

ATTACHMENT B

Overhead view of test facility area and Additional Transmitter Information

STA – ELS77833

FILE # 0646-EX-ST-2011 (13 October 2011)

See the attached figures for a top view of the radar test sites. The radar normally rotates and scan coverage is controlled through the use of software-set radiation control zones. The radiation control zones will be set to avoid radiating at the near-by buildings to the west and north. The test area is to be cordoned off on Raytheon property and fenced in. Please see the attached figures for an overview of the test facility and radiation direction azimuth, with scanning area limited to 45 degree angle and maximum range limited to 2.5 km.

ADDITIONAL Transmitter Information

List each type of emission separately for each frequency (basically list the emission designators)

- | | |
|---------|---|
| 11M5Q3N | 16.936 GHz (Radar operates in two modes: Unmodulated pulses or Non-Linear FM Chirp that operates in two modes. The short range mode uses the 0.16 microsecond unmodulated pulse at a fixed PRR of 9920 pps for 100m to 2500m while the long range uses the 9.7 microsecond non-linear FM chirp pulse at PRR of 5040 pps from 2500m to 12000m and 3206 beyond 12000m). |
| 12M2P0N | 16.974 GHz (Radar operates in two modes: Unmodulated pulses or Non-Linear FM Chirp that operates in two modes. The short range mode uses the 0.16 microsecond unmodulated pulse at a fixed PRR of 9920 pps for 100m to 2500m while the long range uses the 9.7 microsecond non-linear FM chirp pulse at PRR of 5040 pps from 2500m to 12000m and 3206 beyond 12000m). |
| 15M4M1N | 17.012 GHz (Radar operates in two modes: Unmodulated pulses or Non-Linear FM Chirp that operates in two modes. The short range mode uses the 0.1 microsecond unmodulated pulse while the long range uses the 65 bit polyphase Barker code emission of 6.5 microseconds). |

41M1P0N 17.049 GHz (Radar operates in two modes: Unmodulated pulses or Non-Linear FM Chirp that operates in two modes. The short range mode uses the 0.1 microsecond unmodulated pulse while the long range uses the 65 bit polyphase Barker code emission of 6.5 microseconds).

List as appropriate for the type of modulation:

Pulse duration and rep rate: *9.6 Microseconds maximum pulse width, 9922 pps rate*

For complex emissions, describe in detail: *Linear and Non-Linear Frequency-Modulated Pulsed (Chirp)*
Unmodulated pulse: 65 bit Barker code

Necessary bandwidth. Explain how determined.

Using a predefined selectable factory setting that determines bandwidth.

Width of beam in degrees at the half-power point:

1.6° Azimuth, 1.7° Elevation

Orientation in horizontal plane:

+/- 45° Electronically Scanned, 360° with Rotating Antenna

(This is the full capability of the system. Orientation will be limited via software-defined radiation control zones)

Orientation in vertical plane:

-10° to 55°, relative to ground horizontal

(This is the full capability of the system. Orientation will be limited via software-defined radiation control zones)

