



Environmental Assessment

ArDOT Job NO. CA0602

I-30 (From I-530/I-440 to I-40) and
I-40 (From Hwy. 365/MacArthur Dr. to Hwy. 67)
Pulaski County, Arkansas
May 2018



Environmental Assessment

I-530-Hwy. 67 (Widening & Reconst.) (I-30 & I-40)
Pulaski County, Arkansas
Federal Project Number ACNHPP-030-2(268)138

Submitted pursuant to:
The National Environmental Policy Act (NEPA)
42 U.S.C. §4332(2)(c) and 23 C.F.R. §771

U.S. Department of Transportation
FEDERAL HIGHWAY ADMINISTRATION
And
ARKANSAS DEPARTMENT OF TRANSPORTATION

In cooperation with the United States Coast Guard and United States Army Corps of Engineers

The following people may be contacted for additional information concerning this document:

Randal J. Looney
FHWA
700 W. Capitol Ave., Suite 3130
Little Rock, AR 72201-3298
(501) 324-6430

John Fleming
ArDOT
P.O. Box 2261
Little Rock, AR 72203-2261
(501) 569-2281

Approved For Public Availability



Randal J. Looney
Environmental Coordinator
Federal Highway Administration

6 / 6 / 2018
Date

In compliance with the National Environmental Policy Act, this Environmental Assessment (EA) describes proposed improvements to Interstate 30 from Interstate 530/Interstate 440 to Interstate 40 and along Interstate 40 from Highway 365 (MacArthur Drive) to Highway 67/167.

Comments should be directed to:

Mail: 30Crossing
Attn: Jon Hetzel
4701 Northshore Drive
North Little Rock, AR 72018

Email: info@30Crossing.com

This EA is also available for review online at: <http://www.arkansashighways.com>



Notice of Nondiscrimination

The Arkansas Department of Transportation (ArDOT) complies with all civil rights provisions of federal statutes and related authorities that prohibit discrimination in programs and activities receiving federal financial assistance. Therefore, the Department does not discriminate on the basis of race, sex, color, age, national origin, religion or disability, in the admission, access to and treatment in the Department's programs and activities, as well as the Department's hiring or employment practices. Complaints of alleged discrimination and inquiries regarding the Department's nondiscrimination policies may be directed to Joanna P. McFadden Section Head - EEO/DBE (ADA/504/Title VI Coordinator), P.O. Box 2261, Little Rock, AR 72203, (501) 569-2298 (Voice/TTY 711), or the following email address: Joanna.Mcfadden@arkansashighways.com

Americans with Disabilities Act (ADA) Information

Materials can be provided in alternative formats: large, print, Braille, or audiotape for people with disabilities by contacting ArDOT's EEO/DBE Section Head (ADA/504/Title VI Coordinator) at (501) 569-2298 (Voice/TTY 711), or at the following email address: EEO_DBE_Section_Head@ArDOT.ar.gov. Persons who are deaf or hard of hearing may contact ArDOT through the Arkansas Relay Service at 7-1-1.

A federal agency will publish a notice in the Federal Register, pursuant to 23 USC §139(I), indicating that one or more federal agencies have taken final action on permits, licenses, or approvals for a transportation project. If such notice is published, claims seeking judicial review of those federal agency actions will be barred unless such claims are filed within 180 days after date of publication of the notice, or within such shorter time period as is specified in the federal laws pursuant to which judicial review of the federal agency action is allowed. If no notice is published, then the periods of time that otherwise are provided by the federal laws governing such claims will apply.

1	TABLE OF CONTENTS	
2	Chapter 1 – Purpose & Need	1
3	1.1 What Is The 30 Crossing Project?.....	1
4	1.2 What Are the Existing Conditions In The Project Area?	2
5	1.3 How Is The Project Area Changing?	6
6	1.4 Why Does I–30 Need To Be Improved?.....	8
7	1.5 What Is The Purpose Of This Project?	22
8	1.6 What Is The Purpose Of This Environmental Assessment?.....	23
9	1.7 Who Is Leading This Project?	24
10	Chapter 2 – Alternative Development.....	25
11	2.1 What Are The Project Limits And How Were They Chosen?	25
12	2.2 What Alternatives Were Evaluated In This EA?	25
13	2.3 How Would The Project Affect Traffic And Safety?	43
14	2.4 How Is This Project Being Funded?	62
15	2.5 How Has The Public Been Involved?	63
16	2.6 How Have Tribal Governments Been Involved?.....	64
17	2.7 Which Of These Alternatives Will Be Considered?	64
18	Chapter 3 – Project Effects	66
19	3.1 How Would Economic Conditions In The Little Rock And North Little Rock	
20	Communities And Surrounding Areas Be Affected?	66
21	3.2 How Would The Project Affect Communities In The Area?	67
22	3.3 How Would The Project Affect Cultural Resources?	84
23	3.4 How Would The Project Affect Parks And Recreation Areas?	92
24	3.5 Would Noise Levels Change?	96
25	3.6 Would Utilities Be Affected?	101
26	3.7 How Would The Project Affect Railroads?	101
27	3.8 How Would The Project Affect Views?	102
28	3.9 Would Any Hazardous Materials Be Created Or Affected?	103
29	3.10 How Would Water Resources, Such As Streams, Be Affected?	104
30	3.11 Would The Project Cause Flooding In Surrounding Areas?.....	105
31	3.12 Would Any Wetlands Be Impacted By The Project?	108
32	3.13 Would Any Protected Species Be Impacted By The Project?	109
33	3.14 How Would The Project Affect Other Natural Resources?.....	109
34	3.15 Will The Project Have An Effect On Air Quality?.....	110
35	3.16 Does The Project Have Any Indirect And Cumulative Effects?.....	111
36	3.17 What Other Resources Were Examined But Not Found To Be Present Or	

1	Impacted?	116
2	Chapter 4 – Recommendations.....	117
3	4.1 What Are The Results Of This EA?	117
4	4.2 What Commitments Have Been Made?	120
5	4.3 Is The NEPA Process Finished?	123
6		
7	FIGURES	
8		
9	Figure 1: Project Location Map	3
10	Figure 2: Project Area	5
11	Figure 3: Alternate Modes of Transportation	7
12	Figure 4: Existing (2014) Morning Peak Traffic	10
13	Figure 5: Existing (2014) Afternoon Peak Traffic.....	11
14	Figure 6: Crashes in the Central Arkansas Region in 2014.....	13
15	Figure 7: Roadway Geometric Deficiencies	14
16	Figure 8: Crashes Along I-30 From 2012-2014	17
17	Figure 9: Types of Crashes on I-30	18
18	Figure 10: Structural Roadway Deficiencies.....	19
19	Figure 11: I-30 Arkansas River Bridge Deficiencies	20
20	Figure 12: Arkansas River Navigational Channel	22
21	Figure 13: 8-Lane General Purpose Action Alternative 1	29
22	Figure 14: 8-Lane General Purpose Action Alternative 1	31
23	Figure 15: 8-Lane General Purpose Action Alternative 1	32
24	Figure 16: 6-Lane With C/D Action Alternative 2	34
25	Figure 17: 6-Lane with C/D Action Alternative 2.....	35
26	Figure 18: 6-Lane with C/D Action Alternative 2.....	36
27	Figure 19: 8-Lane General Purpose with SPUI Action Alternative (1A).....	38
28	Figure 20: 6-Lane with C/D with SPUI Action Alternative (2A)	39
29	Figure 21: 8-Lane General Purpose with SDI Action Alternative (1B)	41
30	Figure 22: 6-Lane with C/D with SDI Action Alternative (2B).....	42
31	Figure 23: Future (2041) No-Action Morning Traffic.....	44
32	Figure 24: Future (2041) No-Action Afternoon Traffic	45
33	Figure 25: Future (2041) 8-Lane General Purpose with SPUI (Alt 1A) Morning Traffic.....	47
34	Figure 26: Future (2041) 8-Lane General Purpose with SPUI (Alt 1A) Afternoon Traffic	
35	48
36	Figure 27: Future (2041) 8-Lane General Purpose with SDI (Alt 1B) Morning Traffic ...	50
37	Figure 28: Future (2041) 8-Lane General Purpose with SDI (Alt. 1B) Afternoon Traffic	51
38	Figure 29: Future (2041) 6-Lane With C/D With SPUI (Alt 2A) Morning Traffic.....	53
39	Figure 30: Future (2041) 6-Lane with C/D with SPUI (Alt. 2A) Afternoon Traffic.....	54
40	Figure 31: Future (2041) 6-Lane with C/D with SDI (Alt 2B) Morning Traffic.....	56
41	Figure 32: Future (2041) 6-Lane with C/D with SDI (Alt. 2B) Afternoon Traffic	57
42	Figure 33: Funding Sources	62
43	Figure 34: Public Involvement Summary.....	63
44	Figure 35: ROW/ Permanent Easement Impacts	72
45	Figure 36: ROW/Easement Impacts (None on This Figure).....	73
46	Figure 37: ROW/Easement Impacts from the SPUI Alternatives.....	74

Table of Contents

1	Figure 38: ROW/Permanent Easement Impacts from the SDI Alternatives.....	75
2	Figure 39: ROW/Permanent Easement Impacts	76
3	Figure 40: ROW/Permanent Easement Impacts	77
4	Figure 41: ROW Impacts.....	78
5	Figure 42: ROW Impacts.....	79
6	Figure 43: EJ and LEP Populations Map.....	82
7	Figure 44: Historic Resources Within the APE	85
8	Figure 45: Historic Resources Within the APE	86
9	Figure 46: Historic Resources Within the APE	87
10	Figure 47: Historic Resources Within the APE	88
11	Figure 48: Historic Resources Within the APE	89
12	Figure 49: Historic Resources Within the APE	90
13	Figure 50: Historic Structures Within the APE	91
14	Figure 51: Parks	94
15	Figure 52: I-30 Noise Barrier Locations in Little Rock	99
16	Figure 53: I-30 Noise Barrier Location in North Little Rock	100
17	Figure 54: Fiber Optic Transfer Building.....	101
18	Figure 55: Potential Floodplain Compensation Areas for Fourche Creek.....	106
19	Figure 56: Potential Floodplain Compensation Areas for Dark Hollow	107
20		
21	TABLES	
22		
23	Table 1: Average Daily Traffic in Downtown Little Rock (vehicles per day).....	58
24	Table 2: Results of Predictive Crash Analysis.....	60
25	Table 3: NEPA Public Meeting Summary.....	64
26	Table 4: ROW Impacts	70
27	Table 5: Acquisition from Parks.....	95
28	Table 6: Number of Noise Receptors Impacted	97
29	Table 7: Proposed Noise Barriers	97
30	Table 8: Peak Hour Travel Times to Downtown Little Rock Destinations.....	112
31	Table 9: Average Daily Traffic.....	114
32	Table 10: Comparison of Effectiveness of Alternatives in Meeting Project Goals	118
33	Table 11: Comparison of Impacts of the Project Alternatives.....	119
34		
35		

APPENDICES

1	
2	
3	Appendix A: Indirect Effects Technical Report
4	Appendix B: IJR Traffic Results and Safety Analysis
5	Appendix C: Alternatives Technical Report
6	Appendix D: PEL Public Involvement Summary
7	Appendix E: EA Public Involvement Summary
8	Appendix F: Community Impacts Technical Report
9	Appendix G: Phase I Cultural Resources Survey and Built Environment Resources
10	Effects Analysis Technical Report
11	Appendix H: Section 4(f) Evaluations
12	Appendix I: Traffic Noise Technical Report
13	Appendix J: Utility Technical Memorandum
14	Appendix K: Visual Impacts Technical Report
15	Appendix L: Hazardous Materials Report
16	Appendix M: Streams and Wetlands Report
17	Appendix N: Water Quality Technical Memorandum
18	Appendix O: Floodplain Technical Memorandum
19	Appendix P: USFWS Concurrence Letter 4-14-16
20	Appendix Q: MSAT Technical Report
21	Appendix R: Cumulative Effects Technical Report

Acronym	Definition
ArDOT	Arkansas Department of Transportation
CAP	Connecting Arkansas Program
NEPA	National Environmental Policy Act
PEL	Planning and Environmental Linkages
MPO	Metropolitan Planning Organization
MSA	Metropolitan Statistical Area
UPRR	Union Pacific Railroad
USACE	United States Army Corps of Engineers
USCG	United States Coast Guard
ICA	Imagine Central Arkansas
LRMTP	Long Range Metropolitan Transportation Plan
IJR	Interchange Justification Report
MOE	Measures of Effectiveness
MKARNS	McClellan-Kerr Arkansas River Navigation System
EA	Environmental Assessment
C/D	Collector/Distributor
SPUI	Single Point Urban Interchange
SDI	Split Diamond Interchange
LOS	Level of Service
ROW	Right of Way
NHPP	National Highway Performance Program
IRP	Interstate Rehabilitation Program
FB	Federal Bridge
TWG	Technical Working Group
EJ	Environmental Justice
LEP	Limited English Proficiency
EO	Executive Order
AHPP	Arkansas Historic Preservation Program
SHPO	State Historic Preservation Officer
NRHP	National Register of Historic Places
APE	Area of Potential Effect
PA	Programmatic Agreement
MOA	Memorandum of Agreement
AVE	Area of Visual Effect
ADEQ	Arkansas Department of Environmental Quality
EPA	Environmental Protection Agency
OSHA	Occupational Safety and Health Administration
CWA	Clean Water Act
FWS	United States Fish and Wildlife Service
NAAQS	National Ambient Air Quality Standards
MSAT	Mobile Source Air Toxic

Chapter 1 – Purpose & Need

What's in Chapter 1?

Chapter 1 explains the purpose of the project, why improvements to Interstate 30 (I-30) and Interstate 40 (I-40) are needed, and who is leading the project.

1.1 What Is The 30 Crossing Project?

Approved by Arkansas voters, the Arkansas Department of Transportation (ArDOT) is implementing an accelerated State Highway Construction and Improvement Program named the Connecting Arkansas Program (CAP). A major component of the CAP is to implement a project to improve a portion of Interstate 30 (I-30) from Interstate 530 (I-530) and Interstate 440 (I-440) to Interstate 40 (I-40), including the I-30 Arkansas River Bridge, and a portion of I-40 from Highway (Hwy.) 365 (MacArthur Drive) to US Highway (Hwy.) 67/167 including associated interchanges. This National Environmental Policy Act (NEPA) Study incorporates the results of the Planning and Environmental Linkages (PEL) Study begun in April 2014 by ArDOT. The PEL Study identified the purpose and need for improvements to I-30 and I-40 and evaluated possible viable alternatives to carry forward into this NEPA Study.

The identified method of delivery of the project is **Design-Build**. In Design-Build, the design-builder is permitted to incorporate innovation into final design, as long as the project purpose and need, environmental commitments and contractual obligations are met. This allows for innovation and cost efficiency.

What is **Design-Build**?

Design-Build is delivery system used for transportation projects. The design and construction services are contracted with a single entity, called the design-builder.

1.2 What Are the Existing Conditions In The Project Area?

State of Arkansas

The project area includes the junctions of multiple interstates that form a crucial part of the nation's interstate highway system (**Figure 1**). I-30 enters the state at the Texas border in Texarkana and ends at the I-40 interchange in North Little Rock. I-530 begins in Pine Bluff and ends in Little Rock at I-30. I-40 enters the state in Fort Smith, at the Oklahoma border, passes through North Little Rock, and exits the state in West Memphis, Arkansas, at the Tennessee border. The **controlled access** portion of Hwy. 67 begins in North Little Rock at I-40 and ends in Walnut Ridge.

What is **controlled access**?

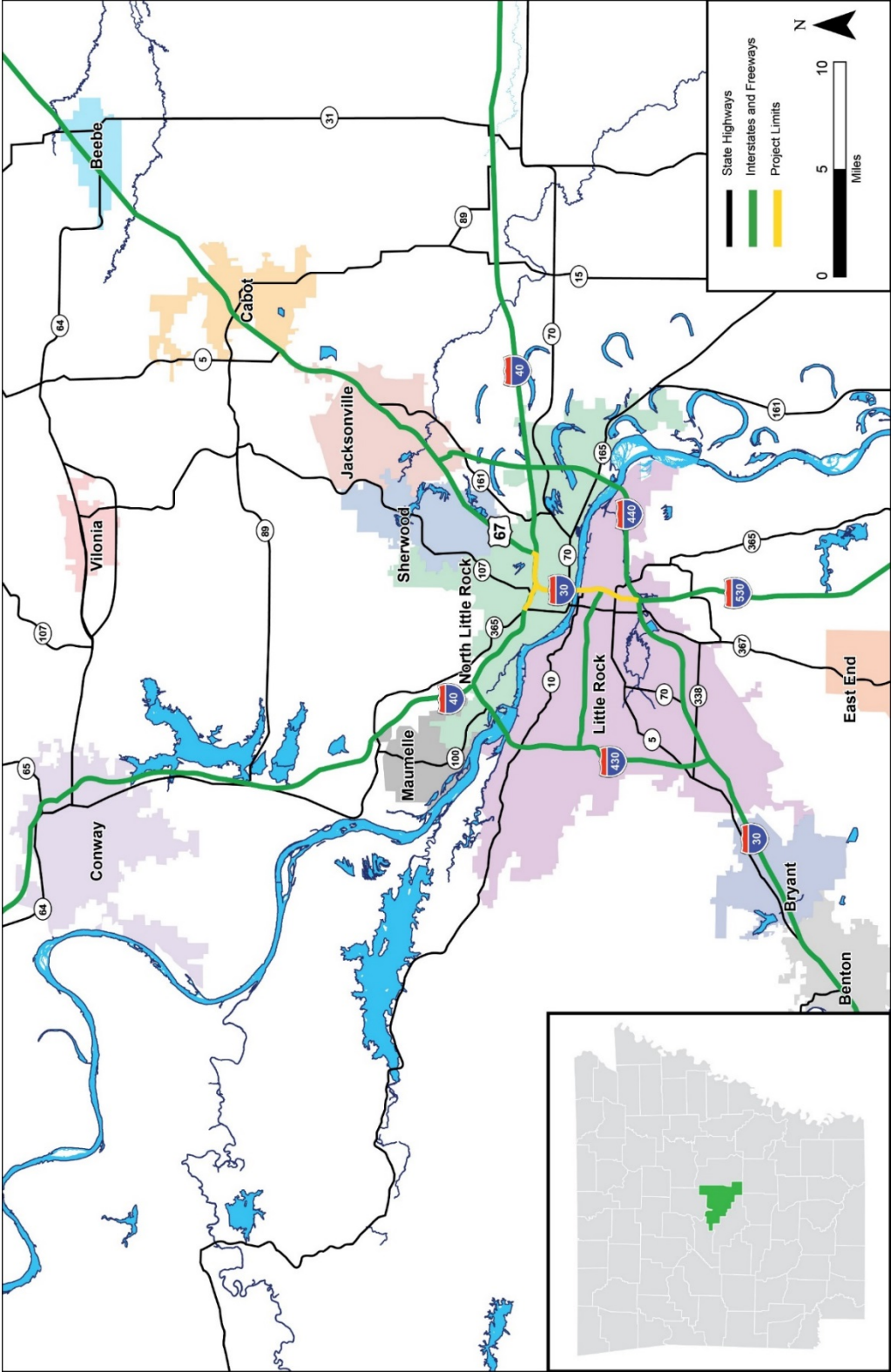
A controlled access highway is a roadway designed for high speed traffic, where access to the roadway is limited to specific locations.

Project Area

The project is located in the Central Arkansas Regional Transportation Study (CARTS) area, which includes all of Faulkner, Pulaski, and Saline Counties, as well as portions of Lonoke County. Metroplan is the designated metropolitan planning organization (MPO) for the region. Pulaski County is part of the Little Rock-North Little Rock Metropolitan Statistical Area (MSA) that is the political, economic, and transportation center of the state of Arkansas. Little Rock is the state capital and largest city (population of 193,524 according to the 2010 Census) in Arkansas, also serving as the county seat of Pulaski County. Little Rock is a regional employment center, with some of the major employers being the State of Arkansas, City of Little Rock, the federal government, and the University of Arkansas for Medical Sciences. North Little Rock had a population of 65,538 according to the 2010 Census, and also is home to several large businesses including the Union Pacific Railroad (UPRR). The project area is urbanized and primarily comprised of commercial and residential properties. There are undeveloped wetland areas in the southern and northern portions of the project area. Some of the prominent community features in the project area are the Verizon Arena, William J. Clinton Presidential Center and Park, Heifer International, and Little Rock River Market.

1
2

Figure 1: Project Location Map



3
4

Source: Project Team, April 2017.

1 The project, shown in **Figure 2**, consisting of portions of I-30 and I-40, is one of the critical
2 links of the Central Arkansas Freeway System. It connects communities within the Central
3 Arkansas Region and serves local, regional and national travelers with varied destinations
4 and trip purposes.

5 The I-30 corridor generally consists of three main lanes in each
6 direction with parallel one-way discontinuous frontage roads on
7 each side of the interstate within the right-of-way along the outer
8 edge. In the northern portion of the project area, the I-40 corridor
9 consists of three to four main lanes in each direction with parallel
10 one-way frontage roads on each side of the interstate between
11 the I-30/I-40 interchange and North Hills Boulevard (Blvd.).
12 Within the project area, both I-30 and I-40 are classified as
13 interstates, which are the highest classification of **principal**
14 **arterials**. Within the 7.3-mile corridor, there are four system
15 (connections between interchanges) interchanges:

- 16 • I-30 with I-530 and I-440
- 17 • I-30 with I-630
- 18 • I-30 with I-40
- 19 • I-40 with Hwy. 67/167

20 I-30 serves state and regional traffic passing through Little Rock and North Little Rock, but
21 also provides significant local access to the downtown areas. I-30 and I-40 are the most
22 highly traveled roads in Arkansas. Within the project area, the busiest roadway segment
23 is I-40 east of North Hills Blvd, with average daily traffic of 124,000 vehicles per day.
24 Approximately 18% of the traffic is “through” traffic, which consists of vehicles moving
25 through the project area that have both an origin and destination outside of the project
26 area. Of the travelers within the project area coming from the north, more than half are
27 destined for the downtown area of North Little Rock and Little Rock. Daily truck traffic in
28 the project area varies from 6% on I-30 at the Arkansas River Bridge to 9% on I-40. I-40
29 is an important freight corridor.

What is a principal arterial?

Urban principal arterials, such as I-30 in the project area, carry high volumes of traffic entering and leaving the urban area or connecting business districts and outlying residential areas. They also provide connections for rural arterials and connectors at the urban boundary.

Figure 2: Project Area



1 There are seven **service interchanges** providing access to the
2 local streets, and multiple locations where I-30 crosses local
3 streets without providing access. The UPRR crosses the project
4 area at two locations.

What is a **service interchange**?

A service interchange connects a freeway to one or more roadways that are not freeways.

5 The I-30 Arkansas River Bridge provides one of three vehicular
6 crossings in downtown Little Rock/North Little Rock over the
7 Arkansas River (**Figure 2**). The Arkansas River is an important shipping channel and is
8 maintained by the United States Army Corps of Engineers (USACE). The United States
9 Coast Guard (USCG) is responsible for navigation in the Arkansas River and for permitting
10 of bridges on the Arkansas River.

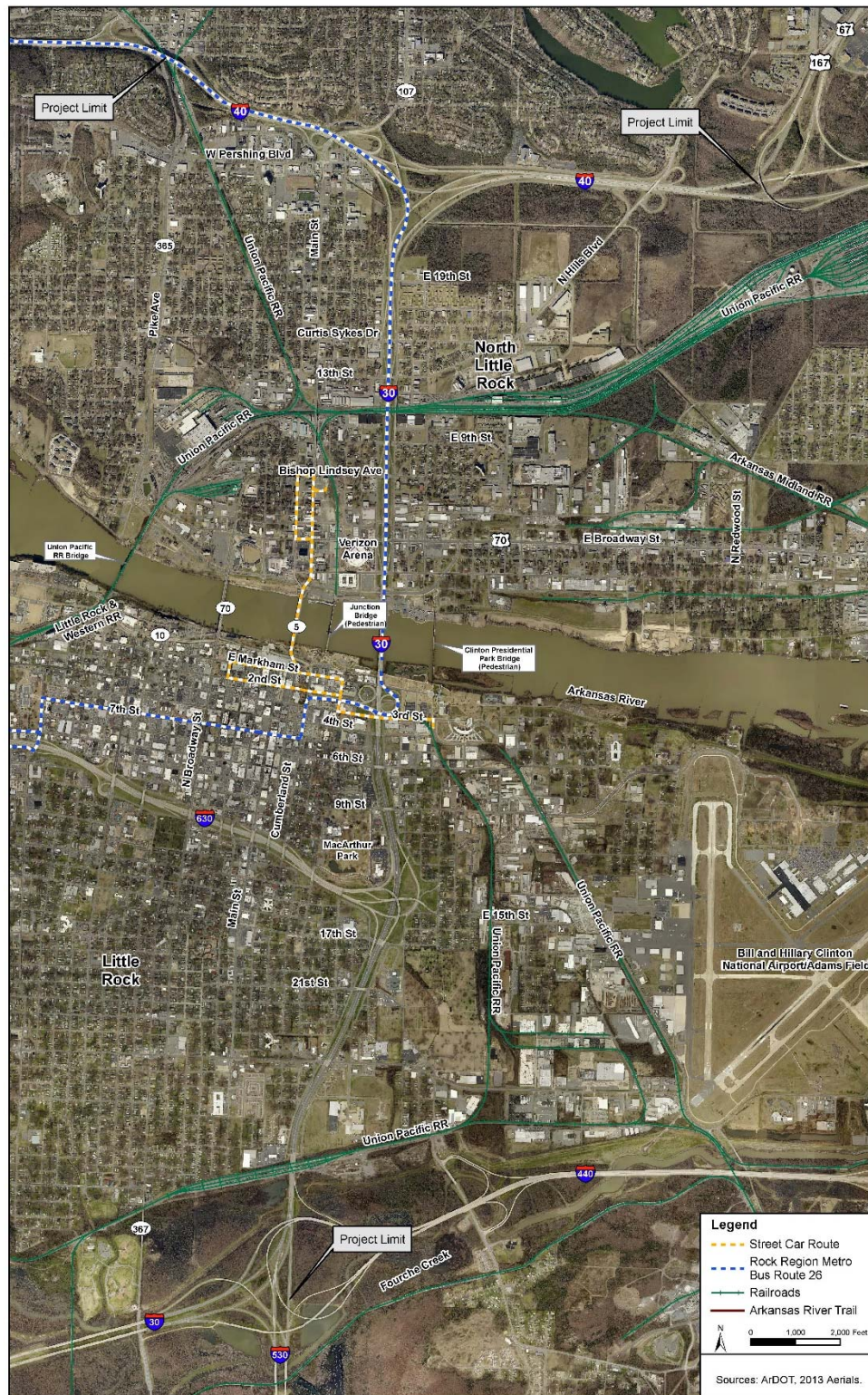
11 Routes for alternate modes of transportation are shown in **Figure 3**. There are three bus
12 routes on I-30 south of the Arkansas River and one on I-30 north of the Arkansas River,
13 all run by a public transit system (Rock Region Metro). Pedestrian facilities are well
14 developed in the project area, with the two bridges closest to the I-30 Arkansas River
15 Bridge being restricted to pedestrians and bicycles. There is also a network of bicycle
16 facilities, including the Arkansas River Trail, which crosses the corridor along both sides
17 of the Arkansas River. North Hills Blvd. is the only local street that does not allow
18 pedestrians to cross I-30 and I-40 within the project area.

19 1.3 How Is The Project Area Changing?

20 The project is located in a highly-urbanized area that is experiencing slow but steady
21 population growth. According to *MetroTrend (July 2017)*, a publication by Metroplan, the
22 six-county metropolitan area has grown by 5.5 % since the 2010 census, which is faster
23 than 4.5 % growth for the U.S. overall. Saline County remains the fastest-growing county
24 in the four-county Central Arkansas region (Saline, Faulkner, Lonoke, and Pulaski
25 Counties) while Faulkner County is the second fastest-growing county. Pulaski County is
26 the slowest-growing county in Central Arkansas. According to *Imagine Central Arkansas*
27 *(ICA)*, the *2040 Long Range Metropolitan Transportation Plan (LRMTP)* (Metroplan, June
28 2017), Central Arkansas is expected to grow from 671,400 people to almost one million
29 people by 2040, with most of this growth expected in the counties surrounding Pulaski
30 County. The current growth patterns through the project area are described in a separate
31 *Indirect Effects Technical Report* prepared for this project (**Appendix A**).

1

Figure 3: Alternate Modes of Transportation



2
3
4

Source: Project Team, May 2017.

1.4 Why Does I-30 Need To Be Improved?

Existing and Projected Traffic Conditions

Since 2002, Metroplan has reported that heavy congestion levels exist on I-30 and I-40 and recommended interchange improvements at I-30/I-630, I-40/I-30 and I-40/Hwy. 67. Up until January 2012, it also reported the need to widen I-30 and I-40 to ten lanes from I-630 to Hwy. 67/167 as indicated in Metroplan's Congestion Management Process Reports. Furthermore, the same recommendation was indicated in the *2003 Central Arkansas Regional Transportation Study – Areawide Freeway Study*. In recognizing the continual growth in population and economy, Metroplan in ICA, identified a series of strategies to support this growth from a transportation infrastructure perspective. They are:

- Roadway – plan for and construct operational improvements, widening, and new facilities
- Transit – implement regional and local transit services
- Bicycles – provide for bicycle options
- Pedestrians – provide pedestrian facilities
- Maintenance of Facilities – promote routine maintenance, rehabilitation and repair, transit maintenance and operations, and bicycle facility maintenance

Furthermore, ICA recommends interchange improvements as top projects for the area's freeways. It also recognizes the need for "projects on freeways and arterials where additional travel lane capacity may be necessary to address recurring congestion or elimination of **bottlenecks**." Based on the observed and forecast growth patterns, the regional growth will result in an increase in trips into and out of the downtown areas of Little Rock and North Little Rock, with most of this traffic depending on the I-30/I-40 corridor. As a result, the project was identified as a roadway improvement strategy to support the region's economic vitality.

What is a **bottleneck**?

A bottleneck is a segment of roadway where congestion is so severe that speeds on a large portion of the roadway approaching the bottleneck location are reduced as well.

To assist in evaluating traffic operations for the existing and future conditions in the project area, a traffic micro-simulation tool was used. Detailed information on the traffic and safety analyses can be found in the *Interchange Justification Report (IJR) Traffic Results and*

1 *Safety Analysis* in **Appendix B**. By collecting real time data on traffic movement through
2 the corridor, the traffic simulation model was calibrated to make sure that it accurately
3 represents existing conditions. The calibrated model was then used to evaluate how the
4 anticipated increases in traffic volumes would affect future traffic conditions in the design
5 year, 2041.

6 Using speeds and travel times as part of the measures of effectiveness (MOE's), the model
7 shows that, during the morning peak hour of 7:15-8:15 AM, I-40 westbound between Hwy
8 67 and I-30; and I-30 southbound from I-40 to downtown Little Rock; have high levels of
9 congestion, with speeds significantly reduced and delays almost twice as long as free flow
10 travel (**Figure 4**). I-30 northbound from the I-530/I-440 interchange to the I-630
11 interchange, is also highly congested in the morning peak hour. In the afternoon peak hour
12 of 4:30-5:30 PM, I-30 northbound between I-630 and I-40 is highly congested, with delays
13 and reductions in speed (**Figure 5**). I-30 southbound approaching the I-530/I-440
14 interchange is also highly congested in the afternoon peak.

Figure 4: Existing (2014) Morning Peak Traffic



Source: Project Team, June 2017.

Figure 5: Existing (2014) Afternoon Peak Traffic



Source: Project Team, June 2017

Roadway Safety

I-30 and I-40 within the project corridor have some of the highest densities of crashes in central Arkansas on its interstates and freeways. (**Figure 6**).

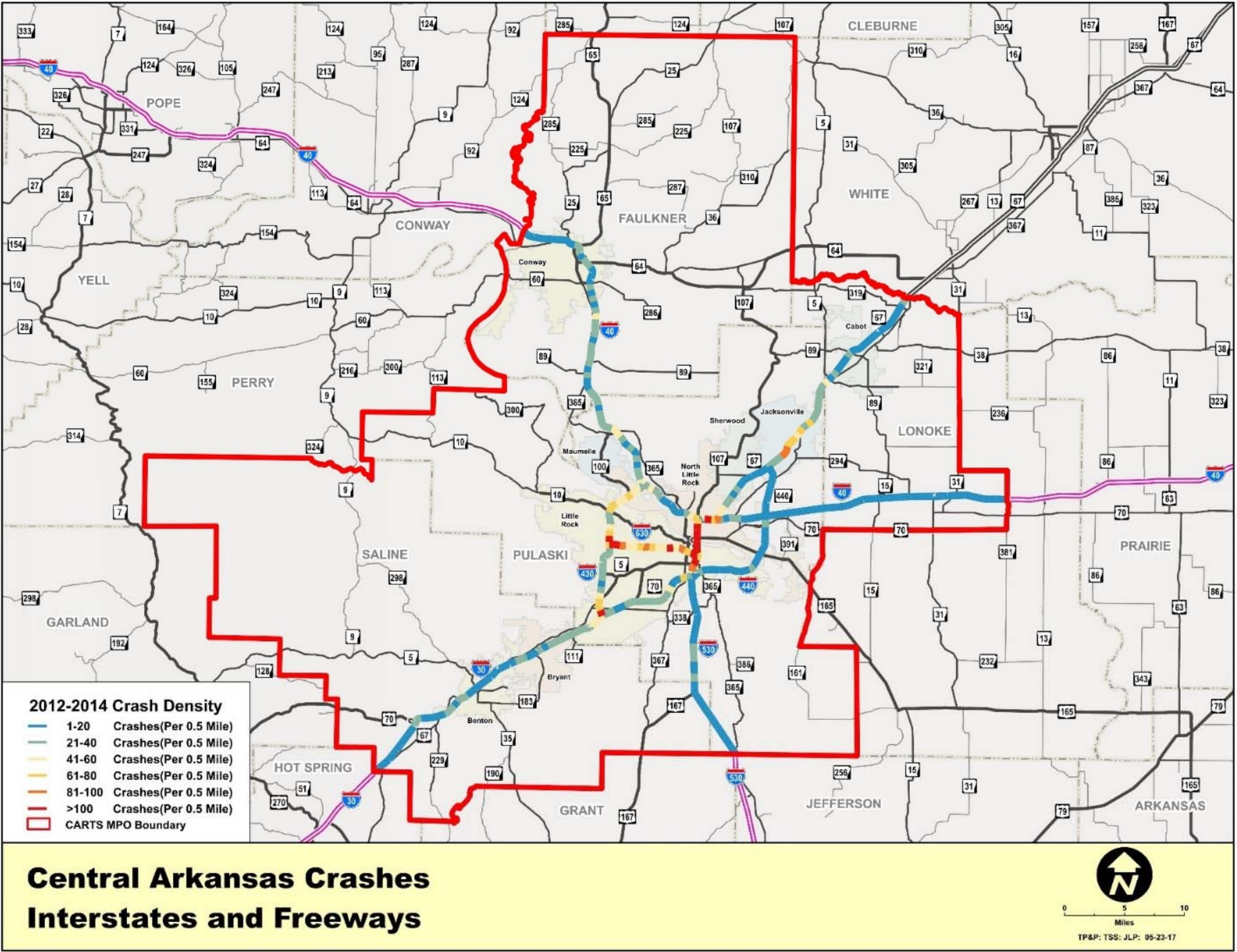
Roadway characteristics that do not meet the minimum standard that is necessary for safe travel are known as geometric deficiencies. Among the roadway geometric deficiencies that have been identified as contributing to an unsafe roadway corridor are:

- ramp lengths that are too short,
- interchanges that are too close together,
- curves that are too sharp,
- left exits,
- and shoulders that are missing or not wide enough.

