FHWA-KY-EIS-75-09-F
FEDERAL HIGHWAY ADMINISTRATION
REGION FOUR
KENTUCKY DIVISION

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

AND

KENTUCKY DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

FINAL

ENVIRONMENTAL IMPACT STATEMENT

ADMINISTRATIVE ACTION

FOR

U.S. 127 and KY 151 relocation in Anderson and Franklin Counties, Kentucky beginning at the Southern Railroad Bridge Northwest of Lawrenceburg and ending at I-64 and KY 151 Interchange and at U.S. 127 one mile east of Alton.
SP 3-31-3L, SP 3-11-8L, SP 37-85-5L, SP 37-125-5L, F-134 (11), F 226 (12)

SUBMITTED PURSUANT TO 42 U.S.C. 4332 (2) (C), 23 U.S.C. 128 (a)

APPROVED AND ADOPTED

DATE 7/19/77

SIGNATURE AND TITLE OF APPROPRIATE FHWA OFFICIAL

DATE 4/6/77

SIGNATURE AND TITLE OF APPROPRIATE KENTUCKY DEPARTMENT OF TRANSPORTATION OFFICIAL

T A B L E O F C O N T E N T S

SUMMARY

1. Federal Highway Administration
Administrative Action Environmental Statement

( ) Draft (X) Final

No Section 4 (f) Statement Required

2. FOR ADDITIONAL INFORMATION, CONTACT:

Kentucky Bureau of Highways:

Mr. R. A. Johnson, P.E.
District Engineer
763 New Circle Road, N.W.
P. O. Box 11127
Lexington, Kentucky 40511
Phone: 606-254-6612

Federal Highway Administration:

Mr. R. E. Johnson, P.E.
Division Administrator
330 West Broadway
P. O. Box 536
Frankfort, Kentucky 40601
Phone: 502-227-7321
502-582-5468 (FTS)

3. BRIEF DESCRIPTION OF PROJECT AND LOCATION

This project will replace the existing road from the Southern Railroad Bridge just Northwest of Lawrenceburg to I-64 at the KY 151 interchange, a distance of 6.9 miles, and to US 127 one mile east of Alton, a distance of 1.75 miles. A two-lane roadway is proposed initially; four-lane, ultimately; with a grade separated interchange at the route junction. (See fig. 1, 2, and 3).

4. SUMMARY OF ENVIRONMENTAL IMPACT AND ADVERSE ENVIRONMENTAL EFFECTS

An adverse impact will result from the channel changes necessary with the project and the noise levels that several residences will attain. Further potential adverse impacts will result temporarily from construction noise, dust and erosion; however, control measures will be utilitized to minimize these effects.

A favorable impact on the environment should result from the replacement of the narrow two-lane road, having sub-standard shoulders, ditches and cross-section by a modern two-lane initial, four-lane ultimate roadway with 40 feet depressed grass median. Also favorable will be the removal of all through traffic from the community of Alton.

The preferred route involves sixty-six (66) right-of-way parcels and necessitates the removal of one (1) business, eight (8) residences, and four (4) farm buildings. The project will have partial control of access throughout except for the US 127 and KY 151 interchange which will be fully controlled access.

5. ALTERNATIVES CONSIDERED

a. The "Do-Nothing alternative
b. Improving the existing road
c. A corridor north of Alton for KY 151
d. A corridor south of Alton for KY 151
   (this is the preferred one)
e. A corridor southeast of Alton for US 127
   (this is the preferred one)
f. An at-grade intersection at US 127 & KY 151
g. A grade-separated interchange at US 127 & KY 151
   (this is the preferred one)
h. Alternative studies within preferred corridors
i. Selected alternative

6. LIST OF ENTITIES TO WHOM DRAFT EIS WAS SENT

U.S. Department of Health, Education , and Welfare*
U.S. Department of Housing and Urban Development
U.S. Environmental Protection Agency*
U.S. Department of Commerce
U.S. Department of the Interior*
Council on Environmental Quality
Department of Agriculture*
Department of Defense
Atomic Energy Commission
Federal Power Commission*
U.S. Office of Economic Opportunity
U.S. Department of State
Federal Energy Administration

Kentucky Department for Natural Resources and
Environmental Protection[1]*

[1]Clearinghouse agency for agencies listed below:

Division of Solid Waste
Department of Mines and Minerals
Division of Policy and Budget
Division of Urban and Regional Planning
Division of Community Services
Division of Sanitary Engineering
Kentucky Heritage Commission*
Division of Water Resources
Division of Forestry
Division of Air Pollution*
Division of Water Quality*
Division of Plumbing*
Department of Agriculture
Department of Parks
Department of Fish and Wildlife
Department of Conservation
State Archaeologist*
Office of Local Government

Sierra Club
Bluegrass Development District
Anderson County Judge
Franklin County Judge
Franklin County Planning Commission
Cincinnati, New Orleans & Texas Pacific R.R.

*Agencies who responded to Draft EIS

7. LIST OF AGENCIES TO WHOM FINAL EIS ARE BEING SENT

U.S. Department of Health, Education, and Welfare
U.S. Environmental Protection Agency
U.S. Department of the Interior
Council on Environmental Quality
Department of Agriculture
Federal Power Commission
Federal Energy Administration

Kentucky Department for Natural Resources and Environmental Protection[1]

[1]Clearinghouse agency for agencies listed below:

Division of Solid Waste
Department of Mines and Minerals
Division of Policy and Budget
Division of Urban and Regional Planning
Division of Community Services
Division of Sanitary Engineering
Kentucky Heritage Commission
Division of Water Resources
Division of Forestry
Division of Air Pollution
Division of Water Quality
Division of Plumbing
Department of Agriculture
Department of Parks
Department of Fish and Wildlife
Department of Conservation
State Archaeologist
Office of Local Government

Sierra Club
Bluegrass Development District
Anderson County Judge
Franklin County Judge
Franklin County Planning Commission
Cincinnati, New Orleans & Texas Pacific R.R.

I. DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES CONSIDERED, AND THE SOCIAL, ECONOMIC AND ENVIRONMENTAL CONTEXT

A. TYPE OF FACILITY AND LOCATION

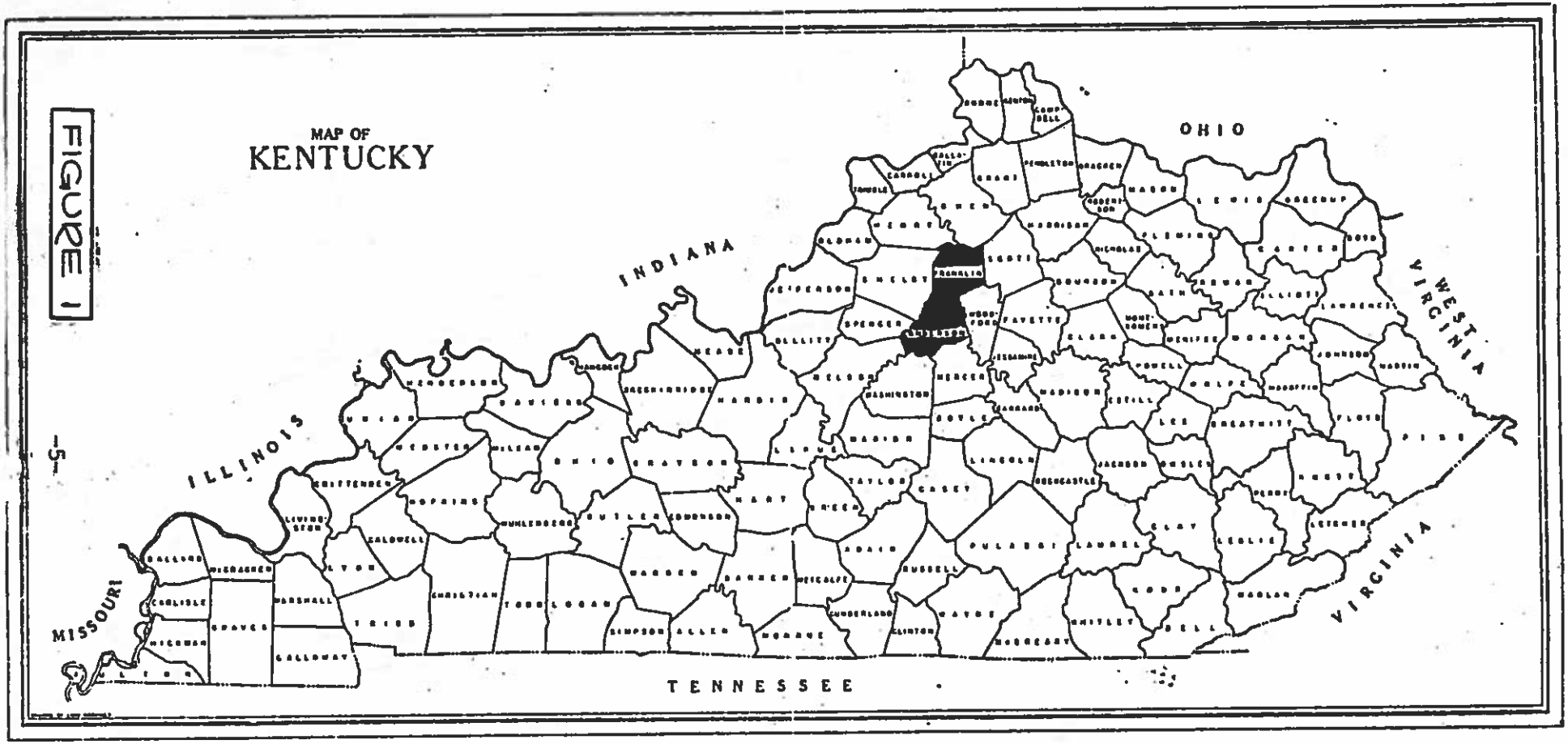
The proposed project is centered around the northern County community of Alton[1], and extends from the Southern Railway bridge on By-Pass US 127 to the Anderson-Franklin County line on US 127 and to I-64 on KY 151. It replaces the existing two-lane twenty-one (21) to twenty-two (22) foot three (3) mile section of US 127 from the Southern Railway bridge to Alton to the Anderson-Franklin County line and the two and five tenths (2.5) mile section of KY 151 from Alton to the Anderson-Franklin County line.

