EXHIBIT E

ENGINEERING STATEMENT
AMENDMENT TO
MINOR CHANGE APPLICATION
FCC FILE NO. 0000035596
FOR CONSTRUCTION PERMIT TO CHANGE
TRANSMITTER SITE FOR
KXLH-LD, HELENA, MONTANA
CHANNEL 9 3 KW ERP 2369.0 METERS RC/AMSL

DECEMBER 2017

COHEN, DIPPELL AND EVERIST, P.C.
CONSULTING ENGINEERS
RADIO AND TELEVISION
WASHINGTON, D.C.

COHEN, DIPPELL AND EVERIST, P. C.

City of Washington)
) ss
District of Columbia)

Donald G. Everist, being duly sworn upon his oath, deposes and states that:

He is a graduate electrical engineer, a Registered Professional Engineer in the District of Columbia, and is President, Secretary and Treasurer of Cohen, Dippell and Everist, P.C., Consulting Engineers, Radio - Television, with offices at 1420 N Street, N.W., Suite One, Washington, D.C. 20005;

That his qualifications are a matter of record in the Federal Communications Commission;

That the attached engineering report was prepared by him or under his supervision and direction and

That the facts stated herein are true of his own knowledge, except such facts as are stated to be on information and belief, and as to such facts he believes them to be true.

Donald G. Everist
District of Columbia
Professional Engineer
Registration No. 5714

Subscribed and sworn to before me this 28th day of December, 2017.

CAROLYN L. LEGON NOTARY PUBLIC DISTRICT OF COLUMBIA 02-28-2018

Notary Public

My Commission Expires: 2/28/2018

Introduction

This engineering statement has been prepared on behalf of KRTV Communications, LLC ("KRTV"), licensee of television translator station KXLH-LD, Helena, Montana. This statement amends the pending application (FCC File No. 0000035596) for the licensee's request for site change and change in antenna manufacturer pattern. KXLH-LD is authorized to operate on Channel 9 with a radiation center above mean sea level ("RCAMSL") of 1530 meters and 3 kW maximum ERP. It is proposed to move 25.1 km at an azimuth of N 75.8° E to site known as Hogback Mountain. KRTV hereby requests digital low power translator facilities on channel 9 with a maximum effective radiated power ("ERP") of 3.0 kW at a radiation center above mean sea level of 2369.0 meters. The sole purpose of this amendment is to specify a stringent filter. No other changes are requested.

Transmitter Site

An antenna manufactured by Kathrein will be utilized and the antenna will be mounted on an existing tower with an overall height of 44.5 meters. Exhibit E-1 provides the proposed site plotted in the latest USGS 7.5 quadrangle map. The geographic coordinates of the site follow below.

North Latitude: 46° 49' 30"

West Longitude: 111° 42' 13"

NAD-27

North Latitude: 46° 49' 29.8"

West Longitude: 111° 42' 15.9"

NAD-83

Equipment Data

Transmitter:	Type-approved
Transmission Line:	Dielectric, FLEXLine 7/8", 45.7 meters (150 feet) with 83.6% efficiency
Antenna:	Kathrein DRV-2/2HW with maximum power gain of 6.58 and no electrical beam tilt. Exhibit E-2 provides the proposed antenna data
Output Filter:	Stringent

Power Data

Transmitter:	0.545 kW	-2.63 dBk
Transmission Line Efficiency/Loss:	0.836%	0.78 dB
Input Into Antenna:	0.456 kW	-3.41 dBk
Antenna Gain:	6.58	8.18 dB
ERP:	3.0 kW	4.77 dBk

Elevation Data

Elevation of site above mean sea level	2357.0 meters (7732.9 feet)
Center of radiation of antenna above ground level	12 meters (39.4 feet)
Center of radiation of antenna above mean sea level	2369.0 meters (7772.3 feet)
Overall height above ground level existing tower	44.5 meters (146 feet)

The existing tower is less than 45 meters and does not require registration.

Interference Analysis

A study of predicted interference caused by the proposed KXLH digital translator channel 9 operation has been performed using the Longley-Rice program for which the source data has been posted by the Commission on its website at fcc.gov/oet/tvstudy. Comparison of service/interference areas and population indicates this model closely matches the FCC's digital low-power TV/translator evaluation program. Best efforts have been made to use data and calculation identical to the FCC's program. The model employs the Longley-Rice propagation methodology and evaluates in grid cells of approximately 1 sq. km. Using one-second terrain data sampled approximately every 1.0 km at one-degree azimuth intervals with 2010 census centroids, all studies are based upon data in the current LMS database. A Longley-Rice study (Exhibit E-3) was performed with the proposed channel 9 KXLH digital television translator facilities and all potentially affected stations listed in the FCC database as of December 22, 2017. The results of the study are included as Exhibit E-3.

As indicated above, the transmitter with typical power output of 0.545 kW will deliver 0.456 kW to the input of the antenna. The antenna, having a maximum power gain of 6.58 will produce a maximum ERP of 3.0 kW. A coverage map (Exhibit E-4) providing the normally protected coverage contour of the proposed digital facility. The proposed normally protected contour is depicted relative to the authorized digital operation of KXLH-LD is included as Exhibit E-5.

Other Broadcast Facilities

A brief analysis was completed to determine the presence of stations in the vicinity of the KXLH tower using the November 14, 2017, data contained within the Commission's Consolidated Database System ("CDBS"). Within 0.1 km of the proposed site, there are eight authorized FM radio stations, two DTV television stations, and no low-power analog television or television translator stations other than the proposed KXLH operation. There are no AM facilities within 3.22 km of the existing tower. Although no adverse technical effects are expected due to the proposed changes, the licensee will take measures to resolve any problems proven to be related to the changes proposed in this application.

FCC Rule, Section 1.1307

The proposed 3 kW directional operation will utilize a Kathrein, Type DRV-2/2HW antenna (or equivalent) described above with a center of radiation above ground of 12 meters. The antenna will be side-mounted on an existing tower with an overall height of 44.5 meters above ground. The proposed digital operation of KXLH will create a radio frequency field level of less than 11 $\mu W/cm^2$ near the base of the tower. This level is less than six percent of the Maximum Permissible Exposure ("MPE") level for the general population and uncontrolled environment.

Authorized personnel and rigging contractors will be alerted to the potential zone of high radio frequency field levels on the existing tower, and if necessary, the station will operate with reduced power or terminate the operation of the transmitter as appropriate when it is necessary for authorized personnel or contractors to perform work on or near the existing tower. Workers

and the general public, therefore, will not be subjected to RFF levels in excess of the current FCC guidelines.

Environmental Assessment

An environmental assessment ("EA") is categorically excluded under Section 1.1306 of the FCC Rules and Regulations as the tower was constructed prior to the requirements specified in WT Docket No. 03-128 and the licensee indicates:

(a)(1)	The existing tower is not located in an officially designated wilderness area.
(a)(2)	The existing tower is not located in an officially designated wildlife preserve.
(a)(3)	The proposed facilities on an existing tower will not affect any listed threatened or endangered species or habitats.
(a)(3)(ii)	The proposed facilities on an existing tower will not jeopardize the continued existence of any proposed endangered or threatened species or likely to result in the destruction or adverse modification of proposed critical habitats.
(a)(4)	The proposed facilities located on a tower which was built prior to the adoption of WT Docket No. 03-128 and is grandfathered and has not affected any known districts, sites, buildings, structures, or objects significant in American history, architecture, archaeology, engineering, or culture.
(a)(5)	The existing tower is not located near any known Indian religious sites.
(a)(6)	The existing tower is not located in a flood plain.
(a)(7)	The installation of the DTV facilities on an existing guyed tower will not involve a significant change in surface features of the ground in the vicinity of the tower.
(a)(8)	It is not proposed to equip the tower with high intensity white lights unless required by the FAA.

(b) Workers and the general public will not be subjected to RFF levels in excess of the current FCC guidelines contained in OET Bulletin No. 65, Edition 97-01, dated August 1997 and Supplement A.