These roadway geometric deficiencies are shown in **Figure 7** and described in detail below.

1

Figure 6: Crashes in the Central Arkansas Region in 2014



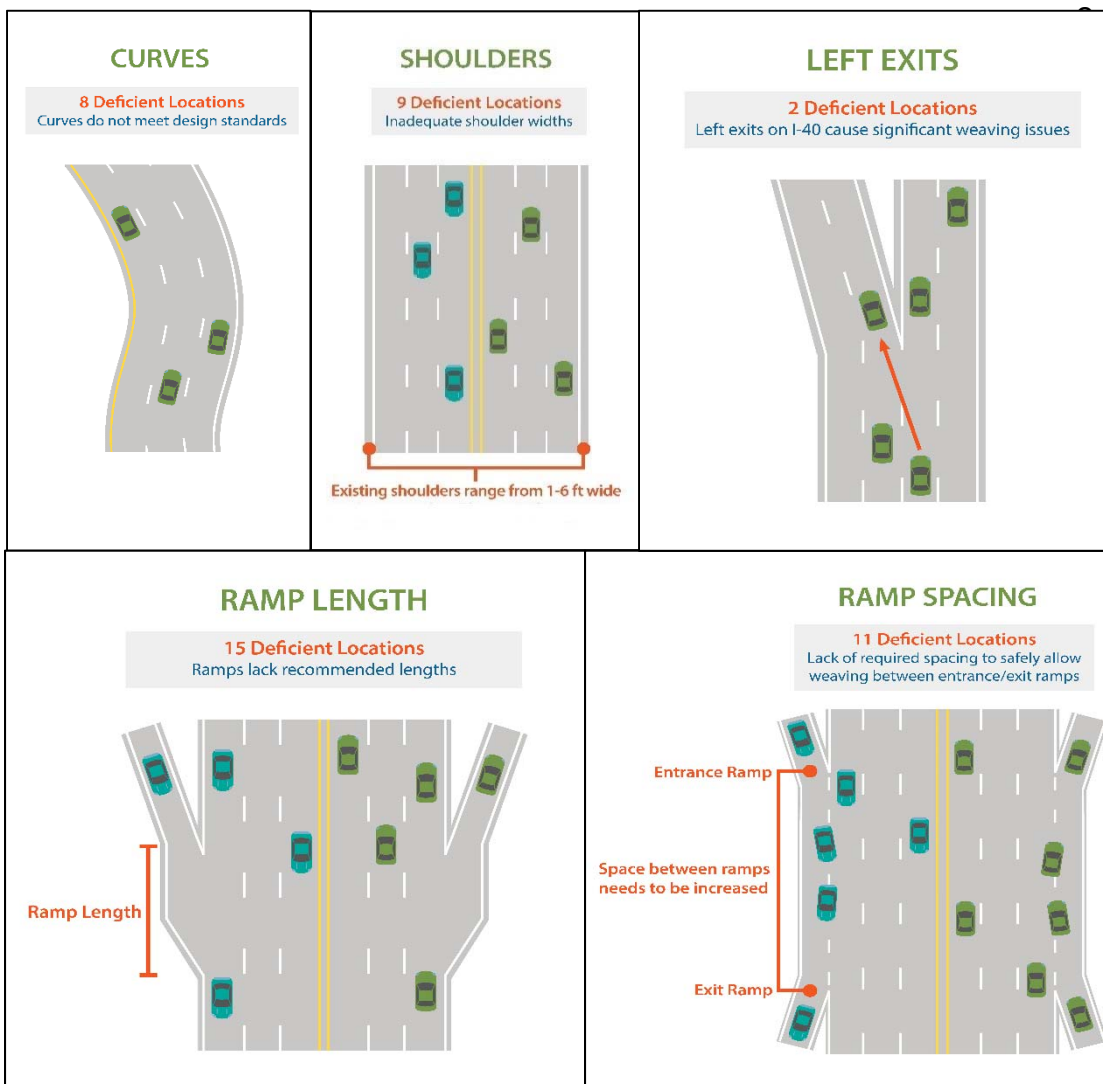
2

3

Source: Project Team, June 2017

1

Figure 7: Roadway Geometric Deficiencies



3 Source: Project Team, April 2017.

4 Ramp lengths: Requirements for interstate ramp
 5 **acceleration/deceleration lengths** are based on the
 6 difference between the freeway speed and ramp speed. The
 7 design speed for I-30 is 60 miles per hour, while ramp speeds
 8 vary between a low of 25 miles per hour at the Hwy. 10
 9 (Cantrell Road) interchange, to 50 miles per hour on the I-30
 10 to I-40 ramps. Ramp lengths were measured and evaluated
 11 against recommended standards found in *A Policy on Geometric Design of Highways and*
 12 *Streets, 2011 (Green Book)*, as well as ArDOT standards. Fifteen locations were identified

What are **acceleration/deceleration lengths**?

The distance it takes a vehicle to accelerate from the ramp speed to freeway speed, or to slow from freeway speed to ramp speed.

1 in the *IJR Safety Analysis (Appendix B)* where substandard acceleration/deceleration
2 lengths exist, including eight locations where no deceleration lanes exist at all.

3 Ramp spacing: Closely spaced interchanges result in exit and
4 entrance ramps that are very close together. Vehicles
5 entering and leaving the freeway do not have sufficient
6 distance to smoothly enter or leave the traffic stream
7 (weaving). Recommended **weaving lengths** are given in the
8 *Green Book* as 2000 feet. Eleven locations were identified in
9 the *IJR Safety Analysis (Appendix B)* where substandard
10 weaving lengths exist, with five of these locations between I-

What are **weaving lengths**?

Weaving is the movement that vehicles make when entering and leaving the traffic stream at interchanges. Weaving length is the distance vehicles have to make that movement.

11 630 and the Arkansas River. When weaving lengths are too short and traffic volumes are
12 high, it can become difficult for vehicles to enter a freeway at the same time vehicles are
13 attempting to leave the freeway.

14 Curves: Curves that are too sharp (substandard curves) make it more difficult for vehicles
15 to stay in the travel lanes, and reduce the distance at which drivers can see traffic
16 conditions in front of them. In addition to making the roadway less safe, substandard
17 curves cause traffic to reduce speed, increasing congestion. Eight curves were identified
18 in the *IJR Safety Analysis (Appendix B)* that do not meet *Green Book* standards.

19 Left exits: **Left exits** are not expected by drivers and occur
20 from lanes that typically have higher speeds. Drivers may
21 change lanes rapidly when they realize that the exit is not in the
22 expected location (right side), and may exit onto the ramp at a
23 speed which is higher than the ramp is designed for. There are
24 two left exits within the project limits; on I-40 westbound at I-30
25 and at I-40 eastbound at Hwy. 67. In the morning and
26 afternoon, traffic to and from Hwy. 67 and downtown Little Rock
27 must weave across eastbound and westbound traffic on I-40, causing congestion and
28 safety issues.

What are **left exits**?

Traffic normally enters and leaves a freeway from the right. Motorists do not expect traffic to enter or leave from the left, and it can cause them to react suddenly, creating an unsafe condition.

29 Shoulders: There are nine locations with inadequate shoulder widths, including two
30 locations where the curb and gutter is immediately adjacent to the travel lanes. Disabled

1 vehicles can obstruct the travel lanes if shoulders are not wide enough, leading to further
2 accidents and congestion. Emergency vehicles responding to an accident may be unable
3 to use the inadequate shoulder to reach the accident, leading to increased response time.

4 The geometric deficiencies have contributed to high crash rates (crashes per million
5 vehicle miles traveled) along the corridor (**Figure 8**). Crash data from 2012-2014, the most
6 recent years available, show an average fatal and serious injury crash rate on the segment
7 of I-30 from I-630 to I-40 that ranged from 4.09 to 17.50 per 100 million vehicle miles
8 traveled within that time period, which is substantially higher than the statewide average
9 for similar freeways during that time period (3.19 to 5.08 fatal and serious injury crashes
10 per 100 million vehicle miles traveled). The 30 Crossing project area experienced 65 fatal
11 and serious injury collisions from 2012-2014, with a total of 1859 total crashes over the
12 three-year period.

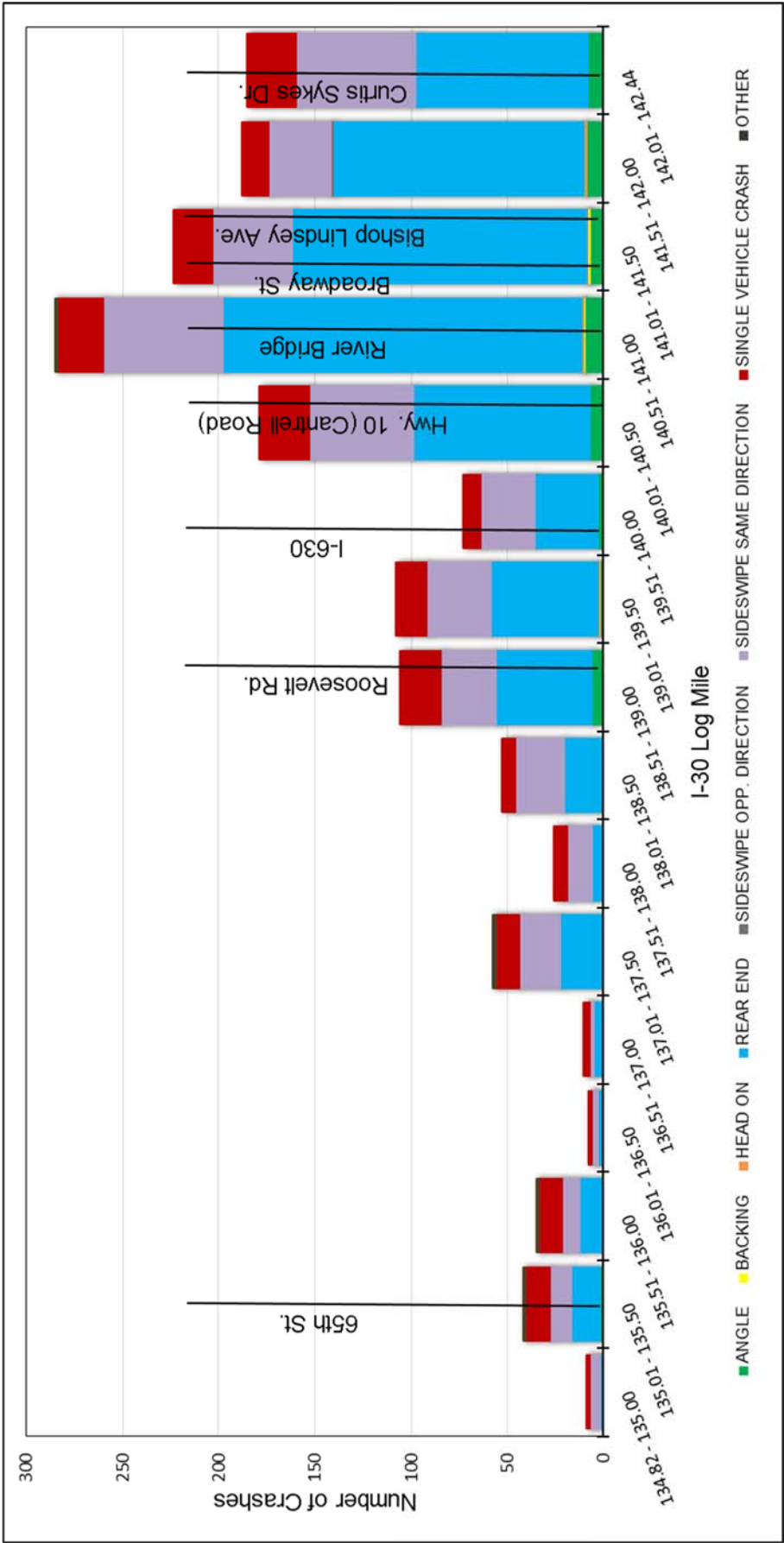
13 The majority of the crashes occurred on I-30 between I-630 and I-40. This area had a
14 crash rate of 2.92 crashes per million vehicle miles in 2014, which is nearly three times as
15 high as the statewide average (0.99 crashes per million vehicle miles traveled) for similar
16 freeways. A few key locations exhibit large clusters of crashes consistently throughout
17 this period: one exceptionally high crash area is the segment from the I-30 Arkansas River
18 Bridge to the I-30/Broadway Street interchange.

19 Crashes result in traffic congestion, as vehicles attempt to
20 navigate around disabled vehicles. This unexpected
21 congestion due to crashes makes it difficult for travelers to
22 estimate how long it will take to reach their destination.
23 Unreliable travel times are one of the principal causes of
24 reduced **mobility**.

What is **mobility**?

Mobility is the movement of people and goods. Improvements in mobility make it faster, easier and safer for people to use the roadway.

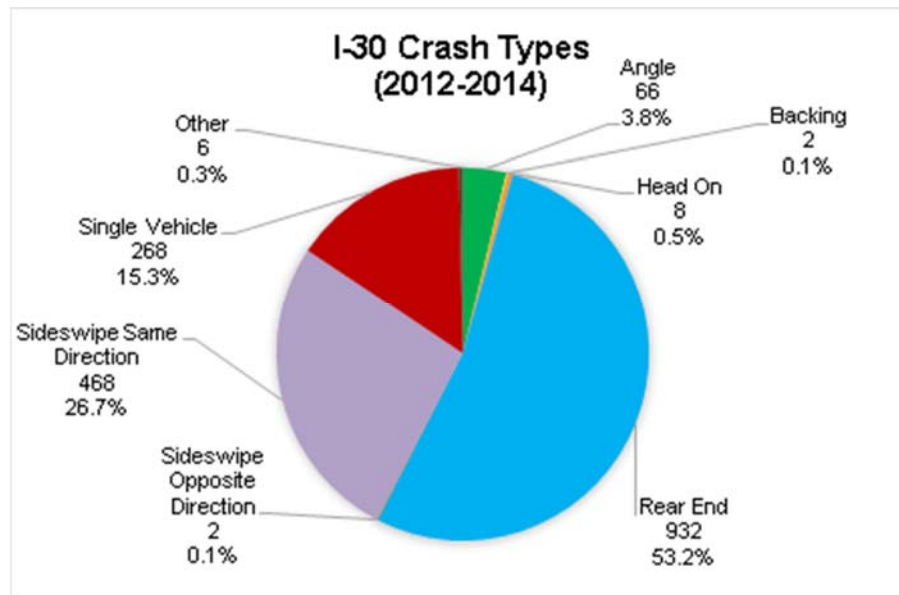
Figure 8: Crashes Along I-30 From 2012-2014



Source: Project Team, June 2017.

The highest percentage of the crashes on I-30 (**Figure 9**) were rear end collisions (53.2%), followed by sideswipe collisions (26.7%), and single vehicle crashes (15.3%). Rear end collisions on freeways are usually associated with heavy congestion and stop and go traffic conditions.

Figure 9: Types of Crashes on I-30



Source: ArDOT, 2017

Structural and Functional Roadway Deficiencies

Structural deficiencies are roadway features that either were not constructed to current standards or are no longer functioning as designed due to the effects of heavy traffic loads over time. Existing pavement surface conditions within the project area show moderate to severe levels of cracking (**Figure 10**). I-30 and I-40 were originally constructed with concrete pavement in the 1960's. In the 1980's, I-30 was overlaid with asphalt and I-40 was overlaid with concrete; it has been over 30 years since the pavement condition was improved. Pavement is typically designed to last for 20 years. Portions of the project area will likely require some level of pavement rehabilitation within the expected timeframe of this project to meet adequate structural performance.

Figure 10: Structural Roadway Deficiencies



Source: ArDOT, 2017.

Functional deficiencies are features that prevent the roadway from handling the normal traffic volume expected of a major highway. Many of these functional deficiencies were discussed above as contributing to safety issues along the corridor, including:

- short acceleration ramps that do not allow vehicles to reach highway speed before entering the interstate, which in turn causes interstate traffic flow to be disrupted;
- interchanges that are too close together, which causes congestion as vehicles try to enter and leave the interstate at the same time within a short distance;
- sharp curves, which cause vehicles to slow and create congestion, and;
- shoulders that are too narrow to permit a disabled vehicle to safely pull off the roadway or allow emergency vehicles to reach a crash site.

Structural and Functional Bridge Deficiencies

Bridges are considered structurally deficient if significant load carrying elements are found to be in poor condition due to deterioration. Of the forty-seven bridges in the project limits, five bridges, including the I-30 Arkansas River Bridge, which was constructed in 1958, were found to be structurally deficient based on information provided by ArDOT in September 2017. In addition, fourteen bridges were found to be functionally obsolete, meaning that lane widths, shoulder widths, or other features are not sufficient for the traffic the bridge is currently carrying.

The I-30 Arkansas River Bridge has been determined to have portions that are designated fracture critical. Most modern bridges are designed so that the fracture of a steel member would not result in collapse of the entire bridge. This is accomplished through design and selection of materials. The I-30 Arkansas River Bridge was not designed this way.

In addition to structural deficiencies of the I-30 Arkansas River Bridge, the width of the existing bridge is less than desirable. Although the bridge meets the minimum width requirements, the shoulders on the bridge are below current standards for new construction (**Figure 11**). The reduction in the shoulder width can lead to driver discomfort, resulting in decreased speed and increased congestion. A reduced bridge width can also lead to an increase in emergency response time and traffic accidents because there is not enough shoulder width for storage of disabled vehicles, maneuvering around an obstacle in the roadway, or passage of emergency response vehicles.

Figure 11: I-30 Arkansas River Bridge Deficiencies



Source: PEL Study, 2015.

1 Navigational Safety

2 The I-30 Arkansas River Bridge is one of the six bridge structures
3 (three vehicular, two pedestrian, and one railroad) that cross the
4 Arkansas River in the downtown Little Rock area. The Arkansas
5 River is part of the McClellan-Kerr Arkansas River Navigation
6 System (**MKARNS**), which connects Tulsa, Oklahoma, with the
7 Mississippi River. The waterways in the MKARNS have been
8 widened and deepened, and locks have been built, to allow barge
9 traffic to safely travel upstream and downstream.

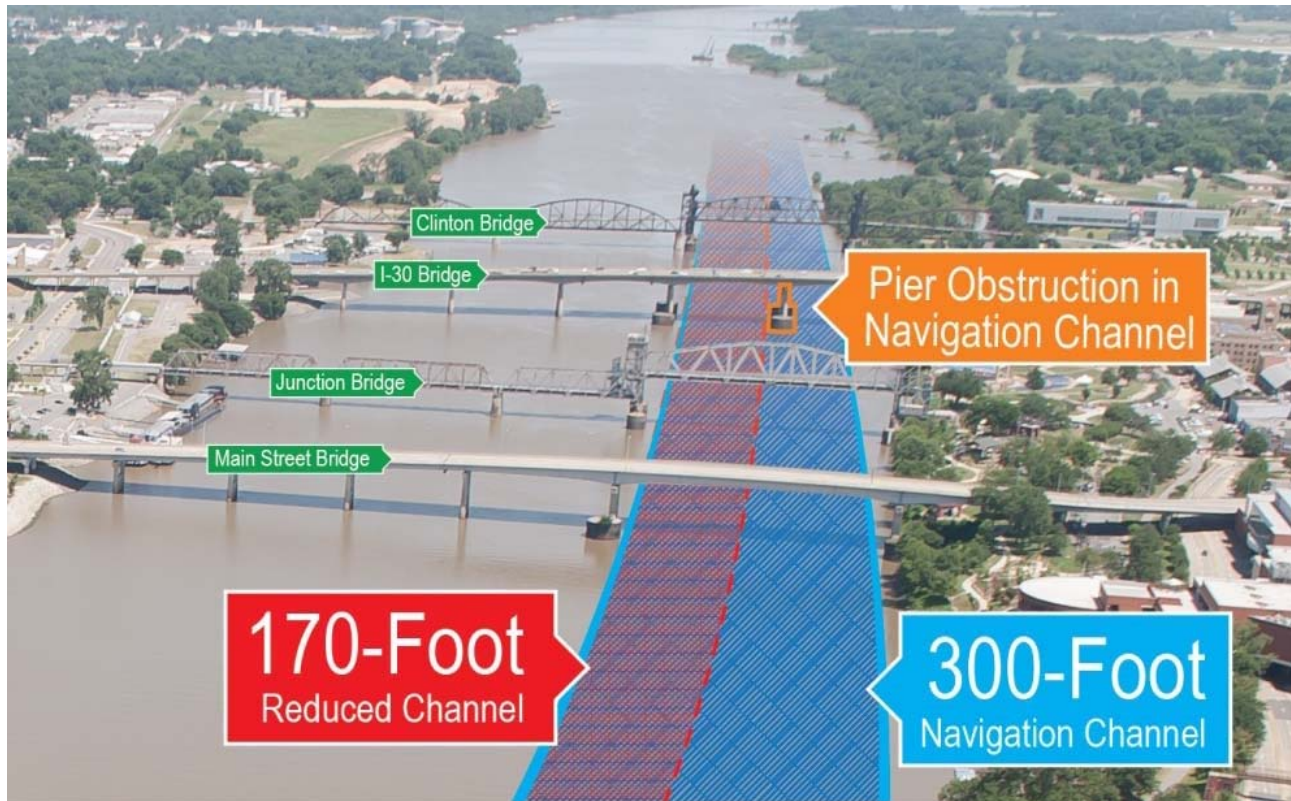
Why is the **MKARNS** important?

The MKARNS supported the transportation of 11.5 Million tons of barge traffic (\$2-3 Billion) in 2016. This equates to approximately 2500 barges per year, or 7 barges per day.

10 For bridges crossing a navigation channel, the two most important features are the vertical
11 clearance provided from the water surface to the bottom of the bridge and the horizontal
12 clearance between the bridge piers (vertical bridge supports). As discussed in the
13 *Alternatives Technical Report (Appendix C)*, the USCG has requested that the proposed
14 I-30 Arkansas River Bridge provide a minimum vertical clearance of 63 feet and horizontal
15 clearances of 320 feet; the Arkansas Waterways Commission has requested that the
16 proposed bridge meet a vertical clearance of 62.4 feet and a horizontal clearance of 332
17 feet. The existing I-30 Arkansas River Bridge has a vertical clearance of 65.6 feet and
18 horizontal clearance of 174.5 feet.

19 The I-30 Arkansas River Bridge has a pier that obstructs the channel, affecting river
20 navigation by dividing the channel into two navigational spans, with substandard horizontal
21 navigational clearance in both spans. (**Figure 12**). The five other bridge structures in
22 downtown Little Rock have an open span across the navigational channel. Further, the
23 navigational opening for the I-30 Arkansas River Bridge does not line up with the adjacent
24 Clinton and Junction Bridges. The reduced horizontal clearance due to the pier obstruction
25 and poor alignment makes the I-30 Arkansas River Bridge difficult for barges to navigate
26 safely and restricts their operational speed. Barge collision data provided by the USCG,
27 indicates a total of five barge strikes have occurred at the site since 2001, with the two
28 most recent since August 2013. Barges striking the bridge could cause the structurally
29 deficient, fracture critical bridge to collapse. Because the existing bridge pier in the
30 navigational channel is a hazard to navigation, widening is not an option and the bridge
31 must be replaced.

Figure 12: Arkansas River Navigational Channel



Source: Project Team, April 2017.

1.5 What Is The Purpose Of This Project?

The purpose of this project is to increase the safety of vehicular traffic on I-30 and I-40 by correcting geometric deficiencies, improve the condition of the roadway by modernizing infrastructure and maintaining a state of good repair, improve navigational safety on the Arkansas River, correct the I-30 Arkansas River Bridge deficiencies, and reduce traffic congestion by improving mobility on I-30 and I-40. The intent of the project improvements is to provide for increased travel speed and reduced travel time to downtown North Little Rock and Little Rock as traffic demand increases in the future. The I-30 Arkansas River Bridge would be replaced with a new structure, correcting the functional and structural deficiencies and navigation safety issues.

In addition, the goals of the project include:

- Improve opportunities for east-west connectivity, including bicycle and pedestrian connectivity;
- Improve local vehicle access to and from downtown Little Rock/North Little Rock;
- Accommodate existing transit and future transit;
- Improve system reliability;
- Minimize roadway disruptions during construction;
- Minimize river navigation disruptions during/after construction;
- Follow through on commitment to voters to improve I-30 as part of the CAP;
- Maximize cost efficiency;
- Optimize opportunities for economic development;
- Avoid and/or minimize impacts to the human and natural environment, including historic and archeological resources; and
- Sustain public support for the I-30 Corridor improvements.

1.6 What Is The Purpose Of This Environmental Assessment?

This Environmental Assessment (EA) is being prepared to:

- Evaluate the environmental effects of improving I-30 and I-40.
- Inform and receive feedback from the public and decision makers about the purpose and need for the project, the alternatives that are being considered, and the anticipated environmental effects of the improvements.
- Determine whether effects are significant and require an Environmental Impact Statement or if the project effects can be sufficiently documented through an EA and Finding of No **Significant Impacts** (FONSI).

What are **significant impacts**?

NEPA regulations do not provide specific thresholds to determine if project impacts are considered significant, but they do discuss the process that should be used to evaluate impacts.

Consideration is given to both context, where the significance of impacts varies with the setting of the proposed action, and intensity, the severity of the impacts.

1 **1.7 Who Is Leading This Project?**

2 This project is being led by a partnership between the Federal Highway Administration
3 (FHWA) and ArDOT. The FHWA is involved because it is funding a portion of the project,
4 which is on the interstate highway system and involves improvements to interstate
5 interchanges. The FHWA has the primary responsibility for the content and accuracy of
6 this National Environmental Policy Act (NEPA) document.

7 The project is also being funded through state funds
8 allocated to ArDOT. ArDOT is responsible for
9 administering and maintaining the state highway
10 system, which includes I-30 and I-40. ArDOT is
11 responsible for preparation of this EA, in consultation
12 with FHWA, and for application for federal funds from
13 FHWA.

14 For these reasons, FHWA will be the lead agency under
15 NEPA. The USCG and USACE have agreed to be
16 **cooperating agencies.**

What are cooperating agencies?

Cooperating agencies under the National Environmental Policy Act are federal agencies other than the lead agency that have jurisdiction by law or special expertise in an environmental area and choose to assist the FHWA in conducting a study and producing the environmental document.

Chapter 2 – Alternative Development

What's In Chapter 2?

Chapter 2 identifies the project limits and briefly describes the alternatives evaluated in this EA.

2.1 What Are The Project Limits And How Were They Chosen?

The **logical termini** of the project are the I-530/I-440/I-30 interchange on the south and the Hwy. 67/Hwy. 167/I-40 interchange on the north (**Figure 2**). These logical termini were determined to be rational end points for the project based on traffic modeling, which determined that capacity improvements were needed for both I-30 from the I-530/I-440 interchange on the south to the I-40 interchange on the north and on I-40 from the I-30 interchange to the Hwy. 67/Hwy. 167 interchange. A segment was added on I-40 westbound from I-30 to Hwy. 365 (MacArthur Drive) in order to continue both northbound lanes on I-30 onto I-40 westbound.

What are logical termini?

Logical termini for project development are defined by FHWA as:

1. Rational end points for a transportation improvement.
2. Rational end points for a review of the environmental impacts.
3. Improvements cannot restrict alternatives for other reasonably foreseeable transportation improvements.
4. The project and its limits must have independent utility.

2.2 What Alternatives Were Evaluated In This EA?

Detailed information on the development of project alternatives can be found in the *Alternatives Technical Report (Appendix C)*. The alternatives development process began in 2014 with the PEL Study conducted by ArDOT. The PEL Study involved evaluation of a wide range of potential solutions to the congestion and safety issues along I-30 and I-40. Among these were bypass routes to the west of I-30 along Pike Avenue and Chester Street. It was determined that these alternatives would not divert enough traffic from I-30 to resolve the congestion and safety issues and would have extensive impacts to residences and buildings along those routes. The PEL Recommendation was the 10-Lane **Collector Distributor (C/D)** Alternative (three main lanes and two C/D lanes in each direction), now referred to as the 6-lane with

What are **Collector Distributor (C/D)** lanes?

C/D lanes are lanes parallel to the main lanes that carry traffic from one interchange to an adjacent interchange. The lanes are separated from the main lanes by a barrier.

1 C/D Alternative. This alternative included adding two C/D lanes in each direction from just
2 south of 3rd Street in Little Rock to near Broadway Street in North Little Rock.

3 As a result of comments from Metroplan following Public Meeting 4 in April 2015, the
4 FHWA requested ArDOT to add an alternative that had been screened out during the PEL
5 Study: the 8-lane General Purpose Alternative (four main lanes in each direction). This
6 alternative had not been carried forward from the PEL Study because it was viewed as
7 not addressing mobility and safety as adequately as the PEL Recommendation.

8 During the NEPA Study, an alternative that would convert I-30 to an at-grade boulevard
9 (Boulevard Alternative) was evaluated. This alternative would only accommodate
10 approximately half the traffic currently using I-30, and would result in increased
11 congestion, reduced speeds, and increased travel times in the study area. Congestion on
12 other regional and local roadways would increase as motorists sought out alternate
13 routes. The multiple, at-grade, closely-spaced intersections would result in higher crash
14 rates. Finally, because the Boulevard Alternative would convert I-30 to a local roadway
15 and remove it from the interstate system, the funding source for the project would be lost.
16 Because the Boulevard Alternative would not improve the congestion and safety issues
17 along I-30 and I-40 and is impractical, it was not recommended for further study.

18 Consequently, two corridor improvement alternatives, the 8-lane General Purpose (Action
19 Alternative 1) and 6-Lane with C/D (Action Alternative 2), were carried forward as the two
20 corridor Action Alternatives which are evaluated in this EA. In addition to capacity
21 improvements and pavement rehabilitation on I-30 and I-40, both corridor Action
22 Alternatives include improvements to correct substandard interchange ramp lengths,
23 weaving lengths, horizontal and vertical curves, shoulder widths, and signage. The
24 existing left exits at the I-40 and Hwy. 67 interchanges would be eliminated under both
25 corridor alternatives and replaced with right exits. Frontage road improvements, bicycle
26 and pedestrian enhancements, and additional open (green) space in the Hwy. 10
27 interchange would be included under both Corridor Action Alternatives.

28 All structurally deficient bridges within the project limits, including the I-30 Bridges over
29 UPRR in Little Rock and North Little Rock, and the I-30 Arkansas River Bridge, would be
30 replaced or rehabilitated. Functionally obsolete bridges within the project limits would be

1 replaced or rehabilitated as funding allows. The I-30 Arkansas River Bridge would be
2 replaced with a structure that meets navigational clearance requirements, as requested
3 by USCG. The existing navigational channel would be shifted to the north to align better
4 with the channel in the adjacent upstream and downstream bridges and the horizontal
5 clearance in the navigation channel would be increased to 320 feet. These modifications
6 would accommodate existing and future navigational needs for the waterway by allowing
7 barges to pass under the bridge more safely. The alignment of the bridge would be shifted
8 slightly in the downstream direction to allow the bridge to be built in phases while causing
9 minimal impacts to adjacent parks.

10 Numerous concepts for improvement to the Hwy. 10 Interchange were also evaluated,
11 including Diverging Diamond, Standard Diamond, Single Point Urban Interchange
12 (SPUI), One-Way Pair, Roundabout and Split Diamond Interchange (SDI) options. As
13 detailed in the *Alternatives Technical Report* in **Appendix C**, these options were
14 evaluated for performance for the following factors: cost, access to River Market and
15 Clinton Center, Level of Service (LOS, a measure of traffic operational effectiveness),
16 geometrics, vehicular east-west connectivity, visual east-west connectivity, pedestrian
17 and bicycle east-west connectivity, and impact on the River Rail Streetcar. The options
18 that scored highest were the At-Grade SPUI and Split Diamond Interchange (SDI). Based
19 on comments from the public and the City of Little Rock, the At-Grade SPUI was elevated
20 and realigned in order to allow the River Rail Streetcar to continue to operate on 3rd Street,
21 after which the interchange option was known simply as the SPUI. These two Hwy. 10
22 interchange options were shown to the public at Public Meeting 6 and were carried
23 forward for consideration in this EA as independent Action Alternatives, under both
24 corridor improvement Action Alternative 1 (8-Lane General Purpose) and corridor
25 improvement Action Alternative 2 (6-Lane with C/D). The four Action Alternatives are
26 therefore:

- 27 • Action Alternative 1A: 8-Lane General Purpose with SPUI at Hwy. 10
- 28 • Action Alternative 1B: 8-Lane General Purpose with SDI at Hwy. 10
- 29 • Action Alternative 2A: 6-Lane with C/D with SPUI at Hwy. 10
- 30 • Action Alternative 2B: 6-Lane with C/D with SDI at Hwy. 10

The No-Action Alternative

The **No-Action Alternative** represents the case in which the proposed project is not constructed, but could include future projects identified through the long- range planning process for maintaining a state of good repair as funding becomes available. The No-Action Alternative would not make any immediate improvements to the existing roadway or any bridges throughout the corridor, including the I-30 Arkansas River Bridge. With increasing population and traffic demand and no improvements to the project area, congestion will increase and ultimately decrease safety and mobility. This alternative would not improve the existing geometric deficiencies, traffic capacity limitations, safety insufficiencies, or deteriorating roadway and bridges. The No-Action Alternative does not meet the purpose and need outlined for the project.

Why would you consider an alternative that does nothing?

The National Environmental Policy Act (NEPA) requires decision makers to consider a **“No-Action” alternative** in all NEPA studies. This alternative usually does not meet the project’s purpose and need, but is used to compare the beneficial and adverse impacts of the “Action” alternatives and determine their significance.

Corridor Improvement Action Alternative 1 (8-Lane General Purpose)

The 8-Lane General Purpose Action Alternatives (1A and 1B) would generally consist of reconstructing the existing six-lane (three in each direction) roadway and adding one through lane, for total of eight lanes (**Figures 2 and 13**). These alternatives would not have Collector Distributor (C/D) lanes.