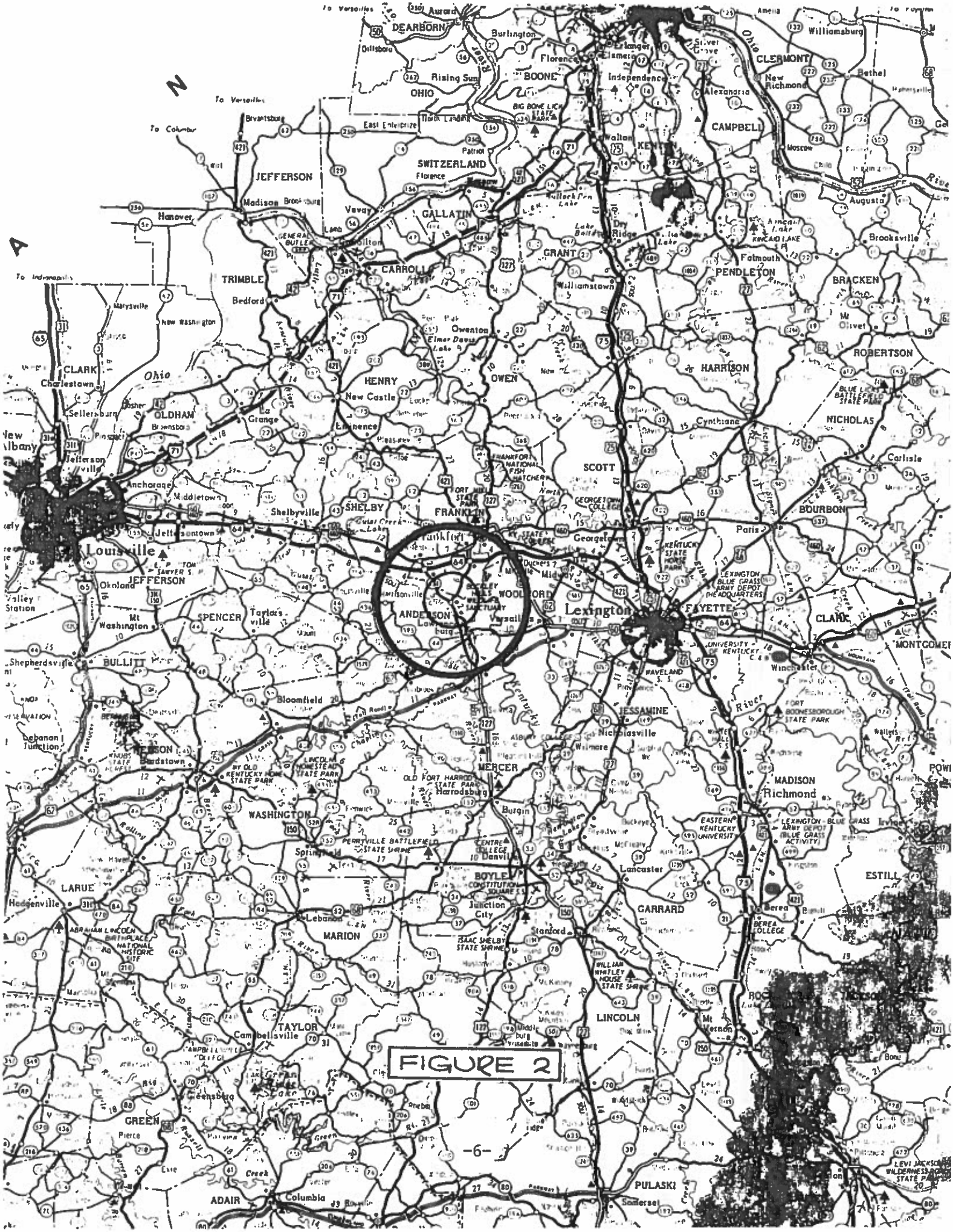
The beginning point on US 127 northwest of Lawrenceburg at the Southern Railway crossing was established several years previous to this date when the Lawrenceburg By-Pass was constructed. The ending point on KY 151 in Franklin County was established when KY 151 was reconstructed in Franklin County in 1969. The ending point on US 127 was determined by selecting the nearest point at which relocated US 127 could be terminated on existing US 127 and still be compatible with a future reconstruction of US 127 in Franklin County.

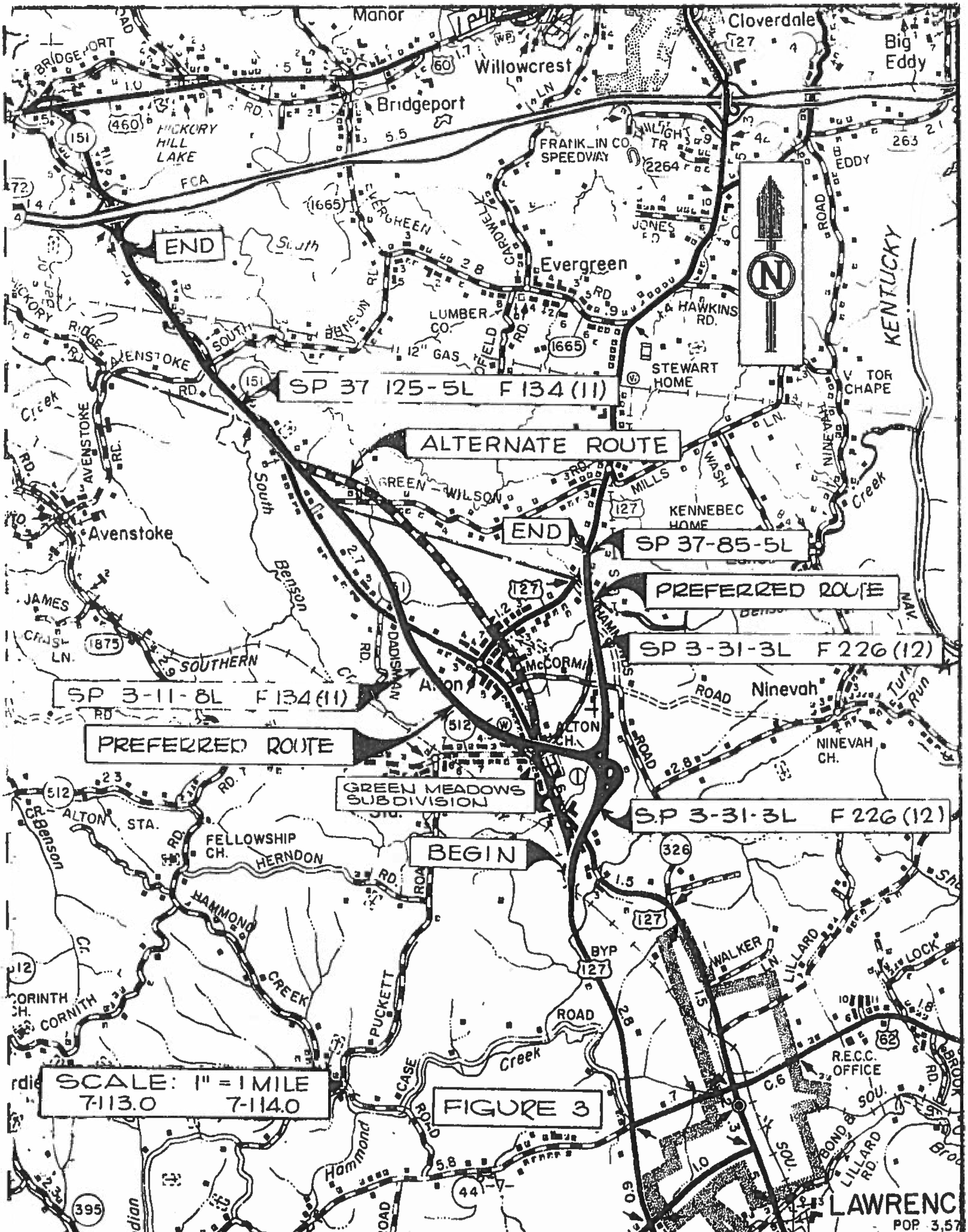
---

1. See Figure Numbers 1, 2, and 3 for location

FIGURE 1


MAP OF
KENTUCKY
OHIO
INDIANA
ILLINOIS
MISSOURI
WEST VIRGINIA
VIRGINIA
TENNESSEE


N
DEARBORN
BOONE
OHIO
CLERMONT
CAMPBELL
KENTON
JEFFERSON
SWITZERLAND
GALLATIN
GRANT
PENDLETON
BRACKEN
TRIMBLE
CARROLL
HENRY
OWEN
HARRISON
ROBERTSON
CLARK
OLDHAM
SCOTT
NICHOLAS
BOURBON
SHELBY
FRANKLIN
Louisville
Lexington
FAYETTE
JEFFERSON
SPENCER
BULLITT
ANDERSON
WOODFORD
JESSAMINE
MERCER
MADISON
Richmond
WASHINGTON
MARION
BOYLE
GARRARD
LINCOLN
TAYLOR
GREEN
ADAIR
PULASKI
Ohio
Kentucky
FIGURE 2
-6-


END
SP 37 125-5L F 134 (11)
ALTERNATE ROUTE
END
SP 37-85-5L
PREFERRED ROUTE
SP 3-31-3L F 226 (12)
SP 3-11-8L F 134 (11)
PREFERRED ROUTE
GREEN MEADOWS SUBDIVISION
SP 3-31-3L F 226 (12)
BEGIN
SCALE: 1" = 1 MILE
7-113.0 7-114.0
Manor
Cloverdale
Big Eddy
Willowcrest
Bridgeport
HICKORY HILL LAKE
FRANKLIN CO. SPEEDWAY
Evergreen
LUMBER CO.
12" GAS
STEWART HOME
KENNEBEC HOME
KENTUCKY
Avenstoke
Alton
McCORMICK
ALTON CH.
Ninevah
NINEVAH CH.
FELLOWSHIP CH.
R.E.C.C. OFFICE
LAWRENC
POP. 3,57
FIGURE 3

The proposal calls for a four-lane divided highway with a forty foot depressed grass median with full safety features and partial control of access.[1] Initial plans call for four-lane sections in the vicinity of the interchange and two-lane sections on US 127 to the Anderson-Franklin County line and on KY 151 to the recently constructed two-lane section of KY 151 in Franklin County, based on the design hour volumes with adequate right-of-way to ultimately construct a four-lane section over the total project. Upon completion of the ultimate four-lane section, the new roads will operate at a high level of Service B.[2] Due to the high percentage of trucks on the existing two (2) lanes the existing facility now operates at less than the desired level. The facility will provide safer conditions due to the increased passing sight distance and the partial and fully controlled access which will decrease the number of access points therefore decreasing conflicts to traffic.

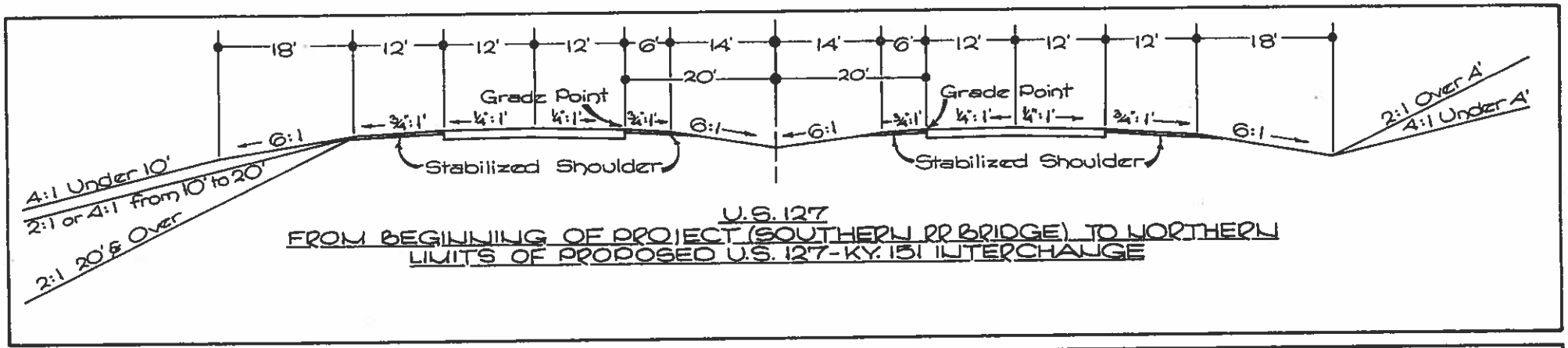
It is anticipated that the additional two lanes will be constructed by the design year (1996) based on the availability of construction funds on a state-wide priority. The present plan will include acquisition of right-of-way for the full facility. The final EIS has addressed the anticipated impacts of the planned four-lane highway.

