

## 2 ALTERNATIVES

This section will provide details of the EIS process for the proposed project including the study process, development of alternatives and information relating to the decision-making process on the Preferred Alternative.

### **2.1 ALTERNATIVES DEVELOPMENT AND THE SDEIS**

Alternatives development for the EIS process incorporated existing information from previous studies along with updated information obtained through agency scoping, public officials meetings, and public involvement meetings. Figure 2.1-1 illustrates a simplified flow chart of the processes followed.

The Notice of Intent for preparation of the SDEIS, published in April 2004, stated that the entire length of the project would be reassessed due to the amount of time that had passed since the ROD was signed in 1994. The reassessment of the project area began with a meeting with Army National Guard officials regarding Camp Robinson's current and future plans. As a result of this and subsequent meetings, the officials updated their preferred alignment through Camp Robinson related to land use changes and future development plans. The original agreement with these officials included a realignment of a section of Batesville Pike that would locate its interchange with the proposed facility outside the Camp's boundary. It was decided this proposal would remain part of the current project after discussions with Army National Guard officials. A corridor was developed for the alignment through Camp Robinson and added to an area east of Camp Robinson to create the project area for the SDEIS (Figure 2.1-2). An Agency and Public Officials Scoping meeting was held in March 2005 to obtain information about current issues and constraints in the proposed project study area.

Preliminary alignment alternatives were developed in the project area based upon information from previous environmental documents, existing highways, facilities, landforms, and other known constraints (Figure 2.1-3). The option for construction of either a grade separation or an interchange was included for the alignment alternatives that crossed Oneida Street in

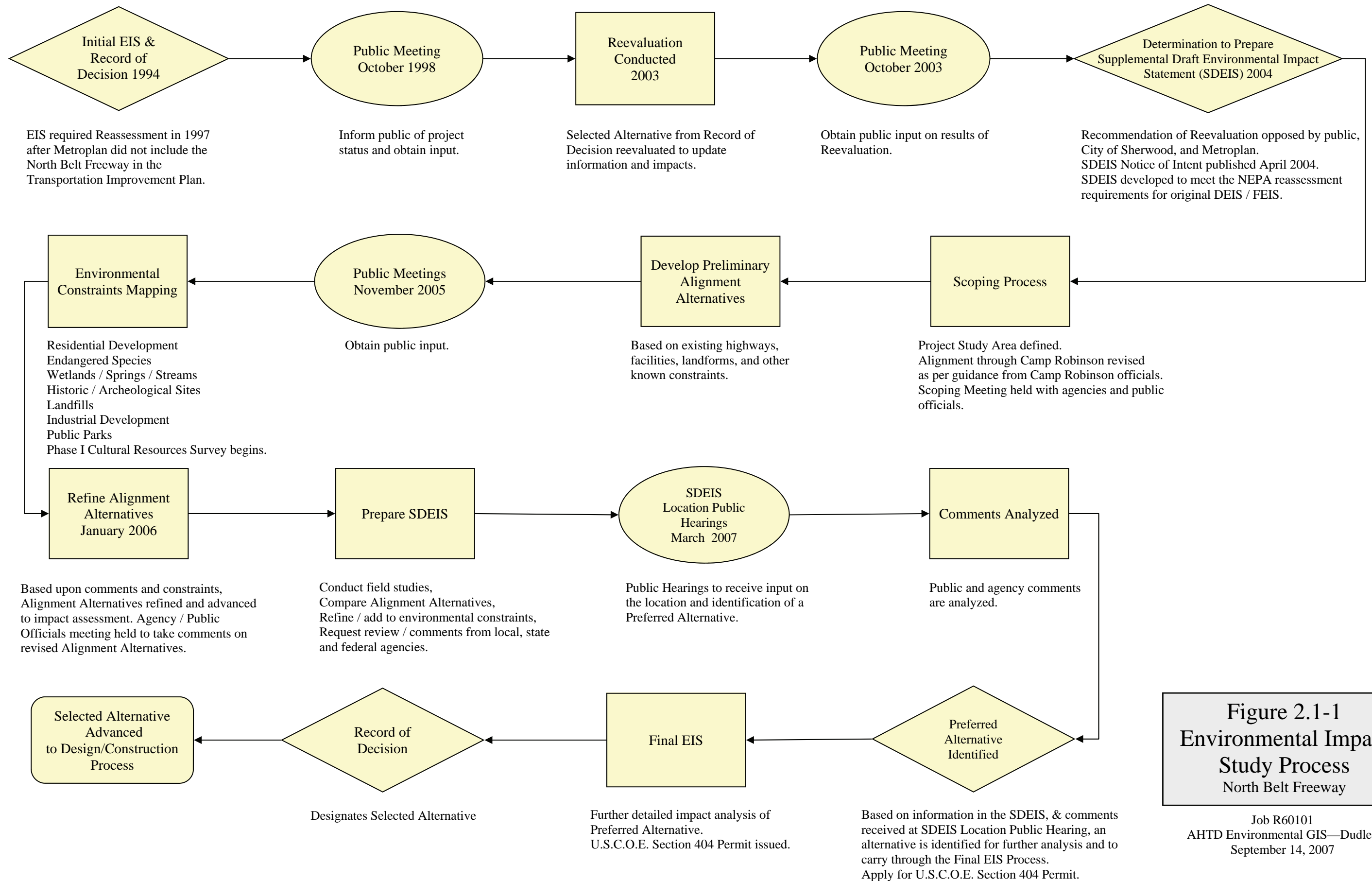
response to public and community comments. The preliminary alignment alternatives were presented for public comment in November 2005. Revisions to the alignment alternatives presented at the public involvement meetings were made after analyses of public comments and preliminary constraints (Figure 2.1-4). A public officials meeting was held in January 2006 to discuss the revised alignment alternatives.

