

October 9, 2024

Director,
DC Office of Zoning
Board of Zoning Adjustment
441 4th Street, NW, Suite 200S, Washington, DC
20001

**Reference: Application for Special Exception of Public Safety radio site antenna installation
University of the District of Columbia, 4200 Connecticut Avenue, NW
DCOZ Temporary Case #: BZATmp4548**

Dear Sir or Madam,

Please find herein a burden of proof statement in support of the UDC public safety radio site relocation project.

The District of Columbia Office of Unified Communications and the Department of General Services are engaged in a project to relocate several 911 Public Safety antennas to maintain radio communication for first responders (Fire & Police) and 911 Dispatchers. Public Safety radio sites ensure seamless communication between the 6,000 first responders and 1,000 District-wide agency personnel and their command centers. The UDC radio site is part of the District radio system and provides radio coverage in the northwestern part of the City, including foreign missions, universities, area residents, and visitors.

The existing Arts and Science Library (Building 41), which houses the Public Safety 911 radio communications site, is scheduled to be demolished to make way for the New Archives Building. As such, there is an urgent need to relocate the Public Safety equipment so demolition of Building 41 can begin.

The plan calls for replicating Building 41 layout of the antennas and making improvements to Building 38 to house the same type of radio equipment as in building 41. The height of the antennas do not meet the zoning sections: C-1305.2, C-1312, and X-901.2 (Subtitle X § 901.2), and require special exception. Since Public Safety antennas are generally taller than those of wireless carriers, there is no option to reduce the height to achieve the desired coverage for 911 emergency response.

The antennas include four (4) 9-foot panel antennas and two (2) 20-foot omni antennas that will have the mounts attached to the inside of the screen wall and only the antennas will be visible over the wall. The antennas will extend above the screen wall at a height of 9 feet and 20 feet, respectively. In the following appendices, we will illustrate the existing antenna layout in Building 41 and demonstrate how the lack of a radio site will severely affect public safety radio reception and transmission.

UDC Building 38 Public Safety Radio Site Relocation

Appendix 1 contains photos of the existing site (Building 41) and the proposed site (Building 38). Those are the same antennas that will be placed on Building 38 to achieve the desired system coverage for 911 emergency response.

Appendix 2 provides the District of Columbia Radio System map. In the upper left corner, you will see the proposed site (Building 38). As it currently stands, that site is covered by Building 41, which is scheduled for demolition. This new site is a replacement to provide radio coverage for the existing building. Another important note on radio coverage is that it is not simply antenna coverage as in traditional Radio Frequency coverage. The coverage we are seeking is actually in-building, which is a much higher threshold and more difficult to achieve. This means that a first responder within a building will be able to key up their handheld radio and transmit and receive communications with others including dispatchers and fellow first responders.

Appendix 3 provides coverage maps with and without Building 38 within the radio sites for 0 dB. In this scenario, there is no significant change in coverage. This gets much worse in the next Appendices.

Appendix 4 shows radio coverage at 10 dB, which there is a noticeable decrease in coverage (more gaps that are not purple in color).

Appendix 5 at 20 dB, which has a larger impact without the site.

Appendix 6 at 30 dB, there is a huge loss of coverage without the replacement site. This loss of coverage means that a first responder with a handheld radio will not be able to transmit or receive communications in a potential life-threatening situation.

I hope we were able to demonstrate the need for zoning relief and proceed with the installation of public safety antennas on the rooftop of Building 38.

I look forward to answering any questions you may have on this project and request an expedited review.

Sincerely,

Phil Gregory

Philippe Gregory
Sr. Project Manager
Mobile: 703-424-6673
Email: Philippe.Gregory@dc.gov