TEXAS A&M UNIVERSITY
Wm Michael Barnes '64 Department of
Industrial & Systems Engineering

ISEN 460 Capstone Senior Design
Phase 1, Team 26
Alternate Route Study
East End District

EAST END
DISTRICT

Spring 2024

Team 26

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Literature Review

Company Background:
- – Established in 1999 by the 76th Texas legislature
- – Made for economic revitalization of the area

Literature Review

Overview of Company
- Conducts capital improvements to area
- Graffiti Abatement, Public Safety, and Road Safety and Mobility

Literature Review

The Challenge

– Many trains pass through East End District
– Area is mostly residential today
– Trains often block roads around houses
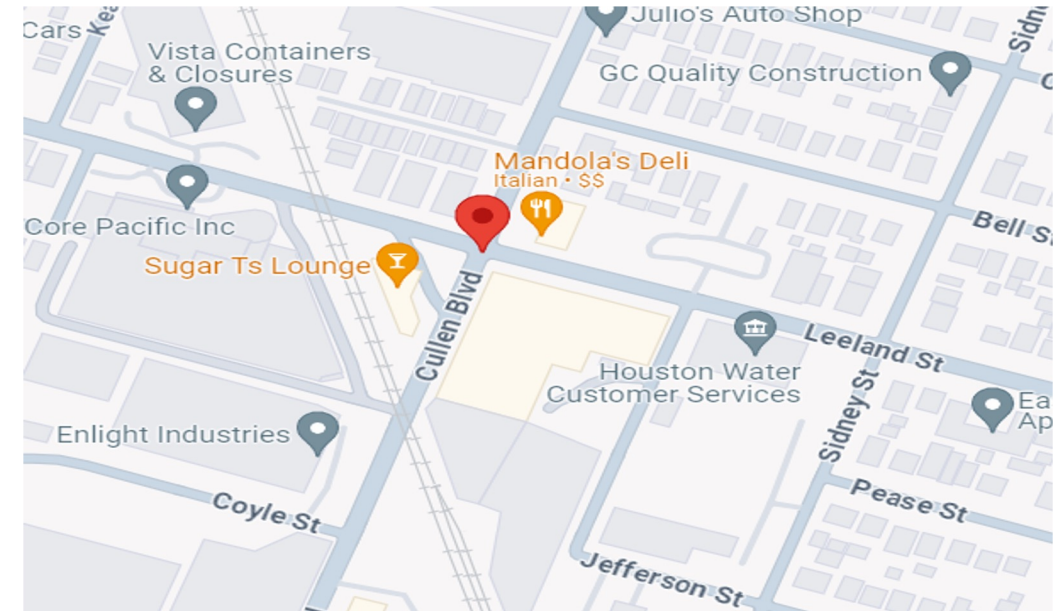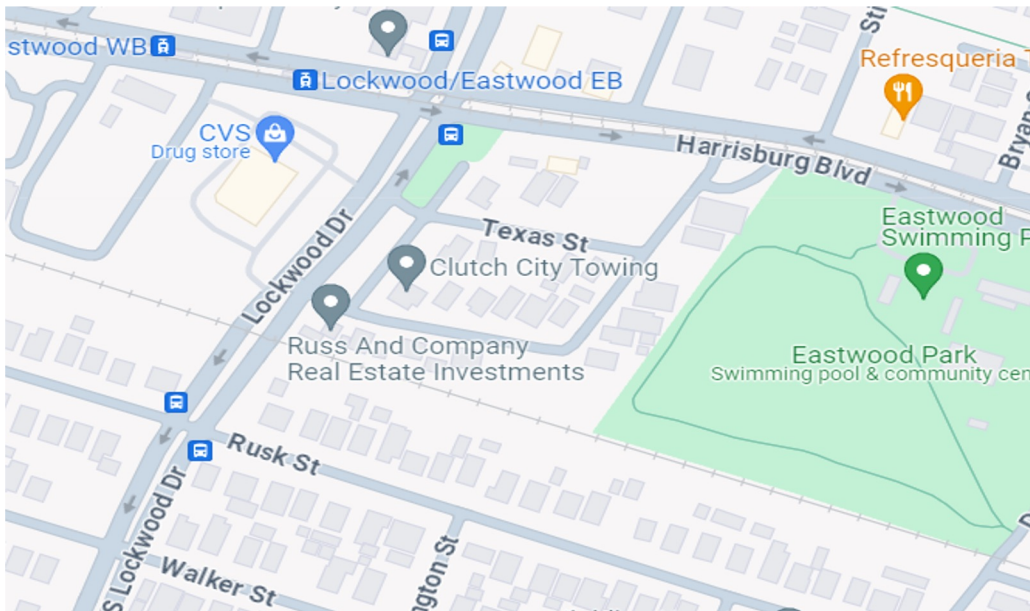– Leads to heavy traffic congestion