## **2.2 ALTERNATIVES CONSIDERED AND NOT ADVANCED TO THE SDEIS**

The previous DEIS and FEIS analyzed and eventually discarded several alternatives for the North Belt Freeway project including: Transportation System Management, Mass Transit, and Road Reconstruction. From these studies, it was determined that a new location alignment alternative was the only viable alternative to meet the purpose and need of the project. Current land use development within and adjacent to the study area has not altered this determination. The No-Action Alternative was retained throughout the study as a basis of comparing the relative benefits and impacts of the alternatives.

### **2.2.1 Camp Robinson Alignment**

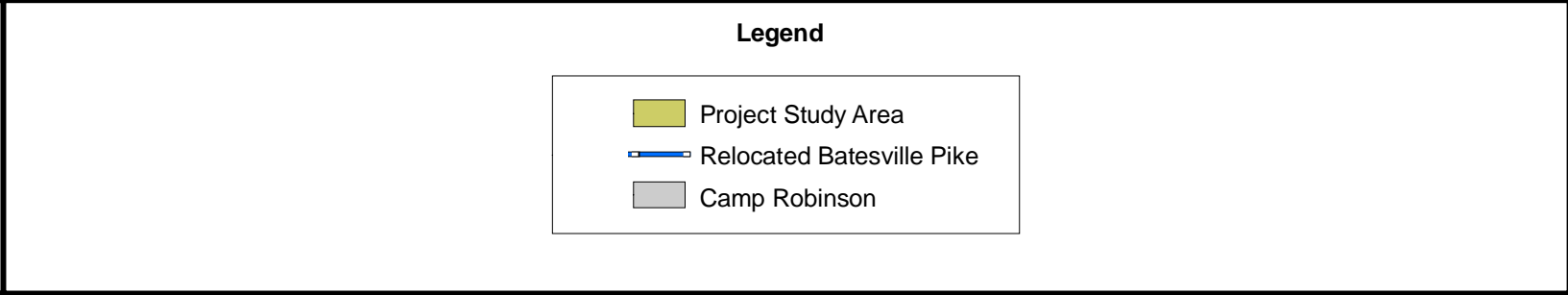
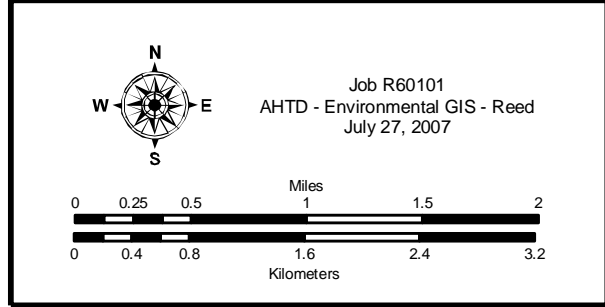
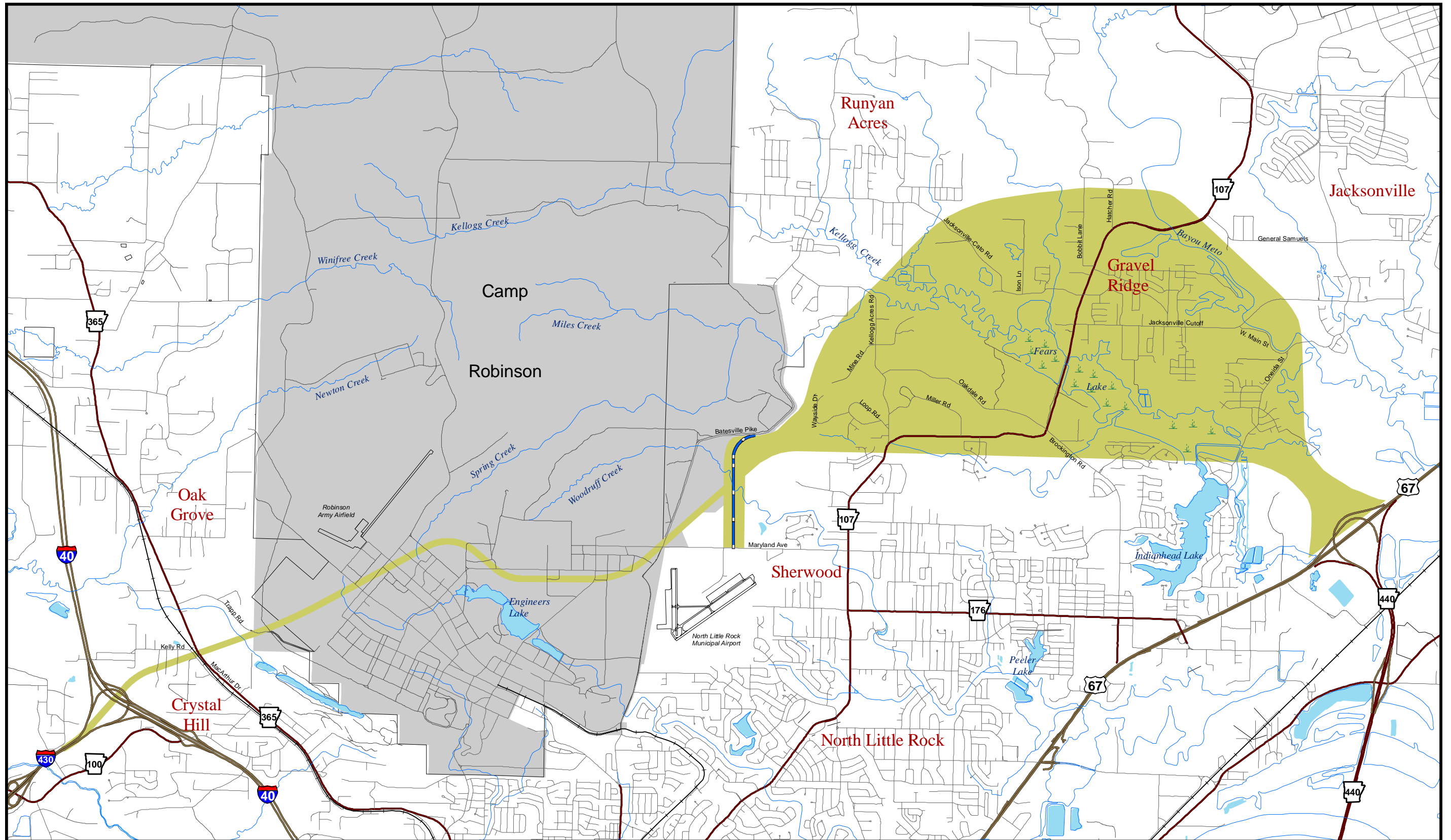
At the initial meeting with Army National Guard officials in March 2004, they proposed a new alignment through Camp Robinson for the AHTD's evaluation. The proposed alignment crossed Camp Robinson north of the cantonment and continued down the west border of the Camp. A preliminary evaluation of the new alignment was conducted, and it was found to be more costly than the existing alignment and would attract less traffic. For these and other reasons, this new alignment alternative was not found to meet the purpose and need for the proposed project. Army National Guard officials were informed of the AHTD's intentions to drop the new alignment from consideration at a meeting in February 2005. At that time, they reaffirmed their commitment to allow the AHTD to utilize the original alignment with slight modifications. These modifications were incorporated into the freeway's alignment shown in this FEIS.