---

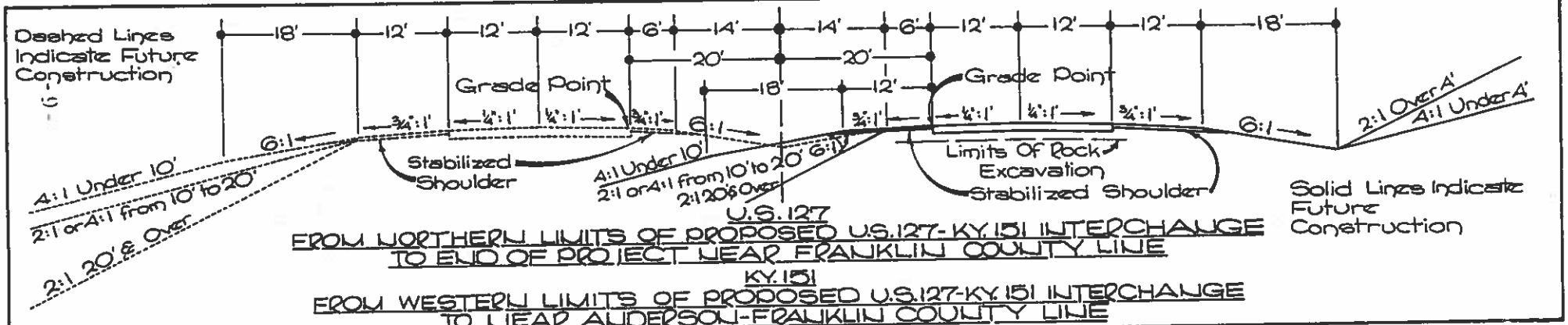
1. See Figure Number 4

2. See Appendix Page 105

TYPICAL SECTIONS OF PROPOSED ROADWAY

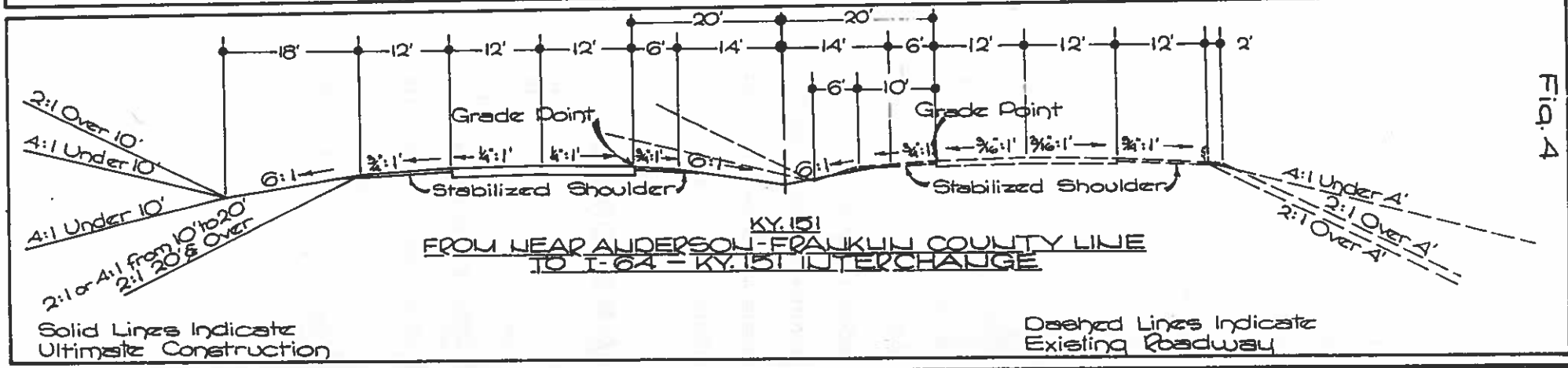


U.S. 127
FROM BEGINNING OF PROJECT (SOUTHERN RR BRIDGE) TO NORTHERN LIMITS OF PROPOSED U.S. 127-KY. 151 INTERCHANGE



U.S. 127
FROM NORTHERN LIMITS OF PROPOSED U.S. 127-KY. 151 INTERCHANGE TO END OF PROJECT NEAR FRANKLIN COUNTY LINE

KY. 151
FROM WESTERN LIMITS OF PROPOSED U.S. 127-KY. 151 INTERCHANGE TO NEAR ANDERSON-FRANKLIN COUNTY LINE



KY. 151
FROM NEAR ANDERSON-FRANKLIN COUNTY LINE TO I-64 – KY. 151 INTERCHANGE

Fig. 4

B. RIGHT OF WAY

New construction reduces the length of US 127 by approximately one-half (1/2) mile; KY 151, seven hundred fifty (750) feet and requires acquisition of a right-of-way strip that varies from two hundred (200) to three hundred (300) feet to replace the existing sixty (60) foot strip. Sixty-six (66) parcels are involved and removal of eight (8) residences, one (1) business, and four (4) farm buildings is necessary. There will also be seventeen (17) farm units severed.[1] Affected utilities include: Kentucky Utilities, South Central Bell Telephone and Telegraph Company, Alton Water District, Western Kentucky Gas Company, Fox Creek RECC.

C. TRAFFIC DATA

Traffic volumes, based on 1971 traffic counts, are as follows:

	1974	1996	Trucks
US 127-KY 151 near Lawrenceburg	5,200 A.D.T.	10,100 A.D.T.	12%
KY 151	2,800 A.D.T. 700 D.H.V.	5,750 A.D.T.	18%
US 127 (near Franklin Co. line)	3,300 A.D.T.	6,500 A.D.T. 850 D.H.V.	7%

D. MAJOR DESIGN FEATURES AND DEFICIENCIES OF EXISTING FACILITY

An interchange is located at the proposed junction of KY 151 and US 127 east of Green Meadows sub-division.

---

1. Farm units classified as farms having greater than 10 acres of area.

Other intersections are at grade with a minimum spacing of sixteen hundred (1600) feet in rural areas and five hundred (500) feet where development already exists to preserve traffic capacity, safety, and level of service. The largest stream encountered on the project is South Benson Creek with an average depth of six (6) inches and average width of twelve (12) feet which requires a 16' x 8' reinforced concrete box culvert. Also, there will be several small culverts on KY 151 which will need lengthening to accommodate the ultimate four-lane design. In every case sedimentation traps will be required during and for a period following construction.

The section of US 127 from By-Pass US 127 to its junction with KY 151 at Alton has a twenty-two (22) foot bituminous surface and one (1) foot shoulders. This section of roadway has one (1) vertical and two (2) horizontal alignment deficiencies and when combined with the pavement and shoulder widths, it has a sufficiency rating of forty-four (44) points out of one hundred (100). A rating lower than fifty (50) points is considered to be very poor.

The section of US 127 from its junction with KY 151 to I-64 at Frankfort has an average pavement width of twenty-one (21) feet with two to three (2-3) foot shoulders. This section of road has a sufficiency rating of sixty (60) points.

The section of KY 151 from the US 127 junction to the new section of KY 151 completed in 1958 has a twenty-two (22) foot bituminous surface and three (3) foot shoulders and was resurfaced in 1963. This section of roadway has two vertical and three horizontal alinement deficiencies but a much lower traffic volume than that on US 127, when combined with the above pavement and shoulder widths it has a sufficiency rating of seventy-three (73) points which is considered to be good.

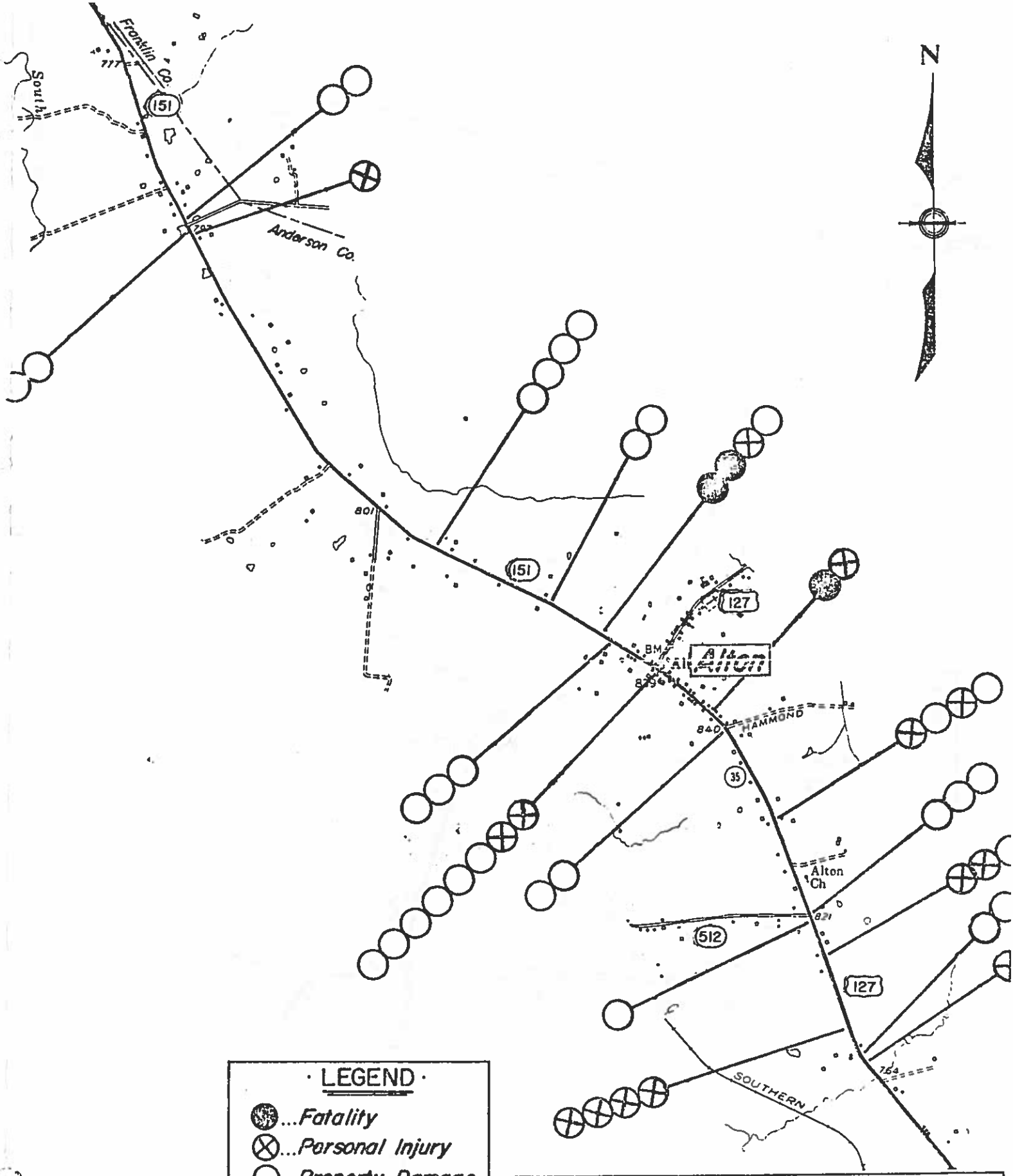
This section of US 127 is the only remaining section that has not been improved in recent years or scheduled for improvement between I-64 and Danville, except for a several block section within Harrodsburg and is a major connector between Frankfort and the Bluegrass Parkway (see Fig. 2).

