

Arkansas' Interstate Rehabilitation Program



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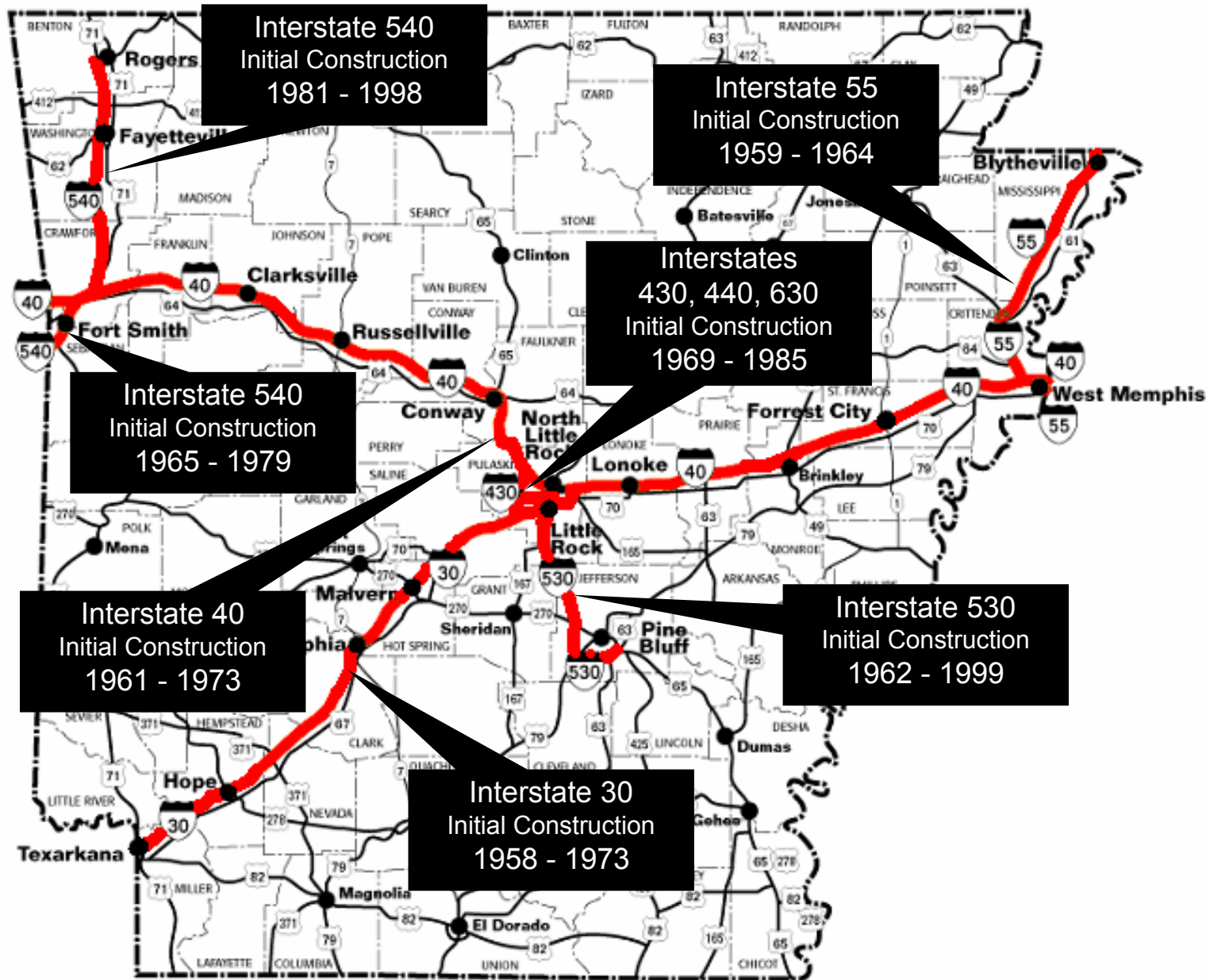


Background of the Interstate System in Arkansas

Background

- First Section – Interstate 55 in West Memphis
 - Opened to traffic in 1959
 - JCP
- Last Section – Interstate 530 in Pine Bluff
 - Opened to traffic in 1997
 - JCP

Original Interstate Construction in Arkansas



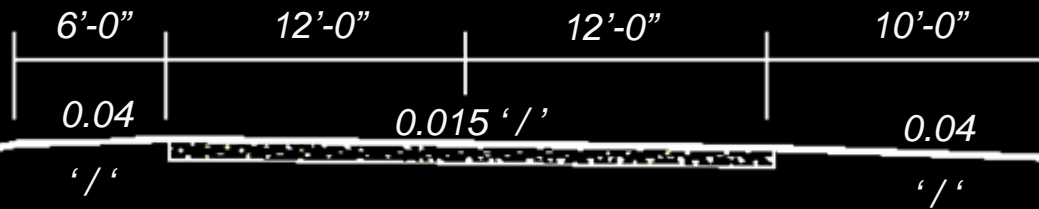
The Interstate System in Arkansas

- 1999 - 543 Centerline Miles
 - 40th of 50 in Total Length
- 2005 - 657 Centerline Miles
 - 35th of 50 in Total Length
 - Addition of
 - I-530
 - I-540 North of I-40

