

Nature's Embrace: The Process of Creating Architectural Elegance in the Irwin Creek Project

Charlotte Mecklenburg Schools

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BACKGROUND: The Irwin Creek Project involves the design, fabrication, and construction of a public plaza and canopy structure that sympathetically responds to its natural surroundings along the Irwin Creek Greenway extension in Charlotte, NC

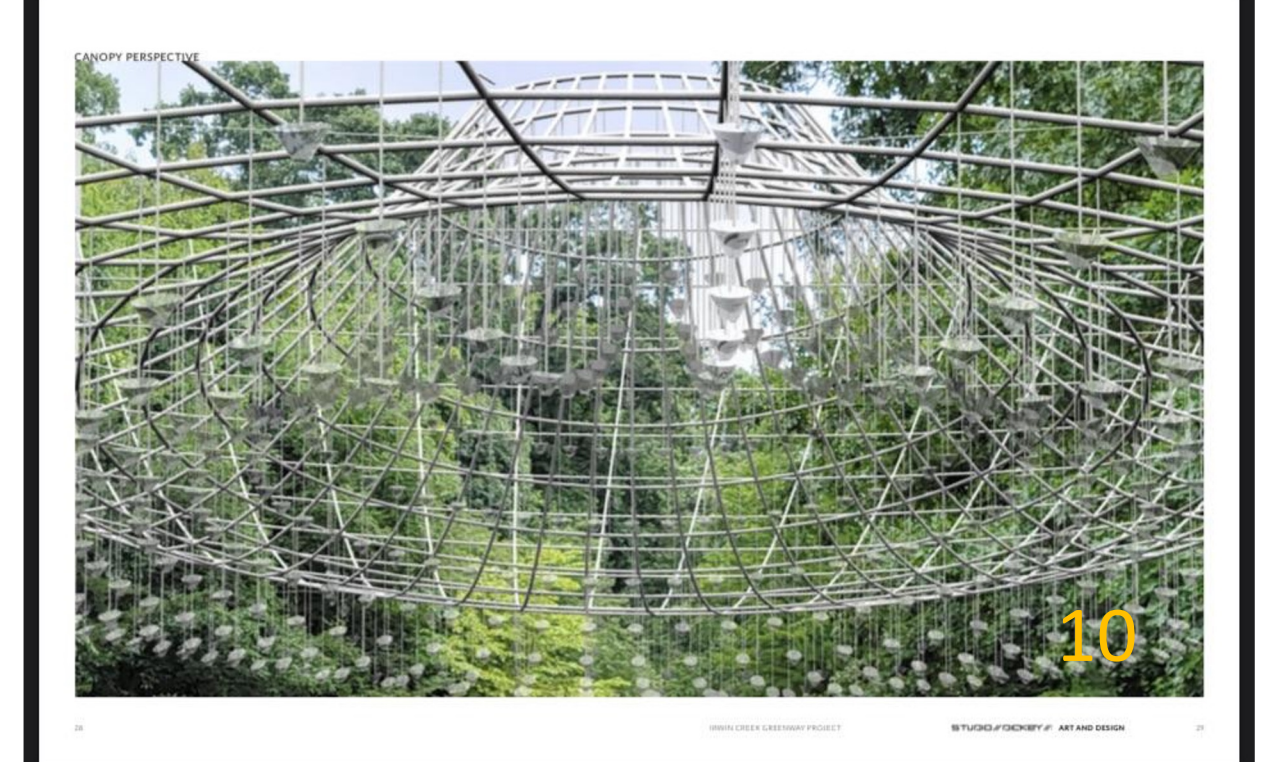
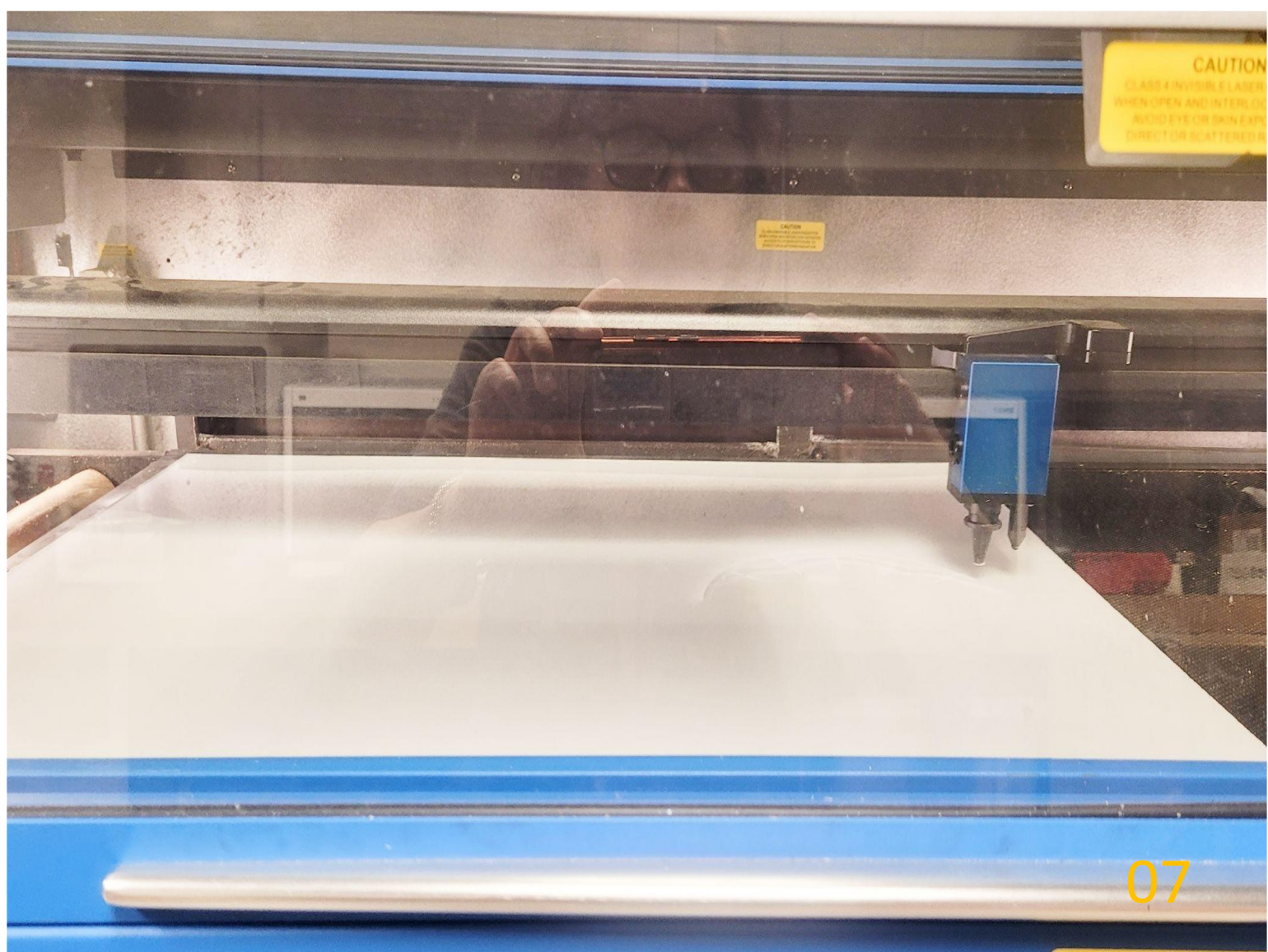
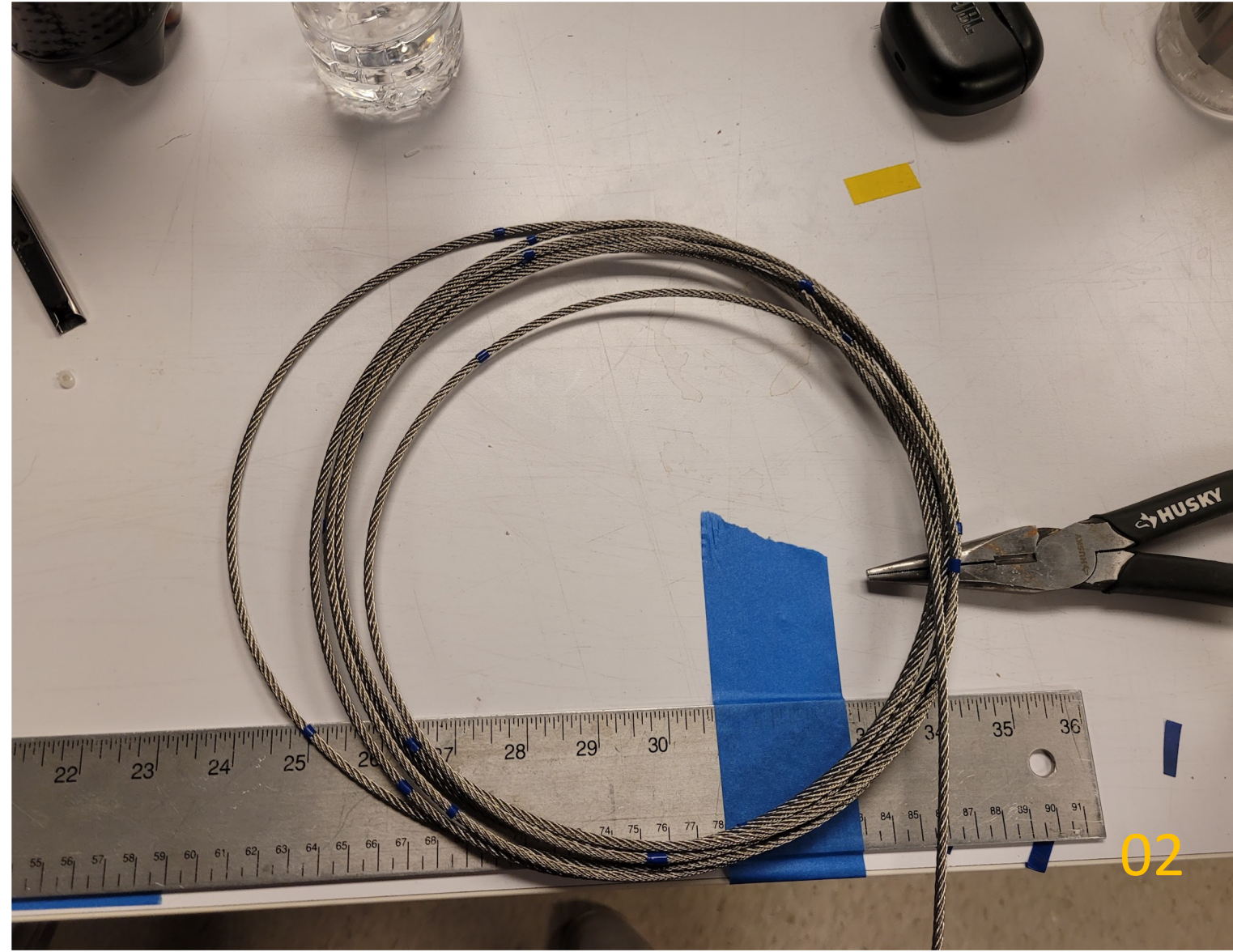
ABSTRACT

