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#### AASHE STARS Innovation Credit 4- Integrated Mixed-Use Development and Creation of New Central Park

The new Bell Tower Amphitheater/Central Park and surrounding development serve as an example of mixed-use, highly integrated, and innovative planning and construction that provide multiple new amenities to campus while reducing environmental impact. Previously a 6-acre surface parking lot in the center of campus, the Bell Tower parking lot redevelopment created a 0.7 acre landscaped amphitheater, the Genome Sciences Building, the Bell Tower Parking Deck, and wide sweeping bike paths, walk ways, roads, and open space. The amphitheater and the green roof on the Genome Sciences Building increased permeable surface area in a low-lying area of campus that had been prone to flooding.

The amphitheater serves as a performance and gathering space and a pre-game activity area on football Saturdays. Underneath the amphitheater is underground storage for 710,000 gallons of rain and stormwater. Rainwater collected from the roofs of the three Genome Sciences Buildings drains to a 350,000 gallon, stone-filled cistern. Following UV treatment and chlorination, the rainwater is used to flush 1000 toilets in the Genome Sciences Building and Kenan Stadium and to irrigate the Kenan football field. When rainwater is insufficient, reclaimed wastewater from the local water utility provides a non-potable backup. Concrete vaults detain ground-level stormwater. Short-term storage reduces downstream erosion, flooding, and pollutant loading.

New construction adjacent to the amphitheater includes the 210,000-square-foot Genome Sciences Building (GSB) completed in 2012 and the Bell Tower Parking Deck. GSB consists of office and classroom spaces and research facilities, including greenhouses. Programmable LED lighting borders the monumental staircase that resembles a double-helix. The LEED Gold building features high-performance glazing and integrated shading devices. The concrete exterior is thermally efficient and contains slag waste from steel mills. Active chilled beams provide cooling independent of the ventilation system. Six air changes per hour instead of 12 results in considerable energy savings. Covered bike storage and lockers, along with shower facilities, are available in the courtyard.

Stairwell lighting in the Bell Tower Parking Deck is provided by 30 photovoltaic panels funded by the student green energy fee. The Deck is also the first on campus to be lit entirely with LED lighting. Operating costs for the deck are so low that retrofits are planned in parking decks across campus.

Lower operating costs, reduced environmental impact, and integrated, innovative planning and design concepts are exemplified in this mixed-use project that draws people from across campus every day and tens of thousands of football fans on Saturdays in the fall.

Sincerely,

Anna Wu

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