

The Truck Driver Resource Mapping Project: Rationale, Findings, and Future Directions

Michael K. Lemke, Ph.D., *The University of Houston-Downtown*

Adam Hege, Ph.D., *Appalachian State University*

Alexander M. Crizzle, Ph.D., *The University of Saskatchewan*

Mackenzie McKeown, *The University of Saskatchewan*

Aya Hassoun, *The University of Saskatchewan*

Megan McCloskey, *Appalachian State University*

Savannah Hamrick, *Appalachian State University*

Three Objectives of Today's Presentation

1. Provide rationale for the need to map health and safety resources within publicly-accessible truck driver worksites
2. Present methodology and initial findings from a collaborative resource mapping project between U.S. and Canadian academic institutions
3. Describe prospective strategies for disseminating project findings to facilitate their utilization among truck drivers and other stakeholders

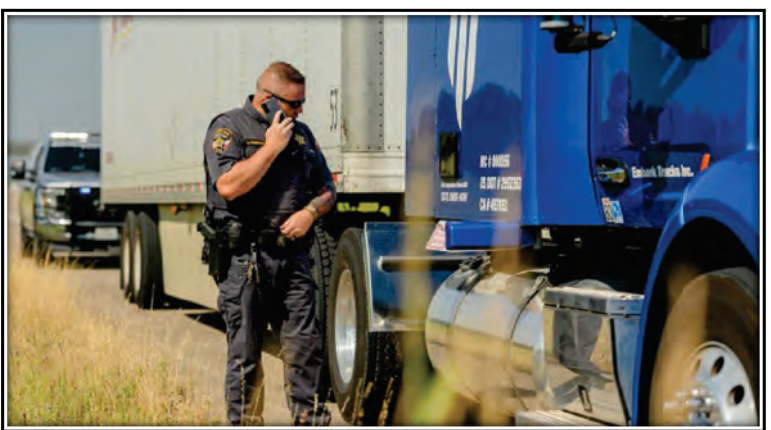
Truck Driver Worksites



Worksites Provide Basic Needs




Truck Driver Environmental Constraints



What Mapping Resources Could Provide


- Reveal ‘hidden’ resources that drivers may not be unaware of, but could be utilized to support health and safety
- Enable better trip planning for drivers, dispatchers, software developers, etc.
- Identify gaps in the distribution of environmental resources that constrain driver health and safety
- A rich and powerful description of truck driver built environments for basic and applied research

Initial Resources



THE ULTIMATE TRUCK PARKING GUIDE

11th Edition



*Truck Stops, Truck Parking Areas, Rest Areas
 Mom & Pop Restaurants, Weigh Stations
 Walmart Supercenters, and more*

11,000 Tractor-Trailer Parking Locations

"A Guide for Truckers, Written by a Trucker"

