XXXX Z1
Exhibit A

KUON
Ithaca, NE
2023

INSPECTION REPORT

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Summary

DATE: 11/11/2023
LOCATION: Ithaca, NE
Type: Guyed
Height: 770’
INSPECTOR: Ken Rickhoff
FCC: 1029935

Ken Rickhoff of Precision Communications, LLC. completed a physical inspection of the KUON broadcast tower. Conditions then existing on the tower were noted and photographed. This report describes those conditions, includes reference photographs, and recommendations for any needed corrective action.

The contents of this report, including the recommendations, are based on a visual condition assessment per the TIA 222 Structural Standard for Antenna Supporting Structures and Antennas, Annex J. No type of structural analysis or testing of individual components is included or implied. The tower owner is responsible for maintaining the tower and its components and fulfilling any requirements of the FCC, FAA or any other governing body under which the tower or any of its components are subject.

Recommendations

There are areas of surface rust on the ladder where the galvanizing appears to be worn off. We recommend that the rusting areas be treated.
Ref: Photos 4, 5, & 7

The banding that secures diagonal members at their intersections is loose or missing in multiple sections throughout the tower. The banding is stretching over time. These conditions can cause wear and loss of steel where the diagonal members rub and hit each other at the intersections. We recommend that the banding be removed from all diagonals throughout the tower and replaced with U-bolts and backing plates.
Ref: Photos 16, 17, 18 – 22, & 26

There is surface rust at the intersection of some diagonal members that have loose or missing banding. We recommend that all rusting areas be treated and coated with a high zinc content primer when the bandings are replaced with U-bolts and backing plates.
Ref: Photos 20, 22, & 28

One diagonal member in Section #10, Bay #2, on Face B is bent. We recommend that this member be replaced. ****Priority**
Ref: Photo 22

One diagonal member in Section #15, Bay #1, on Face C is bent at the upper and lower ends of the member. We recommend that this member be replaced. ****Priority**
Ref: Photos 23 & 24

One diagonal member in Section #17, Bay #3, on Face A is bent. We recommend that this member be replaced. ****Priority**
Ref: Photo 25

One diagonal member in Section #30, Bay #3, on Face B is bent. We recommend that this member be replaced. ****Priority**
Ref: Photo 26

Note: All of the diagonals are mounted to the outside of the gusset plates, and this is causing them to bow at their intersections. Some look worse than others for this reason. Upon replacement of the damaged diagonal members, installing the new rods at the inside of the gusset plates would help reduce the bowing around each other.

Recommendations continued

The ladder does not have a safety climb cable system. We recommend that one be installed to comply with the ANSI TIA 222-G 12.3 code. ****Priority**
Ref: Photo 14

There are multiple brackets secured to the back side of the ladder at several elevations throughout the tower. The brackets are impeding the climbing area and some look to be preventing the climber from putting his foot directly on the ladder rung, and more on the C-channel that is bolted to it. This represents a potential climbing hazard and is a safety concern. We recommend that two runs of rigid conduit be installed to support the coax lines, and the brackets be removed from the ladder. ****Priority**
Ref: Photos 13, 14, 28, & 29

The ladder is significantly bowed at two locations just below the second guy level. This represents a possible climbing hazard and is a safety concern. We recommend that the bowed ladder sections be replaced, and that all U-bolts securing the ladder be checked and tightened throughout the tower, as needed. ****Priority**
Ref: Photo 28

Guy wire levels #5 and #6 are not within the current TIA tower specifications for guy tensions. We recommend adjusting the tensions at these levels. The rest of the tensions and vertical alignment are within specifications. ****Priority**
Ref: Page 22

There are areas of surface rust on the guy wires, mostly at the upper elevations of each wire. We recommend treating the guy wires with an anodic self-priming paint or paraffin wax to prevent the progression of the rusting.
Ref: Photos 39 - 43

There are broken chunks of concrete at the outer anchor A foundation, and slight cracks in the concrete at the inner anchor B and outer anchor C foundations. We recommend that the outer anchor A foundation be repaired, and the cracks in the concrete at the inner anchor B and outer anchor C foundations be patched and sealed.
Ref: Photos 32 - 34