Typical Pavement Design – Original Interstate

- Jointed PCCP
 - Primarily mesh reinforced PCCP
 - 9” to 10” slab thickness
 - 6” granular base typical
 - Dowelled construction joints @ 45’
 - Sawn warping (control) joints @ 15’
 - Undowelled
 - Continuously Reinforced Concrete
 - 8” slab thickness
 - 6” to 8” soil cement or lime treated base
- (12’ slab widths with bituminous shoulders typical)

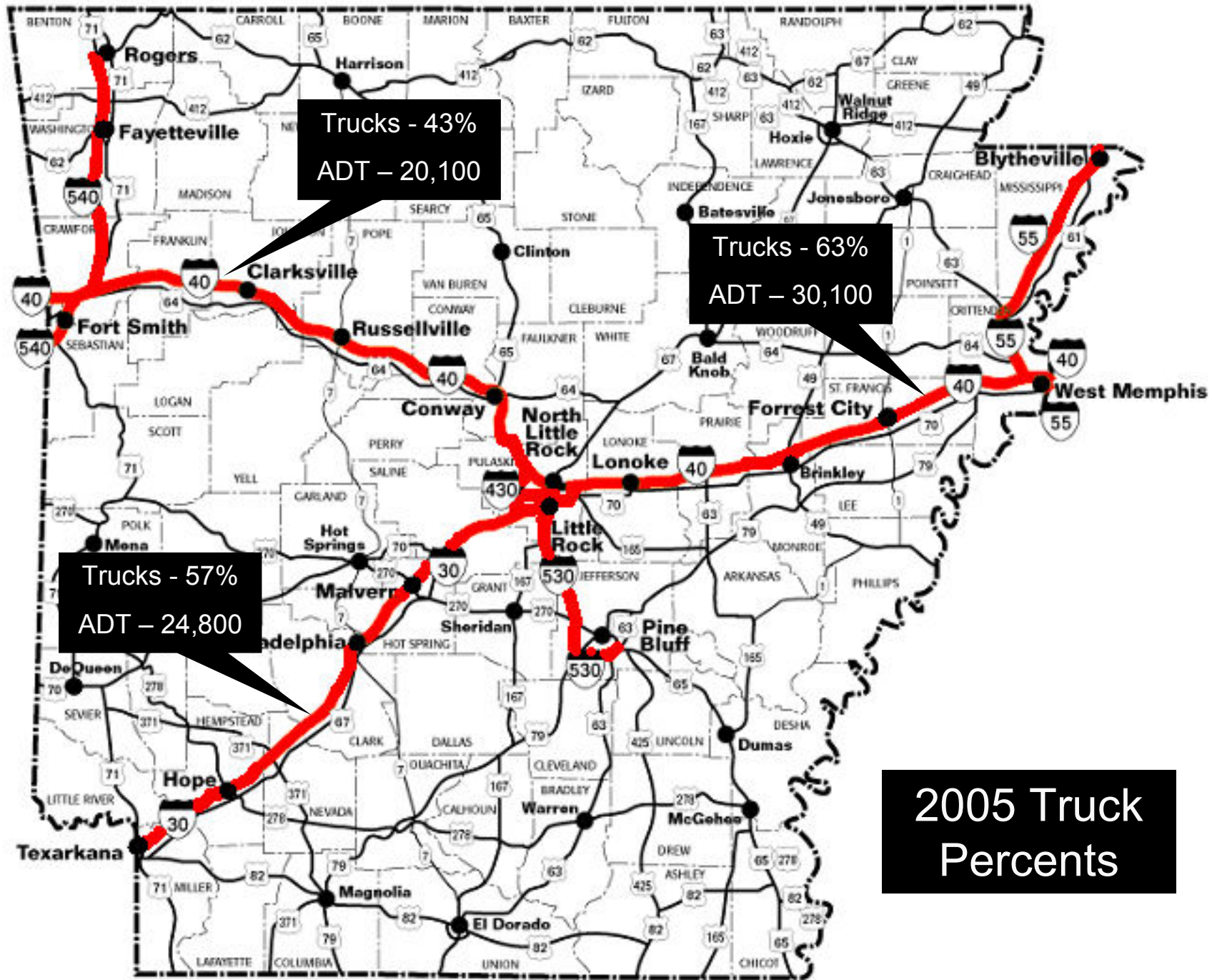
Typical Section of Original Interstate



Why the IRP?

Original Interstate

- In 1999 the average age of an Arkansas Interstate segment was 35 Years
- Typical rural segment designed for
 - 7% - 10% Trucks
 - 10,000 – 15,000 ADT
- Many segments had met their design traffic within 7 years