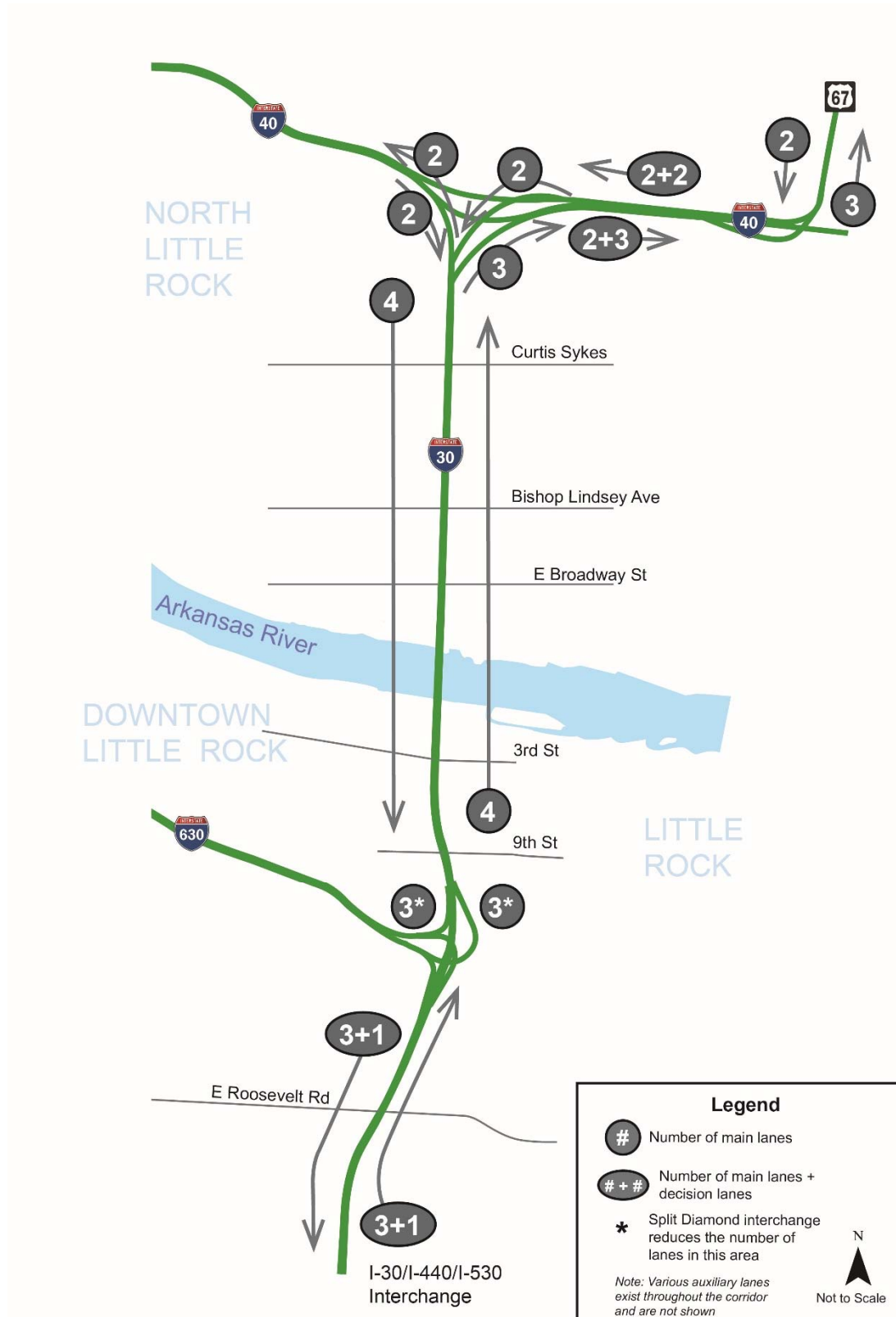
From the beginning of the project at the I-30/I-530/I-440 interchange to the I-30/I-630 interchange, these alternatives would have three through lanes and one **decision lane** in each direction, replacing the existing six-lane (three in each direction) section.

What is a **decision lane**?

Decision lanes are lanes that are added and dropped from the freeway as it moves through a series of interchanges.

1

Figure 13: 8-Lane General Purpose Action Alternative 1



2

3 Source: Project Team, May 2017

4

1 From the I-30/I-630 interchange to Broadway Street in North
2 Little Rock, the configuration would vary depending on which
3 Hwy. 10 Interchange Action Alternative (SDI or SPUI) is
4 selected. This section includes the I-30 Arkansas River Bridge
5 and would include four through lanes and one **auxiliary lane**
6 in each direction.

7 From Broadway Street to the I-40 interchange (**Figure 14**),
8 these alternatives would have four lanes in each direction,
9 replacing the existing six-lane (three in each direction)
10 section. One of these northbound lanes would become a
11 decision lane, with vehicles allowed to go either east or west
12 on I-40. The I-30 northbound to I-40 eastbound ramp would
13 be widened from two to three lanes. The existing left exit from
14 I-40 westbound to I-30 southbound would be replaced with a right exit but would remain
15 a two-lane ramp.

16 Within this segment, Cypress Street would be extended from 9th Street to 13th Street,
17 including a bridge over the UPRR, allowing it to become a one-way southbound frontage
18 road. The existing structurally-deficient North Locust Street Bridge over the UPRR would
19 be replaced, and North Locust Street would serve as the one-way northbound frontage
20 road.

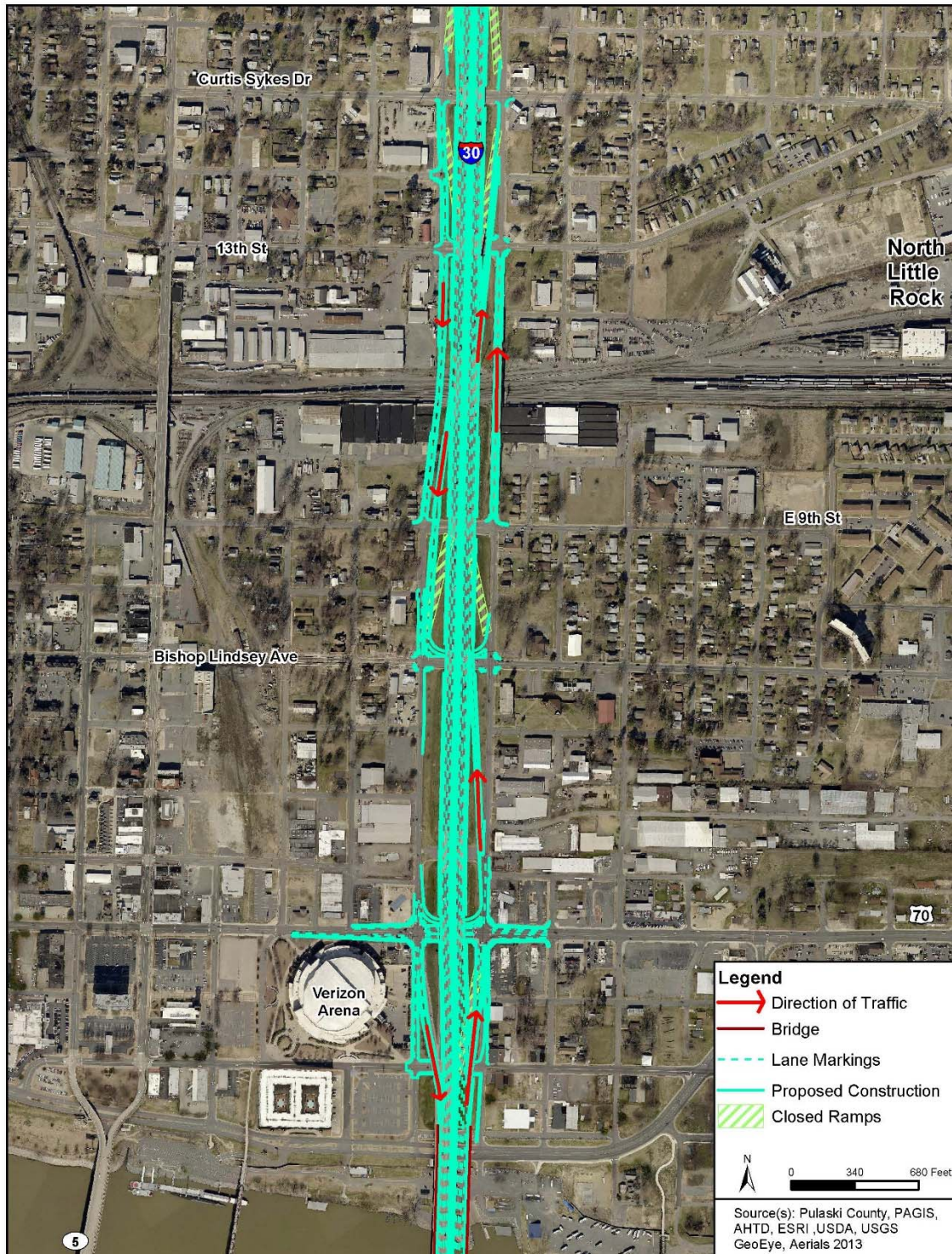
21 The proposed improvements to I-40 from the I-30 interchange to the Hwy. 67 interchange
22 (**Figure 15**) would consist of reconstructing the existing eight-lane (four in each direction)
23 section to provide two through lanes and three decision lanes in the eastbound direction,
24 and two through lanes and two decision lanes in the westbound direction. The existing
25 left exit on I-40 eastbound to Hwy. 67 northbound would be widened from two to three
26 lanes and replaced with a right exit, eliminating the weaving issues for through traffic on
27 I-40. The Hwy. 67 southbound to I-40 westbound ramp would remain a two-lane ramp.

28 The improvements to I-40 westbound from the I-30 interchange to Hwy. 365 (MacArthur
29 Drive) would consist of increasing the length of the ramps.

What is an **auxiliary lane**?

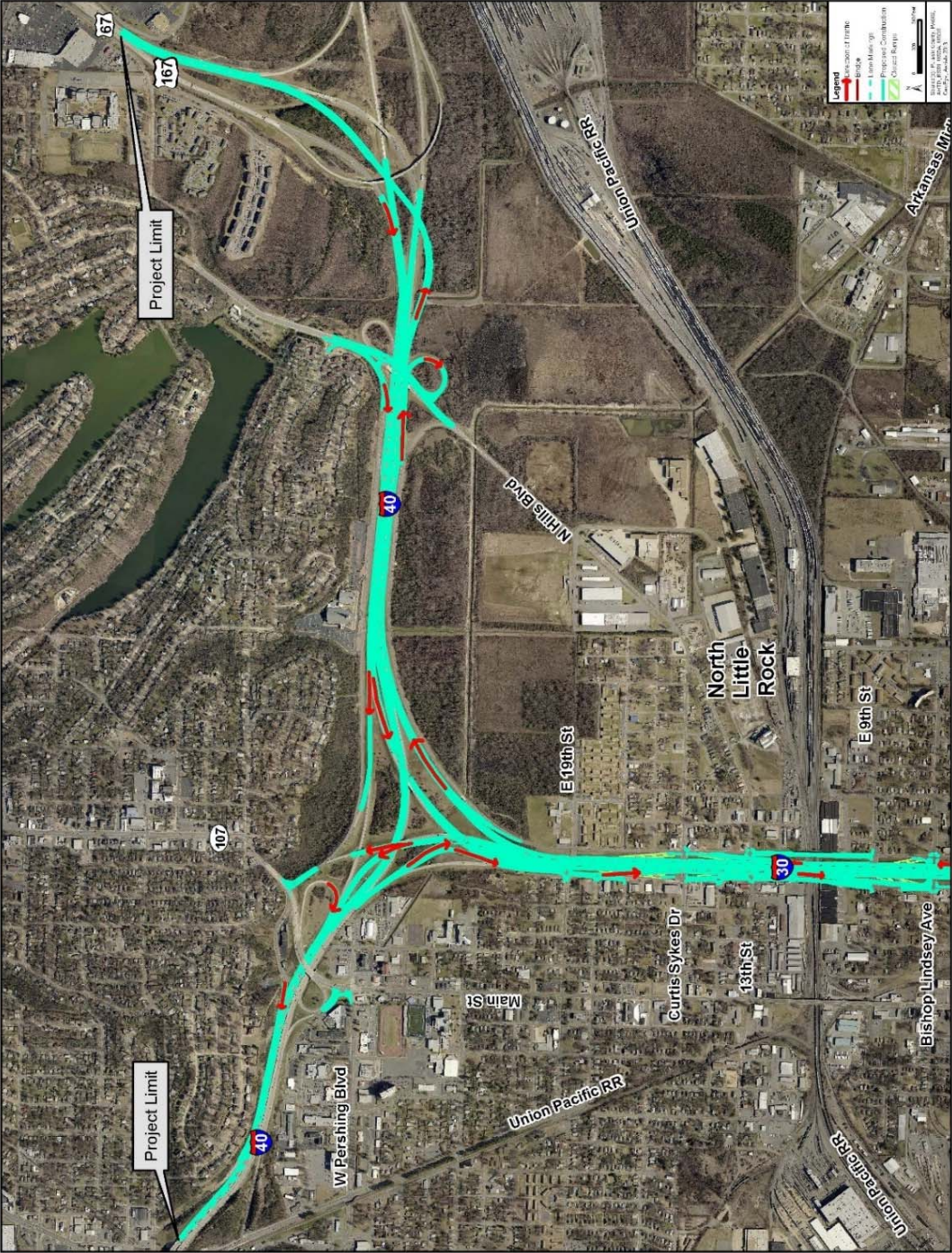
Auxiliary lanes are lanes adjoining the main lanes that are used for speed change, turning, weaving, truck climbing, maneuvering of entering and leaving traffic, and other purposes supplementary to through-traffic movement. They allow an acceptable weaving area for vehicles to safely enter and exit the freeway without adversely impeding though traffic on the main lanes.

Figure 14: 8-Lane General Purpose Action Alternative 1



Source: Project Team, May 2017

Figure 15: 8-Lane General Purpose Action Alternative 1



Source: Project Team, May 2017

Corridor Improvement Action Alternative 2 (6-lane With C/D)

These corridor improvement Action Alternatives (2A and 2B) would generally consist of reconstructing the existing six-lane (three in each direction) roadway while adding two decision lanes in each direction that ultimately feed into the C/D lanes located at the I-30 Arkansas River Bridge (**Figures 2 and 16**).

From the beginning of the project at the I-30/I-530/I-440 interchange to the I-30/I-630 interchange, these alternatives would have three through lanes and two decision lanes, for a total of five, in the northbound direction, and three through lanes and one decision lane, for a total of four, in the southbound direction. This would replace the existing six-lane (three in each direction) section. I-630 westbound to Cumberland Street would be widened from four to five lanes.

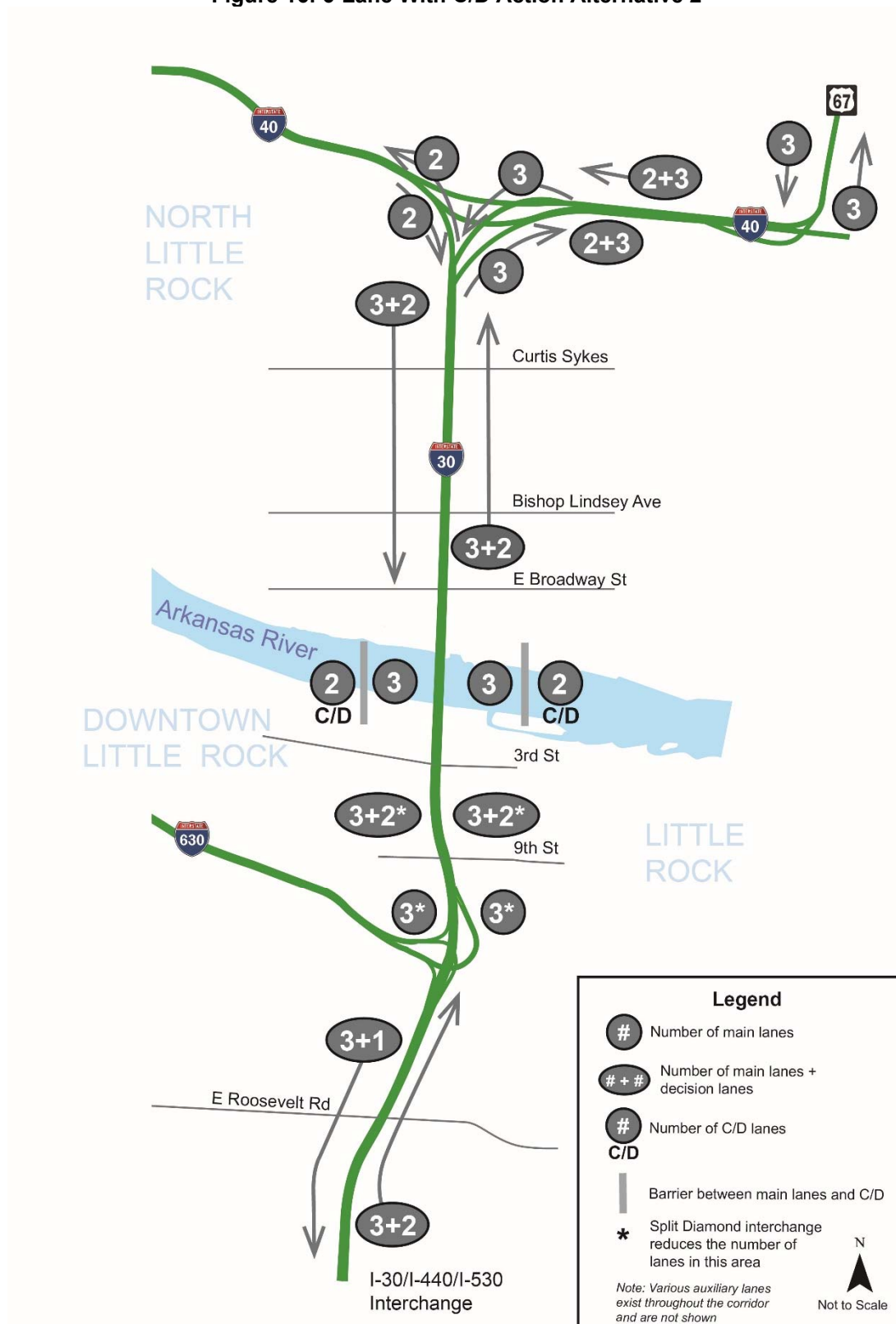
From the I-30/I-630 interchange to Broadway Street in North Little Rock, the configuration would vary depending on which Hwy. 10 interchange alternative (SDI or SPUI) is selected. This section includes the I-30 Arkansas River Bridge and would consist of three through lanes, two C/D lanes, and an auxiliary lane, for a total of six in each direction. The C/D lanes would provide a connection for local traffic between North Little Rock and Little Rock.

From Broadway Street to the I-40 interchange (**Figure 17**), these alternatives would have three through lanes and two decision lanes, for a total of five in each direction, replacing the existing six-lane (three in each direction) section. The I-30 northbound to I-40 eastbound exit ramp would be widened from two to three lanes. The existing left exit from I-40 westbound to I-30 southbound would be replaced with a right exit and would be widened from two to three lanes.

Within this segment, Cypress Street would be extended from 9th Street to 13th Street, including a bridge over the UPRR, allowing it to become a one-way southbound frontage road. The existing structurally deficient North Locust Street Bridge over the UPRR railroad would be replaced and North Locust Street would serve as the one-way northbound frontage road.

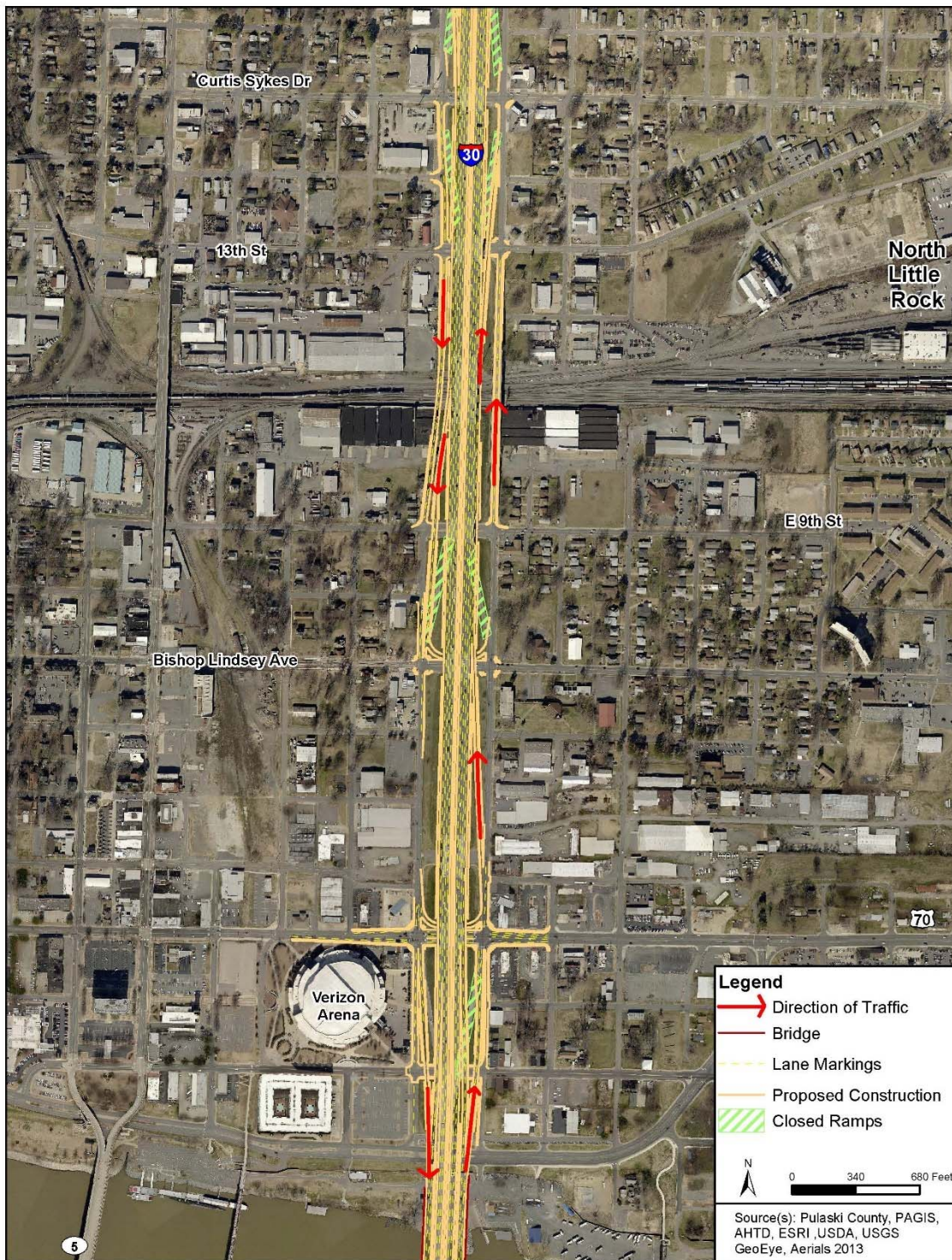
The improvements to I-40 from the I-30 interchange to the Hwy. 67 interchange (**Figure 18**) would consist of two through lanes and three decision lanes, for a total five in each

Figure 16: 6-Lane With C/D Action Alternative 2



Source: Project Team, May 2017.

Figure 17: 6-Lane with C/D Action Alternative 2



Source: Project Team, May 2017

1

Figure 18: 6-Lane with C/D Action Alternative 2



2

3 Source: Project Team, May 2017

direction, replacing the existing eight-lane, four in each direction, section. The existing left exit on I-40 eastbound to Hwy. 67 northbound would be widened from two to three lanes and replaced with a right exit, eliminating the weaving issues for through traffic on I-40. The Hwy. 67 southbound to I-40 westbound ramp would be widened from two to three lanes. The improvements to I-40 westbound from the I-30 interchange to Hwy. 365 (MacArthur Drive) would consist of increasing the length of the ramps.

The Hwy. 10 Interchange Action Alternatives

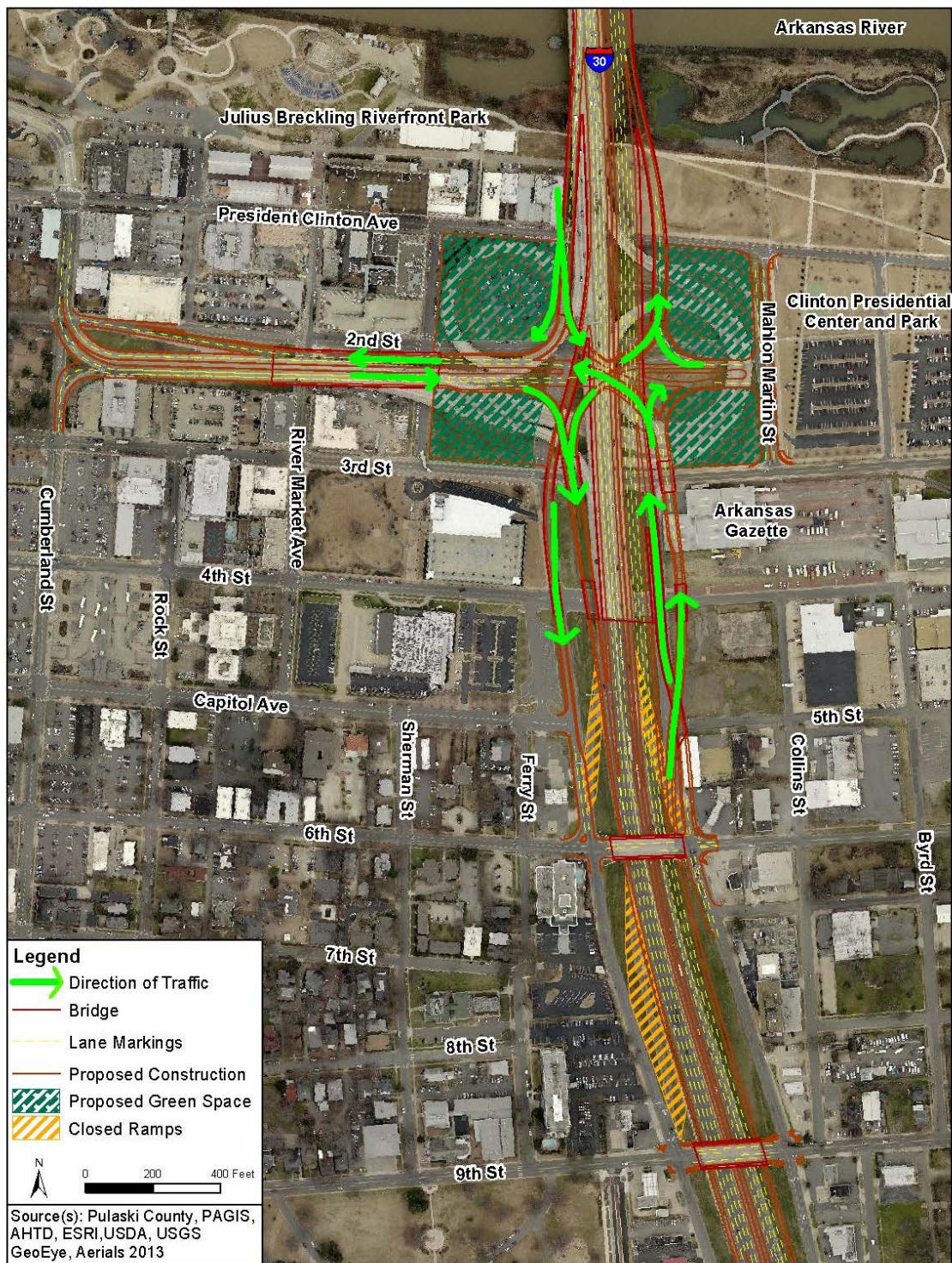
Action Alternatives 1A and 2A - Single Point Urban Interchange (SPUI)

The SPUI Action Alternatives (**Figures 19** and **20**) are a refinement of the initial Single Point Urban Interchange concept that was developed in order to avoid impacts to the portion of the River Rail Street Car on East 3rd Street and loss of vehicular access to East 4th Street. With the SPUI Action Alternatives (1A and 2A), I-30 would continue to be elevated over East 2nd Street, while all entrance and exit ramps would intersect at a central signalized location under the I-30 Arkansas River Bridge. This signalized location would be modestly elevated on embankment in order to provide clearance over East 3rd and East 4th Streets for entrance and exit ramps. Traffic would access the SPUI from Little Rock by a six-lane elevated roadway beginning at-grade at the Cumberland/LaHarpe/East 2nd Street intersection on the west side and at Mahlon Martin Street on the east side. In addition, traffic would be able to enter I-30 northbound from East 6th Street by using a ramp that would bridge over East 4th, East 3rd, and East 2nd Streets, and exit I-30 southbound by an additional ramp that would intersect with Capitol Avenue. An additional traffic signal would be needed at the intersection of East 3rd Street and Mahlon Martin Street.

In this interchange option, traffic would continue to enter and exit downtown Little Rock in a similar manner as the existing interchange. The only change to the local street systems would be that Cumberland Street between East 2nd Street and East 3rd Street would be closed to traffic. The Hwy. 10 interchange would also continue to utilize the right of way (ROW) of the current interchange for transportation purposes, although there would be an increase in open space as a result of removal of the circular ramps.

1

Figure 19: 8-Lane General Purpose with SPUI Action Alternative (1A)



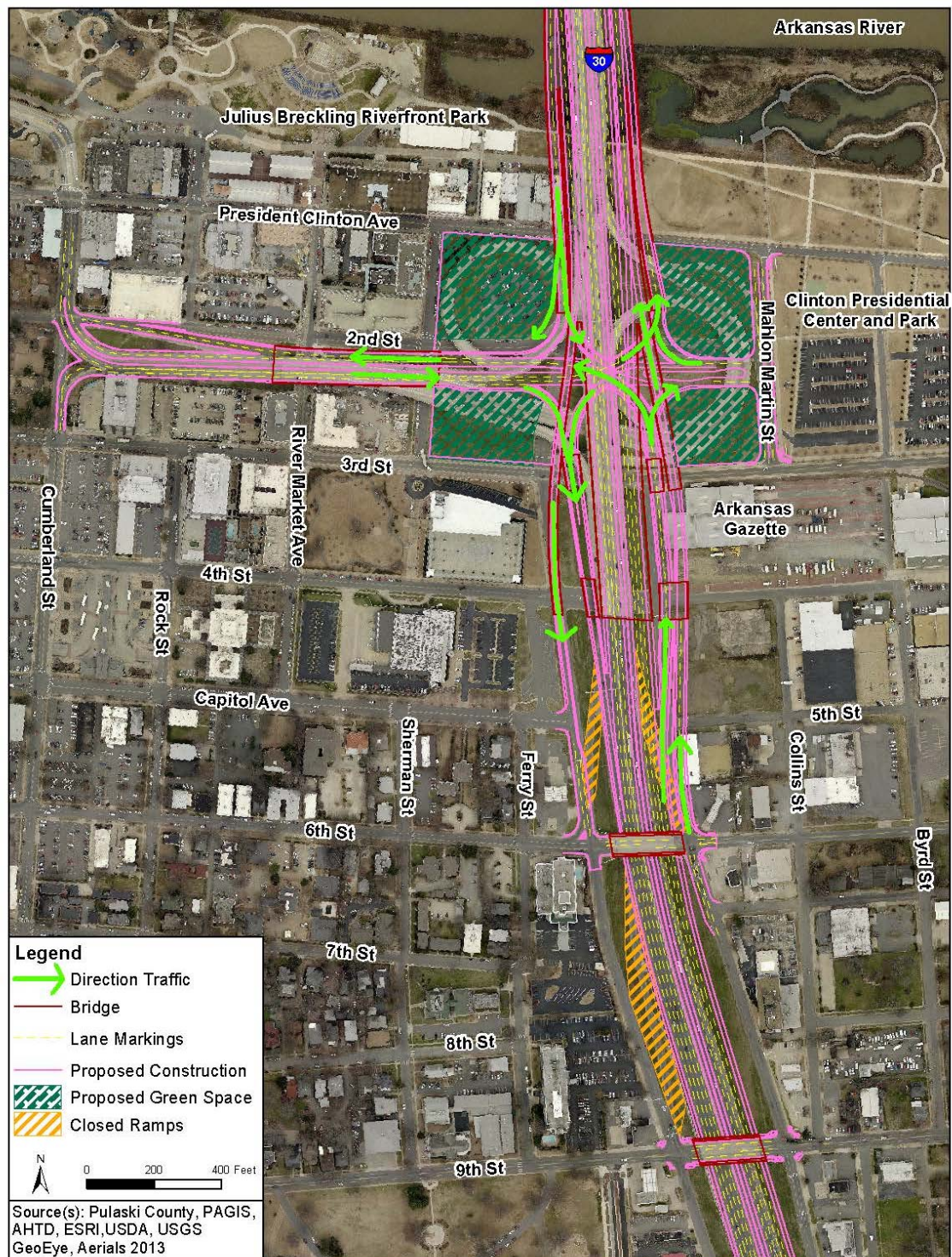
2

3 Source: Project Team, June 2017.

4

1

Figure 20: 6-Lane with C/D with SPUI Action Alternative (2A)



2

3 Source: Project Team, June 2017.

4

Action Alternatives 1B and 2B - Split Diamond Interchange (SDI)

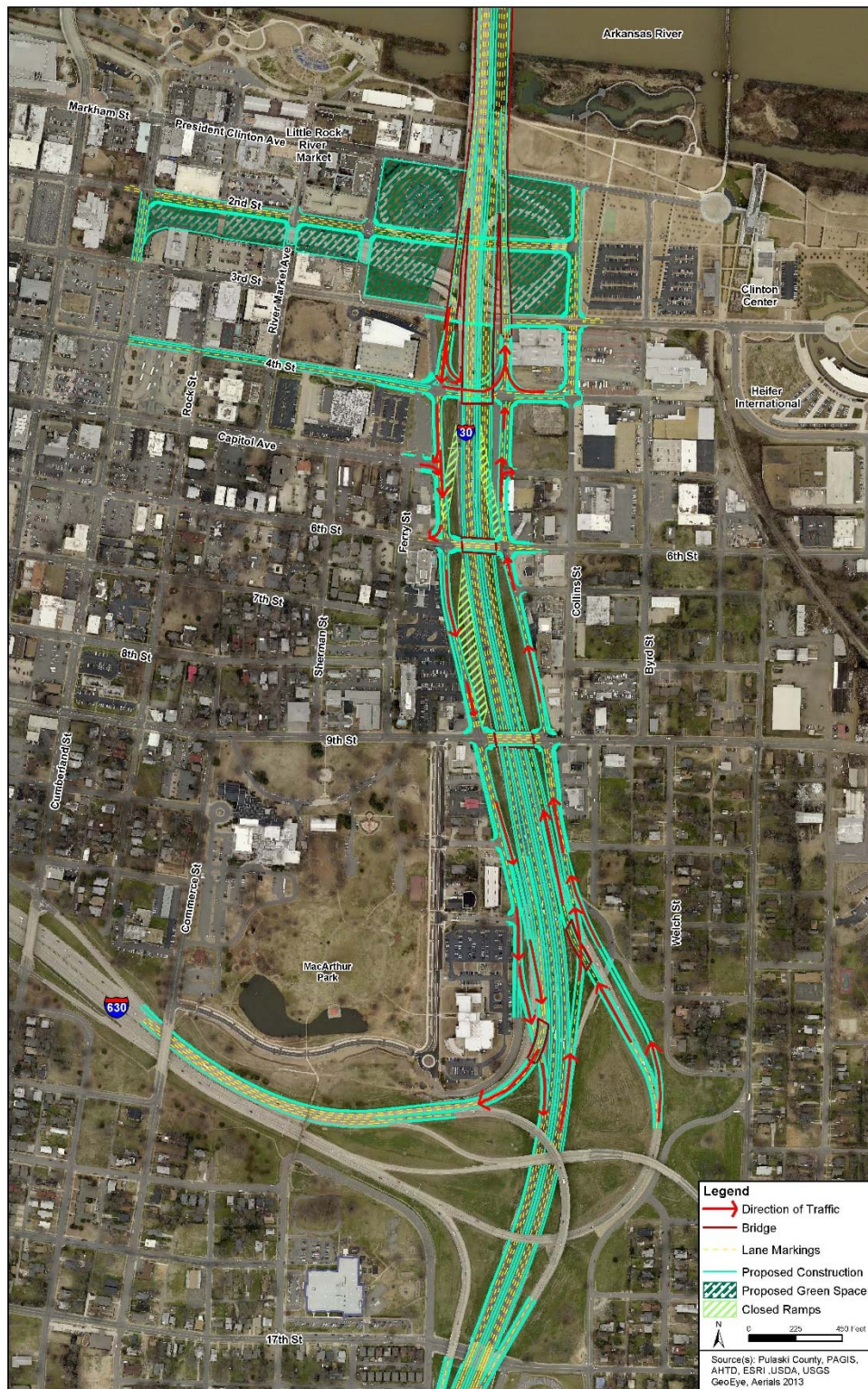
The SDI Action Alternatives eliminate the existing partial cloverleaf interchange at Hwy. 10 and the elevated Hwy. 10 “spur” connecting I-30 and Cumberland Street. With these alternatives, the only southbound I-30 off-ramp between I-630 and the Arkansas River would be at 4th Street and the only northbound I-30 off-ramp in the same area would be at 9th Street (**Figures 21** and **22**). Frontage roads would be used to distribute traffic onto the downtown road network. These alternatives would provide direct access to I-630 westbound from the southbound frontage road and direct access to the northbound frontage road from I-630 eastbound. Modifications to the existing traffic patterns in downtown Little Rock would be required:

- East 4th Street between Cumberland Street and the southbound frontage road would be two lanes eastbound and one lane westbound, requiring the removal of 29 on-street parking spaces to accommodate three lanes of traffic.
- A **Texas U-turn** would be added to allow traffic on the southbound I-30 off-ramp to exit onto 3rd Street.
- Mahlon Martin Street would be widened and converted from a one-way roadway to a two-way roadway.
- East 2nd Street would be widened and improved between Cumberland Street and Mahlon Martin Street to provide two lanes eastbound and two lanes westbound. Six on-street parking spaces along East 2nd Street and twelve on-street parking spaces along Ferry Street would be removed.
- A new road would be constructed between East 3rd and East 4th Streets east of I-30 to connect Collins Street with Mahlon Martin Street.
- Cumberland Street between East 2nd Street and East 3rd Street would be slightly widened to provide two lanes in both the northbound and southbound directions.
- Traffic signals may be required at the intersections of East 2nd Street with River Market Avenue, Sherman Street, and Mahlon Martin Street; East 3rd Street with River Market Avenue, the Texas U-turn and Mahlon Martin Street; East 4th Street with River Market Avenue and Rock Street; and Capitol Avenue and the southbound frontage road.

