

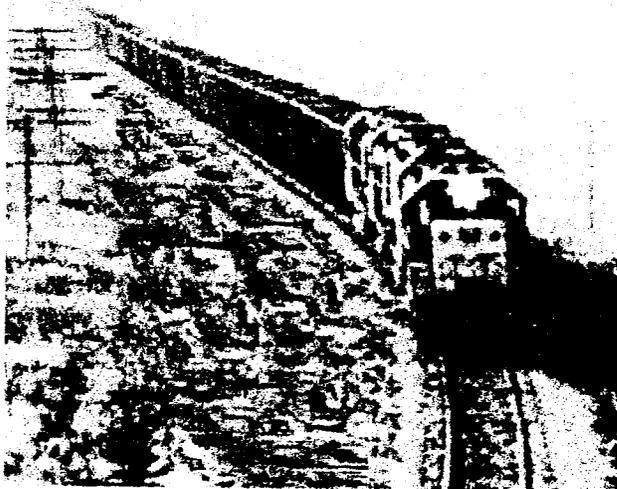
Decision ID No. 31381

Service Date: November 2, 2000
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DRAFT ENVIRONMENTAL ASSESSMENT

FINANCE DOCKET NO. 33782

ENTERGY ARKANSAS AND ENTERGY RAIL--
Construction and Operation Exemption--
White Bluff to Pine Bluff, Arkansas



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CONCLUSION

This Draft Environmental Assessment (Draft EA) considers the potential environmental impacts of construction and operation of an approximately 8.6-mile rail line, plus a crossover track, by Entergy Rail in Jefferson County, Arkansas. The proposed new construction, combined with rehabilitation of existing rail trackage, would connect Entergy Arkansas, Inc.'s White Bluff electric generating plant with a nearby former Southern Pacific (SP) rail line now owned by the Union Pacific Railroad Company (UP). This connection would make it possible for the Burlington Northern Santa Fe Corporation (BNSF) to provide alternative direct rail access to the White Bluff plant. This Draft EA considers the environmental impacts of constructing and operating the proposed new rail line and also of rail operations over the line planned for rehabilitation; it does not consider the environmental impacts of the rehabilitation process itself.

Based on the Section of Environmental Analysis' (SEA) review of all information available to date and its independent analysis of the proposed rail line construction and operation, all the comments and mitigation requested by various federal, state, and local agencies, as well as other concerned parties, and the mitigation offered by Entergy, SEA preliminarily concludes in this Draft EA that construction and operation of Entergy Rail's proposed rail line would have no significant environmental impacts if the Board imposes and Entergy implements the mitigation recommended in Section ES.5.

Therefore, SEA preliminarily recommends that the Board impose on any final decision approving the proposed rail line construction and operation conditions requiring Entergy to implement the mitigation contained in Section ES.5. SEA will consider all comments received in response to the Draft EA in making its final recommendations to the Board. The Board will consider SEA's final recommendations and the environmental comments in making its final decision.

EXECUTIVE SUMMARY

SEA has prepared this Draft EA in response to a petition filed by Entergy Arkansas, Inc. (EAI) and Entergy Rail¹ with the Board for an exemption under 49 U.S.C. 10505 from the prior approval requirements of 49 U.S.C. 10901 to permit the construction and operation of an 8.6-mile rail line, plus a crossover track, near the City of Pine Bluff, in Jefferson County, Arkansas.²

ES.1 PURPOSE AND NEED FOR AGENCY ACTION

Entergy proposes, by means of new rail construction and rehabilitation of existing rail trackage, to connect its White Bluff electric generating plant with UP's mainline between Pine Bluff and Little Rock, Arkansas (see Figures A-1 through A-8 in Appendix A). Entergy would build an 8.6-mile long new rail line to connect the White Bluff plant with 4.0 miles of existing line within the Pine Bluff Arsenal (Arsenal) and 0.2 miles of existing trackage just outside the Arsenal. Entergy would rehabilitate the existing trackage and build a crossover track to connect the rehabilitated trackage to the UP mainline.³ The White Bluff plant currently has direct rail access by UP; the proposed rail construction would make it possible for BNSF to provide alternative direct rail access to the plant.

The Board conditionally granted Entergy's petition, subject to its further consideration of the environmental impacts of the proposal. Upon completion of the Board's environmental review, it will issue a further decision addressing those matters and making the exemption effective at that time, if appropriate, thereby allowing construction to begin.

¹ Unless referred to separately, EAI and Entergy Rail will be referred to collectively as Entergy.

² The Surface Transportation Board (Board) was formerly the Interstate Commerce Commission (ICC). The ICC Termination Act of 1995, Pub. L. No. 104-88, 109 Stat. 803, which was enacted on December 29, 1995, and took effect on January 1, 1996, abolished the ICC and transferred certain rail functions and proceedings to the Board.

³ This Draft EA considers the environmental impacts of constructing and operating the proposed new rail line and also of rail operations over the line planned for rehabilitation; it does not consider the environmental impacts of the rehabilitation process itself.

SEA prepared the Draft EA based on its independent analysis of the project, the comments and mitigation requested by various federal, state, and local agencies as well as other concerned parties, and all the information available to date. The Draft EA assesses the potential environmental effects of the proposed action and feasible alternatives, including the "no-build" alternative. SEA has served the Draft EA on the public, which has been invited to submit comments on the document. SEA will consider all the comments received in making its final recommendations to the Board. The Board will consider the entire environmental record, SEA's final recommendations, including final recommended mitigation measures, and the environmental comments in making its final decision.

ES.2 OVERVIEW OF THE AFFECTED ENVIRONMENT (See Chapter 2 for details)

The proposed rail line would be located in southeastern Arkansas, in the northwestern quadrant of Jefferson County. Jefferson County is located just south of Pulaski County and the state capital of Little Rock. The proposed line would be located entirely in the unincorporated area of Jefferson County; for approximately half its length the new rail construction would be located within the Arsenal boundaries.

Much of the land between the White Bluff station and the northwest corner of the Arsenal is in large commercial timber tracts which largely retain a forest cover. However, in this area the line would pass through a subdivision of manufactured homes which is under development.⁴ The Arsenal is essentially an industrial property; the proposed new rail construction within the Arsenal would be located within a largely cleared area immediately adjacent to the existing UP rail transportation corridor. A 1,500-acre site in the northwestern corner of the Arsenal is being promoted for development of a technology park to be called the "Bioplex".

The regional economy is based on agriculture (including cotton, soybeans, rice, poultry and catfish), timber and forest products, while the Pine Bluff economy is centered in manufacturing, government, and services. In 1995, the U.S. Census Bureau estimated that Jefferson County had approximately twice the rate of people living below the poverty level as did the nation as a whole.

The Arkansas river roughly divides Jefferson County in half, running from approximately the northwest to the southeast corner. The project area is part of the Gulf Coastal Plain Ecoregion, which is characterized by rolling terrain broken by stream valleys

⁴ A manufactured home is a prefabricated house that is put together in standardized sections.

of minor size. Elevation ranges from about 370 feet above mean sea level in the northern part of the project area to around 225 feet above sea level at its southern end. Surface drainage is to the east, ultimately into the Arkansas River. Area soils are moderately well drained to poorly drained, loamy soils that are used mainly for the production of wood crops.

A biological survey of the proposed rail corridor found no endangered, threatened or otherwise protected plant or animal species in the project area.

Pine Bluff is located approximately 40 miles southeast of Little Rock at the intersection of U.S. Highways 65 and 79. Pine Bluff has a fully functional river port on the Arkansas River. The project area is situated north of Pine Bluff between U.S. 65 and the river. The UP line to which the proposed rail project would connect is part of UP's mainline to Little Rock.

Jefferson County is in attainment of the National Ambient Air Quality Standards (NAAQS) for all six criteria air pollutants. The northern part of the project area outside the Arsenal is primarily commercial timberland. Noise levels along this part of the proposed ROW are expected to be relatively low but are expected to be higher in the vicinity of the power plant. Inside the Arsenal boundaries, ambient noise levels are expected to be higher, due to traffic on nearby roads and rail traffic on the UP line immediately adjacent to the proposed rail ROW.

A cultural resource survey was conducted which included a records search for sites within the entire area of new rail construction and a field survey of that part of the proposed new rail ROW outside Arsenal boundaries (the area within the Arsenal had been covered in an intensive survey done in 1993). The survey indicated that there are no cultural resource sites within the survey area which are eligible for the National Register of Historic Places (NRHP). The Arkansas Historic Preservation Program is currently reviewing the cultural resource survey findings.

ES.3 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES (See Chapter 3 for details)

ES.3.1 Entergy's Proposed Route

Construction

Entergy proposes to build an approximately 8.6-mile long new rail line to connect the White Bluff plant with approximately 4.2 miles of existing trackage which it plans to rehabilitate (see Figures A-2 through A-8). It would also construct a crossover track to connect the rehabilitated trackage with the UP line.

Operation and Maintenance

At the present time, coal is the primary commodity expected to be shipped over the proposed rail line. Entergy states that is not aware of any plans to ship munitions bound for the new munitions incineration facility over the line. If the Bioplex site develops, it is possible that potential rail shippers might locate there and ship over the line at some point in the future. However, there is no definite indication as to if or when this may occur. Entergy Rail would own the line; train operations might be provided by BNSF, a third party rail operator, or a combination of both. There could be a maximum of two to four train movements per day over the proposed line, 365 days a year. A typical train would consist of two to four locomotives and 115 to 135 cars.

Entergy would have an established contractor provide ROW and track maintenance and would implement a regular program designed to keep the railroad bed free of weeds. This would include use of mechanical measures and herbicides to clear track bed and the ROW adjacent to the track bed and also (within the Arsenal) use of controlled burning in order to preserve the prairie habitat of the area.

ES.3.2 Initially Considered Alternatives to the Proposed Rail Construction

Non-Rail Transport

In 1998 Entergy implemented a temporary rail-barge coal delivery to the White Bluff plant. However, this alternative was found to be infeasible because it was unable to deliver a sufficient volume of coal without a major investment in barge handling and unloading facilities at the plant. Additional factors causing rail-barge to be economically infeasible include circuitous routing, costly rail-to-barge transfer, and breaking up of barge tows and operation through locks on the Arkansas River.

Entergy also considered a rail-truck movement. However, truck movement to move the needed amount of coal from the assumed transload point would result in a truckload of coal approximately every 2.25 minutes. Aside from the high cost of a new transload facility at the rail-truck transfer point and the cost of buying and operating the trucks, the noise, congestion, and highway damage associated with such an operation would be unacceptable.

For the above reasons, non-rail coal transport was not considered a satisfactory substitute for alternative direct rail access to the power plant.

All-Rail Alternatives

Entergy identified and evaluated the following rail construction routes as alternatives to the proposed route (see Figure A-14).

Route A. Route A would begin at the same point as the proposed route but after a short distance would diverge from the proposed route and proceed toward the community of Jefferson. Route A would then move southeast to enter the Arsenal near the Stark Gate. From that point Route A would again follow the same alignment as the proposed route, ending a short distance southeast of the Dexter Gate. However, Route A would involve substantially longer rehabilitation of existing rail line because it was assumed that the route would not be able to utilize UP's Pine Bluff to Little Rock line to access the existing Arsenal trackage. Instead Route A would follow the alignment of the former Cotton Belt Arsenal spur from the southern Arsenal boundary all the way to the west end of downtown Pine Bluff.

Reconstruction of and operation over a rail line through urban Pine Bluff would likely cause significant adverse impacts on the surrounding community and would also affect residential areas near Jefferson. Table 3-2 shows a summary comparison of the proposed and alternate routes; it shows that Route A has substantial negative environmental impacts, including residential areas, wetlands, and road crossings. Once the Board issued its decision finding that Entergy does have the option to utilize UP's Pine Bluff to Little Rock line to access existing Arsenal trackage, Entergy no longer considered Route A a viable alternative.

Route A1. Route A1 assumes that the rail line could not be routed through the Arsenal, that the line would have to be located entirely outside the Arsenal. Route A1 would follow the same alignment as Route A until just south of Jefferson, where it would diverge from Route A and continue south to cross the UP and Highway 365. Proceeding southeast, after approximately five miles Route A1 would again cross Highway 365. Just south of the southern Arsenal boundary Route A1 would proceed east crossing the UP and the former Cotton Belt to be in the same alignment as Route B. It would then proceed east and southeast to connect with another former Cotton Belt line in eastern Pine Bluff.

The entire length of Route A1, 16.9 miles, would be new construction in new rail ROW. Table 3-2 shows that this route also would have substantial negative impacts on residential areas, wetlands, and road crossings. Once the Arsenal committed to allow Entergy to build a rail line on its property and to allow it to also use existing Arsenal trackage, Entergy no longer considered Route A1 a viable alternative due in part to its potential negative environmental impacts.

Route B. Route B would follow the same alignment as Route A from its beginning to just south of the southern Arsenal boundary. Route B would then diverge from Route A to move east and southeast, sharing a common alignment with Route A1 to its end in eastern Pine Bluff.

Route B would involve 13 miles of rail construction in new ROW and 5.2 miles of rail line rehabilitation in existing ROW. Table 3-2 shows that Route B would also have substantial negative impacts on residential areas, wetlands, and road crossings. Once the Board issued its decision finding that Entergy does have the option to build out to the proposed connection point with the UP, Entergy no longer considered Route B a viable alternative.

ES 3.3 Environmentally Preferable Route

SEA preliminarily concludes that Entergy's proposed route for providing alternate rail access to the White Bluff plant is the most environmentally preferable route. This route is clearly preferable to Routes A, A1, and B for a number of reasons: it has the least mileage of new construction in new ROW, there are substantially fewer residences within 500 feet of the ROW, the route would affect a much smaller amount of wetlands, and would not increase rail traffic through any public at-grade road crossings.

ES.3.4 No-Build Alternative

If the proposed rail line is not built, environmental impacts associated with that rail construction and operation would not occur, including acquisition of land for ROW, limited wetland effects, and limited operational air, noise, and transportation impacts.

ES.4 SUMMARY OF ENVIRONMENTAL IMPACTS OF THE PROPOSED RAIL LINE CONSTRUCTION AND OPERATION (see Chapter 4 for details)

ES.4.1 Land Use

The proposed ROW would require approximately 166 acres of land outside the Arsenal. The line would pass through an area currently being developed as a residential subdivision containing 24 lots but only seven residences at the present time, all of which are manufactured homes. Entergy states that it hopes to acquire all of these lots, including those with residences (three of these are within the proposed ROW and so would be acquired for the ROW). The proposed ROW within the Arsenal would be obtained through an easement.

There are no known hazardous waste sites within the proposed ROW. There are 64 residences or known residential lots within 500 feet of the entire ROW (including the ROW for new rail construction and the ROW for the existing rail line which would be rehabilitated); this number includes the lots in the subdivision noted above.

ES.4.2 Socio-economic

Entergy expects an average of 25 to 30 people to be employed during construction of the proposed rail line. To the extent that these people spend their wages locally, there would be a limited, short-term positive impact on the local economy.

The proposed rail line would pass through the edge of a planned technology park, a "Bioplex". Entergy would coordinate the line's design with the site's developer, who wishes to obtain direct rail access; this could enhance the development potential of the project.

The U.S. Environmental Protection Agency (EPA) requested that the Board consider Environmental Justice impacts in its environmental review. SEA conducted an environmental justice analysis (see Appendix D) which concluded that the project area does not meet what EPA terms "Environmental Justice Communities of Concern" (EJCOC) criteria. Therefore, no disproportionately high or adverse human health or environmental effects can result from the proposed project.

ES.4.3 Water Resources

The proposed rail line construction and operation would not affect groundwater quantity or quality.

The proposed new rail construction, including the crossover, would cross eight intermittent drainageways. The proposed construction would adversely affect less than one-quarter acre of wetlands; in addition, new rail line construction would affect 1,550 linear feet of "other waters of the U.S." The U.S. Army Corps of Engineers (Corps) has authorized this proposed activity under Department of the Army General Permit GB.

Entergy has received its Section 401 water quality certification for the project. Entergy would have to obtain a construction permit from the Arkansas Department of Environmental Quality (ADEQ), which would incorporate a Stormwater Pollution Prevention Plan. Implementation of this plan and adherence to the provisions of the Corps permit should minimize surface water resource impacts.

ES.4.4 Biological Resources

Implementation of measures noted in the preceding section which Entergy would take to minimize erosion of soil into drainageways should minimize soil erosion impacts on aquatic wildlife.

The proposed rail ROW outside the Arsenal would require around 166 acres of land, most of which is currently commercial pine forestland. Rail construction and operation would have minor adverse wildlife impacts. No federal or state-listed endangered

or threatened or otherwise protected species would be affected by the proposed action.

ES.4.5 Transportation/Safety

The rail line would cross Kearney Road, Jefferson River Road, and two access roads into the Arsenal (at the Stark Gate and the Dexter Gate); all of these crossings would be grade-separated. In addition, Entergy has proposed to eliminate the existing at-grade crossing where the UP line crosses the Dexter Gate access road by raising the access road over both the UP and proposed rail lines. If the Arsenal accepts this proposal, there could be a reduction in the potential for at-grade crossing accidents and delay.

At present no at-grade crossings of private roads are expected; however, should they become necessary they would be plank crossings (the crossing surface where the rail and road intersect would be wooden planks) with informational signs and would meet federal, state, and local requirements.

A munitions incineration facility is currently under construction at the Arsenal (see Figure A-22). The Jefferson County Office of Emergency Services (OES) hopes to build an evacuation road to run east-west from the vicinity of the incineration facility to Highway 365; this road, if it is built, would intersect the proposed rail line. There is some concern that the presence of the proposed rail line could affect the cost of constructing the evacuation road, if and when it is built. Also shown in Figure A-22 is the location of the planned Bioplex technology park. The Economic Development Alliance of Jefferson County (The Alliance) believes that the emergency access road described above could also provide access to the Bioplex site. There is concern that, if the proposed rail line crosses the proposed emergency access road at-grade, this could negatively affect potential development of the Bioplex.

The proposed rail line would not block any existing public roads or Arsenal access roads, as all these road crossings would be grade-separated. Entergy states that it would cooperate with the appropriate organizations to try to prevent or minimize potential conflict with the proposed emergency access road and to try to ensure that the proposed rail construction would not adversely affect road access into the Bioplex site.

ES.4.6 Air Quality

Rail line construction would not significantly affect local air quality, nor would proposed rail operations, due to the projected low level of traffic over the proposed line.

ES.4.7 Noise, Cultural Resources, and Recreation

Construction and operation of the proposed route would not have significant noise impacts. It would not affect any properties listed on or eligible for inclusion in the NRHP. The proposed construction would not adversely affect any public recreation sites.

ES.4.8 Conclusion and Recommendation

Based on the information provided from all sources to date and its independent analysis, SEA preliminarily concludes in this Draft EA that construction and operation of Entergy's proposed rail line would have no significant environmental impacts if the Board imposes and Entergy implements the mitigation recommended in Section ES.5. Accordingly, preparation of an Environmental Impact Statement (EIS) is unnecessary.

ES.5 SECTION OF ENVIRONMENTAL ANALYSIS' RECOMMENDATIONS FOR MITIGATION

Recommended Mitigation

Based on the Section of Environmental Analysis' review of all information available to date, and its independent analysis of the proposed rail line construction and operation, all the comments and mitigation requested by various federal, state, and local agencies, as well as other concerned parties, and the mitigation offered by Entergy, the Section of Environmental Analysis preliminarily recommends that, if the Surface Transportation Board approves the proposed construction and operation, such approval be subject to the following mitigation measures:

Land Use

1. As agreed to by Entergy, where property severance is unavoidable, Entergy shall negotiate with the landowner and either purchase the severed property or provide access to the property.
2. As agreed to by Entergy, along the proposed line within the Pine Bluff Arsenal, Entergy shall replace fencing at locations directed by the Arsenal.
3. As agreed to by Entergy, outside the Pine Bluff Arsenal Entergy shall provide fencing where required by adjacent landowners.
4. As agreed to by Entergy, in the subdivision which the proposed rail line would pass through in the Jefferson River Road area, if Entergy is not able to acquire those residences outside the proposed right-of-way, Entergy shall install fencing between the properties and the proposed ROW.

5. Entergy shall develop any other sites related to the proposed rail construction, such as staging areas, borrow/spoil sites, and haul roads, in accordance with all applicable environmental regulations.
6. Entergy shall require its construction contractor to dispose of all waste material generated during construction in accordance with applicable federal, state, and local regulations.
7. Should hazardous wastes be encountered in the project area during the proposed construction, Entergy shall handle and dispose of such wastes in accordance with applicable federal, state, and local regulations.

Water Resources

8. As agreed to by Entergy, it shall prepare an Erosion and Sedimentation Control Plan and require that its construction contractor implement the provisions of the plan.
9. As agreed to by Entergy, all bridges shall be designed to pass the 100-year storm, and all culverts shall be designed to pass the 25-year, 24-hour storm, and not to flood the track during a 100-year storm.
10. As agreed to by Entergy, it shall coordinate the proposed construction, regarding 100-year floodplain and floodway issues, with the local Federal Emergency Management Agency administrator for Jefferson County.
11. Entergy shall comply with any conditions attached to the U.S. Army Corps of Engineers permit issued in conjunction with the proposed rail line construction.
12. Entergy shall prepare a Storm Water Pollution Prevention Plan and shall require its construction contractor to abide by its provisions.
13. For ROW maintenance, Entergy shall use only contractors trained in herbicide application and shall require those contractors to follow label directions in applying herbicides. Entergy shall also require those contractors to use only herbicides registered for such use with the U.S. Environmental Protection Agency and to follow all applicable state regulations regarding use of those herbicides.

Transportation

14. As agreed to by Entergy, it shall construct the crossings of Kearney Road, Jefferson River Road, and the Stark Gate and Dexter Gate access roads on grade separations.
15. As agreed to by Entergy, if property severance is unavoidable and the severed landowner needs a private grade crossing, Entergy shall install a plank crossing (the crossing surface where the rail line and road intersect would be wooden planks) with informational signs and the crossing shall meet applicable federal, state, and local requirements.
16. Entergy shall cooperate with the appropriate organizations, including The Economic Development Alliance of Jefferson County, the State of Arkansas, and Jefferson County, to try to prevent or minimize potential conflict with the planned emergency access road and to try to ensure that the proposed rail construction would not adversely affect road access into the Bioplex site. Entergy shall keep those groups advised of its plans with respect to all access road issues.

Air Quality

17. As agreed to by Entergy, it shall require its construction contractor(s) to use water trucks and other appropriate dust control measures.

Conclusion and Request for Comments

Based on the information provided from all sources to date and its independent analysis, the Section of Environmental Analysis preliminarily concludes that construction and operation of the proposed rail line would have no significant environmental impacts if the Surface Transportation Board imposes and Entergy implements the mitigation recommended above. Therefore, the environmental impact statement process is unnecessary in this proceeding.

The Section of Environmental Analysis specifically invites comments on all aspects of this Draft EA, including suggestions for additional mitigation measures. We will consider all comments received in making our final recommendations to the Surface Transportation Board. The Surface Transportation Board will consider the entire environmental record, our final recommendations, including final recommended mitigation measures, and the environmental comments in making its final decision in this proceeding.

If you wish to file comments and any questions regarding this Draft EA, send an original and 10 copies to the Office of the Secretary, Attn: Phillis Johnson-Ball, Environmental Review (FD

33782), Surface Transportation Board, 1925 K St. NW, Washington, D.C. 20423. Comments should refer to the docket number of this proceeding: Finance Docket No. 33782.

Date made available to the public: November 2, 2000

Comment due date: December 4, 2000

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CHAPTER 1.0

1.1 PURPOSE AND NEED FOR AGENCY ACTION

SEA has prepared this Draft EA in response to a petition filed by EAI and Entergy Rail with the Board for an exemption under 49 U.S.C. 10502 from the prior approval requirements of 49 U.S.C. 10901 to permit Entergy Rail to construct and operate an approximately 8.6-mile long rail line near Pine Bluff, in Jefferson County, Arkansas. The petition was filed on July 30, 1999, and designated as Finance Docket No. 33782.

EAI states that it intends to form a railroad to be known as Entergy Rail and proposes, by means of new rail construction and rehabilitation of existing rail trackage, to connect its White Bluff electric generating plant with a nearby former SP rail line now owned by UP. Entergy Rail would build an 8.6-mile long new rail line to connect the White Bluff plant with 4.0 miles of existing line within the Arsenal and 0.2 miles of existing trackage just outside the Arsenal. Entergy Rail would rehabilitate the existing trackage. Entergy Rail also proposes to build a crossover track to connect the rehabilitated trackage to the UP rail line.

Construction and operation of the proposed new rail line, including the crossover, are the actions subject to Board approval under the subject petition. The White Bluff plant currently has direct rail access by the UP; the proposed rail line would enable BNSF to provide alternative direct rail access to the plant.⁵ Figure A-1 in Appendix A shows the project area location within

⁵ Entergy Rail had contended that a decision of the Board in Finance Docket 32760 (the UP-SP merger proceeding) allowed it to "build out" from the White Bluff plant to a line of the former SP in order to provide alternative rail access by BNSF. UP, SP's successor, disputed, among other things, the location to which Entergy proposed to build out.

In a decision served on March 21, 2000, in Finance Docket 32760 (Decision No. 88), the Board interpreted conditions that it had imposed in granting merger authority that relate to the preservation of pre-merger build-in, build-out options for all shippers. In that decision, the Board found that Entergy Rail had a pre-merger option to build-out from the White Bluff plant to the connection point proposed in this proceeding and the Board preserved that option, with trackage rights giving BNSF access to the build-out connection point. The Board also directed UP and BNSF to submit to arbitration any unresolved dispute respecting construction of the proposed new crossover.

the State of Arkansas and also within Jefferson County. Figure A-2 shows a more detailed view of the proposed rail construction route, while Figures A-3 through A-5 show aerial photos of the project area, and Figures A-6 through A-8 show a topographic view of the area.

Entergy Rail expects the proposed line to carry primarily coal shipments to the generating plant. The line would be located near an area being considered for industrial development. Should this development come about, future rail shipments over the proposed line might include raw materials and finished goods associated with that project.

On April 25, 2000, the Board conditionally granted Entergy's exemption petition, subject to the Board's further consideration of the anticipated environmental impacts of the proposal. Upon completion of the Board's environmental review, it will issue a further decision addressing those matters and making the exemption effective at that time, if appropriate, thereby allowing construction to begin.⁶

On April 19, 2000, Entergy Rail submitted a request to SEA for a waiver of the requirement that SEA prepare an Environmental Impact Statement (EIS) on the proposed rail line construction (Appendix B, Attachment 1). In its response of June 30, 2000, SEA granted the waiver (Appendix B, Attachment 2). In its letter, SEA found that the proposed construction and operation is unlikely to involve significant environmental impacts and that an EA, rather than an EIS, is appropriate in this proceeding. SEA based its conclusion on a number of factors, including: (1) consultations with Entergy and SEA's third-party consultant in this proceeding; (2) site inspections of the project area conducted by SEA's third-party consultant and representatives of Federal, State, and local agencies; and (3) the proposed line's expected minimal environmental impacts, including minimal impacts on wetlands, threatened or endangered species, and residential areas.

SEA prepared this Draft EA in accordance with the National Environmental Policy Act (NEPA) and with the Board's regulations implementing NEPA and other environmental laws at 49 CFR 1105. This Draft EA assesses the environmental effects of the proposed action and alternatives. Chapter 2 describes the affected environment in the project area, Chapter 3 describes the proposed action and alternatives, Chapter 4 identifies the potential

⁶ As noted earlier, this Draft EA considers the environmental impacts of constructing and operating the proposed new rail line, and also of rail operations over the line planned for rehabilitation; it does not consider the environmental impacts of the rehabilitation process itself.

environmental impacts of the proposed action, Chapter 5 summarizes unavoidable, adverse impacts of the proposed action, Chapter 6 addresses the proposed project's cumulative impacts, and Chapter 7 identifies SEA's preliminary recommendations for mitigation. The Board has served the Draft EA on the public, which has been invited to submit comments on the document.

1.2 FRAMEWORK FOR THE DRAFT EA PREPARATION

In the process of preparing this Draft EA, SEA consulted with a number of governmental organizations to solicit their comments on the proposed project and environmental issues which should be addressed in this document. Appendix C contains the responses to this consultation process. This Draft EA addresses the issues raised by the respondents, as well as requested mitigation.

A "third-party" contractor prepared this document. Third-party contractors work on behalf of the Board, working under SEA's direction to collect the needed environmental information and compile it into a Draft EA or EIS, which is then submitted to SEA for its review, verification, and approval. Petitioner retains these contractors subject to SEA approval. SEA approved the third-party contractor in this proceeding on July 26, 1999.

CHAPTER 2.0 DESCRIPTION OF THE AFFECTED ENVIRONMENT

The purpose of this chapter is to give a brief overview of the affected environment in the project vicinity. Environmental impacts of the proposed action as well as permitting requirements are discussed in Chapter 4.

2.1 LAND USE

As shown in Figure A-1, the proposed rail line would be located in southeastern Arkansas, in the northwestern quadrant of Jefferson County. Jefferson County is located just south of Pulaski County and the state capital of Little Rock. Jefferson County is a farming and manufacturing/commercial center. Pine Bluff is the county seat and main trading center.

The project area begins at the existing rail spur into the White Bluff power plant and extends to a point approximately one mile northwest of the City of Pine Bluff (see Figure A-2).⁷ The proposed 8.6 miles of new rail construction would be located entirely within the unincorporated area of Jefferson County. Approximately 4.2 miles of this would be located on Arsenal property.⁸ The proposed new construction would enter and then exit the northwest corner of the Arsenal, would then follow a path parallel to but outside the west boundary of the Arsenal until reaching a point just north of Stark Gate, where the proposed line would reenter the Arsenal. The proposed new rail construction

⁷ The project area as described here includes both the area of new rail construction and the area of rail operations over the line planned for rehabilitation.

