

TECHNICAL EXHIBIT  
AMENDMENT TO PENDING  
APPLICATION FOR CONSTRUCTION PERMIT  
DIGITAL TV STATION WWJX-DT  
JACKSON, MISSISSIPPI

MAY 31, 2011

CH 23    20 KW (MAX-DA)    150 M

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Technical Narrative

The technical exhibit of which this narrative is part was prepared on behalf of digital television station WWJX-DT. WWJX-DT presently is licensed on commercial digital Channel 51 assigned to Jackson, Mississippi.<sup>1</sup> By this instant amended application, WWJX-DT proposes to modify this facility by changing to Channel 23 as recently ordered by the Commission.<sup>2</sup> No other technical modifications are being requested. The same effective radiated power, transmitter site, antenna radiation center and directional antenna characteristics as licensed on Channel 51 will be employed on Channel 23.<sup>3</sup>

The proposal would not be subject to environmental processing in accordance with Section 1.1306. The proposed Jackson facility will be located on an existing registered tower; therefore, a new Federal Aviation Administration (FAA) *Determination of No Aeronautical Hazard* is not required.

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<sup>1</sup> See FCC license File Number: BLC DT-20090824AAM.

<sup>2</sup> See Report and Order in MB Docket Number 11-8, *In the Matter of Amendment of Section 73.622(i), Post-Transition Table of DTV Allotments, Television Broadcast Stations, Jackson, Mississippi.*

<sup>3</sup> This application is actually an amendment to the pending application for construction for WWJX-DT, BPC DT-20090929ADE.

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Proposed Transmitter Location

The proposed transmitting facility will consist of a directional Dielectric panel array antenna mounted on a tower located at Utica, Mississippi. The location is uniquely described by the following geographic coordinates [NAD-27], which were obtained from the Commission's engineering database:

32° 03' 13" North Latitude  
90° 20' 23" West Longitude

A sketch showing the proposed antenna and supporting structure is shown on Figure 1.

DTV Frequency Allocation

Implementation of the proposed Jackson facility will have a *de minimus* impact on the Commission's DTV assignments and stations. Using the procedures outlined in OET Bulletin No. 69, an interference analysis was completed.<sup>4</sup> As shown in Figure 3, the interference to other stations is considered *de minimis*.

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<sup>4</sup> OET Bulletin No. 69, *Longley-Rice Methodology for Evaluating TV Coverage and Interference*, July 2, 1997.

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Transmitting Antenna

A Dielectric TUA-C2-3/6H-1-SP panel antenna with a cardioid type directional pattern is proposed for Jackson. The horizontal and vertical plane relative field patterns and tabulations are provided within Appendix A.

Coverage Contours

The predicted coverage contour for the proposed operation was calculated in accordance with the provisions of Section 73.313. The average terrain elevations from 3 to 16 kilometers along eight radials evenly spaced at 45 degree intervals, and thirty-two additional radials for contour definition, were obtained from the National Geophysical Data Center's (NGDC) 30-second terrain database. The terrain elevations were then used in combination with the effective radiated power for determining the distances to coverage contours.

Figure 2 is a map showing the predicted coverage contours. As the map illustrates, the FCC predicted City Grade (48 dBu) coverage contour entirely encompasses the Jackson city limits.

Radiofrequency Electromagnetic Field Exposure

The proposed facility has been evaluated in terms of potential radiofrequency electromagnetic fields at ground level in accordance with OST Bulletin No. 65, *Evaluating Compliance with FCC Specified Guidelines for Human Exposure*

*to Radiofrequency Electromagnetic Fields.*<sup>5</sup> The proposed calculated power density at the base of the tower was calculated using the appropriate equation contained on page 30 in Supplement A, *Additional Information for Radio and Television Broadcast Stations*, of the Bulletin.

For the calculation, a downward relative field value of 0.5 was assumed for the transmitting antenna. Therefore, using a maximum average effective radiated power of 20 kilowatts and a relative field value of 0.5, the predicted power density at ground level located 128 meters (420 feet) below the antenna radiation center is 0.01 mW/cm<sup>2</sup>. This is less than five-percent of the Commission's guideline in an uncontrolled environment for a television station.<sup>6</sup>

Pursuant to Section 1.1307(b) of the Commission's Rules, the power density contributions of co-located and nearby broadcast stations are not required to be calculated as the proposed power density contribution is less than five percent of the guideline value.

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<sup>5</sup> OET Bulletin 65, Edition 97-01, August, 1997.

<sup>6</sup> The FCC maximum guideline for an UHF broadcast television station on Channel 23 in an uncontrolled environment is 0.35 mW/cm<sup>2</sup>.

Access to the transmitting site is restricted and appropriately marked with warning signs. When it becomes necessary for workers to ascend the tower, appropriate measures, such as reduction or shutdown of power if necessary, shall be taken to ensure that the human exposure to radiofrequency electromagnetic fields will not exceed the FCC guidelines.

