Arkansas

STATE FREIGHT PLAN

Appendices

TRANSPORTATION 2040
WE MOVE ARKANSAS FREIGHT

ARKANSAS DEPARTMENT OF TRANSPORTATION

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Appendices

A. FAC Meeting Materials and Summaries

B. Arkansas Freight Network Identification Process
(including discussion of Critical Freight Corridors)

C. Truck Parking Information

D. Port Improvement Needs

E. Rail Improvement Needs

F. Needs Identified Through Stakeholder Outreach and Technical Analysis

G. Projects Funded with National Highway Funding Program as included in the 2016-2020 Statewide Transportation Improvement Program

APPENDIX A

FAC Meeting Materials and Summaries

Appendix A. FAC MEETING MATERIALS AND SUMMARIES

Table A-1. FAC Roster

Member	Representing	Member	Representing
Jessie Jones	ARDOT	Lawrence Bengal	Arkansas Oil and Gas Commission
Becky Keough	ADEQ	Glenn Bell	PDD/EDDs
Kurt Naumann	AEDC	Steve Williams	Public and Private Freight Transportation Owners/Operators
Wes Ward	Arkansas Agriculture Department	Amy Heflin	FHWA
Warren Carter	Arkansas Farm Bureau	Craig Douglass	Arkansas Good Roads and Transportation Council
Gene Higginbotham	Arkansas Waterways Commission	John Baglevy	US Corps of Engineers
Randy Zook	Arkansas State Chamber of Commerce	Jeff Hawkins	Metropolitan Planning Organizations
Shannon Newton	Arkansas Trucking Association	Brandon Morris	Railroad Industry Representative
Bradley David Clark	American Society of Civil Engineers – Arkansas Section	Joe Arbonna	Railroad Industry Representative
Richard Mills	Arkansas Department of Aeronautics	Kevin Breedlove	Safety Partners
Bryan Day	Freight Shippers, Carriers, and Freight Forwarders	Ron Burks	Safety Partners
Derrick Harris	Intermodal Authorities		

Table A-2. FAC Meeting Schedule and Support Documents

Meeting Date	Supporting Documents		
August 28, 2015	Agenda	Minutes	Presentation
March 1, 2016	Agenda	Minutes	Presentation
May 11, 2016	Agenda	Minutes	Presentation
August 11, 2016	Agenda	Minutes	Presentation
February 1, 2017	Agenda	Minutes	Presentation
May 17, 2017	Agenda	Minutes	Presentation

Freight Advisory Committee Meeting #1 – Agenda

August 28, 2015

A TD Auditorium

10:30 AM to 12:00 PM Central Time

Time	Item	Presenter
10:30	Welcome and Introductions	Jessie Jones
10:10-10:35	Presentation •	Jeff Carroll
10:35-11:50	Interactive Breakout Session • Visioning Workshop Survey Results • MPO Goals Input • Develop Goals and Discuss Objectives • Breakout Group Reports	Julie Lorenz Maggie Doll Jeff Carroll
11:50-12:00	• Q&A	Team
12:00	Adjourn	

Arkansas State Freight Plan

Freight Advisory Committee Meeting #1

August 28, 2015

AHTD Auditorium

Jessie Jones, Division Head of the Transportation Planning and Policy Division welcomed the attendees to the first Freight Advisory Committee meeting. Attendees were asked to introduce themselves to the group. She then turned the meeting to Dike Ahanotu of Cambridge Systematics, Inc.

Dike presented the slides reviewing the current status of freight related transportation infrastructure and the demand to the system, highlighting key freight corridor, top trading partners, and key commodities He continued the presentation with crash statistics involving commercial vehicles and national forecasts regarding freight movement.

The meeting concluded with Dike presenting the "Next Steps" which includes interviews with members of the FAC, additional interviews with specific industries (shippers and receivers), bottleneck analyses, and a statewide needs assessment. The next meeting will be in the winter.

Arkansas Statewide Freight Plan

presented to

Arkansas Freight Advisory Committee

presented by

Cambridge Systematics, Inc.

August 28, 2015

CAMBRIDGE SYSTEMATICS

Agenda

- Overview of Study
- Role of Freight Advisory Committee
- Arkansas Freight Plan Goals and Objectives
- Preliminary Freight Activity and Performance Data
- Next Steps

CAMBRIDGE SYSTEMATICS

Overview of Study

- Develop a performance-based, multi-modal freight transportation plan
  - » Inventory freight transportation assets
  - » Describe current and future freight demand
  - » Identify freight needs, issues and opportunities
  - » Proactive and comprehensive public involvement process
  - » Identify projects, policies, and strategies
  - » Develop an implementation plan

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CAMBRIDGE SYSTEMATICS

Role of Freight Advisory Committee

- Provide input on freight transportation system, demand and stakeholders
- Comment on key methodology used for analysis
- Review draft deliverables
- Become ambassadors for statewide freight plan
- Three future meetings
  - » Describe freight transportation assets and demand - December
  - » Draft projects, policies, and prioritization scheme - March
  - » Final freight plan – June (webinar)

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CAMBRIDGE SYSTEMATICS

Freight Plan – Goals and Objectives

- Freight Movement and Economic Vitality National Goal
  - » To improve the freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development
- Goals that overlap with freight
  - » Infrastructure condition – To maintain the highway infrastructure asset system in a state of goods repair
  - » System Reliability – To improve the efficiency of the surface transportation system
  - » Safety – To achieve a significant reduction in traffic fatalities and serious injuries on all public roads

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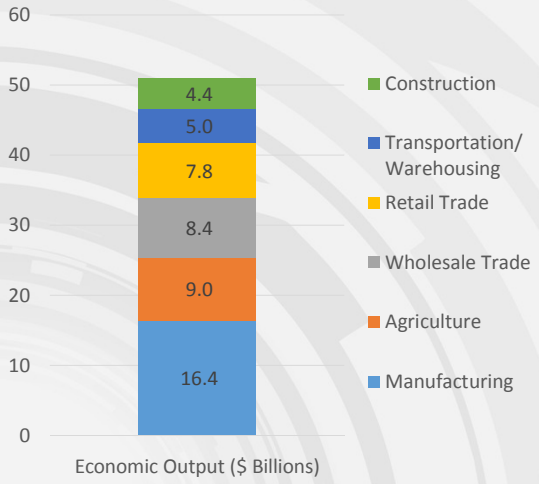
CAMBRIDGE SYSTEMATICS

Freight Dependent Portion of Arkansas Economy



- $51 billion of output from freight dependent sectors
- 43 percent of total economic output in Arkansas

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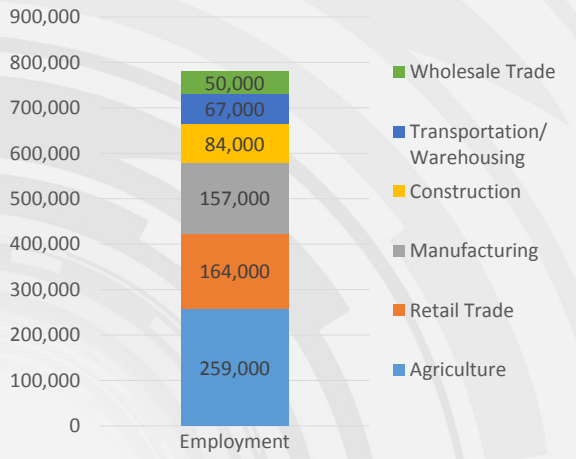
CAMBRIDGE SYSTEMATICS

Freight Dependent Portion of Arkansas Economy



- 781,000 employees in freight dependent sectors
- 50 percent of total employment in Arkansas

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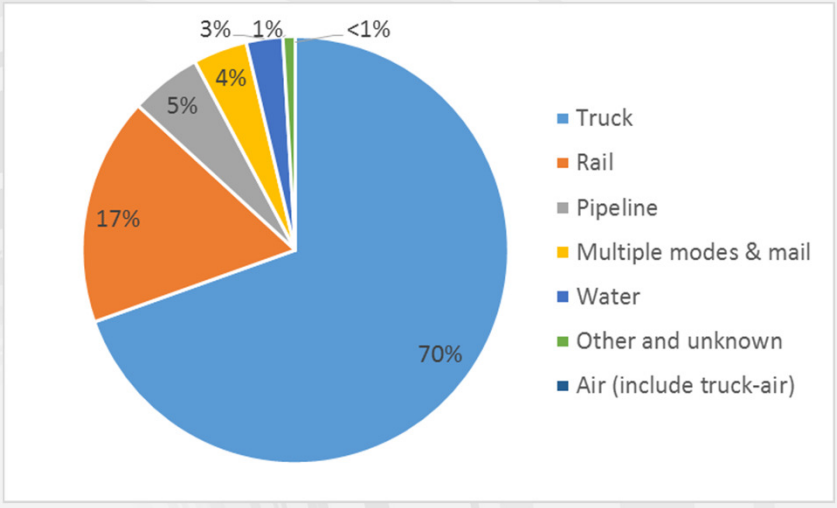
CAMBRIDGE SYSTEMATICS

Freight Activity Data – Mode Split



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Freight Activity Data – Trip Direction Split

Mode	Tonnage (Thousands)	Percent of Total
Internal	131,208	44%
Inbound	92,010	31%
Outbound	76,088	25%
Total	**299,306**	**100%**

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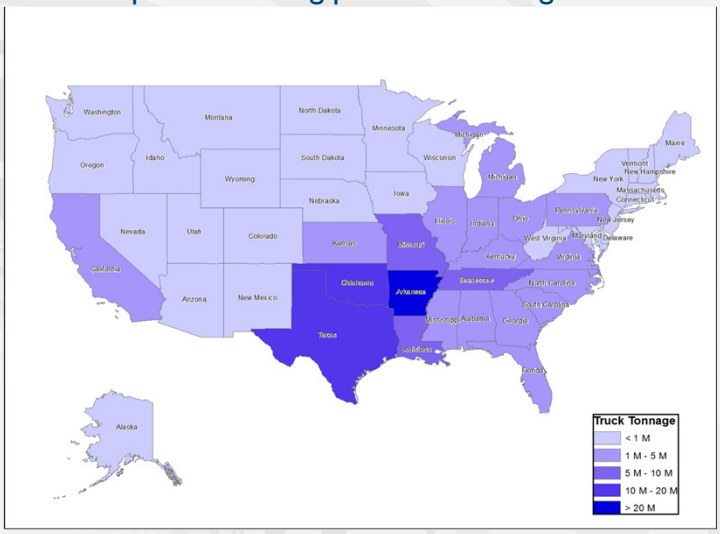
CAMBRIDGE SYSTEMATICS

Freight Activity Data – Truck Trading Partners

- Top truck trading partners are neighbor states



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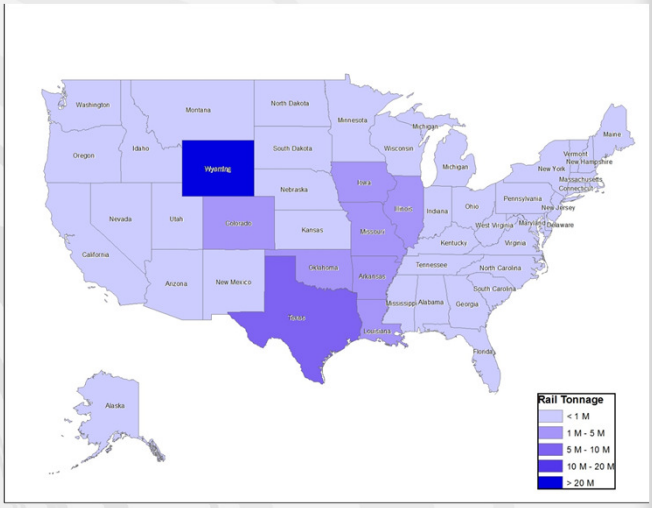
Freight Activity Data – Rail Trading Partners

- Wyoming is the top rail trading partner
- Other top trading partners are located from Illinois to Texas



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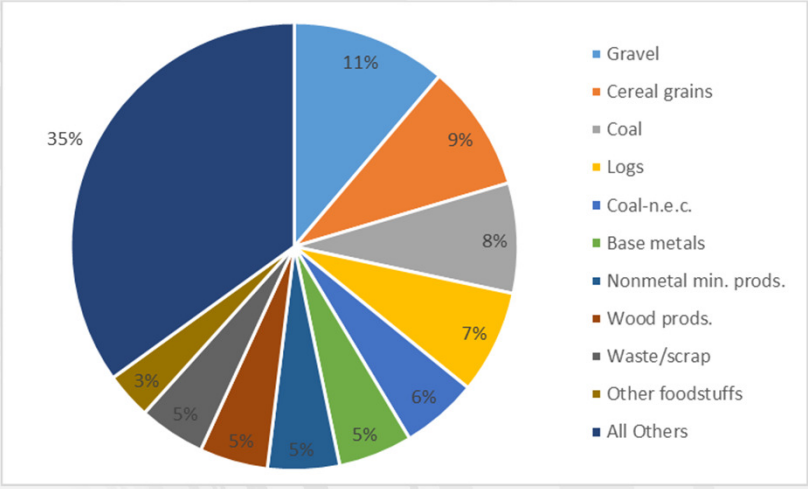
Freight Activity Data – Commodity Split



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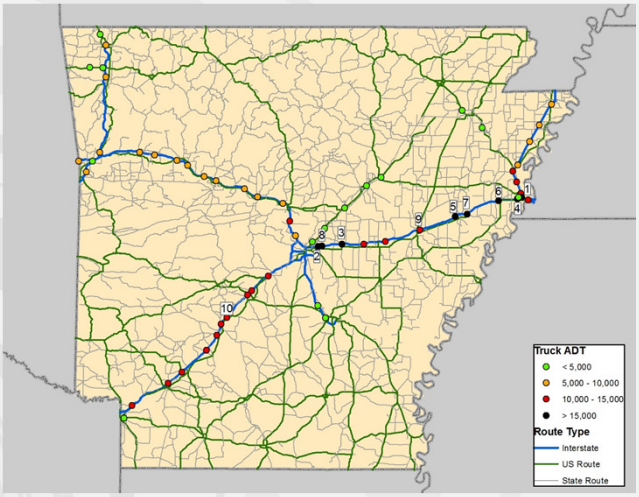
CAMBRIDGE SYSTEMATICS

Freight Activity Data – Top Truck Count Locations

- I-40 Little Rock to Memphis
- I-30 Little Rock to Texarkana
- I-55 in NE Arkansas
- I-40 Little Rock to Fort Smith



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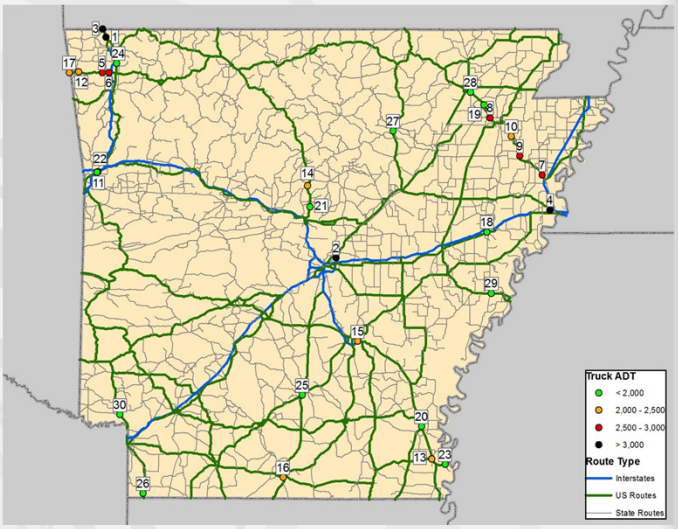
CAMBRIDGE SYSTEMATICS

Freight Activity Data – Non-Interstate Counts

- Northwest AR
  - » U.S. 71
  - » U.S. 412
  - » U.S. 64
- Northeast AR
  - » U.S. 63
  - » U.S. 67 not included
- Southern AR
  - » Pine Bluff
  - » U.S. 278



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CAMBRIDGE SYSTEMATICS

Freight Activity Data – Non-Interstate Counts

- Many state routes that are becoming interstates
- Other locations have 100 trucks per hour and 200-300 during midday

Rank	Rte	Begin Mile	End Mile	County	Truck Percent	Truck ADT
1	US 71	0.7	2.0	Benton	10	4,000
2*	SR 440	10.1	13.4	Pulaski	17	3,740
3	US 71	4.9	7.0	Benton	18	3,600
4	SR 118	2.3	3.3	Crittenden	27	3,510
5	US 412	2.5	5.3	Washington	15	3,000
6	US 412	6.6	8.1	Washington	10	3,000
7*	US 63	-	2.2	Crittenden	29	2,755
8	US 63	9.4	11.1	Craighead	14	2,660
9*	US 63	7.2	12.8	Poinsett	21	2,520
10	US 63	9.0	12.4	Craighead	17	2,380
11	US 64	3.0	4.5	Crawford	14	2,240
12*	US 412	4.2	10.4	Benton	12	2,160
13	US 65	-	2.4	Chicot	21	2,100
14	US 65	0.2	7.8	Faulkner	21	2,100

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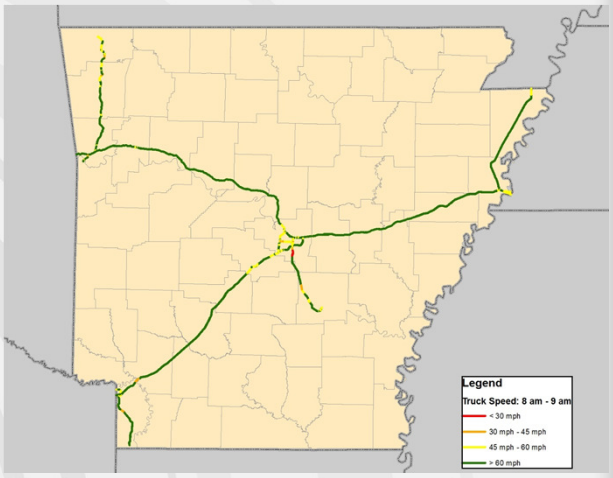
Freight Activity Data – Interstate Speeds (Aug.)

- FHWA NPMRDS data used to estimate speeds
  - » Recurring congestion in urban areas
- ATRI truck GPS data will be used to identify rural congestion



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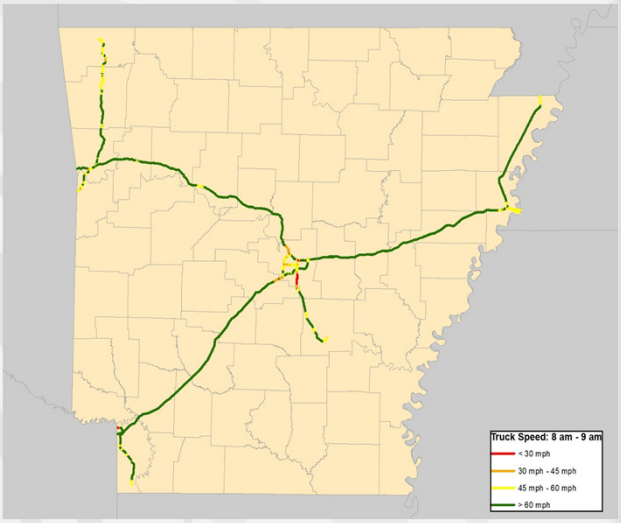
Freight Activity Data – Interstate Speeds (Apr.)

- Slightly more congestion during April



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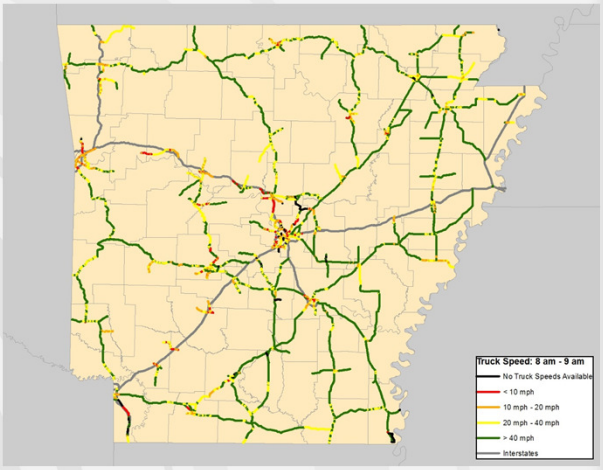
Freight Activity Data – Non-Interstate Speeds

- Lots of variability in trucks speeds off of interstates
- Future analysis will identify low speed, high crash locations
- Examination of weight restricted roads



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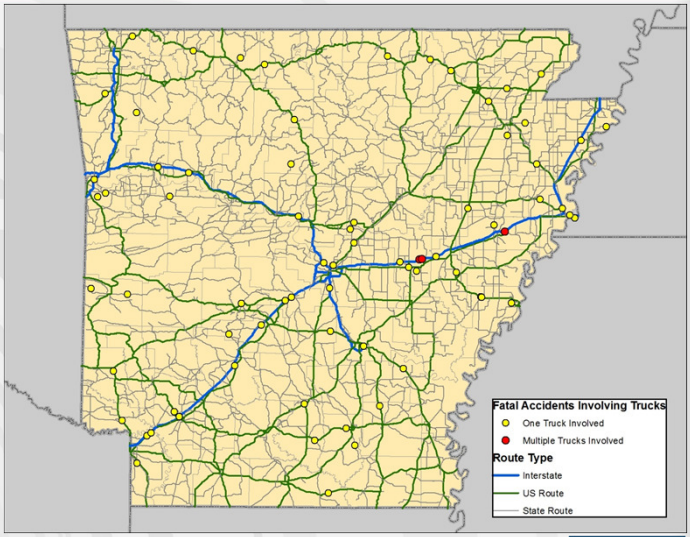
Freight Activity Data - Crashes

- Fatal crashes occur throughout the state
- Only 3 multiple truck fatal crashes in AR on I-40



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Freight Activity Data – I-40 Analysis

- I-40 between Little Rock and Memphis corridor mentioned in several interviews and outreach efforts
- Specialized analysis required for rural corridors
  - » Quantify number of crashes
  - » Monetize impacts of crashes based on severity
  - » Estimate traffic impacts of crashes are road closures
  - » Develop corridor specific growth rates based on origin-destination patterns
  - » Determine safety and congestion benefits of increased capacity

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Waterway, Rail and Air Cargo Analysis

- Focused on economic development opportunities
- Discussions with shippers, economic developers, site selectors, supply chain management professionals
- Inventory intermodal connections, access roads and crossings
- Examine funding structures

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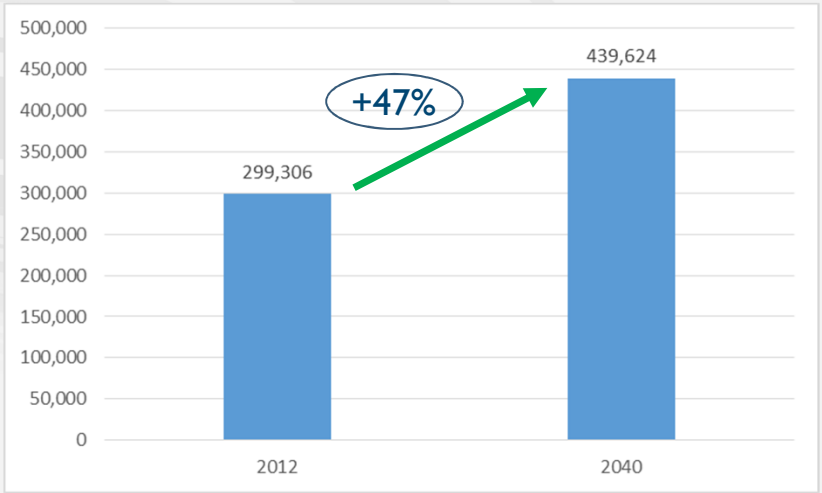
Freight Activity Data - Forecast



Thousands of Tons

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Next Steps

- Complete interviews of FAC members
- Interview key shippers and receivers in Arkansas
- Receive additional freight data and conduct analysis to identify key freight flows, bottlenecks, and safety hotspots
- Complete statewide freight needs assessment
  - » Include needs across all modes
- Next FAC meeting – early December

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Freight Advisory Committee Meeting #2 Agenda

March 1, 2015

1:30 PM to 3:00 PM

Public Transportation Training Room
Public Transportation Administration Building
Arkansas State Highway and Transportation Department
10324 Interstate 30 | Little Rock, AR

Time	Item	Presenter
1:30	Recap of the Freight Advisory Committee Meeting #1	Jessie Jones
1:40	Discussion of Freight Technical Analyses Freight Clusters Modal Needs Analyses	Dike Ahanotu
2:25	Discussion of Goals and Objectives	Project Team
2:40	Overview of FAST Act Federal Legislation	Jessie Jones Dike Ahanotu
2:55	Summary and Next Steps	Project Team
3:00	Adjourn	

Arkansas Freight Advisory Committee Meeting #2

Meeting Notes

March 3, 2016

Introduction

Recap of Freight Advisory Committee (FAC) Meeting #1 by Jessie Jones, AHTD Division Engineer – Transportation Planning & Policy Division, Arkansas State Highway and Transportation Department.

Discussion of Freight Technical Analysis

Cambridge Systematics presented the results to date for the cluster analysis for truck trip ends, the truck bottleneck analysis, and the results of the analyses for rail, air cargo, and waterways.

There were several comments from the FAC regarding the truck bottleneck analysis including:

- Speed limits on Highways 67 and 440 are likely slowing down traffic. Additionally, red lights on U.S. 67 slows down traffic
- 3,740 trucks per day on Highway 440 (north of Interstate 40) sounds too high. Needs to be double-checked.
- There are thousands of weight restricted bridges in the northeast part of the state. These restrictions create longer routes, but will not be reflected in the bottleneck analysis presented at the meeting
- Traffic is particularly bad between Conway and Mayflower in central Arkansas
- Highway 71 Business carries local trucks through the Fayetteville area and it gets congested during peak periods
- Designated National Highway System freight intermodal connectors in NW Arkansas should be identified and analyzed as a group
- FHWA will want to see an analysis that focuses on the Priority Freight Network

Comments on other portions of the analysis include:

- There is a need to reach out to Genessee-Wyoming to better understand shortline railroad operations and needs in Arkansas

- Major grade separations are needed in Jonesboro (Craighead County) near ASU. Other important crossings were discussed in a recent citywide crossing review study. Jonesboro is also participating in a TIGER grant for rail crossing improvements to the BN line.

- Need to examine if air cargo is still present in Pine Bluff

- There is a STEP grant that has assisted energy production along the UP line

Primary issues for ports and waterways are:

- Roadway conditions for the landside access to ports is often poor. Rail crossings on access roads can block traffic

- Rail access is not available at all ports

- Need to highlight the designation of M-40 corridor along the Arkansas River

- Waterways present an option to add capacity to the I-30 corridor from a multimodal freight perspective

Discussion of Freight Plan Goals and Objectives

Cambridge Systematics presented the draft freight goals and objectives to the FAC and solicited feedback from the meeting participants.

Overview of FAST Act Federal Legislation

Cambridge Systematics and the FAC representative from FHWA presented elements of the FAST Act that are most relevant for freight planning

Formula Funding - ……..(text from slides)

Discretionary program – from slide

Preliminary Feedback from Private Sector Interviews

Susan Atherton from the consultant team provided an overview of primary comments heard thus far in the private sector interviews which are……..

Summary and Next Steps

AHTD and Cambridge Systematics asked that FAC members provide specific project solutions for consideration at the next FAC meeting. Additionally, FAC members were made aware that the next meeting will include a draft description of urban and rural connectors for them to provide feedback.

The next FAC meeting is planned near the end of June 2016.

Website link URL……..

Arkansas Statewide Freight Plan

presented to

Arkansas Freight Advisory Committee

presented by

Cambridge Systematics, Inc.

March 1, 2016

CAMBRIDGE SYSTEMATICS

Agenda

- Recap of Freight Advisory Committee Meeting #1
- Discussion of Freight Technical Analysis
  - » Highway needs analysis
  - » Summary needs for rail, waterway, and air cargo
- Discussion of Freight Plan Goals and Objectives
- Overview of FAST Act Federal Legislation
- Preliminary Feedback from Private Sector Interviews
- Summary and Next Steps

2

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Recap of Freight Advisory Committee Meeting #1

- Overview of Study
  - » Develop a performance-based, multi-modal freight transportation plan
- Role of Freight Advisory Committee
- Importance of Freight to Arkansas Economy
- Preliminary freight activity data
  - » Freight flows across all modes
  - » Truck counts, speeds

3

CAMBRIDGE SYSTEMATICS

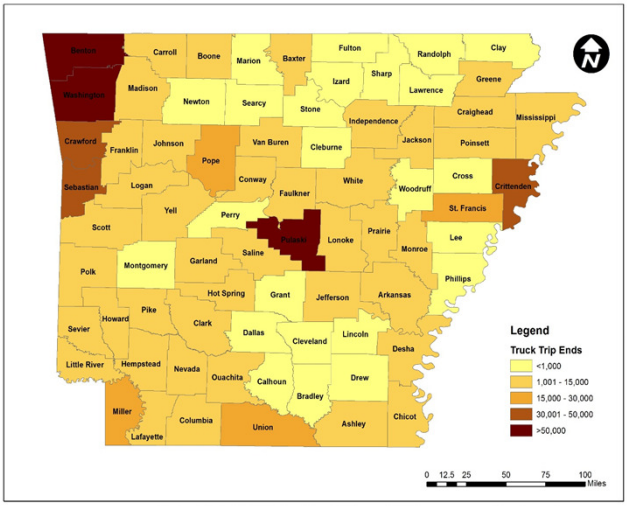
Highway Needs Analysis

- Highway Needs Analysis Categories
  - » Connectivity
  - » Congestion
  - » Crashes

4

CAMBRIDGE SYSTEMATICS

Connectivity – Truck Trip Ends



- Truck trip ends estimated based on ATRI GPS data licensed to AHTD
- Truck trip ends concentrated in a few regions across Arkansas

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CAMBRIDGE SYSTEMATICS

Connectivity - Truck Trip Ends By County

County	Number of Truck Trip Ends	Percent of Total
Pulaski	80,126	13%
Washington*	59,709	10%
Benton*	52,930	9%
Crittenden	41,617	7%
Sebastian*	31,956	5%
Crawford*	30,506	5%
Pope	25,401	4%
St. Francis	23,803	4%
Miller	22,445	4%
Union	19,617	3%
Remainder of State	215,351	36%
Total	**603,461**	**100%**

- Half of all truck trips start or end in top 6 counties
- 30 percent of truck trip ends are in NW corner of Arkansas
  - » Indicated with a "*"

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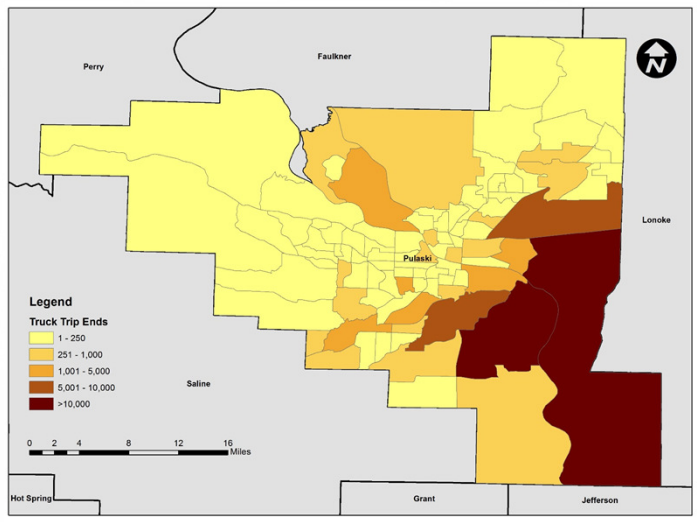
CAMBRIDGE SYSTEMATICS

Truck Trip Ends – Pulaski County



- Data also available at sub-county level
- Pulaski trucks located in SE corner of county

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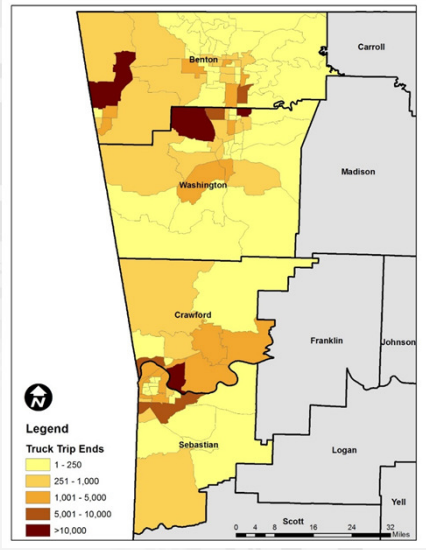
CAMBRIDGE SYSTEMATICS

Truck Trip Ends – NW Arkansas



- Truck traffic in Fayetteville and Fort Smith regions are concentrated around a handful of locations

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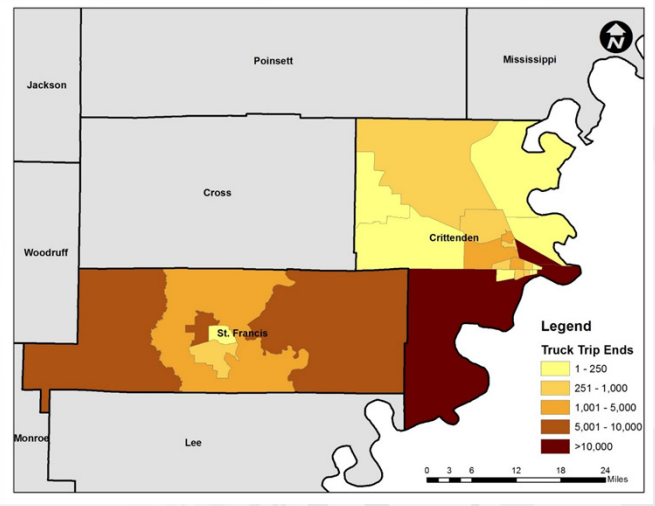
Truck Trip Ends – Crittenden and St. Francis Counties



- Truck trips in Crittenden County are concentrated in south
- Memphis-bound and through trucks increase truck activity

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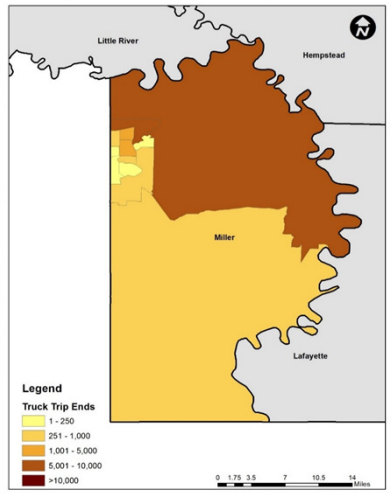
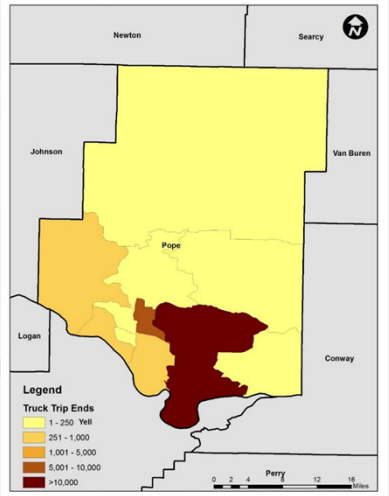
Truck Trip Ends – Miller and Pope County



Industrial activity in northern Miller County?