What is a **Texas U-Turn**?

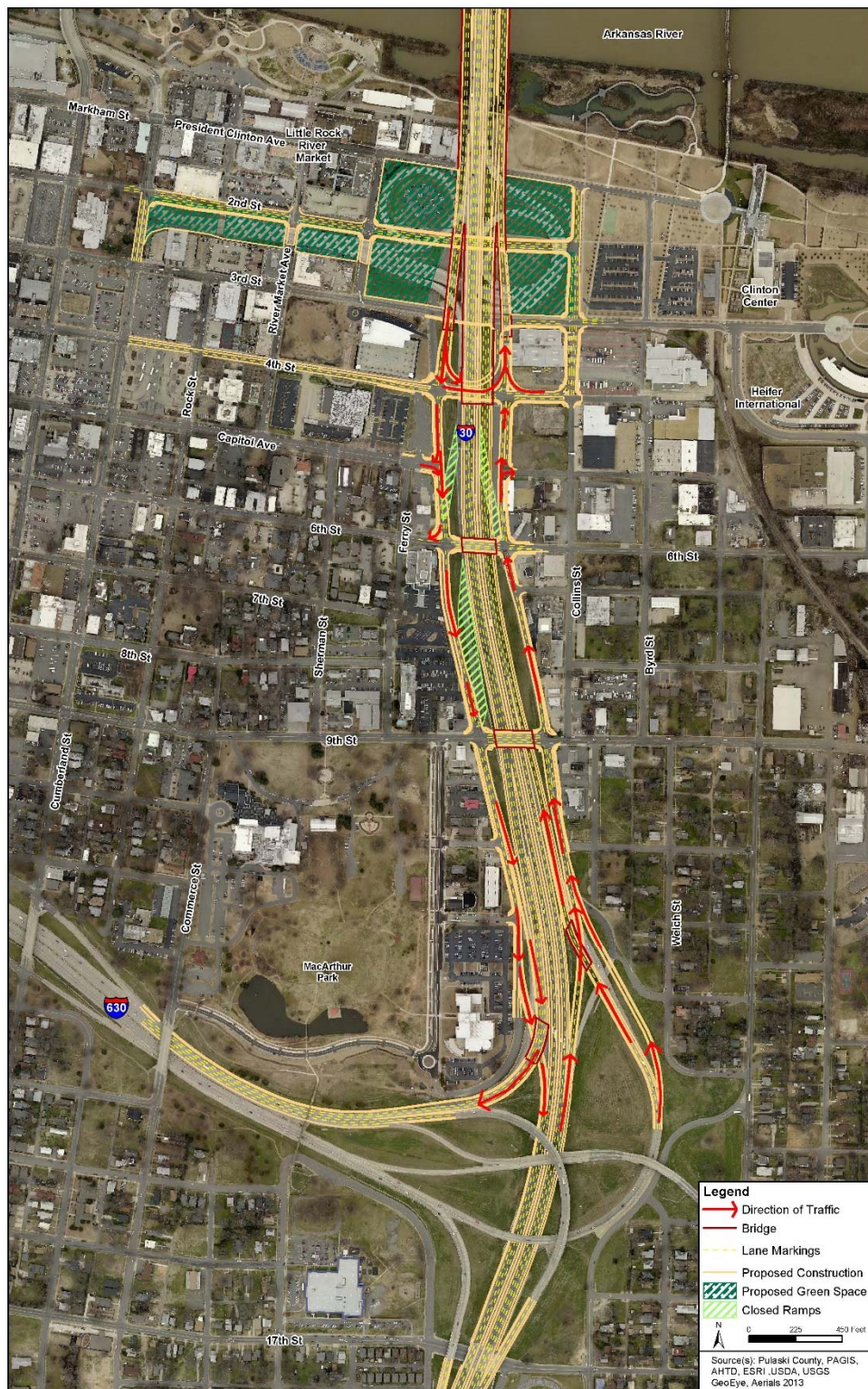
A Texas U-turn is a dedicated lane to move traffic over or under a highway to the opposite side without the need for signalization.

Figure 21: 8-Lane General Purpose with SDI Action Alternative (1B)



Source: Project Team, January 2018.

Figure 22: 6-Lane with C/D with SDI Action Alternative (2B)



Source: Project Team, January 2018.

The SDI Action Alternative (1B and 2B) removes the existing exit ramp that provides direct access to the complex intersection of Hwy. 10, 2nd Street and Cumberland Street, which provides opportunity for a decrease in traffic at this intersection. The traffic currently using the existing Hwy. 10 interchange would shift primarily to East 2nd Street, East 3rd Street, and East 4th Street, resulting in an increase in the traffic volumes on these city streets. The removal of the existing interchange would open up the space currently occupied by the interchange providing opportunity for improved multi-modal east-west movement under I-30 at this location.

2.3 How Would The Project Affect Traffic And Safety?

How would traffic patterns and volumes in the 30 Crossing corridor change with the project?

VISSIM (a traffic simulation software tool) modeling was used to evaluate future (2041) traffic conditions throughout the corridor for the No-Action and Action Alternatives. The Action Alternative VISSIM models assumed that, by 2041, one additional lane would be added outside the project limits to both directions of I-30 from 65th Street to the I-30/I-440/I-530 interchange.

No-Action Alternative

By the design year 2041, traffic volumes over the I-30 Arkansas River Bridge are expected to increase by approximately 24%, from 123,000 to 153,000 vehicles per day. Under the No-Action Alternative, in the morning peak, weaving issues over the I-30 Arkansas River Bridge and capacity issues at the I-30/I-40 interchange would lead to congested conditions, low speeds and long travel times on Highway 67, I-40 both east and west of I-30, and on I-30 from I-40 to downtown Little Rock (**Figures 23 and 24**). The congestion would begin around 6:30 AM and would extend through the morning. I-630 eastbound from Cumberland Street to the merge with I-30 northbound would be congested through the morning peak. There would also be a segment of I-30 northbound that extends from outside the south project limit on I-30 to Roosevelt Road that would experience congestion, low speeds and delays from 6:45 AM to 9:30 AM. During the afternoon peak, weaving issues over the I-30 Arkansas River Bridge and capacity limitations would lead to congestion that would spread through the entire project limits in the southbound direction, as well as from I-630 to Hwy. 67 interchange in the northbound direction, which would continue until well after the end of the afternoon peak. This congestion would spread

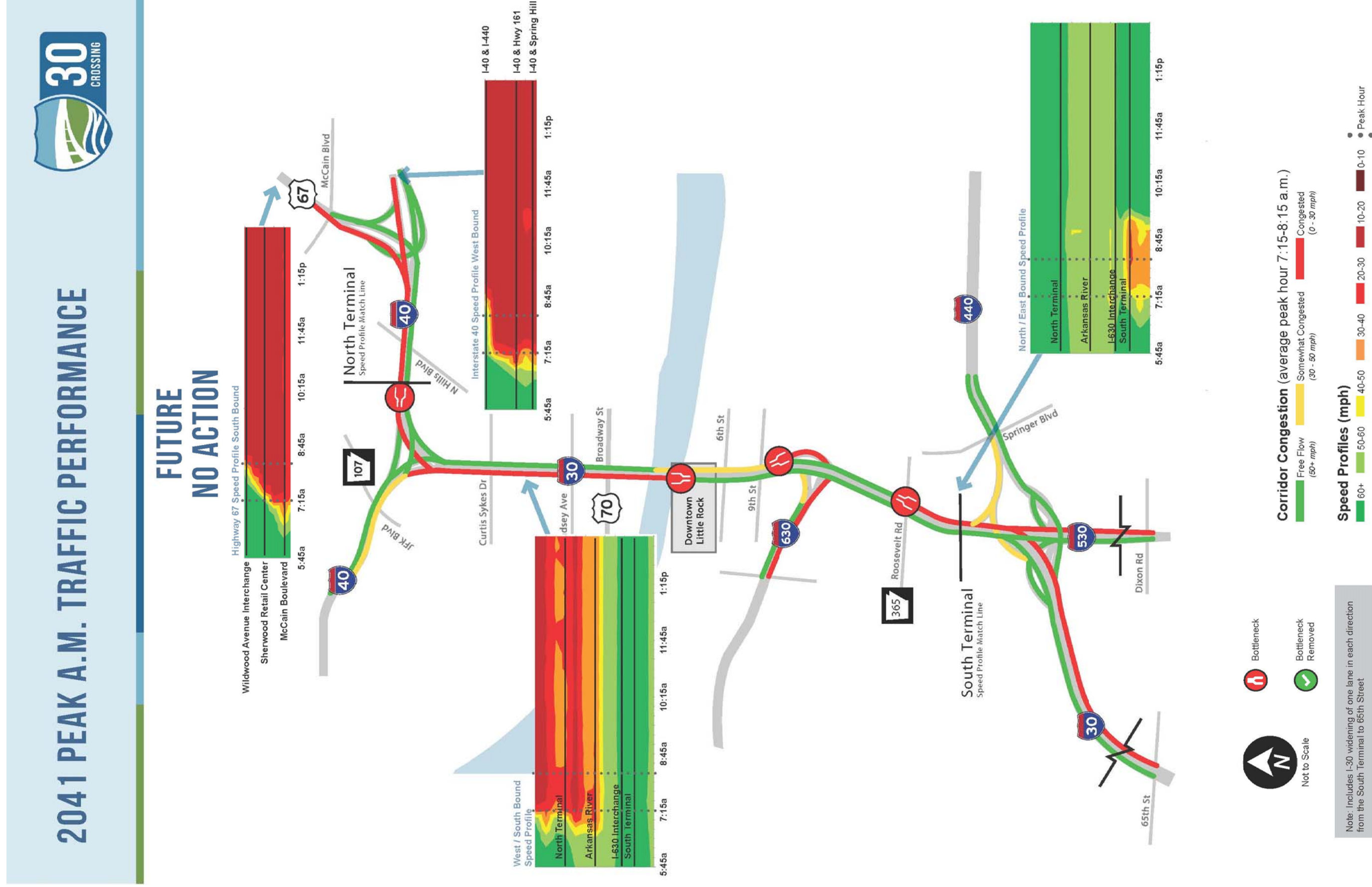
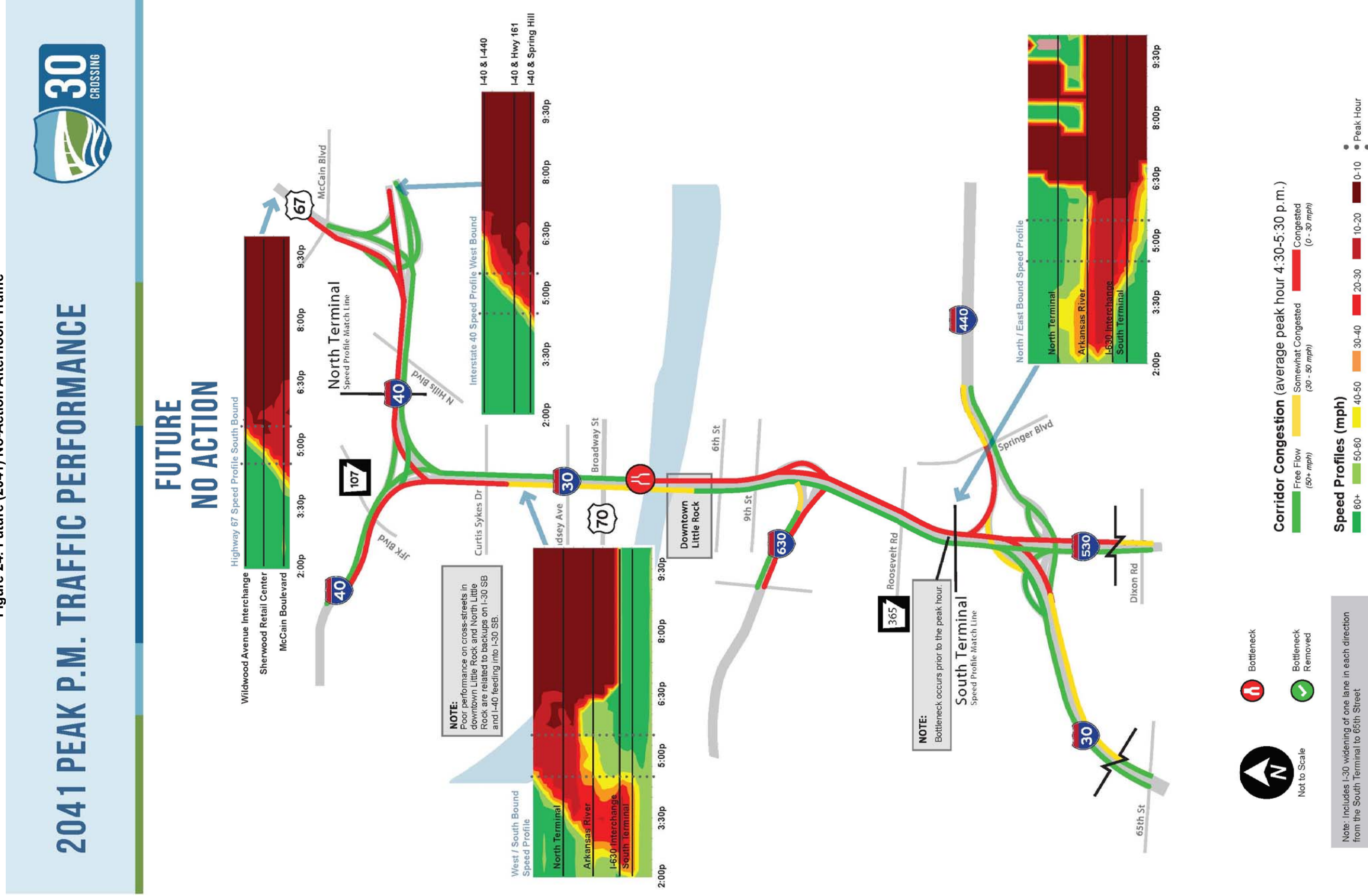


Figure 24: Future (2041) No-Action Afternoon Traffic



1 throughout arterial roadways connecting to I-30, especially in the downtown Little Rock
2 area, leading to long delays at intersections. The No-Action Alternative does not relieve
3 congestion or improve mobility.

4 **Action Alternative 1A (8-lane General Purpose with SPUI)**

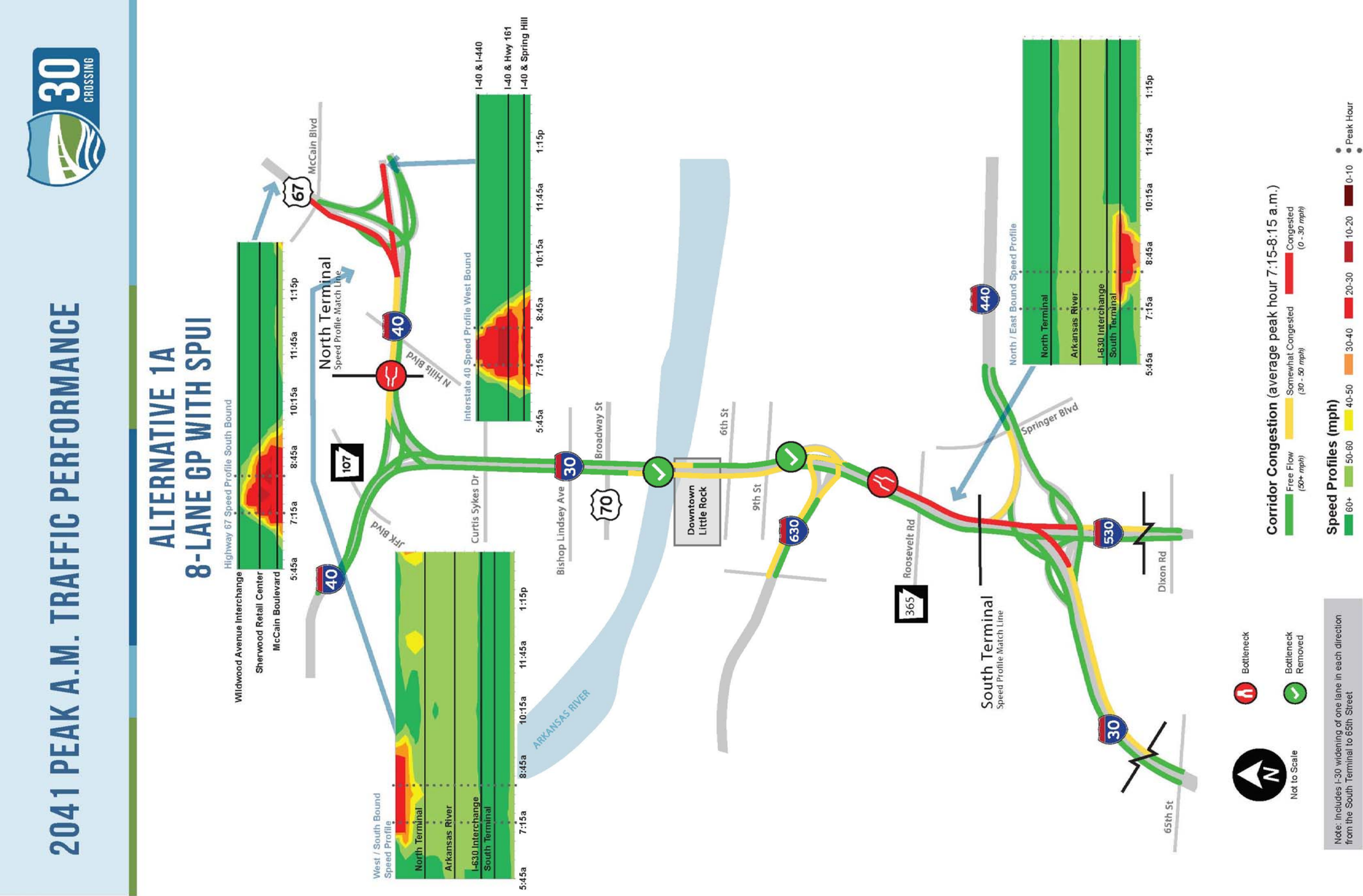
5 This Action Alternative would partially improve mobility on I-30 and I-40 in the design year
6 2041 by improving travel speed and travel time over the No-Action Alternative in the PM
7 peak. This alternative would accommodate an increase in traffic volume at the I-30
8 Arkansas River Bridge of approximately 8% over the No-Action condition. During the
9 morning peak, low speeds and delays would continue to exist for extended periods on
10 Hwy. 67 southbound and I-40 westbound and on I-30 northbound from 65th Street to
11 Roosevelt Road (**Figures 25 and 26**). The cause of the congestion on Hwy. 67
12 southbound and I-40 westbound is the ramp capacity from Hwy. 67 southbound, through
13 lane capacity on I-40 westbound, and ramp capacity from I-40 westbound to I-30
14 southbound. Because of the location of this bottleneck, morning travelers would have few
15 options for alternative routes to avoid the congestion. The causes of the congestion in the
16 northbound direction on I-30 from 65th Street to I-630 are main lane capacity on I-30 and
17 weaving.

18 In the afternoon peak, the segment of I-30 southbound from the I-630 interchange to 65th
19 Street would continue to experience heavy congestion. The cause of this congestion is
20 the lack of capacity on I-30 outside of the project limits, west of 65th Street. There would
21 be no congestion in the northbound direction in the afternoon. Arterial roadways
22 connecting to I-30 would experience relatively little afternoon congestion.

23

24

Figure 25: Future (2041) 8-Lane General Purpose with SPUI (Alt 1A) Morning Traffic



1

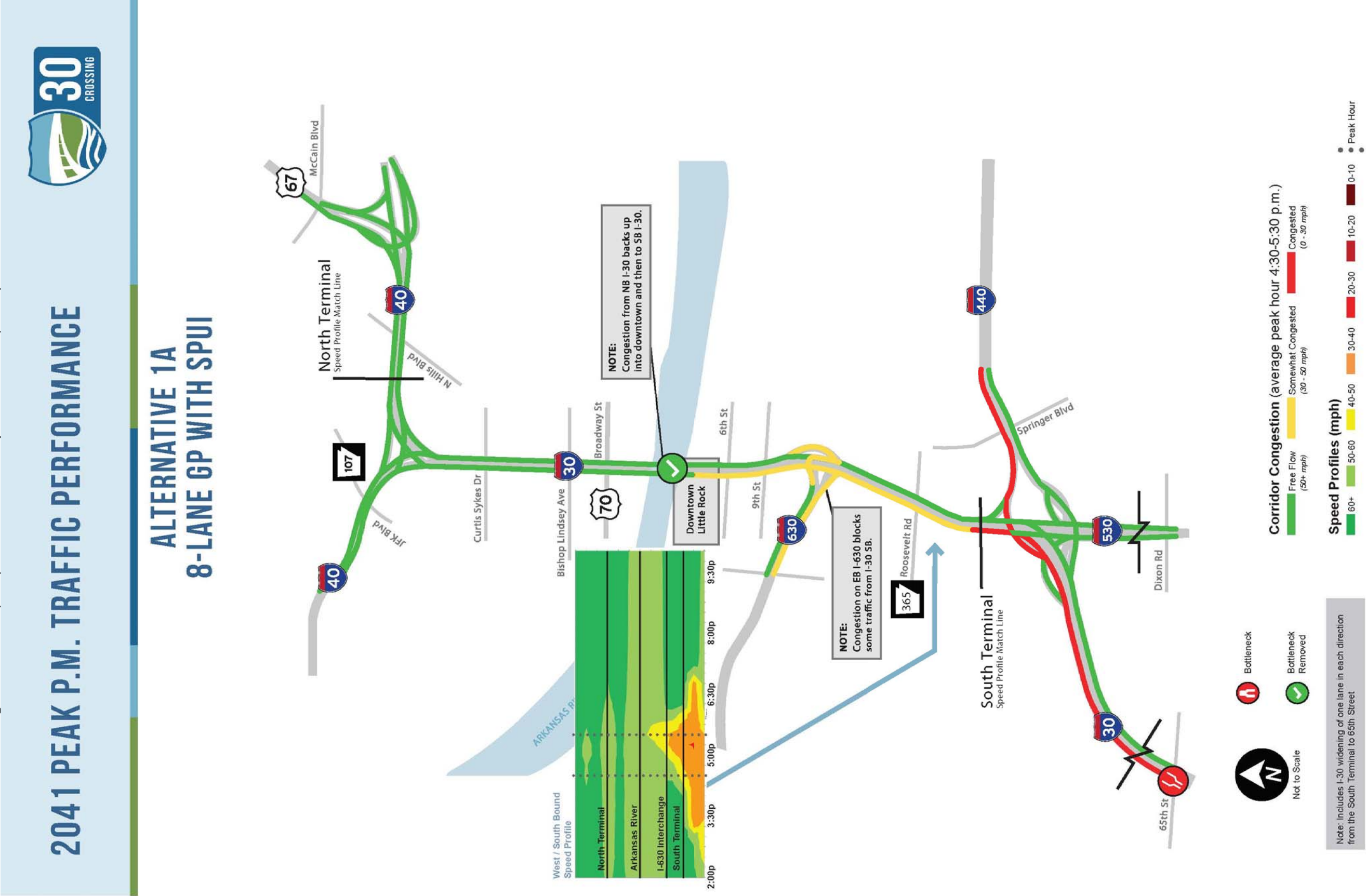
2

3

4

47

Figure 26: Future (2041) 8-Lane General Purpose with SPUI (Alt 1A) Afternoon Traffic



Action Alternative 1B (8-Lane General Purpose with SDI)

This Action Alternative would not greatly improve mobility on I-30 and I-40 in the design year 2041 over the No-Action Alternative. This alternative would accommodate an increase in traffic volume at the I-30 Arkansas River Bridge of approximately 10% over the No-Action condition. During the morning peak, low speeds and delays similar to the No-Action Alternative would exist for extended periods from the Arkansas River to the I-40/Hwy. 67 interchange in the southbound direction (**Figures 27 and 28**). The primary reason that this alternative does not perform as well as the 8-Lane General Purpose with SPUI Action Alternative (1A) in the AM peak is that the SDI Action Alternatives (1B and 2B) design provide one less access point to downtown Little Rock. There would be slightly less congestion in the northbound direction during the morning peak from 65th Street on I-30 to Roosevelt Road than with the 8-Lane General Purpose with SPUI Action Alternative (1A), due to differences in lane configuration.

During the afternoon peak, traffic delays in the southbound direction under this Action Alternative would be less severe than under the 8-Lane General Purpose with SPUI Action Alternative (1A). The congestion would only exist from 65th Street to the I-530/I-440 interchange in the southbound direction, due to capacity limitations outside the project, west of 65th Street. There would be no congestion in the northbound direction in the afternoon. Arterial roadways connecting to I-30, especially in the downtown Little Rock area, would experience relatively greater intersection delays in the afternoon than under any of the other Action Alternatives.

Figure 27: Future (2041) 8-Lane General Purpose with SDI (Alt 1B) Morning Traffic

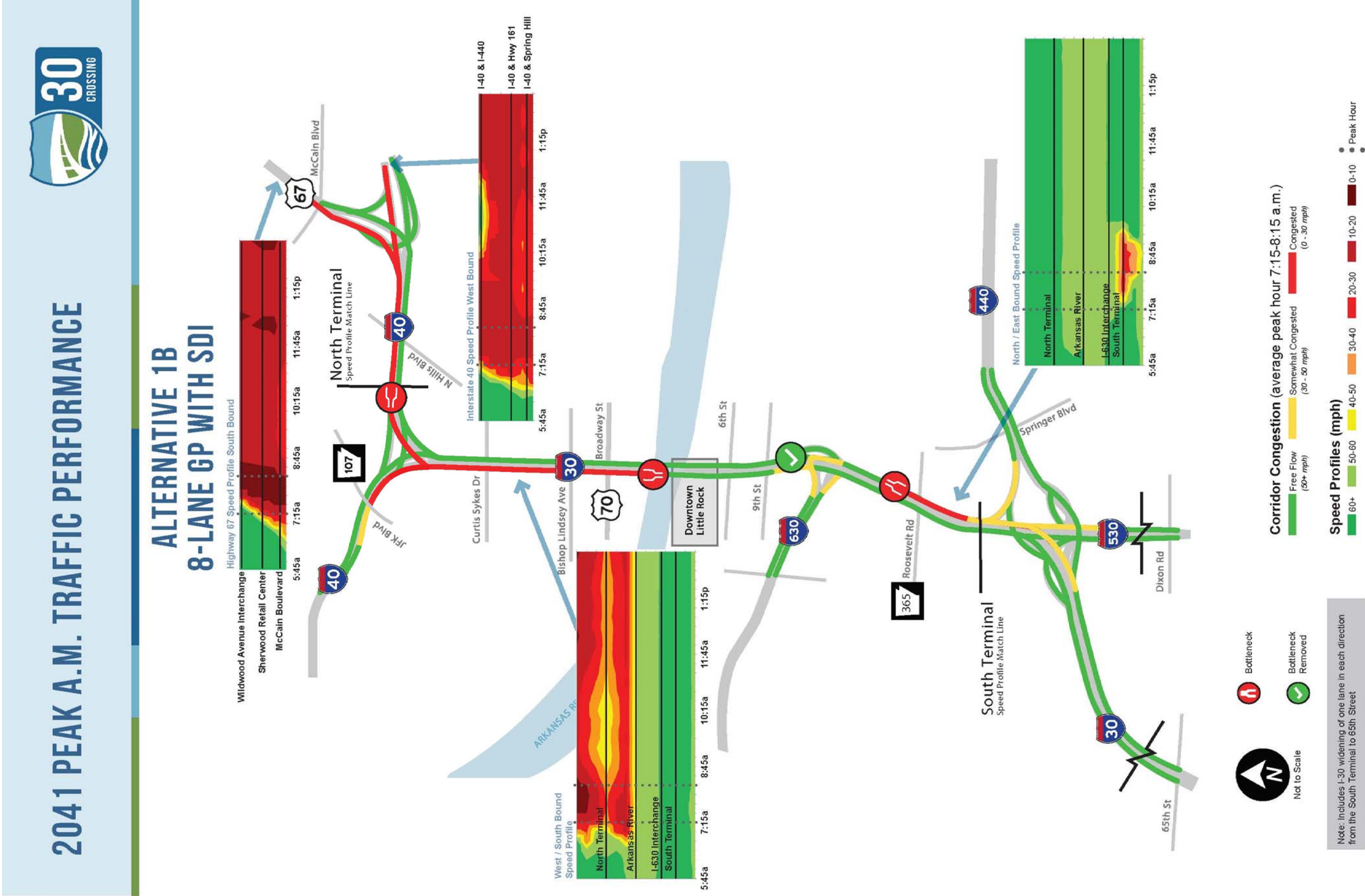
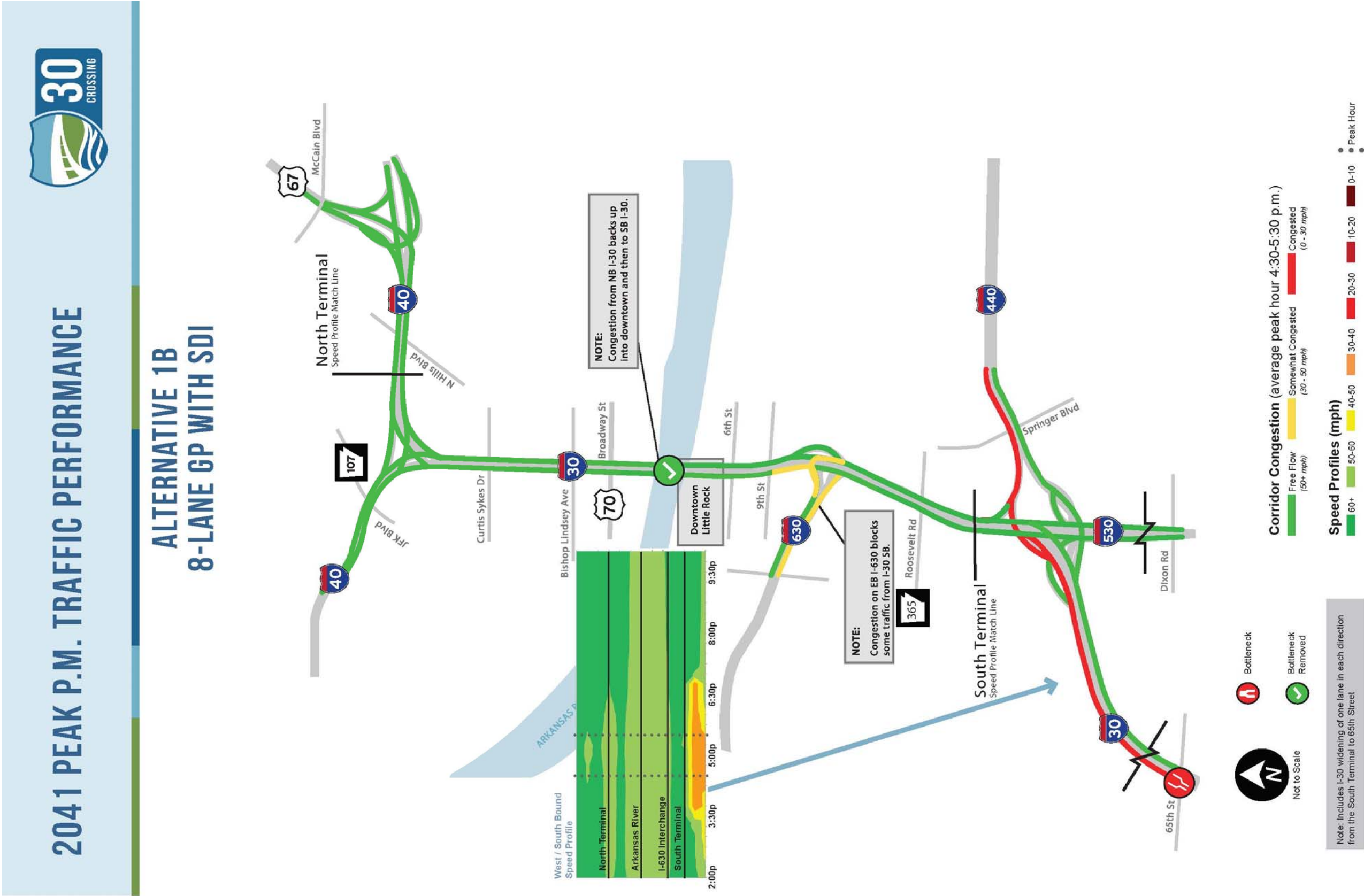


Figure 28: Future (2041) 8-Lane General Purpose with SDI (Alt. 1B) Afternoon Traffic



North Arrow

Not to Scale

Bottleneck

Bottleneck Removed

65th St

Springer Blvd

Dixon Rd

530

440

630

30

70

40

107

67

McCain Blvd

North Terminal Speed Profile Match Line

N Hills Blvd

Curtis Sykes Dr

Bishop Lindsey Ave

Broadway St

6th St

9th St

Roosevelt Rd

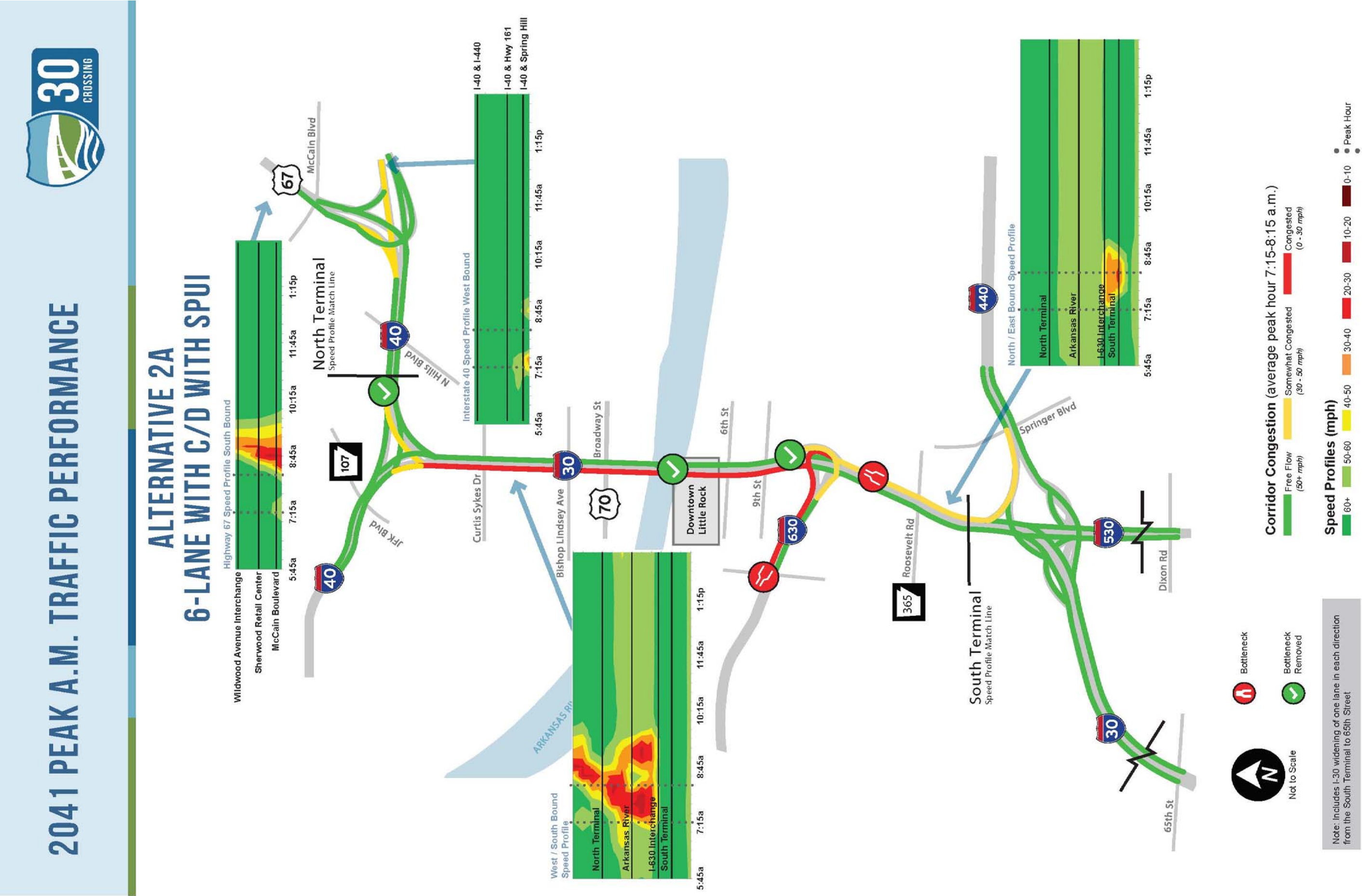
365

Action Alternative 2A (6-lane with C/D with SPUI)

This Action Alternative would improve mobility on I-30 and I-40 in the design year 2041 by improving travel speed and travel time over both the No-Action Alternative and both 8-lane General Purpose Action Alternatives (1A and 1B). This alternative would accommodate an increase in traffic volume at the I-30 Arkansas River Bridge of approximately 19% over the No-Action condition. During the morning peak, there would be a congested section in the southbound direction on I-30 from I-630 to the I-40 interchange; however, this is due to westbound capacity restrictions outside the project on I-630, which would last for approximately two hours (**Figures 29 and 30**). This congestion outside the project on I-630 could be addressed by a future project to add capacity to I-630. There also would be a congested section in the morning in the northbound direction on I-30 between the I-530/I-440 interchange and I-630, caused by weaving.

