

STATION: BEATTYVILLE PASSIVE
CUSTOMER: SOUTH CENTRAL BELL
TOWER TYPE: 30' SELF SUPPORTER
DATE OF INSPECTION: 6-23-94
INSPECTOR: LANE JOHNSON
CREW: PHIL HOUCHEMS

Minerich, Inc.

MAINTENANCE AND INSPECTION REPORT

1905 Barnes Mill Road
P.O. Box 98
Richmond, Kentucky 40475
Phone: (606) 623-0024



MINERICH, INC.
MAINTENANCE/INSPECTION REPORT

STATION: BEATTYVILLE PASSIVE
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CERTIFICATION

It is the supervisor's responsibility to ensure that all the procedures used (plumb/tensioning) comply with the requirements for this project and to ensure that safe and correct practices are maintained during maintenance and inspection work.

1]. This certifies that all the information entered herein is correct to the best of my knowledge and that all items noted by [X] have been **corrected** or explained on page 11 notes for reasons for **not correcting**, and that the customer's representative has been informed of major problems that require authorization to correct.

CUSTOMER'S REPRESENTATIVE: _____

Lane Johnson SIGNED
MINERICH, INC. SUPERVISOR/INSPECTOR
PRINT NAME: LANE JOHNSON

2] Report reviewed and recorded. _____

Rob E. Minerich
MINERICH INC. PROJECT MANAGER
PRINT NAME: Rob E. Minerich

3] Date of last inspection. _____

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STATION: BEATTYVILLE PASSIVE

SUMMARY

[1] TOWER STRUCTURE

1. G Sections
2. G Angles/Members
3. G Splices
4. G Bolts/Nuts/Filler plates
5. N/A Guy Pulloffs
6. N/A Torque Stabilizers
7. G Ladder
8. N/A Safety Climb Device
9. N/A Step Bolts
10. X Lightning Rod
11. G Foundations
12. G Galvanizing/Rust/Flaking
13. G Tower Grounding

[2] TOWER SUPPORT SYSTEM - N/A

1. _____ Tower Plumbness
2. _____ Guy Tensions
3. _____ Guy Attachments
4. _____ Guy Anchors
5. _____ Anchor Grounding
6. _____ Anchor Fence/Guard Posts

[3] PAINTING - N/A

1. _____ Number of Bands
2. _____ Condition of Paint
3. _____ Surface Coverage

[4] SITE

1. N/A Access Road
2. N/A Access Gate/s
3. G Shelter Fence
4. N/A Shelter
5. X General Site Conditions

[5] ELECTRICAL

1. _____ Relamped
2. _____ Operation
3. _____ Beacon
4. _____ Sidelights
5. _____ Conduit
6. _____ Junction Boxes
7. _____ Supports

[6] WAVEGUIDE

1. _____ Elliptical
2. _____ Rigid
3. _____ Co-Axial
4. _____ Spacing
5. _____ Supports
6. _____ Waveguide Bridge
7. _____ Building Entry
8. _____ Pressure
9. _____ Ice Protection
10. _____ Bullet Protection
11. _____ Grounding

[7] ANTENNAS

1. N/A Parabolic []
2. N/A Horns []
3. G Reflectors [1]
4. N/A Two Way []
5. G Mounts
6. G Stiffarms
7. N/A Antenna Ice Protection
8. N/A Feedhorn Ice Protection
9. N/A Grounding

Legend:

[G]-Good

[X]-See Notes

[N]-Not Applicable

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[1] TOWER STRUCTURE

GUYED

SELF SUPPORTING

30'

OTHER

1. Check sections for damage or distortion

G

2. Check angles and members for damage, distortion and missing steel

G

3. Check splices

G

4. Check bolts for tightness (Torque Wrench)

G

5. Check guy pulloffs

N/A

6. Check torque stabilizers

N/A

7. Check ladder/step bolts

G

8. Check safety climb

N/A

9. Check lightning rod

X

10. Check foundations (grout, settling, cracks)

G

11. Check galvanized surfaces

G

12. Check tower grounding system

G

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(4A)