Truck stops and chicken processing

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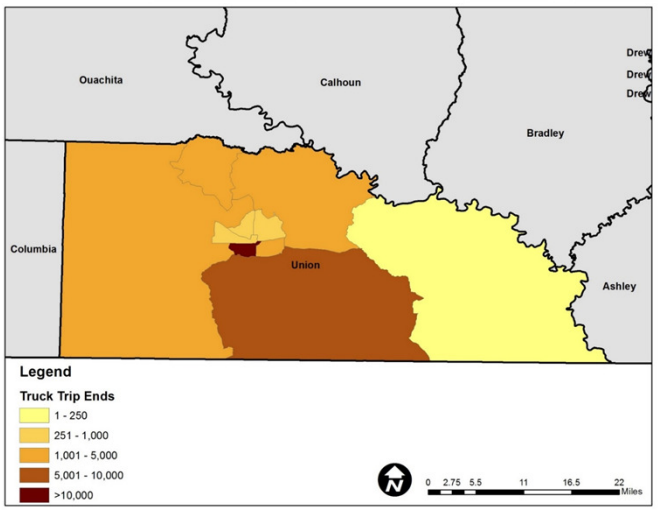
Truck Trip Ends – Union County



- Major truck trip generator in central Union County

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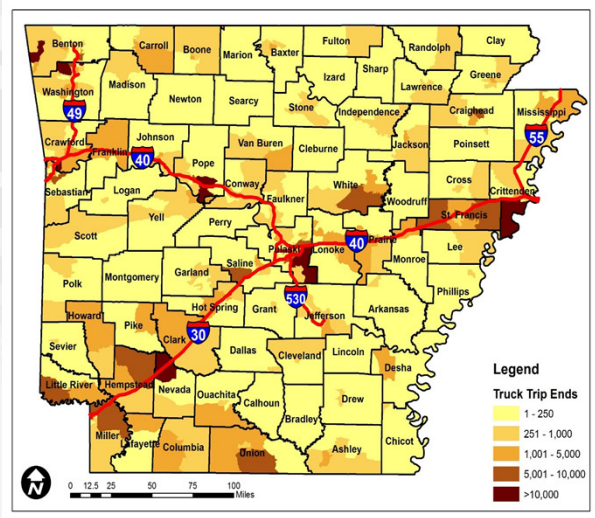
CAMBRIDGE SYSTEMATICS

Implications for Highway Connectivity



- Truck trip end generation concentrated around interstates
- Several non-interstate locations also have high volumes of truck trip ends

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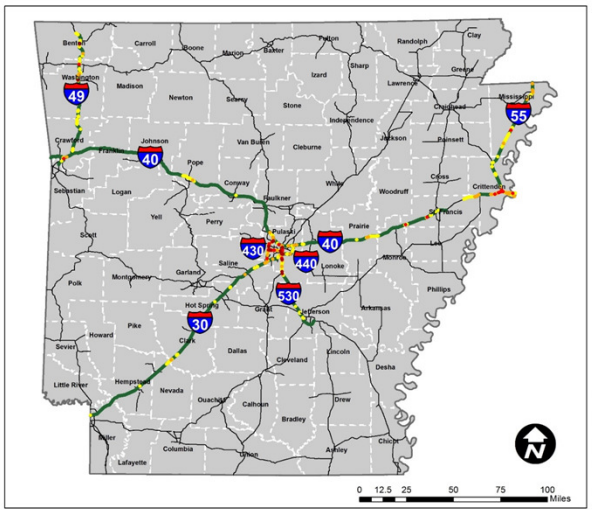
CAMBRIDGE SYSTEMATICS

Congestion - Interstate Speed Analysis



- ATRI GPS data also used to estimate truck speeds across state
- Focus on 5:00 to 6:00 P.M. on weekdays in April 2015

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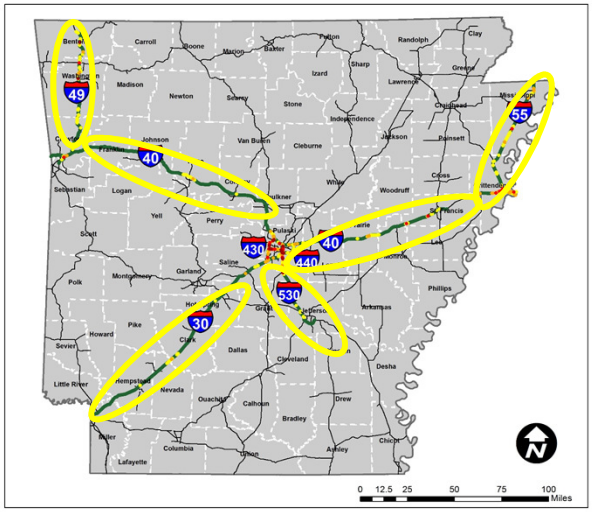
CAMBRIDGE SYSTEMATICS

Congestion - Interstate Speed Analysis on Long Haul Corridors



- Interstate system divided into six long-haul corridors

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CAMBRIDGE SYSTEMATICS

Congestion by Long-Haul Interstate Corridor

Corridor	Corridor Length	% Less than 55 mph	Miles Less than 55 mph	% Less than 45 mph	Miles Less than 45 mph
I-49 MO to Ft. Smith	85	72%	61.2	5%	4.3
I-40 Ft. Smith to Little Rock	130	11%	14.3	1%	1.3
I-40 Little Rock to TN Line	120	15%	18.0	6%	7.2
I-55 West Memphis to MO Line	70	60%	42.0	8%	5.6
I-30 Little Rock to Texarkana	125	13%	16.3	1%	1.3
I-530 Little Rock to Pine Bluff	30	17%	5.1	1%	0.3
Total	**560**	**28%**	**156.9**	**4%**	**19.9**

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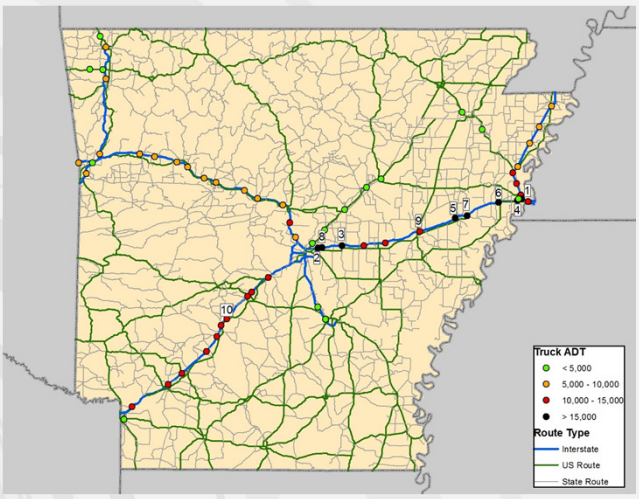
CAMBRIDGE SYSTEMATICS

Congestion – Adding in Truck Volume Data

- I-40 Little Rock to Memphis
- I-30 Little Rock to Texarkana
- I-55 in northeast Arkansas
- I-40 Little Rock to Fort Smith



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CAMBRIDGE SYSTEMATICS

Congestion – Speeds and Truck Volumes

Corridor	Corridor Length	Miles Less than 45 mph	Average Truck Count
I-49 MO to Ft. Smith	85	4.3	6,000
I-40 Ft. Smith to Little Rock	130	1.3	7,500
I-40 Little Rock to TN Line	120	7.2	17,500
I-55 West Memphis to MO Line	70	5.6	10,000
I-30 Little Rock to Texarkana	125	1.3	12,500
I-530 Little Rock to Pine Bluff	30	0.3	3,500

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CAMBRIDGE SYSTEMATICS

Congestion – Adding in Shipment Value Data

Commodity	Truck Tons (2013)	Percent of Total
Nonmetallic Minerals	42,826,277	27%
Farm Products	34,018,666	22%
Petroleum or Coal Products	14,826,997	9%
Food or Kindred Products	14,218,094	9%
Lumber or Wood Products	12,929,680	8%
Secondary Traffic	11,580,368	7%
Waste or Scrap Materials	6,875,783	4%
Clay, Concrete, Glass, or Stone	7,966,984	5%
Primary Metal Products	1,907,005	1%
Chemicals or Allied Products	1,974,182	1%
All Others	7,969,298	5%
Total	157,093,334	100%

IHS/Global Insight Transearch data

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CAMBRIDGE SYSTEMATICS

Congestion – Speeds, Volumes and Shipment Value on Long-Haul Interstate Corridors

Corridor	Corridor Length (miles)	Miles Less than 45 mph	Average Truck Count	Average Shipment Value Per Truck
I-49 MO to Ft. Smith	85	4.3	6,000	28,601
I-40 Ft. Smith to Little Rock	130	1.3	7,500	39,263
I-40 Little Rock to TN Line	120	7.2	17,500	39,263
I-55 West Memphis to MO Line	70	5.6	10,000	44,272
I-30 Little Rock to Texarkana	125	1.3	12,500	10,290
I-530 Little Rock to Pine Bluff	30	0.3	3,500	9,681

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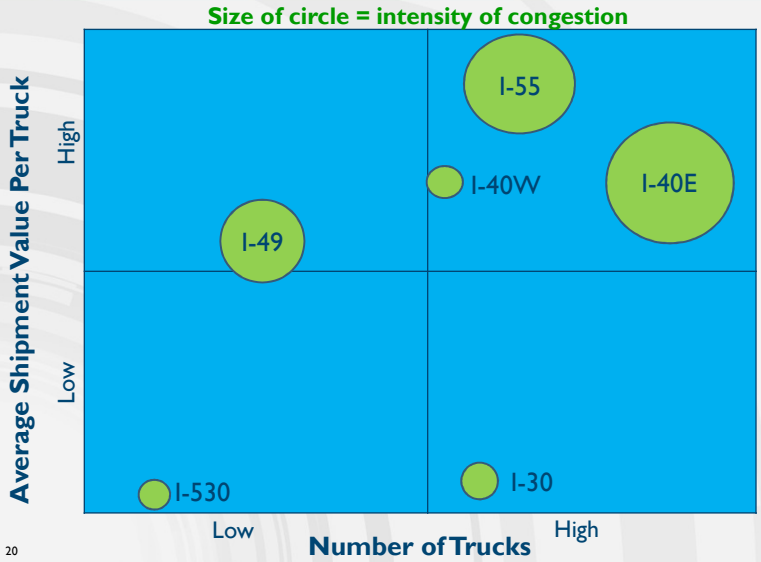
CAMBRIDGE SYSTEMATICS

Congestion – Graphic of Speeds, Volumes and Shipment Value



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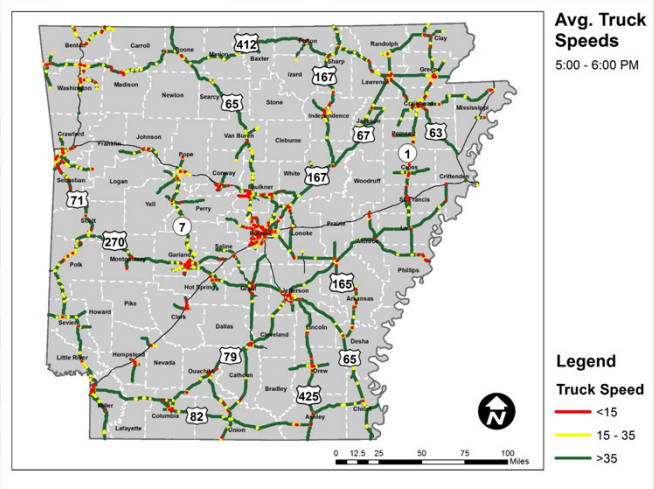
CAMBRIDGE SYSTEMATICS

Congestion – Non-Interstate Speed Analysis

- Hundreds of slow speed locations across Arkansas



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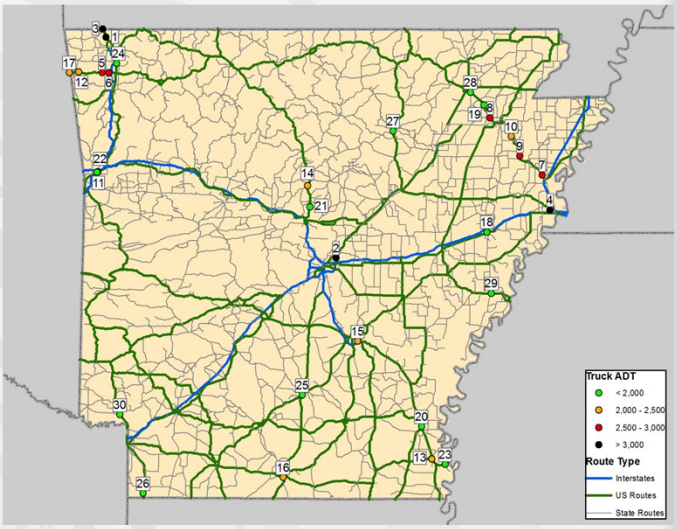
CAMBRIDGE SYSTEMATICS

Congestion – Starting With Truck Volume Data

- Northwest AR
  - » U.S. 71
  - » U.S. 412
  - » U.S. 64
- Northeast AR
  - » U.S. 63
  - » U.S. 67
- Southern AR
  - » Pine Bluff
  - » U.S. 82



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CAMBRIDGE SYSTEMATICS

Congestion – Starting With Truck Volume Data

- Top 13 truck count locations on non-interstate roads

Rank	Route	Begin Mile	End Mile	County	Truck Percent	Truck ADT
1	US 71	0.7	2.0	Benton	10	4,000
2*	SH 440	10.1	13.4	Pulaski	17	3,740
3	US 71	4.9	7.0	Benton	18	3,600
4	SH 118	2.3	3.3	Crittenden	27	3,510
5	US 412	2.5	5.3	Washington	15	3,000
6	US 412	6.6	8.1	Washington	10	3,000
7*	US 63	-	2.2	Crittenden	29	2,755
8	US 63	9.4	11.1	Craighead	14	2,660
9*	US 63	7.2	12.8	Poinsett	21	2,520
10	US 63	9.0	12.4	Craighead	17	2,380
11	US 64	3.0	4.5	Crawford	14	2,240
12*	US 412	4.2	10.4	Benton	12	2,160
13	US 65	0.2	7.8	Faulkner	21	2,100

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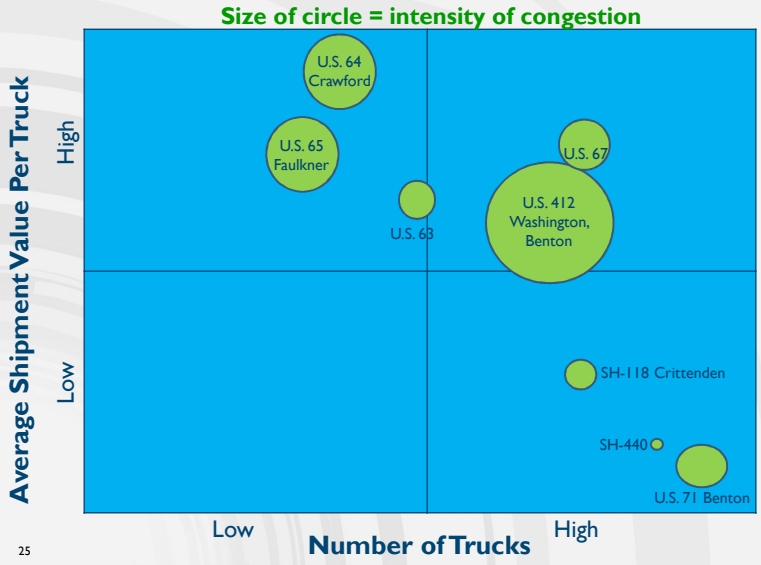
CAMBRIDGE SYSTEMATICS

Congestion – Speeds, Volumes and Shipment Value on Non-Interstates

Corridor	Corridor Length (miles)	Miles Less than 15 mph	Average Truck Count	Average Shipment Value Per Truck
U.S. 71, Benton County	4	0.3	4,000	11,608
SH-440, Pulaski County	3	0.0	3,740	11,697
SH-118, Crittenden County	2	0.1	3,510	14,200
U.S. 67, Pulaski to White Counties	50	0.3	3,101	18,515
U.S. 412, Washington, Benton Counties	30	0.8	3,000	17,996
U.S. 63, Crittenden to Craighead County	25	0.2	2,755	15,660
U.S. 64, Crawford County	14	0.4	2,240	26,391
U.S. 65, Faulkner County	15	0.4	2,100	20,343

Congestion – Graphic of Speeds, Volumes and Shipment Value on Non-Interstates



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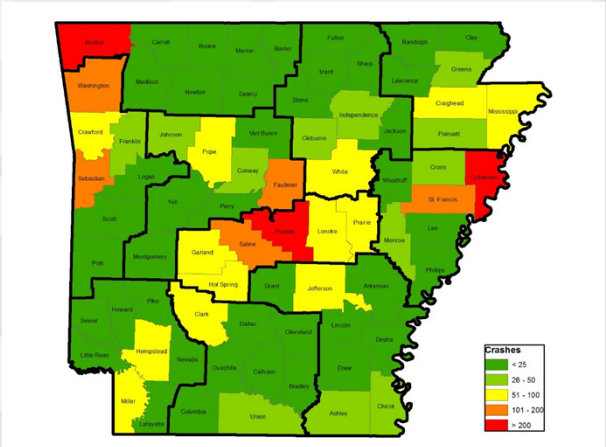
CAMBRIDGE SYSTEMATICS

Truck Involved Crashes by County

- Truck-involved crashes most concentrated in urbanized areas
- However, several rural locations on or close to I-40 and I-30 are also critical



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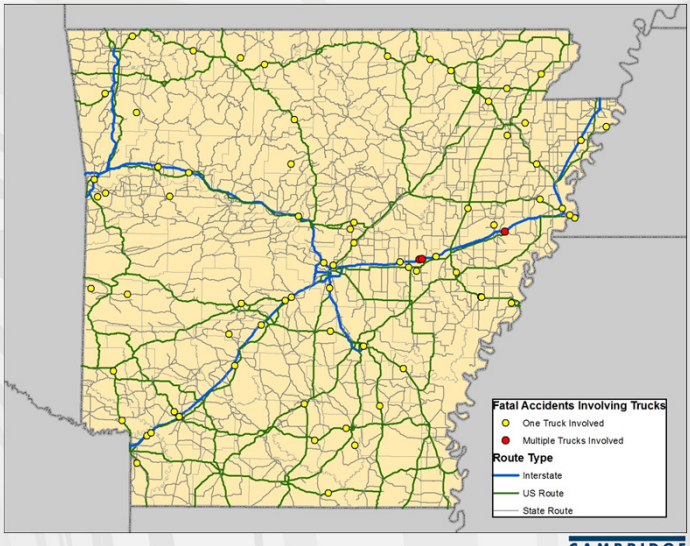
CAMBRIDGE SYSTEMATICS

Truck-Involved Fatal Crashes

- Fatal crashes occur throughout the state
- Only 3 multiple truck fatal crashes in AR on I-40



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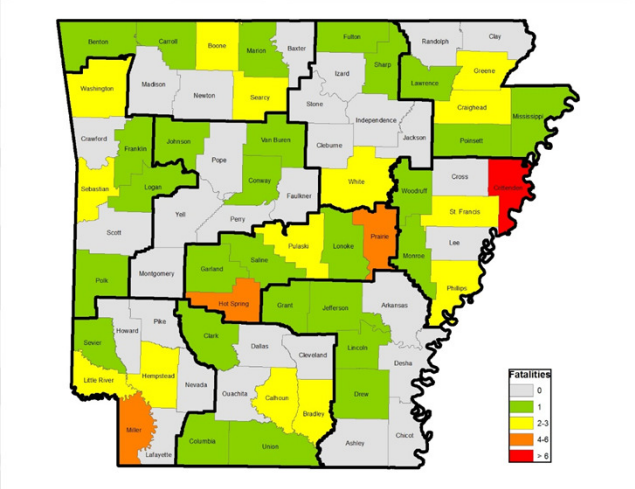
CAMBRIDGE SYSTEMATICS

Truck-Involved Fatal Crashes

- Indication that crash locations across the state need to be further examined



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CAMBRIDGE SYSTEMATICS

Truck Issue Future Analysis

- Prioritize congested interstate corridors and non-interstate point locations
- Supplement with corridor analyses in central Arkansas using travel demand model
- Quantify connectivity to locations away from the interstate
- Identify top truck-involved crash location for micro-level analysis

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CAMBRIDGE SYSTEMATICS

Freight Rail Issues

- Intermodal terminal access
- Highway-rail crossing safety
- Rail abandonment issues
  - » Caddo Valley RR, Delta Southern RR
  - » Several "at-risk" lines
- Height capacity issues
  - » Tunnel between Little Rock and Conway unable to handle double stack trains

Source: Arkansas Statewide Rail Plan, 2015

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CAMBRIDGE SYSTEMATICS

Freight Rail Issues – Short Lines

- Track maintenance
  - » Worn rail, ties, and switches
  - » Poor line and surface condition
  - » 286 miles rated by FRA as being in poor state of repair
- Weight capacity
  - » 310 track miles unable to handle 286,000 pound railcars

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CAMBRIDGE SYSTEMATICS

Port and Waterway Issues

- General Port Issues
  - » Coordination of planning with other freight modes
  - » Highway access
  - » Navigation of waterways (Red River, White River, Ouachita River)
- Implementation of Little Rock Port Authority Strategic Plan
  - » Explore Arkansas agricultural market opportunities
  - » Ensure adequate facilities to support Arkansas farmers and business
  - » Increase programs to support existing and new business/industry
  - » Be the example of a port practicing sustainability

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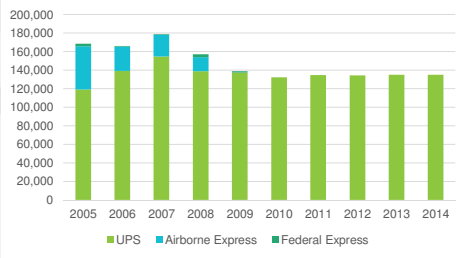
CAMBRIDGE SYSTEMATICS

Air Cargo Issues – Little Rock National Airport

- Steady cargo volumes over the last five years
  - » Discontinuation of FedEx and Airborne Express services
  - » Proximity to larger air cargo markets (Memphis, Dallas, and Houston) decrease competitiveness
- Current growth plans
  - » 32,018 available square feet
- Road access
  - » Good access
  - » Minor rush hour congestion



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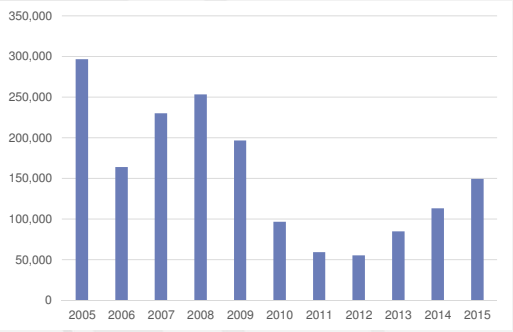
CAMBRIDGE SYSTEMATICS

Air Cargo Issues – Northwest Arkansas Regional Airport

- Cargo volumes peaked in 2002
- Steady growth since 2012
- No current dedicated air cargo flights
  - » Ramp/facilities can accommodate dedicated air cargo



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CAMBRIDGE SYSTEMATICS

Air Cargo Issues – Fort Smith and Texarkana Airports

- Fort Smith Regional Airport
  - » Federal Express is listed as a freight tenant
  - » Majority of cargo shipped to or from Fort Smith is trucked to Tulsa, Oklahoma and flown to a respective sorting hub
  - » NHS freight intermodal connector identified for this airport
- Texarkana Regional-Webb Field
  - » Primary airport based on NPIAS classification
  - » Minimal air cargo activity and no designated freight intermodal connector on NHS

CAMBRIDGE SYSTEMATICS

AHTD Long Range Intermodal Transportation Plan - Goals and Objectives

- **Infrastructure Condition** – Invest in the existing highway and bridges to maintain and preserve the existing system
- **Safety and Security** - Improve statewide safety by funding projects reducing vulnerability (the magnitude of impact on the system due to events such as major traffic incident, flooding, lane closure, bridge failures, and seismic activity), and improving resiliency of the system (the ability of the system to recover from these events)
- **Congestion Reduction, Mobility and System Reliability** - Invest in the multimodal transportation system to improve mobility, connectivity, accessibility, and reliability for people and goods
- **Economic Competitiveness** - Improve intermodal transportation system connectivity, efficiency, and mobility to support existing industries and strengthen national and regional economic competitiveness
- **Environmental Sustainability** - Enhance the performance of the transportation system while avoiding, minimizing and/or mitigating impacts to natural and cultural resources
- **Multimodal Transportation System** – Partner with responsible modal agencies, local jurisdictions, and planning organizations working to improve safety, accessibility, and connectivity, for the movement of people and goods

CAMBRIDGE SYSTEMATICS

AHTD Statewide Freight Plan - Goals and Objectives

- **Freight Infrastructure Condition** – Invest in existing freight assets to maintain and preserve the existing system
- **Safety and Security** - Improve statewide safety for all freight modes and improve freight system resiliency
- **Goods Movement Congestion Reduction, Mobility and System Reliability** - Invest in the multimodal freight transportation system to improve mobility, connectivity, accessibility, and reliability for the movement of goods
- **Economic Competitiveness** - Improve intermodal freight transportation system connectivity, efficiency, and mobility to support existing industries and strengthen national and regional economic competitiveness

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CAMBRIDGE SYSTEMATICS

FAST Act Federal Transportation Legislation

- Nationally Significant Freight and Highway Projects
  - » $4.5B in grants to "shovel ready" projects
  - » Criteria include cost effectiveness, mobility (feds to define this)
- National Highway Freight Program
  - » $6.3B in formula funding for the network: Priority HFN and rural and urban freight corridor
  - » Rural freight corridors must have a minimum of 25% of AADT, access to energy production areas, connect freight facilities or ports of entry, vital to the economy of the state
  - » Urban freight corridor criteria: urban area size, connecting freight facilities, may designate 75 miles or 10% highway freight system (whichever is greater)

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CAMBRIDGE SYSTEMATICS

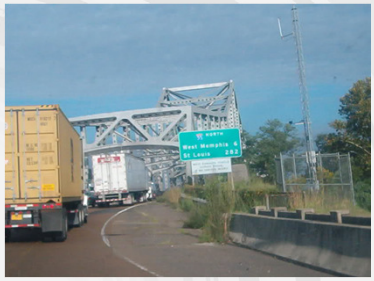
FAST Act Federal Transportation Legislation

- Other Programs
  - » High Priority Corridors on NHS in VA, NC, TX, NY, CO, and OR
  - » Surface Transportation Block Grant Program eligible freight projects
  - » Consolidated Rail Infrastructure and Safety Improvements
  - » Highway-Rail Grade Crossing Safety FRA first, State Action Plans
  - » Motor Carrier Safety Grant Consolidation more FMCSA flexibility

CAMBRIDGE SYSTEMATICS

Private Sector Interviews

- Completed Interviews
  - » Global Shippers
  - » Private Fleet
  - » Third Party Logistics
  - » Small fleet



- Upcoming Interviews
  - » LTL, Truckload, Intermodal
  - » University Supply Chain/ Engineering
  - » Retail Distribution
  - » Class I and Shortline Rail
  - » Agricultural/Hazmat/Bulk/
  - » Waterway drayage

CAMBRIDGE SYSTEMATICS

Feedback from Early Interviews

- Highway Infrastructure Condition
  - » Primary roads in good shape
  - » Select secondary roads need improvement
  - » General bridge conditions are a concern
- Highway Performance
  - » Congestion and Safety on 71 through Bella Vista
  - » Congestion I-55, I-40 in West Memphis
  - » Key roadways for system performance
    - North-south corridors, highway and intermodal NAFTA and Gulf port access

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CAMBRIDGE SYSTEMATICS

Feedback from Early Interviews (continued)

- Highway Operations
  - » I-55 bridge closure
  - » Alternate Routing
  - » Weight limits and harmonization with surrounding states
- Truck Parking
  - » Significant needs along I-40 and some secondary highways
  - » Additional amenities needed (e.g. restrooms, drinking water)
- Rail Intermodal Topics
  - » Container services used – Memphis, Dallas, K.C.
  - » Bulk transfer service
  - » Little River intermodal hub investigation

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CAMBRIDGE SYSTEMATICS

Next Steps

- Complete interviews of key shippers and receivers
- Finalize goals and objectives
- Finalize needs assessment
- Identify freight solutions to address freight issues
- Develop prioritized freight projects
- Homework for FAC members – Any other shippers, haulers, or stakeholders we should contact?
- Next FAC meeting – June 2016

CAMBRIDGE SYSTEMATICS

Arkansas State Freight Plan

Freight Advisory Committee Meeting #3 Agenda

May 11, 2016

1:30 PM to 3:30 PM

AHTD Material Division Training Room
Materials Annex
Arkansas State Highway and Transportation Department
11301 West Baseline Road | Little Rock, AR

I.	**Welcome and Introductions**	***Jessie Jones***
II.	**Summary of FASTLANE Grant Applications**	***Jessie Jones***
III.	**Introduction to the Project Website**	***Dave Roberts***
IV.	**Bottleneck Analysis – Result Update**	***Dike Ahanotu***
	a. Is this what you expected to see?	
	b. Missing pieces?	
V.	**Performance Measures**	***Dike Ahanotu***
	a. Open Discussion	
	b. Other possible measures?	
	c. Data needs and availability	
VI.	**Critical Rural and Urban Corridors**	***Virginia Porta***
VII.	**Help Us Help You**	***Michael Henry***
VIII.	**Wrap Up and Next Meeting**	
	August 11, 2016	

Arkansas Statewide Freight Plan
Freight Advisory Committee Meeting #3
Meeting Summary

May 11, 2016

The Arkansas State Freight Advisory Committee meeting was called to order by Jessie Jones, Transportation Planning and Policy Division Engineer. Members of the audience introduced themselves to the group and stated their role in the freight planning process.

FASTLANE Grant Applications Update

Jessie Jones offered a brief summary of the three FASTLANE Grant Applications submitted by the Department.

- **30 Crossing**
  - Pulaski County
  - Interstates 30 and 40
  - Interstate 530 – Highway 67
  - Widening and reconstruction
  - 7.4 miles
  - Total cost = $632M
  - Requested= $100M

- **Interstate 49**
  - Benton and Washington Counties
  - Fayetteville – Bentonville
  - Interchange Improvements; Widening and Reconstruction
  - 12.6 miles
  - Total Cost = $194M
  - Amount Requested = $40M

- **Interstate 69**
  - Drew and Desha Counties
  - Monticello Bypass to the Great River Bridge
  - New Location Interstate Facility
  - 29.2 miles
  - Total cost = $25M
  - Amount requested = $12M

Introduction of Project Web Site

Dave Roberts (Crafton Tull) presented the project website and walked the group through the various pages. If any members have photographs they would like to share to the website, they can email them to mpp-mpo@ahtd.ar.gov. The website has been updated to include the following pages:

- About the Plan – High level description of the planning process and purpose.

- Freight Advisory Committee – This provides a list of the people serving on the FAC and the organization they represent. Hyperlinks can be provided with the members' consent.
- Important Dates – Calendar of FAC Meetings, Presentations, Meeting Summaries
- Resources – Links to FHWA and AHTD websites
- Get Involved – Questions to generate additional involvement from interested parties with an email address to be added to the mailing list.
- Contact Us – Contact information for the AHTD project managers.

Bottleneck Analysis Methodology - Trucking

Dike Ahanotu presented additional information to the group regarding the bottleneck analysis methodology presented at the FAC Meeting #2. In this presentation Dike shared the methodology for identifying the bottleneck issues including results from the Arkansas Statewide Travel Demand Model (AR TDM) and from GPS data. From there the delay characteristics (speed differential) can be identified to determine the type and cause of the delay (saturation of the roadway or time of day issues). Additionally, based on the method of identification and other information (speed and congestion, safety, commodity value), prioritization can be made for corrective treatment.

Steve Williams, representing Public and Private Freight Transportation Owners/Operators, reported that Maverick Truck Lines has live GPS data from trucks involved in roll-over occurrences. Chief Burks, representing the Safety Partners, and chief of the Arkansas Highway Police reported they were also working to catalog locations where trucks/trailers travel on an unimproved shoulder causing the trailing to roll over. The Interstate 40/540 interchange was discussed as a problem area. The group was asked to identify any other locations.

The Department is considering low cost safety improvements for these areas.

Freight Related Performance Measures

Dike further discussed Performance Measures with the group. At the Federal level, states are now required to track system reliability and uncongested mileage with two and four-year targets. There was discussion of using the term predictable instead of reliable. Time is now the basis of transportation pricing rather than distance. Some shippers have a time window within which a shipment can be delivered while others will not accept a delivery if it is a minute late. The question becomes one of capacity or poor condition. Another suggestion was to possibly look at average speed and reliability over time to determine a percent improvement.

Potential State Performance Measures were presented with their connection to the Goals and Objectives presented and discussed at a previous meeting. Will targets be set as a percent improvement? How will we get to that point? The group was advised to not have a single measure or one attribute may be improved at the expense of another. Other ideas discussed included:

- Looking at commodity value in addition to truck volumes
- Identifying key corridors (e.g. I-40 from North Little Rock – Memphis) as a separate indicator for the entire Interstate system.
- Several routes could be used to report performance (I-30, I-40, I-55; Highway 71, 412, or 67/167).

- Identification of secondary roadways to capture performance for non-through movements
- Safety and security- non-interstate truck crashes should be examined as a whole when infrastructure improvements are needed.

Further discussion revolved around the following statement from Steve Williams: " '30,000 fatalities per year across the country with 1/3 attributed to infrastructure'. If all the trucks and cars have the technology to avoid these areas is it cheaper than trying to upgrade the infrastructure (i.e. widening I-40 would cost $700 M)."

- With new technologies put into the trucking fleet, Maverick has gone from about 25 rear end collisions per year to maybe one or two
- Difference in fleet types (i.e. interstate carriers vs non-interstate carries, agricultural vehicles are only used seasonally) also impacts the type of technology investment made.
- Resiliency - alternate routes considerations due to volume and safety issues.
- Is it better to invest money in improving interstates than to build/improve a redundant parallel facility?
- Driver safety & crossings are an issue for both truck and train
- Vehicles need to understand that trains cannot stop in a short distance

The performance measure related to Economic Competitiveness was discussed as supporting attractiveness of Arkansas for economic investments. Kurt Naumann (AEDC) reported that AEDC promotes sites with multiple transportation options – especially super sites. Multiple mode accessibility improves the competition for transportation services. AEDC tracks Arkansas Site Select is a database supported by Entergy that can determine sites with direct rail access or within five miles.

Other measures include determining and reporting the number of rail miles rated to carry at least 286,000 pounds. For waterways, a nine-foot draft is the minimum depth currently maintained for navigation on the Arkansas River. If a deeper channel is maintained on the Arkansas River, water transportation costs would become more competitive. The cost to increase the depth of the Arkansas River channel to 12 feet in Oklahoma and Arkansas is $221 million resulting in a 43% projected increase of tonnages shipped. The USACE is interested in these improvements if the states will contribute to the overall costs.

In terms of land side access, concerns were raised about the pavement quality leading into the rail yards, ports, and airports on the officially-designated and the de facto intermodal connectors. Likewise, weight limitation and discrepancies by system are problematic. The 40-foot export containers used for containerized freight can carry more than the weight allowed on the state highway system – raising the question of how to transport those containers to water more effectively?

Similarly, there are concerns related to the allowance of overweight agriculture/timber shipments on the state highway system that cannot access the Interstate system. An observation was made that travel of the heavier trucks could be safer on the interstate highways and would cause less damage compared to the state highway system. This led to the discussion of bridge weight limitations on truck movements throughout the state.

National Multimodal Freight Network

Virginia Porta presented information on the National Multimodal Freight Networks, beginning with the Primary Highway Freight Network and how the FAC can help identify the Critical Rural and Urban Freight Corridors. The purpose for these designations is to establish eligibility for future federal funding.

Arkansas has the opportunity to add up to 150 miles of rural and 75 miles of urban freight connectors. A map was shared showing the routes that met the FHWA defined criteria based on truck percentage. The FAC was asked to further examine the maps and the corridor criteria and determine other potential criteria to designate the corridors as well as actual urban and rural corridor designations. The maps and the slides from the meeting (with the criteria) will be posted to the project website (www.wemovearkansasfreight.com).

What can AHTD do better to help move freight?

Michael Henry led the final discussion regarding what AHTD could do better to help move freight in Arkansas. Topics included:

- **Truck Parking**
  - The Department has been tracking truck parking activities since 2006 to provide data source for potential discretionary funds
  - Thirty minute driver breaks are now a requirement and they are impacting the need for safe places to park.
  - Many of the rest areas across Arkansas have been closed.
  - The cost of using private truck rest stops is absorbed by the driver.
  - Federal regulations regarding truck parking will go into effect in December 2017. There is concern that not everyone is compliant. As more drivers come into compliance, the need for parking will continue to be significant issue.
  - It was recommended that 'over-capacity truck parking areas' be added as a potential measure.

- **Work Zone Safety and Education**
  - The Department has added solutions to our work zones (extra lanes, rumble strips, highway police at the beginning of the queue).
  - Suggestions included moving the lane shift even further upstream.
  - Adjust the placement of Jersey barriers.
  - Provide alternative routing information (more often? more outlets?)
  - ATRI has a list of work zone issues (national information)
  - Work to better push data to alert drivers using technology advancements
  - More incentives to finish construction projects more quickly
  - Construction routing – as new or modified infrastructure is under construction, trucks are sometimes forced to use facilities that were not designed for heavy loads leading to additional system costs.

Wrap Up and Next Meeting

Several members of the FAC asked to meet again possibly in smaller, targeted groups – prior to the August 11 FAC meeting. AHTD staff will make those opportunities available. Potential groups include: Truck Issues, ATRI Safety Analysis, Waterways, Rail, Critical corridor identification, and performance measures.

Arkansas Statewide Freight Plan

presented to

Arkansas Freight Advisory Committee Meeting #3

presented by

Cambridge Systematics, Inc.

May 11, 2016

Agenda

- Welcome and Introductions
- Summary of FASTLANE Grant Applications
- Project Website
- Bottleneck Analysis
- Performance Measures
- Critical Rural and Urban Corridors (small group discussions)
- What can AHTD do better to help move freight?
- Wrap-Up and Next Meeting

2

Arkansas Freight Advisory Committee Meeting #3

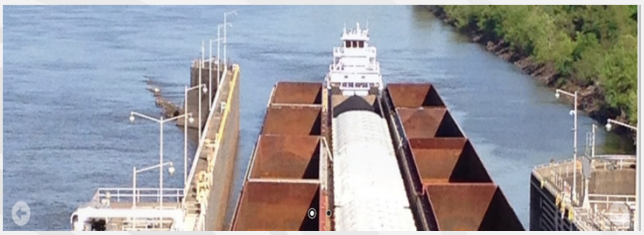
Welcome and Introductions

FASTLANE Grant Applications

- Nationally Significant Freight and Highway Projects
- Five-Year Funding Program
  Annually $800M - $1B
- Goals:
  Safety, Efficiency, Economic Benefit, Connectivity, Infrastructure Resiliency, Mitigate Freight Movement Impacts
- Applications submitted April 14, 2016. Anticipate announcement from the Office of the Secretary - June 2016.

Project Website

www.wemovearkansasfreight.com



About the Plan

Freight Advisory Committee

Important dates

Resources

Get Involved

Contact Us

5

Bottleneck Analysis Methodology

Bottleneck Location From Travel Demand Model	Bottleneck Location From GPS Data	Treatment
No	No	No Treatment
Yes	No	Lower priority of bottleneck
No	Yes	Further examination required (e.g. construction, model limitations)
Yes	Yes	Use GPS data to describe the nature of the bottleneck

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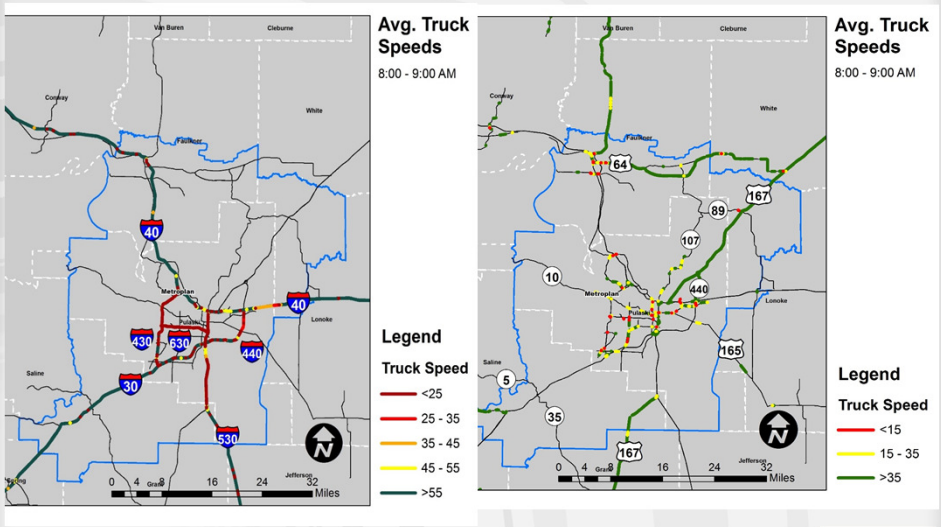
Bottleneck Analysis – Central Arkansas



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CAMBRIDGE SYSTEMATICS

Performance Measures – Federal

- FHWA National Performance Management Measures: Freight Movement on the Interstate System
  - » Percent of the interstate system mileage providing reliable truck travel times
  - » Percent of interstate system with mileage uncongested
  - » 2-year and 4-year targets required for each state

8

CAMBRIDGE SYSTEMATICS

Performance Measures – State

- Measures key elements of freight system and operations
- Cut across all modes
- Can be tracked using existing data sources
- Measures that can be influenced by State decisions
- A handful of good performance measures is ideal

Potential Performance Measures - State

Objective	Potential Performance Measure	Rationale
Congestion Reduction, Mobility and Reliability	Travel Time Reliability Between Little Rock and Memphis	• Highest truck volume corridor • Recurrent congestion is less of an issue
Safety and Security	Non-Interstate Truck-Involved Crashes	• Cost of truck-involved crashes is greater than cost of congestion • Non-interstate crashes can often be lowered through interstate improvements

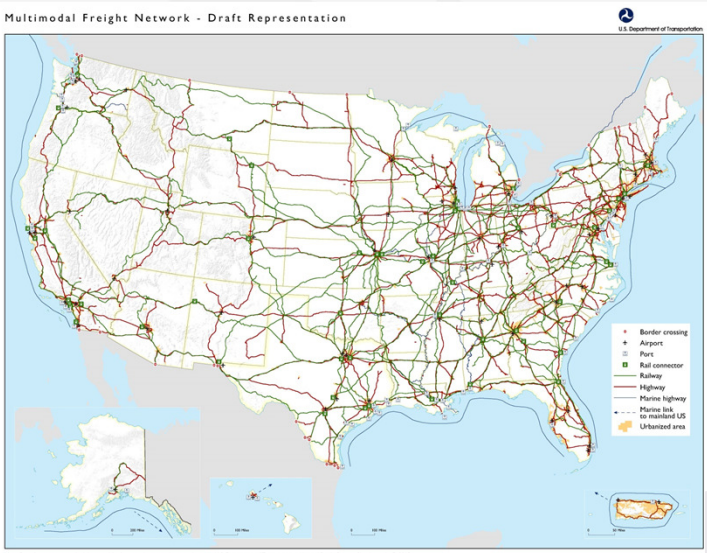
Potential Performance Measures – State (continued)

Objective	Potential Performance Measure	Rationale
Economic Competitiveness	Economic Output in Freight-Related Sectors	• Measures economic attractiveness of Arkansas
Freight Infrastructure Condition	Navigable waterway depth at 14 feet or greater	• Waterways are a key distinguishing factors of Arkansas freight
Freight Infrastructure Condition	Pavement quality of roadways connecting to IMX railyards and air cargo airport	• Measures accessibility to modal options and attention to all freight modes
Other Performance Measures?		

National Multimodal Freight Network

- National Highway Freight Network
- Freight Rail Systems of Class I Railroads
- Public Ports with annual trade of at least 2M tons
- Inland and intracoastal waterways
- Great Lakes, St. Lawrence Seaway, and coastal/ocean routes
- 50 US airports with the highest annual landed weight
- Other strategic assets (intermodal facilities, Class III rails, etc.)

