

# Lookouts, May 2004



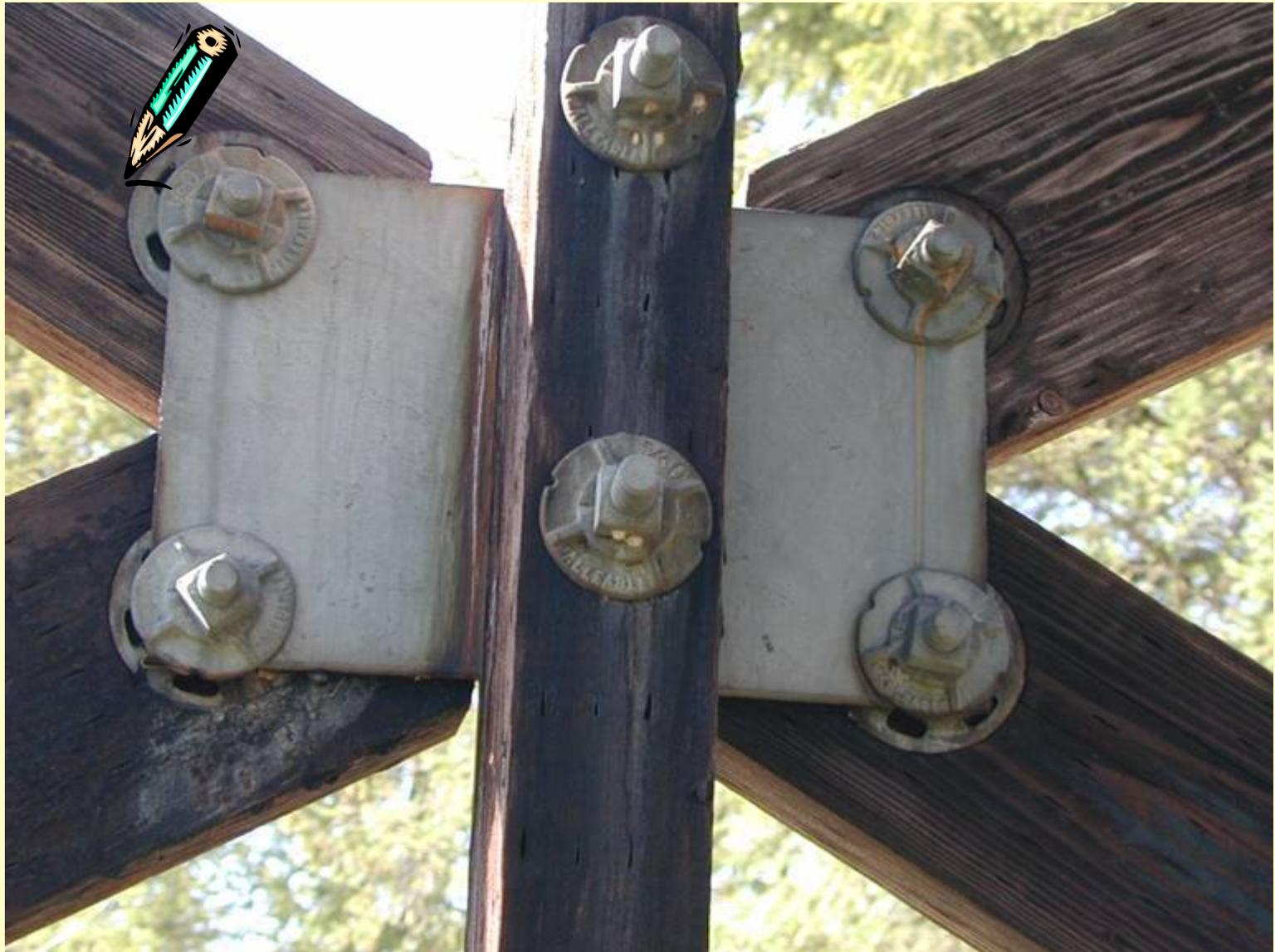
A propane line bonded to the lightning protection system.



Notice crack is large, but not bad enough to replace member.



Shear plates are visible in this photo behind this gusset plate.



Note the metal rod below the step is essential to holding the stairway railing securely.



Watch for overly tightened bolts that have pulled through the wood too far.



Solid blocking is needed between joists. Metal clamps were loose. Loose clamp is shown better on next photo.





Grating used for safety. This grating is not bonded.



Broken railing is also treated with creosote. Replace with materials that are safe for human touch.



An example to bonding to the steel gusset plates.



Creosote has leaked out of the top of the post and was covered with linoleum to protect hands. Need to replace the post or prevent contact with skin.



Storage for shutters has undersized joists holding up the load.



4" by 10" beam has a fatal crack due to snow loading. The crack is over 8 feet long and completely separates the beam.



Frayed cable, and note the Clamps are on the right way. Use plastic coated ¼ inch diameter cable.



Frayed cable is really about broken under the pulley where you can not see it as well as the obvious fray marked here.



Safety door needs to be made 42 inches high. This one is 30” high.



Tensioning device is on the cable and is connected to the reader.

