

# APPALACHIAN CORRIDOR I-66

From US 23 in Pike County Kentucky to the King Coal Highway in  
Mingo County West Virginia

## Final Environmental Impact Statement

Submitted Pursuant to: 42 USC 4332(2)(c); by

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL HIGHWAY ADMINISTRATION  
KENTUCKY TRANSPORTATION CABINET  
WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

### Cooperating Agencies

U.S. Army Corps of Engineers

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This project consists of a proposal to construct approximately 53 kilometers (33 miles) of four-lane, median-divided, controlled access, interstate highway from US 23/119 south of Pikeville, KY. eastward to the King Coal Highway southeast of Matewan, WV. This study evaluates the social, economic, and environmental impacts which may be associated with this undertaking.

Comments on this FEIS must be received by MAY 27, 2003, and should be sent to:

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# SUMMARY

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## **Brief Description of the Proposed FHWA Action**

The Kentucky Transportation Cabinet (KYTC), in conjunction with the Federal Highway Administration (FHWA), is proposing to construct the 33 mile (53 kilometer) Interstate Route 66 (I-66) from US 23/119 south of Pikeville, Kentucky to the proposed King Coal Highway southeast of Matewan, West Virginia. The western project logical terminus for this section of I-66 has been established to be the US 23/119 highway in Pike County, Kentucky. The eastern project logical terminus has been established to be the King Coal Highway in Mingo County, West Virginia. The new road will be a four-lane, divided, access controlled, Interstate Highway.

The project study area involves a southwest to northeast band across central Pike County, crosses the Kentucky - West Virginia border at Tug Fork river and extends for 5 miles (8 kilometers), into southwestern Mingo County. There is currently no existing highway serving this east - west travel pattern in this region. This new route will facilitate not only through traffic between project termini but will also serve several communities in Pike and Mingo Counties that have historically been poorly served by and isolated from major transportation routes.

This new travel corridor and its substantially improved travel conditions will benefit people at local, regional, and interstate levels by enhancing access to jobs, markets, and services, by reducing regional accident potentials, and by reducing travel times at all levels including longer distance drivers desiring to connect with other improved routes and interstate facilities located in both states.

## **Other Proposed Governmental Major Actions**

The only other known proposed governmental major action proposed in the same geographic area as the Appalachian Corridor I-66, is the King Coal Highway at the eastern project terminus in West Virginia. King Coal Highway (I-73/74) is a 96 mile (154 kilometer), four lane divided freeway facility. It begins at the intersection of US 119/US 52 near Williamson and extends southeasterly to the vicinity of Bluefield. The project is currently in the final design phase. The FEIS for King Coal Highway was approved on June 26, 2000 and the Record Of Decision (ROD) was approved on August 24, 2000.

There are currently no other known major federal actions proposed by other governmental agencies in the same geographic area as the proposed US 23 to King Coal Highway, I-66 project.

## **Summary of Reasonable Alternatives Considered and Identification of the Preferred Alternative**

In 1991, Congress enacted the Intermodal Surface Transportation Efficiency Act (ISTEA) which provides federal assistance for highway studies, design, and construction. The 1991 ISTEA (Section 1105 (c) (3)), included a legislative mandate by Congress for a study of a Southern Kentucky Corridor for I-66. It was defined in the "East-West Transamerica Corridor" study and was listed as a High Priority Corridor on the National Highway System because it would: (1) "connect major population centers and greatly enhance economic growth"; (2) "serve the travel and economic development needs of the region"; and (3) "improve the efficiency and safety of commerce and travel which would further promote economic development".

In 1995, the National Highway System Designation Act amended Section 1105 (c) (3) of the ISTEA and specified that I-66 in Kentucky was to be examined within a corridor that was centered on the cities of Pikeville, Jenkins, Hazard, London, Somerset, Columbia, Bowling Green, Hopkinsville, Benton, and Paducah. The "Southern Kentucky Corridor" was to connect with the proposed King Coal Highway (I-73/74) in West Virginia, as listed in Section 1105 (c) (3) of the ISTEA. This legislation effectively identified the project study area for the Southern Kentucky Corridor and established the general location for the examination of reasonable alternatives between Pikeville and the King Coal Highway. A Final Environmental Impact Statement and a Record Of Decision have been approved by the FHWA for the King Coal Highway from the vicinity of Williamson, WV to the vicinity of Bluefield, WV, a distance of approximately 96 miles (154 kilometers).

Consistent with Congressional mandates, during the period from 1995 to early 2000, a *Corridor Location Study* for the Pikeville to King Coal Highway priority section of I-66 was undertaken and completed. This Study focused on a two mile wide corridor and produced a general review of the potential environmental, economic and engineering issues of the corridor. It also initiated a comprehensive public information and environmental resource agency notification and review process, and developed an extensive project purpose and need statement. The overall objectives of the Study included: determining project compatibility with regional and community goals and concerns; promoting early notification and public participation in project location decision-making actions; learning about the potential benefits and likely consequences of this project; ensuring that human values and needs received proper attention while the undertaking was still in its conceptual stages; and making coordinated recommendations for project location options and alternatives.

In early 2000, utilizing the information and the inclusive public involvement process approach established during the *Corridor Location Study* phase, work was initiated for the establishment of general roadway alignment options within the identified approved corridor. This work resulted in the initial designation of four (4) composite lines with more than fifty (50) possible combinations between project termini. These lines were the basis for publishing in the Federal Register a Notice Of Intent to prepare an Environmental Impact Statement. They were also the focus of a formal project Scoping Meeting held at the offices of the U.S. Army Corps of Engineers in Huntington, West Virginia on October 19, 2000. These roadway line combinations were examined for issues of environmental concern and engineering feasibility. They were also taken before numerous public forums for review and questioning by the public and by a citizens committee formed for the project, the I-66 Appalachian Corridor Team (I-66 ACT), whose membership was made up of local and regional citizen representatives from both states.

As a result of the critical public review process, the development of environmental and engineering estimates, and the project Scoping efforts with local, state, federal agencies and environmental organizations, the fifty-plus alignment combinations were systematically scaled down and two representative 1000' wide "bands" were designated. These "bands", one along the northern extent of the study corridor and one along the southern extent, were determined to represent the two best potential locations for the proposed project. Provisions were also included with these "bands" for cross-over transitions from north to south and vice versa. The two broad bands, with cross-overs, were subsequently endorsed by the citizens committee (I-66 ACT) and by the public. They were approved by the project's Executive Committee in Frankfort, Kentucky, as comprising the study area for specific alignment alternatives for assessing environmental impacts for the Draft Environmental Impact Statement (DEIS).

Subsequently, two roadway alignment alternatives within each of the two broad (1,000') bands, evolved from the Project Planning Phase, early coordination, Scoping activities, comprehensive public involvement processes, initial environmental examinations, and conceptual engineering adaptations. During that evolutionary process, extensive analyses and critical open-forum reviews were completed before any of the initial alternatives considered were discounted. Each of the remaining alternative bands, which were examined in detail in the project DEIS, were considered viable and there was no designation of a preferred alternative. The preferred alternative was to be designated following completion and circulation of the DEIS, analysis of the results of the official project Public Hearing, and review of all comments received.

As a result of this comprehensive and inclusive process, the Preferred Alternative was subsequently determined to consist of a combination of segments of the study alternatives from both the northern and southern alignment options. Specifically, the Preferred Alternative begins on the northern corridor at US 23/119 south of the City of Pikeville. It extends easterly crossing route KY 1460 and then transitions from the northern corridor across to the southern corridor south of the community of Raccoon, KY. From that point, it continues to utilize the southern project corridor to its termination at the proposed King Coal Highway east of Matewan, WV. (FEIS Exhibits 3 and 4a - 4k).

## **Summary of Major Environmental Impacts**

The primary adverse impacts of the proposed action include: a) the displacement of up to 109 residences and 11 businesses; b) impacts to streams (5.9 mi est.) and biological ecosystems from the conversion of woodlands (2,408 ac.) to highway rights-of-way; and c) temporary impacts, such as dust and noise, and inconvenience, such as traffic delays at cross roads and equipment access points, during the construction period.

Beneficial effects of the proposed action include: a) improved regional travel safety and accident reduction; b) improved travel times; c) improved local and regional accessibility; d) improved highway system connectivity; and e) enhanced economic development potentials.

The proposed action will not use land protected by: Section 106 of the National Historic Preservation Act; Section 4(f) of the US Department of Transportation Act; nor Section 6(f) of the Land and Water Conservation Act.

During the development of this project, over the next 20 to 30 or more years, it is anticipated that additional environmental studies, environmental reevaluations, and new or supplemental environmental documents will be necessary. These studies and documents are expected for further refinement of developments on the project such as proposed interchanges, designated waste sites, project modifications and changes, or new information. They may also be necessary to address changes in environmental laws and regulations which may occur during the life of the project. The FHWA and the KYTC will ensure that all such circumstances are evaluated and subjected to full environmental analysis and public involvement prior to final project decisions which may result in significant environmental impacts not identified in the most recently distributed version of the project Final EIS.

## **Areas of Controversy**

At the publication date of this FEIS, there have been no areas of controversy identified and no controversial issues raised by agencies or the public.

## **Major Unresolved Issues With Other Agencies**

At the publication date of this FEIS, there are no major unresolved issues with other agencies on this project.

## **List of Other Federal Actions Required**

U. S. Department of the Army, Corps of Engineers - Section 404 Permits

## **I. PURPOSE OF AND NEED FOR ACTION**

Upon completion, the I-66 Southern Kentucky Corridor would provide an important connecting link between system routes in West Virginia and Missouri. The Appalachian Corridor I-66 is a critical segment of this east-west, southern Kentucky link. In recognition of the overall significance of the I-66 route, the FHWA and the KYTC have established the following goals for I-66 in Kentucky:

- , Support the completion of I-66 across southern Kentucky to carry out the legislative intent of the Intermodal Surface Transportation Act (ISTEA), the 1995 National Highway System (NHS) Act, and the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21).
- , Provide an improved, efficient Interstate facility for system continuity of I-66 between West Virginia and Missouri.
- , Improve accessibility throughout southern Kentucky to jobs, industry, urban centers, educational facilities, tourism and recreational facilities, with particular emphasis to the Kentucky portions of Appalachia and the Lower Delta Mississippi Delta Region.
- , Improve interstate movement of people and freight by ensuring a safe transportation system that is accessible, integrated, and efficient while offering flexibility of transportation choices across southern Kentucky.

Each individual segment of I-66 will have an individual Purpose and Need Statement developed that reflects both these overall goals and the local and regional goals within a given segment.

### **I. A. Project Purpose (Ref. DEIS, page 1)**

The purpose of this project is to develop a key segment of the I-66 Southern Kentucky Corridor in the historically underserved and economically distressed Appalachian Region of Pike County, KY. and Mingo County, WV. This new route is to be constructed to Interstate Highway standards with minimal geometric constraints (e.g. sharp curves, steep grades, narrow lanes/shoulders, bridge restrictions, etc.). It will be designed to minimize conflicts between local, regional, and interstate travel, and reduce conflicts between large truck (e.g. coal trucks, semi-trucks) and auto traffic. It would be expected to decrease travel time and improve travel convenience between project termini and intermediate access points in between. It would be anticipated that this new route would serve to reduce accident rates on a regional scale and reduce emergency response times for ambulance, emergency response, and police and fire protection services. In addition, an important aspect of this project is the development of a transportation facility that would provide conditions and support for a broader economic development plan for the study area. It would help achieve this purpose by supplying a heretofore missing link, for regional communities and economies, to the Interstate and National Highway Systems (NHS) and provide new connections to National and International markets and population centers.

## **I. B. Project Need (Ref. DEIS, page 1)**

The FHWA Technical Advisory T6640.8A lists items which may be important and assist in the explanation of the need for a transportation project. These items were analyzed relative to their applicability to the proposed Appalachian Corridor I-66 project. The applicable items are:

- , Regional and National system linkage
- , Current and future transportation demand
- , Congressional legislation
- , Social demands and economic development
- , Safety and roadway network deficiencies

### **I. B. 1. Regional and National System Linkage (Ref. DEIS, page 1)**

A major gap in the Eastern Kentucky and southwestern West Virginia highway network is found in the lack of east-west connectivity through Pike County (Kentucky's largest county) and Mingo County by other than narrow, winding backroads with substandard alignments and profiles.

This missing element deprives the region of critical ties to key routes on the Interstate (I-73/74, I-77, I-75) and the National Highway System (US 23, US 460, US 119) that would efficiently link the area to the rest of the country. In addition, the absence of a "high-type" east-west road also impedes local accessibility to many services and to the seats of government in both counties.

Pikeville, the County Seat of Pike County, is the center of employment, public and government services, commerce and shopping, education and health facilities in Pike County. Williamson serves in many of these same ways in Mingo County. Each community offers many opportunities and basic social and economic services which are not found elsewhere in the region. The lack of an efficient connection to these cities has served to isolate the rural population and restrict their access to many resources that most Americans take for granted. These may include such things as medical and dental benefits, court and legal services, senior citizen social services and social security offices, voter registration, driver license and motor vehicle registration, vocational and continuing education, and recreational and cultural opportunities.

The current roadway system within the study area consists of two-lane and single-lane, paved, gravel and dirt roads characterized by geometric constraints such as sharp curves, steep grades and limited passing zones. A continuous four-lane highway providing east-west travel service does not exist in the study area including southern West Virginia. The proposed Appalachian Corridor I-66 would provide this badly needed transportation route, significantly enhancing transportation network connectivity throughout the region. It would be expected to provide the safe and efficient access needed to local destinations of

county governments and towns, as well as to NHS highways and the Interstate system.

Connection with major highway systems is extremely important for the economy of the study area. The area is poorly connected to NHS routes and has no direct access to any Interstate highway. This proposed segment of I-66 would provide substantially improved regional connections to West Virginia, Virginia, North Carolina, Tennessee and points beyond. This enhanced access would assist commerce and industry with shipping and on-time deliveries, and be expected to decrease travel time for employees. It would also be anticipated to improve the efficiency and safety of highway coal transport.

Local access to towns and facilities would also be greatly improved. The largely rural population of the area could experience improved efficiency and time savings in their travel to Pikeville, Kimper, Phelps and smaller townships in Kentucky as well as to Williamson, Welch and points east in West Virginia. Regional travel dependence on local substandard roads and backroads would decrease, thus improving safety and overall driving conditions. I-66 could also decrease the real and perceived isolation of the area and “landlocked” villages, bringing the area into the world community.

### **I. B. 2. Current and Future Transportation Demand (Ref. DEIS, page 2)**

The coal industry and local rural population place high transportation demands on the existing area roadway network. Coal transport and automobile transport are often incompatible conveyances on the existing narrow and substandard facilities. Modal conflicts and travel delays are not infrequent. Because the coal industry is such a large component of the current local economy (and is expected to continue to be so for many years to come), it will be important to provide for efficient coal truck passage in conjunction with any new transportation facility. Although area coal production has been in steady decline, the percentage of coal moving out of the area by truck has increased by approximately 11% over the past decade. These trucks carry more than 50% of all coal mined in the study area, placing high commercial transportation demands on highway facilities.

In addition to coal transport demands, primary local access routes in the study area are subject to automobile, school bus, delivery and emergency service demands as well. Schools, hospitals, and stores have become more centralized, in response to declining populations and in an attempt to increase efficiency. This centralization has resulted in greater trip distances and longer travel times for much of the study area population. This has led to increased localized transportation demand. Local transportation demand, consisting primarily of automobile traffic, and regional demand, mostly comprised of coal truck traffic, sets up conflicting conditions on the current system. These demands, along with the geometric constraints of existing facilities, has led to a system that does not efficiently handle current transportation pressures. These conditions are expected only to become worse in the future, as the highway infrastructure ages. The proposed Appalachian Corridor I-66 would provide much needed relief for the existing system by supplying a fast and efficient alternative transportation route, serving both local and regional needs, through a “high type” facility that will easily accommodate the expected truck and auto mix. I-66 will be designed to accommodate existing industries (including coal transport) to support the current local economic base. The modern design would also be expected to supply a critical element of the transportation infrastructure needed for future economic development that is expected to become less dependent on coal resources.

### **I. B. 3. Congressional Legislation (Ref. DEIS, page 2)**

The Congress of the United States has formally recognized the economically distressed and underserved nature of the project area since the establishment of the Appalachian Regional Commission (ARC) in 1965. The ARC was established by Congress to address and support economic and social development in the Appalachian Region. To meet ARC goals, the Commission has helped fund such projects as education and workforce training programs, water and sewer system construction, leadership development programs, small business start-ups and expansions, development of health-care resources, and highway construction. In selecting and designating Appalachian Development Highway System (ADHS) corridors, the ARC sought to approve a network of development highway corridors that would: (1) link key centers in the region to national markets, thus helping to make the corridor areas competitive for growth; (2) provide for more efficient flows of commerce through the region in order to enhance the development potential of isolated areas traversed by the new routes; (3) facilitate the commutation of people to new jobs and public services to be developed along the System; and (4) open up new sites for development. To achieve these objectives, each ADHS corridor was selected to accomplish one or more of the following:

- (1) Major economic centers in Appalachia which were bypassed by the Interstate Highway System were to be linked to the Interstate System, restoring locational advantages which they had lost by being bypassed.
- (2) Selected corridors were chosen to help “close the gap” between key markets on either side of Appalachia that were not linked by the Interstate System. The region could then capitalize on the alterations in flows of commerce which such additions to the national highway network might induce.
- (3) Several corridors were selected to open up large areas of Appalachia with significant potential for recreational development.
- (4) By constructing a new highway system through the more isolated sections of Appalachia, it was also anticipated that commuting fields for the major job centers in and around Appalachia would be enlarged because more people would be able to travel greater distances in less time to the jobs and services being developed.

Within the region of Appalachia which encompasses the proposed I-66 route, three key ADHS corridors have been designated. They include Corridor B (US 23), Corridor Q (US 460), and Corridor G (US 119) (see Exhibits 3 & 6). These projects have resulted in and continue to support the improvement of these major area routes including US 23 (Corridor B), US 119 (Corridor G), and US 460 (Corridor Q).

Corridor Q (US 460), a four-lane, divided highway, is in various stages of implementation from final design to right-of-way acquisition to under construction. The Preferred Alternative for I-66 will not affect Corridor Q because the two do not intersect and each serves different traffic pattern functions and destinations. Corridor Q and I-66 will complement each other and each will provide elements of the goals and objectives of highway corridor development enumerated above and within the Purpose and Need

discussions of this FEIS.

The Preferred Alternative for I-66 will intersect Corridor B (US 23) approximately 1 mile south of Pikeville (see Exhibit 3). Corridor B has been constructed to a four-lane, “high type” facility under the ADHS program and was completed several years ago. An interchange connecting the two routes (Corridor B (US 23) and I-66) is proposed. An interchange with Corridor B and I-66 will link the routes together further enhancing the conditions sought by the ARC with their selection and designation of ADHS corridors. Linking Corridor B and I-66 will provide commuters and travelers with an east-west travel option tying into the existing north-south routing that Corridor B already provides. The I-66 - ADHS Corridor B relationship will be complementary, in that both routes will provide necessary conditions for achieving ARC established goals and well as the broader, regional and national objectives associated with the I-66 system connectivity and continuity represented by the I-66 Appalachian Corridor.

ADHS Corridor G (US 119) begins at an intersection with Corridor B (US 23) approximately two miles north of Pikeville (see Exhibit 3). Corridor G extends in a north-northeast orientation to Williamson, West Virginia and on north to Charleston, West Virginia. Corridor G is a four-lane, divided facility over most of its length and most of Corridor G in the region has been completed or is under construction (see Exhibit 3). Corridor G will not be affected by I-66 as the two do not intersect and each serves different traffic pattern orientations and destination. Corridor G and I-66 will complement each other and each will provide elements of the goals and objectives of highway corridor development enumerated above and within the Purpose and Need discussions of this FEIS.

The ADHS projects have been and are enhancing general travel corridors in this region. In 1991 Congress recognized the need to examine a broader, east-west Interstate corridor that would include the more severely distressed portions of the Appalachian Region. They did this through the inclusion of the “Transamerica Transportation Corridor” in the passage of the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA). This transportation corridor, passing through southern West Virginia and southern Kentucky, was envisioned as a coast-to-coast Interstate route that could provide a major highway link for isolated and economically lagging counties in West Virginia/Kentucky Appalachia. Although subsequent studies indicated such a complete coast-to-coast route to be impractical, they did reveal that certain segments of the route could be highly beneficial.

This reduced scale aspect of the transamerica concept was recognized by Congress in 1994 through the passage of the National Highway System Designation Act which amended ISTEA and specified that I-66 in Kentucky was to be centered on the cities of Pikeville, Jenkins, Hazard, London, Somerset, Columbia, Bowling Green, Hopkinsville, Benton, and Paducah. It also specified that I-66 was to follow I-73/74 (King Coal Highway) in West Virginia.

The route study corridor and the alternative alignment locations, which have been examined for this facility and discussed in the DEIS (see Appendix D) and in this FEIS, are consistent with the mandate which has been given by Congress through the above cited legislation.

