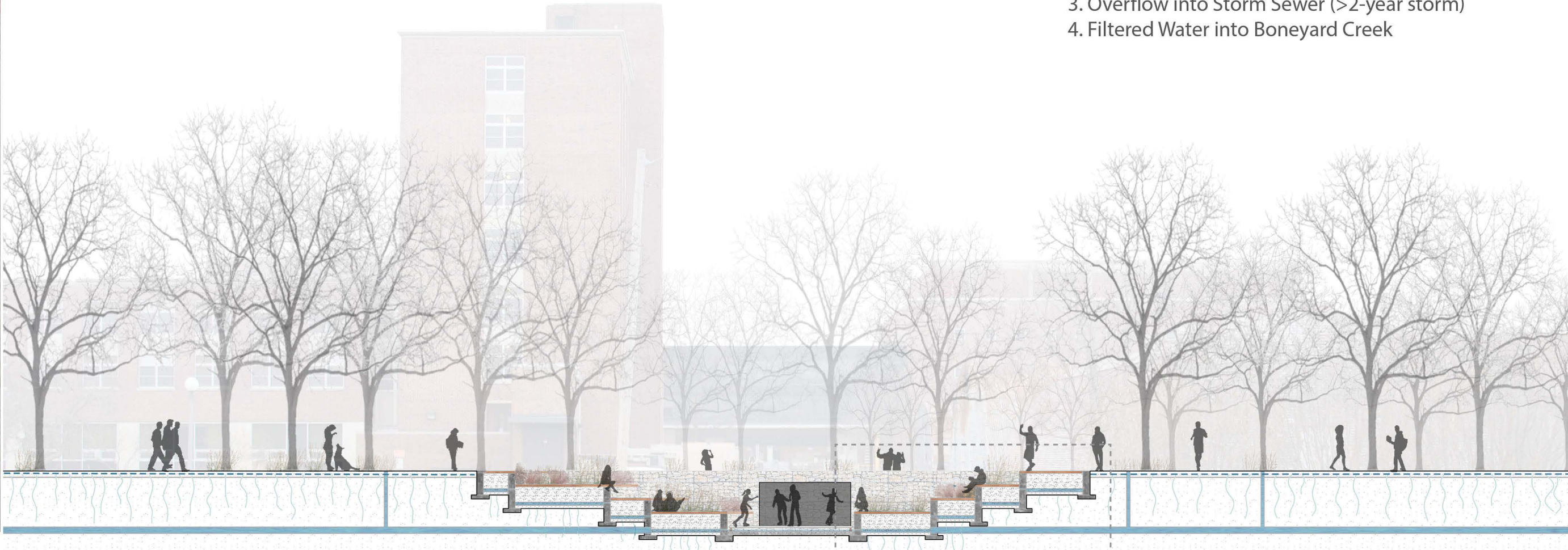




**PROGRAMMED TERRACES**  
 Above: Section A: 'Swimming Hole' at Engineering Quad  
 Below: Section B: Linear Skating Trail

**FILTERED FLOWS**  
 1. Surface Stormwater Runoff (Runnel)  
 2. Bioinfiltration via Native Planting  
 3. Overflow into Storm Sewer (>2-year storm)  
 4. Filtered Water into Boneyard Creek

