

TECHNICAL STATEMENT AND WAIVER REQUEST
K268CK GOLDEN, CO
MARY MEDICUS
FCC FORM 349
SEPTEMBER 2015

This Technical Statement and Waiver Request is in support of a minor change application, FCC form 349, being filed on behalf of Mary Medicus (“MM”) in regards to its FM translator, K268CK Golden, Colorado, facility ID 147935. K268CK seeks to modify its current operation on channel 268D to a new non-adjacent “displacement” channel 237D. This change in channel is being requested to avoid the new predicted interference anticipated by the construction of KJHM-FM6 Commerce City, Colorado, facility ID 191988, Construction Permit number BNPFTB-20130815AAL.

The current operation of K268CK is used to provide service to the community of Golden, Colorado. Figure 6 shows a Longley-Rice coverage map showing that the currently licensed same channel operation, 268C, of KJHM Strasburg, Colorado, facility ID 38629 is terrain shielded to Golden, Colorado allowing adequate interference free coverage by K268CK to Golden. However, KJHM has recently been approved to build a new FM Booster station at Commerce City, Colorado on channel 268D with 8 KW Effective Radiated Power with a directional antenna pattern aimed generally west, or towards Golden, Colorado. Figure 5 shows the new proposed 40 dB μ interference contour towards the 60 dB μ protected contour of K268CK. As can be seen there will be a large amount of interference caused to K268CK once this facility is constructed.

Normally a new Class D station interference contour would have to protect the 60 dB μ protected contour of another class D FM station. But because the FM booster rules

only require that a new booster coverage be contained within the primary stations 60 dBμ contour, this new CP was granted to KJHM.

K268CK seeks to preemptively change channels to avoid the expected new interference it will receive from KJHM-FM6.

After some technical research was conducted it was determined that it will be impossible to eliminate the interference predicted to be caused to K268CK without limiting the operation of K268CK to the point it would no longer cover any meaningful population. A channel study was conducted on the three adjacent, and I.F. spaced channels to its present channel 268D. None of these channels would be available for use by K268CK. Channels 265, 266 and 267 are precluded because the transmitter site for K268CK is located inside the protected 60 dBμ contour of KOSI(FM) Denver, Colorado on channel 266C, facility ID 1681928. Channel 269, 270 and 271 are precluded because the transmitter site for K268CK is located inside of the protected 60 dBu contour of KXWA(FM) Centennial, Colorado on channel 270C, facility ID 70822 . I.F. channels 215 and 216 are precluded because the transmitter site for K268CK is located inside of the protected 60 dBμ of KLDV(FM) Morrison, Colorado, on channel 216C, facility ID 12354.

In all of these cases, there is no possible way for K268CK to propose operation at its current tower site on any of these pertinent adjacent channels since on any of the 8 channels that would be considered a “one-step” channel change, it would be precluded by a station operating on a same or 1st adjacent channel with a 60 dBμ protected contour that goes over the K268CK transmitter site.

It was determined that non-adjacent channel 237D could be utilized at the current K268CK transmitter site and not cause any interference to any licensed or authorized stations, with the exception of the licensed operation of KPTT Denver, Colorado, on second adjacent channel 239C0, facility ID 48967 and KRKS-FM Lafayette, Colorado on third adjacent channel 234C, facility ID 58631. However, it will be shown that no actual interference will occur to either KPTT or KRKS-FM since there is no population residing inside of the potential area of interference. Thus, it was determined that channel 237D could be utilized by K268CK Golden.

REQUEST FOR WAIVER OF 74.1233(a)(1)

MM, the licensee of Station K268CK Golden, Colorado, hereby requests that the Commission waive the provisions of the Section 74.1233(a)(1) of the Commission's Rules that would otherwise consider a relocation to a channel, other than a first, second, or third adjacent channel or an IF channel, to be a "major change" which would require the opening of a window before an application could be filed. In support of the waiver request, MM makes the following statements of fact:

- 1) MM has sought to file a modification application that is in accord with the Commission's minor change rules. However, MM has been unable to do so and is, therefore, seeking the instant waiver.
- 2) As evidenced in the showing contained in this Technical Statement and attached exhibits, there are simply no available channels that would allow MM to comply with the applicable provisions of Section 74.1233. Each of the adjacent channels and the I.F. channels are precluded because of interference that would occur to other stations on those channels. The best available

channel is Channel 237D and that channel has been selected for this application.

