

# **ENGINEERING REPORT**

Translator Application  
Channel 228D, 93.5 MHz  
Newton, KS

**March, 2003**

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**MUNN-REESE, INC.**  
Broadcast Engineering Consultants  
Coldwater, MI 49036

## **Discussion**

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This firm has been retained to prepare the required engineering report in support of a new Translator Application for Newton, KS, on Channel 228. The Translator will rebroadcast KYFW, Wichita, KS, Channel 202. This proposal meets the requirements of the Rules.

It has been determined that the translator may be used in the area without interference to any existing FM broadcast station. A copy of the FCC Form 349 Tech Box Worksheet has been included in **Exhibit 1.0**. This represents the actual technical information as filed with the FCC in the recent Translator Window. A copy of the allocation has been included for this translator has been included as **Exhibit 1.1**. A copy of the vertical placement of the antenna on the proposed tower has been included as **Exhibit 2.0**. The proposed Translator Coverage area has been depicted in **Exhibit 3.0**. **Exhibit 3.1** of this report is a map showing the relationship of the primary station protected contour to the protected contour of the translator station.

The proposed facility will meet the requirements of the Rules for operation without a licensed operator in attendance. The transmitter site should be reached promptly at all hours and in all seasons. The transmitter should be equipped with proper control and interface circuits which will place the translator in a non-radiating condition in the event the proper incoming signal is absent. The transmitter and controls should be placed in a locked area to prevent unauthorized tampering with the equipment. A person or persons should be assigned to observe the signals of the station each day, and to take corrective action if required. The equipment proposed for this operation is listed in the type-approved list of the Commission.

## **CERTIFICATION**

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I hereby certify, subject to penalties for perjury, that the contents of this Engineering Statement are true and accurate to the best of my knowledge and belief.

March 26, 2003

**Munn-Reese, Inc.**

By Wayne S. Reese  
Wayne S. Reese, President

By Donald J. Baad  
Donald J. Baad, Project Engineer

By Justin W. Asher  
Justin W. Asher, Project Engineer

PO Box 220  
Coldwater, MI 49036  
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Section III-A - Engineering

**Exhibit 1.0 - FCC Form 349**

**TECHNICAL SPECIFICATIONS**

Ensure that the specifications below are accurate. Contradicting data found elsewhere in this application will be disregarded. All items must be completed. The response "on file" is not acceptable.

**TECH BOX**

1. Channel: \_\_\_\_\_

2. Primary Station:	Call Sign	City	State	Channel
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3. Delivery Method:

Off-air     
  Microwave     
  Satellite     
  Via \_\_\_\_\_     
  Other

4. Antenna Location Coordinates: (NAD 27)

\_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ "     N     S Latitude  
 \_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ "     E     W Longitude

5. Antenna Structure Registration Number: \_\_\_\_\_

Not applicable     
  FAA Notification Filed with FAA

6. Antenna Location Site Elevation Above Mean Sea Level: \_\_\_\_\_ meters

7. Overall Tower Height Above Ground Level: \_\_\_\_\_ meters

8. Height of Radiation Center Above Ground Level: \_\_\_\_\_ meters (H)    \_\_\_\_\_ meters (V)

9. Effective Radiated Power: \_\_\_\_\_ kW (H)    \_\_\_\_\_ kW (V)

10. Transmitting Antenna:

Nondirectional     
  Directional "Off-the-shelf"     
  Directional composite

Manufacturer	Model
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Rotation: \_\_\_\_\_ °     No rotation

Degree	Value	Degree	Value	Degree	Value	Degree	Value	Degree	Value	Degree	Value
0		60		120		180		240		300	
10		70		130		190		250		310	
20		80		140		200		260		320	
30		90		150		210		270		330	
40		100		160		220		280		340	
50		110		170		230		290		350	
Additional Azimuths											