ABOVE GROUND **ABOVE MEAN SEA LEVEL**

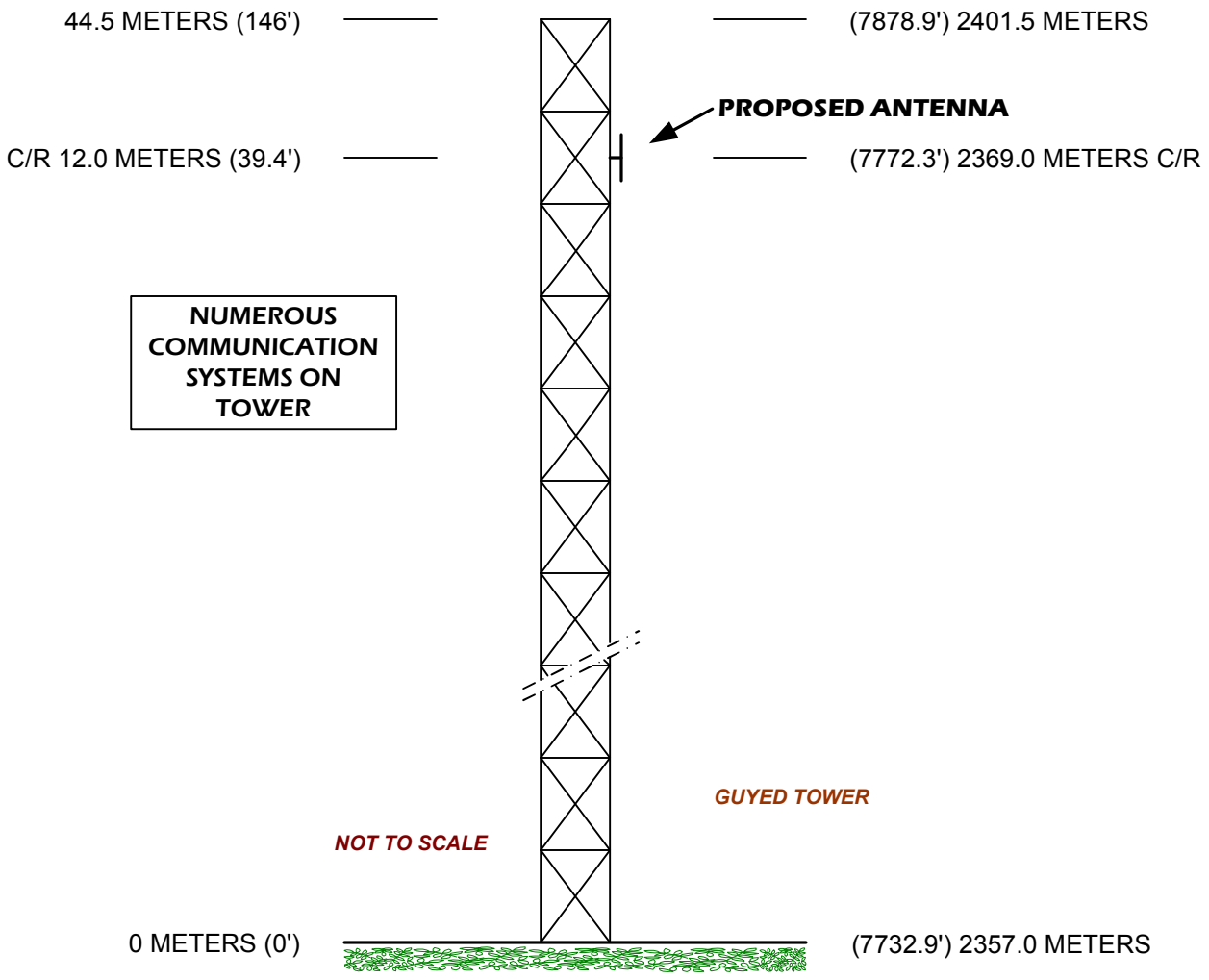


EXHIBIT E-1

EXISTING TOWER

KXLH-LD, HELENA, MONTANA

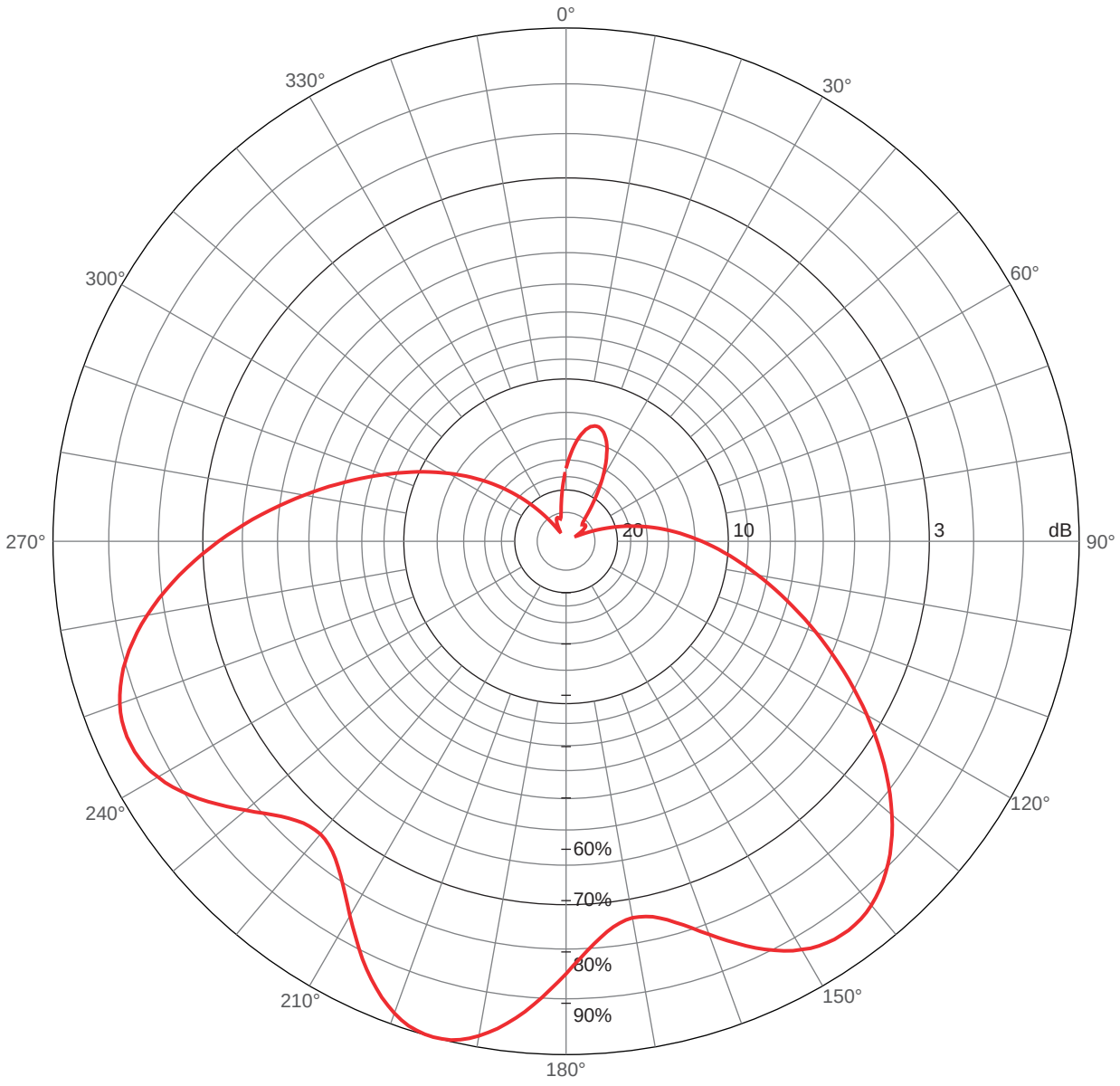
DECEMBER 2017

COHEN, DIPPELL AND EVERIST, P.C. Consulting Engineers Washington, D.C.