- 3) Station K268CK expects that new prohibited interference will be caused by the construction of KJHM-FM6 Commerce City once constructed, as evidenced in Figure 5. Therefore, unless K268CK can transition to another channel, the impact of the service provided by K268CK would be to ultimately cause the permanent termination of the operations. In that K268CK provides a valuable program service to the community of Golden, listeners in Golden should not lose the service and only a waiver of Section 74.1233(a)(1) will permit K268CK's broadcast service to remain in operation.
- 4) A waiver of the rules to allow K268CK to migrate to Channel 237 will enable K268CK to continue to operate and is in the best interest of the Station and its listeners. Accordingly, the public interest would be well served by treating the requested channel change as a minor change, given the unique circumstances attendant to this request, involving a displaced translator station and otherwise unavailable channels to migrate to. On the basis of the unique circumstances presented and that the public interest is well-served by a waiver of the major change rule in order to permit Station K268CK to continue to serve the public, MM urges that it has overcome the high hurdle for waiver requests and is entitled to the waiver it is seeking. *See WAIT Radio v. FCC*, 418 F.2d 1153 (D.C. Cir. 1969), *cert denied*, 409 U.S. 1027(1972).

TECHNICAL STUDY FOR OPERATION ON CHANNEL 237D

MM is proposing to remain at its existing site located at N. 39° 43' 46", W. 105° 14' 08", NAD 27, with an increased Effective Radiated Power of 75 Watts and replace the current Scala CA-5 antenna with a new Scala HDCA-10, composite pattern yagi type directional antenna system. The antenna will be mounted at the 9 meter level on a 9 meter overall tower, with a Center of Radiation at 2251 Above Mean Sea Level. This is at the same level and heights as the currently licensed operation of K268CK. It also seeks to change channels from 268D to 237D.

Figure 1 shows a detailed channel interference study conducted from the current site for K268CK. It shows that the proposed operation of K268CK on channel 237D will not cause any prohibited outgoing interference to any licensed or proposed FM services, with the exception of KPTT(FM) Denver, Colorado operating on channel 239C0, facility ID 48967 and KRKS-FM Lafayette, Colorado on channel 234C, facility ID 58631 . The proposed operation of K268CK on 237D is located within the protected 60 dB μ contour of 2nd adjacent station KPTT and 3rd adjacent channel KRKS-FM.

The "worst case" interference contour would be 100 dB μ towards any 2nd or 3rd adjacent channel station. Figure 2 documents that there is no population within the proposed predicted 100 dB μ interference contour for K268CK on channel 237D. The licensee, Mary Medicus, respectfully requests a waiver of C.F.R. 74.1204(d) of the Commission's rules based on the fact that there is no population within the area of predicted interference. There are no homes nearby the proposed existing tower site which

is a privately owned 1 acre square wooded area with private access. The transmitter building is uninhabited and does not have indoor plumbing.

Figure 3 shows the proposed directional antenna pattern for use by K268CK on channel 237D.

Figure 4 is a tabulation of the distance to pertinent contours used in the study for the proposed operation of K268CK on channel 237D.

Figure 7 shows the proposed 60 dB μ of K268CK will be completely contained inside of the current 2 mv/m daytime contour and 25 mile radius of the station being rebroadcast, KDCO(AM) Denver, Colorado on 1340 Khz, facility ID 34585. The proposed operation of K268CK will be considered a “fill-in” translator for KDCO, thus some of the maximum allowable ERP limits on some of the pertinent radials will be exceeded. However, the maximum ERP on any radial will not exceed 75 watts, thus this proposed operation is in compliance with 74.1235(a).

Since K268CK is not proposing a change in tower site location, it can be assumed that the present 60 dB μ contour and proposed 60 dB μ contour will overlap with each other as required.

It was concluded that the new proposed operation of K268CK Golden, Colorado on channel 237D will not cause any harmful interference to any existing stations, and will be in full compliance with the commission’s rules.

FIGURE 1 - DETAILED CHANNEL INTERFERENCE STUDY

K268CK GOLDEN, CO, CH. 237D

REFERENCE
39 43 46.0 N.
105 14 08.0 W.

CH# 237D - 95.3 MHz, Pwr= 0.075 kW DA, HAAT= 0.0 M, COR= 2251 M
Average Protected F(50-50)= 5.24 km
Standard Directional

