Radio Frequency Electromagnetic Energy (RF-EME) Analysis:

Application for Wireless Facility Siting at Park Ritchie Apartments

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| **Site Name:** | Park Ritchie Apartments |
| **Site Address:** | 7600 Maple Ave., Takoma Park, MD 20910 |
| **Proposed Minor Modification:** | Remove and replace nine antennas on apartment building rooftop |

At the County’s request, the applicant submitted an updated radio frequency (RF) report for the proposed site. The County had asked that the applicant provide information regarding:

* The FCC’s general public limit for RF emissions at the site
* Calculations using worst-case assumptions
* The cumulative emissions from all antennas on the building operating simultaneously
* Identification of any areas at the site where RF emissions are above the general public limit
* Information on RF emissions in any areas in or around the building where the general public has access, including:
  + The top-most floors of the building
  + The ground level around the building

## Report findings

The RF-EME report considered two types of locations at the site: Areas where the general public has access, and areas where the general public does not have access.

### Findings for areas without general public access

There are locations at the site where RF emissions would exceed the general public limit. However, these are areas on the roof, immediately in front of the antennas, where there is no general public access. Additionally, there are barriers and warning signs in these areas to alert building personnel or other people authorized to be in those areas. The maximum emissions in these areas are calculated as:

1. Penthouse roof level: 771.6 percent of the general public limit
2. Main roof level: 2,598.6 percent of the general public limit
3. Lower roof of the building: 2,526.8 percent of the general public limit

### Findings for general public areas

No locations at the building that are accessible to the general public would have emissions over the general public limit. The maximum emissions in the areas studied are calculated as:

1. Top floor inside the building: 50.2 percent of the general public limit
2. Top floor below the lower roof level inside the building: 0.835 percent of the general public limit
3. Ground level: 0.06 percent of the general public limit

## CTC analysis and verification

CTC conducted a detailed review of the updated RF-EME report submitted by the applicant. CTC first analyzed the proposed antennas listed in the report, the frequency bands on which each antenna would operate, antenna azimuths, beam width, antenna gain, maximum ERP values from each antenna, and the Z heights of the antennas with respect to different analysis plane. All these parameters were compared with details provided on the application form and supporting documents. For example, we verified that the antenna model and frequency listed on the application matched with the plumbing diagram on the plans and the RF-EME report.

CTC concludes that the applicant has demonstrated that the report indicates that the site would be compliant with the FCC’s general public RF emissions limit. No areas with general public access would be above the FCC limit. While the areas immediately in front of the antennas would be over the general public limit, there is no general public access to those areas, and the applicant will be required to deploy FCC-mandated signs and barriers in those areas.