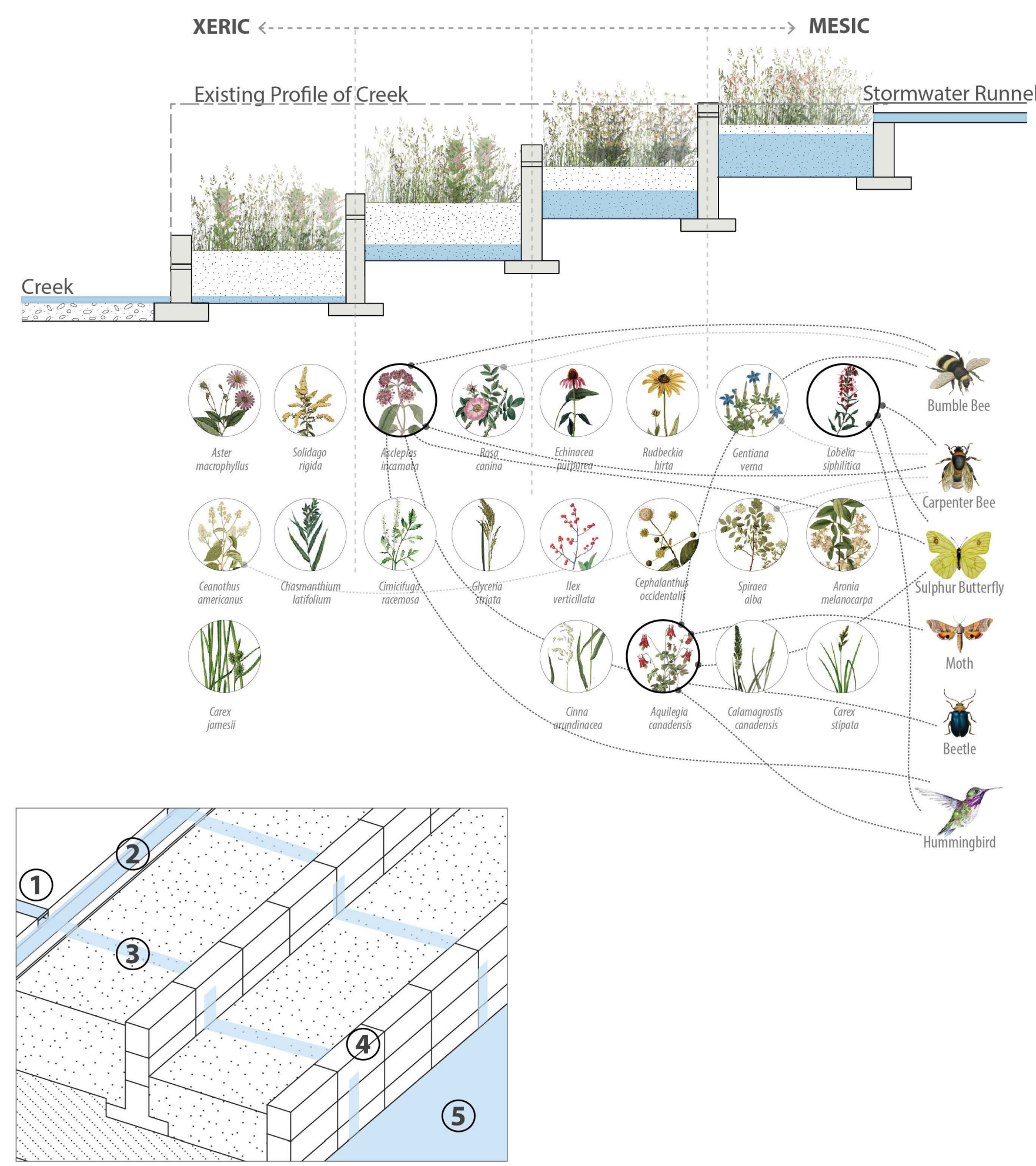


**CAMPUS-CREEK INTERFACE: A NEW EDGE CONDITION**

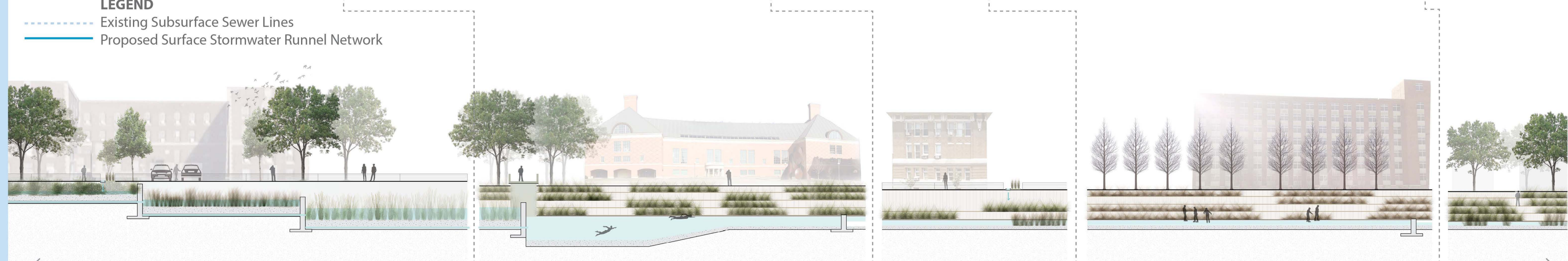
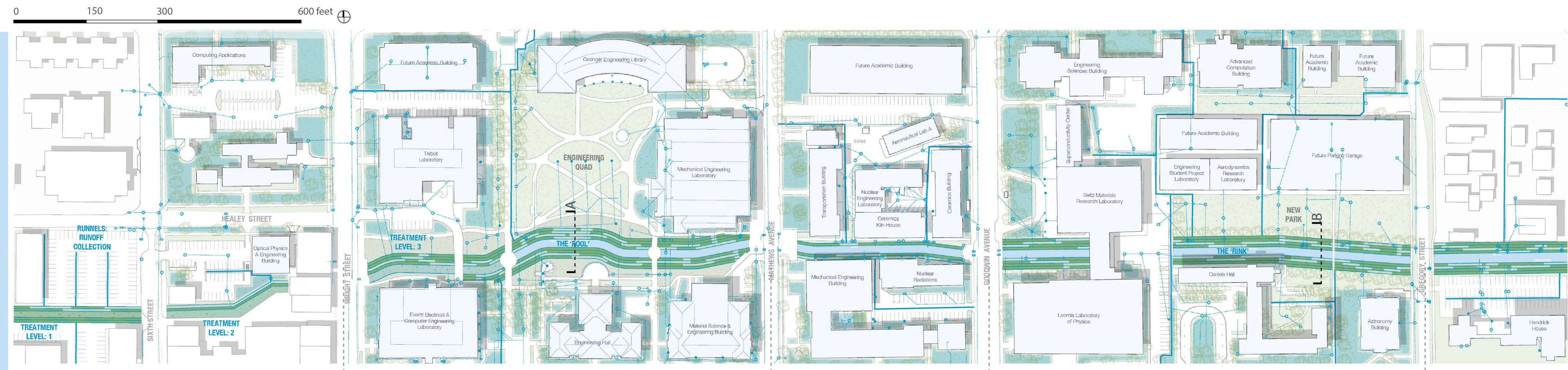
**EDGE ECOLOGY: FROM SHEET PILES TO POLLINATOR TERRACES**  
 With the threat of flood eliminated through detention upstream accommodating up to 100 year storm, and water quality improved through campus-wide green infrastructure, the hard vertical edges of the former 'drainage ditch' flowing through the Engineering Campus, give way to multifunctional terraces of native prairie plants for stormwater bioinfiltration, pollinator habitat, urban ecological education, and active and passive campus recreation.

**VERTICAL AND HORIZONTAL FLOW CONSTRUCTED WETLAND**  
 Through a vertical and horizontal flow constructed wetland typology, terraces effectively filter runoff, before discharging into the creek. Runoff enters the highest terrace first. Upon saturation, water seeps through gabion walls into subsequent lower terraces. The moisture gradient of wet to dry, accommodates a wide range of native plant communities and pollinators.

**TERRACE HYDROLOGY**  
 1. Stormwater Runoff via Runnel  
 2. Distribution Weir  
 3. Bioinfiltration via Native Plants  
 4. Gabion Basket Retaining Wall  
 5. Filtered Water into Creek



**ENGINEERING CAMPUS MASTERPLAN STRATEGY**



**LONGITUDINAL SECTIONS: REVERSE ENGINEERING ON THE ENGINEERING CAMPUS**

**PHASE 3: FILTER**  
 Whereas Phase 1 addresses runoff contamination from within the local sub-watershed, Phase 2 focuses on upstream pollutants already present in the water including E. coli bacteria. A three-tier terraced system utilizing