www.ParkMyRig.com

TM

CHAPTER 1 INTERSTATE HIGHWAYS	
I-2 TEXAS	
45	S: Stripes/Taco Co 35+ (24 hr, 956-519-1593) Hutto Rd Exit S: Loves/24 hr Arby's 150+ (Showers, Scales, Laundry, 956-464-1133)
I-4 FLORIDA (Last mile marker is 132mm)	
3	E: Marathon 0+ (24 hr, no parking, only quick stops, 813-247-4602) E: Burger King (4+)(Overnight ok)
5	W: Tampa Bay Truck Center 60+ (West on MLK then ¼ mile on left) (Private Property, \$17 to park per day, not 24 hr) 813-635-9634 E: Sonoco/Subway 2+ (24 hr, East on MLK, make U-turn at S/L, tight to get in to)
7	N: Mobil Truck Stop/Krispy Krunchy 88+ (Hwy 301 North, \$12 to park) (Showers, Scales, Laundry) (24 hr Waffle House across street)
10	N: Flying J/24 hr Denny's 30+ (Showers, TV Lounge, Scales, Laundry) N: TA/Arby's/Popeye's 87+ (Showers, Scales, \$20 to park)
11mm	B: Weigh Station 11+
25	S: Speedlane Mobil 0+ (24 hr, No parking, only quick stops) S: McDonald's 3+ (30 min, Customer parking, Free Wi-Fi, Open 5am-1am) (4 trucks park on shoulder after parking lot)
32	N: McDonalds 4+ (Overnight ok, open 5am-1am, Free WiFi) 863-858-3009 S: Denny's 10+ (24 hr, 863-687-3390) (Park in vacant lot across street)
44	S: Loves/Arby's 120+ (Scales, Showers) S: BP Polk City Truckstop/24 hr Subway 25+ (Showers, Scales)
46mm	B: Rest Area 24+ (Venomous Snakes in Area) (night time security)
55	N: Loves/24 Arbys (65+)(Showers, Scales) N: Sunoco 0+ (No Parking, Only short stops on fuel island, not 24 hr) N: Comfort Inn 4+ (Customer only) 863-353-4510
64	N: *Disney World (Customers only, Pay to Park)
71	S: *Sea World (Customers only, Pay to Park)
77	S: W: Acme Truckstop/Restaurant 82+ (Scales, opens 6am) 407-240-4669 (Florida Turnpike South 5 miles to exit 254, then ¼ south on Orange) (Blossom, on the left, pay to park)
94mm	WB: Rest Area 17+ (Picnic Tables, nighttime security)
96mm	EB: Rest Area 17+ (Picnic Tables, nighttime security)
132	Junction I-95 (Reference only)

Initial Resources

Flying J Travel Center
4.2 ★★★★★ 832 reviews
Truck stop

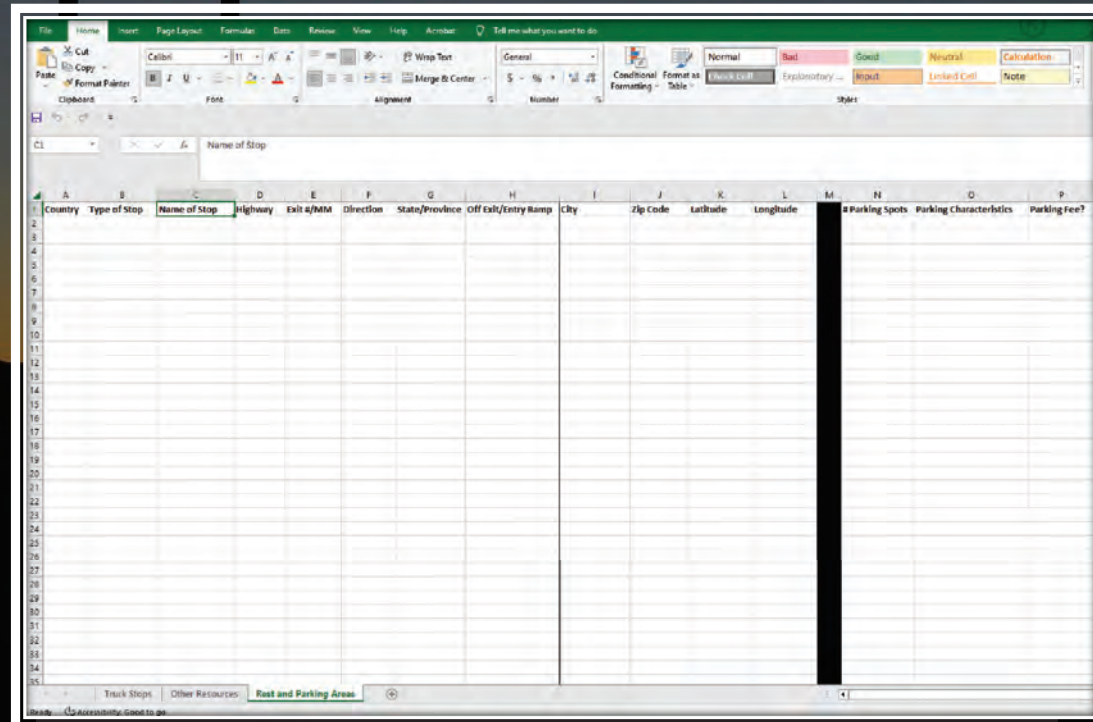
Diesel	Regular	Midgrade	Premium
\$4.56	\$2.56	\$3.00	\$3.50