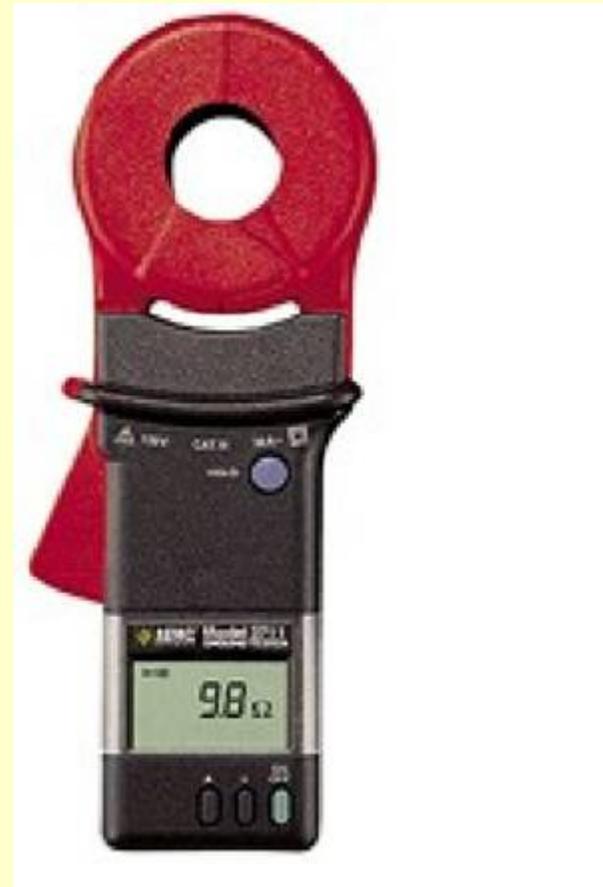


## Cable Tension Checker.



## Photo of Ground resistance tester

- For more information about this gage we are using.
- <http://www.aemc.com/products/index.asp>



More photos of lookouts, check out these web sites:

- <http://www.firelookout.com/mtmissoula.html>
- [www.firelookout.org](http://www.firelookout.org)  
Forest Fire Lookout Association site
- [www.firelookout.net](http://www.firelookout.net)  
Latest lookout information
- [www.firelookout.com](http://www.firelookout.com)  
Pictures and Chatroom
- [www.firetower.org](http://www.firetower.org)  
National Historic Lookout Register site



# Presentation Objectives:

## How did we get here?

Safety is one of our top priorities in the Forest Service. The purpose of this presentation is to explain how in our Northern Region initiated a process to make our lookouts much safer and be better preserved for future use.

As Government facility managers, we all have more work than we have funds. Here is the process we used to work on this problem.

# Process: Inspections

We inspected a number of lookouts in the Region the previous year, finding many with life-safety and structural problems of major concern.

Key element:       Take time to really look at your facilities and forest concerns often.

Investigate past practices on your subject area after your initial inspections reveal large deficiencies.

# Process: Deficiencies

Many deficiencies were common throughout the Region we had to do something quickly to insure our other lookouts would be made safe.

Key element: Take action quickly and concentrate your efforts in way that will maximize your effectiveness.

Key element: Analyze the amount of energy and time you have to take on a big problem before you take on the problem.

# Process: Past Work

We collected information on previous lookout inspections

Key element: Review past work to see what was wrong on earlier inspections.

History is usually repeated. Out of site out of mind facilities are usually ignored.

# Process: Results Discovered

We found 30 years of neglect, liability concerns, rental of lookout direction that was not followed, inspections not completed, corrections identified on inspections not corrected, lack of funds, lack of direction, permittee's not following their permit guidance for maintenance.

# Process: Action!!!!!!!

We issued Regional Direction letter signed by Regional Forester formally direction forests to:

Key element: We needed management buy in to obtain action at the field.

# Process: Regional Direction

Recommended that all lookouts must be inspected the following year with qualified inspectors.

The Regional office would provide training for their inspectors on lookouts.

# Process: Regional Direction

Key element: To send out direction to have qualified inspectors do the work without adequate funding to hire A & E's was useless.

If it was important to get qualified inspectors we need to train the staff to do the work cost effectively.

# Process: Regional Direction

The Regional office would provide tools for inspection cables and grounding systems.

Key element: Without proper tools you can not get the job done. We need simple tools to do the work and the region bought the tools to share among the forest.

# Process: Regional Direction

Gave the facility managers examples of funding they could use to correct the deficiencies.

# Process: Regional Direction

We recommended that all critical deficiencies corrected prior to occupation this year.

Key element: Clear direction that was followed up with examples on the [web](#) showing and stating what items were critical and what items were nice to do.

# Process: Outside Support

We have asked the Forest Service Technology and Development staff to help us review Forest Service lookout structural and lightning protection system designs to aid in long-term solutions for the lookouts. See [Project Submittals for details](#).

Key element: Where the Regional office lacked time or expertise we went out to the Washington office for help.

# Process: Regional Direction

We reminded the facility managers many of our lookouts are historical, and any repairs need to comply with heritage guidelines.

# Process: Regional Direction

We left the decisions as to what to do with the lookout up to the Forest after it was inspected.

Key element: Give the forests ownership of their solution. Work with them to be successful. Post their solutions for all to see the results.

# Process: Website tools

We created a website with useful information to aid in the lookout inspections. See example of details [here](#).

Key element: Used the [web](#) to train inspectors, see common problems to aid all inspections, share corrections and inspection forms used to record the problems. Update the web as needed to keep current.

# Process: Specialist help

We hired structural engineer to analysis one of our common towers for stability.

We hired a Fire Protection life safety specialist to analysis our lookouts for rental fire safety.

# Process: Details, Details

We worked and funded with Region 6 a lightning protection contract that each region could use for their benefit.

We inspected 30 lookouts and trained inspectors to help other forests with their inspections.

# Process: Details, Details

We are now inspecting more cabin rentals due to awareness of rental safety problems

Grounding on Communication sites are frequently similar to our lookouts or share the same systems.

# Process: Conclusion

Our attitude about lookouts will never be the same, we have not repaired all our lookouts, but we are on our way to safer lookouts throughout our region. This has been a successful program.

Steve Oravetz, R1 Facilities Management Group  
Leader