⁸ The Pine Bluff Arsenal is owned by the U.S. Government. The Arsenal produces, stores and demilitarizes conventional ammunition; serves as the Group Technology center for illumination and infrared munitions; serves as the Specified Mission facility for smoke munitions; and maintains the sole U.S. capability for white phosphorus fill. The installation supports the storage and destruction of the second largest statewide chemical weapons stockpile; preservation of the only permitted site east of the Rockies for acceptance of non-stockpile chemical munitions; and enforcement of international treaty efforts through compliance and education of world-wide inspectors. The Arsenal is the Joint Services' Center of Expertise for Chemical/Biological Defensive Equipment production, maintenance, testing, certification and training. It supports design agencies with development and engineering, prototype production, testing and demonstration. The Arsenal is the only active Army installation in the state.

within the Arsenal would end at a point south of Dexter Gate. The remaining area of new rail construction would be the proposed crossover to the UP just south of the Arsenal.

The southern portion of the project area is generally flat, but to the north the proposed rail corridor passes through a more rolling topography. Much of the land between the White Bluff station and the northwest corner of the Arsenal is in large timber tracts which largely retain a forest cover, although there are many small acreages interspersed in these tracts from which the forest cover has been removed (see Figures A-3 and A-6). Figure A-6 shows the approximate location of a residential subdivision of manufactured homes which is under development near the proposed rail line in the Jefferson River Road area.

The Arsenal is essentially an industrial property and land use in that part of the project area within the Arsenal is typical of such property. The proposed new rail construction within the Arsenal would be located within a largely cleared area immediately adjacent to the existing UP rail transportation corridor.

The Arsenal has been authorized to transfer to The Alliance a 1500-acre section of land extending east from its northwestern corner. The Alliance plans to develop a Bioplex technology center which it is hoped would attract research facilities and industry. The Alliance expects the transfer of title to the property to occur in September or October 2000. The next step in developing the site would be provision of an access road to the site. The Jefferson County OES has applied for funding to construct an emergency evacuation road to connect Highway 365 with the environs of the munitions incineration facility currently under construction in the northeastern part of the Arsenal. If such a road is constructed, The Alliance believes that it could also provide road access to the proposed Bioplex site.

2.2 SOCIO-ECONOMIC SETTING

The project area is located approximately 30 miles southeast of Little Rock. With a 1990 population of 57,140, Pine Bluff is Arkansas' fourth largest city. The City states that it is the trade, entertainment, recreational, and health services center of Southeast Arkansas, with an area population of more than 250,000.

Jefferson County's 1990 population was 85,487, 48.1 percent of which was male, and 51.9 percent female. The county's estimated July 1, 1998, population was 81,556, a decline of 4.6 percent since 1990, although the state's population is estimated to have increased by eight percent between 1990 and 1998. The county's 1990 population was 56.0 percent white, 43.1 percent black, and 0.9 percent "other race". In 1990, 65.9 percent of

county residents 25 years of age and older had completed high school or higher. The U.S. Census Bureau estimates that in 1995 26.5 percent of the Jefferson County population lived below the poverty level, compared with 18.2 percent for the State of Arkansas population and 13.8 percent for the U.S. population. Estimated 1995 median household income was \$25,273 for the county, compared to \$26,515 for Arkansas and \$34,076 for the US. Jefferson County is part of the eleven-county Southeast Economic Development District.

Farming is important in the eastern part of Jefferson County, in the alluvial soils of the Arkansas River. Forestry (pine) is important in the upland western portion of the county. The regional economy is based on agriculture (including cotton, soybeans, rice, poultry and catfish), timber and forest products, while the Pine Bluff economy is centered in manufacturing, government, and services; the city has a manufacturing base employing approximately 8,000 area residents.

2.3 PHYSIOGRAPHY

Jefferson County is approximately square with a narrow, irregular extension on its east side along the Arkansas River. This river roughly divides the county in half, running from approximately the northwest to the southeast corner. The county is about 43 miles wide and 29 miles long, with a total area of 580,480 acres.

The project area is part of the Gulf Coastal Plain Ecoregion. This ecoregion is characterized by rolling terrain that is broken by stream valleys, which within the project area are of only minor size. Most of the Gulf Coastal Plain Ecoregion is gently to moderately sloping; its surface deposits are of ocean bed origin and date from approximately 135 million to 70 million years in age, i.e., Tertiary and Quaternary.

Drainage in the project area is an easterly direction into the Arkansas River (see Figures A-9 and A-10). Tributary streams to the Arkansas River in the project area include Eastwood Bayou, Tulley Creek, and Caney Bayou. Elevation ranges from about 370 feet above mean sea level near the beginning of the proposed line at the power plant to around 225 feet above sea level at the southern end of the project area near the location of the proposed crossover track.

Because of the moist tropical air from the Gulf of Mexico that persistently covers the area, the project area is characterized by long, hot summers and fairly short, cool winters; with only rare and non-persistent cold waves. Precipitation is usually fairly heavy and well distributed throughout the year,

with the average annual precipitation being approximately 50 inches. Prolonged droughts are relatively rare in the project area, although the summers of 1998 and 1999 were extremely dry. The mean daily maximum temperature is 75 degrees, while the mean daily minimum temperature is 53 degrees.

2.3.1 Soils

In the western part of Jefferson County, where the project area is located, soils formed on uplands in stratified sediment deposited on the bottom of the shallow coastal embayment that covered all of Jefferson County many thousands of years ago, and in recent alluvium washed from this material. These soils are moderately well drained to poorly drained, loamy soils that are used mainly for the production of wood crops.

In the northern part of the project area, the proposed new rail construction would begin in the Sacul-Sawyer-Savannah soil association. This association is comprised of moderately well drained, nearly level to gently sloping, loamy soils on uplands. The association consists of broken ridges and narrow swales. Natural drainageways are slow-flowing, intermittent streams. Sacul soils are moderately well drained and are on ridges and side slopes. Sawyer soils are moderately well drained and are on the lower parts of side slopes. Savannah soils are moderately well drained and are on ridges and side slopes. This association is used mainly as woodland, but some small tracts are used for cultivated crops. Erosion is a moderate to severe hazard on these soils.

The remainder of the project area is located in the Pheba-Savannah-Amy soil association. This association is comprised of poorly drained to moderately well drained, level to gently sloping, loamy soils on uplands and stream terraces. The soils are on broad flats that are broken by ridges. The soils formed in thick beds of loamy sediment. Natural drainageways are mainly slow-flowing, intermittent streams.

2.4 WATER RESOURCES

2.4.1 Groundwater

The Arkansas Geological Commission indicates that the proposed construction would be on sand and gravel of Quaternary age and on clay and silt in the Jackson Group which is Eocene in age. The Geological Commission states that these units are not considered to be major aquifers (See Appendix C, Attachment 9).

2.4.2 Surface Water

The project area is located in the Arkansas River drainage basin, which is part of the Mississippi River basin (see Figures A-9 and A-10). The project area parallels the Arkansas River and traverses several small tributaries that flow into the Arkansas. Most of these tributaries exhibit intermittent channels that drain upland areas to the west and direct the runoff ultimately to the Arkansas River.

The proposed new rail construction would cross the following streams (from north to south): Love Creek North Branch, Love Creek, Carver Mill Creek (north branch), Carver Mill Creek (south branch), Jackson Creek, Eastwood Bayou, Tulley Creek, and Henslee Creek (along the proposed new crossover track).

Water quality in streams of the Gulf Coastal Ecoregion is generally mildly acidic and low in mineral and nutrient quantities. In these streams, intermittent summertime flows result in the absence of dilution and reaeration flows which makes dissolved oxygen the critical limiting water quality factor.

Along the proposed new rail line Carver Mill Creek has been mapped as having FEMA 100-year floodplain and floodway designations, as has Henslee Creek along the proposed crossover track.

Certain sites within the project area are designated as jurisdictional wetlands under Section 404 of the Clean Water Act. A Section 404 wetland is one that meets the U.S. Army Corps of Engineers' (Corps) definition as "an area that is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Wetlands are valuable because they provide habitat for a variety of wildlife species and because they filter overland runoff, serve as stormwater storage basins, and stabilize stream banks.

The above wetland definition requires the presence of positive indicators for each of three basic elements that are used in identification and delineation of wetlands: wetland hydrology, hydrophytic vegetation, and hydric soils. Wetland hydrology is determined by the presence of permanent or periodic inundation, or soil saturation to the surface, during at least a certain portion of the growing season. Hydric soils are those that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic (oxygen-deficient) conditions in the upper part. Hydrophytic vegetation is macrophytic plant life growing in water; soil, or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content. These criteria are

developed in detail in the *1987 Corps of Engineers Wetlands Delineation Manual (1987 Manual)*.

Qualified wetland scientists delineated Section 404 wetlands and other waters of the United States within the proposed rail ROW using procedures required by the *1987 Manual*.

Section 404 jurisdictional wetlands were identified within the floodplains of Love Creek, Carver Mill Creek North, Eastwood Bayou, Caney Bayou, and Henslee Creek. Within the proposed ROW itself total acreage of jurisdictional wetlands is estimated at approximately 1.25 acres at three locations: Love Creek, North Branch of Carver Mill Creek, and Eastwood Bayou. Each of these wetland areas is located on the floodplain of an intermittent stream channel and has developed as a result of a past beaver impoundment, although beaver activity within the wetlands was very limited to nonexistent at the time of the delineation.

Minor amounts of additional wetlands acreage outside the proposed ROW were delineated for the purpose of drawing attention to areas that should be avoided during staging of equipment for the proposed railroad construction.

Because of poor hydrology at the wetland sites, most wetland functions and values were low. Project area wetlands showed no evidence of being significant in the following wetland functions and values: (1) erosion control, (2) flood storage, (3) flood conveyance, (4) sediment control, and (5) water quality improvement. Moreover, the absence of open water in combination with small size of the wetlands appeared to significantly limit the types of wildlife that would frequent these wetlands on a sustained basis.

In addition to the jurisdictional wetlands identified, a total of approximately 1,550 linear feet of channels of intermittent and permanent tributaries within the corridor of the proposed new rail construction has a potential for jurisdiction by the Corps under Section 404 as "other waters of the U.S."

Potential impacts of the proposed rail line on the above waterways and wetlands are discussed in Chapter 4, Section 4.3.

2.5 BIOLOGICAL RESOURCES

There are no officially designated wildlife refuges or protected areas within the proposed project area.

A survey of the entire project area was conducted by qualified wildlife biologists during the period of July 1999 through February 2000. The purposes of this survey were to:

(1) describe plant and animal species expected and/or observed in the study area; (2) evaluate wildlife habitat; and (3) determine if any threatened, endangered (T&E), or sensitive species or their habitat occur within the study area. The initial phase of the survey involved a review of literature, consultation with the U.S. Fish and Wildlife Service (USFWS) and Arkansas Natural Heritage Commission (ANHC), and other potential sources of site-specific data.⁹ This was followed by extensive onsite field investigation, which included the wetland survey discussed in Section 2.4. The survey results are described below.

Conclusions regarding the biological resource impacts of the proposed construction and operation are discussed in Chapter 4, Section 4.4.

2.5.1 Flora

Most of the project area between the White Bluff power plant and the northwest Arsenal boundary represents an upland area that supports a forest vegetation cover. Almost all of that forest vegetation is subject to active management as industrial timberland. This area consists of a mostly mature forest cover represented by two major forest types: (1) Loblolly Pine-Shortleaf Pine-Mixed Hardwood, and (2) Bottomland Hardwood.

The Loblolly Pine-Shortleaf Pine-Mixed Hardwood type represents a mixture of community types, most of which are adapted to dry conditions. Canopy dominants include various mixtures of loblolly pine (*Pinus taeda*), shortleaf pine (*Pinus echinata*), Southern red oak (*Quercus falcata*), post oak (*Quercus stellata*), black hickory (*Carya texana*), and white oak (*Quercus alba*). Dominants of the understory on these dry areas include winged elm (*Ulmus alata*), flowering dogwood (*Cornus florida*), and numerous species of blueberry (*Vaccinium* spp.).

Limited areas of the Bottomland Hardwood type are found on sites in the area of proposed new rail construction that have soils with apparently higher moisture holding capacities, i.e., streamsides and lower slopes. Canopy dominants include water oak (*Quercus nigra*), willow oak (*Quercus phellos*), mockernut hickory (*Carya tomentosa*), blackgum (*Nyssa sylvatica*), red maple (*Acer rubrum*), and loblolly pine. Basswood (*Tilia americana*) is of

⁹ Included in the literature review were numerous studies prepared to develop and maintain a current inventory of natural habitats and their biological components at the Arsenal. Most of these studies have direct relevance to that portion of the project area within the Arsenal. The Final EIS for the Highway 65 bypass, around Pine Bluff was also a useful source of more general information (Federal Highway Administration and Arkansas State Highway and Transportation Department, 1988).

occasional occurrence on higher and better drained sites. Understory dominants include American holly (*Ilex opaca*), ironwood (*Carpinus caroliniana*), red maple (*Acer rubrum*), hazelnut (*Corylus americana*), and cane (*Arundinaria gigantea*).

Sites dominated by hydrophytic vegetation, i.e., adapted to high moisture levels, were extremely localized within the project corridor and for the most part were restricted to relatively narrow floodplains of several small streams. The three major areas supporting hydrophytic vegetation, e.g., Love Creek, Carver Mill Creek North, and Eastwood Bayou, developed in response to past beaver impoundments. Dominant species found in these mostly early successional wet habitats include woolly bulrush (*Scirpus cyperinus*), millet (*Echinochloa crus-galli*), climbing hemp (*Mikania scandens*), false nettle (*Boehmeria cylindrica*), smartweeds (*Polygonum* spp.), beak-sedge (*Rhynchospora glomerata*), a panic-grass (*Panicum scoparium*), bur-reed (*Sparganium americanum*), and miscellaneous other species. Intact floodplains of smaller tributaries, e.g., Carver Mill Creek South, Jackson Creek, etc., typically are dominated by woody species, including willow oak (*Quercus phellos*), sweetgum (*Liquidambar styraciflua*), common alder (*Alnus serrulata*), red maple (*Acer rubrum*), ironwood (*Carpinus caroliniana*), and miscellaneous other species.

That part of the project area located between Stark Gate and Dexter Gate primarily represents a grass-dominated area that is similar in structure and species composition to the railroad grassland described in the next paragraph. Small portions of this area support an upland forest community of the Loblolly Pine-Shortleaf Pine-Mixed Hardwoods type. This area includes a highly disturbed borrow pit area that supports numerous weedy species.

The project area from approximately Dexter Gate south to the southern terminus of the Arsenal includes the existing rail line planned for rehabilitation. This existing ROW is burned annually to reduce cover and prevent invasion by woody species. Vegetation cover there was dominated by herbaceous species and had a prairie-like appearance. This area is here referred to as the railroad grassland. Dominant species in that prairie-like community included three grass species: little bluestem (*Andropogon scoparius*), panic grass (*Panicum anceps*), and velvet panic grass (*Panicum scoparium*). In addition to these grasses, other dominant species included grass-leaved golden aster (*Heterotheca graminifolia*), blazing star (*Liatris pycnostachya*), and hoary pea (*Tephrosia onobrychoides*). The Nature Conservancy (1977) provides a detailed list of species associated with this plant community, i.e., both inside and outside of the proposed project corridor.

The overall project area represents a mosaic of intact forest communities, disturbed forest communities in various stages of

succession, grasslands, various weedy plant communities associated with developed areas, and small amounts of wetlands and open water. This habitat diversity supports a diverse assemblage of wildlife species, as documented in the following section.

2.5.2 Fauna

The literature basis for this section draws heavily on studies prepared for the Arsenal. Because habitat diversity within the project area closely approximates habitat diversity within the Arsenal, the studies should provide a good index of wildlife species having a high probability of occurrence within the project area.

One such study documented the presence of eight species at the Arsenal through onsite trapping activities. These eight species included: cotton mouse (*Peromyscus gossypinus*), hispid cotton rats (*Sigmodon hispidus*), fulvous harvest mouse (*Reithrodontomys fulvescens*), golden mouse (*Ochromotys nuttalli*), deer mouse (*Peromyscus maniculatus*), white-footed mouse (*Peromyscus leucopus*), Southern flying squirrel (*Glaucomys volans*), and Southern short-tailed shrew (*Blarina carolinensis*). In addition to the eight species known from trapping activities, the study identified several additional mammal species at the Arsenal on the basis of tracks, scat, and actual sightings. These species included beaver (*Castor canadensis*), gray and/or fox squirrel (*Sciurus* spp.), eastern mole (*Scalopus aquaticus*), eastern cottontail rabbit (*Sylvilagus floridanus*), river otter (*Lutra canadensis*), striped skunk (*Mephitis mephitis*), coyote (*Canis latrans*), opossum (*Didelphis virginiana*), nine-banded armadillo (*Dasypus novemcinctus*), white-tailed deer (*Odocoileus virginianus*), and black bear (*Ursus americanus*).

Another study evaluated the presence of bat taxa at the Arsenal. Saugey documented the occurrence of five species of bats at the Arsenal, including red bat (*Lasiurus borealis*), hoary bat (*Lasiurus cinereus*), eastern pipistrelle (*Pipistrellus subflavus*), evening bat (*Nycticeius humeralis*), and southeastern myotis (*Myotis austroriparius*). In addition, the study suggested that an additional seven species of bats have a high likelihood for occurrence at the Arsenal on the basis of known Arkansas distributions. These species include silver-haired bat (*Lasionyceteris noctivagans*), Brazilian free-tail bat (*Tadarida brasiliensis cynocephala*), Rafinesque's big-eared bat (*Corynorhinus rafinesquii*), big brown bat (*Eptesicus fuscus*), little brown bat (*Myotis lucifugus*), northern long-eared bat (*Myotis septentrionalis*), and seminole bat (*Lasiurus seminolus*). The study also indicated that the following species that are known elsewhere in Arkansas should not occur at the Arsenal: small-footed myotis (*Myotis leibii*), gray bat (*Myotis grisescens*), Indiana bat (*Myotis sodalis*), and Ozark big-eared bat

(*Corynorhinus townsendii ingens*).

The Nature Conservancy has documented a total of 155 bird species from the Arsenal. Included among this total are 37 neotropical migratory species, over 50% of which nest in forest habitats. The remaining neotropical migrants consist of species that are associated with brushy fields, hedgerows, grass and isolated large trees, and several species, i.e., chimney swift and several swallows, that nest in structures or holes.

A survey for amphibians and reptiles at the Arsenal found that amphibians at the facility included toads, frogs, and salamanders. The survey reported 11 toad and frog species, i.e., dwarf American toad (*Bufo americanus charlesmithi*), Fowler's toad (*Bufo woodhousei fowleri*), Northern cricket frog (*Acris crepitans crepitans*), green treefrog (*Hyla cinerea*), Cope's gray treefrog (*Hyla chrysoscelis*), Northern spring peeper (*Pseudacris crucifer crucifer*), upland chorus frog (*Pseudacris triseriata feriarum*), Eastern narrowmouth toad (*Gastrophryne carolinensis*), bullfrog (*Rana catesbiana*), bronze frog (*Rana clamitans clamitans*), Southern leopard frog (*Rana utricularia*). Salamanders were represented by spotted salamander (*Ambystoma maculatum*), and Western lesser siren (*Siren intermedia nettingi*).

Reptiles at the Arsenal included alligators, lizards, snakes, and turtles. Alligators and lizards included American alligator (*Alligator mississippiensis*), green anole (*Anolis carolinensis carolinensis*), Northern fence lizard (*Sceloporus undulatus hyacinthinus*), five-lined skink (*Eumeces fasciatus*), ground skink (*Scincella lateralis*), and six-lined racerunner (*Cnemidophorus sexlineatus*). Snakes were well represented and included Southern black racer (*Coluber constrictor priapus*), black rat snake (*Elaphe obsoleta obsoleta*), Western mud snake (*Farancia abacura reinwardtii*), Eastern hognose snake (*Heterodon platyrhinos*), speckled kingsnake (*Lampropeltis getulus holbrooki*), yellowbelly water snake (*Nerodia erythrogaster flavigaster*), broad-banded water snake (*Nerodia fasciata*), diamondback water snake (*Nerodia rhombifer rhombifer*), midland water snake (*Nerodia seipeda pleuralis*), rough green snake (*Opheodrys aestivus*), Graham's crayfish snake (*Regina grahamii*), midland brown snake (*Storeria dekayi wrightorum*), western ribbon snake (*Thamnophis proximus proximus*), rough earth snake (*Virginia striatula*), Southern copperhead (*Agkistrodon contortrix contortrix*), and Western cottonmouth (*Agkistrodon piscivorus leucostoma*). The study documented a total of 10 species of turtles, including common snapping turtle (*Chelydra serpentina serpentina*), alligator snapping turtle (*Macrochelys temminckii*), common musk turtle (*Sternotherus odoratus*), Southern painted turtle (*Chrysemys picta dorsalis*), Mississippi map turtle (*Graptemys kohnii*), Ouachita map turtle (*Graptemys pseudogeographica ouachitensis*), red-eared slider (*Trachemys scripta elegans*), three-toed box turtle

(*Terrapene carolinae*), ornate box turtle (*Terrapene ornata ornata*), and Midland smooth softshell (*Apalone mutica mutica*).

Surveys conducted in 1998 and 1999 for insect species at the Arsenal indicated the presence of a rich assemblage of grassland species, many of which have been considered rare, endangered and/or remnant dependent in neighboring states. Three of these species, i.e., rattlesnake master borer moth (*Papaipema eryngii*), Diana fritillary butterfly (*Speyeria diana*), and a leafhopper (*Deltella decisa*) are known to be especially rare throughout their respective ranges. Field studies were conducted over a major portion of the Arsenal's land base, but the so-called "railroad prairie", i.e., grass-dominated ROW adjacent to existing railroad tracks through the Arsenal, represented a location that supported numerous rare species. This ROW is burned on an annual basis, which undoubtedly plays a major role in preventing invasion of woody species into the grass-dominated areas, which would result in loss of suitable habitat for the insect species.

A 1997 inventory of crayfishes of the Arsenal documented the presence of eight species of crayfishes at the facility. Those species included *Cambarus ludovicianus*, *Fallicambarus fodiens*, *Faxonella clypeata*, *Orconectes palmeri longimanus*, *Procambarus acutus*, *Procambarus clarkii*, *Procambarus ouachitae*, and *Procambarus tulaneii*. Some of these species make burrows in terrestrial habitats, while others are more closely associated with aquatic habitats.

2.5.3 Threatened and Endangered Species

Federally Listed Species

No federally listed or proposed threatened or endangered species are currently known within the project area (Appendix C, Attachments 4 & 5). Moreover, no suitable habitat exists within the project area for any species that is protected under the Endangered Species Act. The report on bat species at the Arsenal confirmed that the three federally listed bat species known from Arkansas should not occur at the Arsenal, i.e., gray bat (*Myotis grisescens*), Indiana bat (*Myotis sodalis*), and Ozark big-eared bat (*Corynorhinus townsendii ingens*).

The occurrence has been documented of several rare insect species at the Arsenal, some of which were reported from existing railroad ROW. However, none of these species represents a federally listed or proposed threatened or endangered species.

State Listed Species and Species of State Concern

The ANHC tracks plant and animal occurrence records and assigns rankings to species based on their apparent degree of

rarity. ANHC assigns rankings to tracked species using a dual system of global and state rankings.¹⁰ Species which ANHC designates as state-listed have no real legal status in the State of Arkansas. ANHC has no enforcement authority, and little protection is afforded vascular plant species or habitat by the State of Arkansas except for certain state-owned lands where collection of plants and animals is prohibited without authorization by the appropriate state agency.

ANHC tracks localities for species that are either federally listed or state-listed in addition to those that are considered rare for one reason or another. A search of ANHC records indicates the occurrence of several species of state concern within Jefferson County. These include 16 animal and 22 plant species (listed in Table 2-1 at the end of this chapter). Two of these species, *i.e.*, Florida panther (*Felix concolor coryi*) and bald eagle (*Haliaeetus leucocephalus*), represent federally listed species; however, neither are expected within the proposed rail corridor. Species shown in the table as having no federal status and state status as "inventory" represent sensitive species of state concern which have no protection by either federal or state law.

The Nature Conservancy has documented seven of the vascular plant species shown in Table 2-1 as occurring at the Arsenal: *Carex atlantica* ssp. *capillacea*, *Chamaelirium luteum*, *Eleocharis flavescens*, *Eleocharis microcarpa*, *Eupatorium hyssopifolium* var. *hyssopifolium*, *Lycopodium appressum*, and *Scleria pauciflora*. Each of these represents species that are of widespread occurrence elsewhere but peripheral in Arkansas. The biological resources field survey of the proposed rail corridor observed two of the species, *i.e.*, *Eupatorium hyssopifolium* and *Scleria pauciflora*, near the proposed ROW within the Arsenal at locations which would not be affected by the proposed rail line construction. Both are among those species having no protection by either federal or Arkansas law. None of the other plant or animal species listed in Table 2-1 were observed within or near the proposed rail corridor.

2.6 TRANSPORTATION

Figure A-11 shows major elements of the state and local transportation system. Pine Bluff is located approximately 40 miles southeast of Little Rock at the intersection of U.S. Highways 65 and 79. U.S. Highway 65 is a major north-south route through the state, while U.S. Highway 79 extends east through Memphis into Tennessee and west into Texas. A southern bypass around Pine Bluff is under construction. Upon completion, it will

¹⁰ ANHC last revised its list of state-listed threatened and endangered species in 1986.

be designated I-530 and will allow through traffic on Highways 65 and 79 to loop to the south of downtown Pine Bluff, instead of passing through the downtown area, as it does currently. Pine Bluff also has a fully functional river port situated on the Arkansas River. The project area is situated north of Pine Bluff between U.S. 65 and the Arkansas River. The UP line to which the proposed new rail construction and planned rail line rehabilitation would connect is part of UP's mainline to Little Rock.

Transportation impacts are discussed in Chapter 4, Section 4.5.

2.7 AIR QUALITY

The U.S. Environmental Protection Agency (EPA) has established National Ambient Air Quality Standards (NAAQS) for six principal air pollutants, called "criteria" pollutants: ozone, lead, carbon monoxide, sulfur dioxide, nitrogen dioxide, and respirable particulate matter. The standards were established to protect the public from exposure to harmful amounts of pollutants. When the pollutant levels in an area have caused a violation of a particular standard, the area is classified as "nonattainment" for that pollutant. Likewise if emissions do not exceed the maximum allowed levels, the region is an "attainment area" for the specific pollutant. The designations are pollutant-specific, which means that an area may fall into both categories for different pollutants. Jefferson County is in attainment of the NAAQS for all six criteria air pollutants.

EPA maintains an inventory by geographic area of the number of sources emitting criteria air pollutants as well as total air pollutant emissions from those sources. EPA data indicate that in Jefferson County in 1996 there were seven stationary sources of criteria air pollutants; these include Entergy's White Bluff power plant at Redfield and six industrial facilities located in Pine Bluff. The White Bluff plant ranked second among those seven in terms of emissions.

The nearest Class I area is the Caney Creek Wilderness Area located approximately 125 miles to the west in the Ouachita National Forest.¹¹

¹¹ Amendments to the Clean Air Act had the intention of protecting air quality by setting aside "Class I" areas for pristine air quality. Class I air quality areas are generally locations such as national parks and wilderness areas.

2.8 NOISE

The proposed new rail ROW would begin at the White Bluff plant and pass through what is primarily commercial timberland until entering the Arsenal near the Stark Gate. Noise levels along this northern portion of the proposed ROW would be expected to be relatively low, ranging between 40 and 45 dB. However, ambient noise levels could be expected to be higher in the vicinity of the power plant due to the activities involved in operation of the plant, including existing rail and vehicular traffic there. Inside the Arsenal boundaries, ambient noise levels are expected to be higher, due to vehicular traffic on local roads within the Arsenal and on nearby Highway 365, and due to rail traffic on the existing UP rail line located immediately adjacent to the proposed rail ROW.

2.9 CULTURAL RESOURCES

Researchers believe that Native American settlement of the project vicinity prior to the 19th Century matches the general Paleo-Indian, Archaic, Woodland, and Mississippian periods documented elsewhere in the central and lower Mississippi River Valley. However, as there have been relatively few intensive archeological investigations in the area and the results of those have been sparse, at the present time there is insufficient data to confirm theories on Native American settlement of the area. The data which does exist consists of scattered bits of lithic debris from stone tool manufacture and use along with occasional ceramic fragments; this shows evidence for a clustering of materials along or adjacent to the small drainages which are tributary to the Arkansas River, such as Eastwood Bayou.

The archeological record created by the successive groups of European and American explorers and occupants of the region is also very poorly documented; however, the documentary record indicates that although DeSoto and his band may have entered the area by as early as 1541, the actual occupation of the area by Europeans began in 1686 when explorers, hunters, trappers, and traders began coming up the Arkansas River into the interior portions of Arkansas. By the end of the 18th century the area was home to at least a few farmers. The 19th century saw the emergence of cotton farming, followed later by harvesting of timber, with much of the land in the area eventually being managed as industrial timberland.

An intensive cultural resources survey was conducted in the area of the proposed new rail construction. This included a records search and a field survey.

A search of records at the Arkansas Archeological Survey indicated the presence of two sites located within or near the project area. One of these was located approximately 200 meters east of the proposed ROW; it consisted of chert and novaculite chips, one pot sherd, one chert point, and several broken novaculite points. This site appears to have been destroyed by construction of a road. The second site is a previously reported archeological site adjacent to the existing rail line within the Arsenal. This site consisted of a scatter of trash judged to be from the early to mid-20th Century. This trash is not associated with any known structure other than the existing rail line and is not considered eligible for nomination to the National Register of Historic Places (NRHP).

Trained archaeologists conducted a field survey of that part of the ROW proposed for new rail construction outside the Arsenal boundaries; this includes the proposed ROW from the White Bluff plant to the Arsenal and also the location of the proposed crossover track south of the Arsenal.¹² The survey in the area north of the Arsenal included walking single line transects and digging shovel tests at 25 meter intervals along these transects. The survey of the proposed crossover location included a pedestrian transect of the area. The field survey found no cultural materials.

The cultural resource survey found no previously unrecorded archeological sites within the proposed project area. The previously recorded 20th Century site north of the Dexter Gate has been disturbed and was previously judged not to be eligible for the NRHP. The survey recommended no further archeological investigations for the project area. The cultural resource survey results have been forwarded to the Arkansas Historic Preservation Program, which is currently reviewing its findings.

