EXECUTIVE SUMMARY

INTRODUCTION

The Arkansas State Highway and Transportation Department (AHTD) in cooperation with the Federal Highway Administration (FHWA), is proposing to construct a bypass of existing U.S. 412 through Springdale. The four-lane, fully controlled access facility (Interstate type) will be located in northern Washington and southern Benton Counties, Arkansas.

The project is known as the Springdale Northern Bypass. All alternative alignments begin at an interchange with existing U.S. 412 west of Tontitown where the highway presently changes from four to five lanes and will end with an interchange on existing U.S. 412 between the Springdale eastern city limits and Beaver Lake. The length of the proposed project is between 14.6 and 18.9 miles (23.5 and 30.4 kilometers), depending on the alignment selected. Both toll and non-toll funding alternatives are under consideration for each alignment. Major communities in and around the study area include Springdale, Tontitown, Elm Springs, Bethel Heights, Lowell, Sonora, Rogers, Bentonville, Fayetteville, and Cave Springs.

U.S. 412 is part of a congressionally designated High Priority Corridor (HPC) running east and west across northern Arkansas. This project was initiated in 1996 with a Major Investment Study (MIS), followed by the beginning of the Environmental Impact Study (EIS) in 1998.

Three phases of work are involved in the study process for the Springdale Northern Bypass.

- Phase I includes the Major Investment Study, the Scoping Process, and development of the project purpose and need.
- Phase II includes the development of corridors within the study area, the refinement of those corridors into alignments, the detailed environmental study of those alignments, the preparation of a Draft Environmental Impact Statement, and the selection of a preferred alignment.
- Phase III includes the preparation of a Final Environmental Impact Statement.

This process ensures that only those alignments which adequately meet the purpose and need of the project are fully evaluated and that those alignments are developed to minimize the potential environmental impacts. Figure S-1 illustrates a simplified flow chart of the EIS process followed for the preparation of this document.

PURPOSE AND NEED

To determine the purpose and need of this project, several transportation related issues were examined. These include: the results of the Major Investment Study; the needs of the existing highway system; the condition of the U.S. 412 corridor; the current and future capacity of the existing facility; forecast regional growth; transportation demand; intermodal demand; regional long-range planning; existing and future congestion along the existing facility; existing and future delay along the existing facility; and, safety of traffic along the existing facility including crash history analysis. Meetings with the general public and local officials were an integral part of the development of the purpose and need. The following is a list of the major points of the purpose and need:

- Function as a link in the U.S. 412 High Priority Corridor, as well as the state and regional transportation system
- Improve safety
- Improve circulation
- Improve connectivity
- Improve intermodal access
- Minimize traffic through the cities

In summary, the purpose of this project is to provide safe and efficient movement of traffic within the region while accommodating through and intermodal travelers and alleviating congestion along existing facilities.

ALTERNATIVE DEVELOPMENT

A planning level MIS was conducted within the urbanized area of northwest Arkansas. This effort considered several construction and non-construction strategies for to implement for an

