverted directional antenna pattern and the construction permit pattern.

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[1] Rackley, Ronald D. *AM Antenna Systems*, chapter 4.3 of NAB Engineering Handbook, 10th ed., ed. Edmund Williams, National Association of Broadcasters (Washington, 2007), pp.721-722.

CALCULATION USING INVERTED PARAMETERS

AM BROADCAST STATION KYPA
LOS ANGELES, CALIFORNIA

1230 kHz 1 kW U DA-1

INVERTED STANDARD RADIATION PATTERN DATA
(Radiation Values at One Kilometer)

TOWER Number	Field Ratio	Phase (deg)	Spacing (deg)	Bearing (deg)	Height (deg)
1	0.400	+0.0	0.0	0.0	90.0
2	1.000	+154.0	74.7	73.5	90.0

Input Power (kW)	Loop Loss (ohms)	Theoretical RMS (mV/m)	Theoretical RSS (mV/m)	Q Factor (mV/m)	Standard RMS (mV/m)
1.00	1.00	316.9	403.4	10.1	332.9

Azimuth Angle (deg)	Elevation Angle in Degrees: 0 (mV/m)	5 (mV/m)	10 (mV/m)	15 (mV/m)	20 (mV/m)	25 (mV/m)	30 (mV/m)
0	237.	236.	232.	226.	217.	207.	195.
5	236.	235.	231.	225.	216.	205.	193.
10	238.	237.	233.	226.	217.	206.	193.
15	243.	241.	237.	230.	220.	208.	195.
20	249.	248.	243.	235.	225.	212.	198.
25	257.	255.	250.	242.	231.	217.	202.
30	265.	264.	258.	249.	237.	223.	206.
35	274.	272.	266.	257.	244.	229.	211.
40	283.	280.	274.	264.	251.	235.	216.
45	290.	288.	282.	271.	257.	240.	221.
50	297.	295.	288.	277.	263.	245.	225.
55	303.	301.	294.	282.	267.	249.	229.
60	308.	305.	298.	286.	271.	253.	232.
65	311.	308.	301.	289.	274.	255.	234.
70	312.	310.	303.	291.	275.	256.	235.
75	313.	310.	303.	291.	275.	257.	235.
80	312.	309.	302.	290.	275.	256.	234.
85	309.	307.	299.	288.	272.	254.	233.
90	305.	303.	296.	284.	269.	251.	230.
95	300.	297.	290.	279.	265.	247.	227.
100	293.	291.	284.	274.	259.	242.	223.
105	286.	284.	277.	267.	253.	237.	218.
110	278.	275.	269.	260.	247.	231.	213.
115	269.	267.	261.	252.	240.	225.	208.
120	260.	259.	253.	245.	233.	219.	204.
125	252.	251.	246.	238.	227.	214.	199.
130	245.	244.	239.	232.	222.	210.	196.
135	240.	238.	234.	227.	218.	207.	194.
140	237.	235.	231.	225.	216.	205.	193.
145	236.	235.	231.	225.	216.	206.	194.
150	239.	238.	234.	228.	219.	209.	197.
155	245.	244.	240.	233.	225.	214.	201.
160	254.	252.	248.	241.	232.	221.	208.
165	265.	264.	259.	252.	242.	230.	216.
170	278.	277.	272.	264.	254.	240.	225.
175	293.	291.	286.	278.	266.	252.	236.

Azimuth Angle (deg)	Elevation Angle in Degrees 35 (mV/m)	40 (mV/m)	45 (mV/m)	50 (mV/m)	55 (mV/m)	60 (mV/m)
0	181.	167.	151.	135.	119.	103.
5	179.	165.	149.	134.	117.	101.
10	179.	164.	148.	132.	116.	100.
15	180.	165.	148.	132.	116.	99.4
20	182.	166.	149.	132.	115.	98.9
25	185.	168.	150.	133.	116.	98.7
30	189.	171.	152.	134.	116.	98.7
35	193.	174.	154.	135.	117.	98.9
40	197.	177.	156.	136.	117.	99.1
45	201.	179.	158.	138.	118.	99.5
50	204.	182.	160.	139.	119.	99.8
55	207.	185.	162.	140.	120.	100.
60	209.	186.	163.	141.	120.	100.
65	211.	188.	164.	142.	121.	101.
70	212.	188.	165.	142.	121.	101.
75	212.	189.	165.	142.	121.	101.
80	212.	188.	165.	142.	121.	101.
85	210.	187.	164.	141.	120.	101.
90	208.	185.	163.	141.	120.	100.
95	205.	183.	161.	140.	119.	100.0
100	202.	181.	159.	138.	118.	99.6
105	198.	178.	157.	137.	118.	99.3
110	194.	175.	155.	136.	117.	99.0
115	190.	172.	153.	134.	116.	98.8
120	187.	169.	151.	133.	116.	98.7
125	183.	167.	150.	132.	115.	98.8
130	181.	165.	149.	132.	116.	99.2
135	179.	164.	148.	132.	116.	99.8
140	179.	164.	149.	133.	117.	101.
145	180.	166.	150.	135.	118.	102.
150	183.	168.	153.	137.	120.	104.
155	187.	172.	156.	140.	123.	105.
160	193.	177.	161.	143.	125.	108.
165	200.	183.	166.	147.	129.	110.
170	209.	190.	171.	152.	132.	113.
175	217.	198.	178.	157.	136.	115.

Azimuth Angle (deg)	Elevation Angle in Degrees: 0 (mV/m)	5 (mV/m)	10 (mV/m)	15 (mV/m)	20 (mV/m)	25 (mV/m)	30 (mV/m)
180	309.	307.	301.	292.	280.	264.	246.
185	325.	323.	317.	307.	293.	277.	258.
190	341.	339.	332.	322.	307.	289.	269.
195	357.	354.	347.	336.	320.	301.	280.
200	372.	369.	362.	349.	333.	313.	290.
205	385.	383.	375.	362.	345.	324.	300.
210	398.	395.	387.	374.	356.	334.	309.
215	409.	407.	398.	384.	366.	343.	317.
220	419.	416.	408.	394.	374.	351.	324.
225	428.	425.	416.	401.	382.	358.	331.
230	435.	432.	423.	408.	388.	364.	336.
235	441.	438.	428.	414.	393.	369.	340.
240	445.	442.	433.	418.	397.	372.	344.
245	448.	445.	436.	420.	400.	375.	346.
250	450.	447.	437.	422.	401.	376.	347.
255	450.	447.	437.	422.	401.	376.	347.
260	449.	446.	436.	421.	401.	375.	347.
265	446.	443.	434.	419.	398.	373.	345.
270	443.	440.	430.	415.	395.	370.	342.
275	438.	434.	425.	410.	390.	366.	338.
280	431.	428.	419.	404.	385.	361.	333.
285	423.	420.	411.	397.	378.	354.	327.
290	414.	411.	402.	388.	369.	346.	320.
295	403.	400.	392.	378.	360.	338.	312.
300	391.	388.	380.	367.	349.	328.	304.
305	377.	375.	367.	355.	338.	318.	294.
310	363.	360.	353.	341.	325.	306.	284.
315	348.	345.	338.	327.	312.	294.	273.
320	332.	329.	323.	313.	299.	282.	262.
325	315.	313.	308.	298.	285.	269.	251.
330	299.	298.	292.	283.	271.	257.	240.
335	284.	283.	278.	269.	258.	245.	229.
340	270.	269.	264.	257.	246.	234.	220.
345	258.	257.	252.	245.	236.	224.	211.
350	248.	247.	243.	236.	227.	217.	204.
355	241.	240.	236.	230.	221.	211.	198.