#### **I. B. 4. Social Demands and Economic Development (Ref. DEIS, page 4)**

The study area economy has developed around a dependency on the coal industry for its employment, per capita incomes, and growth. Early coal enterprises were also relied upon for residential housing, stores, and social institutions. Although the heaviest dependency and support systems of the old coal camps are no longer prevalent, the region is still intensely reliant on coal. In more recent periods, the growing mechanization of the coal industry has led to corresponding declines in employment and payrolls throughout the region. This has also led to years of out-migration, dependency on government support programs, and reduced tax base. Mainly because of isolation (due in large part to inadequate roadways) and the absence of alternative employment opportunities, the decline in coal related jobs has directly affected the area's economic health and population composition. The region is subsequently one of the poorest in the Nation. Income rates are 50%-60% of those of the U.S. average and unemployment and poverty rates are 2 to 3 times higher than the rest of the Nation. As a result, many of the younger, more mobile segments of the population have elected to go elsewhere in search of better conditions, and some of the older, less mobile people live a deprived existence.

By increasing local and regional accessibility, the study area would offer greater possibilities and be far more likely to become more socially and economically diverse. Economic diversification based on commerce and industry less dependent on mineral extraction is considered as a primary means for stimulating the economy and contributing to sustainable growth for this area. State programs have already been initiated to prepare Appalachian communities to host commercial activities and processes that will enable effective competition in a global economy. Such effective preparation is linked to a number of factors, but one of the keys is building adequate infrastructure, including highways, to enhance a community's posture as a site for commerce and economic development.

The rugged, mountainous scenery, the fast flowing streams, the lakes and recreation areas, and the history and "checkered past" of the region also make it ripe for tourism development. The location, within a few hours drive of major markets and population centers, makes it inviting for tourism as well as commerce and industry. However, the long-term success of any of these possibilities is heavily dependent on safe and easy access. The proposed segment of I-66 between US 23/119 (ADHS Corridor B) and I-73/74 (King Coal Highway) would be anticipated to provide a crucial part of that access demanded.

#### **I. B. 5. Safety and Roadway Network Deficiencies (Ref. DEIS, page 4)**

The existing highways and roads of the study area are characterized by narrow lanes, small or no shoulders, sharp curves, steep grades, winding-circuitous lengths, and constantly changing driving conditions. Most roads follow narrow mountain valleys and contain numerous small linear communities that call for "No Passing Zones". With a steady procession of coal trucks and pervading side friction, inconsistent speeds and increased driver frustration are common travel issues. These and other factors combine to impede traffic flow and contribute to the frequency of accidents.

Examination of accident records for monitored roads in the study area revealed accident rates higher than the State's averages, for similar routes and conditions, on nearly every road in the area. During the period from January 1997 thru December 1999, property damage accidents were 35% higher and accidents involving fatalities and injuries were 86% higher than statewide percentages. As might be expected on a system with wide ranging geometric deficiencies and narrow driving lanes, side swipe accidents were 39% higher, head-on collisions were 27% higher, and rear-end collisions were 7% higher.

Although the proposed segment of I-66 would not correct the adverse driving conditions of existing roadways, it would be predicted to reduce the number of vehicles using those roadways and provide a demonstratively safer travel route (Interstate Highway) for them. By reducing the number of vehicles on existing substandard roads, a corresponding decrease in regional highway system accident rates would be expected.

As noted earlier, currently there is no east-west transportation route serving southern Pike and Mingo Counties that provides access to the NHS. This highway network deficiency has been a principle contributor to the physical isolation of this region of Appalachia. Most of the roads serving the area fall far short of currently accepted design standards. Narrow, winding and steep roads discourage travel and distract from the enjoyment of the viewsheds and visual resources present. The highway link provided by this segment of I-66, closes a major gap in the east-west arterial system and establishes an element of the network connectivity critically needed in this region. This priority section of I-66 creates NHS system linkage and provides for much more direct and shorter travel opportunities than the present, substandard facilities. Ease of access into and out of the area would be expected to result in a greater importance for the recreational and cultural resources present, giving them an increased role in the economic structure of the region. Improving accessibility, system connectivity and travel safety are major components of the project's purpose and need objectives, as is increasing tourism opportunities on a broad scale. Improving regional traffic safety and travel conditions would help supply a necessary element for economic opportunities to accrue.

#### **I. B. 6. Project Purpose and Need Summary (Ref. DEIS, page 5)**

As broadly established during the project Planning Phase through evaluation of studies conducted in conjunction with the Transamerica Transportation Corridor, the Interstate 66 Feasibility Study, the Southern Kentucky Corridor I-66 Economic Justification and Financial Feasibility Study, and the Appalachian Corridor I-66 Location Study, the purpose and need objectives of this project have been prescribed as follows:

1. To open new **economic development** opportunities in Pike and Mingo Counties by improving accessibility to regional, state, and national markets, by reducing travel time and operating costs.
2. To improve regional **accessibility** to government services, higher education, employment,

shopping, and to medical, dental and legal services.

3. To improve east-west **transportation linkage** and **connectivity** to the National Highway System (NHS) and Interstate System.
4. To increase **tourism** opportunities to area lakes, recreational resources, and cultural heritage sites.
5. To improve highway **travel safety** for the motoring public.

These purpose and need objectives have been validated and reconfirmed by the public and the ACT committee at numerous points during project development and public involvement activities (see FEIS Appendix B and DEIS Appendix B). In addition, the ACT committee, as an integral part of their charter, reached a consensus on additional Partnership Goals to be pursued in conjunction with the project. These Goals were also utilized in the consideration of alternatives and were scripted as follows:

- Goal - Produce a project that is recognized for technical excellence and environmental sensitivity.
- Goal - Avoid, minimize and mitigate all environmental concerns.
- Goal - Meet all project schedule dates.
- Goal - Inform project area households of the availability of the I-66 ACT Committee by August 1, 2000.
- Goal - Obtain agreements of agency review turnaround times by September 1, 2000.
- Goal - Complete the project within budget.
- Goal - Maximize economic development opportunities.
- Goal - Establish a project website and newsletter by June 1, 2000.
- Goal - Keep alive the spirit of partnering throughout the project environmental and design process.
- Goal - Create an atmosphere of improved communication between government and communities.
- Goal - Develop a process for timely access to properties.
- Goal - Resolve all conflicts within the time frame set out in the conflict resolution ladder.

## **II. PREFERRED ALTERNATIVE**

The ALTERNATIVES section of the Draft Environmental Impact Statement (DEIS), pages 10 - 22, presents the history of the development of the alternatives for this project and provides the identification and detailed description of all study alternatives which were examined for EIS preparation. Please refer to the DEIS, pages 10 - 22, for specific detail on the full range of Alternatives examined for this project. The following listed information on the range of initial alternatives is disclosed on pages 10 - 22, in the DEIS:

- , A discussion of the designation of the I-66 corridor by Congressional authority.
- , A discussion of the planning process through which the study corridor and preliminary alignments were established.
- , A description of all “reasonable alternatives” considered.
- , Disclosure of the reasons for elimination of certain alternatives (segments) from further consideration and detailed study.
- , Discussion of the study “bands” concept and the project Scoping process.
- , Identification and description of the reasonable alternatives for detailed study in the DEIS.

Each of the reasonable alternatives subjected to detailed examination and documented in the DEIS were considered to accomplish the project purpose and need objectives to varying degrees and all were considered candidates for selection. Since circulation of the DEIS, one minor change has occurred on the South Corridor Preferred Alternative. This change was brought about as a result of the Value Engineering Study process. A short segment of the South Alternative southeast of Kimper (see Exhibit 4e) was shifted slightly southward to the opposite side of Gabriel Branch. This minor change was presented at the Public Hearings held in March, 2002. No opposition nor expressions of concern about this change on any grounds was received. There have been no other noteworthy changes to the alternatives examined since circulation of the DEIS. The Preferred Alternative has now been designated after careful consideration of all reasonable alternatives, including the assessment of their potential environmental impacts (social, natural, and physical), project costs, and the evaluation of public and agency comments stemming from the extensive coordination and public involvement/public hearing process for the project. The identification of the Preferred Alternative (Exhibits 3 and 4a - 4k) and the basis for its selection follows:

### **II. A. Preferred Alternative Description**

At its western terminus with US 23 (Appalachian Development Highway System Corridor B), the Preferred Alternative utilizes the North 1000' band from the DEIS (ref. DEIS pg. 19). It begins on US 23 approximately 1 mile (1.6 kilometers) south of Pikeville near the intersection of US 23 and Lank Branch Road. From that point it proceeds in a northeasterly direction following a series of creek valleys. The alignment crosses Harolds Branch and then remains north of Harolds Branch. The line bridges KY 1460 south of Fife Fork of Lower Chloe Creek. It enters into the catchment of Upper Chloe Creek at Ivy Fork

Creek Road and Collins-Adams Road and then proceeds southeasterly to cross Upper Chloe Road. Continuing to use the North band, the Preferred Alternative then crosses the mountain into the Raccoon Creek area near the abandoned Chesapeake and Ohio rail line and KY 1441. At this point, the Preferred Alternative shifts to utilize the North to South Connector 1000' band (ref. DEIS pg. 21) in order to transition from the northern corridor to the southern corridor. This Connector provides for a route for linking the northern and southern corridors and crosses KY 1441 mid-way between these corridors.

After reaching the southern corridor via the North to South Connector, the Preferred Alternative utilizes the South 1000' band from the DEIS (ref. DEIS pg. 20). Several cuts permit this alternative to traverse the high ridges north of the Jonican and Hurricane Branches. KY 194 is bridged at Ridge Line Road and the line continues northeast crossing Lane Branch then KY 632 and Johns Creek south of Kimper. The Preferred Alternative then climbs the high peaks and ridges east of Kimper and swings south toward Phelps. Roadways crossed in this area include KY 199 and KY 3419 at the Calloway Gap. No other roadways are crossed until KY 319 is encountered at the headwaters of Peter Branch and Poundmill Run north of Freeburn. The South Alternative bridges the Tug Fork, the railroad, and WV 49 at Rose Siding, West Virginia. The Preferred Alternative then continues northeasterly to the ridgeline between WV 6 and US 52 where it terminates with an interchange at the proposed King Coal Highway.

## II. B. Design Criteria

The Preferred Alternative will be designed as a four-lane, divided, fully controlled access Interstate facility through Kentucky and as a four-lane, divided, partially controlled access arterial in West Virginia, in accordance with the approved Design Policies of each State. All other design criteria not specified below, will be in accordance with the currently approved *AASHTO Policy on Geometric Design of Highways and Streets*. The typical sections are shown in Exhibit 5.

DESIGN CRITERIA				
Design Element		Kentucky Segments *		West Virginia Segments **
Design Speed			112 kph (70 mph with exceptions)	96 kph (60 mph)
Minimum Curve Radius			581 m (1910 ft)	395 m (1295 ft)
Maximum Grade			5%	6%
Minimum Stopping Sight Distance			187 m (615 ft)	205 m (750 ft)
Interchanges			4	1
At Grade Intersections			0	2 per mile maximum
Medians			18 m (60')	12 m (40') or less
Shoulders:			depressed grass 3.6 m (12')	3.6 m (12')
*KYTC will use full control of access design criteria. The project is designated <i>Interstate</i> in KY.				**WVDOH will use limited control of access design criteria. The project is designated <i>Freeway</i> in WV.

Access to I-66 in Kentucky will be at initial interchanges constructed with major crossroads including US 23, KY 194, KY 632, as well as in the vicinity of Phelps. In West Virginia, access to I-66 will include an interchange at the King Coal Highway and entry elsewhere will be limited to designated points such as intersections with public roads, or other locations for direct access to abutting property by at-grade intersections. The number of access points in West Virginia will generally be limited to two per side per 1 mile (1.6 k).

## **II. C. Basis for Selection of Preferred Alternative**

The selection of the Preferred Alternative was made by the project Executive Committee, which includes representatives of the Division Administrator, Federal Highway Administration Kentucky Division, the Secretary of the Kentucky Transportation Cabinet, and the Secretary of the West Virginia Department of Transportation. The selection was based on recommendations made by the technical project team, the ACT Committee, and the public, following the Public Hearings that were held on March 25 - 26, 2002. The Preferred Alternative is considered to meet the project purpose and need objectives (see pages 1 - 8), fulfill the project decision determinants (see Tables 1, 2, and 3), and meet the ACT Committee goals (see page 8), better than all other reasonable project alternatives considered.

The Preferred Alternative would directly serve a large regional population (35,750+) and the most communities (10). At its western terminus, it would be within one (1) mile of the city of Pikeville in compliance with Congressional mandates (ISTEA, Sect.1105 (c) (3)). It would provide the best access to the government, emergency, community and social services, educational facilities, commercial and recreational establishments located in Pikeville, Kimper, Matewan, and Williamson. It would provide new and improved access to Fishtrap Lake (eastern shore access). It would serve and improve access to Grants Branch Park, the Hatfield - McCoy Historic District sites (see pgs. 21 & 39), the Matewan Historic District, and other area cultural resources and sites without directly impacting any of these resources (new interchanges/intersections). It would be the least expensive alternative to build (\$42M/mile). It would displace the fewest number of families (109) and businesses (11). It would potentially affect a small number of active mining operations (8), provide the best geotechnical conditions for construction, and maximize economic development site opportunities (approx. est. 9). It would also be equal to the other alternatives studied in terms of stream impacts (5.9 mi. total) and forest conversion/wildlife habitat impacts (approx. 2,408 wooded acres). The Preferred Alternative was considered by the project ACT Committee to best meet their project goals and it received the highest recommendations and endorsement from the ACT Committee as well as from the project technical team. The Preferred Alternative also received the largest support from the public (57%), as witnessed from testimony and comments provided from public meetings and the formal project Public Hearings held (see Appendix B). The Preferred Alternative would not be expected to produce any long-term significant adverse social, economic, or environmental impacts for the project area (see pages 23 - 47). Detailed measures to minimize unavoidable impacts of the Preferred Alternative are accounted for on pages 47 - 52.

### **III. AFFECTED ENVIRONMENT**

This section provides a summary description of the social, economic and physical environmental setting for the area affected by the Preferred Alternative. For a greater level of detail, please refer to the DEIS. The project study area is situated in the Appalachian Mountains of Eastern Kentucky and southwestern West Virginia in the Coalfields Physiographic Region. The description of the area is general in nature applying to the entire project area. Detailed study area data, which were utilized to prepare this section, are provided in the Technical Reports prepared for the project. No noteworthy changes in the affected environment and setting of the project area have occurred since the DEIS was circulated.

During the development of this project over the next 20 to 30 or more years, it is anticipated that additional environmental studies, environmental reevaluations, and new or supplemental environmental documents will be necessary. These studies and documents are expected for further developments on the project such as proposed interchanges, designated waste sites, project modifications, changes to the affected environment and project setting, or new information. They may also be necessary to address changes in environmental laws and regulations which may occur during the life of the project. The FHWA and the KYTC will ensure that all such circumstances are evaluated and subjected to full environmental analysis and public involvement prior to final project decisions which may result in significant environmental impacts not identified in this most recently distributed version of the project final EIS.

#### **III. A. Social and Economic Setting (Ref. DEIS, page 23)**

Since the early European settlement period, the project study area has remained rural and disconnected. From the early 1900's, the social and economic framework of the study area has been inseparably linked to the coal industry. Coal mining has been the major factor in defining the historical development of the entire region and has been largely responsible for the configuration of the area's infrastructure, including land use, population distribution and character, community services, housing, economy, and transportation opportunities. The poor transportation network, in combination with the rugged mountainous terrain and coal based "mono-economy", has kept this region as one of the most isolated and underserved in the Nation. It has also remained one of the poorest.

Both Pike and Mingo Counties have been designated by the Appalachian Regional Commission (ARC) as "Distressed Counties". The area has been characterized by Widner as one in which "the most severe human and economic problems and isolation have existed." (Widner, 1990). Within the Appalachian Region the Appalachian Regional Commission (ARC) describes distressed counties on the basis of low per capita incomes and high poverty and unemployment rates. The two study area counties are among the most critical in all of Appalachia. Both are experiencing per capita income below state averages, and rates of poverty and unemployment that well exceed state and national averages. The trends of the study area economy and population have been toward steady declines.

### **III. A. 1. Project Area Business and Industry (Ref. DEIS, page 24.)**

In 1998, Pike County had a total of 1,540 business establishments. Retail Trade accounted for 353 (23%) of the businesses; Transportation and Warehousing 212 (14%), Mining 104 (7%), and Contract Construction 90 (6%).

In 2000, Services were the major sources of employment covered by unemployment insurance in the Mingo County Workforce Area (Mingo, Logan, Wayne, Lincoln, Boone, Putnam, and Cabell Counties)--employing 31,140 people. The Trade industry was next with 27,140 employees, and the Government sector employed more than 18,610 people. The Board of Education in Mingo County is currently the largest employer.

### **III. A. 2. Project Area Population and Employment (Ref. DEIS, page 24)**

Between 1980 and 2000, Pike County's population declined by 15.2% from 81,123 to 68,736. This trend has been on-going for several decades and is predicted to continue. Projections for the year 2020 are for the drop in population to reach 63,660. During the ten year period from 1980 - 1990, the City of Pikeville grew by 13.3% from 5,583 to 6,324. This data indicates that some migration from the county to the city has occurred, probably in response to job opportunities or annexation, but area net migration has been to locations outside of Pike County. The project area is represented by Census Tracts 9904, 9911, 9912, 9915, 9916, and 9918 whose 1990 pop. was 10,496.

Mingo County has also been experiencing steady declines in population, going from 37,336 in 1980 to 33,739 in 1990 and 33,646 by 1995. It is predicted to decline an additional 10% - 12% by the year 2020. Census Tract 9576 represents the project study area.

In 1998, Pike County's rate of unemployment was 6.5% while Kentucky's was 4.6%. The economy in the project area is based on the incomes which local residents earn working outside the immediate project area and on coal mining. Some drive-in businesses receive a substantial portion of their revenue from traffic passing through the area on US 460, KY 1460, KY 1441, KY 194, KY 632, KY 199, and KY 1056 .

In 2000, Mingo County's rate of unemployment was 8.1%, while West Virginia's was 4.7%. The economy in the project area is based on the incomes which local residents earn working outside the immediate project area and the coal industry. Some drive-in businesses receive a portion of their revenue from traffic passing through the area on WV 49, WV 65, and CR-6. Reflective of the unemployment rate and out migration trend, per capita personal income in Mingo County increased only 5.6% from \$15,898 in 1996 to \$16,792 in 1998. The state had an increase of 24.1%, and the U.S. had an increase of 19.7% during the same period. The per capita personal income of Mingo County is below the state and nation.

### **III. A. 3. Project Area Wages and Income Status (Ref. DEIS, page 25)**

Pike County study area Census Tract information shows that the annual income range of \$15,000 to \$24,999 was the most common with 752 (18.9%) households, and the income range \$5,000 to \$9,999 was second with 661 (16.6%) of 3,972 households in 1998.

In 1998, Mingo County Census Tract data shows that 343 (26.2%) of 1,311 families are below the poverty level. Also, 1,272 (27.2%) of 4,666 individuals were below the poverty level. In 1995, poverty levels in Mingo County were 31.0%, with West Virginia having 19.7%, and 13.8% for the rest of the country. The state and national poverty levels are well below Mingo County's, suggesting, as with Pike County, that employment opportunities continue to be relatively scarce and within the economic profiles typical for mountainous Appalachia.

In 1998, the Census Tracts show that 588 (19.1%) of 3,075 families are below the poverty level. Also, 2,150 (20.8%) out of 10,327 individuals were below the poverty level. In 1995, poverty levels in Pike County were 24.5%, with Kentucky having 17.9%, and 13.8% for the rest of the country. The Census Tracts affected are below the poverty level total for Pike County (20.8% vs. 24.5%). The state and national levels are well below Pike County's, suggesting employment opportunities for a diverse workforce are scarce. Historically, this has become considered typical for the mountainous regions of Appalachia.

#### **III. A. 4. Project Area Age Distribution (Ref. DEIS, page 26)**

In 1990, the largest ten-year age group in the Census Tracts was 25-34 years (17.1%) followed by 35-44 years (15.8%). The smallest age groups were the older citizens of Pike County with 105 (1.0%) in the 85+ age group followed by 374 (3.6%) in the 75-84 year range. All age groups were evenly dispersed with regard to gender.

In 1990, the largest ten-year age group in the Census Tracts was 25-44 years (31.0%) followed by 5-17 years (23.9%). The smallest age groups were the older citizens of Mingo County with 292 (0.9%) in the 85+ age group followed by 1007 (3.0%) in the 75-84 year range. All age groups were evenly dispersed with regard to gender.

#### **III. A. 5. Project Area Ethnic Composition (Ref. DEIS, page 26)**

According to the 1990 Census: of the 72,583 people in Pike County, 565 (0.8%) were nonwhite. In 1990, the project area Census Tracts had 10,358 (98.8%) persons of the white race and 31 (.003%) of the black race. Other races within the same tract numbers include 12 American Indian, Eskimo, or Aleut; 69 Asian or Pacific Islander; 21 of Hispanic Origin; and five (5) Other race's category.

According to the 2000 Census: Of the 28,253 people in Mingo County, 1,020 (3.6%) were nonwhite. In 1990, the project area Census Tract had 4,549 of the white race and 122 (2.6%) of the black race. Other races within the same tract number include nine (9) American Indian, and two (2) Other Race category.

#### **III. A. 6. Project Area Housing and Community Cohesion (Ref. DEIS, page 27)**

As would be expected after more than 20 years of declining populations, there is a housing surplus in Pike County. In 1990, the county had 28,760 year-round housing units of which only 26,148 were occupied leaving a surplus of 2,612 unoccupied houses. Of the occupied units, 20,101 were owner-occupied and had a median value of \$45,113. The remaining 6,047 units were renter-occupied with a median rent of \$301 per month. Approximately 61% of the County's housing was built after 1969. Only 11% were built before 1940.