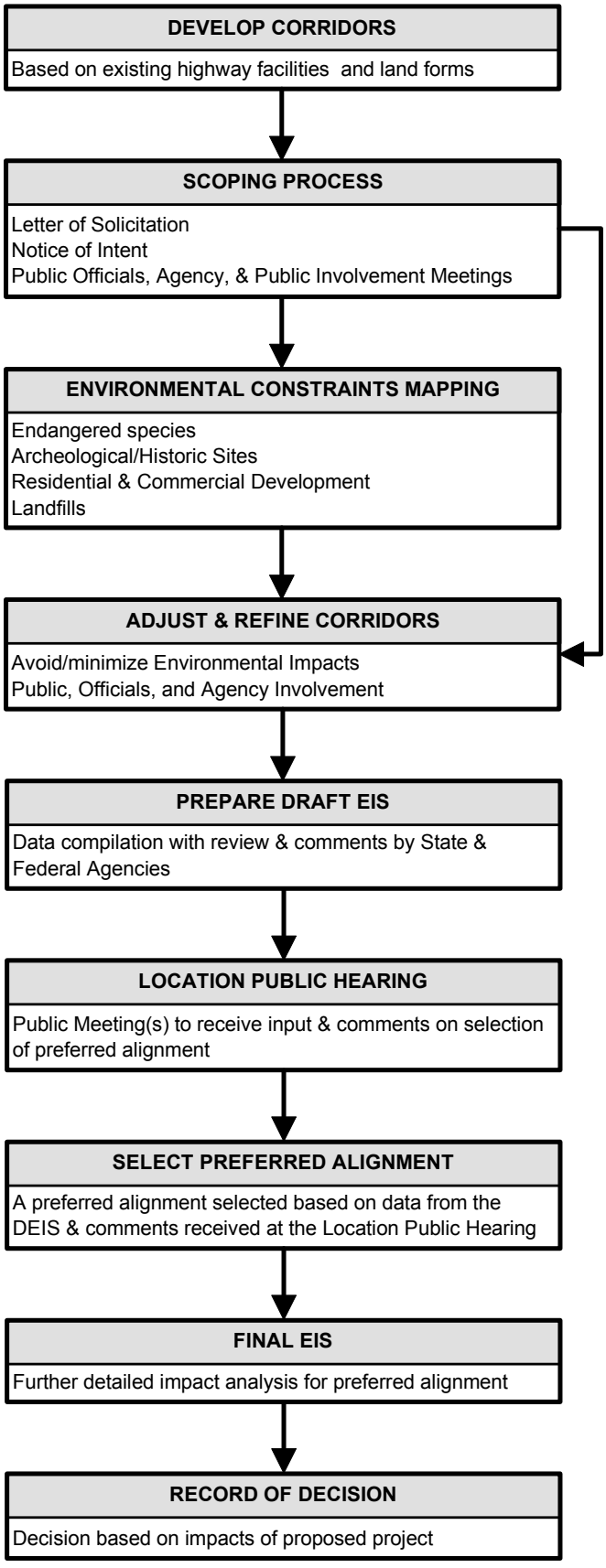

FIGURE S-1
EIS STUDY PROCESS

improved transportation system. A working group was developed including representatives from area cities and counties, AHTD, FHWA, the Metropolitan Planning Organization (MPO) for northwest Arkansas (Northwest Arkansas Regional Transportation Study Policy Committee), and other interested parties. This group ultimately concluded that a new location alignment north of Springdale best met the overall project purpose and need as developed by the working group, as well as numerous local objectives. This conclusion was adopted by the MPO Policy Committee.

The development of alignments for the Springdale Northern Bypass followed a multi-step approach in order to screen possible highway locations against increasingly more detailed environmental information. Corridor development began by identifying design constraints throughout the project area. Design issues which limited corridor placement included avoidance of undesirable topography and consideration of potential interchange locations.

An Environmental Impact Statement is also underway to determine the location for a connector facility between the Northwest Arkansas Regional Airport and either U.S. 412 or I-540. From the beginning of the Springdale Northern Bypass and the NWARA Access Road projects, commitments were made to closely coordinate the projects and investigate the possibility of shared roadway sections for the two projects to minimize impacts to the area. This would reduce costs and lessen impacts to the region caused by road construction and operation. As the corridor and alignment studies progressed for the two projects, information used for the NWARA Access Road DEIS was also used in the development of the Springdale Northern Bypass corridors and vice versa. Figure S-2 shows the initial corridors developed for the NWARA Access Road DEIS in March of 2000.

Environmental constraints such as endangered species habitat, dense residential or business development, and landfills, were then identified and utilized to refine the placement of the corridors. During this process, the corridors were examined and reviewed by the public, local officials, and resource agencies.

This process provided sufficient information to further narrow the corridors into four new location alignments, each with a toll and a non-toll funding alternative, which were advanced to detailed study. A corridor on existing U.S. 412 was also considered, along with a No-Action Alternative. Widening the existing route would have involved several hundred residential and business relocatees, and was eliminated on this basis.

The No-Action Alternative was retained throughout the study as a basis for comparing the relative benefits and impacts of the alternatives. The No-Action Alternative consists of no improvements to the present system and no expenditures other than regular maintenance of the existing route. The majority of the existing route would remain a five-lane facility.

The four alignments are shown in Figure S-2 as colored lines, identified as Line 1 (red), Line 2 (blue), Line 3 (gold) or Line 4 (green). Two or more of the alignments may run together for distances and converge or diverge at points along the alignments. Where the lines converge, there is the potential to change from one line to another. For analysis purposes the lines were divided into five segments which are marked with letters A through F. For the purpose of the environmental analysis, an average estimated width of 300 feet (91 meters) was utilized for all of the alignments.