Trucks - 43%
ADT - 20,100

Trucks - 63%
ADT - 30,100

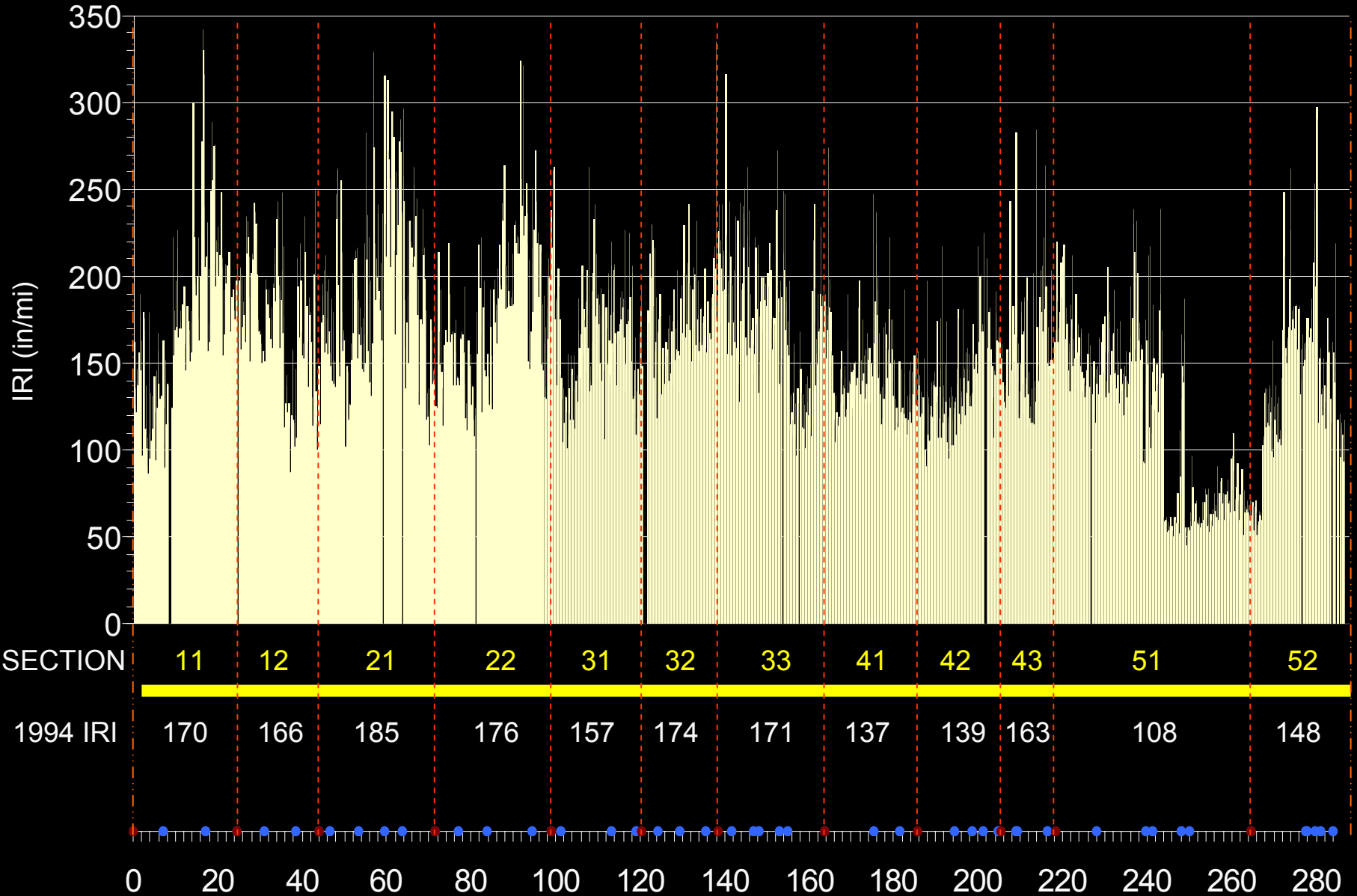
Trucks - 57%
ADT - 24,800

**2005 Truck
Percents**

Oklahoma
State Line

Interstate 40 IRI

Tennessee
State Line



Interstate Condition

- In 1994, using IRI “condition” data, Arkansas’ Interstate system ranked one of the 5 worst
- Ranked one of the worst states according to the trucking industry
- Arkansas typically rehabilitates 10 – 15 miles of Interstate pavements per year

Bond Information

- Approved by Arkansas voters in June 1999
 - 4:1 Margin
- \$575 Million in bonds
- \$950 Million in Improvements
 - Originally programmed - 379 miles
 - Actually let to contract – 359 miles

Bond Information

- Bonds were sold over three years
 - 2000 - 2002
- Work was scheduled to be completed within 5 years
- Program would rehabilitate 54% of the Arkansas Interstate system