102 Sheldon Rd, Channelview, TX 77530
Open 24 hours
locations.pilotflying.com
(281) 457-1435
QVCF+GW Channelview, Texas

29.77332, -95.12445
Directions from here
Directions to here
What's here?
Search nearby
Print
Add a missing place
Add your business
Report a data problem
Measure distance

Variable Classification and Extraction

6. Identify location type and add to appropriate Excel sheet.
 - a. Identify whether the entry is a Truck Stop, Other Resource, or Rest or Parking Area
 - i. Truck Stops:
 1. Any locations that have truck parking and have fuel
 2. Any locations with truck stop, travel plaza; truck center, or travel center in name
 3. Major truck stop chains: Loves; Pilot; Flying J; TA; Petro; Esso; Husky; Irving
 - ii. Other Resources:
 1. Convenience stores with truck parking
 2. Convenience stores without truck parking
 3. Gas stations without truck parking
 4. Wal-marts
 5. Grocery stores
 6. Other store with truck parking (e.g., Cabela's)
 7. Malls
 8. Casinos
 9. Restaurants with truck parking
 10. Motels/hotels
 11. Tourist attractions
 - iii. Rest/Parking Areas:
 1. Rest areas
 2. Welcome centers
 3. Weigh stations
 4. Asphalt cutouts
 5. Gravel cutouts
 6. Chain removal areas
 7. Brake check areas
 8. Vista points



The screenshot shows an Excel spreadsheet with a data table. The table has 17 columns and 35 rows. The columns are labeled as follows:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
	Country	Type of Stop	Name of Stop	Highway	Exit #/MM	Direction	State/Province	Off Exit/Entry Ramp	City	Zip Code	Latitude	Longitude		# Parking Spots	Parking Characteristics	Parking Fee?
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
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The spreadsheet interface includes a ribbon with tabs for Home, Insert, Page Layout, Formulas, Data, Review, View, and Help. The active sheet is named 'Truck Stops'.