DISPLAY DATES
DATA 08-28-15
SEARCH 08-31-15

CH CITY	CALL	TYPE STATE	ANT AZI -->	DI ST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*OUT* (Overlap in km)
239C0 KPTT Denver	LIC DCX CO	353.2 173.2	0.40 BLH20071003ACN	39 43 59.0 105 14 10.0	100.000 346	6.2 2256	52.9 Cit icasters Licenses, Inc.	-52.5*	
234C KRKS-FM Lafayette	LIC DCN CO	345.2 165.1	39.35 BMLH19981009KC	40 04 19.0 105 21 14.0	100.000 300	11.3 2442	78.6 Salem Media Of Colorado, I	-39.2*	
236C KATC-FM Colorado Springs	LIC _C_ CO	163.5 343.7	113.94 BLH20060622ABT	38 44 43.0 104 51 39.0	72.000 695	146.3 2946	97.7 Radi o Li cense Hol di ng Cbc,	0.3	
237L1 NEW Louisvi lle	CP _ CO	18.4 198.5	29.66 BNPL20131114AQP	39 58 58.0 105 07 31.0	0.100 -4	1644	Ci ty Of Loui sville	3.6	
236L1 NEW Boul der	CP _ CO	353.3 173.3	32.32 BNPL20131114ABS	40 01 07.0 105 16 47.0	0.100 -266	1647	N I C E Corp.	25.5	
237L1 KSIK-LP Greel ey	LIC _ CO	30.9 211.2	85.68 BLL20150722ADI	40 23 24.0 104 42 58.7	0.061 38	1485	Col orado Progressi ve Congr	49.4	
237D K237BI Breckenri dge, Etc.	LIC DCN CO	245.5 65.0	70.58 BLFT19860130TC	39 27 50.0 105 58 56.0	0.054 393	19.1 3726	5.2 Skandi a, LI c	52.2	
238D K238BP Lake George	CP _C_ CO	197.5 17.3	79.25 BNPFT20130821ACS	39 02 55.0 105 30 44.0	0.010 683	23.9 3441	15.0 The Col orado Col lege	62.7	
237D K237CY Ft. Coll ins	LIC DC_ CO	3.1 183.1	84.94 BLFT20061016ADT	40 29 36.0 105 10 52.0	0.010 332	17.4 2078	2.9 Educational Communi cations	76.5	
235D K235BT Fort Coll ins	LIC DC_ CO	3.1 183.1	85.00 BLFT20121105ANJ	40 29 38.0 105 10 53.0	0.099 334	0.0 2081	4.0 Edgewater Broadcasi ng, In	79.2	
234D K234AJ Col orado Spr i ngs	LIC _C_ CO	162.3 342.5	98.25 BLFT20101201AQE	38 53 10.0 104 53 24.0	0.019 -107	0.3 2213	3.7 Educational Communi cations	91.2	
237D K237BL Vail , Etc.	LIC DCN CO	263.4 82.7	104.89 BLFT19880816TA	39 36 56.0 106 26 57.0	0.054 -217	14.5 2723	4.5 Al waysmountai ntime, LI c	92.2	
237C1 DKECK Eckl ey	LIC _CX CO	80.8 262.4	214.09 BLH20080229AAG	40 00 33.0 102 45 35.0	100.000 103	140.2 1391	43.3 Arnol d Broadcasi ng, Inc.	97.1	
236C KCGY Larami e	APP _CX WY	354.1 173.9	176.51 BPH20150728ABL	41 18 37.1 105 27 14.6	100.000 332	86.2 2734	55.1 Townsquare Media Larami e L	115.2	
236C KCGY Larami e	LIC _CN WY	354.1 174.0	176.41 BLH19831107AS	41 18 34.0 105 27 11.0	100.000 326	85.2 2726	54.0 Townsquare Media Larami e L	116.1	
238C2 KRVG Gl enwood Spr i ngs	CP _CX CO	260.0 78.6	186.47 BPH20140422AAA	39 25 07.0 107 22 06.0	1.200 773	88.7 3224	59.6 Western Sl ope Communi catio	122.7	
238C2 KRVG Gl enwood Spr i ngs	LIC _CX CO	259.9 78.6	186.37 BLH20081112ALM	39 25 05.0 107 22 01.0	1.000 736	84.4 3169	56.9 Western Sl ope Communi catio	125.2	

Terrain database is NGDC 30 SEC , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM
In & Out distances between contours are shown at closest points. Reference zone= West Zone, Co to 3rd adjacent.
All separation margins (if shown) include rounding.
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
Incoming contour overlap is ignored.
"*"affixed to 'IN' or 'OUT' values = site inside restricted contour.

* No actual interference will be caused to second adjacent channel KPTT Denver,,
CO channel 239C0 or third adjacent channel KRKS-FM Lafayette, CO channel 234C
since the predicted 100 dbu interference contour will not cover any population.
See the Technical Statement for more details.

FIGURE 2 - PREDICTED 100 DBU CONTOUR
K268CK GOLDEN, CO, CH. 237D

Coverage Study - NGDC 30 SEC
08-31-2015

K268CK CH237 D , 0.075 kW, 0.0M HAAT, 2251.0M COR AMSL
Interference Contour = 100 dBu. Population = 0