Azimuth Angle (deg)	Elevation Angle in Degrees 35 (mV/m)	40 (mV/m)	45 (mV/m)	50 (mV/m)	55 (mV/m)	60 (mV/m)
180	227.	206.	184.	162.	140.	118.
185	237.	214.	191.	168.	144.	121.
190	246.	222.	198.	173.	148.	124.
195	256.	231.	205.	178.	152.	127.
200	265.	238.	211.	184.	156.	130.
205	274.	246.	217.	188.	160.	133.
210	282.	253.	223.	193.	164.	136.
215	289.	259.	228.	197.	167.	138.
220	295.	264.	233.	201.	170.	140.
225	301.	269.	237.	204.	173.	142.
230	306.	273.	240.	207.	175.	144.
235	309.	277.	243.	209.	176.	145.
240	312.	279.	245.	211.	178.	146.
245	314.	281.	247.	212.	179.	147.
250	315.	282.	247.	213.	179.	147.
255	316.	282.	248.	213.	179.	147.
260	315.	281.	247.	213.	179.	147.
265	313.	280.	246.	212.	178.	146.
270	311.	278.	244.	210.	177.	145.
275	307.	275.	241.	208.	175.	144.
280	303.	271.	238.	205.	173.	143.
285	298.	266.	234.	202.	171.	141.
290	291.	261.	230.	199.	168.	139.
295	285.	255.	225.	195.	165.	137.
300	277.	249.	219.	190.	162.	134.
305	268.	241.	213.	186.	158.	131.
310	260.	234.	207.	180.	154.	128.
315	250.	226.	201.	175.	150.	126.
320	240.	218.	194.	170.	146.	123.
325	231.	209.	187.	164.	142.	120.
330	221.	201.	180.	159.	138.	117.
335	212.	193.	174.	154.	134.	114.
340	204.	186.	168.	149.	130.	111.
345	196.	180.	163.	145.	127.	108.
350	190.	174.	158.	141.	124.	106.
355	185.	170.	154.	138.	121.	104.

CALCULATION USING CONSTRUCTION PERMIT PARAMETERS

AM BROADCAST STATION KYPA
LOS ANGELES, CALIFORNIA

1230 kHz 1 kW U DA-1

NIGHTTIME STANDARD RADIATION PATTERN DATA
(Radiation Values at One Kilometer)

TOWER Number	Field Ratio	Phase (deg)	Spacing (deg)	Bearing (deg)	Height (deg)
1	1.000	+0.0	0.0	0.0	90.0
2	0.400	+154.0	74.7	73.5	90.0

Input Power (kW)	Loop Loss (ohms)	Theoretical RMS (mV/m)	Theoretical RSS (mV/m)	Q Factor (mV/m)	Standard RMS (mV/m)
1.00	1.00	316.9	403.4	10.1	332.9

Azimuth	Elevation Angle in Degrees						
Angle (deg)	0 (mV/m)	5 (mV/m)	10 (mV/m)	15 (mV/m)	20 (mV/m)	25 (mV/m)	30 (mV/m)
0	237.	236.	232.	226.	217.	207.	195.
5	236.	235.	231.	225.	216.	205.	193.
10	238.	237.	233.	226.	217.	206.	193.
15	243.	241.	237.	230.	220.	208.	195.
20	249.	248.	243.	235.	225.	212.	198.
25	257.	255.	250.	242.	231.	217.	202.
30	265.	264.	258.	249.	237.	223.	206.
35	274.	272.	266.	257.	244.	229.	211.
40	283.	280.	274.	264.	251.	235.	216.
45	290.	288.	282.	271.	257.	240.	221.
50	297.	295.	288.	277.	263.	245.	225.
55	303.	301.	294.	282.	267.	249.	229.
60	308.	305.	298.	286.	271.	253.	232.
65	311.	308.	301.	289.	274.	255.	234.
70	312.	310.	303.	291.	275.	256.	235.
75	313.	310.	303.	291.	275.	257.	235.
80	312.	309.	302.	290.	275.	256.	234.
85	309.	307.	299.	288.	272.	254.	233.
90	305.	303.	296.	284.	269.	251.	230.
95	300.	297.	290.	279.	265.	247.	227.
100	293.	291.	284.	274.	259.	242.	223.
105	286.	284.	277.	267.	253.	237.	218.
110	278.	275.	269.	260.	247.	231.	213.
115	269.	267.	261.	252.	240.	225.	208.
120	260.	259.	253.	245.	233.	219.	204.
125	252.	251.	246.	238.	227.	214.	199.
130	245.	244.	239.	232.	222.	210.	196.
135	240.	238.	234.	227.	218.	207.	194.
140	237.	235.	231.	225.	216.	205.	193.
145	236.	235.	231.	225.	216.	206.	194.
150	239.	238.	234.	228.	219.	209.	197.
155	245.	244.	240.	233.	225.	214.	201.
160	254.	252.	248.	241.	232.	221.	208.
165	265.	264.	259.	252.	242.	230.	216.
170	278.	277.	272.	264.	254.	240.	225.
175	293.	291.	286.	278.	266.	252.	236.

Azimuth Angle (deg)	Elevation Angle in Degrees 35 (mV/m)	40 (mV/m)	45 (mV/m)	50 (mV/m)	55 (mV/m)	60 (mV/m)
0	181.	167.	151.	135.	119.	103.
5	179.	165.	149.	134.	117.	101.
10	179.	164.	148.	132.	116.	100.
15	180.	165.	148.	132.	116.	99.4
20	182.	166.	149.	132.	115.	98.9
25	185.	168.	150.	133.	116.	98.7
30	189.	171.	152.	134.	116.	98.7
35	193.	174.	154.	135.	117.	98.9
40	197.	177.	156.	136.	117.	99.1
45	201.	179.	158.	138.	118.	99.5
50	204.	182.	160.	139.	119.	99.8
55	207.	185.	162.	140.	120.	100.
60	209.	186.	163.	141.	120.	100.
65	211.	188.	164.	142.	121.	101.
70	212.	188.	165.	142.	121.	101.
75	212.	189.	165.	142.	121.	101.
80	212.	188.	165.	142.	121.	101.
85	210.	187.	164.	141.	120.	101.
90	208.	185.	163.	141.	120.	100.
95	205.	183.	161.	140.	119.	100.0
100	202.	181.	159.	138.	118.	99.6
105	198.	178.	157.	137.	118.	99.3
110	194.	175.	155.	136.	117.	99.0
115	190.	172.	153.	134.	116.	98.8
120	187.	169.	151.	133.	116.	98.7
125	183.	167.	150.	132.	115.	98.8
130	181.	165.	149.	132.	116.	99.2
135	179.	164.	148.	132.	116.	99.8
140	179.	164.	149.	133.	117.	101.
145	180.	166.	150.	135.	118.	102.
150	183.	168.	153.	137.	120.	104.
155	187.	172.	156.	140.	123.	105.
160	193.	177.	161.	143.	125.	108.
165	200.	183.	166.	147.	129.	110.
170	209.	190.	171.	152.	132.	113.
175	217.	198.	178.	157.	136.	115.

Azimuth Angle (deg)	Elevation Angle in Degrees 0 (mV/m)	5 (mV/m)	10 (mV/m)	15 (mV/m)	20 (mV/m)	25 (mV/m)	30 (mV/m)
180	309.	307.	301.	292.	280.	264.	246.
185	325.	323.	317.	307.	293.	277.	258.
190	341.	339.	332.	322.	307.	289.	269.
195	357.	354.	347.	336.	320.	301.	280.
200	372.	369.	362.	349.	333.	313.	290.
205	385.	383.	375.	362.	345.	324.	300.
210	398.	395.	387.	374.	356.	334.	309.
215	409.	407.	398.	384.	366.	343.	317.
220	419.	416.	408.	394.	374.	351.	324.
225	428.	425.	416.	401.	382.	358.	331.
230	435.	432.	423.	408.	388.	364.	336.
235	441.	438.	428.	414.	393.	369.	340.
240	445.	442.	433.	418.	397.	372.	344.
245	448.	445.	436.	420.	400.	375.	346.
250	450.	447.	437.	422.	401.	376.	347.
255	450.	447.	437.	422.	401.	376.	347.
260	449.	446.	436.	421.	401.	375.	347.
265	446.	443.	434.	419.	398.	373.	345.
270	443.	440.	430.	415.	395.	370.	342.
275	438.	434.	425.	410.	390.	366.	338.
280	431.	428.	419.	404.	385.	361.	333.
285	423.	420.	411.	397.	378.	354.	327.
290	414.	411.	402.	388.	369.	346.	320.
295	403.	400.	392.	378.	360.	338.	312.
300	391.	388.	380.	367.	349.	328.	304.
305	377.	375.	367.	355.	338.	318.	294.
310	363.	360.	353.	341.	325.	306.	284.
315	348.	345.	338.	327.	312.	294.	273.
320	332.	329.	323.	313.	299.	282.	262.
325	315.	313.	308.	298.	285.	269.	251.
330	299.	298.	292.	283.	271.	257.	240.
335	284.	283.	278.	269.	258.	245.	229.
340	270.	269.	264.	257.	246.	234.	220.
345	258.	257.	252.	245.	236.	224.	211.
350	248.	247.	243.	236.	227.	217.	204.
355	241.	240.	236.	230.	221.	211.	198.