Several cables and flexible lines to ancillary antennas were found to be unsecured at several locations. The lines were temporarily secured with electrical tape and nylon zip ties during the inspection. We recommend that the lines be secured with proper stainless steel hardware, and that the broken hangers that have slid down the line in section #15 be removed.
Ref: Photos 50, 51, 54,

Recommendations continued

The hoisting grip for the flexible line feeding the dipole antenna in section #20 is secured with a butterfly clamp. We recommend that the grip be supported with stronger hardware.
Ref: Photo 53

There is light to moderate surface rust on the mount for the dipole antenna in section #20. We recommend that the rusting areas be treated and coated with a high zinc content primer.
Ref: Photo 52

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Broadcast

Photographs 1 - 10
Main Antenna: Andrew ATW16V5-HTO -12
Center of Radiation: 820'
Transmission Line: RCA 6-1/8" rigid coax with Marmon flanges

1
Profile view of main antenna. Photo also shows faded and missing paint.

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2

Antenna base mount.

3

Transmission line input and top fixed hanger.

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4

Transmission line elbow complex below the antenna input. Photo also shows some surface rust on the ladder.

5

Fixed hangers below the top elbow complex. Photo also shows some surface rust on the ladder.

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6

Transmission line location in the tower.

7

Typical spring hanger. Photo also shows surface rust on the ladder.

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8

Transmission line elbow complex at the tower base.

9

Transmission line in the bridge.

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10

Transmission line entering the building.

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Structure

Photographs 11 - 29
Manufacturer: Stainless G-7
Type: Guyed
Height: 770’

The sections of tower appeared in satisfactory condition. The paint coverage has faded and worn off at some elevations. The climbing ladder does not have a safety climb cable system installed. The lightning rod assembly above the top mounted antenna appeared in satisfactory condition.

11

Profile view of tower.

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12

Typical leg splice and gusset plate connections.

13

Typical bracing configuration. Photo also shows C-channel brackets secured to the back side of the ladder.

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14

The climbing ladder without a safety climb cable system. Photo also shows C-channel brackets secured to the back side of the ladder.

15

Grounding at the tower base.

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16

Typical missing banding at the intersection of diagonals.

17

Typical missing banding at the intersection of diagonals.

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18

Typical loose banding at the intersection of diagonals.

19

Typical loose banding at the intersection of diagonals.

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20

Typical loose banding at the intersection of diagonals. Photo also shows rust at the intersection of the diagonal members.

21

Typical loose banding at the intersection of diagonals.

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22

Bent diagonal member in Section #10 with 1" deflection. Photo also shows rust at the intersection of the diagonal members.

23

Bend at the lower end of diagonal member in Section #15.

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24

Bend at the upper end of diagonal member in Section #15.

25

Bent diagonal member in Section #17.

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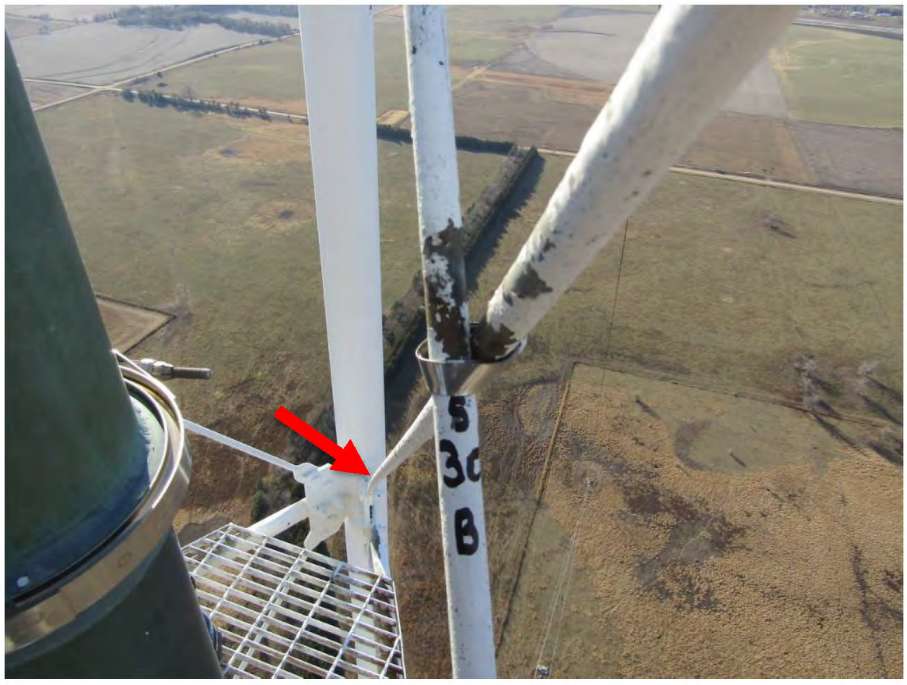