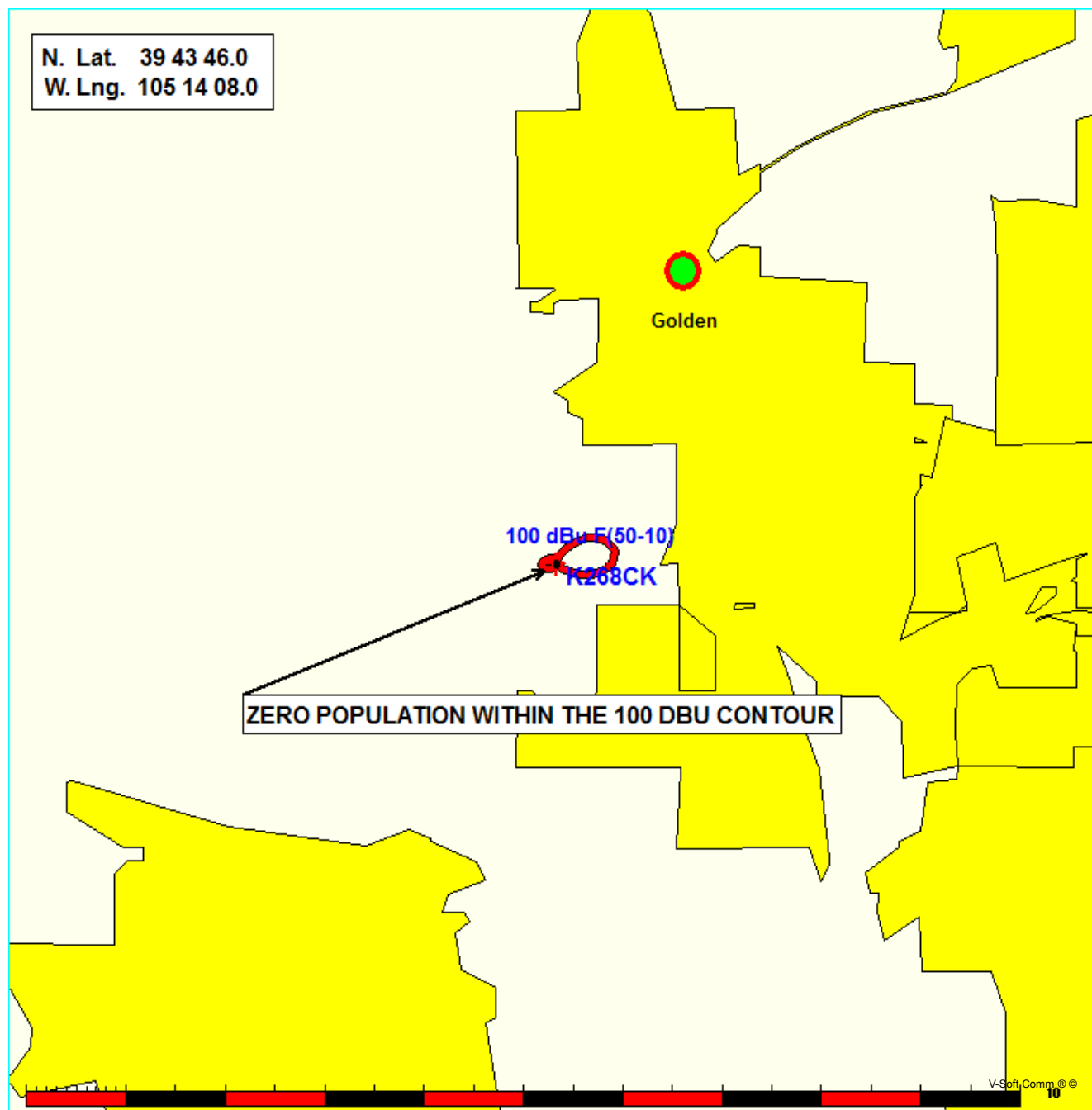


FIGURE 3 DIRECTIONAL ANTENNA DATA

K268CK

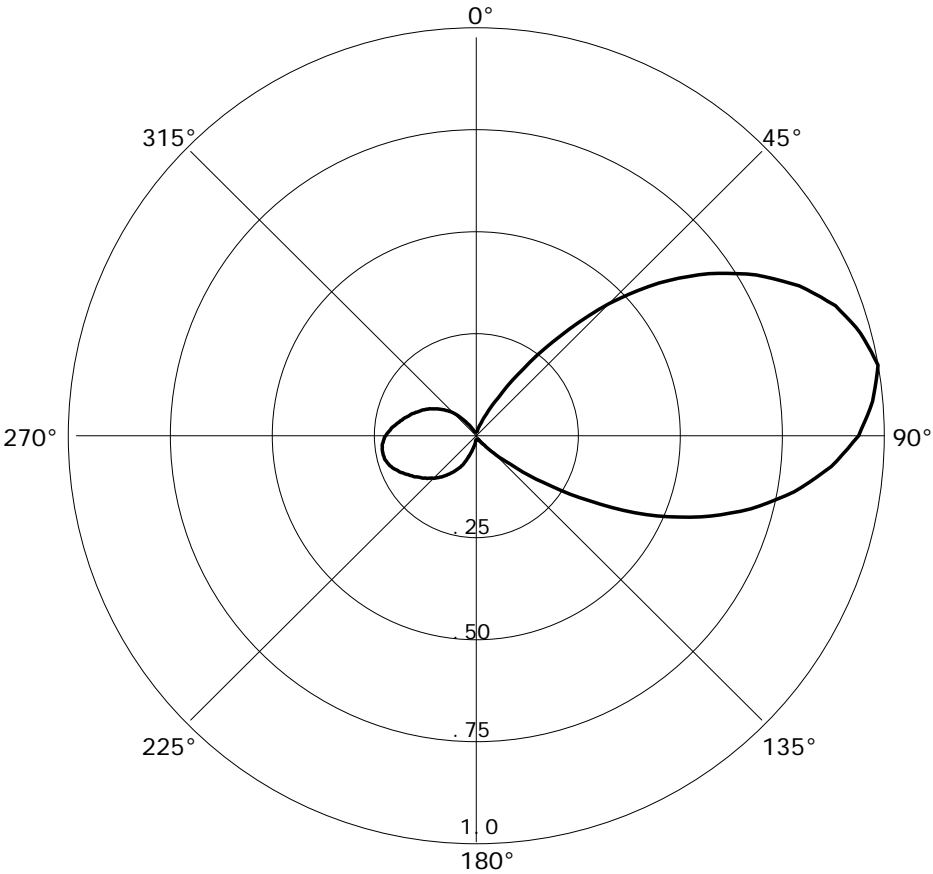
08-31-2015

RMS(V)= .382

SCALA HDCA-10

Graph is Relative Field

Azi	Field	dBk	kW
000	0.010	-51.249	0.000
010	0.010	-51.249	0.000
020	0.030	-41.707	0.000
030	0.108	-30.581	0.001
040	0.320	-21.146	0.008
050	0.585	-15.906	0.026
060	0.792	-13.275	0.047
070	0.937	-11.815	0.066
080	1.000	-11.249	0.075
090	0.937	-11.815	0.066
100	0.792	-13.275	0.047
110	0.585	-15.906	0.026
120	0.320	-21.146	0.008
130	0.108	-30.581	0.001
140	0.030	-41.707	0.000
150	0.010	-51.249	0.000
160	0.010	-51.249	0.000
170	0.010	-51.249	0.000
180	0.010	-51.249	0.000
190	0.023	-44.015	0.000
200	0.055	-36.442	0.000
210	0.097	-31.514	0.001
220	0.133	-28.772	0.001
230	0.162	-27.059	0.002
240	0.192	-25.583	0.003
250	0.222	-24.322	0.004
260	0.233	-23.902	0.004
270	0.222	-24.322	0.004
280	0.192	-25.583	0.003
290	0.162	-27.059	0.002
300	0.133	-28.772	0.001
310	0.097	-31.514	0.001
320	0.055	-36.442	0.000
330	0.023	-44.015	0.000
340	0.010	-51.249	0.000
350	0.010	-51.249	0.000



Contour.out

N. Lat. = 394346.0 W. Lng. = 1051408.0
 HAAT and Distance to Contour,
 FCC, FM 2-10 Mi, 51 pts Method - NGDC 30 SEC

FIGURE 4 - DI STANCE TO CONTOURS, K268CK, 237D

Azi.	AV EL	HAAT	dBk	60-F5	54-F1	40-F1	100-F1
000	1844.5	406.5	-51.25	0.61	1.21	4.91	0.01
010	1811.0	440.0	-51.25	0.61	1.21	5.03	0.01
020	1801.2	449.8	-41.71	1.72	3.29	10.90	0.02
030	1746.6	504.4	-30.58	5.46	9.13	23.94	0.07