# Exhibit 1.1 - Translator Allocation

REFERENCE CH# 228D - 93.5 MHz, Pwr= 0.25 kW, HAAT=82.2 M, COR= 508 M      DISPLAY DATES  
 38 01 47 N      Average Protected F(50-50)= 7.09 km      DATA 03-22-03  
 97 18 53 W      Ave. F(50-10) 40 dBu= 23.8 54 dBu= 10.1 80 dBu= 2.3 100 dBu= 1.1      SEARCH 03-26-03

CH CITY	CALL	TYPE STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr(kW) HAAT(M)	COR(M) INT(km)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
228D Newton	BBNXL	AP C KS	0.0 180.0	0.00	38 01 47 97 18 53	0.250	508	7.1 23.8 Bible Broadcasting Network	-30.85<	-30.85<
226C Pratt	*KDGB	LIC C KS	263.0 83.0	88.16 BLH20010123AAA	37 55 43 98 18 36	100.000 322	817 10.5	74.0 Waitt Radio, Inc.	66.25	13.01
> Reference HAAT at 263.0°= 78.0 M, Pwr= 0.25 kW, Pro. Dist. = 11.44 km, Int Dist. = 1.11 km										
228A Wellington	*KWME<	LIC CN KS	185.0 5.0	87.86 BLH19980320KF	37 14 28 97 24 04	6.000 85	471 84.1	26.2 Johnson Enterprises, Inc.	-7.34<	23.67
> Reference HAAT at 185.0°= 73.5 M, Pwr= 0.25 kW, Pro. Dist. = 11.14 km, Int Dist. = 37.96 km										
230C3 Andover	KDGS	LIC CN KS	182.4 2.4	45.89 BLH19931108KC	37 37 00 97 20 11	25.000 100	497 4.1	39.1 Entercom Wichita License,	34.74	5.70
228A Eureka	*KOTE	LIC CN KS	106.1 286.1	93.89 BLH19910304KC	37 47 29 96 17 25	3.000 65	439 68.5	19.7 Newwood Productions, L.p.	14.36	36.54
> Reference HAAT at 106.1°= 72.2 M, Pwr= 0.25 kW, Pro. Dist. = 11.05 km, Int Dist. = 37.61 km										
229C1 Salina	*KYEZ	LIC CN KS	346.1 166.1	105.73 BLH6686	38 57 14 97 36 29	100.000 160	538 89.5	59.8 Ebc Inc.	6.07	31.84
> Reference HAAT at 346.1°= 59.8 M, Pwr= 0.25 kW, Pro. Dist. = 10.16 km, Int Dist. = 14.13 km										
225C2 Osage City	KANSFM	LIC CN KS	62.2 242.2	121.01 BLH19890925KE	38 31 47 96 05 09	36.000 172	529 5.9	51.9 C&c Consulting, Inc.	108.07	68.00

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 "\*\*" = ERP and HAAT on direct line to and from reference station.  
 "<" = Station meets FCC minimum distance spacing for its class. "<" = Contour Overlap