In 1990, Mingo County had 13,087 year-round housing units, of which 11,830 or 90% were occupied--leaving 1,257 for sale or rent. Of the occupied housing units, 8,610 (73%) were owner-occupied and had a median value of \$39,400. The other 3,220 units (27%) were renter-occupied with a median rent of \$272 per month. Housing units in Mingo County built before 1940 were 1,925 (15%) compared to 24% statewide. About 54% of the housing units in the county were built after 1969 compared to 41% statewide. Census Tract information shows that homes with values less than \$15,000 were the most commonly owned--with 120 each; \$60,000 to \$74,999 was second, with 70 homes owned. The median value of specified owner-occupied housing units is \$39,400.

Identifiable neighborhoods in the study area include Shelbiana, Mayo Village, Pleasant Valley, Collins, Yeager, Robinson Creek, Garden Village, Raccoon Creek, Kimper, McVeigh, Ransom, McCarr, Phelps, Rose Siding, Matewan, North Matewan, Thacker, and Red Jacket. There are no parks, recreational facilities, libraries, entertainment, social or health care services in any of these neighborhoods. The only affiliated community resources are; Upper Chloe Church of God, Red Creek Church of God, US Post Office at Kimper, Kimper Fire and Rescue, Kimper Church of Christ, EDO Free Baptist Church, Cedar Bottom Church, Kimper Elementary, Runyon Elementary School, Benton Baptist Church, Matewan Elementary School, O'Brien Park, The Church of God, First Assembly of God, Church (CR-6), Hugh C. Boyd Lodge No. 119, and Red Jacket Post Office.

Housing in study area neighborhoods is very diverse ranging from small one-bedroom frame construction- to single and double trailers- to large, four+ bedroom frame and brick homes intermixed throughout the locality. Most home sites are small (1/3 acre or less) due to the terrain, some carved out of the hillsides and nearly all are neat and well maintained. The population of the study area Census Tracts is 14,907 (1990).

Area isolation and housing limitations also affect employment in the study area. Topographical constraints and limited highway access make it less feasible to live within the study area but work elsewhere because of travel time and distances. Inefficient travel and convenience also discourage new businesses from moving into the region.

### **III. A. 7. Project Area Labor Characteristics (Ref. DEIS, page 28)**

The Regional labor market area had an estimated labor supply of 35,216 persons available for work in 1998. This includes 2,428 who were unemployed. The labor market area includes Pike County, the adjoining Kentucky counties of Floyd, Knott, Letcher, and Martin, and Mingo County.

### **III. A. 8. Project Area Agriculture (Ref. DEIS, page 28)**

Pike County's total agricultural cash receipts shrank 23% from \$755,000 in 1990 to \$309,000 in 1998. During this period cash receipts from crops decreased 21% from \$172,000 to \$136,000 while cash receipts from livestock decreased 70% from \$583,000 to \$173,000. This illustrates a shift from livestock, which accounted for 77% of cash receipts in 1990, to crops that accounted for 44% of cash receipts in 1998. Only 0.2% of the labor force of Pike County worked in agriculture in 1998. In 1998, Pike County's total agricultural cash receipts ranked 114th out of the 120 counties in Kentucky. Corn is the most common crop raised in the area. Due to the lack of available flat land in the region, cultivation for crops is difficult in most areas of the county.

Mingo County's agriculture base is virtually nonexistent. As of 1997, a total of five (5) farms were raising crops or livestock, down from nine (9) in 1992. The average market value for all five (5) farms was \$1,211. Due to the lack of available flat land in the region, cultivation for crops is difficult in most areas of the county.

### **III. A. 9. Project Area Social and Economic Setting Summary (Ref. DEIS, page 28)**

Social and economic diversification is needed in the region in order to effectively respond to the shift from historic dependencies on the coal industry to changing and expanding local employment opportunities. Such diversification has not been indicated and does not occur uniformly throughout the study area. The greatly improved highway system connectivity represented by proposed I-66 could do much to alleviate real and perceived regional isolation, link area communities with new social, cultural, educational, and economic possibilities and hopes, and provide a needed stimulus to reverse economic declines and population losses.

Efforts in recent times to reverse the negative social and economic trends of the area include the establishment of the Pikeville/Pike County Industrial Development and Economic Authority (IDEA). IDEA offers incentives to any new industry that would locate in the area or any existing facility that would expand its workforce. IDEA has facilitated the expansion of several existing industries and also created the full-service Pikeville-Pike County Industrial Park. IDEA was responsible for bringing Mountain Top Baking Company to the county. It was recently purchased by Kellogg USA, Inc. and when operated at full capacity is expected to employ 1,500 people.

Local government has also promoted plans for Pikeville to become a regional trucking and rail distribution hub for the tri-state area. Currently, there are 15 common carrier trucking companies that provide intra or interstate service to the area. CSX transportation provides mainline rail service and Elkhorn City and the Norfolk Southern Corporation provide rail service to coal mining operations.

Reversing population declines and out-migration, and establishing social and economic sustained growth for the Pike County - Mingo County area will be largely dependent on improved regional access to increase the attractiveness of the area to non-coal business and industry. Improved access will also be critical for the promotion of the tourist trade and increased visitation for the rich natural heritage available throughout the region. The proposed project is considered to be an essential part of the transportation network planned and needed as a critical stimulus for these objectives.

### **III. B. Existing Land Use and Land Cover (Ref. DEIS, page 29)**

The existing land use and cover patterns reflect the area's history and are limited by the topography of the study area. More than 85% of the study area is comprised of steep mountain slopes and covered by second and third growth forests. The forests of the area have recovered following the deforestation of the 19<sup>th</sup> and early 20<sup>th</sup> centuries. Prior to European settlement, the region was covered by vegetation characteristic of a mature stable deciduous woodland classified as Mixed Mesophytic Forest. This forest was dominated by yellow poplar, chestnut, oaks, and yellow buckeye. Early logging practices, coal mining, and subsequent soil erosion have led to forests that are more xeric. The dominant timber types found today are of the oak/hickory families. These comprise approximately 60% of area woodlands. It is estimated that 85% - 90% of

the two project counties (Pike and Mingo) are composed of commercial forests. A majority of this woodland (70%-72%) is in private ownership while most of the remainder (23%-25%) is owned primarily by mining corporations. Less than 5% is publicly owned. Currently, only a small amount of woodland (approximately 3%) is owned and specifically managed for timber production.

The heavily forested, steep slopes and lack of level ground throughout the region has led to limited agricultural activity. Only 6.8 hectares (17 acres) of prime farmland were found in the study area in Pike County and no prime farmland occurs in the study area in Mingo County.

Settlements, beginning with the logging industry development of the 1800's and followed by the coal industry since, have concentrated in the narrow valleys centered around these industrial operations. Development is along the limited, more level terraces of creeks and streams and is generally associated with coal mines (abandoned or active). These buildable locations are generally densely developed with a diversity of single family home types throughout that consist of a house or trailer with a small maintained yard and parking area.

Planning in Pike County is controlled by the Pikeville-Pike County-Elkhorn City Joint Planning Commission. Zoning is only enforced in the City of Pikeville. Pike County has no formal land use planning, development controls, or zoning ordinances, therefore, no official existing or future land use plans are currently available. Even though there is no formal land use plan for the project area, local officials have indicated that the project is consistent with their land use goals for the area and anticipate developing residential and industrial sites along the proposed project. In addition, the proposed project is consistent with the transportation planning goals of the Big Sandy Area Development District and is included in the Kentucky Six Year Highway Plan.

Mingo County also has no formal land use planning, development controls or zoning ordinances, however, it is included in the Region I Planning and Development Council's, *Regional Development Plan 1991-1993*, (1990). This Plan identifies businesses having a potential for future success in the region as: value-added wood products; information management; tourism; food processing; warehousing and distribution; and value-added coal. Most of these business types are relatively dependent on surface transportation. Regional planners believe that given the study area's proximity to eastern and southern markets, that it would be ideally situated for these businesses if an efficient transportation network was in place. Planners also agree that diversification into industries other than coal is essential for the region's long-term economic health.

The Region I *Regional Plan* also identifies areas that are proposed for industrial development. None of these proposed sites are located in Mingo County, however, the County is in the midst of an extensive effort to add water and sewer capacity. With added infrastructure and improved highway access, the development potential would be greatly enhanced. The proposed Appalachian Corridor I-66 highway project is consistent with the goals of the *Regional Plan*.

### **III. C. Natural Environment**

#### **III. C. 1. Geologic and Physiographic Characteristics (Ref. DEIS, page 31)**

This region consists of highly dissected uplands with irregular mountain ridges, and steep mountain slopes with narrow, V-shaped valleys carved by high-gradient surface streams. Numerous small streams drain the project study area and all flow into either Tug or Levisa Forks. A dendritic drainage system has developed over the flat-lying sedimentary rocks within the study area. Streams within the region generally lie in narrow floodplains, have moderate to high gradient, and rocky to sandy substrates.

Elevations generally range from about 198 meters to 975 meters (650 to 3,200 feet) across the study area. The average relief from ridge top to valley bottom is approximately 275 meters (900 ft).

The underlying geology of the project area is of the Quaternary and Pennsylvanian Systems. Quaternary alluvium occurs in the narrow bottoms along the two main surface streams. Pennsylvanian age rock consists of the Breathitt and Allegheny Formations, which are made up of interbedded sandstones, siltstones, shales, limestone, and coal beds.

A great number of commercial coal seams are present within the study segments. The coal beds are usually immediately underlain with soft clay-shale (fire clay or underclay). Coal seams to be encountered include Fire Clay, Amburgy, Clintwood, Eagle, Alma, Upper Elkhorn No. 1, 2 & 3, Lower Elkhorn, Peach, Taylor, Winifrede, Chilton, Williamson, Powellton, and Campbell Creek. Because of the low sulfur content, these coal seams are environmentally attractive. Deep mines, contour strips, and mountaintop removal have extensively mined many coal seams.

#### **III. C. 2. Soils (Ref. DEIS, page 31)**

The main soil associations found in the project area, identified by steep mountain side slopes and ridge tops, are composed of the Marrowbone-Feds creek-Kimper-DeKalb association in Kentucky and the Matewan-Highsplint-Guyandotte association in West Virginia. These soil associations consist of very deep to moderately deep, very steep, well-drained soils with loamy subsoils; slopes typically range between 35% and 80%. Marrowbone soils occur on upper middle side slopes; Feds creek and Highsplint soils along lower slopes with warm aspects; Kimper and Guyandotte soils along lower slopes with cool aspects; and Dekalb and Matewan soils along ridge tops. These mountain soils are not suited for development or agriculture. Mined areas consist of Myra soils formed from high pH regolith and the mountaintop removal areas have potential to develop commercially.

The Nelse-Shelbiana-Udortents soil association primarily occurs along riverbanks and low terraces of Russell Fork in the project area, and the Yeager-Chavies-Udortents occur in alluvial conditions and in association with Tug Fork and Mate Creek. These soils are deep, nearly level and well drained, with an underlying layer of loamy subsoil. Nelse and Yeager soils are located on riverbanks; Shelbiana and Chavies soils on low stream terraces; and Udortents are disturbed soils occurring in reconstructed valleys associated with residential and

commercial development. Other gravelly alluvial soils along secondary stream tributaries include Craigsville and Potomac soils. Most alluvial areas along streams are used for residential, commercial, and industrial development. Small undeveloped areas, less than 1% of the total area, qualify as Prime Farmland.

### **III. C. 3. Climate (Ref. DEIS, page 32)**

The regional climate may be considered mild with warm, humid summers and moderately cold winters. The annual average daily temperature is 58 degrees F. Winter average temperature is 39 degrees F and summer is 76 degrees F. Total annual precipitation averages 44 inches of which 55% usually falls in April through September. The average seasonal snowfall is 15.6 inches. The average annual growing season is approximately 177 days per year. Wind speed is highest (12 mph avg.) during the spring, and heavy rains and severe thunderstorms sometimes cause flash flooding in the narrow stream valleys.

### **III. C. 4. Flora and Fauna (Ref. DEIS, page 32)**

The project area is included in the Northern Temperate Deciduous Forest Biome. The predominant flora associated with this biome is the dominant oak/hickory forest-type group that is mostly a mosaic of second and third-growth communities. Deciduous forest covers from 85% to 88% of the entire study area. The average age of the forest is between 65 and 80 years. The predominant fauna associated with this biome include: white-tail deer; hare, squirrel, fox, opossum, skunk, black bear, bobcat, owls and hawks. In 1997, the Kentucky Department of Fish and Wildlife Resources began a program to reintroduce elk into the area. It is estimated that 800 to 1000 individuals are now present throughout the range. Reports of black bear from the area are increasing and only the bison, gray wolf, mountain lion, and river otter remain absent from the list of original fauna of the larger mammals indigenous to the area. While most of the fauna is still intact, there have been changes in abundance. Many species have made successful comebacks but none are as plentiful as they once were. The terrestrial field study conducted for this proposed project represents the first comprehensive study into the vascular plant flora and forest ecology of the project area.

No Federally-listed (U.S. Fish and Wildlife Service, USFWS) threatened or endangered species were initially reported by the Cookeville, TN. or the Elkins, WV. Offices of the USFWS as known from the project area. Correspondence received from the USFWS Atlanta, GA. Office indicated the likely occurrence of one federally listed species, the Indiana bat, from the area.

The Kentucky Department of Fish and Wildlife Resources (KDFWR) had no records of federally listed or proposed threatened or endangered species for the project area and no records were reported by the West Virginia Division of Natural Resources. Additionally, no unique or ecologically sensitive areas and wildlife and waterfowl refuges were reported as occurring in the project study area.

### **III. C. 5. Surface Water Resources (Ref. DEIS, page 33)**

The project corridor lies within the Big Sandy River watershed and is crossed by both of the Big Sandy's largest tributaries, Levisa Fork and Tug Fork. Levisa Fork is a sixth order river with a watershed encompassing 6,024 sq. km. (2,326 sq. mi.). It runs parallel to US 23 at the western end of the project study area. Tug fork

is also a sixth order stream with a watershed encompassing 4,038 sq. km. (1,559 sq. mi.). It serves as the border between Kentucky and West Virginia nearer the eastern end of the project. A ridgeline between Kimper and McVeigh creates the watershed divide between the two river systems.

Between project termini, approximately 40 perennial, ephemeral, and intermittent streams cross the project study area. The largest of these streams, from west-to-east, include Johns Creek, Pond Creek, Blackberry Creek, and Mate Creek. According to biennial reports published by the Kentucky Division of Water (KDOW) since 1992, portions of Levisa Fork and Johns Creek, and tributaries Raccoon Creek and Hurricane Branch, have failed to support designated uses due to siltation/turbidity from mining and silviculture, and due to pathogens/organic enrichment from residential wastewater systems.

The *Kentucky Rivers Assessment*, published in 1992, listed Levisa Fork, Pond Creek, and Tug Fork as Class 3 rivers. This ranking indicates that the streams have a viable fish community, but no unique biological communities nor state or federal protected species.

The West Virginia Division of Natural Resources (WVDNR) has recently conducted biological, habitat, and water quality evaluations of Mate Creek and Tug Fork. Their results indicated that Mate Creek appeared to be impaired biologically and physically. Six fish species were reported from Mate Creek. Tug Fork data reflected non-impaired communities and conditions and produced a total of 23 fish species.

According to the water quality and aquatic ecosystem data developed for surface waters in the project study area, there are no sensitive water resources that would be affected by the project. Tug Fork is considered by WVDNR to be a High Quality Stream that supports significant populations of freshwater mussels and may support significant or irreplaceable fish, wildlife, and recreational resources. Tug Fork is the only stream in the project area which affords these conditions.

### **III. C. 6. Wetlands (Ref. DEIS, page 33)**

A review of the National Wetlands Inventory (NWI) mapping represented by the USGS quadrangles for Pikeville, Lick Creek, Millard, Belfry, Matewan, and Delbarton revealed 13 potential, palustrine-type wetlands within the project area. Of these 13 potential wetlands, only 3 were determined to be present within the study area. Seventeen (17) additional wetlands, including isolated wetlands, which were not listed on the NWI mapping, were recorded in the study area from on-site investigations. Only one of the wetlands appeared to be natural; the remaining 19 were man-made structures that were primarily built to provide sediment control for surface coal mine sites. Most wetland locations are small (less than 0.2 hectares [0.5 acres]). The largest within the study area was 0.65 hectares (1.6 acres). Because of a recent Supreme Court decision on wetlands (*Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*, January 9, 2001), some of these sites may not be determined jurisdictional wetlands. During the project design process for the Preferred Alternate, on-site examination will be conducted by the Huntington District, Army Corps of Engineers to obtain official determinations for any sites unavoidably affected.

### **III. C. 7. Floodplains and Floodways (Ref. DEIS, page 34)**

Significant floodplain areas occur on the Preferred Alternative in conjunction with Levisa Fork, Johns Creek, Pond Creek, Blackberry Creek, Tug Fork, and Mate Creek. These areas currently contain residential and commercial land uses, with some small areas of subsistence farming.

### **III. C. 8. Farmlands (Ref. DEIS, page 34)**

Formal consultation with the U.S. Department of Agriculture, Pike County Field Office of the Soil Conservation Service (USDA, SCS) revealed that there are only 9 to 17 acres of prime farmland within the project study area in Kentucky. Formal consultation with the U.S. Department of Agriculture, Beckley, West Virginia Field Office of the Soil Conservation Service (USDA, SCS) revealed that no prime farmland occurs within the study area in West Virginia.

### **III. C. 9. Recreational Resources (Ref. DEIS, page 34)**

The only public recreational facilities in the project area are: Fishtrap Lake, accessed from existing Route KY 1789 and from KY 194; and the Grants Branch Lake and Recreation Area, accessed from KY 199. Neither of these facilities will be impacted by the Preferred Alternative, however, improving accessibility to and use of these resources, a stated goal of the project, would be achieved. There are no other public recreational facilities, parks, refuges, or Section 4(f) recreational type land uses within the project study area.

### **III. C. 10. Cultural Resources (Ref. DEIS, page 34)**

Early settlement and transportation routes in the project study area were largely restricted to the river and stream valleys. The family of William Robert Leslie made the first known permanent white settlement in Pike County on lower John's Creek. By the beginning of the nineteenth century, other settlements appeared on Levisa Fork near present day Pikeville.

Exploitable coal deposits were known from the area before the Civil War, but large scale development did not occur until the railroads were completed during the first two decades of the twentieth century. Pike County has been one of the principal coal producing counties in the U.S. since about 1910 when production reached 895,093 tons. By 1920 production climbed to 4,740,453 tons and peaked in 1926 at 7,820,301 tons. By 1930, Pike County production dropped 22% to 6,065,840 and on the eve of WWII, in 1940, production was down to 4,818,545. Spikes in the production of coal have occurred during WWII, during the Korean War and during the OPEC oil embargo of the early 1970's.

By the early 1950's, the coal company stores had virtually disappeared. Smaller truck mines gradually began to out-produce the rail mines and the coal camps either shut down or operated on a more limited scale. In the 1950's, strip mining or surface mining became the preferred method for coal removal. The numbers of mines and miners have decreased as the level of mechanization has increased. Today, coal remains a strong force in the regional economy and substantial coal reserves are still being mined. More than half of the coal mined today is transported by truck

Among the more noted historic areas are McVeigh, Hardy, and Stone along a stretch of Pond Creek. Pond Creek was once dotted with coal camps, N&W railroad stations and sidings, and other structures associated with the coal industry. The area's population peaked at 16,264 during the 1930's coal boom.

Another local historic area lies in the vicinity of Blackberry Creek and the community of Ransom. This area was closely associated with the nineteenth century Hatfield - McCoy feud. Though few standing structures remain, the area still contains feud era sites and elements which contribute to the Hatfield - McCoy Feud Historic District.

Following a detailed field investigation for cultural historic resources, it was determined that there was one recorded site, the Jeremiah Hatfield House, within the project study area. After documenting all sites appearing to be more than 50 years old, two additional sites within the study area, the Hughes House and the Justice House, were found to meet National Register of Historic Places criteria.

### **III. C. 11. Visual and Atmospheric Environment (Ref. DEIS, page 35)**

The visual experience in the study area is generally characterized by mountainous vistas intersected by narrow valleys which have been formed by small rivers and creeks. The land surface within the study area is almost wholly forested with small portions of built-up land and some strip mines randomly distributed throughout. Generally, the area through which the Preferred Alternative passes is rural and thinly populated. The only exceptions are at major cross-roads where some development has occurred in the available flat land, and at the beginning of the project along US 23.

Currently, air monitoring is conducted for transportation air pollutants at various locations within each state by the National Air Monitoring System (NAMS), and by the State and Local Air Monitoring System (SLAMS) programs. Based on historical data, Pike County is designated as being "in attainment" for all transportation related air pollutants and Mingo County is currently designated as "attainment unclassifiable". The term "attainment" refers to the status of the various pollutants described in the National Ambient Air Quality Standards (NAAQS). To be in attainment, a measured transportation related pollutant must not exceed the standard by an average of more than 1 time over a 3-year period. If a pollutant exceeds the standard more than the allowable average, it is considered "in non-attainment". The project area has not exceeded standards for transportation related air pollutants. Furthermore, based on area conditions and predicted traffic volumes for the proposed route, no air quality problems are anticipated and the area is expected to remain "in attainment" for the foreseeable future.

