Form 120 Addendum – Applicant's Burden of Proof for Variance

Bowie Gridley Architects / Perkins + Will, JV is requesting relief from Section 411.3. Section 411.3 requires all buildings, regardless of size or shape, to have one mechanical unit enclosure. The new Ballou Senior High School building is a 360,000 gsf building composed of 3 wings around a central triangular shaped courtyard. The use and mechanical zoning of the building requires a significant number of rooftop mechanical units. The difficulties for the design to meet this section are fourfold:

1. Need for Multiple Mechanical Units: The size and diverse use of the building requires the building to be served by multiple mechanical units – these include units serving classrooms, a library, a natatorium, two gymnasiums, a cafeteria and kitchen, an auditorium, and offices. The building cannot be served by one mechanical unit.
2. Limits of Mechanical Duct Runs: Due to the multiple wings of the building, placing all the mechanical units all on the roof of one wing would make the duct runs excessively long. This would necessitate the need to oversize the mechanical fans and, in turn, decrease the energy efficiency of the building and raise the operating costs of the building.
3. Increased Floor to Floor Requirements: The duct sizes would also have to increase to accommodate the long runs. This would necessitate the need for the floor to floor dimensions of the building and significantly increase the first cost of the building for the District of Columbia
4. Necessity for Rooftop Units: The mechanical units are on the roof because they also serve as the source of the fresh air for the building. Placing the units on the ground or in the lower level of the building reduce the usable site and building area for educational use and are subject to potential contamination.

The location and the mechanical units and enclosures, if approved, will not be of substantial detriment to the public good and are consistent with the general intent of the Zoning Regulations. The 21 mechanical units in 4 locations are evenly spread around the wings of the building are located to provide efficient delivery of fresh air and conditioning to the occupants of the building which include students, faculty, staff and community members. This will result in a comfortable, energy efficient building. The dispersed arrangement will also allow the mechanical enclosures to be smaller in size and more in scale with the facades of the building. The overall visual impact of the units is diminished because the units can be set back from the parapet of the building. The roof structures will be at least 59 feet from the nearest property line.