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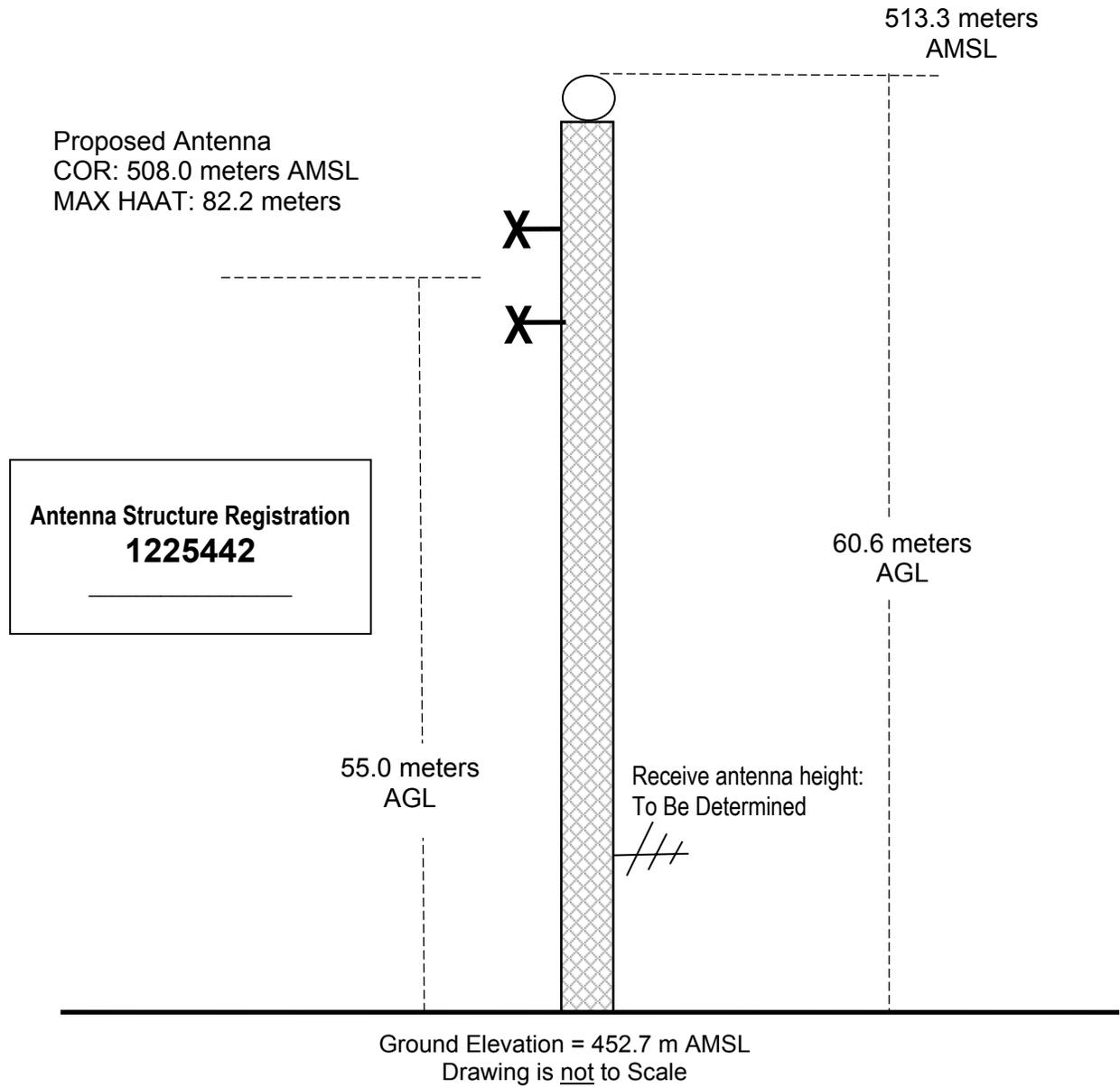
# EXHIBIT 2.0 VERTICAL PLAN OF ANTENNA SYSTEM

This station will rebroadcast KYFW, Wichita, KS.