## **IV. ENVIRONMENTAL CONSEQUENCES**

The environmental impacts discussed are anticipated to occur as a result of construction and operation of the Appalachian Corridor I-66 project. The assessment of impacts served as a basis for comparison of the Build Alternatives and assisted in the identification and selection of the Preferred Alternative. During the development of this project over the next 20 to 30 or more years, it is anticipated that other environmental studies, environmental reevaluations, and new or supplemental environmental documents will be necessary. These studies and documents are expected for further developments on the project such as proposed interchanges, designated waste sites, project modifications and changes, or new information. They may also be necessary to address changes in environmental laws and regulations which may occur during the life of the project. The FHWA and the KYTC will ensure that all such circumstances are evaluated and subjected to full environmental analysis and public involvement prior to final project decisions which may result in significant environmental impacts not identified in this most recently distributed version of the Final EIS.

The methodologies utilized to examine and assess anticipated impacts are those currently recognized by regulatory agencies and/or prescribed by the Federal Highway Administration (FHWA), the Kentucky Transportation Cabinet (KYTC), and the West Virginia Department of Transportation (WVDOT). Detailed, topic specific information can be found in the supporting DEIS and in the Technical Appendices. The sections that follow focus on the measurable impacts of the Preferred Alternative, including discussion of indirect and cumulative effects where appropriate. Since circulation of the DEIS, one minor change has occurred on the Preferred Alternative. This change was brought about as a result of the Value Engineering Study process. A short segment of the South Alternative southeast of Kimper (see Exhibit 4e) was shifted slightly southward to the opposite side of Gabriel Branch. This shift resulted in an estimated savings of \$11+million in construction costs, eliminated the need for several residential relocations, and reduced the degree of stream impacts on Gabriel Branch. No additional impacts were observed and no additional impact mitigation measures were found to be necessary as a result of this change. This minor change to the Preferred Alternative was presented at the Public Hearings held in March, 2002. No opposition nor expressions of concern about this change on any grounds were received. No other noteworthy changes in the study alternatives nor the anticipated project environmental consequences have occurred since the DEIS was circulated.

### **IV. A. Land Use and Land Cover Impacts (Ref. DEIS, page 36)**

Preferred Alternative North band from US 23 to the North to South Connector is estimated to impact approximately 650 acres. Of this total area, approximately 430 acres are forest, which will be removed from within project disturb limits. The approximate balance is: developed residential, 59 acres; commercial/business, 45 acres; industrial/coal surface mines, 22 acres; and stream bottom/terrace, 1.5 acres. The remaining approximately 92 acres, makes up existing road rights of way, subsistence agricultural use, non-forested areas, and miscellaneous uses.

The connector segment, linking the northern line to the southern line (North to South Connector band) west of Kimper, would account for another 331 acres of forest but would not impact other land uses.

Preferred Alternative South segment is estimated to impact approximately 2,387 acres. Approximately 1,647 acres are forest, 84 acres residential, 1.4 acres commercial/business, 89 acres industrial/surface mines, and

4.5 acres stream bottom/terrace. The remaining approximately 561 acres is composed of non-forest, subsistence agricultural use, road rights of way, and other uses.

Approximately 88% (441,700 acres) of Pike County is covered by forest land, as is nearly 100% of the 297 project acres in Mingo County. The Preferred Alternative may convert approximately 3,665 acres to highway rights-of-way. The 2,408 forested acres from this total acquisition and conversion represents less than one-half of one percent of the total project area woodland available in the two counties.

Woodlands have recognized ecological values on a local scale in that they provide forage, nesting and cover for local fauna. They also provide erosion control and runoff moderation benefitting surface streams. Even though these values have been appreciably debased in the project corridor due to repeated disturbances by mining, logging, and forest fires that have occurred periodically since early settlement, measures to minimize forest impacts and timber removal are recommended and will be explored during the final design of the Preferred Alternative.

It is believed that this can be achieved to a great extent on this project through context sensitive design measures and innovative construction methods. Such measures could include minimizing the project footprint through the forest by limiting clearing and grubbing activities, and holding construction disturb limits as tight as possible. The forest land to be converted for the project represents a small percentage (0.083%) of forest land available (440,000+ acres). It is not distinctive, in that it does not supply critical habitat or unique ecological features. Areas beyond that required for actual construction of the highway, specifically, areas to be used for placement of excess fill material, shall be investigated for possible economic development. Those with limited potential for such shall be revegetated with native plant species to the maximum extent practicable. With implementation of measures to minimize forest conversion, no significant land alteration impacts are expected as a result of timber removal and land cover changes caused by roadway construction. Therefore, no additional mitigation is proposed or considered necessary. Further evaluation of the possible uses, environmental effects, and mitigation potential for waste/fill sites will be conducted during the final design phase when waste/fill amounts and placement locations can be determined.

#### **IV. B. Farmland and Agricultural Impacts (Ref. DEIS, page 38)**

Formal consultation with the U.S. Department of Agriculture, Pike County Field Office of the Soil Conservation Service (USDA, SCS) for compliance with the Farmland Protection Policy Act of 1981 (FPPA) has been completed. From the maximum 981 acres to be converted to highway right-of-way on the North segment of the Preferred Alternative (including North to South crossover), only approximately 9 acres of prime farmland were found. The project's rating was 110 out of a possible 260 points indicating that no significant farmland impacts would accrue on this segment of the Preferred Alternative. (See DEIS Appendix A - Form AD-1006).

Of the maximum 2,387 acres to be converted to highway right-of-way on the South segment of the Preferred Alternative, approximately 17 acres of prime farmland were found. The project's rating was 115 out of a possible 260 points, which discloses that no significant farmland impacts would result from the Preferred Alternative South option (See DEIS Appendix A - Form AD-1006).

Formal consultation with the U.S. Department of Agriculture, Beckley, West Virginia Field Office of the Soil Conservation Service (USDA, SCS) for compliance with the Farmland Protection Policy Act of 1981

(FPPA) has also been completed. Of the 297 acres located on the Preferred Alternative in West Virginia, none could qualify as prime, unique, statewide or locally important farmland.

#### **IV. C. Social Impacts**

##### **IV. C. 1. Community Cohesion and Community Impact Assessment (Ref. DEIS, page 38)**

Current development in the Kentucky study area occurs along existing roadways or along the approach roads. Towns and villages in the study area, including Pikeville, Shelbiana, Mayo Village, Pleasant Valley, Collins, Yeager, Robinson Creek, Garden Village, Raccoon Creek, Kimper, McVeigh, Ransom, McCarr, Phelps, and Rose Siding are built along both sides of their existing access roads. In the West Virginia study area, development also primarily occurs along existing roadways or along the approach roads. Matewan, North Matewan, Thacker, and Red Jacket are built along both sides of their existing access roads.

The Preferred Alternative would bypass each of the above identified communities and several of the existing roads to these communities would serve as collector roads. Access to the project mainline could be provided at each terminus and from some of the collector roads. After completion of the proposed project, traffic on existing roadways is predicted to be only 20% to 48% of predicted levels without the project, depending on location.

As a result of traffic volume reductions, community cohesion in the study area communities along existing roadways which are not directly impacted by the project, is likely to be enhanced because interaction between neighbors would be easier with decreased vehicle pollution levels, noise, and congestion that would be associated with a high volume of through traffic.

Community cohesion in the small, linear residential clusters along the hollows and side roads that are directly affected in the project study area would likely suffer adverse impacts due to the number of displacements required. Some of these communities may lose identity in locations where most or all structures are displaced. This probability has been widely and openly discussed at all public and ACT Committee meetings since initiation of the project. These housing clusters do not display characteristics as might be represented by similarities in design, style, age, ethnicity, culture, incomes, family composition, or usage. Based on discussions with local residents, statements expressed at public meetings and hearings conducted for the project (see Appendix B), and survey data collected (over 400 questionnaires were received and reviewed), these residential clusters are not cohesive units with family, ethnic or other group interdependencies. Strong ties to neighborhood through religious, ethnic, or cultural affiliations were also not indicated and length of tenure averaged twenty to thirty years for those responding to project questionnaires.

Based on the public participation during the project development process, it has been recorded that despite disruption of some residential clusters, affected families throughout the study area have expressed unwavering support for this project. This support clearly indicates that community impacts are not regarded as significant and in many cases viewpoints have been expressed that the project will supply opportunities for improved living conditions. Additionally, some displaced residents may be able to relocate their homes and structures on the same property and/or within the same general residential cluster. Therefore, final relocation

activities would *not* be complicated by the need to attempt to maintain associated cultural groups or families (relocation impacts are discussed later) and no uniquely connected community would be affected. As the project continues to evolve, specific measures for minimizing impacts on family clusters and hollow neighborhoods will be examined through design modifications during final design.

In addition to residential displacements, there are also some limited community resources and institutions indirectly affected. These resources may be inconvenienced during the construction period, but they will not be subject to displacement by the proposed project. In Kentucky, these resources include: Upper Chloe Church of God, Red Creek Church of God, US Post Office at Kimper, Kimper Fire and Rescue, Kimper Church of Christ, EDO Free Baptist Church, Cedar Bottom Church, Kimper Elementary, and Runyon Elementary School. In West Virginia, these resources include: Benton Baptist Church, Matewan Elementary School, O'Brien Park, The Church of God, First Assembly of God, Church (CR-6), Hugh C. Boyd Lodge No. 119, and Red Jacket Post Office. A number of family cemeteries were also identified in conjunction with the Preferred Alternative and it is currently expected that most all will be avoided. Those which cannot be avoided will be subject to sensitive grave relocation procedures employed to ensure that next-of-kin wishes and requirements are met to the maximum practicable extent.

Travel patterns would ultimately be somewhat changed as travelers make choices between the old routes and new I-66 and divert to the new route, but arterial/collector and feeder roads would continue to serve their same functions. The changes in traffic distribution would be expected to improve area accessibility and overall public safety by providing a modern, divided, four-lane facility for regional travel while enabling drivers with more local destinations, such as shopping and community facilities, to use less congested existing highways.

The net effects of the proposed project would include improving overall vehicular access, travel time, safety, convenience, and traffic service on all major travel routes. This would improve the economic attractiveness of the project area because it should become easier, faster, and more predictable to reach business locations and commercial enterprises.

Quality of life issues from the community perspective have been locally expressed in terms of the increased accessibility and convenience for highway corridor residents to jobs, services, and key institutions such as schools, hospitals, recreation, cultural, and governmental resources and services. These facilities are located in the larger regional towns and cities. Improved access, convenience, and visibility may not have an immediate measurable dollar value, but it is certainly understood and locally noted as an important potential impact of this new highway. Positive, desired effects on community development trends and activities can also result from highway construction in rural regions because new routes tend to shorten the travel distance between communities, as well as travel time, enhancing both the sense of the regional unity and the ability of communities to work together. These circumstances can help to moderate community impacts initially felt with property acquisition actions.

Significant regional and local socioeconomic benefits are predicted at the community level as a result of the project. These include construction period jobs and support employment, enhanced commercial and industrial opportunities, improved tourism access, and long-term gains in per capita income and local tax revenues. In addition, the new facility would provide a safer and more efficient travel route, for improving emergency and

distribution services delivery, for school buses, and for vehicle enforcement. It would be anticipated to significantly reduce accident costs, stabilize travel time/expectations, and reduce traffic congestion.

The only measurable negative socioeconomic effects predicted for the project--residential displacements and lost revenue to drive-by businesses--are local to the immediate project area. Preliminary estimates indicate that as many as 72 residences may be displaced by the North segment of the Preferred Alternative, and 37 residences by the South segment. These numbers are based on a "worst case" analysis and will be subject to adjustment during the final design phase. It is expected that actual relocation numbers will be somewhat lower. In any case, no substantial problems are anticipated in relocating displaced people because sufficient lead time (4 to 20 or more years) will be allotted to accomplish this in an orderly manner. Also, according to real estate listings and Census data, there are sufficient numbers of homes that are either for sale or rent to easily accommodate all displacees. Although some residences have not been posted for sale or rent, many may come on the market once the right-of-way has been approved and demand becomes more pressing. Decent, safe, and sanitary replacement housing within the financial means of all displacees is available in the region--or expected to become available during the extended relocation period. In addition, Last Resort Housing measures would be available for use on a case-by-case basis, and would be expected for the construction of mobile home sites and to assist elderly and disabled individuals.

Upon completion of the I-66 Appalachian Corridor Preferred Alternative, there would be a four-lane road from Pikeville, Kentucky to the proposed King Coal Highway in West Virginia. No such regional transportation option exists today. A four-lane road could help generate an improved sense of cohesion between east and west portions of Pike County. It would simultaneously improve system linkage for this isolated subdivision of Appalachia, with other Interstate and NHS routes in central Kentucky, southeastern West Virginia and major eastern and southern travelways. These improved transportation connections would provide a necessary condition for the attainment of enhanced opportunities, which all project area communities need, in order to enjoy better economic status and social interaction. Therefore, no significant adverse community impacts or negative consequences to community cohesion constituents are expected from the Preferred Alternative.

#### **IV. C. 2. Accessibility (Safety and Mobility) (Ref. DEIS, page 41)**

The Preferred Alternative will not displace any public facilities, schools, police or fire stations. The proposed road will improve access and safety for emergency vehicles which service hospital facilities, police, and fire protection located in and around Pikeville, Matewan and Red Jacket. Educational facilities such as Pikeville College and Pikeville High School, Matewan Elementary School, and Red Jacket Head Start School would likely benefit as well from the project. Because many of the existing roads are two lanes with little or no shoulder, an accident could close a road for lengthy periods, effectively cutting an area off. I-66 represents an alternative route which could provide critical relief under such conditions.

Safety and accessibility to Pikeville Elementary School, Pikeville High School, Pikeville College, Pike County High School, Johns Creek Elementary, Runyon Elementary School, Kimper Elementary, Belfry High School, and Bevins Elementary School would be improved because traffic will be decreased on the existing roads in front of the schools. Travel patterns for through traffic are likely to divert to the new road, relieving some congestion problems on many of the existing roads throughout the study area. School

buses and students coming to the schools are expected to benefit from the new road because some of the current traffic will shift their route to the new road.

The new facility would improve travel time and safety for commuters and facilitate through traffic to the new I-66 in Pike and Mingo Counties. Many of the existing roads may become collectors that will serve the new alignment. The new facility would enhance safety by shifting traffic from a congested area onto a full safety, four-lane highway with safety clear zones and full and partial control of access. Greatly improved access to recreational and cultural resources throughout the area would also be provided. Therefore, regional accessibility, including safety and mobility, is expected to be positively reinforced with no significant adverse consequences following completion of the Preferred Alternative.

#### **IV. C. 3. Environmental Justice (Ref. DEIS, page 42)**

The purpose of *Executive Order 12898*, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations, is to focus Federal attention on the environmental and human health condition in minority and low-income communities, promote nondiscrimination in Federal programs affecting human health and the environment, and to provide minority and low-income communities access to public information and an opportunity to participate in matters relating to the environment and human health. Based on the composition of the population within the project study area, as determined from Census data, on-site surveys, conversations with governmental officials, discussions with residents affected by the project, and review of questionnaires completed by the public (see example in Appendix B), no disproportionately high and adverse human health or environmental effects on minority and low-income populations would result from the Preferred Alternative. Specific additional detail on this subject is found on pages 42 - 43 in the DEIS.

#### **IV. D. Residential and Business Relocation Impacts (Ref. DEIS, page 43)**

The Preferred Alternative North segment would displace 72 residences, eight (8) businesses, one (1) church, and one (1) cemetery; however, no farms would be affected. Preferred Alternative South segment would displace 37 residences, three (3) business, and one (1) cemetery; however, no farms, or churches, would be affected. The Connector would not require any displacements.

The *Conceptual Stage Relocation Report* (CSRR) (see Appendix C) and supplemental housing data developed for the project indicate that adequate decent, safe, and sanitary replacement housing within owners' financial means will be available within a radius of less than 6 miles (10 kilometers) to 12 miles (20 kilometers) of the project. The local housing market, as represented in newspapers and real estate listings, has shown the following typical availability:

##### Kentucky Study Area:

- ! 380 houses for sale at price ranges from \$20,000 to more than \$100,000
- ! 110 mobile homes and sites for sale in the \$20,000 range
- ! 225 lots for sale from \$2,000 to \$30,000
- ! 30 apartments, ten (10) houses, and ten (10) mobile homes for rent from \$250-\$750/mo.
- ! Ten (10) mobile home sites for rent

West Virginia Study Area:

- ! 44 houses for sale at price ranges from \$20,000 to more than \$100,000
- ! Eight (8) mobile homes and sites for sale in the \$20,000 range
- ! Five (5) lots for sale from \$2,000 to \$30,000
- ! 20 apartments, five (5) houses, and five (5) mobile homes for rent from \$250-\$750/mo.

U.S. Census housing data from 1990 disclose that there were approximately 2,612 vacant housing units in Pike County and approximately 1,257 vacant housing units in Mingo County. Houses from this pool will continue to become available on the market each year in response to local demand created by capital development projects and expected continuing out-migration. Currently, the supply of market and vacant housing in Pike and Mingo Counties far exceed anticipated demand. It is anticipated that the local market will be able to absorb the displacements of the project over the lengthy relocation period, thus allowing most individuals and families to remain in the area if they so choose. Therefore, the cumulative impacts of the residential displacements from the Preferred Alternative are not expected to be significant.

In the Kentucky study area, there are as many as 11 businesses (with a total of 166 employees) affected by the Preferred Alternative. However, no employees are expected to permanently lose their jobs as a result of project impacts to businesses as each would be expected to receive assistance and relocate within the area. In the West Virginia study area, there are no businesses, farms, or cemeteries affected by the Preferred Alternative. Listed below are the businesses that could be affected by the Preferred Alternative:

- ! Pikeville Pediatrics - 12± employees. It appears the business can be relocated. There are buildings available for sale or lease.
- ! Pikeville Water Systems - four (4) employees. This water treatment facility would need reconstruction to service the area prior to highway construction. Care will be taken to ensure maintenance of water service during the construction phase. Existing water lines will not normally be disconnected until new replacement lines are in place. If disconnection prior to new line installation is necessary, alternative water sources will be provided to affected users. Utility relocations will be accomplished in accordance with the requirements of the FHWA and consistent with the KYTC Utilities Manual.
- ! Aramark - 15 employees. It appears the business can be relocated. There are buildings available for sale or lease.
- ! Days Inn Hotel - 10 employees. It appears the business can be relocated.
- ! Dye's Used Auto Sales- two (2) employees. It appears the business can be relocated. There are buildings available for sale or lease.
- ! Campbell Oil and Mine Supply - three (3) employees. It appears the business can be relocated. There are buildings available for sale or lease.
- ! Pike County Coal Company - 25 employees. It appears the business can be relocated. There are buildings available for sale or lease.
- ! Wayne Supply - 120 employees. It appears the business can be relocated. No single building is available. A new site and new facilities construction would likely be required. Wayne Supply is an important local employer which provides heavy equipment sales, service, repair, and storage for the coal mining and construction industries. It is important to the local economy for this company to remain in the area. Wayne Supply officials have indicated, during discussions about this project, that they intend to

relocate their operations because they have outgrown this current site. They have advised that they are currently seeking another site within Pike County. They are evaluating several sites, including highway waste/fill site locations constructed in conjunction with other highway projects. It is therefore expected that Wayne Supply will have moved prior to project right-of-way acquisition activities in the vicinity of their current facilities. However, if this large local employer is still in business at this site at the time of project construction, measures will be taken, in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policy Act, to ensure assistance with their relocation to prevent undue hardships for the company or its employees, and ensure, to the fullest extent possible, that they remain within this community.

- ! Doug's Body Shop - two (2) employees. It appears the business can be relocated. There are buildings available for sale or lease.
- ! Classic Cars of Kentucky - two (2) employees. It appears the business can be relocated. There are buildings available for sale or lease.
- ! Compton Carpet Cabinets - four (4) employees. It appears the business can be relocated. There are buildings available for sale or lease.

Except during the relocation transition period, all existing local businesses would be expected to benefit during the construction period as a result of associated employment, payrolls, and tax revenues. Short-term negative impacts would be expected during the relocation transition period while business activities are being relocated. Only eleven businesses may be directly affected by the Preferred Alternative. No single one employs an unusually large number of people, all can relocate in the project area, and the actual relocations will only occur periodically over an extended acquisition period (2 to 20+ years). Therefore, the Preferred Alternative is not expected to have any significant adverse long term business or employment impacts.

Relocation resources will be made available to all relocatees without discrimination. Relocation Agents will be prepared to assist relocatees in finding adequate replacement housing, in contacting lending agencies and approved moving firms, and in processing claims for payment and appeals. The Relocation Agents will assist the relocatee in any way, within the law and their capability, to relocate into adequate replacement housing with a minimum of disruption.

If any unforeseen problem should arise, last resort housing can be implemented on a case-by-case basis and may include construction of a new dwelling, addition to or rehabilitation of an existing replacement dwelling, loan or rental subsidy, relocation of a dwelling, purchase of land, or possibly relocating to a different area if that provides a better solution.