In the afternoon peak, in the southbound direction, lack of capacity outside the project limits on I-30 southbound west of 65th Street, as well as weaving on I-30 southbound between I-630 and the I-530/I-440 interchange, would cause congestion that backs up to the Arkansas River and lasts for approximately four hours. There would be no congestion in the northbound direction in the afternoon. Arterial roadways connecting to I-30 would experience the least afternoon congestion of all the Action Alternatives.

Figure 29: Future (2041) 6-Lane With C/D With SPUI (Alt 2A) Morning Traffic



West / South Bound Speed Profile

North Terminal

Arkansas River

I-630 Interchange

South Terminal

5:45a 7:15a 8:45a 10:15a 11:45a 1:15p

Highway 67 Speed Profile South Bound

Wildwood Avenue Interchange

Sherwood Retail Center

McCain Boulevard

5:45a 7:15a 8:45a 10:15a 11:45a 1:15p

North Terminal Speed Profile Match Line

Interstate 40 Speed Profile West Bound

I-40 & I-440

I-40 & Hwy 161

I-40 & Spring Hill

5:45a 7:15a 8:45a 10:15a 11:45a 1:15p

South Terminal Speed Profile Match Line

North / East Bound Speed Profile

North Terminal

Arkansas River

I-630 Interchange

South Terminal

5:45a 7:15a 8:45a 10:15a 11:45a 1:15p

Figure 30: Future (2041) 6-Lane with C/D with SPUI (Alt. 2A) Afternoon Traffic



1

Action Alternative 2B (6-Lane with C/D with SDI)

This Action Alternative would improve mobility on I-30 and I-40 in the design year 2041 by improving travel speed and travel time over both the No-Action Alternative and the 8-lane General Purpose Action Alternatives (1A and 1B). This alternative would accommodate an increase in traffic volume at the I-30 Arkansas River Bridge of approximately 19% over the No-Action condition (**Figures 31 and 32**). The congested area that exists in the morning in the southbound and northbound directions with the 6-Lane with C/D with SPUI Action Alternative (2A) would also exist with this alternative; however, this congestion would be greater, as the SDI Action Alternatives (1B and 2B) provide one less southbound exit into downtown Little Rock than the SPUI Action Alternatives (1A and 2A). As with the 6-Lane with SPUI Action Alternative (2A), congestion on I-630 westbound outside the project limits also contributes to the morning congestion. There also would be a congested section in the morning in the northbound direction on I-30 between the I-530/I-440 interchange and I-630, caused by weaving.

Conditions during the afternoon peak would be similar to the 6-Lane with SPUI Action Alternative (2A). There would be congestion in the southbound direction on I-30 from I-630 to 65th Street, caused by lack of capacity on I-30 outside the project limits west of 65th Street, and by weaving between I-630 and the I-530/I-440 interchange. There would be no congestion in the northbound direction. Arterial roadways connecting to I-30 would experience higher afternoon congestion than the 6-Lane with SPUI Action Alternative (1A).

Figure 31: Future (2041) 6-Lane with C/D with SDI (Alt 2B) Morning Traffic

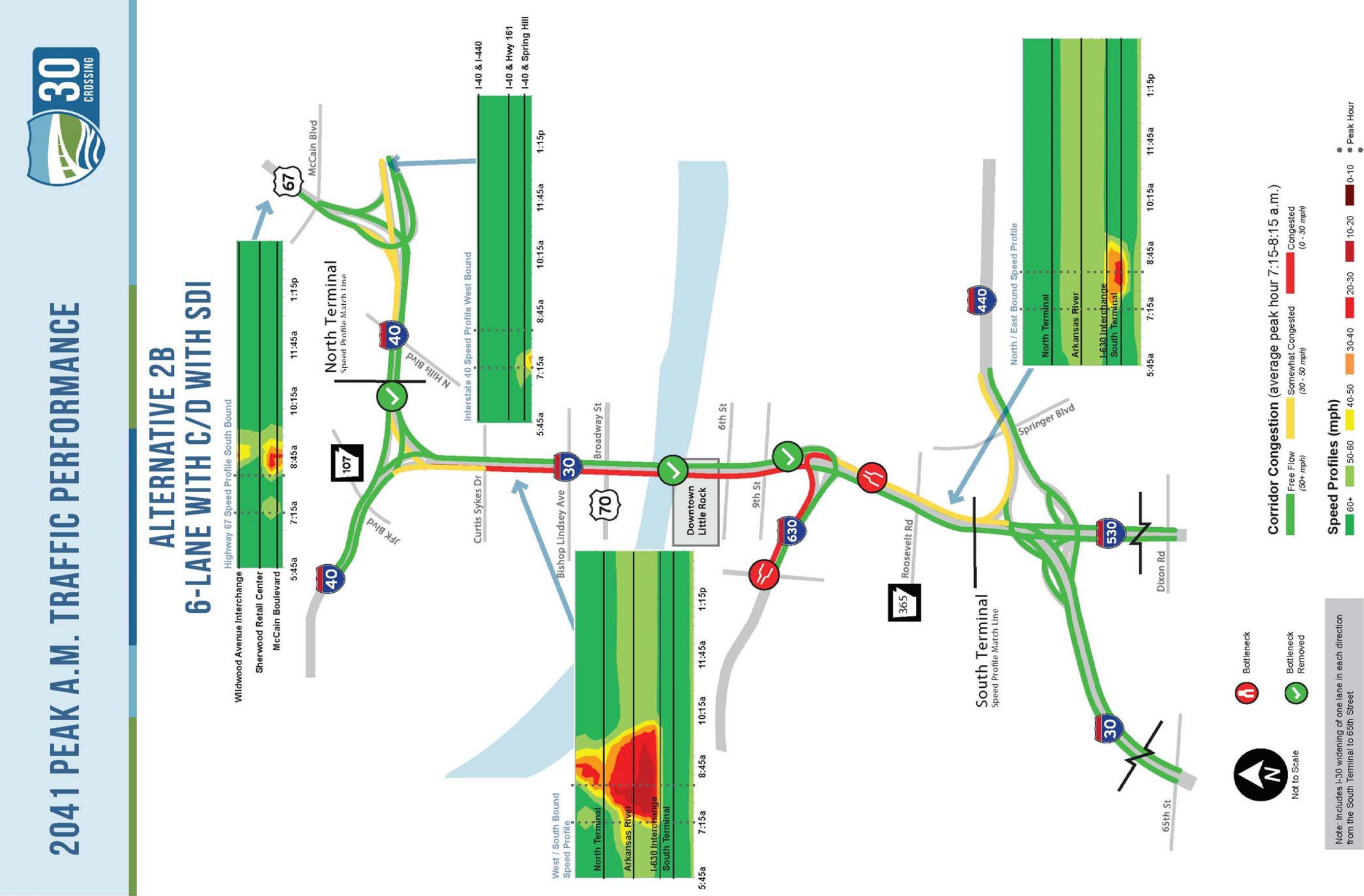
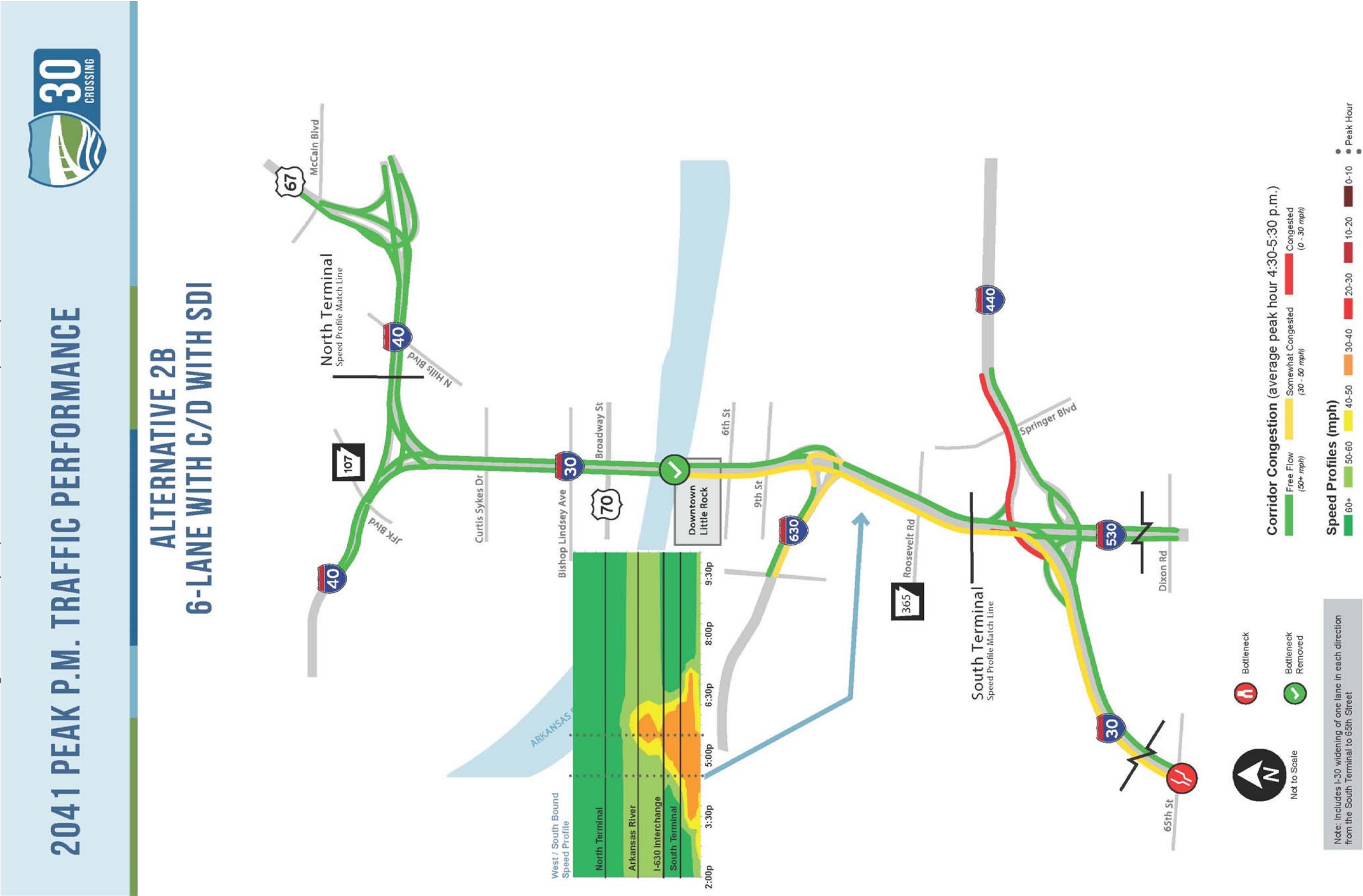


Figure 32: Future (2041) 6-Lane with C/D with SDI (Alt. 2B) Afternoon Traffic



1

2

How would traffic conditions in downtown Little Rock be affected?

Future (2041) traffic conditions in the downtown area of Little Rock would be primarily affected by the choice of Highway 10 interchange alternative: SPUI (Action Alternatives 1A and 2A) vs. SDI (Action Alternatives 1B and 2B). In downtown Little Rock, the differences in traffic conditions between the corridor alternatives (8-Lane General Purpose vs. 6-Lane with C/D) would be slight in comparison to the differences between interchange alternatives. The 6-Lane with C/D corridor alternative would introduce slightly more traffic into the downtown area of Little Rock, as it eliminates the bottleneck on I-40 that exists with the 8-Lane General Purpose Alternative. Consequently, the 6-Lane with C/D corridor alternative would provide better accessibility and result in higher traffic levels in downtown Little Rock. Traffic conditions in downtown Little Rock were evaluated for the higher traffic condition under Alternatives 2A (6-Lane with C/D with SPUI) and 2B (6-Lane with C/D with SDI). The results are shown in **Table 1**.

Table 1: Average Daily Traffic in Downtown Little Rock (vehicles per day)

Location	Existing	Future No-Action Alternatives	2A Action Alternative	2B Action Alternative
2 nd St. just west of the SB frontage road	2,800	4,100	N/A*	13,000
Hwy. 10 spur between I-30 and Cumberland	26,000	32,000	35,000	N/A*
3 rd St. just west of the SB frontage road	4,000	5,500	4,200	11,000
4 th St. just west of the SB frontage road	2,100	2,100	3,600	12,000
2 nd St. between River Market Ave. and Sherman St	3,000	4,000	2,900	14,000
3 rd St. between River Market Ave. and Sherman St.	4,200	5,800	4,000	11,000
4 th St. just east of River Market Ave.	2,100	2,100	3,600	12,000
Cumberland St. between President Clinton Ave. and 2 nd St.	18,500	24,500	26,000	19,000
Cumberland St. between 2 nd St. and 3 rd St.	8,300	8,900	3,600	16,500
Cumberland St. between 3 rd St. and 4 th St.	5,100	5,100	2,700	13,500
Cumberland St. between 4 th St. and 5 th St.	3,600	4,000	2,000	4,100
Mahlon Martin St. between 3 rd St. and 2 nd St.	2,000	2,000	16,500	24,500
Capitol Avenue between River Market Ave. and Sherman Street	2,900	3,100	5,100	5,000
East 6 th Street between Rock Street and Sherman Street	3,600	4,800	4,800	4,800
East 9 th Street between Commerce Street and Sherman Street	8,100	9,900	9,700	9,500

Source: Project Team, 2018. * Note: Data is not available because this alternative's configuration would not have the same location for comparison purposes.

The results indicate that traffic volumes on East 6th and East 9th Street do not vary greatly between the Future No-Action, SPUI (Alternative 2A) and SDI (Alternative 2B) Alternatives. On Capitol Avenue, daily traffic volumes are similar for the SPUI (Alternative 2A) and SDI (Alternative 2B), both of which are higher than the Future No-Action Alternative. The SDI Alternative (2B) results in higher traffic volumes on East 3rd Street, East 4th Street, and on Cumberland Street between East 2nd Street and Capitol Avenue, than with either the Future No-Action Alternative or the SPUI Alternative (2A). The SPUI (Alternative 2A) results in higher traffic volumes on Cumberland Street between President Clinton Avenue and East 2nd Street than with either the Future No-Action Alternative or the SDI (Alternative 2B).

How would the project affect safety?

With the combination of roadway geometric deficiencies and increased congestion through the project area, the No-Action Alternative would result in a corridor that would be increasingly difficult to travel safely. Using the methods in the *Highway Safety Manual*, the *IJR Safety Analysis (Appendix B)* documented the results of a predictive safety analysis which estimated potential crash reductions for the No-Action and Action Alternatives. Under the No-Action Alternative, the section of I-30 from I-630 to I-40 is expected to have the highest number of crashes in 2041 (444), with a crash rate of 2.89 crashes per million vehicle miles (**Table 2**). For the entire project, the number of crashes is expected to rise from 616 in 2014 to 792 in 2041. In addition, the navigational safety issues detailed in Section 1.4 would not be addressed under the No-Action Alternative, and the I-30 Arkansas River Bridge would be expected to continue to experience barge strikes due to the substandard horizontal clearance.

All Action Alternatives would address the roadway geometric deficiencies that contribute to the high amount of crashes, and, according to the predictive safety analysis, result in a reduction in crashes compared to the No-Action Alternative. Looking at all segments of the project combined, all Action Alternatives would be effective in reducing the crash rate, from 1.95 crashes per million vehicle miles under the No-Action Alternative to 0.97 – 1.04 crashes per million vehicle miles (the exact number depends on the Action Alternative). In terms of crashes, this would be a reduction of approximately 320-349 crashes per year, depending on the Action Alternative. The number of crashes would be expected to drop

1

Table 2: Results of Predictive Crash Analysis

Alternative	Length (miles)	Average Daily Volume (vpd)	# Crashes ¹		Crash Rate ²	
			All Severity Types	KA ³	All Severity Types (per MVM)	KA (per 100 MVM)
I-30 from I-530/I-440 to I-630 (Log Miles 138.236-139.433)						
2014 Actual	1.20	98,500	74	0	1.72	0.00
2041 No-Action		94,800	94	1	2.26	3.54
2041 Alternative 1A		121,000	58	1	1.09	2.11
2041Alternative 1B		122,000	59	1	1.10	2.12
2041Alternative 2A ⁴		124,000	59	1	1.08	2.08
2041 Alternative 2B ⁴		126,000	62	1	1.12	2.14
I-30 from I-630 to I-40 (Log Miles 139.433-142.435)						
2014 Actual	3.00	111,500	357	5	2.92	4.09
2041 No-Action		140,000	444	8	2.89	4.95
2041 Alternative 1A		148,000	196	4	1.21	2.55
2041Alternative 1B		147,000	176	4	1.09	2.24
2041Alternative 2A ⁴		159,000	181	3	1.04	1.94
2041 Alternative 2B ⁴		161,000	200	4	1.13	2.13
I-40 from MacArthur Drive to I-30 (Log Miles 151.395 - 153.048)						
2014 Actual	1.65	87,000	54	3	1.03	5.72
2041 No-Action		128,000	76	2	0.98	2.48
2041 Alternative 1A		143,000	90	2	1.04	2.61
2041Alternative 1B		146,000	93	2	1.06	2.64
2041Alternative 2A ⁴		147,000	93	2	1.05	2.63
2041 Alternative 2B ⁴		147,000	94	2	1.06	2.64
I-40 from I-30 to Highway 67 (Log Miles 153.048 - 154.872)						
2014 Actual	1.82	115,500	96	2	1.25	2.60
2041 No-Action		162,000	142	4	1.31	3.50
2041 Alternative 1A		164,000	76	2	0.70	1.62
2041Alternative 1B		166,000	78	2	0.71	1.64
2041Alternative 2A ⁴		168,000	71	2	0.63	1.50
2041 Alternative 2B ⁴		168,000	71	2	0.63	1.49
Highway 67 from I-40 to McCain Boulevard (Log Miles 0.475-1.254)						
2014 Actual	0.78	83,000	35	3	1.48	12.71
2041 No-Action		91,500	37	1	1.43	4.09
2041 Alternative 1A		101,000	37	1	1.30	3.73
2041Alternative 1B		101,000	37	1	1.30	3.73
2041Alternative 2A ⁴		115,000	46	1	1.40	3.89
2041 Alternative 2B ⁴		115,000	46	1	1.40	3.89

Notes: 1 Does not include ramps or frontage roads; 2 MVM= million vehicle miles; 3 KA = fatal (K) and serious injury (A) collisions; 4 Includes crashes on the C/D Road

2

1 by approximately half on the high crash rate segment of I-30 from I-630 to I-40, as well
2 as on the important freight corridor of I-40 from I-30 to Hwy. 67.

3 As discussed above, both 8-Lane General Purpose Action Alternatives (1A and 1B) are
4 only partially effective in eliminating congestion in the AM peak. Crashes related to AM
5 congestion would continue, although at a much lower frequency than are expected with
6 the No-Action Alternative. The C/D lanes included under the 6-Lane with C/D Action
7 Alternatives (2A and 2B) separate traffic entering and exiting the freeway from the through
8 traffic, and reduce weaving, which is a major source of vehicle conflicts and crashes. This
9 improvement is reflected in the lower fatal and serious injury (KA) crash rates with these
10 alternatives. Segments of I-30 which would experience AM congestion with the 8-Lane
11 General Purpose Action Alternatives (1A and 1B), such as I-40 from I-30 to Hwy. 67, are
12 also expected to have higher crash rates than those segments under the 6-Lane with C/D
13 Action Alternatives (2A and 2B).

14 There were no significant differences in predicted crash rates between the SPUI Action
15 Alternatives (1A and 2A) and SDI Action Alternatives (1B and 2B). For the highest crash
16 segment, I-30 from I-630 to I-40, the alternative predicted to be most effective in reducing
17 crash rates is also the alternative most effective in reducing congestion, the 6-Lane with
18 C/D SPUI Action Alternative (2A).

19 Because of the predicted reduction in crashes with the 6-
20 Lane with C/D SPUI Action Alternative (2A), as well as the
21 improvement in incident clearance time due to reduced
22 congestion, the 6-Lane with C/D SPUI Action Alternative (2A)
23 would have the highest **reliability index** of the Action
24 Alternatives.

25 All Action Alternatives would also address the navigational
26 safety issues on the Arkansas River.

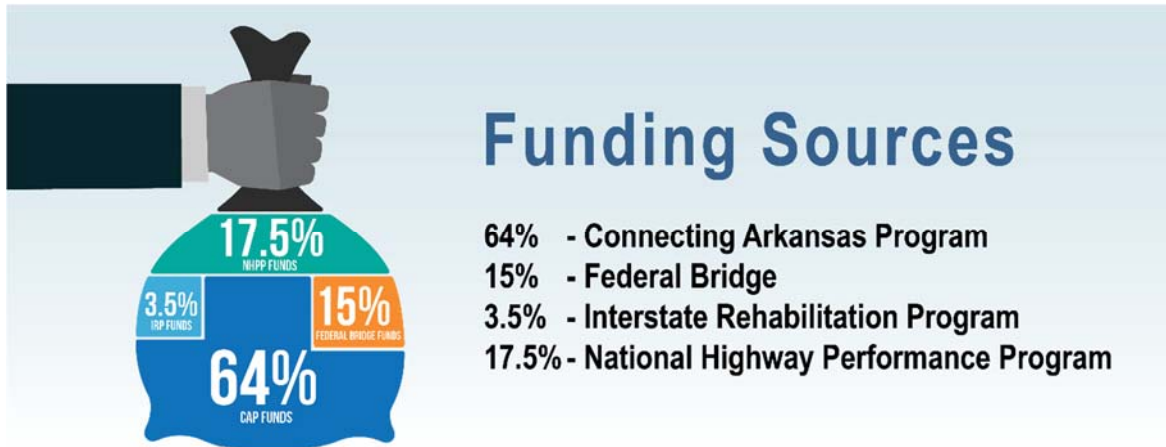
What is the *reliability index*?

Reliability index is a qualitative measure of predictability in travel time. It takes into account the potential for disruptions to traffic flow such as crashes, as well as the time it takes for congestion due to incidents to clear.

2.4 How Is This Project Being Funded?

The 30 Crossing project is part of the CAP and will be funded through four different avenues based upon a \$631.7 million-dollar budget; National Highway Performance Program (NHPP) funds 17.5%, Interstate Rehabilitation Program (IRP) funds 3.5%, CAP funds 64%, and Federal Bridge (FB) funds 15% (**Figure 33**).

Figure 33: Funding Sources



Source: Project Team, April 2017.

A review of the ArDOT estimate was performed using identified project risks and their probabilities as inputs to a risk-based cost-estimating simulation which provided probabilistic range of estimated project costs. The estimate is being shown as a range which is typical for a complex major project at this stage of development. The review indicated a range of \$615M - \$700M.

This project will initially be delivered using a fixed budget/variable scope design-build delivery contract. Design-Builders will compete to provide the most project scope for the fixed budget. In the event that none of the Design-Build firms are able to provide the full project scope, additional projects will be programmed and contracts will be let at a future date to complete the project scope. Any work postponed to a future date will include additional costs for inflation.

2.5 How Has The Public Been Involved?

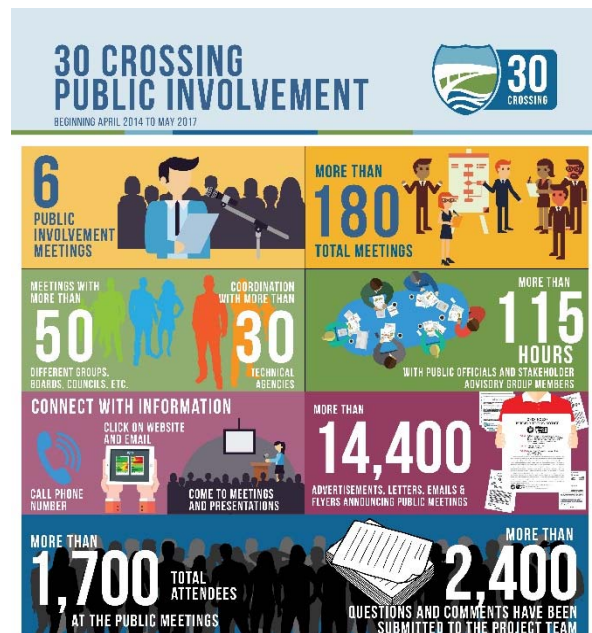
There was an extensive public outreach effort during the PEL Study that continued into the NEPA phase. These efforts are summarized in **Figure 29** and detailed in **Appendix D**. All information concerning the project or public meetings was made available to the public at:

www.30crossing.com

A Technical Working Group (TWG) consisting of local, state, and federal staff, as well as representatives from local businesses, environmental advocacy groups and regional institutions, was developed for the project. TWG meetings were held prior to all public meetings, allowing the Study Team to meet with subject matter experts and incorporate their feedback prior to presenting concepts to the public.

There have been a total of four public meetings in the PEL Study and two in the NEPA phase (**Table 3**). Public Meetings 1 through 4 allowed for the PEL Study team and the public to work together to choose the alternatives that would be carried through to the NEPA phase. During the NEPA phase, the project team has continued to organize and participate in extensive informational and advisory meetings with local officials and organizations. Monthly meetings have been held with the Project Partners group, which includes the cities of Little Rock and North Little Rock, Pulaski County, Metroplan, and the FHWA. Unique presentations have been given to residents and stakeholder groups, both to inform and allow the public to ask questions and provide comments. These have included a Town Hall meeting at the Clinton Library, community meetings at churches within minority communities, one-one-one discussions with state legislators and local government officials, and various presentations to local cities, associations and boards. In 2016, more than a dozen “pop-up” stations were held in large businesses in Little Rock and North Little Rock. Staff members answered questions from the public and showed

Figure 34: Public Involvement Summary



materials provided at Public Meeting 6, including the 3D video renderings. Details on the NEPA public involvement efforts can be found in **Appendix E**.

Table 3: NEPA Public Meeting Summary

	Public Meeting 5	Public Meeting 6
Date	October 22, 2015	April 26, 2016
Location	Friendly Chapel of the Nazarene North Little Rock	Wyndham Riverfront Hotel North Little Rock
Number of attendees	399	390
Information presented	<ul style="list-style-type: none"> • I-30 PEL Study & Project area, • 8-Lane Alternative, • 10-Lane with Downtown C/D (6-Lane with C/D) • 4 Hwy. 10 interchange alternatives 	<ul style="list-style-type: none"> • 8-Lane Alternative, • 6-Lane with C/D Alternative (10-Lane with Downtown C/D), • 2 Hwy. 10 interchange alternatives

2.6 How Have Tribal Governments Been Involved?

In July 2014, FHWA contacted the Osage Nation, United Keetoowah Band of Cherokee Indians, Quapaw Tribe of Oklahoma, Tunica-Biloxi Tribe of Louisiana, Choctaw Nation of Oklahoma, and Caddo Nation to notify them that a cultural resources survey would be conducted as part of the project and to provide them a survey of previously recorded archaeological sites. The tribes were requested to notify FHWA of any constraints or concerns with regards to the upcoming survey. On August 01, 2014, ArDOT received a response letter from the Tribal Historic Preservation Office of the Quapaw Tribe of Oklahoma (**Appendix E**). The Quapaw Tribe agreed with the need for a cultural resources survey and asked that the report follow all current regulations and standards. The Quapaw Tribe was invited to participate in the public involvement process as well. Details of public involvement during the PEL Study are provided in **Appendix D** and public involvement during the NEPA phase is summarized in **Appendix E**.

2.7 Which Of These Alternatives Will Be Considered?

Based on the analysis of the Action Alternatives presented in this Chapter, the 6-Lane with C/D Action Alternatives (2A and 2B) will be considered. The 8-Lane General Purpose Action Alternatives (1A and 1B) would fail to remove a major bottleneck within the project

limits, specifically on I-40 between I-30 and Hwy. 67. This congestion would extend outside the project limits on I-40 and Hwy. 67. Queues resulting from this bottleneck would extend outside the project limits on I-40 and Hwy. 67, restrict the through traffic movement on I-40, and leave traffic in the corridor with few options to bypass the congestion in order to reach downtown North Little Rock and Little Rock. Furthermore, the 8-Lane General Purpose with SDI Action Alternative (1B) would introduce additional congestion on I-30 between the Arkansas River and I-40 due to the reduction in access points into the downtown area of Little Rock, particularly during the morning peak period. The improvements required in order to remove the bottleneck would result in a final project configuration very similar to that of the 6-Lane with C/D Action Alternatives (2A and 2B). However, if these improvements were deferred to a later date, the construction cost would increase and the traveling public would continue to experience traffic delays and safety issues.

Conversely, the 6-Lane with C/D Action Alternatives (2A and 2B) would eliminate the major bottleneck within the project limits on I-40 between I-30 and Hwy. 67. By eliminating the major bottleneck on I-40, traffic is able to reach the grid system in downtown North Little Rock, where various travel options and destinations exist, including additional river crossings into Little Rock. In addition, the C/D lanes provided with these alternatives would result in improved local access across the Arkansas River by connecting the frontage roads on both sides of the river.

For these reasons, the 6-Lane with C/D Action Alternatives (2A and 2B) would better meet the mobility and safety goals of the project. The effects of the No-Action and all Action Alternatives throughout the I-30 and I-40 corridors will be compared in Chapter 3. As discussed above, the 6-Lane with C/D Action Alternatives (2A and 2B) remove the bottleneck on I-40 and promote better access into downtown North Little Rock and Little Rock. Therefore, with respect to the impacts of the Action Alternatives on the downtown Little Rock area, Chapter 3 provides a comparison of the No-Action and 6-Lane with C/D SPUI (Action Alternative 2A) and SDI (Action Alternative 2B) alternatives.

Chapter 3 – Project Effects

What's In Chapter 3?

*Chapter 3 identifies permanent and construction impacts that are expected as a result of the proposed project. Only elements that would be affected by the project are discussed. The impacts discussed in Chapter 3 are summarized in **Tables 8 and 9**, in Chapter 4.*

3.1 How Would Economic Conditions In The Little Rock And North Little Rock Communities And Surrounding Areas Be Affected?

A more detailed discussion on the effects of the project on the regional and local economy can be found in the *Indirect Effects Technical Report (Appendix A)* and in the *Community Impacts Technical Report (Appendix F)*. All Action Alternatives would provide additional lanes, bicycle and pedestrian accommodations, and ramp improvements. Discontinuous frontage roads on both west and east sides of I-30 would be converted to one-way, continuous frontage roads. These features would improve access and safety and decrease congestion, which would have a beneficial effect on local transit, emergency, and other services. Decreasing congestion and shorter travel times would also reduce operating costs for commercial road users and reduce time spent by commuters in traffic congestion in the project area, both of which would have an overall positive effect on the regional economy. Improved travel times and reliability would make downtown destinations more attractive to businesses, visitors and tourists, which would provide a boost to the local economy. All Action Alternatives would improve traffic congestion and safety on I-40, an important freight corridor.

All Action Alternatives would correct the I-30 Arkansas River Bridge navigational safety issues. This would provide an economic benefit to barge traffic on the Arkansas River. Short duration closures of the Arkansas River navigational channel are expected to allow for safe construction. Any closures will be announced in advance so that barge traffic schedules can be adjusted and the transportation of barge traffic would not be affected.

The No-Action Alternative would result in increasing congestion and crash potential, which would have a direct adverse effect on businesses, commuters, and tourists using the corridor, negatively impacting the regional economy. Travel times from area destinations such as the River Market and Clinton Center to outside the project during the

afternoon peak would be several times greater than travelers currently experience. Emergency response times would increase, and no bicycle and pedestrian improvements would be provided. Barge traffic would continue to be impacted by the navigational restrictions at the Arkansas River Bridge. Freight traffic on I-40 would be increasingly affected by congestion and crashes.

The SDI Action Alternatives (1B and 2B) would transform the River Market central business district by changing travel patterns, eliminating some on-street parking, and increasing connectivity in downtown Little Rock. Both Hwy. 10 Interchange Action Alternatives would increase green space in downtown Little Rock, which has the potential to increase the recreation opportunities and economic vitality of the area, particularly the developing area east of I-30. The SDI Action Alternatives (1B and 2B) would result in an increase of 15.7 acres of green space and provide an unobstructed open area under I-30 from the Arkansas River to 3rd Street. The SPUI Action Alternatives (1A and 2A) would add 9.1 acres of green space and the area under I-30 from the Arkansas River to 3rd Street would be partially obstructed by the SPUI.

In addition to these direct economic effects, the Action Alternatives would have indirect effects on the local economy, which are discussed in Section 3.16 of this EA.

3.2 How Would The Project Affect Communities In The Area?

Impacts of the project on regional and community growth; public facilities, services and destinations; access and travel patterns; potential ROW acquisitions and displacements; community cohesion; and Environmental Justice (**EJ**) and Limited English Proficiency (**LEP**) populations are discussed in the *Community Impacts Technical Report (Appendix F)*. The Corridor Action Alternatives (8-Lane General Purpose and 6-Lane with C/D Alternatives) have similar impacts on communities, except in the Hwy. 10 Interchange area. The Hwy. 10 Interchange Alternatives, the SPUI and SDI, have different impacts on communities, as detailed below.