E. ACCIDENT HISTORY

For a section of road beginning at the Southern Railroad crossing extending to Anderson-Franklin County line the accident record for a three year period, 1964 through 1966, shows a total of forty-eight (48) accidents; thirty-one causing property damage, fourteen (14) causing personal injury and three (3) fatalities. These accidents adjusted to a 100 million vehicle mile basis are twenty-four percent (24%) below the state average.[1]

---

1. See Figure Number 5

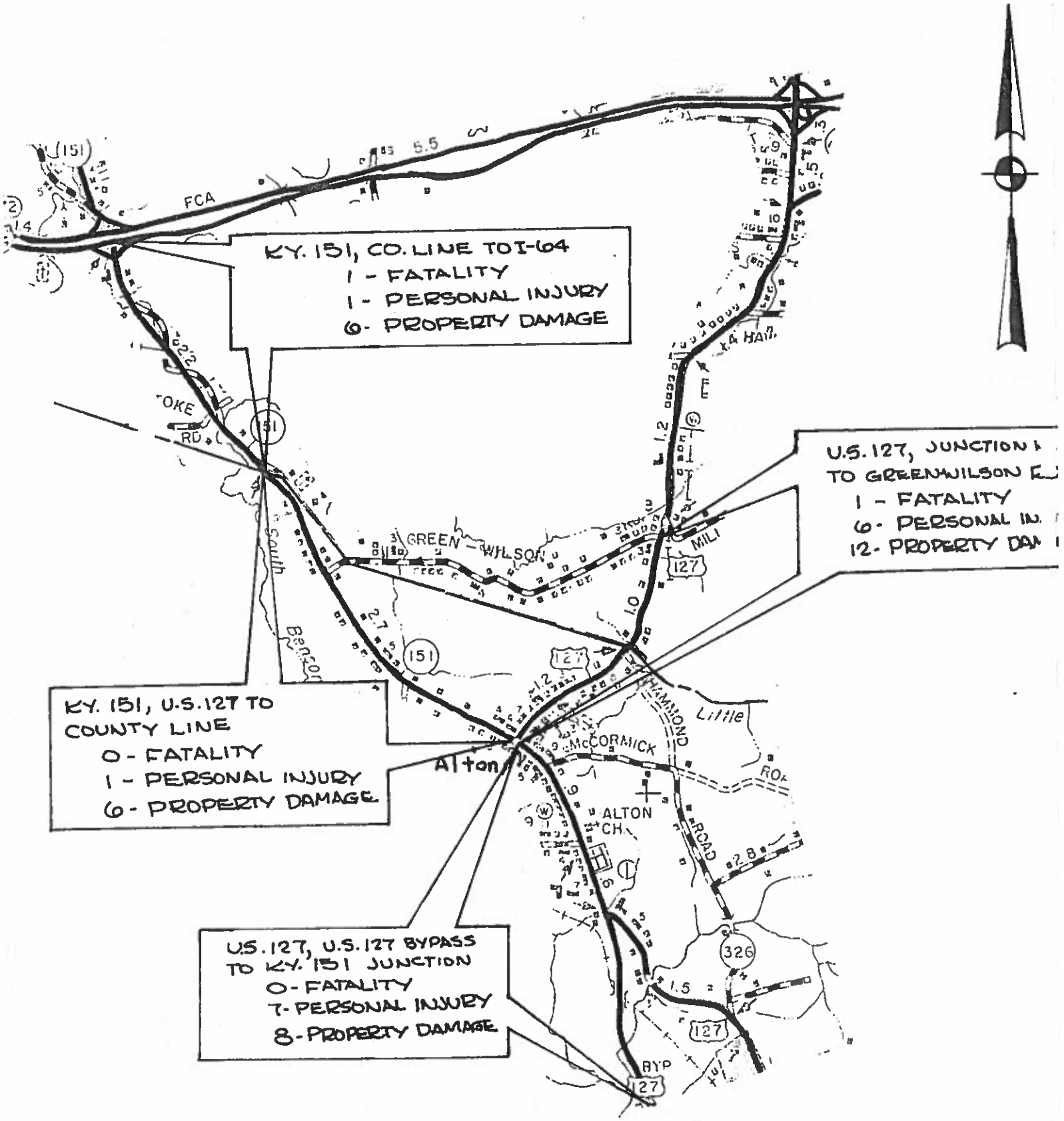


ACCIDENT INVENTORY
1964 - 1966

~~EXHIBIT 2~~

Scale : 1" = 2000'

FIGURE 5



ACCIDENT INVENTOR
1974 - 1975
FIGURE #6

The accident record for the same section of road from 1974 to 1975 shows a total of thirty (30) accidents; twenty causing property damage, nine (9) causing personal injury, and one (1) fatality. These accidents adjusted to a 100 million vehicle mile basis, are forty-six percent (46%) below the state average.[1]

The accident record for 1974 to 1975 beginning at the intersection of US 127 and KY 151 and ending at Green Wilson Road shows a total of nineteen (19) accidents, twelve causing property damage, six (6) causing personal injury, and one (1) fatality. These accidents adjusted to a 100 million vehicle mile basis are thirty-eight percent (38%) above the state average.[2]

The added safety and increased capacity with the proposed project would provide a safer more efficient means of transportation for the people from Lawrenceburg and Anderson County as well as provide easier access to the area for development.

F. SOCIAL AND ECONOMIC STATUS

A sizeable percentage of the population work and shop outside of Anderson County and since US 127 and KY 151 are the major routes from Lawrenceburg to Louisville, Frankfort, and Lexington, many must travel the existing facilities.

---

1. See Figure Number 6
2. See Figure Number 6

Anderson's county seat is Lawrenceburg, which is located in the Bluegrass Region. The population of the county in 1970 was 9,358 people, 93% of whom were born in Kentucky. Only 3.7% of people five years old and older have changed residence from 1965 to 1970. These statistics combine to indicate a stable populace with rather traditionally oriented extended family overtones. The minority groups in this area make up 4.7 % of the population. There are people considered "non-white" in ethnic origin. None of these will be directly affected by dislocations or land acquisitions on the proposed project.

Seventy-one percent of the population in the county lives in a rural situation. There has been only a slight decrease in this since 1960, and at present only 4,179 out of 131,840 total acres are urbanized. A change toward urbanization is expected to become substantial in the future because of the interaction with major urban centers of the surrounding areas. Alton is the only area that is considered a "community" that will be directly affected by this project. Alton stands to benefit by this project in the long run because the By-Pass will reduce the through traffic, leaving only local traffic to contend with. This traffic reduction will promulgate improved air quality, reduced noise levels and a safer environment for children and pets. Additionally, cohesion of the developing area and the anticipated economic stimulation will be a probable positive aspect.

The county's growth activity is centered in and adjacent to the only incorporated city, Lawrenceburg, located in the east central portion of the county. The greatest intensity of urban non-industrial land use is located in this area and north and south of the city along US 127 in the form of linear urban sprawl. Significant rural settlements that will be affected by this project, located north of Lawrenceburg, are Ninevah on KY 325 and of course, Alton on KY 151. Industrial land use is concentrated in the northwestern section of Lawrenceburg at the intersection of US 127 and US 127 By-Pass. Existing industrial acreage is estimated to be 70 acres.

There are eight manufacturing firms in the general vicinity that employ between 25 and 300 employees. There is a current labor surplus available for industrial jobs in the labor market area. This, coupled with six industrial sites available indicated a definite need to upgrade the transportation facilities to meet the projected level of traffic correlated with this growth.

The short term tax loss in this proposed project is considered minimal. This is feasible due to the probable immediate reinvestment in upgraded housing, with a strong tendency to remain in the tax base area because of strong socio-economic ties. There is a potentially large long term tax gain with the urbanization and industrialization projected, thus outweighing

any short term loss. Property values are estimated to continue to rise in the vicinity due to these reasons as well.

G. PUBLIC FACILITIES

Anderson County has none of the following municipal facilities within its boundaries; hospital, nursing home, college or university, vocational school, or a recreational facility (in the eastern portion of the county). Because of the distinct lack of these necessary facilities plus the fact that most of these facilities are located in the areas that require travel on US 127 and KY 151, the positive aspects of the proposed project are displayed through ease and safety of the highway user. There are no locally situated municipal facilities directly affected by the proposed project.

The proposed project is not anticipated to adversely affect the elderly, school age children, those dependent upon public transportation, handicapped, illiterate, non-drivers, pedestrians, bicyclists, low income groups and racial, ethnic, or religious groups.

Other aspects considered for their probable impacts include: national defense will be aided, police protection should increase in efficiency due to ease and swiftness of travel to and through the area. There will be no places of worship displaced, no social services displaced of affected, and no education institutions displaced.

H. AESTHETICS

Alton is a rural agricultural community in the gently rolling Bluegrass Region of Central Kentucky. The terrain

is mostly cleared pasture land with scattered sections of woodland and where feasible, every effort will be made to save all desirable plant materials within and adjacent to the project construction limits. In situations where existing trees and shrubs cannot be preserved, reclamation of such areas via replacement, or supplemental landscaping will be considered as an integral part of the construction plans if it is so resolved that landscaping is needed. In areas where visual pollution will occur as a result of the project, surveys will be taken to determine the suitability and effectiveness of landscaping as a mitigatory agent. Where economically and sociologically reasonable, alternates avoiding adverse environmental effects will be employed.

I. STATUS REPORT

The following list of dates shows the progress the project has made:

September 1969	Route Study Complete
April 2, 1970	Corridor public hearing
June 12, 1970	Project authorization given
August 7, 1970	Corridor Approval[1]
October 2, 1970	Survey Order made
October 7, 1970	Effective work order date
September 17, 1971	Preliminary line and grade inspection date
December 10, 1971	Corridor Approval[2]
August 15, 1974	Preliminary line and grade inspection date
December 11, 1974	Informal public hearing
March 3, 1977	Design Public Hearing

---

1. Approval for US 127 and KY 151 from beginning at Southern Railroad to Anderson-Franklin County Line

2. Approval for KY 151 from Anderson-Franklin County Line to Interstate 64

At this time it is doubtful that right-of-way acquisition will be completed before August 1978 or that construction could begin before Fall, 1978.

The latest available cost estimates (based on 1977 costs) for the project are:

US. 127 construction, including interchange	$4,590,000	includes 20% for Const. Engr.
KY 151 construction	2,930,000	
Total construction	$7,520,000	includes 20% for Const. Engr.
Right of Way	1,470,000	
Utilities	287,000	
	$9,277,000	

II. LAND USE PLANNING

The existing land use is deemed compatible with this project. The proposed project displaces a rather small percent of the total farmland acreage. In Anderson County approximately one hundred eighty (180) acres out of a total of ninety-one thousand, two-hundred seventy-eight (91,278) acres of farmland is displaced or two-tenths of one percent (0.2%). In Franklin County approximately seventy (70) acres out of a total one-hundred and one thousand eight-hundred and ninety (101,890) acres of farmland is displaced or one-tenth of one percent (0.1%). Of the total of 250 acres of farmland being taken 63 acres of farmland in Anderson County and 11 acres of farmland in Franklin County is considered prime farmland in the criteria set forth by the United States Soil Conservation. The rather small acreage of farmland lost is compensated for by the urban and industrial growth stimulated by this project, especially in the Lawrenceburg-Alton corridor where industrial development has already begun.

There have been two reports prepared that show the land use and development in the area of the proposed project. The first is a Lawrenceburg-Anderson County Development Plan and Program dated June 1974 by Mayes, Sudderth, and Etheredge, Inc. of Lexington, Kentucky. In Franklin County a land use plan for Frankfort-

Franklin County Kentucky dated August, 1970 has been prepared by Planning and Research Associates of Lexington, Kentucky. These reports were used to find total acreage of farmland and to show the future land use of Alton.[1]

The Lawrenceburg and Alton communities have enjoyed a steady growth in residential development, and to a lesser extent, industrial and commercial establishments. Planning and zoning is in a rudimentary state but the land use by the road is deemed to be compatible with the existing land use. It is hoped that any resulting development will be in an orderly and complimentary fashion and not just increase the residents of the area reliance on the automobile to travel great distances to work and shop.