**Figure 2.1-1  
 Environmental Impact  
 Study Process  
 North Belt Freeway**

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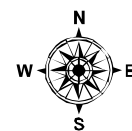
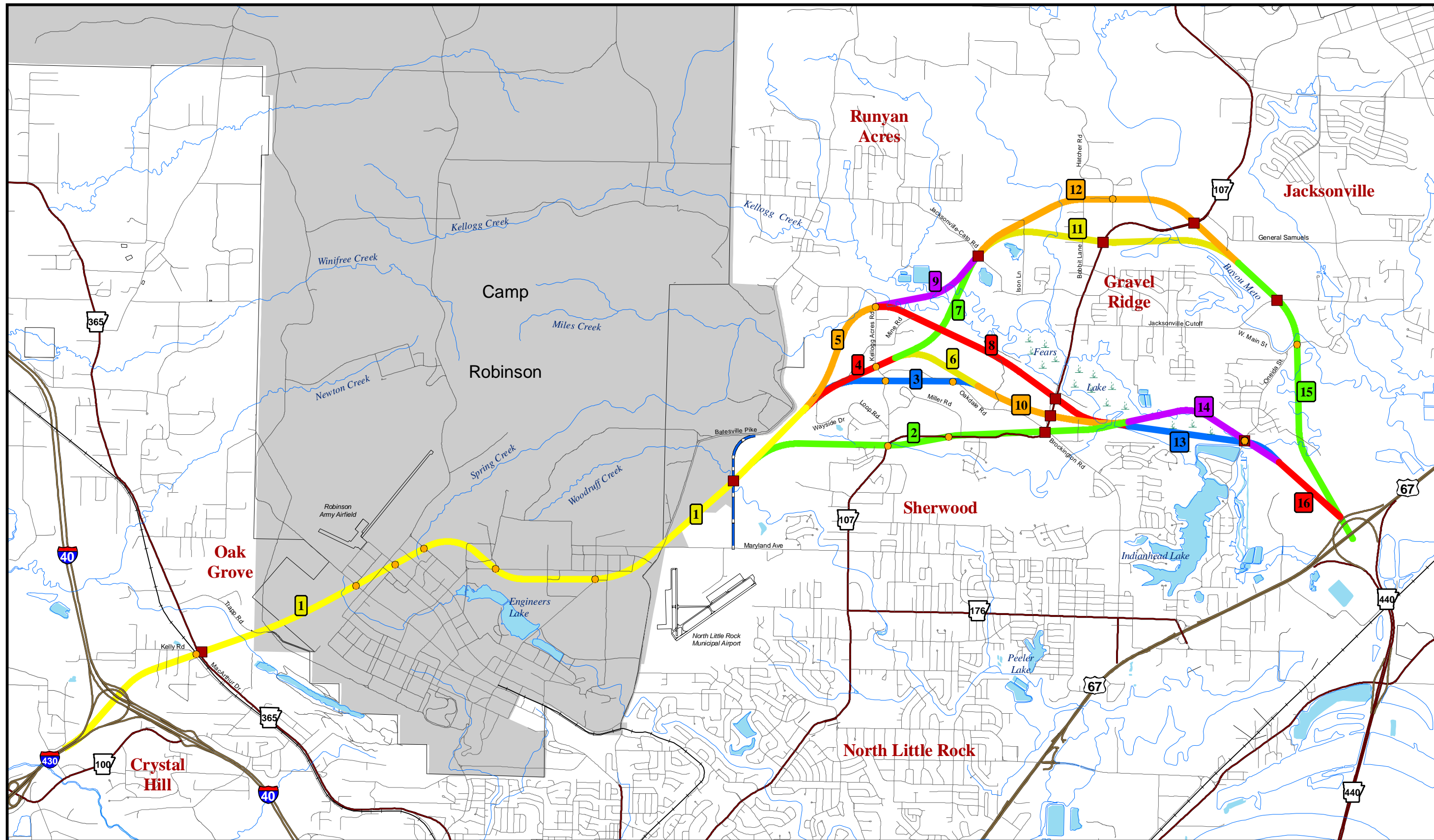
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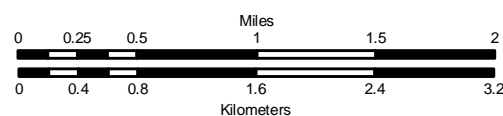
**Figure 2.1-2**  
**Project Area**  
North Belt Freeway

