

COPY

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PLANNING BOARD  
GRAFTON, MA

SEP 30 2016

RECEIVED

September 21, 2016

Chief Normand A. Crepeau Jr.  
Grafton Police Department  
30 Providence Road  
Grafton, MA 01519

Re: Police antenna attachment request for proposed tower at 104 Creeper Hill Rd, Grafton

Dear Chief Crepeau:

Our radio communications company, WoRad Inc., has reviewed and analyzed the Town of Grafton Police radio communications system, which include (5) existing radio antenna sites in Grafton (Pigeon Hill, Brigham Hill, Tufts University veterinary School, South Fire Station and the Police station) and believe that adding an additional radio communications site at 104 Creeper Hill Road on the proposed 180' tower would benefit the police radio communication system for both transmitting and receiving.

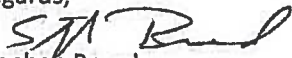
Further, we evaluated various receiving and transmitting heights and have concluded that a TX antenna at the 175' height and a RX antenna at 100' height assure maximum signal propagation in this area of Grafton.

We recommend that Grafton police be able to:

- Attach (1) directional whip antennas at 175'. To have adequate vertical signal separation and avoid any signal interference, the next closest attachment centerline should be at 165'.
- And attach (1) 12' whip directional antennas at 100'. To have adequate vertical signal separation and avoid any signal interference, the next closest attachment centerline should be at 117' or higher. Attachment heights below 100' will not be effective for the police radio system.
- In addition, we recommend 2 outdoor equipment cabinets be placed on a 9' x 6' concrete equipment pad.

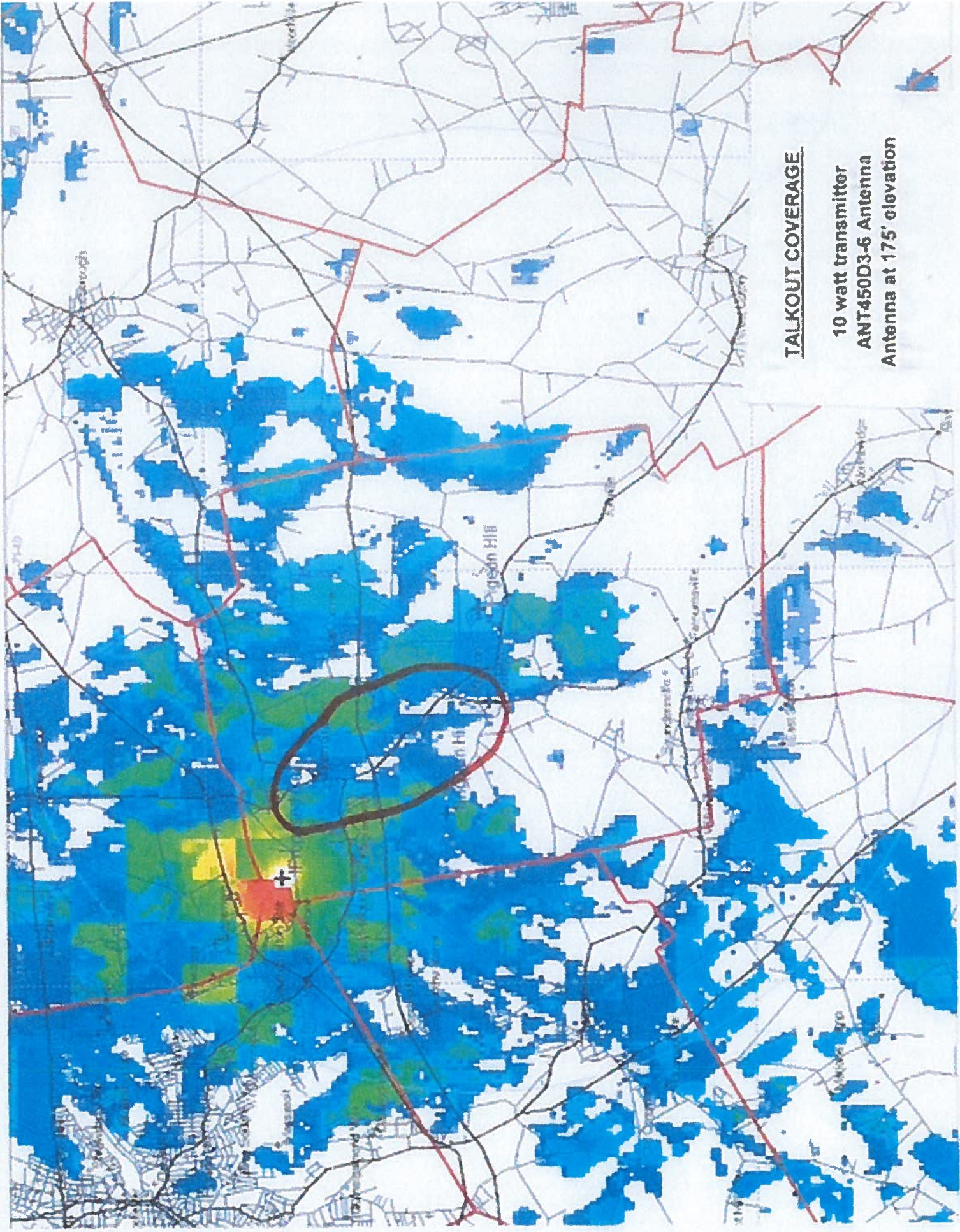
My understanding is that US Wireless, Inc. /Vertical Bridge Development II, LLC is going to supply and perform the installation of the antenna equipment on the tower at the specified heights and prepare the ground based equipment pads and supply and install the equipment cabinets.

