Colorado’s Statewide Truck Parking Assessment

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Felsburg Holt & Ullevig

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Outline

- Background & Need for the Study
- Statewide Facility Inventory
- Parking Utilization
  - Site-specific
  - By Corridor
- Study Conclusions
- Related Elements
Why is Truck Parking a Concern?

- Infrastructure Shortfalls
  - Physical constraints
  - Community concerns
  - Rest Area closures
- Increased parking needs
  - Continued growth in truck freight
  - Electronic Logging Device (ELD) mandate
- Outcomes
  - Hours of Service violations
  - Unsafe / illegal parking
Hours of Service Violations

- Total hours of service violations declining
- Hours of Service violations as % of total violations rising
  - 2014: Over 20% of violations in five states
  - 2017: Over 20% of violations in seven states
  - 2018: (forecasted): Over 20% of violations in twelve states
- Colorado ranking:
  - 2014: Not in the top eight
  - 2017: Ranked 4th
  - 2018 (forecasted): Ranked 2nd
Unsafe / Illegal Parking

Unsafe locations
- Ramp shoulders
- Blind corners
- Parking / fire lanes

Illegal locations
- Private parking lots
- Neighborhoods
- Time-limited facilities
Study Corridors

Truck Parking Assessment Routes

Legend:
- Private Truck Stops
- Public Rest Areas
- Highway Freight Corridors
- Corridor Assessment Routes
- Interstate Highways
- U.S. Highways
- State Highways
Parking Inventory

- Public facilities
  - Rest Areas
  - Truck Parking Areas
  - Limited Use:
    - Welcome Centers
    - Scenic Areas
  - Not Considered:
    - Weigh Stations
    - Chain Stations

- Private Facilities
  - Truck Stops
    - Pilot / Flying J
    - TA Travel Centers
    - Loves
    - Others
  - Convenience Stores / Gas Stations
Inventory Data Sources

- Existing state data
  - DOT inventories
    - Rest areas
    - Truck parking areas
    - Chain stations
  - DOR weigh station data
  - OED welcome center data

- Private data sources
  - Operator websites
    - Pilot / Flying J
    - Loves
    - TA Travel Centers
  - Industry websites
  - Online map / search tools
## Corridor Parking Summary

<table>
<thead>
<tr>
<th>Route</th>
<th>Rest Areas</th>
<th>Truck Stops</th>
<th>Other</th>
<th>Total</th>
<th>Spaces per Mile</th>
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<tbody>
<tr>
<td>I-25</td>
<td>95</td>
<td>620</td>
<td>8</td>
<td>723</td>
<td>2.42</td>
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<tr>
<td>I-70</td>
<td>68</td>
<td>1,798</td>
<td>87</td>
<td>1,953</td>
<td>4.34</td>
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<tr>
<td>I-76</td>
<td>65</td>
<td>313</td>
<td>0</td>
<td>378</td>
<td>2.05</td>
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<td>US 40</td>
<td>10</td>
<td>35</td>
<td>27</td>
<td>72</td>
<td>0.28</td>
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<tr>
<td>US 50</td>
<td>6</td>
<td>223</td>
<td>0</td>
<td>108</td>
<td>1.51</td>
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<tr>
<td>US 160</td>
<td>13</td>
<td>171</td>
<td>6</td>
<td>291</td>
<td>0.62</td>
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<tr>
<td>US 287</td>
<td>13</td>
<td>178</td>
<td>15</td>
<td>617</td>
<td>1.11</td>
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<tr>
<td>SH 71</td>
<td>0</td>
<td>0</td>
<td>11</td>
<td>60</td>
<td>0.08</td>
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<tr>
<td><strong>Totals</strong></td>
<td><strong>270</strong></td>
<td><strong>3,338</strong></td>
<td><strong>154</strong></td>
<td><strong>3,762</strong></td>
<td><strong>1.92</strong></td>
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</table>
Inventory Highlights

- About 160 sites evaluated
- Largest sites privately owned /operated
  - One large public site along I-70
- Parking space counts require assumptions
  - Included cab-only spaces when available
  - Typical space sizes for unmarked spaces and dirt lots
  - Requires engineering judgement
- Used mapping tools to:
  - Sketch inventoried areas
  - Note assumptions
Parking Utilization Data

- Obtained GPS parking data for each site
  - Locations (polygons) defined in GIS
  - American Transportation Research Institute (ATRI) Data
  - Data typically from independent shippers
  - Expansion factors required
- Four two-week periods collected in 2017
  - Summer was busiest period
  - Winter was least busy period
  - Only collected stays longer than 30 minutes
Utilization Highlights

- Site Specific Results
  - Many sites over capacity

- Corridor results
  - I-25: 50%
  - I-70: 25%
  - I-76: 35%

- Adjacent sites with easier access show higher usage

- Assume 30-minute buffer
  - 30-35 miles on interstates, less on other routes
Corridor Fact Sheets

2017 Truck Parking Usage by Location

Summary of Conditions, Needs and Solutions
West I-70 (From Utah State Line to I-25)

2017 Truck Parking Usage along Corridor

- Grand Junction / Parachute
  - This segment generally provides adequate spaces.
  - Higher than average freight traffic growth is forecasted between Parachute and Denver.