All displaced persons will be treated without discrimination on any basis and in a manner that complies with the *Uniform Relocation Assistance and Real Property Acquisition Act of 1970* as amended; Public Law 91-646, *Title IV of the Surface Transportation Uniform Relocation Act of 1987*; CFR, Part 24, *Uniform Relocation Assistance and Real Property Regulations for Federal and Federally Assisted Programs*; Final Rule and Notice, as administered by the Kentucky Transportation Cabinet and by the West Virginia Department of Transportation. Relocation resources are available to all residential and business relocatees without discrimination in accordance with the *Civil Rights Act of 1964, Title VI*.

#### **IV. E. Economic Impacts**

##### **IV. E. 1. Employment, Income, and Business Activity (Ref. DEIS, page 47)**

The Preferred Alternative is not anticipated to have negative long-term effects on employment, income, or business activity as a whole. The Pike County Chamber of Commerce, Industrial Development and Economic Authority, Big Sandy Area Development District, Pikeville Main Street Program, Mingo County Chamber of Commerce, business leaders, and local officials have all expressed strong support for the project.

The employment and income levels of the Region should benefit from new businesses locating in the project area. Many residences will have improved access to downtown amenities, which have witnessed a recent resurgence in Pikeville and Williamson through employment and business opportunities. Employees will have access to a larger area within the same travel time. Local residents will also benefit from the larger shopping area and the larger selection and price competition it creates.

The Preferred Alternative could affect some gas wells, and coal reserves that are either being mined or will be mined in the future. Special safety regulations apply to construction activities when crossing coal mines. These can include temporary suspension of mine production and evacuation of personnel from the mine.

At the time of this study, a detailed analysis on the amount of coal reserves by project Alternative had not been completed, however, effects were expected to be generally the same for each proposed alternative. A detailed analysis will be performed in the future for each construction section of the Preferred Alternative (See also Section IV. U. 2.).

A study entitled *Appalachian Development Highways Economic Impact Studies* was prepared for the Appalachian Regional Commission (ARC) in the summer of 1998. This study examined ADHS corridors which were complete or nearly complete in terms of their economic impacts from the aspects of competitive advantage, roadside services, tourism, and construction expenditures. The study concluded that by the year 2015, the improved corridors will have resulted in the creation of over 3,500 new jobs per corridor and over \$2 billion of value added impact. The study found that the ADHS highways produce net user cost savings in terms of travel time, vehicle operating costs, and accident costs. It also found that the ADHS highways have a positive effect on the economic well being of the residents and businesses served by helping to retain and attract jobs and resident populations, as measured by employment opportunities, wages, and value added. People, businesses, and communities have gained considerably from investment in new and improved highways in the region. According to the study, ADHS highways have; (1) created benefits in the form of travel efficiencies valued at \$4.89 billion (1965-2025), (2) yielded conditions for a net increase of 42,000 jobs by the year 2015, (3) provided a net increase in value added from increased production of \$6.9 billion (1965-2025), (4) provided an economic rate of return from the Region's economic development perspective of 8.29% per year, and (5) enabled the Appalachian Region to be better able to compete for economic opportunities, valued at \$2.7 billion (1965-2025). The I-66 Appalachian Corridor is expected to produce similar and additional positive regional impacts for many of the same reasons which the ADHS highways have. I-66 will supply benefits through the addition of travel time and efficiency savings, reduced accidents, improved access, improved economic development opportunities,

improved competitive advantage, additional roadside services, tourism development, and construction expenditures. No long-term adverse economic impacts are predicted as overall business opportunities are expected to be significantly improved by project implementation.

#### **IV. E. 2. Tax Revenue Impacts (Ref. DEIS, page 48)**

The proposed project may ultimately result in a direct conversion of approximately 3,600 acres of land to transportation right-of-way. Both Pike County and Mingo County would initially experience revenue losses due to the removal of the land from the tax rolls. The amount of the initial loss is dependent upon the value of the land. The new facility will spur residential, industrial and commercial development which will generate new tax revenue. Property assessments in Kentucky are 100% of fair cash value. The local property tax rates are dependent upon city-county location and school districts. Since the project is in rural Pike County, the local tax rate is a combination of a county tax and a Pike County School District tax. The 2000 combined local tax rates per \$100 valuation is \$0.762. The 2000 state property tax on real estate per \$100 valuation was \$0.141. Thus, the total tax rate for rural Pike County is \$0.903 per \$100 valuation. Total tax revenue from residential housing, excluding farms, would be reduced by approximately \$75,000.00 for the Preferred Alternative.

Property assessments in West Virginia are 100% of fair cash value. The local property tax rates are dependent upon county living and school districts. The total 2000 tax for property is \$1.1596 per \$100. Total tax revenue from residential housing, excluding farms, would be reduced by \$6,668.00 for the West Virginia segment of the Preferred Alternative.

#### **IV. F. Joint Development and Regional and Local Plans (Ref. DEIS, page 49)**

Joint development is not applicable and is not anticipated for this project.

The Pikeville-Pike County Industrial Development and Economic Authority (IDEA) promotes economic development within Pike County. The Authority was responsible for bringing Mountaintop Baking Company to Pike County, which employs approximately 400, along with numerous other successful businesses. The IDEA was also responsible for the first industrial park in this region.

There are currently 13 commoncarrier trucking companies that provide interstate and/or intrastate service to Pike County. CSX transportation provides mainline rail service to Pikeville and Elkhorn City. CSX Transportation and Norfolk Southern Corporation provide the nearest intermodal facilities in Kingsport, Tennessee, 101 miles south of Pikeville. The Norfolk Southern Corporation provides rail service to numerous coal mining operations in Pike County.

Local officials have indicated that the completion of I-66 is consistent with plans to develop the area into a regional distribution hub. A safe and efficient main thoroughfare through the county to West Virginia could improve Pike County's performance as a hub, increase Pike County's attractiveness for potential industrial sites, and enhance tourism access to Fishtrap Lake, Hatfield-McCoy Feud Sites, Grant Branch Recreation Area, Breaks Interstate Park, R.D. Bailey Lake, and significant historic landmarks related to coal mining towns in both counties. Based on interchange and intersection locations proposed and feasible, proximity to former surface mine sites, and possible spoil waste sites that may become necessary, it is currently estimated that as many as nine potential development sites could eventually serve the region.

The Mingo County Development Economic Authority promotes economic development within Mingo County. The I-66 Preferred Alternative is consistent with the Authority's land use plans and objectives.

Neither Pike nor Mingo County have formal land use planning, development controls or zoning ordinances, therefore, no official existing or future land use plans currently exist. However, the proposed project is consistent with the transportation planning goals of the Big Sandy Area Development District and the Region I Planning and Development Council's *Regional Development Plan* (1990) and it is included in the Kentucky Six Year Highway Plan and County Comprehensive Plans.

#### **IV. G. Pedestrian and Bicycle Facilities (Ref. DEIS, page 50)**

Currently, there are no bicycle or pedestrian corridors or trails within the project study area. Because of steep grades and mountainous terrain, no development of these facilities is planned, in conjunction with the project or after project completion.

#### **IV. H. Air Quality Impacts (Ref. DEIS, page 50)**

An Air Quality Analysis of the entire project from US 23/119 to the King Coal highway, including the Crossover Connectors (see Exhibit 3), was conducted in May 2001. Based on the findings of this Analysis, the maximum carbon monoxide (CO) concentrations for the existing facility are 8.7 parts per million (ppm) for one-hour and 5.89 ppm for eight-hours. The maximum CO concentrations predicted for the existing facility in the year 2020 (i.e. the no-build option) are 8.9 ppm for one-hour and 6.03 ppm for eight-hours. The maximum CO concentrations predicted for the proposed project in the year 2020 (i.e. the build option) are 8.9 ppm for one-hour and 6.03 ppm for eight-hours. This analysis reveals that maximum CO concentrations in the corridor will be the same with or without the project and that CO levels for all alternates are below the NAAQS.

The project is in an area that has been designated as in attainment for all transportation-related criteria air pollutants and does not require transportation control measures. Predicted CO concentrations are well below the one-hour (35 ppm) and eight-hour (9 ppm) National Ambient Air Quality Standards. Therefore, the Amended Final Conformity Guidelines issued by the U.S.E.P.A. and the U.S.D.O.T. do not apply. The project is exempt from the requirements of the Federal Transportation Conformity Rule(s) and the related West Virginia State Rule.

No transportation control measures are required pursuant to the Amended Final Conformity Guidelines issued September 15, 1997 by the U.S. Environmental Protection Agency and the U.S. Department of Transportation. With respect to the latest conforming State Transportation Improvement Program (STIP), the proposed project is located on page 179 of the STIP, Fiscal Years 2003-2008, approved in September of 2002. Mobile source air pollution is not a problem in the project area and the existing ambient air environment is well within National Ambient Air Quality Standards (NAAQS).

Based on the project specific Air Quality Analysis, this project is in compliance with the State Implementation Plan for the Attainment and Maintenance of National and State Ambient Air Quality Standards of both Kentucky and West Virginia.

Any increase in particulate matter in the air due to construction activities will be temporary and will not be detrimental to the health and welfare of local residents. Dust pollution during construction may be an unavoidable, minor nuisance and every feasible effort will be made to minimize this problem via standard dust suppression methods (Kentucky Road and Bridge Construction Specifications). Exhaust from construction equipment will have an insignificant effect on the ambient air quality. Any open air burning will be done in compliance with Kentucky or West Virginia state regulations and local laws and ordinances. Care will be taken to insure burning is done only along the right-of-way at the greatest practicable distance from dwellings, highways, and airfields and not when atmospheric conditions are such as to create a hazard or nuisance to the public.

#### **IV. I. Noise Impacts (Ref. DEIS, page 51)**

An analysis of predicted noise impacts resulting from operation of the new facility was prepared for the roadway Alternates in Kentucky and West Virginia. Both KYTC and WVDOT, in conjunction with FHWA, have developed consistent policies to determine the need, feasibility, and reasonableness of noise abatement measures for Federal-aid highway projects. The noise abatement policies of both agencies provide for consideration of noise abatement measures when highway traffic noise levels are predicted to approach (i.e. come within 1 decibel) or exceed the Noise Abatement Criteria (NAC) for a particular land use, or when adjacent noise receptors are predicted to experience substantial noise increase impacts (i.e. >10 decibels higher than existing).

At the 21 noise receptor sites examined for the project, the difference between measured existing noise levels and computer modeled future project noise levels did not exceed 10 dBA Leq at any site with any alternative. Therefore, no substantial noise increase impacts will occur. In addition, since the increase in noise levels between the Build and the No-Build conditions in the design year are not greater than 3 dBA at any receptor site, noise abatement measures for the project are not required. This is consistent with the approved noise abatement policies of both Kentucky and West Virginia, therefore, noise abatement measures are not likely for this project.

Noise levels due to the heavy equipment used during construction may exceed acceptable noise standards during the construction period, however, every reasonable effort will be made to minimize construction noise, especially around any noise-sensitive locations.

#### **IV. J. Water Quality Impacts (Ref. DEIS, page 51)**

Generally, stream disturbances will occur at locations which involve construction of culverts, pipes, fills and channel changes. These instream impacts usually result in temporarily degraded water quality conditions and net loss of aquatic habitat. The resulting effects can be long-term or short-term in nature. Stream segments that are covered or affected by fill will cause less long-term habit loss than culverts or pipes because the stream channel can be shifted and restored. Stream conditions and stream length are not easily recovered in situations involving culverts or pipes because stream segments that are placed through culverts or pipes will undergo permanent changes to their physical characteristics that will remain for the long term. Streams that are bridged will not likely experience direct adverse impacts. Bridge piers and abutments will not be located in streams and bridge fill slopes will not extend below ordinary high water. The streams that would be bridged include: Levisa Fork, Harolds Branch, Raccoon Creek, Hurricane Branch, John's Creek, Grant's Branch, Pond Creek, Blackberry Creek, Peter Creek, Tug Fork, and Mate Creek.

Water quality in the project study area is typically degraded by erosion, mine runoff, sewage discharge from straight pipes and inefficient, mismanaged septic systems. Some of the streams throughout the project area also flow through disturbed uplands (mining, logging, etc.) and developed stream terraces. With the possible exception of Tug Fork, water quality measurements showed that project area streams are basic with high sulfate levels as well as high alkalinity and hardness values (see DEIS Table 13). Biotic diversity is correspondingly limited by degraded water quality, low flows and poor habitat structure. According to the West Virginia Division of Natural Resources, Tug Fork, however, is considered a “High Quality Stream”. It supports fish, wildlife, and recreational resources and significant populations of state protected freshwater mussels. Tug Fork will be bridged by the project and erosion control measures, as appropriate, will be used. No fill material would be placed into the Tug Fork channel. In addition, an Erosion and Siltation Control Plan and stream specific mitigation measures will be prepared to prevent quality receiving waters such as Tug Fork from being adversely affected by road and bridge construction activities. Therefore, the Preferred Alternative will not encroach upon any stream or riparian habitats that are of high quality or uncommon or unique to the immediate project area or region.

Construction involving culverts, pipes, and channel relocations will produce impacts on water quality and aquatic habitat. Potential impacts include: increased sedimentation, which can cause reduced stream capacity and smothering of aquatic habitat; increased turbidity, conductivity, and suspended solids; exposure of acid producing shales; increased water temperature due to stream canopy reduction; segmentation of riparian travel corridors; and lowered streambank stability.

Impacts to streams involving more than 200 ft (61 linear meters) of disturbance and drainage areas greater than 400 acres (162 hectares) will require individual Section 404 Permits from the U.S. Army Corps of Engineers (USACOE) and Water Quality Certification from the Kentucky Division of Water (KDOW) or West Virginia Department of Environmental Protection (WVDEP). Currently in Kentucky, compensatory mitigation is required for all permanent stream losses which occur in watersheds greater than 250 acres (101 hectares). In West Virginia, the WVDEP and West Virginia Division of Natural Resources (WVDNR) work together to determine mitigation requirements on a case-by-case basis. Recommendations will be sought from the WVDEP and from the WVDNR and stream channel design will utilize the WVDNR Natural Stream Channel Design (NCD) principles during final design.

During the final design phase of the project, water quality and aquatic ecosystem impacts will be examined in depth for the Preferred Alternative. It will be subjected to a process wherein *avoidance* of stream impacts are thoroughly investigated, followed by analysis of options for *minimizing* any unavoidable impacts. If there are still stream impacts remaining requiring mitigation, several mitigation scenarios will be explored. The first will be to restore affected streams and stream length through the creation of in-channel aquatic habitat, meanders, pools and riffles, and riparian vegetation reestablishment. This may be on-site or off-site. Another option would be to repair impacted streams and restore stream bank stability on non-project area streams or other stream reaches. An additional option would be to institute projects that result in permanent water quality improvement, such as removal of straight sewage pipes or installing wastewater treatment facilities. Finally, mitigation could be provided through payment of “in-lieu fees” as approved by the USACOE under Section 404 of the Clean Water Act. Any combination of these options could be employed as appropriate and necessary.

An Erosion and Siltation Control Plan and stream specific mitigation measures will be prepared for the project, in conjunction with the permit application process, during the final design phase of project development for each construction section. With applied stream mitigation measures as described above, quality receiving waters such as Tug Fork would be protected and some stream conditions may actually improve because of removal of the sources of serious active pollutants (e.g. sewage, in-stream garbage, repetitive streambank clearing, etc.). No substantial long-term adverse impacts to area water quality and aquatic ecosystems are predicted as a result of construction of the Preferred Alternative.

#### **IV. K. Wetland Impacts (Ref. DEIS, page 53)**

The Preferred North to South Alternative could potentially affect 2 wetland sites. These areas are small, averaging approximately 0.42 acres in size. Because of a recent Supreme Court decision on wetlands (*Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*, January 9, 2001), these sites may not be determined jurisdictional. During the final design phase, avoidance of all potential wetland areas will be thoroughly explored. It is anticipated that due to the small number (2) and size of potentially affected wetlands (0.42 acres average), and high project location flexibility, avoidance of wetland sites is highly likely. However, if it is subsequently determined that any of these identified areas cannot be avoided, on-site examination will be conducted by the Huntington District, U.S. Army Corps of Engineers (USACOE) to obtain official jurisdictional wetland determinations.

For any jurisdictional wetland site potentially affected, the requirements of Executive Order (E.O.) 11990 will be met. This will include an explanation of why there are no practicable alternatives and why the proposed action includes all practicable measures to minimize harm. Any jurisdictional wetland site at which it is found that avoidance is not possible or practicable, additional considerations will be given to minimize impacts to the maximum reasonable extent. Following these steps, if it is determined that unavoidable wetland impacts remain, consultation with the KDOW or the WVDEP/WVDNR/WVDWR, as appropriate, and the USACOE will be initiated. At that time, approvals will be obtained, compensatory mitigation measures will be determined, and a wetland mitigation plan will be developed. Any mitigation measures determined necessary for impacts to jurisdictional wetlands and/or waters of the State of West Virginia will be formulated in consultation with these agencies, which will determine appropriate replacement ratios. Mitigation could include any combination of the following general options.

Compensatory mitigation for the loss of wetlands may include restoration, enhancement, or replacement of wetlands. Restoration of existing wetlands degraded by local land practices is one form of compensatory mitigation. Enhancement may involve the removal of conditions degrading existing wetlands and the purchase and preservation existing wetlands and/or buffer zones.

Replacement, as a form of compensation requires construction of a new wetland. Replacement may occur either within the same watershed as the impacted wetland or within a different watershed. The replacement wetland may provide a wetland of the same vegetation class (in-kind replacement) or a different vegetation class (out-of-kind replacement). The general functions and values of the impacted wetlands must also be replaced.

The utilization of the wetland banking concept is not practicable in the project area as there are no wetland bank sites nearby and no know locations which could be developed into wetland bank sites. This is based on current wetland bank site records, examination of county soil surveys for hydric soils and prior converted croplands, and National Wetlands Inventory mapping. However, a wetland bank site, which is used as a single source wetland bank, is located in South Shore in Greenup County, Kentucky. This bank has served the Little Sandy River basin and should serve the Big Sandy River basin as well. Therefore, this Greenup County wetland bank could be submitted for use on this project if it is considered necessary and appropriate by the jurisdictional agencies.

Final determinations on jurisdictional wetland impacts, appropriate mitigation measures, and necessary documentation of full compliance with E.O. 11990, including a Wetlands Finding, will be made during the final design phase and Section 404 Permitting phase process. For wetland encroachment permits, all of the technical information, data and studies generated for the Environmental Impact Statement will be incorporated into the permit package. Field verification reviews will be conducted during development and review of the Section 401 and Section 404 application. Specific wetland mitigation requirements will be developed during this process. This approach is consistent with adopted FHWA guidance on the coordination of NEPA studies and federal permit processing (Interagency Consensus on Integrating NEPA/404 for Transportation Projects, July 23, 1992).

Since individual wetland locations are small (avg. 0.42 ac. est.) and project location flexibility is high, it is expected that most, if not all, jurisdictional wetland areas will ultimately be avoided. Those unavoidably affected, will be appropriately mitigated. Therefore, no significant wetland impacts are anticipated as a result of construction of the Preferred Alternative.

#### **IV. L. Permits (Ref. DEIS, page 54)**

Water quality measurements showed that project area streams are basic with high sulfate levels as well as high alkalinity and hardness values. Biotic diversity is correspondingly limited by degraded water quality, low flows and poor habitat structure. Therefore, the project will not encroach upon any stream or riparian habitats that are of high quality, uncommon or unique to the immediate project area or region.

The project will affect these low quality surface streams through the construction of culverts and channel changes. Impacts normally associated with concrete culverts include loss of natural stream bottom, light restriction, loss of stream length, and barriers to aquatic fauna. In addition, during construction periods temporary increases in turbidity, nutrients, and dissolved and suspended solids due to erosion would be expected.

Because of the degraded condition of existing streams, long-term impacts related to culvert construction and rechannelization are not considered critical to the local aquatic ecosystem. The streams affected by this project will gradually recover to the pre-construction conditions and, with standard stream mitigation measures applied, some stream conditions may actually improve because of removal of the sources of serious active pollutants (e.g. sewage, in-stream garbage, repetitive streambank clearing, etc.). Mitigation measures proposed are also expected to protect quality receiving waters such as Tug Fork.

Streams that are identified as blue line streams on USGS topographic mapping, as well as ephemeral and intermittent streams, may require Section 401 water quality certification and Section 404 permits for stream disturbing activities meeting certain thresholds, even though the streams are seriously degraded and not expected to be severely impacted by the project. West Virginia Public Lands Corporation permission may also be required for fills in any stream that has a defined channel. These permits/permissions will be obtained by KYTC and WV DOT in advance of any construction letting. Requirements, including thorough documentation and plans for avoidance and minimization of water-related impacts, will be accomplished during the final design phase of the project and will accompany the permit applications. A site specific stream mitigation plan will be developed for each location. When final design of the Preferred Alternative is complete, all appropriate and applicable permits/permissions will be obtained. This approach is consistent with adopted FHWA guidance on the coordination of NEPA studies and federal permit processing (Interagency Consensus on Integrating NEPA/404 for Transportation Projects, July 23, 1992).

No U.S. Coast Guard bridge permits nor other federal permits are required for this project (see DEIS Appendix A).

#### **IV. M. Floodplain Impacts (Ref. DEIS, page 55)**

FEMA designated floodplains are found on the Preferred Alternative. The Preferred Alternative North segment has approximately 22.5 acres of floodplain locations. The FEMA floodplains associated with the North segment include Levisa Fork, Chloe Creek, and Raccoon Creek. The Preferred Alternative South segment has 23.3 acres. The FEMA Floodplains include Elkhorn Creek, Johns Creek, and Tug Fork.