What are **LEP** and **EJ** populations? LEP populations communicate in a language other than English. EJ populations are comprised of greater than 50% minority or households with median incomes below the poverty guideline.

Regional and Community Growth

The No-Action Alternative would not accommodate projected future growth and the resulting increases in traffic congestion.

The Action Alternatives would provide better relief than the No-Action Alternative from the congestion expected as a result of projected population growth. The Action Alternatives would improve travel conditions, enhancing safety and mobility. This transportation project alone would not cause a substantial impact to the population growth of the study area. Although population growth can directly impact the cities and communities within the project corridor, population growth would occur in the future and is not a direct effect of the proposed project. Any effect resulting from the proposed project that occurs later in time and distance from the proposed project footprint would be considered an indirect effect. Indirect effects are detailed in the *Indirect Impacts Technical Report (Appendix A)*.

Public Facilities, Services, and Destinations

The No-Action Alternative would not provide any improvements in access to public facilities and would result in decreased access as congestion increases. In addition, emergency response times would not be improved and may worsen over time as a result of increasing congestion within the corridor.

The Action Alternatives include improvements to interchange ramps, frontage roads, and cross streets, including bicycle and pedestrian accommodations that would improve access to public facilities and improve emergency services response time. Although there would be temporary disruptions to access of public facilities during construction, the Action Alternative improvements would enhance access to public facilities throughout Little Rock and North Little Rock.

The City of Little Rock has not requested renewal of the air space agreement that allows for the parking that currently exists under I-30, and within the interchange ramps, including the Hwy. 10 spur to Cumberland Street.

The SDI Alternatives (1B and 2B) would involve a change in travel patterns in downtown Little Rock due to the elimination of the Hwy. 10 interchange. These two alternatives

would not eliminate access to any public facilities and would not impact any public facility structures.

In addition, the SDI Alternatives (1B and 2B) would involve the loss of approximately 47 parking spaces along East 2nd Street, Ferry Street, and East 4th Street.

Access and Travel Patterns

With the No-Action Alternative, there would be no change in access or travel patterns; however, increasing congestion on I-30 would result in motorists seeking alternative routes, which would result in increased travel times and a change in travel patterns that could negatively impact adjacent neighborhoods.

Access changes due to interchange ramp improvements are discussed in the *Indirect Impacts Technical Report (Appendix A)*. Under all Action Alternatives, one ramp would be removed and two ramps would be replaced near Curtis Sykes Road to improve safety, but there would not be any loss of access. Frontage road and ramp improvements would lead to improved traffic operations on the local street system fronting I-30.

The 6-Lane with C/D Action Alternatives (2A and 2B) would provide better access to the downtown area of Little Rock than either the No-Action or 8-Lane General Purpose Alternatives (1A and 1B) by removing bottlenecks within the project limits on I-30 and I-40. In addition, the C/D road system would provide improved connectivity between Little Rock and North Little Rock.

With the SDI Action Alternatives (1B and 2B), there would be a change in access and travel patterns in downtown Little Rock, as described in Section 2.3. The Hwy. 10 spur from I-30 to Cumberland Street and the Hwy. 10 interchange would be eliminated, improving connectivity in downtown Little Rock. Frontage roads would connect with East 3rd Street, East 4th Street, and Capitol Avenue, to I-30, enhancing access to and from these City streets. Traffic volumes on East 2nd Street, East 3rd Street, East 4th Street, and Cumberland Street between 2nd Street and Capitol Avenue would be higher than the existing, No-Action, or SPUI Action Alternatives (1A and 1B). Traffic volumes on Cumberland Street between President Clinton Avenue and East 2nd Street would be lower than the No-Action and SPUI Action Alternatives (1A and 2A), and close to the existing traffic levels.

The SPUI Action Alternatives (1A and 2A) would maintain existing travel patterns in downtown Little Rock. The Hwy. 10 interchange and the spur from I-30 to Cumberland Street would remain in their current locations, with minor improvements to connectivity in downtown Little Rock, and not reducing traffic to the busy pedestrian area on Cumberland Street between East 2nd Street and President Clinton Avenue. The frontage roads would not connect with either East 3rd or East 4th Streets.

Under all Action Alternatives, pedestrian movements at intersections where pedestrian movements are high would be accommodated by including pedestrian phases at signalized intersections.

ROW Acquisitions and Displacements

The No-Action Alternative would not require any ROW acquisition or displacements.

ROW impacts of the Action Alternatives are summarized in **Table 4** and shown on **Figures 35-42**. ROW acquisition begins with an easement over the UPRR near the southern end of the project and ends with ROW for a ramp at the I-40/Hwy. 67 interchange near the eastern project limit. The ROW required under the 8-Lane General Purpose (1A and 1B) and 6-Lane with C/D (2A and 2B) Action Alternatives is the same. The only differences in ROW among the Action Alternatives occurs in the area of the Hwy. 10 Interchange. **Figures 37** and **38** show the differences in ROW between the SPUI (1A and 2A) and SDI (1B and 2B) Action Alternatives.

Table 4: ROW Impacts

Impact	8-Lane General Purpose Action Alternative		6-Lane With C/D Action Alternative	
	SPUI (1A)	SDI (1B)	SPUI (2A)	SDI (2B)
Acreage of acquisition	11.9	12.0	12.8	13.0
Number of Affected Parcels	53	53	54	54
Commercial Displacements	5	4	5	5
Residential Displacements	6	6	6	6

Source: Project Team, May 2017

1 All Action Alternatives would result in five commercial and six residential displacements,
2 with the exception that the 8-Lane General Purpose with SDI Action Alternative (1B),
3 which would require one less commercial displacement. All six residential displacements
4 are located along Cypress Street in North Little Rock. In order to improve connectivity
5 and access to businesses and residences in this neighborhood, under all Action
6 Alternatives, the existing southbound frontage road (Cypress Street) would be extended
7 over the UPRR between 9th and 13th Streets, causing six residences to be displaced. .

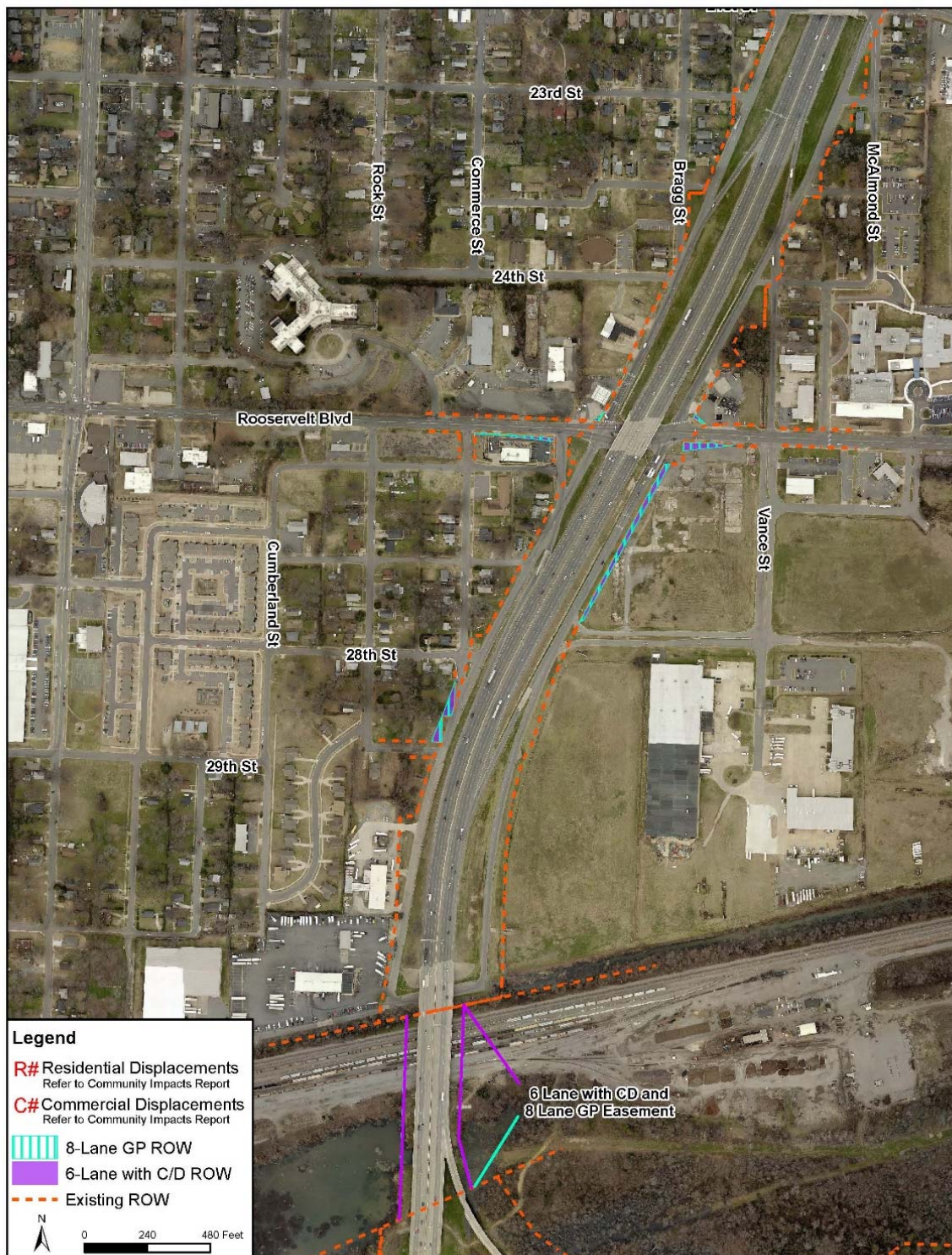
8 In the downtown Little Rock area, all Action Alternatives would require additional ROW to
9 be acquired along the northbound exit ramp between East 3rd and East 6th Streets,
10 requiring the acquisition of the EZGO Golf Cart Headquarters (C1) and westernmost
11 building of the Arkansas Gazette (C2). The SDI Action Alternatives (1B and 2B), which
12 would involve a connection between 3rd and 4th Streets on the east side of I-30, would
13 involve a greater taking from the Arkansas Gazette (C2) than the SPUI Action Alternatives
14 (1A and 2A). All Action Alternatives would require a taking from the Clinton Presidential
15 Center and Park along Mahlon Martin Street and the northbound entrance ramp. All
16 Action Alternatives with the exception of the 8-lane General Purpose with SDI Action
17 Alternative (1B) would require a taking along the southbound exit ramp to Hwy. 10,
18 involving the Julius Breckling Riverfront Park and one commercial displacement (C3).

19 Acquisition and relocation assistance would be provided to displaced persons in
20 accordance with the *Uniform Relocation Assistance and Real Properties Acquisitions*
21 *Policies Act of 1970*. A search of comparable replacement commercial and residential
22 properties within one to five miles of the displacements was performed as part of the
23 *Community Impacts Technical Report (Appendix F)*. Sixteen comparable homes were
24 found for sale and five were found for rent. The project would not proceed to construction
25 until all displaced residents had been provided the opportunity to be relocated to adequate
26 replacement sites.

27

1

Figure 35: ROW/ Permanent Easement Impacts



2

3 Source: Project Team, April 2017.

4

1

Figure 36: ROW/Easement Impacts (None on This Figure)



2

3 Source: Project Team, April 2017.

4

Figure 37: ROW/Easement Impacts from the SPUI Alternatives



Source: Project Team, April 2017.

1

Figure 38: ROW/Permanent Easement Impacts from the SDI Alternatives



2

3 Source: Project Team, April 2017.

4

1

Figure 39: ROW/Permanent Easement Impacts

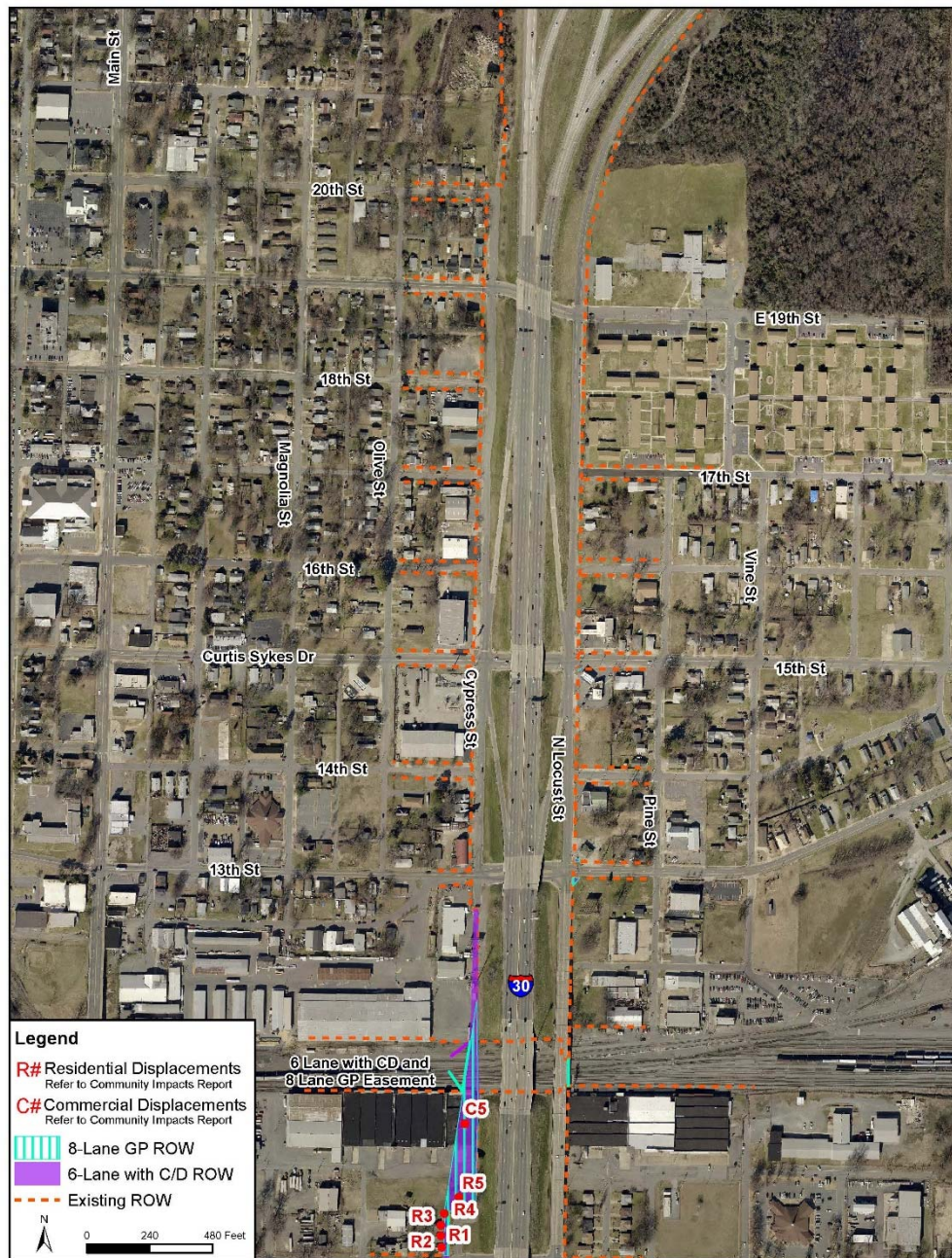


2

3 Source: Project Team, April 2017.

1

Figure 40: ROW/Permanent Easement Impacts



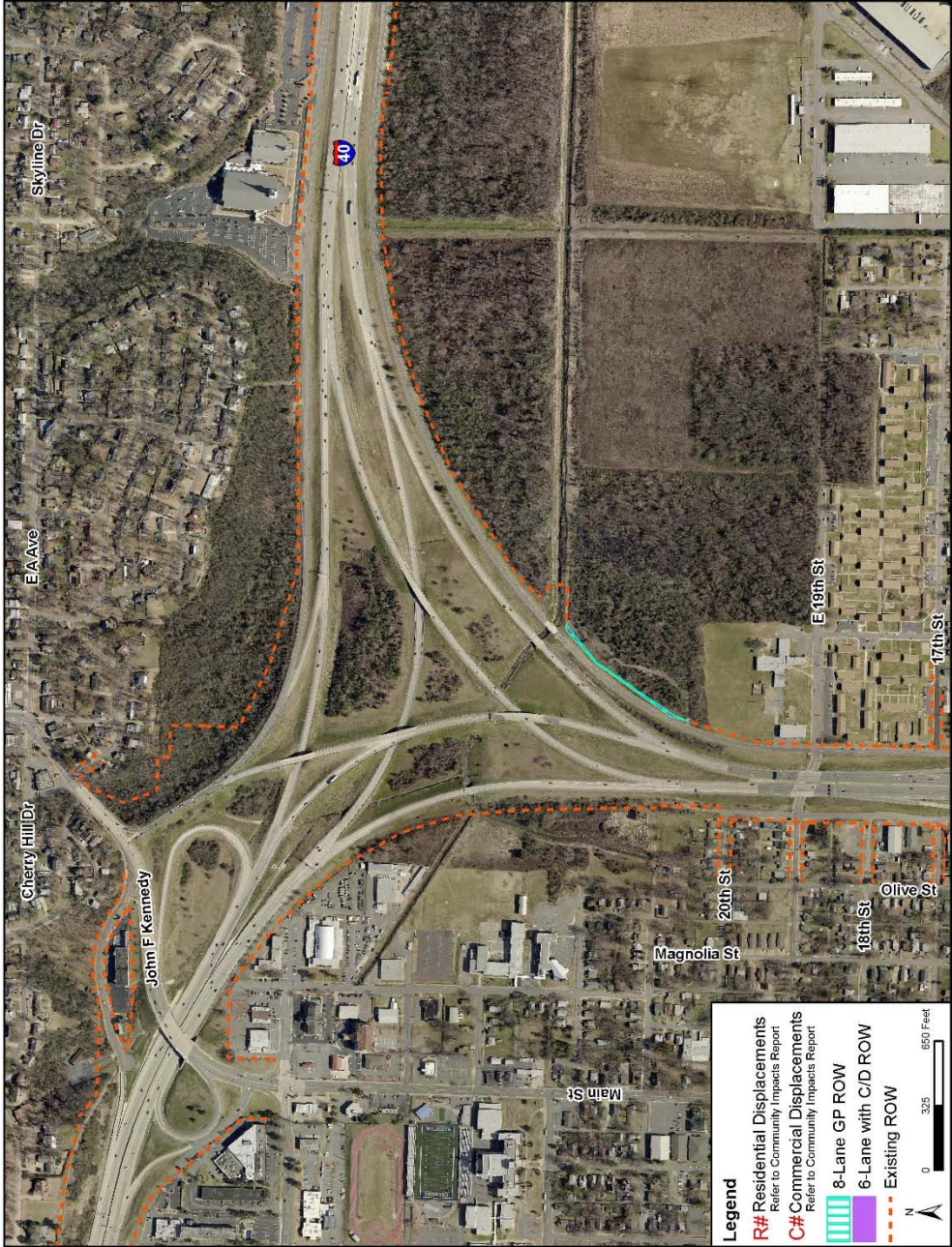
2

3 Source: Project Team, April 2017.

4

1

Figure 41: ROW Impacts



2

Source: Project Team, April 2017.

4

1

Figure 42: ROW Impacts



2

3 Source: Project Team, April 2017.

1 **Community Cohesion**

2 The No-Action Alternative would not involve any temporary disruption during construction,
3 but would not provide any connectivity enhancements. Additionally, as congestion
4 worsens and conditions on I-30 deteriorate, communities would be impacted by travelers
5 seeking alternate routes.

6 The Action Alternatives include improvements to frontage roads and cross streets,
7 including bicycle and pedestrian accommodations that would enhance east-west
8 connectivity across I-30 and promote community cohesion. The 6-Lane with C/D Action
9 Alternatives (2A and 2B) would additionally improve connectivity across the Arkansas
10 River between North Little Rock and Little Rock. During construction, there would be
11 temporary disruptions. The effects of the Action Alternatives are similar throughout the
12 project area, except in the downtown Little Rock area.

13 The SPUI Action Alternatives (1A and 2A) would allow vehicles, as well as bicycles and
14 pedestrians, to cross under I-30 along President Clinton Avenue, East 3rd Street, and East
15 4th Street. It would allow the River Rail Streetcar to continue to operate along East 3rd
16 Street. This interchange alternative would visually enhance the downtown area by
17 creating approximately 9.1 acres of green space on both sides of I-30 from President
18 Clinton Avenue to East 3rd Street, due to the removal of the existing circular ramps. The
19 SPUI Action Alternatives (1A and 2A) would have a beneficial effect on community
20 cohesion by increasing vehicular, pedestrian and bicycle connectivity across the I-30
21 corridor and improving the area aesthetically. However, the proposed ramps connecting
22 Hwy. 10 to I-30 would partially obstruct views along President Clinton Avenue.

23 The SDI Action Alternatives (1B and 2B) would be even more of a visual enhancement
24 than the SPUI Action Alternatives (1A and 2A). The existing Hwy. 10 ramps and the
25 existing elevated spur of Hwy. 10 from I-30 to Cumberland Street would be removed
26 altogether, increasing connectivity along Rock Street and making the area around the
27 Historic Arkansas Museum safer and more pedestrian and bicycle-friendly. The removal
28 of the ramps would have a beneficial effect on community cohesion by increasing
29 vehicular, pedestrian and bicycle connectivity across the I-30 corridor and improving the
30 area aesthetically by creating approximately 15.7 acres of green space along both I-30

1 and East 2nd Street. Views along President Clinton Avenue would not be obstructed and
2 pedestrian movements would not be inhibited along East 2nd Street. Coordination
3 between ArDOT and the City of Little Rock is ongoing regarding the development of the
4 potential green space. Traffic volumes along East 2nd, 3rd, and 4th Streets would increase;
5 however, because this area is highly developed, the change would not affect the
6 character of the area.

7 **Environmental Justice and LEP Populations**

8 An Environmental Justice (EJ) analysis was performed in
9 accordance with Executive Order (EO) 12898. The EJ analysis
10 was intended to identify and address any disproportionately
11 high and adverse effects to low income or **minority**
12 **populations** within the project study area. Low income is a
13 household whose income is at or below the 2018 Department
14 of Health and Human Services poverty guidelines for a family
15 of four (\$25,100). Twenty-two of the 62 census block groups
16 have median incomes below the poverty guideline. People were
17 living in 1240 census blocks within the project study area, 877
18 of which have a minority population greater than 50% of the
19 total population. For the total project study area, the minority
20 population consists of approximately 59% of the total population.

What is a minority population?

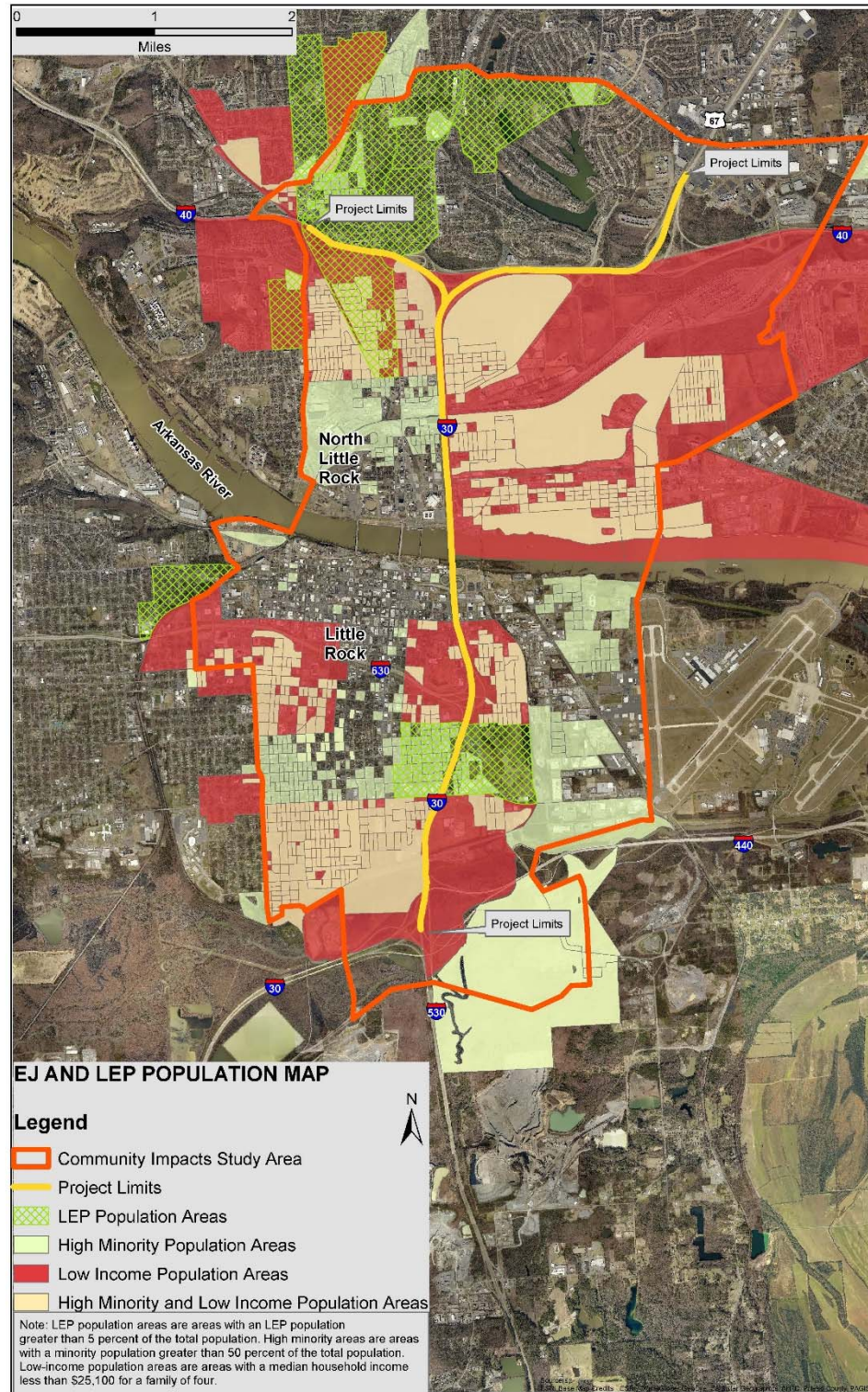
A minority population is a readily identifiable group of minority (Black, Hispanic or Latino, Asian American, American Indian or Alaska Native, or Native Hawaiian or Other Pacific Islander) persons living close to a FHWA project who would be similarly affected by the project.

21 Twenty-four of the 62 census block groups within the community impacts study area
22 indicate the presence of LEP populations (**Figure 43**), primarily Spanish-speaking. Public
23 involvement through the PEL and NEPA phases included accommodations for non-
24 English speaking attendees.

25 The No-Action Alternative would not result in any temporary disruptions, traffic noise
26 impacts, access changes, aesthetic changes, or ROW acquisitions or displacements that
27 could adversely impact EJ or LEP populations. However, the No-Action Alternative would
28 not provide any of the improvements in mobility and congestion relief, community
29 cohesion benefits, and aesthetic enhancements of the Action Alternatives.

1

Figure 43: EJ and LEP Populations Map



2

3 Source: Project Team, April 2017.

1 It is anticipated that the project Action Alternatives would result in a traffic noise impact,
2 as documented in the *Traffic Noise Report* (**Appendix I**). Noise impacts would potentially
3 occur along the entire corridor, including the areas of minority and/or low income
4 populations, and would affect all users of the facility including EJ and non-EJ populations.
5 To address these impacts, potential noise abatement measures could include
6 construction of traffic noise barriers, which would minimize and mitigate the potential
7 noise impacts resulting from the proposed project alternative.

8 The access changes with the Action Alternatives discussed above in the area of the Curtis
9 Sykes Drive and the Hwy. 10 Interchange would occur in areas of high minority and/or
10 low income populations. Access would not be eliminated, merely shifted in location.

11 The aesthetic changes due to the Action Alternatives would primarily be temporary
12 changes during construction and would occur throughout the project. The Action
13 Alternatives would include enhancements to aesthetics including improved lighting, and
14 aesthetic design features that would occur throughout the project corridor, including
15 minority and low-income areas. The greatest changes in aesthetics would occur in the
16 Hwy. 10 Interchange area, where the increase in green space with all Action Alternatives
17 would benefit minority and low-income populations.

18 All five residential displacements and one commercial displacement are located in a
19 census block with a minority population greater than 50% of the total population.
20 Avoidance of these displacements is not possible, because they lie along the segment of
21 Cypress Street that would be extended over the UPRR from 9th Street to 13th Street. This
22 would allow Cypress Street to become a one-way southbound frontage road and would
23 improve connectivity throughout the surrounding neighborhood. These displacements
24 would not be considered disproportionate to EJ populations, because the EJ communities
25 are located throughout the corridor, and the total population of the project area is
26 predominately minority.

3.3 How Would The Project Affect Cultural Resources?

Historic Resources

Section 106 of the National Historic Preservation Act requires agencies to consider the effects of federal actions to **historic properties**. The Area of Potential Effects (**APE**) is shown in **Figures 44** through **50**. ArDOT cultural resources specialists consulted with the staff of the Arkansas Historic Preservation Program (AHPP) and State Historic Preservation Officer (SHPO) to determine that seven historic districts that are listed in the National Register of Historic Places (NRHP) are located within, or partially within, the APE. In addition to the seven historic districts, there are a total of 136 NRHP-listed or NRHP-eligible properties within the APE, including the Locust Street Overpass.

Potential effects of the Action and No-Action Alternatives on these resources were evaluated in the *Built Environment Resources Effects Analysis Technical Report (Appendix G)*. The No Action Alternative would have no impact on these resources. Construction, demolition, noise, traffic, and visual impacts of the Action Alternatives were evaluated. Noise impacts on historic properties would be mitigated as discussed in Section 3.5.

A Consulting Parties group, consisting of representatives of local agencies with an interest in historic preservation, was established. Four meetings were held with the group to discuss the project Action Alternatives and obtain input on minimization and avoidance of potential impacts to historic properties.

It was determined that the permanent traffic and visual impacts, and temporary construction impacts, of the Action Alternatives would not compromise the integrity of any historic properties, with the exception of the Locust Street Overpass, which would be

What is a **historic property**?

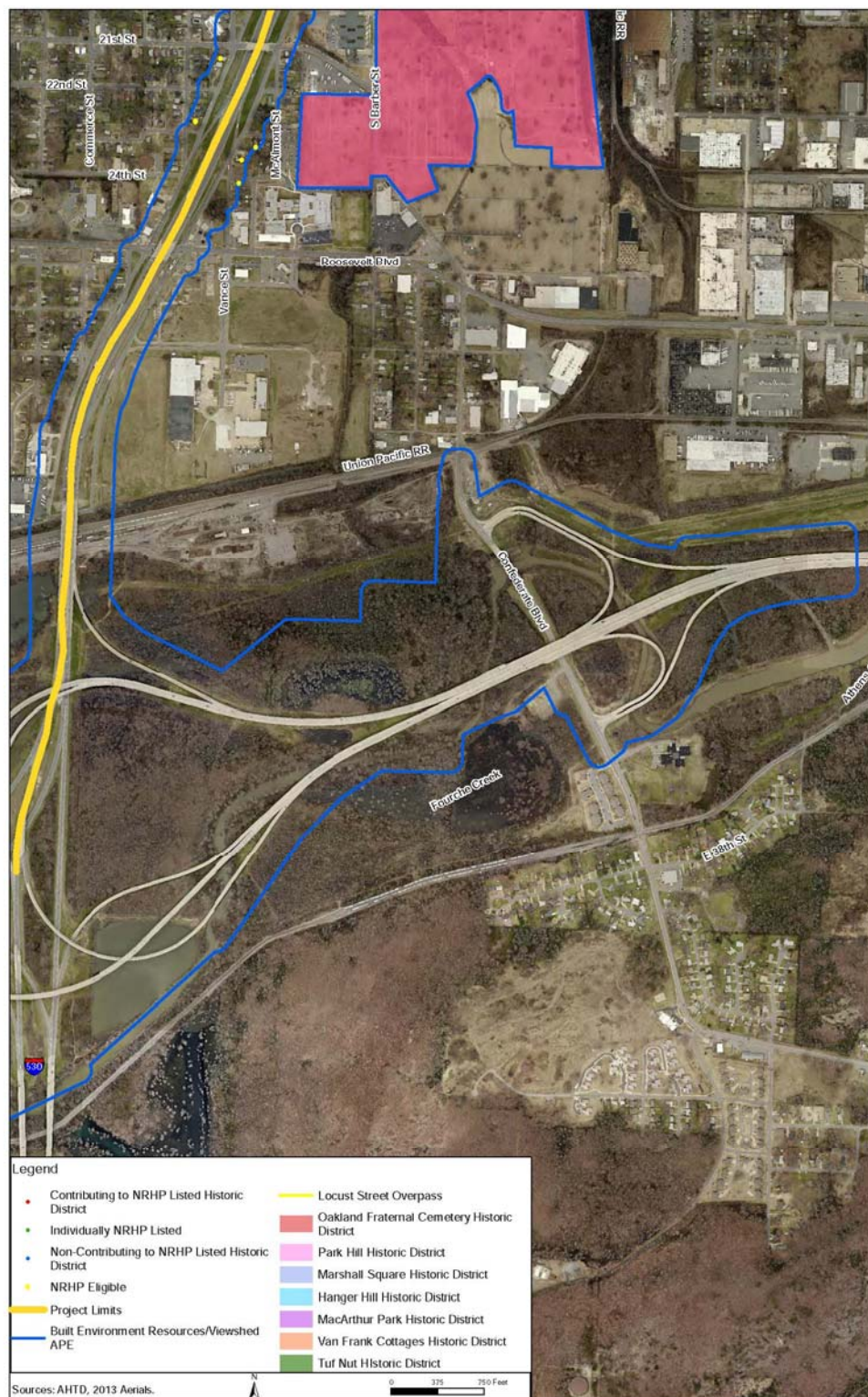
Cultural resources include elements of the built environment (buildings, structures, or objects) or evidence of past human activity (archeological sites). Historic significance is discussed in Appendix G. Those resources that are listed in or eligible for listing in the National Register of Historic Places (NRHP) are defined as historic properties.

What is the **APE**?

The Area of Potential Effects (APE) is the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties.

1

Figure 44: Historic Resources Within the APE



2

3

Source: Project Team, April 2018.