2.10 RECREATION

There are no officially designated wildlife refuges or protected areas within the proposed project area. The Arsenal Golf Course is located approximately 1,000 feet east of the proposed rail ROW near the Dexter Gate (see Figure A-7). There are no other public recreational facilities in the immediate project area.

¹² The field survey did not include the proposed rail ROW within the Arsenal because that is in an area previously examined by an intensive cultural resource survey of the Arsenal in 1993.

TABLE 2-1

LIST OF SPECIES TRACKED BY ARKANSAS NATURAL HERITAGE COMMISSION
FOR WHICH JEFFERSON COUNTY RECORDS ARE KNOWN

COMMON NAME	SCIENTIFIC NAME	FEDERAL STATUS	STATE STATUS
Vertebrate Animals			
Bachman's sparrow	<i>Aimophila aestivalis</i>	None	Inventory
Goldstripe darter	<i>Etheostoma parvipinne</i>	None	Inventory
Florida panther	<i>Felis concolor coryi</i>	Listed endangered	Inventory
Common moorhen	<i>Gallinula chloropus</i>	None	Inventory
Bald eagle	<i>Haliaeetus leucocephalus</i>	Listed Threatened	Inventory
Least bittern	<i>Ixobrychus exilis</i>	None	Inventory
Swainson's warbler	<i>Limnothlypis swainsonii</i>	None	Inventory
Shorthead redhorse	<i>Moxostoma macrolepidotum</i>	None	Inventory
Southeastern myotis	<i>Myotis austroriparius</i>	None	Inventory
Green water snake	<i>Nerodia cyclopion</i>	None	Inventory
Bluehead shiner	<i>Notropis hubbsi</i>	None	Inventory
Taillight shiner	<i>Notropis maculatus</i>	None	Inventory
Graham's crayfish snake	<i>Regina grahami</i>	None	Inventory
Gulf crayfish snake	<i>Regina rigida sinicola</i>	None	Inventory
Tree swallow	<i>Tachycineta bicolor</i>	None	Inventory
Barn owl	<i>Tyto alba</i>	None	Inventory

Vascular plants			
San Antonio false-foxglove	<i>Agalinis homalantha</i>	None	Inventory
Tuberous grass-pink	<i>Calopogon tuberosus</i>	None	Inventory
A sedge	<i>Carex atlantica</i> ssp. <i>capillacea</i>	None	Inventory
Devil's-bit	<i>Chamelirium luteum</i>	None	Inventory
Scratch-daisy	<i>Croptilon hookerianum</i> var. <i>validum</i>	None	Inventory
Southern lady's-slipper	<i>Cypripedium kentuckiense</i>	None	Inventory
Pale spike-rush	<i>Eleocharis flavescens</i>	None	Inventory
Small-fruited spike-rush	<i>Eleocharis microcarpa</i>	None	Inventory
Hyssopleaf thoroughwort	<i>Eupatorium hyssopifolium</i>	None	Inventory
Showy prairie-gentian	<i>Eustoma russellianum</i>	None	Inventory
Umbrella grass	<i>Fuirena bushii</i>	None	Inventory
Soapwort gentian	<i>Gentiana saponaria</i>	None	Inventory
A haplopappus	<i>Haplopappus validus</i>	None	Inventory
A heliotrope	<i>Heliotropium convolvulaceum</i>	None	Inventory
Corkwood	<i>Leitneria floridana</i>	None	Inventory

Southern bog clubmoss	<i>Lycopodiella appressa</i>	None	Inventory
Celestial lily	<i>Nemastylis geminiflora</i>	None	Inventory
Yellow-crested orchid	<i>Platanthera cristata</i>	None	Inventory
Rose pogonia	<i>Pogonia ophioglossoides</i>	None	State Listed Threatened
Barbed rattlesnake root	<i>Prenanthes barbata</i>	None	Inventory
Fewflower nutrush	<i>Scleria pauciflora</i>	None	Inventory
A websteria	<i>Websteria confervoides</i>	None	Inventory

3.1 ENTERGY'S PROPOSED ROUTE

3.1.1 Construction

Entergy proposes to connect its White Bluff electric generating plant with a former SP rail line now owned by the UP. To do this, Entergy proposes to build an approximately 8.6 mile long new rail line to connect the White Bluff plant with approximately 4.2 miles of existing trackage which it plans to rehabilitate (see Figures A-2 through A-8). It would also construct a crossover track to connect the rehabilitated trackage with the UP line. As already noted, this Draft EA considers the environmental impacts of rail operations over the line planned for rehabilitation but not impacts of actually rehabilitating the line.

The proposed new rail line would begin at the existing spur line into the White Bluff plant and would proceed in a southeasterly direction to cross Kearney Road and Jefferson River Road. The line would then proceed south to enter the Arsenal at its northwest corner. After a short distance the proposed rail line would exit the Arsenal and continue due south just outside the western Arsenal boundary before re-entering Arsenal property just north of the Stark Gate. The proposed line would then cross the Stark Gate access road (Roemer Road). A short distance after crossing Roemer Road the proposed new rail line would turn in a southeasterly direction and would continue just inside the Arsenal boundary for the remainder of its distance, crossing the Dexter Gate access road and then connecting with the existing main switching lead of the U.S. Government Railroad a little southeast of the Dexter Gate.¹³

From its beginning at the White Bluff plant to its connection with the Arsenal trackage, the proposed rail line would be in new rail ROW. The proposed crossings of Kearney Road and Jefferson River Road would be grade-separated. The proposed crossings of the Stark Gate and Dexter Gate access roads would also be grade-separated. As shown in Figure A-7, from just south of the Stark Gate the proposed rail line would closely parallel the existing UP line, which lies just outside the Arsenal boundary.

Entergy plans to rehabilitate the section of Arsenal trackage shown in Figure A-8; that trackage connects to an approximately 0.2 mile length of track formerly owned by the St. Louis

¹³ The new rail ROW would be located next to the existing Arsenal fence. A new fence would be established just to the east of the proposed new rail line, and a patrol road reestablished within the new fence. The proposed crossing of the Dexter Gate access road would require relocating the Dexter Gate.

Southwestern Railway Company (SSW, also known as the Cotton Belt).¹⁴ Entergy would also rehabilitate that short section of track. The final piece of new rail construction would be the proposed crossover track which would connect the rehabilitated existing line with the UP mainline. The approximate location of the crossover is shown in Figures A-2 and A-8. The proposed crossover would connect to the UP at approximately UP Milepost 383.6.¹⁵

The line would have an approximate total of 45,400 feet of new main line track. Basic steps in the construction process would be as follows:

- Clear the ROW for construction. Marketable trees would be harvested where practical. All other trees and brush would be piled and burned and the ashes buried on the ROW.
- Following clearing operations, excavation, hauling, and embankment construction for the roadbed would begin. Culvert pipes would be installed during embankment construction.
- Once the roadbeds are constructed to grade at bridge locations, pile driving for bridge abutments, trestle bents, and bridge piers would begin.
- After installation of piling, bridge pier construction and trestle bent cap installation would begin.
- Once bridge piers, trestle and bridge abutments, and trestle bent caps are in place at each bridge, bridge and trestle spans would be erected.
- Following completion of fine grading of the embankments and cuts, seeding and erosion protection may be placed at any time.
- After bringing the top of the subgrade to correct grade and alignment, subballast would be placed on top of the subgrade to provide a surface for track construction.
- When sufficient subballast and bridge construction has been completed to allow efficient track construction to proceed, track construction would begin.
- Once tracklaying is completed, the rail would be thermally adjusted and tested for defects.

¹⁴ This area is known as the Arsenal Lead/Gaylord Spur area.

¹⁵ The proposed crossover switch to the UP main line off the former Cotton Belt Arsenal Spur would be at approximately Milepost 272.8 on the former Cotton Belt Arsenal Spur. The exact location of the crossover, its design, and construction would be determined by an agreement between BNSF (the operating carrier over the proposed rail line) and UP. The Board has directed UP and BNSF to submit to arbitration any unresolved dispute respecting construction of the crossover.

Entergy expects that UP would construct the turnout and any signaling required for the proposed crossover. Entergy's construction contractor would build the remainder of track and bridges. Other than trestles and bridges, there are no planned rail-related structures such as enginehouses, storehouses, or other railroad-type buildings or structures. Entergy indicates that it has no information at this time concerning staging areas, haul roads, borrow, or waste areas.

Figure A-12 shows the condensed track profile of the proposed rail line, while Figure A-13 shows the typical railroad cross-section.

The typical ROW width is governed by the many cuts and fills on the proposed route. The minimum ROW purchased would be 150 feet, while the typical ROW purchased would be approximately 200 feet. The maximum ROW required would be approximately 475 feet; however, wider widths may be negotiated with individual land owners to avoid property severance. All ROW on the Arsenal would be under an easement.

The proposed rail line construction is expected to require approximately eighteen months, and is weather-dependent. Clearing and grubbing would require approximately three months; earthwork would overlap clearing and grubbing, and would require approximately eleven months. Bridge construction would require approximately nine months, plus another three months of fabrication time for both steel and precast girders. Track laying (including track rehabilitation) would require about four months to complete. Relocation of the Dexter Gate and subsequent construction of the overpass of the Dexter Gate access road would require twelve to eighteen months, and would be done concurrently with other activities.

3.1.2 Operation and Maintenance

Operations

The proposed rail line would serve Entergy's White Bluff coal-fired power plant. This facility currently receives via the UP daily shipments of coal mined in the Powder River Basin of Wyoming. Entergy states that the plant has experienced repeated shortages of coal supply during the past several years. Construction and operation of the proposed rail line would enable BNSF to compete with UP for shipment of coal to the White Bluff plant. Actual shipments over the line would depend on the outcome of competitive bidding between the two carriers. Shipments won by BNSF under the competitive bidding would move over the proposed rail line. The maximum coal deliveries over the line would be approximately 6.5 million tons per year.

Coal to the White Bluff plant currently moves in Entergy-owned unit trains over the UP from the Powder River Basin through Kansas City, MO, Wagoner OK, Van Buren and North Little Rock, AR,

to the plant. Empties move via the reverse of the loaded movement.

BNSF coal shipments to the plant would originate from any of several mines in the Powder River Basin. BNSF would move the loaded trains through Kansas City, MO, to Jonesboro, AR. From Jonesboro BNSF would move the trains via trackage rights over UP's line to Pine Bluff, then over UP's Pine Bluff to Little Rock line as far as the proposed crossover to the trackage planned for rehabilitation and then onto the proposed new rail line to the White Bluff plant. Routing of the empty trains is subject to negotiations between BNSF and UP concerning UP's directional running arrangement. The most efficient routing would be with UP's directional traffic flow, in which case the empty trains would depart the plant using existing Entergy rail connections with the UP mainline, travel through North Little Rock to Hoxie, AR, then via BNSF to the mine.

There are no other potential shippers currently located along the proposed route. The proposed rail line would pass very near the proposed Bioplex site (see approximate location in Figure A-11). If the site develops, it is possible that potential rail shippers might locate there and ship over the line at some point in the future. However, there is no definite indication as to if or when this might occur.

Entergy is not aware of any plans to ship munitions bound for the new munitions incineration facility (see approximate location in Figure A-11) over the proposed rail line. The Arsenal has in the past and plans to continue in the future to ship white phosphorus, a hazardous commodity, by rail approximately once or twice a year. The Arsenal has an Emergency Contingency Plan already in place that has been approved by the State to respond to any material spill.

Entergy Rail would own the proposed rail line. It has not yet determined who would provide operations over the line; however, options for this include BNSF, a third party rail operator, or a combination of both.

Maximum coal deliveries over the line would be approximately 6.5 million tons per year, or approximately 400 to 460 loaded trains per year carrying 14,000 to 16,000 tons each. There would thus be a maximum of 800 to 920 yearly train movements (loaded and empty) over the proposed rail line. Trains over the proposed rail line would operate 365 days a year, which would mean an average of less than three train movements per day.¹⁶

¹⁶ In practice, it is unlikely that there would be three train movements in a day; on some days there might be one round trip (two train movements) and on others, two round trips (four train movements).

A typical train is expected to consist of two to four locomotives and 115 to 135 cars. Normal train length is expected to be approximately 6,300 to 7,500 feet. Train operating speed through the Arsenal is expected to be 25 mph south of the Baldwin Yard area. North of this point train speed would be 35 mph until approaching the White Bluff plant, where train speed would be restricted to 10 mph. Train operations could occur at any time of day, seven days per week, loaded or empty.

Maintenance

Track maintenance would be performed by an established contractor in accordance with Federal Railroad Administration (FRA) requirements provided in CFR 49, Part 213, Track Safety Standards. Maintenance aspects designed to detect and prevent the potential for derailments include periodic inspections for, and correction of, internal rail defects, track geometry, track structure, and switch and other track components.

An established contractor would provide vegetation control in accordance with applicable environmental regulations and accepted practices. These include:

- Within the Arsenal: Vegetation control would be performed in accordance with established practices for existing Arsenal rail trackage. Current practice is by burning in order to preserve the prairie habitat of the area.
- Remaining trackage: Vegetation would be controlled by the use of liquid herbicides applied by licensed applicators using hi-rail units (road vehicles equipped with rail wheels for operating on tracks). Herbicides used would be those approved by EPA for aquatic vegetation management. Application will be once per year, with spot spraying as necessary to control noxious weeds. Size of the area to be sprayed would be 20 feet on each side of the centerline, except at private grade crossings, if any, where spraying would be widened as required to provide adequate visibility (there would be no at-grade crossings of public roads). Blowing of spray would be controlled by use of reduced pressure, drift control, nozzle size, or by not spraying at all when wind is high enough to move spray. Herbicide runoff would be controlled by following label instructions, and handspraying if necessary to avoid runoff.

3.2 INITIALLY CONSIDERED ALTERNATIVES TO THE PROPOSED RAIL CONSTRUCTION

3.2.1 Non-Rail Transport

Rail-barge Movement

In 1994 and 1998 Entergy evaluated rail-barge deliveries of coal and in 1998 implemented a temporary rail-barge delivery to the White Bluff plant to supplement UP deliveries during the UP service crisis. Entergy found this alternative to be infeasible as a long-term solution for the following reasons:

- Rail-barge movement was unable to deliver a sufficient volume to meet the plant's requirements without a major investment in high-capacity barge handling and unloading facilities at the plant. However, it was seen as a useful method to supplement deliveries by other modes of transportation during supply shortages.
- Rail-barge movement was not economically feasible due to circuitous routing, costly rail-to-barge transfer, costly barge-to-plant transfer, and breaking up of barge tows and operation through five locks on the Arkansas River. A sixth lock is presently under construction which would also have to be negotiated during certain times of the year, depending on navigation conditions.

Rail-Truck Movement

Entergy also considered a rail-truck movement via an assumed transload point at Jonesboro, AR, the closest BNSF mainline point to the White Bluff plant. This would require installation and operation at Jonesboro of a high-volume rail-to-truck transload facility capable of handling coal unit trains and over-the-road transportation by truck from Jonesboro to the White Bluff Plant, a one-way distance of approximately 160 miles. Assuming an average load of 28 tons per truck and an average cycle time of 7 hours including loading, unloading and fuel/maintenance stops, this would require approximately 187 trucks operating in continuous service, 24 hours per day, delivering a total of approximately 636 truckloads per day to the plant. This would result in a truckload of coal approximately every 2.25 minutes. Aside from the high cost of the new transload facility and the over-the-road truck movement, the socio-economic impact of the noise, congestion and highway damage associated with such an operation would be unacceptable.

3.2.2 All-Rail Alternatives

Entergy identified alternate rail construction routes to the White Bluff plant using USGS mapping supplanted by aerial and ground reconnaissance. It used the following criteria to evaluate the routes:

- Current use of the land
- Noise and visual impacts
- Estimated number of residences displaced
- Sensitive land areas near the route
- Protected species potential
- Habitat quality
- Wetlands (hydric soils)

Entergy indicates that, in its route selection it attempted to avoid or minimize impacts in the above areas and at the same time, reflect current engineering practice for the design of unit train railroad facilities. It identified and evaluated the following rail construction routes as alternatives to the proposed route (see Figure A-14).

Route A

Route A would begin in new rail construction at the same point on the White Bluff plant spur line as would the proposed route. However, after only a short distance Route A would diverge from the proposed route and proceed due south to the community of Jefferson. At that point Route A would turn and move in a southeasterly direction until entering the Arsenal near the Stark Gate. From that point the new rail construction involved in Route A would again follow the same alignment as the proposed route, ending a short distance southeast of the Dexter Gate. However, Route A would involve substantially longer rehabilitation of existing rail line because it was assumed that the route would not be able to utilize UP's Pine Bluff to Little Rock line to access the existing Arsenal trackage. Instead Route A would follow the alignment of the former Cotton Belt Arsenal spur from the southern Arsenal boundary all the way to the west end of downtown Pine Bluff.

Route A would involve 9.1 miles of rail construction in new ROW; it would also involve 7.6 miles of track reconstructed on existing ROW, much of it in downtown Pine Bluff. Route A was Entergy's original preferred route because the relatively flat terrain along the route of new rail construction made the route desirable from an engineering standpoint. However, reconstruction of and operation over a rail line through urban Pine Bluff would likely cause significant adverse socioeconomic, noise, visual, and transportation impacts on the surrounding community. The route would also have affected residential areas near the Jefferson community. Table 3-2 shows a summary comparison of the proposed and alternate routes. The table shows that there were 190 residences within 500 feet of the entire length of Route A, that the route would affect 14 acres of wetlands, and would involve 10 at-grade public road crossings.

Once the Board issued its decision finding that Entergy does have the option to utilize UP's Pine Bluff to Little Rock line to access existing Arsenal trackage (by building out to the connection point with the UP line proposed in this proceeding),

Entergy no longer considered Route A a viable alternative due in part to its potential negative environmental impacts.

Route A1

Whereas the proposed route and Route A involve routing the rail line through the Arsenal, Route A1 assumes that this option would not be available and that the line would have to be located entirely outside the Arsenal. Route A1 would follow the same alignment as Route A from the White Bluff spur line until just south of Jefferson. At that point Route A1 would diverge from Route A, continuing south to cross the UP and Highway 365 before turning to move in a southeasterly direction. The route would roughly parallel the UP and after approximately five miles would again cross Highway 365. Just south of the southern Arsenal boundary Route A1 would turn in a more easterly direction, again crossing the UP as well as the former Cotton Belt to be in the same alignment as Route B. It would then proceed east and southeast to connect with another former Cotton Belt line in eastern Pine Bluff. Route A1 would avoid downtown Pine Bluff; in that part of the route which it has in common with Route B, Route A1 would be located north and east of Lake Pine Bluff.

The entire length of Route A1, 16.9 miles, would be new construction in new rail ROW. Table 3-2 shows that there were 170 residences within 500 feet of the entire length of the route, that the route would affect 20 acres of wetlands, and would involve 14 at-grade public road crossings.

Once the Arsenal committed to allow Entergy to build a rail line on its property and to allow it to also use existing Arsenal trackage, Entergy no longer considered Route A1 a viable alternative due in part to its potential negative environmental impacts.

Route B

Route B would follow the same alignment as Route A from the White Bluff plant spur line to a point just south of the southern Arsenal boundary. At that point Route B would diverge from the former Cotton Belt Arsenal spur (and Route A) to move in an easterly and southeasterly direction, continuing on to connect with another former Cotton Belt line in eastern Pine Bluff. As noted above, this final segment of Route B between the former Cotton Belt Arsenal spur and the end of the route in east Pine Bluff is also shared with Route A1.

Route B would avoid downtown Pine Bluff; in that part of the route which it has in common with Route A1, Route B would be located north and east of Lake Pine Bluff.

Route B would involve 13 miles of rail construction in new ROW; it would also involve 5.2 miles of rail line rehabilitation in existing ROW. Table 3-2 shows that there were 120 residences

within 500 feet of the entire length of the route, that the route would affect 19 acres of wetlands, and would involve 7 at-grade public road crossings.

Once the Board issued its decision finding that Entergy does have the option to build out to the connection point with the UP line proposed in this proceeding, Entergy no longer considered Route B a viable alternative due in part to its potential negative environmental impacts.

3.3 ENVIRONMENTALLY PREFERABLE ROUTE

SEA preliminarily concludes that Entergy's proposed route for providing alternate rail access to the White Bluff plant is the most environmentally preferable route. This route is clearly preferable to Routes A, A1, and B for a number of reasons: it has the least mileage of new construction in new ROW, there are substantially fewer residences within 500 feet of the ROW, the route would affect a much smaller amount of wetlands, and would not increase rail traffic through any public at-grade road crossings.

In a letter dated April 19, 2000, Entergy requested that SEA include in this EA an in-depth environmental analysis of the proposed route and a less detailed analysis of the alternatives (Appendix B, Attachment 3). In its telephone response of July 17, 2000, SEA indicated that this approach would be appropriate. SEA based its determination on the results of consultations with its third-party consultant and other governmental agencies and on a review of environmental analysis data available up to that time.

3.4 THE NO-BUILD ALTERNATIVE

SEA also considered the "no-build" alternative. If the proposed rail line is not built, environmental impacts associated with that rail construction and operation would not occur. These potential impacts include acquisition of land for ROW, limited wetland effects, and limited operational air, noise, and transportation impacts. However, failure to gain competitive access to more than one rail carrier for transporting coal could affect Entergy's ability to maintain adequate fuel supplies for its White Bluff plant.

TABLE 3-1
Proposed Entergy Rail Line Design Specifications

Maximum curvature	7.0 degrees, 30 minutes
Maximum grade	0.88 percent (1% compensated for curvature)
Minimum weight of rail	AREMA No. 1 Relay 115 lb or greater
Tie length	8 feet 6 inches or 9 feet 0 inches
Grade of ties	AREMA 7" Grade
Number of Ties per Mile	3249
Top ballast depth	12 inches
Subballast depth	10 inches
Subgrade width	26 feet
Minimum depth of drainage ditch	3 feet
Minimum distance to ditch from C_L	22 feet
Cut and fill slopes	3h:1v in general, or flatter if soil conditions dictate
Depth of maximum cut	approximately 30 feet
Height of maximum fill	approximately 35 feet

TABLE 3-2
SUMMARY COMPARISON OF PROPOSED AND ALTERNATE RAIL CONSTRUCTION ROUTES

Evaluation Criteria	Proposed Route	Route A	Route A1	Route B
Length of new construction	8.6 miles	9.1 miles	16.9 miles	13.0 miles
Length of track rehabilitation/reconstruction	4.2 miles	7.6 miles	0	5.2 miles
Residences within 500 feet ^a	64 ^b	190	170	120
# Schools within 1/4 mile	1	2	1	1
# Hospitals within 1/4 mile	0	0	0	0
Total ROW acreage ^c	166 acres	100 acres	278 acres	184 acres
Affected wetlands	1.2 acres ^d	14 acres ^e	20 acres ^e	19 acres ^e
Threatened or endangered species	None ^f	None ^g	None ^g	None ^g
# At-grade public road crossings	0 ^h	10	14	7
# Grade separations	4 ^h	3	6	3

- a Numbers obtained primarily from December 17, 1998, aerial photographs. Includes residences that currently have the UP line between the proposed line and the affected area.
- b Most of these residences have the UP between the proposed line and the residence.
- c Does not include land that would be leased from the Arsenal.
- d Field evaluated for wetlands as defined by the Corps.
- e Evaluated using National Wetland Inventory maps.
- f Based on an actual study and inspection of the route.
- g Based on a records and literature search.
- h The grade separation count includes a new overpass at Dexter Gate which reduces the number of at-grade crossings.

CHAPTER 4.0 ENVIRONMENTAL IMPACTS OF CONSTRUCTION AND OPERATION OF THE PROPOSED RAIL LINE

4.1 INTRODUCTION

This chapter addresses environmental impacts of constructing and operating over the proposed new rail line and operating over the rail line to be rehabilitated. The issues raised by the various respondents to the consultation process are discussed in the appropriate sections of this chapter. Chapter 7 presents SEA's recommended mitigation.

4.2 LAND USE/SOCIOECONOMICS

4.2.1 Land Use

The potential for land use impacts from construction of a rail line generally arises from acquisition of land for the ROW and associated uses, as well as from effects on property adjacent to the ROW due to such things as restriction of access. The extent to which such impacts actually occur depends on the circumstances of the particular case.

Land use along the northern portion of the proposed new rail construction, between the White Bluff station and the northwest corner of the Arsenal, is largely in commercial timberland. However, the proposed new rail line would pass through an area currently being developed as a residential subdivision along Jefferson River Road (see Figure A-6). Although there are 24 lots within the subdivision, at the present time it contains only seven residences, all of which are single or doublewide manufactured homes. Three of these residences are located within the proposed ROW and would be acquired and removed by Entergy. Entergy states that it hopes to reach an agreement with all existing property owners in the subdivision for the purchase of their lot. It has already purchased from the subdivision developer land options on the lots which have not yet been sold to prospective homeowners.

Within the Arsenal the new rail line would be located within a largely cleared area adjacent to an existing rail transportation corridor.

The ROW for the proposed new rail line outside the Arsenal property would require approximately 165.5 acres of land (excluding ROW on the White Bluff plant site itself). All of this land is currently in private ownership and would be acquired in fee by Entergy. This land would be acquired from nine landowners; with multiple tracts belonging to some large landowners.

ROW for the proposed rail line within the Arsenal would be obtained through an easement. The process of granting the easement would be initiated by the Arsenal and submitted through

appropriate channels. Publicly owned land at the grade-separated crossings would be accessed under an easement agreement with Jefferson County.

Entergy states that it has attempted to minimize instances of property severance by the proposed rail line. Where severance is unavoidable, Entergy would negotiate with the landowner and either purchase the severed property or provide access to the property.

Along the proposed line within the Arsenal Entergy would replace fencing at locations directed by the Arsenal. Outside the Arsenal Entergy would provide fencing where required by adjacent landowners. In the subdivision referred to above, several of the existing residences would be located outside the proposed rail ROW; if Entergy is not able to acquire those properties, it would install fencing between the properties and the proposed ROW.

There are 64 residences or known residential lots within 500 feet of the ROW. Twenty-four of these are the new subdivision lots referred to above, although only seven structures are located on those lots. Three of those structures would be within the ROW and thus removed; the closest of the remaining four is estimated to be approximately 150 feet from the proposed ROW. There are other residences estimated to be 120 feet from the proposed Arsenal ROW; however, all of these are located to the west of the UP, which is between those residences and the proposed line.

Vegetation and construction debris would be piled up and burned where permitted. Burial and haulage to landfills are other options that could be implemented if appropriate. Entergy indicates that it has no information at this time concerning staging areas, haul roads, or borrow/spoil sites.

Entergy states that it knows of no hazardous waste sites within the proposed new rail ROW.

4.2.2 Socioeconomics

Entergy expects that, on average, approximately 25-30 people would be employed during construction of the proposed rail line; this number would double at the peak of activity. The average time of employment would be nine months to one year, at an average base salary of \$10 to \$12 per hour. To the extent that the wages these employees would receive are spent within the local area, the construction phase of the proposed action would positively affect the local economy. However, this would represent a minimal effect due to the relatively limited number of construction employees and the limited duration of employment.

The proposed rail line would pass along the western edge of the planned Bioplex site at an elevation that would allow rail service from the proposed line into the site (see Figure A-11). The Alliance, the site's developer, wishes to obtain direct rail access into the site and Entergy indicates that it is coordinating

the line's design with the organization. Direct rail access into the site could enhance the development potential of the project.

Environmental Justice

In its comments on the proposed rail construction, EPA requested that the Board consider Environmental Justice impacts in its environmental review (Appendix C, Attachment 3).

Presidential Executive Order No. 12898, "Federal Actions to Address Environmental Justice in Minority and Low-Income Populations" directs individual federal agencies to develop approaches that address environmental justice concerns in their programs, policies, and procedures. SEA conducted an environmental justice analysis to: (1) determine the presence or absence of EJCOG surrounding the proposed rail line;¹⁷ and (2) if such a community is present, to determine the presence or absence of disproportionately high and adverse human health or environmental effects on the citizens of that community.¹⁸

¹⁷ EPA's criteria for identifying EJCOG include the following:

- At least one-half of the census block being analyzed is minority status or
- At least one-half of the census block being analyzed is low-income status or
- The percentage minority of the census block being analyzed is more than 10 percentage points higher than the percent minority status for the entire county in which the block is located or
- The percentage low-income status of the census block being analyzed is more than 10 percent higher than the percentage of low-income for the entire county in which the block is located.

¹⁸ Executive Order 12898 does not require independent federal agencies, e.g., the Board, to conduct an environmental justice analysis. However, SEA conducted an environmental justice analysis for this proceeding for the following reasons:

- The President requested agencies to comply with Executive Order 12898, particularly during the NEPA process;
- The U.S. Department of Transportation Order entitled "To Address Environmental Justice in Minority Populations and Low-Income Populations", the CEQ guidance, and the draft EPA guidance on environmental justice emphasize addressing environmental justice concerns in the NEPA context;
- The Board is responsible for ensuring that any action which it authorizes is consistent with the public

SEA conducted an environmental justice analysis on block groups within Jefferson County that may be affected by construction of the proposed rail line. The analysis was based on census information and norms compiled from U.S. Census Bureau data. Subject norms included percent of minorities and percent of low-income population in Jefferson County; these were used as a point of reference for comparison to actual census block data using the criteria noted above.

Based on census block group data analyzed for Jefferson County using EPA criteria, the study area for the proposed rail corridor initially appears to have a single EJCOG. In the absence of a more detailed analysis, it would appear that a disproportionately high or adverse human health or environmental effect could result from the proposed project within Block Group 9 of Census Tract 5.02. However, a detailed analysis of census data available for Census Tract 5.02, Block Group 9, has shown that this conclusion is premature.