National Multimodal Freight Network



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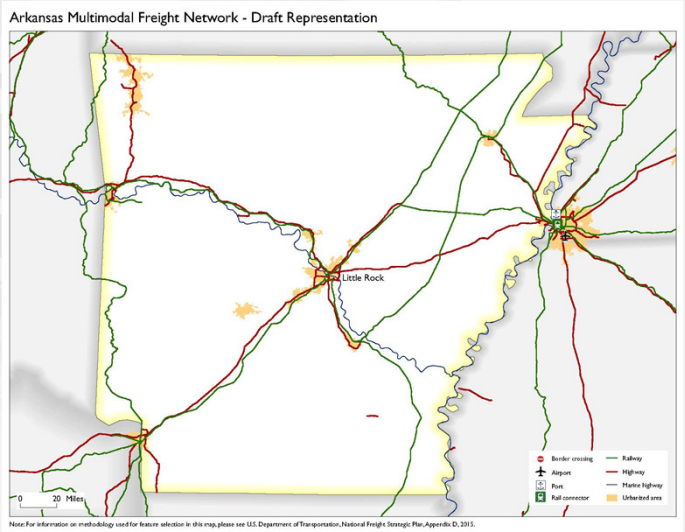
National Multimodal Freight Network



14

National Highway Freight Network

- Primary Highway Freight System
  - » 41,518 centerline miles (37,436 Interstate/4,082 Non-Interstate)
- Portions of the Interstate System NOT designated as part of the Primary Highway Freight System
  - » 9,511 centerline miles (estimated and will change with deletion and additions to the Interstate Highway System)
- Critical Rural Freight Corridors
- Critical Urban Freight Corridors

15

National Highway Freight Network

16

National Highway Freight Network

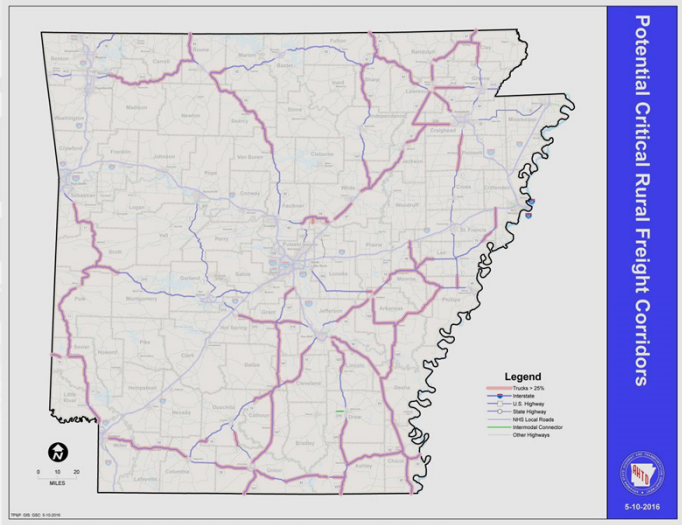
17

Critical Rural and Urban Freight Corridors

- Critical Rural Freight Corridors (150 miles)
  - » Rural principal arterial with at least 25% trucks
  - » Provides access to select freight facility (e.g. energy, grain, agricultural, mining, forestry or intermodal facility)
  - » Connects to facilities that handle more than 50,000 TEUs or 500,000 tons of bulk commodities
- Critical Urban Freight Corridors (75 miles)
  - » In urbanized area of 500,000 population or more
  - » Connects an intermodal facility or major freight generator

18

Critical Rural Freight Corridors

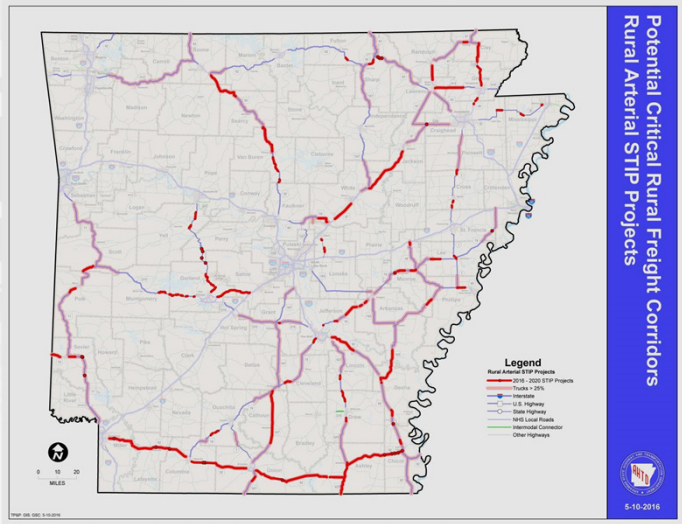


Potential Critical Rural Freight Corridors

5-10-2016

19

Critical Rural Freight Corridors



Potential Critical Rural Freight Corridors
Rural Arterial STIP Projects

5-10-2016

20

Critical Rural and Urban Freight Corridors (continued)

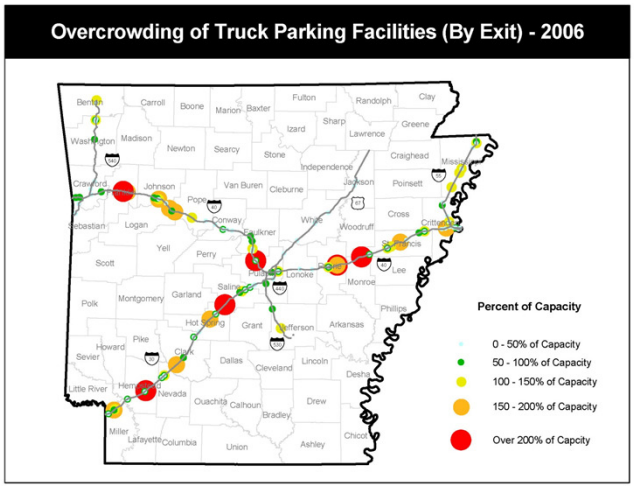
Small Group Discussion

- Work in two or three small groups
- Suggest additional data to consider prior to designating Corridors
- Identify roadways that should be designated as Critical Rural Freight Corridors
- Report back to group

Help Us Help You!

What Can AHTD Do Better to Help Move Freight?

Truck Parking - Statistics



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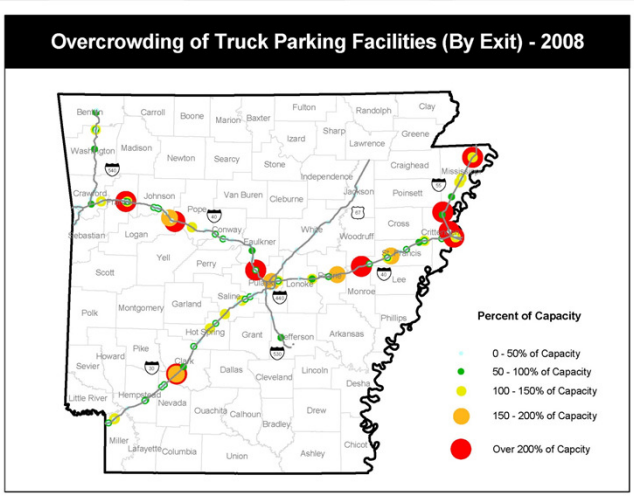

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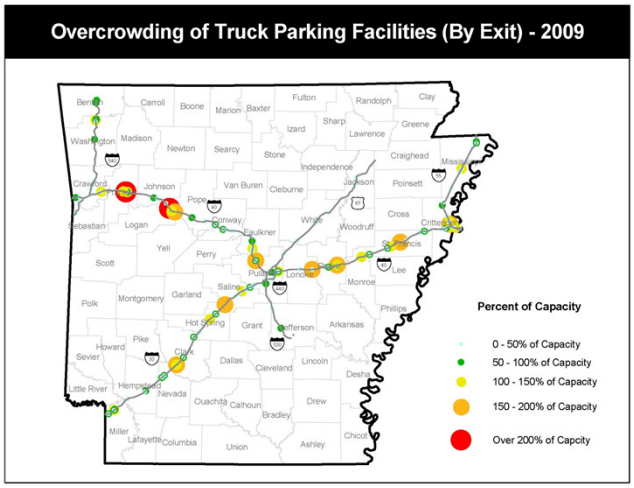

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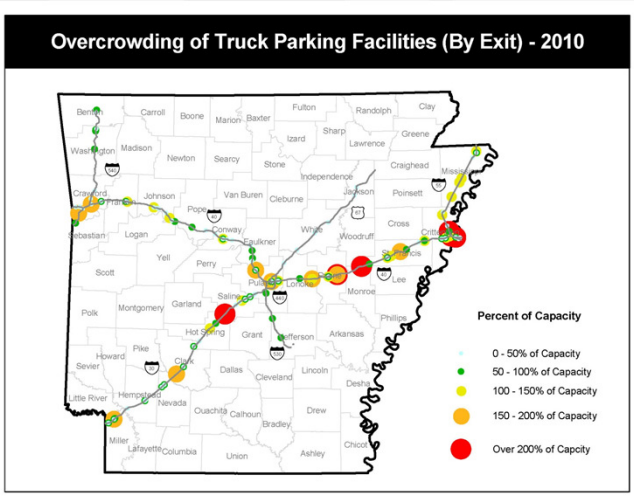

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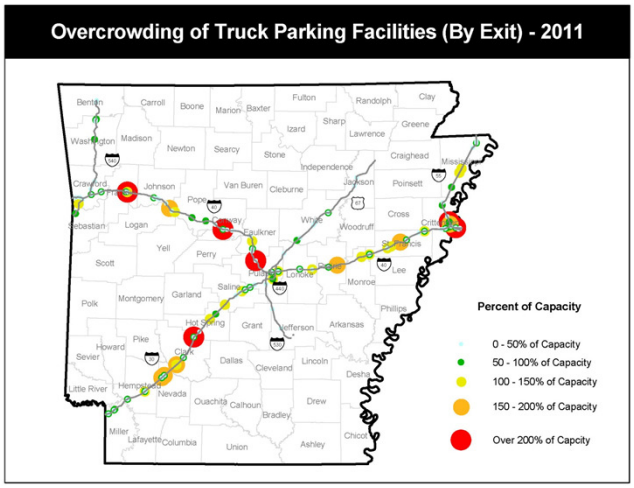

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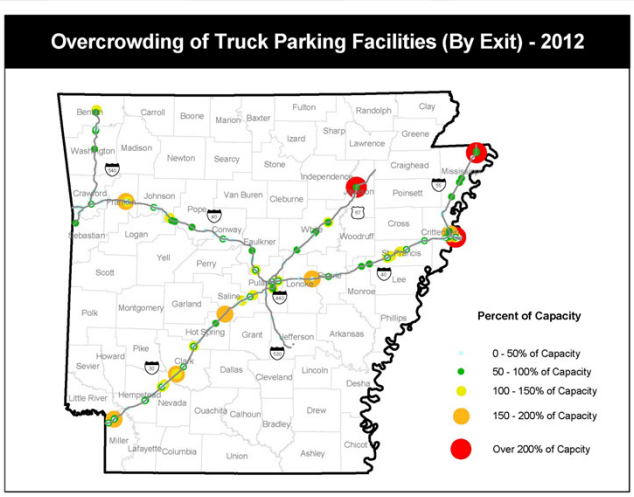

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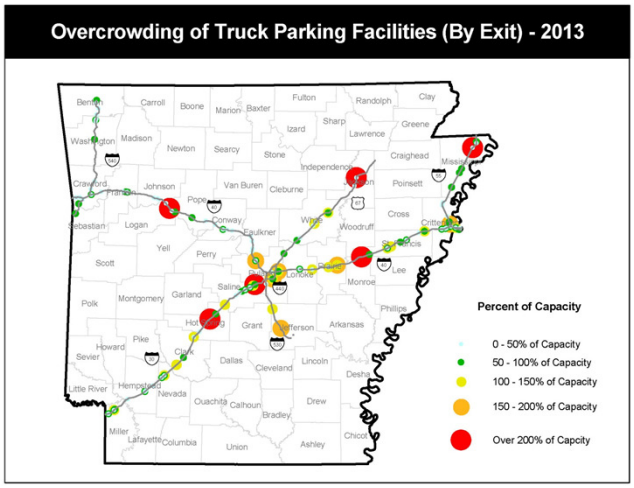

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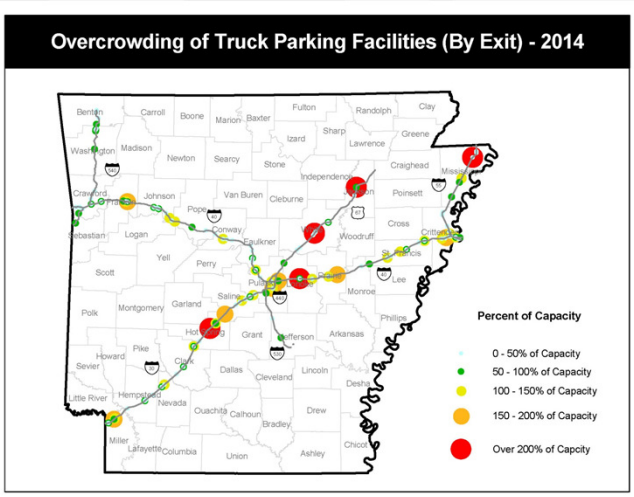
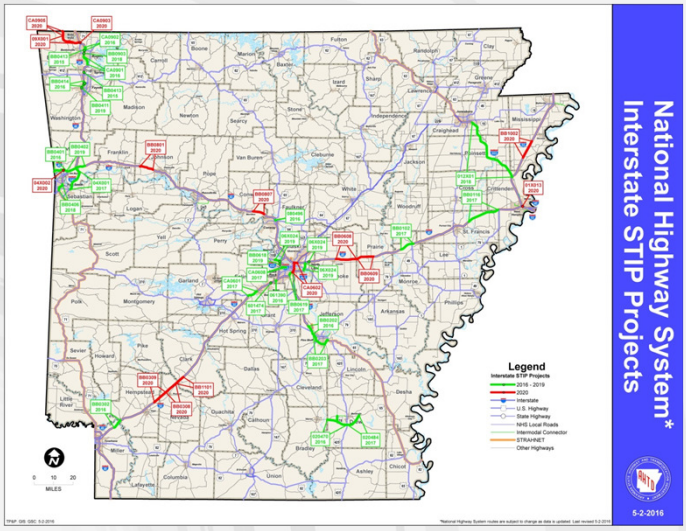


30

Work Zone Safety and Efficiency



National Highway System* Interstate STIP Projects

5-2-2016

Work Zone Safety and Efficiency

- What we have done so far?
  - » Added a back-of-queue warning with ASP and Highway Police
  - » Added minor shoulder widening to keep two lanes of traffic open as much as possible
  - » Added temporary shoulder rumble strips
- What more can we do?

Wrap-Up and Next Meeting

- Next Steps
  - » Complete bottleneck analysis
  - » Identify list of potential freight improvement projects
- SAVE THE DATE – August 11, 2016
  - » Next FAC Meeting
  - » Potential performance measures
  - » Projects, projects, projects

Arkansas State Freight Plan

Agenda

Freight Advisory Committee Meeting

August 11, 2016; 1:30 – 3:30 PM

AHTD Transportation Planning and Policy Division Training Room
Transportation Planning and Policy Annex
Arkansas State Highway and Transportation Department
10324 Interstate 30 | Little Rock, AR

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1. **Welcome and Introductions**
2. **Truck Parking Activities in Arkansas**
3. **Discussion and Evaluation of Critical Urban and Rural Freight Corridors**
4. **Potential Performance Measures – Discussion**
5. **Presentation of Draft Project List**
    a. Projects from outreach process
    b. Projects from consultant analysis
    c. Projects from previous studies
6. **Project Evaluation Process Discussion**
    a. Initial screening using Arkansas Statewide Freight Plan Goals and Objectives
    b. Secondary screening using performance measures
    c. Economic analysis used to prioritize projects
7. **Next FAC Meeting: _____**

Arkansas State Freight Plan

Freight Advisory Committee Meeting #4

August 11, 2016

AHTD – PTP Training Room

Virginia Porta, AHTD Project Manager opened the meeting by welcoming the attendees and thanking them for the ongoing involvement and participation.

The focus of this meeting was to introduce the project evaluation methodology to the FAC and share the preliminary results. Dike Ahanotu provided a powerpoint presentation centered on the various improvements that were generated by the interviews and the technical analyses. Comments from the FAC follow:

- Discern between transload and intermodal facilities
- Increase technology deployment to report high crash locations or high incident locations directly to drivers
- Truck Parking Capacity
- Co-locating truck parking with weigh station locations
- Questions were raised regarding the Truck Parking Survey – how are the rest areas addressed?
- If you choose to consider "Complete Streets" – you must also consider Freight.

Additional discussions among the members of the FAC included a request for Dike to access the American Association of Port Operator and Authorities to retrieve their 2014 tonnage information. That will provide more specific information for Helena Harbor and the Port of Catoosa.

Arkansas Statewide Freight Plan

presented to

Arkansas Freight Advisory Committee

presented by
Cambridge Systematics, Inc.

August 11, 2016

Welcome and Introductions

Agenda

- Welcome and Introductions
- Special Video on Goods Movement
- Truck Parking Studies
- Presentation of Draft Project List
- Project Evaluation Process
- Critical Urban and Rural Freight Corridors
- Wrap-Up and Next Meeting

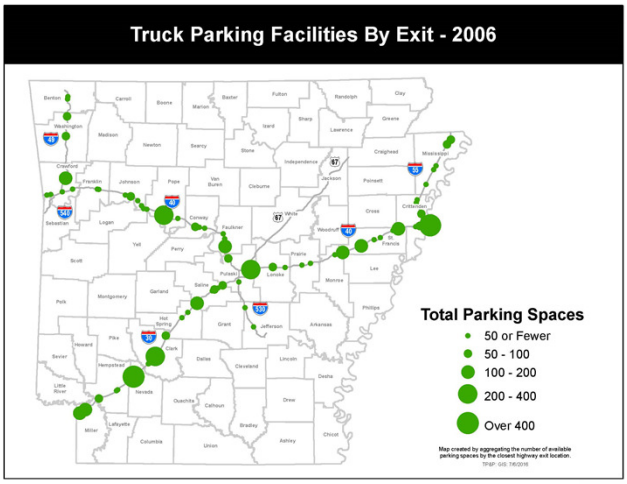
3

4

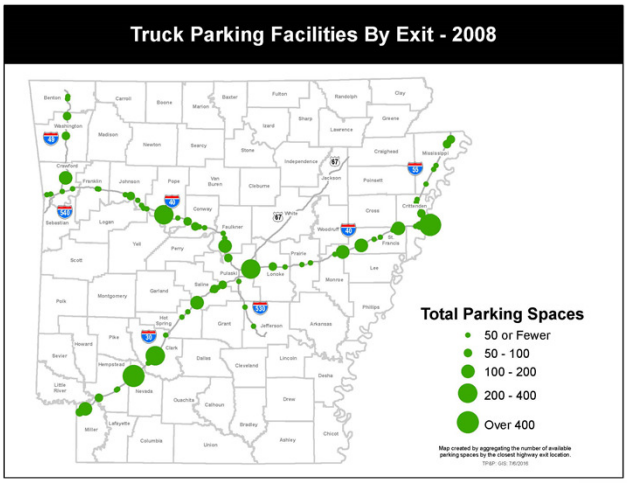
Commercial Vehicle Studies

- Parking Study
  - » Survey of available parking spaces versus number of trucks parked, aggregated by exit.
  - » 2006-2015
    - Available Parking
    - Overcrowding
    - Legal and Illegal (ramps and private property)
    - 2012 - Suggested location for additional truck parking
- Fatal or Serious Injury Crashes

Truck Parking Study



Truck Parking Study



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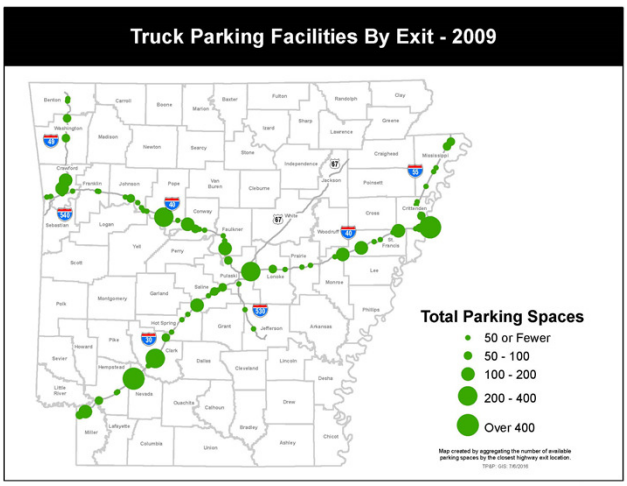

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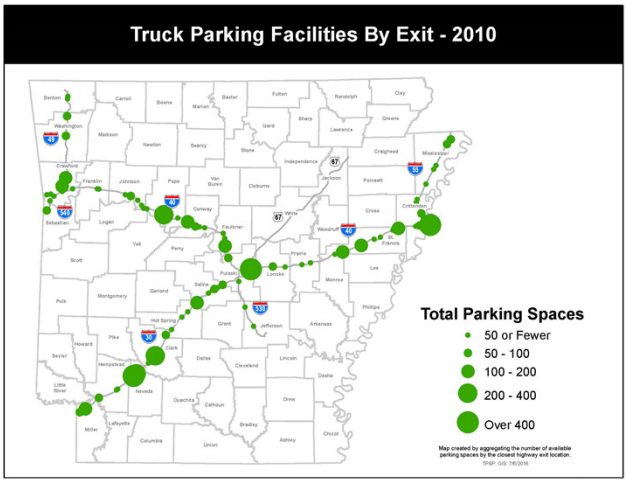

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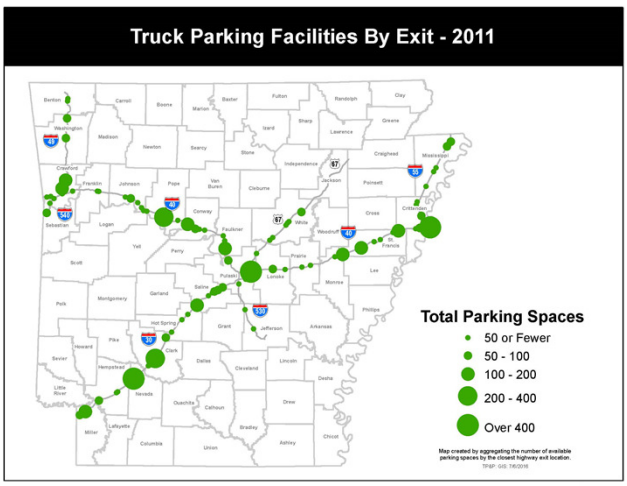

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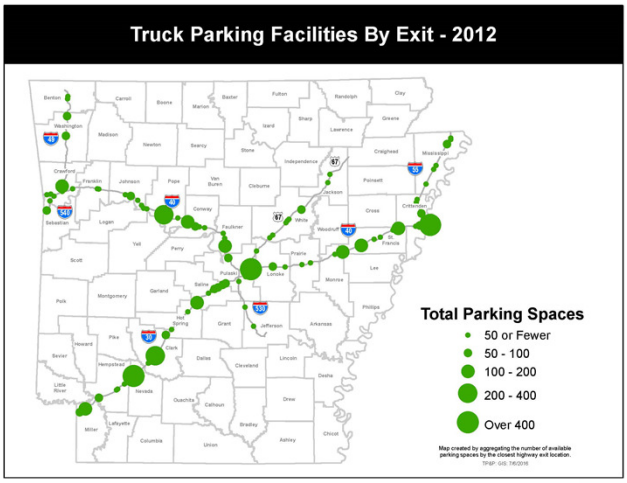

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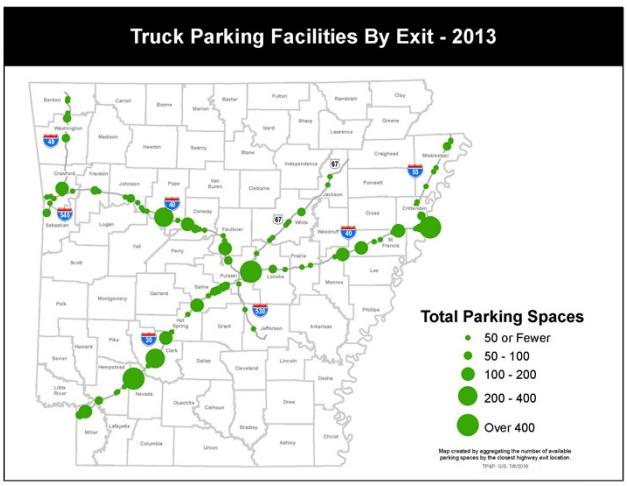

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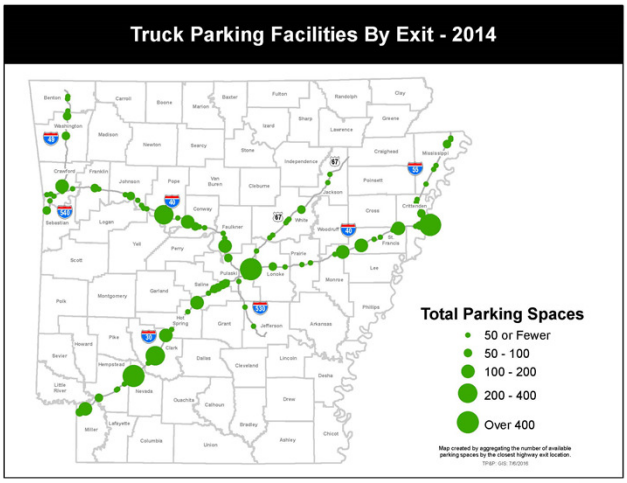

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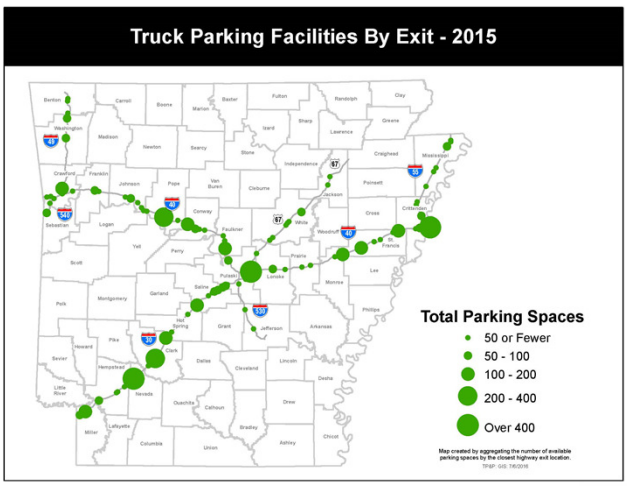

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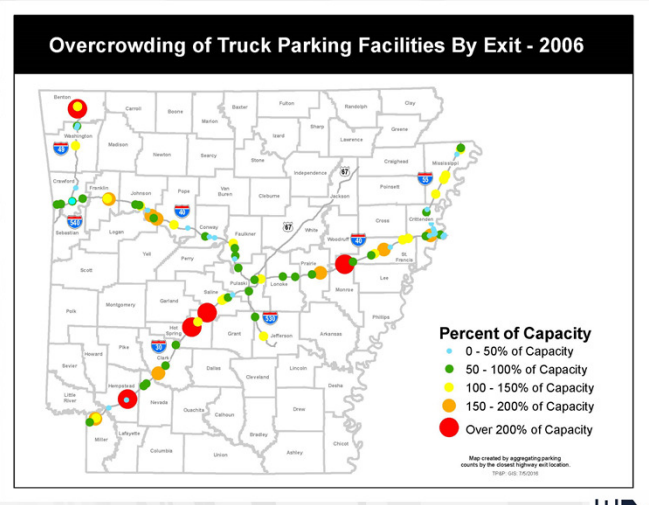

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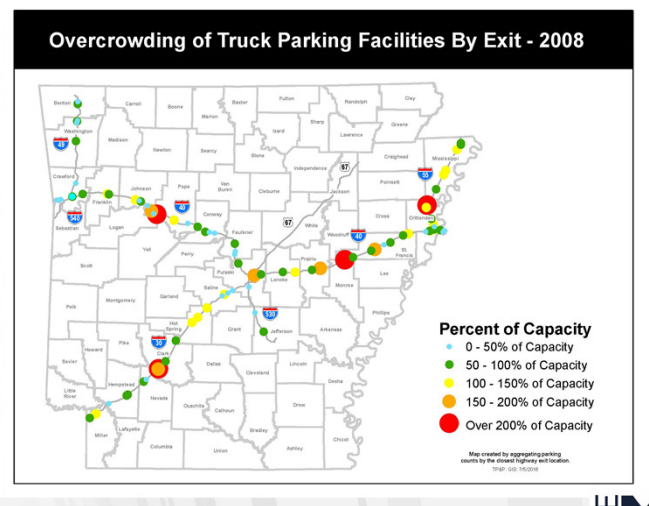

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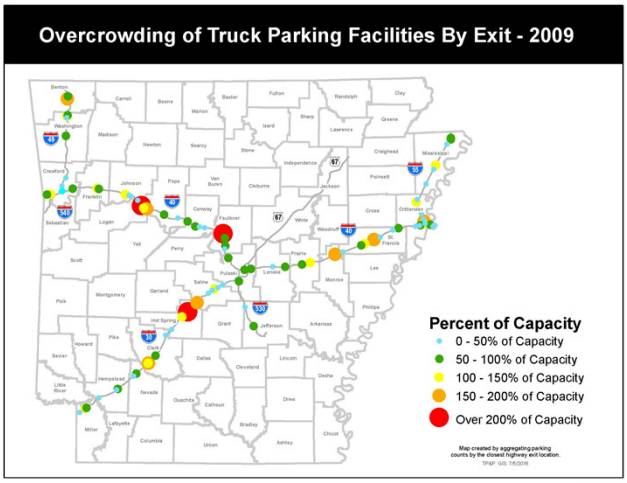

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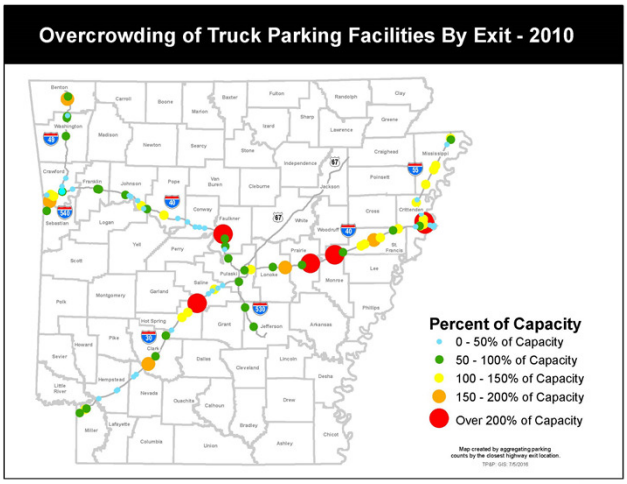

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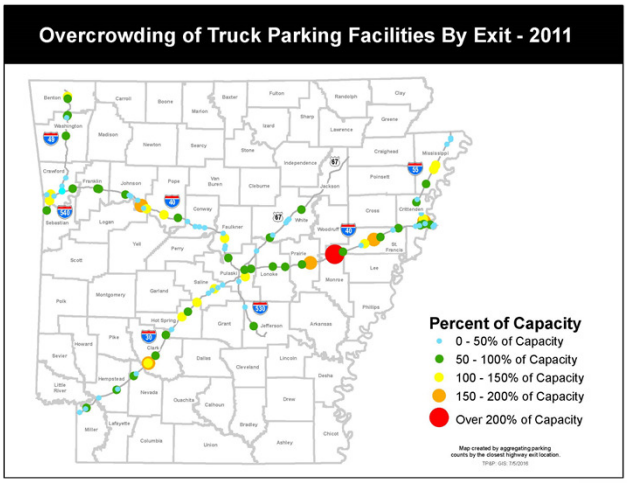

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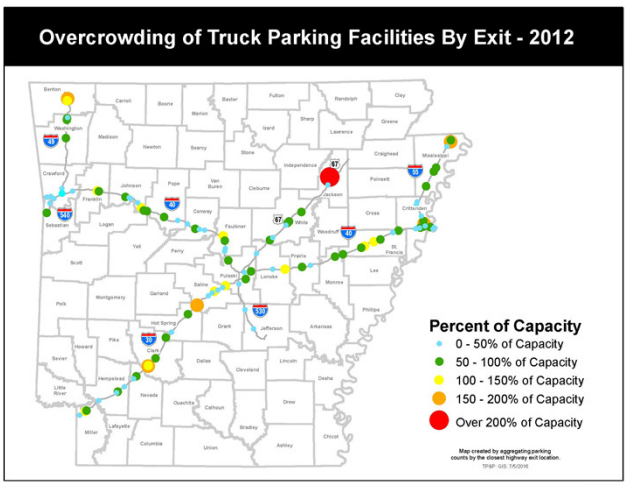

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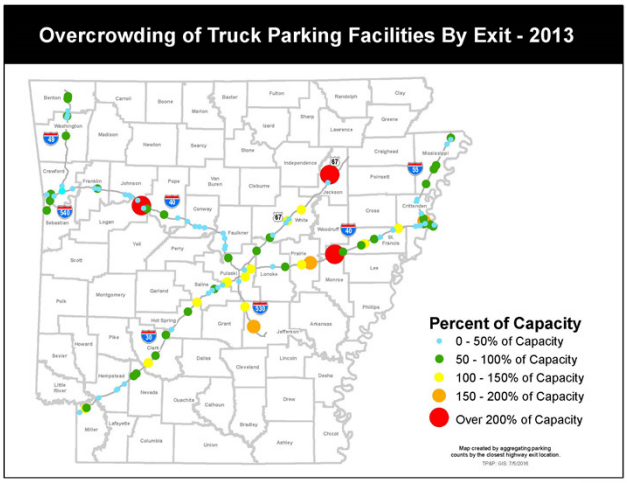

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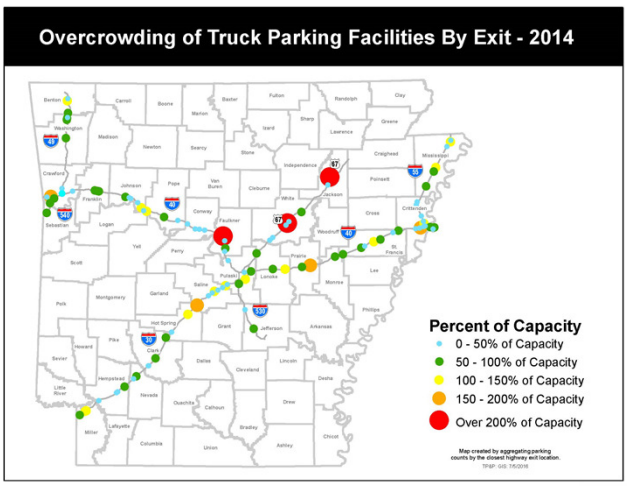

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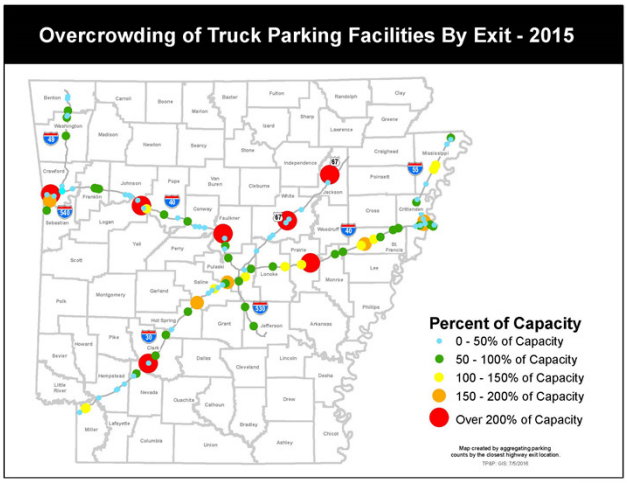

Truck Parking Study

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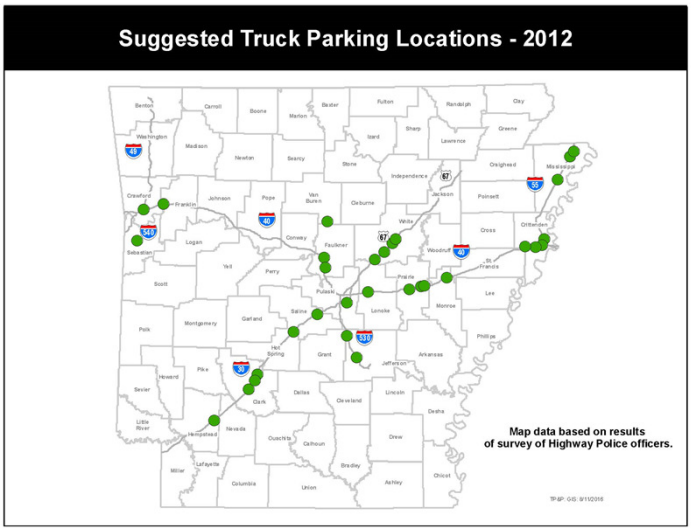
Truck Parking Study

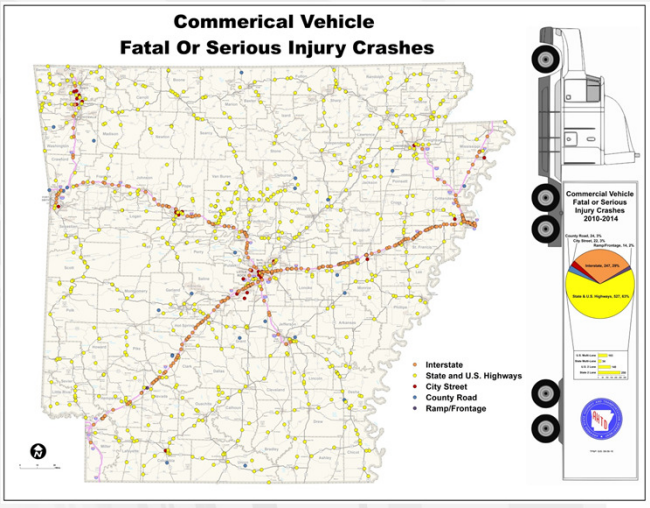
Suggest Truck Parking Locations - 2012



Call to Action:

Additional sites for additional parking.

Commercial Vehicle Crash Study



Identification of Freight Projects

35

Freight Project Identification Process

Technical Analysis

- Arkansas Freight Assets Draft Report
- Arkansas Freight Demand and Needs Draft Report

Stakeholder Outreach

- FAC
- MPOs
- Airports
- Private Sector

Previous Studies

- Modal Plans
- MPO LRTPs

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Requested Input from FAC on Identified Projects

- Ensure freight projects will deliver projects beneficial to goods movement
- Identify conflicts or synergies with other ongoing or future projects

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Projects Identified from Stakeholder Outreach *Capacity Improvements*

- Additional lanes along I-40 between Little Rock and Memphis
- Improve access roads to ports – Highways 65, 208, Cooper Sands Road, Southland Drive, South Loop, and various County Roads
- Improve routes for agricultural access
- Improve major statewide corridors such as Highways 49, 67, 270, 412, I-49 and I-69
- Improve state highways in metropolitan areas to provide accessibility and congestion relief
- Additional capacity the XNA Airport Connector
- Dredge MKARNS to 12 feet to attract more barge traffic
- Improve inland port capacity for larger tows
- Capacity improvements to airports to allow larger planes and increase cargo options
- Improve rail between central and northeast Arkansas as a part of the track improvements

38

Projects Identified from Stakeholder Outreach
Safety and Economic Development Improvements

- Safety improvements
  - » Rerouting of trucks away from central business districts
  - » Low-clearance bridge structures (reduce crashes and indirection)
  - » At-grade rail crossings (sight distance, improvements, accessibility, reduce crossing closures)
- Economic Development Improvements
  - » Identify select sites for economic development with improved landside connections
  - » Maintenance of county roads and bridges in rural areas providing access to intermodal or industrial sites
  - » More intermodal capacity for wood chips and timber
  - » Establish navigation on the Red River in Arkansas
  - » Dredge MKARNS to 12 feet to attract more barge traffic

39

Projects Identified from Stakeholder Outreach
Operational Improvements

- » Interchanges along Interstates 30 and 55
- » Pavement improvements on urban truck routes
- » Real-time truck parking information as well as additional rest areas
- » Improve traffic management during rehabilitation projects in high freight traffic corridors
- » Access to industrial areas (Highway 18, Commerce Drive)
- » ITS information for travelers in urbanized areas
- » Improved access to air freight operations

Call to Action:

Identification of any additional improvement project input.

40

Freight Project Prioritization

41

Freight Project Prioritization Process

- Projects that have already been programmed will be identified
- Initial screen for consistency with statewide priorities
- Projects will be evaluated relative to the State's freight goals
  - » Freight infrastructure condition
  - » Safety and security
  - » Goods Movement Congestion Reduction, Mobility and System Reliability
  - » Economic Competitiveness

Call to Action:

Provide input regarding the prioritization process.