4

1

Figure 45: Historic Resources Within the APE

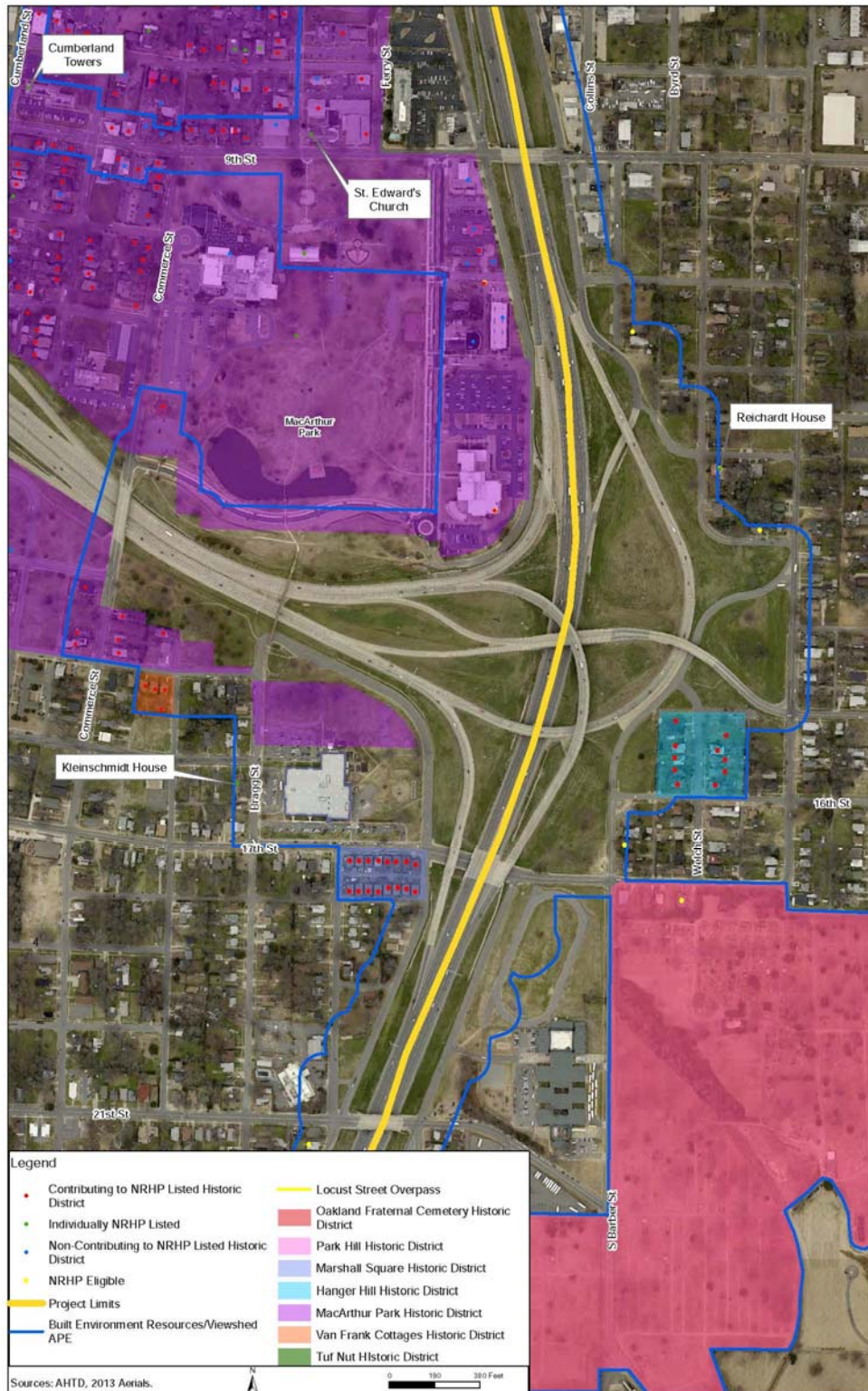


2
3
4
5

Source: Project Team, April 2018.

1

Figure 46: Historic Resources Within the APE

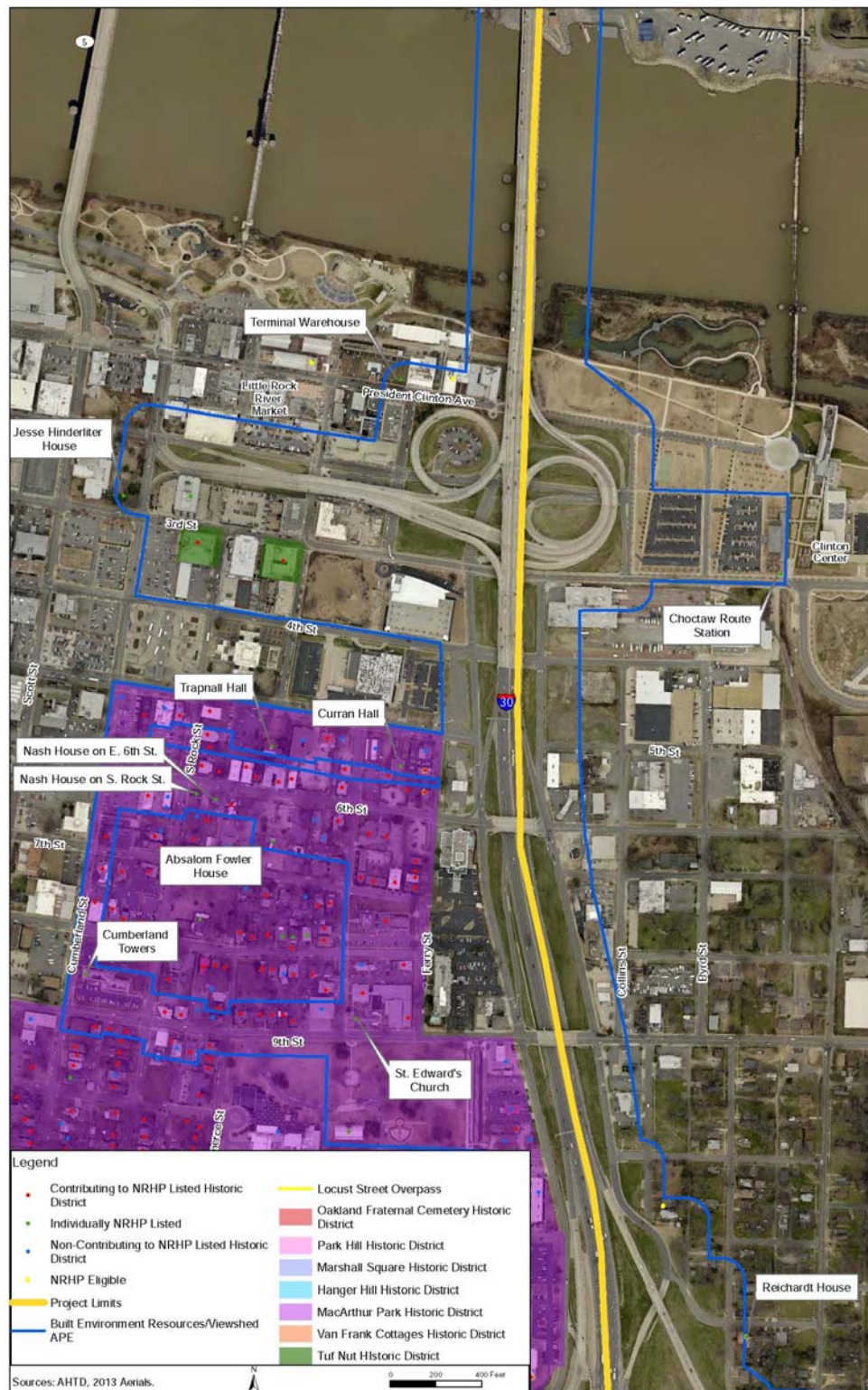


2
3
4

Source: Project Team, April 2018.

1

Figure 47: Historic Resources Within the APE



2
3
4

Source: Project Team, April 2018.

1

Figure 48: Historic Resources Within the APE



2
3
4

Source: Project Team, April 2018.

1

Figure 49: Historic Resources Within the APE

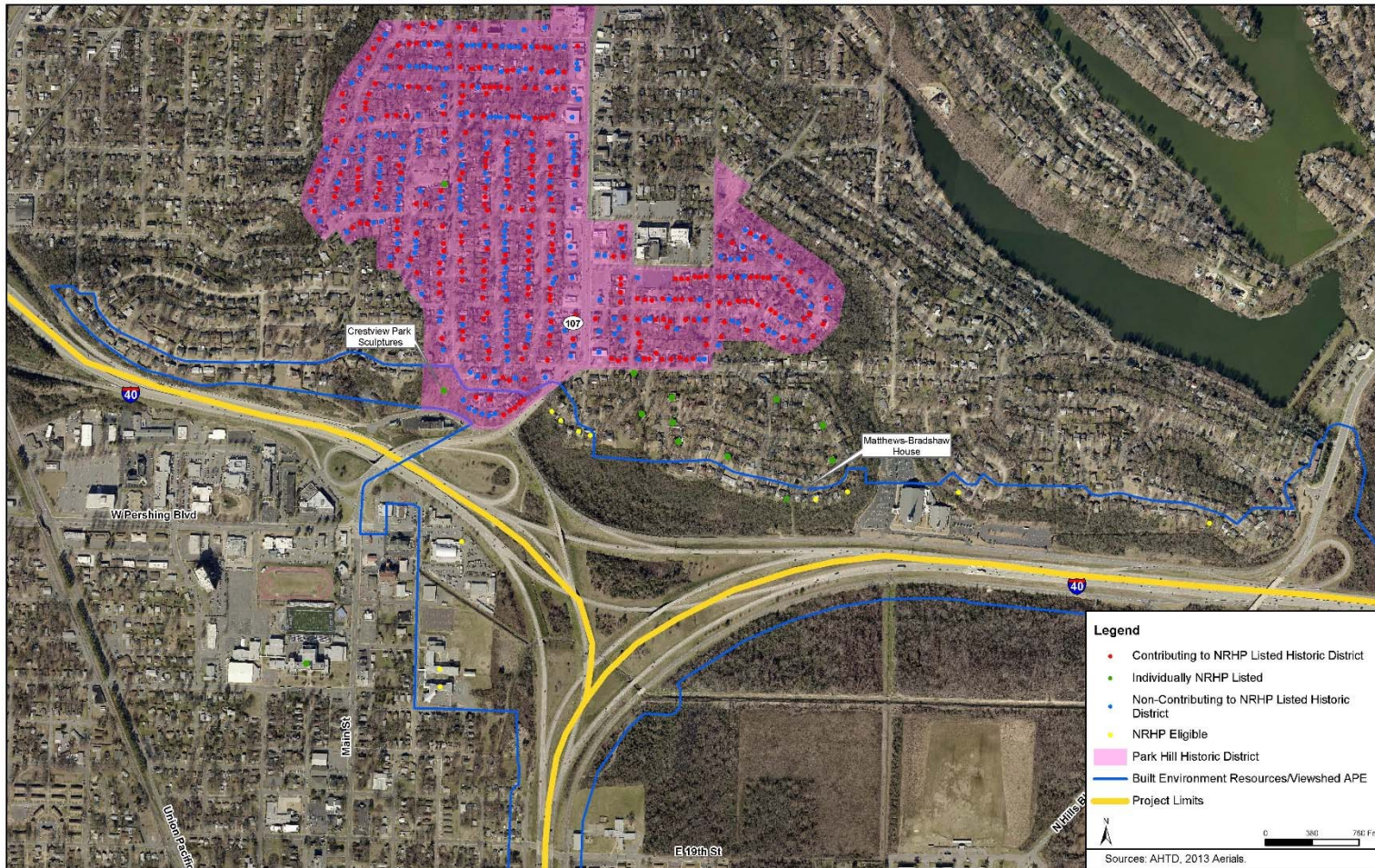


2
3

Source: Project Team, April 2018.

1

Figure 50: Historic Structures Within the APE



2
3

Source: Project Team, April 2018.

demolished. The removal of the Locust Street Overpass would be an adverse effect. The Action Alternatives would have no adverse effect on the remainder of the historic properties within the APE.

The FHWA and the Advisory Council on Historic Preservation are developing a Section 106 Programmatic Agreement (PA) to address any adverse effects on historic properties within the APE. The PA will stipulate measures to avoid, minimize or mitigate any adverse effects to historic properties that are currently identified or that become apparent in a later phase of the project. With regards to the Locust Street Overpass, the PA will include appropriate measures to minimize harm as required by the Programmatic Section 4(f) Evaluation and Approval for FHWA Projects that Necessitate the Use of Historic Bridges. This Programmatic 4(f) document can be found in **Appendix H**.

Archeological Resources

The archaeological APE consists of existing and proposed ROW. A preliminary (Phase 1) *Cultural Resources Survey* (**Appendix G**) was conducted within the archeological APE along approximately 6.7 miles of proposed roadway improvements. Seven new archeological sites were identified and recorded and a previously recorded but unevaluated archeological site was revisited. None of the newly recorded archeological sites were recommended as eligible for inclusion in the NRHP. No further archeological identification work is recommended for the currently planned project area. Archeological monitoring during construction, in coordination with the SHPO, is recommended at several of the sites.

An Addendum to the Phase 1 Cultural Resources Survey was conducted along a 0.7-mile segment of westbound I-40 from Hwy. 365 (MacArthur Drive) to JFK Boulevard. All tests were negative and no cultural features or materials were observed.

The effects of the Action Alternatives on archaeological resources are the same. The No-Action Alternative would have no effect on archaeological resources.

3.4 How Would The Project Affect Parks And Recreation Areas?

There are three parks along the Arkansas River that would be affected by the construction of the I-30 Arkansas River Bridge. None of these parks used funds from the Land and

1 Water Conservation Act Funds; therefore, there is no Section 6(f) involvement. On the
2 south bank of the River, the William J. Clinton Presidential Center and Park (Clinton
3 Center) lies to the east of I-30 and Julius Breckling Riverfront Park (Riverfront Park) lies
4 to the west of I-30 (**Figure 51**). Both parks are administered by the City of Little Rock.
5 North Shore Riverwalk (Riverwalk Park) lies on the north side of the River on both sides
6 of I-30. Riverwalk Park is administered by the City of North Little Rock. The North Little
7 Rock Downtown Riverside Recreational Vehicle Park (RV Park), which is separately
8 administered by the City of North Little Rock, lies within its boundaries.

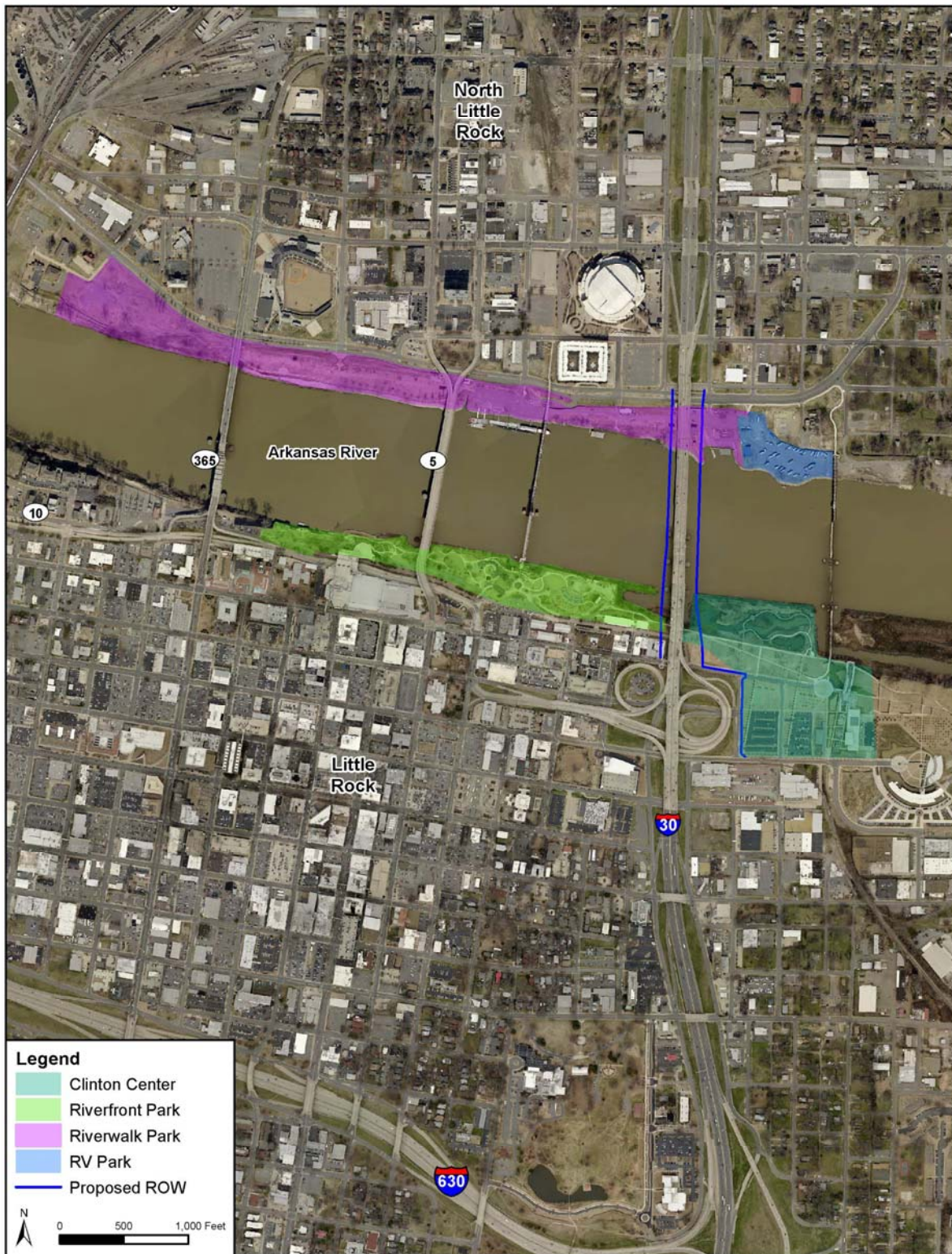
9 During construction, there would be temporary impacts to the Clinton Center and
10 Riverfront Park under all Action Alternatives due to construction of the I-30 Arkansas
11 River Bridge. The following resources within the Clinton Center would have to be
12 temporarily relocated by the City of Little Rock or closed under all project alternatives: the
13 Promenade, an access roadway located just to the east of and under I-30; a stairway
14 from Clinton Drive to the Arkansas River Trail; statues along the Promenade; and the
15 Arkansas River Trail. ArDOT would work with the Clinton Center and the City of Little
16 Rock to minimize disruption due to construction activities. Also during construction, there
17 would be temporary impacts to the following resources within the Riverfront Park: the
18 Promenade, an access roadway located under I-30 and extending into the Park, and the
19 Arkansas River Trail. ArDOT would work with Riverfront Park and the City of Little Rock
20 to minimize temporary disruption to these resources due to construction activities.

21 During construction, there would be temporary impacts under all Action Alternatives to
22 the pavilion, parking, the Arkansas River Trail, and the Locust Street boat ramp within
23 Riverwalk Park. These amenities would be within the footprint of the construction activities
24 and would have to be temporarily relocated out of the construction area by the City of
25 North Little Rock. Following construction, the City could request relocation of the pavilion
26 and parking back within ArDOT ROW by means of an air space agreement. The Arkansas
27 River Trail would have to be temporarily detoured around the construction zone. ArDOT
28 would work with the City of North Little Rock to minimize disruption to the Arkansas River
29 Trail. The Locust Street boat ramp would be temporarily closed for the duration of
30 construction activities.

31 There will be no permanent noise impacts to the parks as a result of the project. During

1

Figure 51: Parks



2

3 Source: Project Team, April 2017.

construction, there will be temporary impacts due to construction noise. Mitigation for these impacts is discussed in Section 3.5.

The proposed I-30 Arkansas River Bridge would be wider than the existing bridge and would require ArDOT to expand the air space agreement over the Parks. In addition, temporary construction easements would be required. For the Clinton Center and Riverfront Park, the amount of ROW and easements needed varies with the Action Alternatives and is summarized in **Table 5**. Under all Action Alternatives, it would also be necessary to acquire a 7-10-foot strip of ROW along the west side of Mahlon Martin Street, part of the Clinton Center, to allow for widening of the roadway.

Table 5: Acquisition from Parks

Location	No-Action	8-Lane GP Action Alternative		6-Lane with C/D Action Alternative	
		SPUI (1A)	SDI (1B)	SPUI (2A)	SDI (2B)
Clinton Center	None	2.4 Acres	2.4 Acres	2.4 Acres	2.3 Acres
Riverfront Park	None	0.1 Acres	None	0.2 Acres	0.1 Acres
Riverwalk Park	None	2.3 Acres	2.3 Acres	2.3 Acres	2.3 Acres

Source: Project Team, April 2017.

Travel times to and from the Clinton Center under the Action and No-Action Alternatives were evaluated in the *Indirect Effects Technical Report (Appendix A)*. Generally, the analysis showed that the 8-Lane General Purpose Action Alternatives (1A and 1B) would provide better access to and from the Clinton Center than the No-Action Alternative, but the 6-Lane with C/D Action Alternatives (2A and 2B) would provide better access than the 8-Lane General Purpose Action Alternatives (1A and 2A). The SPUI Action Alternatives (1A and 2A) generally would provide better access to the Clinton Center than the SDI Action Alternatives (1B and 2B).

The No-Action alternative would have no effect on the Parks; however, access to the Parks would be affected by increasing traffic congestion.

FHWA has determined that the project will not harm the protected features, assets, or activities that make the Parks important for recreation under Section 4(f), thus qualifying for a de minimis

What is *de minimis* finding?

A *de minimis* finding documents that the project impacts do not affect the features that make the park important.

Section 4(f) finding. The Cities of Little Rock and North Little Rock have agreed that the project will not have a harmful effect on the Parks. Documentation is provided in **Appendix H**.

The Arkansas River is an important recreational resource, with boating and fishing being the most common activities. The Action Alternatives would not affect recreational use of the Arkansas River. For safety reasons, passage under the Arkansas River Bridge for recreational users would be temporarily prohibited during certain phases of construction. These closures would be of short duration and announced in advance.

3.5 Would Noise Levels Change?

Impacts from traffic noise are discussed in detail in the *Traffic Noise Study Report* (**Appendix I**).

Long term noise measurements were taken at three locations during a 48-hour period within the project area to determine the time of day when traffic noise levels were the highest. Simultaneously, short-term noise measurements were taken at 15 other locations throughout the project area. Traffic was counted at the same time as these short-term noise measurements, for the purpose of verifying that the noise levels produced by the computer program, FHWA's Traffic Noise Model (TNM) 2.5, were reasonable compared to the short-term measurements. It was found that the computer program would model noise levels that compared reasonably well with the short-term noise measurements. The model was then used to predict existing and future (2041) traffic noise levels for the No-Action and Action Alternatives. Traffic noise levels are measured and modeled in a unit of noise intensity called as Leq, A-weighted decibels (dB(A)).

Whether or not traffic noise from a highway project would result in environmental impacts depends on the land use of the site (receptor) that is receiving the noise and the noise level. For residences and parks, a noise level of 66 dB(A) is considered a noise impact, while 71 dB(A) is considered an impact for businesses. An increase in noise levels of 10 dB(A) from the existing condition to the future condition is considered a significant increase and is also considered to be a noise impact. No increases of 10 dB(A) were predicted by the noise model as a result of the No-Action and Action Alternatives. The number of receptors that would experience future (2041) noise levels that are considered to be a noise impact are shown in **Table 6**.

Table 6: Number of Noise Receptors Impacted

Future No Action	8-Lane General Purpose Action Alternative		6-Lane with C/D Action Alternative	
	SPUI (1A)	SDI (1B)	SPUI (2A)	SDI (2B)
168	201	187	256	224

Source: Project Team, October 2017.

Results of the analysis conclude that all Action Alternatives would result in traffic noise impacts. Noise abatement measures were evaluated for all areas with noise impacts. Noise barriers must be both feasible and reasonable in order to be proposed for construction. “Feasible” means that the barrier provides a substantial (5 dB(A) or greater) noise reduction for at least one impacted site and that there are no engineering or economic obstacles to its construction. “Reasonable” means that the barrier is cost-effective in that it can be built at an average of \$36,000 or less for each site that is benefited by the barrier; that for at least one site that is benefited, an 8 dB(A) reduction is obtained. **Table 7** shows the number of barriers that were evaluated and those determined to be feasible and reasonable.

Table 7: Proposed Noise Barriers

	8-Lane General Purpose Action Alternative		6-Lane with C/D Action Alternative	
	SPUI (1A)	SDI (1B)	SPUI (2A)	SDI (2B)
Number of barriers evaluated	10	11	15	15
Barriers found to be feasible and reasonable	3	3	3	3

Source: Project Team, October 2017.

1 For all Action Alternatives, three barriers were found to be both feasible and reasonable:

- 2 • West of I-30 from 21st St. to UPRR in Little Rock, benefiting 84-86 residences
- 3 • West of I-30 between 17th St. and 21st St. in Little Rock, benefiting 30-33
- 4 residences
- 5 • East of I-30 between 13th St. and 19th St. in North Little Rock, benefiting 87-139
- 6 residences

7 The locations of these barriers are shown in **Figures 52 and 53**. Based on the traffic noise
8 study report, ArDOT is likely to incorporate the feasible and reasonable noise barriers
9 identified in **Table 6** into the project. During the design phase of the project, the location
10 of feasible and reasonable noise mitigation will be reassessed. If final design results in
11 substantial changes in roadway design from the conditions modeled for the EA, noise
12 abatement measures will be reviewed. A final decision on the installation of abatement
13 measures will be made upon completion of the public involvement process, which will
14 solicit the viewpoints of residents and property owners benefited by the construction of
15 the feasible and reasonable noise barriers and in accordance with 23 CFR 772.13(i).

16 For design-build projects, the traffic noise study report shall document all considered and
17 proposed noise abatement measures for inclusion in the NEPA document. Final design
18 of design-build noise abatement measures shall be based on the preliminary noise
19 abatement design developed in the traffic noise study report. Noise abatement measures
20 shall be considered, developed, and constructed in accordance with this standard (23
21 CFR 772) and in conformance with the provisions of 40 CFR 1506.5(c) and 23 CFR
22 636.109.

23 Construction activities such as demolition, hauling, grading, paving and bridge
24 construction would result in temporary increases in noise along the project. Local noise
25 ordinances may place restrictions on the contractor, including limiting certain activities to
26 specified hours, in order to reduce construction noise impacts. In addition, techniques
27 such as temporary noise barriers are available that would further reduce temporary noise
28 impacts.

1

Figure 52: I-30 Noise Barrier Locations in Little Rock



2
3

Source: Project Team, October 2017.

Figure 53: I-30 Noise Barrier Location in North Little Rock



Source: Project Team, October 2017.

3.6 Would Utilities Be Affected?

Any impacts to utilities in the project area would be avoided and minimized as much as possible. Overhead and underground utilities exist within the project area. The preliminary investigation of utilities identified one feature to be avoided. There is a transfer building for fiber optic lines that is located on ArDOT ROW, southwest of the I-30/I-40 Interchange (**Figure 54**). Another building is scheduled to be built to the southwest of the existing building.

The largest concentration of utilities within the project area is on the I-30 Arkansas River Bridge. For more information, refer to *Utilities Technical Memorandum*, **Appendix J**.

The Action Alternatives would have the same effects on utilities. The No-Action Alternative would not affect any utilities.

Figure 54: Fiber Optic Transfer Building



Source: Project Team, April 2017.

3.7 How Would The Project Affect Railroads?

The project crosses the UPRR at two locations, south of I-630 in Little Rock and south of the I-30/I-40 interchange in North Little Rock. Under all Action Alternatives, the existing structurally deficient I-30 railroad overpasses would be replaced or rehabilitated, the southbound frontage road (Cypress Street) would be extended over the UPRR Railroad between 9th Street and 13th Street, and the structurally deficient northbound frontage road (North Locust Street) overpass over the UPRR would be replaced. The project team coordinated with UPRR to minimize impacts to their facilities. Meeting notes are included in **Appendix D**. Coordination will continue in order to minimize disruption during construction.

The Action Alternatives would have the same effects on railroads. The No-Action Alternative would not affect any railroads.

3.8 How Would The Project Affect Views?

The **viewshed** from the 30 Crossing project area is described in the Visual Impact Assessment Technical Report (**Appendix K**). From south to north, the Area of Visual Effect (AVE) was broken down into the Landscape Units of North Little Rock, I-30 Arkansas River Bridge, and Little Rock. The North Little Rock Landscape Unit consists of the wetland area of Dark Hollow Basin, Northern Residential area, and Southern Light Industrial area. The I-30 Bridge (Arkansas River) Landscape Unit consists of the North Bank, Arkansas River, Clinton Presidential Center and Park, and downtown Little Rock. The Little Rock Landscape Unit consists of the predominantly residential area of South Little Rock, the light industrial/commercial area of East Little Rock, MacArthur Park, and the natural area of Fourche Creek.

What is a **viewshed**?

A viewshed is the area that is visible from a specific location. The viewshed could be from the point of view from a vehicle, pedestrians, bicyclists, or even river users.

The No-Action Alternative would have no impact on the viewshed.

The Action Alternatives would have temporary impacts on the viewshed during construction. Once construction has been completed, both the SPUI and SDI Action Alternatives would provide an area of revitalized green space in downtown Little Rock. The SDI Action Alternatives (1B and 2B) would remove the existing Hwy. 10 Interchange and elevated spur from I-30 to Cumberland Street, enhancing the viewshed in downtown Little Rock and providing more green space than the SPUI Interchange Action Alternatives (1A and 2A).

The Action Alternatives would involve improvements within the ROW, with very little alteration in the height of the roadway and bridges above the surrounding land. Consequently, changes in the appearance of the corridor, as well as the views experienced by road users, would be minor.

The community was involved in selection of visual features for the Action Alternatives. Visioning workshops were held in November 2014, October 2015 and February 2017 to obtain feedback from the public on what aesthetic features should be incorporated into the project. The feedback from the community was that the project design elements, such as bridges, retaining walls, and noise walls, should have a unified, consistent theme. The participants expressed a desire for simple designs using locally available materials that

would be compatible with the existing viewshed. The incorporation of these features into the Action Alternatives would ensure that there would be minimal impacts to the visual environment.

3.9 Would Any Hazardous Materials Be Created Or Affected?

An Initial Site Assessment (ISA) was performed to identify existing or potential recognized environmental conditions (**Appendix L**).

The assessment consisted of a site reconnaissance and review of state and federal records. Several locations were identified where excavation associated with construction of the project could potentially encounter **hazardous materials**, primarily petroleum.

These are:

- Intersection of N. Locust and Curtis Sykes Drive
- Intersection of N. Locust and E. 13th Street
- The I-30 and Locust Street Overpasses
- Intersection of N. Cypress Street and Bishop Lindsey Avenue
- Vicinity of I-30 and E. Broadway Street and E. Washington Street
- River Market/Clinton Presidential Library Area
- Vicinity of I-30/6th Street and 9th Street Interchanges
- I-30/I-630 Interchange
- Vicinity of I-30/Roosevelt Road Interchange

If hazardous materials are identified, observed or accidentally uncovered by any ArDOT personnel, contracting company(s), or state regulating agency, it would be ArDOT's responsibility to determine the type, size, and extent of contamination. ArDOT would identify the type of contaminant, develop a remediation plan and coordinate disposal methods to be employed for the particular type of contamination. All remediation work would be conducted in conformance with the Arkansas Department of Environmental Quality (ADEQ), Environmental Protection Agency (EPA), and Occupational Safety and Health Administration (OSHA) regulations.

The Action Alternatives do not vary in their ROW impacts, except in the River Market/Clinton Presidential Library Area, where the SPUI Action Alternatives (1A and 2A) would have slightly different ROW impacts than the SDI Action Alternatives (1B and 2B).

What are **hazardous materials**?

Any materials which if encountered could cause a potential health risk to the public.

Within this area, the areas of suspected contamination consist primarily of gas stations with possible petroleum contamination and dry cleaners. The eastern half of the existing Hwy. 10 Interchange and ramps to Cumberland Street have a high concentration of potential contaminated sites. The SDI Action Alternatives (1B and 2B) would be expected to have less involvement with these sites, since the construction activities would be primarily demolition. The C3 displacement (discussed in Section 3.2), which is a potential contamination site, is not required under the 8-Lane General Purpose with SDI Action Alternative (1B), but is required under all other Action Alternatives.

The No-Action alternative would have no involvement with any hazardous materials.

3.10 How Would Water Resources, Such As Streams, Be Affected?

Specific details on location and types of streams within the project area can be found in **Appendix M**, the *Streams and Wetland Report*. There are fifteen streams within the project area, totaling 16,631 linear feet. These streams consist of ephemeral, intermittent, and perennial channels, some containing multiple types. Most of the natural stream systems have been altered through channelization, excavation, and straightening for highway/roadway construction and storm water conveyance. Most of the streams are narrow and cross the interstates and highways in the project area via culverts. Permits would be obtained under Section 404 of the **Clean Water Act (CWA)** from the U.S. Army Corps of Engineers for impacts to streams. Avoidance and minimization efforts would be employed throughout the design process.

What is the **Clean Water Act (CWA)**?

The CWA is a federal regulation governing activities that could have a harmful effect on the quality of the nation's water bodies. Section 404 of the CWA governs discharge of material into water bodies. Section 402 of the CWA governs the discharge of pollutants into water bodies. Section 401 of the CWA gives the states the authority to regulate the discharges that may affect water quality.

Water bodies in the project area are the Arkansas River and Fourche Creek. Water quality in these water bodies is described in the *Water Quality Technical Memorandum*, **Appendix N**. Fourche Creek is listed as impaired for dissolved oxygen, turbidity and metals. Permits would be obtained from the ADEQ under Sections 401 and 402 of the CWA for impacts to water quality during construction. Best Management Practices, which are measures which have been shown to prevent impacts to water quality, such as erosion control, would be utilized to prevent degradation of water quality due to

construction activities. A permit would be obtained from USCG for the replacement of the I-30 Arkansas River Bridge, as the Arkansas River is a navigable waterway. All Action Alternatives would address the navigational safety issues that the existing I-30 Arkansas River Bridge presents. The No-Action Alternative would not address these issues.

The 8-Lane General Purpose Action Alternatives (1A and 1B) would impact 3,353 linear feet of streams, while the 6-lane with C/D Action Alternatives (2A and 2B) would impact 3,529 linear feet of streams. The No-Action Alternative would not affect any water resources, such as streams.

3.11 Would The Project Cause Flooding In Surrounding Areas?

A detailed account of impacts to **floodplains** is provided in the *Floodplain Technical Memorandum* in **Appendix O**. The project was evaluated to determine if any encroachment into special flood hazard areas, the 100-year floodplain, identified through Federal Emergency Management Agency Flood Insurance Rate Maps, would occur with the Action Alternatives. There were three areas in the project area where encroachment would occur: the Arkansas River, Fourche Creek, and Dark Hollow Basin. No additional floodplain encroachment will occur in the Arkansas River. The Action Alternatives would raise and widen I-30, improve interchanges, and replace bridges along the entire corridor. These improvements would cause unavoidable impacts to floodplains.

What is a **floodplain**?

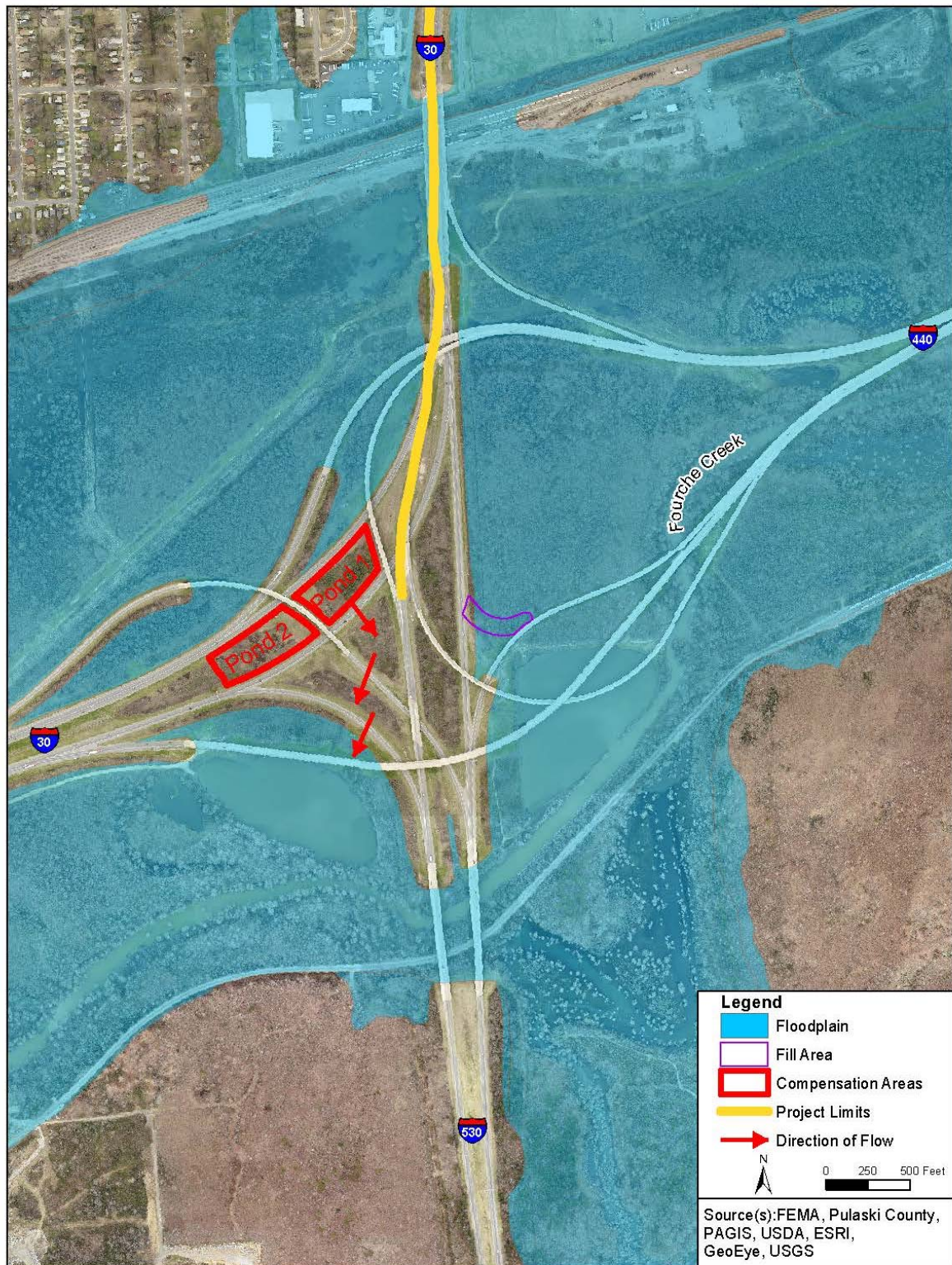
Floodplains are land areas that become covered by water in a flood event. 100-year floodplains are areas that would be covered by a flood event that has a 1% chance of occurring (or being exceeded) each year, also known as a 100-year flood. This is the floodplain commonly used for insurance and regulatory purposes.