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**Legend\***

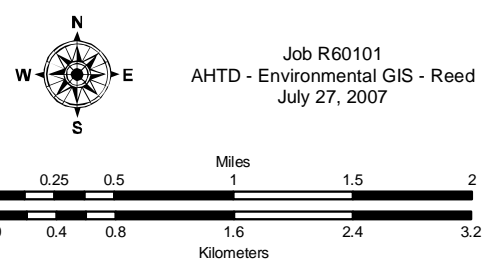
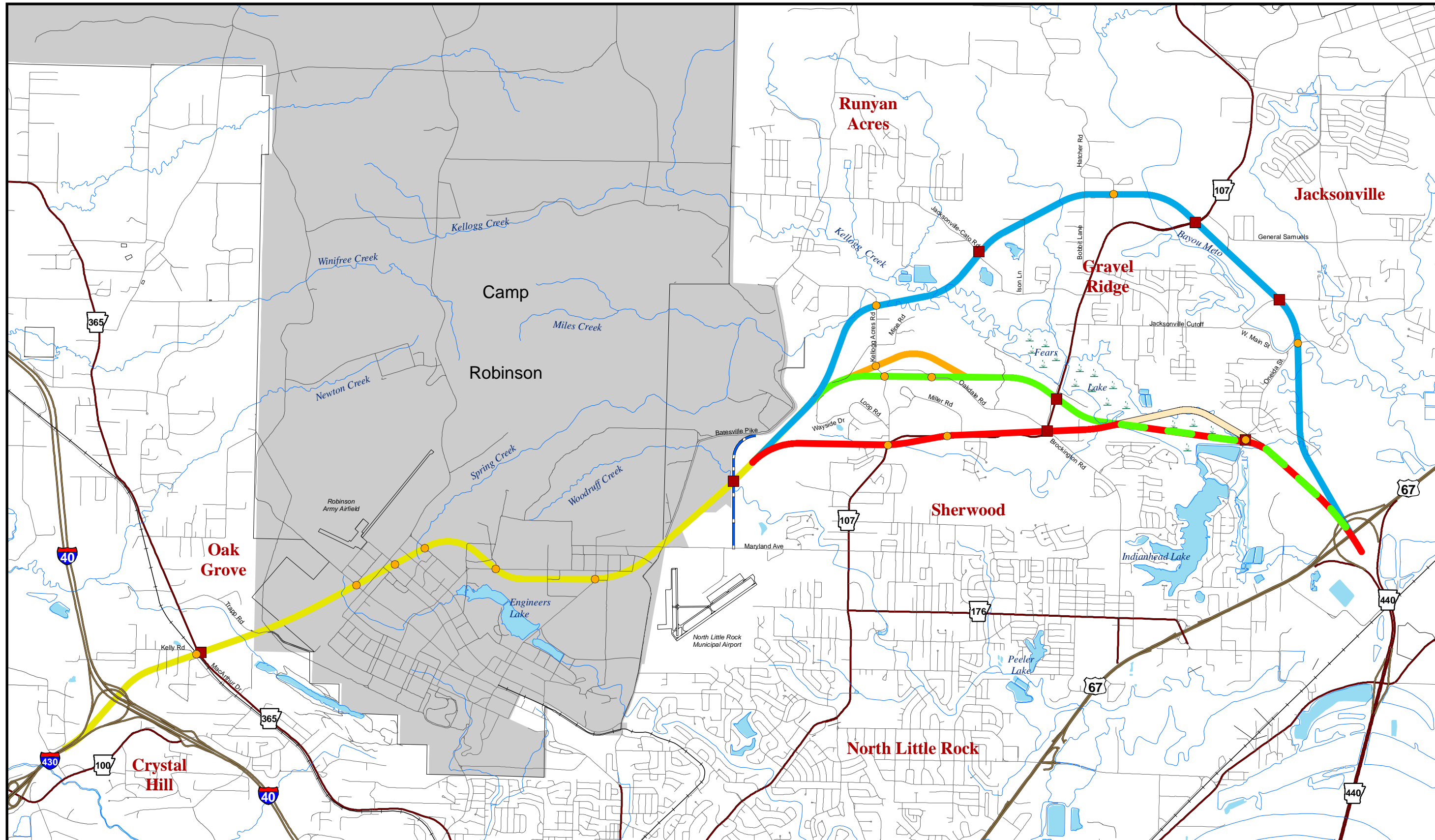
- |  |                                |  |   |
|--|--------------------------------|--|---|
|  | Alignment Alternative Segments |  | Interchange or Grade Separation (...to be determined) |
|  | Interchange                    |  | Relocated Batesville Pike                             |
|  | Grade Separation               |  | Camp Robinson   |