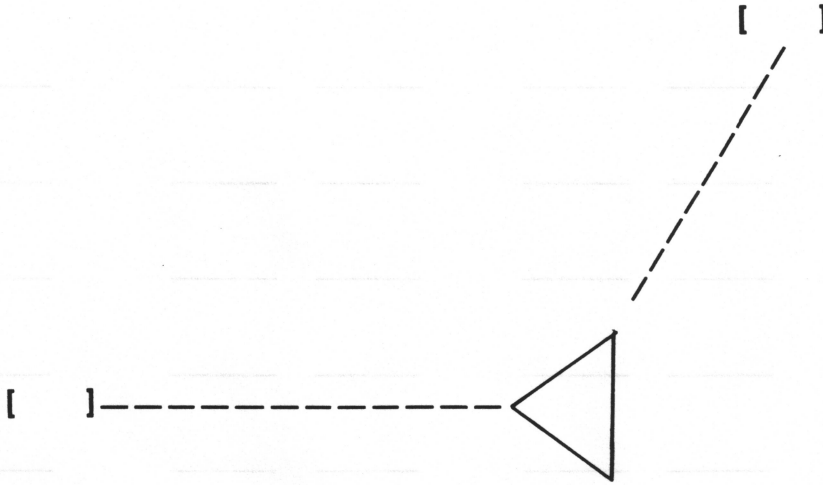
[2] TOWER SUPPORT SYSTEMS - N/A

1. TOWER PLUMBNESS

A). Record the amount and direction of **twist**.

B). Draw a sketch locating

1. **Transit** set up positions and note (Pos. I) and (Pos. II)
2. **Magnetic North**
3. **Building** to Tower relation
4. **Anchors** noted clockwise from "N"



Do not tension or pump tower when wind exceeds 15 mph.
2nd guy tension verified and balanced on tower stabilizers.
*Tension recordings taken per guy level.

Method used for determining tension _____

Ground wind velocity _____ MPH _____ Direction _____

Outside air temperature _____ degrees Fahrenheit _____

Weather Conditions _____

Tension tension/pump not completed _____

Unit Serial # _____

Guy Serial # _____

TENSION SPACES _____

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[2] TOWER SUPPORT SYSTEMS - N/A

[2] GUY TENSIONS

TENSIONS:	Guy Level	Guy Size	Guy "A" Actual/Final		Guy "B" Actual/Final		Guy "C" Actual/Final	
_____	1.	_____	_____	_____	_____	_____	_____	_____
_____	2.	_____	_____	_____	_____	_____	_____	_____
_____	3.	_____	_____	_____	_____	_____	_____	_____
_____	4.	_____	_____	_____	_____	_____	_____	_____
_____	5.	_____	_____	_____	_____	_____	_____	_____
_____	6.	_____	_____	_____	_____	_____	_____	_____
_____	7.	_____	_____	_____	_____	_____	_____	_____
_____	8.	_____	_____	_____	_____	_____	_____	_____
_____	9.	_____	_____	_____	_____	_____	_____	_____

***Tension recordings taken per guy level.
2nd guy tension verified and balanced on torque stabilizers.
Do not tension or plumb tower when wind exceeds 15 mph.**

↑
_____ [] TENSION SPECS:

Unit Serial # _____

Method used for determining tension _____ Unit Serial # _____

Ground wind velocity _____ MPH Direction _____

Outside air Temperature _____ degrees Fahrenheit

Weather Conditions _____

Reason tension/plumb not completed _____

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[2] TOWER SUPPORT SYSTEMS U/A

[3/4] GUY ATTACHMENTS/ANCHORS

1. Describe condition and type of connection hardware

- 1. _____ Preform _____
- 2. _____ Fist Grip _____
- 3. _____ Crosby Clamp _____
- 4. _____ Other _____
- 5. _____ Thimbles _____
- 6. _____ Shackles _____
- 7. _____ Sockets _____
- 8. _____ Other _____
- 9. _____ Turnbuckles _____

2. Check cotter pins/locking nuts are secured

3. Check for adequate reserve thread on turnbuckles

4. Check safety wire passes through turnbuckle centers and eyes/jaws

5. Check guy hardware and guy strands for corrosion

6. Check guy tails for unravelling

7. Check guy anchors

Inner:

Outer:

“A”

“B”

“C”

“A”

“B”

“C”

