Zaid Admani
Stephen Zhao
Brent Crawford

<u>Hydraulic Design Group 4 Project Proposal</u>

Our project will focus on adding pervious pavement at the UT Austin campus, specifically along Speedway. We plan on replacing the current pavement with pervious pavement. We are focusing on low impact design. There are bike racks installed on gravel along Speedway. We propose on replacing the gravel with pervious pavement and installing new bike racks, resulting in increased bike parking. During a rain event, the gravel becomes muddy. The installation of pervious pavement will reduce ponding and mud. Additionally, the pervious pavement will provide infiltration of pollutants during a rain event. The existing trees can be used to create bio retention beds. We have attached an image to illustrate our idea.

In order to move forward with this project will need rainfall data for the UT Campus. We will also need to know how fast the water is drained. Additionally, we will need the locations of nearby inlets. Information such as the infiltration of the current gravel will need to be determined.

In order to determine the effectiveness of the pervious pavement, we will need to do a simulation model. Doing simulation of 5, 10, and 25 year storm events will guide our design of the pervious pavement.

Our key project element will be the pervious pavement we use to replace the gravel along Speedway. The pervious pavement will also result in the creation of bio retention beds around the trees along Speedway

To complete this project, Stephen will construct the graphics and run the simulations. Zaid will be responsible for the GIS database. Brent will do the CAD drawings. We will all collectively work together in determine the design.

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