Ivy Corridor Phase II Redesign (Technical Report)

The Struggle to Promote Walking and Cycling in American Cities (STS Research Paper)

An Undergraduate Thesis Portfolio Presented to the Faculty of the School of Engineering and Applied Science In Partial Fulfillment of the Requirements for the Degree Bachelor of Science in Civil Engineering

by

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## Preface

Behavioral design is design intended to promote some behaviors and to deter others. Applied well, behavioral design can serve community purposes.

Urban planning can promote values such as spatial efficiency, productivity, and sustainability. In Virginia, the Ivy Corridor Project will introduce a designated entrance for both the University of Virginia and the city of Charlottesville. The project features a new residential area and a convenience store on university-owned land. The project plans also include a new building for the university's School of Data Science, a vehicular bridge, a parking garage, and hotel. In a project of such scale and variety, problems of capacity and aesthetic coherence can be complex. The scope of the project includes designing the site layout, improvement of stormwater management, sustainability, multimodal transportation system, and utility planning. The goal is to create a vibrant university hub that flows harmoniously flow with the adjacent infrastructure.

In U.S. cities, proponents of sustainable, inclusive, affordable, and healthful mobility have promoted walkability, cycling infrastructure, and better accommodations for cyclists. In so doing, they have emulated successful examples in Europe and Latin America, such as Copenhagen, Amsterdam, and Bogotá. Despite such efforts, however, the traffic safety record in the U.S. has grown worse, especially for pedestrians and cyclists. Some blame the trend on efforts to promote walking and cycling; others, however, argue that such efforts will succeed if driving is reduced as a share of all urban passenger transport, and if vehicular speeds in cities are reduced.