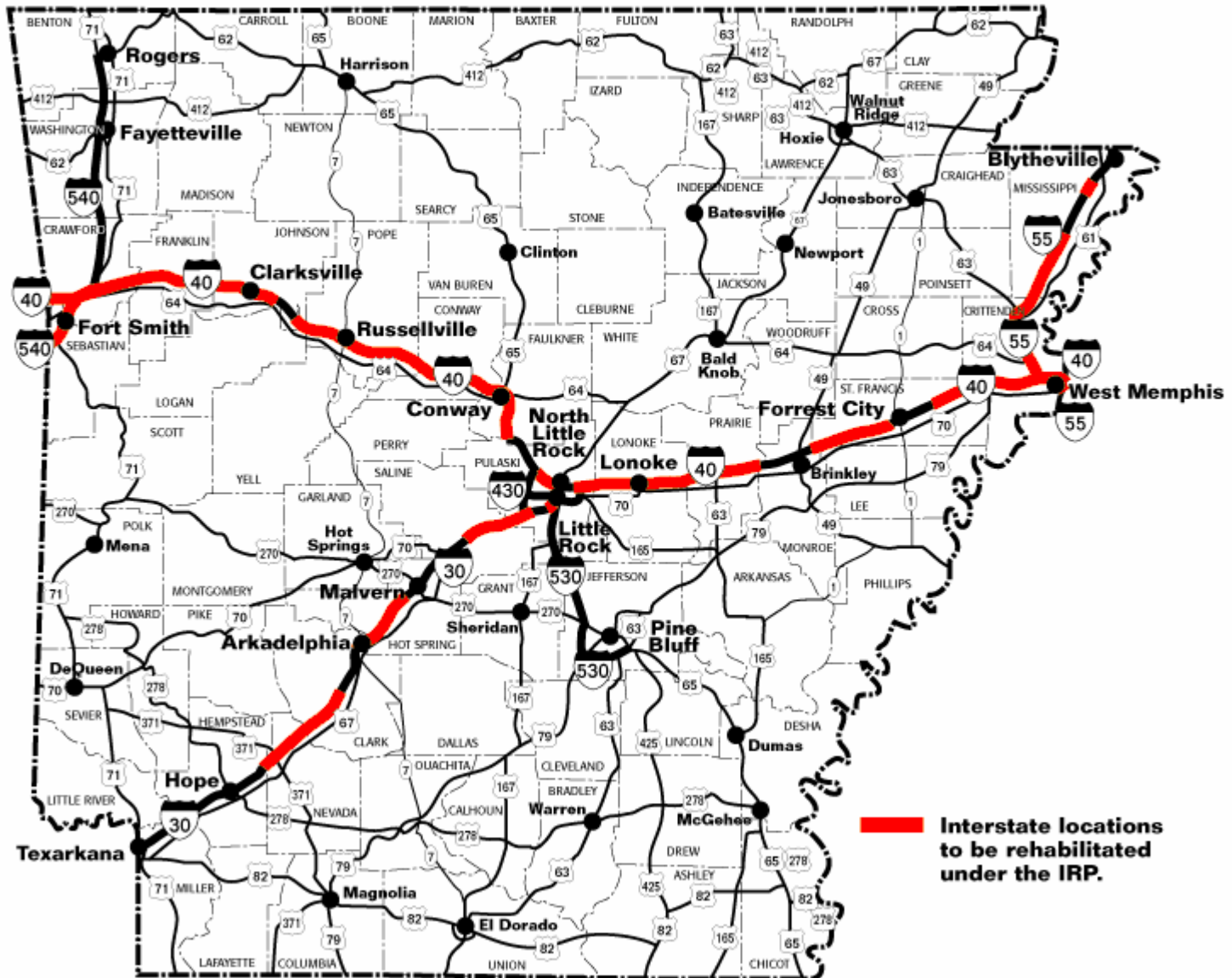
Major Design Issues

- Pavement Selection and Design
- Bridge Rehabilitation (*not covered here*)
- Maintenance of Traffic

Pavement Selection and Design

-- Rehabilitation Types --

Interstate Rehabilitation Program Overview



Rubblize and Overlay

-- 276 Miles --

- 4" ACHM Surface Course ($\frac{1}{2}$ ")
 - Placed in two lifts
- 3" ACHM Binder Course (1 ")
- 4" ACHM Base Course (1 $\frac{1}{2}$ ")
- 9" – 10" Rubblized PCCP

Jointed Concrete Pavement

-- 40 Miles --

- 14" Portland Cement Concrete Pavement
- 1" ACHM Binder Course (3/8 ")
- 6" Cement Stabilized Base Course
- Existing concrete pavement removed
 - Widened slab in truck lane to 14 feet
 - Dowels at all joints

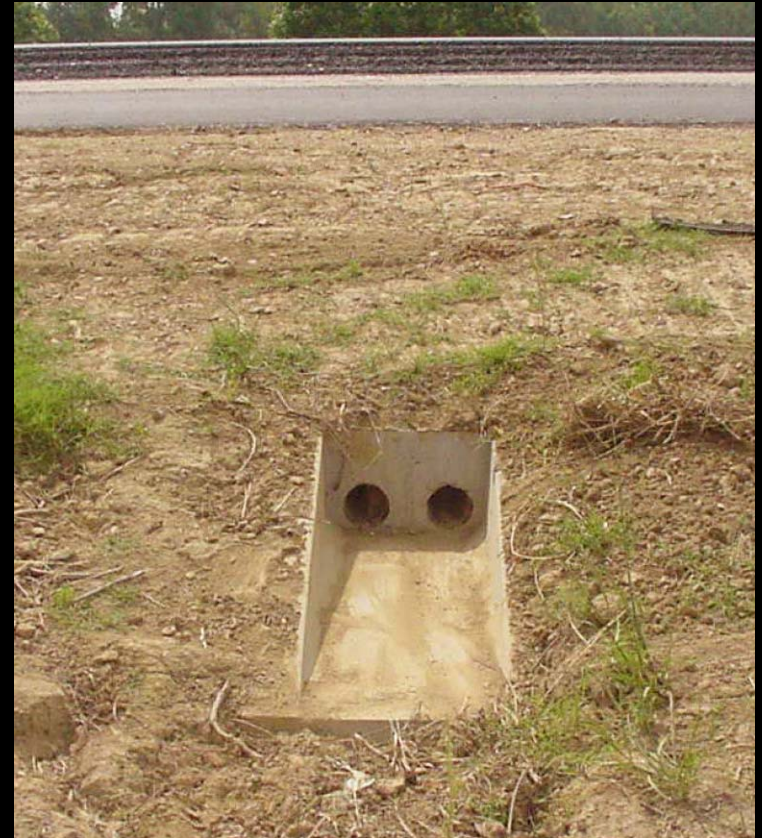
Mill and Inlay

-- 64 Miles --

- Cold mill existing ACHM surface
- 2" ACHM Surface Course (1/2 ")
- 4" ACHM Binder Course (1 ")