Executive Order 11988 requires that if an action involves floodplains the federal agency must evaluate alternatives to avoid adverse impacts and incompatible development. It is FHWA policy, and KYTC and WV DOT practice, to avoid significant floodplain encroachment, where practicable, minimize impacts which adversely affect floodplains, and restore and preserve natural and beneficial floodplain values. During the final design phase of the project, a detailed location hydraulic study will be completed in accordance with 23 CFR 650 for the Preferred Alternative. This Study will provide detailed analysis of the effects of floodplain encroachments on flood elevations. These analyses will determine the proper design for culverts, pipes, and bridges to insure flood elevations will have “no net effect” due to highway construction. The Study will address flooding risks, impacts to natural and beneficial floodplain values, support of probable incompatible floodplain development, specific measures for avoidance/minimization of floodplain impacts, and measures to restore natural and beneficial values. Floodplain encroachment will be subject to review by the Kentucky Division of Water (KDOW) and WVDEP and a no rise certification will be obtained. No fill material will be placed in a regulated floodway.

The Preferred Alternative is not expected to result in any significant floodplain impacts due to: 1) major portions of floodplain areas will be bridged; 2) natural, ecologically valuable habitats and other beneficial floodplain values are generally lacking; 3) the larger floodplains are currently built-out (residential, commercial, and right-of-way land uses) in much of the project area; and 4) unavoidable floodplain effects will be appropriately mitigated.

**IV. N. Wild and Scenic Rivers Ref. DEIS, page 56)**

There are no wild or scenic rivers nor any proposed segments within the project area.

**IV. O. Threatened or Endangered Species (Ref. DEIS, page 56)**

Coordination with the U.S. Fish and Wildlife Service (USFWS) for threatened and endangered species was conducted for both Pike and Mingo Counties. No listed federal threatened or endangered species were reported by USFWS, Cookeville, TN. office or the Elkins, WV. office, nor by other resource agencies, as known from or possibly occurring in the project area. However, the USFWS, Atlanta, Georgia Office advised that the Indiana bat, Myotis sodalis, is “likely to occur” (see Appendix A). Therefore, since potential Indiana bat habitat could be removed for the project, a biological assessment (BA) for Indiana Bat has been completed for the Preferred Alternative. The BA concluded that the proposed project is “not likely to adversely affect” the Indiana bat. This conclusion has been concurred in by the U.S. Fish and Wildlife Service (see Appendix A).

**IV. P. Historic and Archaeological Preservation Impacts (Ref. DEIS, page 57)**

As a result of literature searches, archival research, and field investigation, including on-site documentation of all sites appearing to be more than 50 years old, three sites within the study area, the Jeremiah Hatfield House (a ruin), Hughes House, and the Justice House, were identified and found to meet National Register of Historic Places criteria. None of these three sites would be directly or indirectly affected by the Preferred Alternative. The Hatfield-McCoy Historic District, a non-contiguous series of sites and locales associated with Hatfield-McCoy feud are also present in the County and at various locations outside the study area of the Northern Band east of Kimper. Since the Northern Band options east of Kimper are not a part of the Preferred Alternative, no sites associated with the Hatfield-McCoy District would be affected. No significant historic resources would be affected by the Preferred Alternative. Therefore, the requirements of Section 106 of the National Historic Preservation Act have been met and the requirements of Section 4(f) of the Department of Transportation Act, with respect to historic sites, are not applicable. The SHPO’s of both States have provided comments on this undertaking (see Appendix A).

A Phase I archaeological reconnaissance survey of the high probability locations on all study Alternatives was also performed in accordance with the established procedures of the respective States. As a result, no prehistoric or historic archaeological sites were recorded in the high probability locations of the study area alternatives.

An intensive archaeological survey and deep subsurface reconnaissance of the Preferred Alternative was subsequently conducted. This survey was done from May 20, 2002 to August 2, 2002. During this survey, one potentially significant, multi-component, prehistoric archaeological site/historic period cemetery (site 15Pi203), and two potentially significant historic period cemeteries (sites 15Pi205 and 15Pi206), were identified within the study area. All of these sites were located in Kentucky and were the only potentially significant archaeological sites encountered on the Preferred Alternative. It has been determined that each of these sites will be avoided and the sites will be protected through design refinements and special construction notes developed during the final project

design phase. Final design plans will be developed to ensure that archaeological sites 15Pi203 (Hatfield Cemetery and multicomponent prehistoric site), 15Pi205 (Sword Cemetery), and 15Pi 206 (Ivy Fork Cemetery) are avoided and protected from direct and indirect project impacts. Special construction notes will be added to contract documents specifying that these sites are to be protected and will not be used for pier, abutment, or embankment construction, staging, equipment storage, or other ground disturbing uses. Therefore, none of the potentially significant archaeological resources identified would be physically disturbed by the Preferred Alternative as currently proposed.

The Kentucky SHPO has determined that site 15Pi203 (Hatfield cemetery component only) is eligible for the National Register of Historic Places (see SHPO letter in Appendix A). However, the SHPO has provided the opinion that the project would not have an adverse effect on site 15Pi203. The SHPO's of both states have concurred with the initial archaeological findings and their correspondence regarding the intensive archaeological survey of the Preferred Alternative is included in Appendix A.

Native American consultation was initiated in accordance with the current requirements of KYTC/FHWA. No comments were received. There are no Federally recognized Tribal lands in the States of Kentucky or West Virginia. Historically, Pike County and Mingo County have had no federally recognized Native American interests.

In accordance with the Section 106 regulations of the Advisory Council on Historic Preservation, invitations were extended to local government officials and other historic organizations and individuals with a demonstrated interest in the project, to become a Consulting Party on the project. In addition, a Section 106 information station was manned at public meetings and at the Public Hearings held for the project. This station provided information on the Section 106 Consulting Party process and accepted requests for Consulting Party status. As a result of these activities, one request for Consulting Party status was received. This request was from the Pike County Judge/Executive. Project historic information and documentation was provided to the Pike County Judge/Executive and project participation and recommendations on historic resource issues were solicited. No comments or other correspondence on historic resource issues were received from the Pike County Judge/Executive and the Section 106 Consulting Party process was concluded. The project will have no effect on any significant historic resources.

#### **IV. Q. Hazardous Materials Impacts (Ref. DEIS, page 58)**

An on-site pedestrian survey of the project area supplemented the findings of the official State and Federal records and revealed no UST locations of environmental concern, and no hazardous waste sites. All UST locations recorded from official records and observed in the field are associated with active gasoline/convenience store retailers or business operations, which are registered and in regulatory compliance. The UST locations documented occur near the beginning of the project along US 23, and at mid-project near Kimper. According to current project plans, the proposed interchanges at US 23 and KY 632 are the only locations along the Preferred Alternative where known UST's could be affected.

Preferred Alternative North segment begins at US 23 and utilizes Lanks Branch hollow as it extends eastward from US 23. A large commercial business, Whayne Supply Company, occupies the property at the head of Lanks Branch Road and would be displaced. Records indicate that Whayne Supply is a RCRA

Generator and, in the past, utilized underground storage tanks. The business is currently in regulatory compliance and all UST's at this property were removed in 1996-97. On-site examination of the property revealed several above ground petroleum storage tanks in use but no indications of UST's were observed. Areas outside the operations building showed evidence of minor surface petroleum product staining but there was no evidence of reportable quantity spills or contamination. There was also no evidence of leaks or spills at the above ground tanks. However, due to the nature of this business (large equipment sales, service, repair and storage) and the implications of the on-site survey, a Phase 2 investigation the property will be conducted. This would be for the purpose of determining the extent of surface soil contamination and whether or not any remediation actions would be necessary. Phase 2 would be conducted prior to right-of-way acquisition.

Also at the US 23/I-66 juncture are several gasoline/convenience businesses that could be affected by the construction of the interchange required for Preferred Alternative North segment, or by the relocation of US 23. These businesses are: the Pop Stop, a BP service, and the Fill Zone, a Chevron service. According to the station managers, all tanks at these sites meet current requirements for leak detection and have fiberglass reinforced external protection. In addition, daily inventory records are kept and regular tightness testing is conducted. There are no other services or activities at these facilities which generate hazardous substances or create conditions for environmental concern. Under current plans, none of these UST localities are expected to be impacted and no further investigations are recommended for these sites.

Near the I-66 interchange at KY 632 in the Kimper area, a Marathon gasoline/convenience store is located at the junction of KY 632 and KY 194. This is a relatively new operation and all UST's and facilities meet current requirements for leak detection and have fiberglass reinforced external protection, according to the business manager. Based on the current interchange designs for this location, this business is not expected to be directly affected by the project and no further investigations are recommended.

There are no other known UST locations affected by the Preferred Alternative and there are no known UST locations within the project corridor at any point of the study area in West Virginia. If previously unknown (regulated or non-regulated) USTs are encountered during construction, they will be properly reported and remediated.

#### **IV. Q. 1. Solid and Hazardous Waste/Materials Site Discussions (Ref. DEIS, page 60)**

Other land uses along US 23 which could be affected by project acquisition and construction activities include: a transformer storage area. The Kris Electrical Company property contains electrical equipment including transformers which may contain PCB's. There were no indications of petroleum or hazardous materials problems at this property, however, if they are required to relocate, the parcel should be reexamined to insure that no issues of environmental concern are left behind.

A small pond located within the I-66/US 23 interchange area is locally known as "trash pond" and is heavily littered with trash and household garbage. There was no visible evidence of hazardous substances having been placed in this pond and there were no seepages and no sheens on water surfaces. However, given the local history of this pond and the possibility of submerged materials which could not be examined, it is recommended that water chemistry tests be conducted before draining the pond to determine if the water requires special disposal

methods. After the water has been removed, pond contents and bottom sediments should be examined for disposal before any required excavation or filling.

Any hazardous waste generated by project construction will be registered, manifested, and disposed at a permitted Treatment, Storage and Disposal (TSD) facility.

#### **IV. Q. 2. Other Waste and Hazardous Substance Issues (Ref. DEIS, page 60)**

There are no landfills or commercial dumps within the limits of the Preferred Alternative. Scattered refuse consisting of domestic trash and garbage were observed at numerous locations within the 30 mile plus corridor, but none appeared to contain hazardous or toxic materials. Interviews with U.S. Mine Safety and Health Administration (MSHA) personnel and examination of records and mapping, did not reveal the presence of coal waste, slag piles, or impoundments within the limits of the Preferred Alternative.

Since the proposed project area is overwhelmingly undeveloped forested slopes with very limited access, and has no historic record of any developmental uses other than timber harvesting, coal mining and residential, the potential for hazardous materials issues is relatively low. Residential heating requirements are primarily met through the use of coal/wood stoves, propane, and/or electricity. No heating oil tanks were detected.

There were no oil sheens on water of ponds and streams observed, no evidence of spills, and no stressed vegetation present at any accessible locations investigated throughout the project area. There were no abandoned tanks or drums located. There are no dumps and no other suspicious areas which could harbor hazardous materials within the boundaries of the project study areas.

Based on the Phase 1 level investigation, there are no significant UST or HZW issues or locations of environmental concern which would affect project decisions at this time. Any of the household refuse, discarded junk and garbage that may be in the path of the Preferred Alternative, should be transported to a permitted landfill, along with the materials from demolition of structures. No further Preliminary Site Assessment actions or inquiry is considered necessary for this project and none is recommended.

#### **IV. R. Visual Impacts (Ref. DEIS, page 62)**

The natural aesthetics of the Appalachian highlands of eastern Kentucky and southwestern West Virginia are outstanding with views of forested landscape and rock outcrops. The heavily forested mountainous terrain of the region offers the opportunity for unique aesthetic and educational experiences. The rugged natural beauty of the study area provides a diverse scenery that includes important rivers winding along valley floors; steep gradient streams with picturesque waterfalls and quiet pools; and mixed-species deciduous forested slopes that become a palate of reds and yellows each fall.

Under current conditions, the traveler has virtually no chance to observe or stop and enjoy these qualities because of the demands of attention required to negotiate the serpentine, congested area highways. Travel through the region is made frustrating and, at times, dangerous because of the coexistence of tourists, wishing to experience the scenery, with higher speed traffic and commercial vehicles needing to move through the area as quickly as

possible. The new facility will relieve much of the congestion on the existing system while leaving that view, from the road and view of the road, essentially unchanged. Visitors seeking to explore the area's natural heritage and examine the special viewscapes will be able to use the existing roads, while leaving the new, high-type facility for the truck commerce and hurrying through-traveler. A cramped and congested road puts a strain on motorists because of demands placed on driver attention and concentration. This condition will continue to affect travel enjoyment as traffic increases and the existing roadway system deteriorates.

The proposed road would be expected to relieve some of the congestion and be more aesthetically appealing to the driver. The project would create many exposed rock cuts throughout the corridor which may have an initial adverse impact upon aesthetics, however, the exposure of the geological strata of the area may be educational and aesthetically pleasing to some. Scenic vistas will be created as the proposed highway negotiates the rugged mountains of the region and descends into valleys. New design standards will include safety clear zones, making the road safer and easier to drive. Decreased side friction demands on motorists will allow greater enjoyment of the natural beauty seen in the mountainous undisturbed landscape, and exposed rock cuts. Also, erosion control, including seeding of slopes and disturbed areas with native species to the maximum extent practicable, combined with natural weathering and revegetation of rock cuts, will help soften and restore the natural state of the landscape.

The aesthetics of the new, Interstate type roadway will be quite different from the existing roadways, but very much like the other improved APD corridors in region such as US 23 (corridor B), US 460 (Corridor Q) and US 119 (Corridor G) in Pike County and US 119 in Mingo County. The view from the road will be from a wider, more open highway corridor that will reveal broader vistas. Several rock cuts will be constructed for the highway and will expose the area's underlying geologic strata, often considered interesting, educational, and not necessarily unattractive in a travel corridor setting. The view of the road will be of a modern, four-lane, divided transportation facility carved into the mountains and supported on fills and bridges flowing smoothly through the mountainous topography. As vegetation re-establishes over time and users become accustomed to the route, it will tend to blend more readily into the environment and seem less out of character, as has happened with the other regional road improvements. The enhanced safety features of the new road will also enable a greater enjoyment of the mountains and passing views. Therefore, no significant, long-term adverse visual impacts are anticipated from construction and operation of the proposed project. Other than erosion control measures and Best Management Practices, which will accompany project construction activities, no other specific mitigation is proposed, or considered necessary, for visual quality.

#### **IV. S. Energy Impacts (Ref. DEIS, page 63)**

The amount of energy required to construct road projects of this type is substantial but temporary in nature and generally leads to reduced operating costs once completed. The existing and proposed alignments for this project were evaluated to compare the average fuel consumption on the proposed alignment to the existing road. For this analysis maximum speeds were assumed to be the posted speed limits, 30 mph (48 km/h) for unregulated portions of the existing road, and 65 mph (105 km/h) for the proposed road. Speeds were reduced for upgrades.

On the proposed road, fuel consumption for medium trucks is estimated to be 15% lower than it would be on the existing roads and for heavy trucks it is estimated to be between 3% and 18% lower than existing. Fuel

consumption for automobiles is estimated to be between 0% and 6% higher than existing; however, wear and tear on the automobile would be reduced due to less stop and start traveling. Travel time between served destinations is estimated to be two-thirds (**b**) the existing time for trucks and one-half (1/2) for automobiles.

#### **IV. T. Construction Impacts (Ref. DEIS, page 63)**

Any impact incurred during the construction of this project will be short-term and will have no enduring effect upon the ecological balance of the area. No major detours will be needed and only minor traffic delays can be expected. The noise levels due to the heavy equipment used during construction may exceed acceptable noise standards during the construction period, however, every reasonable effort will be made to minimize construction noise, especially around any noise-sensitive locations.

Any increase in particulate matter in the air due to construction activity will be temporary and will not be detrimental to the health and welfare of local residents. The dust pollution may be an unavoidable, minor nuisance and every feasible effort will be made to minimize this problem. Exhaust from construction equipment will have an insignificant effect on the ambient air quality. Any open air burning will be done in compliance with Kentucky or West Virginia state regulations and local laws and ordinances. Care will be taken to insure burning is done only along the right-of-way at the greatest practicable distance from dwellings, highways, and airfields and not when atmospheric conditions are such as to create a hazard or nuisance to the public.

During the construction stage, adequate construction methods, Best Management Practices (BMP's) and erosion control procedures will be utilized in areas of potential sedimentation and erosion to ensure that this project will not introduce any additional pollutant which would have significant detrimental environmental or ecological effects upon the area. Construction associated with or near streams will occur during low flow periods to minimize disturbance. Replanting of disturbed areas, including streambanks and rights-of-way, will be with native vegetation for soil stabilization and fish and wildlife populations. Removal of stream canopy trees will be avoided wherever possible. Mitigation of instream habitat disturbance will be accomplished. Section 401 Water Quality Certification and Section 404 Permits will be obtained prior to any construction activity.

The removal of structures and debris would be accomplished in accordance with local, state, and federal agencies permitting these operations. KYTC Standard Specifications and WVDOT Road and Bridge Specifications will be strictly enforced. It is anticipated that waste/fill sites will be needed and can be reasonably provided for this project. However, it is impossible at this stage of project development to predict whether or not waste sites will be required for specific construction sections and where such sites might be located. It is a goal of the final design phase is to try to balance cut and fill quantities, and this level of detail is not yet available. While acquisition of most waste sites would likely be the responsibility of the construction contractor the waste sites must comply with all local, State and Federal laws, regulations and ordinances governing the location and placement of waste material. Revegetation of waste/fill sites with native plant materials will be accomplished to the maximum practicable extent and waste/fill site use for possible economic development will also be explored. Further evaluation of the possible uses, environmental effects, and mitigation potential for waste/fill sites will be conducted during the final design phase when fill amounts and placement locations can be determined.

Construction activities, including maintenance of traffic and sequencing of construction, would be planned and scheduled to minimize traffic delays. Signing would be used as appropriate to provide notice of pertinent information to the traveling public. Access to all properties would be maintained to the maximum practical extent.

The project would be expected to produce construction-period economic benefits by stimulating local economies through construction-related jobs, sales, income, government revenue and expenditures, and off-site construction support.

#### **IV. U. Other Project Impacts**

##### **IV. U. 1. Indirect and Cumulative Impacts (Ref. DEIS, page 64)**

A potential indirect impact of the Preferred Alternative is the conversion of adjacent land areas to development. For this proposed project this possibility has been expressed as a desirable and favored outcome by local citizens and governmental bodies. Improved access and convenience can help stimulate the economy and therefore increase the likelihood of development. However, due to the rugged terrain through which this project passes and the restricted initial number of access points provided, developmental locations and opportunities will be limited.

Three types of development, each with different location criteria, could potentially compete for available or created development locations. The three types are: industrial/institutional; commercial; and residential.

Industrial/Institutional development is likely to occur where transportation access, public utilities, and sufficient land are available. Increasingly, industries also seek prepared sites, i.e. industrial parks. At the present time, no such sites exist within the project study area in either Pike or Mingo Counties and none are currently planned.

Commercial development will be attracted to new high-traffic areas. These will be the interchange and cross-road locations. Eventually, it would be expected that commercial development would also be stimulated by overall industrial and residential growth and by increased tourism opportunities being explored for the region. Access and topography constraints tend to work in favor of existing downtown areas of communities in the study area whose long-term sustainability would be enhanced by new commercial enterprises which could locate in these communities. There are currently no known planned commercial development sites.

Residential development requires access points, available and suitable land, and is more likely to occur in locations with water service. New residential development is therefore, likely to be stimulated in areas nearer interchanges and crossroads, at existing communities, and close to new and existing employment opportunities. According to local officials, the Area Development District, and the Chamber of Commerce, at this time there are no known locations being developed or planned for residential subdivisions in the project study area.

Research is not available which might make it possible to quantify the amount and type of development that would occur with or without the proposed project. However, given the long-range goals of state and local governments and area chambers of commerce, and in light of public investments being made in infrastructure in the region, it is reasonable to assume that stabilization and reversal of declines in population and employment would be a desired and likely outcome related to the construction and operation of the proposed highway. Such

desirable changes would be expected to occur gradually over a duration of time perhaps corresponding to the project construction period of an estimated 20 years or more. Given the anticipated gradual and long-term nature of these changes, associated infrastructure needs, such as water and power, stormwater, wastewater, sewage and waste disposal could be accommodated without undue strain on local resources.

Without the proposed highway, industrial and commercial growth would likely continue to be hampered by the lack of access and highway system connectivity. Without new employment opportunities and economic stimuli, population declines and out-migration will be expected to continue. Social and economic conditions will likely continue to decline and residential development would have low and scattered emphasis if no improvements are made.

There were no substantial differences in the number of potential growth areas for each of the reasonable Alternatives considered. The most likely and best indirect growth opportunities would be expected to initially occur where access, services, and infrastructure exist or can be reasonably provided. With the Preferred Alternative, this is expected to be in the general vicinity of the interchanges at US 23, KY 632, near Phelps, and the King Coal Highway, and accessible reclaimed surface mine sites. Other growth areas may develop over time in response to improved tourism and recreational opportunities, but existing sites are not present and no currently planned sites are known, based on coordination with local officials. Although possible new locations cannot be predicted at this time, they would not be expected to outstrip the areas ability to accommodate the gradual changes anticipated. Local planning and zoning regulations could be relied upon to ensure that indirect development occurs at appropriate locations to have beneficial long-term effects.