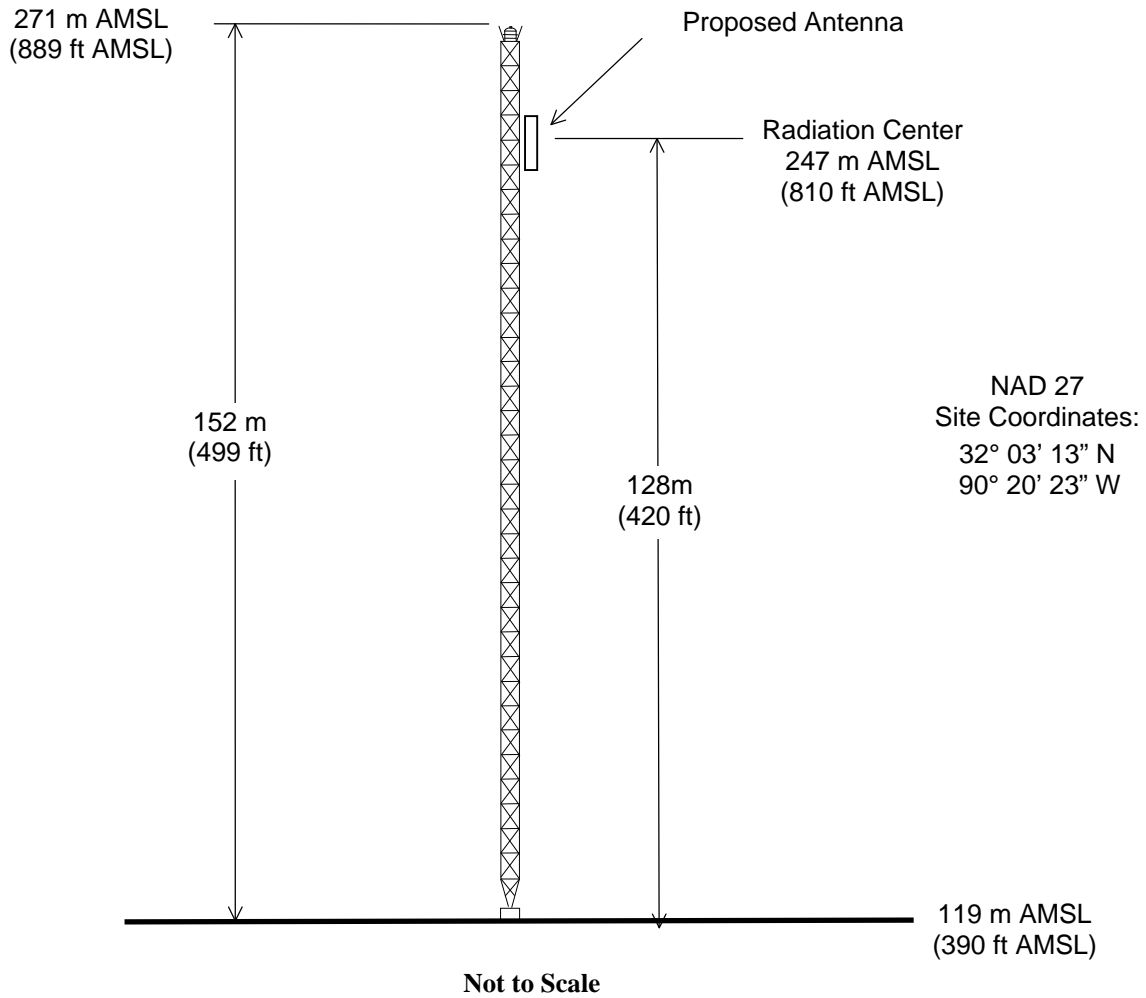
Charles A. Cooper

May 31, 2011

du Treil, Lundin & Rackley, Inc.  
201 Fletcher Avenue  
Sarasota, Florida 34237  
941.329.6000



ASRN: 1209376



## ANTENNA AND SUPPORTING STRUCTURE

DTV STATION WWJX-DT

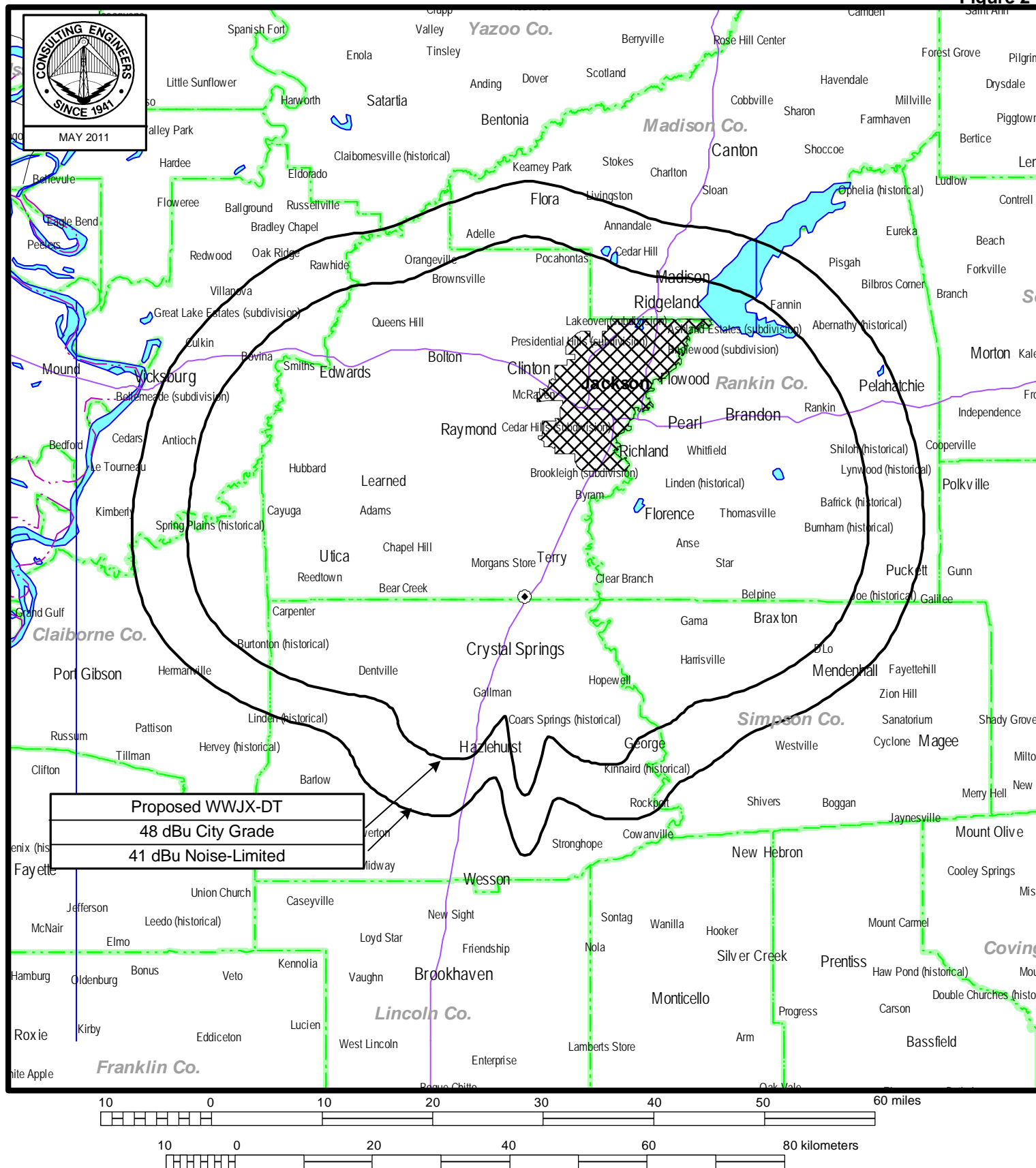
JACKSON, MISSISSIPPI

CH 23 20 KW (MAX-DA) 150 M

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



Figure 2



## PREDICTED COVERAGE CONTOURS

DTV STATION WWJX-DT

JACKSON, MISSISSIPPI

CH 21 20 KW (MAX-DA) 150 M

du Treil, Lundin & Rackley, Inc Sarasota, Florida

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OET-69 Allocation Study

Percent allowed new interference: 0.500  
 Percent allowed new interference to non Class A LPTV: 2.000  
 TW Census data selected 2000  
 Data Base Selected  
 /export/home/cdb/pt\_tvdb.sff  
 TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 05-31-2011 Time: 17:58:05