42

National Multimodal Freight Network

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National Multimodal Freight Network

- National Highway Freight Network
- Freight Rail Systems of Class I Railroads
- Public Ports with annual trade of at least 2M tons
- Inland and intracoastal waterways
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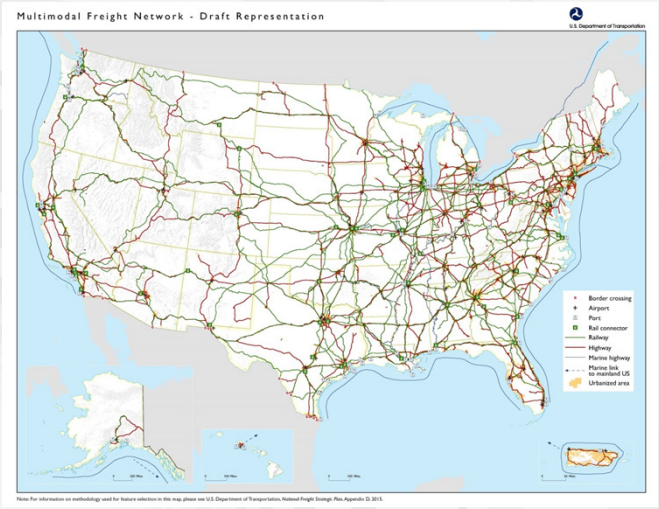

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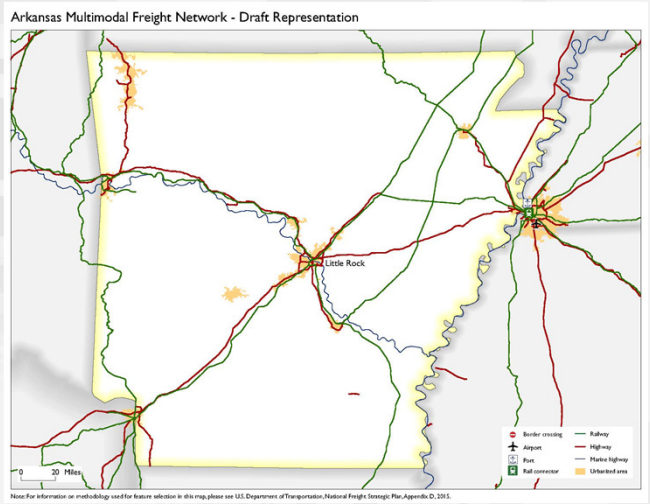
National Multimodal Freight Network



Call to Action:

By September 6, 2016 – submit any comments regarding the criteria for the network designation process (all modes).

46

National Multimodal Freight Network

- **National Highway Freight Network**
- Freight Rail Systems of Class I Railroads
- Public Ports with annual trade of at least 2M tons
- Inland and intracoastal waterways
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National Highway Freight Network

49

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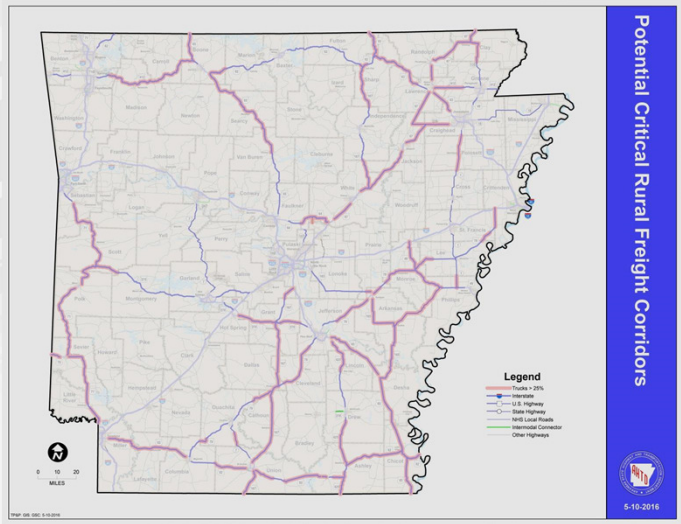
50

Critical Rural and Urban Corridors

- **Critical Rural Freight Corridors (150 miles)**
  - » **Rural principal arterial with at least 25% trucks**
  - » **Provides access to select freight facility (e.g. energy, grain, agricultural, mining, forestry or IMX)**
  - » **Connects to facilities that handle more than 50,000 TEUs or 500,000 tons of bulk commodities**
- Critical Urban Freight Corridors (75 miles)
  - » Connects an intermodal facility or major freight generator

51

Critical Rural Freight Corridors



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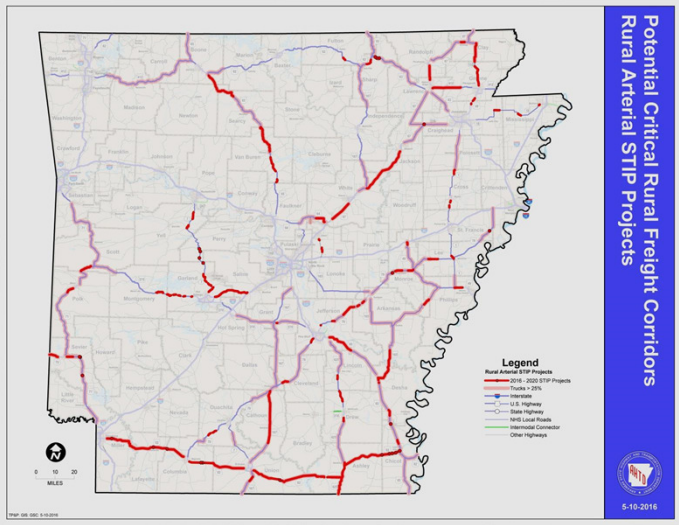
Critical Rural Freight Corridors



Potential Critical Rural Freight Corridors
Rural Arterial STIP Projects

5-10-2016

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TRANSPORTATION 2040 WE MOVE ARKANSAS FREIGHT

Critical Rural and Urban Corridors

- Critical Rural Freight Corridors (150 miles)
  - » Rural principal arterial with at least 25% trucks
  - » Provides access to select freight facility (e.g. energy, grain, agricultural, mining, forestry or IMX)
  - » Connects to facilities that handle more than 50,000 TEUs or 500,000 tons of bulk commodities
- **Critical Urban Freight Corridors (75 miles)**
  - » **Connects an intermodal facility or major freight generator**

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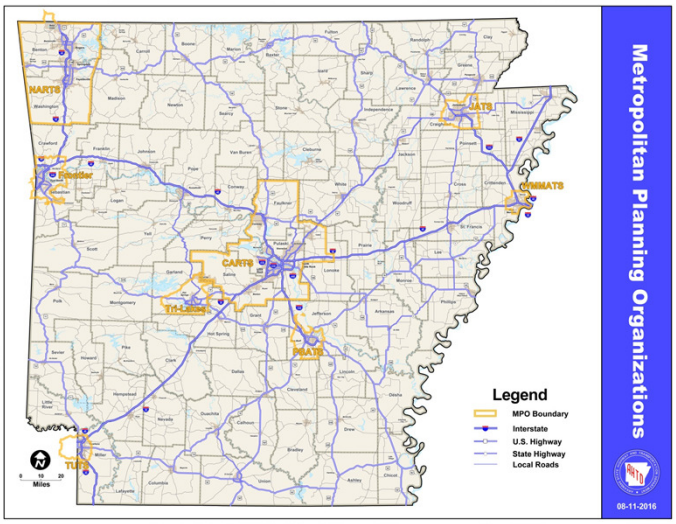
TRANSPORTATION 2040 WE MOVE ARKANSAS FREIGHT

Critical Urban Freight Corridors



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National Highway Freight Network

- Primary Highway Freight System
  - » 41,518 centerline miles (37,436 Interstate/4,082 Non-Interstate)
- Portions of the Interstate System NOT designated as part of the Primary Highway Freight System
  - » 9,511 centerline miles (estimated and will change with deletion and additions to the Interstate Highway System)
- Critical Rural Freight Corridors
- Critical Urban Freight Corridors

Call to Action:

Input regarding the selection criteria for Critical Urban or Rural Freight Corridors

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Wrap-Up and Next Meeting

- FAC To-Do List – by September 12, 2016
  - » Comments to AHTD regarding the selection criteria for the NMFN (by August 29, 2016)
  - » Additional truck parking locations
  - » Provide additional freight improvement project input
  - » Provide comments on freight project prioritization process
  - » Suggestions for Critical Urban and Rural Freight Corridors
  - » Spread the word on "Be Prepared to Stop" Video
- Next meeting – early November 2016
  - » Draft prioritized project list (based on project input and prioritization process)
  - » Recommended Urban and Rural Corridors

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Arkansas State Freight Plan

Agenda

Freight Advisory Committee Meeting

February 1, 2017; 9:00 – 11:00 AM

AHTD Transportation Planning and Policy Division Training Room
Transportation Planning and Policy Annex
Arkansas State Highway and Transportation Department
10324 Interstate 30 | Little Rock, AR

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1. **Welcome and Introductions**
2. **Draft Project List and Map**
3. **Supply Chain Analysis**
4. **Funding and Finance Considerations**
5. **Other Items**
    a. **Freight Network Designation**
6. **Next Steps**
7. **Wrap Up and Next FAC Meeting: _____**

Statewide Freight Plan: Meeting #5

February 1, 2017 at AHTD Transportation & Policy Annex

Project methodology (reviewed by Dike)
- Technical Analysis
- Stakeholder Outreach
- Previous studies

Draft Project List & Map
- Identified potential projects across the state (maintain, rail improvements, truck routing, ED etc)
- Used Goals and Objectives to prioritize the projects

Freight Plan Prioritization Methodology
- Reduction in truck related crashes -function of VMT
- Congestion reduction - based on statewide travel demand model
- Economics competitiveness - using IMPLAN Economic Development tool

Virginia: Are you asking the group if we should discuss what methodology to use?

Jessie: How are the performance measures aligned with the final rules (performance measures). Do we have the analysis to defend? When do we need to have the fast action info

Dike: Fall of 2017 (Oct 1) is the plan for submission to FHWA for approval (a review cycle is on their end). The performance measure analysis has been done and can be used - current activity and future assumptions. We can report on this once we know what future scenario we wish to apply.

Jessie: How do we use the performance measures for the FAST Act?

Dike: You need to rely on the travel demand model to apply it to what is happening today (using Travel Demand Model). They recommend you use what is happening today.

Jessie: Objectives and Prioritization slides seem to be focused on highways (not much waterway and rail)

FHWA: if less VMT from trucks will divert trips/tonnages to rail, water and air if less trucks used. Looking for diversion opportunities.

VA: Model may need to be a manual modification

Dike: Do we want to assign bonus points for other modes? Could have a project that makes traffics more efficient. (ie. Key trade corridor (all modes)?) How do we want to make these multi-modal acknowledged.

Jessie: Not only multi-modal but a host of projects that can be on the waterways - more efficient.

Gene: A deeper river leads to more efficiency.

VA: Would we not also do lock expansion with dredge project?

Gene: No - not needed. There is a need to upgrade the tow haulage (via dredging) but not expand the locks that were designed in AR for a single.

Gene: Army Corps has a plan/authorization to do it but up for de-authorization due up next year. Gene has

been trying to look at alternatives, has approached the Corp on that. Governor's tax cut pulled that idea off the table. Maybe Trumps's new infrastructure plan will work for waterways. Tried to apply a bond issue to water ways in DC this year.

Susan: Are you operating at capacity on River?

Gene: No - we need more freight, not more capacity.

FHWA: Not just diversion but what opportunities for economic development can be the potential new customers? Enforce height and weight in goals - talked to surrounding states?

Dike: We don't have specific projects relegated to that.

VA: There seems to be a push with coordination with border states. We might want to include that since freight moves across the country (related to harmonization of size and weight between states).

FHWA: They are pretty close now.

Susan: Sometimes getting to is harder than weight

Joe: Can't handle heavier weights due to deferred maintenance. Sometimes changes (harmonizing) even effects short lines.

FHWA: It's about capacity - ie 90% a truck has somethings on it to be efficient. If you want to reduce VMT you have to get to the people that have freight that needs to travel to get freight to rail and water.

Trucking Rep: It's about cost effective for the customer as to which mode you use.

FHWA: The ports do business internationally - getting them to transport point A to point B on rail is tougher.

Joe: There are transload facilities that can handle that. Class Is can reinvest to keep their lines moving but short lines have issues. These projects are not massive. (286,000 weight is an issue). They need to do both truck and rail.

FHWA: Dealing with bigger carriers?

Rail Rep: No unit trains and 3 car loads. We provide the little car loads that larger rail can't handle.

Gene: Waterways increase business by expanding it outside of the state. LR Port looks for opportunities to increase inside their industrial park. Now they try to get users in port that will use the port.

FHWA: it would make more sense to get waterways connected to the railroad.

Joe: Their salesman (Ryan) that goes door to door that should be one that talks to everyone since he knows the decisions (i.e. Price of fuel).

Economic Development aspect - certain rural locations, short lines that provide services, need the line there to keep rates reasonable for trucks, even if they don't use the rail line. It's about rates.

Susan: A transload project in Arkadelphia can affect this.

VA: The State Rail Plan is looking at capital expenditures. The rail plan for just G&W is $28 mil. It's low cost in the big picture.

Short Rail Rep: Transload is something we are getting into now.

Dike: We can add bonus points for increasing the competitiveness to freight in the state. And allow points that improve the Economic Development for the state. Likely to attract businesses that might also use other loads. Ie weight and size restrictions harmonization.

VA: Harmonization across all 3 modes (not plane) will benefit all.

VA: Do we have any issues with Dausault's work in terms of getting their ordered planes in and out? In Kansas it doesn't get reported as cargo since the ordered plane is the product.

Richard: No not really any issues. They fly in green, are customized, and then fly out.

VA: That is not reported out as freight - Can we get that identified as an Economic Development benefit?

Richard: yes let's visit on that.

Freight Project Prioritization Steps (get map from Dike to add to web site??)
- May lump some projects together to do grouped model run to analyze efficiently
- Going to use IMPLAN to get to Economic Development benefits.

Supply Chain Analysis
- Tells the story of freight
- Three supply chain examples:
  - Poultry
  - Boat manuf.
  - Rice
- Poultry supply change - five components involved (growing farms less than 30 miles from feed mills). Primarily in West AR.
- Fuel is a contributor on the front end of this process

VA: Transport of live chickens to processing plant distance? Uses State Roads in rural settings.

Susan: Tyson was trying to get their supply closer to McDonalds distribution.

Dike: Poultry - 6 bil. lbs of chicken / 612 millions lbs of turkey / 3 bil. Eggs (2015 Ar Poultry Fed. Data source). NWA has the concentration. PICO in NE AR will impact this some in the future.

VA: Can we get that same map that goes into the market area in surrounding states (MO, OK, & Louisiana, etc). North and West Border + south.

Poultry Inputs and Outputs
- Corn shipped in from Iowa & Illinois, Indiana
  - Train & barge to freight into AR
  - Local corn owners use trucks (105 bil bushels produced).
- Packaging material by truck (huge for Short line shipping)
- Final frozen products shipped out by truck and containers

Gene: Grant awards to help Helena rail into their port/ Purdue from Georgia is the customer as well as Tyson

Jessie: Identify multimodal projects that Fast Lane grant can fund out of this Statewide Plan where the work has already been done.

Gene: We can't apply for Fast Lane (can't compete with another agency's grant) state agencies, cities etc.

Poultry Product Destinations: Dike showed the destination chart (2006 - 2016 table from census), need to balance domestic and international. Need breakdown to see totals.

Gene: combine #3 and #7 (Hong Kong is part of China)

VA: Are there other states shipping to other countries?

Dike: GA is shipping through the port of Savannah. AR uses Louisiana ports primarily

VA: AEDC may have numbers on domestic vs. international

Boats Manufacturing - War Eagle Boats in Monticello AR (SR 35)
- Statewide demand for boats + can ship to other states
- Alum. Coil, mechanical and electrical components
- Few direct imports
- Use tricking to ship
- Key roadways, SR 35 / US 63, I-530 and I-40

War Eagle Output
- Direct purchase program
- Distrib. mostly eastern half of US
- No exports
- They have their own trucking fleet to ship their product
- Component for repair & parts ship via UPS

Dike: Keystone Pipeline uses steel from AR. We might want to focus on this product as a consideration

US Rice Production
- 19 bil lbs
- AR produces over half (52%) the rice consumed in US
- Primarily long grain rice
- Rail ships rice produced in GA as well

AR Rice Production - mostly in East Arkansas with mills nearby in NE. Arkansas County is the highest at 9%. (2012 data from Dept of Ag)

Gene: Pointsett grows more now. Ships from mill in Jonesboro than out of MO and Mississippi

Michael: Arkansas County now does a lot of soy bean.

Rice Inputs and Outputs - Dike showed chart
- Mill size is also 2012 data (may have changed).
- Distribution goes by waterway and barge but within 300 miles will be by truck

Rice Exports - Dike showed chart of ports in country
- Louisiana has many of the larger ports

Rice Consumers - Dike showed chart (Mexico and Japan on top at 14%)

VA: The non-Ag product was hard to come up with. Lumber? Paper?

Joe: Much of the lumber is shipped by rail.

Susan: Paper products and diaper fluff is a food product that gets shipped out due to primary contact. Kimberly Clark has to be food grade (VA to talk to Dike on this product). Mode share may be the way to track it. Ie - Sun Paper is coming to Arkadelphia soon. All their product will go to China (per Gene). They need our trees. Domtar is doing the same thing, using KCS rail to ship.

Gene: Intermodal Authority in Ashdown (Little River) in SW Arkansas was formed in weeks!

Freight Funding & Finance
- Funding related to FAST ACT - must have all funding sources identified.
- Funding identified in Freight option of Long Range Intermodal Transportation Plan (LRITP)

Jessie: How did the FAST ACT influence other modes (i.e. FRA is grant funds)? This requirement only applies to highway mode.

VA: Rail is all private industry so the list is to be funded by commercial entities (not agencies).

Joe: Is there a restriction of public and private partnerships?

VA: Not that we have heard.

Other Items (VA led discussion)
Freight Network Designation
- Rural and Urban Connectors - AHTD going to look at this again since they are milage they can designate. Look at needs for connectivity and see where projects are planned and leverage some of the funding.
- FAST Lane grants were applied for but no wins listed yet (3 highway projects). New Administration will select projects but timing unknown.

Next Steps
- Project improvements and points assigned
- Project Prioritization

AHTD will share all next step info + draft documents

VA: Once state freight plan is finished in 3 months – it is not the end of the process. Would like to have FAC maintain activity to provide input. Even designation can be re-done (5 year cycle)

Jessie: what is he schedule for Freight Rail Plan completed

VA: April 26 for AHC review of the Long Range Intermodal Transportation Plan approval with this Freight Plan in the cycle after.

Gene: Approval of the Long Range plan first before the Freight Plan - what if things don't jive?

VA: There has been much coordination by both teams

Jessie: Long Range plan is not project specific - more policy document.

VA: Planning conference April 18 - 19 in Fayetteville

Susan: NWA symposium on driverless trucks by Uber coming up.

Jessie: if you want to include a project identified in the Freight plan - it will position you in future grants. Please get with us on this so we can include it.

Upcoming FAC Meeting: one more prior to review of final.

Jessie: please have this committee review and take an action if you approve this plan to help through the AHTD commission.

Dike/Jessie: Fed Highway will need to see it prior to - draft for review.
Jessie: that way FHWA can stamp the final since they have reviewed it.

Arkansas Statewide Freight Plan

presented to

Arkansas Freight Advisory Committee Meeting #5

presented by

Cambridge Systematics, Inc.

February 1, 2017

Welcome and Introductions

Agenda

- Welcome and Introductions
- Draft Project List and Map
- Supply Chain Analysis
- Funding and Finance Considerations
- Other Items
- Next Steps
- Wrap-Up and Next Meeting

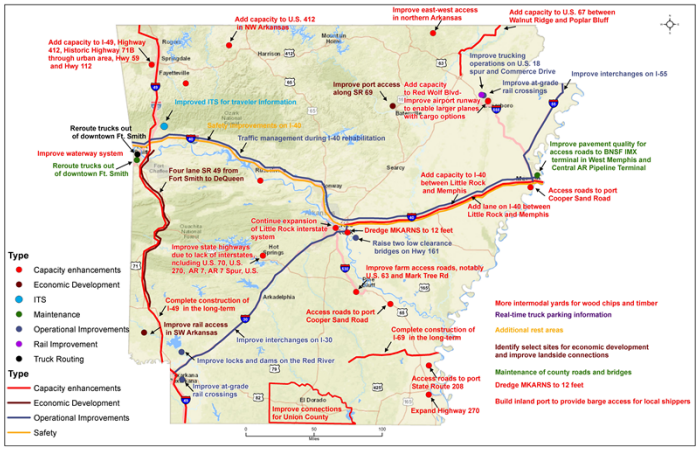
Draft Project List and Map

Freight Project Identification

- Projects were identified from three primary sources
  1. Technical analysis
     - Highway bottlenecks
     - Highway safety
     - Rail needs – primarily based on State Rail Plan
     - Waterway and port needs
     - Air cargo needs
  2. Stakeholder outreach
  3. Previous studies
     - Example – Arkansas State Rail Plan

Map of Potential Freight Improvement Projects

- Potential projects identified across all modes and regions of Arkansas



Description of Freight Goals

Freight Goals	Descriptions
Safety and Security	Improve statewide safety for all freight modes and improve system resiliency
Freight Infrastructure Condition	Invest in existing assets to maintain and preserve the existing system
Goods Movement Congestion, Reduction, Mobility, and System Reliability	Invest in the multimodal freight transportation system to improve mobility, connectivity, efficiency, and mobility to support existing industries and strengthen national and regional economic competitiveness
Economic Competitiveness	Improve intermodal freight transportation system connectivity, efficiency, and mobility to support existing industries and strengthen national and regional economic competitiveness

Freight Objectives Related to Project Prioritization (summarized)

- Reduce truck-involved crashes
- Improve resiliency through improving segments with elevated risk of failure and important freight impacts
- Enforce weight and size restrictions
- Provide predictable, reliable travel times on key freight corridors
- Implement real-time ITS freight strategies and CV/AV strategies
- Improve key freight routes – not just congestion points
- Improve freight transportation efficiency for key industries
- Improve designated connecting roads to freight terminals
- Coordinate with neighboring and local jurisdictions

Freight Project Prioritization Methodology

- Points assigned for:
  - Reduction in truck related crashes
    - As a function of VMT
  - Congestion reduction
    - Based on travel demand model
  - Economic competitiveness
    - Based on analysis using IMPLAN economic analysis tool

Freight Project Prioritization Methodology (continued)

- Bonus points assigned for
  - Projects located on crash hotspots
  - Projects located on bottleneck hotspot locations
  - Projects that are located along key trade corridors
  - Projects that utilize advanced technology
  - Projects that improve connectivity

Freight Project Prioritization Steps

- Develop specific projects from concepts
  - » Such as improve connections
- Apply travel demand model to packages of highway projects
- Utilize IMPLAN to determine economic benefits of project packages
- Utilize pre-existing project analyses
  - » MKARNS
  - » 2016 Arkansas State Rail Plan

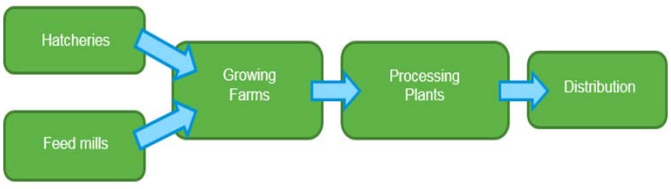
Supply Chain Examples

Supply Chain Analysis

- Supply chain analysis used to "tell story of freight" and describe how freight improvements relate to the broader economy
- Three supply chain examples
  - Poultry
  - Boat Manufacturing
  - Rice

Poultry Supply Chain

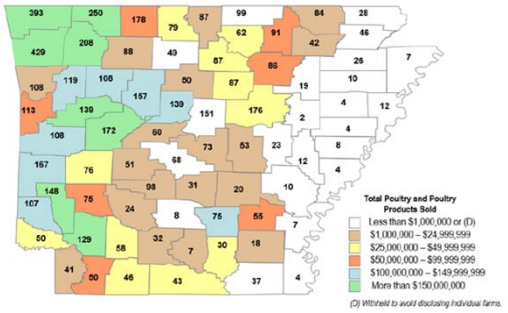
- Five primary components of poultry supply chain
  - 25 hatcheries, feed mill, and processing plant "complexes", primarily in western Arkansas
  - Growing farms are typically less than 30 miles from feed mills



Poultry Production

- 6 billion pounds of broiler chicken
- 612 million pounds of turkey
- 3 billion eggs

Number of Farms and Poultry Products Sold



Poultry Inputs and Outputs

- Corn
  - » 150 million bushels shipped into Arkansas from states such as Iowa
  - » Typically use train and some barge
  - » Local corn growers use trucks
    - 105 million bushels of corn produced in Arkansas
- Packaging material needed at processing plants
  - » Typically delivered by truck
- Final product is either fresh or frozen for further processing
  - » Typically shipped by truck

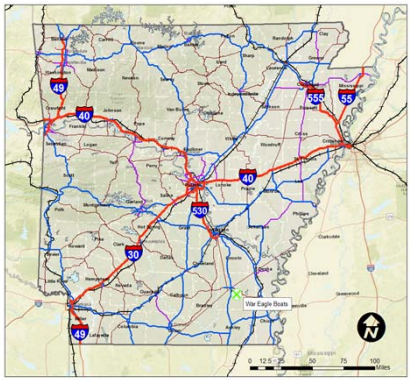
Poultry Product Export Destinations

- Mix of domestic and international destinations for Arkansas poultry products
- Arkansas exports primarily through ports in Louisiana
- Key modes are trucking, rail, and waterways

Rank	Country	Arkansas Broiler Exports (1,000 lbs)
1	Mexico	11,807,594
2	Russia	9,548,578
3	China (Mainland)	3,703,461
4	Canada	3,547,868
5	Angola	3,388,372
6	Cuba	3,100,700
7	Hong Kong	2,721,679
8	China (Taiwan)	2,591,336
9	Iraq	1,962,271
10	Guatemala	1,732,619

War Eagle Boats - Overview

- Strong local demand for boating
  - » Arkansas has 9,700 miles of fishable streams and rivers
  - » 600,000 acres of lakes
- War Eagle Manufacturing located in Monticello on SR 35



War Eagle Boats – Inputs

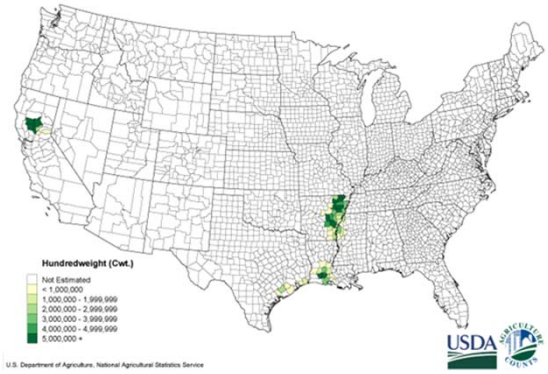
- Aluminum coil, mechanical and electrical components from Central and SE U.S.
- Few direct imports
- Transported to Monticello facility by truck
  - » Flatbeds, LTL
- Key roadways include SR 35, U.S. 63, I-530, I-40, and I-30

War Eagle Boats – Outputs

- Ware Eagle distributors mostly located in Eastern U.S.
- Direct sales occur throughout U.S.
- No exports
- Private truck fleet and drivers to deliver boats
- Some customers pick up boats
- Shipments of components for repair travel by UPS

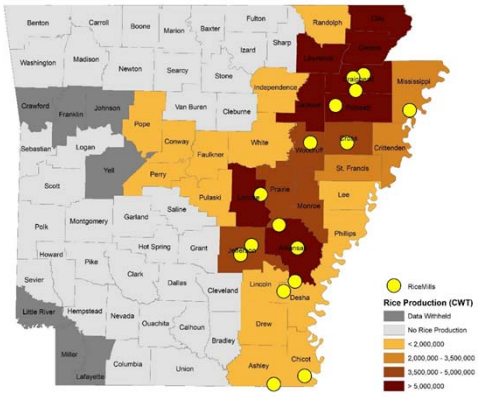
U.S. Rice Production

- 19 billion pounds of rice produced in U.S. concentrated in a few states
- Arkansas produces over half of all rice
- Primarily long grain rice



Arkansas Rice Production

- Rice production and milling concentrated in Eastern Arkansas
- Top counties are
  - » Arkansas (9%)
  - » Poinsett (8%)
  - » Clay (7%)
  - » Jackson, Green, Lonoke, Craighead (6% each)
  - » Lawrence, Prairie, Cross (5% each)



Rice Inputs and Outputs

- Rice seed, fertilizer, pesticides inputs
  - » Locally grown inputs use truck
  - » Water and rail may be used for longer flows
- Milling facilities located on rail and barge lines
- Distribution within 300 miles occurs by truck

Milling Facility	City	County
Busch Agricultural Resources	Jonesboro	Craighead
Cormier Rice Milling Co	De Witt	Arkansas
Farmers Granary	McCrory	Woodruff
Producers Rice Mill Inc	Eudora	Chicot
Producers Rice Mill Inc	Pine Bluff	Jefferson
Producers Rice Mill Inc	Stuttgart	Arkansas
Producers Rice Mill Inc	Wilmot	Ashley
Producers Rice Mill Inc	Wilson	Mississippi
Riceland (Stuttgart Grain Dryer Coop)	Altheimer	Jefferson
Riceland Foods Inc (Dumas Grain)	Dumas	Desha
Riceland Foods Inc (Rivland)	Jonesboro	Craighead
Riceland Foods Inc (Waldenburg Rice Division)	Waldenburg	Poinsett
Riceland Foods Inc Pendleton (Pendleton Grain Terminal)	Dumas	Desha
Riviana Foods Inc (Riviana Foods)	Carlisle	Lonoke
Southwind Milling	Pine Bluff	Jefferson
Windmill Rice Co	Jonesboro	Craighead

Rice Exports

- Arkansas rice primarily shipped out of ports in Louisiana
- Primary U.S. export destinations are
  - » Mexico (14%)
  - » Japan (14%)
  - » Haiti (11%)
  - » Canada (8%)
  - » South Korea (8%)
  - » Columbia (5%)
  - » Saudi Arabia, Jordan, Honduras (4% each)

Rank	Port	January – May 2016 Trade Value ($1,000)	Percent of Total
1	Port of New Orleans, LA	$186,722	24%
2	Port of Oakland, CA	$177,499	23%
3	Port of Greater Baton Rouge, LA	$83,428	11%
4	Port of Stockton, CA	$81,872	11%
5	Port of Lake Charles, LA	$37,092	5%
6	Port of Houston, TX	$34,765	4%
7	World Trade Bridge, Border Crossing, Laredo, TX	$25,772	3%
8	Port of Detroit, MI	$22,252	3%
9	Port of Los Angeles, CA	$19,289	2%
10	Port of Port Huron, MI	$18,149	2%
	All Others	$87,419	11%
Total		**$774,260**	**100%**

Source: World City Trade Numbers.

Freight Funding and Finance

Freight Funding Options Being Examined

- Funding related to FAST Act
  - » Freight funding requires all data sources to be identified
- Funding identified in “Freight” option of Long Range Intermodal Transportation Plan (LRITP)

Other Items

- Freight Network Designation
  - » Rural and Urban Connectors
- Other

Next Steps

- Next steps
  - » Analyze specific project improvements
  - » Estimate economic impacts
  - » Develop project recommendations

Wrap-Up and Next Meeting

- Final FAC meeting – Spring 2016
  - Discuss project recommendations
  - Comments and edits to Draft Freight Plan

Arkansas State Freight Plan

Agenda

Freight Advisory Committee Meeting

May 17, 2017; 9:00 – 11:00 AM

AHTD Transportation Planning and Policy Division Training Room
Transportation Planning and Policy Annex
Arkansas State Highway and Transportation Department
10324 Interstate 30 | Little Rock, AR

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1. **Welcome and Introductions**
2. **Project Prioritization Process**
3. **Funding Scenarios**
4. **Critical Urban and Freight Corridors Identification**
5. **Draft Executive Summary (Sneak Peek)**
6. **Other Business**
7. **Wrap Up and Next Steps**

Arkansas Freight Advisory Committee Meeting #6

Meeting Summary
May 17, 2017

Attendees:
Jessie Jones (AHTD), Kurt Naumann (AEDC), Shannon Newton (ATA), Brandon Morris (UPRR), Ron Burks (AHP), David O'Neal (ATA), Kelley Eubanks (KEE Concrete and Construction, Inc.)

Project Team: Dike Ahanotu, Dave Roberts, Susan Atherton, Andy Brewer, Virginia Porta, Michael Henry, Minnie Beth White

Project Prioritization Process:
- Dike showed the map with over 100 projects identified via stakeholder interview & public outreach
- Goals and Objectives were used to set prioritization criteria to evaluate the projects
- Virginia asked about 'resiliency of system '- project provides alternative route or corrects a possible issue (i.e. Potential flooding) addressed resiliency.
- Susan asked about 'project improves enforcement'? Dike: Related to infrastructure condition - truck weight is correct with design of roads and bridges if the weigh stations are current and enforced.
- Jesse asked if the team looked at 'Routes of Significance'. Virginia answered that it could be looked at statewide but said it wasn't used as goal criteria. Jesse said it is a FHWA requirement which could lead to additional projects brought into the filter. Dike & Virginia said they would include it.
- Jesse asked the group if the criteria addressed their areas of emphasis.
    - ☐ Brandon said at-grade crossings (NE Arkansas in grain areas) should be included if possible since it's a safety and security issue. Dike said they can add that to the criteria with data they have on crashes. Virginia shared with the group that severe or steep approaches to the crossings creates problems for trucks with low clearance.
    - ☐ Include locations of types of crossing protections - quantify the level of protection at each crossing (per Virginia). Susan asked if there are overlaps with the rail plan. Virginia responded that yes, there is some overlap.
- Virginia & Jesse talked about the 'Crossing Inventory' project to verify the crossing, approach surface and single/double track of short lines. Look at protections and even adjacent routes if crossing is compromised. There are approximately 2,500 crossings in the state. These could be a strategy in the Freight Plan.

3 Funding Scenarios
Dike continued his presentation with three Funding Scenarios.
- Funding Scenario 1 - FAST Act freight funding only ($70 mil over next 5 years)
- Funding Scenario 2 - FAST Act & Priority Freight Projects (100+ projects added to the FAST Act Projects)
- Funding Scenario 3 - Freight Supported Scenario from the Long Range Intermodal Transportation Plan (improve flow of freight in the state).

- Jessie mentioned the Federal Highway Administration (FHWA) requires an approved Freight Plan that is FAST Act compliment done by December 2017 to recieve funds ($17 mil annually).
- Virginia said of the list of projects that are identified in this plan - funding could occur through discretionary grants.
- The Scenario 1 project list includes all interstates. Other routes included (not a complete list):
    - ☐ Downtown Fort Smith (Garrison & Rogers) - trucks through town on 71B via Hwy 64 bridge is an issue for local users. There is industry close to downtown which requires truck access. Virginia mentioned prior work conducted by the Oklahoma DOT to connect Highway 271 to I-40 (near Poteau).
    - ☐ Russellville & Morrilton have some downtown truck issues as well.
- Dike mentioned there is a mix of project types in the screening project list. Cost effective solutions will be the outcome.
- Jesse asked how much detail would be needed to satisfy FHWA regarding the project details included in the State Freight Plan. Dike said they are very specific as how they want to see the FAST Act projects (much like a STIP). Virginia said specific projects can be shown as illustrative to reflect funding constraints.
- The higher number in the criteria list equates to more criteria met.

- Scenario 2 - correction: 67/167 from Little Rock to LA should only read Hwy 167.
- Projects receiving a screening score less than 4 were likely not moved forward for evaluation.
- Scenario 2 projects include:
    - ☐ Improved transload centers and short line utilization - more feasible option
    - ☐ Improve connections for Union County (Hwy 82)
    - ☐ Improve (correction Add) locks and dams on the Red River
    - ☐ Consider location of an intermodal railyard in NWA (per Brandon container market should drive location not truck traffic and the needed private investment costs of approximately $600 million could take it out of consideration). Virginia mentioned that if you drop a pin at Marion and one in Kansas City, there likely won't be a business case to add another large intermodal/container facility within a 500-mile radius).
    - ☐ Improve east-west access in northern AR

- Scenario 3 - focused on improving interstate congestion area to add capacity.
    - ☐ Economic benefits of $135million are based on capacity improvements that will allow the transportation system to provide competitive service. According to Kurt at AEDC - there is the possibility of additional industry along these corridors, and that $135 million may be a conservative estimate.
    - ☐ An operational improvements study of this scenario is underway as a part of the Long Range Intermodal Transportation Plan.
- Benefits and Costs of each scenario will be analyzed

Critical Urban & Rural Freight Corridors Identification:

- Virginia presented initial and secondary screening for rural corridors (150 miles):
  - ☐ Used truck percentage on a subset of the state highways system.
  - ☐ Daily truck volumes
  - ☐ Considered First and Last mile connectors
- AHTD is working to identify where rural improvements are needed for key corridors
- Consideration is also being given to:
  - ☐ Combine locations
  - ☐ Consistency with the STIP
  - ☐ Consistency with other plans
  - ☐ identify bike & Ped plan routes so that conflict with trucks and bikes don't happen
- Virginia presented initial and secondary screening for urban corridors (75 miles):
- Consideration is being given to:
  - ☐ Coordination with the eight MPOs to identify most critical freight movements
  - ☐ AADT and AADTT
  - ☐ First and last miles
  - ☐ Manufacturing and distribution facilities locations
  - ☐ Development density by type
  - ☐ Permit data to identify manufacturing locations
  - ☐ Adjacent land use
  - ☐ Consistency with STIP
- The intent is to have the initial list of designated CUFCs/CRFCs included in the State Freight Plan.
- Designation in the State Freight Plan will make these corridors eligible for NHFP funds.
- Shannon previously submitted a list of truck routes with issues but didn't prioritize them. This will be compared to the CUFC/CRFC candidate routes to see if there are any overlaps/matches.
- Virginia also mentioned an option presented by Paula Dowell at Cambridge (while discussing another project). Other states are approaching the CUFC/CRFC issue by designating a “state” freight network. Within that network, CUFCs/CRFCs would be identified. It should be noted that designation within a state freight network does not ensure funding.
- Jessie reminded the group that future interstates must be identified on the state list. (e.g. I-49 or I-69).
- The State Freight Plan may ultimately include the national freight network designations followed by a state network.

Draft Executive Summary

- The Draft Executive Summary will be submitted to the FAC For review within a week of this meeting.
- Comments generated during a cursory review by the FAC:
  - ☐ graphics and images need to be more multi-modal (not just truck)
  - ☐ Major industries and commodities should be revised from broiler to poultry.
  - ☐ Be sure to include reference to the TRB paper regarding the I-40 flooding issue as it relates to system reliability
  - ☐ A section was requested to show how Arkansas fits into the global market.

- Jessie reminded the group that FHWA will need to review this Executive Summary prior to AHC adoption.
- June 14 is the deadline for FAC comments on the Executive Summary
- All technical memos will be posted to the website (www.wemovearkansasfreight.com).

Arkansas Statewide Freight Plan

presented to

Arkansas Freight Advisory Committee Meeting #6

presented by

Cambridge Systematics, Inc.