Azimuth Angle (deg)	Elevation Angle in Degrees 35 (mV/m)	40 (mV/m)	45 (mV/m)	50 (mV/m)	55 (mV/m)	60 (mV/m)
180	227.	206.	184.	162.	140.	118.
185	237.	214.	191.	168.	144.	121.
190	246.	222.	198.	173.	148.	124.
195	256.	231.	205.	178.	152.	127.
200	265.	238.	211.	184.	156.	130.
205	274.	246.	217.	188.	160.	133.
210	282.	253.	223.	193.	164.	136.
215	289.	259.	228.	197.	167.	138.
220	295.	264.	233.	201.	170.	140.
225	301.	269.	237.	204.	173.	142.
230	306.	273.	240.	207.	175.	144.
235	309.	277.	243.	209.	176.	145.
240	312.	279.	245.	211.	178.	146.
245	314.	281.	247.	212.	179.	147.
250	315.	282.	247.	213.	179.	147.
255	316.	282.	248.	213.	179.	147.
260	315.	281.	247.	213.	179.	147.
265	313.	280.	246.	212.	178.	146.
270	311.	278.	244.	210.	177.	145.
275	307.	275.	241.	208.	175.	144.
280	303.	271.	238.	205.	173.	143.
285	298.	266.	234.	202.	171.	141.
290	291.	261.	230.	199.	168.	139.
295	285.	255.	225.	195.	165.	137.
300	277.	249.	219.	190.	162.	134.
305	268.	241.	213.	186.	158.	131.
310	260.	234.	207.	180.	154.	128.
315	250.	226.	201.	175.	150.	126.
320	240.	218.	194.	170.	146.	123.
325	231.	209.	187.	164.	142.	120.
330	221.	201.	180.	159.	138.	117.
335	212.	193.	174.	154.	134.	114.
340	204.	186.	168.	149.	130.	111.
345	196.	180.	163.	145.	127.	108.
350	190.	174.	158.	141.	124.	106.
355	185.	170.	154.	138.	121.	104.

Item 12

Tower Numbering - KYPA

The construction permit for the new KYPA directional antenna system uses a numbering scheme for the towers that differs from that of the licensed facility of KBLA, the station that has operated at the site for many years. The KYPA construction permit shows theoretical parameters specified for towers 1 and 2, which are towers 2 and 6, respectively, of the KBLA array.

It is desirable for all stations at a site to use the same numbering system to avoid confusion – particularly with regard to radiofrequency radiation exposure and safety of life issues when maintenance is performed on towers. All references to tower numbering at the site – including the antenna monitors and the nomenclature of the phasing and coupling equipment – follow the scheme of the KBLA licensed specifications. KYPA will use this numbering scheme for referring to the towers in day-to-day operation.

To eliminate any confusion, it is requested that the new license have the numbering scheme that is in use at the site, with operating parameters specified for towers 2 and 6. All tower numbering herein adheres to that scheme. The antenna monitor parameters provided herein and on the associated FCC Form 302 technical section correspond to the towers numbered accordingly.

Summary of Certified Array Geometry - KYPA

The tower locations based on the relative distances in feet and azimuths (referenced to True North) provided in the Tower Location Certification of Appendix A were compared to the relative distances and azimuths of the array elements specified on the construction permit. The Certified and specified values were converted to the rectangular coordinate system to facilitate calculating the individual tower specified-to-certified distances, which were then converted to the polar coordinate system to determine their magnitudes. The following tabulation shows those distances, expressed in feet and electrical degrees at 1230 kilohertz, as well as other information that is relevant to their determination.

Tower	Specified Array Geometry			Post-Construction Certification*		Distance From Specified Base Location	
	Spacing (Deg.)	Spacing (Feet)	Azimuth (Deg. T.)	Spacing (Feet)	Azimuth (Deg. T.)	(Feet)	(Deg.)
1	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
2	74.7	165.9	73.5	164.6	73.5	1.3	0.59

The "as built" tower 2 displacement from the specified location expressed in electrical degrees at carrier frequency is within the 1.5 electrical degree tolerance specified in FCC Public Notice DA 09-2340, October 29, 2009.

The tower number designations for this analysis agree with those shown on the construction permit document for direct comparison. Towers 1 and 2 of the construction permit are towers 2 and 6 of the six-tower KBLA array, respectively, and they appear by that numbering scheme throughout the remainder of this exhibit. See Item 12.

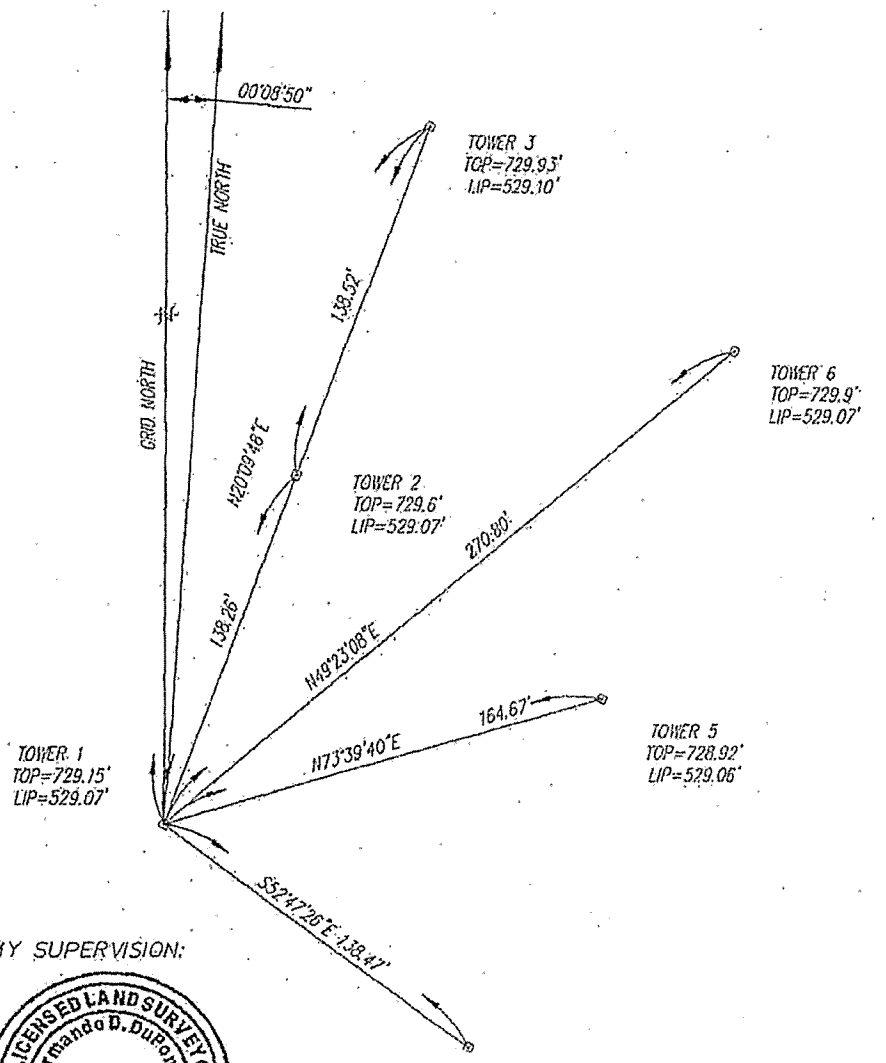
As built tower locations derived from October 18, 2011 Tower Location Certification prepared by Armando D. Dupont, Professional Land Surveyor of Cal Vada Surveying, Inc.