Regards,

  
Stephen Breed  
WoRAD Inc.

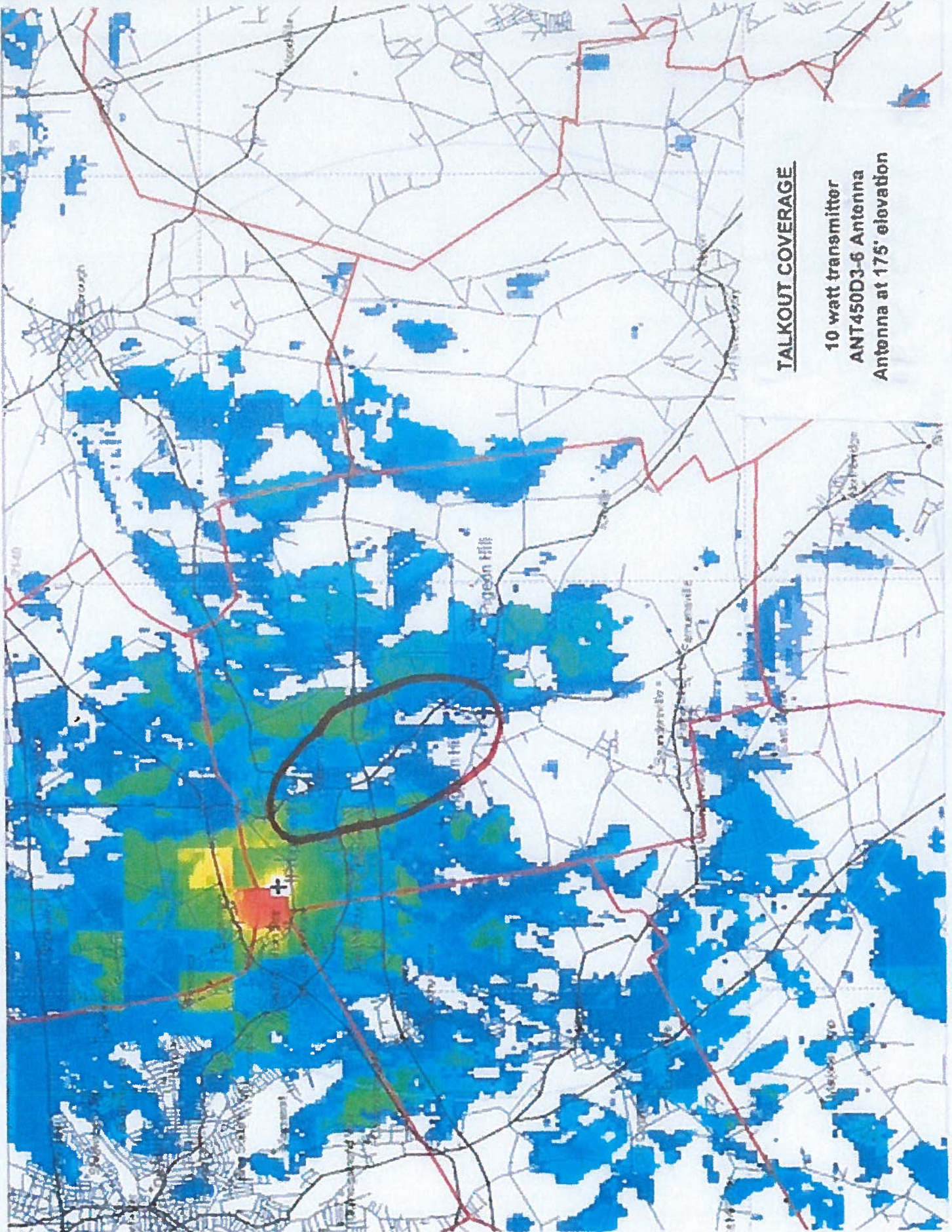


**MOTOROLA**  
Authorized Manufacturers  
Representative



**TALKOUT COVERAGE**

**10 watt transmitter  
ANT450D3-6 Antenna  
Antenna at 175' elevation**



**TALKOUT COVERAGE**

10 watt transmitter  
ANT450D3-6 Antenna  
Antenna at 175' elevation