040	1722.6	528.4	-21.15	11.87	18.33	43.81	0.19
050	1711.9	539.1	-15.91	17.09	25.79	59.25	0.36
060	1694.4	556.6	-13.27	20.55	30.85	67.94	0.48
070	1707.1	543.9	-11.81	22.08	33.45	71.44	0.57
080	1711.3	539.7	-11.25	22.70	34.54	72.81	0.61
090	1716.2	534.8	-11.81	21.86	33.09	70.84	0.57
100	1739.0	512.0	-13.27	19.54	29.33	64.85	0.48
110	1778.8	472.2	-15.91	15.85	24.16	54.56	0.36
120	1812.3	438.7	-21.15	11.20	16.58	39.29	0.19
130	1799.1	451.9	-30.58	5.35	8.88	22.74	0.07
140	1792.7	458.3	-41.71	1.72	3.30	10.97	0.02
150	1837.2	413.8	-51.25	0.61	1.21	4.94	0.01
160	1933.4	317.6	-51.25	0.61	1.21	4.54	0.01
170	2146.0	105.0	-51.25	0.61	1.21	2.98	0.01
180	2173.8	77.2	-51.25	0.61	1.21	2.62	0.01
190	2236.0	15.0	-44.01	1.40	1.61	2.53	0.01
200	2293.2	-42.2	-36.44	1.61	1.77	3.86	0.03
210	2223.6	27.4	-31.51	1.65	2.35	5.16	0.06
220	2242.9	8.1	-28.77	1.95	2.72	6.05	0.08
230	2290.3	-39.3	-27.06	2.16	2.96	6.68	0.10
240	2383.1	-132.1	-25.58	2.34	3.23	7.27	0.12
250	2400.4	-149.4	-24.32	2.49	3.46	7.84	0.13
260	2320.2	-69.2	-23.90	2.55	3.55	8.04	0.14
270	2253.3	-2.3	-24.32	2.49	3.46	7.84	0.13
280	2186.5	64.5	-25.58	3.37	4.80	10.77	0.12
290	2285.5	-34.5	-27.06	2.16	2.96	6.68	0.10
300	2389.0	-138.0	-28.77	1.95	2.72	6.05	0.08
310	2396.0	-145.0	-31.51	1.65	2.35	5.16	0.06
320	2347.1	-96.1	-36.44	1.61	1.77	3.86	0.03
330	2254.4	-3.4	-44.01	1.40	1.61	2.53	0.01
340	2140.4	110.6	-51.25	0.61	1.21	3.04	0.01
350	1968.0	283.0	-51.25	0.61	1.21	4.39	0.01