Record Selected for Analysis

WWJX USERRECORD-01 JACKSON MS US  
 Channel 23 ERP 20. kW HAAT 148. m RCAMSL 00247 m  
 Latitude 032-03-13 Longitude 0090-20-23  
 Status APP Zone 2 Border Site number: 01  
 Dir Antenna Make CDB Model 00000000094252 Beam tilt N Ref Azimuth 80.  
 Last update Cutoff date Docket  
 Comments  
 Applicant

Cell Size for Service Analysis 2.0 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Facility (site # 01) meets maximum height/power limits

Site number	1		
Azimuth	ERP	HAAT	41.0 dBu F(50,90)
(Deg)	(kW)	(m)	(km)
0.0	15.665	146.2	57.7
45.0	20.000	165.7	60.3
90.0	5.080	158.2	53.3
135.0	0.134	154.1	34.6
180.0	0.298	118.7	36.3
225.0	0.122	140.9	33.2
270.0	5.000	158.4	53.2
315.0	19.032	143.5	58.4

Evaluation toward Class A Stations from site # 01

No Spacing violations or contour overlap  
 to Class A stations from site # 01

Class A Evaluation Complete

### Figure 3

SPACING VIOLATION FOUND BETWEEN STATION

WWJX        23 JACKSON                      MS USERRECORD01                      Site # 01

and station

SHORT TO: WWJX 23 JACKSON MS DTVP LN DTVP0835  
32 -03-13 90 -20-23  
Req. separation 223.7 Actual separation 0.0 Short 223.7 km

SHORT TO: WWJX-DR 23 JACKSON MS BPRM 20100806ACK  
032-03-13 0090-20-23  
Req. separation 223.7 Actual separation 0.0 Short 223.7 km

LANDMOBILE SPACING VIOLATIONS FOUND

NONE from Site # 01

Checks to Site Number 01

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quiet zone

Proposed facility OK toward Table Mountain

Proposed facility is beyond the Canadian coordination distance

Proposed facility is beyond the Mexican coordination distance

Proposed station is OK toward AM broadcast stations

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## Start of Interference Analysis

Proposed Station			
Channel	Call	City/State	ARN
23	WWJX	JACKSON MS	USERRECORD01

### Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
22	WHLT	HATTIESBURG MS	126.7	LIC	BLCDT	20091216AAL
23	WDPM-DT	MOBILE AL	304.9	CP MOD	BMPCDT	20081110AAA
23	WVUA-CA	TUSCALOOSA AL	284.1	CP	BDSDTA	20090824ABW
23	KLMB-LP	EL DORADO AR	251.6	CP	BDFCDTA	20060331BPL
23	KLMB-LP	EL DORADO AR	251.6	LIC	BLTTL	19990329JC
23	KJEP-CA	NASHVILLE AR	388.3	CP	BDFCDTA	20070103AAQ
23	KJEP-CA	NASHVILLE AR	388.3	LIC	BLTTL	19960111AE
23	WSTY-LP	HAMMOND LA	174.6	APP	BSTA	20101129AAY
23	KLPB-TV	LAFAYETTE LA	266.8	LIC	BLEDT	20031117ACC
23	KLPB-TV	LAFAYETTE LA	266.8	CP	BPEDT	20110309ABI
23	WTWV	MEMPHIS TN	354.1	LIC	BLEDT	20090619AAW
24	WMDN	MERIDIAN MS	158.0	LIC	BLCDT	20090304ADN

[illegible]

## Analysis of Interference to Affected Station 1

## Analysis of current record

Channel	Call	City/State	Application	Ref. No.
22	WHLT	HATTIESBURG MS	BLCDDT	-20091216AAL

## Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
21	WHNO	NEW ORLEANS LA	181.5	LIC	BLCDDT	-20050413AAK
21	WAPT	JACKSON MS	139.2	CP	BPCDDT	-20091118AFN
21	WAPT	JACKSON MS	139.2	LIC	BLCDDT	-20081126ALZ
22	WFIQ	FLORENCE AL	377.7	CP	BPEDT	-20080619AGU
22	WFIQ	FLORENCE AL	377.7	LIC	BLEDDT	-20060718ACG
22	WBMM	TUSKEGEE AL	319.8	LIC	BLCDDT	-20090428ABH
23	WDPM-DT	MOBILE AL	178.6	CP MOD	BMPCDDT	-20081110AAA
23	WWJX	JACKSON MS	126.7	PLN	DTVPLN	-DTVP0835
23	WWJX	JACKSON MS	126.7	APP	USERRECORD-01	

Proposal causes no interference

#####

## Analysis of Interference to Affected Station 2

## Analysis of current record

Channel	Call	City/State	Application	Ref. No.
23	WDPM-DT	MOBILE AL	BMPCDDT	-20081110AAA

## Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
22	WBMM	TUSKEGEE AL	226.1	LIC	BLCDDT	-20090428ABH
22	WHLT	HATTIESBURG MS	178.6	LIC	BLCDDT	-20091216AAL
23	WJSP-TV	COLUMBUS GA	370.8	LIC	BLEDDT	-20080521AAH
23	WWJX	JACKSON MS	304.9	PLN	DTVPLN	-DTVP0835
24	WMDN	MERIDIAN MS	216.7	LIC	BLCDDT	-20090304ADW
23	WWJX	JACKSON MS	304.9	APP	USERRECORD-01	

Proposal causes no interference

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## Analysis of Interference to Affected Station 3

## Analysis of current record

Channel	Call	City/State	Application	Ref. No.
23	WVUA-CA	TUSCALOOSA AL	BDISDTA	-20090824ABW

## Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
23	W23AK	JASPER AL	92.4	LIC	BLTTL	-19900102IH
23	W23AK	JASPER AL	92.5	APP	BSTA	-20100601AJE
23	WDPM-DT	MOBILE AL	271.6	CP MOD	BMPCDDT	-20081110AAA
23	WJSP-TV	COLUMBUS GA	266.6	LIC	BLEDDT	-20080521AAH
23	WWJX	JACKSON MS	284.1	PLN	DTVPLN	-DTVP0835
23	WTWV	MEMPHIS TN	317.7	LIC	BLEDDT	-20090619AAW
23	WNAB	NASHVILLE TN	363.4	LIC	BLCDDT	-20040712AAO
24	WMDN	MERIDIAN MS	134.0	LIC	BLCDDT	-20090304ADW
23	WWJX	JACKSON MS	284.1	APP	USERRECORD-01	

Proposal causes no interference

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## Analysis of Interference to Affected Station 4

## Analysis of current record

Channel	Call	City/State	Application Ref. No.
23	KLMB-LP	EL DORADO AR	BDFCDTA -20060331BPL

## Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
23	K23GT	HOT SPRINGS AR	156.2	LIC	BLTT -20050207AEE
23	KJEP-CA	NASHVILLE AR	137.6	LIC	BLTTL -19960111AE
23	KLPB-TV	LAFAYETTE LA	322.5	LIC	BLEDT -20031117ACC
23	KLPB-TV	LAFAYETTE LA	322.5	CP	BPEDT -20110309ABI
23	WWJX	JACKSON MS	251.6	PLN	DTVPLN -DTVP0835
23	WTWV	MEMPHIS TN	342.9	LIC	BLEDT -20090619AAW
24	KLTS-DR	SHREVEPORT LA	132.3	LIC	BPRM -20080620AOC
24	KLTS-TV	SHREVEPORT LA	132.3	LIC	BLEDT -20100216ABQ
23	WWJX	JACKSON MS	251.6	APP	USERRECORD-01

Proposal causes no interference

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## Analysis of Interference to Affected Station 5

## Analysis of current record

Channel	Call	City/State	Application Ref. No.
23	KLMB-LP	EL DORADO AR	BLTTL -19990329JC

## Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
15	KTAL-TV	TEXARKANA TX	130.4	LIC	BLCDDT -20070404ABW
21	KPXJ	MINDEN LA	132.6	LIC	BLCDDT -20050930AAL
23	KLPB-TV	LAFAYETTE LA	322.5	LIC	BLEDT -20031117ACC
23	KLPB-TV	LAFAYETTE LA	322.5	CP	BPEDT -20110309ABI
23	WWJX	JACKSON MS	251.6	PLN	DTVPLN -DTVP0835
23	WTWV	MEMPHIS TN	342.9	LIC	BLEDT -20090619AAW
24	KLTS-DR	SHREVEPORT LA	132.3	LIC	BPRM -20080620AOC
24	KLTS-TV	SHREVEPORT LA	132.3	LIC	BLEDT -20100216ABQ
26	KVTH-DT	HOT SPRINGS AR	134.6	LIC	BLCDDT -20090209ANJ
27	KMCT-TV	EL DORADO AR	42.1	LIC	BLCDDT -20070105ABH
38	KMCT-TV	WEST MONROE LA	91.0	LIC	BLCDDT -20071113ADI
23	WWJX	JACKSON MS	251.6	APP	USERRECORD-01

Proposal causes no interference

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## Analysis of Interference to Affected Station 6

## Analysis of current record

Channel	Call	City/State	Application Ref. No.
23	KJEP-CA	NASHVILLE AR	BDFCDTA -20070103AAQ

## Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
23	KLMB-LP	EL DORADO AR	137.6	LIC	BLTTL -19990329JC
23	K23KT-D	FORT SMITH AR	171.8	CP	BNPDTL -20100104AET
23	K23GT	HOT SPRINGS AR	95.3	LIC	BLTT -20050207AEE
23	KOZK	SPRINGFIELD MO	365.0	LIC	BLEDT -20030911AAS
23	WWJX	JACKSON MS	388.3	PLN	DTVPLN -DTVP0835
23	K23HY-D	IDABEL OK	90.9	LIC	BLDTT -20091228AEM
23	WTWV	MEMPHIS TN	392.0	LIC	BLEDT -20090619AAW
23	KUVN-DT	GARLAND TX	329.7	LIC	BLCDDT -20090618AAG
23	KUVN-DT	GARLAND TX	329.7	CP MOD	BMPCDDT -20080618ADY

23 WWJX JACKSON MS 388.3 APP USERRECORD-01

Proposed station is beyond the site to  
nearest cell evaluation distance

#####

#### Analysis of Interference to Affected Station 7

##### Analysis of current record

Channel	Call	City/State	Application	Ref. No.
23	KJEP-CA	NASHVILLE AR	BLTTL	-19960111AE

##### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
15	KTAL-TV	TEXARKANA TX	119.3	LIC	BLCDDT	-20070404ABW
21	KHBS	FORT SMITH AR	145.5	LIC	BLCDDT	-20031121AMR
21	KPXJ	MINDEN LA	142.7	LIC	BLCDDT	-20050930AAL
23	K23GT	HOT SPRINGS AR	95.3	LIC	BLTT	-20050207AEE
23	KOZK	SPRINGFIELD MO	365.0	LIC	BLEDT	-20030911AAS
23	WWJX	JACKSON MS	388.3	PLN	DTVPLN	-DTVP0835
23	K23HY-D	IDABEL OK	90.9	LIC	BLDDT	-20091228AEM
23	WTWV	MEMPHIS TN	392.0	LIC	BLEDT	-20090619AAW
23	KUVN-DT	GARLAND TX	329.7	LIC	BLCDDT	-20090618AAG
23	KUVN-DT	GARLAND TX	329.7	CP MOD	BMPCDDT	-20080618ADY
26	KVTH-DT	HOT SPRINGS AR	84.8	LIC	BLCDDT	-20090209ANJ
23	WWJX	JACKSON MS	388.3	APP	USERRECORD-01	

Proposed station is beyond the site to  
nearest cell evaluation distance

#####

#### Analysis of Interference to Affected Station 8

##### Analysis of current record

Channel	Call	City/State	Application	Ref. No.
23	WSTY-LP	HAMMOND LA	BSTA	-20101129AAY

##### Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
15	WNOL-TV	NEW ORLEANS LA	76.2	CP MOD	BMPCDDT	-20080620ADC
15	WNOL-TV	NEW ORLEANS LA	78.4	LIC	BLCDDT	-20090818AAG
21	WHNO	NEW ORLEANS LA	77.2	LIC	BLCDDT	-20050413AAK
23	WDPM-DT	MOBILE AL	275.8	CP MOD	BMPCDDT	-20081110AAA
23	KLPB-TV	LAFAYETTE LA	173.2	LIC	BLEDT	-20031117ACC
23	KLPB-TV	LAFAYETTE LA	173.3	CP	BPEDT	-20110309ABI
23	WWJX	JACKSON MS	174.6	PLN	DTVPLN	-DTVP0835
24	WUPL	SLIDELL LA	77.2	LIC	BLCDDT	-20040812AAA
25	WLPB-TV	BATON ROUGE LA	70.1	LIC	BLEDT	-20101201ALR
26	WGNO	NEW ORLEANS LA	78.4	LIC	BLCDDT	-20090818AAF
26	WGNO	NEW ORLEANS LA	76.2	CP MOD	BMPCDDT	-20080620ACU
31	WLAE-TV	NEW ORLEANS LA	76.0	LIC	BLEDT	-20090205AAL
23	WWJX	JACKSON MS	174.6	APP	USERRECORD-01	

Proposal causes no interference

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#### Analysis of Interference to Affected Station 9

##### Analysis of current record

Channel	Call	City/State	Application	Ref. No.
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23 KLPB-TV LAFAYETTE LA BLEDT -20031117ACC

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
23	WWJX	JACKSON MS	266.8	PLN	DTVPLN	-DTVP0835
23	KLTJ	GALVESTON TX	321.8	LIC	BLEDT	-20080317AAD
23	KLTJ	GALVESTON TX	321.8	CP	BPEDT	-20080617AAD
24	WUPL	SLIDELL LA	221.6	LIC	BLCDDT	-20040812AAA
23	WWJX	JACKSON MS	266.8	APP	USERRECORD-01	

Proposal causes no interference

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Analysis of Interference to Affected Station 10

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
23	KLPB-TV	LAFAYETTE LA	BPEDT	-20110309ABI

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
23	WWJX	JACKSON MS	266.8	PLN	DTVPLN	-DTVP0835
23	KLTJ	GALVESTON TX	321.8	LIC	BLEDT	-20080317AAD
23	KLTJ	GALVESTON TX	321.8	CP	BPEDT	-20080617AAD
24	WUPL	SLIDELL LA	221.7	LIC	BLCDDT	-20040812AAA
23	WWJX	JACKSON MS	266.8	APP	USERRECORD-01	

Proposal causes no interference

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Analysis of Interference to Affected Station 11

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
23	WTWV	MEMPHIS TN	BLEDT	-20090619AAW

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
22	WFIQ	FLORENCE AL	198.2	CP	BPEDT	-20080619AGU
22	WFIQ	FLORENCE AL	198.2	LIC	BLEDT	-20060718ACG
23	KOZK	SPRINGFIELD MO	355.0	LIC	BLEDT	-20030911AAS
23	WWJX	JACKSON MS	354.1	PLN	DTVPLN	-DTVP0835
23	WNAB	NASHVILLE TN	296.8	LIC	BLCDDT	-20040712AAO
24	KVTN-DT	PINE BLUFF AR	216.7	LIC	BLCDDT	-20071231AFB
23	WWJX	JACKSON MS	354.1	APP	USERRECORD-01	

Proposal causes no interference

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Analysis of Interference to Affected Station 12

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
24	WMDN	MERIDIAN MS	BLCDDT	-20090304ADW

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
23	WDPN-DT	MOBILE AL	216.7	CP MOD	BMPCDDT	-20081110AAA
23	WWJX	JACKSON MS	158.0	PLN	DTVPLN	-DTVP0835
24	WHIQ	HUNTSVILLE AL	334.4	LIC	BLEDT	-20060927ALU

24	KVTN-DT	PINE BLUFF AR	395.9	LIC	BLCDDT	-20071231AFB
24	WUPL	SLIDELL LA	296.2	LIC	BLCDDT	-20040812AAA
25	WFNA	GULF SHORES AL	201.0	LIC	BLCDDT	-20100614AQJ
25	WMAO-TV	GREENWOOD MS	208.4	LIC	BLEDT	-20090612AAI
23	WWJX	JACKSON MS	158.0	APP	USERRECORD-01	

Proposal causes no interference

#####

# Analysis of Interference to Affected Station 13

## Analysis of current record

Channel	Call	City/State	Application Ref. No.
23	WWJX	JACKSON MS	USERRECORD-01

## Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
22	WHLT	HATTIESBURG MS	126.7	LIC	BLCDDT -20091216AAL
23	WDPM-DT	MOBILE AL	304.9	CP MOD	BMPCDDT -20081110AAA
23	KLPB-TV	LAFAYETTE LA	266.8	LIC	BLEDT -20031117ACC
23	KLPB-TV	LAFAYETTE LA	266.8	CP	BPEDT -20110309ABI
23	WTWV	MEMPHIS TN	354.1	LIC	BLEDT -20090619AAW
24	WMDN	MERIDIAN MS	158.0	LIC	BLCDDT -20090304ADW

Total scenarios = 1

Result key: 1  
Scenario 1 Affected station 13  
Before Analysis

Results for: 23A MS JACKSON USERRECORD01 APP

HAAT 148.0 m, ATV ERP 20.0 kW	POPULATION	AREA (sq km)
within Noise Limited Contour	484822	7889.2
not affected by terrain losses	483225	7856.9
lost to NTSC IX	0	0.0
lost to additional IX by ATV	162	24.2
lost to ATV IX only	162	24.2
lost to all IX	162	24.2