Variables Included in Initial Resources

OTHER RESOURCES

1. Extract information from *Ultimate Truck Parking Guide* and add to *Other Resources* sheet.
 - a. **Location:**
 - i. Country
 - ii. Type of Stop
 - iii. Name of Stop
 - iv. Highway
 - v. Exit #/MM (or Name of Exit) (if MM, enter "mm" or "km" after number)
 - vi. Direction
 - vii. State/Province
 - viii. Off Exit or Entry Ramp (yes/no; "no" unless stated otherwise)
 - ix. Phone # (entered as (xxx)-xxx-xxxx)
 - b. **Parking:**
 - i. # Parking Spots
 - ii. Parking Characteristics ([if there are Parking Spots; if not, then "NA"] no overnight parking, overnight parking ok, no signs regarding overnight parking)
 - iii. Add'l Parking Dir. (enter any additional parking directions freehand)
 - iv. Parking Fees (yes/no; "no" unless stated otherwise; "NA" if no Parking Spots)
 - v. Parking Cost (if "yes" to Parking Fees; otherwise, "NA")
 - vi. Other Parking Info
 - c. **Nutrition:**
 - i. Name of Restaurant(s)
 - ii. Phone # (entered as (xxx)-xxx-xxxx)
 - iii. In Same Building (yes/no; "yes" if "" separating establishments)
 - iv. Open 24 Hours (yes/no; "no" unless stated otherwise)
 - v. Open Hours (if "no" Open 24 Hours)
 - vi. Parking On Site (yes/no; "no" unless stated otherwise)
 - vii. Other Parking ([if "no" to Parking On Site] enter parking details freehand)
 - viii. Amenities (if the restaurant offers its own specific amenities aside from those offered by the broader location, such as WiFi, enter each amenity freehand)
 - d. **Other Amenities:**
 - i. Showers (yes/no; "no" unless stated otherwise)
 - ii. Scales (yes/no; "no" unless stated otherwise)
 - iii. Laundry (yes/no; "no" unless stated otherwise)
 - iv. Free WiFi (yes/no; "no" unless stated otherwise)
 - v. WiFi Limits ([if "no" Open 24 Hours; if specified location of WiFi [e.g., "McDonald's with Free WiFi] yes/no; "no" unless stated otherwise)
 - vi. Air (yes/no; "no" unless stated otherwise)
 - vii. TV lounge (yes/no; "no" unless stated otherwise)
 - viii. Motel (yes/no; "no" unless stated otherwise)
 - ix. Motel Name (if "yes" to Motel; otherwise, NA)
 - x. Motel Location ([if "yes" to Motel; otherwise, NA] on property; close to property; close to property and has parking)
 - xi. Smoking (yes/no; "no" unless stated otherwise)
 - xii. Other Amenity Info
 - e. **Activities:**
 - i. Name of Activity (freehand)
2. Extract information using Google Maps
 - i. City
 - ii. Zip Code
 - iii. Latitude
 - iv. Longitude

TRUCK STOPS

1. Extract information from *Ultimate Truck Parking Guide* and add to *Truck Stops* sheet.
 - a. **Location:**
 - i. Country
 - ii. Name of Stop
 - iii. Highway
 - iv. Exit #/MM (or Name of Exit) (if MM, enter "mm" or "km" after number)
 - v. Direction
 - vi. State/Province
 - vii. Phone # (entered as (xxx)-xxx-xxxx)
 - b. **Parking:**
 - i. # Parking Spots
 - ii. Parking Characteristics (no overnight parking, overnight parking ok, no signs regarding overnight parking, other, NA)
 - iii. Parking Fee? (yes/no; "no" unless stated otherwise)
 - iv. Parking Cost (if "yes" to Parking Fees; otherwise, "NA")
 - v. Other Parking Info
 - c. **Nutrition:**
 - i. Name of Restaurant(s)
 - ii. Phone # (entered as (xxx)-xxx-xxxx)
 - iii. In Same Building (yes/no; "yes" if "" separating establishments)
 - iv. Open 24 Hours (yes/no; "no" unless stated otherwise)
 - v. Open Hours (if "no" Open 24 Hours)
 - vi. Parking On Site (yes/no; "no" unless stated otherwise)
 - vii. Other Parking ([if "no" to Parking On Site] enter parking details freehand)
 - viii. Amenities (if the restaurant offers its own specific amenities aside from those offered by the broader location, such as WiFi, enter each amenity freehand)
 - d. **Other Amenities:**
 - i. Showers (yes/no; "no" unless stated otherwise)
 - ii. Scales (yes/no; "no" unless stated otherwise)
 - iii. Laundry (yes/no; "no" unless stated otherwise)
 - iv. Free WiFi (yes/no; "no" unless stated otherwise)
 - v. WiFi Limits ([if "no" Open 24 Hours; if specified location of WiFi [e.g., "McDonald's with Free WiFi] yes/no; "no" unless stated otherwise)
 - vi. Air (yes/no; "no" unless stated otherwise)
 - vii. TV lounge (yes/no; "no" unless stated otherwise)
 - viii. Motel (yes/no; "no" unless stated otherwise)
 - ix. Motel Name (if "yes" to Motel; otherwise, NA)
 - x. Motel Location ([if "yes" to Motel; otherwise, NA] on property; close to property; close to property and has parking)
 - xi. Smoking (yes/no; "no" unless stated otherwise)
 - xii. Other Amenity Info
 - e. **Activities:**
 - i. Name of Activity (freehand)
2. Extract information using Google Maps
 - i. City
 - ii. Zip Code
 - iii. Latitude
 - iv. Longitude