As shown by census data for Block Group 9, that block group does support some blocks that individually would meet EJCOG criteria on the basis of percent minority, percent households below poverty level, and/or percent population below poverty level. However, none of the 5 blocks within Block Group 9 that are contiguous or close to the southern terminus of the project area meet EJCOG criteria. The 1990 census data indicate that there are no inhabitants and housing units within a group of 5 contiguous blocks of Block Group 9 which includes less than 2,400 linear feet of the project line and actually extends beyond the southern terminus of the project area, i.e., Blocks 901B, 902, 903, 904B, and 905D. The northern boundary of Block 905C, which represents the fifth block within Block Group 5.02 from the southern terminus project area, is at a distance of approximately 6,000 feet, i.e., greater than 1 mile, from the south boundary of the Arsenal.

In conclusion, the project area does not meet EJCOG criteria and therefore does not have a potential to cause disproportionately high and adverse human health or environmental effects on the citizens of the community in the vicinity of the proposed rail line.

The full text of the environmental justice analysis is shown in Appendix D.

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- interest; and
 - Under NEPA of 1969, 42 U.S.C. 4331-4335, the Board is required to examine direct, indirect, and cumulative environmental impacts of actions requiring Board authorization.

4.3 WATER RESOURCES

4.3.1 Groundwater

Rail line construction could theoretically affect groundwater quantity in two ways: (1) if placement of the line were in some way to interfere with infiltration of water through the earth's surface into the aquifers where groundwater is stored, or (2) if movement of water through the aquifer were to be interfered with due to severance of the aquifer by excavation for the rail line. However, the proposed action is not expected to have either of these effects. The Arkansas Geological Commission has indicated that the proposed rail line would not be located in an area of major aquifers. Furthermore, Entergy states that it does not expect to cut into known aquifers, or to place fill in known exposed recharge areas.

Groundwater quality could be affected if a spill or release of contaminants were to occur during rail line construction or operation and penetrate the aquifer, thereby contaminating it. The likelihood of such a release is extremely small due to the fact that fuels and oils, the items most frequently associated with spills, would not be present in large quantities. In addition, as noted above, the project area is not an area of major aquifers.

4.3.2 Surface Water

A rail line does not have to actually cross a waterway to affect it; however, generally speaking, the surface water resources of most concern are those a rail line would actually cross. The following discussion of impacts deals first with potential impacts of building the proposed rail line, and then with impacts of operating and maintaining it.

Construction

The actual process of constructing a rail line could affect drainageways and wetlands in the following ways:

- **Soil/Debris Deposition.** Soil or debris could be deposited into a waterway or wetland while rail construction activities are taking place in or near the waterway or wetland. Disturbance of the streambed by instream construction activities could also increase siltation. In addition, soil could erode into the waterway/wetland over time after completion of construction activities as a result of steep cut or fill slopes or as a result of inadequate revegetation procedures. Soil or debris deposition could adversely affect water quality.
- **Interference with Surface Drainage.** This could occur if placement of fill material were to block surface drainageways or if bridge or culvert openings were not

large enough to accommodate waterflow, causing the drainageway to overflow its channel. This is a particular concern if any part of the proposed rail construction is to be located in a floodway, in which case the concern is that the railway structure not block movement of floodwaters to the extent that floodwater heights and velocities would be increased.

- **Wetland Impacts.** Wetland vegetation could be destroyed by work occurring in the wetland and also by adverse effects on water quality due to soil or debris deposition. Placement of fill material in a wetland to serve as support for the track structure removes a portion of the wetland from use and could alter the hydrology of that portion of the wetland which is not covered with fill.

Table 4-1 lists the drainageway crossings to be made by the proposed rail line and describes the drainageways and proposed crossing method.¹⁹ As indicated in the table, all of the drainageways which would be crossed by the new rail line are intermittently flowing at the proposed crossing point.

At trestles, steel H-piles would be driven as foundations, and capped with either a precast or cast-in-place concrete pile cap. The spans would be supported on the pile cap. At bridges, steel H-piles would be driven to support a cast-in-place concrete pier base, which would then support the cast-in-place concrete bridge piers. The steel bridge spans would be placed on the piers. No in-stream construction activities are expected in any of these small streams. Mobile cranes would be set up on either side of streamways to erect the piers and spans. An Erosion and Sedimentation Control Plan would be prepared for the project; it would be administered by the Construction Manager, and implemented by the Contractor.

The proposed new rail construction would not impede existing surface drainage, which would be routed through the channels where drainage presently flows. The only changes in drainage would be placement of culverts under fills in the stream channel. All bridges would be designed to pass the 100-year storm. All culverts would be designed to pass the 25-year, 24-hour storm, and would not flood the track during a 100-year storm. The proposed new rail construction would cross mapped Federal Emergency Management Agency (FEMA) 100-year floodplains at Carver Mill Creek and at Henslee Creek (on the proposed crossover). Entergy is coordinating the project, regarding 100-year floodplain and floodway issues, with the local FEMA administrator for Jefferson County.

¹⁹ There would also be culverts at some locations on drainage ditches parallel to the rail line; these are not listed in Table 4-1.

As noted in Chapter 2, the Board's subcontractors performed a survey to identify U.S. Waters, including wetlands, subject to regulation by the Corps under Section 404 of the Clean Water Act. Three small wetland areas were delineated in the vicinity of the project corridor (Love Creek, Carver Mill Creek North, and Eastwood Bayou). These three small areas represent a total of approximately 1.25 acres within the proposed ROW. Each of these wetland areas is located on the floodplain of an intermittent stream channel and has developed in response to past beaver impoundment activities. However, the proposed new rail construction is expected to adversely affect less than one-quarter of an acre of these wetlands. The major impact in the wetland areas would be the placement of steel H-piles driven to support rail trestles. Direct wetland impacts due to deposition of fill during bridge and culvert installation would be avoided or minimized through the use of appropriate construction techniques, including use of: (1) pile-driven construction; (2) bridge structures that would span wetlands and stream channels; and (3) contained-form construction. Approximately 1,550 linear feet of channels of intermittent tributaries within the proposed new rail ROW (excluding wetlands) are considered "other waters of the U.S."

On June 7, 2000, the Corps authorized Entergy's "proposed placement of dredged and fill materials in waters of the U.S. associated with the construction and rehabilitation of bridges along 12.8 miles of new and existing rail line" (Appendix C, Attachment 2). The Corps authorized the proposed activity under Department of the Army General Permit GB, provided the conditions included in that permit are met. Section 401 of the Clean Water Act is administered by the Arkansas Department of Environmental Quality (ADEQ); as part of its Corps permit, Entergy received Section 401 water quality certification for activities verified under General Permit GB.

The proposed rail line construction would also require a construction permit from ADEQ. This permit would incorporate the Storm Water Pollution Prevention Plan. Entergy expects to submit the required Notice of Intent by January 31, 2001.

EPA requested that the Draft EA address surface water impacts and take steps to prevent surface and groundwater contamination (Appendix C, Attachment 3). The steps noted above should minimize water resource impacts due to rail construction.

Operation and Maintenance

An accident during train operations over the proposed line could result in a spill of contaminant (such as diesel fuel) into a waterway or wetland. However, the likelihood of a train accident is thought to be minimal due to the projected low traffic level on the line and also to the planned maintenance program for the rail line. In addition, diesel fuel for the locomotives, which is the primary potential contaminant to be carried for the foreseeable

future, would only be present in limited quantities.

Maintenance of the proposed rail line could cause toxic materials to be deposited in a waterway if herbicides applied to the ROW to control vegetation were to run off into adjacent drainageways or wetlands. The typical pattern for herbicide application would be a strip along the length of the rail bed and bounded on either side by drainage ditches. Nevertheless, at least a limited potential exists for a certain amount of the applied herbicide to run or wash off from the part of the ROW on which it is sprayed into adjacent drainageways. However, Entergy's proposed maintenance policy would minimize the potential for such run-off.

4.4 BIOLOGICAL RESOURCES

Project area biological resources are described in Chapter 2, Section 2.5.

Aquatic wildlife is directly affected by water quality and quantity; therefore, the aspects of rail construction and operation which affect aquatic wildlife are essentially the same as those which affect surface water resources. As noted in Section 4.3, these activities are:

- construction activity in or adjacent to drainageways/wetlands could cause increased siltation of the water resource, with possible effects on vegetation and fish spawning
- removal of stream/riparian vegetation, including large trees overhanging streams, could affect water quality and, thus, aquatic wildlife
- construction activity in wetlands could uproot and destroy aquatic vegetation
- material or structures used to support the rail line as it crosses the drainageway or wetland could permanently remove portions of the resource as habitat
- herbicides used in the ROW vegetation control program could wash into waterways, with a possibly toxic effect on aquatic flora and fauna
- operations over the proposed rail line could at some point result in accidents with a potential for contaminant spills into waterways.

Terrestrial wildlife could be affected by construction and operation of a rail line in the following ways:

- conversion of land within the ROW from its current habitat use
- the track and supporting structure could act as a barrier to animal movement
- operations over the line could sporadically disturb animals in the vicinity, perhaps during critical

breeding/nesting periods.

Construction-related impacts and habitat conversions are not expected to threaten the existence of any aquatic species. Siltation impacts due to construction near waterways and wetlands should be minimal, because the Corps permit authorizing the proposed project under Section 404 of the Clean Water Act requires implementation of measures that should minimize soil erosion (measures equivalent to those contained in *Suggested Methods for Erosion/Sedimentation Control for Pipeline Projects*). In addition, bridges of pile-driven construction have been designed to minimize impacts on aquatic and wetland resources. Moreover, waterways within the project area are mostly intermittent and characterized by a paucity of aquatic life forms. The minor amounts of wetlands within the project area are of low quality and support very few aquatic or wildlife species.

Construction impacts on terrestrial vegetation within the ROW would be limited because almost all of the trackage within the proposed new ROW would be located in areas that have long been managed for timber production and have thus already sustained major disturbance over a long time period.

New ROW acquisition and rail line construction could cause some fragmentation of local habitat. However, this should have minimal impacts on animal movements due to the presence of numerous culverts and pile-driven bridges with long spans that would facilitate movement of terrestrial animal species. Terrestrial wildlife species that partially or totally depend on forested wetlands for food, cover, and breeding areas would possibly sustain long-term albeit very minor loss of habitat.

Should herbicides applied to the ROW during ROW maintenance wash into drainageways, there could be an adverse effect on aquatic wildlife. Likewise, an accident during train operations over the proposed line could result in a spill of contaminant into a waterway. However, in view of the projected low traffic levels and maintenance activities on the proposed line the potential for release of contaminants is very low. Herbicides would be applied only by personnel trained in their use and would include only those compounds having EPA approval.

Use of controlled burns to keep the proposed ROW clear of woody vegetation could damage adjacent vegetation. However, such impacts should be limited because ROW maintenance on an annual schedule would prevent a build up of excess organic matter that could allow fire to escape beyond the ROW.

Train operations over the proposed rail line could disturb animals in the vicinity; however, in view of the projected low traffic levels, the potential for this is very low.

As indicated in Chapter 2, Section 2.5, the project area supports no known federally listed species or habitat having a

potential for supporting federally listed species. Two species of concern to state agencies and local conservation entities, i.e., *Eupatorium hyssopifolium* and *Scleria pauciflora*, were observed near the railroad within the Arsenal at locations which would not be affected by the proposed rail line construction. Following rail construction, the maintenance of ROW through the use of fire, herbicides, and other vegetation management tools has a high potential to increase the extent of prairie-like habitat that is suitable and available for colonization by these two early-successional species.

4.5 TRANSPORTATION

Construction and operation of the proposed rail line could affect transportation in the following ways:

- Construction of the rail line could affect local transportation infrastructure
- Operations over the proposed rail line could cause delays of vehicular traffic at grade crossings
- Operations over the proposed rail line could cause train-vehicular accidents at grade crossings
- Operations over the proposed rail line could cause train derailments
- There could be a reduction in transportation-related impacts on rail routes or other transportation modes which might incur a reduction in traffic as a result of the proposed action

4.5.1 Construction

The proposed new rail line would cross two public roads, Kearney Road and Jefferson River Road, and two access roads into the Arsenal, at Stark Gate and Dexter Gate. All of these road crossings would be grade-separated. The proposed rail line would underpass both Kearney and Jefferson River Roads (Figure A-21 shows a typical road overpass). The proposed line would overpass the Stark Gate access road on a through-plate girder bridge.

The UP line presently crosses the Dexter Gate access road at-grade. Entergy's proposed line would make a grade-separated crossing of that road and Entergy has proposed to the Arsenal to grade separate the road for both the UP line and the proposed line. If the Arsenal accepts this proposal, Entergy would raise the access road over both the UP and proposed lines, thereby eliminating UP's currently existing at-grade crossing of the road. If the Arsenal decides not to pursue this overpass of both rail lines, the proposed rail line would overpass the Dexter Gate access road on a through plate girder bridge similar to that for the Stark Gate. Construction of the grade separation at the Dexter Gate would require relocating the gate and gatehouse a short distance from its present location.

At the present time, Entergy expects no at-grade crossings of private roads. If property severance is unavoidable and the severed landowner needs a private grade crossing, Entergy states that it would provide a plank crossing with informational signs and that the crossing would be designed to meet federal, state, and local requirements.

As noted in Chapter 2, a munitions incineration facility is currently under construction at the Arsenal for the purpose of destroying chemical munitions (see Figure A-22). The Jefferson County OES has applied to FEMA for funding to design and construct two new roads to serve as part of an emergency evacuation roadway system in order to reduce the risk for individuals living and/or working near the Arsenal and incineration facility. The primary road would generally run west from the entrance at the U.S. Food and Drug Administration's National Toxicological Research Center (NTRC) to an intersection with Stagecoach Road and Highway 365, with overpasses of the UP mainline and Highway 365. OES states that, although FEMA has indicated its support for constructing this road, it has not actually approved funding for it, and that it may be quite some time before this occurs. OES is less certain that FEMA would fund the second road. As the proposed evacuation road would run in an east-west direction from the vicinity of the incineration facility to Highway 365, it would intersect the proposed rail line, which would run north-south. The mayor of Pine Bluff has expressed concern that the presence of the proposed rail line could affect the cost of constructing the evacuation road, if and when it is constructed (see Appendix C, Attachment 11).

As also noted in Chapter 2, the Arsenal is expected to transfer ownership of a 1,500-acre site at the northwest corner of the Arsenal to The Alliance, which has plans to develop the Bioplex technology park (see Figure A-22). The Alliance believes that the emergency access road described above, if constructed, could also function as an access road to the proposed Bioplex site. The mayor of Pine Bluff expressed concern that, if the proposed rail line crosses the proposed emergency access road at-grade, this could negatively affect potential development of the Bioplex (Appendix C, Attachment 11).

Entergy states that it has met with The Alliance, the Arsenal, the Arkansas Highway and Transportation Department, the Jefferson County Judge, and the Jefferson County OES regarding issues of emergency access and access to the planned Bioplex site. Jefferson River Road is the public road which currently serves the NCTR (see Figure A-22). The proposed rail line would not block any existing public roads or Arsenal access roads, as all these road crossings would be grade-separated. Entergy states that it would cooperate with The Alliance, the State of Arkansas, and Jefferson County regarding the proposed emergency access road and road access to the Bioplex and that it would keep these groups advised of its plans with respect to all access road issues.

The proposed rail line would pass along the western edge of the Bioplex site at an elevation that would allow rail service off the line into the Bioplex. Entergy states that The Alliance desires rail service to the site and that it is coordinating its design for the rail line with officials at the organization.

Arkansas Highways and Transportation states that, as the proposed line would not intersect any existing or proposed state highways, it would have minimal impacts upon the state highway system. The Department requested that, if future modifications to the proposed rail alignment do intersect with the state highway system, the Department should be contacted (Appendix C, Attachment 10).

At the present time, construction of the proposed new rail line is expected to affect the utilities listed below. Entergy and the utility companies are currently assessing the work needed at each location. As a result, the necessary protective actions listed below are typical for the type of crossing, but may not necessarily represent the scope of work ultimately required at the particular utility crossing. For cable lines such as telephone, the cable would be run through conduits under the track, and be relocated as necessary to support construction. If, after further analyses, a pipeline is determined to be adequate to withstand the additional loadings without casing and venting as allowed by AREMA procedures, the casing and venting may be eliminated by agreement between the pipeline company and Entergy.

- Ammonia pipeline, approximate Station 24+70, encase and vent if required;
- Transmission line, approximate Station 24+90, raise;
- Gas pipeline, approximate Station 59+00, encase and vent;
- Electrical transmission line, approximate Station 63+50, relocate or raise;
- Gas pipeline, approximate Station 96+00, no action, under a bridge;
- Electrical transmission line, approximate Station 98+50, relocate or raise;
- Gas line, approximate Station 126+50, relocate under track, encase, and vent;
- Water line, approximate Station 126+75, relocate and encase under track;
- Phone cable and TV cable, approximate Station 126+80, relocate and conduit;
- Power distribution line, approximate Station 276+50, raise;
- Phone cable, approximate Station 276+55, relocate and conduit under track;
- Water line, approximate Station 280+00, encase if required;
- Power line, approximate Station 291+00, raise or relocate;
- Water line, approximate Station 291+40, under bridge, no

- action required; and
- Power lines, approximate Station 293+50 and 294+50, relocate.

Based on the above information, the proposed rail line construction would not adversely affect existing transportation infrastructure. Entergy has stated that it wishes to cooperate with the appropriate organizations to prevent or minimize potential conflict with future transportation infrastructure, such as the proposed emergency access road.

4.5.2 Operations

There would be a maximum of approximately 800 to 920 total yearly train movements (loaded and empty) over the proposed rail line, which would equate to an average of less than three train movements per day.²⁰ A typical train would consist of two to four locomotives and 115 to 135 cars. Train operating speed through the Arsenal is expected to be 25 mph south of the Baldwin Yard area. North of this point train speed would be 35 mph until approaching the White Bluff plant, where train speed would be restricted to 10 mph. Train operations could occur at any time of day, seven days per week, loaded or empty.

There should be no vehicular accident or delay impacts at the proposed public road crossings and the Arsenal access road crossings, as these would all be grade-separated. The existing UP crossing of the Dexter Gate access road is at-grade; if the Arsenal accepts Entergy's proposal to grade separate that crossing by raising the access road over both the UP and proposed rail lines, there would be a reduction in potential at-grade crossing accidents and delay.

Trains operating over the proposed rail line would also operate through trackage rights over UP's mainline between Pine Bluff and the proposed crossover track to the former Cotton Belt line. Entergy states that its proposed operations over UP's line would not interfere with UP's operations over that line because BNSF's Entergy train operations over UP's mainline would be governed by UP operating rules. Trains would be dispatched by the UP in accordance with dispatch protocol established for BNSF trackage rights granted in connection with the UP-SP merger.

Any instance of train operation over a rail line involves at least a limited potential for derailment. However, track safety inspections would be conducted according to FRA standards contained in 49 CFR Part 213. The inspection program should detect any potential problems with the physical condition of the

²⁰ In practice, it is unlikely that there would be three train movements in a day; on some days there might be one round trip (two train movements) and on others, two round trips (four train movements).

line at an early stage, minimizing derailment potential.

4.6 AIR QUALITY

4.6.1 Construction

Entergy states that fugitive dust control would be addressed in its construction specifications, which would require each contractor to use water trucks and other appropriate dust control measures. In addition, the Erosion and Sedimentation Control Plan which would be implemented for the project would require prompt reseeding or revegetation of disturbed areas after completion of earthwork construction activities; this would also help keep fugitive dust to a minimum.

4.6.2 Operation

Rail operations can affect air quality through emission of air pollutants from locomotive diesel fuel combustion.

The Board typically applies a threshold level of rail traffic increase for determining whether to quantify the air pollution which would be generated by rail traffic over a new rail line proposed for construction. This threshold is contained in 49 CFR 1105.7(e)(5).²¹ If the line proposed for construction is not located in either a Class I or a nonattainment area, pollutant emissions from rail traffic will be quantified only if the proposed action would add eight or more trains per day to the line to be constructed.

The project area is not in a Class I area. Jefferson County is in attainment for all six criteria air pollutants. Substantially fewer than eight train movements per day are expected to be added to the proposed line (two to four daily train movements are expected). Because of this, expected air pollutant emissions from rail operations over the proposed line have not

²¹ It should be noted, however, that this threshold is applied with flexibility; SEA finds it a useful guide in a preliminary assessment of the need for more detailed analysis. When circumstances warrant, SEA will examine air quality impacts of a proposed rail line construction even though proposed traffic levels do not exceed the threshold noted here. Precedence for use of such thresholds was established in Finance Docket (F.D.) 30400, Santa Fe Southern Pacific Corporation-Control-Southern Pacific Transportation Company; Merger the Atchison, Topeka and Santa Fe Railway Company and Southern Pacific Transportation Company Environmental Assessment served November 1, 1985, at 32,33, and 44, and F.D. No. 3200, et al., Rio Grande Industries, Inc.; SPTC Holding, Inc.; The Denver Rio Grande and Western Railroad Company-Control-Southern Pacific Transportation Company. Environmental Assessment, served May, 1988, page 2.

been quantified. However, they are expected to be insignificant.

4.7 NOISE

4.7.1 Construction

Noise levels in the area would rise during construction of the proposed rail line. Vehicles and machinery used for land clearing, road bed construction, and bridge construction would generate temporary increases in noise levels. However, construction noise emissions would be of short term duration and would be confined to the eighteen-month construction period. In addition, approximately the northern half of the proposed new rail line would be constructed in a largely wooded area which is sparsely populated, thus limiting the number of people potentially affected by such noise. That part of the proposed construction within the Arsenal would also be located in a wooded area, for the most part, although there are some residences to the west of the proposed and UP rail lines in the area between the Stark Gate and the Dexter Gate.

4.7.2 Operations

Train operations over the proposed rail line would raise ambient noise levels in the immediate vicinity of the line.

The Board applies a threshold level of rail traffic increase for determining whether to quantify noise which would be generated by rail traffic over a new rail line proposed for construction. This threshold is contained in 49 CFR 1105.7(e)(6).²² If the proposed action would add eight or more trains per day to the line to be constructed, noise to be generated by operations over the line must be quantified and sensitive receptors may have to be identified. As projected train operations over the proposed line fall substantially short of this threshold, SEA has not quantified the potential increase in noise levels due to such operations. However, it can be said that the potential increase in noise would be fairly minimal due to the low rail traffic level. Also, the number of noise receptors would be relatively few, as much of the line would pass through a primarily wooded area, with relatively few receptors located nearby.

²² It should be noted, however, that SEA applies this threshold with flexibility, finding it a useful guide in a preliminary assessment of the need for more detailed analysis. When circumstances warrant, SEA will examine noise impacts of a proposed rail line construction even though proposed traffic levels do not exceed the threshold noted here.

4.8 CULTURAL RESOURCES

The cultural resource survey conducted for the proposed action and described in Chapter 2, Section 2.9, found no sites on or eligible for the NRHP along the ROW for the proposed new rail construction. The results of the survey have been forwarded to the Arkansas Historic Preservation Program for review.

4.9 RECREATION

With the exception of the Arsenal Golf Course located some 1,000 feet to the east of the proposed new ROW near the Dexter Gate, there are no public recreation sites in the project area. The proposed new rail construction and operation would not affect access to the golf course. Noise and air quality impacts on persons using the golf course would be minimal.

TABLE 4-1 PROPOSED DRAINAGEWAY CROSSINGS ON NEW RAIL LINE CONSTRUCTION

Station Number	Drainageway Name & Description	Drainage Area	Crossing Method	Linear distance of Channel w/in Corridor	100-year Storm Peak (in cubic ft/sec)	Receiving Waters
72+50	Love Creek, North Branch. Intermittent channel with no adjacent wetlands	116 acres	Culverts (see Figure A-15)	150 feet	214 cfs	Love Creek
97+00	Love Creek. Intermittent channel with adjacent wetlands	819 acres	Multiple span steel bridge (see Figures A-16 & A-17)	300 feet (two separate channels)	1,215 cfs	Arkansas River
153+00	Carver Mill Creek North. Intermittent channel with adjacent wetlands	336 acres	Multiple span trestle (see Figures A-18 & A-19)	250 feet (oblique alignment)	576 cfs	Carver Mill Creek
175+00	Carver Mill Creek. Intermittent channel with no adjacent wetlands	970 acres	Multiple span steel bridge (see Figure A-17)	150 feet	1,127 cfs	Eastwood Bayou
212+75	Jackson Creek. Intermittent channel with no adjacent wetlands	101 acres	Culvert (see Figure A-15)	150 feet	188 cfs	Eastwood Bayou
235+00	Eastwood Bayou. Intermittent channel with adjacent wetlands	852 acres	Multiple span trestle (see Figures A-20 & A-19)	250 feet (split meandering channel)	1,562 cfs	Arkansas River
281+70	Tulley Creek. Intermittent channel with no adjacent wetlands.	50 acres	Culverts (see Figure A-15)	150 feet	100 cfs	Tulley Lake
687+30	Henslee Creek. Located on the proposed crossover. Intermittent channel with no adjacent wetlands.		Multiple span trestle (see Figure A-19)	150 feet		Caney Bayou

The proposed rail line construction would result in conversion of approximately 166 acres of land to rail use for the ROW outside the Arsenal. The proposed line would pass through a subdivision which is under development in the Jefferson River Road area.

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The proposed new rail construction would affect less than one-quarter of an acre of wetlands due to placement of dredged and fill material during bridge construction. Rail construction and operation would have minor adverse wildlife impacts, including habitat loss, increased human presence associated with construction and maintenance activities, noise, train-wildlife collisions, and the possibility of contaminants being introduced into the environment.

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Proposed rail line operations would have localized, but insignificant, air and noise impacts.

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CHAPTER 6.0 CUMULATIVE ENVIRONMENTAL IMPACTS

Cumulative environmental impacts result when the effects of an action on a particular resource, ecosystem, or human community are added to or interact with other effects in a particular place and within a particular time. Cumulative impacts of the proposed rail line construction would include those which may result from construction of the planned Bioplex development, possible construction of the emergency access road to the munitions incineration facility, and construction of the incineration facility itself. While environmental impacts from the proposed rail line construction itself are not expected to be significant, these impacts would be added to similar impacts which may result from the above-noted other projects in the area. Thus the proposed rail construction and operation would add somewhat to the total of impacts in the project area related to conversion of land to other uses, wetland impacts, removal of land from use as wildlife habitat, increased air pollutant emissions, and increased localized noise levels.

**CHAPTER 7.0 SECTION OF ENVIRONMENTAL ANALYSIS' RECOMMENDATIONS
FOR MITIGATION**

Based on the Section of Environmental Analysis' review of all information available to date, and its independent analysis of the proposed rail line construction and operation, all the comments and mitigation requested by various federal, state, and local agencies, as well as other concerned parties, and the mitigation offered by Entergy, the Section of Environmental Analysis preliminarily recommends that, if the Surface Transportation Board approves the proposed construction and operation, such approval be subject to the following mitigation measures:

Land Use

1. As agreed to by Entergy, where property severance is unavoidable, Entergy shall negotiate with the landowner and either purchase the severed property or provide access to the property.
2. As agreed to by Entergy, along the proposed line within the Arsenal Entergy shall replace fencing at locations directed by the Pine Bluff Arsenal.
3. As agreed to by Entergy, outside the Pine Bluff Arsenal Entergy shall provide fencing where required by adjacent landowners.
4. As agreed to by Entergy, in the subdivision which the proposed rail line would pass through in the Jefferson River Road area, if Entergy is not able to acquire those residences outside the proposed right-of-way, Entergy shall install fencing between the properties and the proposed ROW.
5. Entergy shall develop any other sites related to the proposed rail construction, such as staging areas, borrow/spoil sites, and haul roads, in accordance with all applicable environmental regulations.
6. Entergy shall require its construction contractor to dispose of all waste material generated during construction in accordance with applicable federal, state, and local regulations.
7. Should hazardous wastes be encountered in the project area during the proposed construction, Entergy shall handle and dispose of such wastes in accordance with applicable federal, state, and local regulations.