EXHIBIT E-2

ANTENNA MANUFACTURER DATA

Azimuthal Pattern (polar-linear)



Antenna, Order No. 600256
Panels per Bay: 2

Frequency: 189 MHz
Azimuthal Directivity: 4.55 dB
Directivity: 8.18 dBd

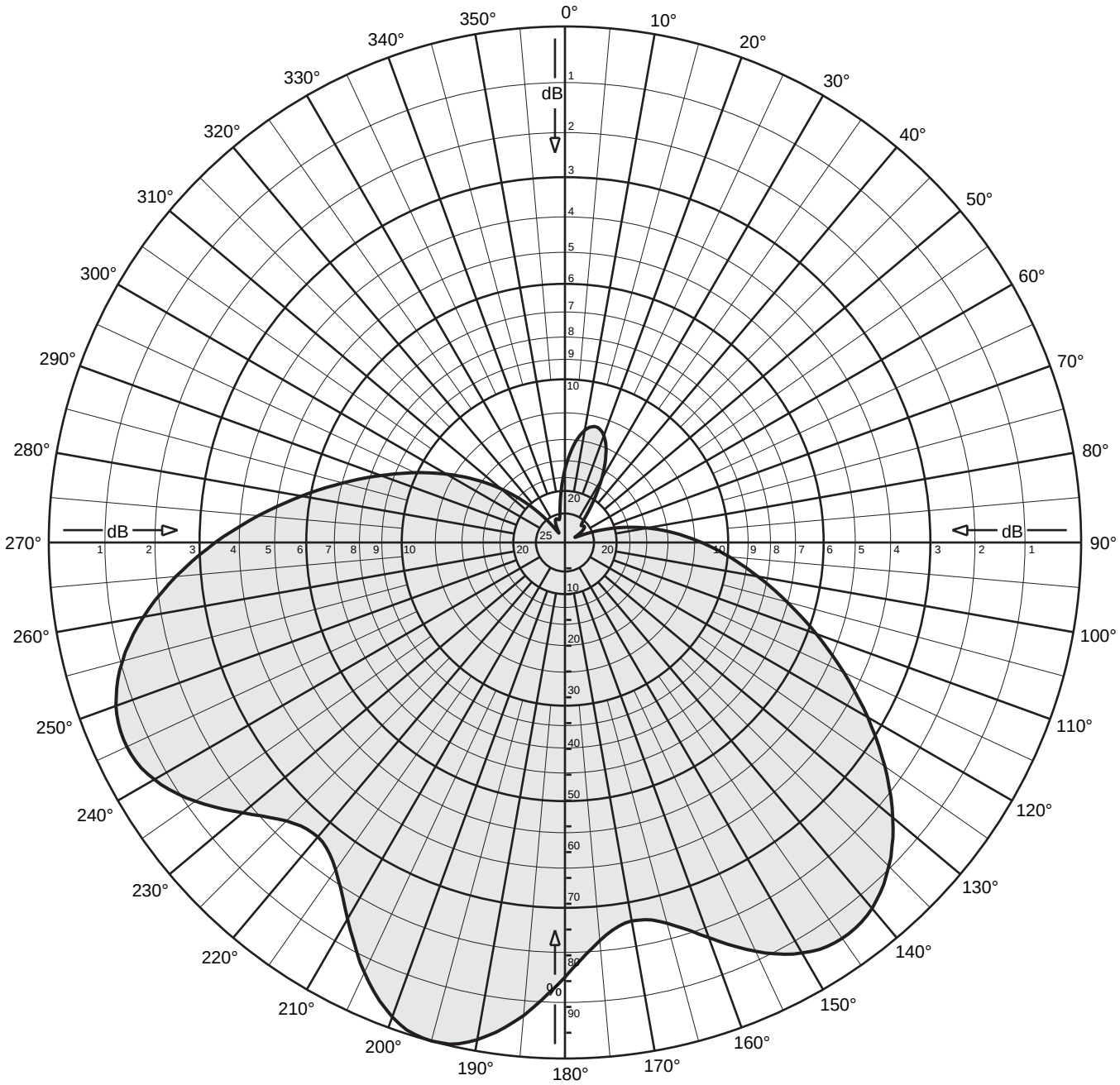
No.	Azimuth [°]	Radius [in]	Offset [in]	Power	Phase [°]
1	150	25	0	1	0
2	240	25	0	1	0

Subject to alternation

KRTV COMMUNICATIONS, LLC | KXLH | Date: 2017.11.03

Dan Stark | Kathrein USA mj | Page: 3

KATHREIN-Werke KG Anton-Kathrein-Str. 1-3 P.O. Box 10 04 44 83004 ROSENHEIM Germany Phone +49 8031 184-0 Fax +49 8031-495 www.kathrein.de



DRV-2/2HW Panel Array skewed @ 195 deg
Two bays
Two panels w/ 90 deg skew per bay
Max gain: 8.18 dBd Power-x: 6.58
Horizontal Polarization
Horizontal Plane Pattern

KATHREIN
SCALA DIVISION
Post Office Box 4580
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DRV-2/2HW Panel Array skewed @ 195 deg
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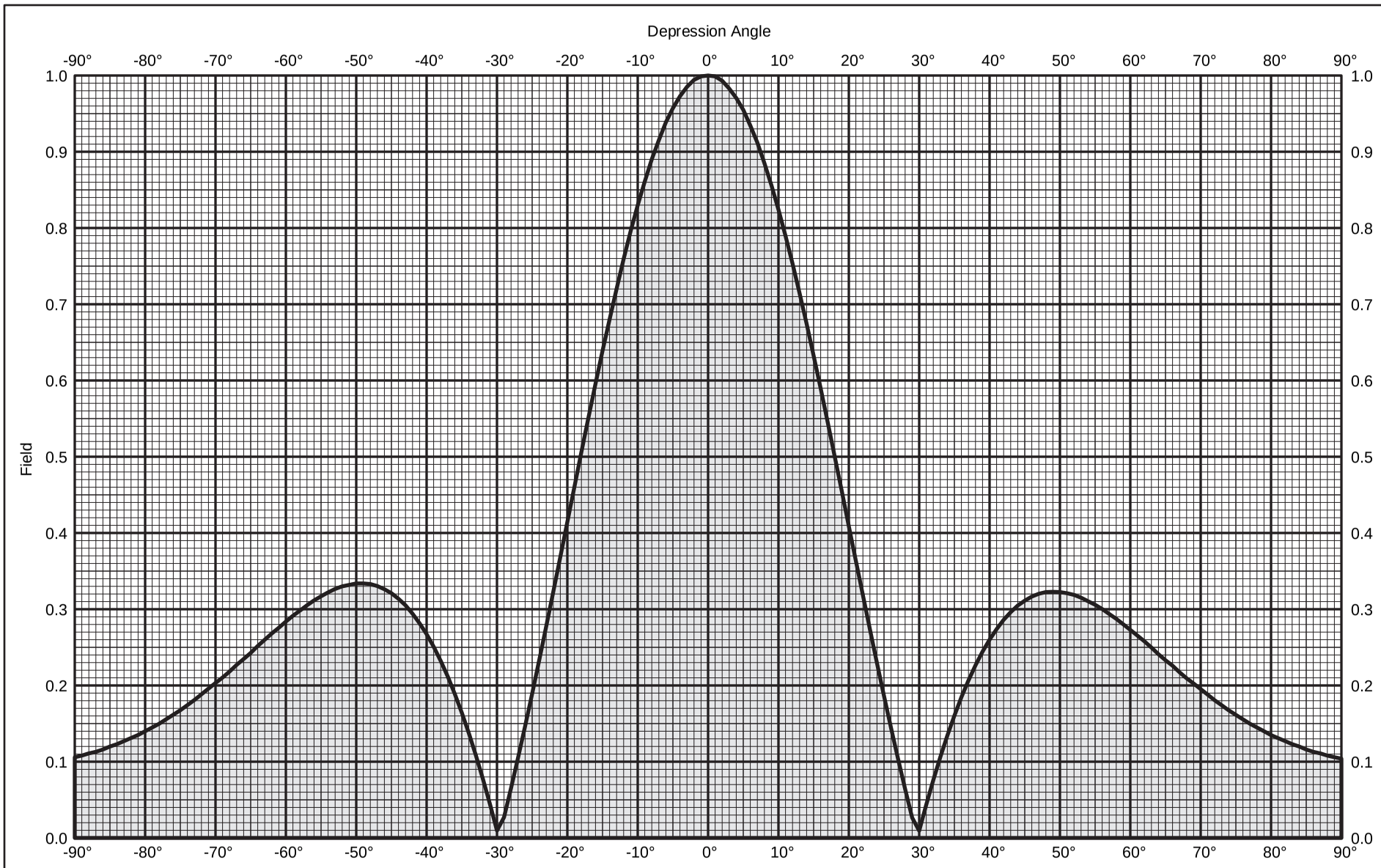
Horizontal Polarization
Horizontal Plane Pattern

Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
0	0.142	-16.94	-8.76	0.13	180	0.842	-1.49	6.69	4.67
10	0.221	-13.11	-4.93	0.32	190	0.978	-0.19	7.99	6.30
20	0.220	-13.14	-4.96	0.32	200	0.978	-0.19	7.99	6.30
30	0.142	-16.94	-8.76	0.13	210	0.842	-1.49	6.69	4.67
40	0.056	-25.01	-16.83	0.02	220	0.745	-2.56	5.62	3.65
50	0.049	-26.20	-18.02	0.02	230	0.815	-1.78	6.40	4.37
60	0.027	-31.50	-23.32	0.00	240	0.918	-0.74	7.44	5.55
70	0.066	-23.66	-15.48	0.03	250	0.926	-0.67	7.51	5.64
80	0.162	-15.81	-7.63	0.17	260	0.829	-1.63	6.55	4.52
90	0.265	-11.54	-3.36	0.46	270	0.678	-3.38	4.80	3.02
100	0.379	-8.42	-0.24	0.95	280	0.518	-5.71	2.47	1.77
110	0.518	-5.71	2.47	1.77	290	0.379	-8.42	-0.24	0.95
120	0.678	-3.38	4.80	3.02	300	0.265	-11.54	-3.36	0.46
130	0.829	-1.63	6.55	4.52	310	0.162	-15.81	-7.63	0.17
140	0.926	-0.67	7.51	5.64	320	0.066	-23.66	-15.48	0.03
150	0.918	-0.74	7.44	5.55	330	0.027	-31.49	-23.31	0.00
160	0.815	-1.78	6.40	4.37	340	0.049	-26.20	-18.02	0.02
170	0.745	-2.56	5.62	3.65	350	0.056	-25.02	-16.84	0.02



DRV-2/2HW Panel Array skewed @ 195 deg

Two bays

Two panels w/ 90 deg skew per bay

Max gain: 8.18 dBd Power-x: 6.58

Horizontal Polarization

Vertical Plane Pattern

KATHREIN
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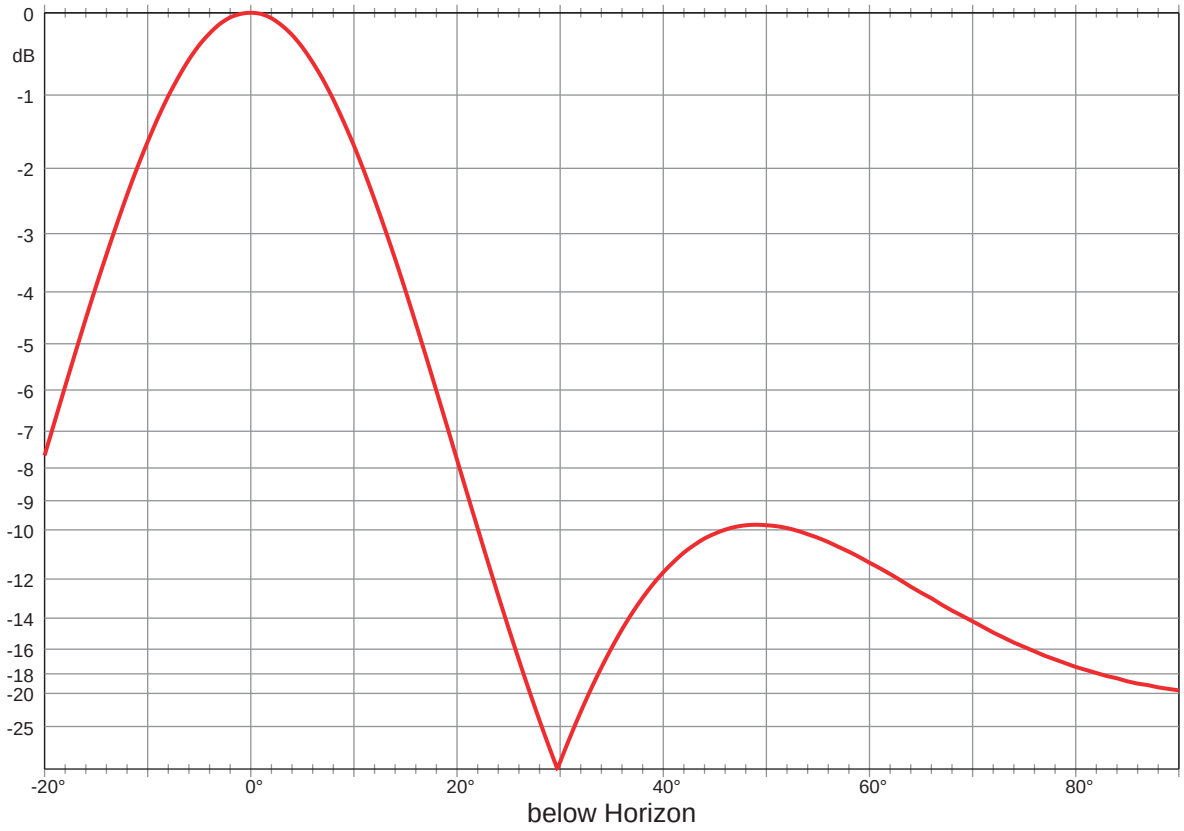
Elevation Pattern (cartesian-linear)



Antenna, Order No. 600256
Number of Bays: 2

Frequency:	189 MHz
Elevation Directivity:	3.64 dBd
Directivity:	8.18 dBd
Downtilt:	0°
Compensation:	0 %