#### **IV. U. 2. Mineral Resources (Ref. DEIS, page 65)**

Coal mining is the principle mineral extraction activity in the project study area. Coal resources provide approximately 81% - 89% of mineral production in West Virginia and Kentucky. Within the area of the Preferred Alternative, a number of coal seams have been identified and have been or are being mined by surface mining techniques. No active subsurface mines have been identified in association with the project alignment at this time. It is estimated that the Preferred Alternative could impact approximately 9,650,071 tons of recoverable coal. Construction contracts will reference the Federal construction project exemption, 405 KAR 7:030 Section 2, Coal extraction incidental to government-financed construction. The earliest possible coordination between project managers and Department of Surface Mining Reclamation and Enforcement personnel should be accomplished to ensure interaction between active permits, any required permit modifications, and road construction. At the present time, it is estimated that the Preferred Alternative could affect up to four active surface mine locations; however, it is not anticipated that the Preferred Alternative would affect any mine slurry ponds, acid ponds, retention basins, or other impoundments.

#### **IV. U. 3. Groundwater (Ref. DEIS, page 66)**

The potential project impact on groundwater resources can be related to geologic formations containing aquifers. Fractured sandstone is one of the best sources of groundwater. Construction activities that may create additional fractures or blockages in these water-bearing strata may alter the quantity of groundwater. Local

streams and wells could also experience a temporary or permanent loss of water quantity. However, fracturing sometimes results in increases in water capacity of a particular stratum. Wells in sandstone could possibly experience reduced water quality due to introduced pollutants and sediment during the project construction period. Water-borne pollutants generated by operation and maintenance from highway related runoff could also infiltrate groundwater wells. The amount of these potential impacts cannot be predicted.

Therefore, in recognition of potential groundwater impacts, engineering based on site specific circumstances will be used during the final design process to avoid cuts where landscape stability is of concern. Construction measures could include terraced cuts, sufficiently sloped cuts, retaining walls, revegetation, and diversion ditches. In addition, formal Erosion and Sediment Control Plans will be prepared according to federal, state, and local regulations, to reduce the potential for unacceptable levels of pollution during the construction period and prescribe the effective reestablishment of vegetation and ground cover. The final design, construction and operation of the new facility will comply with all requirements for the Well Head Protection policies and procedures for protection of public wells as established by the States.

#### **IV. U. 4. Acid Drainage/Runoff (Ref. DEIS, page 66)**

Mitigation measures for acid drainage or runoff, will be developed in consultation with the KDOW and WVDEP during the final design phase of the project. Detailed information obtained from geotechnical borings will be used to predict the location and severity of acid drainage. In areas where acid producing materials are identified, plans will be developed to avoid and minimize the production of acid drainage. All excess excavation which results from acid producing materials will be disposed of in accordance with and at locations identified in the approved plan.

#### **IV. V. Proposed Measures To Minimize Harm**

Coordination between KYTC, WVDOH, FHWA, and interested resource agencies throughout the NEPA process has resulted in identification of measures to minimize and mitigate adverse environmental impacts that may be attributed to the Preferred Alternative. In general, all practicable measures to minimize harm have been incorporated into this decision. Additional measures which may be unique to the project final design, right-of-way, and/or construction phases, will be added when appropriate as the project evolves over the coming years. Mitigation measures already incorporated into this decision include the following:

- , During the final design phase, measures to reduce displacement impacts, such as minor alignment modifications, steepening of side slopes, retaining walls, etc., will be incorporated into the highway design where prudent and reasonable. Where avoidance is not possible, acquisition and relocation will proceed in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policy Act of 1970. Under this law, a Last Resort Housing Program can be utilized on a case-by-case basis if comparable decent, safe, and sanitary housing is not available or is not within the relocatees financial means. It may include construction of a new dwelling, addition to or rehabilitation of an existing replacement dwelling, loan or rental subsidy, relocation of a dwelling, purchase of land, or possibly relocating to a different area if that provides a better solution. Wayne Supply Company, an important local employer which provides heavy equipment sales, service, repair, and storage for the coal mining and construction industries, is important to the local economy. Therefore, it will be important for this company to remain in the area. Wayne

Supply officials have indicated, during discussions about the project, that they intend to relocate their operations because they have outgrown this current site. They have advised that they are currently seeking another site within Pike County. They are evaluating several sites, including highway waste/fill site locations constructed in conjunction with other highway projects. It is therefore expected that Whayne Supply will have moved prior to project right-of-way acquisition activities in the vicinity of their current facilities. However, if this large local employer is still in business at this site, measures will be taken, in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policy Act, to ensure assistance with their relocation to prevent undue hardships for the company or its employees, and ensure that they remain within this community. Care will be taken to minimize impacts to Pikeville Water Systems and water service and to ensure maintenance of water service during the construction phase. Existing water lines will not normally be disconnected until new replacement lines are in place. If disconnection prior to new line installation is necessary, alternative water sources will be provided to affected users. Utility relocations will be accomplished in accordance with the requirements of the FHWA and consistent with the KYTC Utilities Manual.

- , During the construction phase, measures to mitigate harm will include prudent scheduling and programming of the various construction activities, provision for construction period detours, informative signing, maintenance of access to homes, businesses, and facilities, and notification/information regarding construction scheduling, road closures and alternative route designations.
- , Measures to minimize forest impacts and timber removal will be explored during the final design of the Preferred Alternative. It is believed that this can be achieved to a great extent on this project through context sensitive design measures and innovative construction methods. Such measures could include minimizing the project footprint through the forest by limiting clearing and grubbing activities, and holding construction disturb limits as tight as possible. The revegetation with native plant materials of waste/fill sites developed for the project will also be accomplished to the maximum practicable extent, to help mitigate forest removal impacts.
- , Impacts to streams involving more than 200 ft (61 linear meters) of disturbance and drainage areas greater than 400 acres (162 hectares) will require individual Section 404 Permits from the U.S. Army Corps of Engineers (USACOE) and Water Quality Certification from the Kentucky Division of Water (KDOW) or West Virginia Department of Environmental Protection (WVDEP). Currently in Kentucky, compensatory mitigation is required for all permanent stream losses which occur in watersheds greater than 250 acres (101 hectares). In West Virginia, the WVDEP and West Virginia Division of Natural Resources (WVDNR) work together to determine mitigation requirements on a case-by-case basis. Recommendations will be sought from the WVDEP and the WVDNR for stream channel design using Natural Stream Channel Design (NCD) principles during final design. During the final design phase of the project, water quality and aquatic ecosystem impacts will be examined in depth for the Preferred Alternative. It will be subjected to a process wherein *avoidance* of stream impacts are thoroughly investigated, followed by analysis of options for *minimizing* any unavoidable impacts. If there are still stream

impacts remaining requiring mitigation, several mitigation scenarios will be explored. The first will be to restore affected streams and stream length through the creation of in-channel aquatic habitat, meanders, pools and riffles, and riparian vegetation reestablishment. This may be on-site or off-site. Another option would be to repair impacted streams and restore stream bank stability on non-project area streams or other stream reaches. An additional option would be to institute projects that result in permanent water quality improvement, such as removal of straight sewage pipes or installing wastewater treatment facilities. Finally, mitigation could be provided through payment of "in-lieu fees" as approved by the USACOE under Section 404 of the Clean Water Act. Any combination of these options could be employed as appropriate and necessary. Construction associated with or near streams will occur during low flow periods to minimize disturbance. Replanting of disturbed areas, including streambanks and rights-of-way, will, to the maximum practicable extent, be done with native vegetation for soil stabilization and fish and wildlife population benefits. Removal of stream canopy trees will be avoided wherever possible. Mitigation of instream habitat disturbance will be accomplished. Bridge piers and abutments will not be located in streams and bridge fill slopes will not extend below ordinary high water.

, An Erosion and Siltation Control Plan and stream specific mitigation measures will be prepared for the project, in conjunction with the permit application process, during the final design phase of project development for each construction section. During the construction stage, adequate construction methods, Best Management Practices (BMP's) and erosion control procedures will be utilized in areas of potential sedimentation and erosion to ensure that this project will not introduce any additional pollutant which would have significant detrimental environmental or ecological effects upon the area. With applied stream mitigation measures as described above, quality receiving waters such as Tug Fork would be protected and some stream conditions may actually improve because of removal of the sources of serious active pollutants (e.g. sewage, in-stream garbage, repetitive streambank clearing, etc.). Tug Fork will be bridged by the project and erosion control measures, as appropriate, will be used. No fill material will be placed into the Tug Fork channel. Bridge piers and abutments will not be located in streams and bridge fill slopes will not extend below ordinary high water.

, It is anticipated that due to the small number (2) and size (0.42 acres average) of potentially affected wetlands, and high project location flexibility, avoidance of wetland sites is highly likely. For any jurisdictional wetland site at which it is found that avoidance is not possible or practicable however, additional considerations will be given to minimize impacts to the maximum reasonable extent. Following these steps, if it is determined that unavoidable wetland impacts remain, consultation with the KDOW or the WVDEP/WVDNR/WVDWR, as appropriate, and the USACOE will be initiated, approvals will be obtained and compensatory mitigation measures will be developed. Any mitigation measures determined necessary for impacts to jurisdictional wetlands and/or waters of the State of West Virginia will be formulated in consultation with these agencies, which will determine appropriate replacement ratios. Mitigation could include any combination of the following general options.

Compensatory mitigation for the loss of wetlands may include restoration, enhancement, or replacement of wetlands. Restoration of existing wetlands degraded by local land practices is one form of compensatory mitigation. Enhancement may involve the removal of conditions degrading existing wetlands and the purchase and preservation of existing wetlands and/or buffer zones.

Replacement, as a form of compensation requires construction of a new wetland. Replacement may occur either within the same watershed as the impacted wetland or within a different watershed. The replacement wetland may provide a wetland of the same vegetation class (in-kind replacement) or a different vegetation class (out-of-kind replacement). The general functions and values of the impacted wetlands must also be replaced.

Wetland banking is another form of mitigation. A wetland bank site, which is used as a single source wetland bank, is located in South Shore in Greenup County, Kentucky. This bank has served the Little Sandy River basin and should serve the Big Sandy River basin as well. Therefore, this Greenup County wetland bank could be submitted for use on this project if it is considered necessary and appropriate by the jurisdictional agencies.

Final determinations on jurisdictional wetland impacts and necessary mitigation measures will be made during the final design phase and Section 404 Permitting phase process. For wetland encroachment permits, all of the technical information, data and studies generated for the Environmental Impact Statement will be incorporated into the permit package. Field verification reviews will be conducted during development and review of the Section 401 and Section 404 application. Specific wetland mitigation requirements and Wetland Mitigation Plans will be developed during this process. This approach is consistent with adopted FHWA guidance on the coordination of NEPA studies and federal permit processing (Interagency Consensus on Integrating NEPA/404 for Transportation Projects, July 23, 1992).

, During the final design phase of the project, a detailed location hydraulic study will be completed in accordance with 23 CFR 650 for the Preferred Alternative. This Study will provide detailed analysis of the effects of floodplain encroachments on flood elevations. These analyses will determine the proper design for culverts, pipes, and bridges to insure flood elevations will have “no net effect” due to highway construction. The Study will address flooding risks, impacts to natural and beneficial floodplain values, support of probable incompatible floodplain development, specific measures for avoidance/minimization of floodplain impacts, and measures to restore natural and beneficial values. Floodplain encroachment will be subject to review by the Kentucky Division of Water (KDOW) and WVDEP and a no rise certification will be obtained. No fill material will be placed in a regulated floodway. Bridge piers and abutments will not be located in streams. Bridge fill slopes will not extend below ordinary high water.

, A small pond located within the I-66/US 23 interchange area, locally known as “trash pond”, is heavily littered with trash and household garbage. There was no visible evidence of hazardous

substances having been placed in this pond and there were no seepages and no sheens on water surfaces. However, given the local history of this pond and the possibility of submerged materials which could not be examined, water chemistry tests will be conducted before draining the pond to determine if the water requires special disposal methods. After the water has been removed, pond contents and bottom sediments may be examined for disposal before any required excavation or filling. Due to the nature of the Wayne Supply business near the US 23 project terminus (large equipment sales, service, repair and storage), and the implications of the on-site survey, a Phase 2 investigation of the property will be conducted. This would be for the purpose of determining the extent of surface soil contamination and whether or not any remediation actions would be necessary. Phase 2 activities will be conducted prior to right-of-way acquisition. Any hazardous waste generated by project construction will be registered, manifested, and disposed at a permitted Treatment, Storage and Disposal (TSD) facility.

- , Noise levels due to the heavy equipment used during construction may exceed acceptable noise standards during the construction period, however, every reasonable effort will be made to minimize construction noise, especially around any noise-sensitive locations.
- , Dust pollution may be an unavoidable, minor nuisance and every feasible effort will be made to minimize this problem. Any open air burning will be done in compliance with Kentucky or West Virginia state regulations and local laws and ordinances. Care will be taken to insure burning is done only along the right-of-way at the greatest practicable distance from dwellings, highways, and airfields and not when atmospheric conditions are such as to create a hazard or nuisance to the public.
- , In recognition of potential groundwater impacts, engineering based on site specific circumstances will be used during the final design process to avoid cuts where landscape stability is of concern. Construction measures could include terraced cuts, sufficiently sloped cuts, retaining walls, revegetation, and diversion ditches. In addition, formal Erosion and Sediment Control Plans will be prepared according to federal, state, and local regulations, to reduce the potential for unacceptable levels of pollution during the construction period and prescribe the effective reestablishment of vegetation and ground cover. The final design, construction and operation of the new facility will comply with all requirements for the Well Head Protection policies and procedures for protection of public wells as established by the States.
- , Mitigation measures for acid drainage/runoff will be developed in consultation with the KDOW and WVDEP during the final design phase of the project. Detailed information obtained from geotechnical borings will be used to predict the location and severity of acid drainage/runoff. In areas where acid producing materials are identified, plans will be developed to avoid and minimize the production of acid drainage. All excess excavation which results from acid producing materials will be disposed of in accordance with and at locations identified in the approved plan.

- , Final design plans will be developed to ensure that archaeological sites 15Pi203 (Hatfield Cemetery), 15Pi205 (Sword Cemetery), and 15Pi 206 (Ivy Fork Cemetery) are avoided (see SHPO correspondence in Appendix A) and protected from direct and indirect project impacts. Special construction notes will be added to contract documents specifying that these sites are to be protected and will not be used for pier, abutment, or embankment construction, staging, equipment storage, or other ground disturbing uses.
  
- , It is a goal of the final design phase to try to balance cut and fill quantities. While acquisition of most waste sites would likely be the responsibility of the construction contractor the waste sites must comply with all local, State and Federal laws, regulations and ordinances governing the location and placement of waste material. Revegetation of waste/fill sites with native plant materials will be accomplished to the maximum practicable extent and waste/fill site use for possible economic development will also be explored. Further evaluation of the possible uses, environmental effects, and mitigation potential for waste/fill sites will be conducted during the final design phase when waste/fill amounts and placement locations can be determined.

**V. RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF THE ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY**

The construction phase of the Preferred Alternative could cause limited adverse impacts on the human environment of a short-term nature. This could include temporary air pollution from dust and unavoidable noise from equipment during the construction phase. Project area surface waters could experience higher than normal siltation; however, erosion, sedimentation, and pollution control measures will be included in the construction plans. Both temporary and permanent control measures will minimize adverse short-term construction period effects and reduce substantial damage for the long-term.

Long-term road user benefits include an improved level of service and safety. I-66 is considered as a long-term productive facility. With its modern design characteristics, it will provide safe and efficient vehicle operations well into the future. Anticipated long-term benefits include reduced accidents and associated costs, reductions in operating costs, travel times, and an increase in economic activity in the project study area.

The local short-term impacts and uses of resources by the proposed project are consistent with the maintenance and enhancement of long-term productivity goals for the local area, the states, and the Appalachian Region.

## **VI. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES WHICH WOULD BE INVOLVED IN THE PROPOSED ACTION**

Construction of the Appalachian Corridor I-66 will involve an irretrievable commitment of a range of natural, physical, human, and financial resources. In addition to the commitment of labor and materials, the land used in the construction of the facility will be considered an irreversible commitment during the time period that the land is used for highway purposes. However, if a greater need arose for the land, it could be converted to another use. At this time, there is no reason to believe that such a case would occur or be desirable.

Considerable amounts of fossil fuels, labor, and construction materials will be expended in order to complete the route. Large amounts of labor and natural resources will be used in the fabrication and preparation of construction materials. These resources are generally not retrievable. However, neither are they in short supply and their use will not have an adverse effect on their continued availability. The route will require a substantial expenditure of state and federal highway funds which will not be directly retrievable. Construction costs can be indirectly recovered through highway taxes, user fees, and the income taxes generated by a more robust, healthy and sustainable economy.

While relocation of individuals, families and businesses will be unavoidable, the number of displacements will be held to the minimum number necessary. In addition, relocation assistance and fair payments will be provided.

The commitment of these resources is based on the concept that the citizens of the affected region will benefit from the improved quality of the transportation system. These benefits will consist of improved accessibility, travel safety and convenience, savings in time, savings in fuel consumption, enhanced economic development potentials, and greater availability of quality services. The cumulative benefits of the project are anticipated to outweigh the commitment of these resources.

## **VII. COMMENTS AND COORDINATION**

### **VII. A. Public Information and Public Meetings**

Comments on this proposed project have been actively solicited since the initiation of the early planning phase following designation by Congress of the I-66 Southern Kentucky Corridor in 1995. All comments and coordination correspondence which was received relative to this undertaking between conclusion of the Planning Phase and NEPA Phase initiation (Spring 2000) and publication of the DEIS (January 2002), were included in the DEIS Appendix A. All comments received from the public, from the ACT committee, and from federal, state, and local agencies have been taken into consideration during the development of this proposed project. Copies of all comments and coordination letters received during the specified comment period for the circulation of the DEIS are included in Appendix A of this FEIS. The comment letters included in Appendix A of this FEIS contain marginal notations and/or identify the applicable location in this FEIS where each comment is addressed. These comments are also summarized and general responses provided, along with FEIS page notations, in Section VII. D. below.

An extensive Public Involvement Program was initiated for this project as early as the pre-NEPA planning phase (1997 - 2000) of the project. This Program was enhanced and carried forward when the project entered the Preliminary Engineering and Environmental Impact Statement (NEPA) phase (2000 - present). The Public Involvement Program has included: multiple rounds of public meetings at various locations in both States, the formation of a citizens/government representative committee (I-66 Appalachian Corridor Team (ACT)), which thus far has met six times during project development, an interactive Internet Web Page, which has received more than 450,000 "hits", and a project Newsletter, which has been published 3 times. All of the information and recommendations received through these media have been taken into consideration in the decision making process for selection of the Preferred Alternative.

## **VII. B. Scoping Process**

A formal project Scoping Meeting was held on October 19, 2000, at the offices of the U.S. Army Corps of Engineers in Huntington, WV with representatives from federal and state resource agencies, the transportation departments of both States, and project team members present. The Notice Of Intent to prepare an EIS was published in the Federal Register on March 15, 2000.

The purpose of the Scoping Meeting included the following:

- , To invite early and continuing participation of the resource agencies in the development of project alternatives and environmental documentation.
- , To formally initiate the NEPA process and preparation of the DEIS in accordance with CEQ regulations and FHWA requirements.
- , To identify significant issues within the framework of the DEIS analyses.
- , To develop consensus on the appropriate level of analysis for the DEIS.
- , To identify required governmental permits.

The formal Scoping Meeting also served as a forum for presentation of the project history, outcomes of the planning phase activities, project schedules and environmental streamlining objectives, and future resource agency communication points and standards. Scoping Meeting minutes are included in the DEIS.

## **VII. C. Public Hearings**

Two formal Public Hearings were held for the project, one in Red Jacket, WV on March 25, 2002 and one in Pikeville, KY on March 26, 2002. These hearings were held in order to formally receive comments from the public on the I-66 Appalachian Corridor project and to solicit recommendations for a preferred alternative for the project. Announcements for the Hearings were published twice in the local and regional news media. In addition, approximately 12,000 flyers were distributed throughout the project area announcing the Hearing times and places. This announcement also appeared on the I-66 Internet Website.

The Hearings were held in an “open format” style with no speeches or formal presentations made. Several large scale exhibits displayed the project alternatives on aerial photography, USGS topographic maps, and on plan sheets. All exhibit stations were manned by project team personnel and staff familiar with all aspects of the project and questions and comments by the public were addressed on an individual, one-on-one basis.

Based on counts from sign-in sheets provided at Hearing room entrances, 78 people attended the Hearing in Red Jacket, and 392 people attended the Hearing in Pikeville. Three methods for the public to provide formal comments were made available. A court reporter was present at both Hearing sites to record oral comments. A comment sheet was provided to all attendees who wished to provide written comments. And an interactive comment sheet was posted on the I-66 Website so that citizens could post remarks via the Internet. Informal comments were also accepted by project team members and staff during discussions with the public at the various project information stations throughout the Hearing room. Comments could also be submitted by mail for a period of ten days following the Public Hearings.