26

Bent diagonal member in Section #30. Photo also shows loose banding and surface rust at the intersection of the diagonal members.

27

Surface rust on the ladder.

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28

C-channel mounting brackets secured to the ladder below guy level #2. Photo also shows two significant bows in the ladder.

29

C-channel mounting brackets secured to the ladder below guy level #4.

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Guy Wires

Photographs: 30 - 43
Guy Levels: 6

Vertical Alignment

The vertical alignment of the tower was measured with a transit set up in two locations 90° apart from each other. Facings were verified using a lens tic compass.

Temperature: 55 degrees **Wind: 5 mph**

Guy Level	Transit A Facing Leg A 0			Transit B Facing Leg A 90		
	Left	Ø	Right	Left	Ø	Right
1		Ø			Ø	
2		Ø			Ø	
3		Ø			Ø	
4		Ø			Ø	
5		Ø			Ø	
6		Ø			Ø	

Guy Wire Tensions

The tensions of the guy wires were measured from the A anchor with an intercept scope. The recommended tension intercept readings are at 55 degrees off the provided temperature chart.

The acceptable tolerance for tensions on the guy wires is plus or minus 5%, according to . documents provided by SpectraSite.

Temperature: 55 degrees Wind: 5 mph

Guy Level	Measured Intercept / Sag (Feet)	Recommended Intercept / Sag (Feet)	Percentage
1	10’	10.5’	+ 0.4 %
2 R	15’	14.6’	- .02 %
2L	14.8’	14.6’	0 %
3	24’	25.3’	+0.5 %
4 R	88’	92’	+4 %
4L	87’	92’	+4 %
5	92.4’	81.3’	-11 %
6	96’	83.6’	-12 %

30

Inner anchor A with brush growing on the guy wires.

31

Inner anchor A after removal of brush by the inspection crew.

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32

Broken concrete at the outer anchor A.

33

Small cracks in the concrete at the inner anchor B.

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34

Small cracks in the concrete at the outer anchor C.

35

Typical fencing at the anchors, and dampers on the guy wires.

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36

Typical grounding cable connections on guy wires.

37

Typical tower connection for guy wires at levels #1, #3, #5, & #6.

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Typical tower connection for guy wires at double guyed levels #2 & #4.

39

Typical areas of surface rust on at the upper end of a level #3 guy wire.

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40

Typical areas of surface rust on a level #3 guy wire.

41

Typical areas of surface rust on a level #4 guy wire.

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42

Typical areas of surface rust on a level #5 guy wire.

43

Typical areas of surface rust on a level #6 guy wire.

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Lighting
Photographs: 44 - 49
Lighting type: Dialight LED Dual Mode System
Levels: 4

44
Typical flash head and ice shield.

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45

Typical controller box.

46

Location of rigid conduit in the tower.

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47

Light fixture level #2.

48

Junction box at light level #2.