Appendix A

Certified Post Construction Array Geometry

EXHIBIT "A-1"

KBLA-AM TRANSMITTING TOWERS
1700 N. ALVARADO, LOS ANGELES, CA



PREPARED UNDER MY SUPERVISION:

LICENSED LAND SURVEYOR
Armando D. DuPont
L.S. 7780
Exp. 12-31-11
STATE OF CALIFORNIA

ARMANDO D. DUPONT,
P.L.S. 7780
REG. EXP. DECEMBER 31, 2011

SHEET 1 OF 2

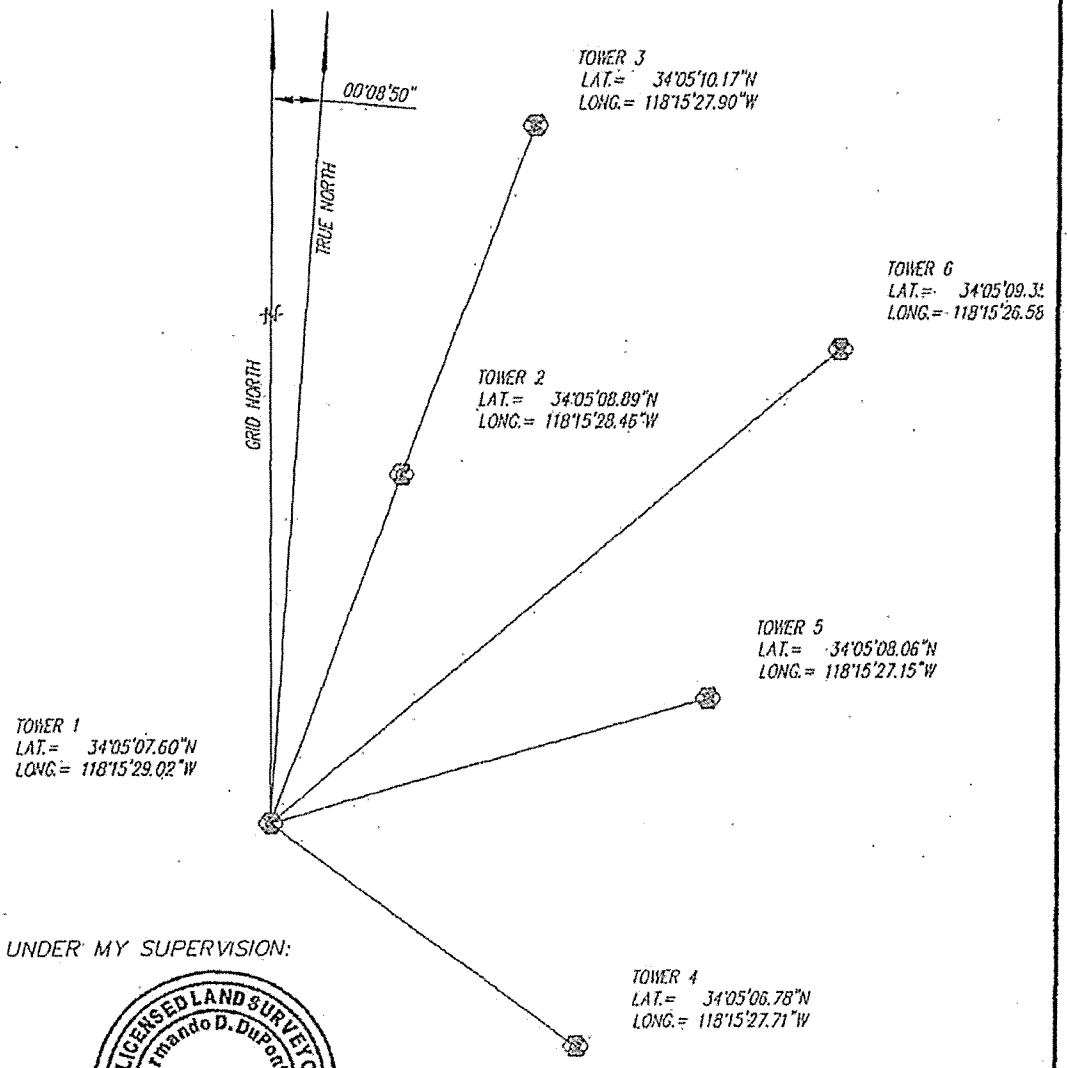
SURVEY DATE: 10/11/11

CALVADA
SURVEYING, INC.
411 JENKS CIRCLE, SUITE 205, CORONA, CA. 92880-1782
PHONE: 951-280-9960 FAX: 951-280-9740

Job No. 11837
Drawn By: GBM
Date: 10/18/11
www.calvada.com

EXHIBIT "A-2"

KBLA-AM TRANSMITTING TOWERS
1700 N. ALVARADO, LOS ANGELES, CA



PREPARED UNDER MY SUPERVISION:

LICENSED LAND SURVEYOR
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Exp. 12-31-11
STATE OF CALIFORNIA

ARMANDO D. DUPONT,
P.L.S. 7780
REG. EXP. DECEMBER 31, 2011

SHEET 2 OF 2

SURVEY DATE: 10/11/11

CALVADA
SURVEYING, INC.
411 JENKS CIRCLE, SUITE 205, CORONA, CA. 92880-1782
PHONE: 951-280-9960
FAX: 951-280-9746

Job No. 11837
Drawn By: GBM
Date: 10/10/11
www.calvada.com

SECTION III - LICENSE APPLICATION ENGINEERING DATA

Name of Applicant

MULTICULTURAL RADIO BROADCASTING LICENSEE, LLC (AMENDMENT TO BMML-20111209KKR)

PURPOSE OF AUTHORIZATION APPLIED FOR: (check one)

☑ Station License ☐ Direct Measurement of Power

1. Facilities authorized in construction permit

Call Sign	File No. of Construction Permit (if applicable)	Frequency (kHz)	Hours of Operation	Power in kilowatts	
				Night	Day
KYPA	BP -20050228ACB	1230	UNLIIMITED	1.0	1.0

2. Station location

State	City or Town
CA	LOS ANGELES

3. Transmitter location

State	County	City or Town	Street address (or other identification)
CA	LOS ANGELES	LOS ANGELES	1700 N. ALVARADO BLVD.

4. Main studio location

State	County	City or Town	Street address (or other identification)
CA	LOS ANGELES	PASADENA	747 E. GREEN STREET

5. Remote control point location (specify only if authorized directional antenna)

State	County	City or Town	Street address (or other identification)
CA	LOS ANGELES	PASADENA	747 E. GREEN STREET

6. Has type-approved stereo generating equipment been installed? ☐ Yes ☑ No

7. Does the sampling system meet the requirements of 47 C.F.R. Section 73.68? ☑ Yes ☐ No ☐ Not Applicable

Attach as an Exhibit a detailed description of the sampling system as installed. Exhibit No. TECH EXHIBIT

8. Operating constants:

RF common point or antenna current (in amperes) without modulation for night system	RF common point or antenna current (in amperes) without modulation for day system
4.65	4.65

Measured antenna or common point resistance (in ohms) at operating frequency		Measured antenna or common point reactance (in ohms) at operating frequency	
Night	Day	Night	Day
50.0	50.0	-j 6.0	-j 6.0

Antenna indications for directional operation

Towers	Antenna monitor Phase reading(s) in degrees		Antenna monitor sample current ratio(s)		Antenna base currents	
	Night	Day	Night	Day	Night	Day
1 UNUSED	N/A	N/A	N/A	N/A	N/A	N/A
2	-154.2	-154.2	0.403	0.403	N/A	N/A
3 UNUSED	N/A	N/A	N/A	N/A	N/A	N/A
4 UNUSED	N/A	N/A	N/A	N/A	N/A	N/A
5 UNUSED	N/A	N/A	N/A	N/A	N/A	N/A
6	0.0	0.0	1.000	1.000	N/A -	N/A

Manufacturer and type of antenna monitor: POTOMAC INSTRUMENTS AM-1901

SECTION III - Page 2

9. Description of antenna system ((f directional antenna is used, the information requested below should be given for each element of the array. Use separate sheets if necessary.)

Type Radiator	Overall height in meters of radiator above base insulator, or above base, if grounded.	Overall height in meters above ground (without obstruction lighting)	Overall height in meters above ground (include obstruction lighting)	If antenna is either top loaded or sectionalized, describe fully in an Exhibit.
UNIFORM CROSS-SECTION, GUYED	61.0	61.5	2: 61.5; 6: 62.0	Exhibit No. N/A

Excitation ☑ Series ☐ Shunt

Geographic coordinates to nearest second. For directional antenna give coordinates of center of array. For single vertical radiator give tower location.