REST AND PARKING AREAS

1. Extract information from *Ultimate Truck Parking Guide* and add to *Rest and Parking Areas* sheet.
 - a. **Location:**
 - i. Country
 - ii. Type of Stop
 - iii. Name of Stop
 - iv. Highway
 - v. Exit #/MM (or Name of Exit) (if MM, enter "mm" or "km" after number)
 - vi. Direction
 - vii. State/Province
 - viii. Off Exit or Entry Ramp (yes/no; "no" unless stated otherwise)
 - b. **Parking:**
 - i. # Parking Spots
 - ii. Parking Characteristics ([if there are Parking Spots; if not, then "NA"] no overnight parking, overnight parking ok, no signs regarding overnight parking)
 - iii. Add'l Parking Dir. (enter any additional parking directions freehand)
 - iv. Parking Fees (yes/no; "no" unless stated otherwise; "NA" if no Parking Spots)
 - v. Parking Cost (if "yes" to Parking Fees; otherwise, "NA")
 - vi. Nighttime Security (yes/no; "no" unless stated otherwise)
 - vii. Other Parking Info
 - c. **Nutrition:**
 - i. Picnic Tables (yes/no; "no" unless stated otherwise)
 - ii. Other Nutrition Info
 - d. **Other Amenities:**
 - i. Free WiFi (yes/no; "no" unless stated otherwise)
 - ii. WiFi Limits ([if "no" Open 24 Hours; if specified location of WiFi [e.g., "McDonald's with Free WiFi] yes/no; "no" unless stated otherwise)
 - iii. Other Amenity Info
 - e. **Other Amenities:**
 - i. Free WiFi (yes/no; "no" unless stated otherwise)
 - ii. WiFi Limits ([if "no" Open 24 Hours; if specified location of WiFi [e.g., "McDonald's with Free WiFi] yes/no; "no" unless stated otherwise)
 - iii. Other Amenity Info
 - f. **Activities:**
 - i. Name of Activity (freehand)
2. Extract information using Google Maps
 - i. City
 - ii. Zip Code
 - iii. Latitude
 - iv. Longitude

Initial Findings

- Based on piloting of methodology with graduate students at University of Saskatchewan and undergraduate students at Appalachian State University
- Collected data for stops along three routes:
 - I-2 (TX)
 - I-4 (FL)
 - I-5 (WA)
- Included 33 truck stops, 34 other resources, and 21 rest and parking areas

Initial Findings

- Truck stops:
 - 12 (36%) major chains (Loves, Flying J, TA, Pilot)
 - 21(64%) other/independent
 - Parking: Average of 47 parking spots; 7 (21%) have parking fee; 32 (94%) allow overnight parking
 - Food: 29 (88%) have at least one restaurant (or hot food); 9 (27%) have at least two restaurants (or hot food); 60% of all restaurants (or hot food) were fast food chains
 - Services: 61% had showers; 61% had scales; 21% had laundry