phytoremediation will be implemented over a half-mile stretch of the Creek reaching from the Healey St. Detention Basin to the Engineering Quad. 80% of this stretch will require day-lighting, successfully reorienting the space for enhanced ecological, educational and recreational performance.

**PHASE 4: PROGRAM**  
 Improved water quality as a result of the network of Green Infrastructure on the UIUC Campus and the Marsh Filter upstream will produce water of sufficient quality to support programmatic elements including the development of a 'swimming hole' and a linear skating trail. A series of dams and weirs at varying heights will manage water levels to accommodate specific programs. Existing stream gauge will measure the performance of campus wide green infrastructure.

**PHASE 2: CONNECT**  
 As per the 2007 Campus Masterplan, the stretch of Boneyard Creek between Matthews Ave. and Goodwin St. is projected to be daylighted. This will connect the system along the Engineering Campus, facilitating the flow of programs and circulation.

**PHASE 1: CATALYZE**  
 As per the 2007 Campus Master Plan, a proposed multi-level parking structure will free the edges of the creek of parking lots, designating them as open space. With projected change to land use, there lies a unique opportunity to take an integrated systems approach to stormwater design and management reclaiming the creek edges as campus green stormwater infrastructure.

**PHASE 5: EXTEND**  
 The system extends beyond the campus and establishes itself as a linear park linking the campus with the greater community, through active and passive recreation, and sustainability education.