Literature Review

Problem
– Project focuses on 2 intersections

Lockwood

Literature Review

Lockwood

- Near a residential area/elementary school
- Avg 7 per day
- Avg 17 minute blockage time
- Longest 4.5 hours in December

Literature Review

Leeland/Cullen
- Train blocks 2 directions
- Avg 24 per day
- Avg 7 minute blockage time
- Longest 2 hours in December

Literature Review

Problem Needs

Part 1:
- Create alternative routes around train tracks
- Understand traffic data, train data, road capacity etc.
- Simulate routes to find fastest/safest

Part 2:
- Implement routes through detour signs, warning signs, etc.
- Determine location/number of signs
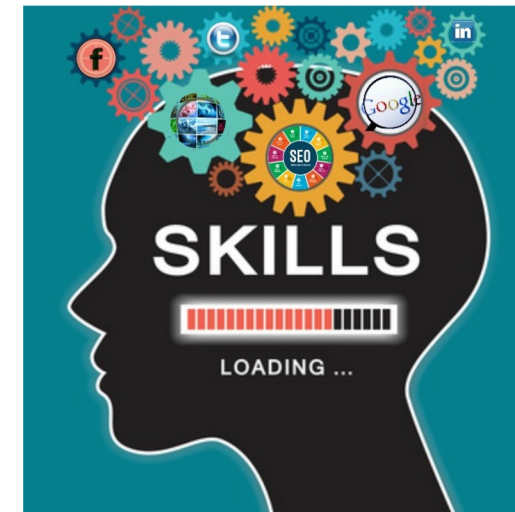
Literature Review

Skills Needed:
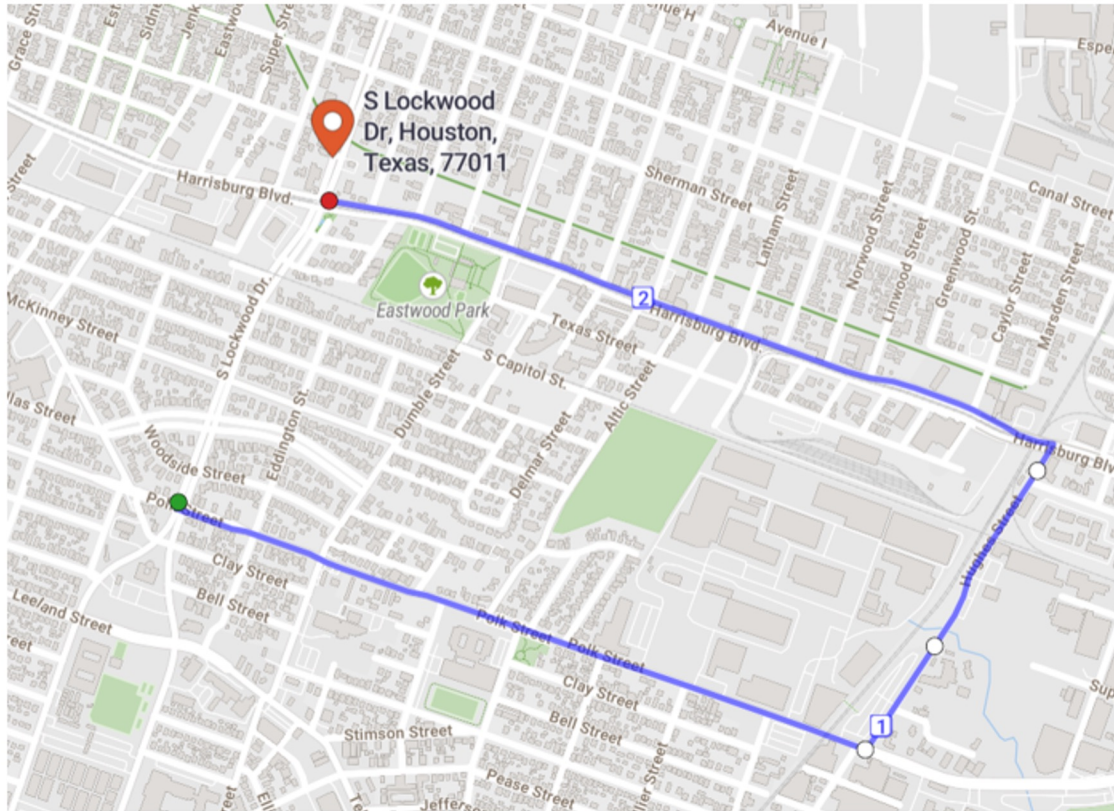
- Simulation (Simio)
- Data Analysis (Traffic/Train)
- Human Factors (Size/Locations of Signs)