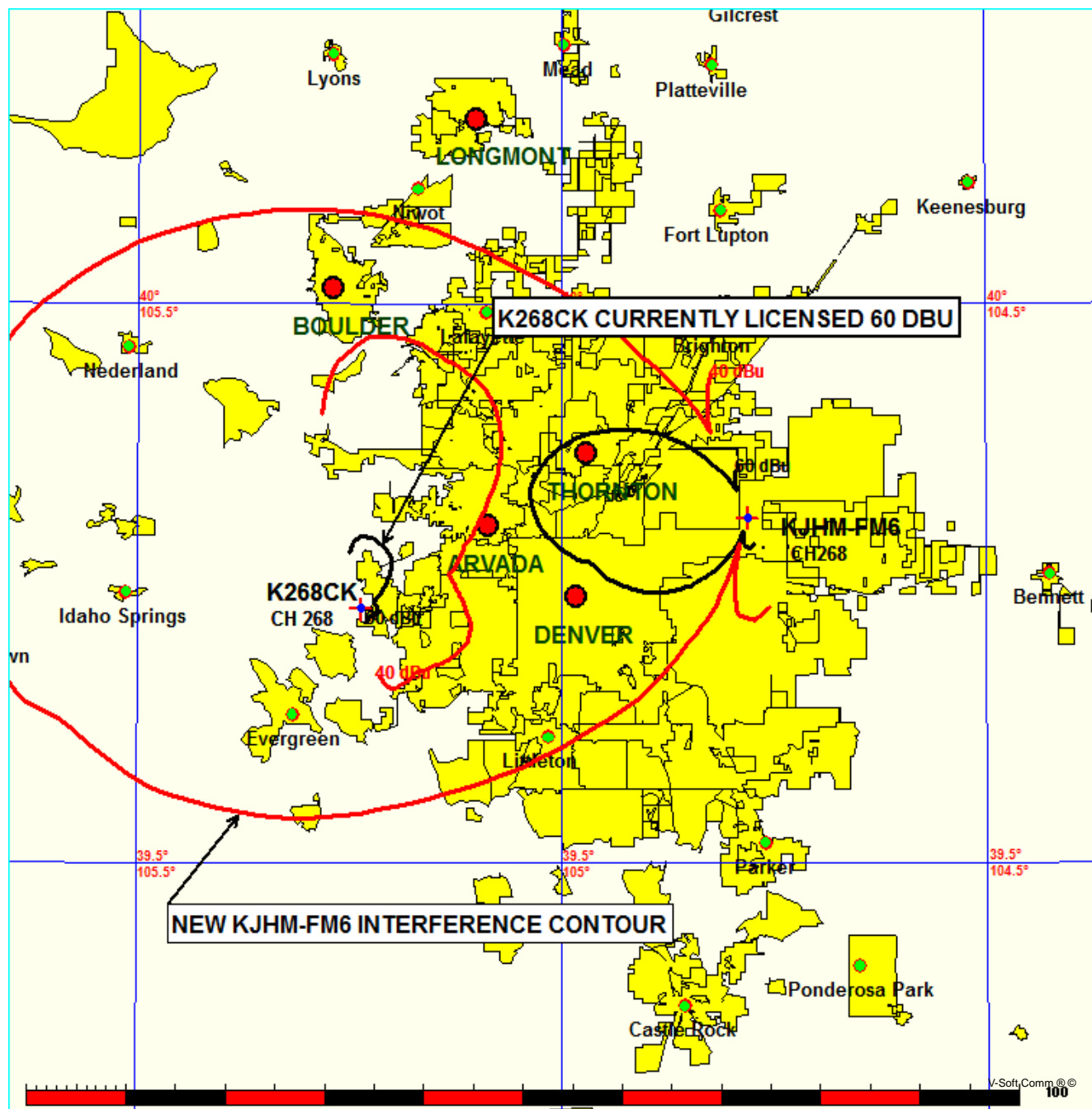
Ave EI = 2030.24 M HAAT= 220.76 M AMSL= 2251