North Latitude	West Longitude
34 ° 05 ' 08 "	118 ° 15 ' 24 "

If not fully described above, attach as an Exhibit further details and dimensions including any other antenna mounted on tower and associated isolation circuits. Exhibit No. N/A

Also, if necessary for a complete description, attach as an Exhibit a sketch of the details and dimensions of ground system. Exhibit No. N/A

10. In what respect, if any, does the apparatus constructed differ from that described in the application for construction permit or in the permit?

NONE

11. Give reasons for the change in antenna or common point resistance.

NEW TRANSMITTER SITE FOR KYPA

I certify that I represent the applicant in the capacity indicated below and that I have examined the foregoing statement of technical information and that it is true to the best of my knowledge and belief.

Name (Please Print or Type)	Signature
RONALD D. RACKLEY, P.E.	Ronald D Rackley
Address (include ZIP Code) DUTREIL, LUNDIN & RACKLEY, INC. 201 FLETCHER AVENUE SARASOTA, FL 34237	Date: JULY 08, 2013 Telephone No. (Include Area Code): 941-329-6000

☐ Technical Director

☑ Registered Professional Engineer

☐ Chief Operator

☐ Technical Consultant

☐ Other (specify)

MULTIPLEX AGREEMENT

THIS MULTIPLEX AGREEMENT (this "Agreement") is made as of April 2, 2012 between Multicultural Radio Broadcasting, Inc. ("MRBI") and Liberman Broadcasting of California LLC ("LBI").

Recitals

A. MRBI has an interest in the real property (the "Property") located at Alvarado and Effie Streets, Los Angeles, California which is more particularly described on *Exhibit A* attached hereto, and owns or operates the AM transmission towers listed on *Exhibit A* attached hereto (collectively, the "Towers") and a transmitter building (the "Building") located on the Property. The Towers, Building and all other improvements of MRBI on the Property are collectively referred to herein as the "Site." MRBI uses the Site as the transmitter site for its radio broadcast stations KBLA(AM), 1580 kHz, Santa Monica, California ("KBLA") and KYPA(AM), 1230 kHz Los Angeles, California ("KYPA"), which currently operate with a shared multi-frequency AM antenna system.

B. LBI owns radio broadcast station KHJ(AM), 930 kHz Los Angeles, California ("KHJ"), and desires to lease space at the Property for the purpose of housing, installing and operating the LBI Facilities (defined below), also utilizing a multi-frequency AM antenna system, in conjunction with KBLA and KYPA.

Agreement

NOW, THEREFORE, in consideration of the foregoing, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties, intending to be legally bound, hereby agree as follows:

1. Premises.

(a) MRBI hereby leases to LBI use of the Towers and, at LBI's option, sufficient space in the Building for the purpose of installing, maintaining, repairing, replacing and operating the LBI Facilities necessary to transmit KHJ's signal on a multiplexed basis, *i.e.* utilizing a multi-frequency AM antenna system in conjunction with KBLA and KYPA, from the Property.

(b) MRBI hereby authorizes LBI to: (i) construct LBI Facilities on the Property including without limitation installing, maintaining, repairing, replacing and connecting the transmitters, transmission lines, filters, electric generators and other communications equipment related to the operation of KHJ in accordance with this Agreement, (ii) construct, at LBI's option, a transmitter building (the "LBI Building") on the Property, (iii) install necessary filters, shielding enclosures, and related multiplexer equipment on the Property for the transmission of KHJ's signal (the "KHJ Multiplex Equipment"), and (iv) pass through portions of the Property for ingress to and egress from the Building and the Towers. All of the foregoing shall be collectively referred to herein as the "Premises." All site preparation work for the use of the Premises by LBI shall be performed by LBI at its expense.

(c) As used in this Agreement, the term "LBI Facilities" shall mean the LBI Building and KHJ Multiplex Equipment and any other buildings, cables, transmitter, filters and broadcast equipment of LBI located on the Property, as may be more particularly described on *Exhibit B* attached hereto, and any replacement or additions to such equipment and facilities.

(d) If LBI does not elect to construct the LBI Building, then the LBI Facilities shall include sufficient space in the Building for LBI's transmitter and related equipment, and prior to or concurrent with the installation of the LBI Facilities, LBI shall, at its expense: (i) install a new roof on the Building, (ii) upgrade the Building's HVAC system as necessary for the LBI Facilities, (iii) upgrade the Building's electrical system as necessary for the LBI Facilities, including installation of a separate meter and (iv) upgrade the Building's interior facilities as reasonably necessary for the LBI Facilities.

2. Term. The term (the "Term") of this Agreement shall commence on the date that LBI commences installation and construction of the LBI Facilities on the Premises (the "Commencement Date") and shall end on the date ten (10) years after the Rent Commencement Date (as defined in Section 3), subject to any earlier termination or extension of this Agreement. The Term shall be automatically extended for three (3) additional periods of five (5) years each, unless LBI gives MRBI written notice of non-renewal at least ninety (90) days prior to the expiration of the then-current Term.

3. Rent. LBI shall pay MRBI rent in the amount of _____ ("Rent") for use of the Premises, payable monthly in advance on the first day of each calendar month during the Term; provided, however that such obligation to pay Rent shall not begin until the date LBI begins broadcasting KHJ's signal from the Property (the "Rent Commencement Date"). Rent for any partial month shall be prorated. _____ Rent shall be paid to MRBI at the address for notices provided in Section 29 below, or at such other place as MRBI may designate in a written notice to LBI.

4. Governmental Approvals.

(a) LBI shall be responsible for obtaining at its expense all necessary approvals of the Federal Communications Commission ("FCC") and any other applicable state or local governmental authorities for the installation and operation of the LBI Facilities at the Property and for demonstrating compliance with the FCC's rules, including without limitation that KBLA's and KYPA's current directional antenna patterns are not materially impaired and that no undesirable intermodulation or spurious emissions are generated by the operation of the LBI Facilities at the Site. Upon LBI's request, MRBI shall assist LBI in obtaining any FCC or other governmental approvals related to this Agreement. Upon request, LBI shall provide MRBI with copies of all applications filed with the FCC related thereto and all permits and licenses issued to KHJ by the FCC or other applicable governmental authorities. LBI shall comply with any conditions which the FCC or other applicable governmental authority may impose with respect to the installation or operation of the LBI Facilities and shall pay for all legal and engineering expenses related thereto; provided, however that MRBI shall pay for all fees and expenses related to all matters existing prior to installation of LBI Facilities.

(b) LBI shall be responsible for

provided, however that MRBI shall pay for all fees and expenses related to all matters existing prior to installation of LBI Facilities. In addition, LBI shall pay for

provided, however that MRBI shall pay for all fees and expenses related to all matters existing prior to installation of LBI Facilities.

5. Use of Premises. LBI shall use the Premises for the installation, removal, operation, repair, replacement and maintenance of the LBI Facilities and for operation of KHJ, utilizing the shared multi-frequency AM antenna system to be installed pursuant to this Agreement. Operation of the LBI Facilities shall be conducted in accordance with this Agreement and the rules and regulations of the FCC and any other governmental body having jurisdiction over the installation, repair, alteration, operation or replacement of the LBI Facilities or any activities of LBI on the Premises. LBI and MRBI shall each comply with all laws and regulations of the federal, state, county and municipal authorities applicable to the Property.

5.1 Non-Exclusive Use. LBI's use of the Property is non-exclusive, and MRBI reserves the right to lease the Site (or any portion thereof) to others so long as such other uses are compatible with and do not interfere with or impair LBI's use of the Premises pursuant to this Agreement or cause Interference (defined below) or any other material impairment to KHJ's operation or to the sound quality or coverage area of KHJ's signal.

5.2 Interference.

(a) Interference. LBI and MRBI shall use commercially reasonable efforts to avoid Interference with their respective operations from the Property and to resolve any Interference that arises in connection with such operation. Neither party shall make changes or installations at the Property that will impair or Interfere with the other party's signals or broadcast operations from the Property. In the event Interference to such signals or operations does occur, the interfering party shall notify the other party in writing and take all commercially reasonable steps to correct such Interference in all material respects within 7 days. MRBI shall ensure that any and all tenants other than LBI who install radio communications systems or other equipment on the Property after the date hereof shall not cause Interference to the operations of LBI and, in the event of such Interference, MRBI shall eliminate such Interference without any further cost or expense to LBI.