SUMMARY OF BENEFICIAL AND ADVERSE IMPACTS

Construction of the proposed project would provide the following benefits:

- Provide a vital link in the U.S. 412 High Priority Corridor and the National Highway System, as well as the state and regional transportation system.
- Improve connectivity between U.S. 412 and I-540,
- Improve the connectivity of existing air, rail, truck and bus transportation modes
- Improve efficiency of transportation for the trucking industry and businesses dependent on trucking
- Improve traffic safety
- Provide safe and efficient movement of traffic within the region while accommodating through travelers
- Produce travel time savings of approximately 340 hours per day along the existing facility, and 625 hours a day along the new access-controlled facility
- Promote the retention of a higher level of service on the new facility by the construction of a fully access-controlled highway
- Minimize traffic through cities
- Alleviate congestion along existing facilities

A summary of impacts is included in Table S-1.

PREFERRED ALIGNMENT

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

The Interdisciplinary Staff, composed of representatives from various disciplines of AHTD and FHWA, reviewed the Draft EIS. This staff met and considered the potential impacts, advantages, and disadvantages of the various segments before coming to a decision. The Impact Summary in Table S-1 was utilized, as well as Table S-2, the Segment Comparison Table, which illustrates the major advantages and disadvantages for segments of each line. The segments of the various alignments were compared and the Preferred Alignment is compiled of the preferred segments. Table S-3 gives an brief explanation of the basis for preference within each segment.

The Preferred Alignment is shown in Figure S-2. This Alignment:

- Meets the project purpose and need,
- Minimizes overall impacts,
- Best balances the benefits expected from the project with the overall impacts,
- Provides good access to communities and other regional highway facilities,
- Provides an improved link in the High Priority Corridor system that serves the travel, economic development, and commercial demands of northern Arkansas and the nation,
- Enhances intermodal access to the Northwest Arkansas Regional Airport,
- Minimizes cumulative impacts by having a 3.5 mile (5.6 kilometer) collocated segment with the NWARA Access Road.
- Provides for connections to planned transportation facilities identified in the 2025 Regional Transportation Plan for Metropolitan Northwest Arkansas.

The Preferred Alignment is 20.1 miles (32.3 km) in length, with seven interchanges and seventeen grade separations proposed. The Preferred Alignment avoids known endangered

Table S-1
IMPACT SUMMARY

Yellow Highlighting indicates the Preferred Alignment in each Segment

Segments	Alignment	Length	Acreage	Total Cost **	Relocations						Noise	404 Impacts			Cultural Resources-Direct Impacts			Hazardous Materials	Farmland	
					Residential Owners	Residential Tenants	Businesses	Non-Profit Organizations	Poultry Farms	Total	2021 Receptors	Springs	Stream Crossings		Recorded Archeology Sites	Historic Structures	GLO Resources	Auto-Salvage Yard	acreage (hectares)	
													Intermittent	Perennial					Total	Prime
		miles (km)	(hectares)	(in million $)																
A-B	Line 1	4 (6)	243 (98)	46	10	1	1	0	1	13	21	2	6	4	1	1	0	1		
	*Line 2/4	6 (9)	300 (121)	57	16	4	1	0	1	22	53	1	8	3	1	0	0	1		
	Line 3	3 (5)	215 (87)	51	15	3	1	0	3	22	34	1	8	4	1	0	0	1		
B-C	Line 1	3 (5)	252 (102)	52	24	1	1	0	0	26	50	1	5	4	1	0	1	0		
	*Line 2/4	3 (5)	241 (98)	51	8	1	1	0	1	11	10	0	4	4	3	0	1	0		
	Line 3	3 (5)	194 (79)	45	7	7	9	0	0	23	12	0	0	3	1	0	0	0		
C-D	*Line 1/2	2 (3)	59 (24)	16	1	1	0	0	0	2	30	0	3	0	0	0	0	0		
	Line 3	2 (3)	54 (22)	17	8	1	1	0	0	10	50	0	1	0	0	0	0	0		
	Line 4	2 (3)	72 (29)	19	13	3	0	0	0	16	39	0	1	0	0	0	0	1		
D-E	Line 1	3 (5)	158 (64)	48	21	23	15	1	0	60	47	0	0	0	1	2	0	0		
	Line 2	3 (5)	146 (59)	49	23	23	15	1	0	62	50	0	2	0	1	2	0	0		
	Line 3	4 (6)	214 (87)	51	12	0	8	0	0	20	25	0	2	0	0	1	0	0		
	Line 4	4 (6)	219 (89)	51	11	0	8	0	0	19	20	0	1	0	0	1	0	0		
E-F	Line 1	3 (5)	141 (57)	41	6	0	2	0	1	8	50	1	2	1	0	0	0	0		
	*Line 2/4	5 (8)	196 (80)	47	10	1	1	0	0	12	25	0	5	1	0	0	0	0		
	Line 3	4 (7)	176 (71)	49	9	0	1	0	0	10	23	1	4	1	0	0	0	0		
	No-Action	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Line 1	15 (24)	853 (345)	202	62	26	19	1	2	109	198	4	16	9	3	3	1	1	490 (200)	180 (70)
LINE	Line 2	19 (30)	942 (381)	220	58	30	18	1	2	109	165	1	22	20	5	2	1	1	480 (190)	190 (80)
TOTALS	Line 3	16 (26)	853 (345)	213	51	11	20	0	2	75	144	2	15	8	2	1	0	1	590 (240)	220 (90)
	Line 4	20 (32)	1028 (416)	225	58	9	11	0	3	85	147	1	20	8	4	1	1	2	620 (250)	190 (80)
	Preferred	19(30)	1004(406)	227	58	8	11	0	2	79	150	2	19	8	4	1	5	2	630 (250)	210 (80)
Preferred by Segment																				
A-B	Line 2/4	6 (9)	300 (121)	57	16	4	1	0	1	22	53	1	8	3	1	0	0	1		
B-C	Line 2/4	3 (5)	241 (98)	51	8	1	1	0	1	11	10	0	4	4	3	0	1	0		
C-D	Line 4	2 (3)	72 (29)	19	13	3	0	0	0	16	39	0	1	0	0	0	0	1		
D-E	Line 3	4 (6)	214 (87)	51	12	0	8	0	0	20	25	0	2	0	0	1	0	0		
E-F	Line 3	4 (7)	176 (71)	49	9	0	1	0	0	10	23	1	4	1	0	0	0	0		
TOTALS		19(30)	1004(406)	227	58	8	11	0	2	79	150	2	19	8	4	1	5	2		