FIGURE 5 - NEW KJHM-FM6 INTERFERENCE CONTOUR
K268CK Golden, CO, CH. 268D

FMCommander Single Allocation Study - 08-31-2015 - NGDC 30 SEC
K268CK's Overlaps (In= -37.13 km, Out= 12.29 km)

K268CK CH 268 D DA
Lat= 39 43 46.0, Lng= 105 14 08.0
0.002 kW 0 M HAAT, 2251 M COR
Prot.= 60 dBu, Intef.= 40 dBu

KJHM-FM6 CH 268 D DA BNPFTB20130815AAL
Lat= 39 48 39.0, Lng= 104 46 52.0
8.0 kW 11 M HAAT, 1635 M COR
Prot.= 60 dBu, Intef.= 40 dBu



KJHM

BMLH20141014ACF

Latitude: 39-55-22 N

Longitude: 103-58-18 W

ERP: 97.00 kW

Channel: 268

Frequency: 101.5 MHz

AMSL Height: 2109.0 m

Elevation: 1509.0 m

Horiz. Pattern: Omni

Vert. Pattern: No

Prop Model: Longley/Rice

Climate: Cont temperate

Conductivity: 0.0050

Dielec Const: 15.0

Refractivity: 311.0

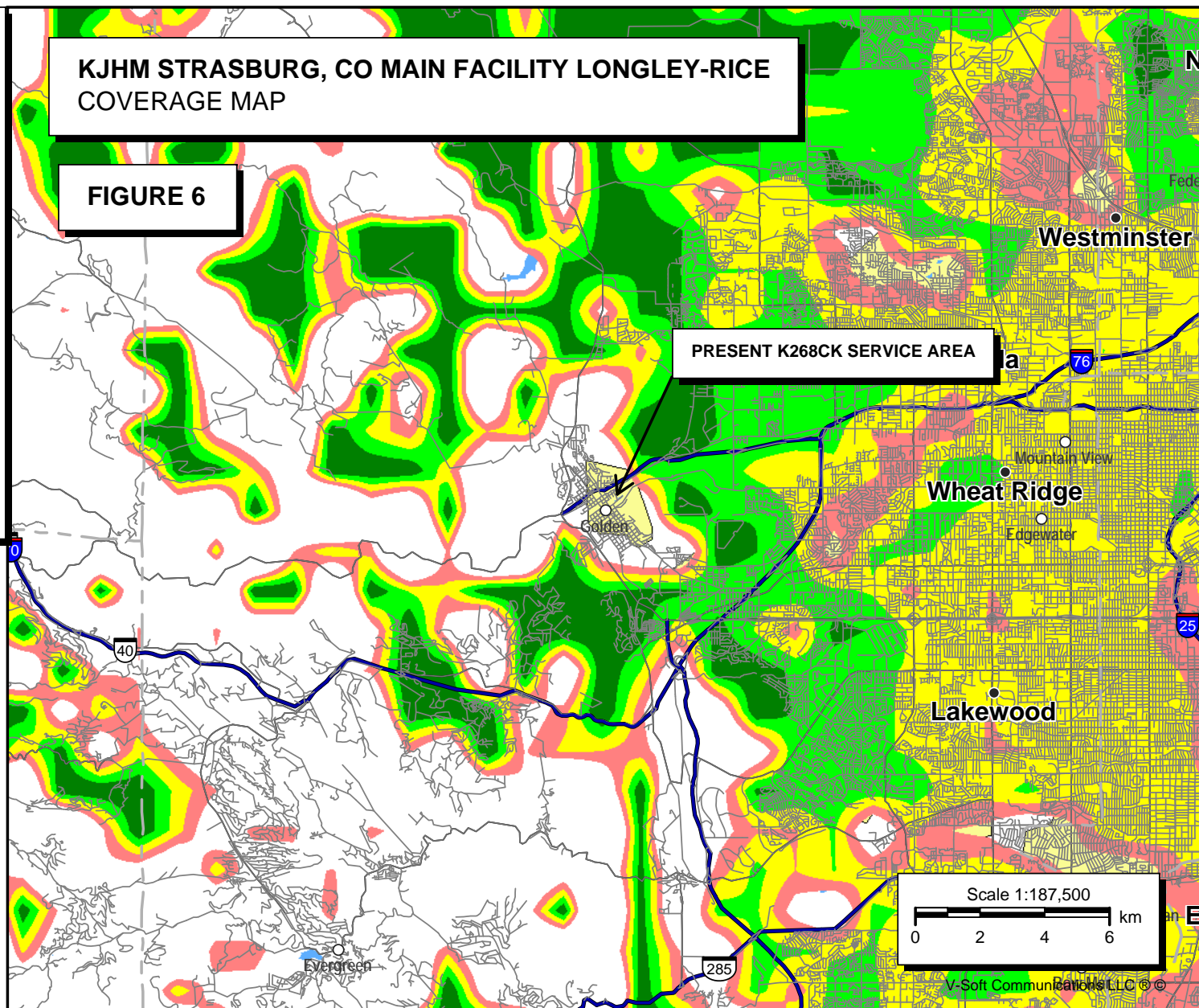
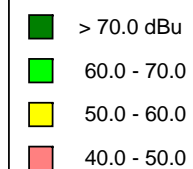
Receiver Ht AG: 9.1 m