(b) Interference Definition. As used herein, "Interference" with a transmitting activity means (i) a condition existing that constitutes "interference" within the meaning of the provisions of the then-current recommended practices of the Electronics Industry Association or under the rules, regulations, technical bulletins and orders of the FCC then in effect (for purposes of clarification, pre-existing interference or signal issues shall not constitute Interference under this Agreement) or (ii) a material impairment of the quality of the sound signals of a broadcasting activity from the Site in a material portion of the broadcast service area

of such activity, as compared to that which existed prior to the commencement of (or alteration to) the operations of the most recent use on the Property, provided that, Interference will not be deemed to exist with respect to the multiplexed operations of KBLA, KYPA, and KHJ so long as such stations remain able to transmit with acceptable signal quality for reception of analog AM receivers available for consumer use as of the date of this Agreement, without noticeable degradation and consistent with FCC requirements with respect to suppression of spurious emissions.

5.3 Quiet Enjoyment. Each of LBI and MRBI shall conduct its operations at the Property in such a manner so as not to unreasonably interfere with the other's operations from the Property, provided that nothing stated herein is intended to preclude LBI's quiet enjoyment of the Premises afforded herein.

5.4 Cooperation. In the event it is necessary for LBI or MRBI to reduce, limit or temporarily cease use of its equipment located at the Property so that the other party may install, maintain, repair, remove or otherwise work upon its broadcast equipment at the Property, the non-requesting party shall cooperate in a commercially reasonable manner. If necessary, the non-requesting party shall temporarily reduce, limit or cease use of its equipment located at the Property, provided that the requesting party takes all reasonable steps to minimize the amount of time the non-requesting party shall so operate and that the requesting party takes all reasonable steps to schedule such installation, maintenance, repairs, removal or work at a time convenient to the non-requesting party. In the event LBI's use of the Premises is reduced so as to have a material adverse effect on KHJ, then LBI may terminate this Agreement on thirty (30) days written notice to MRBI and may remove its equipment in accordance with Section 20, with no further liability other than the payment of amounts due through the date LBI vacates the Property and other surviving provisions of this Agreement.

6. Access.

6.1 Prior to Commencement Date. Prior to the Commencement Date, LBI shall have access to the Property as needed in connection with securing permits and authorizations necessary for its operations from the Property. LBI shall contact MRBI prior to accessing the Premises for such purpose and shall give MRBI the opportunity to have its employees or agents accompany LBI on all such visits to the Property. Thereafter, LBI shall have access to the Property for the purpose of installing, maintaining, operating and repairing the LBI Facilities.

6.2 Authorized Personnel. During the Term, LBI shall have access to the ground portions of the Premises, including the LBI Building (if any) and the Building (if used by LBI) twenty-four hours a day, seven days a week. In the event that LBI wishes to access the Towers, LBI shall provide notice to MRBI, and MRBI shall arrange to have a representative available at a mutually agreeable time.

6.3 LBI's Contractors. All contractors and subcontractors (collectively referred to herein as "Contractor") of LBI who perform any service for LBI on the Premises shall hold licenses or governmental authorizations appropriate to and necessary for the work being performed. Any such Contractor shall carry insurance issued by companies licensed in the state

of California. In addition, if requested by MRBI, Contractor shall provide MRBI with certificates or other proof of insurance which shall name MRBI as an "additional insured" on all such policies and such other documentation as MRBI may reasonably request showing Contractor's compliance with this Section 6.3.

7. Utilities. LBI shall at it sole cost and expense initiate, contract for, obtain and pay for any electrical, telephone or other utility services used by LBI at the Premises. Each of LBI and MRBI shall cooperate with the other's reasonable requests regarding the manner and timing of the installation of LBI's utilities. Without limiting the foregoing, MRBI shall permit LBI to install a sub-panel from the existing service with a private meter for billing purposes and shall also permit LBI to connect to any existing emergency generator system. If MRBI does not have a satisfactory emergency generator at the Premises available for LBI's use, then MRBI shall provide space for and permit LBI to install a generator for LBI's use at the Premises.

8. Taxes. MRBI shall pay all real property taxes assessed against the Premises and the Property, and LBI shall reimburse MRBI upon invoice for a pro rata share (being 1/3) of such real property taxes. LBI shall pay when due any taxes levied against the LBI Facilities and any other personal property of LBI located on the Premises. Where possible, LBI shall cause the LBI Facilities or other personal property to be assessed and billed separately from the Property.

9. Maintenance.

(a) MRBI shall maintain the Property, Towers and Building at its expense in good operating condition (ordinary wear and tear excepted). MRBI shall maintain all required Site records and shall file any required notification concerning any failure of, repairs to, and correction of the Site in compliance with the rules and regulations of the Federal Aviation Administration, the FCC and any other applicable governmental authorities.

(b) LBI shall maintain the LBI Facilities at its expense in good operating condition (ordinary wear and tear excepted).

(c) Each of LBI and MRBI shall pay its pro rata share of other maintenance costs related to the proposed multiplex operation. LBI shall reimburse MRBI upon invoice for a pro rata share (being one-third) of the reasonable out-of-pocket expenses incurred by MRBI in the ordinary course of business for maintenance of the Towers (including for lighting, painting and tensioning), landscaping of the Property, security of the Towers and compliance with Los Angeles County mandated graffiti control. MRBI shall be responsible for all expenses related to the Property, Towers or Building that are outside of the ordinary course of business and for all expenses that relate solely to KBLA or KYPA.

10. Insurance. Each of LBI and MRBI shall all times during the Term maintain, at a minimum, the policies of insurance set forth below issued by companies licensed in the state of California, with respect to its operations from the Property. Prior to commencement of work at the Premises, LBI shall provide MRBI with certificates or other proof of insurance which shall name MRBI as an "additional insured" on all such policies.

10.1 Commercial General Liability Insurance. Commercial General Liability Insurance for bodily injury and property damage, written on an "occurrence" basis, with limits no less than and no less than

10.2 Workers' Compensation Insurance. Workers' Compensation Insurance affording coverage under the workers' compensation laws of California, having minimum limits

10.3 Umbrella Liability Insurance. Umbrella Liability Insurance providing excess coverage over all limits and coverages noted in Sections 10.1 and 10.2 above, written on an "occurrence" basis.

11. LBI Construction.

11.1 Installation of LBI Facilities. Prior to and in connection with the installation and operation of the LBI Facilities (the "Work"), LBI shall comply with the following:

(a) the Work shall comply in all material respects with standards of good engineering practice, the installation standards provided in this Agreement and any standards imposed by the FCC and any other applicable governmental authority;

(b) the Work shall not commence until satisfactory documentation detailing the plans and specifications of the Work have been provided to and approved by MRBI, whose approval shall not be unreasonably withheld, delayed or conditioned, and until after the FCC has granted LBI a construction permit for the installation of the LBI Facilities; and

(c) LBI shall pay for all engineering studies associated with the Work.

11.2 Proofs of Performance.

(a) Prior to commencement of any installation of LBI Facilities, and immediately after completion of the installation of LBI Facilities, LBI shall engage a qualified engineer (subject to MRBI's reasonable approval) to conduct any measurements required by the FCC and make any FCC required filings. LBI shall be responsible for all legal and consulting engineering fees and expenses and FCC filing fees in connection with such measurements and FCC filings. All stations will be licensed utilizing "Method of Moments" or "MoM" computer modeling in lieu of field strength measurements to the extent feasible and consistent with FCC requirements.

(b) MRBI acknowledges that MRBI may be required to operate at reduced power or cease broadcasts for a period of time during the installation of LBI Facilities. LBI shall take all steps reasonably necessary to minimize unreasonable disruptions to MRBI's normal operations. LBI shall schedule all such installation work that may cause such disruptions to KBLA or KYPA at such times as shall be agreed to in advance by MRBI's general manager for KBLA, such consent of MRBI not to be unreasonably withheld, delayed or conditioned.