Rubblization

- Edge drain installation



Rubblization

Resonant Head Breaker



Multi-Head Breaker

Rubblization





Rubblization



Rubblization

Vertical Clearance



Rubblization



Maintenance of Traffic

Before Construction Began

- Public relations campaign using
 - Television infomercials
 - Radio spots
 - Internet web site
 - Newspaper spots





During Construction




- Motorists were made aware using
 - Television infomercials
 - Radio broadcasts
 - Internet web site
 - Newspaper spots
 - Billboards
 - Traffic control
 - Highway Advisory Radio (HAR)
 - Changeable message boards
 - Iowa Weave



"Pave the Way" Web Site

Netscape: AHTD's Pave The Way Program

Location: <http://www.arkansasinterstates.com>



Arkansas State Highway & Transportation Department

Traffic Zone **Safety Zone**
Info Zone **Fun Zone**

Rebuilding Arkansas Interstates

Quick Links

- Today's Lane Closures
- What's New on the Web Site
- Trivia Question - Win A Prize!
- AHTD Contacts List
- E-Mail/Fax Alert Registration

Welcome and thank you for taking the Pave the Way Web site about the Interstates in Arkansas.

We hope this Web site will give you an overview of the construction program and spell out the various ways you can plan ahead to make your journey through Arkansas easier.

Please come back and visit often since we will update this site continuously. It is the most complete reference to all of the information resources available to you about construction and delay updates.

And, please remember to *Think Ahead* — in order to make travel safer for you, your passengers and other motorists.

Traffic Zone | Safety Zone | Info Zone | Fun Zone | Site Map | Home

Arkansas State Highway & Transportation Department
 Phone: (501) 569-2000 E-mail: Info@ahtd.state.ar.us

Arkansas Interstate 40 Traffic Flow Indicators - Microsoft Internet Explorer

Address: <http://aimshost.net/i40m/CurrentTrafficConditions.htm>

Arkansas Interstate 40 Traffic Flow Indicators

Last updated May 05, 2006 11:20 am Central

In The Traffic Zone...

Click the location on list or point to symbol on map for current message or image.

Page updates about every 5 minutes.

Please refresh for the latest update.

Important Notice
 The information provided on this page is dependent on weather and construction factors, as well as the functioning of various electronic systems and thus may not always be accurate or

Signs

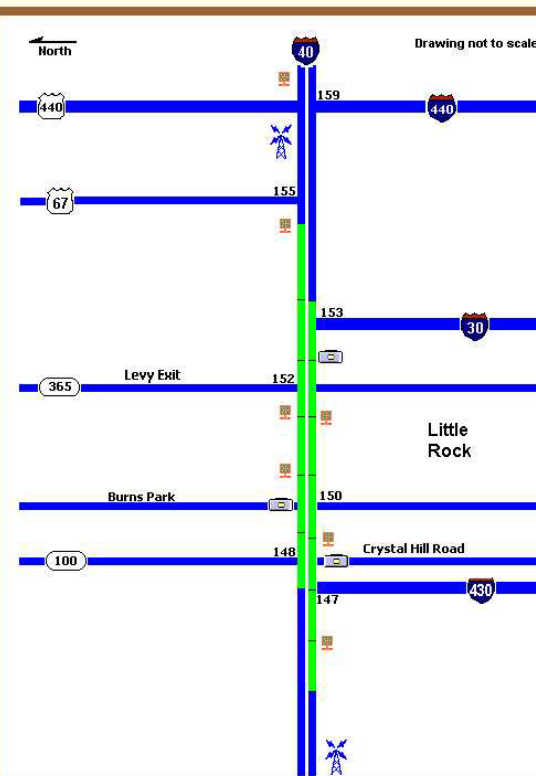
- EB I-40 at Exit 142
- EB I-40 before Exit 147 I-430
- EB I-40 before Burns Park Exit 150
- EB I-40 before Exit 153 I-30
- WB I-40 before Exit 159 I-440
- WB I-40 before Exit 154
- WB I-40 after Exit 153 I-30
- WB I-40 before Burns Park Exit 150

Radios

- At mile 143 broadcasting to western project area
- At mile 157 broadcasting to eastern project area

Cameras

- Looking west from Crystal Hill Road
- Looking east from Burns Park Interchange
- I-40 Eastbound Levy Bridge facing east



North

Drawing not to scale

Billboards

Think Ahead

There's a whole lot of paving going on.

9 Work Zones Next 140 Miles

pave the Way



SECT	HW	OP	D	L	W	TAPE
118	01	12	3	1	1	228
775	79.3	02/03/27				11669

To you, I'm a worker.
To my family, I'm everything.

Think Ahead **pave the Way**

Obey the signs or pay the fine.

DO NOT PASS

MERGE NOW

Think Ahead

Tune to 1680 AM now for work zone info.

Tune to 1680 AM now for work zone info.

2003 4 18

Highway Advisory Radio



“Pave The Way” Interstate Signage and Highway Advisory Radio Networks



This image and corresponding press release are available via the press kit at www.ArkansasInterstates.com

Changeable Message Boards



The Weave



DIST	CNTY	RTE	SECT	RM	OP	D	L	W	TAPE
08	015	040	310	01	72	3	1	1	316
167.186	167.182	77.7	02/12/12						134195







ARKANSAS
HIGHWAY
COMMISSION

THANK YOU
FOR YOUR
PATIENCE!

ANOTHER
PROJECT
COMPLETED!