No.	Vert. Distance [in]	Power	Phase [°]
2	63	1	0
1	0	1	0

Subject to alternation

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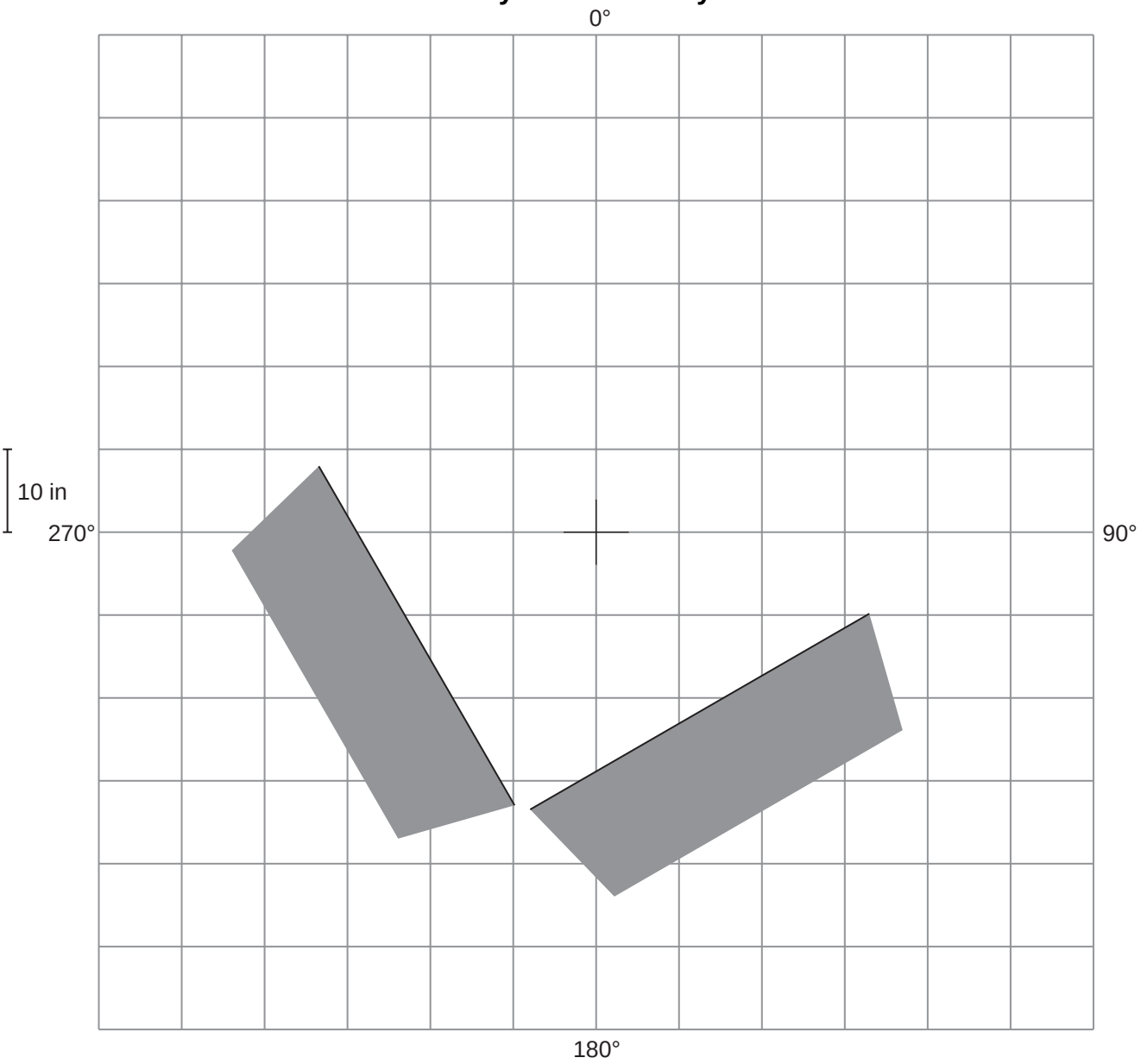
KATHREIN
SCALA DIVISION

DRV-2/2HW Panel Array skewed @ 195 deg
Two bays
Two panels w/ 90 deg skew per bay
Max gain: 8.18 dBd Power-x: 6.58

Horizontal Polarization
Vertical Plane Pattern

Angle	Field	Rel.dB	dBd	PwrMult	Angle	Field	Rel.dB	dBd	PwrMult
0	1.000	0.00	8.18	6.58	45	0.311	-10.14	-1.96	0.64
1	0.999	-0.01	8.17	6.56	46	0.317	-9.99	-1.81	0.66
2	0.993	-0.06	8.12	6.49	47	0.320	-9.89	-1.71	0.67
3	0.983	-0.15	8.03	6.35	48	0.322	-9.83	-1.65	0.68
4	0.971	-0.26	7.92	6.19	49	0.323	-9.82	-1.64	0.69
5	0.955	-0.40	7.78	6.00	50	0.322	-9.83	-1.65	0.68
6	0.934	-0.59	7.59	5.74	51	0.321	-9.87	-1.69	0.68
7	0.912	-0.80	7.38	5.47	52	0.319	-9.93	-1.75	0.67
8	0.885	-1.06	7.12	5.15	53	0.315	-10.03	-1.85	0.65
9	0.856	-1.35	6.83	4.82	54	0.310	-10.16	-1.98	0.63
10	0.824	-1.68	6.50	4.47	55	0.306	-10.29	-2.11	0.62
11	0.790	-2.05	6.13	4.10	56	0.300	-10.45	-2.27	0.59
12	0.753	-2.46	5.72	3.73	57	0.294	-10.64	-2.46	0.57
13	0.714	-2.92	5.26	3.36	58	0.287	-10.83	-2.65	0.54
14	0.675	-3.42	4.76	2.99	59	0.280	-11.05	-2.87	0.52
15	0.632	-3.98	4.20	2.63	60	0.273	-11.28	-3.10	0.49
16	0.590	-4.59	3.59	2.29	61	0.265	-11.52	-3.34	0.46
17	0.545	-5.27	2.91	1.95	62	0.258	-11.77	-3.59	0.44
18	0.500	-6.02	2.16	1.64	63	0.250	-12.05	-3.87	0.41
19	0.455	-6.84	1.34	1.36	64	0.241	-12.36	-4.18	0.38
20	0.409	-7.77	0.41	1.10	65	0.233	-12.65	-4.47	0.36
21	0.363	-8.79	-0.61	0.87	66	0.226	-12.92	-4.74	0.34
22	0.318	-9.94	-1.76	0.67	67	0.217	-13.26	-5.08	0.31
23	0.274	-11.26	-3.08	0.49	68	0.209	-13.58	-5.40	0.29
24	0.229	-12.79	-4.61	0.35	69	0.203	-13.87	-5.69	0.27
25	0.186	-14.60	-6.42	0.23	70	0.195	-14.19	-6.01	0.25
26	0.144	-16.82	-8.64	0.14	71	0.188	-14.52	-6.34	0.23
27	0.104	-19.70	-11.52	0.07	72	0.181	-14.87	-6.69	0.21
28	0.064	-23.85	-15.67	0.03	73	0.174	-15.19	-7.01	0.20
29	0.027	-31.51	-23.33	0.00	74	0.167	-15.53	-7.35	0.18
30	0.009	-40.53	-32.35	0.00	75	0.161	-15.84	-7.66	0.17
31	0.044	-27.23	-19.05	0.01	76	0.156	-16.16	-7.98	0.16
32	0.076	-22.41	-14.23	0.04	77	0.150	-16.49	-8.31	0.15
33	0.106	-19.49	-11.31	0.07	78	0.145	-16.78	-8.60	0.14
34	0.134	-17.44	-9.26	0.12	79	0.140	-17.08	-8.90	0.13
35	0.160	-15.90	-7.72	0.17	80	0.135	-17.40	-9.22	0.12
36	0.185	-14.67	-6.49	0.22	81	0.131	-17.66	-9.48	0.11
37	0.207	-13.70	-5.52	0.28	82	0.127	-17.92	-9.74	0.11
38	0.226	-12.90	-4.72	0.34	83	0.123	-18.20	-10.02	0.10
39	0.244	-12.24	-4.06	0.39	84	0.120	-18.42	-10.24	0.09
40	0.260	-11.70	-3.52	0.44	85	0.116	-18.71	-10.53	0.09
41	0.274	-11.25	-3.07	0.49	86	0.113	-18.94	-10.76	0.08
42	0.286	-10.87	-2.69	0.54	87	0.111	-19.10	-10.92	0.08
43	0.296	-10.57	-2.39	0.58	88	0.108	-19.33	-11.15	0.08
44	0.305	-10.32	-2.14	0.61	89	0.106	-19.50	-11.32	0.07
					90	0.104	-19.66	-11.48	0.07

System Summary



Sketch Top View, M 1 : 20

Antenna Order No.:	600256	Frequency:	189 MHz
Panels per Bay:	2	Max ERP:	3kW
Radius:	25 in	Input Power:	512W TPO assuming .5 dB line loss
Number of Bays:	2	Total Loss:	0 dB
Verticale Distance:	63 in	Antenna Gain:	8.18 dBd
Physical Aperture:	110.24 in	Estimated line loss for 90 ft of 7/8 Foam:	.5 dB
Harness Loss:			
Transmision Line:	no	System Gain: 7.68dBd (power-x: 5.86)	
Length:		*Power level @ input to antenna: 456W	

Subject to alternation

KATHREIN	KRTV COMMUNICATIONS, LLC	KXLH	Date: 2017.11.03
	Dan Stark	Kathrein USA mj	Page: 2

EXHIBIT E-3

ALLOCATION STUDY

tvstudy v2.2.4 (Z2Qqz3)
Database: localhost, Study: KXLH-KTVHSite2, Model: Longley-Rice
Start: 2017.12.22 17:06:27

Study created: 2017.12.22 17:01:41

Study build station data: LMS TV 2017-12-21 (38)

    Proposal: KXLH-LD D9 LD LIC HELENA, MT
 File number: KTVHSite
 Facility ID: 168401
Station data: User record
   Record ID: 129
     Country: U.S.

