

ENGINEERING NARRATIVE
IN SUPPORT OF APPLICATION FOR CONSTRUCTION PERMIT

Prepared for

INDEPENDENT COMMUNICATIONS, INC.

K39CZ-D CH 36 Facility ID 28534 3.0 kW NON-DIRECTIONAL RC 504.9 M AMSL

ABERDEEN, SOUTH DAKOTA

Summary

Independent Communications, Inc. ("ICI") specifies herein its displacement CH 36 transmission facilities. The proposed facility is based on continued operation from the licensed site but with a slightly reduced antenna RC on FCC Tower Registration #1048744 which is a lease tower site. A slot type antenna will continue to be employed. The replacement antenna is a Jampro model JA-SS-16/36 SEO Custom, elliptically polarized, with the RC AMSL 504.9 meters AMSL. The community boundary for Aberdeen, South Dakota is located inside the 50.9 dBu F(50,90) noise limited contour.

Attached herein is the TVStudy version 2.2.3 output which demonstrates that the proposed facility complies with FCC DTV allocation requirements in that there is no impermissible increase in interference to any other station in the study.

Environmental

The proposed site is an existing site.

The proposed antenna system, as stated above, will consist of an elliptically Jampro model JA-SS-16/36 SEO with the RC AGL of 99.0 meters. The antenna will be side mounted on the tower in an area inaccessible to the public. The H.Pol. maximum ERP at any azimuth is 3 kilowatts and the V.Pol. ERP is 0.75 kW. Utilizing formula 10 OF OET Bulletin No. 65, Edition 97-01, a value F of 0.10 has been

used to calculate the power density 2 meters above ground. The maximum power density is 0.133 uW/cm squared. This value is 0.033% of the General Population exposure per section 1.1310. Based on this analysis it is believed that the proposed facility follows OET-65 Guidelines.

The applicant will reduce power or cease transmission as required to meet FCC OET-65 Worker Safety Guidelines.

OET-69 Bulletin, TVStudy Output

Study created: 2017.10.26 07:31:21
Study build station data: LMS TV 2017-10-23 (14)

Proposal: K39CZ-D D36 LD LIC ABERDEEN, SD
File number: BLDTL20140129AKO
Facility ID: 28534
Station data: User record
Record ID: 131
Country: U.S.

Build options:
Protect records not on baseline channel

No protected stations found.

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D36
Mask: Full Service
Latitude: 45 28 29.00 N (NAD83)
Longitude: 98 31 38.00 W
Height AMSL: 504.9 m
HAAT: 0.0 m
Peak ERP: 3.00 kW
Antenna: Omnidirectional
Elev Pattn: Generic
Elec Tilt: 0.50

50.9 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	3.00 kW	93.4 m	34.1 km
45.0	3.00	107.0	35.6
90.0	3.00	109.2	35.8
135.0	3.00	109.5	35.8
180.0	3.00	108.8	35.8
225.0	3.00	91.4	33.8
270.0	3.00	81.1	32.5
315.0	3.00	82.7	32.7

Database HAAT does not agree with computed HAAT

Database HAAT: 0 m Computed HAAT: 98 m

Distance to Canadian border: 391.9 km

Distance to Mexican border: 1670.0 km

Conditions at FCC monitoring station: Grand Island NE

Bearing: 179.1 degrees Distance: 506.0 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

Bearing: 225.0 degrees Distance: 804.5 km

Study cell size: 1.00 km

Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%

Maximum new IX to LPTV: 2.00%

No IX check failures found.

OET-69 Bulletin, tvix Study

tvstudy v2.2.3 (ujVPF2)
Database: 127.0.0.1, Study: BLDTL20140129AKO (379), Model: Longley-Rice
Start: 2017.10.26 07:31:48

Study created: 2017.10.26 07:31:21

Study build station data: LMS TV 2017-10-23 (14)

Proposal: K39CZ-D D36 LD LIC ABERDEEN, SD
File number: BLDTL20140129AKO
Facility ID: 28534
Station data: User record
Record ID: 131
Country: U.S.

Build options:
Protect records not on baseline channel

No protected stations found.

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D36
Mask: Full Service
Latitude: 45 28 29.00 N (NAD83)
Longitude: 98 31 38.00 W
Height AMSL: 504.9 m
HAAT: 0.0 m
Peak ERP: 3.00 kW
Antenna: Omnidirectional
Elev Pattn: Generic
Elec Tilt: 0.50

50.9 dBu contour:

Azimuth	ERP	HAAT	Distance
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45.0	3.00	107.0	35.6
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135.0	3.00	109.5	35.8

180.0	3.00	108.8	35.8
225.0	3.00	91.4	33.8
270.0	3.00	81.1	32.5
315.0	3.00	82.7	32.7

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 98 m

Distance to Canadian border: 391.9 km

Distance to Mexican border: 1670.0 km

Conditions at FCC monitoring station: Grand Island NE
Bearing: 179.1 degrees Distance: 506.0 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 225.0 degrees Distance: 804.5 km

Study cell size: 1.00 km
Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%
Maximum new IX to LPTV: 2.00%

Interference to proposal, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	K39CZ-D	D36	LD	LIC	ABERDEEN, SD	BLDTL20140129AKO	
	Service area				Terrain-limited		
3738.6	36,357	3738.6		36,357	3738.6	IX-free 36,357	Percent IX 0.00 0.00

Conclusion

Based on the information supplied herein, and accompanying application for construction permit, it is believed that the proposed facilities meet all applicable FCC requirements for construction permit for facilities displaced by 600 MHz band auction licensees.

The foregoing was prepared on behalf of Independent Communications, Inc. by Clarence M. Beverage of *Communications Technologies, Inc.*, Marlton, New Jersey, whose qualifications are a matter of record with the Federal Communications Commission. The undersigned certifies, under penalty of perjury, that the statements herein are true and correct of his own knowledge, except such statements made on information and belief, and as to these statements he believes them to be true and correct.



By _____

Clarence M. Beverage
for Communications Technologies, Inc.
Marlton, New Jersey
October 26, 2017