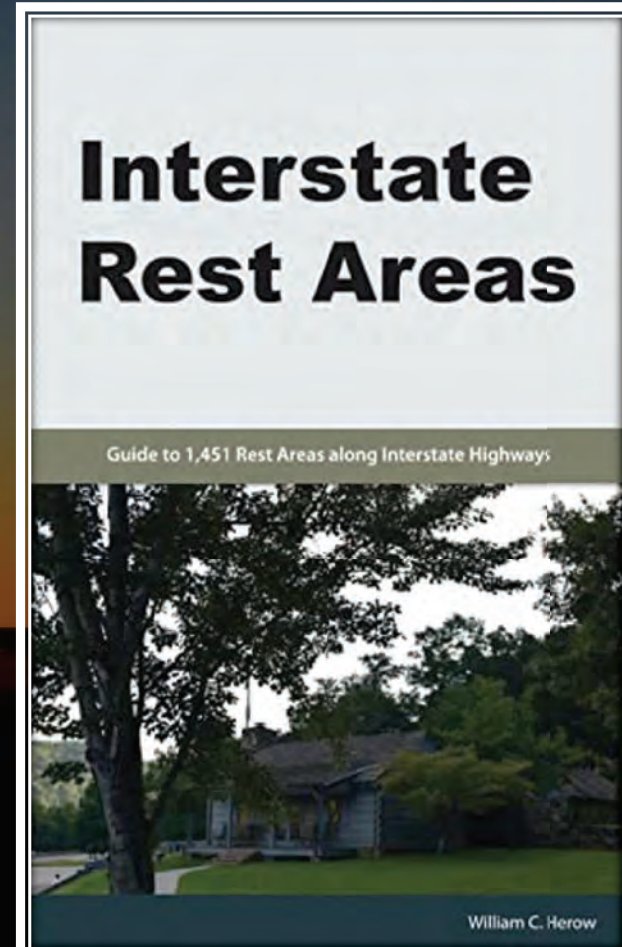
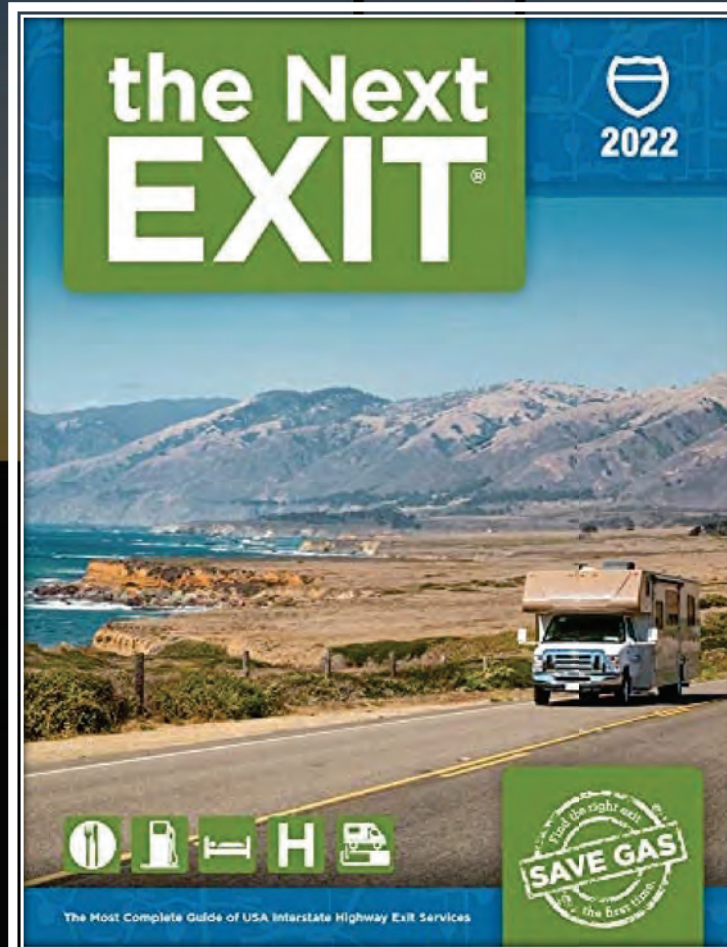
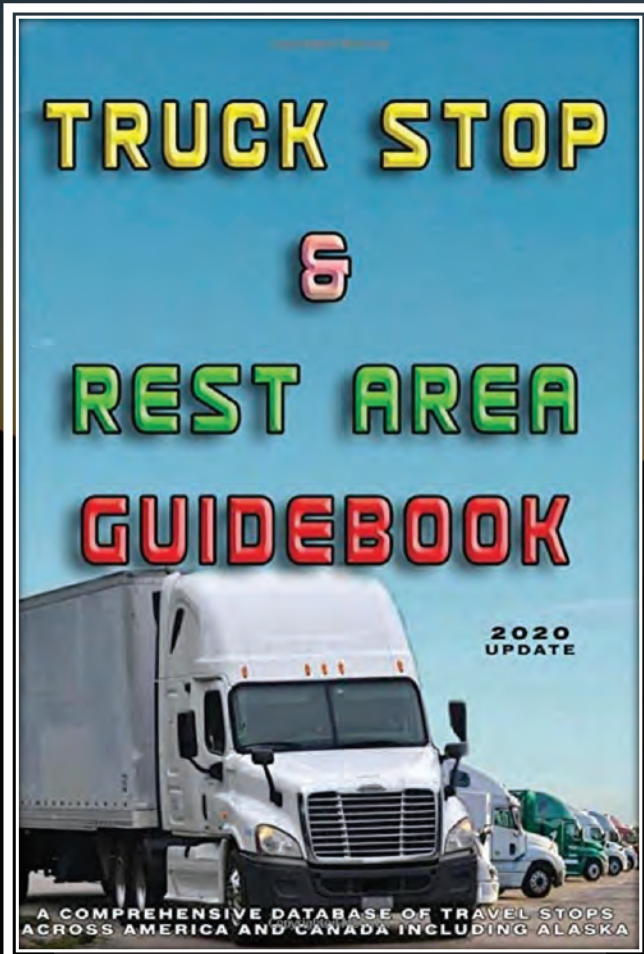
Initial Findings