---

1. See Figure Number 7

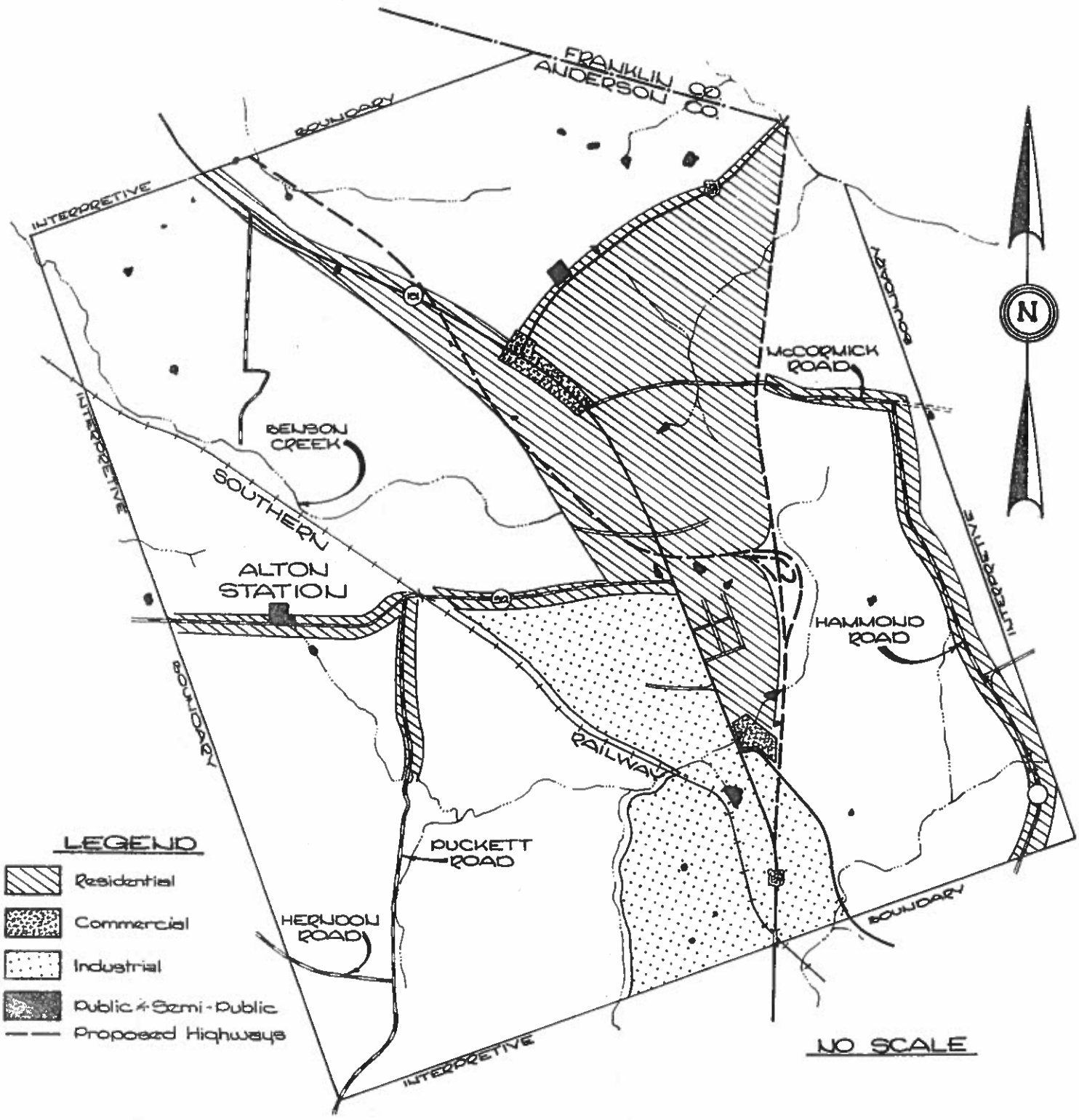


FIGURE 7

ALTON

FUTURE LAND USE

ANDERSON COUNTY, KENTUCKY

SOURCE: MAYES, SUDDERTH & ETHEREDGE, INC.

III. PROBABLE IMPACT OF THE PROPOSED ACTION ON THE ENVIRONMENT

A. NATURAL IMPACTS

The view from the road will be pleasing through the vistas provided across the fill areas. Through the cut areas the thirty foot clear zone should eliminate any "closed in" feeling and the landscaping and grass slopes should complement the rural surroundings. The view to the road will be very good through the cut sections and in time the landscaping will enhance the roads appearance in the fill areas.

There are no park and recreation areas that will be affected by the proposed project. The section of US 127 toward Frankfort does traverse a wooded area for several hundreds of feet which will cause some disturbance to wildlife in the area, but few water fowl use this area. No historic or natural landmarks are disturbed. No disturbance to religious, educational, or health facilities is known. No minority groups are affected by this project. No privately or publicly owned 4 (f) lands are involved.

Construction practices, right-of-way clearing, and paving will either eliminate or significantly alter a total of 250 acres. Of this amount, 28 acres are forested and 222 acres are non-forested. Forested acreage consisted of 3 acres of bottom land hardwood, 10 acres of cedar and 15 acres of upland hardwood. Non-forested acreage consisted of 3 acres of brush land, 5 acres of residential areas, 60 acres of cultivated or rowcrop

areas, 62 acres of improved pasture, and 92 acres of unimproved pasture.

Consultation with the Franklin County Conservation Officer of the Kentucky Department of Fish and Wildlife Resources indicated that there were excellent population levels of white-tailed deer, gray squirrel, red and gray fox, striped skunk, opossum, red-tailed and sparrow hawks, and owls. A rating of good was assigned to population levels of cottontail rabbit, raccoon, muskrat, and mink. All ratings were subjective and in most cases depend upon the juxtaposition and quality of habitat types. No attempt was made to assign ratings to non-game species. A description of the aquatic fauna can be found in the Appendix.[1] No unique or endangered species are known to exist within the project right-of-way. The total wildlife population will be decreased to the extent that habitat is removed, and other permanent effects on wildlife in the immediate locality can be expected for the life of the project.

Subsection 212.06 of the Standard Specifications for Road and Bridge Construction of the Kentucky Department of Transportation, 1976 Edition, governs permanent seeding and protection. This subsection states that all areas not covered by satisfactory vegetation within the construction limits and/or right-of-way limits that can be expected to sustain plant growth, and are not covered by satisfactory vegetation will be seeded.

---

1. See Appendix Page 109

Those species to be seeded include Kentucky 31 fescue, creeping red fescue, red top, white dutch clover, and Kentucky bluegrass. Section 724 concerns the planting, shrubs, and vines but does not list species.

B. RELOCATION

The adverse effects of displaced residents in the area of this project are considered minimal, since: (1) very few displacements actually occur, (2) local realtors report there is a sufficient turnover of decent, safe and sanitary housing to easily absorb displacements.

The estimated price of the owner occupied dwellings within the proposed right-of-way are:

$12,000 - 20,000 - 2	
$20,000 - 30,000 - 2	September, 1975
$30,000 - 40,000 - 4	

There is no rental property being acquired on these projects.

There are no major business or non-profit organizations to be relocated within the proposed right-of-way. There is one service station and three farm buildings to be relocated. There will be 17 farm units severed but no underpasses or culverts will be utilized to reduce the impacts due to the criteria set forth by the Kentucky Department of Transportation.

The approximate economic level of those to be displaced is estimated to be between $12,000 and $20,000 a year.

The available dwellings for sale within the financial means of those displaced are as follows:

$12,000 - 20,000 - 5		
$20,500 - 30,000 - 8	September, 1975	
$30,500 - 40,000 - 4		

The above information was obtained from classified sections of the Anderson County News, Frankfort State Journal and personal contacts with the real estate agencies.

All of the residences taken are safe, decent, and sanitary and should be taken care of in the normal relocation assistance procedure. No difficulties are anticipated in reconstructing subsurface systems.

There will be one service station on KY 151 displaced by the proposed Corridor B. This is not considered significant, because it is not anticipated to have any impact on property values, tax base, unemployment, or economic status of the area. Some farmland will be taken, as previously stated, but not a significant amount when compared to the large portion of the county that is classified as rural farm. There will not be any noticeable effect in the county's production of farm goods.

C. SOCIAL IMPACTS

The proposed project location has been selected to avoid the small community of Alton, which consists of about fifty (50) buildings, mainly residential except

for several commercial, one school, and at least one church. This community will experience a considerable reduction of air and noise pollution and a virtual loss of traffic congestion.

Community cohesion in Alton will be greatly benefited since heavy traffic will be shunted around the community center. Any short-term loss to the local businesses due to the loss of thru-traffic should be compensated for in the long-term by local patron accessibility due to the absence of traffic congestion making it a more attractive location to live and do business. The removal of eight (8) residences and four (4) farm buildings are the only removal items of consequence on this project. The families will be alleviated by whatever payment and assistance they are due under the 1970 Uniform Relocation Assistance Act, and assurances of adequate, safe, decent, and sanitary facilities have been made by our relocation section. Economic activity will increase measurably during the short-term construction stage and with the completion of the project with its relative proximity to I-64, industrial and commercial development should be a long-term asset, and although the reduction in distance from Lawrenceburg to Frankfort and from Lawrenceburg to Grafenburg is only one-half (1/2) mile and seven hundred fifty (750) feet respectively, this to is a long-term

gain both to the users financially and to the country as a whole in the reduced use of petroleum.

D. AIR QUALITY

A preliminary air quality review to determine if a detailed review would be required pursuant to Regulation AP-11, "Review of New or Modified Indirect Sources," indicates that the project will not come under the purview of Regulation AP-11. During the course of the preliminary review, it was determined that the emissions resulting from the mobile source activity associated with the project alternatives (as proposed) should not prevent or interfere with the attainment or maintenance of the ambient air quality standards. Further, the source should operate in compliance with the control strategy and all local, State, Federal regulations which are part of the Kentucky Implementation Plan.

In accordance with Kentucky Department of Transportation, Bureau of Highway, Supplemental Specifications No. 1 to the 1976 Standard Specifications for Road and Bridge Construction, the Contractor shall perform construction activities in a manner so as to prevent air pollution from occurring as the result of burning (where permitted), drilling, blasting, production of materials, hauling, or any other necessary construction operations of any kind in conformity with the applicable provisions of KRS Chapter 224 and regulations

issued by the responsible State agency, and in conformity with regulations established by local governmental agencies pursuant to KRS Chapter 77.

In conjunction with the preceeding paragraph and with Section 107.01.04, water shall be applied by the Contractor when, where, and as directed or approved by the Engineer in order to effectively prevent and control dust from becoming an air pollutant, safety hazard, or other type nuisance during the construction of a project. Failure to perform this item of work satisfactorily will be a basis for deferring the processing of any pay estimates due to Contractor for the project.

Air pollutants generated during and after construction from the mobile source activity will not be significant, (less than 2 ppm) will not violate standards and the project will not come under the purview of the indirect source regulations. The project, in conjunction with other connecting sections is anticipated to lower the carbon monoxide burden and will therefore, improve regional air quality. The Kentucky Department of Transportation in conjunction with the Kentucky Department for Natural Resources and Environmental Protection, Division of Air Pollution Control has determined that the project will operate in compliance with the Kentucky Implementation Plan. No unforeseen adverse impacts on air quality will be allowed to go unabated. The existing ambient (i.e. background levels) CO concentrations are less than 2 ppm.

E. WATER QUALITY

A Water Quality and Eco-system Analysis included in the appendix concludes that the proposed project would accelerate the natural rate of erosion and sedimentation in this corridor. Some of these high potential erosion and sedimentation areas are listed and discussed below:

1. Approximate station 538 - In this area, there is a cut of approximately 20 feet.
2. Approximate station 553 - In this area, there is an embankment of approximately 19 feet. The west side of this embankment has the potential for sedimentation of the headwaters of South Benson Creek. Extra attention should be given to on-site erosion control in this area.
3. Approximate station 595 - In this area, there is a cut of approximately 25 feet. The top and ends of these cut sections are particularly susceptible to erosion.
4. Approximate station 605 - In this area, there is a cut of approximately 24 feet.
5. From approximate station 615 to station 645 - In this area, there is a lengthy embankment, the depth varying up to 22 feet. This area is potentially the most damaging segment of this project due to sedimentation and erosion.

The proximity to the small tributary of South Benson, the length of sideslopes, and the channelization that is planned, all contribute to the high erosion and sedimentation potential of this site.

6. Approximate station 669 - In the headwaters of a small natural drain, an embankment of approximately 26 feet would be placed. The east side of this embankment has the greatest potential for delivering sediment to this drain.
7. Approximate station 684 - A cut of approximately 32 feet would be necessary in this region.
8. From approximate station 130 to 152 - The proximity to the stream and the channelization of South Benson Creek intensified the erosion and sedimentation potential of this area. In addition, there are several farm ponds that will probably require sediment control in order not to degrade these ponds.

The sediment from this project would adversely impact both the aquatic ecosystem and the water quality in the project area. The impact on the aquatic ecosystem being more prolonged. Strict enforcement of erosion and sedimentation control guidelines, and special attention to areas of high potential erosion and sedimentation would help mitigate these impacts.

