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Optimizing Traffic Flow and Space Utilization at ISU Transportation Services

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Optimizing Traffic Flow and Space Utilization at ISU Transportation Services

Client: ISU Transportation Services, Ames, Iowa

Problem Statement

- Transportation services is looking to alleviate some of the congestion during peak times by putting in a self-service kiosk to allow for checkouts outside of normal business hours.
- In order to do this, the parking lot must be redesigned to fit enough cars and handle the traffic flow.

Objectives

- Move fence and redraw lines to accommodate 112 spaces
- Create a new organizational system for easy rental
- Create SOP for new kiosk system
- Improve traffic flow with new design

Constraints

- Cannot expand lot
- Trailers must remain locked up
- Must accommodate a minimum of 112 parking spaces
- One-way flow

Methods

- Park CAD and AUTOCAD

Current Parking Area



Proposed Solutions

- Remove majority of the fencing.
- Fence in an area only for vehicles that need to be locked up after hours.
- Improve flow
- Color coordinate zones to easily find vehicle and have color indicators on key so client knows where to find and return vehicle.

Major Outcomes

- Able to focus more on vehicle maintenance
- The ability for clients to receive vehicles after hours will help reduce afternoon rushes.

Proposed Improvement



Benefit to Client

- Easier to maintain vehicles
- Easier to find vehicles
- Can have designated areas for types of vehicles or heavily used vehicles