FOR A
SMOOTHER
RIDE

Results of the IRP in Arkansas

Projects Let To Date

COMPLETED PROJECTS		
ROUTE	NUMBER OF PROJECTS	TOTAL MILES
I - 30	16	73.40
I - 40	26	225.63
I - 55	6	47.15
I - 540	1	6.71
PROJECTS UNDER CONSTRUCTION		
ROUTE	NUMBER OF PROJECTS	TOTAL MILES
I - 30	0	0.00
I - 40	1	6.44
I - 55	0	0.00
I - 540	0	0.00
TOTALS		
	SUBSTANTIALLY COMPLETE	352.89
	UNDER CONSTRUCTION	6.44
LET TO CONTRACT		359.33

Interstate Lane Miles By Surface

1999 – Pre IRP

- 2703 Total Lane Miles
 - PCCP
 - 1999 Miles
 - ACHM
 - 704 Miles

- 74% PCCP
- 26% ACHM

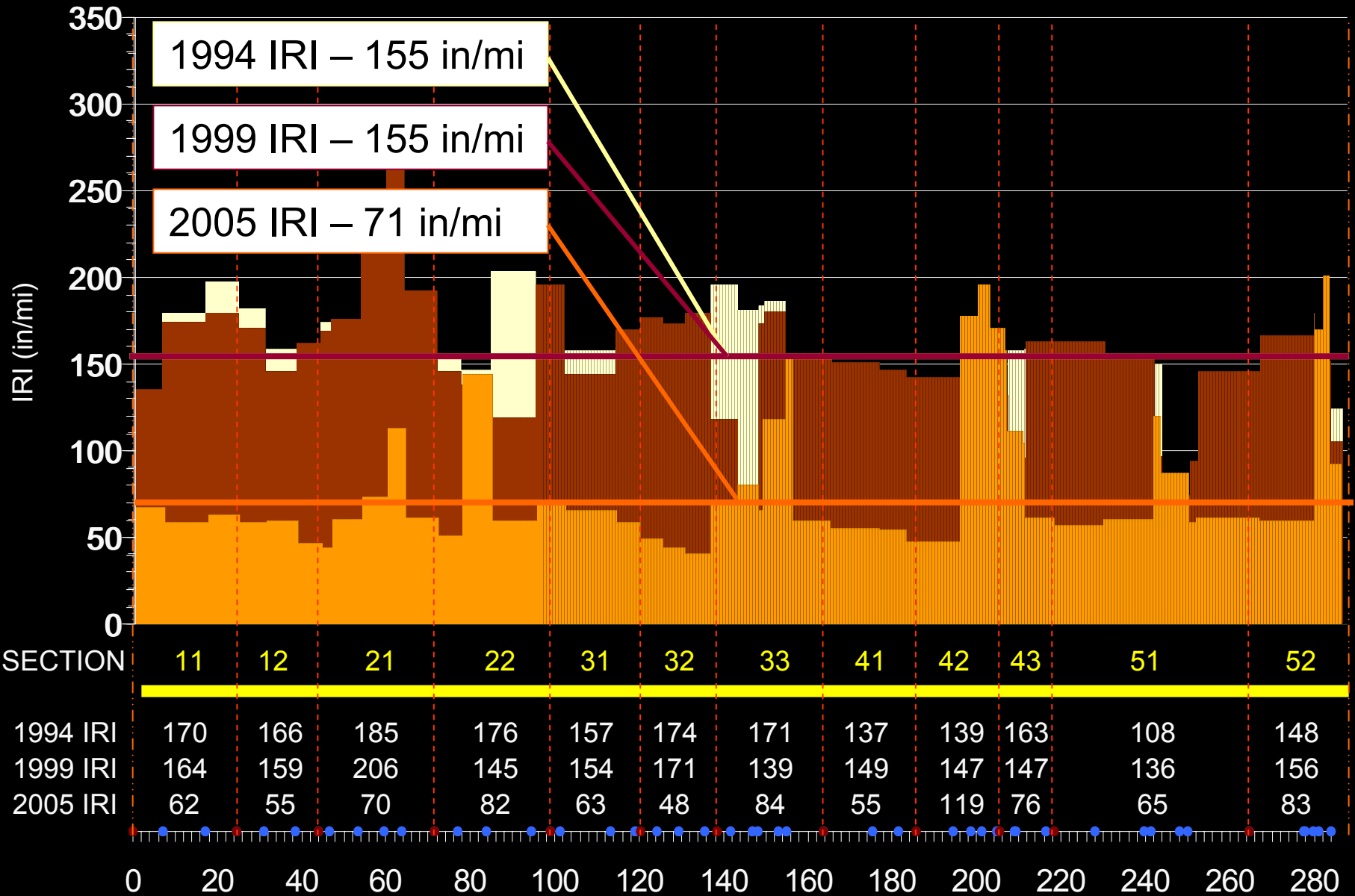
2005 – Post IRP

- 2756 Total Lane Miles
 - PCCP
 - 991 Miles
 - ACHM
 - 1765 Miles

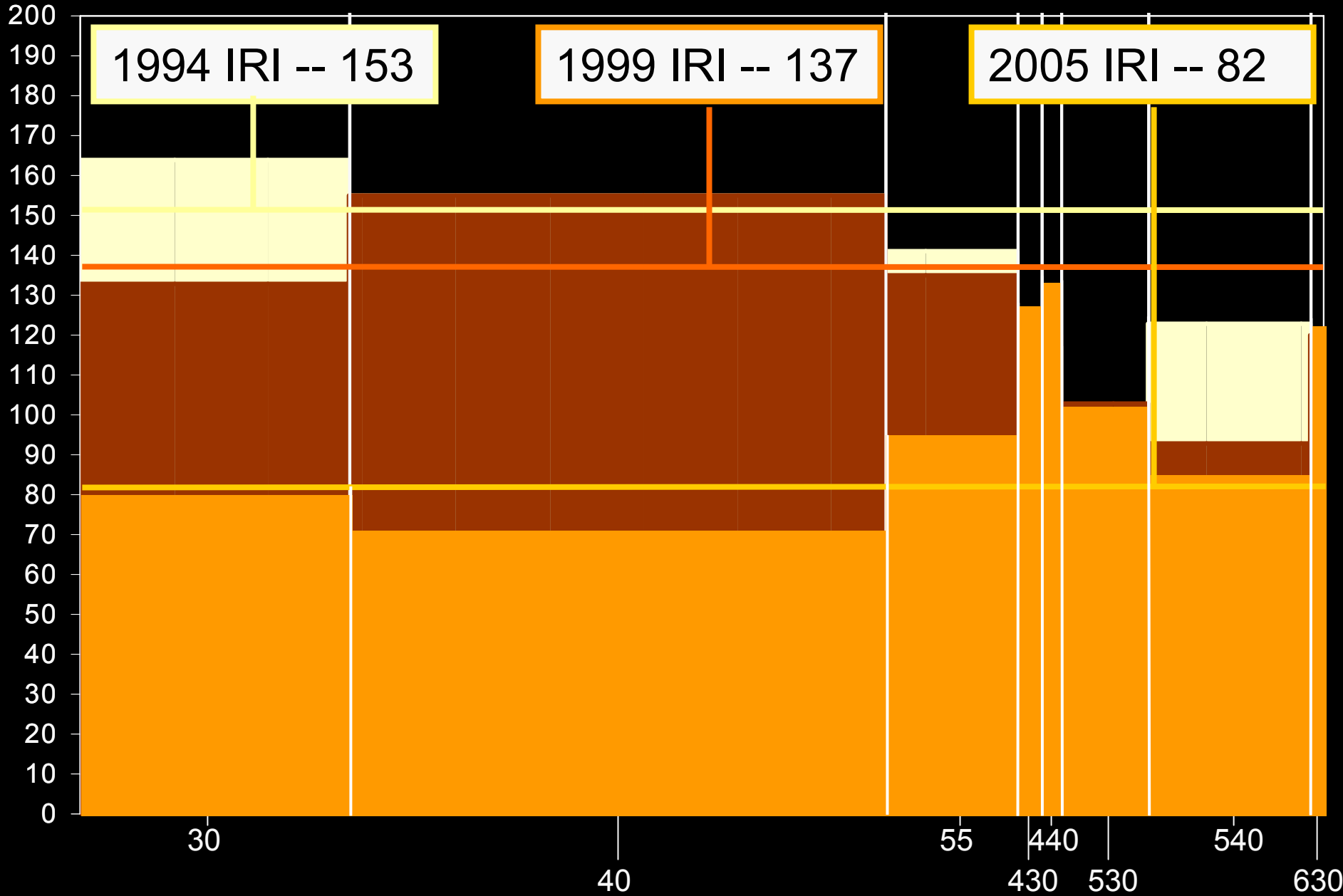
- 36% PCCP