The most damaging activity that would be associated with this project from a water quality and aquatic ecosystem viewpoint would be the channel changes proposed. Only two channel changes of significant impact are proposed and these are minor in length. The channel changes are 750 feet of South Benson Creek and 800 feet of an unnamed tributary to South Benson Creek would be relocated due to the proposed project. These channel changes are located in areas devoted to agricultural uses where no permanent or temporary structures are located. Kentucky Department of Transportation guidelines will be used to insure a minimum affect on stream stages through the development of adequate channel geometrics. The stream reach affected in each case, is of minor length and the area precludes any necessity for a flood hazard evaluation beyond those items required in the project plans. The streams affected by this project are of a nature such that a normal flow of 5 cubic feet per second is not attained, therefore a Section 404 permit is not required. Determination of the flow rate was made in accordance with Kentucky Department of Transportation guidelines by Department personnel qualified to assertion these values.

The channel changes are located where they will have the least adverse impact. On South Benson Creek the channel could be left as it now exists but would necessitate the location of the proposed improvements on the northeast side of the existing two lanes. This

plan would require the taking of 2 houses, 2 barns, 1 trailer and the relocation of a cemetery. The proposed improvements would only require the taking of 1 barn. Therefore, the proposed improvements would have less impact than locating the proposed two lanes on the northeast side of the existing two lanes. The channel change for the unnamed tributary of South Benson Creek was studied and looked at in two studies. A shift to the northeast would shorten the channel change but would require an alignment shift that would shove the line closer to the historical place owned by the Mountjoy family. This plan would require Section 4 (f) discussions and a decision was made not to disturb the Mountjoy property. If the channel change were moved to the southwest the only difference would be that the channel change would be located farther upstream and be approximately the same length and have similar impacts. Therefore, it was determined that the channel change on the unnamed tributary of South Benson Creek would have less adverse impact at the proposed location.

The anticipated impacts of these channel changes would be to lessen stream productivity, decrease the diversity of aquatic life, hinder the spawning of fish, increase the turbidity of the water due to increased erosion, increase the ambient temperature due to loss of shade, and decrease the capacity of the stream to retain

oxygen because of increased temperature. These channel changes would cause adverse impacts on the stream segments affected and for some distance upstream and downstream due to the instabilities created in the stream. These impacts decrease in severity with time, but the aquatic ecosystem rebounds very slowly. Studies indicate that the game fish populations and the pounds of fish per acre do not recover fully in 40 years. The other impacts associated with the project would appear to be minimal. Deicing salts would be used in greater amounts due to the increased width of pavement, and the adverse impacts associated with these salts entering the aquatic ecosystem would be intensified. This project because of the relatively small cuts and fills would not be anticipated to cause significent adverse impacts on the quantity or quality of groundwater. The aquatic populations of the farm ponds to be drained and filled due to this construction would be eliminated. Approximately seven farm ponds would be drained and filled due to the construction of this project. There are no known water supply intakes that should be adversely impacted by this proposed project. The adverse impact of this proposed project on water quality and the aquatic ecosystem would be controlled by the following mitigation measures:

1. Strict enforcement of the Kentucky Department of Transportation's Standard Specifications for Road

and Bridge Construction Sections 212 and 213 would help minimize adverse impacts from erosion and sedimentation. Special attention to erosion and sedimentation control at the areas of high potential would further mitigate these effects. The necessary requirements to allow for on-site control of erosion and sedimentation would be part of the plans and specifications. (Temporary seeding, ditch checks, top of fill berms, and silt checks and basins).

2. In the channel change sections, the following are examples of mitigation measures which may be used on this project. Channel changes will be coordinated with Kentucky Department of Fish and Wildlife Resources.

I. South Benson Creek

1. Construct at least 2 riffle structures (no more than 2 feet above flow line) in the channel change.

2. Place small dumped stone deflectors between riffle structures.

3. Randomly place varying size rock material throughout the channel change.

II Unnamed tributary of South Benson Creek

1. Add artificial meanders to replace lost length of stream.

2. Place small rock flow retard dams at approximately 100 foot spacing. Gabions should not be used to construct these small flow retard dams and natural deterioration should be allowed to occur.

3. Create a non-uniform bottom slope by scooping out pockets (not more than 1 1/2 feet deep and 40 feet long).

3. In addition, the revegetation of the banks of these channelized sections should be accelerated by planting trees indigenous to the area (i.e. elms, black walnut, and hackberry). This project is not under the jurisdiction of Sections 9 and 10 of the 1899 Rivers and Harbors Act or Section 404 of the Federal Water Pollution Control Act; therefore, no Army Corp of Engineers or Coast Guard permits are required.

F. NOISE QUALITY

The highway-generated noise impact of this project has been analyzed in accordance with Federal Highway Administration Manual (FHPM) 7-7-3. An effective, quantitative noise impact analysis must first determine the impacted noise sensitive receptors, establish by measurement the existing noise levels, predict the future (Design Year) noise levels, compare the predicted noise levels with applicable standards, and if necessary, discuss the feasibility of the various abatement methods. The project was analyzed using the preferred route for the proposed alternative to be compared to the existing and do-nothing alternative.

A total of twelve noise receptors were selected for study. Table I describes these receptors.

TABLE I

Site Number	Land Use Category	Description
KY 151:		
1	B	Residence 100' Rt. Sta. 534+00
2	B	Residence 120' Lt. Sta. 155+00
3	B	Residence 125' Lt. Sta. 136+50
4	B	Residence 200' Lt. Sta. 677+50
5	B	Lot 200' Lt. Sta. 521+00 in Green Meadows Subdivision
6	B	Green Meadows Subdivision, 250' center of existing US 127 and KY 151.
U.S. 127:		
7	B	Residence 160' Rt. Sta. 492+50
8	B	Residence 120' Lt. Sta. 492+80
9	B	Residence 180' Lt. Sta. 493+20
10	B	Residence 230' Lt. Sta. 493+40
11	B	Residence 295' Lt. Sta. 493+90
12	B	Residence 410' Lt. Sta. 494+60

Table I of FHPM 7-7-3 gives Design Noise Level/Land Use relationships for various types of land developments. Land Use Category B is applicable to the noise sensitive receptors on this project because it includes residences. For Category B the Design Noise Level is 70 dBA L_{10} (noise level exceeded 10% of the time), and applies to noise levels on the exterior of the building or structure.

TABLE II

Table II presents the noise impacts on the noise sensitive receptors listed in Table I.

Receptors	1992 L_{10} Impact	Do-Nothing	Existing L_{10}	Applicable Standards
1	72/+7	67/+2	65	70
2	71/+8	65/+2	63	70
3	71/+4	68/+2	66	70
4	61/+11	52/+2	50	70
5	68/+25	47/+2	45	70
6	58/0	61/+3	58	70
7	74/+18	58/+2	56	70
8	75/+19	58/+2	56	70
9	73/+17	58/+2	56	70
10	73/+17	58/+2	56	70
11	72/+16	58/+2	56	70
12	71/+15	58/+2	56	70

The affected area is predominantly rural farmland with one subdivision, Green Meadows. The proposed alternative will create a more modern facility that will provide safer conditions and relieve congestion. The facility as it now exists causes a problem with the congestion and accident problem and will only tend to worsen as traffic increases.

Sites 7, 8, 9, 10, 11, and 12 were the only sites along U.S. 127 anticipated to have major noise impacts.

The noise level along U.S. 127 will increase but no major impacts are anticipated and none are expected to exceed 70 dBA.

If the "Do-Nothing" option is implemented the existing noise levels will increase by 2 dBA by 1992, due to increased traffic volumes. The proposed project if built will increase noise levels in some areas due to the alignment shift being located different from the existing alignment.

Certain measures will be taken by the Contractor when so directed by the Engineer to prevent construction noise from becoming a nuisance and detriment to the normal activities near the project. These measures may include, but not be limited to, dampening of metal surfaces on construction equipment, sound aprons, enclosures or physical barriers for stationary equipment and restriction of construction operations.

As can be seen from the noise level calculations in Table II twelve (12) Category B noise sensitive receptors were identified and studied for noise impacts resulting from operation of the proposed transportation facility. Of the 12 study sites 11 are predicted to incur major (10^{+} dBA or more) noise impacts and/or violations of the FHWA noise level standards. Therefore, the practicality and feasibility of construction of noise barriers for attenuation of highway traffic noise at the 11 locations identified by the noise impact analysis must be considered.

The recommendations are subject to modification during design to ensure incorporation of the latest developments in highway acoustics and safety research, and the desires of the affected publics.

The eleven (11) study locations have been identified separately in Table I. To avoid confusion, the site numbers used in Table I coincide with Table II. Site 6 was omitted because noise levels will not change over the existing noise level if the project is built and will only have a minor impact if the Do-Nothing plan is adopted.

Sites 1, 2 and 3: The Design Noise Levels for these locations are above 70 dBA. These sites are all located along KY 151. Barriers for each of the residences would be minimally effective because of the openings needed for crossroads and resident's driveways causing breaks in the barrier walls. This plus the actual cost of a barrier and the detrimental aesthetic effect of the intrusive barriers in a rural area such as this would make the costs inappropriate in relation to the benefits. Therefore, it is not likely noise abatement measures will be taken at these locations.

Site 4 is below the Design Noise Level of 70 dBA but will incur a major noise impact of +11 dBA. A noise barrier at this location would cost approximately $100,000 and protect three homes valued at $75,000 from

noise impact. Therefore, it is not likely that noise abatement measures will be taken at this site.

Site 5 is located in Green Meadows subdivision at the back corner of the subdivision 200' from station 521+00 of proposed KY 151. This site was representative of houses located as far away as 400'. A noise barrier of 1200' in length and 10' high was studied and would produce a noise reduction for this area between 200'-400' of -6 dBA. This barrier would cost $130,000 and protect 5 homes valued at around $125,000. Some maintenance problems would be caused because part of the wall would be built over an existing pond, to be filled in, and may be unstable. A wall or barrier at this location would detract from the aesthetics of the area.

Because of the economical, maintenance, and aesthetics aspects of the noise barriers studied it is not likely that noise abatement measures will be incorporated at this site.

Sites 7, 8, 9, 10, 11 and 12: The Design Noise Levels for these locations are above 70 dBA and incur major noise impacts (10^{+} dBA or more) and violations of the FHWA noise level standards.

For Site 7 on the right of the proposed road has a predicted noise level of 74 dBA. If an earth berm barrier were erected for this site it would necessitate the taking of the house in question which would defeat the purpose of a noise barrier. A timber barrier at

this site is estimated to cost $40,000 which would be protecting a $25,000 house. Also a timber barrier would cause safety and maintenance problems. It is not likely that noise abatement measures will be incorporated at Site 7.

An earth berm was studied for Sites 8, 9, 10, 11 and 12. An earth berm 1220 feet in length and 15 feet in height would produce the following results.

Sites

(8) Would be taken by the barrier.

(9) Reduce noise level from 73 dBA to 62 dBA.

(10) Reduce noise level from 73 dBA to 63 dBA.

(11) Reduce noise level from 72 dBA to 64 dBA.

(12) Reduce noise level from 71 dBA to 65 dBA.

The barrier would cost approximately $180,000 and would protect four homes valued at approximately $100,000. A timber barrier would cost approximately $100,000 but would be damaging from the social and aesthetic points of view along with the safety hazards and maintenance problems the barrier would create.

Because of the economical, safety, and aesthetic aspects of the barriers studied it is not likely that noise abatement measures will be incorporated at Sites 8, 9, 10, 11, and 12. (See Appendix for complete noise analysis)[1]

---

1. See page 134-144

G. CONSTRUCTION IMPACTS

The movement of utilities will be minor. Fire protection and other emergency services should be enhanced due to the increased ease of movement. Any detouring traffic will be of a minor nature and for a short duration. Where necessary a dust free surfacing material will be used for the detours and a sincere effort to control sedimentation and erosion during construction will be made by way of constructing sedimentation traps, seeding and protecting slopes as soon after construction is completed as possible, and limiting the areas stripped of vegetation ahead of construction. Air and noise pollution during construction can be kept to reasonable levels by use of paved detours and water spraying dusty areas and limiting work hours in residential areas.

Air quality, noise impact and water quality impact statements are in the appendix and summarized previously.