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Ancillary
Photographs 49 - 54

49

Flexible lines to ancillary systems

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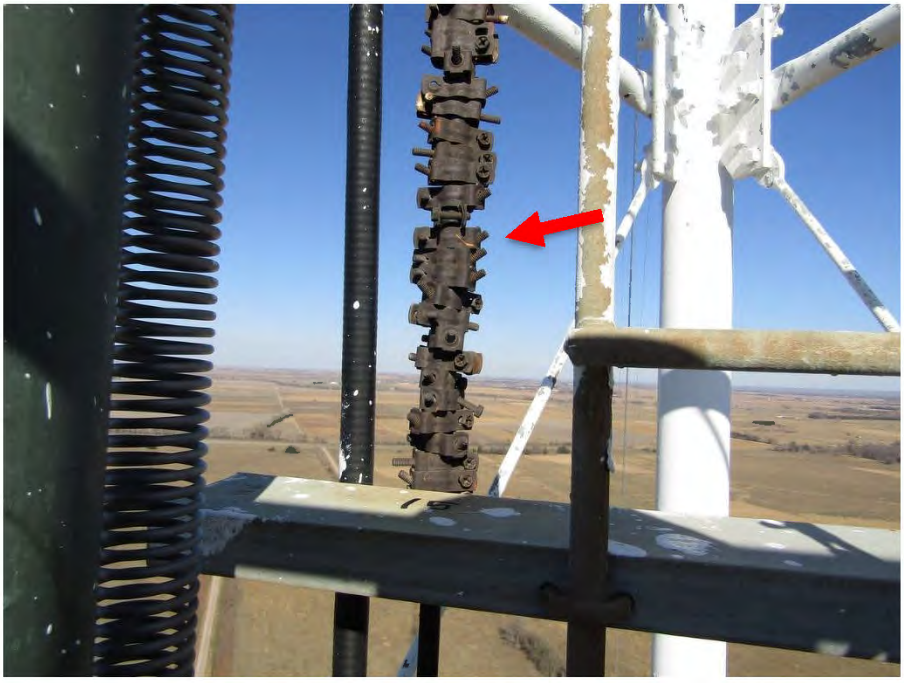
50

Flexible line to the dipole antenna in section #20 was unsecured. The line was temporarily secured with electrical tape during the inspection.

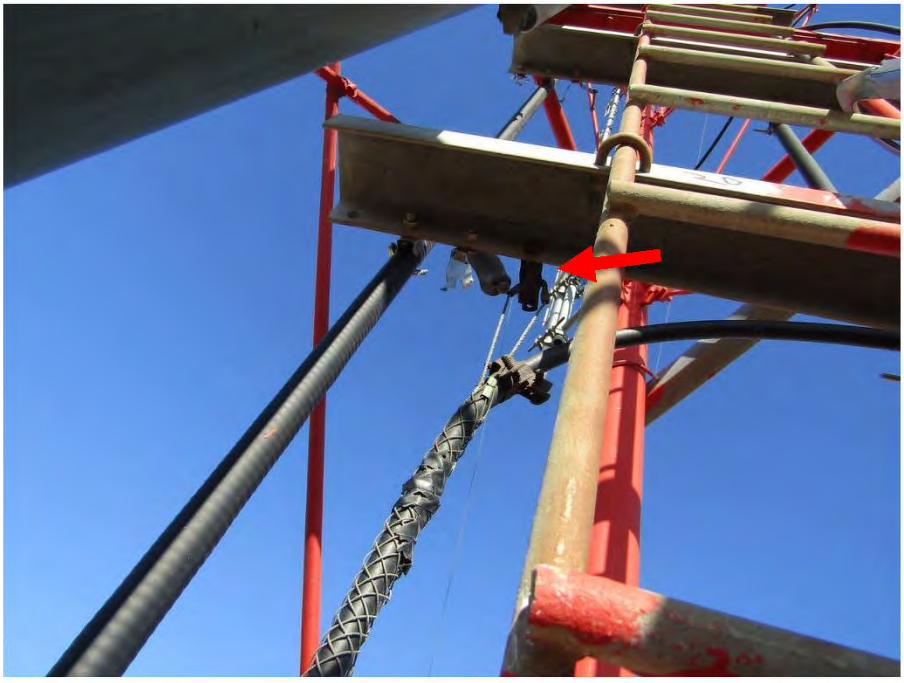


51

Broken hangers that slid down a flexible line in section #15. The crew temporarily secured the line with zip ties.

52

Surface rust on the mount for the dipole antenna in section #20.



53

Hoisting grip for the flexible line feeding the dipole antenna in section #20 secured with a butterfly clamp.

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54

Unsecured flexible line noted in photo #50, before being temporarily secured by the inspection crew.

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