- 64% ACHM

ORIGINAL INTERSTATE 100% PCCP

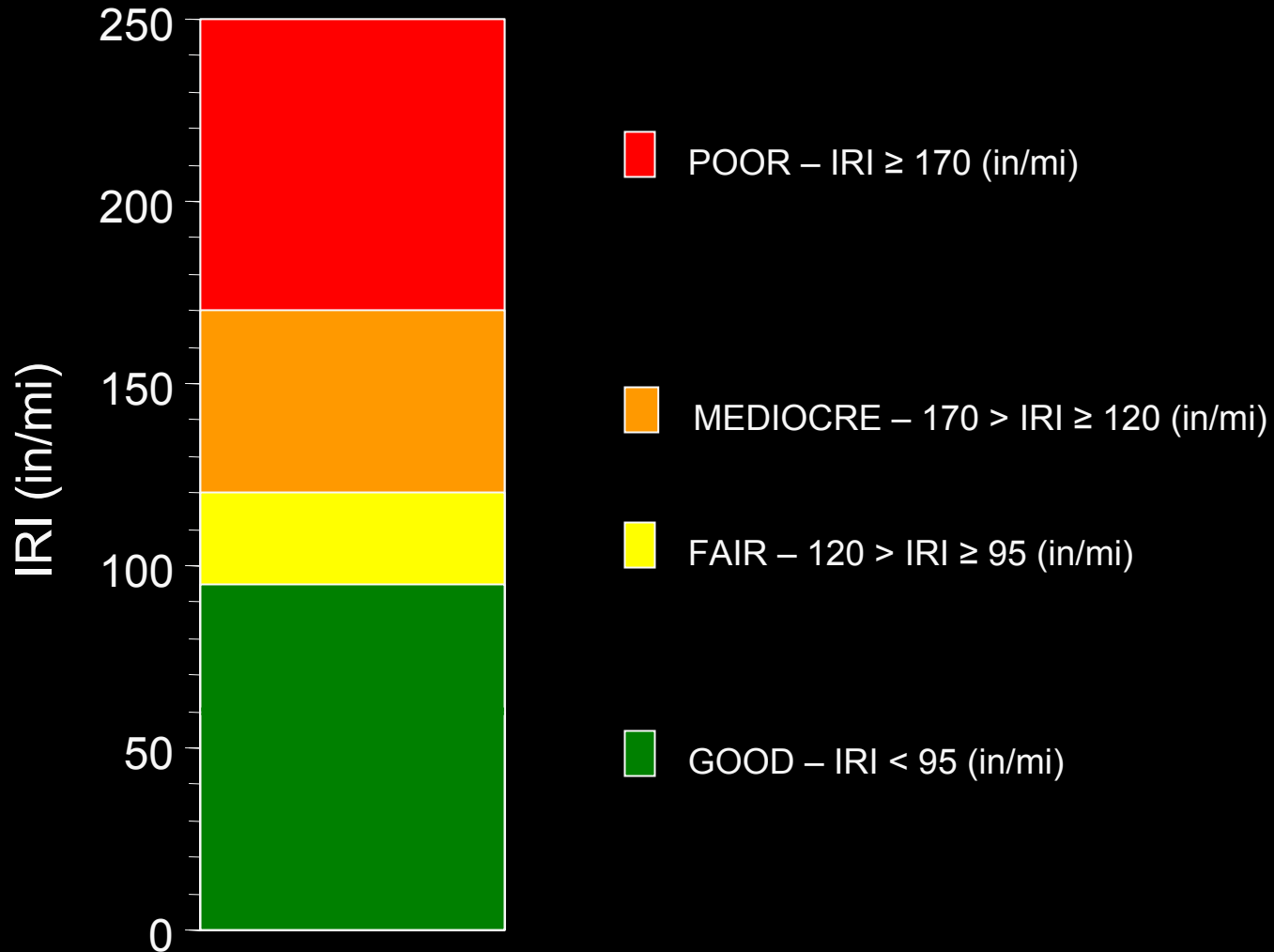
Interstate 40



OVERALL INTERSTATE IRI

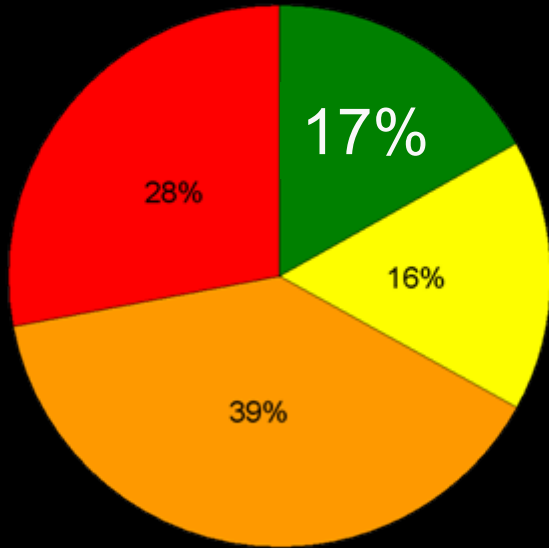


IRI "CONDITION" SCALE

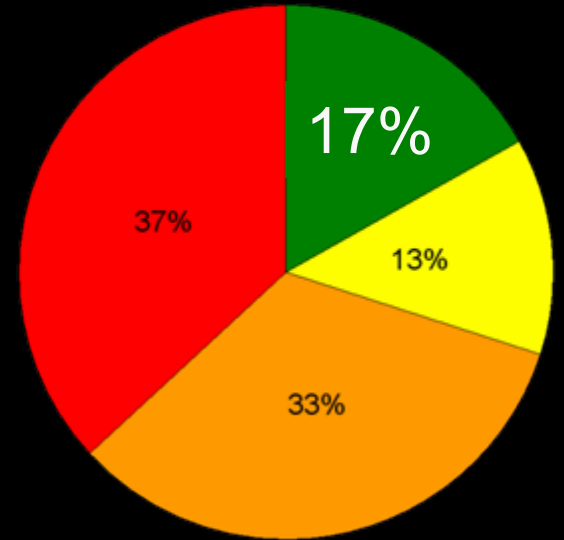


Interstate System IRI

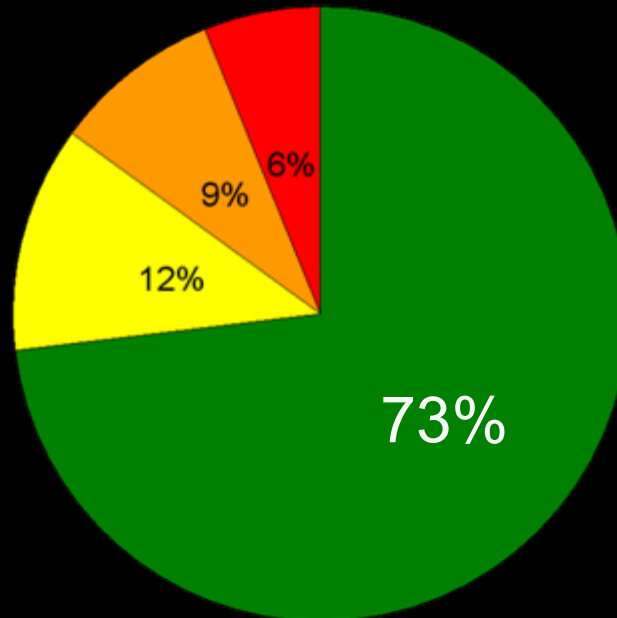
1994



1999



2006



QUESTIONS?



**Rebuilding Arkansas
Interstates**