- | | | | | | | |
|-----------------------------|-------|-------|-------|-------|-------|-------|
| 1. _____ Flat bar | _____ | _____ | _____ | _____ | _____ | _____ |
| 2. _____ Rod | _____ | _____ | _____ | _____ | _____ | _____ |
| 3. _____ “I” Channel | _____ | _____ | _____ | _____ | _____ | _____ |
| 4. _____ “J” Channel | _____ | _____ | _____ | _____ | _____ | _____ |
| 5. _____ Weldment (Caisson) | _____ | _____ | _____ | _____ | _____ | _____ |

8. Check backfill condition

9. Anchor heads for clearance above grade

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[2] TOWER SUPPORT SYSTEMS - *N/A*

[5/6] ANCHOR GROUNDING/PAINTING

1. Check anchor ground connections

2. Check guy wire ground connections

3. Record type of connections

"A" Inner/Outer

"B" Inner/Outer

"C" Inner/Outer

4. Check anchor fences/guard posts

5. Record Type of fences/guard posts

"A" Inner/Outer

"B" Inner/Outer

"C" Inner/Outer

[3] PAINTING - *N/A*

1. Check number of color bands

2. Check paint condition

3. Record color

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[4] SITE:

1. Check access road condition

N/A WALK ONLY

2. Check access gate/s condition

N/A

3. Check shelter/building fence condition and Record size

G 20'x20'

4. Check general shelter/building condition and Record size

N/A

5. Check general site condition

X - CLEARED BRUSH AND TREES FROM COMPOUND.

[5] ELECTRICAL N/A

Beacon

Sidelight/s

1. Relamped Yes _____

Yes _____

No _____

No _____

2. Record Bulb Manufacturer/Type

3. Check Operation of lights and control

4. Record unit type/manufacturer

5. Check beacon physically for damage and condition

6. Check sidelights physically for damage and condition

7. Check conduit/junction boxes for damage

8. Check support system for damage

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[6] **WAVEGUIDE** - *N/A*

Check and record Waveguide types

	Type:	Type Number:	Number Runs:	Condition:
1.	Elliptical	_____	_____	_____
2.	Rigid	_____	_____	_____
3.	Co-axial	_____	_____	_____
4.	Flex Sections at antennas/record quantity	_____		
	Antenna:	_____		
	Quantity/Type:	_____		
5.	Check for correct spacing	_____		
6.	Check waveguide support system	_____		
7.	Check waveguide bridge	_____		
8.	Check building entry/ports	_____		
9.	Check pressurization/leaks	_____		
10.	Check ice protection on waveguide	_____		
11.	Check bullet protection on waveguide	_____		
12.	Check waveguide grounding system	_____		

Waveguide
Top: Bottom: Other:

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[7] ANTENNAS

Check and record antenna types.

	Size/Type:	Parabolic		Horn:	R/flrs:	2/Ways:	Stiffarms:
		Azimuth	Height:				
1.	<u>10'x15'</u>	<u>357.7°</u>	_____	_____	<u>25'</u>	_____	_____
2.	_____	_____	_____	_____	_____	_____	_____
3.	_____	_____	_____	_____	_____	_____	_____
4.	_____	_____	_____	_____	_____	_____	_____
5.	_____	_____	_____	_____	_____	_____	_____
6.	_____	_____	_____	_____	_____	_____	_____
7.	_____	_____	_____	_____	_____	_____	_____
8.	_____	_____	_____	_____	_____	_____	_____
9.	_____	_____	_____	_____	_____	_____	_____
10.	_____	_____	_____	_____	_____	_____	_____

5. Check mounts/hardware

G

6. Check stiffarms

G

7. Check ice protection

Antenna:	Ft:	Az:	Feedhorn:	Ft:	Az:
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

8. Check Antenna grounding at antenna

NA

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[8] GENERAL NOTES (NOTE ALL ITEMS CORRECTED OR REQUIRING FURTHER ACTION)

1] All rusted areas zinc rich spray coated [/] cans used.

[4] SITE

CLEARED BRUSH AND TREES FROM COMPOUND AND REFLECTOR PATH.

