Ground Transportation Ad Hoc Committee

Innovations in Ground Transportation Operations

PREPARED FOR:

SAN DIEGO
INTERNATIONAL AIRPORT™

PREPARED BY:

Kimley»Horn

4/27/2018

Introduction

▶ William (Bill) Schmitz, P.E. (MN)

- 11 years of experience (2 years at SAN)

- Background includes planning, programming, design, construction, and operations

- Varied clients and services including airport landside, transit, highway, and structured parking

▶ Kimley-Horn and Associates

- Multi-disciplinary consultants

- Served SDCRAA for over 20 years

- Currently working at over 24 of the top 30 US airports by enplanement

eDispatch - MSP Virtual Taxi Hold Lot

▶ eDispatch vision: Fully virtual lot

▶ Operator Engagement: Wary of fully virtual lot

▶ Implemented in June 2018

▶ eDispatch allows:
- Queue length check before entering lot
- Holds driver spot in queue if leave hold lot

▶ eDispatch requires:
- Valid e-mail address
- Web account
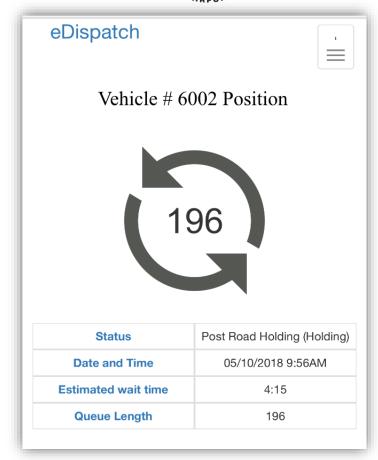- Text message capable phone

Image Source: Metropolitan Airport Commission, 2018

eDispatch - MSP Virtual Taxi Hold Lot

▶ How eDispatch Works

- Driver logs into the app and checks the queue length
  - The driver decides when to head to the hold lot
- Driver enters the hold lot and enters the queue
  - The driver decides whether to wait in the hold lot
- Driver position in the first in first out queue is maintained on the virtual list, which is also displayed at the hold lot
- Text messages are sent to drivers who have left the lot to remind them to return
- Driver returns to the hold lot when directed and is dispatched based on the virtual list of first in first out

Registered eDispatch
[Position: 181]

Please drive to the Post road Holding Lot. You must arrive before 3:24PM

6002 T1

Image Source: Metropolitan Airport Commission, 2018

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eDispatch - MSP Virtual Taxi Hold Lot

▶ So what...

- Fewer taxis in hold lot
- Fewer police calls to hold lot
- Reduction in airport staff enforcement
- Operator support and positive feedback
- High operator usage of virtual system near 80%

▶ Credits:

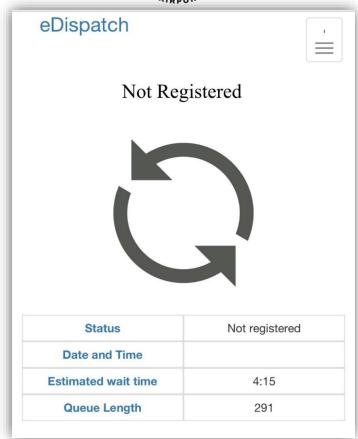- Brandon Simon, Metropolitan Airports Commission

Image Source: Metropolitan Airport Commission, 2018

License Plate Recognition (LPR)

▶ Possible uses
- Parking
- Roadway
  - Real time vehicle classification
  - Tolling
- Commercial vehicles
  - Compliment or replace AVI systems
  - Enforcement
  - Identify unknown commercial vehicles

Image Source: TransCore, 2018

Open Road Tolling

▶ Currently only one US Airport

- ▪ Dallas Fort Worth

▶ 14 UK airports

▶ How it works

- ▪ Multiple cameras capture images of license plate

- ▪ Images processed to determine license plate number

Image Source: TransCore, 2018

Open Road Tolling

▶ Challenges

- Manual processing of images that cannot be automatically determined

- DMV / agency interface and coordination

- Process for collecting revenue from irregular facility users

- Public perception
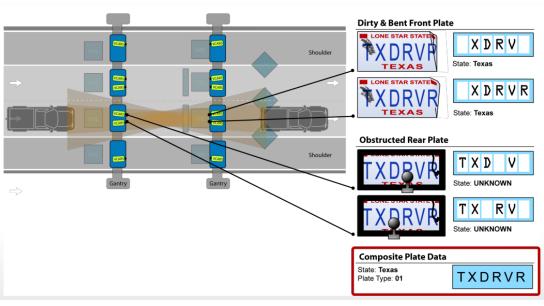
▶ Credits:

- Forrest Swanson, TransCore

Image Source: TransCore, 2018

Flexible Landside Facilities

▶ Why is this important

- Civil infrastructure can be designed to last 50 to 75 years

▶ Change Example: 9-11

- No longer walk passenger to gate without security pass
- Increased curbside activity
- Reduced short term parking
- Opportunity for increase long term parking

1994

2018

Image Source: GoogleEarth, 2019

Flexible Landside Facilities

- Maximize limited space with multiple functions
  - Parking
  - Ground transportation
  - Rental cars
  - Unknown?
- Plan with change in mind
  - Multiple access points
  - Future expansion/modification
- Think in 3-D
  - Multi-level facilities can handle operations on multiple levels
- Consider the Passenger
- ACRP 03-47
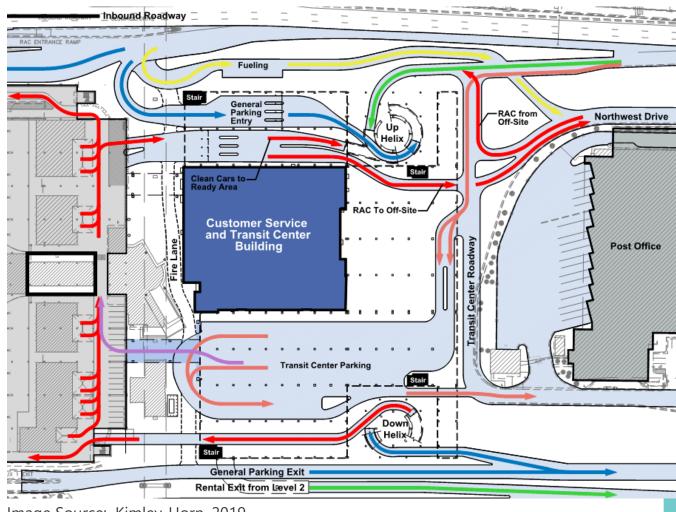 - Rethinking Airport Parking Facilates to Protect and Enhance Non-Aeronautical Revenue

Image Source: Kimley-Horn, 2019

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