APPENDIX A

APPENDIX A

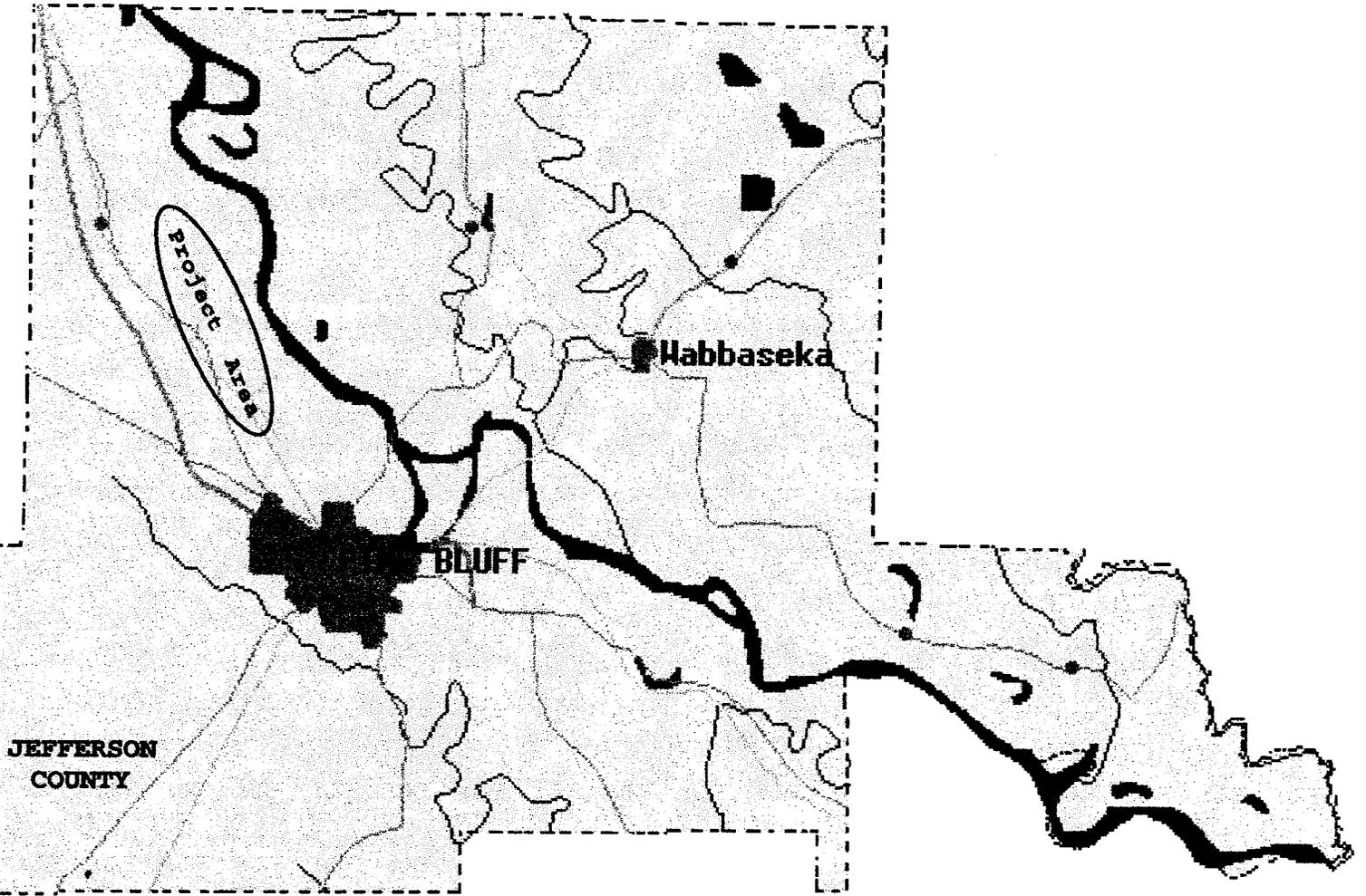
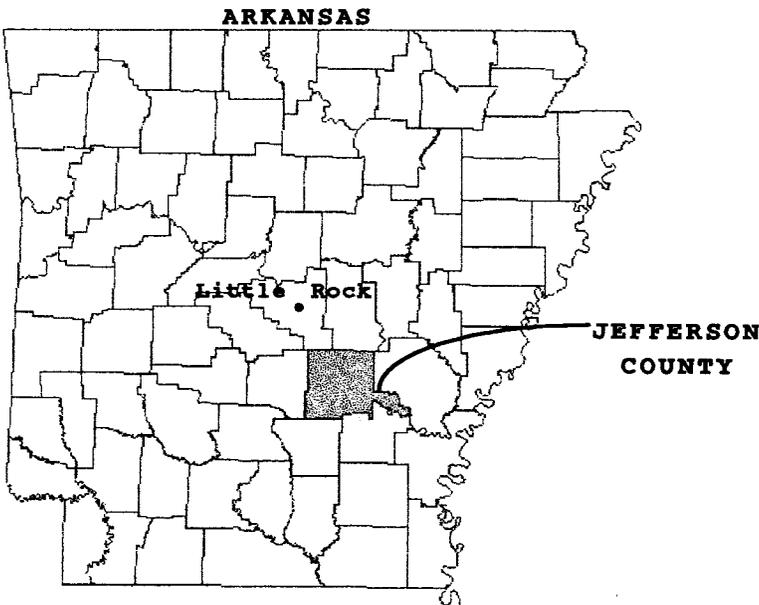


FIGURE A-1
PROJECT AREA LOCATION



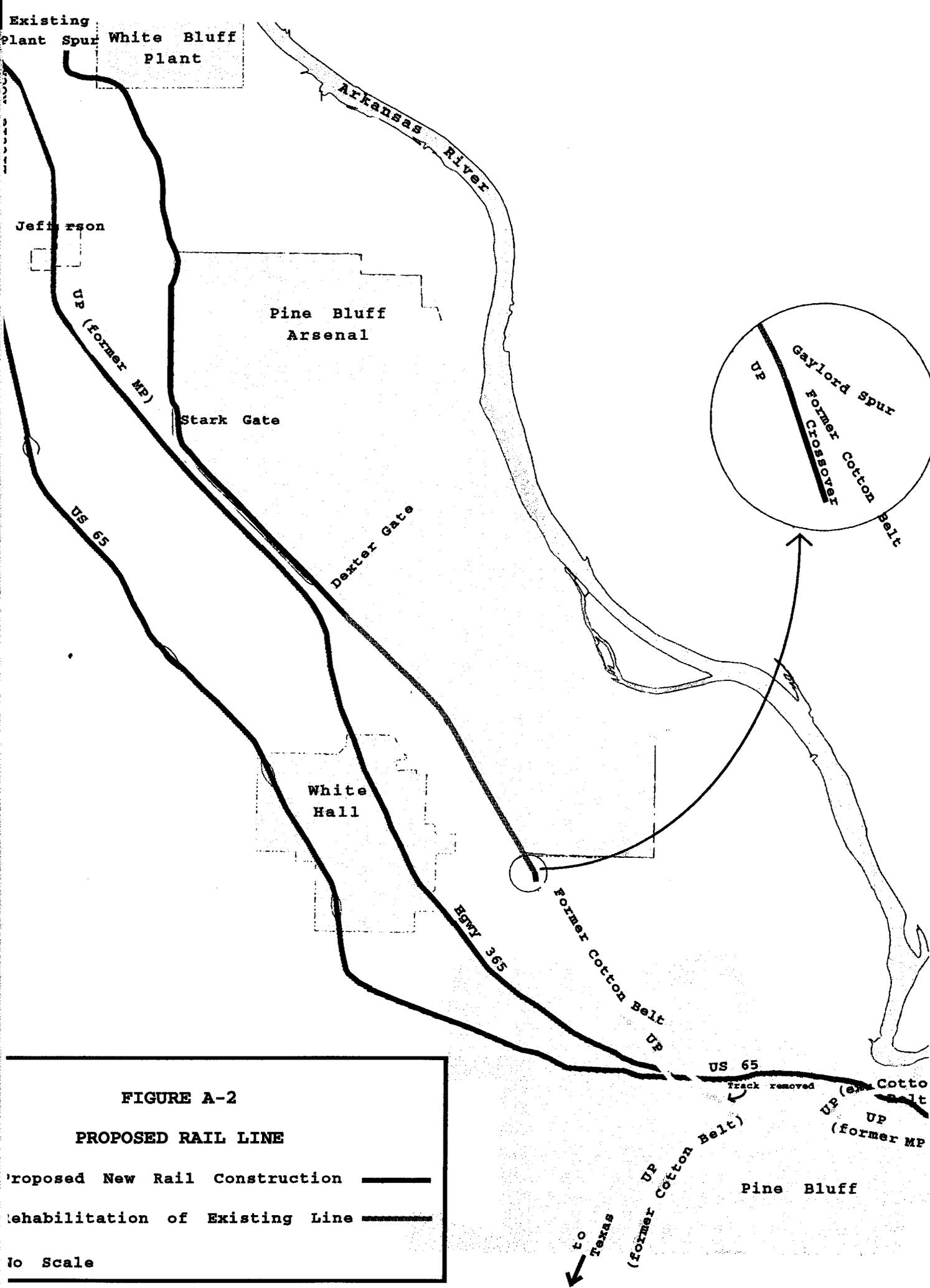


FIGURE A-2

PROPOSED RAIL LINE

Proposed New Rail Construction ———

Rehabilitation of Existing Line - - - - -

No Scale



FIGURE A-3
Project Area Aerial View
(see also Figure A-6)

Proposed Rail Line 
Match Line/Fig. A-4 



FIGURE A-4

PROJECT AREA AERIAL VIEW
(see also Figure A-7)

Proposed Rail Line 
Match Line/A-3 & A-5 

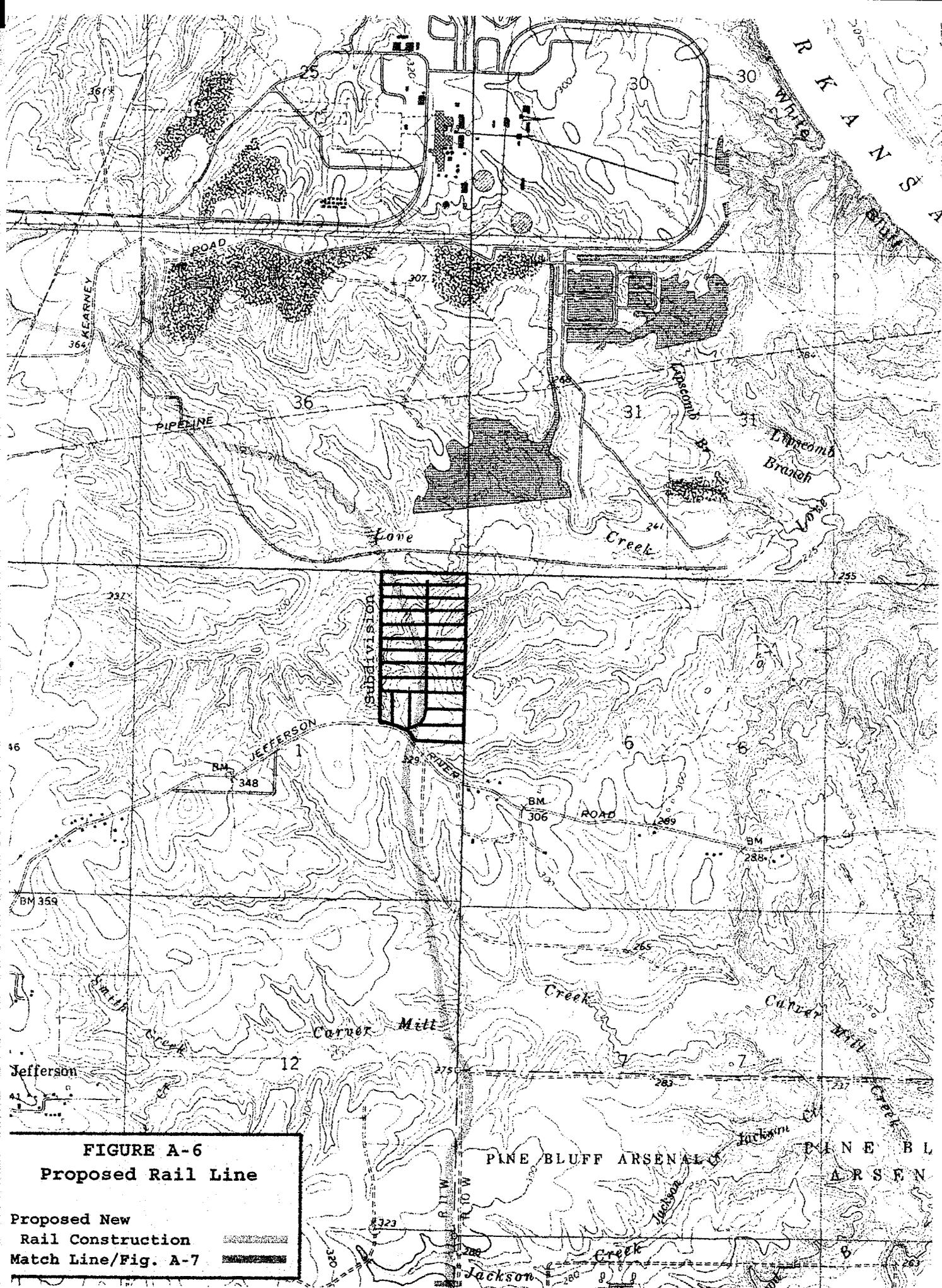
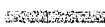
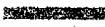


FIGURE A-6
Proposed Rail Line

Proposed New
 Rail Construction 
 Match Line/Fig. A-7 

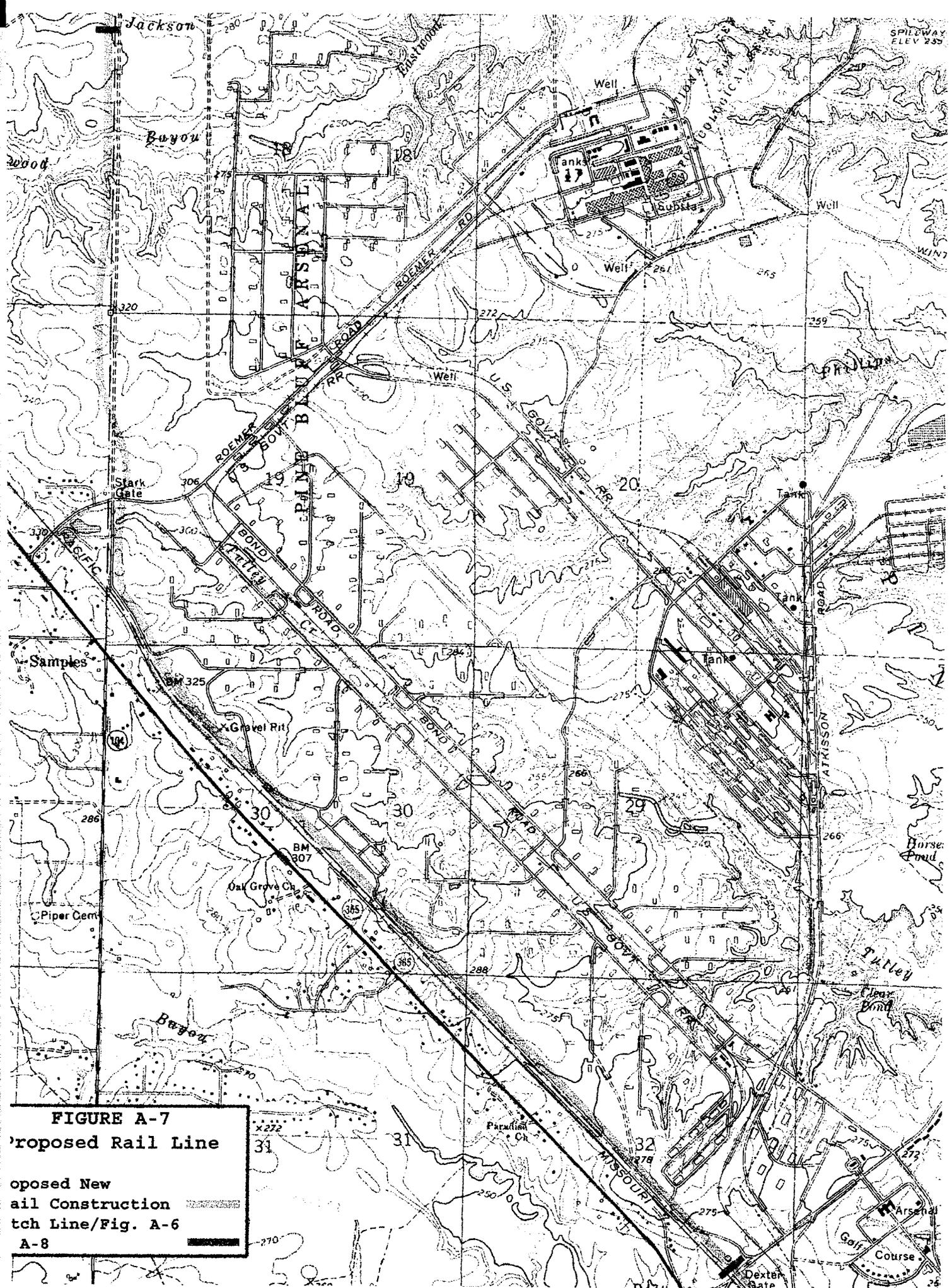
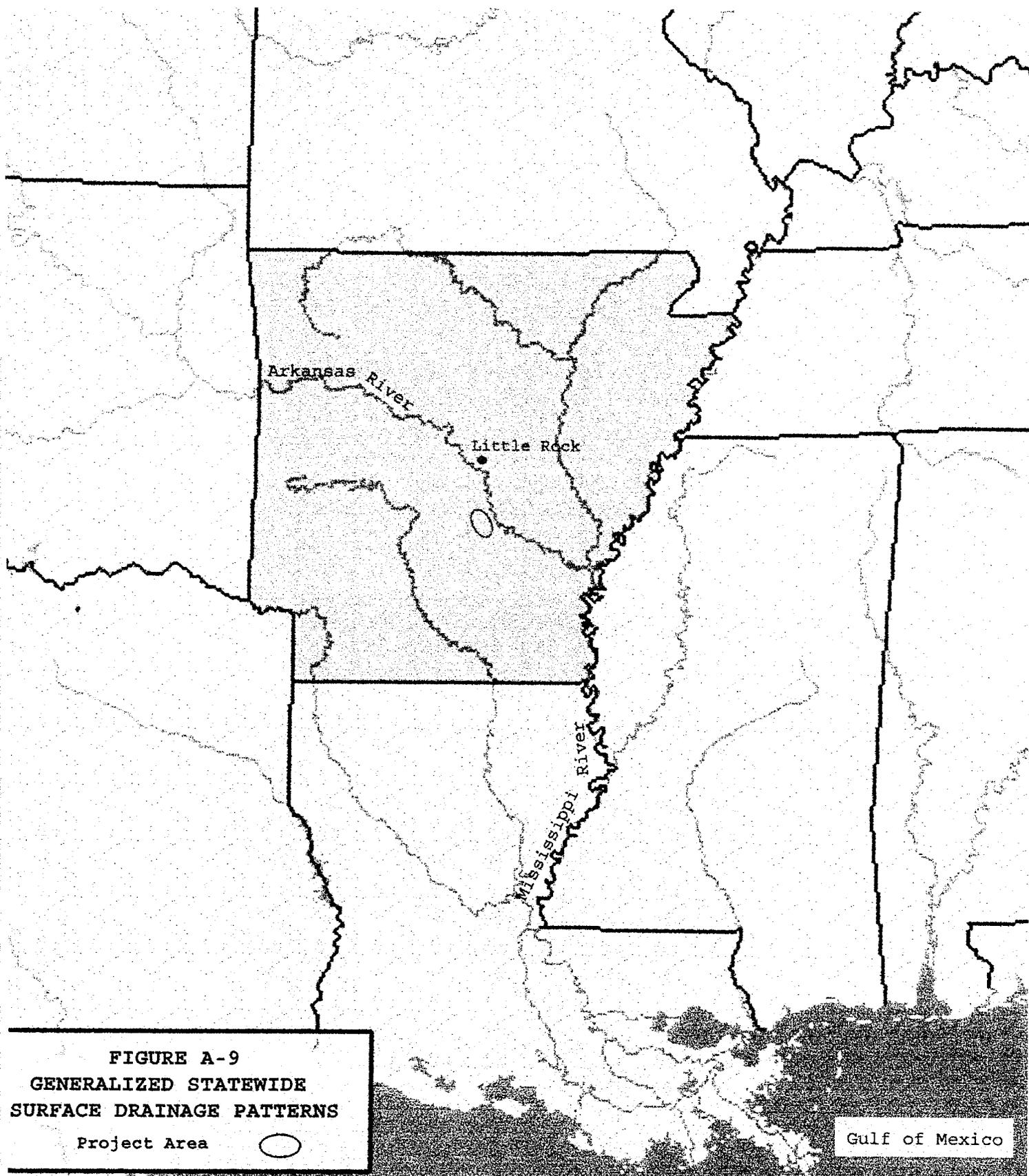


FIGURE A-7
Proposed Rail Line

Proposed New Rail Construction
Patch Line/Fig. A-6
A-8



JEFFERSON COUNTY

FIGURE A-10
JEFFERSON COUNTY SURFACE DRAINAGE

Project Area

Boonville Bayou

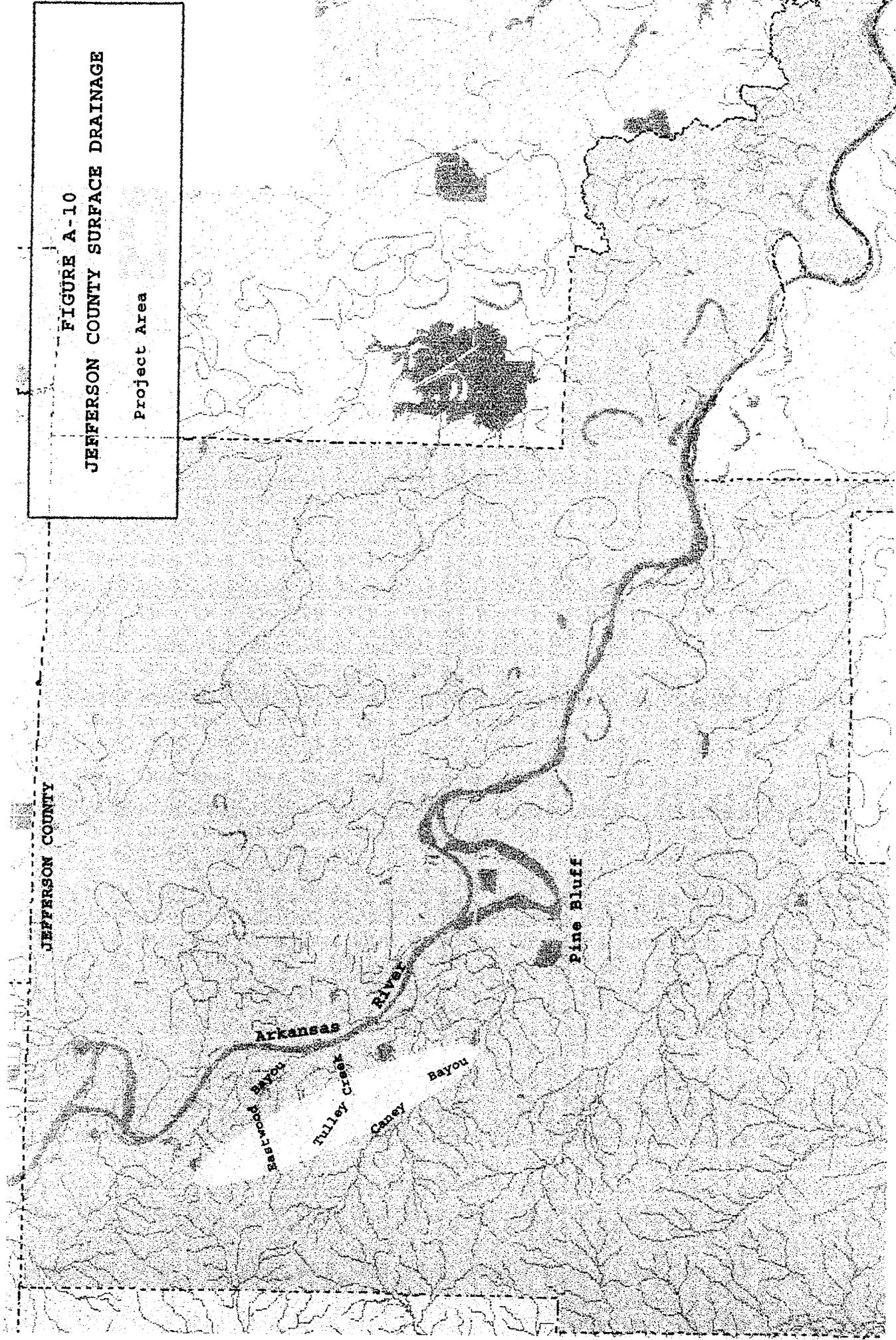
Tulley creek

Caney

Bayou

Arkansas River

Pine Bluff



Project Area

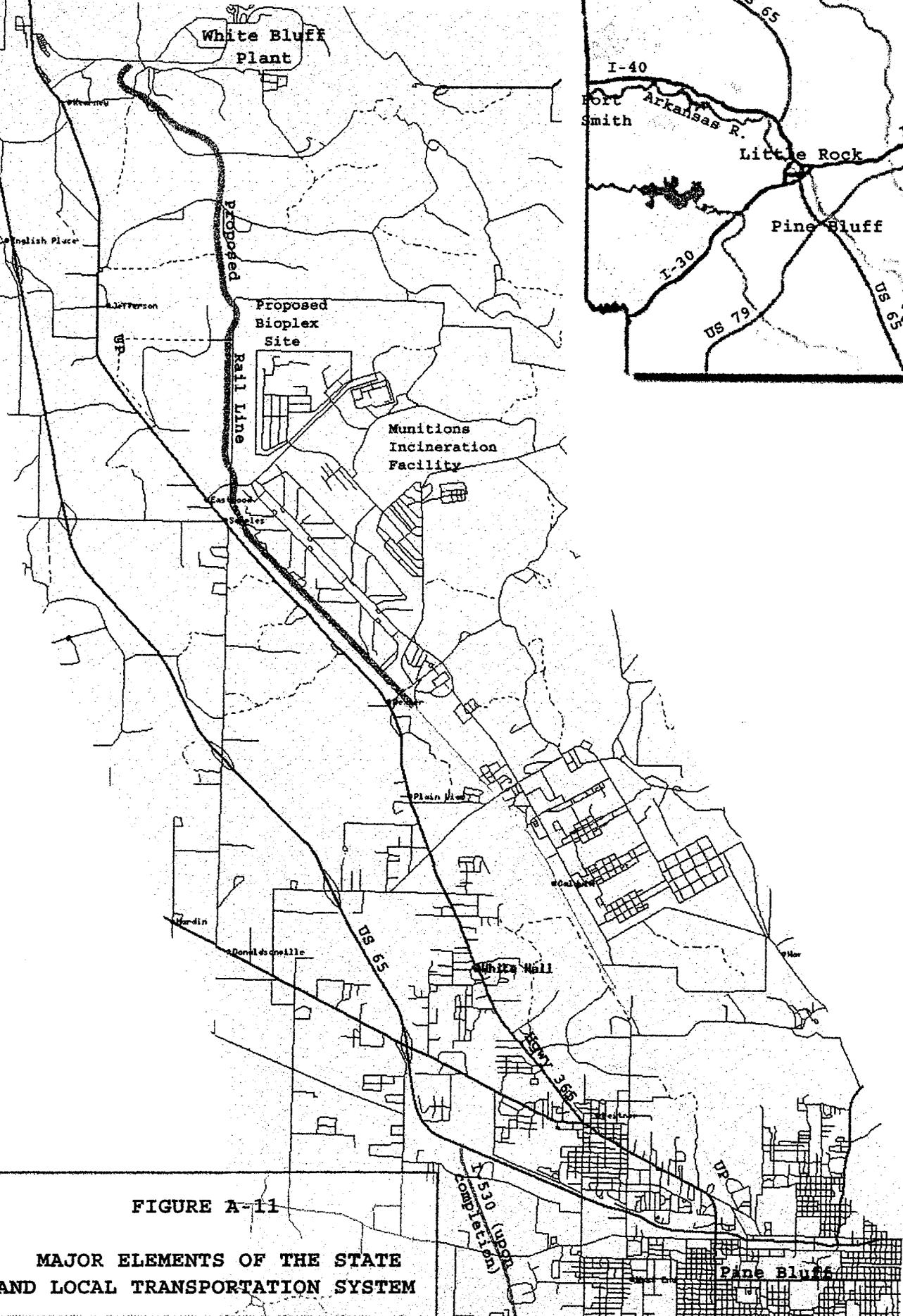
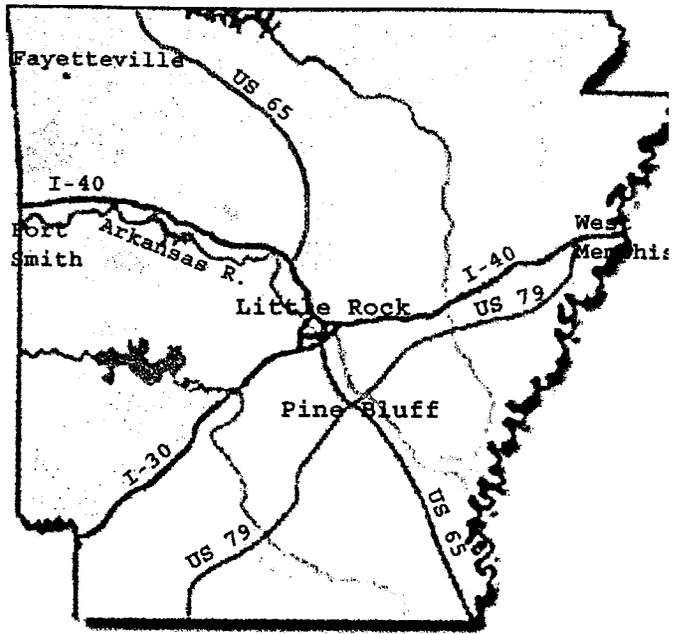
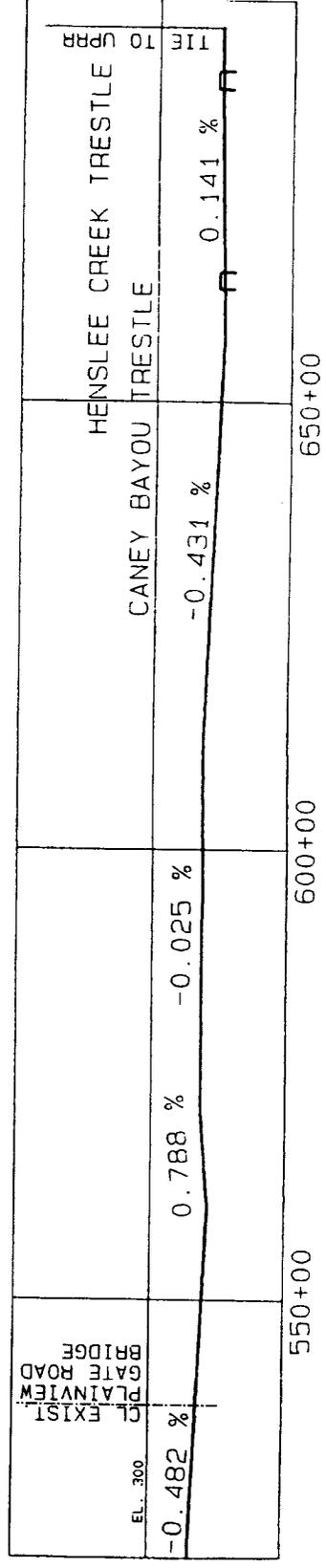
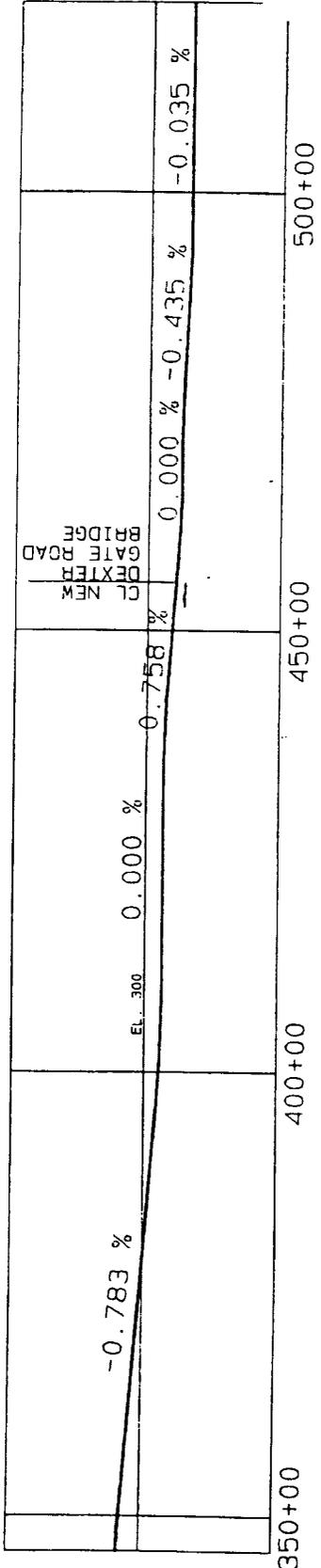
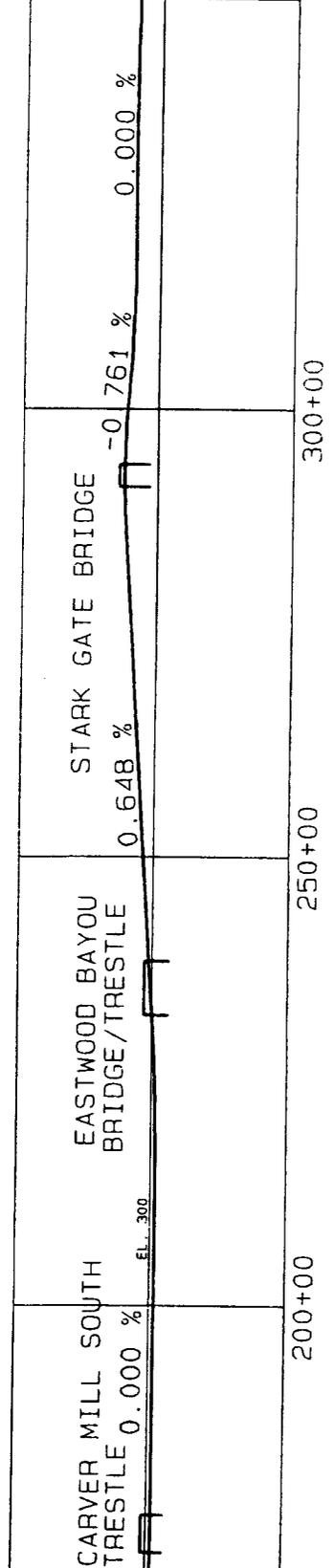
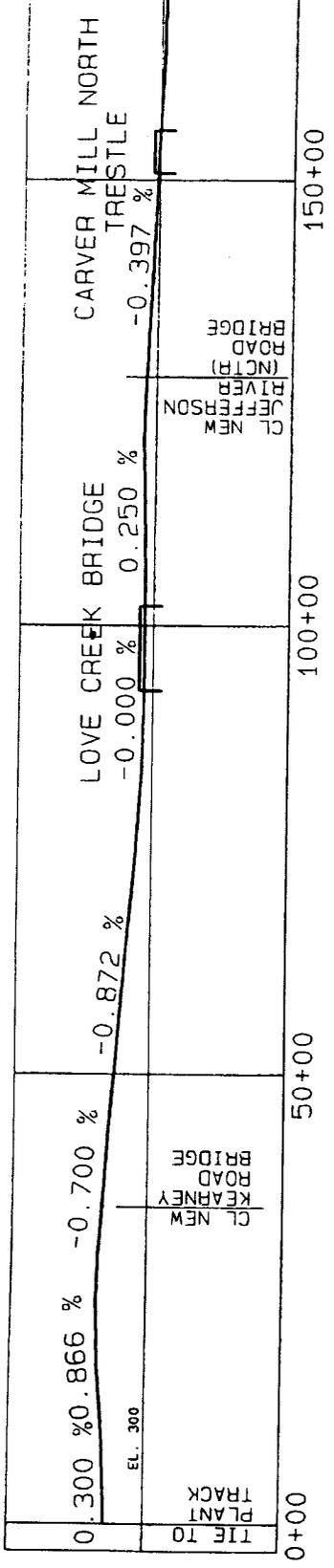