Receiver Gain: 0 dB

Time Variability: 50.0%

Sit. Variability: 50.0%

ITM Mode: Broadcast

**KJHM STRASBURG, CO MAIN FACILITY LONGLEY-RICE
COVERAGE MAP****FIGURE 6****PRESENT K268CK SERVICE AREA**

V-Soft Communications LLC ©

K268CK

BLFT20131101AJL

Latitude: 39-43-46 N

Longitude: 105-14-08 W

ERP: 0.075 kW

Channel: 237

Frequency: 95.3 MHz

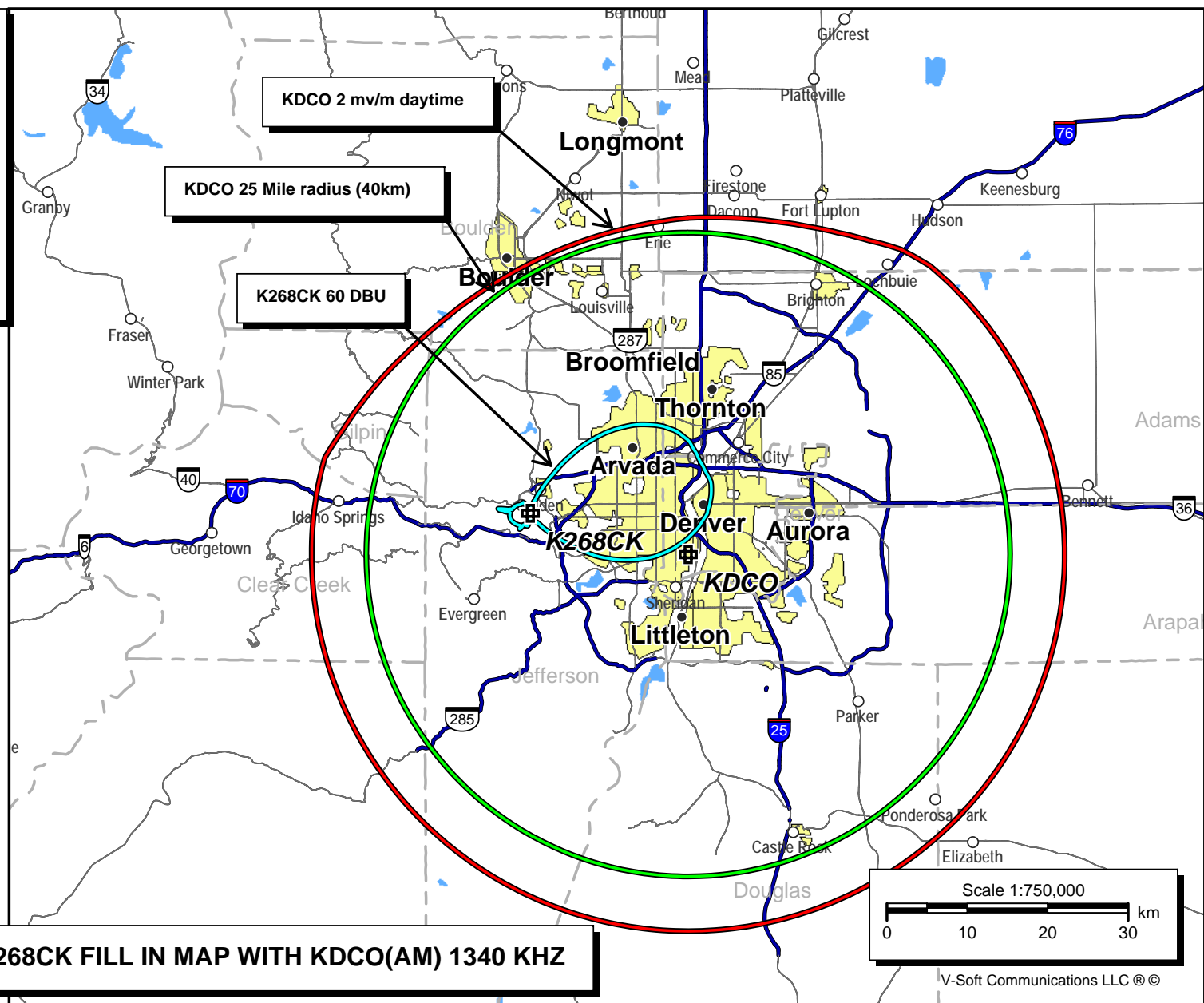
AMSL Height: 2251.0 m

Elevation: 2242.0 m

Horiz. Pattern: Directional

Vert. Pattern: No

Prop Model:

**FIGURE 7 - K268CK FILL IN MAP WITH KDCO(AM) 1340 KHZ**