*Shared Alignments within segment

**Includes ROW and Construction costs for the Non Toll Alternative. Toll Alternatives will require an additional $21 million for toll plazas.

or threatened species habitat, cemeteries, recreation areas, wetlands, community facilities, and minimizes relocations and community severance impacts to the maximum extent possible.

The Preferred Alignment will undergo public, local official, and state and federal resource agency review during the public hearing(s) and comment period on the Draft EIS. These comments will be assessed and, if necessary, the Preferred Alignment may be modified either through the choice of a different alignment through a segment of the project, and/or through shifts or changes to the Preferred Alignment. After a complete evaluation of the comments received, an alignment will be selected to be documented in the Final EIS. This documentation will contain responses to the comments received on the Draft EIS, and address comments and changes related to the Selected Alignment.

OTHER MAJOR FEDERAL ACTIONS IN THE AREA

One other federal action is currently under study in the area. FHWA is preparing an Environmental Impact Study for the construction of the Northwest Arkansas Regional Airport (NWARA) Access Road to connect the southern entrance of the airport to either I-540 or U.S. 412. The NWARA Access Road project is being coordinated with the Springdale Northern Bypass.

OTHER FEDERAL ACTIONS AND PERMITS REQUIRED

The following actions must occur in order to implement this project:

1) The issuance of a Section 404 permit by the U.S. Army Corps of Engineers for the placement of dredged and fill material in waters of the United States as required by Section 404 of the Clean Water Act.

2) The issuance of a Section 401 Water Quality Certification by the Arkansas Department of Environmental Quality, as required by the Clean Water Act.

3) The issuance of a National Pollutant Discharge Elimination System (NPDES) Permit by the Arkansas Department of Environmental Quality as required by Section 402 of the Clean Water Act.

4) Completion of the Section 106 process for consideration of historic properties in conjunction with the Arkansas Historic Preservation Program and the Advisory Council on Historic Preservation

5) Ongoing coordination with the Cherokee and Osage tribes during the planning and construction stages of the project.

FURTHER INFORMATION

This Executive Summary was derived from information in the Draft Environmental Impact Statement. The DEIS is a compilation of extensive scientific and engineering information required for compliance with federal and state rules and regulations.