FIGURE A-11

MAJOR ELEMENTS OF THE STATE AND LOCAL TRANSPORTATION SYSTEM



LEGEND

-  -- Bridge / Trestle
- 150+00 -- Stationing
- 0.035 % -- Percent Grade

FIGURE A-12
CONDENSED TRACK
PROFILE

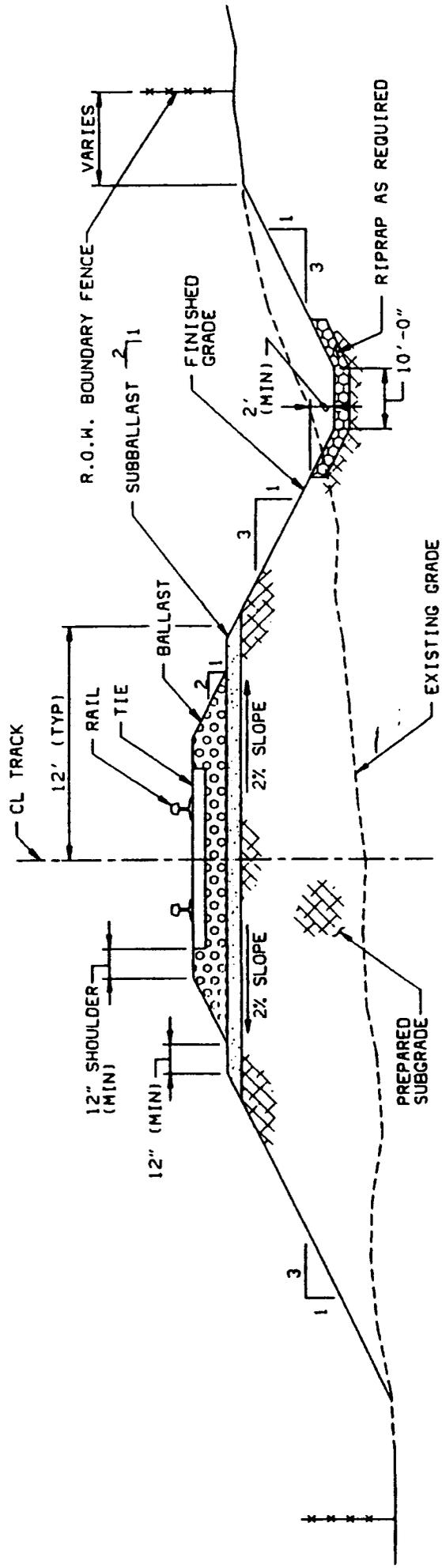


FIGURE A-13

Typical Railroad Cross-section

NO SCALE

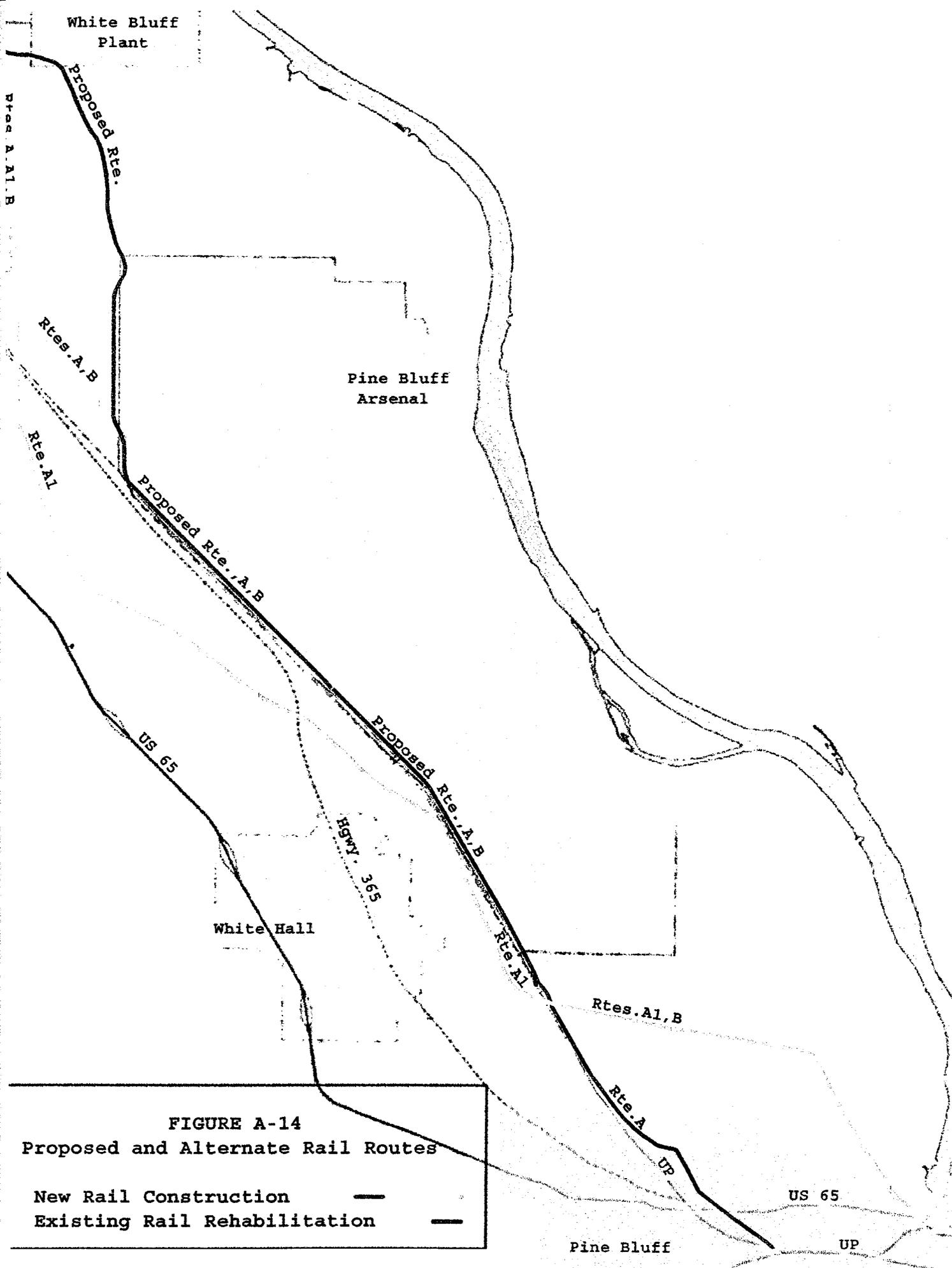


FIGURE A-14
Proposed and Alternate Rail Routes

New Rail Construction	—
Existing Rail Rehabilitation	—

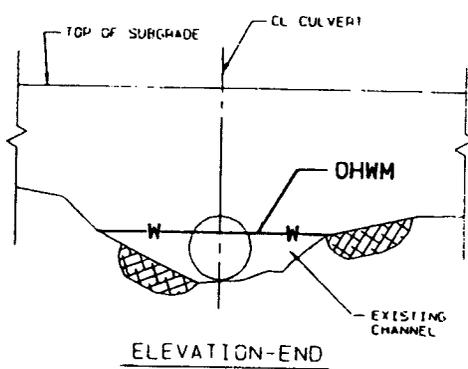
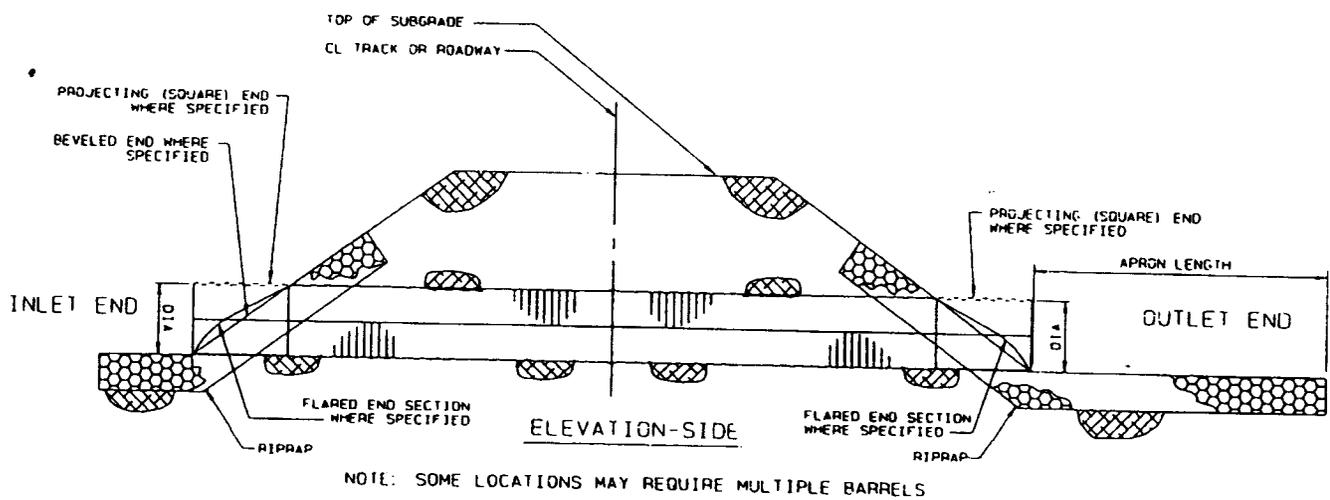
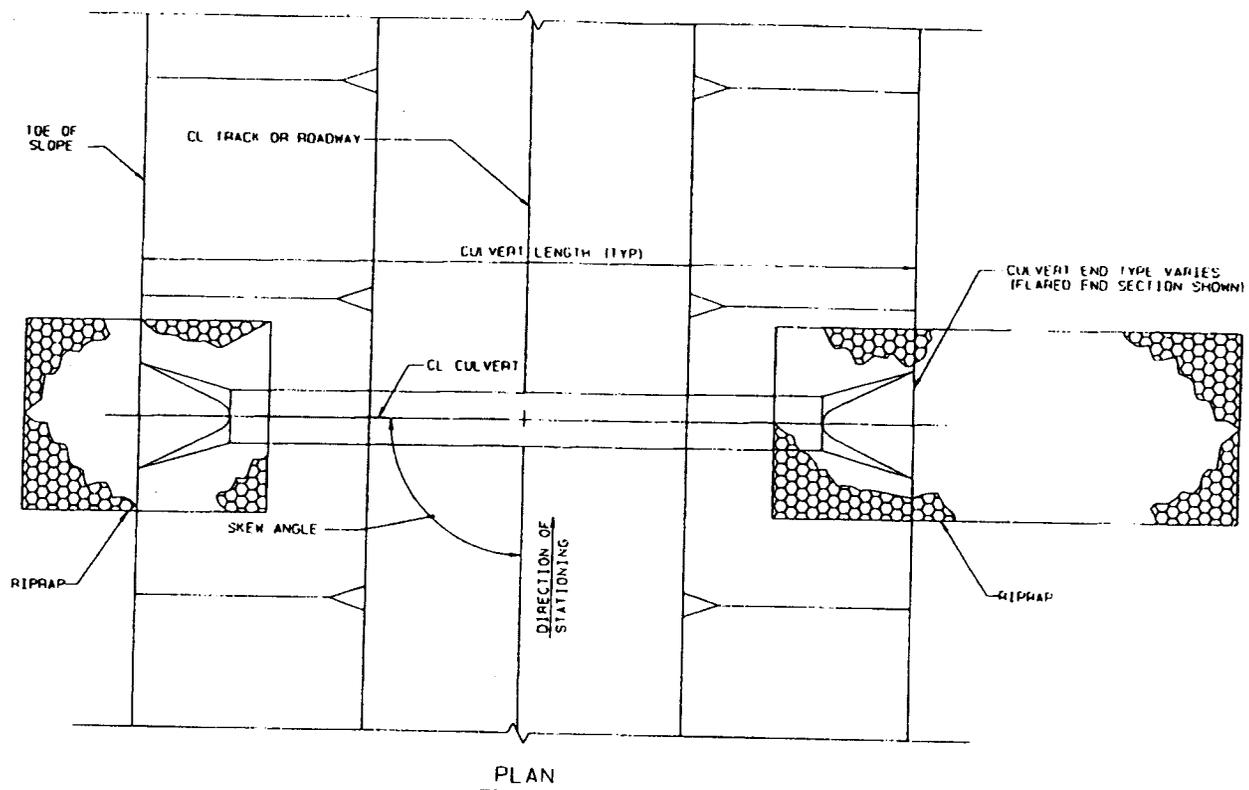


FIGURE A-15
Typical Culvert

FIGURE A-16
Love Creek Bridge

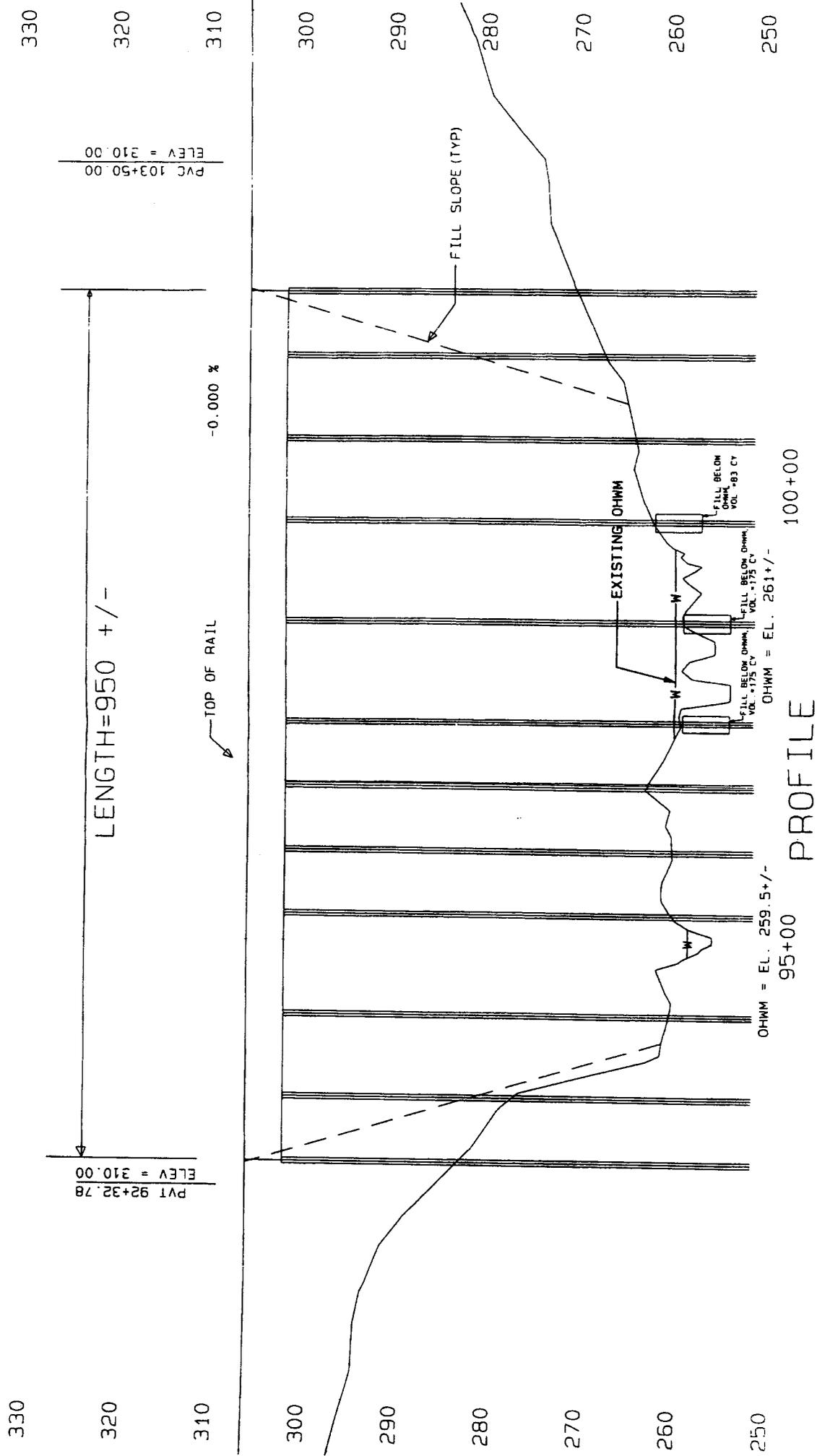
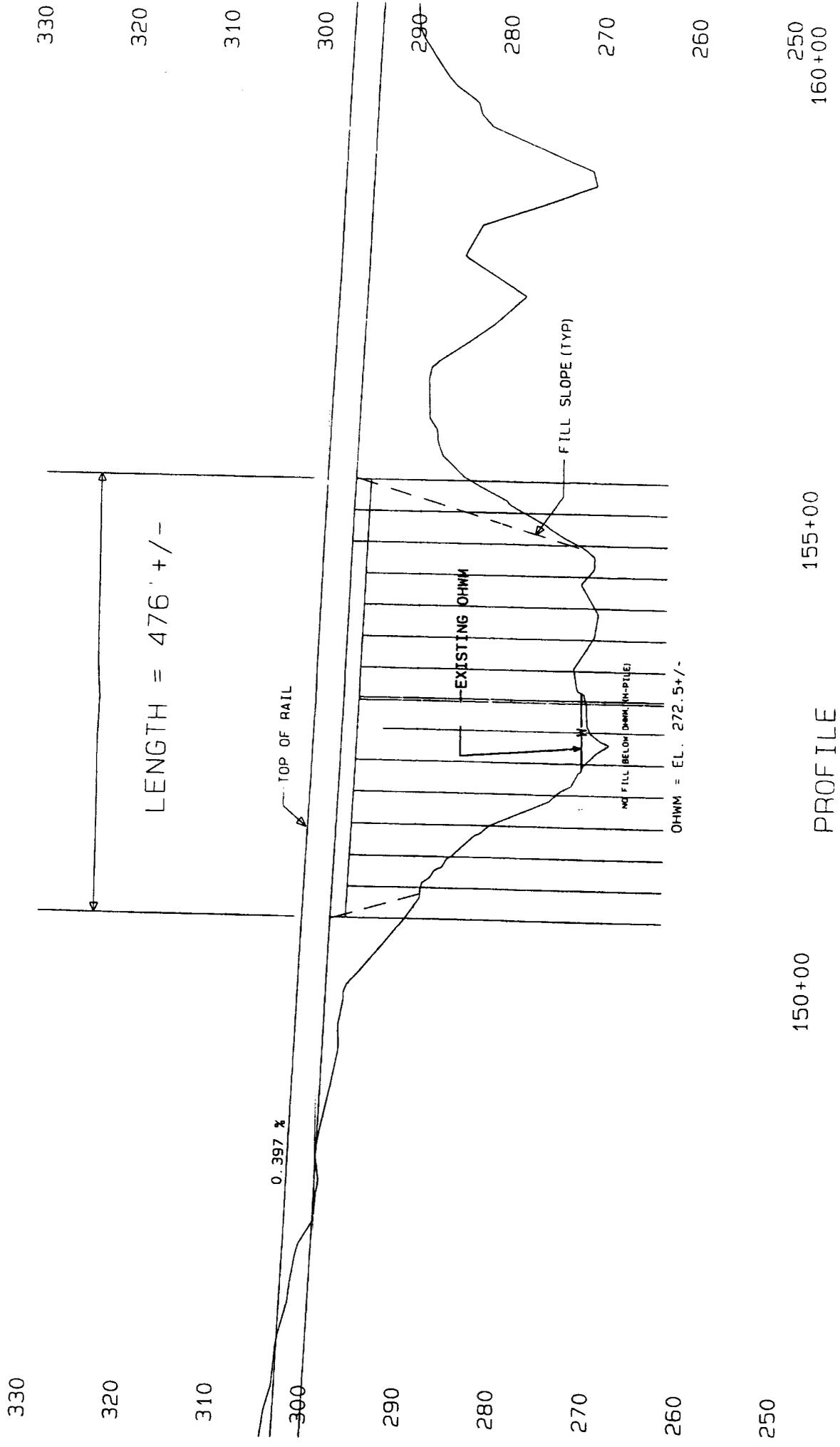
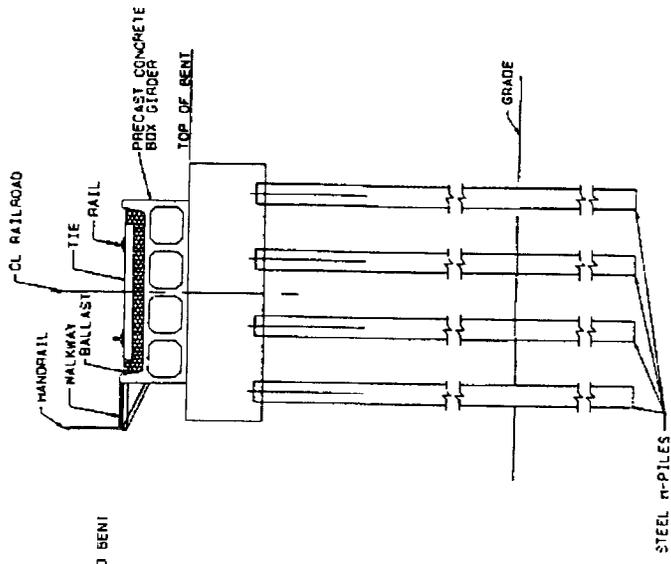