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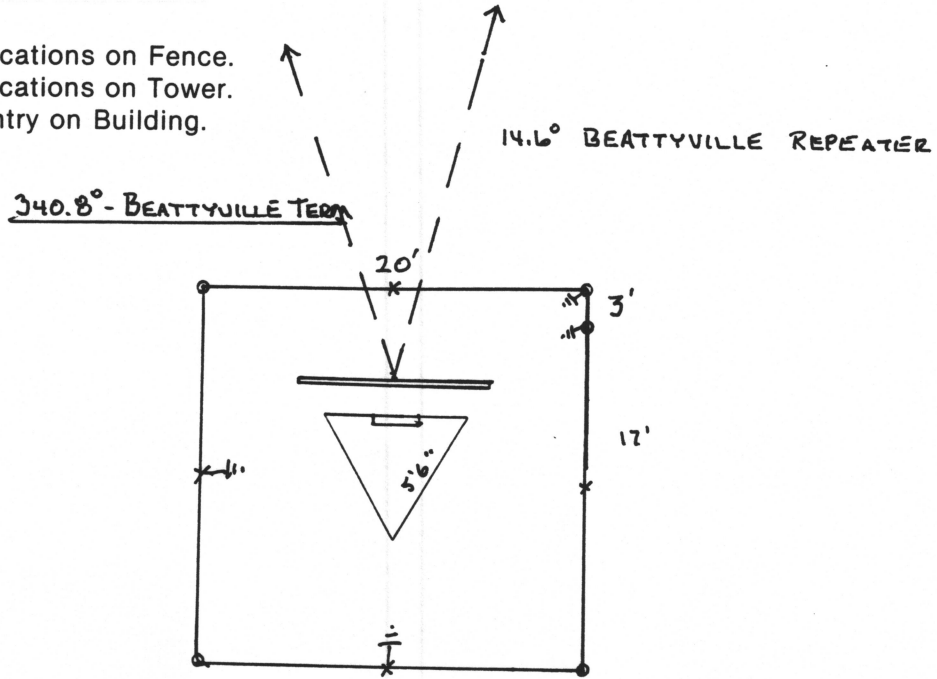
(12)

[9] SITE INFORMATION

Sketch fence area and record measurements.
Sketch building shape and record measurements.

NOTE:

- 1) Ground Connection locations on Fence.
- 2) Ground Connection locations on Tower.
- 3) Ground Connection/Entry on Building.
- 4) General Information.



ANCHOR LOCATIONS
RECORD DISTANCES
[FROM OUTSIDE OF TOWER LEG]

"A" _____

"B" _____

"C" _____

"D" _____

NOTE:
1) Ladder Positions
2) Tower Light Positions
3) Anchor 'A' from Building
4) Show Building Location



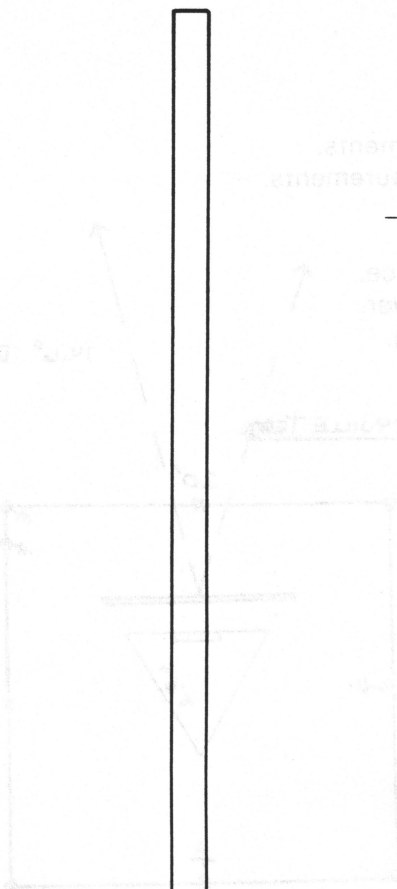
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**[10] GUYED TOWER
GUY AND ANTENNA LOCATIONS**