11.3 Obligation to Restore. Notwithstanding anything in this Agreement to the contrary, if in the performance of any Work LBI disturbs the property, equipment, broadcast pattern or services of MRBI as would require MRBI to perform a partial or full proof of performance of its broadcast pattern, LBI will restore such property, equipment or broadcast pattern to its former condition in all material respects including, without limitation, conducting and performing such partial or full proof of performance as may be required by the FCC, at LBI's expense. If LBI does not promptly restore such property, equipment or broadcasting pattern that was disturbed by LBI in performing the Work, MRBI may restore such property to its former condition in all material respects at LBI's sole expense.

11.4 Improvements, Modifications, Alterations. During the Term, LBI, at LBI's expense, shall have the right to substitute, modify, change or replace any or all of the LBI Facilities, provided that, prior to commencement of installation of any material part of the LBI Facilities, LBI submits to MRBI, for review and written approval, copies of LBI's construction and installation plans for the modifications. MRBI's approval of such plans shall be timely and shall not be unreasonably withheld, conditioned or delayed. Title to LBI Facilities shall be held by LBI, and all equipment or other property attached to or otherwise brought onto the Premises by LBI, including the equipment cabinets, LBI Building and the KHJ Multiplex Equipment, shall at all times be considered personal property of LBI and not fixtures. LBI shall not demolish, remove or modify any permanent installations, additions, fixtures, structures or other improvements now or hereafter affixed to the Site or any structure thereon, without the prior written consent of MRBI, which consent shall not be unreasonably withheld, delayed or conditioned.

11.5 Other Approvals. Prior to the initiation by LBI of the delivery, installation, replacement or removal of the LBI Building and LBI Facilities, LBI shall obtain the prior written approval of MRBI to LBI's proposed scheduling of work and LBI's choice of vendors and contractors (which approval shall not be unreasonably withheld, delayed or conditioned). LBI shall construct the LBI Building and deliver and install LBI Facilities in conformity in all material respects with the specifications, schedules and choice of vendors and contractors approved by MRBI.

11.6 Liens. LBI has no authority or power to cause or permit any lien or encumbrance of any kind whatsoever, whether created by the actions of LBI, or the operation of law or otherwise, to attach to or be placed upon MRBI's title or interest in the Property, Building, Towers or Premises, any and all liens and encumbrances created by LBI shall attach to LBI's interest only. LBI agrees not to permit any lien of mechanics, suppliers, materialmen or others to be placed against the Building, Towers or Property, and LBI agrees that within thirty (30) days after written notice by any entity of the filing of any such lien, LBI shall cause it to be released and removed of record.

12. Indemnification. MRBI shall indemnify, defend and hold LBI harmless from and against any and all loss, liability, cost and expense (including reasonable attorneys' fees) arising from MRBI's use of the Property, Towers and Building or from MRBI's default under this Agreement. LBI shall indemnify, defend and hold MRBI harmless from and against any and all loss, liability, cost and expense (including reasonable attorneys' fees) arising from LBI's use of the Premises, except for any claims or damages that may arise from or be caused by the

negligence of MRBI or its agents, or from LBI's default under this Agreement. The obligations under this Section shall survive any termination of this Agreement.

13. Damage and Destruction. In the event that any of the Towers is fully or partially destroyed or damaged by fire, lightning, windstorm, explosion, collapse, vandalism, civil disturbance, aircraft or other vehicle damage or other casualty so as to be unfit for LBI's occupancy and intended use hereunder and the Towers cannot be restored or rebuilt by MRBI within 180 days, then LBI may elect to terminate this Agreement by written notice to MRBI. If any of the Towers is in need of such repair or is so damaged by fire, lightning, windstorm, explosion, vandalism, aircraft or other vehicle damage, collapse or other casualty that reconstruction or repair cannot reasonably be undertaken without dismantling the LBI Facilities, then MRBI may request that LBI remove such LBI Facilities or interrupt LBI's operations, thereafter replacing the equipment as soon as reasonably possible (and MRBI shall be responsible for repairing or replacing any related damage to LBI Facilities to the same or better condition as existed prior to the damage). LBI shall be entitled to a pro rata abatement of its Rent for such time as it is unable to conduct its normal operations as a result of such total or partial destruction or damage or need of repair. Notwithstanding anything herein to the contrary, in the event LBI's use of the Premises is reduced so as to have a material adverse effect on KHJ, then LBI may terminate this Agreement on thirty (30) days written notice to MRBI and may remove its equipment in accordance with Section 20, with no further liability other than the payment of amounts due through the date LBI vacates the Property and other surviving provisions of this Agreement.

14. Hazardous Materials.

14.1 Each of MRBI and LBI shall: (a) comply with all environmental laws applicable to its operations from the Property, (b) not bring any hazardous materials on the Property except in compliance with applicable law, (c) not take any action that would subject the Property to permit requirements for storage, treatment or disposal of hazardous materials, (d) not dispose of hazardous materials on the Property, (e) not discharge hazardous materials into drains or sewers in violation of any environmental laws, (f) not suffer, cause or allow the release of any hazardous materials on, to or from the Property in violation of any environmental laws or in quantities requiring a permit, and (g) at its own cost arrange for the lawful transportation and off-site disposal of all hazardous materials that it generates.

14.2 Each of LBI and MRBI shall promptly upon receipt thereof provide the other party with copies of all summons, citations, directives, information inquiries or requests, notices of potential responsibility, notices of violation or deficiency, orders or decrees, claims, complaints, investigations, judgments, letters, notices of environmental liens or response actions in progress and other communications, written or oral, actual or threatened, from the United States Environmental Protection Agency, Occupational Safety and Health Administration or other federal, state or local agency or authority or any other entity or individual, concerning any release of a hazardous material on, to or from the Property or any alleged violation of or responsibility under environmental laws.

14.3 MRBI agrees that LBI is not responsible for any hazardous materials located on the Property prior to the Commencement Date or for any hazardous materials

subsequently brought to the Property by MRBI or any third party. MRBI will make all reasonable efforts to make sure that no hazardous materials are present on the Property prior to commencement of construction by LBI.

15. MRBI Title. MRBI's title to the Property (if owned by MRBI), Building, Towers and Premises is and always shall be paramount to the interest of LBI and nothing herein contained shall empower LBI to do any act or to omit any act which would encumber MRBI's title.

16. Force Majeure. MRBI shall not be liable to LBI for failure to furnish space under this Agreement if prevented by war, fires, strikes or other labor troubles, acts of God, or other causes beyond its reasonable control. LBI shall be entitled to a pro rata abatement of its Rent for such time as it is unable to conduct its normal operations as a result of a force majeure event. Notwithstanding anything herein to the contrary, in the event LBI's use of the Premises is reduced so as to have a material adverse effect on KHJ, then LBI may terminate this Agreement on thirty (30) days written notice to MRBI and may remove its equipment in accordance with Section 20, with no further liability other than the payment of amounts due through the date LBI vacates the Property and other surviving provisions of this Agreement.

17. Eminent Domain. If the land on which MRBI's Towers, foundation, guy wire anchors or Building is located, or the Premises are acquired or condemned under the power of eminent domain whether by public authority, public utility, or otherwise, then this Agreement shall terminate as of the date title shall have vested in such public authority. MRBI shall be entitled to the entire amount of any condemnation award, except LBI shall be entitled to make a claim for and retain a condemnation award based on and attributed to the value of the LBI Facilities and the expense of removing and relocating the LBI Facilities.

18. Assignment.

(a) By MRBI. MRBI shall have the right to assign this Agreement in connection with a transfer of the Property, provided that such assignee agrees in writing to assume all obligations of MRBI under this Agreement arising on or after the date of assignment.

(b) By LBI. LBI shall not assign or sublease this Agreement without the prior written consent of MRBI, which shall not be unreasonably withheld, delayed or conditioned. Notwithstanding the foregoing, LBI may assign its rights and obligations under this Agreement, without the consent of MRBI, to an entity that is controlled by or under common control with LBI or to any party acquiring KHJ's FCC authorizations pursuant to FCC approval, provided that such acquiring party agrees in writing to assume this Agreement.

(c) No assignment shall relieve a party of any obligation or liability under this Agreement. This Agreement shall inure to the benefit of and be binding upon the parties and their successors and assigns.