Build options:
Protect pre-transition records not on baseline channel

Search options:
Baseline record excluded if station has CP

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	K08KT-D	D8	LD	LIC	BOULDER, MT	BLDTV20090831ABW	71.8 km
Yes	KUSM-TV	D8	DT	LIC	BOZEMAN, MT	BLEDT20050926ALC	143.2
Yes	KFBB-TV	D8	DT	LIC	GREAT FALLS, MT	BLCDT20071108ADA	85.1
No	K08LI-D	D8	LD	LIC	WHITE SULPHUR SPRING, MT	BLDTV20120507AAX	76.2
No	K09SD-D	D9	LD	LIC	LEMHI, ETC., ID	BLDTV20100924ACT	256.2
No	K09BG-D	D9	LD	LIC	BASIN, MT	BLDTV20091123AAB	74.8
No	K09YR-D	D9	LD	LIC	HARLOWTON, MT	BLDTV20120621ABI	160.8
No	K09ZB-D	D9	LD	LIC	HAVRE, MT	BLDTV20140318AAA	238.1
No	K09HI	N9	TX	LIC	JORDAN, ETC., MT	BLTTV1622	354.2
No	K09HI	D9	LD	CP	JORDAN, ETC., MT	BDFCDTV20110922ACM	354.2
Yes	KCFW-TV	D9	DT	APP	KALISPELL, MT	BLANK0000036084	239.8
Yes	KCFW-TV	D9	DT	LIC	KALISPELL, MT	BLCDT20090622ADR	239.8
No	K09JG-D	D9	LD	LIC	MALTA, MT	BLDTV20111116ATQ	333.3
Yes	K09LW-D	D9	LD	LIC	MARTINSDALE/LENNEP, MT	BLDTV20120619ACV	106.6
No	K09MY-D	D9	LD	LIC	POLARIS, MT	BLDVL20120529ALL	190.6
No	K09WS	N9	TX	LIC	ROUNDUP, MT	BLTTV19970409JB	242.8
No	K09BX-D	D9	LD	LIC	SACO, MT	BLDTV20120514AEY	368.0
No	K09YT-D	D9	LD	LIC	SULA, MT	BLDTV20110816ABM	208.2
No	K09FQ-D	D9	LD	LIC	THOMPSON FALLS, MT	BLDTV20090610ADP	284.3
Yes	K09MH-D	D9	LD	LIC	WHITE SULPHUR SPRING, MT	BLDTV20120618ABZ	76.2
No	K09SF	N9	TX	LIC	NORTH FORK, ETC., WY	BLTTV19830314ID	325.9
No	K10RC-D	D10	LD	LIC	DENTON, MT	BLDTV20140821AEK	144.1
No	K10RD-DT	D10	LD	CP	WHITE SULPHUR SPRING, MT	BNPDTV20140226AAD	76.2

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

```
    Channel: D9
       Mask: Stringent
   Latitude:  46 49 29.80 N (NAD83)
  Longitude: 111 42 15.90 W
Height AMSL: 2369.0 m
       HAAT: 0.0 m
   Peak ERP: 3.00 kW
    Antenna: DRV-2 2HW 0.0 deg
Elev Pattrn: Generic
  Elec Tilt: 1.00
```

48.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	0.060 kW	549.7 m	45.9 km
45.0	0.008	424.0	26.7
90.0	0.211	392.4	48.2
135.0	2.31	524.9	74.1
180.0	2.13	715.0	80.1
225.0	1.83	946.7	83.9
270.0	1.38	939.5	81.6
315.0	0.039	601.1	45.1

Database HAAT does not agree with computed HAAT
Database HAAT: 0 m Computed HAAT: 637 m

Proposal 21.00 dBu contour does not cross Canadian border
Distance to Canadian border: 241.5 km

Distance to Mexican border: 1588.6 km

Conditions at FCC monitoring station: Ferndale WA
Bearing: 290.3 degrees Distance: 841.8 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 142.7 degrees Distance: 905.2 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 BLEDT20050926ALC LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KUSM-TV	D8	DT	LIC	BOZEMAN, MT	BLEDT20050926ALC	
Undesireds:	KXLH-LD	D9	LD	LIC	HELENA, MT	KTVHSite	143.2 km
	KIFI-TV	D8	DT	LIC	IDAHO FALLS, ID	BLCDT20090612AGO	280.1
	KFBB-TV	D8	DT	LIC	GREAT FALLS, MT	BLCDT20071108ADA	209.4

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
19757.2	115,855	14544.2	106,155	14433.3	106,085	14421.1	106,085	0.08	0.00

Undesired	Total IX	Unique IX, before		Unique IX, after	
KXLH-LD D9 LD LIC	13.2	0		12.2	0
KIFI-TV D8 DT LIC	57.4	33	46.3	33	46.3	33
KFBB-TV D8 DT LIC	64.6	37	53.5	37	52.5	37

Interference to BLCDT20071108ADA LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KFBB-TV	D8	DT	LIC	GREAT FALLS, MT	BLCDT20071108ADA	
Undesireds:	KXLH-LD	D9	LD	LIC	HELENA, MT	KTVHSite	85.1 km
	KRTV	D7	DT	LIC	GREAT FALLS, MT	BLCDT20130701AAV	0.0

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
25105.2	93,515	21730.6	92,013	21730.6	92,013	21669.5	92,013	0.28	0.00

Undesired	Total IX	Unique IX, before		Unique IX, after	
KXLH-LD D9 LD LIC	61.1	0		61.1	0

Interference to BLANK0000036084 APP scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KCFW-TV	D9	DT	APP	KALISPELL, MT	BLANK0000036084	
Undesireds:	KXLH-LD	D9	LD	LIC	HELENA, MT	KTVHSite	239.8 km

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX		
47572.5	177,400	37752.2	138,823	37752.2	138,823	37695.5	138,823	0.15	0.00	
1034.0	88	715.6	0	715.6	0	715.6	0	0.00	0.00	(in Canada)

Undesired	Total IX	Unique IX, before	Unique IX, after
KXLH-LD D9 LD LIC	56.7	0	56.7	0

Interference to BLCDT20090622ADR LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KCFW-TV	D9	DT	LIC	KALISPELL, MT	BLCDT20090622ADR	
Undesireds:	KXLH-LD	D9	LD	LIC	HELENA, MT	KTVHSite	239.8 km

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
35623.4	148,211	28037.1	127,740	28037.1	127,740	28026.0	127,740	0.04	0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
KXLH-LD D9 LD LIC	11.1	0	11.1	0

Interference to BLDTV20120619ACV LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	K09LW-D	D9	LD	LIC	MARTINSDALE/LENNEP, MT	BLDTV20120619ACV	
Undesireds:	KXLH-LD	D9	LD	LIC	HELENA, MT	KTVHSite	106.6 km
	K09YR-D	D9	LD	LIC	HARLOWTON, MT	BLDTV20120621ABI	54.9
	K09HI	N9	TX	LIC	JORDAN, ETC., MT	BLTTV1622	272.2
	K09MH-D	D9	LD	LIC	WHITE SULPHUR SPRING, MT	BLDTV20120618ABZ	33.3

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
1130.8	503	1087.3	503	1037.0	502	1035.9	502	0.10	0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
KXLH-LD D9 LD LIC	2.0	0	1.0	0
K09YR-D D9 LD LIC	49.4	1	49.4	1	49.4	1
K09MH-D D9 LD LIC	1.0	0	1.0	0	0.0	0

Interference to BLDTV20120618ABZ LIC scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	K09MH-D	D9	LD	LIC	WHITE SULPHUR SPRING, MT	BLDTV20120618ABZ	
Undesireds:	KXLH-LD	D9	LD	LIC	HELENA, MT	KTVHSite	76.2 km