\*Colored Lines Represent a 300 ft. Wide Corridor

**Figure 2.1-3**  
**Preliminary Alignment Alternatives**  
 North Belt Freeway

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**Legend\***

	Common Alignment		Interchange
	Alignment Alternative A		Grade Separation
	Alignment Alternative B		Interchange or Grade Separation (...to be determined)
	Alignment Alternative C		Relocated Batesville Pike
	Segment a		Camp Robinson
	Segment b		

\*Colored Lines Represent a 300 ft. Wide Corridor

**Figure 2.1-4**  
**Revised Alignment Alternatives**  
 North Belt Freeway

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### **2.2.2 Segments Modified or Eliminated**

From the preliminary alignment alternatives presented at the public involvement meetings (Figure 2.1-3), several were either modified or eliminated. Segment 11 was eliminated due to the low level of public support and because the Highway 107 Interchange location would be in a developed area resulting in multiple business relocations. Segment 12 was shifted slightly to the north in order to reduce the number of relocations. Segment 7 was eliminated and Segment 8 was shortened and modified in order to reduce impacts on residential areas and the Kellogg Mines area. The nature of the Kellogg Mines area as an engineering, environmental, and historical constraint is discussed more fully in sections 3.2.1.1 and 3.7.1 and Appendix B. Segment 10 was eliminated due to its reduced utility as a result of the modification of Segment 8. These changes resulted in the revised alignment alternatives that were carried forward for analysis in the SDEIS (Figure 2.1-4).

## **2.3 ALTERNATIVES CONSIDERED AND NOT ADVANCED TO THE FEIS**

The SDEIS was completed and approved for public dissemination in January 2007. Location Public Hearings were held in March 2007 to display the SDEIS study information and maps of the alignments. The comments received from the SDEIS Location Public Hearings and the information in the SDEIS were used to choose an alignment alternative to be carried forward into the FEIS.

The Interdisciplinary Staff, composed of representatives from various disciplines of AHTD and FHWA, reviewed the SDEIS. This staff met and considered the potential impacts, advantages, and disadvantages of the various alignment alternatives before coming to a recommendation. The impact information contained in Tables 3.21-1 and 3.21-2 of the Impact Summary section was utilized for the evaluation.

### **2.3.1 Alignment Alternatives A and Ab**

In general, Alignment Alternatives A and Ab provide the shortest routes, least cost, and highest predicted traffic volumes. However, they would also impact several subdivisions, resulting in high numbers of relocatees and noise impacts.

### **2.3.2 Alignment Alternatives B, Ba, and Bb**

In general, Alignment Alternatives B, Ba, and Bb have a lower numbers of relocatees and noise impacts than the other alignment alternatives. However, Alignment Alternatives B and Ba have the highest impacts on wetlands of all the alignment alternatives.

### **2.3.3 Alignment Alternative C**

Alignment Alternative C has the lowest amount of wetland impacts of all the alignment alternatives. However, it is the longest and most expensive of the alignment alternatives. Additionally, it has the most relocatees and the lowest predicted traffic volumes.

## **2.4 ALTERNATIVES BEING CONSIDERED IN THE FEIS**

### **2.4.1 The No-Action Alternative**

Included in the study process for the proposed project is the No-Action Alternative. The No-Action Alternative consists of no improvements to the present system and no expenditures other than regular maintenance of the existing streets. As a result, the LOS and safety issues identified in the Purpose and Need Section would remain and deteriorate to the point at which nearly the entire system in Northern Pulaski County would provide poor service to the traveling public. Delays along the highways would be more severe than exist currently and the number of crashes would be expected to increase.

There are costs involved with the No-Action Alternative and they include the following:

- Maintenance of the roadway system – conducting maintenance on highways at or near capacity is difficult and costly;
- Increased vehicle operating costs on substandard, inadequate facilities;
- The monetary value of time lost due to congestion;
- The intangible costs associated with the inconvenience and annoyance provoked by the above deficiencies;
- Increased travel time for emergency services;

- Costs associated with an increase in the number of crashes;
- Improved access to business centers would not be realized, outlying rural and suburban communities would be difficult to reach, accessibility to job centers for commuters would not improve, and potential industries may not consider the study area as a possible site without an improved transportation facility to transport raw materials and finished products.

In all but no-growth scenarios, No-Action is a deferral of difficult choices. Northern Pulaski County is experiencing significant growth with diminishing options for improvement of the east-west travel in the region and access to the local Interstates. Growth would eventually cause congestion to be so problematic and intolerable that action would be required or growth would slow. When that time comes, right of way acquisition would be more difficult and costly because of increased development in the corridor and the overall increase in property values as development continues to occur in northern Pulaski County. The result would be an increase in cost to the community, state, and nation in social, economic and environmental resources.