May 17, 2017

Welcome and Introductions

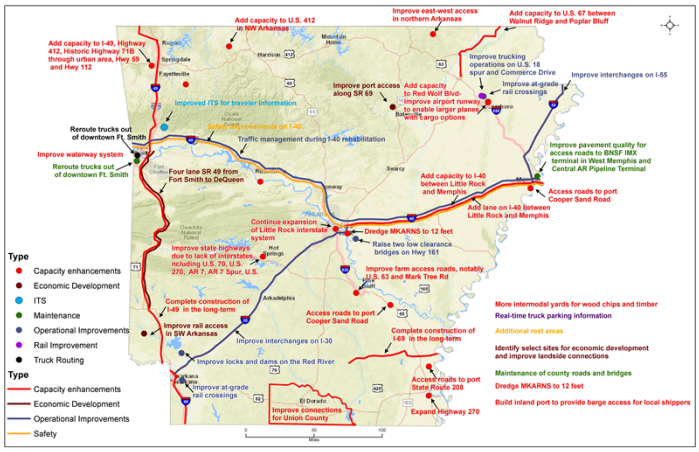
Agenda

- Welcome and Introductions
- Project Prioritization Process
- Funding Scenarios
- Critical Rural and Urban Freight Corridors Identification
- Draft Executive Summary (Sneak peek)
- Wrap-Up

Project Prioritization Process

Map of Long List of Potential Freight Improvement Projects

- Potential projects identified across all modes and regions of Arkansas



Freight Project Prioritization

- Transform goals and objectives into metrics that can be used to compare freight improvement project concepts
- Arkansas Statewide Freight Plan Goals
  - » Safety and Security
    - Improve statewide safety for all freight modes and improve freight system resiliency
  - » Freight Infrastructure Condition
    - Invest in existing freight assets to maintain and preserve the existing system
  - » Goods Movement Congestion Reduction, Mobility, and System Reliability
    - Invest in the multimodal freight transportation system to improve mobility, connectivity, accessibility, and reliability for the movement of goods
  - » Economic Competitiveness
    - Improve intermodal freight transportation system connectivity, efficiency, and mobility to support existing industries and strengthen national and regional economic competitiveness

Freight Project Prioritization – Goal #1

Freight Goals	Objectives	Project Screening Criteria Based on Objectives
Safety and Security – Improve statewide safety for all freight modes and improve freight resiliency	Identify Interstate and Non-Interstate truck crash hotspots and develop recommendations that have the potential to reduce truck-involved crashes.	Project located in crash hotspot identified in Task E (Freight Demand) Report
	Partner with counties and local governments to provide guidance on low-cost safety applications for local roads related to trucks.	Low-cost project supported by county or local government
	Provide information to the LRITP regarding the freight impacts related to roadway or bridge failure.	No screening criteria. Objective met in other element of freight plan
	Identify segments of the freight transportation system that may be at an elevated risk of failure based on infrastructure condition, system demand, or outside forces.	Project is located at location of elevated risk of failure
	Improve the resiliency of the freight transportation system.	Project improves freight system resiliency

Freight Project Prioritization – Goal #2

Freight Goals	Objectives	Project Screening Criteria Based on Objectives
Freight Infrastructure Condition – Invest in existing freight assets to maintain and preserve the existing system.	Document freight transportation assets and needs for each mode.	No screening criteria. Objective met in other elements of Freight Plan
	Provide current and forecast goods movement data to assist AHTD in forecasting the future condition of the freight infrastructure.	No screening criteria. Objective met in other elements of Freight Plan
	Enforce weight and size restrictions to protect roads and bridges.	Project improves truck weight and size enforcement

Freight Project Prioritization – Goal #3

Freight Goals	Objectives	Project Screening Criteria Based on Objectives
Goods Movement Congestion Reduction, Mobility, and System Reliability – Invest in the multimodal freight transportation system to improve mobility, connectivity, accessibility, and reliability for the movement of goods.	Provide predictable, reliable travel times on key freight corridors.	Project is located on road segments with low reliability as identified in Task E (Freight Demand) report
	Implement ITS strategies to inform and provide commercial vehicle operators with real-time information regarding weather conditions, travel times, emergencies, incidents, and delays.	Project leverages ITS technologies
	Consider technology advances such as connected and automated vehicles to improve freight system performance.	Project positions state to benefit from from truck CV and AV technology
	Plan and prepare for autonomous and connected trucks.	Project positions state to benefit from truck CV and AV technology
	Use output from MPOs' Congestion Management Systems to identify and address congested areas on the NHS.	Project located on congested road segment as defined by an MPO Congestion Management System
	Support freight multimodal transportation alternatives that best match freight origin-destination patterns.	Balances freight improvements across freight modes

Freight Project Prioritization – Goal #4

Freight Goals	Objectives	Project Screening Criteria Based on Objectives
Economic Competitiveness – Improve intermodal freight transportation system connectivity, efficiency, and mobility to support existing industries and strengthen national and regional economic competitiveness.	Identify key freight routes between Arkansas and external trading partners in need of long-term additional capacity.	No screening criteria. Objectives met through other elements of Freight Plan
	Determine freight transportation needs of key existing freight-related industries in Arkansas.	Project benefits key industry in Arkansas based on size of industry
	Prioritize and enhance intermodal connections for freight movement by updating designated NHS intermodal connectors and documenting the use, condition, and performance of connectors.	Project located at an NHS freight terminal or on an NHS freight connector
	Determine the economic impact of freight-related bottlenecks on the Arkansas highway system.	No screening criteria. Objectives met through other elements of Freight Plan
	Collaborate with the Arkansas Economic Development Commission to identify freight projects that will improve the State's economic competitiveness.	Project identified by Arkansas Economic Development Commission
	Support the maintenance and operation of state highways, bridges, rail, ports, locks, and dams.	Freight maintenance or operation project
	Coordinate with neighboring states, MPOs, and local governments' freight planning efforts.	Project leverages projects/plans to be developed by neighboring states, MPOs and local governments
	Identify critical rural and urban freight corridors that are consistent with FAST Act criteria and maintain these corridors to ensure freight-related industries in Arkansas have efficient access to suppliers and customers.	Project located on critical rural or urban freight corridor

Funding Scenarios

Freight Funding Options Being Examined

Freight Plan considers the following three potential freight funding levels:

- **Funding Scenario 1 – FAST Act freight funding only**
  - Through the FAST Act, the State of Arkansas will have $70million dollars over the next five years to dedicate to freight projects. These projects were identified based on previous transportation planning efforts in the State and restricted to projects that are located on the Arkansas Priority Freight Highway Network.
- **Funding Scenario 2 – FAST Act + Priority Freight Projects**
  - This scenario includes all of the projects from Funding Scenario 1 and adds the highest rated freight projects as identified in the project prioritization process for the State Freight Plan.
- **Funding Scenario 3 – Freight-Supported Scenario from the LRITP**
  - This scenario labeled as "Think Locally – Trade Globally" in the Arkansas Long Range Intermodal Transportation Plan is designed to enhance infrastructure investments that support industry retention and attraction. Available funding is focused on adding capacity to existing major Interstates, major four-lane highways, and other freight corridors to alleviate freight bottlenecks.

Projects Included in Funding Scenario #1

County	Project Description	Route
Hempstead & Nevada	Hwy. 299 - East of Hwy. 371(PE)	30
Nevada	East of Hwy. 371 - Co. Rd. 35 (PE)	30
Clark & Nevada	Co. Rd. 35 - Gurdon Rest Area (PE)	30
Crawford	Ark. Mo. R.R. Overpass - Dyer	40
Crawford	Oklahoma St. Line - Ark. Mo. R.R. Overpass	40
Pulaski	Hwy. 391 Interchange Improvements	40
Prairie	Lonoke Co. Line - East (PE)	40
Crawford	I-40/Hwy. 59 Interchange Improvements	40
Johnson	Hwy. 164 - Hwy. 352 (PE)	40
Lonoke	Hwy. 31 - Prairie Co. Line (PE)	40
Conway	Plumerville - East (PE)	40
Benton	Hwy. 71B Interchange Improvements	49
Washington	Porter Rd. - Hwy. 112/71B Widening & Interchange Improvements	49
Benton	Hwy. 264 - New Hope Rd. (Widening)	49
Mississippi	Bassett - Hwy. 181 (PE)	55
Various	I-69 Development (PE & Right of Way)	69
Jefferson	Hwy. 65B - Hwy. 65	530
Jefferson	Access Impvts. For Possible Economic Development	530
Statewide	PE / Right-of-Way / Utilities / CENG	TBD

Priority Freight Projects for Considering in Funding Scenario #2

Project Description	Prioritization Score
Add capacity or improve operations on I-40 between Little Rock and Memphis (including safety improvements	10
Real-time truck parking information	7
Complete I-49 in NW Arkansas	6
Access roads to ports – Cooper Sand Road, Highway 65, State Route 208, County Road 35	6
Add capacity to U.S. 412 in NW Arkansas	5
Dredge MKARNS to 12 feet	5
Improve rail access in SW Arkansas	5
Raise two low clearance bridges on Hwy 161	5
Complete construction of I-69 and I-49 in the long-term	5
Build inland port to provide barge access for local shippers	5
Reroute trucks out of downtown Ft. Smith	5

Priority Freight Projects for Considering in Funding Scenario #2 (continued)

Project Description	Prioritization Score
More transload terminals for wood chips and timber	4
Improve interchanges on I-30 and I-55	4
Additional rest areas	4
Improve farm access roads, notably U.S. 63 and Mark Tree Rd	4
Improve state highways due to lack of interstates, including U.S. 70, U.S. 270, AR 7, AR 7 Spur, U.S. 70/270 Bypass	4
Improved ITS for traveler information	4
Expand Highway 270	4
4-lane U.S. 65/165 from Little Rock to MS	4
4-lane U.S. 65/165 from Little Rock to Harrison – most often cited	4
4-lane U.S. 67/167 from Little Rock to LA	4

Additional Priority Freight Projects in Funding Scenario #2

Project Description	Rationale
Improved transload centers and shortline utilization	Modal balance
Improve connections for Union County	Geographic balance
Improve locks and dams on the Red River	Modal balance
Consider location of an intermodal railyard in NW Arkansas	Modal balance
Improve east-west access in northern Arkansas	Geographic balance

Projects Included in Funding Scenario #3

Segment	Route	Total Miles	Description
1	I-40	18.1	Highway 59 to Highway 215
2	I-40	21.0	Highway 333 to 0.75 miles E of Highway 105
3	I-40	24.8	Bell Mountain Road to Highway 365
4	I-55	9.5	Highway 118 to Arkansas/Tennessee State Line along I-55 (additional 1 mile along I-40 from I-55 to Highway 38)
5	I-30	49.9	Highway 270 to I-440/I-40 Interchange
6	I-40	15.0	I-440/I-40 Interchange to Highway 31
7	I-530	8.2	I-530/I-440 Interchange to E Bingham Road

Benefits and Costs of Scenario #3

- Developed as part of the LRITP
- Cost during construction phase
  - » $3,929 million (including construction, engineering, and cumulative O&M cost)
  - » $1.4 million annual O&M cost
- Economic benefits of $135 million annually
- Potential number of crashes is 41,984
- Estimated annual travel time savings is $67 million

Benefits and Costs of Other Scenarios

- Benefits and Costs of Scenario #1
  - Benefits will be discussed qualitatively
  - Costs developed by AHTD
- Benefits and Costs of Scenario #2
  - Benefits
    - Estimated for highway capacity expansion projects using travel demand model consistent with LRITP
    - MKARNS dredging benefits based on previous study
  - Costs - under development using a combination of pre-existing and newly developed estimates
  - Projects with low B/C ratios will be removed from scenario

Critical Rural and Urban Freight Corridors

Critical Rural Freight Corridors

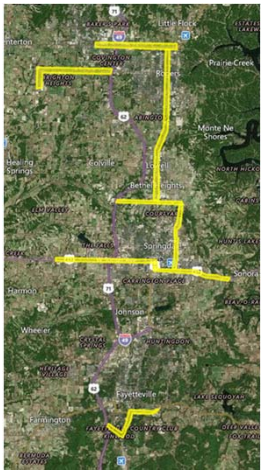
- Initial Screen
  - Annual Average Daily Truck Traffic (AADTT) >250/500
  - First and Last Mile Connectors
  - Scoring Criteria
    - How can these corridors serve the goals of the Statewide Freight Plan?
- Secondary Screen (used to refine the preliminary list)
  - Potential for combining locations
  - Consistency with other system plans
  - Consistency with STIP

Critical Urban Freight Corridors

- Initial Screen
  - Visual assessment
  - Consultation with metropolitan planning organizations
- Secondary Screen (used to refine the preliminary list)
  - Annual Average Daily Truck Traffic (AADTT)
  - First and Last Mile Connectors/Visible Manufacturing and Distribution locations
  - Scoring Criteria
    - Safety, Accessibility, Condition, Adjacent Land Use
  - Consistency with other system plans
  - Consistency with STIP

Critical Urban/Rural Freight Corridors

- Preliminary Identification Efforts
  - » 75 mile limit for urban and 150 mile limit for rural
  - » 140+ urban miles identified in the eight MPO areas
  - » Every MPO area has at least one CUFC
- Anticipated completion later this summer (coincident with SFP completion)
- This is a rolling designation so modifications can be made



Draft Executive Summary

Overview of Draft Executive Summary

- In separate pdf document

Wrap-Up

- Draft Executive Summary
  - » Will be emailed to FAC on Wednesday, May 24th
  - » Full FAC comment period through June 14th
- Full Draft of Final Freight Plan will be emailed to FAC on Wednesday, May 31st for review and comment
- Technical memoranda will be available on website, www.wemovearkansasfreight.com
- Next Step – Implementation!

Thank you for participating in the Arkansas State Freight Plan

APPENDIX B

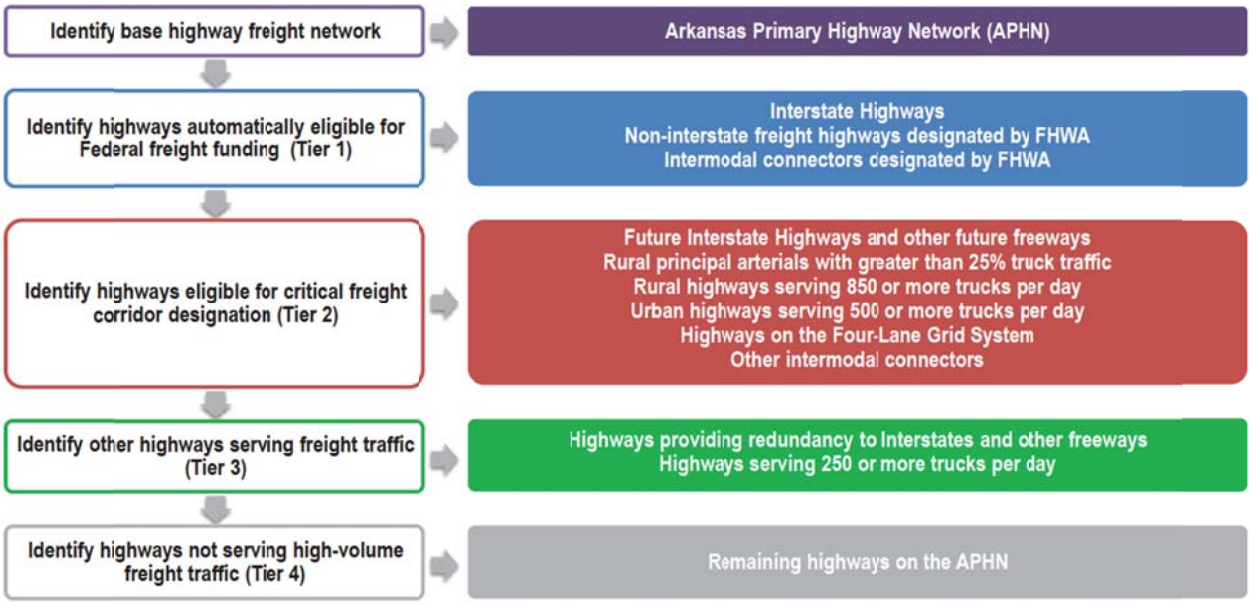
Arkansas Freight Network Identification Process (including discussion of Critical Freight Corridors)

APPENDIX B. ARKANSAS FREIGHT NETWORK IDENTIFICATION PROCESS (INCLUDING DISCUSSION OF CRITICAL FREIGHT CORRIDORS)

During the process of developing this State Freight Plan (SFP), the Arkansas Department of Transportation (ARDOT) staff solicited identification of candidate routes for designation as Critical Urban Freight Corridors (CUFCs) from each of the eight metropolitan planning organizations (MPOs) in Arkansas. The lists returned from the MPOs included numerous routes that perform vital roles in the movement of freight into, out of, and through urbanized areas in Arkansas. However, the total mileage of the locations identified by the MPOs greatly exceeded the available CUFC mileage (75 miles). Moreover, given the limited availability of freight funding through the National Highway Freight Program (NHFP), the ArDOT staffed reached the conclusion that it was premature to designate CUFCs (or, for the same reason, to designate Critical Rural Freight Corridors (CRFCs)).

To facilitate the future designation of CUFCs and CRFCs, the ARDOT staff developed the Arkansas Freight Highway Network (AFHN). The AFHN is a tiered network of all highways included on the Arkansas Primary Highway Network. The tiering of AFHN routes is intended to reflect the significance of each of the primary highways in the movement of freight in Arkansas. Figure B1 outlines the methodology used to assign tiers to each element of the AFHN:

Figure B1. Methodology for Delineating a Tiered Freight Highway Network



As indicated in Figure B1, highways automatically eligible for NHFP funding are included in Tier 1. Highways eligible for designation as CUFCs or CRFCs will generally be included in Tier 2, since those highways tend to serve high volumes of interstate or intrastate freight, but are not automatically eligible for NHFP funding. Highways in Tier 3 are recognized as facilities that serve freight, but to a lesser extent than highways in Tier 1 or Tier 2. Highways in Tier 4 generally serve little freight, though, in some instances, designation as a Tier 4 route may result from a lack of data.

It is important to note that the AFHN was developed for planning purposes only. The AFHN is not intended to guide truck-routing decisions, which should be based on various considerations such as geometry (grade and curvature), weight-restrictions, and availability of trucking facilities. Moreover, it is anticipated that the designation of routes may change as additional information becomes available. Future efforts to refine the AFHN are expected to include:

- Identification of first- and last- mile connectors;
- Identification of freight routes that are not on the Arkansas Primary Highway Network;
- Alignment of tiering designations with other transportation networks (such as statewide and local bicycle networks); and
- Development of new datasets (such as the locations of freight generators).

These efforts will be made in collaboration with the State Freight Advisory Committee (FAC), the MPOs, and other freight stakeholders.

Moving forward, two approaches are being considered for the designation of critical freight routes:

- *Programmatic Approach* – This approach to the designation of CUFCs and CRFCs would begin with the identification of a project that is in need of funding, followed by a determination of whether that project is related to freight. If the project is related to freight, the location of the project would be examined to determine if it is eligible for designation as a CUFC or CRFC. At this stage, the AFHN will be used as a guide for identifying locations that are potentially eligible for CUFC/CRFC designation. If it is determined that the location is eligible for a CUFC/CRFC designation, ARDOT staff would take the appropriate steps to certify that location with the Federal Highways Administration (FHWA), thereby making it eligible for NHFP funding.

- *Systematic Approach* – This approach to the designation of CUFCs and CRFCs would begin with a quantitative analysis of highway facilities based on the goal areas of the SFP. A proposed matrix of goal areas and quantitative measures is presented in Table B1. Under this approach, the AFHN would be used as a screen for determining which locations should be included in the detailed quantitative analysis.

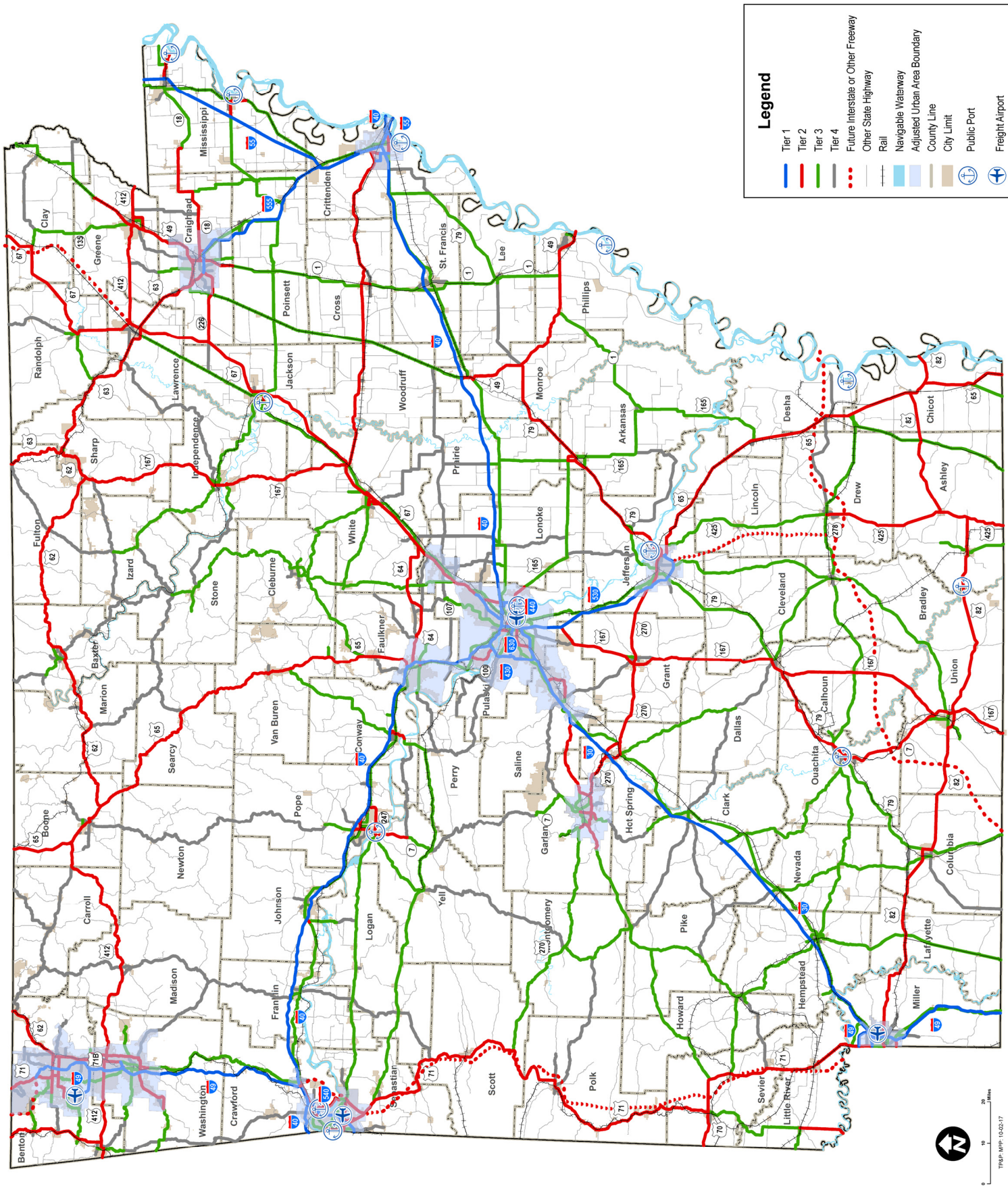
  The results of the quantitative analysis would be used to prioritize potential locations for freight projects. If it is determined that a location is eligible for CUFC/CRFC designation, and a project at that location is feasible, ARDOT staff would take the appropriate steps to certify that location with FHWA, thereby making it eligible for NHFP funding.

Table B1. Screening and Scoring Criteria for Critical Freight Corridors

State Freight Plan Goal Area	Measure
Safety and Security	Crash History
	Relief Route for NHFN
Freight Infrastructure Condition	Pavement Condition
	Bridge Condition
Goods Movement, Congestion Reduction, Mobility, and System Reliability	Annual Average Daily Truck Traffic or Truck Percent
	Level of Service
Economic Competitiveness	Provides First/Last Mile Connectivity to Freight Generator
	Value of Freight, Adjacent Land Uses, or Intensity of Development

Regardless of the approach taken, the designation of CUFCs and CRFCs would be rolling – as highway freight projects are identified, eligible locations would be designated as CUFCs or CRFCs. When those projects are completed, the CUFC or CRFC designation would be removed, making that mileage available for designation at another location. Interstate 69 (I-69) illustrates a potential application of this rolling designation process. In Arkansas, the proposed alignment of Interstate 69 is 184 miles in length, which exceeds the available CRFC mileage (150 miles). Moreover, it is anticipated that I-69 will be completed in sections over many years. As such, instead of designating I-69 with all 150 miles of CRFC in Arkansas, an alternate approach would be to use a portion of the available CRFC mileage to designate locations on I-69 as projects are scheduled. That approach would allow the use of the remaining CRFC mileage in other portions of the State. As sections of I-69 are completed, those CRFC miles could be moved to other locations on I-69. This rolling designation process could be repeated, section by section, until I-69 is completed.

Arkansas Department of Transportation
Draft Arkansas State Freight Network



APPENDIX C

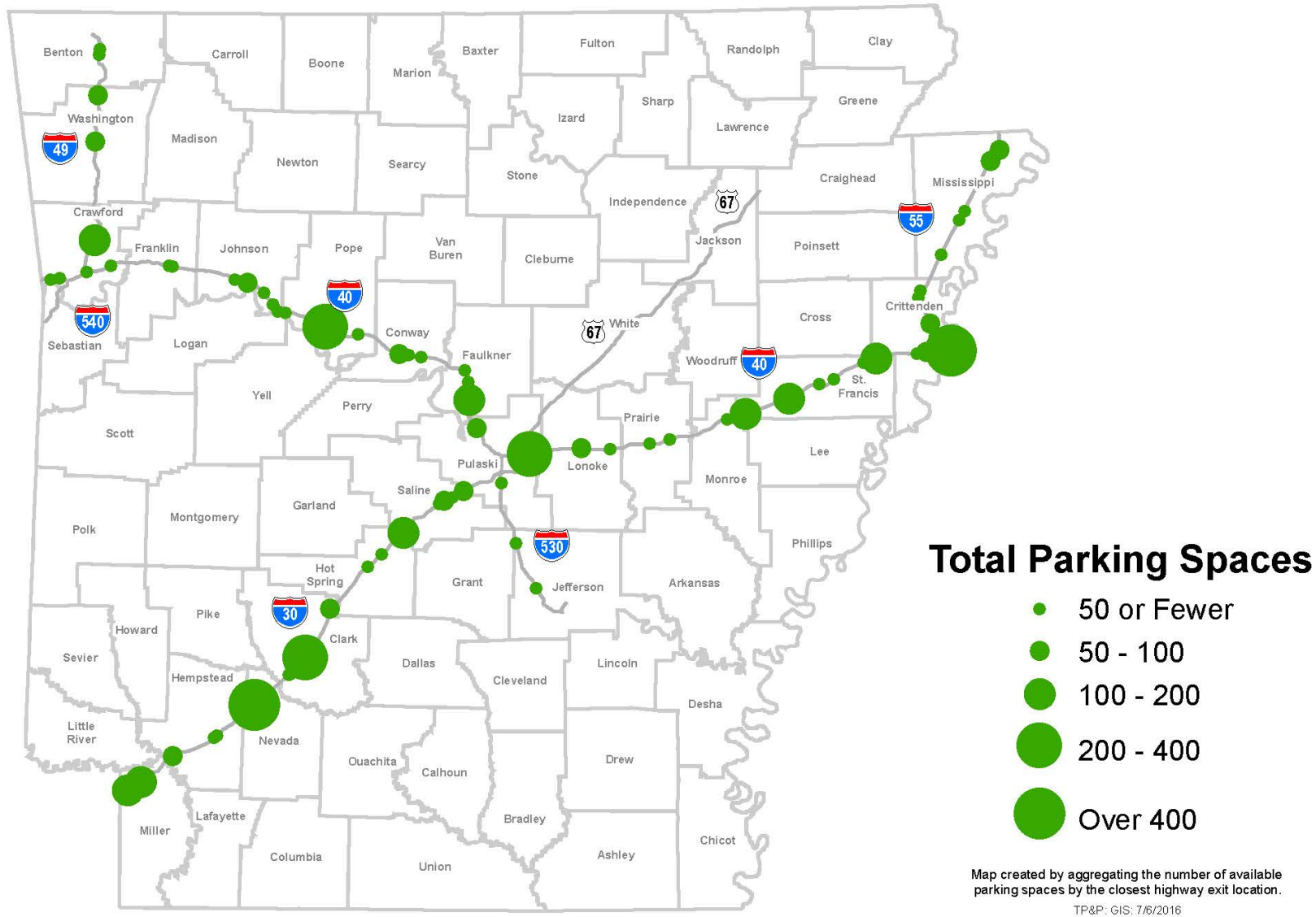
Truck Parking Information

APPENDIX C. TRUCK PARKING INFORMATION

Since 2006, the Department has conducted an annual survey of commercial vehicle parking activities along the Interstates and select routes. The first survey was conducted in 2006 with annual surveys beginning in 2008. Each year, there is a record of the Total Parking Spaces Available (by Exit), Legal versus Illegal Parking Activity (by Exit), and Overcrowding of Truck Parking Facilities (by Exit). In 2017, the presentation format was revised to show Truck Parking Needs and Availability on a single image. The table below provides hyperlinks to the available maps

YEAR	Total Parking Spaces Available	Legal versus Illegal Parking Activity	Overcrowding of Truck Parking Facilities
2006			
2008			
2009			
2010			
2011			
2012			
2013			
2014			
2015			
2017			

Truck Parking Facilities By Exit - 2006



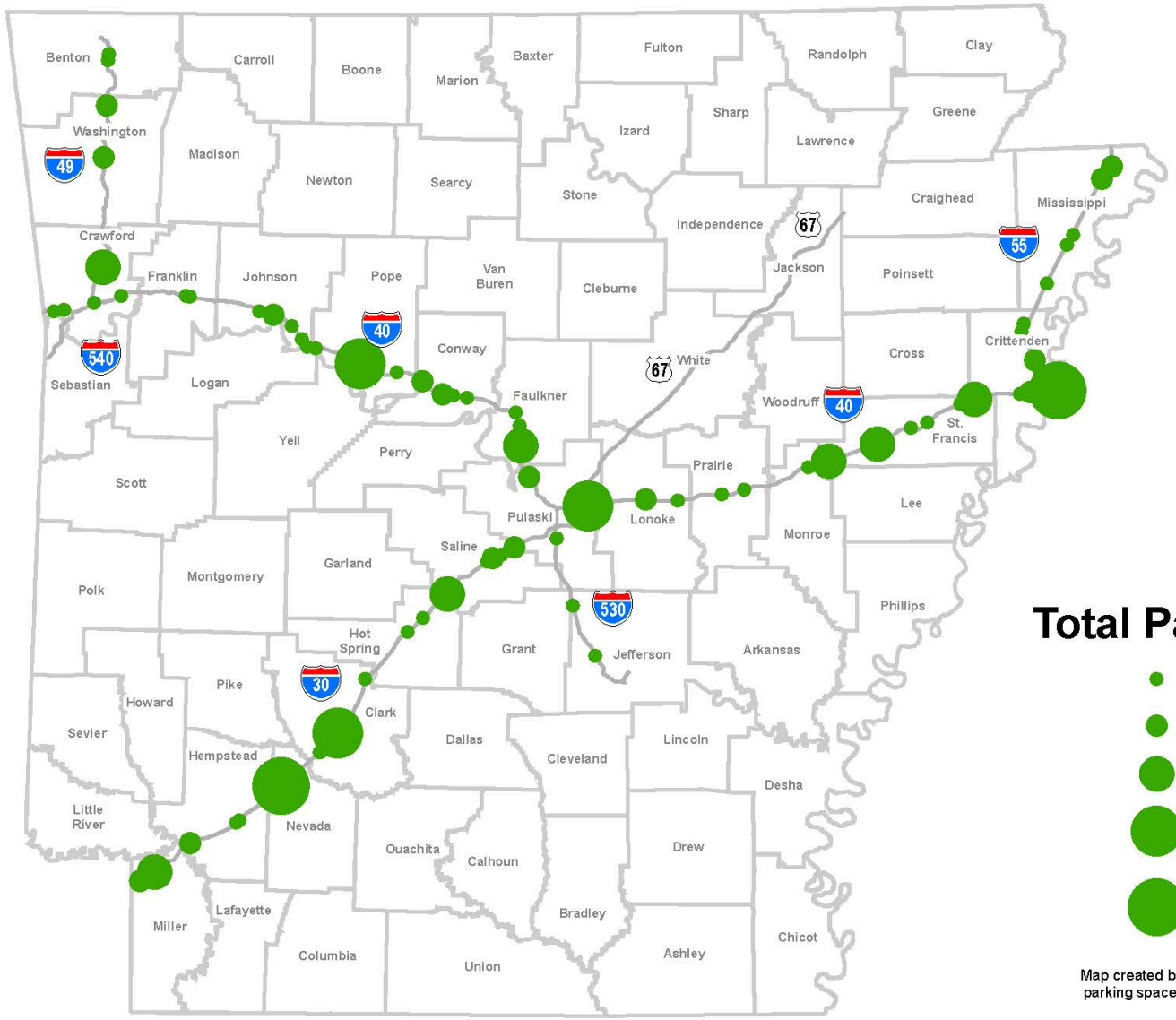
Total Parking Spaces

- 50 or Fewer
- 50 - 100
- 100 - 200
- 200 - 400
- Over 400

Map created by aggregating the number of available parking spaces by the closest highway exit location.

TP&P: GIS: 7/6/2016

Truck Parking Facilities By Exit - 2008



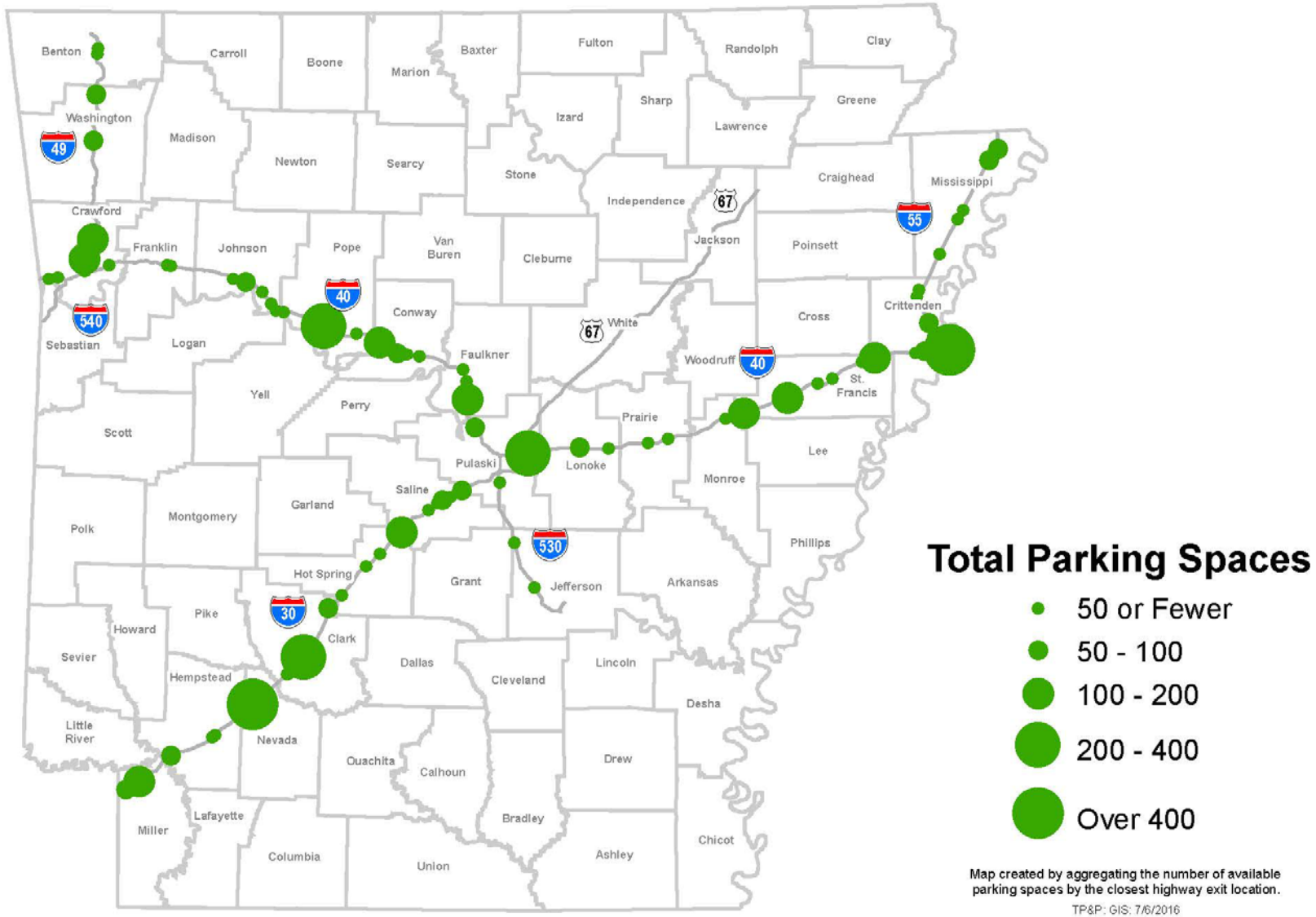
Total Parking Spaces

- 50 or Fewer
- 50 - 100
- 100 - 200
- 200 - 400
- Over 400

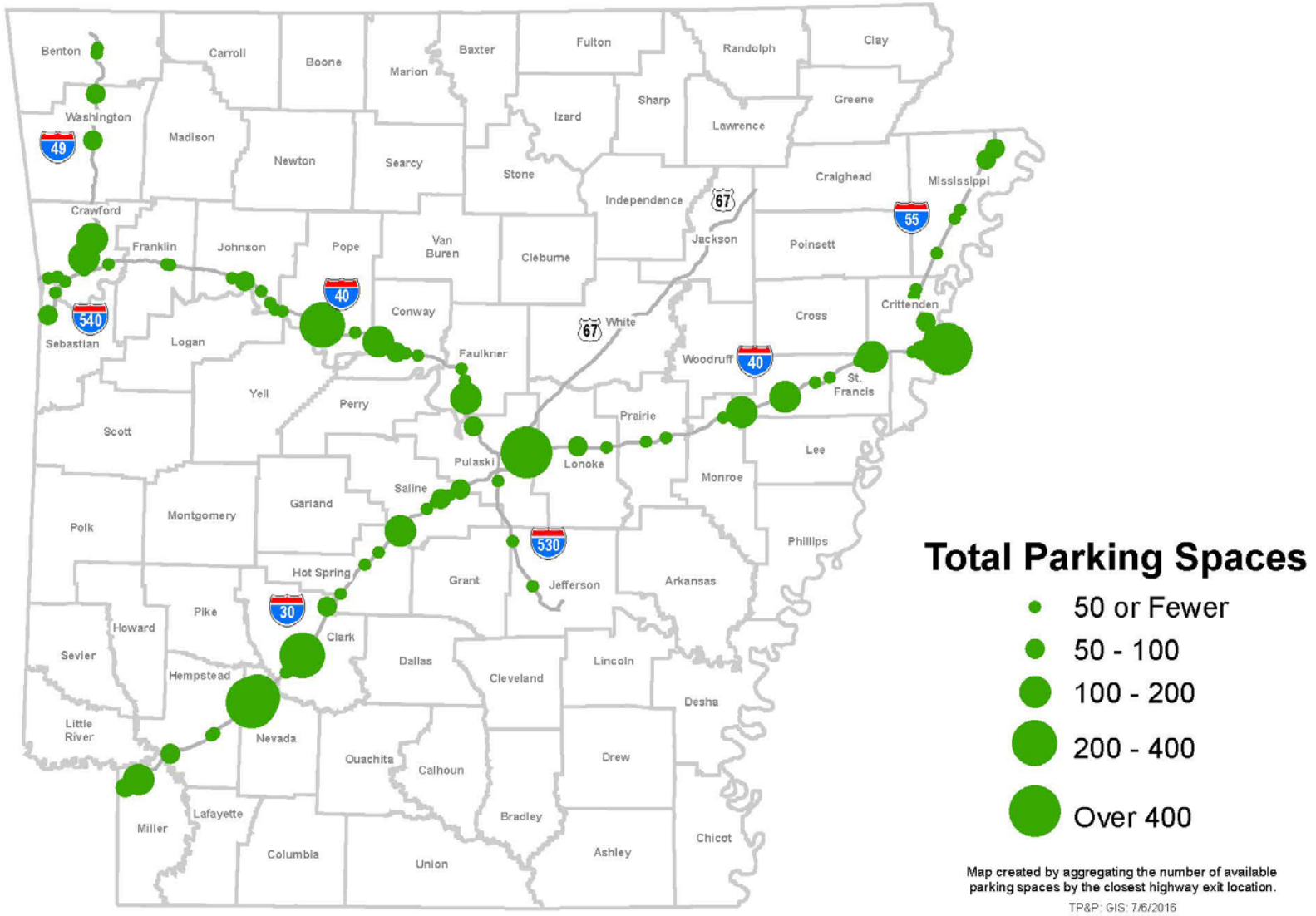
Map created by aggregating the number of available parking spaces by the closest highway exit location.