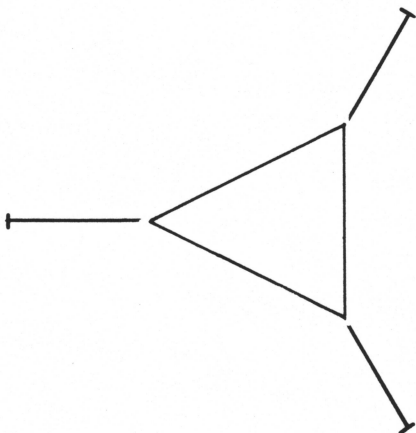
PATH DIRECTION ←

PATH DIRECTION →

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- NOTE:**
- 1]. Ladder Positions
 - 2]. Tower Light Positions
 - 3]. Anchor 'A' from Building
 - 4]. Show Building Location



**ANCHOR LOCATIONS
RECORD DISTANCES
[FROM OUTSIDE OF TOWER LEG]**

_____	_____	_____	"A"
_____	_____	_____	"B"
_____	_____	_____	"C"
_____	_____	_____	"D"



▲ **INNER** ▲ **MID** ▲ **OUTER**

DISTANCE

[] INCHES

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[11] SITE PHOTOGRAPHS



NOTE:
 1) Ladder Positions
 2) Tower Light Positions
 3) Show Building Location
 4) Base Levels

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[12] SELF SUPPORTING TOWER
ANTENNA LOCATIONS

← PATH DIRECTION

10'x15' REF @ 25'

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DISTANCE

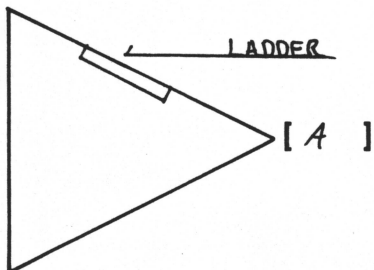
| 5'6" |

→ PATH DIRECTION

BEATYVILLE REPEATER 14.6°

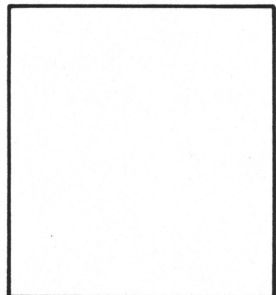
BEATYVILLE TERM. 340.8°

[C]



[B]

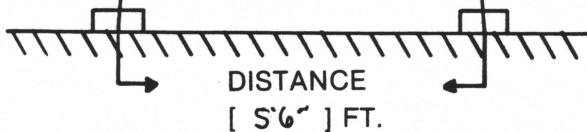
[] []



[] []

NOTE:

- 1). Ladder Positions
- 2). Tower Light Positions
- 3). Show Building Location
- 4). Base Levels



[13] SITE PHOTOGRAPHS



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[14] GROUND MEG TESTING

EQUIPMENT:

AEMC CLAMP-ON GROUND RESISTANCE TESTER MODEL 3700

IF MORE THAN 2AMP CURRENT FLOW IN GROUND DO NOT PROCEED WITH GROUND RESISTANCE TEST

SITE: BEATTYVILLE PASSIVE

STATE: KY

DATE: 6-23-94

TESTER: PHIL HOUGHENS

WEATHER: CLOUDY-607

SITE TERRAIN: MOUNTAIN

PROBE LOCATION:

1. MAIN GROUND TO BUILDING

CURRENT
READINGS:

OHMS
READINGS:

2. TOWER BASE --- (A))

_____ AMPS

0.0 AMPS

22.0

3. TOWER BASE --- (B))

_____ AMPS

0.0 AMPS

22.0

4. TOWER BASE --- (C))

_____ AMPS

0.0 AMPS

22.0

5. FENCE -- (CORNER W/S))

0.0 / 0.0 AMPS

22.0 / 22.0

6. FENCE -- (CORNER-GATE))

0.0 / 0.0 AMPS

22.0 / 22.0

7. ANCHORS -- ("A" INNER)

_____ AMPS

("A" OUTER)

_____ AMPS

("B" INNER)

_____ AMPS

("B" OUTER)

_____ AMPS

("C" INNER)

_____ AMPS

("C" OUTER)

_____ AMPS

NOTES

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[15] RECOMMENDATIONS/ACTION REQUIRED

(18) SITE PHOTOGRAPHS

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[16] SITE PHOTOGRAPHS

(b) RECOMMENDATION/INSPECTION REQUIRED