Although the No-Action Alternative avoids the impacts that could be caused by the proposed construction, the identified need for an east-west, four-lane, controlled access facility to serve the area remains valid. Selection of the No-Action Alternative would avoid the major state and federal expenditures and initial impacts to the social, economic, natural and cultural environment, including residential displacements, which could ensue from the selection of a construction alternative. However, the costs associated with the No-Action Alternative, along with the adverse impacts related to traffic congestion such as air pollution, noise, and decreased vehicular and pedestrian safety, could create an undesirable environment that could have more long-term adverse impacts than the anticipated construction impacts. Additional impacts that would result from the selection of the No-Action Alternative can be found in the Affected Environment & Environmental Consequences Section of this FEIS.

The concept of No-Action remains a viable alternative until the decision-making process has been completed. Each alternative developed and advanced through the EIS process was compared to the No-Action Alternative.

## **2.4.2 THE PREFERRED ALTERNATIVE**

After a full evaluation of the information contained within the SDEIS, and as a result of participation by resource agencies, the local officials, the public, and the response gained through these avenues, sufficient information was available to identify a Preferred Alternative for the proposed facility.

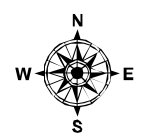
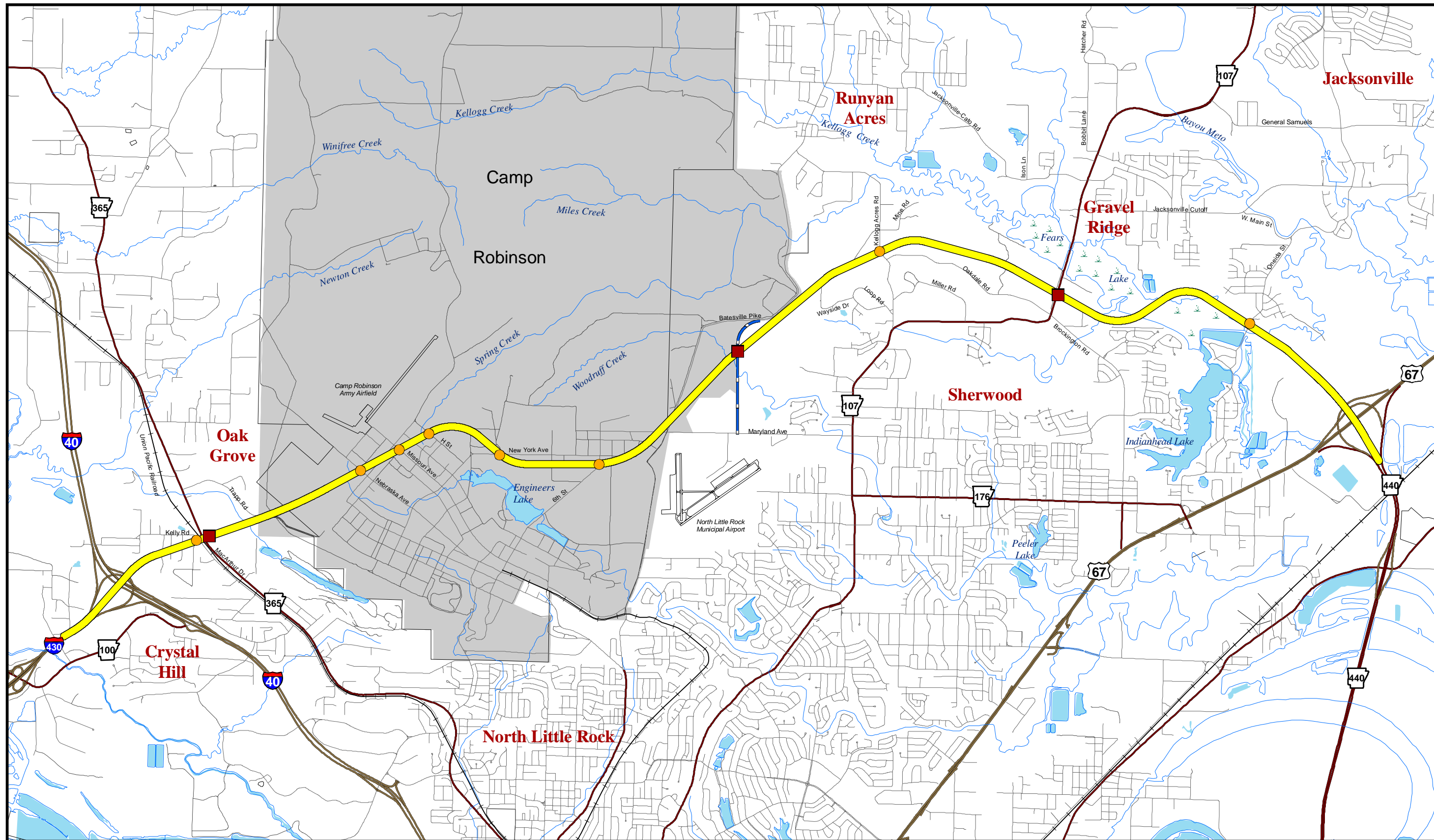
The various alignment alternatives were compared and Alignment Alternative Bab was recommended for combination with the Common Alignment and designated as the Preferred Alternative. The Preferred Alternative is shown in Figure 2.4-1.

### **2.4.2.1 Description**

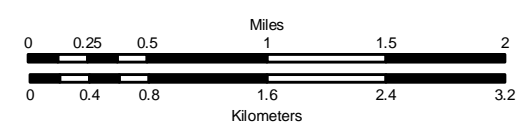
The Preferred Alternative is 12.7 miles (20.4 km) in length, with five interchanges and eight grade separations proposed. An interchange is not proposed at Oneida Street in order to minimize residential relocations, wetland impacts, and impacts to the surrounding subdivisions. Additionally, interchange constructability issues exist due to the proximity of Kellogg Creek and Fears Lake, and spacing with the Highway 67 Interchange would not be optimal for traffic operations. The Preferred Alternative avoids recreation areas and the Kellogg Mines area, while minimizing relocations, wetland, and noise impacts to the maximum extent possible.