TP&P: GIS: 7/6/2016

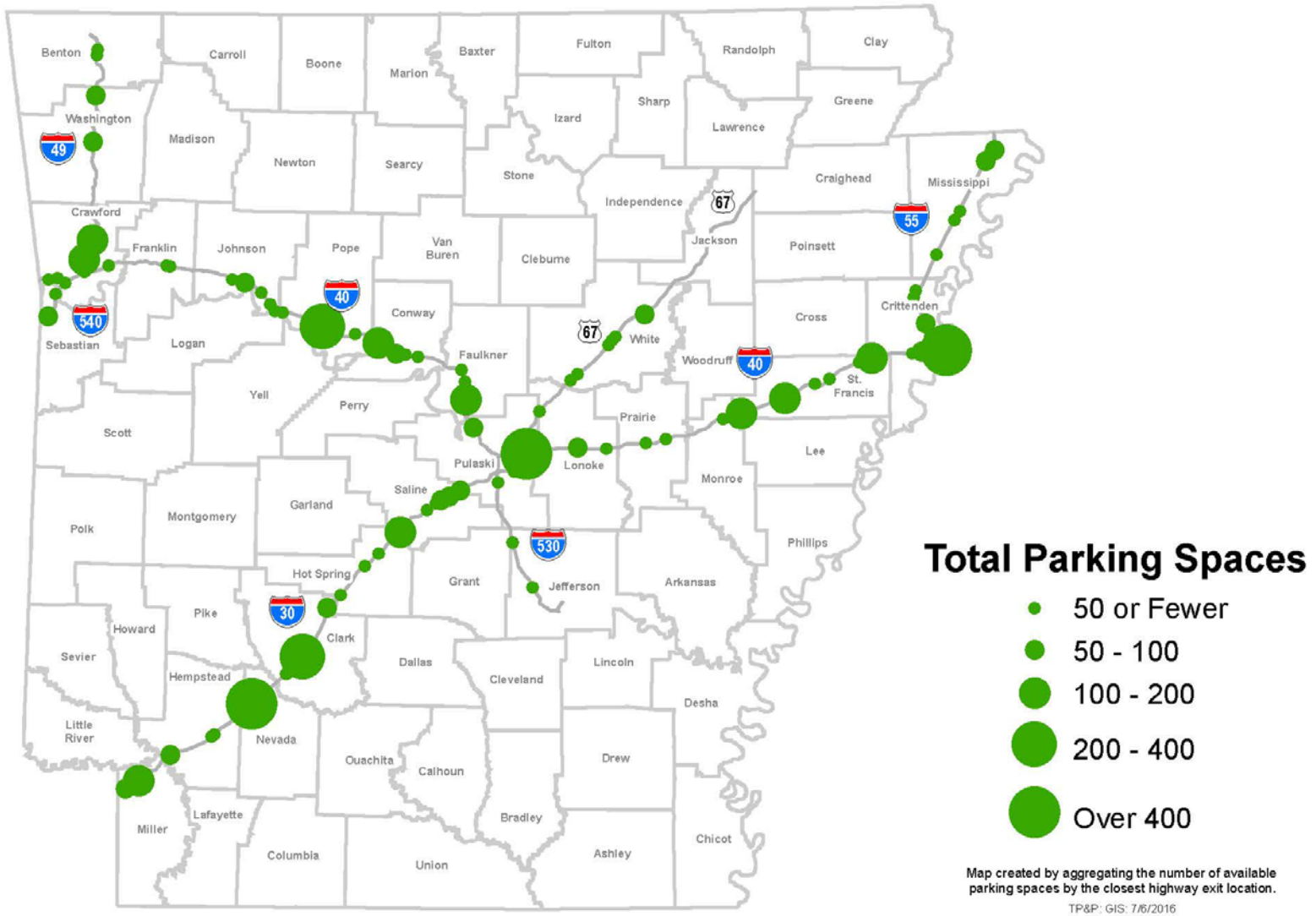
Truck Parking Facilities By Exit - 2009



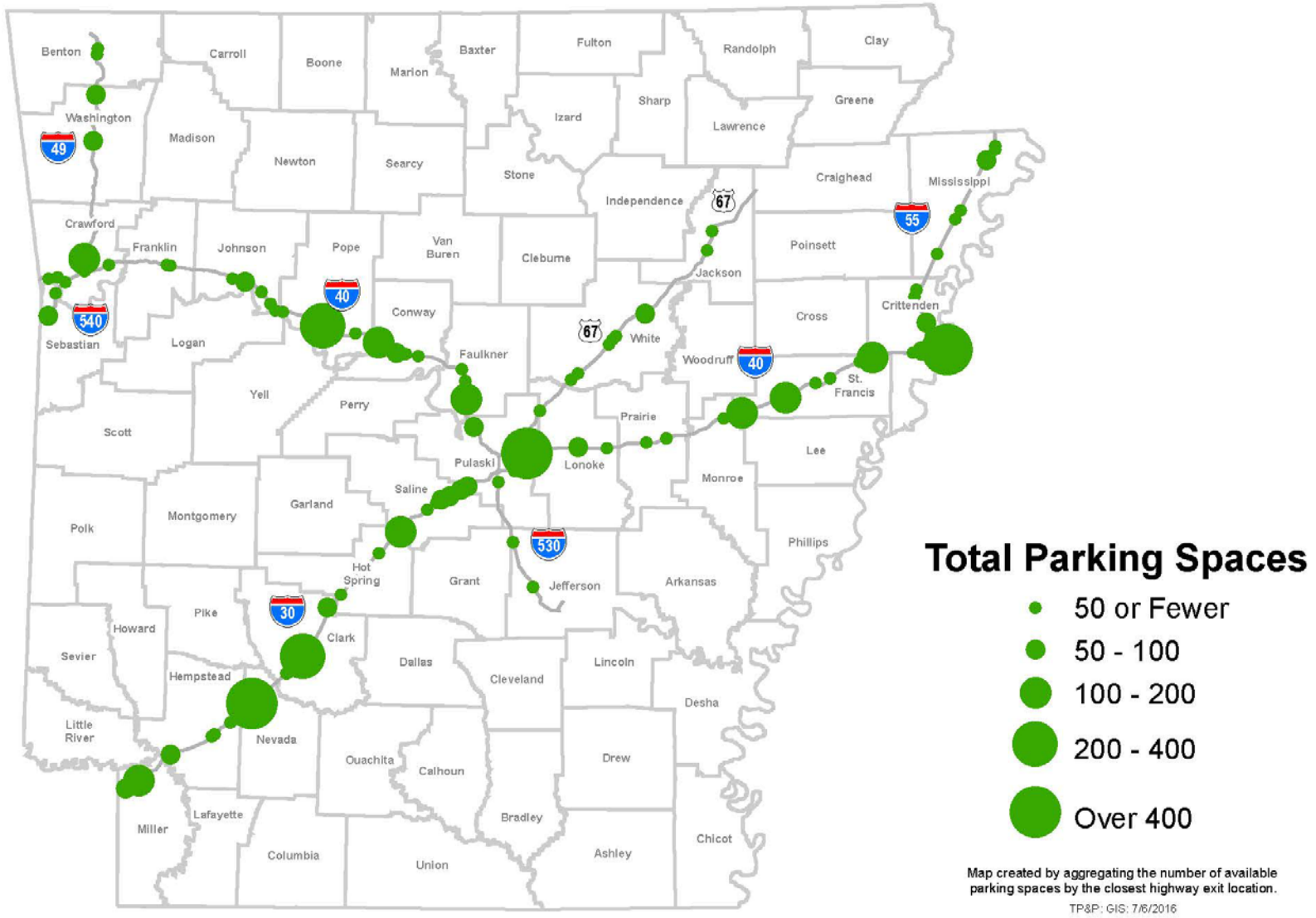
Truck Parking Facilities By Exit - 2010



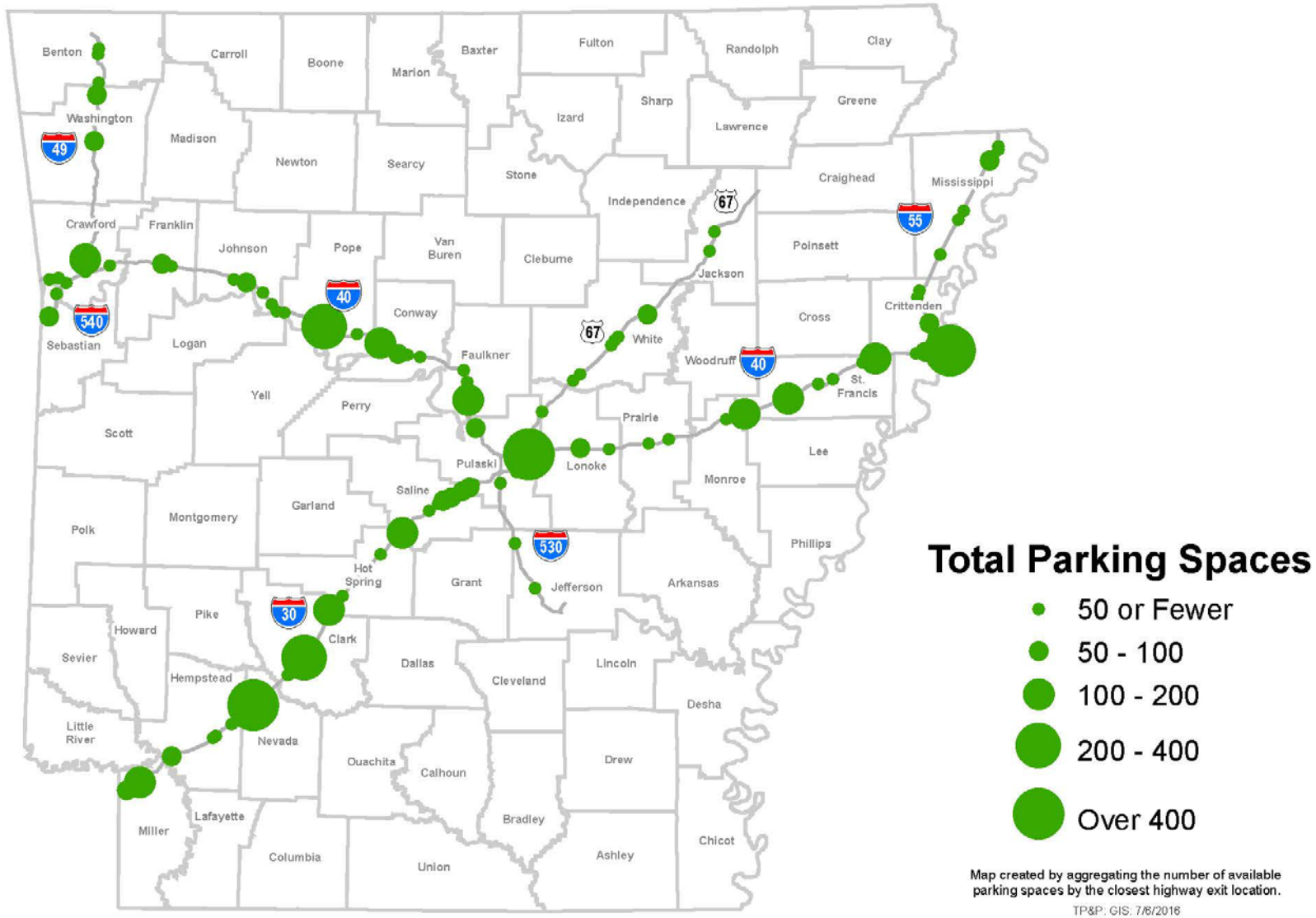
Truck Parking Facilities By Exit - 2011



Truck Parking Facilities By Exit - 2012



Truck Parking Facilities By Exit - 2013



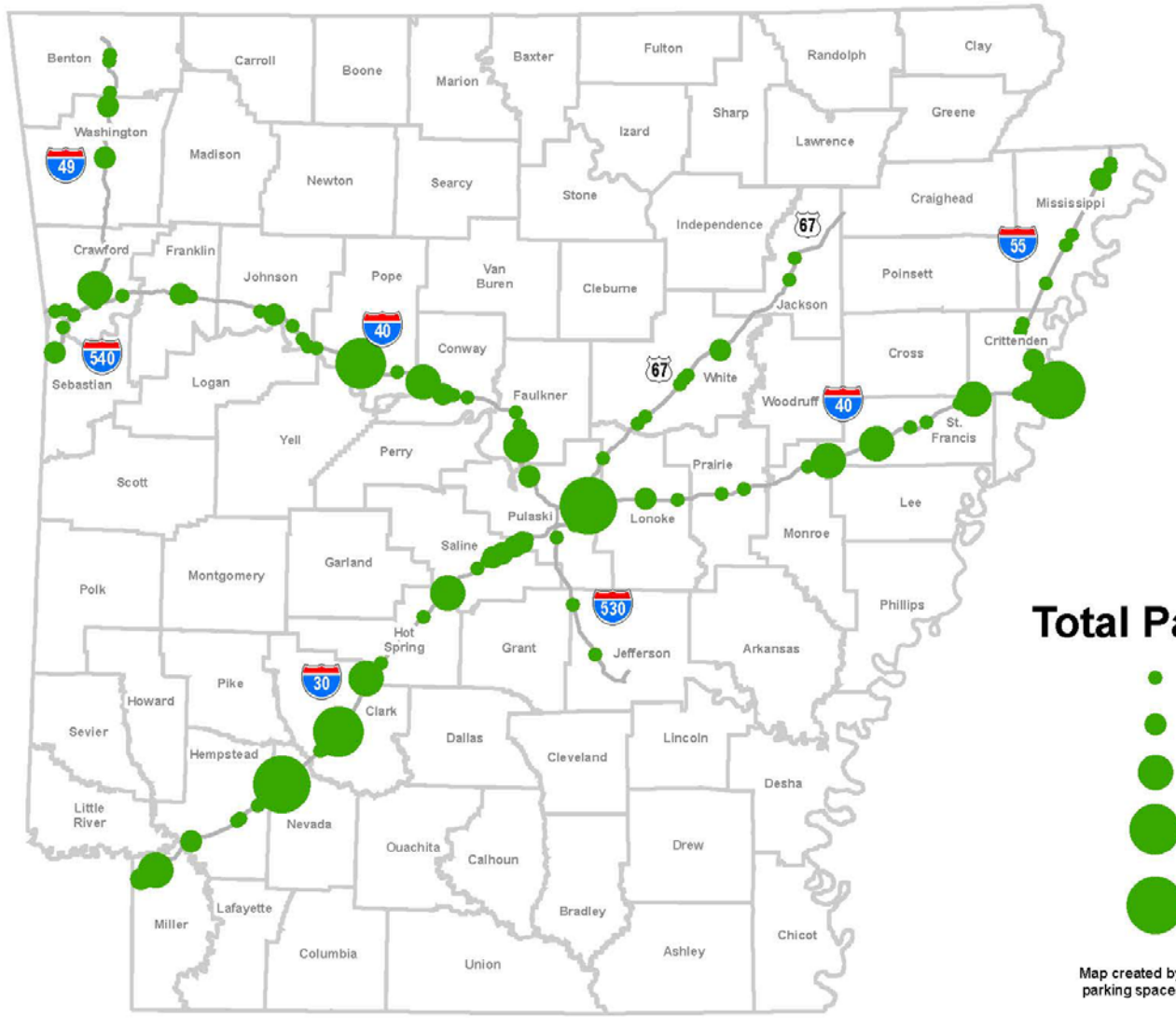
Total Parking Spaces

- 50 or Fewer
- 50 - 100
- 100 - 200
- 200 - 400
- Over 400

Map created by aggregating the number of available parking spaces by the closest highway exit location.

TP&P: GIS: 7/6/2016

Truck Parking Facilities By Exit - 2014



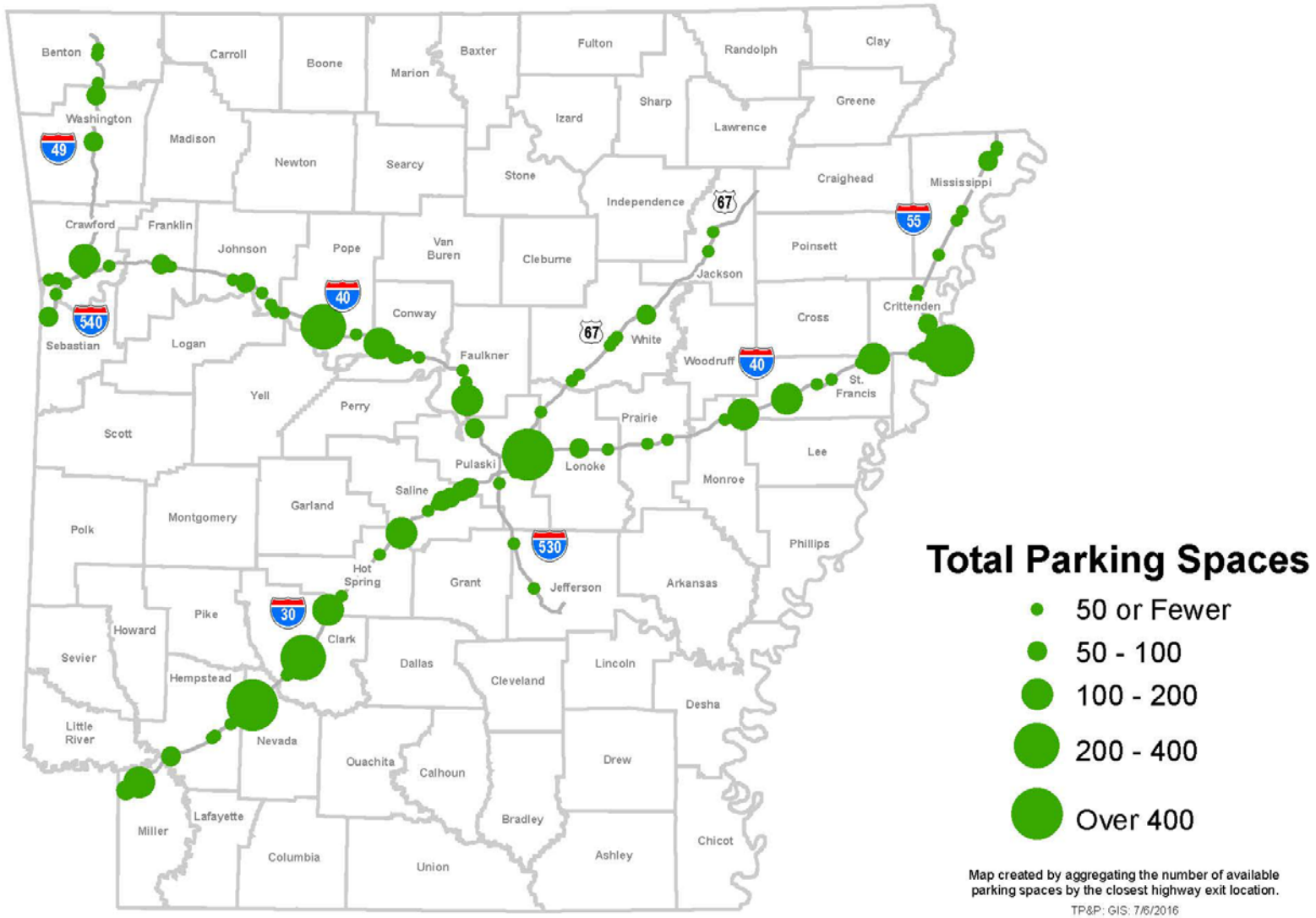
Total Parking Spaces

- 50 or Fewer
- 50 - 100
- 100 - 200
- 200 - 400
- Over 400

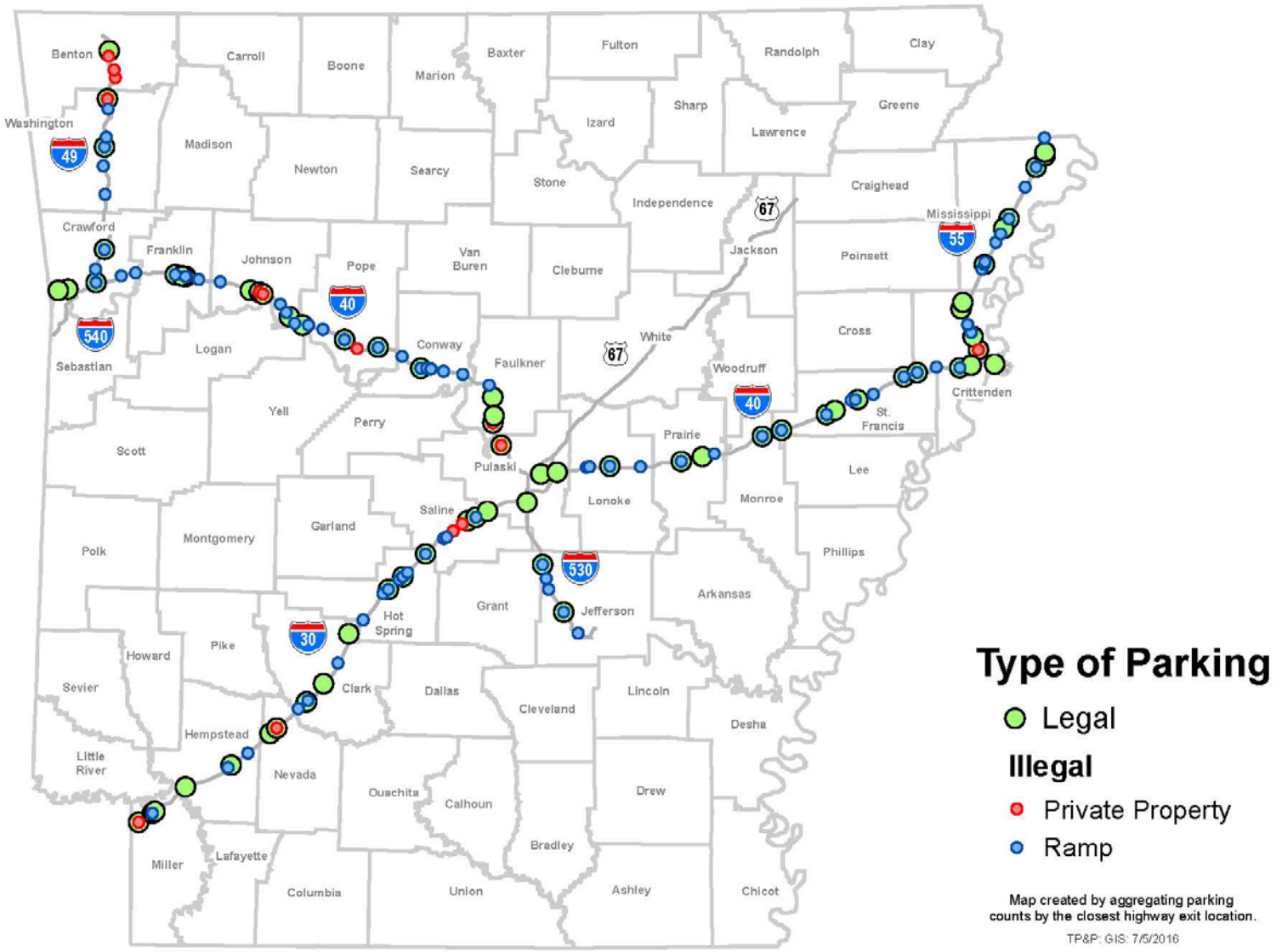
Map created by aggregating the number of available parking spaces by the closest highway exit location.

TP&P; GIS: 7/6/2016

Truck Parking Facilities By Exit - 2015



Legal Parking at Public and Private Facilities By Exit - 2006



Type of Parking

- Legal

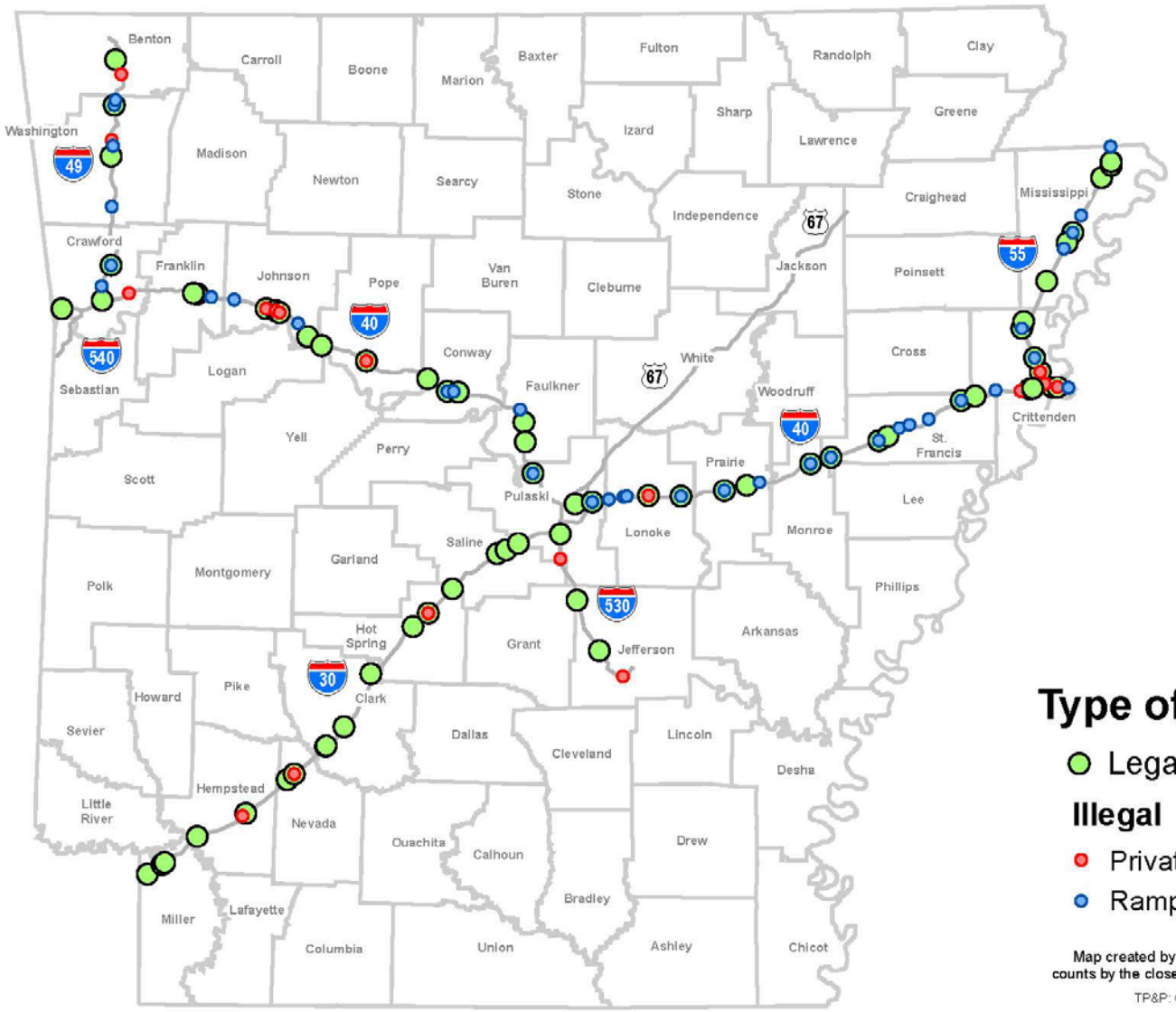
Illegal

- Private Property
- Ramp

Map created by aggregating parking counts by the closest highway exit location.

TP&P: GIS: 7/5/2016

Legal Parking at Public and Private Facilities By Exit - 2008



Type of Parking

- Legal

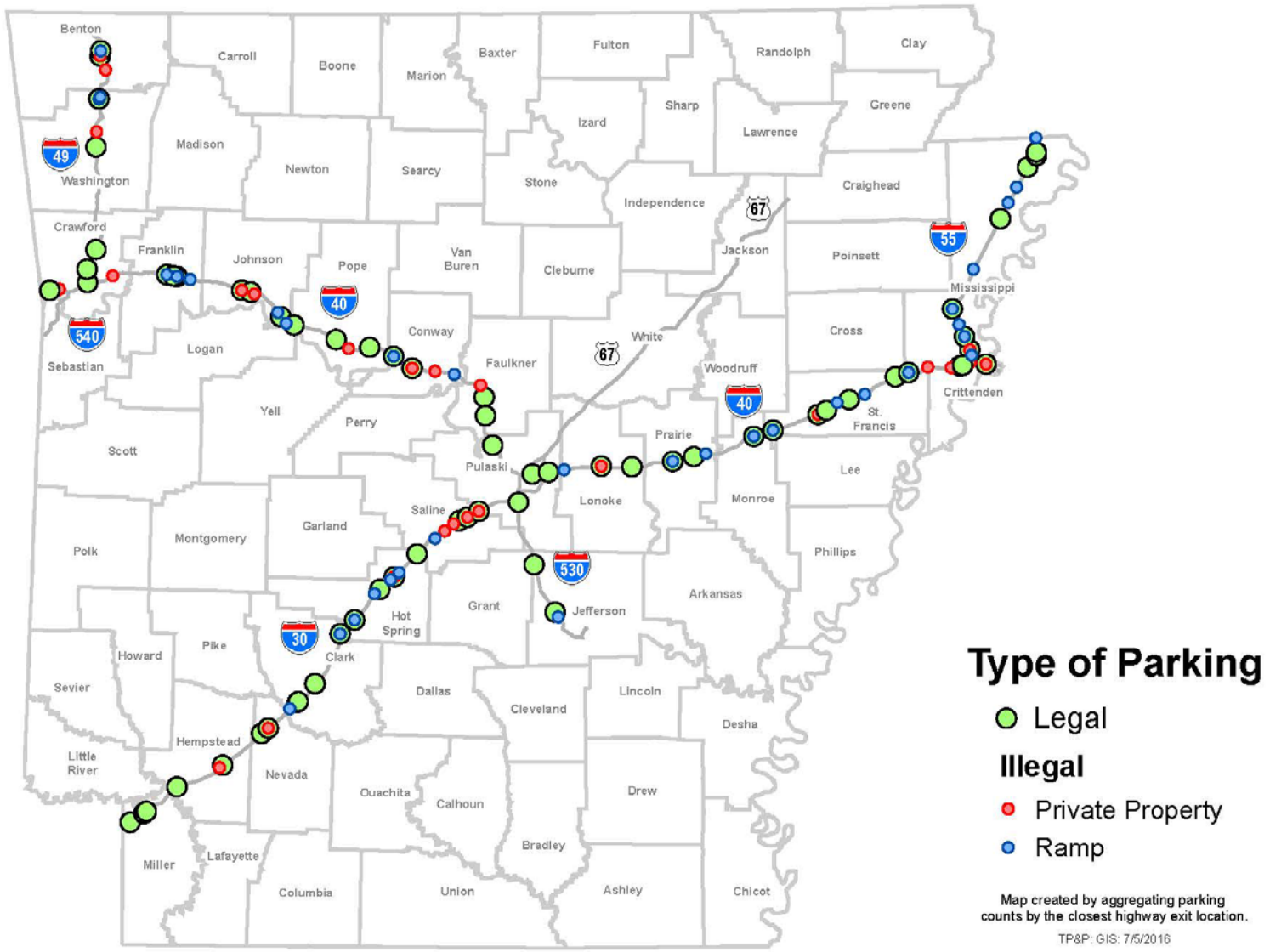
Illegal

- Private Property
- Ramp

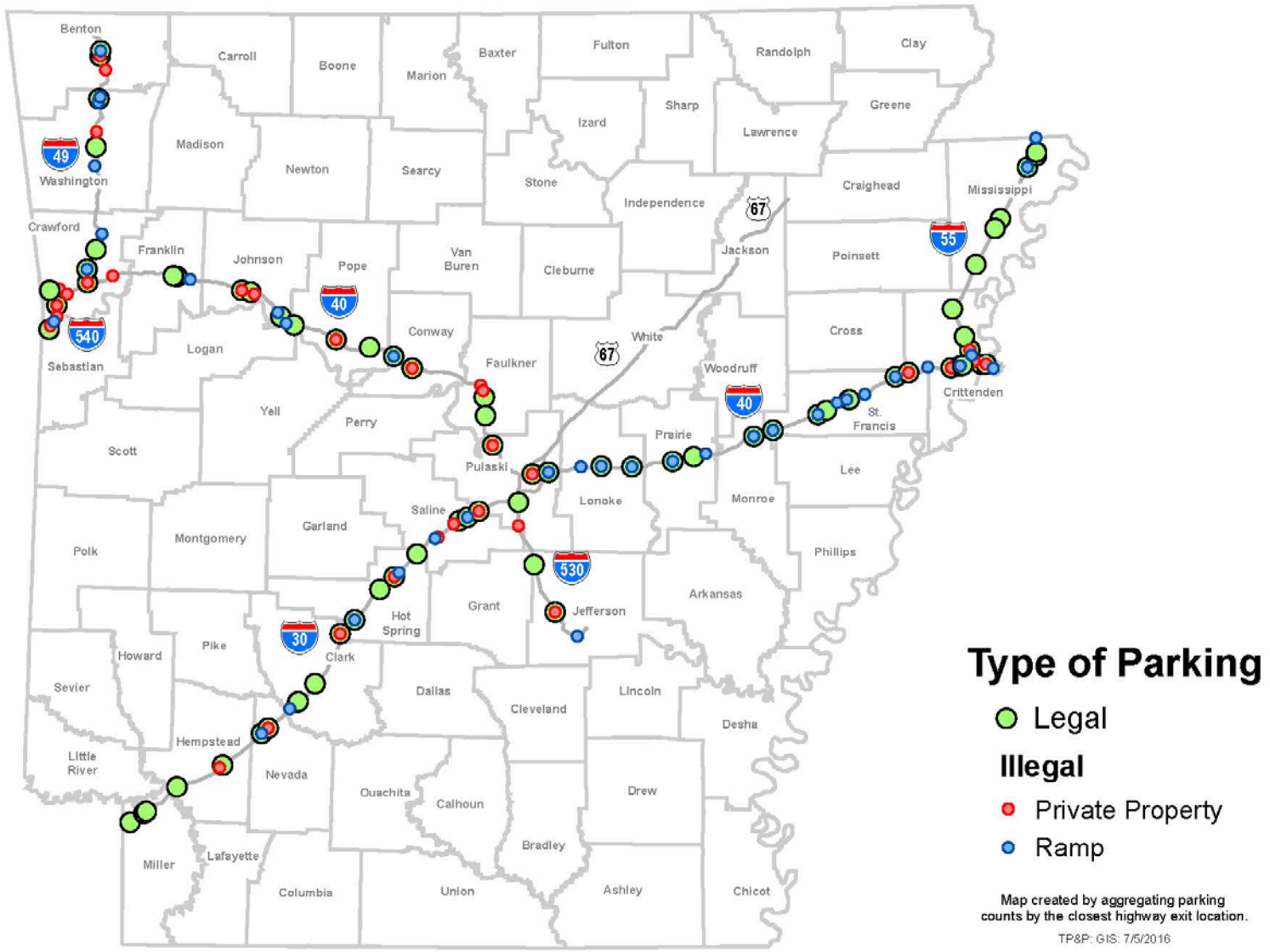
Map created by aggregating parking counts by the closest highway exit location.

TP&P: GIS: 7/5/2016

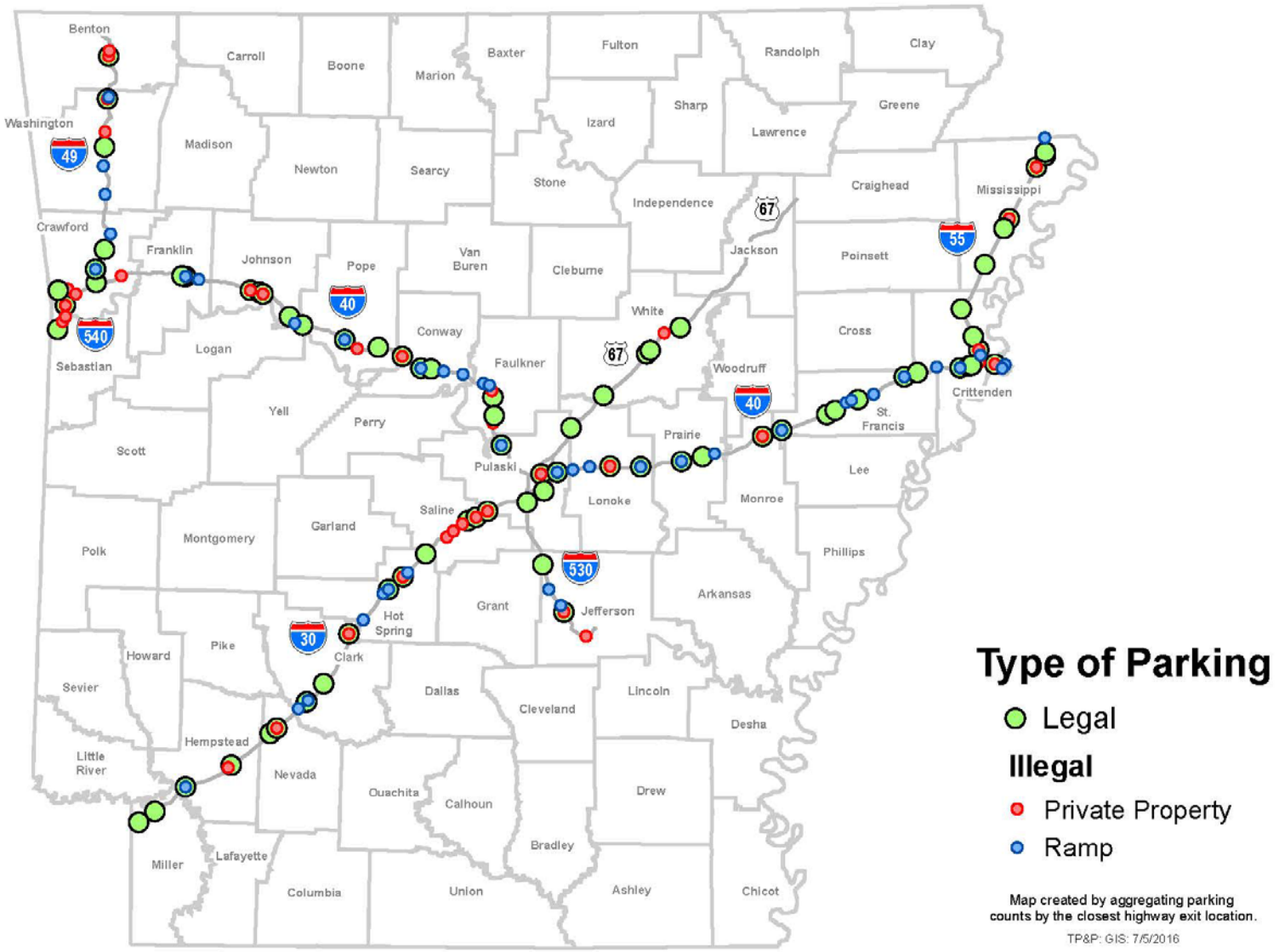
Legal Parking at Public and Private Facilities By Exit - 2009



Legal Parking at Public and Private Facilities By Exit - 2010



Legal Parking at Public and Private Facilities By Exit - 2011



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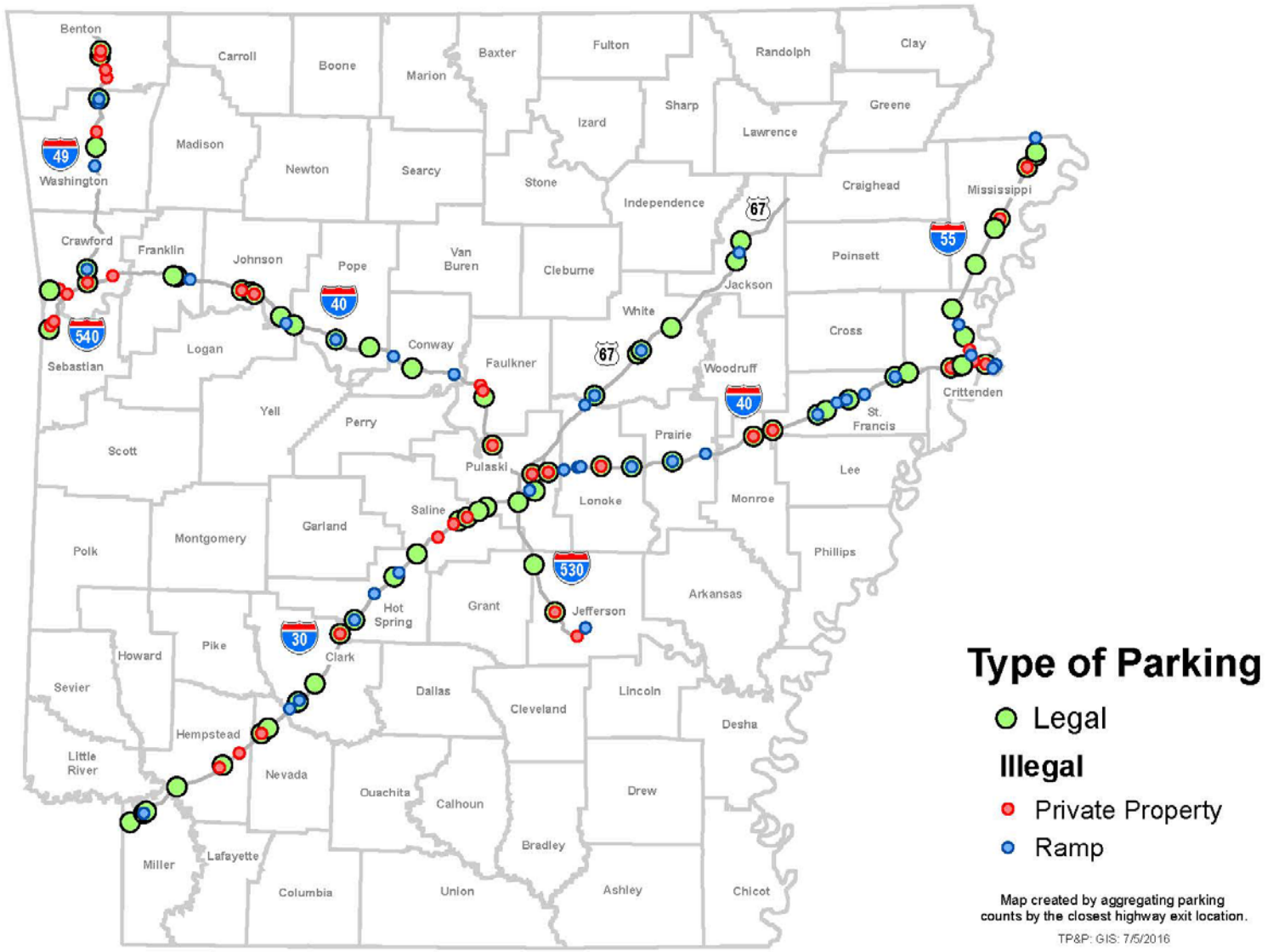