Potential Interfering Stations Included in above Scenario 1

23A AL MOBILE	BMPCDDT	20081110AAA	CP
23A LA LAFAYETTE	BPEDT	20110309ABI	CP

#####

FINISHED FINISHED FINISHED FINISHED FINISHED FINISHED



## APPENDIX A

### MANUFACTURER PROVIDED DIRECTIONAL ANTENNA PATTERN DATA

Proposal Number

**C-x**

Date

**21-Jul-09**

Call Letters

**WPXX-DT**

Channel

**51**

Location

**Memphis, TN**

Customer

Antenna Type

**TUA-C2-3/6H-1-SP**

## AZIMUTH PATTERN

Gain

**2.83**

**( 4.52 dB)**

Calculated / Measured

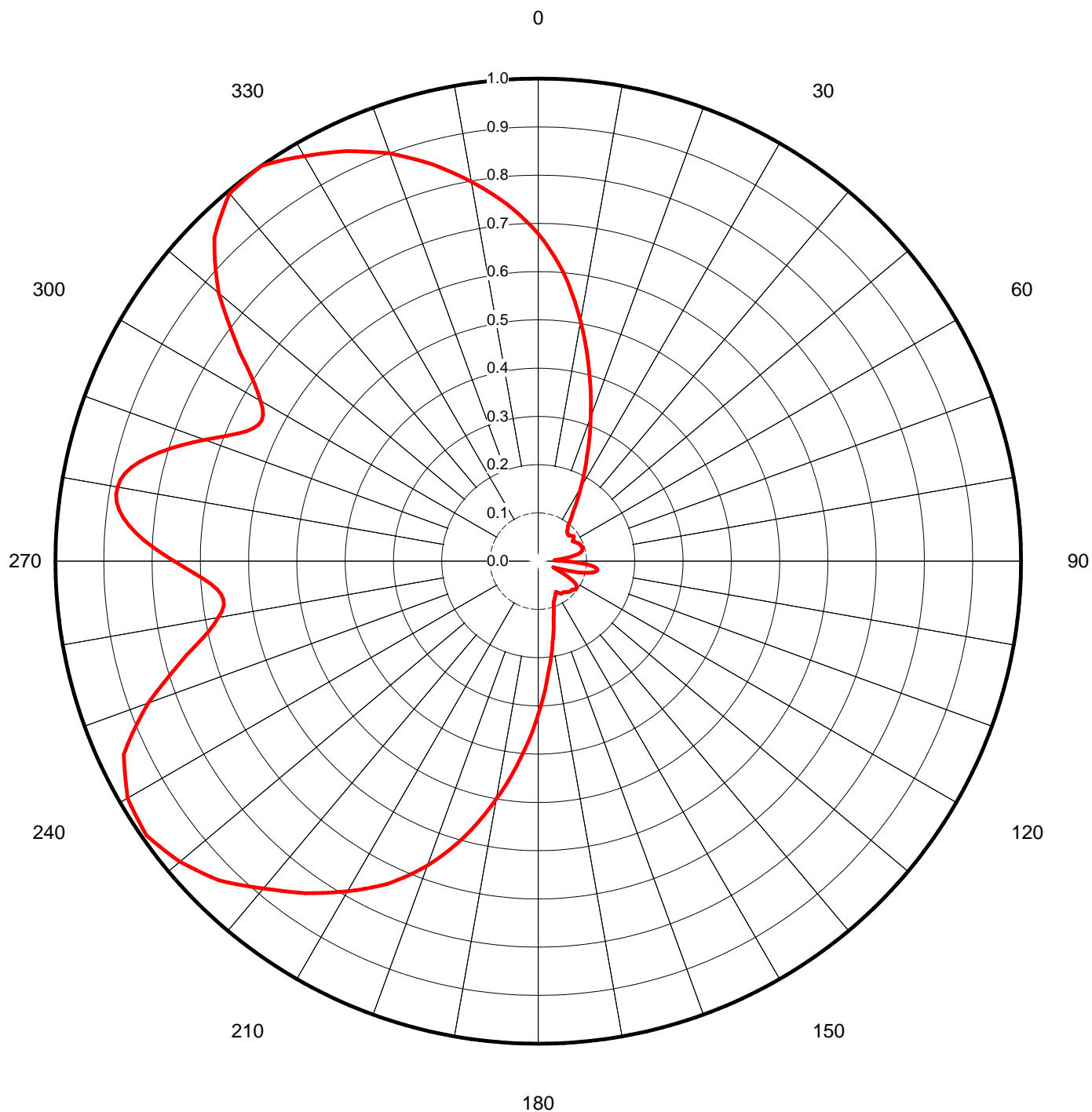
**Calculated**

Frequency

**695.00 MHz**

Drawing #

**TUA-C2-6950**





Proposal Number **C-x**  
Date **21-Jul-09**  
Call Letters **WPXX-DT** Channel **51**  
Location **Memphis, TN**  
Customer  
Antenna Type **TUA-C2-3/6H-1-SP**

## TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing #: **TUA-C2-6950**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
0	0.679	45	0.085	90	0.055	135	0.090	180	0.317	225	0.935	270	0.754	315	0.949
1	0.664	46	0.084	91	0.067	136	0.089	181	0.336	226	0.942	271	0.776	316	0.958
2	0.648	47	0.084	92	0.080	137	0.088	182	0.354	227	0.949	272	0.797	317	0.968
3	0.633	48	0.083	93	0.091	138	0.086	183	0.372	228	0.956	273	0.817	318	0.977
4	0.617	49	0.083	94	0.102	139	0.085	184	0.390	229	0.962	274	0.835	319	0.986
5	0.600	50	0.082	95	0.111	140	0.083	185	0.407	230	0.969	275	0.851	320	0.994
6	0.582	51	0.084	96	0.117	141	0.083	186	0.427	231	0.974	276	0.864	321	0.996
7	0.563	52	0.086	97	0.122	142	0.083	187	0.446	232	0.978	277	0.875	322	0.997
8	0.544	53	0.087	98	0.124	143	0.083	188	0.464	233	0.982	278	0.882	323	0.998
9	0.524	54	0.088	99	0.124	144	0.083	189	0.482	234	0.986	279	0.885	324	0.999
10	0.504	55	0.090	100	0.122	145	0.083	190	0.500	235	0.991	280	0.885	325	1.000
11	0.485	56	0.089	101	0.119	146	0.081	191	0.519	236	0.989	281	0.882	326	0.994
12	0.466	57	0.087	102	0.114	147	0.079	192	0.538	237	0.987	282	0.875	327	0.988
13	0.446	58	0.086	103	0.107	148	0.077	193	0.556	238	0.986	283	0.865	328	0.982
14	0.426	59	0.084	104	0.100	149	0.075	194	0.574	239	0.984	284	0.851	329	0.976
15	0.407	60	0.082	105	0.091	150	0.073	195	0.592	240	0.982	285	0.834	330	0.969
16	0.389	61	0.084	106	0.082	151	0.075	196	0.608	241	0.975	286	0.817	331	0.963
17	0.371	62	0.085	107	0.072	152	0.076	197	0.624	242	0.968	287	0.798	332	0.956
18	0.353	63	0.086	108	0.062	153	0.078	198	0.640	243	0.961	288	0.777	333	0.950
19	0.335	64	0.088	109	0.053	154	0.080	199	0.656	244	0.954	289	0.756	334	0.944
20	0.317	65	0.089	110	0.045	155	0.082	200	0.671	245	0.947	290	0.735	335	0.938
21	0.301	66	0.091	111	0.038	156	0.084	201	0.685	246	0.931	291	0.714	336	0.930
22	0.285	67	0.092	112	0.033	157	0.086	202	0.699	247	0.913	292	0.694	337	0.922
23	0.270	68	0.093	113	0.034	158	0.088	203	0.712	248	0.896	293	0.676	338	0.914
24	0.254	69	0.094	114	0.039	159	0.090	204	0.725	249	0.878	294	0.662	339	0.907
25	0.238	70	0.094	115	0.047	160	0.093	205	0.738	250	0.860	295	0.652	340	0.899
26	0.226	71	0.095	116	0.054	161	0.098	206	0.748	251	0.838	296	0.645	341	0.890
27	0.213	72	0.096	117	0.063	162	0.104	207	0.759	252	0.816	297	0.643	342	0.880
28	0.201	73	0.096	118	0.071	163	0.110	208	0.769	253	0.795	298	0.646	343	0.871
29	0.188	74	0.096	119	0.078	164	0.117	209	0.780	254	0.774	299	0.653	344	0.861
30	0.176	75	0.094	120	0.085	165	0.123	210	0.790	255	0.755	300	0.665	345	0.852
31	0.166	76	0.094	121	0.089	166	0.132	211	0.800	256	0.734	301	0.677	346	0.841
32	0.156	77	0.093	122	0.093	167	0.142	212	0.810	257	0.714	302	0.692	347	0.831
33	0.146	78	0.091	123	0.095	168	0.152	213	0.820	258	0.698	303	0.711	348	0.820
34	0.136	79	0.087	124	0.096	169	0.162	214	0.830	259	0.684	304	0.732	349	0.809
35	0.127	80	0.083	125	0.096	170	0.172	215	0.840	260	0.673	305	0.755	350	0.799
36	0.120	81	0.077	126	0.097	171	0.184	216	0.849	261	0.663	306	0.775	351	0.787
37	0.114	82	0.070	127	0.097	172	0.196	217	0.858	262	0.658	307	0.796	352	0.776
38	0.108	83	0.062	128	0.096	173	0.209	218	0.867	263	0.657	308	0.818	353	0.765
39	0.103	84	0.054	129	0.094	174	0.222	219	0.876	264	0.660	309	0.841	354	0.754
40	0.097	85	0.047	130	0.092	175	0.234	220	0.886	265	0.668	310	0.864	355	0.743
41	0.094	86	0.038	131	0.092	176	0.251	221	0.896	266	0.680	311	0.881	356	0.730
42	0.092	87	0.033	132	0.092	177	0.268	222	0.906	267	0.695	312	0.899	357	0.718
43	0.089	88	0.035	133	0.091	178	0.284	223	0.916	268	0.713	313	0.916	358	0.705
44	0.087	89	0.044	134	0.091	179	0.301	224	0.925	269	0.733	314	0.933	359	0.692

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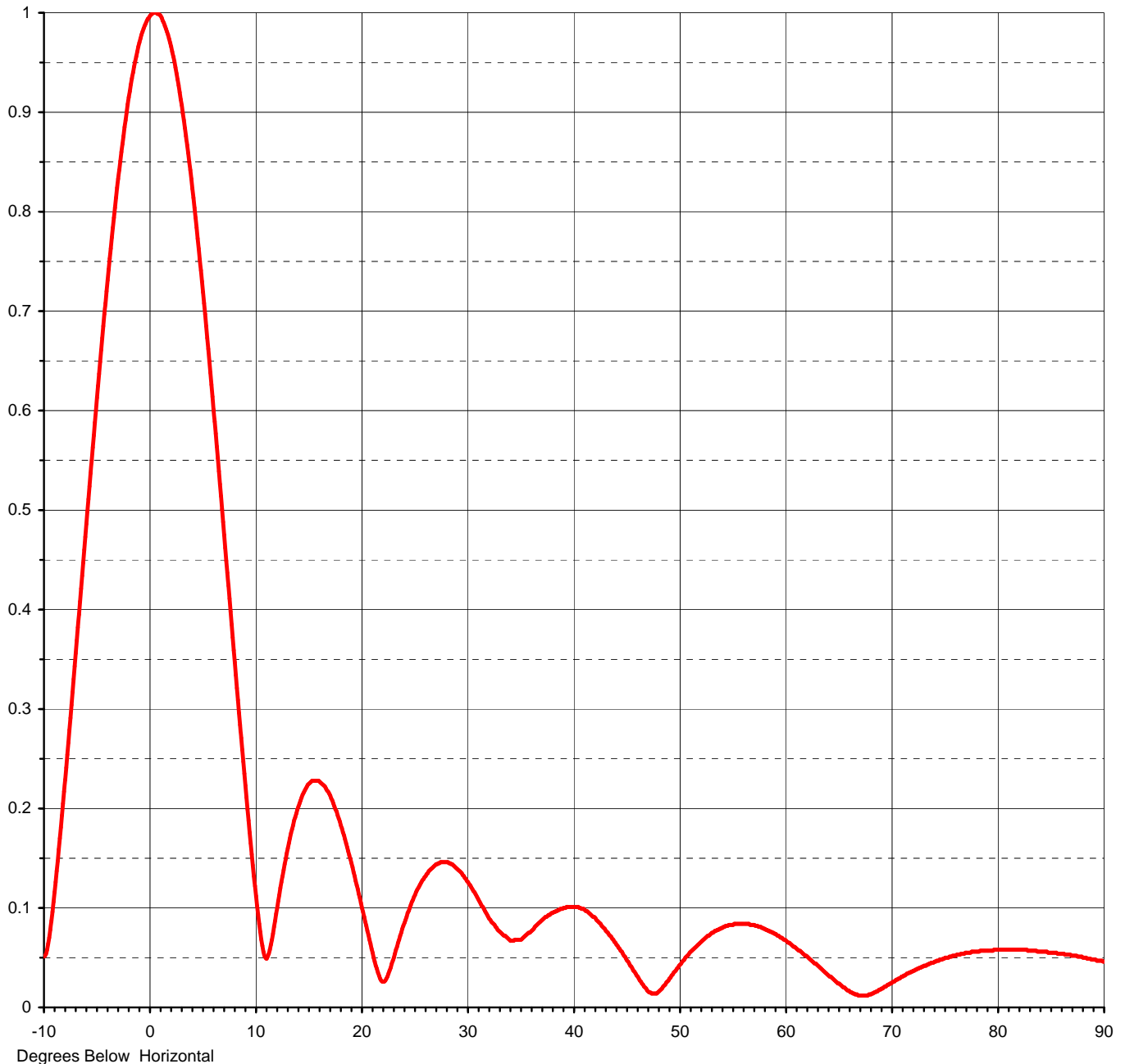