Copies of the DEIS have been placed at the Springdale Public Library and various municipal and county offices throughout the study area. The following contact information can also be used to request copies of the DEIS:

Mail: Arkansas State Highway and Transportation Department
Environmental Division
P.O. Box 2261
Little Rock, AR 72203-2261

Telephone: (501)569-2281

E-mail: springdalenorthernbypass@ahtd.state.ar.us

Table S-2

Segment Comparison*

Preferred segment is shaded with gray

Segment	Line	Advantages	Disadvantages
A-B	Line 1	• Lowest estimated costs • Fewest relocatees	• Bisects Elm Springs (community impacts) • Not practicable for use by NWARA Access Road
	*Line 2/4	• Avoids majority of Elm Springs Community • Best alignment & design for interchange with NWARA Access road • Minimizes severance impacts to local land owners	• Most relocatees • Most noise receptors • Highest estimated costs • Longest segment (more ROW needed)
	Line 3		• Crosses one planned residential development
B-C	Line 1	• Avoids impacts associated with removal of local access for I-540 & bypass • Avoids costs & difficulties associated with crossing active quarry	• Bisects Elm Springs (community impacts) • Not practicable for use by NWARA Access Road • Most residential relocatees • High number of noise receptors
	*Line 2/4	• Avoids impacts associated with removal of local access for I-540 & bypass • Avoids costs & difficulties associated with crossing active quarry • Fewest relocatees	• Requires more estimated ROW
	Line 3	• Avoids interchange impacts to Spring Creek • Lowest cost estimates	• Removes local access to I-540 & bypass • High number business relocatees • Crosses active quarry
C-D	*Line 1/2	• Minimizes community impacts to Bethel Heights • Avoids impacts associated with removal of local access for I-540 & bypass • Avoids costs & difficulties associated with crossing active quarry • Fewest relocatees	• Crosses two planned residential developments
	Line 3	• Avoids interchange impacts to Spring Creek • Avoids subdivision developments	• Removes local access to I-540 & bypass • Most noise receptors • Bisects Bethel Heights
	Line 4	• Avoids impacts associated with removal of local access for I-540 & bypass • Avoids costs & difficulties associated with crossing active quarry	• Most residential relocatees • Impacts one new subdivision • Most noise receptors • Highest costs • Bisects Bethel Heights • Requires more estimated ROW
D-E	Line 1	• Minimizes community impacts to Bethel Heights	• Crosses Fitzgerald Mountain • High Number of noise receptors (similar to Line 2) • Interchanges with Old Wire Rd.
	Line 2	• Minimizes community impacts to Bethel Heights	• Crosses Fitzgerald Mountain • High Number of noise receptors (similar to Line 1) • Interchanges with Old Wire Rd.
	Line 3	• Low number of relocatees (similar to Line 4) • Low number of noise receptors (similar to Line 4) • Interchanges with S.H. 264	• Bisects Bethel Heights • More estimated ROW needed
	Line 4	• Fewest relocatees • Fewest noise receptors • Interchanges with S.H. 264	• Bisects Bethel Heights
E-F	Line 1	• Shorter alignment resulting in fewest relocatees and lowest cost	• Eastern terminus does not connect to divided 4-lane section of U.S. 412 • Most noise receptors
	*Line 2/4	• Eastern terminus connects to divided 4-lane section of U.S. 412	• Most relocatees • Longest segment (more ROW needed)
	Line 3	• Eastern terminus connects to divided 4-lane section of U.S. 412 • Fewer relocatees than Line 2/4 • Fewest noise receptors	• Highest costs

*Shared Alignments within Segment

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Table S-3
Identification of the Preferred Alignment

Segment	Preferred Line	Basis for Preference
A-B	Line 2/4	1) Avoids most of the City of Elm Springs. 2) Better alignment and design for interchange with NWARA Access road; encourages concurrent segments with NWARA Access road; and minimizes cumulative impacts. 3) Minimizes severance impacts to local landowners.
B-C	Line 2/4	1) Avoids most of the City of Elm Springs. 2) Encourages concurrent segments with NWARA Access road and minimizes cumulative impacts. 3) Avoids impacts associated with removal of local access for I-540. 4) Avoids costs and difficulties associated with crossing active quarry.
C-D	Line 4	1) Based on Segment B-C and Segment D-E preference, Line 4 is preferred in this segment.
D-E	Line 3	1) The estimated impacts and costs of Segment E-F of Lines 3 and 2/4 were very similar. Line 3 was selected based on Segment E-F impacts. 2) Minimal amount of relocatees, slightly higher than Line 4. 3) Minimal amount of noise receptors, slightly higher than Line 4.
E-F	Line 3	1) Connects with U.S. 412 divided four-lane instead of five-lane section. 2) Provides for complete bypass of remaining U.S. 412 five-lane section through Springdale. 3) The estimated impacts and costs of Segment E-F of Lines 3 and 2/4 were very similar. Line 3 was favored because the estimated number of relocatees was slightly lower.