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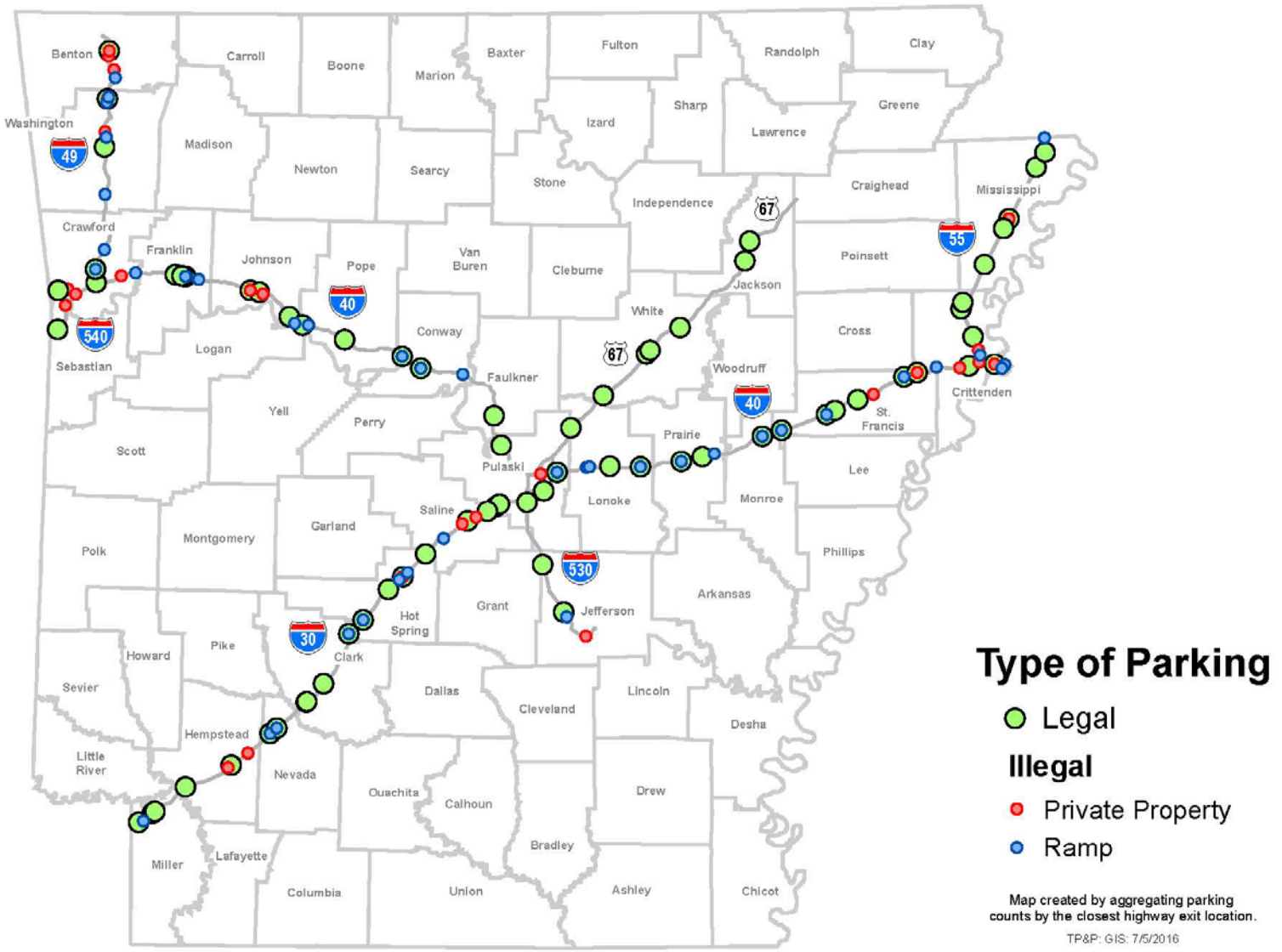

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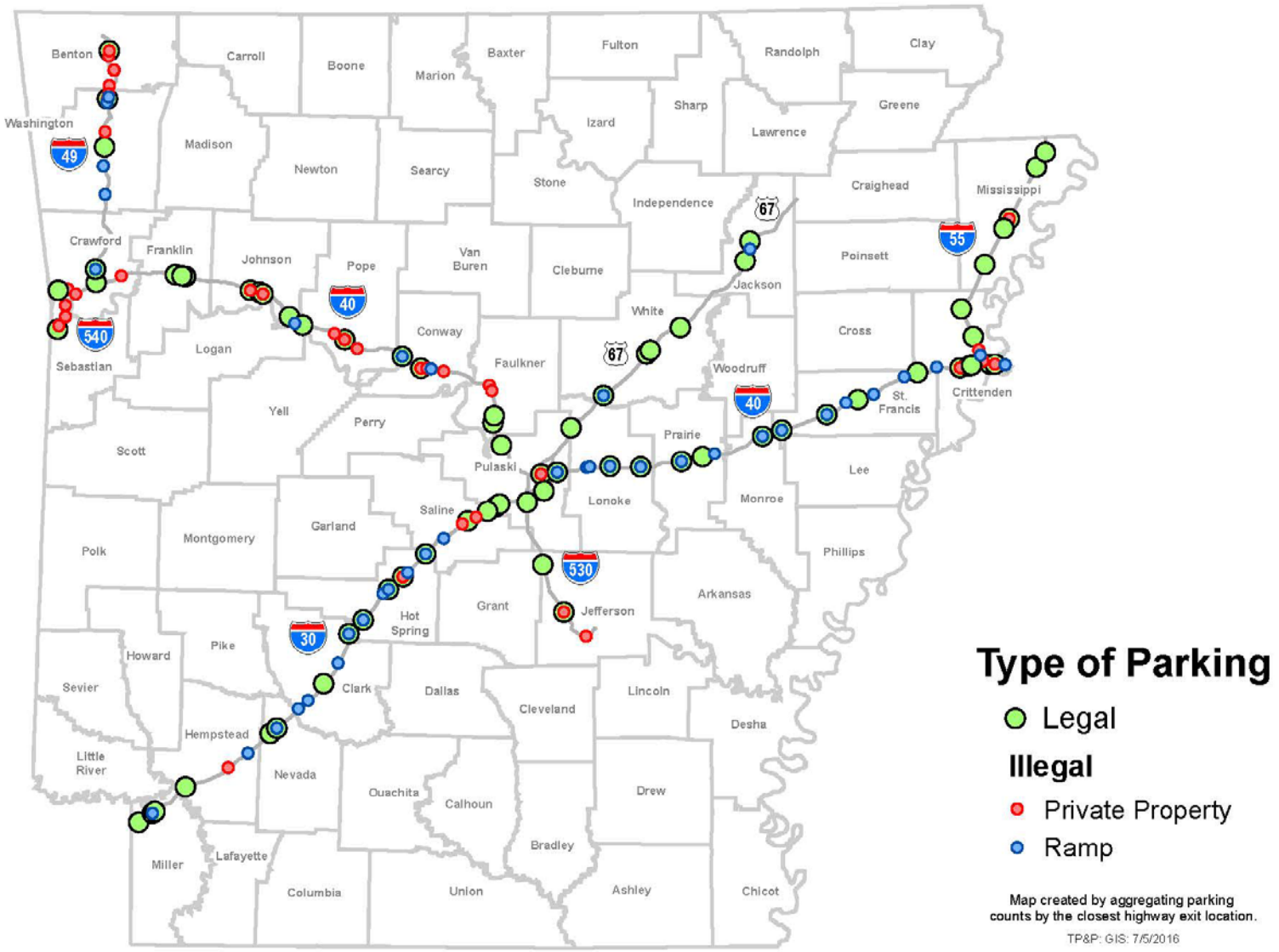


Type of Parking

- Legal

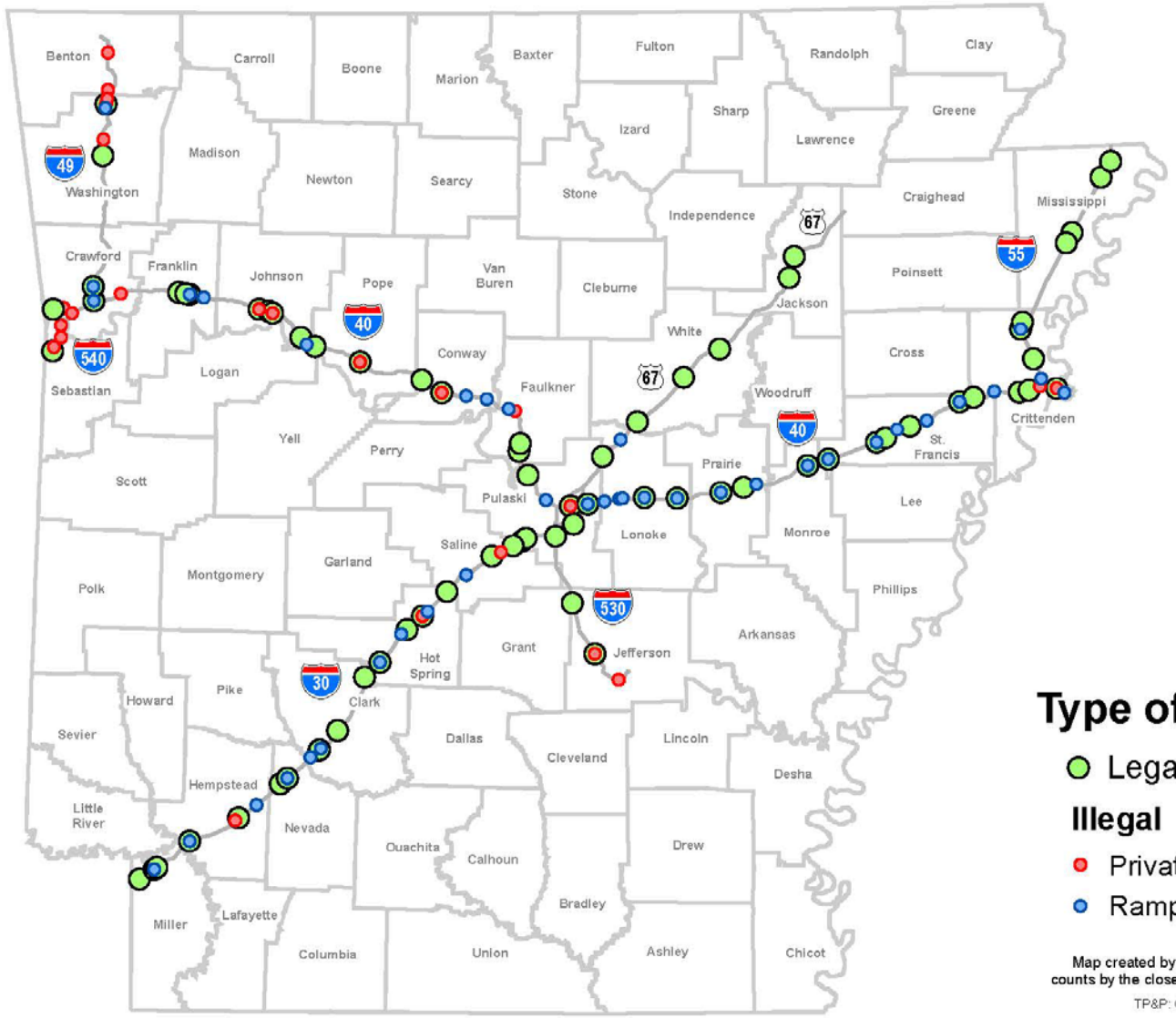
Illegal

- Private Property
- Ramp

Map created by aggregating parking counts by the closest highway exit location.

TP&P: GIS: 7/5/2016

Legal Parking at Public and Private Facilities By Exit - 2015



Type of Parking

- Legal

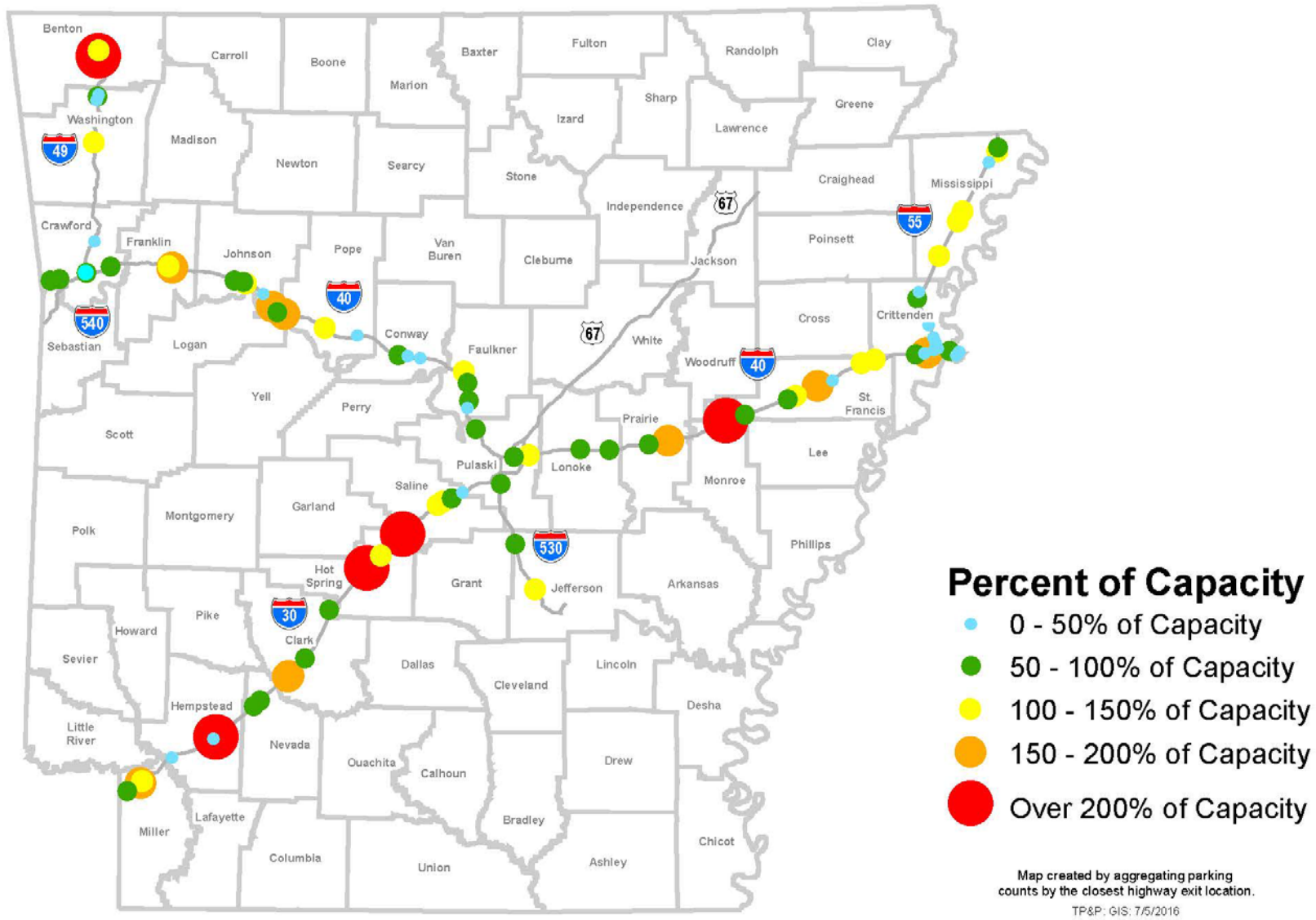
Illegal

- Private Property
- Ramp

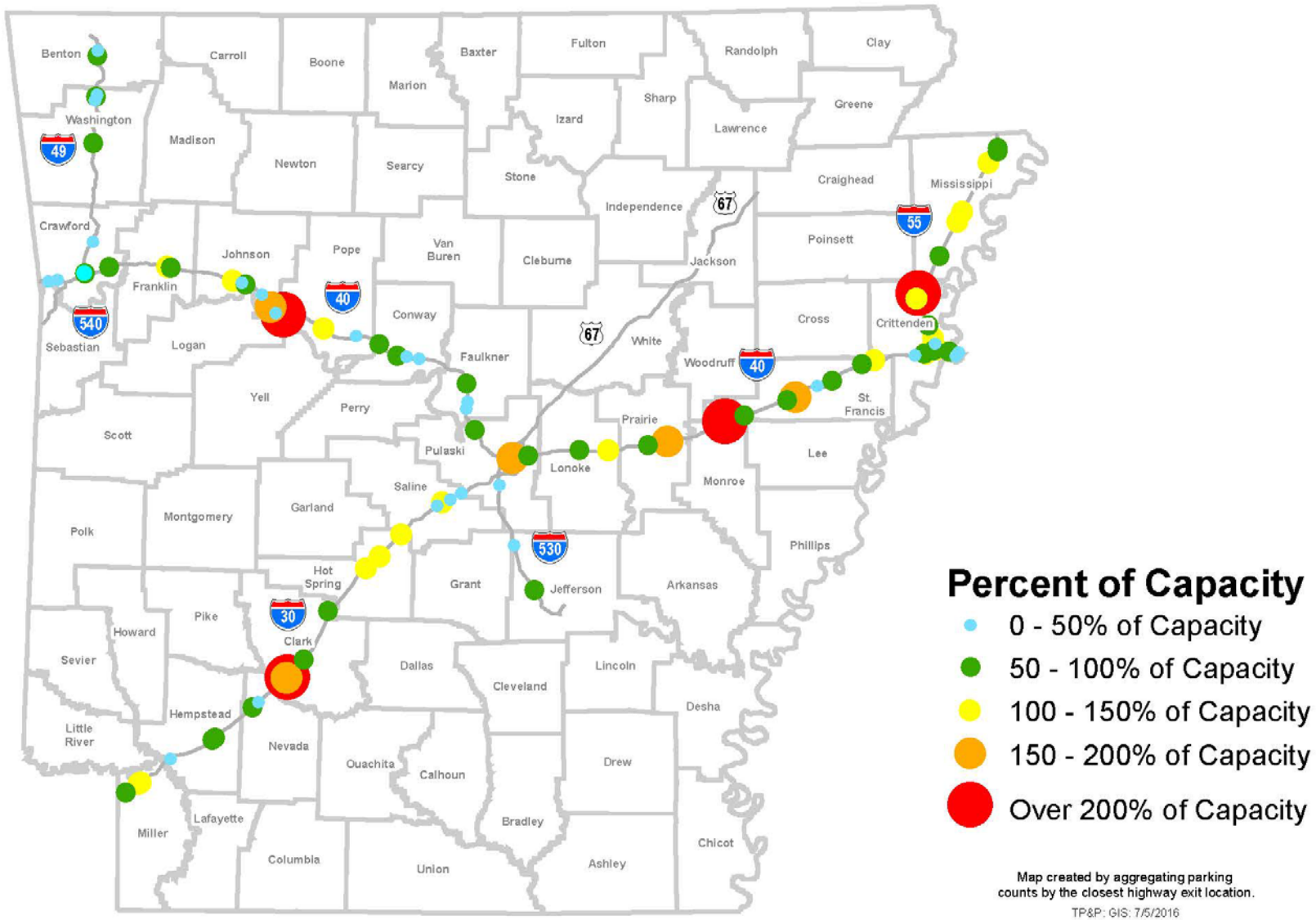
Map created by aggregating parking counts by the closest highway exit location.

TP&P: GIS: 7/5/2016

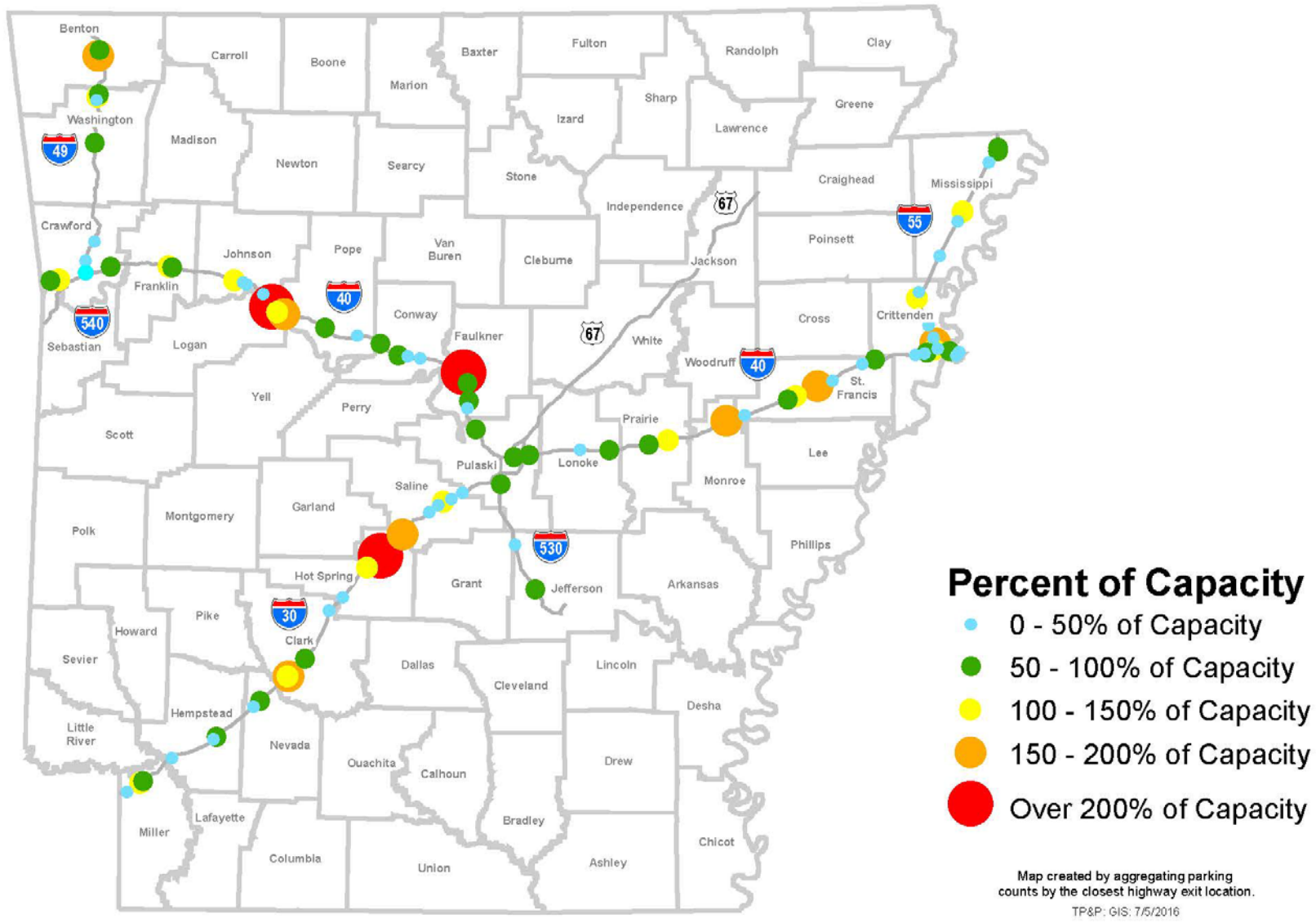
Overcrowding of Truck Parking Facilities By Exit - 2006



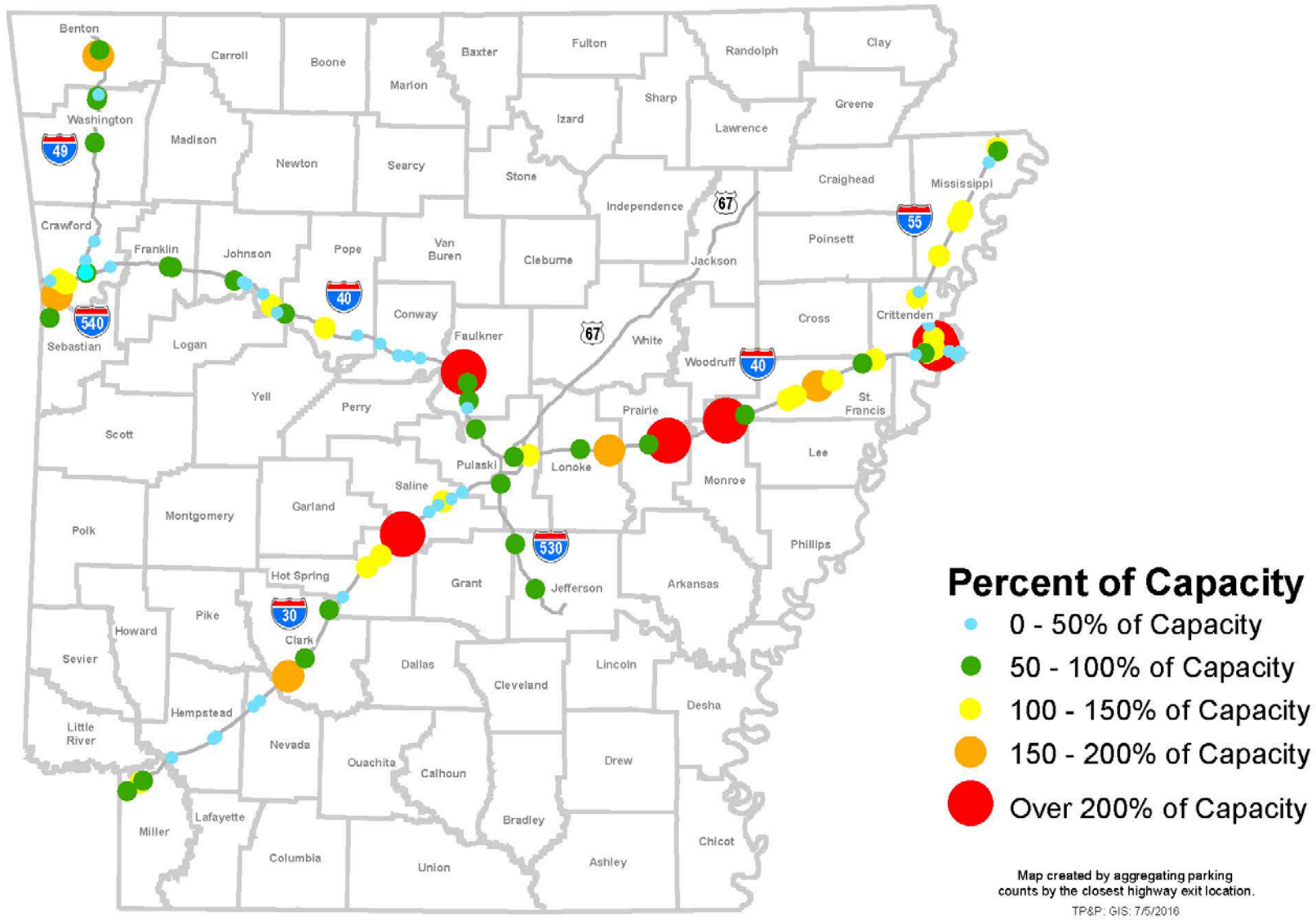
Overcrowding of Truck Parking Facilities By Exit - 2008



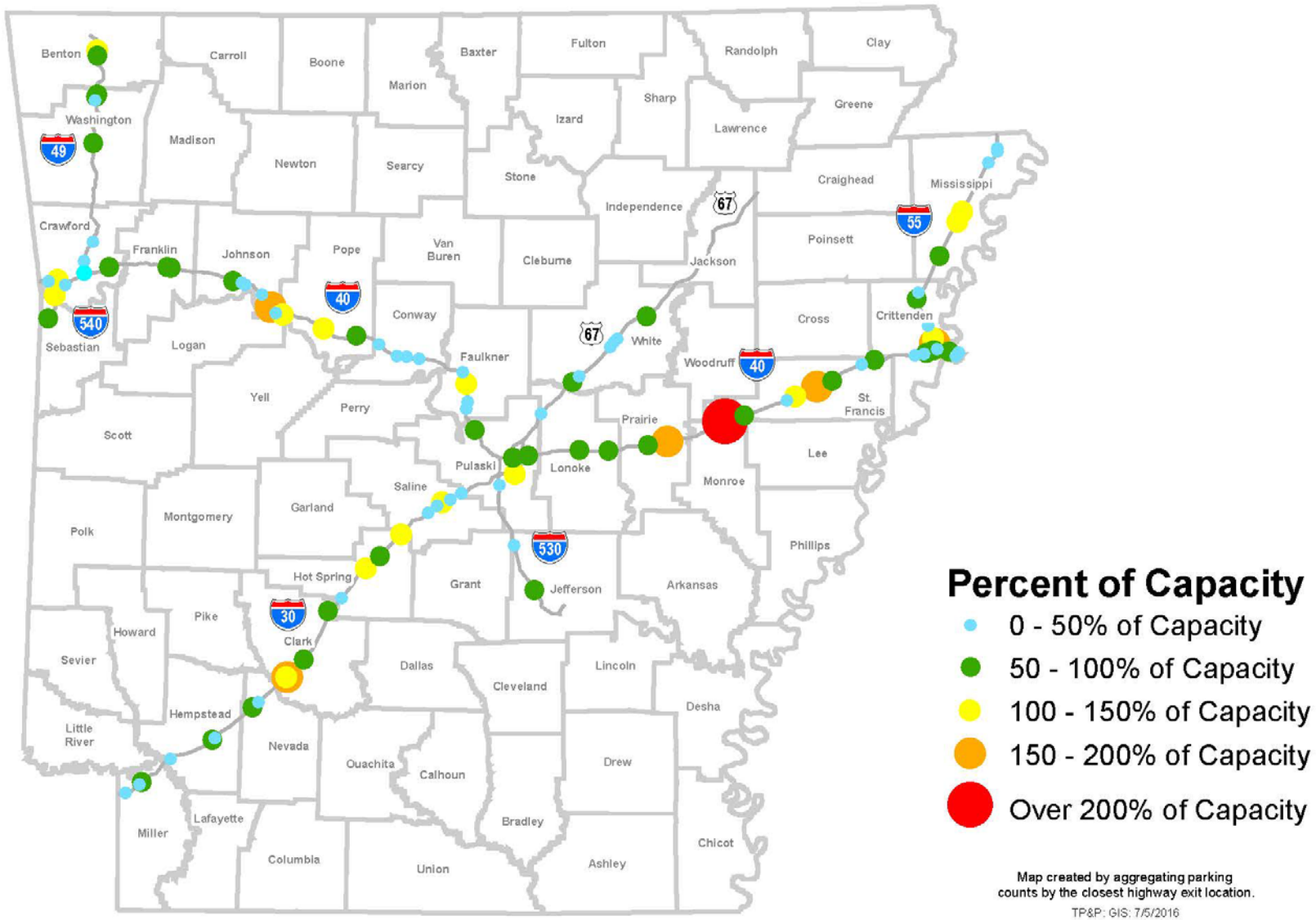
Overcrowding of Truck Parking Facilities By Exit - 2009



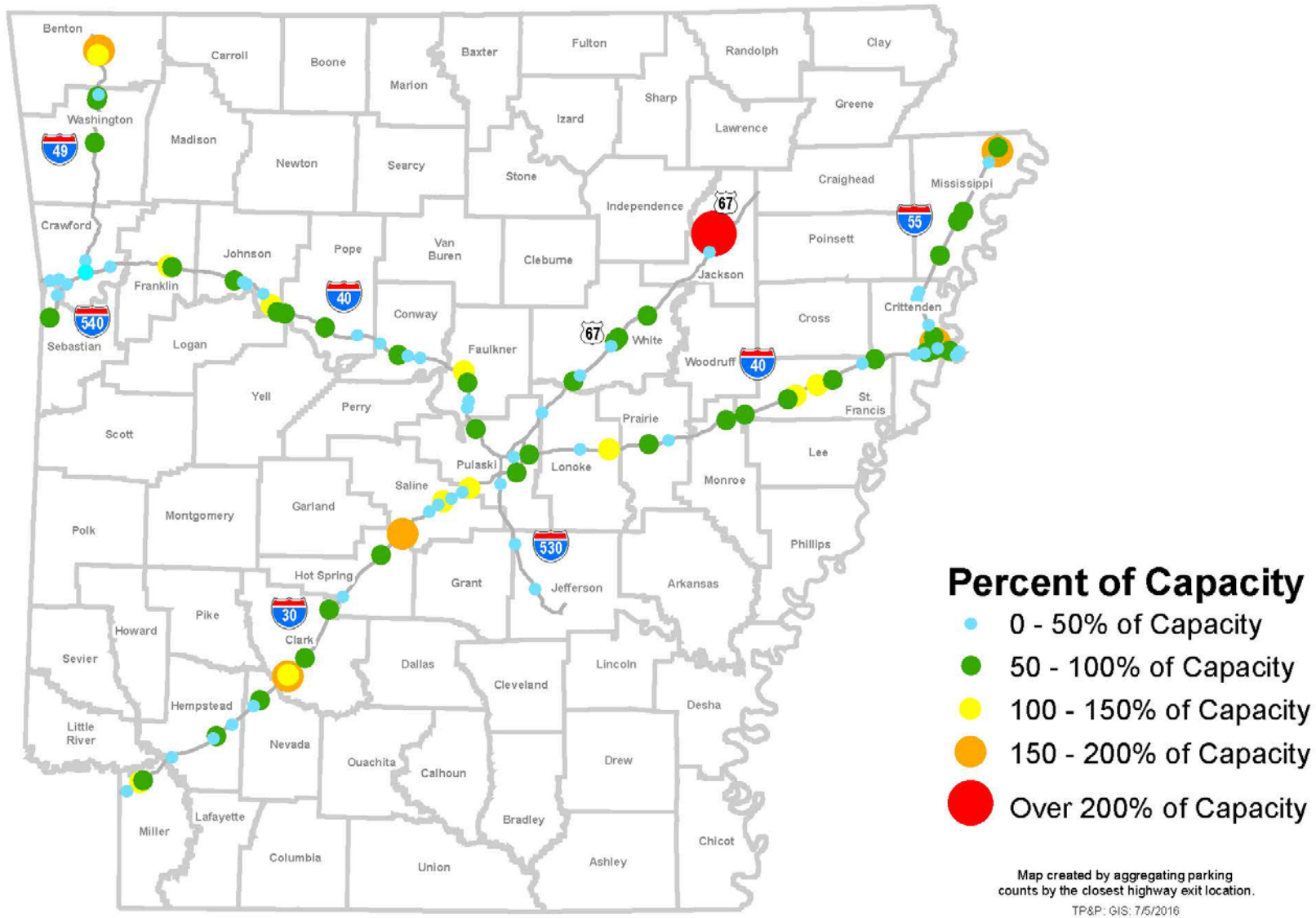
Overcrowding of Truck Parking Facilities By Exit - 2010



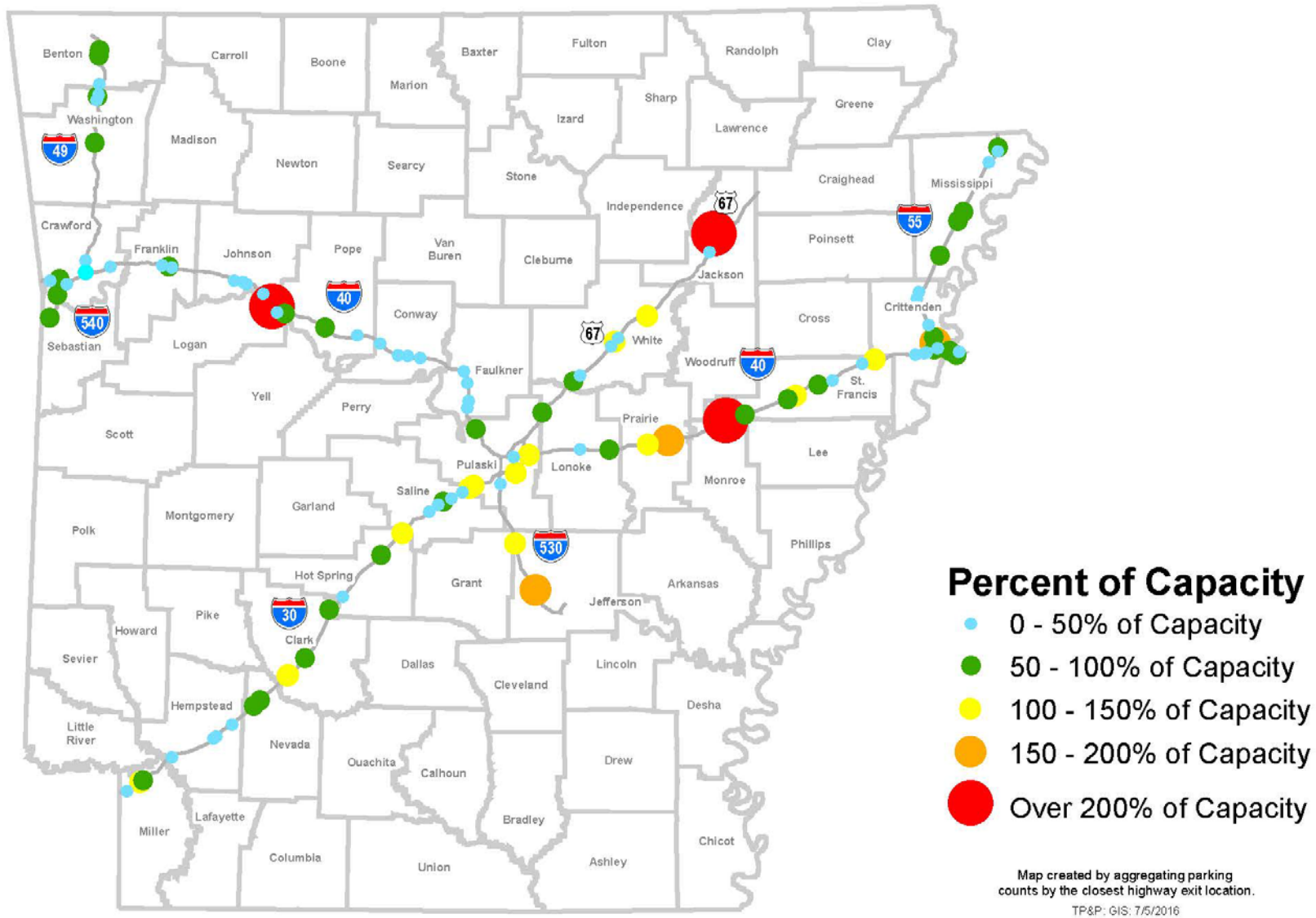
Overcrowding of Truck Parking Facilities By Exit - 2011