	K09HI	N9	TX	LIC	JORDAN, ETC., MT	BLTTV1622	302.4
	KCFW-TV	D9	DT	APP	KALISPELL, MT	BLANK0000036084	316.0
	K09LW-D	D9	LD	LIC	MARTINSDALE/LENNEP, MT	BLDTV20120619ACV	33.3

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
829.2	1,276	740.7	1,273	739.7	1,273	587.7	1,256	20.56	1.34

Undesired	Total IX	Unique IX, before		Unique IX, after	
KXLH-LD D9 LD LIC	153.1	17		152.1	17
K09LW-D D9 LD LIC	1.0	0	1.0	0	0.0	0

Interference to proposal scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KXLH-LD	D9	LD	LIC	HELENA, MT	KTVHSite	
Undesireds:	K08KT-D	D8	LD	LIC	BOULDER, MT	BLDTV20090831ABW	71.8 km
	K08LI-D	D8	LD	LIC	WHITE SULPHUR SPRING, MT	BLDTV20120507AAX	76.2
	K09HI	N9	TX	LIC	JORDAN, ETC., MT	BLTTV1622	354.2
	KCFW-TV	D9	DT	APP	KALISPELL, MT	BLANK0000036084	239.8
	K09LW-D	D9	LD	LIC	MARTINSDALE/LENNEP, MT	BLDTV20120619ACV	106.6
	K09MH-D	D9	LD	LIC	WHITE SULPHUR SPRING, MT	BLDTV20120618ABZ	76.2
	K10RD-DT	D10	LD	CP	WHITE SULPHUR SPRING, MT	BNPDTV20140226AAD	76.2

Service area		Terrain-limited		IX-free		Percent IX	
13049.1	75,290	9566.9	72,634	9291.4	72,603	2.88	0.04

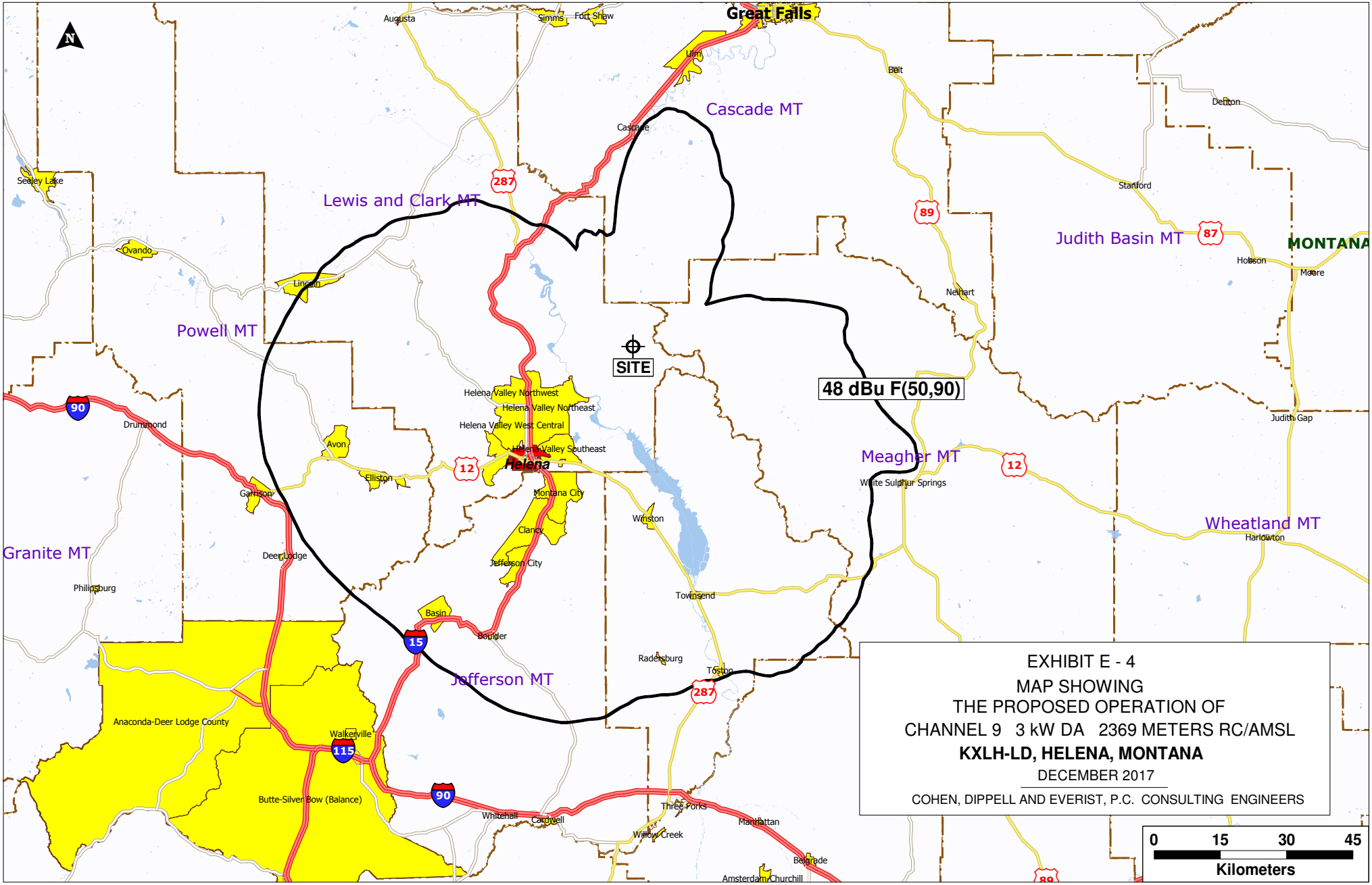
Undesired	Total IX		Unique IX		Prcnt Unique IX	
K08KT-D D8 LD LIC	5.1	0	5.1	0	0.05	0.00
K08LI-D D8 LD LIC	25.2	4	0.0	0	0.00	0.00
K09LW-D D9 LD LIC	2.0	0	2.0	0	0.02	0.00
K09MH-D D9 LD LIC	268.4	31	243.3	27	2.54	0.04
K10RD-DT D10 LD CP	25.2	4	0.0	0	0.00	0.00