From the western end of the proposed project at Interstate 40, the Preferred Alternative goes to the northeast through the Crystal Hill community to an interchange at Highway 365. From there, it continues to the northeast into Camp Robinson, passing to the southeast of the Camp Robinson Army Airfield. Briefly turning to the southeast then east, the route passes to the north of Engineers Lake before turning to the northeast again to cross Batesville Pike just to the north of Maryland Avenue and the North Little Rock Municipal Airport. Part of the Preferred Alternative includes relocating a portion of Batesville Pike outside Camp Robinson, as shown in Figure 2.4-1 and discussed in Section 2.2. From the Batesville Pike





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**Legend\***

- Preferred Alternative
- Interchange
- Grade Separation
- Relocated Batesville Pike
- Camp Robinson

\*Colored Line Represent a 300 ft. Wide Corridor

**Figure 2.4-1**  
**Preferred Alternative**  
 North Belt Freeway



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Interchange the Preferred Alternative continues northeast, to the west of Wayside Drive, and crosses Kellogg Acres Road just to the north of the intersection with Oakdale Road. It continues east just north of Oakdale Road and then southeast with an interchange proposed at Highway 107. The Preferred Alternative turns to the northeast when crossing Fears Lake and back to the southeast, crossing Oneida Street before connecting with the Highway 67 Interchange.

Table 2.4-1 lists general information about the Preferred Alternative, such as length and locations of interchanges and grade separations.

<p align="center"><b>Table 2.4-1 Preferred Alternative Information, Proposed Interchange and Grade Separation Locations</b></p>		
<p align="center"><b>General Information</b></p>	<p align="center"><b>Proposed Interchange Locations</b></p>	<p align="center"><b>Proposed Grade Separations (Overpasses)</b></p>
<p>12.7 miles (20.4 kilometers) 5 Interchanges 8 Grade Separations</p>	<p>Interstate 40 Highway 365 Batesville Pike Highway 107 Highway 67</p>	<p>Union Pacific Railroad Nebraska Avenue Missouri Avenue H Street New York Avenue 6<sup>th</sup> Street Kellogg Acres Road Oneida Street</p>

**2.4.2.2 Traffic and Safety**

Traffic forecasts were developed using the CARTS regional traffic forecast model. Traffic forecasts for the Preferred Alternative vary from a high of 41,800 vpd between Interstate 40 and Highway 365 on the west end to 28,200 between Highway 107 and Highway 67. The weighted average for the entire alignment is 34,468 vpd. These volumes represent a desirable LOS B to the east of Batesville Pike and LOS C to the west.

Forecast 2030 traffic volumes are shown for the No-Action, Preferred Alternative, and surrounding system on Figure 2.4-2. Highway 67 south of the proposed North Belt