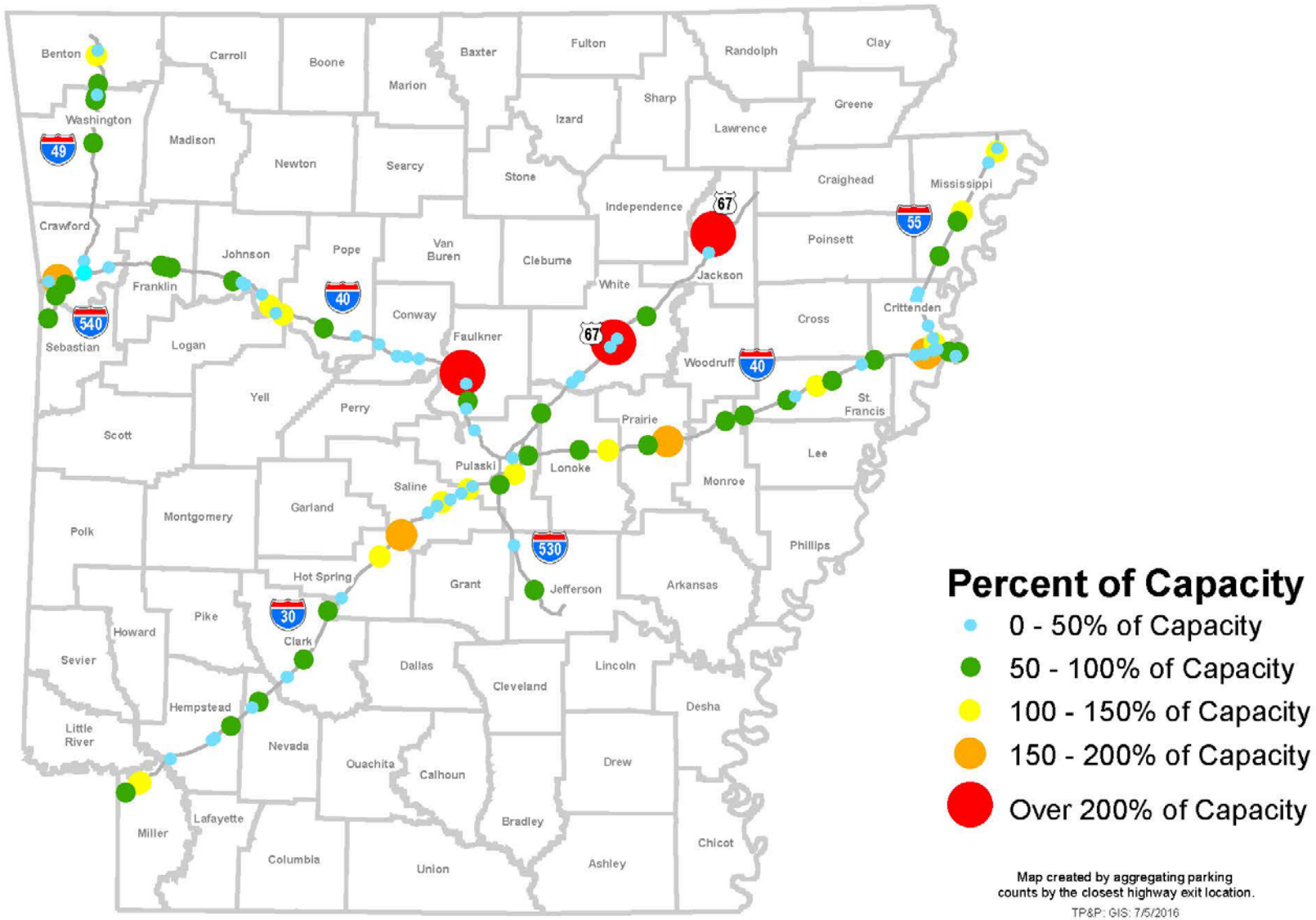
Overcrowding of Truck Parking Facilities By Exit - 2012



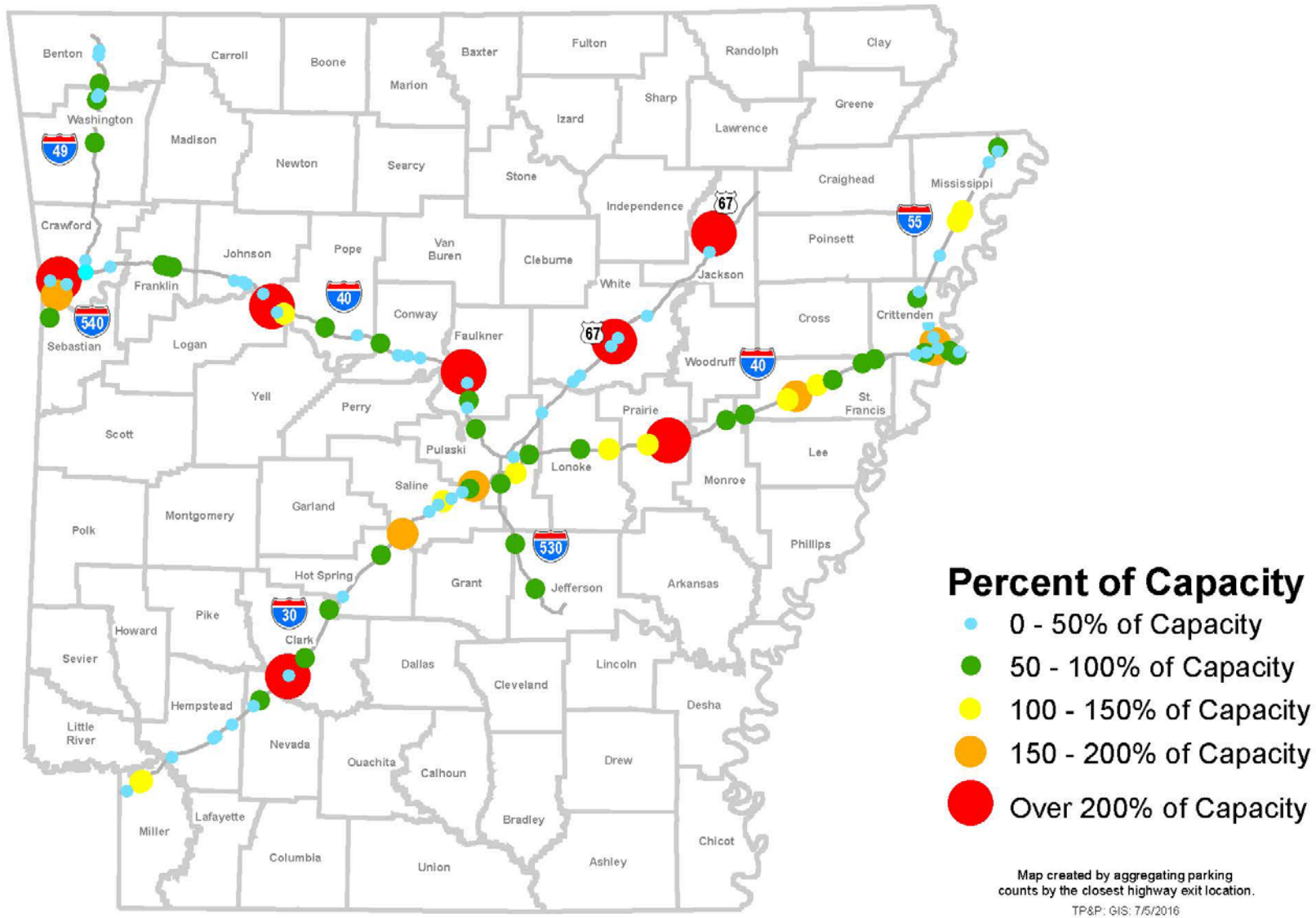
Overcrowding of Truck Parking Facilities By Exit - 2013



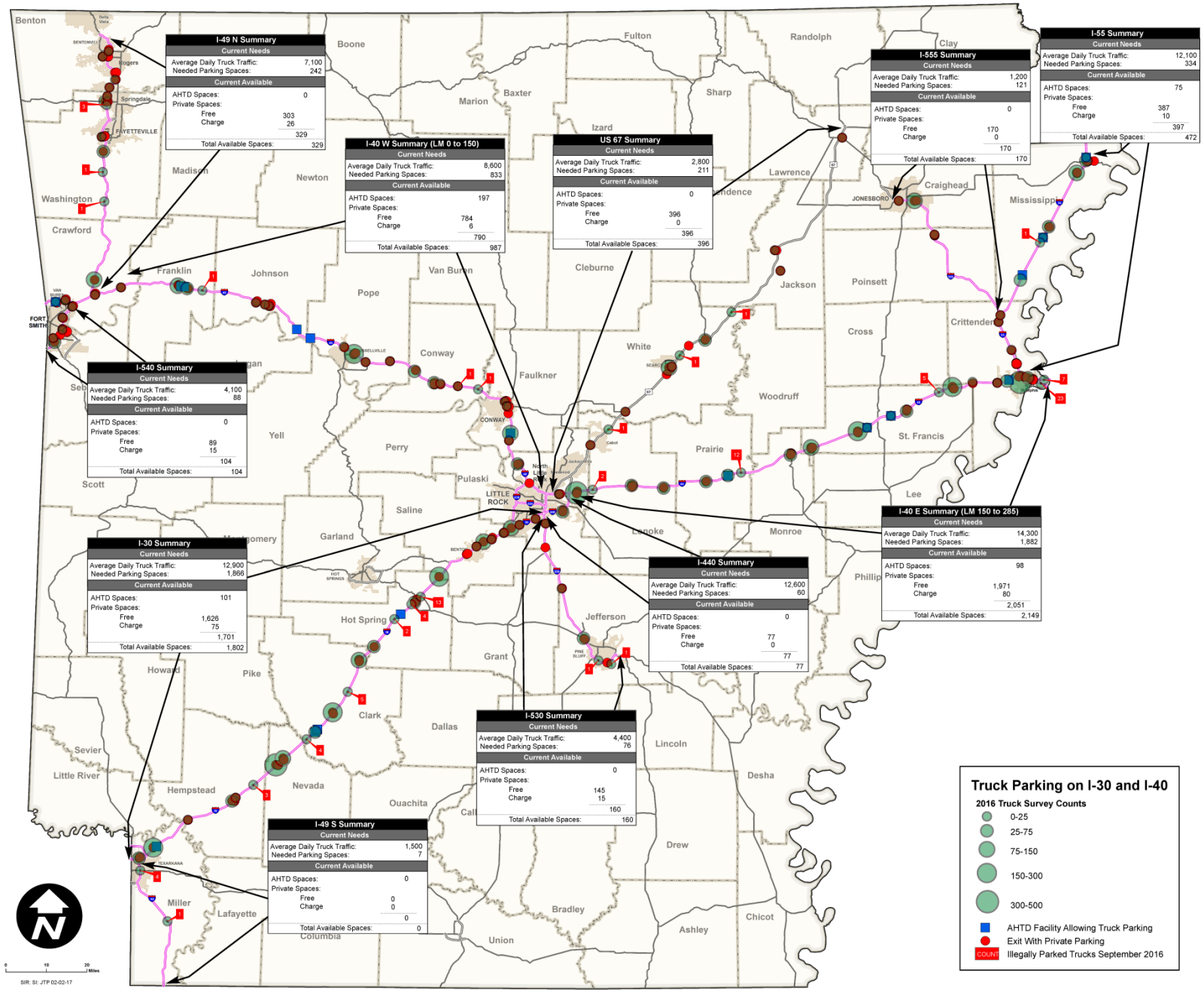
Overcrowding of Truck Parking Facilities By Exit - 2014



Overcrowding of Truck Parking Facilities By Exit - 2015



Arkansas State Highway and Transportation Department
Truck Parking Needs and Availability



2017

APPENDIX D

Port Improvement Needs

APPENDIX D. PORT IMPROVEMENT NEEDS

Port	Road Improvement Needs	Rail Improvement Needs	Other Land-Based Improvement Needs	Maritime Improvement Needs	Equipment Needs
Pine Bluff	Truck staging area In-plant asphalt repairs	New spur track Rail line extension	Additional hard surface storage space (asphalt & concrete) Additional 80K sq ft dry flat storage warehouse Office building Transload facility Truck dump with pit Liquid bulk tanks Other storage On-site improvements	Dock dredging 2000 lf 2-3 feet out Dock extension Mooring dolphins repair Dock shifting winch system upgrade	Long reach excavator Covered conveyor Replacement of fertilizer loading conveyor 320 front end loader Skid loader Forklifts Crawler crane
Little Rock	Resurface Lindsey Road & Fourche Dam Pike Scale house paving & landscaping Fourche Dam Pike widening	Annual track maintenance Intermodal storage tracks Storage tracks on loop north of harbor Intermodal yard at Industrial harbor at Lindsey Road South harbor rail spur	Warehouse space Engine shed Transit shed # 4 storage slab	Dolphin replacement Dock expansion Dredged fill Infrastructure for industrial park expansion South port infrastructure Wetland banking for future Shingle pile mitigation FEMA floodplain mitigation Land acquisition Woodson Levee improvements and certification	Harbor bridge crane
Ft. Smith	I-49 N-S completed New road access to port	Reciprocal switching		More business Operating 24/7 Dredging and maintaining Poteau River to 12 feet	Material handling excavators
Osceola	Better connectors to main highway; more direct route to Hwy 61 Truck access		Improvements to rock dike upstream from river terminal area to lessen silt in harbor Expansion of port on	Dredging Creation of additional fleeting capacity	New crane for general cargo Heavy forklifts and other general cargo material handling equipment

Port	Road Improvement Needs	Rail Improvement Needs	Other Land-Based Improvement Needs	Maritime Improvement Needs	Equipment Needs
	improvements Shoulder improvements on 239 for truck queuing during harvest season Grade separation at railroad crossings		harbor		
West Memphis	Better connecting roads to port New South Loop truck route	Rail-served space	Address eddy downstream TIGER grant for 2,500 acre rail-port logistics park:	Dock upgrade New dock north of existing terminal Container	Better connecting roads to port New South Loop truck route
Helena	AR Hwy 20 and 20 Spur improvements: 20 Spur needs to be asphalt; Hwy 20 needs maintenance Road access to levee paved with concrete Phillips Rd 422 off 20 Spur Connectivity to U.S. 49 Connectors to different parts of port	Crosstie replacement for port tract: 800 crossties and critical points on turns Routine maintenance Rail on other side of harbor channel	500,000-gallon water tower	Captive barge with loader, hopper, and conveyor Dredging on harbor	Loader Hopper Conveyor
Yellow Bend	Pave road and truck staging area New I-69 bridge/ highway	Rail line to harbor Rail marshalling yard	New office building Warehouse with rail sidings Bagging facility Climate-controlled warehouse Fertilizer warehouse	Dredging Harbor expansion	Conveyor belt and loading/unloading hoppers Mobile crane

APPENDIX E

Rail Improvement Needs

APPENDIX E. RAIL IMPROVEMENT NEEDS

This appendix lists the freight improvement projects from the State Rail Plan which identified a number of rail freight needs throughout the State across several categories with a wide range of scope and cost.

Sponsor	Railroad	Project Description	Associated Initiatives	Cost
Genesee & Wyoming, Inc.	AKMD—Carlise	5 Turnouts	Industrial access/economic development	$350,000
Genesee & Wyoming, Inc.	AKMD—Carlise	Marshalling Yard	Industrial access/economic development, Operations and safety, Capacity	$1,724,000
Genesee & Wyoming, Inc.	AKMD—Carlise	Storage Yard	Industrial access/economic development	$1,546,000
Genesee & Wyoming, Inc.	AKMD—Cypress Bend	Bridge Upgrades (2)	Upgrade/rehabilitation	$1,000,000
Genesee & Wyoming, Inc.	AKMD—Cypress Bend	Improve Drainage in McGehee Yard	Cost reduction and efficiency	$100,000
Genesee & Wyoming, Inc.	AKMD—Helena	Rail improvements (3,229 tons)	Upgrade/rehabilitation	$2,421,900
Genesee & Wyoming, Inc.	AKMD—Helena	20 Turnouts	Upgrade/rehabilitation	$1,400,000
Genesee & Wyoming, Inc.	AKMD—Helena	32,000 Crossties	Upgrade/rehabilitation	$1,888,000
Genesee & Wyoming, Inc.	AKMD—Helena	2,000 tons of Ballast	Upgrade/rehabilitation	$54,000
Genesee & Wyoming, Inc.	AKMD—Hot Springs	Bridge Upgrades (7)	Upgrade/rehabilitation	$5,000,000
Genesee & Wyoming, Inc.	AKMD—Hot Springs	12 Turnouts	Industrial access/economic development	$840,000
Genesee & Wyoming, Inc.	AKMD—Hot Springs	10,560 Ft. Marshalling Yard	Industrial access/economic development, Operations and safety, Capacity	$2,640,000
Genesee & Wyoming, Inc.	AKMD—Hot Springs	Transload Facility	Multimodal Improvements	$200,000
Genesee & Wyoming, Inc.	AKMD—Hot Springs	Maintenance Shop	Operations and safety, Cost reduction and efficiency	$2,000,000
Genesee & Wyoming, Inc.	AKMD—Hot Springs	Office	Operations and safety	$800,000
Genesee & Wyoming, Inc.	AKMD—Jacksonville	8 Turnouts	Industrial access/economic development	$560,000

Genesee & Wyoming, Inc.	AKMD—Warren	3,734 tons of Rail	Upgrade/rehabilitation	$2,800,000
Arkansas & Missouri Railroad	Arkansas & Missouri Railroad	Replace 10 miles of Mainline rail	Upgrade/rehabilitation, Operations and safety, Cost reduction and efficiency	$2,220,000
Arkansas & Missouri Railroad	Arkansas & Missouri Railroad	Arkansas River Bridge Rehab	Upgrade/rehabilitation	$3,000,000
Arkansas & Missouri Railroad	Arkansas & Missouri Railroad	Replace Ft. Smith Scale	Upgrade/rehabilitation	$200,000
Arkansas & Missouri Railroad	Arkansas & Missouri Railroad	Spur Line Track	Industrial access/economic development	$8,000,000
Arkansas & Missouri Railroad	Arkansas & Missouri Railroad	Storage Yard Track	Operations and safety, Capacity	$1,200,000
Arkansas & Missouri Railroad	Arkansas & Missouri Railroad	Purchase Railcars	Capacity	$7,500,000
Arkansas & Missouri Railroad	Arkansas & Missouri Railroad	Warehouse facility	Multimodal improvements, industrial access/economic development	$2,000,000
Arkansas & Missouri Railroad	Arkansas & Missouri Railroad	Transload/Bagging Facility	Multimodal improvements	$2,000,000
Arkansas Shortline Railroads, Inc.	Camden & Southern Railroad	Track Rehab	Upgrade/rehabilitation	$500,000
Arkansas Shortline Railroads, Inc.	Dardanelle & Russellville Railroad	Signals to 4th Street	Protection to the public	$200,000
Arkansas Shortline Railroads, Inc.	Dardanelle & Russellville Railroad	Signals to 16th Street	Protection to the public	$200,000
Arkansas Shortline Railroads, Inc.	Dardanelle & Russellville Railroad	Signals to 19th Street	Protection to the public	$150,000
Arkansas Shortline Railroads, Inc.	Dardanelle & Russellville Railroad	Upgrade of 75 lb rail to 115 lb rail	Upgrade/rehabilitation	$1,500,000
Arkansas Shortline Railroads, Inc.	Dardanelle & Russellville Railroad	Surfacing and ballast	Operations and safety	$450,000
El Dorado & Wesson Railway	El Dorado & Wesson Railway	Heavier Rail	Upgrade/rehabilitation	$5,500,000
El Dorado &	El Dorado & Wesson	Heavier Rail for Turnouts	Upgrade/rehabilitation	$2,500,000

Wesson Railway	Railway			
Pioneer Railcorp	Fort Smith Railroad Co.	Transload Facility	Multimodal improvements	$2,000,000
Pioneer Railcorp	Fort Smith Railroad Co.	6,480 tons of Rail	Upgrade/rehabilitation	$16,000,000
Pioneer Railcorp	Fort Smith Railroad Co.	32,800 crossties	Upgrade/rehabilitation	$2,500,000
Pioneer Railcorp	Fort Smith Railroad Co.	20 switch crossties	Upgrade/rehabilitation	$100,000
Pioneer Railcorp	Fort Smith Railroad Co.	20,500 tons of ballast	Upgrade/rehabilitation	$500,000
Pioneer Railcorp	Fort Smith Railroad Co.	216,480 Surfacing	Upgrade/rehabilitation	$650,000
Pioneer Railcorp	Fort Smith Railroad Co.	Marshaling Yard	Industrial access/economic development, Capacity	$2,000,000
Pioneer Railcorp	Fort Smith Railroad Co.	Lift Equipment	Capacity	$250,000
Genesee & Wyoming, Inc.	Little Rock & Western Railway	345 tons rail	Upgrade/rehabilitation	$350,000
Genesee & Wyoming, Inc.	Little Rock & Western Railway	2 Bridges	Upgrade/rehabilitation	$500,000
Genesee & Wyoming, Inc.	Little Rock & Western Railway	4 Turnouts	Industrial access/economic development	$200,000
Genesee & Wyoming, Inc.	Little Rock & Western Railway	300 Bridge crossties	Upgrade/rehabilitation	$175,000
Genesee & Wyoming, Inc.	Little Rock & Western Railway	200 Switch crossties	Upgrade/rehabilitation	$175,000
Genesee & Wyoming, Inc.	Little Rock & Western Railway	3,000 tons of Ballast	Upgrade/rehabilitation	$65,000
Little Rock Port Authority	Little Rock Port Railroad	1,200 ft Storage Yard	Industrial access/economic development, Capacity	$2,500,000
Little Rock Port Authority	Little Rock Port Railroad	Expansion to marshalling yard in harbor area	Multimodal improvements, Capacity	$3,000,000
Five Rivers Distribution/ Port of Fort Smith	Fort Smith Railroad, Arkansas & Missouri Railroad	Repairs to Rail Spur Lines	Upgrade/rehabilitation	$1,150,000
Five Rivers Distribution/ Port of Fort Smith	Fort Smith Railroad, Arkansas & Missouri Railroad	Rail Line Extension	Multimodal improvements, Capacity	$1,050,000
Five Rivers Distribution/ Port of Fort Smith	Fort Smith Railroad, Arkansas & Missouri Railroad	Replace 85 lb rail with heavier rail	Upgrade/rehabilitation, Multimodal Improvements	$1,150,000
South Logan County	Uncertain	Build 18.4 miles of track between Hartford,	Extend or reactivate rail network	$38,800,000

Chamber of Commerce		Arkansas and Howe, Oklahoma		
South Logan County Chamber of Commerce	Uncertain	Build 57.6 miles between Hartford, Arkansas and Danville, Arkansas	Extend or reactivate rail network	$107,900,000
Chicot Desha Metropolitan Port Authority	AKMD	Build an 8.1 mile rail spur to provide access to the Port of Yellow Bend	Extend or reactivate rail network, Multimodal improvements	$25,200,0000
City of West Memphis	Friday Graham Rail Spur	New Y track to access UP mainline	Industrial access/economic development, Multimodal improvements	Not Available
TBD	Uncertain	Build 3.5 or 4.3 mile rail spur to provide access to industrial park in Fayetteville	Extend or reactivate rail network	$5,600,000 - $8,200,000
TBD	Uncertain	Build 10 to 11 mile spur to Northwest Arkansas Regional Airport	Extend or reactivate rail network	$12,000,000 - $15,400,000
Arkansas Short Line Railroads Inc.	North Louisiana & Arkansas Railroad	Track Rehab	Upgrade/rehabilitation	$3,000,000
Arkansas Short Line Railroads Inc.	North Louisiana & Arkansas Railroad	U.S. 65/82 Lake Village Signals	Crossings/safety	$400,000
Arkansas Short Line Railroads Inc.	North Louisiana & Arkansas Railroad	AR Hwy 257 Lake Village Signals	Crossings/safety	$150,000
Arkansas Short Line Railroads Inc.	North Louisiana & Arkansas Railroad	AR Hwy 8 Eudora Signals	Crossings/safety	$150,000
Arkansas Short Line Railroads Inc.	North Louisiana & Arkansas Railroad	AR Hwy 160 Eudora, AR Signals	Crossings/safety	$150,000
Arkansas Short Line Railroads Inc.	North Louisiana & Arkansas Railroad	AR Hwy 35 Halley, AR Signals	Crossings/safety	$150,000
Arkansas Short Line Railroads Inc.	Ouachita Railroad	Bridge Rehabilitation	Upgrade/rehabilitation	$3,000,000
Arkansas Short Line Railroads Inc.	Ouachita Railroad	Tie Rehabilitation	Upgrade/rehabilitation	$2,080,000

Pinsly Railroad Company	Prescott & Northwestern Railroad	848 tons Rail	Upgrade/rehabilitation	$635,479
Pinsly Railroad Company	Prescott & Northwestern Railroad	14 Turnouts	Industrial access/economic development, Upgrade/rehabilitation	$980,000
Pinsly Railroad Company	Warren & Saline River Railroad	1,049 tons Rail	Upgrade/rehabilitation	$787,118
Pinsly Railroad Company	Warren & Saline River Railroad	11 Turnouts	Industrial access/economic development	$770,000
Union Pacific Railroad	Union Pacific Railroad	Van Buren Yard Slots - Construct Slot at Van Buren	Capacity, Cost reduction and efficiency	$15,000,000
Union Pacific Railroad	Union Pacific Railroad	White Bluff Sub Connection to Pine Bluff Sub - Construct connection from White Bluff Sub to Pine Bluff Sub.	Cost reduction and efficiency	$8,000,000
Union Pacific Railroad	Union Pacific Railroad	Van Buren Sub Sidings - Construct 4-6 sidings between Little Rock and Van Buren on the Van Buren Sub.	Capacity	$50,000,000
Union Pacific Railroad	Union Pacific Railroad	McGehee Sub Sidings - Construct 4-6 sidings south of Pine Bluff on the McGehee sub.	Capacity	$50,000,000
Union Pacific Railroad	Union Pacific Railroad	White Bluff Sub Sidings and Double Track - Construct 2-3 sidings between Little Rock and Pine Bluff, double track extensions extending 3-5 miles out of terminals of Little Rock and Pine Bluff.	Capacity	$70,000,000
Union Pacific Railroad	Union Pacific Railroad	3rd Main Track at North Little Rock - Construct additional mainline at North Little Rock yard to facility fueling, inspection, crew change activities.	Capacity	$17,000,000
Union Pacific Railroad	Union Pacific Railroad	Double Track Little Rock to Marche - Construct approx six miles of 2nd main track between Marion and Presley Jct	Capacity	$45,000,000
Union Pacific Railroad	Union Pacific Railroad	Double Track Marion to Presley Jct - Construct approx six miles of 2nd main track between Marion and Presley Jct.	Capacity	$30,000,000

Union Pacific Railroad	Union Pacific Railroad	Little Rock Area Transload facility - Develop new transload capability in the Little Rock/Central AR area	Multimodal improvements	$20,000,000
Union Pacific Railroad	Union Pacific Railroad	Brinkley Connection - Enhance connection at Brinkley.	Cost reduction and efficiency	$5,000,000
Union Pacific Railroad	Union Pacific Railroad	Little Rock & Hoxie Subs Double Track - Construct 150 - 200 miles of double track between Arkansas/ Missouri State Line and Texarkana	Capacity	$750,000,000
Union Pacific Railroad	Union Pacific Railroad	Centralized Traffic Control (CTC) Van Buren Sub - Install CTC signal system between Van Buren and North Little Rock.	Capacity	$35,000,000
Union Pacific Railroad	Union Pacific Railroad	Power McGehee Sub Sidings - Power all sidings on McGehee sub	Cost reduction and efficiency	$10,000,000
Union Pacific Railroad	Union Pacific Railroad	Expansion of Marion - Construct additional ramp capability (tracks, parking) to support intermodal growth	Multimodal improvements	$40,000,000
BNSF Railway	BNSF Railway	Improve road infrastructure to/from major BNSF served sites	Industrial access/economic development	Not Available
BNSF Railway	BNSF Railway	Identify greenfield sites for dual UP, BNSF access	Industrial access/economic development	Not Available
BNSF Railway	BNSF Railway	Identify at-grade rail crossing improvements, closures, and grade separations, including evaluation of grade separating BNSF line and Highway 18/Nettleton Ave in Jonesboro	Crossings/safety	Not Available
Kansas City Southern Railway	Kansas City Southern Railway	Improve Connection between KCS and DQE	Cost reduction and efficiency	Not Available
Kansas City Southern Railway	Kansas City Southern Railway	Upgrade Fort Smith Subdivision to 286K capacity	Upgrade/rehabilitation	Not Available
Kansas City Southern Railway	Kansas City Southern Railway	Crossing closures in Ashdown	Crossings/safety	Not Available
TBD	KCS/TBD	New rail connection to Northwest Arkansas Regional Airport	Capacity/Multimodal Improvements/Efficiency	Not Available

APPENDIX F

Needs Identified Through Stakeholder Outreach and Technical Analysis

APPENDIX F. NEEDS IDENTIFIED THROUGH STAKEHOLDER OUTREACH AND TECHNICAL ANALYSIS

	Source	Description	Rationale	Mode		Project Type
				Primary	Secondary	
1	Technical Analysis	Complete I-49 in NW Arkansas	Most truck-intensive portion of Arkansas, supports local economic activity (not through truck trips), high level of peak hour congestion	H	---	Capacity
2	Technical Analysis	Add capacity to US 412 in NW Arkansas	Most truck-intensive portion of Arkansas, supports local economic activity (not through truck trips), high level of peak hour congestion, high truck volumes on state highway	H	---	Capacity
3	Technical Analysis	Improve connections for Union County	One of the most truck-intensive portions of the State based on truck GPS data (10th highest), 5th highest truck tonnage based on Transearch, far from interstate network and currently connected by two-lane roads, Over 2,000 trucks per day, high forecast growth on US 67	H	---	Capacity
4	Stakeholder Outreach/ Technical Analysis	Add capacity or improve operations on I-40 between North Little Rock and West Memphis	Highest truck volume corridor in Arkansas, connects State to Memphis regional freight hub, worst reliability of interstate corridors, high number of crashes, ongoing construction, high growth corridor, relatively high shipment values per truck	H	---	Capacity
5	Technical Analysis	Continue expansion of Little Rock interstate system	Worst truck congestion in Arkansas and forecast to get worst, high truck volumes on most interstates, Pulaski County has highest total number of truck trips and truck tonnage generated	H	---	Capacity
6	Stakeholder Outreach/ Technical Analy	Dredge MKARNS to 12 feet	Allow for larger barges which increases cost-effectiveness of mode, Makes AR businesses more competitive relative to other States and other countries, increasing barge traffic can divert trucks from highways, reduce emissions, and reduce freight transportation fuel consumption	W	---	Capacity
7	Technical Analysis	Consider location of an intermodal railyard in NW Arkansas	NW Arkansas has the highest concentration of truck trips in Arkansas with 29 percent of the total volume	R	H	Capacity
8	Technical Analysis	Improve pavement quality for access roads to BNSF Intermodal terminal in West Memphis and Central AR Pipeline Terminal	IRI Pavement rating below FHWA standards	H	R Pipe	Maintenance
11	Stakeholder Outreach	Safety improvements on I-40	Reduce crashes	H	---	Safety
12	Stakeholder Outreach	Access road and rail access to ports, including the Yellow Bend Port Industrial Corridor	Improve access of trucks to get to port gates	H	W Ports	Capacity
13	Stakeholder Outreach	Real-time truck parking information	Increase road safety and security of drivers and goods	H	---	ITS

	Source	Description	Rationale	Mode		Project Type
				Primary	Secondary	
14	Stakeholder Outreach	Improve interchanges on I-30 and I-55	Safety	H	---	Operational
15	Stakeholder Outreach	Additional rest areas	Safety	H	---	Operational
16	Stakeholder Outreach	Identify select sites for economic development and improve landside connections	Economic development	H	R, W	Economic Development
17	Stakeholder Outreach	Improve rail access in SW Arkansas	Economic development	R	---	Economic Development
18	Stakeholder Outreach	Complete I-49 between Fort Smith and DeQueen	Economic development	H	---	Economic Development
19	Stakeholder Outreach	Improve port access along I-69	Economic development	W Ports	H	Economic Development
20	Stakeholder Outreach	Maintenance of county roads and bridges	Ability to handle heavy agricultural industry loads	H	---	Maintenance
21	Stakeholder Outreach	Traffic management during I-40 rehabilitation	Maintain access to Memphis freight hub	H	---	Operational
22	Stakeholder Outreach	More intermodal yards for wood chips and timber	Economic development	H	R	Capacity
23	Stakeholder Outreach	Improve farm access roads, notably US 63 and Marked Tree Rd	Economic development	H	---	Capacity
24	Stakeholder Outreach	Raise two low clearance bridges on Hwy 161	Safety, mobility	H	---	Operational
25	Stakeholder Outreach	Improve east-west access in northern Arkansas	Reduce traffic on interstates through Little Rock	H	---	Capacity
26	Stakeholder Outreach	Add capacity to US 67 between Walnut Ridge and Poplar Bluff	Improve connection from Little Rock to St. Louis	H	---	Capacity
27	Stakeholder Outreach	Complete construction of I-69 and I-49 in the long-term	Increase speeds for inter-city travel	H	---	Capacity
28	Stakeholder Outreach	Build inland port to provide barge access for local shippers	Economic development	W Ports	H	Capacity
29	Stakeholder Outreach	Reroute trucks from downtown Ft. Smith	Safety of drivers and pedestrians	H	---	Truck routing

	Source	Description	Rationale	Mode		Project Type
				Primary	Secondary	
30	Stakeholder Outreach	Pavement improvements on A Street, B Street, and Wheeler Road	Reduce vehicle wear and tear, improve driver comfort	H	---	Maintenance
31	Stakeholder Outreach	Improve waterway system	Economic development, divert trucks from roadways	W Ports	---	Capacity
33	Stakeholder Outreach	Improve state highways due to lack of interstates, including US 70, US 270, AR 7, AR 7 Spur, US 70/270 Bypass	Improve mobility	H	---	Capacity
34	Stakeholder Outreach	Add capacity to Red Wolf Blvd	Reduce congestion	H	---	Capacity
35	Stakeholder Outreach	Improve airport runway to enable larger planes with cargo options	Economic development	A	---	Capacity
36	Stakeholder Outreach	Improve at-grade rail crossings	Safety	R	H	Operational
37	Stakeholder Outreach	Improve trucking operations on US 18 spur and Commerce Drive	Truck mobility	H	---	Operational
38	Stakeholder Outreach	Improve rail track as part of commuter line to Little Rock	Improve rail operations	R	---	Rail
39	Stakeholder Outreach	Add capacity to I-49, Highway 412, Historic Highway 71B through urban area, Hwy 59 and Hwy 112	Improve congestion during peak commute periods	H	---	Capacity
40	Stakeholder Outreach	Improved ITS for traveler information	Improve truck and auto operations	H	---	ITS
41	Stakeholder Outreach	Expand Highway 270	Improved mobility	H	---	Capacity
44	Stakeholder Outreach	Improve at-grade rail crossings	Reduce delays at crossings	R	H	Operational
45	Stakeholder Outreach	Improve locks and dams on the Red River	Economic development	W Ports	---	Operational
47	Stakeholder Outreach	Improve at-grade rail crossings or construct a rail turnaround inside levee	Reduce delays and safety at at-grade crossings	R	H	Operational
48	Stakeholder Outreach	Complete widening of South Loop to 5 lanes	Accommodate future truck flows, deter trucks from using US 70/Broadway through downtown	H	---	Capacity
49	Stakeholder Outreach	Extend Southland Drive to 7th Street	Connectivity of local freight facilities	H	---	Connectivity

	Source	Description	Rationale	Mode		Project Type
				Primary	Secondary	
50	Stakeholder Outreach	Add capacity to airport access road	Improve truck mobility	A	H	Capacity
51	Private Sector	4-lane US 65/165 from Little Rock to MS	High truck volumes on 2-lane road	H	---	Capacity
52	Private Sector	4-lane US 65/165 from Little Rock to Harrison	High truck volumes on 2-lane road	H	---	Capacity
53	Private Sector	4-lane US 67/167 from Little Rock to Louisiana	High truck volumes on 2-lane road	H	---	Capacity
54	Private Sector	Complete I-49 from Texarkana to Fort Smith	Connectivity needed	H	---	Connectivity
55	Private Sector	AR 59 in Siloam, Springs	Separation of truck and other activity	H	---	Truck Routing
56	Private Sector	US 412 through Springdale	Separation of truck and other activity	H	---	Truck Routing
57	Private Sector	E. 19th Street in Texarkana	Separation of truck and other activity	H	---	Truck Routing
58	Private Sector	Stuttgart connecting from I-40 to Pine Bluff or US 65	Separation of truck and other activity	H	---	Truck Routing
59	Private Sector	I-40 from Little Rock to Memphis	Increase reliability	H	---	Congestion Delay
60	Private Sector	Improve Interchange ramps on US 67 and Loop 245	Increase reliability	H	---	Congestion Delay
61	Private Sector	I-55 closure	Increase reliability	H	---	Bridges
62	Private Sector	Road closure or weight limit reductions	Connectivity needed	H	---	Bridges
63	Private Sector	Alternate Arkansas River crossings in Ft. Smith	Connectivity needed	H	---	Bridges
64	Private Sector	Rail bridge structures in central Arkansas with inadequate vertical clearance	Connectivity needed	H	R	Bridges
65	Private Sector	More transload and intermodal yard capacity needed across State	Economic development	R	H	Rail Waterway
66	Private Sector	Improved transload centers and shortline use	Economic development	R	---	Rail Waterway
67	Private Sector	Delays at crossings from stopped trains	Safety	R	H	Rail Waterway
68	Private Sector	Harmonization of regulations with neighboring states	Improve efficiency of truck movements	H	---	Policy Operational Safety

	Source	Description	Rationale	Mode		Project Type
				Primary	Secondary	
69	Private Sector	Truck parking on primary and secondary roads with amenities	Statewide insufficient parking	H	---	Policy Operational Safety
70	Prior Studies	E. Roosevelt Road Realignment	Improve access for trucks moving air cargo and access for passengers	A	H	Connectivity
71	Prior Studies	XNA Connector Road improvements	Improve access for trucks moving air cargo and access for passengers	A	H	Connectivity
72	Private Sector	Improve Connectivity to Big River Steel and Interstate 55	Increase capacity, reliability and Economic Development	H	R	Connectivity

APPENDIX G

Projects Funded with
National Highway Funding Program
as included in the
2016-2020 Statewide
Transportation Improvement Program

APPENDIX G. PROJECTS FUNDED WITH NATIONAL HIGHWAY FREIGHT PROGRAM AS INCLUDED IN THE 2016-2020 STATEWIDE TRANSPORTATION IMPROVEMENT PROGRAM

County	Project Description	Route	Funding Year	Project Type	Length (miles)	Total Project Cost (x $1,000)	NHFP Funding (x $1,000)
Benton	Hwy. 71B Intchng. Impvts. (S)	49	2018	Interchange Improvements	0	23,000	15,200
Washington	Porter Rd. - Hwy. 112/71B Widening and Intchng. Impvts. (S)	49	2016	Interchange Improvements and Major Widening	2.91	55,000	13,100
Jefferson	Hwy. 65B - Hwy. 65 (F)	530	2017	Reconstruction	11.75	30,000	12,500
Various	I-69 Development (PE & Right of Way)	69	2020	New Location		10,000	8,000
Crawford	Ark. Mo. R.R. Overpass - Dyer (S)	40	2019	Reconstruction	10.1	8,800	7,920
Crawford	Oklahoma St. Line - Ark. Mo. R.R. Overpass (S)	40	2019	Reconstruction	6.9	6,000	5,400
Jefferson	Access Impvts. For Possible Economic Development	530	2019	New Location		5,000	4,000
Pulaski	Hwy. 391 Intchng. Impvts. (S)	40	2017	Interchange Improvements	0	2,800	2,520
Benton	Hwy. 264 - New Hope Road (Widening) (S)	49	2016	Major Widening	4.96	41,400	2,200
Mississippi	Bassett - Hwy. 181 (PE)	55	2020	PE	9.4	900	810
Prairie	Lonoke Co. Line - East (S) (PE)	40	2020	PE	8.8	800	720
Hempstead and Nevada	Hwy. 299 - East of Hwy. 371 (S) (PE)	30	2020	PE	7.8	700	630
Crawford	I-40/Hwy. 59 Intchng. Impvts. (PE)	40	2020	Interchange Improvements		700	616
Statewide	PE/Right-of-Way/Utilities/CENG		2016	PE/ROW/Utility/Env.		25,000	600
Statewide	PE/Right-of-Way/Utilities/CENG		2017	PE/ROW/Utility/Env.		25,000	600
Statewide	PE/Right-of-Way/Utilities/CENG		2018	PE/ROW/Utility/Env.		25,000	600
Statewide	PE/Right-of-Way/Utilities/CENG		2019	PE/ROW/Utility/Env.		25,000	600
Statewide	PE/Right-of-Way/Utilities/CENG		2020	PE/ROW/Utility/Env.		25,000	600
Nevada	East of Hwy. 371 - Co. Rd. 35 (S) (PE)	30	2020	PE	6.8	600	540
Clark and Nevada	Co. Rd. 35 - Gurdon Rest Area (S) (PE)	30	2020	PE	5.1	600	540
Johnson	Hwy. 164 - Hwy. 352 (PE)	40	2020	PE	6.93	600	540
Lonoke	Hwy. 31 - Prairie Co. Line (S) (PE)	40	2020	PE	10.7	600	540
Conway	Plumerville - East (PE)	40	2020	PE	5.9	500	450
					Total	**$313,000**	**$78,226**

All Federal-aid funds listed above will be matched by ARDOT using state motor fuels revenues or local funds depending upon any partnering agreements.

TRANSPORTATION 2040

WE MOVE ARKANSAS FREIGHT