Under all Action Alternatives, 11.2 Acre-feet of temporary fill would be placed in the Fourche Creek floodplain. Compensation storage areas totaling 11.9 Acre-feet would be created within the I-30/I-440/I-530 interchange to accommodate the floodplain areas that have been filled (**Figure 55**).

Within the Dark Hollow floodplain, the 8-Lane General Purpose Action Alternatives (1A and 1B) would place approximately 18.0 Acre-feet of fill, while the 6-Lane with C/D Action Alternatives (2A and 2B) would place approximately 17.4 Acre-feet of fill. In compensation for this fill, 26.1 Acre-feet of storage would be created in the I-30/I-40 interchange (**Figure 56**).

1

Figure 55: Potential Floodplain Compensation Areas for Fourche Creek

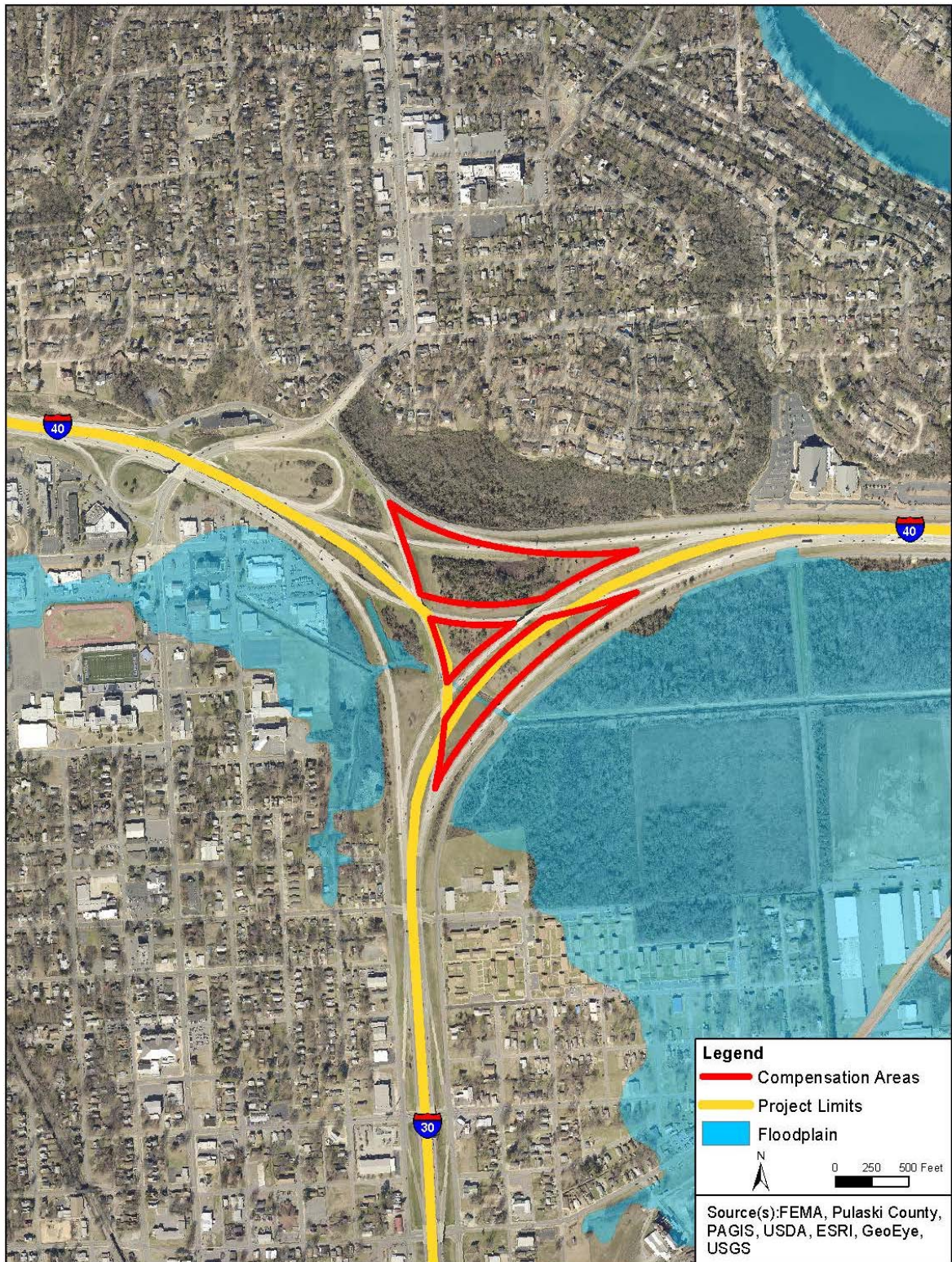


2

3 Source: Project Team, April 2017.

1

Figure 56: Potential Floodplain Compensation Areas for Dark Hollow



2

3 *Source: Project Team, April 2017.*

1 The floodplain compensation concepts for Fourche Creek and Dark Hollow were
2 coordinated with the Cities of Little Rock and North Little Rock. Details of those
3 coordination efforts can be found in **Appendix O**. The No-Action Alternative would not
4 affect any floodplains.

5 3.12 Would Any Wetlands Be Impacted By The Project?

6 Specific details on location and types of wetlands within the
7 project area can be found in **Appendix M**, the *Streams and*
8 *Wetland Report*. There are 23 **jurisdictional wetlands** within
9 the project area, constituting four wetland types: Forested
10 Wetlands, Scrub-Shrub Wetlands, Emergent Wetlands and
11 Riverine Lower Perennial Unconsolidated Bottom Wetlands. A
12 total of 60 acres of wetlands were identified within the project study limits. The 8-lane
13 General Purpose Action Alternatives (1A and 1B) would
14 impact approximately 6.3 acres of wetlands, while the 6-lane
15 with C/D Action Alternatives (2A and 2B) would impact
16 approximately 6.5 acres of wetlands. Permits would be
17 obtained under Section 404 of the CWA from the USACE for
18 impacts to wetlands. Avoidance and minimization efforts
19 would be employed throughout the design process and
20 unavoidable impacts would be mitigated by using an approved
21 **mitigation bank**.
22 The No-Action alternative would have no effect on wetlands.

What are **jurisdictional wetlands**?

A jurisdictional wetland is a type of plant community that contains plants that need periodic inundation in order to survive.

What are **mitigation banks**?

A mitigation bank is a water resource area used to provide compensation for unavoidable wetland impacts. The banks allow many small wetland or stream mitigation projects to be consolidated into a larger, potentially more ecologically valuable site.

3.13 Would Any Protected Species Be Impacted By The Project?

The United States Fish and Wildlife Service (FWS) provided a letter on April 14, 2016 (**Appendix P**), that indicated, according to the Information for Planning and Conservation website, there are three **endangered/threatened species** that have the potential to occur in the project area: the Interior Least Tern (*Sterna antillarum athalassos*), the Piping Plover (*Charadrius melodus*), and the Running Buffalo Clover (*Trifolium stoloniferum*). There are no recorded locations for any of the three species within the project area, and no habitat exists for the Piping Plover or Running Buffalo Clover. The nesting habitat of the Interior Least Tern includes urban rooftops, as well as lightly vegetated sand, shell, and gravel beaches, sandbars, islands, and salt flats in conjunction with rivers and reservoirs. Although these habitats do exist in the project area, FWS concurred with ArDOT finding that “the proposed project is not likely to adversely affect threatened or endangered species”. The Action and No-Action Alternatives would not affect any protected species.

What are **endangered and threatened species**?

Endangered and threatened species are protected species with population numbers that have reached such low levels, or are subject to such threats, that the survival of the species is uncertain.

3.14 How Would The Project Affect Other Natural Resources?

The proposed project area is located in the lower 41 miles of the low-gradient Arkansas River that was once part of the ancestral Mississippi River Valley. The State of Arkansas is comprised of six **Ecoregions**; the Ozark Highlands, Boston Mountains, Arkansas River Valley, Ouachita Mountains, Gulf Coastal Plain, and Delta. The project area goes through the Arkansas River Valley, Ouachita Mountains, Gulf Coastal Plain and the Delta. The project area is surrounded by rolling hills, dense vegetation, a variety of wetlands, and urban development. The No-Action and the Action Alternatives would not disturb any landforms or geological features, as the project area has already been disturbed for farming, pasture, and current commercial and residential developments.

What is an **ecoregion**?

An ecoregion is a major ecosystem defined by distinctive geography and receiving uniform solar radiation and moisture.

3.15 Will The Project Have An Effect On Air Quality?

Since the Clean Air Act of 1970, EPA has been responsible for a variety of efforts to reduce air pollution nationwide. EPA develops standards for the following human health-based criteria air pollutants: particulate pollution (PM_{2.5} and PM₁₀), ground-level ozone, nitrogen oxides, lead, carbon monoxide, and sulfur dioxide. The limits based on human health are called primary standards. Of the six criteria pollutants, particulate pollution (PM_{2.5} and PM₁₀) along with ozone are the most widespread health threats. A geographic area with air quality that is cleaner than the primary standard is called an "attainment area". Likewise, areas that do not meet the primary standards are called "non-attainment" areas. The 30 Crossing project is located in an area that has been in attainment of the 6 criteria pollutants in the National Ambient Air Quality Standards (NAAQS) for the past 25 years.

A Mobile Source Air Toxic (MSAT) quantitative analysis was prepared for the Action and No-Action Alternatives for the existing year (2014), opening year (2021), and design year (2041). MSATs are nine compounds with significant contributions from mobile sources that are considered to be non-cancer hazards and cancer risk contributors: acetaldehyde, acrolein, benzene, 1,3-butadiene, diesel particulate matter (diesel PM), ethylbenzene, formaldehyde, naphthalene, and polycyclic organic matter. The amount of MSATs emitted in the region are proportional to Vehicle Miles Traveled (VMT); however, because of improvements in emissions technologies, total MSAT emissions will decline over time, even while VMT increases. Under both the Action and No-Action Alternatives, total MSAT emissions would be lower than present levels in the design year by 88% with Action Alternatives being 0.3% to 0.9% less than the No-Action. The MSAT analysis is presented in the *MSAT Technical Report* (**Appendix Q**).

3.16 Does The Project Have Any Indirect And Cumulative Effects?

Indirect Effects

An *Indirect Effects Technical Report* was prepared for the project (**Appendix A**). The report analyzed both encroachment-alteration and induced growth **indirect effects** for all Action Alternatives.

The Area of Influence (AOI) evaluated for indirect effects consists primarily of urbanized development and approximately 21 percent of undeveloped parcels. The undeveloped areas are primarily natural features such as wetlands, floodplains, and parks. These natural features are not likely to be developed due to regulatory controls. The Action Alternatives would not affect access to these natural features. Because the area surrounding the project is so urbanized, encroachment-alteration impacts to the natural environment outside of the project footprint are expected to be minimal. Socio-economic encroachment-alteration effects that were evaluated consisted of access modifications and displacements.

Access modifications that were evaluated under the Action Alternatives included the improvements to I-30 and the frontage roads, interchange ramps, and bicycle and pedestrian facilities. To better understand the effects of the Action Alternatives on travel patterns, vehicular travel times were estimated to two important destinations in downtown Little Rock: the River Market area, and the Clinton Presidential Center/Heifer International (**Table 8**). The travel times to the Clinton Center were discussed earlier in Section 3.4.

What is an **indirect effect**?

Indirect effects are caused by the project but are later in time or farther removed in distance, but are still reasonably foreseeable. Encroachment/alteration effects are impacts to areas adjacent to the project, such as the effects of access modifications on travel times outside the project and the effect of relocations. Induced growth effects are the impacts that can occur to land use in areas adjacent to the project due to increases in access caused by the project improvements.

Table 8: Peak Hour Travel Times to Downtown Little Rock Destinations

Destination	Existing (No Traffic, Free Flow)	Existing	Future No-Action	8-Lane GP Action Alternative		6-Lane with C/D Action Alternative	
				SPUI (ALT 1A)	SDI (ALT 1B)	SPUI (ALT 2A)	SDI (ALT 2B)
To River Market (AM)							
A. From Wildwood Ave on Hwy 67	07:40	18:07	30:09	20:55	37:31	13:39	14:20
B. From I-40 and I-440 Interchange	08:31	16:09	31:46	26:55	44:30	15:53	16:49
C. From the McArthur Bridge on I-40	04:26	10:42	23:07	05:09	12:11	08:54	8:47
D. From Dr. MLK Jr. Drive on I-630	04:29	05:17	08:16	04:55	07:09	04:43	07:00
E. From the Dixon on I-530	06:32	08:25	17:24	12:11	13:17	08:20	11:54
F. From the 65th St on I-30	06:16	08:15	12:39	10:35	11:45	08:06	10:40
G. From the Bankhead Drive on I-440	06:10	07:28	05:59	10:17	12:10	08:37	13:02
To Clinton Presidential Center / Heifer International (AM)							
A. From Wildwood Ave on Hwy 67	07:44	17:46	29:07	20:30	36:00	13:39	12:28
B. From I-40 and I-440 Interchange	08:34	15:47	30:44	26:31	43:00	15:53	14:57
C. From the McArthur Bridge on I-40	04:30	10:21	22:06	04:45	10:41	08:54	6:55
D. From Dr. MLK Jr. Drive on I-630	03:58	04:19	07:11	04:14	04:54	04:01	04:48
E. From the Dixon on I-530	06:01	07:27	16:19	11:30	11:01	07:38	09:42
F. From the 65th St on I-30	06:12	07:16	11:34	09:54	09:30	07:25	08:28
G. From the Bankhead Drive on I-440	05:39	06:29	07:38	09:37	09:55	07:55	10:50
From River Market (PM)							
A. To Wildwood Ave on Hwy 67	08:04	11:05	55:15	08:36	11:04	09:02	10:46
B. To I-40 and I-440 Interchange	08:47	11:28	56:16	09:25	11:53	09:50	11:32
C. To the McArthur Bridge on I-40	05:02	06:54	52:19	05:24	07:52	05:54	07:47
D. To Dr. MLK Jr. Drive on I-630	03:35	03:57	16:27	03:47	07:27	04:00	10:01
E. To the Dixon on I-530	05:50	07:18	21:54	08:20	10:13	10:39	15:01
F. To the 65th St on I-30	06:03	07:24	23:19	15:11	15:43	17:18	21:52
G. To the Bankhead Drive on I-440	06:11	07:41	21:04	08:35	05:15	10:41	15:40
From Clinton Presidential Center / Heifer International (PM)							
A. To Wildwood Ave on Hwy 67	07:16	12:00	29:52	09:18	09:16	08:44	07:57
B. To I-40 and I-440 Interchange	07:58	12:23	30:53	10:07	10:06	09:29	08:44
C. To the McArthur Bridge on I-40	04:14	07:49	26:55	06:06	06:04	05:36	04:59
D. To Dr. MLK Jr. Drive on I-630	04:30	04:44	07:37	04:22	05:27	04:46	06:49
E. To the Dixon on I-530	06:45	08:06	13:04	08:55	08:13	11:34	11:49
F. To the 65th St on I-30	06:58	08:11	14:29	15:46	13:42	18:09	18:40
G. To the Bankhead Drive on I-440	07:06	08:28	12:13	09:10	10:27	12:14	12:27
Total Combined Travel Time	175:01	261:16	635:36	301:00	396:16	271:33	314:44

Source: Project Team, January 2018.

Notes: ¹ AM Peak = 7:15 AM to 8:15 AM; PM Peak = 4:30 PM to 5:30 PM

Speeds are inbound to downtown Little Rock in the AM and outbound in the PM.

Travel times between 10:00 minutes and 25:00 minutes are highlighted in light red.

Travel times greater than 25:00 minutes are highlighted in dark red.

Travel times that are unusually low due to a bottleneck upstream are highlighted in blue.

Both 8-Lane General Purpose Action Alternatives (1A and 1B) would improve afternoon travel times from the downtown destinations to outside the project over the No-Action Alternative. Morning travel times from outside the project to downtown destinations would be reduced as well from the No-Action Alternative, with the exception of traffic originating on Hwy. 67 and I-40 east of Hwy. 67, which would be adversely affected by the morning bottleneck on Hwy. 67 southbound and I-40 westbound described in Section 2.3.

The 6-Lane with C/D Action Alternatives (2A and 2B) would improve morning travel times to downtown destinations from outside the project over both the No-Action and 8-Lane General Purpose Action Alternatives (1A and 1B). Afternoon travel times from downtown to outside the project are lower than the No-Action Alternative, and comparable, but slightly higher than the 8-Lane General Purpose Action Alternatives (1A and 1B). When both directions are considered, the 6-Lane with C/D Action Alternatives (2A and 2B) provide lower overall travel times than their corresponding 8-Lane General Purpose Action Alternatives (1A and 1B). In addition, the C/D system would improve access across the Arkansas River, which would benefit the economic vitality of downtown Little Rock and North Little Rock.

All Action Alternatives involve five commercial displacements, with the exception of the 8-Lane General Purpose with SDI Action Alternative (1B), which involves four commercial displacements. The affected properties are four warehouses and a service station; three in Little Rock and two in North Little Rock. Suitable replacement properties are available in the project vicinity. These displacements would not have a substantial effect on the communities of Little Rock and North Little Rock. The No-Action Alternative would not involve any commercial displacements.

Access and mobility improvements resulting from the Action Alternatives would have the potential to induce growth. All Action Alternatives provide greater future traffic volumes than the No-Action Alternative (**Table 9**).

Table 9: Average Daily Traffic

Location	No-Action Alternative	8-Lane GP Action Alternative		6-Lane with C/D Action Alternative	
		SPUI (1A)	SDI (1B)	SPUI (2A)	SDI (2B)
I-40 east of North Hills Blvd.	153,000	155,000	157,000	159,000	159,000
I-30 at Arkansas River Bridge	153,000	166,000	168,000	182,000	182,000
I-30 south of Roosevelt Blvd.	119,000	128,000	129,000	131,000	133,000

Source: Project Team, September 2017.

Information obtained from City of Little Rock and North Little Rock planners indicates that the timing of five planned development or redevelopment projects along the corridor may be affected by the project. The land use plans for these areas is mixed urban, which is consistent with the anticipated growth. Most of the proposed development plans are underway and are not dependent upon the construction of the proposed project, nor would they be limited should the proposed project not be built; however, there is potential for the proposed project to accelerate the rate of the development/redevelopment projects. Other factors such as economic incentives for commercial development could potentially impact these development projects as well, but such factors would not be dependent or affected by the proposed project. The economic incentives could include economic development grants or various tax incentives to attract businesses for development by local municipalities. Although these areas follow local comprehensive plans and initiatives for future growth, the increased capacity of the future facility would positively benefit the development and mobility to the areas within the proposed project limits. Therefore, the improvement in mobility and access to employment centers, businesses, residences, and public facilities would have an overall positive effect on the regional and local economy.

The No-Action Alternative would not involve any improvements to I-30, I-40 or the frontage roads and would not increase accessibility or mobility. Consequently, the No-

1 Action Alternative would not induce growth in surrounding areas.

2
3 **Cumulative Effects**

4 A *Cumulative Effects Technical Report* was prepared for the project (**Appendix R**). The
5 report assessed the direct and indirect effects of the project, as well as past, present and
6 future activities that are independent of the project, but are likely to affect the same
7 resources that are affected by the project, in order to evaluate the cumulative effects of
8 the project. Land resources, community resources, air quality, water resources, ecological
9 resources, and historic resources were evaluated. Because the project would not result
10 in adverse direct or indirect impacts to land resources, air quality, and ecological
11 resources, there is no potential cumulative impact to those resources.

12 Direct and indirect effects to community resources are discussed above and in Section
13 3.2. In summary, the project would have a beneficial effect on communities due to
14 increased accessibility, safety and mobility, increased community cohesion, and visual
15 enhancements. Provision of bicycle and pedestrian features and the removal of the
16 circular ramps at the Hwy. 10 interchange, would improve east-west connectivity in
17 downtown Little Rock. There are relatively few adverse impacts to community resources.
18 The improvements would occur primarily within existing ROW and there would be very
19 few displacements: between four and five commercial and six residential displacements
20 are anticipated. With the SDI Action Alternatives (1B and 2B), there would be a change
21 in travel patterns and loss of parking in downtown Little Rock.

22 There are several transportation projects in the Transportation Improvement Plan for the
23 Little Rock area that are independent of the I-30 project. These projects are intended to
24 improve safety and mobility in the project area. They would be designed to avoid and
25 minimize impacts to community resources and would therefore be expected to have a
26 similar impact on community resources to this project. Consequently, cumulative impacts
27 to community resources are expected to be minimal.

28 Direct and indirect impacts to water resources are discussed above and in Sections 3.10,
29 3.11 and 3.12. The project would involve fill in wetlands and floodplains. These impacts
30 would be mitigated through a wetland mitigation bank and onsite compensation for
31 replacement of lost floodplain volume. Best Management Practices would be used to
32 avoid temporary impacts to water quality during construction.

1 An analysis of the trend of wetland loss in the project watershed showed a 2 % decline
2 over 5 years. Through coordination with local planners, two planned developments were
3 identified in the Rockwater and Marina areas that have the potential to affect water
4 resources. These projects, as well as all projects occurring in the watershed in the future,
5 would be subject to permitting under Section 404 of the CWA. Therefore, the historic
6 decline in water resources is not likely to continue and is not a concern due to the large
7 amount of wetlands and floodplains present in the project watershed.

8 Direct and indirect impacts to cultural resources are discussed above and in Section 3.3.
9 The Locust Street Overpass, which will be removed and replaced, is the only historic
10 resource that would be adversely impacted by the project. Mitigation measures for this
11 impact would be coordinated with the SHPO under a Programmatic Agreement. Local
12 ordinances enacted by the AHPP and City of Little Rock Historic District Commission
13 would prevent indirect effects to historic resources as a result of growth induced by the
14 project. These ordinances have been effective in preserving historic resources and are
15 expected to continue to prevent impacts in the future. No substantial cumulative impact
16 to historic resources as a result of the project is anticipated.

17 3.17 What Other Resources Were Examined But Not Found To Be Present Or 18 Impacted?

19 **Wild and Scenic Rivers**

20 There are no Wild and Scenic Rivers impacted by this project.
21
22

23 **Prime and Unique Farmlands**

24 The project is in a heavily urbanized area with no farmlands.
25
26

27 **Public and Private Water Wells**

28 There were 17 wells found within 100 feet of the ROW. None were for drinking water or
29 irrigation.
30

Chapter 4 – Recommendations

What's In Chapter 4?

Chapter 4 contains the summary of the Environmental Assessment and recommendations resulting from the NEPA process.

4.1 What Are The Results Of This EA?

The environmental analysis of the proposed project did not identify any significant impacts to the natural and social environment as a result of the No-Action Alternative or Action Alternatives. A summary of how well these alternatives address the project goals can be found in **Table 10**. A summary of the environmental impacts of the alternatives can be found in **Table 11**.

Table 10: Comparison of Effectiveness of Alternatives in Meeting Project Goals

Goals	Measures	No- Action	8-Lane General Purpose Action Alternative		6-Lane With C/D Action Alternative	
			SPUI (1A)	SDI (1B)	SPUI (2A)	SDI (2B)
Reduce Congestion and Enhance Mobility	Total travel time from downtown Little Rock to Hwy 67/Wildwood PM (minutes)	55	9	11	9	11
	Total travel time from downtown Little Rock to I- 40/I-440 PM (minutes)	56	9	12	10	12
	Total travel time from Hwy 67/Wildwood to downtown Little Rock AM (minutes)	30	21	38	14	15
	Total travel time from I-40/I- 440 to downtown Little Rock AM (minutes)	32	27	45	16	18
	System-wide average delay per vehicle in AM (minutes)	11	2	14	2	3
	System-wide average delay per vehicle in PM (minutes)	58	2	2	3	3
	System-wide average speed per vehicle in AM (miles per hour)	20	43	21	45	41
	System-wide average speed per vehicle in PM (miles per hour)	4	40	41	40	40
Improve Safety	Predicted crash rate in 2041 (crashes per million vehicle miles)	1.95	1.04	1.00	0.97	1.01
	Predicted fatal and serious injury collisions in 2041 (per 100 million vehicle miles)	3.89	2.36	2.25	2.12	2.20
Improve structural and functional roadway deficiencies		No	Yes			
Improve structural and function bridge deficiencies		No	Yes			
Improve navigational safety		No	Yes			
East-West Connectivity, including bicycle and pedestrian connectivity	Amount of open space across I-30 at Hwy. 10 Interchange (acres)	None	9.1	15.7	9.1	15.7
	Improvements to bike/ped connections across I-30	None	2	2	2	2
Accommodate Existing Transit and Future Transit	Potentially allow for Bus on Shoulder	No	Yes			
Improve System Reliability	Reliability Index (Fewer predicted incidents and shorter incident clearance times)	Low	Medium	Low	High	Medium
Commitment to Voters	Mobility on I-30 Main Lanes (qualitative)	No	Yes			
Opportunity for Accessibility	Number of exit/entrance ramps from/to I-30 between I- 630 and I-40	10/9	8/8	7/6	8/8	7/6

Table 11: Comparison of Impacts of the Project Alternatives

Impacts	Measures	No-Action	8-Lane General Purpose Action Alternative		6-Lane With C/D Action Alternative	
			SPI	SDI	SPI	SDI
Community Impacts	Parking spaces lost on local streets in downtown Little Rock (number)	None	None	47	None	47
	Travel patterns altered	No	No	Yes	No	Yes
	ROW impacts (Acres)	None	11.9	12.0	12.8	13.0
	Parcels Impacted (number)	None	53	53	54	54
	Displacements (number)	None	5 Businesses/ 6 Homes	4 Businesses/ 6 Homes	5 Businesses/ 6 Homes	5 Businesses/ 6 Homes
	Potential Green space added (acres)	None	9.1	15.7	9.1	15.7
	Cohesion	None	Benefited	Greatest benefit	Benefited	Greatest benefit
EJ/LEP	potential displacements to EJ populations (number)	None	7: 6 Homes 1 Business	7: 6 Homes 1 Business	7: 6 Homes 1 Business	7: 6 Homes 1 Business
Cultural Resource Impacts	Number of NRHP-eligible archaeological sites potentially impacted	None	None	None	None	None
	Number of NRHP or NRHP-eligible historic sites with noise levels above criteria	16	N/A	N/A	12	10
Park right of way and temporary easement impacts	North Shore Riverwalk Park (acres)	None	1.3	1.3	1.3	1.3
	Julius Breckling Riverfront Park (acres)	None	0.1	None	0.2	0.1
	William J. Clinton Presidential Center and Park (acres)	None	2.4	2.4	2.4	2.3
Noise Impacts	Number of impacted receptors	171	201	187	256	224
	Number of benefited receptors	N/A	206	211	256	253
Utility impacts	Number of impacted utilities	None	17	17	17	17
Railroad impacts	Number of crossings	None	2	2	2	2
Visual Impacts		None	Benefited	Greatest benefit	Benefited	Greatest benefit
Hazardous Materials Impacts	Number of Displacements with Potential Contamination	None	5	4	5	5
Stream Impacts	Linear feet of stream impacts (feet)	None	2140	2140	2163	2163
Floodplain Impacts	Acres of floodplains impacted (acres)	None	29.2	29.2	28.6	28.6
Wetland Impacts	Acres of wetlands impacted (acres)	None	6.3	6.3	6.5	6.5
Air Quality Impacts	Total 2041 Mobile Source Air Toxic Emissions (Tons/Yr)	8.64	8.58	8.61	8.56	8.57
Indirect Impacts	Average Daily Traffic (ADT) at I-40 east of North Hills Blvd interchange (vehicles per day)	153,000	155,000	157,000	159,000	159,000
	Average Daily Traffic (ADT) at I-30 Arkansas River Bridge (vehicles per day)	153,000	166,000	168,000	182,000	182,000
	Average Daily Traffic (ADT) at I-30 Roosevelt Blvd interchange (vehicles per day)	119,000	128,000	129,000	131,000	133,000
Public Support	Number of Commenters indicating preference at Public Meeting 6	464	11	27	54	483
Local Preference	Publicly endorsed by local government and business leaders	No	No	No	No	Yes

None of the Action Alternatives have significant environmental impacts. Action Alternatives 1A and 1B are not as effective in reducing congestion and improving safety as Alternatives 2A and 2B, due the following:

- Action Alternatives 1A and 1B would fail to remove a major bottleneck within the project limits, specifically on I-40 between I-30 and Hwy. 67; and
- Action Alternatives 1A and 1B do not include the C/D lanes which provide improved local access across the Arkansas River by connecting the frontage roads on both sides of the River.

Consequently, these two Action Alternatives are not recommended. Alternatives 1B and 2B are similar in regards to meeting the purpose and need; however, Alternative 2B has been identified as the preferred alternative due to the following reasons related to the project goals:

- Improves local vehicle access to and from downtown Little Rock/North Little Rock by more directly connecting the frontage road system to the C/D lanes crossing the Arkansas River;
- Optimizes opportunities for economic development by providing a continuous frontage road system between I-630 and East 4th Street and connection to the River Market and Clinton Center areas via President Clinton Avenue, 2nd Street and 3rd Street and allowing additional green space for public use in downtown Little Rock;
- Enhances east-west connectivity, including bicycle and pedestrian connectivity, by removing the elevated ramps between President Clinton Avenue and 3rd Street and by replacing the elevated Hwy. 10 Spur with an improved at-grade 2nd Street; and
- Identified by the local MPO as the locally preferred alternative and has received the most public and business support.

4.2 What Commitments Have Been Made?

The ArDOT's standard commitments regarding relocation procedures, cultural resources discovery, impacts to parks, traffic noise abatement, hazardous waste abatement, water

quality impact controls, wetland mitigation, floodplain compensation, and revegetation have been made for this project. They are as follows:

- Based on current construction plans, six residential and five business relocations will occur as a result of this project. Relocations will be conducted in accordance with *The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970*, as amended. Further information can be found in the *Community Impacts Technical Report (Appendix F)*.
- An intensive cultural resources survey has been conducted for all Action Alternatives. If archaeological sites are affected, a report documenting the site and stating the ArDOT's recommendations will be prepared and submitted for SHPO review. If prehistoric sites are impacted, FHWA-led consultation with the appropriate Native American Tribe will be conducted and the site(s) evaluated to determine if **Phase II testing** is necessary. Should any of the sites be determined as eligible or potentially eligible for the NRHP and avoidance is not possible, site-specific treatment plans will be prepared and data recovery conducted at the earliest practicable time. All borrow pits, waste areas, and work roads will be surveyed for cultural resources when locations become available.
- The ArDOT has reached agreements with the City of North Little Rock and the City of Little Rock, regarding minimization and mitigation of impacts to North Shore Riverwalk Park, Riverfront Park, and the Clinton Center. These measures are discussed in **Appendix H**.
- Noise walls outlined as reasonable and feasible in the *Traffic Noise Study Report (Appendix I)* will be constructed.
- If hazardous materials, unknown illegal dumps, or underground storage tanks are identified or accidentally uncovered by ArDOT personnel or its contractors, ArDOT will determine the type, size, and extent of the contamination according to the ArDOT's response protocol. The ArDOT, in cooperation with the ADEQ, will determine the appropriate containment, remediation and disposal methods suited for that particular type of contamination. Further information can be found in the

What is **Phase II** testing?

Phase II testing involves surveying and archaeological testing to determine site boundaries, cultural and scientific importance, and NRHP eligibility.

1 *Initial Site Assessment* (**Appendix L**).

- 2 • An asbestos survey will be conducted by a certified asbestos inspector on each
3 building slated for acquisition and demolition. If the survey detects the presence
4 of any asbestos-containing materials, plans will be developed to accomplish the
5 safe removal of these materials prior to demolition. All asbestos abatement work
6 will be conducted in conformance with the ADEQ, EPA, and OSHA asbestos
7 abatement regulations.
- 8 • The ArDOT will comply with all requirements of the *Clean Water Act, as amended*,
9 and *Section 10 of the Rivers and Harbors Act of 1899*, for the construction of this
10 project. This includes obtaining the following: Section 401 Water Quality
11 Certification; Section 402 National Pollutant Discharge Elimination Permit; Section
12 404 Permit for Dredged or Fill Material; and approval under Policy and Procedural
13 Guidance for Processing Requests to Alter U.S. Army Corps of Engineers Civil
14 Works Projects Pursuant to 33 USC 408 (Section 408). Further information is
15 provided in **Appendix M**.
- 16 • Stream and wetland mitigation will be offered at an approved mitigation bank site
17 at a ratio approved during the Section 404 permitting process. Details can be found
18 in **Appendix M**.
- 19 • A Water Pollution Control Special Provision would be incorporated into the contract
20 to minimize potential water quality impacts. Further information can be found in
21 **Appendix N**.
- 22 • Floodplain encroachment in Dark Hollow and Fourche Creek will be mitigated by
23 creating floodplain compensation areas in the I-30/I-40 interchange and I-30/I-
24 440/I-530 interchange, as detailed in **Appendix O**. ArDOT will provide a “no-rise”
25 certification to Pulaski County for any unavoidable increases in flood elevations in
26 the Arkansas River.
- 27 • Appropriate action will be taken to mitigate any permanent impacts to private
28 drinking water sources should they occur due to this project.

4.3 Is The NEPA Process Finished?

A Location and Design Public Hearing will be held with an opportunity for public review and comment on both the EA content, location and design of the project.

Based on the information contained in this EA, and after a review of comments received from citizens, public officials, and public agencies, a decision will be made regarding whether the project is likely to have a significant impact on the environment. If FHWA determines that a significant impact is likely, an Environmental Impact Statement (EIS) will be prepared by ArDOT and submitted to FHWA. If FHWA determines a significant impact is not likely, a Finding Of No Significant Impact (FONSI) document will be prepared by ArDOT and submitted to the FHWA.

The Final Request for Proposals for Design-Build procurement will be issued following the approval of the final environmental decision document. If the selected Design-Build team elects to make any modifications to the design which change the environmental impacts, commitments or mitigation measures identified in the NEPA document, the Design-Build team will be responsible for securing all regulatory approvals prior to implementing the change.