Proposal Number	C-x	
Date	21-Jul-09	
Call Letters	WPXX-DT	Channel 51
Location	Memphis, TN	
Customer		
Antenna Type	TUA-C2-3/6H-1-SP	

## ELEVATION PATTERN

RMS Gain at Main Lobe	6.06 ( 7.82 dB )
RMS Gain at Horizontal	6.00 ( 7.78 dB )
Calculated / Measured	Calculated

Beam Tilt	0.50 deg
Frequency	695.00 MHz
Drawing #	03U061050-90





Proposal Number **C-x**  
Date **21-Jul-09**  
Call Letters **WPXX-DT** Channel **51**  
Location **Memphis, TN**  
Customer  
Antenna Type **TUA-C2-3/6H-1-SP**

## TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing #: **03U061050-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.051	2.4	0.945	10.6	0.068	30.5	0.119	51.0	0.055	71.5	0.034
-9.5	0.070	2.6	0.933	10.8	0.056	31.0	0.110	51.5	0.060	72.0	0.037
-9.0	0.116	2.8	0.920	11.0	0.050	31.5	0.101	52.0	0.065	72.5	0.039
-8.5	0.170	3.0	0.907	11.5	0.063	32.0	0.091	52.5	0.070	73.0	0.042
-8.0	0.229	3.2	0.892	12.0	0.094	32.5	0.084	53.0	0.074	73.5	0.044
-7.5	0.291	3.4	0.876	12.5	0.126	33.0	0.077	53.5	0.077	74.0	0.046
-7.0	0.356	3.6	0.859	13.0	0.155	33.5	0.072	54.0	0.080	74.5	0.048
-6.5	0.421	3.8	0.842	13.5	0.179	34.0	0.068	54.5	0.082	75.0	0.050
-6.0	0.486	4.0	0.823	14.0	0.199	34.5	0.068	55.0	0.083	75.5	0.051
-5.5	0.550	4.2	0.804	14.5	0.214	35.0	0.068	55.5	0.084	76.0	0.052
-5.0	0.613	4.4	0.784	15.0	0.224	35.5	0.072	56.0	0.084	76.5	0.054
-4.5	0.673	4.6	0.763	15.5	0.228	36.0	0.076	56.5	0.084	77.0	0.055
-4.0	0.731	4.8	0.741	16.0	0.228	36.5	0.082	57.0	0.083	77.5	0.056
-3.5	0.784	5.0	0.719	16.5	0.223	37.0	0.087	57.5	0.081	78.0	0.056
-3.0	0.833	5.2	0.697	17.0	0.215	37.5	0.091	58.0	0.079	78.5	0.057
-2.8	0.851	5.4	0.673	17.5	0.202	38.0	0.095	58.5	0.077	79.0	0.057
-2.6	0.868	5.6	0.650	18.0	0.187	38.5	0.097	59.0	0.074	79.5	0.057
-2.4	0.885	5.8	0.626	18.5	0.169	39.0	0.099	59.5	0.071	80.0	0.058
-2.2	0.900	6.0	0.601	19.0	0.149	39.5	0.101	60.0	0.068	80.5	0.058
-2.0	0.915	6.2	0.577	19.5	0.127	40.0	0.101	60.5	0.064	81.0	0.058
-1.8	0.928	6.4	0.552	20.0	0.105	40.5	0.101	61.0	0.060	81.5	0.058
-1.6	0.940	6.6	0.526	20.5	0.082	41.0	0.099	61.5	0.056	82.0	0.058
-1.4	0.951	6.8	0.501	21.0	0.059	41.5	0.095	62.0	0.052	82.5	0.058
-1.2	0.961	7.0	0.475	21.5	0.039	42.0	0.091	62.5	0.047	83.0	0.057
-1.0	0.970	7.2	0.449	22.0	0.026	42.5	0.085	63.0	0.043	83.5	0.057
-0.8	0.978	7.4	0.424	22.5	0.031	43.0	0.079	63.5	0.038	84.0	0.056
-0.6	0.984	7.6	0.398	23.0	0.047	43.5	0.072	64.0	0.033	84.5	0.056
-0.4	0.989	7.8	0.372	23.5	0.065	44.0	0.065	64.5	0.028	85.0	0.055
-0.2	0.994	8.0	0.347	24.0	0.082	44.5	0.057	65.0	0.024	85.5	0.055
0.0	0.997	8.2	0.321	24.5	0.097	45.0	0.049	65.5	0.020	86.0	0.054
0.2	0.999	8.4	0.296	25.0	0.111	45.5	0.041	66.0	0.016	86.5	0.053
0.4	1.000	8.6	0.271	25.5	0.122	46.0	0.032	66.5	0.013	87.0	0.052
0.6	1.000	8.8	0.247	26.0	0.131	46.5	0.024	67.0	0.012	87.5	0.051
0.8	0.999	9.0	0.223	26.5	0.138	47.0	0.017	67.5	0.012	88.0	0.050
1.0	0.997	9.2	0.199	27.0	0.143	47.5	0.014	68.0	0.013	88.5	0.049
1.2	0.992	9.4	0.176	27.5	0.146	48.0	0.015	68.5	0.016	89.0	0.048
1.4	0.987	9.6	0.154	28.0	0.146	48.5	0.021	69.0	0.019	89.5	0.047
1.6	0.981	9.8	0.143	28.5	0.144	49.0	0.027	69.5	0.022	90.0	0.046
1.8	0.974	10.0	0.122	29.0	0.140	49.5	0.035	70.0	0.025		
2.0	0.966	10.2	0.102	29.5	0.135	50.0	0.042	70.5	0.028		
2.2	0.956	10.4	0.084	30.0	0.127	50.5	0.048	71.0	0.031		

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