

DEPARTMENT OF PUBLIC WORKS

Quality, Excellence, Innovation

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MERA Executive Board  
95 Rowland Way  
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**Re: Review of Bolinas Fire Volunteer Paging Transmitter Relocation Project**

Dear Directors:

Leased telephone line problems over the last year have prompted the Communications Division to review the feasibility of relocating the volunteer paging transmitter from the Bolinas fire station to the existing MERA Stewart Point microwave transmitter site on the Martinelli Ranch in Bolinas. Relocation of this paging transmitter to the MERA microwave tower site could provide overall better coverage with a higher elevation, increased reliability and would eliminate monthly telephone line costs.

**Summary**

The volunteer paging system is a low band radio network owned by Marin County Fire, and is independent of the MERA radio system. The volunteer paging system provides a one-way, voice paging service for the West Marin volunteers. The paging system is "hard patched" to the CTL-H2 talkgroup on the MERA system. Paging tones and dispatch audio are currently sent simultaneously to the paging radio base stations at Mt. Barnabe, Mt. Tam, Bolinas Fire Station and Tomales Fire Station. The pagers hear signals from the wide area Mt. Barnabe site or the transmitters located at Bolinas Fire Station, Mt. Tam or Tomales.

The MERA network the existing Stewart Point microwave and transmitter site on leased property at the Martinelli Ranch in Bolinas. Available T1s exist on the MERA microwave. They could be used to support relocation of the Bolinas volunteer paging transmitter from the Bolinas Fire Station to the MERA microwave site. No new microwave equipment is required. Relocation of the Bolinas fire station paging transmitter to the MERA site could use one of the four spare T1s available. The microwave T1s from Civic Center to Stewart Point also passes through Mt. Tamalpais, but does not stop there. All other microwave paths exist and do not require any changes. In summary:

- A) The Civic Center microwave site will require wiring up of one T1 circuit on the path to Bolinas. Three additional spare T1 circuits would remain available from Civic Center to Bolinas.

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- B) The Bolinas microwave site will require wiring up of one T1 circuit on the path to Civic Center. Three additional spare T1 circuits would remain available from Bolinas to Civic Center.

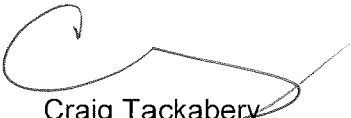
Relocation of the volunteer paging transmitter from the Bolinas Fire Station to the MERA microwave site at the Martinelli Ranch provides costs/savings estimated at:

Radio Licensing by CSI, time unknown, - \$500 to \$800.  
Update the MERA Site Lease, - Cost and time unknown.  
Install new antenna on MERA Martenelli Ranch tower, Contractor - \$2,800.  
New antenna and feedline - \$1,000.  
Relocate, install, tune, test, cross connect existing radio and microwave channel – 2 days (2 people) = \$4,320.  
Cost savings when leased line is no longer required – could be over \$200/Month.

This project was discussed at the MERA Operational Issues Working Group on September 3, 2014. There was no objection to the allocation of the T1 circuits. The site is under a MERA lease. Review and possible update of the lease by MERA is needed.

As outlined above, the allocation of the T1, is recommended.

Very truly yours,



Craig Tackabery  
MERA Operations Officer