The Irwin Creek Project involves the design, fabrication, and construction of a public plaza and canopy structure that sympathetically responds to its natural surroundings along the Irwin Creek Greenway extension in Charlotte, NC. The porous canopy blends with the natural landscape by providing unobscured views to the surrounding trees lining the greenway. Hung from the canopy, 600 vessels collect morning dew and fallen items from the trees above, as a means of coexisting with the natural surroundings. Each vessel form is shaped from casts of community members' hands cupped together as if collecting a natural offering. The artwork pays homage to Charlotte, a city known for its lush tree canopy, urban forests and greenway extensions which connect us to each other and to our natural world.

As part of the Summer Research Experience for Teachers (SRET) Charlotte-Mecklenburg Schools K-12 teachers participate in ongoing prototyping research of the suspended vessels and fabrication of the sculptural canopy. Research activities for the project are centered around testing material processes of production using digital fabrication techniques.

Prototyping Research and Fabrication Tasks

1. Prototyping processes for fabricating suspended vessels involves material testing through adjusting the geometry of the laser cut acrylic panels and calibrating the vacuum forming procedures.
2. Fabricating the canopy structure involves extracting information from the digital 3D model for production of parts and assembly. The canopy takes form through a process of suspending stainless steel wire cable material to form catenary curves which are held to shape with a cross grain wire cable and trellis cable hardware.



1. Crimped cables for suspension
2. 1/4" stainless wire rope for catenary members
3. Silicon mold of community members' hands for casting
4. SRET teacher, Lawna Gamble, at crimping station
5. Plexiglass vacuum formed vessels

6. Laser cut plexiglass
7. Laser cutter in use
8. SRET Teachers, Lawna Gamble (Mountain Island Lake Academy) and Tammy Hawk (Albemarle Road Middle School) in Storrs Architecture fabrication lab
9. Canopy fabrication
10. Image of Irwin Creek Canopy Project