From all available methods, a total of 64 formal comments were received. Of these 64 comments, 50 were in support of the project, 5 were opposed to the project, and 9 requested additional information or were non-committal. Of the comments received in support of the project, 57% favored the North to South alignment alternative, 31% favored the Southern alignment alternative, 12% favored the Northern alignment alternative, and there was no support voiced for the South to North alignment alternative. Oral testimony received by project team members and staff manning stations at the Hearing sites was reported as heavily weighted toward the North to South alignment alternative. All of the comments received opposed to the proposed project cited opposition to being relocated as the basis of their disapproval. All comments, recommendations, and information provided through the Public Hearing activities were taken into consideration in the decisionmaking process for designation of the Preferred Alternative. The Public Hearing Summary is provided in Appendix B of this FEIS.

During the development of this project over the next 20 to 30 or more years, it is anticipated that additional environmental studies, environmental reevaluations, and new or supplemental environmental documents will be necessary. These studies and documents are expected for further developments on the project such as proposed interchanges, designated waste sites, project modifications, and changes or new information. They may also be necessary to address changes in environmental laws and regulations which may occur during the life of the project. Additional public meetings, hearings, and public involvement would be expected in conjunction with this project evolution.

#### **VII. D. Comments on the Draft Environmental Impact Statement (DEIS)**

As a result of circulation of the DEIS, eight (8) letters of comment were received prior to the comment period expiration date (c.o.b. 4/29/02). Copies of these comment letters are included in Appendix A of this FEIS. Letters received after the comment period expiration date (4/29/02) will be addressed in the project Record Of Decision (ROD). The comment letters received (see Appendix A) during the comment period (January 24, 2002 to April 29, 2002), with responses to comments, are summarized as follows (commenting agency identification and their summarized comments are in “bold”, with responses following in plain text). Each comment letter received is provided in Appendix A and includes marginal notations and identifies, as appropriate, the location(s) in this FEIS where each comment is addressed:

1. **A letter dated *February 25, 2002* was received from the Natural Resources Conservation Service (NRCS), Morgantown, WV Office. This letter provided recommended corrections to the Geologic and Physiographic Characteristics section on pages 31 and 32 of the DEIS.**

Comment noted. The corrections have been made and are reflected on page 18 of this FEIS (also see NRCS comment letter in Appendix A for additional information).

2. **A letter dated *February 27, 2002* was received from the Appalachian Regional Commission (ARC), Washington, D.C. Office. This letter recommended that **Appalachian Development Highway System corridors, which have been improved to facilitate economic development in Appalachia, be referenced according to their Corridor designations and project effects on Corridor Q (US 460) be addressed.****

ADHS System designations have been added and discussions of the Program and its relationship to this project are reflected on pages 4, 5, 9, 31, 32, and Exhibits 3, 4 and 6 of this FEIS. The Preferred Alternative will begin on US 23/119, APD Corridor B, which has already been reconstructed to a 4-lane highway, and will access I-66 via an interchange. Corridor Q will not be affected by the Preferred Alternative because I-66 will not intersect US 460 (Corridor Q). The ARC also provided a copy the report entitled "*Appalachian Development Highway System Economic Impact Studies*" which has been utilized the development of this FEIS and in the Economic Impacts section of this FEIS beginning on page 31.

3. **A letter dated *March 7, 2002* was received from the U.S. Fish and Wildlife Service, Cookeville, TN Office. This letter provides concurrence that the project's biological assessment "is adequate and supports the conclusion of not likely to adversely affect" federally listed endangered and threatened species. The letter also recommends that comments be requested from the USFWS Field Office in Elkins, WV.**

The USFWS Elkins WV Field Office was contacted but no comments were received.

4. **A letter dated *March 20, 2002* was received from the West Virginia Division of Culture and History (WV SHPO). This letter provides comments on Architectural Resources and Archaeological Resources. Regarding architectural resources, they advised that comments could not be completed until receipt of Historic Inventory Property forms for the properties in Mingo County.**

These forms were provided on May 20, 2002.

**Regarding archaeological resources, the WV SHPO advised that concurrence with the initial archaeological survey report had not been granted and that comments and recommendations would be provided upon receipt of the completed final archaeological report.**

The Management Summary of the final archaeological report was provided on August 19, 2002. This Summary concludes that no significant archaeological resources would be affected in West Virginia by the Preferred Alternative.

5. **A letter dated *March 20, 2002* was received from the WV SHPO. This letter acknowledged receipt of the revised Phase I archaeological report and concurrent letter from the Kentucky SHPO. It further reiterates that the WV SHPO would provide comments upon receipt of a final “100% survey” report for the preferred alternative.**

The Management Summary for the final archaeological report was provided to the WV SHPO on August 19, 2002. This Summary concludes that no significant archaeological resources would be affected in West Virginia by the Preferred Alternative. The final “100% survey” report was provided to the WV SHPO in September, 2002. The WV SHPO has concurred that no archaeological resources were located in WV. A concurrence letter is included in Appendix A of this FEIS

6. **A letter dated *April 4, 2002* was received from the West Virginia Department of Environmental Protection, Division of Air Quality (DAQ). This letter recommended changes to Section IV.H. of the DEIS.**

These changes have been made and are reflected on page 33 of this FEIS. The DAQ also advised that Mingo County is currently designated “attainment/unclassifiable” and that the project is exempt from the requirements of the Federal Transportation Conformity Rule(s) and the related State Rule. This information is reflected on pages 22 and 33

7. **A letter dated *April 10, 2002* was received from the West Virginia Division of Natural Resources (WVDNR), Wildlife Resources Section. This letter provided topic specific comments as follows:**

- a. **WVDNR expressed a preference for North Band Alternative N-2 on the basis that it appears to have the least amount of environmental impact.**

Comment noted. Although the North Band in its entirety was not selected, the WVDNR position was taken into consideration in the decisionmaking process for designation of the Preferred Alternative. The basis for the selection of the Preferred Alternative is given on pages 9-11.

- b. **WVDNR pointed out that Tug Fork is considered a High Quality Stream by WVDNR, and as such may support significant or irreplaceable fish, wildlife, and recreational resources. They also noted that significant populations of state protected freshwater mussels are found in Tug Fork.**

This information is reflected on pages 20, 35, 36, and 49 of this FEIS.

- c. **WVDNR provided recommendations on relocated stream channel and culvert placement mitigation.**

These recommendations were accepted and are reflected on pages 35, 36, 48, and 49 of this FEIS.

- d. **WVDNR advised that isolated wetlands are considered waters of the State and that approvals for any impacting activity would require approvals from the Division of Water Resources.**

This has been acknowledged and is reflected on page 20, wetland impacts are discussed on pages 36-37, and mitigation is discussed on pages 49 - 50 of this FEIS.

- e. **WVDNR advised that water related permits and permissions may extend to ephemeral and intermittent streams as well as “blue line” streams.**

This information has been incorporated into the FEIS on page 38.

- 8. **A letter dated *April 29, 2002* was received from the U.S. Environmental Protection Agency, Atlanta GA Region 4 Office. The Atlanta Office provided comments resulting from a joint review of the DEIS by both Region 3 and 4. EPA noted that they have “environmental concerns” for all alternatives presented in the DEIS and rated the document “EC-2”. Their DEIS comments, along with appropriate responses, are summarized as follows:**

- a. **EPA requested a summary list of the environmental impacts of the preferred alternative.**

This list has been provided as Table 3 in this FEIS.

- b. **EPA identified various problems with the map exhibits provided in the DEIS.**

All necessary corrections recommended have been made and are reflected in Exhibits 1 through 6 contained in this FEIS. Exhibits 1 and 2 in the FEIS are the same as Exhibits 1 and 2 in the DEIS. No changes were necessary. Exhibits 3 through 8 in the DEIS have been omitted from the FEIS. On Exhibit 8 in the DEIS, the blue line on the northernmost corridor corresponds to the N-1 designations in the DEIS text. The red line on the northernmost corridor corresponds to the N-2 designations in the DEIS text. The blue line on the southernmost corridor corresponds to the S-1 designations in the DEIS text. The red line on the southernmost corridor shown on Exhibit 8 corresponds to the S-2 designations in the DEIS text. Exhibit 8 in the DEIS is not carried forward into the FEIS. Instead, Exhibit 3 in the FEIS replaces Exhibit 8 from the DEIS. Exhibit 3 in the FEIS shows the location of the North study corridor, the South study corridor, the North to South Connector, the South to North Connector, and Exhibit 3 shows the general location of the Preferred North to South Alternative (black line). The Preferred

Alternative is composed of the best combinations from the N-1/N-2 options, the NS-1/NS-2 crossover options, and the S-1/S-2 options within the respective North, North to South, and South corridor (best bands) segments. Standard map conventions, as appropriate, have been included on all maps. Exhibits 9a through 10m in the DEIS, which show all Study Alternatives, have been omitted from the FEIS in favor of Exhibits 4a through 4k, which show the currently available, best level of detail, for the Preferred Alternative. None of the Exhibits in the DEIS or the FEIS were derived from USGS topographic quadrangles. Exhibits 4 through 10m in the DEIS and Exhibits 3 through 4k in the FEIS were generated from digital aerial photographs. The location specific data required to show exact resource-specific maps (such as stream crossings, wetlands, etc.) and the precise relationship of the project to those resources is not yet available because final design has not been initiated. During final design, site specific measures, on a section by section basis, will be incorporated into project plans to eliminate and/or minimize impacts to sensitive resources. These efforts will render any maps, attempting to identify detailed estimates of such impacts at this time, as highly speculative and largely inaccurate. Therefore, no such maps are included. However, discussions of *potential*, *worst-case*, resource-specific impacts from the proposed project are discussed in general terms in the text of the FEIS beginning on page 23. Proposed mitigation measures are described beginning on page 47.

- c. **EPA requested an explanation of how traffic in the area will increase if the project is not built since population declines are expected to continue.**

The increase in traffic volumes is due to increased trips and increased through regional travel. For example, in spite of declining populations, the average daily traffic (ADT) on US 460/KY 80 between Pikeville and Elkhorn City increased from approximately 6,200 in 1980 to 15,500 by 1997 (based on actual counts), and is predicted to grow to 23,000 by the year 2020. ADT on US 119 between Pikeville and Williamson was approximately 6,700 in 1980 but had increased to 14,500 by 1995 (based on actual counts) and is predicted to reach 23,800 by the year 2020. Similar traffic volume growth has occurred, in spite of population declines, and is predicted for other major routes in the project area including proposed I-66

- d. **EPA requested a description of the screening process for Alternatives and the criteria used to eliminate and narrow down the range of alternatives.**

The screening process is described on pages 16 and 17 of the DEIS. This process utilized the determinants shown in DEIS Table 1 as well as the “goals” outlined on page 6 of the DEIS. The values provided for the quantifiable determinants are shown in DEIS Table 1A and their comparison among the final study alternatives is given in Table 3 of this FEIS.

e. **EPA asked what benchmark was used for elimination of segments.**

No single benchmark was used to eliminate segments. Elimination was based on the correlation of alternate segments, within the same general corridor, and comparing their ability to meet stated project purpose and need objectives and project goals. Since these segments were in close proximity to each other, i.e. within the same corridor or “band”, the segment option which clearly fulfilled the test of the established determinants was retained and the one which was less effective was eliminated. Failure could have been based on excessive cost of one segment over its counterpart, excessive relocations, excessive environmental effects, potential impacts to Section 4(f) resources, better travel service, etc. or any combination of factors which showed one segment superior to its counterpart. If both segment options met the determinant requirements equally, then they were both carried forward. It was through this process that two alignment options within each corridor or “best bands” were derived, designated by the ACT Committee, and carried through the DEIS. This process is explained in the DEIS at pages 6, 16-17, and through information contained in DEIS Tables 1 and 1A.

f. **EPA asked why a connection between the Northern Band and Southern Band was needed when ultimately only one alignment will be chosen, either the Northern or the Southern band.**

The connections were provided in order to give additional flexibility to the project location options and make it possible to transition from one corridor/band to the other. This was deemed prudent in case one was ultimately found to be flawed or less effective in meeting all project purpose and need objectives. As can be seen by the designation of the Preferred Alternative (North to South Alternative), it has been determined that the best location for the proposed project involves sections of both the Northern and Southern bands and utilizes the north to south connector. Since the connector alternatives were studied in the DEIS phase along with the mainline alternatives, a connector option can be used without additional work in this area and without fear of encountering significant adverse environmental consequences.

g. **EPA requested an explanation of the statement that “*stream segments covered or affected by fill will cause less long-term habitat loss than culverts or pipes*”, and suggested that stream relocations and culverts be listed separately in Table 12.**

This statement is based on historic experience and the expectation that stream restoration/mitigation can be accomplished for filled or channelized streams to enable them to ultimately recover to similar or better conditions as currently exist. Stream segments that are placed through culverts or pipes will undergo permanent changes to their physical characteristics that will remain for the long term. For further discussion, see pages 35 - 36, and 48 - 49 of this FEIS. The location specific data required to show exact stream relocation sites and lengths, and culvert locations and lengths, in conjunction with the precise relationship of the project to those resources, for DEIS Table 12, is not yet

available because final design has not been initiated. During final design, site specific measures, on a section by section basis, will be incorporated into project plans to eliminate and/or minimize impacts to streams (see pgs. 34-36). These upcoming efforts will render attempts to produce detailed estimates of such individual impacts, at this time, as highly speculative. Table 12 in the DEIS provides gross estimates of stream relocations/culvert crossings for general comparison uses in evaluating the overall conditions of the study corridors (1000' "best bands"). Therefore, this same information is incorporated into Tables 2 and 3 of the FEIS for consistency, but it should be recognized that final impacts are expected to be measurably less.

h. **EPA requested clarification of the extent and nature of potential groundwater impacts.**

These issues have been addressed and clarifications provided on pages 46 - 47 of this FEIS.

i. **EPA stated that the FEIS should clarify whether or not wetland mitigation will take place.**

These issues are fully addressed on pages 36 - 37 and 49 - 50 of this FEIS.

j. **EPA requested information on avoidance and mitigation of forest impacts.**

Additional information has been provided on pages 23 - 24, 43, and 48 of this FEIS.

k. **EPA requested that cultural resource effects and mitigation measures be taken into consideration when selecting the preferred alternative and results reported in the FEIS.**

Cultural resource issues were appropriately considered in the decisionmaking process for designation of the Preferred Alternative. Since the Northern Band alternatives for the eastern project segments are not being utilized, none of the contributing elements of the Hatfield-McCoy Historic District would be affected and no significant historic resources would be affected by the Preferred Alternative. Although the Hatfield cemetery (archaeological site 15Pi203) is considered by the Kentucky SHPO to be eligible for the National Register, the SHPO has advised that the project would have no adverse effect. Archaeological resources impacts are discussed beginning on page 39 and mitigation is further addressed on page 52 of this FEIS.

l. **EPA requested additional information regarding potential secondary and cumulative impacts from the disposal and/or reuse of surplus soil and rock from road cuts and excavation for the construction of the project.**

The project is expected to be divided into numerous construction sections that would be built over a construction period that may last for decades. The design of each construction section will be done in a manner that will strive to balance cut and fill excavations. In situations where this is not possible, it may become necessary to obtain waste sites for excess material (no borrow is anticipated at this time). It is impossible at this stage of project development to predict whether or not waste sites will be required and where such sites might be located for each construction section. While acquisition of most waste sites will be the responsibility of the construction contractor, all waste sites must comply with all local, State and Federal laws, regulations and ordinances governing the location and placement of waste material. Excavation waste is discussed on page 45 and Secondary (Indirect) and Cumulative Impacts are discussed beginning on page 46 of this FEIS.

During the development of this project, over the next 20 to 30 or more years, it is anticipated that additional environmental studies, environmental reevaluations, and new or supplemental environmental documents will be necessary. These studies and documents are expected for further refinement of developments on the project such as proposed interchanges, designated waste sites, project modifications and changes, or new information. They may also be necessary to address changes in environmental laws and regulations which may occur during the life of the project. The FHWA and the KYTC will ensure that all such circumstances are evaluated and subjected to full environmental analysis and public involvement prior to final project decisions which may result in significant environmental impacts not identified in the most recently distributed version of the project Final EIS.

## **VIII. LIST OF PREPARERS**

This document was prepared by the U.S. Department of Transportation, Federal Highway Administration and the Kentucky Transportation Cabinet, with assistance from Palmer Engineering, Inc., American Consulting Engineers, PLC, and Vaughn and Melton Consulting Engineers, Inc. Technical assistance was also provided by H. Powell and Co., Inc., Cultural Horizons, Inc., AMEC Earth and Environmental, and Third Rock Consultants, Inc.

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### **PALMER ENGINEERING, INC.**

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Mr. David Lindeman, P.E. Project Engineer	BS Civil Engineering 15 years transportation experience Document Preparation/Quality Control
Ms. Liz Bullock, E.I.T. Environmental Engineer	BS Degree; MS Degree 2 years experience Environmental Base Studies



## **IX. FEIS DISTRIBUTION LIST**

Copies of the Final Environmental Impact Statement have been distributed to the following:

### **FEDERAL AGENCIES**

1. US Department of Transportation, Washington, D.C.
2. Federal Highway Administration, Charleston, WV
3. US Army Corps of Engineers - Huntington, WV
4. US Department of Agriculture, NRCS, Morgantown, WV
5. US Department of the Interior, Office of Environmental Policy and Compliance, Washington, D.C.
6. US Department of the Interior, Fish and Wildlife Service, Cookeville, TN.
7. US Environmental Protection Agency, Office of Federal Activities, Washington, D.C.
8. US Environmental Protection Agency, Region IV, Atlanta, GA
9. Appalachian Regional Council, Washington, D.C.

### **STATE AGENCIES, KENTUCKY**

1. Natural Resources and Environmental Protection Cabinet, State Environmental Review Officer, Frankfort, KY for Distribution to the Following Agencies:
  - a. Division of Water
  - b. Division of Waste Management
  - c. Division for Air Quality
  - d. Department of Health Services
  - e. Economic Development Cabinet
  - f. Division of Forestry
  - g. Department of Surface Mining Reclamation & Enforcement
  - h. State Nature Preserves Commission
  - i. Department of Parks
  - j. Department of Agriculture
  - k. Kentucky Heritage Council
  - l. Division of Conservation
  - m. Department for Natural Resources
  - n. Department of Fish and Wildlife Resources
  - o. Department for Military Affairs

### **LOCAL AND REGIONAL AGENCIES, KENTUCKY**

1. Pike County Judge Executive, Pikeville, KY
2. Mayor, City of Pikeville, KY
3. Big Sandy Area Development District, Prestonsburg, KY
4. Pikeville Public Library

### **STATE AGENCIES, WEST VIRGINIA**

2. West Virginia Department of Transportation
3. West Virginia Division of Culture and History
4. West Virginia Division of Environmental Protection
5. West Virginia Division of Natural Resources

### **LOCAL AND REGIONAL AGENCIES, WEST VIRGINIA**

1. Mingo County Commission, Williamson, WV
2. Region II Planning and Development Council, Huntington, WV
3. Mingo County Redevelopment Authority, Williamson, WV
4. Mingo County Housing Authority, Williamson, WV
5. Williamson Public Library

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# **ATTENTION**

**IN ACCORDANCE WITH FEDERAL HIGHWAY ADMINISTRATION TECHNICAL ADVISORY T 6640.8A, SECTION VI. B., THIS DOCUMENT UTILIZES THE CONDENSED FINAL EIS OPTION. THE COUNCIL ON ENVIRONMENTAL QUALITY REGULATIONS FOR IMPLEMENTATION OF THE NATIONAL ENVIRONMENTAL POLICY ACT PLACE HEAVY EMPHASIS ON REDUCING PAPERWORK, AVOIDING UNNECESSARY WORK, AND PRODUCING DOCUMENTS WHICH ARE USEFUL TO DECISIONMAKERS AND TO THE PUBLIC.**

**TOWARD THIS END, THE CONDENSED FINAL EIS APPROACH USED IN THIS FEIS AVOIDS REPETITION OF MATERIAL FROM THE DRAFT EIS BY INCORPORATING, BY REFERENCE, THE DRAFT EIS, WHICH IS INCLUDED IN APPENDIX D. THIS FEIS IS A SHORTER DOCUMENT THAN UNDER THE TRADITIONAL APPROACH; HOWEVER, IT AFFORDS THE READER A COMPLETE OVERVIEW OF THE PROJECT AND ITS IMPACTS ON THE HUMAN ENVIRONMENT.**

**THIS CONDENSED FEIS PROVIDES REFERENCES TO AND SUMMARIZES INFORMATION FROM THE DRAFT EIS. THE DRAFT EIS WAS APPROVED ON JANUARY 24, 2002. THIS CONDENSED FEIS FOCUSES DISCUSSION ON THE PROJECT DECISIONS MADE SINCE DISTRIBUTION OF THE DRAFT EIS AND ON NOTEWORTHY CHANGES IN THE PROJECT, ITS SETTING, IMPACTS, TECHNICAL ANALYSIS, AND MITIGATION THAT HAVE OCCURRED SINCE INITIAL DEIS CIRCULATION. THIS CONDENSED FEIS ALSO IDENTIFIES THE PREFERRED ALTERNATIVE, EXPLAINS THE BASIS FOR ITS SELECTION, DESCRIBES THE PROJECT COORDINATION EFFORTS WHICH HAVE BEEN MADE, AND INCLUDES AGENCY AND PUBLIC COMMENTS. RESPONSES TO THESE COMMENTS AND ANY REQUIRED FINDINGS OR DETERMINATIONS ARE ALSO INCLUDED.**