

Public Abstract

First Name:Manal

Middle Name:

Last Name:Jain

Adviser's First Name:James

Adviser's Last Name:Noble

Co-Adviser's First Name:

Co-Adviser's Last Name:

Graduation Term:FS 2017

Department:Industrial Engineering

Degree:MS

Title:Modeling the urban underground pallet tube system design

In an urban city, traffic congestion is one of the biggest problems faced and this has increased environmental pollution and energy consumption. Several industries rely on trucks for their transportation needs adding to the growing congestion problems. In this research, we examine an emerging technology in freight and package delivery systems that will help reduce reliance on traditional ground transportation systems called Underground Pallet Tube System. The goal is to allow the distribution center located outside city limits, to deliver pallets and packages to retail stores located inside the cities through an underground network of pipelines or tubes. We introduce an underground pallet tube system model that generates a network design solution which minimizes the overall cost while connecting to many of its customers located in the center of the city.