H. SECONDARY IMPACTS

Economic activity will increase during the short-term construction stage and with the completion of the project with its relative proximity to I-64, industrial and commercial development should be a long-term asset, an although the reduction in distance from Lawrenceburg to Frankfort and from Lawrenceburg to Grafenburg is only 1/2 mile and 750 feet respectively this to is a long-

term gain both to the uses financially and to the county as a whole in the reduced use of petroleum.

The proposed project is not anticipated to alter or stimulate population growth in the area but is expected to increase employment in the area due to the industrial and commercial development expected on a long-term basis.

IV. ALTERNATIVES

The Do-Nothing alternate does not displace any right-of-way parcels, business, residents, or farm buildings; but the greatest amount of traffic would still be on the section of road with the poorest sufficiency rating. The congestion and noise associated with the existing road will only worsen as traffic increases therefore, the adverse impacts of the Do-Nothing alternate are considered to be greater than those for the proposed project, both economically and socially.

The beginning point on U.S. 127 northwest of Lawrenceburg at the Southern Railway crossing was established several years previous to this date when the Lawrenceburg By-Pass was constructed. The ending point on KY 151 in Franklin County was established when KY 151 was reconstructed in Franklin County in 1969. The ending point on U.S. 127 was determined by selecting the nearest point at which relocated U.S. 127 could be terminated on existing U.S. 127 and still be compatible with the future reconstruction of U.S. 127 in Franklin County.

The reconstruction of U.S. 127 and also KY 151 in their present locations was considered but the proximity of the buildings in Alton to the existing road would make right-of-way and relocation costs very high and disturb many persons; therefore, this alternative was abandoned.

In the planning report approved August 7, 1970 two (2) alternatives were considered for the relocation of U.S. 127 and KY 151. Beginning at the Southern Railway crossing the two alternatives considered were:

ALTERNATE A[1]

Alternate A follows the existing alignment for approximately 1 1/2 miles. It thence leaves the existing alignment traversing rolling terrain, crosses U.S. 127 north of Alton, and continues to traverse farmland northeast of the existing facility until it ties back into the new section of KY 151 near the Anderson-Franklin County line. Approximately 1700 feet of recently constructed KY 151 would not be utilized because of the projected alignment proposed in the study.

Alternate A contains an estimated forty (40 right-of-way parcels. There are twelve residences and seven (7) farm buildings requiring relocation assistance.

ALTERNATE B[1]

Alternate B follows the existing alignment of U.S. 127 for approximately one mile. It thence leaves the existing alignment traversing rolling farmland on the southwest side of the existing facility until it crosses existing terrain northeast of the present roadway until it ties back into the new section of KY 151 near the Anderson-Franklin County line.

Alternate B contains an estimated thirty (30) right-of-way parcels. There are six (6) residences and two (2) farm buildings requiring relocation assistance.

---

1. See Figure No. 8 p. 49

Along with these two alternatives a new alignment for U.S. 127 was studied. This alignment begins at the junction of KY 512 and U.S. 127 and bypasses Alton to the southeast before typing back into existing U.S. 127 east of Alton at the Anderson-Franklin County line. An at-grade intersection with KY 151 was proposed with this alignment. The new alignment was to be built in conjunction with the improvement of KY 151.

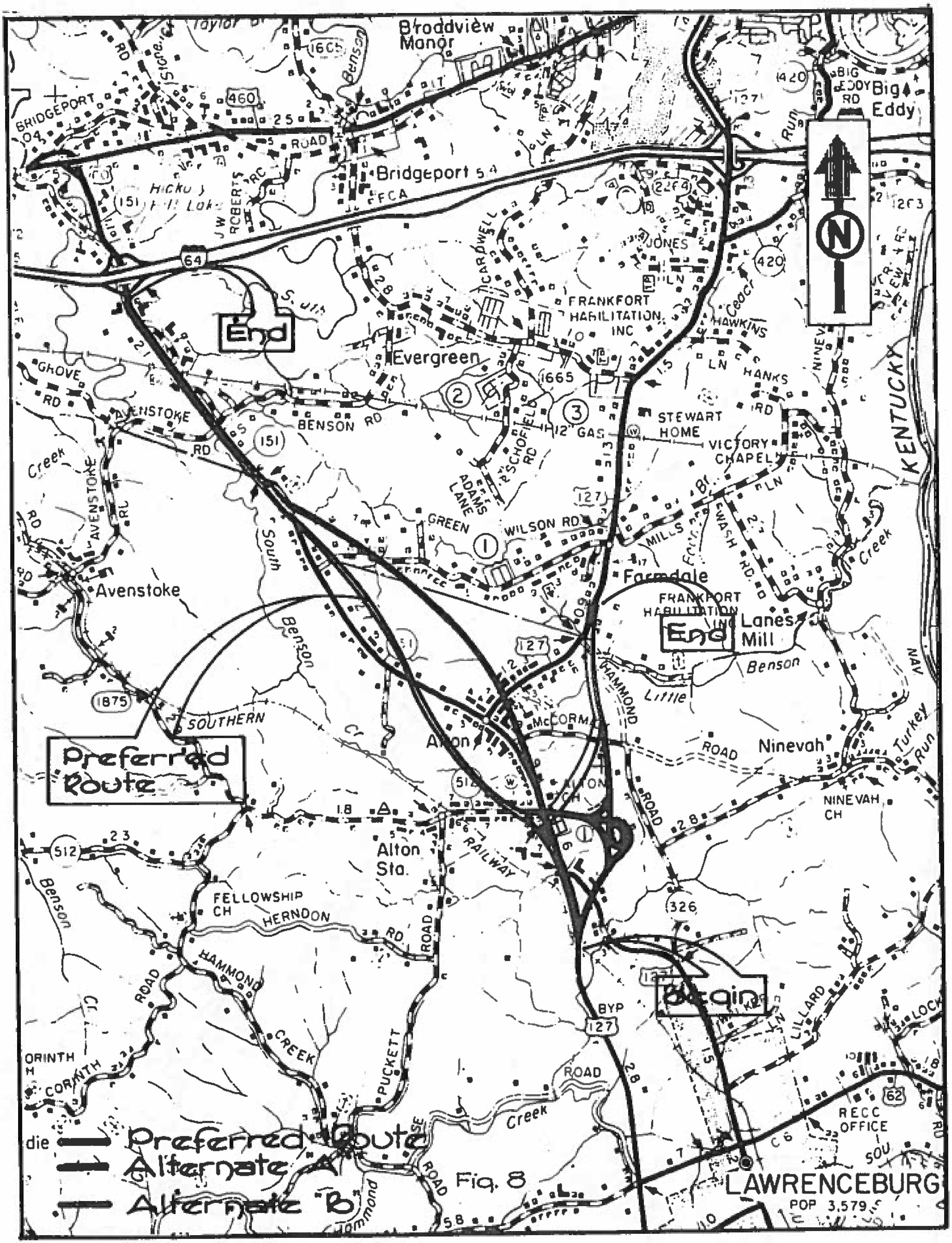
Alternate B was selected based on the following factors:

1. Alternate B was estimated to cost approximately one hundred and ninety-eight thousand dollars ($198,000) less than Alternate A.

2. Alternate B requires the taking of six (6) fewer residences and five (5) less farm buildings than Corridor A.

3. Alternate A would require about four-thousand (4,000) feet of its length to be constructed under traffic while Corridor B would require only about fifteen hundred (1,500) feet.

A line shift of thirty (30) feet to the east of the original centerline was studied in the fall of 1972. This shift was approved in December of 1972 because it would have a savings of twenty-three thousand eight-hundred dollars ($23,800) and would cause less complaint from the property owners affected. The beginning of the line shift would begin approximately seven-hundred (700) feet from the Southern Railroad traversing rolling terrain for approximately fifty-five hundred (5500) feet and tieing into the original centerline.


Broadview Manor
Bridgeport
Big Eddy
Hickory Hill Lake
Evergreen
FRANKFORT HABILITATION, INC
End
STEWART HOME
VICTORY CHAPEL
KENTUCKY
Avenstoke
Farmdale
FRANKFORT HABILITATION INC
Lanes Mill
End
Alton
Ninevah
NINEVAH CH
Alton Sta.
FELLOWSHIP CH
Preferred Route
Begin
LAWRENCEBURG
POP 3,579
RECC OFFICE
Preferred Route
Alternate A
Alternate B
Fig. 8

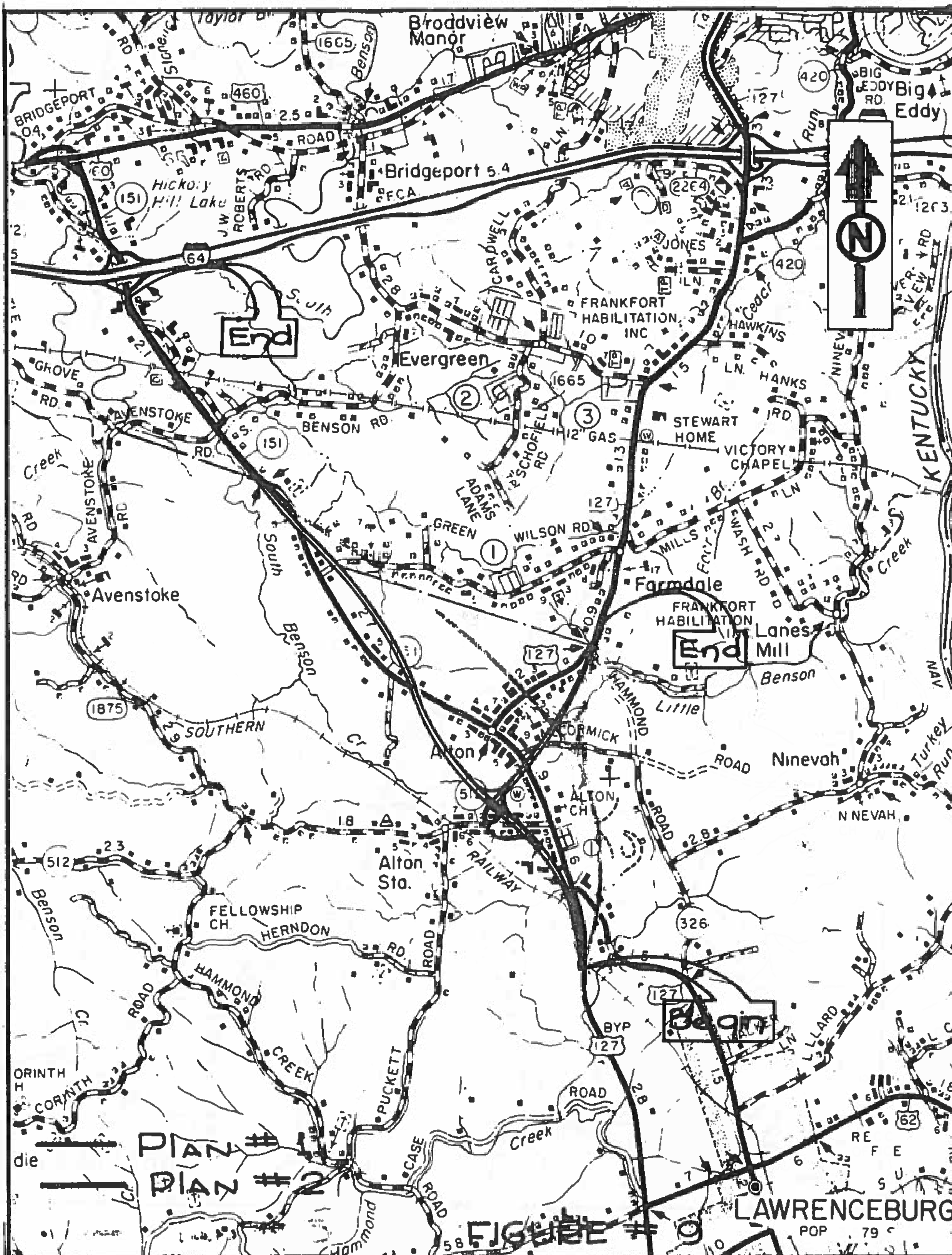

Broddview Manor
Bridgeport 5.4
BRIDGEPORT
Hickory Hill Lake
J.W. ROBERTS RD
Big Eddy
BIG EDDY RD
Run
End
Evergreen
FRANKFORT HABILITATION INC
CARDWELL
JONES
HAWKINS
HANKS
Cedar
GROVE RD
AVENSTOKE RD.
BENSON RD
12" GAS
STEWART HOME
VICTORY CHAPEL
SCHOFIELD RD
ADAMS LANE
KENTUCKY
Creek
South
GREEN
WILSON RD
MILLS
WASH RD
Fox
Farmdale
FRANKFORT HABILITATION
End
Lanes Mill
Avenstoke
South Benson
Benson
Little
HAMMOND
SOUTHERN
Alton
CORMICK
ROAD
Ninevah
Turkey Run
N NEVAH
ALTON CH
Alton Sta.
RAILWAY
FELLOWSHIP CH.
HERNDON RD
ROAD
HAMMOND
CREEK
ROAD
Benson
BYP
Begin
LILLARD
CORINTH
PUCKETT
CASE ROAD
ROAD
Creek
Hammond
LAWRENCEBURG
POP
Plan # 1
Plan # 2

FIGURE # 9

In the fall of 1973 a study on KY 151 and U.S. 127 was made in two locations with four plans:

PLAN #1[1]

Plan #1 relocated U.S. 127 cross country south of Alton, leaving existing U.S. 127 near the county line and intersecting KY 151 opposite KY 512, with an at-grade intersection. For the remaining length the southern portion of the existing U.S. 127 alignment was utilized to near the KY 512 intersection. This scheme would require the construction of two frontage roads one approximately 1200' long and one approximately 800' long.