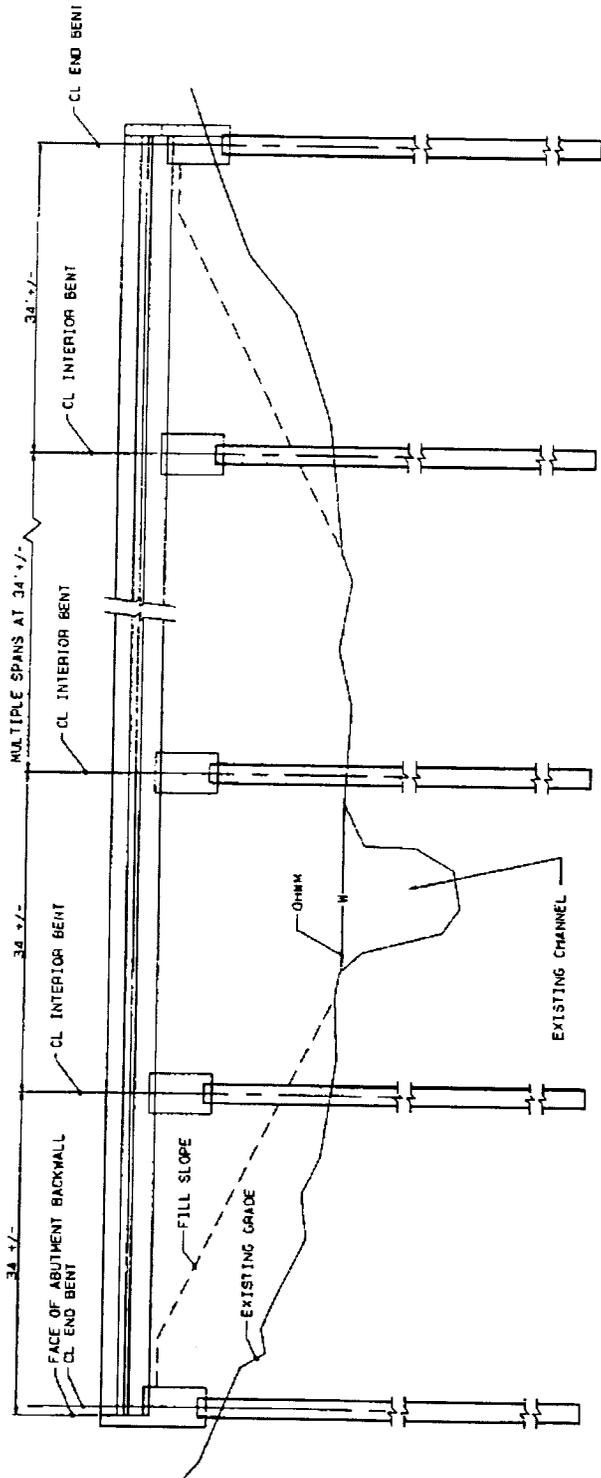
FIGURE A-18

Carver Mill Creek North Trestle





SECTION

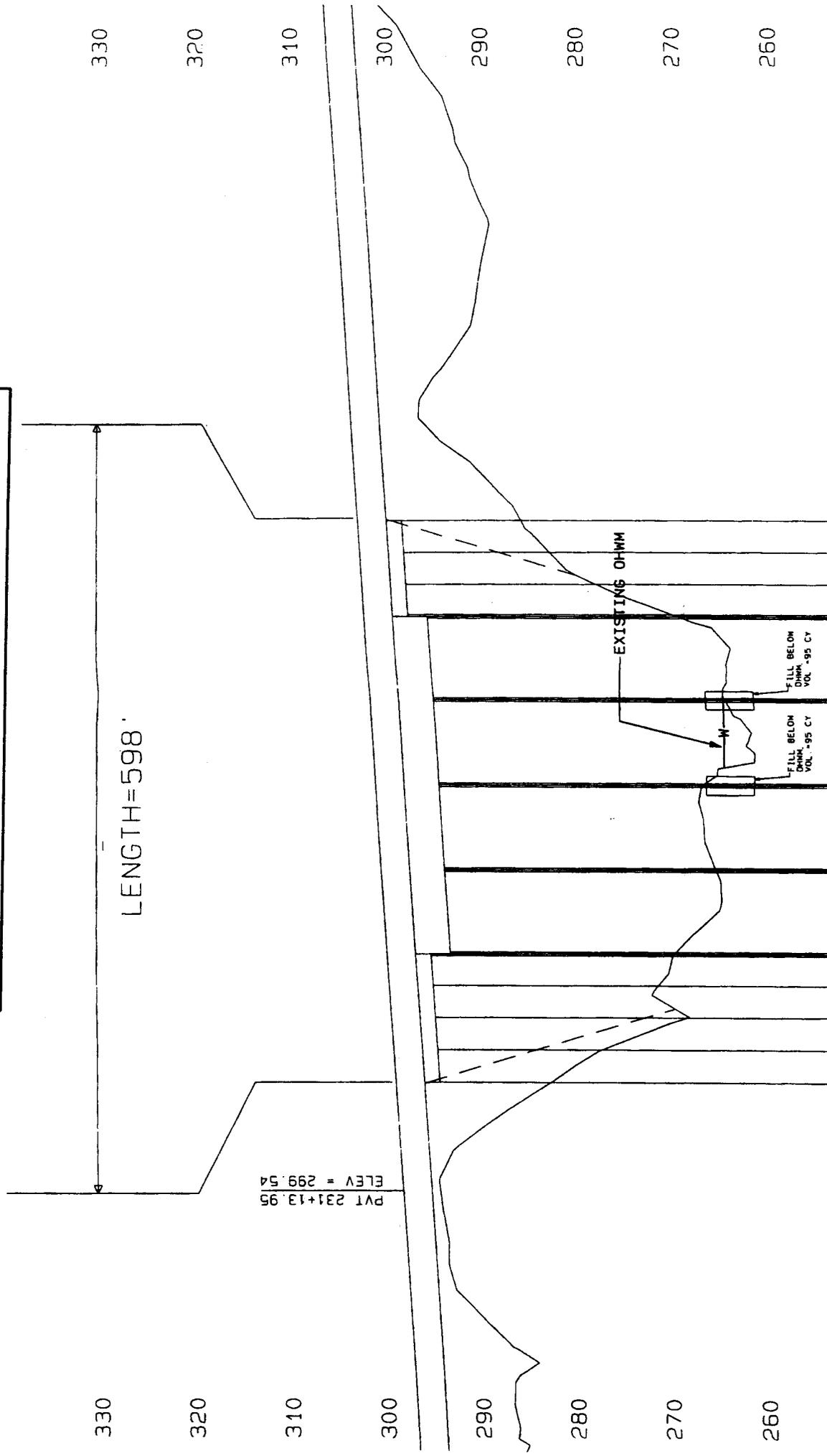


ELEVATION

FIGURE A-19
Typical Trestle

FIGURE A-20

Eastwood Bayou Bridge/Trestle Combination



ORDINARY HIGH WATER MARK = EL 266+/-

230+00

235+00

240+00

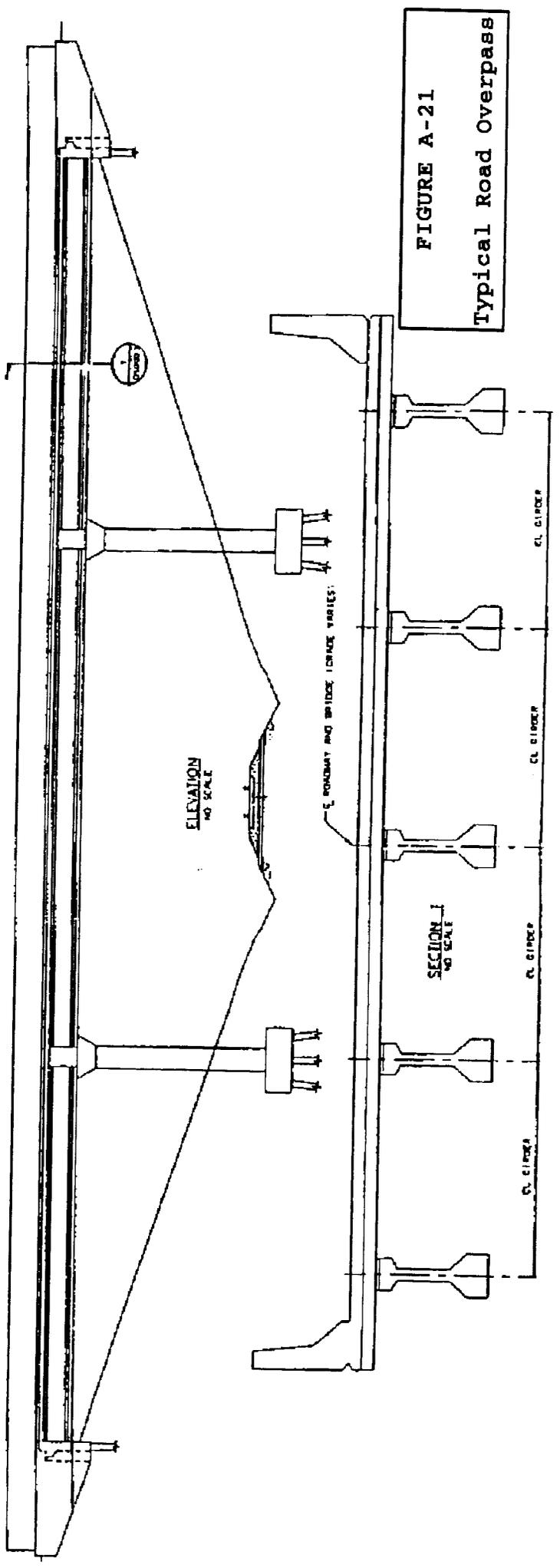
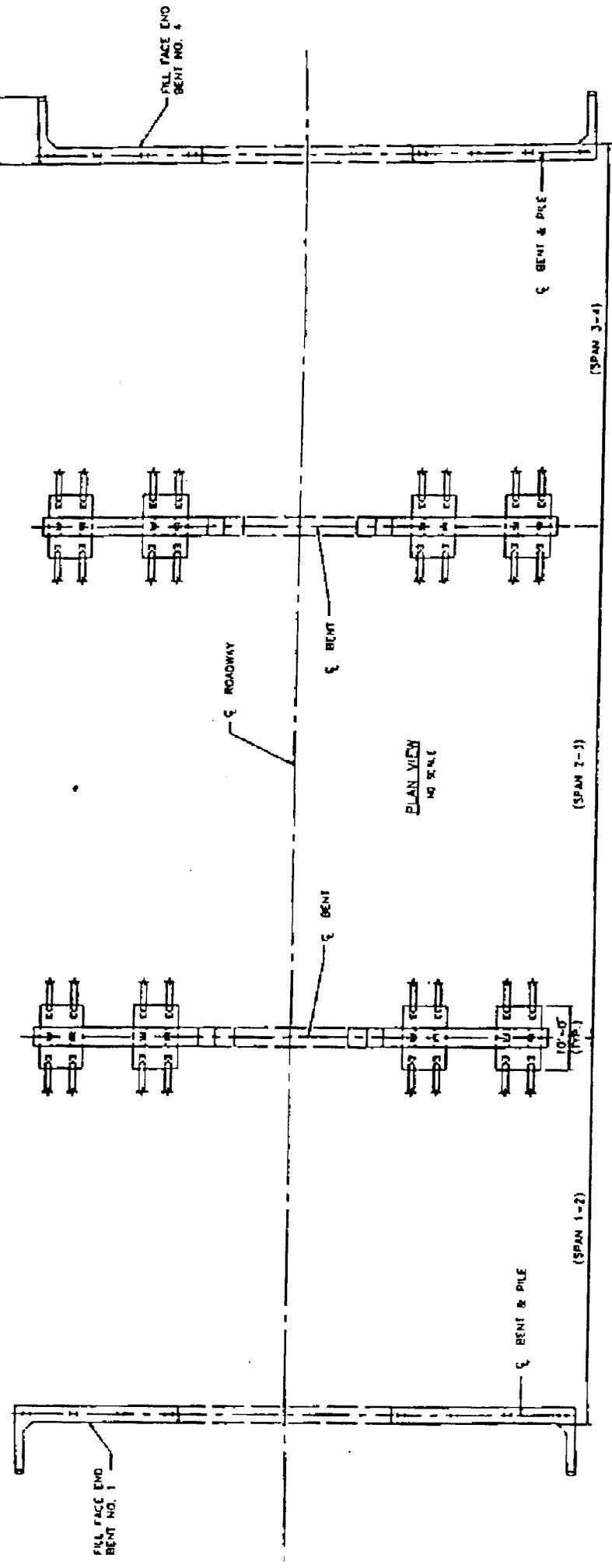


FIGURE A-21
Typical Road Overpass

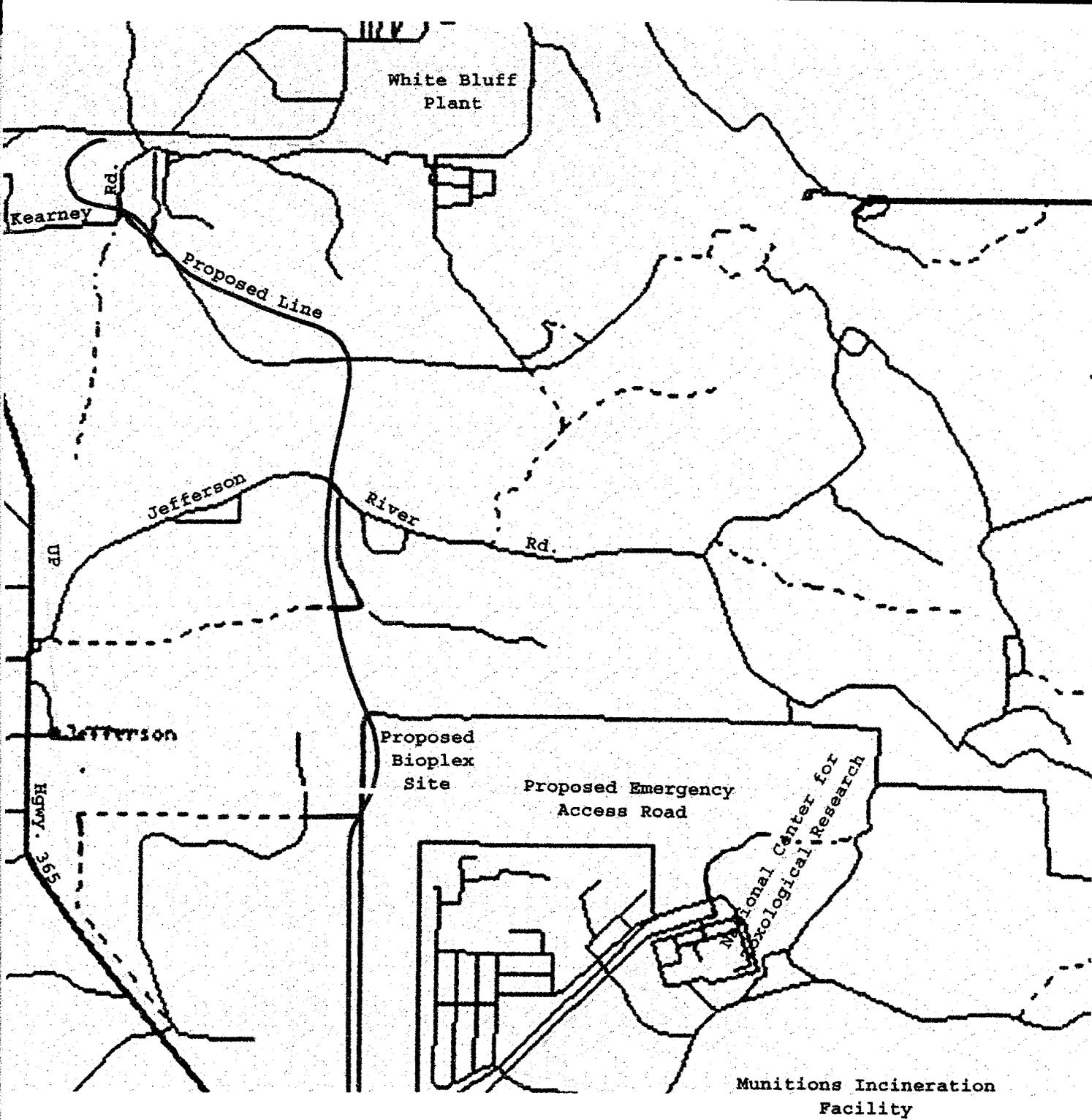


FIGURE A-22
Proposed Location of Emergency Access Road

APPENDIX B

Elaine K. Kaiser, Esq.
April 19, 2000
Page 2

- (2) On-site inspection. On December 8, 1999, the location of the proposed route was inspected by Ms. Dawkins, the third party STB consultant retained for this project; by the engineering firm retained for this project; by the environmental consultant retained for this project; by representatives of the U.S. Corps of Engineers, the Arkansas State Highway and Transportation Department's Environmental Division, and the Arkansas Soil and Water Conservation Commission; the Jefferson County Judge; and by representatives of Entergy. The Board and other agencies were thus able to inspect and study the proposed route in person and ask any questions about the relevant environment.
- (3) Pursuant to the Clean Water Act, a section 404 permit application will be filed shortly with the Corps of Engineers. In connection with the review for a section 404 application, Entergy has undertaken to minimize any potential impact on wetlands. As a result, the Corps has thus far viewed the project as a simple linear project with minor trestles. While Entergy anticipates no significant mitigation issues to be imposed by the Corps, because Entergy has proactively mitigated all known potential concerns, Entergy will undertake to coordinate and abide by conditions determined by the Corps to be necessary.
- (4) The proposed line is to be located within a limited and defined geographic region of Jefferson County, Arkansas. All of the land involved is either in the process of being purchased in fee by Entergy or is part of Pine Bluff Arsenal property over which Entergy will have an easement.
- (5) No significant environmental impact. Throughout the study of this project, Entergy has undertaken to minimize the potential environmental impacts of this proposed construction on the area. Exhibit 1 attached to this letter compares the socioeconomic and environmental factors for the preferred route, Route A3, to the alternative routes. As can be seen from Exhibit 1, the construction of the rail line, as proposed, will result in no significant incremental environmental impact. On-site assessment and surveys of the proposed route have already been conducted by professional consultants and based upon those studies there are no threatened or endangered species along the route and the wetlands impact will be negligible if any at all. In addition, the number of public at-grade crossings, residences, schools and hospitals potentially impacted are either minimal or have been minimized. In fact, the preferred route was selected specifically to avoid the residential community of Jefferson even though the project would be easier from an engineering and cost standpoint under the alternative routes. In keeping with Entergy's efforts to minimize any potential impact on the area, Entergy has designed the preferred route to actually

SURFACE TRANSPORTATION BOARD
Washington, DC 20423

Attachment 2

OFFICE OF ECONOMICS, ENVIRONMENTAL ANALYSIS, AND ADMINISTRATION

June 30, 2000

Mr. John Molm
Troutman Sanders LLP
1300 I Street, N.W.
Washington, DC 20005-3314

Re: Entergy Arkansas - Proposed Construction of a Rail Line near -
Pine Bluff - Waiver from the requirements of 49 C.F.R 1105.6(a).

Dear Mr. Molm:

This letter responds to your request for a waiver from the requirements of 49 C.F.R. 1105.6 (a) which provides that environmental impact statements (EIS) will normally be prepared for rail construction proposals. The Section of Environmental Analysis (SEA) has reviewed your request to waive the preparation of an EIS and finds that the preparation of an environmental assessment is appropriate in this proceeding for the following reasons:

- 1) An on-site inspection was conducted by the SEA's third party consultant with representatives of the U.S. Army Corps of Engineers, the Arkansas State Highway and Transportation Department's Environmental Division, the Arkansas Soil and Water Conservation Commission and the Jefferson County Judge, to inspect and preliminarily assess the potential effects of the proposed project on the natural and human environment in the study area.
- 2) The proposed line would be located within a limited and defined geographic region of Jefferson County, Arkansas. All of the land involved is either in the process of being purchased in fee by Entergy or is part of Pine Bluff Arsenal property over which the rail line will have an easement.
- 3) No threatened or endangered species occur along the proposed line. Wetland impacts would be negligible, and impacts to the residential community of Jefferson have been avoided to the extent possible. No known archeological or historic sites appear to be affected by the project.
- 4) A preliminary evaluation by SEA's third party consultant indicates that no significant

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john.molm@troutmansanders.comDirect Dial: 202-274-2957
Fax: 202-274-2917

April 19, 2000

Elaine K. Kaiser, Esq.
Chief, Section of Environmental Analysis
Surface Transportation Board
Room 504
1925 K Street, N.W.
Washington, D.C. 20006

RE: *Finance Docket No. 33782, Petition of Entergy Arkansas and Entergy Rail for Exemption Under 49 U.S.C. § 10901 to Construct and Operate a Rail Line Between White Bluff and Pine Bluff, Arkansas*

Dear Elaine:

This letter is written on behalf of Entergy Arkansas and Entergy Rail ("Entergy"), which, by petition filed July 30, 1999, proposed to construct a rail line approximately eight and six tenths (8.6) miles in length between the industry track at Entergy Arkansas' White Bluff Plant to a former Southern Pacific line at the vicinity of the Gaylord Spur or Arsenal lead.¹ By separate letter today, Entergy is also requesting permission to prepare an Environmental Assessment ("EA") rather than an Environmental Impact Statement ("EIS"). The EIS waiver request outlines the minimized environmental impact that this project will have and why an EA is appropriate. Based upon the careful selection of the proposed route, the pro-active mitigation, and, as a result, the de minimis environmental impacts, Entergy hereby requests permission to provide the results of the environmental review of the preferred route in detail and of the alternative routes narratively.

In the process of selecting a preferred route, Entergy representatives surveyed the general layout of the land and undertook reconnaissance surveys of several alternative routes. There have been on-site inspections of the preferred route by the third-party STB consultant retained

¹ The STB confirmed Entergy's right to build-out to this point in *Union Pacific Corp. et al.-Control and Merger-Southern Pacific Rail Corp., et al.*, Finance Docket No. 32760, Decision No. 88 (STB served March 21, 2000).

Elaine K. Kaiser, Esq.
April 19, 2000
Page 3

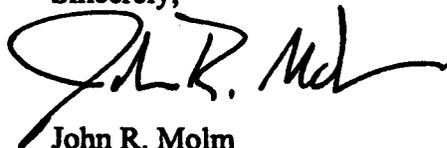
Route A1 starts out similar to Route A but assumed that the Arsenal track would not be used. Since the Arsenal has committed to Entergy's rehabilitation and usage of the Arsenal trackage, Entergy rejected this route as the preferred alternative. Route A1 also had a higher level of wetland acreage that might be affected and a higher number of at-grade crossings.

Route B started out similar to Route A and presumed the usage of the rehabilitated Arsenal track. Route B then moved east of Pine Bluff's downtown in an effort to avoid the developed downtown area of Pine Bluff. In view of the STB's decision confirming that Entergy was not required to build its rail line into downtown Pine Bluff in order to obtain access to the Burlington Northern and Santa Fe Railway, this route was eliminated as the preferred route. Route B was also rejected because of the higher acreage of potentially affected wetlands and the higher disturbance of residential areas.

In summary, the preferred route reflects consideration of, and sensitivity toward, impacts to wetlands, grade crossings, and property ownership. In addition, design considerations for the preferred route reflect a pro-active attempt to mitigate potential socioeconomic and environmental impacts, as well as the desire to avoid at-grade crossings and to minimize the overall impact of the project. Accordingly, based upon the analysis as set forth above, Entergy hereby requests permission to provide the results of the environmental review of the preferred route in detail and of the alternative routes narratively.

If you have any questions regarding this request or need further information, please do not hesitate to call me at (202) 274-2957.

Sincerely,



John R. Molm

Attachment

cc: O.H. "Bud" Storey, Esq.
Janan Honeysuckle, Esq.
Jeffery Herndon
Daniel Gray
Frank Pergolizzi, Esq.
~~Carol Dawkins~~

REPLY TO
ATTENTION OFDEPARTMENT OF THE ARMY
LITTLE ROCK DISTRICT, CORPS OF ENGINEERS
POST OFFICE BOX 867
LITTLE ROCK, ARKANSAS 72203-0867

OCT 19 1999

Engineering and Technical Services Division
Regulatory SectionMs. Jo Carole Dawkins
Environmental Consulting
P.O. Box 845
63 Pine Street
Springville, Alabama 35146

Dear Ms. Dawkins:

This is in regard to your letter dated August 30, 1999, concerning Department of the Army permit requirements pursuant to Section 404 of the Clean Water Act. You requested comments regarding potential environmental impacts by a proposed 8.6-mile alternate rail line to Entergy's White Bluff Generating Station, in Jefferson County, Arkansas.

Section 404 evaluations in the Little Rock District (SWL) are performed on case-by-case basis. Also, a review of our files indicates that such an evaluation has never been initiated in the project area. Therefore, a wetland delineation should be performed on the project area under the 1987 Corps of Engineers Wetland Delineation Manual and submitted to this office for review and concurrence. After concurrence is received, the enclosed permit application should be completed and submitted along with detailed plans of all required fills in waters for the project to this office for evaluation and processing.

Your cooperation in the Regulatory Program is appreciated. If you have any questions, please contact me at (501) 324-5296 and refer to File No. 16071.

Sincerely,

A handwritten signature in cursive script that reads "Larry J. Harrison".

Larry J. Harrison
Project Manager

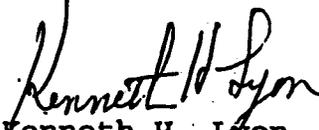
Enclosures

Please read the attached "Notification of Administrative Appeal Options and Process and Request for Appeal" which describes your options regarding this action.

Appropriate erosion and siltation controls must be used during construction and all exposed soil be permanently stabilized. Erosion control measures equivalent to those contained in the enclosed Suggested Methods for Erosion/Sedimentation Control for Pipeline Projects must be implemented during and after construction of the authorized stream crossings.

If you have any questions about this permit or any of its provisions, please contact me at (501) 324-5295 and refer to Permit No. 16071.

Sincerely,


Kenneth H. Lyon
Project Manager

Enclosures

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

**SCOPING COMMENTS
FOR THE
PROPOSED RAIL LINE
PINE BLUFF ARKANSAS
ENVIRONMENTAL IMPACT STATEMENT**

FEDERAL REGULATORY PROGRAMS

EPA federal programs, authorities and special interests include but are not limited to:

- A. Water Quality Management Program - Sections 106, 205, 208, and 303 of the Clean Water Act.
- B. National Pollutant Discharge Elimination System (NPDES) Permit Program - Section 402 of the Clean Water Act.
- C. Drinking Water Programs - Surface Public Water Supply and Underground Water Source Programs - Safe Drinking Water Act.
- D. Section 404 Permit Program Coordination - Section 404 of the Clean Water Act.
- E. Environmental Impact Statement (EIS) Coordination - EIS Preparation and Review Programs - National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act.
- F. Executive Orders 11988 (Floodplain Management) and 11990 (Wetland Protection).
- G. Section 7 of the Endangered Species Act - Protection of threatened or endangered species of flora or fauna.
- H. 36 CFR Part 800 of the Historic Preservation Act - Protection of archeological or historical elements eligible for nomination to the National Register.

Description and requirements of these programs:

- A. The Environmental Protection Agency (EPA) established the Water Quality Management (WQM) Program under the authority of Sections 106, 205, 208 and 303 of the Clean Water Act to develop and implement programs to control point and non-point sources of water pollution. Specific program activities include identifying water pollution problems; assigning the responsibility for problem solving to state and local agencies; and then coordinating with these agencies in developing and implementing solutions to the problems. The state agencies establish their water quality goals and standards, and develop programs to meet these goals. To establish water quality standards, states designate uses for stream segments, and set numerical and general water quality criteria to attain these uses.
- B. Wastewater discharges are considered point sources subject to a National Pollutant Discharge

Length of analysis of environmental impacts varies. If the environmental impact is determined to be slight, the assessment of the impact can be short. If a particular impact, or the impact of the total proposed action is determined to be significant, the assessment should include a detailed analysis of the impact addressed over the life of the project.

SCOPE OF ENVIRONMENTAL ANALYSIS

Section 1502.4 of the Council on Environmental Quality (CEQ) Regulations for Implementing NEPA states that agencies shall make sure the proposal which is subject of an environmental impact statement is properly defined. Agencies shall use the criteria for scope as defined at Section 1508.25 of the CEQ Regulations to determine which proposals shall be the subject of a particular statement. Proposals or parts of proposals which are related to each other closely enough to be, in effect, a single course of action shall be evaluated in a single impact statement.

Section 1508.25 of the CEQ Regulations identifies "scope" as a range of actions, alternatives, and impacts to be considered in an environmental impact statement. To determine the scope of an environmental impact statement agencies shall consider three types of actions, three types of alternatives, and three types of impacts. These include:

(a) Actions (other than unconnected single actions) which may be:

(1) Connected actions, which means that they are closely related and therefore should be discussed in the same impact statement.

Actions are connected if they:

(i) Automatically trigger other actions which may require environmental impact statements.

(ii) Cannot or will not proceed unless other actions are taken previously or simultaneously.

(iii) Are interdependent parts of a larger action and depend on the larger action for their justification.

(2) Cumulative actions, which when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the same impact statement.

(3) Similar actions, which when viewed with other reasonably foreseeable or proposed agency actions, have similarities that provide a basis for evaluating their environmental consequences together, such as common timing or geography.

An agency may wish to analyze these actions in the same statement. The agency should do so when the best way to assess adequately the combined impacts of similar actions or

WATER QUALITY

For each alternative under consideration, we request that the DEIS adopt a process to ensure that the following water quality concerns are assessed. The discussion in the DEIS should be of sufficient detail to determine which sites are environmentally preferable. Site-specific water quality problems need to be assessed in greater detail, if applicable, including the adoption of site-specific mitigation measures to protect water quality and beneficial uses.

- Discuss potential impacts to water quality, beneficial uses and biological resources. Water quality and beneficial uses may be adversely impacted by construction and operation. Evaluate the potential of all program activities to cause adverse impacts to water quality, protected uses and biological resources.

Water quality may be adversely affected by the placement of fill materials in wetlands and other waters of the United States; increased sedimentation, erosion, or turbidity; the runoff of hydrocarbons, heavy metals, toxic materials or other pollutants; the accidental release of hazardous waste; and the accidental discharge of fuels or toxic materials.

- Identify all surface waters that may be affected by the proposed program. Identify the existing and potential beneficial uses of these surface waters. Protected beneficial uses for streams, creeks, lagoons, tidal areas and other surface waters may include one or more of the following: cold and warm freshwater habitat; marine habitat; fish spawning and migration; shellfish habitat; wildlife habitat; preservation of rare, threatened or endangered species; groundwater recharge; freshwater replenishment; public drinking water supplies; agricultural supply; and water contact and non-contact recreation.

Protecting water quality ensures the protection of its beneficial uses. Especially critical is the protection of several sensitive uses. It is important to protect water quality in order to maintain freshwater and wildlife habitats, since many species are sensitive to the introduction of pollutants or the adverse modification of their habitats. It is also important to protect groundwater recharge and freshwater replenishment, particularly if public drinking water supplies could be adversely affected. These sensitive beneficial uses should be carefully considered when evaluating potential impacts caused by the placement of fill, erosion, sedimentation, the runoff of pollutants, and the accidental discharge of hazardous waste or toxic substances.

- Discuss how the project will comply with state and local water quality management plans, state water quality objectives; and state-adopted, EPA-approved water quality standards. Under Section 313 of the CWA, the lead agency must meet state water quality standards regardless of the proposed activity and manage in a manner to protect or improve water quality where standards are not established.

In 1987, Congress amended the CWA by adding Section 319. Section 319 requires states to assess nonpoint source water pollution problems, develop nonpoint source pollution management programs, and implement controls to protect and improve water quality and

The DEIS should determine whether the project will require the placement of dredged or fill material into waters of the United States, including wetlands, an activity regulated under Section 404(b)(1) of the Clean Water Act (CWA). We recommend working closely the appropriate district of the U.S. Army Corps of Engineers to determine if Section 404 is applicable. We recommend the preservation and enhancement of existing wetland resources.

It is essential that every practicable effort be made to first avoid and then reduce the amount of fill placed into waters of the United States. It would be useful for the DEIS to make an initial determination whether the proposed project may require the placement of fill material in waters of the United States. If so, the DEIS should substantiate that appropriate and practicable steps have been taken to avoid and minimize the adverse impacts on aquatic ecosystems. Finally, the DEIS must describe appropriate and practicable measures to compensate for the unavoidable loss of wetlands and other waters of the United States.

If wetlands or waters of the United States may be impacted by activities regulated by Section 404, we strongly recommend that the DEIS contain a thorough discussion of the proposed program's consistency with Federal Guidelines for specification of disposal sites for dredged or fill materials [the 404(b)(1) Guidelines, found at 40 CFR Part 230]. For each alternative under consideration, we request that the DEIS adopt a process to ensure that the following Section 404 concerns are assessed. The discussion in the DEIS should be of sufficient detail to determine which site is environmentally preferable in terms of compliance with the Section 404(b)(1) Guidelines. Site-specific EAs or EISs will need to assess these issues in greater detail, if applicable.

In order to demonstrate compliance with the 404(b)(1) Guidelines, the DEIS should meet the following criteria to the extent possible:

- The proposed discharge must be the practicable alternative which would have the least adverse impact on the aquatic ecosystem [40 CFR 230.10(a)]. If wetlands would be filled, then the DEIS should explain why there are no practicable alternatives to locating the project within wetlands and show how the project has been designed to minimize harm to existing wetlands.
- The proposed action must not cause or contribute to significant degradation of waters of the United States including wetlands and other special aquatic sites [40 CFR 230.10(c)]. Significant degradation includes the loss of fish and wildlife habitat and the loss of other wetland habitat values and functions. Significant degradation also includes cumulative impacts.
- The proposed project does not violate state-adopted, EPA-approved water quality standards or jeopardize the continued existence of any species listed as threatened or endangered under the Endangered Species Act [40 CFR 230.10(b)].
- Minimize the number of acres subject to Section 404 jurisdiction that would be

permanently lost or degraded due to impacts other than the placement of fill (e.g., the impacts of erosion, sedimentation and runoff of pollutants on wetland habitats; diversion of water from wetland habitats).

- Characterize baseline conditions. Include maps, text, and tables that feature areas occupied by wetlands, aquatic systems, and non-wetland riparian habitat. Direct, indirect and cumulative impacts to these resources should be fully described.