### Site Location

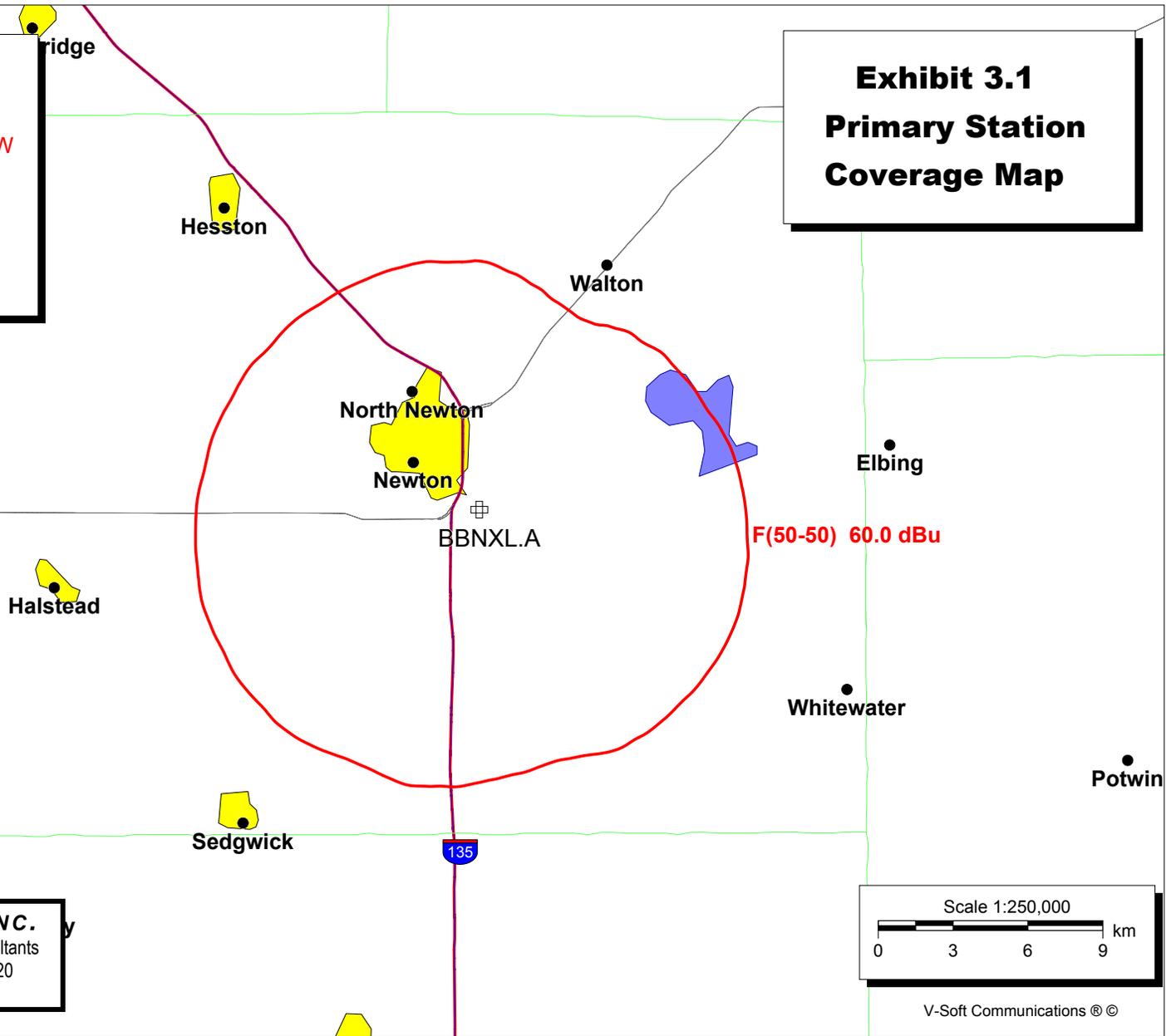
NL: 38° 01' 47"

WL: 97° 18' 53"

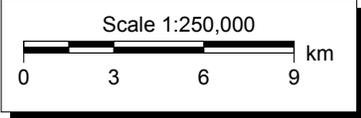


**BBNXL.A**  
Newton, KS  
Latitude: 38-01-47 N  
Longitude: 097-18-53 W  
ERP: 0.25 kW  
Channel: 228  
Frequency: 93.5 MHz  
AMSL Height: 508.0 m  
Horiz. Pattern: Omni

**Exhibit 3.1  
Primary Station  
Coverage Map**



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# Exhibit 3.1 Primary Station Coverage Map

**BBNXL.A**  
Newton, KS  
Latitude: 38-01-47 N  
Longitude: 097-18-53 W  
ERP: 0.25 kW  
Channel: 228  
Frequency: 93.5 MHz  
AMSL Height: 508.0 m  
Horiz. Pattern: Omni

**KYFW**  
Wichita, KS  
Latitude: 37-40-22 N  
Longitude: 097-20-08 W  
ERP: 17.00 kW  
Channel: 202  
Frequency: 88.3 MHz  
AMSL Height: 446.0 m  
Horiz. Pattern: Omni

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