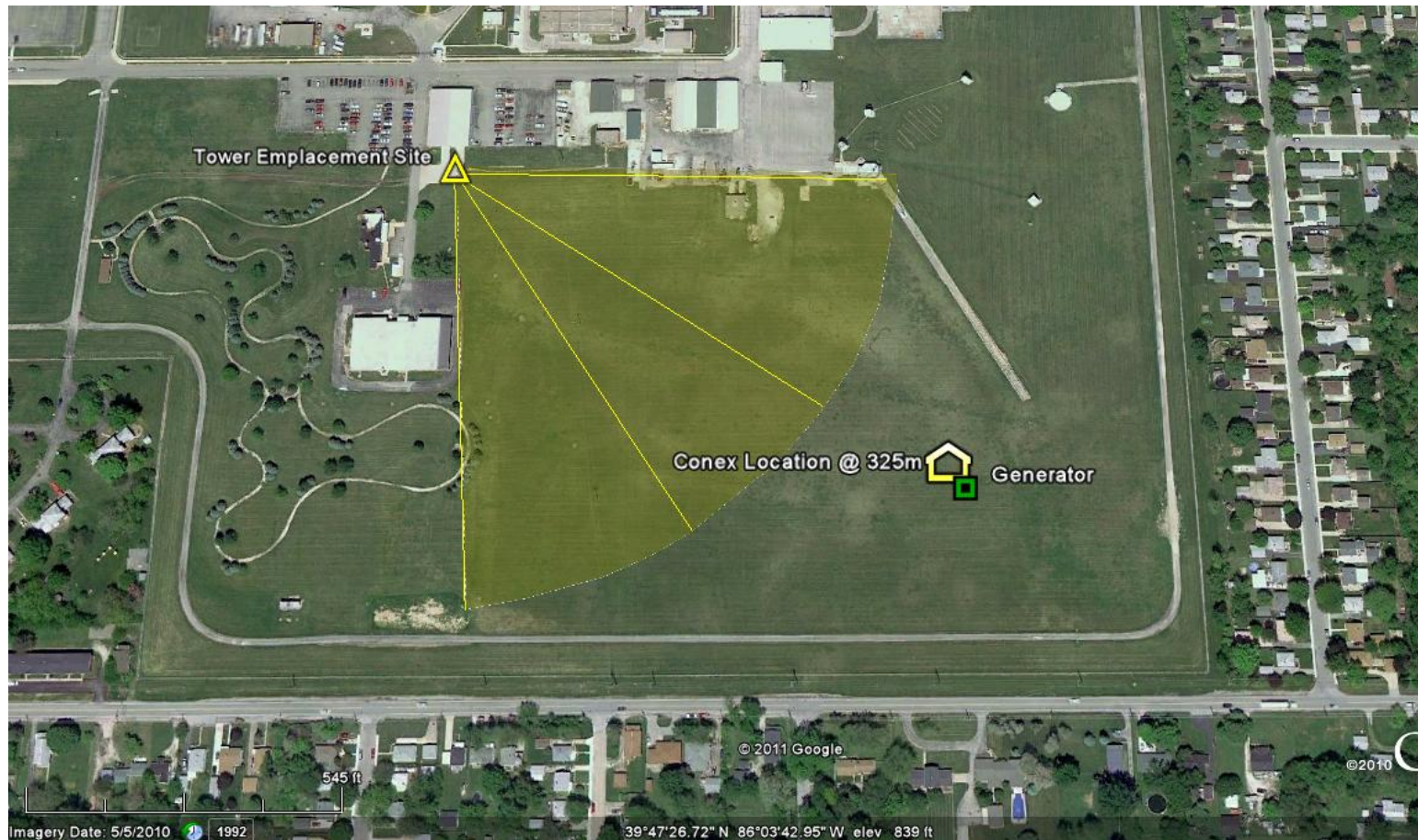


Figure 1 Indianapolis Test Facility.

Test site fenced and Radar elevated 6.6 meters above ground with 45 degree scanning angle.

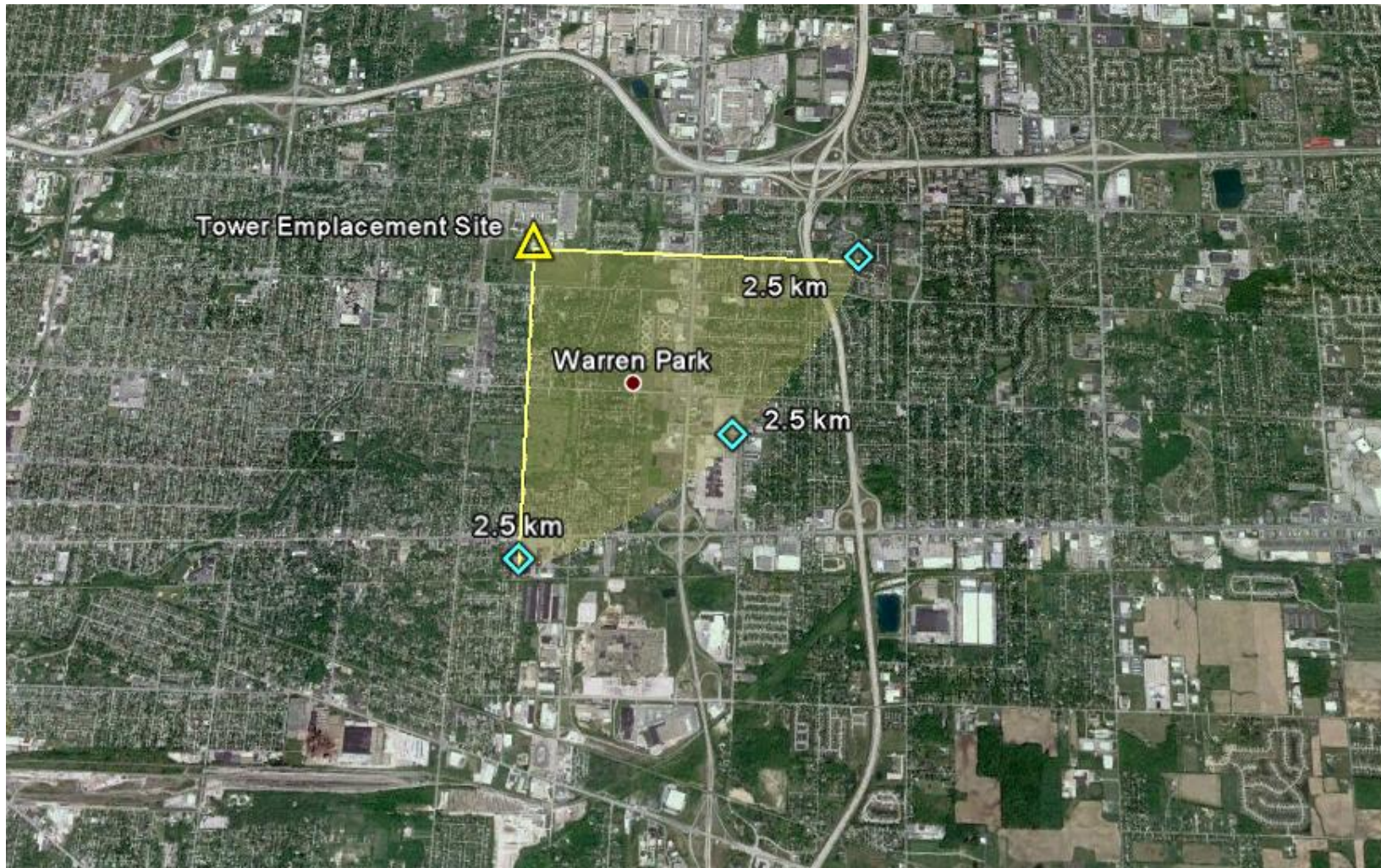


Figure 2. Indianapolis Test Facility with Max range of 2.5 km

Range will be limited to Maximum of 2.5 kilometers for the short periods of time when the radar is radiating for targets.