- Rifle / New Castle
  - A shortfall of spaces was observed in this segment.
  - COTR’s Rifle Rest Area was observed to be operating over capacity.
  - Higher than average freight traffic growth is forecasted between Parachute and Denver.

- Glenwood Springs / Edwards
  - This segment generally provides adequate spaces.
  - Higher than average freight traffic growth is forecasted between Parachute and Denver.

- Avon / Silverthorne / Vail Springs
  - A substantial shortfall of spaces was observed in this segment.
  - No spaces were observed between Loveland Ski area and Idaho Springs.
  - A facility near Empire Junction could provide additional truck parking opportunities.
  - Higher than average freight traffic growth is forecasted between Parachute and Denver.

- Evergreen / Denver
  - A shortfall of spaces was observed in this segment.
  - The existing Pilot Travel Center at Steele Street closed in December 2017.
  - Higher than average freight traffic growth is forecasted between Parachute and Denver.
Statewide Results
Implementation Plan

- Ongoing Monitoring
- Partnerships
- Communication
  - Print / brochure
  - Truck Parking Information Management System (TPIMS)
- Multi-use Infrastructure
  - Public
  - Private
- Add Parking Spaces
New Facility Siting Concerns

- **General**
  - Utilities can be difficult to find in rural areas
  - Appropriate access is a key for success
- **Public Rest Areas**
  - Maintenance funding competes with other needs
- **Truck Stops**
  - Practical sites can be difficult to find in urban areas
  - Zoning may discourage private investment
Thanks!

Questions?

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(303) 721-1440
The MAASTO Regional TPIMS project represents a sustained, multi-year focus on improving the national freight network’s efficiency, economic competitiveness and safety. The project provides truck drivers with reliable, real-time information to make smarter, more efficient truck parking decisions. It covers major freight corridors in Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Ohio and Wisconsin.

https://trucksparkhere.com/
TPIMS - How It Works

**HOW TPIMS WORKS**

1. Vehicle detection systems measure available parking in lots across each state

2. Parking data goes to states and 3rd party processors

3. Data is delivered to drivers

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**The Challenge:**
Long-haul truck drivers struggle to find safe parking.

**The Solution:**
TPIMS monitors parking spots and delivers real-time data to drivers.
Parking Utilization Webmap

- Webmap includes:
  - Inventory data for each site
  - Utilization data by quarter
- Webmap used to:
  - Share data internally
  - Allow client reviews
Hours of service violations by State

- https://www.overdriveonline.com/more-states-shift-focus-to-hours-eld-related-violations/

### Annual hours violations and ranked state leaders

<table>
<thead>
<tr>
<th>Year</th>
<th>STATE LEADERS</th>
<th>BELOW 20%</th>
<th>TOTAL NATIONAL VIOLATIONS</th>
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<tr>
<td>2014</td>
<td>534,935</td>
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<td>2015</td>
<td>485,232</td>
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<td>2016</td>
<td>469,322</td>
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<tr>
<td>2017</td>
<td>429,956</td>
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<td>2018</td>
<td>304,071</td>
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<tr>
<td>2014</td>
<td>Arkansas - 35.6%</td>
<td>Wyoming - 23%</td>
<td>North Dakota - 22.8%</td>
<td>Oregon - 22.1%</td>
<td>Colorado - 21.9%</td>
<td>Indiana - 21.1%</td>
<td>Iowa - 20.7%</td>
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- 1. Arkansas - 33.1%
- 2. Colorado - 30.4%
- 3. Wyoming - 28.1%
- 4. Oregon - 26.4%
- 5. Iowa - 24.6%
- 6. North Dakota - 23.7%
- 7. Nevada - 23.2%
- 8. Utah - 22%
- 9. South Dakota - 21.2%
- 10. Louisiana - 20.4%
- 11. Vermont - 20.3%
- 12. Montana - 20.2%
- 13. Alabama - 19.9%
- 14. Washington - 19.5%
- 15. Maine - 19%