19. Termination.

19.1 LBI Default. In the event LBI shall:

; or (ii) default in the performance of any other covenants under this Agreement and such default continues for thirty (30) days after LBI's receipt of written notice thereof from MRBI (provided, however if LBI is using commercially reasonable efforts to cure such default, then LBI shall have an additional thirty (30) days to cure), then MRBI may:

(a) terminate this Agreement by written notice to LBI and retake possession of the Premises;

(b) cure any such default and invoice LBI for the costs and expenses of the same, which invoice shall be payable within ten (10) business days of its receipt by LBI; and

(c) exercise any other remedy available at law or in equity.

If LBI remains in default beyond any applicable cure period, whether or not MRBI shall have terminated this Agreement, MRBI may, at MRBI's option, (i) demand immediate removal by LBI of the LBI Facilities from the Premises, and if LBI fails to do so within thirty (30) days of MRBI's demand, MRBI may remove and store the LBI Facilities at LBI's sole cost or (ii) notwithstanding anything in this Agreement to the contrary, take possession of the LBI Facilities, at which time the LBI Facilities shall become the property of MRBI and MRBI may dispose of the LBI Facilities in any manner, including, but not limited to, the use or sale by MRBI of such LBI Facilities. In such event, MRBI shall not be liable to LBI for damage to LBI Facilities in the course of such removal, and LBI shall reimburse MRBI for any damages to the Premises caused by such removal.

19.2 MRBI Default. In the event MRBI shall default in the performance of any covenants under this Agreement and such default continues for thirty (30) days after MRBI's receipt of written notice thereof from LBI (provided, however if MRBI is using commercially reasonable efforts to cure such default, then MRBI shall have an additional thirty (30) days to cure), then LBI may terminate this Agreement by written notice to MRBI.

19.3 Other LBI Termination Rights. LBI may terminate this Agreement by written notice to MRBI if, prior to installation of the LBI Facilities, (i) LBI determines in its sole discretion that the contemplated multiplex arrangement or operation of KHJ from the Property is not reasonably feasible or if any FCC or other governmental approval necessary for the construction or operation of the LBI Facilities or operation of KHJ from the Property cannot be obtained within a reasonable period of time after the date hereof, or (ii) LBI determines in its sole discretion not to proceed with the multiplex arrangement contemplated hereunder for any reason. In addition to the foregoing, this Agreement may be terminated by LBI upon thirty (30) days written notice to MRBI if: (i) LBI is unable to obtain or maintain any license, permit or other governmental approval necessary for the construction or operation of the LBI Facilities or operation of KHJ from the Property, (ii) the Premises is or becomes unacceptable for technological reasons including without limitation Interference or defects in design or engineering specifications of the LBI Facilities or (iii) the FCC licenses for KHJ are revoked, suspended, terminated, adversely modified or denied renewal by the FCC. Termination under

this Section 19.3 shall not limit any other rights of LBI pursuant to any other provisions hereof or available at law or equity.

20. Removal of LBI Facilities. Subject to the provisions of Section 19.1 above, upon expiration or termination of this Agreement, LBI shall have the right to dismantle, disconnect and remove, at LBI's sole expense, any and all equipment owned by LBI which may be installed in or connected to the Towers, Building, Property or Premises; provided, however, that LBI shall take no such action that will unreasonably disrupt or otherwise materially adversely affect the signal of KBLA or KYPA. If such disruption occurs, LBI shall be responsible for all commercially reasonable costs and expenses reasonably necessary to restore in all material respects the signal of KBLA or KYPA to its strength and coverage prior to commencement of removal of LBI Facilities. For avoidance of doubt, the KHJ Multiplex Equipment and LBI Building are the property of LBI and may be removed by LBI upon termination in accordance with this Section.

21. Attornment. In the event of the sale or transfer of MRBI's interest in the Property, or in the event of any proceedings brought for the foreclosure of any mortgage covering the Property, or in the event of any other transfer of the Property by MRBI, LBI shall attorn to MRBI's successor in interest and recognize such successor as MRBI under this Agreement.

22. Remedies Cumulative. The remedies provided herein shall be cumulative and shall not preclude the assertion by any party hereto of any other rights or the seeking of and other remedies against the other party hereto.

23. No Waiver. Should either party permit a continuing default of the other party's performance of the terms of this Agreement, its obligations hereunder shall continue and such permissive default shall not be construed as a waiver of any rights or obligations hereunder.

24. Relationship of Parties. Nothing herein contained shall be deemed or construed as creating the relationship of principal and agent or of partnership or of joint venture between the parties hereto, it being understood and agreed that neither the provisions contained herein, nor any acts of the parties, shall be deemed to create any relationship between the parties hereto other than the relationship of landlord and tenant.

25. Broker. LBI warrants that is has dealt with no broker, commission agent, finder or other person or entity with respect to this Agreement, and MRBI warrants that it has dealt with no broker, commission agent, finder or other person or entity with respect to this Agreement. Each party shall indemnify and hold harmless the other party from any and all claims, actions, damages, costs, expenses, and liability whatsoever, including reasonable attorney's fees, that may arise from any claims for commission or finder's fees in connection with this Agreement, the Property or Premises.

26. Applicable Law. This Agreement shall be construed and governed in accordance with the internal laws of the State of California without regard to the conflict of laws provisions thereof.

27. Entire Agreement. This Agreement contains the entire understanding of the parties with respect to the subject matter hereof. There are no restrictions, leases, promises, warranties, covenants or undertakings other than expressly set forth herein. This Agreement supersedes all prior leases and understandings between the parties with respect to the subject matter hereof. No modification of this Agreement shall be effective unless contained in writing signed by the authorized representative of both parties.

28. Headings. The section and paragraph headings contained in this Agreement are for reference purpose only and shall not affect in any way the meaning or interpretation of this Agreement.

29. Notices. Any notice pursuant to this Agreement shall be in writing and shall be deemed delivered on the date of personal delivery or confirmed facsimile transmission or confirmed delivery by a nationally recognized overnight courier service, and shall be addressed as follows (or to such other address as any party may request by written notice):

if to MRBI: Multicultural Radio Broadcasting, Inc.
27 William Street, 11th Floor
New York, NY 10005
Attention: Jim Glogowski
Facsimile: 212 - 431 - 5802

if to LBI: Liberman Broadcasting of California LLC
1845 Empire Avenue
Burbank, California 91504
Attention: Lenard Liberman
Facsimile: (818) 558-4244

30. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Any faxed or PDF signature page hereof shall be considered an original signature page and be effective for all purposes to evidence such party's execution hereof.

31. Severability. If any term or provision of this Agreement shall to any extent be invalid or unenforceable, then so long as no party is deprived of the benefits of this Agreement in any material respect, the remainder of this Agreement shall not be affected thereby, and each other term and provision of this Agreement shall be valid and be enforced to the fullest extent permitted by law.

32. Representations. LBI and MRBI each represent and warrant to the other that it has the power and authority to enter into this Agreement, it is in good standing in the jurisdiction of its organization and is qualified to do business in the state of California, it has duly authorized this Agreement, and this Agreement is binding upon it, and the execution, delivery, and performance by it of this Agreement does not conflict with any other agreement to which it is a party.

[SIGNATURE PAGE FOLLOWS]

SIGNATURE PAGE TO MULTIPLEX AGREEMENT

IN WITNESS WHEREOF, this Agreement has been duly executed and delivered by MRBI and LBI as of the date first set forth above.

MRBI: MULTICULTURAL RADIO BROADCASTING, INC.

By: _____
Name: James J. Gibson Jr.
Title: SVP/CTO

LBI: LIBERMAN BROADCASTING OF CALIFORNIA LLC

By: _____
Name: Lenard Liberman
Title: President/CEO

EXHIBIT A
DESCRIPTION OF PROPERTY

KBLA(AM), (1580 kHz), Santa Monica, CA -- 50 kW DA, Day (4T)/Night (6T)
Tower registrations: 1014851, 1014852, 1014853, 1014854, 1014855, 1014856

KYPA(AM), (1230 kHz), Los Angeles, CA -- 1 kW DA, Day (2T)/Night (2T)
Tower registrations: 1014852, 1014856

Coordinates of the Property are:

35 degrees, 5 minutes, 8 seconds N. Latitude
118 degrees, 15 minutes, 24 seconds W. Longitude

[insert legal description if available]

EXHIBIT B
LBI FACILITIES

LBI shall deliver to MRBI a list of the LBI Facilities prior to the Commencement Date, and such list, as may be revised, amended or supplemented, shall constitute *Exhibit B*.