Edgewood Dr. Extension and New Parking Garage
MCA\textsuperscript{3}T Design

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Objectives:
• Relieve traffic congestion off of University Blvd for pedestrian safety.
• Provide extra parking spots for students, staff, and faculty.

Solutions proposed by MCA\textsuperscript{3}T:
• Divert traffic to use the extension Edgewood Dr. all the way to connect with Babcock St.
• Build a new parking garage in the area of the existing Columbia Village parking garage.

New Parking Garage:
Geotechnical Engineering:
• A soil investigation of the existing soils was done, creating soil profile up to a depth of 50 ft which showcases all soil properties

Structural Engineering:
• A reinforced concrete garage with internal ramps, adding to a total of 3 floors.
• 336 Parking spots with parking count feature, showing number of available spots on each level.

Construction Cost:
Edgewood Dr. Extension = $554,000
New Parking Garage = $2,200,000
Total Project Cost = $2,754,000

Pavement design for Edgewood Dr.:
• A two-line road pavement design with three layers.
  • First layer => HMAC (4.5 in thick)
  • Second => Base (10 in thick)
  • Third layer => Sub base (9.5 in thick)

Extension of Edgewood Dr.:
• Survey of proposed roadway:

Spruce Green

SURFACE COURSE
COURSE
CLOSE COURSE
SUBBASE COURSE

• Proposed Intersection and traffic signals of Edgewood Dr. and Babcock St.

NORTHROP GRUMMAN
Engineering & Science Student Design Showcase
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