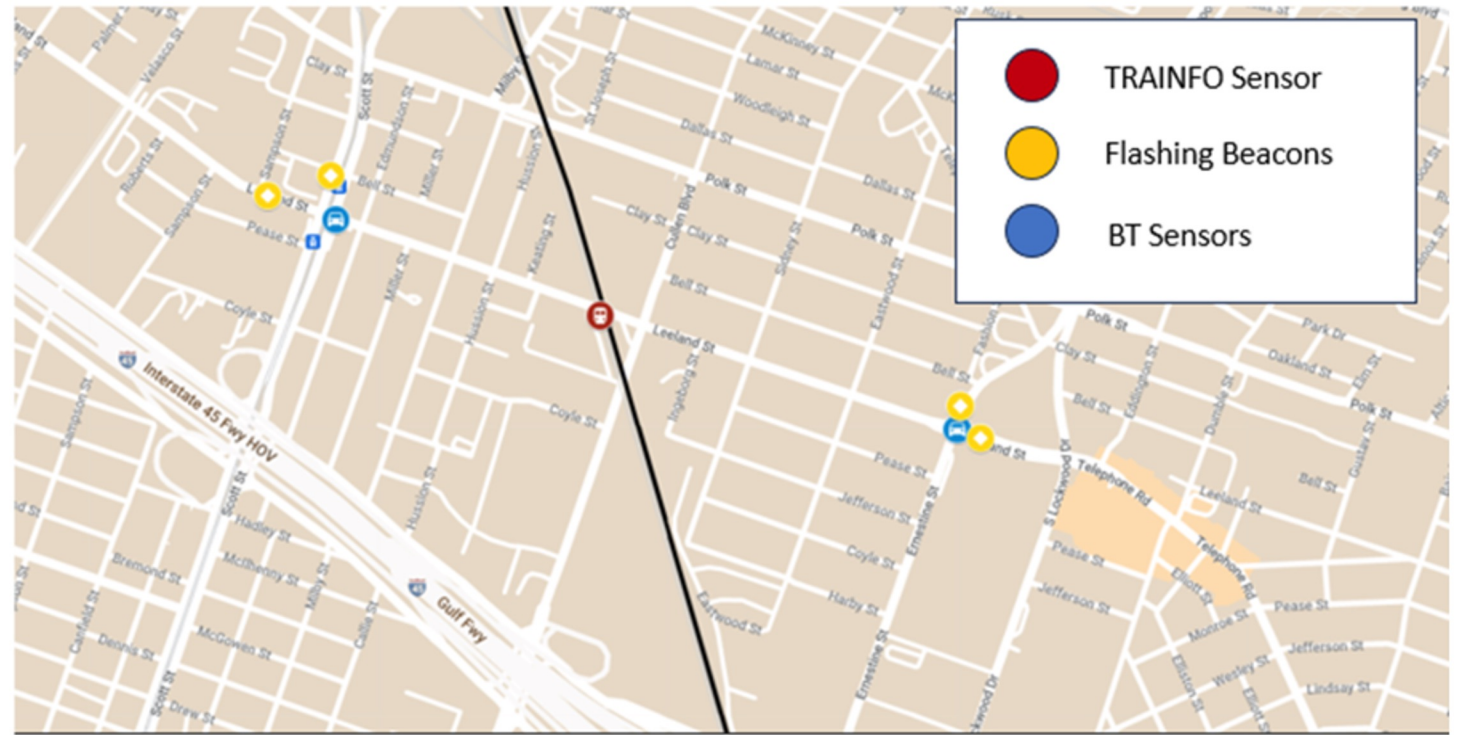# 700 S. Lockwood

4000 Leeland at Cullen

4000 Leeland

🔴	TRAINFO Sensor
🟡	Flashing Beacons
🔵	BT Sensors

EAST END DISTRICT

Questions?