- Other resources:
 - 10 (29%) restaurants with truck parking
 - 5 (15%) Wal-marts
 - 4 (12%) fuel stops without truck parking
 - 15 (44%) other (e.g., Cabela's; casinos)
 - Parking: Average of 7 parking spots; 3 (9%) have parking fee; 15 (44%) have overnight parking
 - Food: 7 (21%) have at least one restaurant (or hot food); 3 (9%) have at least two restaurants (or hot food); 55% were fast food chains
 - Services: none had showers; 1 (3%) had scales; none had laundry

Initial Findings

- Rest and parking areas:
 - 12 (57%) rest areas
 - 6 (29%) weigh stations
 - 2 (10%) both rest areas and weigh stations
 - 1 (5%) other
- Parking: average of 18 parking spots; none have parking fee; 5 (24%) allow overnight parking; 3 (14) provide nighttime security
- Food: 3 (14%) provide free coffee and/or snacks; 12 (57%) provide picnic tables
- Services: none

Resources for Next Stage



Prospective Dissemination for Practical Use


The background of the slide features a silhouette of a lighthouse against a sunset sky. The sky transitions from a deep blue at the top to a warm orange and yellow near the horizon. The lighthouse is a tall, dark structure with a lantern room at the top. The overall mood is serene and contemplative.

- Development of smartphone app
- Integration into navigation devices; routing software; ELDs
- Application of findings for intervention and policy development

Prospective Dissemination for Research

The background of the slide features a silhouette of a lighthouse tower against a sunset sky. The sky transitions from a deep blue at the top to a warm orange and yellow near the horizon. The lighthouse tower is a dark, vertical structure with a lantern room at the top. The overall scene is dark and atmospheric.

- Descriptive analyses
- Geospatial analyses
- Integration into computational simulation models

A silhouette of a traffic light stands against a sunset sky. The sky transitions from a deep blue at the top to a warm orange and yellow near the horizon. The traffic light is a vertical pole with a rectangular sign at the top and a horizontal bar below it. The background shows a dark horizon line with some distant lights.

Thank You!
Any Questions?

My contact information:
Michael Lemke
LemkeM@uhd.edu