- Provide a programmatic mitigation proposal to fully compensate for the loss or degradation of wetland habitats, including the proposed mitigation replacement ratio, the habitat value and proposed location of replacement habitats, general grading and revegetation plans and a biological maintenance and monitoring program.

AIR QUALITY COMMENTS - CLEAN AIR ACT

For each alternative under consideration, we request that the DEIS adopt a process to ensure that the air quality concerns identified below are assessed. The discussion in the DEIS should be of sufficient detail to determine which site is environmentally preferable.

Discuss existing air quality conditions in terms of National Ambient Air Quality Standards (NAAQS), Federal Prevention of Significant Deterioration (PSD) increments, and state air quality standards. State air quality laws should also be discussed.

Identify whether program activities could adversely affect air quality in terms of ambient concentrations and the numbers of federal/state standards and increment violations.

Discuss the types and effectiveness of mitigation measures that will be used to protect air quality (e.g., vapor recovery systems, fumes incinerators, and dust control measures during construction phase). Identify parties which will be responsible for implementing air quality mitigation measures.

Coordinate with state/local/regional air pollution control agencies on air quality planning, air quality modeling, compliance with federal/state air quality standards, the need for air permits, air quality monitoring, and mitigation for adverse impacts.

PESTICIDES

The DEIS should state whether or not any pesticides (e.g., herbicides, insecticides, rodenticide, fungicides, etc.) will be used for vegetation clearance or control, maintenance and harvest operations, or the control of rat, mosquito or other vector populations. If so, the types of pesticides, application rates, and application procedures should be addressed. Any pesticides used must be registered with the EPA and the state, and label directions and instructions followed. All applicable state regulations must also be followed. In addition, because the regulatory status of chemicals is constantly changing, EPA recommends that a periodic review of the chemical's

current regulatory status be done prior to application. Should pesticides be used, EPA recommends that a specific section of the DEIS be devoted to the subject.

AGRICULTURAL LAND

The DEIS should clarify if any agricultural land would be impacted by the program. If so, the DEIS should use the U.S. Department of Agriculture classification scheme to describe the present use of agricultural land which would be affected. If this acreage is prime agricultural land (Class 2), consideration should be given to the Council on Environmental Quality (CEQ) (August 30, 1976 and August 11, 1980) which urge the protection of prime agricultural land. Mitigation measures should be developed to avoid loss of any such valuable resources.

MITIGATION

Section 1502.14(f) of the CEQ regulations state what an EIS must address for each alternative appropriate mitigation measures not included in the proposed action or alternatives. Section 1508.20 defines mitigation to include: a) avoiding the impact altogether by not taking a certain action or parts of an action; b) minimizing impacts by limiting the degree or magnitude of the action and its implementation; c) rectifying the impact by repairing, rehabilitating or restoring the affected environment; d) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and e) compensating for the impact by replacing or providing substitute resources or environment. Mitigation should be fully addressed in the DEIS.

ENDANGERED SPECIES

The DEIS should demonstrate adequate coordination with the Fish and wildlife Service to identify any adverse effects, determine the effect and take measures to eliminate it and fully comply with the requirements under Section 7 of the Endangered Species Act.

CUMULATIVE IMPACT

The DEIS should thoroughly assess the cumulative effects of the proposed alternatives. Cumulative impact has been defined by the President's Council on Environmental Quality as, "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions". Cumulative impact can result from individually minor but collectively significant actions taking over a period of time. Impacts or effects include both direct effects which are caused by an action and occur at the time and place as the action, and indirect effects which are caused by the action and occur later in time and are farther removed in distance but are still reasonably foreseeable.

In assessing cumulative impact, consideration is given to (1) the degree to which the proposed action affects public health or safety, (2) unique characteristics of the geographic area, (3) the degree to which the possible effects on the human environment are highly uncertain or

involve unique or unknown risks, and (5) whether the action is related to other actions which are individually insignificant but cumulatively cause significant impact on the environment.

In light of the above mentioned concerns, we ask that the DEIS include a section on cumulative impact assessment and describe the measures taken to minimize the effects.

HISTORIC PRESERVATION

36 CFR Part 800 of the Historic Preservation Act requires federal agencies to identify and determine the effect of the action on any district, site, building, structure, or object listed in or eligible for listing in the National Register of Historic Places. The DEIS should demonstrate proper coordination with the state historical preservation officer. If adverse impacts are identified, the Federal agency should request formal consultation with the Advisory Council on Historic Preservation (36 CFR, Part 800).



IN REPLY REFER TO:

United States Department of the Interior

FISH AND WILDLIFE SERVICE

1500 Museum Road, Suite 105
Conway, Arkansas 72032

September 21, 1999

Ms. Jo Carole Dawkins
Environmental Consulting
P.O. Box 845
Springville, Alabama 35146

Dear Ms. Dawkins:

The Fish and Wildlife Service has reviewed the information supplied in your letter dated August 30, 1999, concerning the proposed construction of an 8.6 mile rail line from Entergy's White Bluff Generating Station to the Dexter Gate of the Pine Bluff Arsenal in Jefferson County, Arkansas. Our comments are submitted in accordance with the Endangered Species Act (87 Stat. 884, as amended 16 U.S.C. 1531 et seq.)

The red-cockaded woodpecker (*Picoides borealis*) is known to occur in Jefferson County. The red-cockaded woodpecker is associated with old growth pine forests and should not be adversely impacted as long as the proposed project does not disturb this type of habitat. Therefore, no further consultation in accordance with the Endangered Species Act is required.

In future requests for technical assistance, please include the project location, quadrangle name, latitude and longitude on a USGS 7.5 minute series topographic map. We appreciate your interest in the preservation of endangered species.

Sincerely,

Deborah W. Ryckele
Fish and Wildlife Biologist

99-487



IN REPLY REFER TO:

United States Department of the Interior

FISH AND WILDLIFE SERVICE

1500 Museum Road, Suite 105
Conway, Arkansas 72032



June 2, 1999

Attachment

Ms. Shannon P. Holbrook
FTN Associates, Ltd.
3 Innwood Circle, Suite 220
Little Rock, Arkansas 72211

Dear Ms. Holbrook:

The Fish and Wildlife Service has reviewed the information supplied in your letter dated May 17, 1999, concerning the proposed Entergy railroad spur project in Jefferson County, Arkansas (FTN No. 6047-040). Our comments are submitted in accordance with the Endangered Species Act (ESA) (87 Stat. 884, as amended 16 U.S.C. 1531 et seq.).

No federally listed or proposed threatened or endangered species are currently known to occur in the impact area of the project. This satisfies the requirements of Section 7 of the ESA. However, if the proposed project would impact any wetlands or streams, we recommend that you contact the Little Rock District Corps of Engineers to determine whether a permit is required pursuant to Section 404 of the Clean Water Act.

We appreciate your interest in the preservation of endangered species and your assistance and cooperation in specifying the quad name and project location on a USGS 7.5 minute series topographic map. As we will soon be implementing a GIS program, future project descriptions should also include latitude and longitude.

Future requests for technical assistance in the state of Arkansas should be directed to our new office in Conway, Arkansas:

Fish and Wildlife Service
1500 Museum Road, Suite 105
Conway, Arkansas 72032

Sincerely,


Allan J. Mueller
Field Supervisor

99-308



September 10, 1999

ARKANSAS
HISTORIC
PRESERVATION
PROGRAM

Ms. Jo Carole Dawkins
Joe Carole Dawkins Environmental Consulting
P.O. Box 845
63 Pine Street
Springville, AL 35146

RE: Jefferson County - General
Section 106 Review - ICC; AHPP Tracking No. #39182
Proposed Entergy White Bluff Generating Station 8.6 Mile Rail
Line

Dear Ms. Dawkins:

This letter is written in response to your inquiry, regarding properties of architectural, historical, or archeological significance in the area of the proposed referenced project.

In order for the Arkansas Historic Preservation Program (AHPP) to complete its review of the proposed project, we will need the additional information checked below:

- a 7.5 minute U.S.G.S topographic map clearly delineating the project route;
- a project description detailing all aspects of the proposed project;
- the location, age, and photographs of structures (if any) to be renovated, removed, demolished, or abandoned as a result of this project;
- photographs of any structures 50 years old or older on property directly adjacent to the project area.

Once we have received the above information, we will complete our review as expeditiously as possible. If you have any questions, please contact me at (501) 324-9880.

Sincerely,

George McCluskey
Senior Archeologist



**THE FINAL RESPONSE OF THE ARKANSAS HISTORIC PRESERVATION PROGRAM
WILL BE ATTACHED WHEN IT IS RECEIVED**

September 15, 1999

Ms. Jo Carole Dawkins
Environmental Consulting
P. O. Box 845
Springville, Al 35146

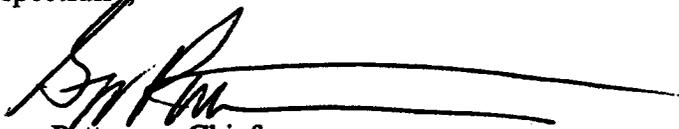
Dear Ms. Dawkins,

I am writing in response to your communication regarding the proposed rail line construction and operation near Pine Bluff, Arkansas. On behalf of the Arkansas Department of Environmental Quality, I thank you for inviting our comments regarding the potential environmental impact this project could have on the community in that area. It is so important that we all work together to preserve our resources when and where we can.

After careful review, the ADEQ does not see any significant environmental concerns that need to be addressed, therefore, we have no comments at this time.

As the project develops, if you feel there are any changes that may require our attention, please feel free to contact us. Again, thank you for your consideration.

Respectfully,



Gregg Patterson, Chief
Environmental Preservation Division

GP/mb

cc: Randall Mathis, Director
Jim Shirrell, Deputy Director
EP Corr File



Arkansas GEOLOGICAL COMMISSION

VARDELLE PARHAM GEOLOGY CENTER • 3815 WEST ROOSEVELT ROAD • LITTLE ROCK, ARKANSAS 72204

Mike Huckabee
Governor

William V. Bus
Director and State Geologist

September 10, 1999

Ms. Carole Dawkins
Environmental Consulting
65 Pine Street
P. O. Box 845
Springville, AL 35146

Dear Ms. Dawkins:

This letter is in response for comments about the proposed 8.6 miles of railroad spur line for the White Bluff power plant in Jefferson County, Arkansas.

The only comment I wish to make is that construction would be on sand and gravel of Quaternary age and of clay and silt in the Jackson Group which is Eocene in age. These units should not present any special environmental problems since the railroad will be used for the transportation of coal. These units are not considered to be major aquifers.

If you have any questions please feel free to contact me.

Sincerely,

William L. Prior
Geologist

PHONE: (501) 296-1877; FAX: (501) 663-7360

agc@mail.state.ar.us

An equal opportunity employer

ARKANSAS STATE HIGHWAY COMMISSION

Attachment 10

HERBY BRANSCUM, JR., CHAIRMAN
PERRYVILLE

JOHN "M" LIPTON, VICE CHAIRMAN
WARREN

J.W. "BUDDY" BENAFIELD
HICKORY PLAINS



MARY P. "PRISSY" HICKERSON
TEXARKANA

JONATHAN BARNETT
SILOAM SPRINGS

DAN FLOWERS
DIRECTOR OF
HIGHWAYS AND TRANSPORTATION

P.O. Box 2261
LITTLE ROCK, ARKANSAS 72203-2261
TELEPHONE No. (501) 569-2000
FAX No. (501) 569-2400

October 8, 1999

Ms. Jo Carole Dawkins
Environmental Consulting
Post Office Box 845
63 Pine Street
Springville, Alabama 35146

Re: Proposed Rail Line Construction
Jefferson County, Arkansas

Dear Ms. Dawkins:

Reference is made to your recent letter requesting information regarding the proposed rail line construction/reconstruction from Entergy's White Bluff Generating Station to Pine Bluff, Arkansas.

The proposed rail line alternatives described in your letter do not intersect any existing or proposed highways; therefore, the proposed rail line should have minimal impacts upon the state's highway system. However, if future modifications to these rail line alignments do intersect with Arkansas state highway system, please contact our Department.

If you have any questions or need additional information regarding this matter, please contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Dan Flowers".

Dan Flowers
Director of Highways
and Transportation

cc: Chief Engineer

CITY OF PINE BLUFF, ARKANSAS

OFFICE OF THE MAYOR

Attachment 11

JERRY TAYLOR
Mayor

September 16, 1999

Ms. Jo Carole Dawkins
Environmental Consulting
P.O. Box 845
Springville, AL 35146

Dear Ms. Dawkins:

In reference to your letter of August 30, 1999 concerning an alternate access rail line to the White Bluff Generating Station, as I'm sure you are aware, a \$550 million chemical munitions incineration facility is under construction at the U.S. Army-Pine Bluff Arsenal for the purpose of destroying the second largest stockpile of chemical munitions in the United States. The Jefferson County Office of Emergency Services (OES) has submitted a funding request to the Federal Emergency Management Agency concerning engineering, design and highway construction of two new roads to serve the Pine Bluff Arsenal (PBA). The funding request has been made in order to reduce the risk for individuals living and/or working near the Pine Bluff Arsenal and the incineration facility by providing for an emergency evacuation roadway system. While the request has not yet been granted, should it be in the future, or should the projects proceed without FEMA funding, the new roadways will require construction of overpasses at the UP mainline and S.H.365. The rail line project may impact these overpasses in terms of length and cost. It is also our understanding that the Jefferson County Judge has a verbal agreement with the UP Chief Dispatcher that trains not stop between Jefferson and PBA's Dexter Gate except in cases of emergencies.

There are also future plans to construct a Bioplex on land that was authorized to be transferred from the Pine Bluff Arsenal to the Economic Development Alliance of Jefferson County (the Alliance). This development will include construction of a new roadway from S.H. 365 to the property and proposed Bioplex site. Additional railway crossing in this area may impact the Bioplex development.

Other than these proposals for future development, the City is not aware of any environmental impacts the proposed rail line construction and operation would have on the areas. If you require further information on the emergency evacuation routes proposed to FEMA or on the proposed Bioplex Development, you may contact Wally Hunt of OES at 870-541-5470 or Derrill Pierce at the Alliance, 870-535-0110.

Sincerely,


Jerry Taylor
Mayor



200 EAST EIGHTH AVENUE / PINE BLUFF, ARKANSAS 71601 / TELEPHONE (870) 543-1855 / FAX (870) 543-5198

APPENDIX D

Environmental Justice Analysis

Executive Order No. 12898, i.e., "Federal Actions to Address Environmental Justice in Minority and Low-Income Populations," was issued by President William J. Clinton in 1994 and requires individual federal agencies to develop approaches to address environmental justice concerns in agency programs, policies, and procedures. Entergy conducted an environmental justice analysis on several block groups within Jefferson County, Arkansas that may be affected by construction of the proposed Entergy rail line project. The analysis was based on census information and norms compiled from US Census Bureau data. Subject norms included percent of minorities and percent of low-income population in Jefferson County and were used as a point of reference for comparison to actual census block data using criteria that define Environmental Justice Communities of Concern (EJCOC), as set forth by US Environmental Protection Agency (EPA). The analysis indicated that EJCOC exist in two of the analyzed block groups. The EPA's "Final Guidance for Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analyses" (EPA, 1998) states that:

"If the environmental justice screening analysis does not identify minority communities or low-income communities, and suggests no disproportionately high and adverse effects on those communities and/or on tribal resources, then the Environmental Assessment (EA) or Finding of No Significant Impact (FONSI) should describe the analysis and note the conclusion."

The following sections provide an overview of background information, the analysis conducted to determine the presence or absence of EJCOC at the project area located in Jefferson County, and conclusions based on the analysis.

Introduction

A primary purpose of Executive Order 12898 was to ensure that federal agencies address human health and environmental conditions in minority communities and low-income communities. The order requires federal agencies to develop strategies to address environmental justice concerns within the context of agency operations. Executive Order 12898 was accompanied by a Presidential memorandum, which stresses that existing laws, e.g., National Environmental Policy Act (NEPA) as promulgated by the Council on Environmental Quality (CEQ), should provide opportunities for federal agencies to consider environmental hazards in minority communities and low-income communities.

EPA released a document in April 1995 titled "Environmental Justice Strategy: Executive Order 12898", which defines the approaches by which EPA will promote environmental justice. This document ensures that disproportionately high and adverse human health or environmental effects on minority communities and low-income communities, which are referred to as environmental justice communities of concern (EJCOC), are identified and addressed.

Executive Order 12898 does not require independent federal agencies, e.g., the Surface Transportation Board (Board), to conduct an environmental justice analysis. An environmental justice analysis was conducted in conjunction with an EA for the Entergy rail line project, however, in order to:

1. Determine the presence or absence of EJCOC surrounding the proposed Entergy rail line project; and, if such a community is present, to
2. Determine the presence or absence of disproportionately high and adverse human health or environmental effects on the citizens of that community.

While the Board is not a Federal Executive Branch agency and not required to conduct an environmental justice analysis, an analysis was conducted during the EA process for the following reasons:

3. The President requested agencies to comply with Executive Order 12898, particularly during the NEPA process;
4. The US Department of Transportation Order titled "To Address Environmental Justice in Minority Populations and Low-Income Populations", the CEQ guidance, and the draft EPA guidance on environmental justice emphasize addressing environmental justice concerns in the NEPA context; and
5. The Board is responsible for ensuring that this proposed project is consistent with the public interest.

Under the NEPA of 1969, 42 U.S.C. 4331-4335, the Board is required to examine direct, indirect, and cumulative environmental impacts of actions requiring Board authorization.

Methodology and Analysis

The methodology used to determine whether a potential environmental justice concern exists involved an analysis of population characteristics of the area in the vicinity of the proposed project corridor. This analysis was conducted by the GIS Applications Laboratory, University of Arkansas at Little Rock.

Census blocks are the smallest geographic entity for which the Census Bureau collects data. The census blocks comprise block groups, which in turn make up census tracts. The Bureau tabulated population data for census blocks in 1990, but the block group is the lowest geographic area for which the Bureau tabulated 1990 socioeconomic data. A Geographical Information System (GIS) was used initially to determine the specific areas that would be potentially affected, *i.e.*, crossed by the proposed project corridor. Maps were generated for use in determining census blocks and block groups contiguous with the proposed project corridor.

Census data for the census block groups contiguous with the proposed project corridor were obtained to determine whether any potential areas of environmental justice concern existed. For this analysis, a four-step approach was used to determine the areas that may warrant environmental justice status.

In Step 1, the EPA criteria that have been established for EJCOG were reviewed. These criteria include the following:

6. At least one-half (50%) of the census block being analyzed is minority status; or
7. At least one-half (50%) of the census block being analyzed is low-income status; or
8. The percentage minority of the census block being analyzed is more than 10 percentage points higher than the percent minority status for the entire county in which the block is located; or
9. The percentage low-income status of the census block being analyzed is more than 10 percent higher than the percentage of low-income for the entire county in which the block is located.

In Step 2, appropriate Jefferson County values were determined for percent minority, percent low-income, median household income for poverty level, and per capita income for poverty level. According to 1990 census data, the national household poverty level income (annual income level below which a household is considered in poverty) was \$12,674.00, and the poverty level per capita income (annual income level below which an individual person is considered in poverty) was \$6,418.00. These income levels were used to determine the percentage of households or individuals below the respective poverty level for the block groups adjacent to the project corridor. Socioeconomic data are available for block groups but are not available for blocks.

The percent minority for Jefferson County was 44.0%. The percent low-income for households for Jefferson County was 23.5%. The percent per capita low-income for the county was 23.9%. These calculated values were the reference points from which comparisons to block group data were made.

In Step 3, minority and low-income percentages for the census block groups within tracts adjacent to the proposed corridor were calculated. Five census tracts and 5 block groups were contiguous to the project area. Again, using 1990 census data, values of minority and low-income were calculated for each census block group that was contiguous to the linear project corridor. These calculated percentages appear in Table 1.

In Step 4, the calculated census block minority and low-income percentages from Step 3 were compared to values calculated in Step 2 using the EPA criteria discussed in Step 1. Table 1 lists the minority and low-income percentages calculated for each block group that is adjacent to the proposed corridor.

Table 1. Comparison of Census Data to Environmental Justice Criteria in Proposed Project Area¹

Census Tract	Block Group	Total Population	Percent Minority	Percent Households Below Poverty Level	Percent Population Below Poverty Level	Meets EJCOG Criteria?
2.00	2	743	16.7	28.6	25.6	NO
3.02	1	1,630	0.6	12.4	13.1	NO
3.03	9	598	35.3	33.2	34.3	NO
4.85	1	236	33.5	0.0	0.0	NO
5.02	9	696	100.0	41.3	53.5	YES ²

¹ Information developed and provided by Ms. Phyllis Smith, Director, GIS Applications Laboratory, University of Arkansas at Little Rock.

²Census Tract data discussed in previous section.

As can be seen in Table 1, one census tract contains a block group that meets one of the four criteria listed above. That is to say, Block Group 9 of Census Tract 5.02 contains at least one-half or 50 percent of either minorities or low-income population. Nevertheless, the broad-based data provided for Census Tract 5.02 in Table 1 would be misleading without a more detailed analysis. The following paragraph provides additional information regarding Census Tract 5.02.

Census Tract 5.02 occupies 11.83 square miles and begins at the southern boundary of the Pine Bluff Arsenal. The proposed railroad project barely enters Block Group 9 of Census Tract 5.02, *i.e.*, extends no more than approximately 2,400 linear feet beyond the south boundary of the Arsenal. Of that total distance, less than approximately 1,200 linear feet represents new track and the remainder represents track to be rehabilitated. Figure 1 depicts blocks within Block Group 9. As shown on the map, the proposed project barely enters Block 901B, which according to the census data represents a block that is characterized by an absence of inhabitants and housing units. Even looking past the southern terminus of the project area and into the next four additional blocks, *i.e.*, Blocks 902, 903, 904B, and 905D, the census data again indicates that each of these blocks is characterized by an absence of inhabitants and housing units. In fact, the northern boundary of Block 905D, which is the southernmost of these five blocks that lack inhabitants, is located at a distance of approximately 6,000 feet (>1 mile) from the southern boundary of the Arsenal and approximately 3,600 feet (>0.65 mile) south of the southern terminus of the project area.

Census Tract 4.85 is of some interest because it supports a high percent minority, *i.e.*, 33.5 percent, but has 0.0 percent households below poverty level and 0.0 percent population below poverty level. This housing area, which comprises a total of 22.16 square miles, is a noteworthy community for Jefferson County by virtue of its relatively high minority population but an absence of households and population below the poverty level. Census Tract 4.85 is located entirely within Pine Bluff Arsenal and represents a housing area for military personnel assigned to this Department of the Army facility. As would be expected, the percentage of minority among these military personnel is high but their officer status eliminates poverty level considerations.

Conclusion

Based on census block group data analyzed for Jefferson County using EPA criteria, the study area for the proposed rail corridor of the Entergy Railroad Line project initially appears to have a single Environmental Justice Community of Concern (EJCOC). In the absence of a more detailed analysis, it would appear that a disproportionately high or adverse human health or environmental effect could result from the proposed project within Block Group 9 of Census Tract 5.02. A detailed analysis of census data available for Census Tract 5.02, Block Group 9, however, has shown that the scope of the data provided in Table 1 could be misleading (Figure 1).

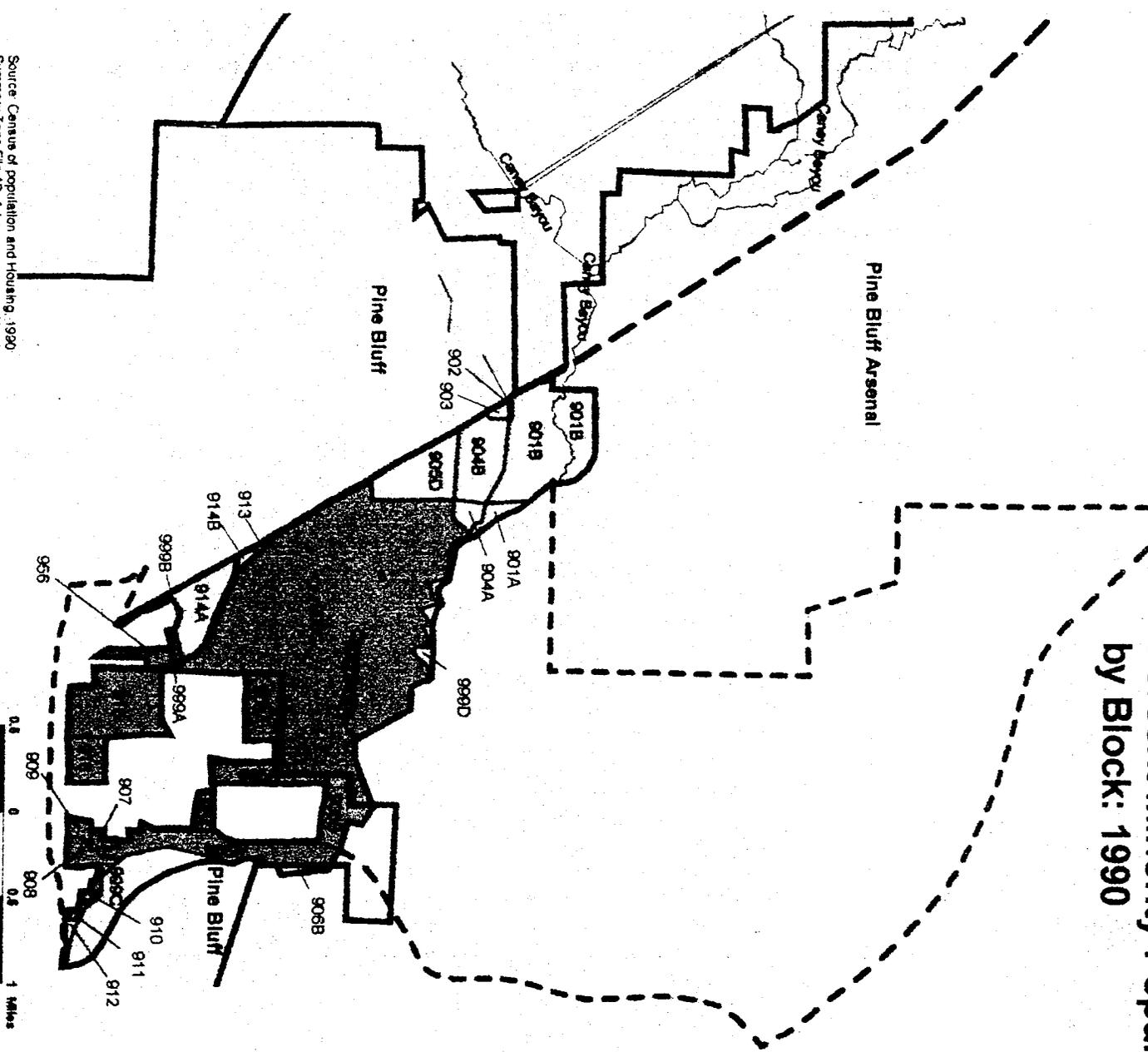
As shown by census data in Figure 1 for Block Group 9, that block group does support some blocks that individually would meet EJCOC criteria on the basis of percent minority, percent households below poverty level, and/or percent population below

poverty level. However, none of the 5 blocks within Block Group 9 that are contiguous or close to the southern terminus of the project area meet EJCOG criteria. As shown in Figure 1, the 1990 census data indicates that there are no inhabitants and housing units within a group of 5 contiguous blocks of Block Group 9 which includes less than 2,400 linear feet of the project line and actually extends beyond the southern terminus of the project area, *i.e.*, Blocks 901B, 902, 903, 904B, and 905D. The northern boundary of Block 905C, which represents the fifth block within Block Group 5.02 from the southern terminus project area, is at a distance of approximately 6,000 feet, *i.e.*, greater than 1 mile, from the south boundary of the Arsenal.

In conclusion, the project area does not meet EJCOG criteria and therefore does not have a potential to cause disproportionately high and adverse human health or environmental effects on the citizens of the community in the vicinity of the proposed railroad project.

Percent Minority Population; Tract 5.02 Block Group 9 by Block: 1990

Blocks	Total Population	Percent White	Percent Minority	Housing Units
901A	0	0.0	0.0	0
901B	0	0.0	0.0	0
902	0	0.0	0.0	0
903	0	0.0	0.0	0
904A	0	0.0	0.0	0
904B	0	0.0	0.0	0
905A	117	0.0	100.0	46
905B	10	40.0	60.0	3
905C	15	0.0	100.0	4
905D	0	0.0	0.0	0
906A	142	2.1	97.9	56
906B	0	0.0	0.0	0
907	10	0.0	100.0	12
908	12	0.0	100.0	9
909	10	0.0	100.0	7
910	10	0.0	100.0	7
911	31	0.0	100.0	10
912	0	0.0	0.0	0
913	0	0.0	0.0	0
914A	0	0.0	0.0	0
914B	0	0.0	0.0	0
915	60	3.3	96.7	19
916	43	2.3	97.7	17
954	150	0.7	99.3	1
956	92	25.0	75.0	27
998A	0	0.0	0.0	0
999B	0	0.0	0.0	0
999C	0	0.0	0.0	0
999D	0	0.0	0.0	0
	702	4.8	95.2	218



- Proposed Railroad
- Tract 5.02
- Block Group 9
- Blocks
- Pine Bluff City Limits
- Percent Minority Population
 - 0 - 33
 - 34 - 67
 - 68 - 100

Source: Census of population and Housing, 1990
 Summary, Tract File 1B, Arkansas, prepared by the
 Bureau of the Census, U.S. Department of Commerce
 Washington, D.C., 1991.

University of Arkansas at Little Rock
 GIS Applications Laboratory
 501-569-8534

APPENDIX E

LIST OF PREPARERS

**Surface Transportation Board
Section of Environmental Analysis:**

Elaine K. Kaiser,
Chief

Project director/Environmental
and legal review

Victoria Rutson,
Staff Attorney

Legal issues/Environmental review

Phillis Johnson-Ball,
Environmental Specialist

Analysis review and verification of
consultant's work product

Third-party consultant:

Jo Carole Dawkins Environmental
Consulting, Springville, AL

APPENDIX F

BIBLIOGRAPHY

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