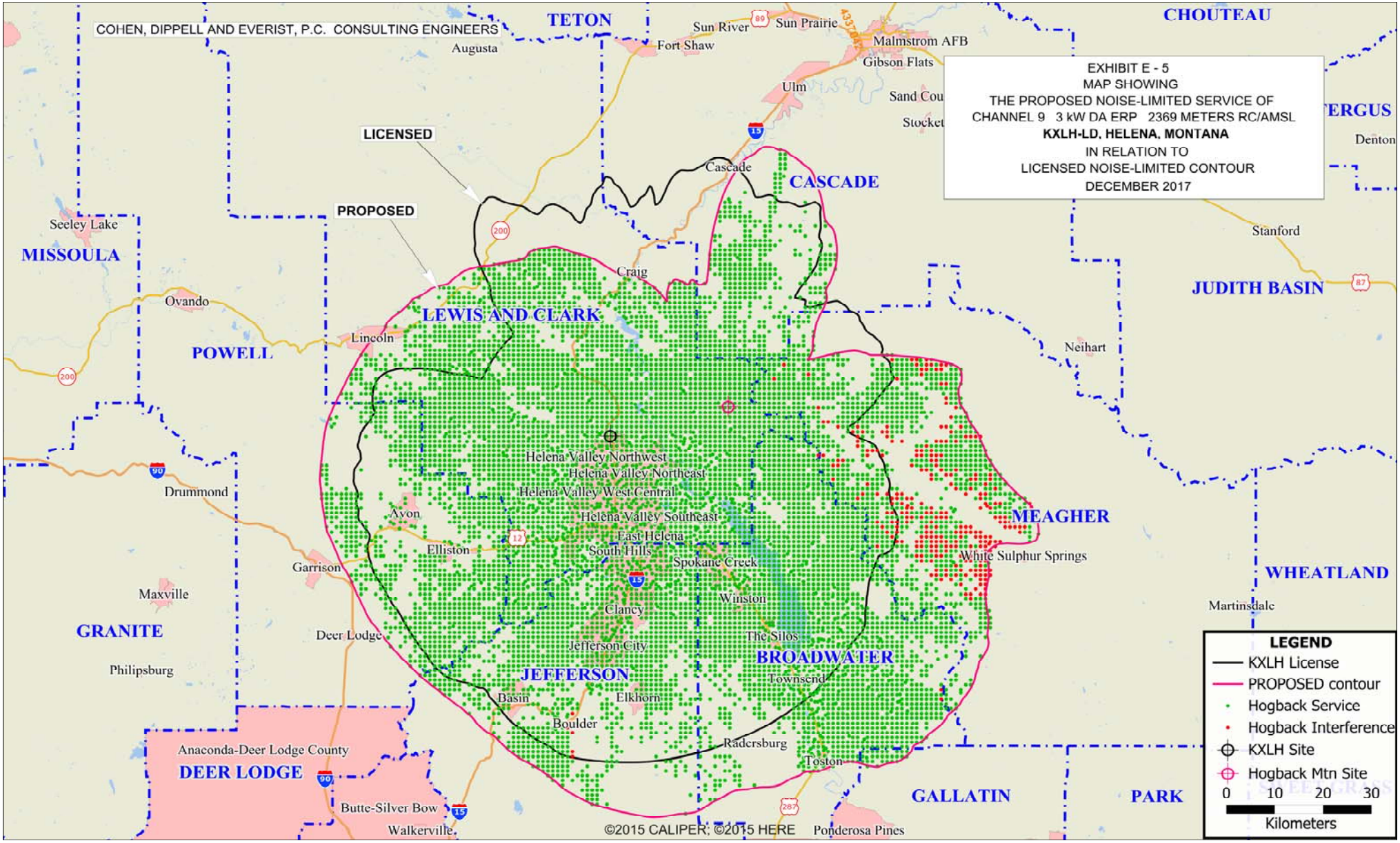
TABLE I
COMPUTED COVERAGE DATA
FOR THE PROPOSED DTV OPERATION OF
KXLH-LD, HELENA, MONTANA
CHANNEL 9 3.0 KW ERP 2369 METERS HAAT
DECEMBER 2017

Radial	Average Elevation	Effective Height	Depression Angle	Effective Radiated Power	Distance to Contour 48 dBu
N ° E, T	meters	meters	degrees	kW	km
0	1819.3	549.7	0.649	0.060	45.9
10	1782.4	586.6	0.671	0.147	54.3
20	1853.8	515.2	0.629	0.145	51.1
30	1899.8	469.2	0.600	0.060	42.6
40	1858.9	510.1	0.626	0.009	31.2
50	2022.4	346.6	0.516	0.007	23.0
60	1976.8	392.2	0.549	0.002	18.8
70	1916.5	452.5	0.589	0.013	31.1
80	1817.3	551.7	0.651	0.079	48.0
90	1976.6	392.4	0.549	0.211	48.2
100	1968.3	400.7	0.554	0.431	54.0
110	1781.8	587.2	0.671	0.805	68.0
120	1984.8	384.2	0.543	1.379	61.9
130	1883.0	486.0	0.611	2.062	70.5
140	1789.4	579.6	0.667	2.572	77.3
150	1700.2	668.8	0.716	2.528	80.1
160	1696.5	672.5	0.718	1.993	78.2
170	1655.6	713.4	0.740	1.665	78.0
180	1654.0	715.0	0.741	2.127	80.1
190	1491.4	877.6	0.821	2.869	86.3
200	1458.8	910.2	0.836	2.869	86.9
210	1454.6	914.4	0.838	2.127	84.6
220	1401.8	967.2	0.861	1.665	83.4
230	1399.8	969.2	0.862	1.993	84.9
240	1424.9	944.1	0.851	2.528	86.4
250	1427.9	941.1	0.850	2.572	86.5
260	1353.2	1015.8	0.883	2.062	85.7
270	1429.5	939.5	0.849	1.379	81.6

TABLE I
COMPUTED COVERAGE DATA
FOR THE PROPOSED DTV OPERATION OF
KXLH-LD, HELENA, MONTANA
CHANNEL 9 3.0 KW ERP 2369 METERS HAAT
DECEMBER 2017

Radial	Average Elevation	Effective Height	Depression Angle	Effective Radiated Power	Distance to Contour 48 dBu
N ° E, T	meters	meters	degrees	kW	km
280	1516.8	852.2	0.809	0.805	75.4
290	1614.1	754.9	0.761	0.431	67.4
300	1741.7	627.3	0.694	0.211	58.4
310	1751.8	617.2	0.688	0.079	50.9
320	1782.2	586.8	0.671	0.013	36.6
330	1739.6	629.4	0.695	0.002	25.0
340	1911.3	457.7	0.593	0.007	27.4
350	1979.3	389.7	0.547	0.009	25.8


Great Falls
Augusta
Simms
Fort Shaw
Ulm
Belt
Cascade MT
Cascade
Deltton
Sealey Lake
Lewis and Clark MT
287
89
Stanford
Judith Basin MT
87
MONTANA
Hobson
Moore
Ovando
Lincoln
Neihart
Powell MT
SITE
48 dBu F(50,90)
Helena Valley Northwest
Helena Valley Northeast
Helena Valley West Central
Helena Valley Southeast
Helena
90
Drummond
Avon
Elliston
12
Judith Gap
Meagher MT
White Sulphur Springs
Garrison
Montana City
Clancy
Winston
Wheatland MT
Harlowton
Granite MT
Deer Lodge
Jefferson City
Philipsburg
Townsend
Basin
Boulder
15
Radersburg
Toston
Jefferson MT
Anaconda-Deer Lodge County
Walkerville
115
Butte-Silver Bow (Balance)
Whitehall
Cardwell
Three Forks
Manhattan
Willow Creek
Belgrade
Amsterdam
Churchill
EXHIBIT E - 4
MAP SHOWING
THE PROPOSED OPERATION OF
CHANNEL 9 3 kW DA 2369 METERS RC/AMSL
KXLH-LD, HELENA, MONTANA
DECEMBER 2017
COHEN, DIPPELL AND EVERIST, P.C. CONSULTING ENGINEERS
0 15 30 45
Kilometers


COHEN, DIPPELL AND EVERIST, P.C. CONSULTING ENGINEERS
EXHIBIT E - 5
MAP SHOWING
THE PROPOSED NOISE-LIMITED SERVICE OF
CHANNEL 9 3 kW DA ERP 2369 METERS RC/AMSL
KXLH-LD, HELENA, MONTANA
IN RELATION TO
LICENSED NOISE-LIMITED CONTOUR
DECEMBER 2017
LICENSED
PROPOSED
TETON
CHOUTEAU
CASCADE
JUDITH BASIN
MEAGHER
WHEATLAND
LEWIS AND CLARK
POWELL
MISSOULA
GRANITE
JEFFERSON
BROADWATER
DEER LODGE
GALLATIN
PARK
Augusta
Fort Shaw
Sun River
Sun Prairie
Malmstrom AFB
Gibson Flats
Ulm
Cascade
Craig
Stanford
Neihart
Seeley Lake
Ovando
Lincoln
Drummond
Avon
Elliston
Garrison
Maxville
Philipsburg
Deer Lodge
Helena Valley Northwest
Helena Valley Northeast
Helena Valley West Central
Helena Valley Southeast
East Helena
South Hills
Spokane Creek
Winston
Clancy
Jefferson City
The Silos
Townsend
Basin
Elkhorn
Boulder
Radersburg
Toston
White Sulphur Springs
Martinsdale
Denton
Anaconda-Deer Lodge County
Butte-Silver Bow
Walkerville
Ponderosa Pines
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PROPOSED contour
Hogback Service
Hogback Interference
KXLH Site
Hogback Mtn Site
0 10 20 30
Kilometers