

Exhibit 1
Item 4G:

Necessary Bandwidth: Based on FCC code of Federal Regulations 2.202g for unmodulated pulse emissions.

$$B_n = \frac{2 \cdot K}{t} = \frac{2 \cdot K}{\frac{\text{Range Resolution}}{(\text{Speed of Light})}} = \frac{2 \cdot 1.5}{\left(\frac{225}{3 \times 10^8}\right)} = 4 \text{ MHz}$$

Exhibit 2
Item 10:

The current project is the development of a Microburst Prediction Radar (MRP). This is an X-band radar that will be used to detect weather phenomena that can be used in the prediction of high wind shear (i.e., microbursts) in the vicinity of airports. The radar will use a phased array to measure wind velocity and reflectivity several kilometers above the ground to detect and classify precursors to microbursts. A flat plate antenna is used to detect high level windflows near the ground.

The goal of the project is to be able to predict the formation of a microburst several minutes before it reaches the ground in order to provide airline pilots sufficient time to avoid hazardous wind shear.

This project will lead to the development of an airport radar that will increase the safety of aircraft landings and takeoffs.