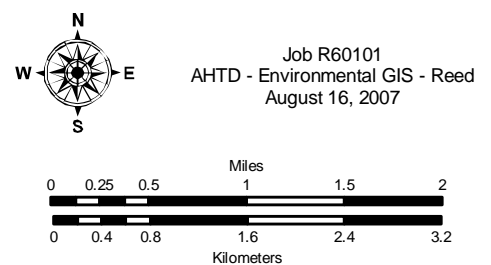
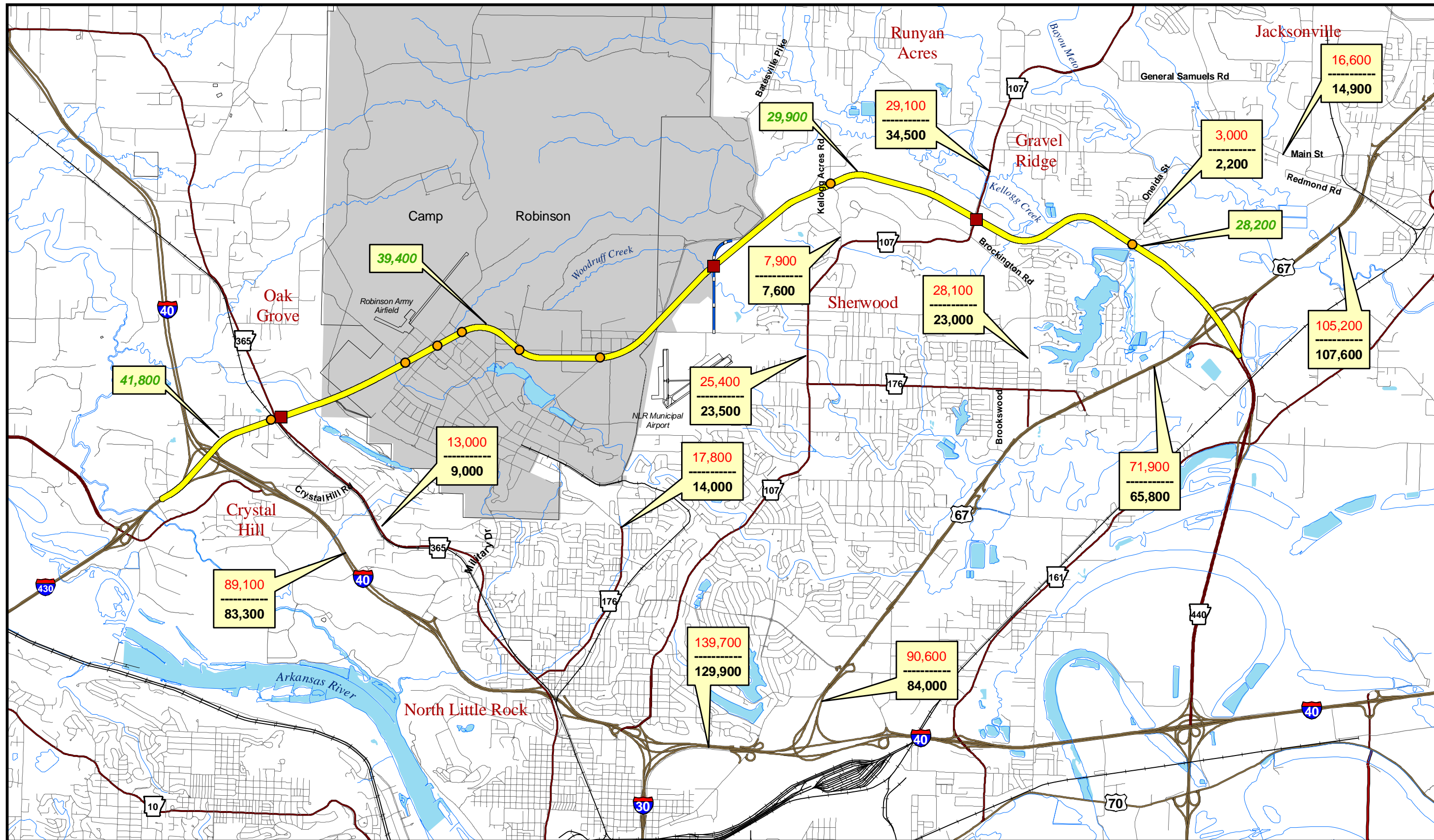
interchange is forecast to decrease by approximately 6,000 vpd with the Preferred Alternative in place. A similar decrease is forecast on I-40 east of I-430 while the 8-lane section of I-40 east of I-30 is forecast to decrease by 10,000 vpd. Arterials in the area are also forecast to benefit from a decrease in traffic caused by the proposed construction. A decrease of 5,100 is forecast on Brockington north of Kiehl Avenue (Hwy. 176), 3,800 on Remount Road south of Camp Robinson (Hwy. 176), 4,000 vpd on Highway 365 east of Crystal Hill Road, and 1,900 on Highway 107 north of Highway 176 (Kiehl Ave.).

In Section 1.4.4, a number of key arterial locations around the project area were forecast to have traffic operations reaching critical levels by the year 2030. Table 2.4-2 shows how the roadways that were forecast at LOS E or F in Table 1.4-4 are forecast to be impacted by the Preferred Alternative. All roadway segments forecast at LOS E or F in Table 1.4-4, but one, are expected to be improved by one level of service. The one exception is Highway 67 south of Redmond Road. The Preferred Alternative is forecast to add a minimal number of vehicles to this section. The comparison of forecast traffic for the No-Action and the Preferred North Belt Alternatives and LOS changes on key roadway segments demonstrates that North Belt would have a beneficial impact on traffic operations in the northern part of Pulaski County, thereby increasing roadway safety.

<b>Table 2.4-2</b> <b>Impact of Preferred Alternative on Roadways Forecast at Critical LOS in 2030</b>		
Roadway Section	2030 No-Action LOS*	2030 LOS with North Belt Freeway
Hwy. 67: south of Redmond Road	E**	E
Hwy. 67: north of Interstate 40 and south of Interstate 40 east ramps	F**	E
Interstate 40: east of Interstate 30	F	E
Main St.: west of Redmond Rd.	E	D
Remount Rd.: north of Camp Robinson Road (Hwy. 176)	E	D

\*Reflects basic main lane freeway analysis. Weave, merge, and diverge levels of service may vary.

\*\*Reflects widening planned or underway.



2030 Average Daily Traffic on Preferred Alternative

2030 Average Daily Traffic with No-Action Alternative

2030 Average Daily Traffic with Preferred Alternative

- Preferred Alternative
- Interchange
- Grade Separation
- Relocated Batesville Pike
- Camp Robinson

**Figure 2.4-2**  
**Forecast Daily Traffic for**  
**No-Action and Preferred Alternative**  
North Belt Freeway

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### 2.4.2.3 Estimated Cost

The Preferred Alternative is estimated to cost \$347 million. Table 2.4-3 presents the estimated costs for each component of the project. This updated cost estimate represents a 25.8% increase from the \$275.8 million (in 2006 dollars) estimate in the SDEIS. The construction costs estimates increased approximately 10% from 2006 to 2007. Additionally, a 10% construction engineering factor was added to construction costs for the FEIS cost estimate that was not included in the SDEIS cost estimate. Future development along the Preferred Alternative could result in right of way costs escalating rapidly.

Construction	Gross ROW	Utility	Relocation	Total Cost
320	14.8	10.9	1.0	347

### 2.4.2.4 Preferred Alternative Summary

The Preferred Alternative is shown in Figure 2.4-1. This alternative:

- 1) Meets the project purpose and need;
- 2) Minimizes overall impacts;
- 3) Best balances the benefits expected from the project with the overall impacts; and
- 4) Provides good access to communities and other regional highway facilities.

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