As a result of studies conducted of existing intersections similar to this situation it was determined that an extremely high concentration of accidents would occur. This indicated the need for an interchange which would afford individual consideration for through movement of traffic on each route.

PLAN #2[1]

Plan #2 was similar to Plan #1 except that it proposed an interchange to handle the traffic. The proposed interchange necessitated the relocation of a portion of KY 512 to the south, modified KY 151 alignment slightly, and moves the U.S. 127 alignment westward somewhat closer to Alton. This plan costs $1,000,000 more to construct than Plan #3.

---

1. See Figure No. 9 p. 50

PLAN #3[1]

Plan #3 considered a complete total relocation of U.S. 127, cross country, beginning at the Southern Railroad bridge and traversing the open country east of Alton and tieing back to existing U.S. 127 near the county line.

This alignment allowed the intersection of U.S. 127 and KY 151 in open country rather than near the confines of Alton and thus a cheaper more workable solution, and makes U.S. 127 the through route. However traffic studies indicated that the at-grade intersection would not be sufficient to handle the large left turn movement onto KY 151. Additionally the at-grade intersection would be hazardous to the traveling public diminishing safety.

PLAN #4[1]

Plan #4 is identical to Plan #3 except that the at-grade intersection was replaced by an intersection with U.S. 127 the through movement and KY 151 taken over U.S. 127 by a bridge. Ramps were provided to handle the desired traffic movements.

Plan #3 was approved October 30, 1973 because when compared to Plan #2, Plan #3 was cheaper to build by approximately $1,000,000. Plan #3 was favored over Plan #1 in that it would allow for the intersection of KY 151 and U.S. 127 to be in open-country alignment rather than near the city

---

1. See Figure No. 8 p. 49

limits of Alton. Plan #3 would allow for an undisturbed movement of traffic flow for U.S. 127. Plan #3 was also modified to provide an interchange with KY 151.

On January 18, 1974 Plan #3 was compared to a new plan known as Plan #5. Plan #5 is as follows.

PLAN #5[1]

Plan #5 allowed for the same beginning and ending points on U.S. 127 as the preferred route and also retained an interchange at the junction of U.S. 127 and KY 151. However under this plan KY 151 would cross existing U.S. 127 north of Alton, and KY 151 remained the through route. On March 11, 1974 approval for Plan #3 was given. Plan #3 was approved over Plan #5 because of the following reasons:

1. Plan #3 costs approximately one hundred and ten thousand dollars ($110,000) less than Plan #5.
2. Plan #3 will cause four (4) residences to be relocated while Plan #5 will relocate fourteen (14) residences.
3. Plan #3 allows a better distribution of traffic in and around Alton.
4. Plan #3 would better serve the industry (Florida Tile) along KY 151.

Therefore Plan #3 beginning at the Southern Railroad and having an interchange for KY 151 and U.S. 127 east of Alton with KY 151 crossing south

---

1. See Figure No. 9 p. 50

of Alton and extending to interstate 64 and U.S. 127 ending just north of the Anderson-Franklin County line is the preferred alternate.

The line was shifted to the left approximately two hundred fifty feet (250') at station 597+00 to preserve a site that has been nominated for the National Register of Historic Places, early in 1976.

At the proposed KY 151 crossing of Wilson Road, one property owner has contended that a small movement away from his property should be made in the final location to preserve the drainage area of his farm ponds. Studies have been made that show a move of this nature would be detrimental to adjoining landowners drainage areas and a decision was reached that the location selected should not be changed.

At the junction with U.S. 127, existing and proposed at the Anderson-Franklin County line, the property owner on the west side has been greatly concerned with the interim between initial and ultimate construction and the future location for U.S. 127 through Franklin County. The prediction of the time the ultimate design will be built is difficult. Studies have been made by the Kentucky Bureau of Highways of the location of U.S. 127 through Franklin County with the conclusion that this project and the future location through Franklin County will be compatible.

Due to the rural nature of the area any alternate forms of transportation, from bicycles to mass transit systems, is considered unfeasible.

The Department of Transportation has selected the alignment for construction based on sound engineering practices and thorough evaluation of social, economic, and environmental consequences anticipated by its construction.

The preferred alignment begins in the center of U.S. 127 of the north end of the existing Southern Railroad bridge, located northwest of Lawrenceburg and approximately 3000 feet south of the existing and old U.S. 127 intersection. The centerline for the proposed project follows the existing road for approximately 600 feet then bears to the right or northeast and crosses old U.S. 127 1200 feet southeast of it's intersection with existing U.S. 127. A new intersection will be provided at this location. Also, the location between the Southern Railroad bridge and this intersection provides the area for transitioning from the existing two lanes to the proposed four lanes of pavement. From this point the line continues northeasterly for 0.6 of a mile to a junction with KY 151. At this point an interchange is provided for separation of the U.S. 127 and KY 151 traffic. The proposed interchange is

located east of the Green Meadows Subdivision. The project then continues northwesterly from the interchange, a distance of 0.7 of a mile to a junction with the relocated McCormick Road. This at-grade intersection of U.S. 127 and McCormick Road is located approximately 0.7 of a mile east of the existing McCormick Road and U.S. 127 intersection. The preferred centerline then proceeds northerly for the next mile and ending 775' northeast of the Anderson-Franklin County line.

The preferred alignment for KY 151 begins at the western limits of the proposed U.S. 127 and KY 151 interchange, located north of Green Meadows subdivision and approximately 500 feet east of the existing U.S. 127 - KY 512 intersection. From this point the centerline proceeds northwesterly, crossing the existing U.S. 127 approximately 270 feet north of the existing KY 512 junction with U.S. 127. Then, curving and proceeding northwesterly traversing farmland southwest of the existing facility until it crosses existing KY 151 approximately 2900 feet west of the U.S. 127 - KY 151 junction in Alton. Also to further pinpoint the preferred line, it is located approximately 1000 feet southwest of the existing U.S. 127 - KY 151 junction in Alton. After crossing KY 151, northwest of Alton,

the preferred alignment continues northwesterly on the northeast side of the existing facility for 3.5 miles until it ties back into the new section of KY 151 located near the Anderson-Franklin County line. For the relocation of KY 151 an intersection will be provided for access to the new facility at KY 512.

The next section of KY 151 begins at the I 64 - KY 151 interchange and terminates at the Franklin-Anderson County line. For the first 0.5 mile the existing alignment is changed to provide a transition from the future median width to the more narrow medians within the interchange. This alignment will enable the Kentucky Department of Transportation to modify the on and off ramps of I 64 to accomodate the KY 151 traffic when the additional two lanes are constructed in the future. For the next 1.5 miles to the Franklin-Anderson County line the existing centerline of KY 151 is used with the median and additional two-lanes, which are to be added in the future, being constructed on the southwest side. See Figure 8 for the Preferred Alignment[1].

---

1. Figure 8 see p. 49

In conclusion, the overall adverse impact of any alternative under consideration would be minimal and the Do-Nothing alternative significant. The following factors should be noted for consideration.

1. The adverse impact of the Do-Nothing alternative on the long range economic development of the area is considered greater than that of any "do-something" alternative considered.

2. The adverse impacts of all construction alternatives considered are very similar, in type though not degree, to each other.

3. The beneficial long range economic impacts of an construction alternative considered outweigh their adverse impacts.

4. The land that is needed for the proposed project will place hardships on some individual farmers in the Alton areas, however, these are not considered significant in view of the overall agricultural output.

5. A major north-south movement into the Bluegrass Region is via U.S. 127 and KY 151 affording access to I-64 and Frankfort from Lawrenceburg and the Bluegrass Parkway.

A history of the progress of events for this project are outlined on page 19 of this paper under the section entitled, "Description of the Proposed Action and Alternatives Considered, and the Social, Economic, and Environmental Context."

V. PROBABLE UNAVOIDABLE ADVERSE ENVIRONMENTAL EFFECTS

There are certain unavoidable adverse effects which the use of reasonable corrective or abatement measures will not reduce the impact to the pre-construction state or level.

The construction of cuts and fills along with stream channelization will combine to alter the topography, natural drainage, water table, as well as to establish a natural barrier to wildlife. During construction dust and soil erosion will cause problems along with noise and air pollution from construction machinery. These factors during construction will be minimized as much as possible.

The relocation of families along with farm buildings is an adverse effect that is unavoidable whenever a new highway is approved. Removal of approximately two-hundred and fifty (250) acres of farmland that could be used for land development, crop production or other means cannot be avoided, due to the proposed project. These factors are expected and unavoidable whenever a new alignment is approved.

The removal of wildlife habitat and vegetation will have no significant long-term effect on the balance of nature in the area. Factors such as fishery and aquatic resources, and the aesthetics will be affected by the proposed project during construction and after the project is built.

Once the project is built there will be noise and air quality effects from vehicular travel which would exist even if the proposed project were not built. With a new or existing highway there will be pollution from highway runoff, maintenance activities, and accidental spills.

VI. THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The factors which provide justification for or evidence against construction of a project are complicated in the task of assessment of their net impacts on the area because they must be considered over a continuum of time. What appears to be an immediate adverse impact may prove to be highly beneficial in the long run, and vice versa. And that which currently seems to be a major adverse impact may become insignificant over time.

In essence, the influence of time on the project involves trade-offs between short-term gains and losses and long-term gaines and losses. The intent of highway construction in this regard is to minimize short-term losses while maximizing long-term gains without significantly foreclosing future options. It is believed that this project will achieve these ends.

A. SHORT TERM EFFECTS

Short term adverse effects on the area of influence of the project during construction include noise and air pollution from construction equipment, increased sedimentation (from exposed soil) to local drainage channels, property takings, topography changes, and the effects of stream channelizations on aquatic and riparian flora and fauna. A short-term increase in dust levels may occur during land clearing operations and normal construction activities.

Potential sources of short-term water pollution include accidental spills, runoff, erosion and disturbance of streams.

U.S. 127 will be constructed primarily on new alignment and therefore would not distrub normal flow except at points where the alignment section would tie into the existing facilities.

Starting at the interchange of KY 151 and U.S. 127 and going to the Anderson-Franklin County Line, KY 151 will be primarily a new alignment. From the Anderson-Franklin County line to the I-64 intersection will be primarily the existing alignment. The increased travel time, dust level, and noise of construction equipment would cause an inconvenience for people wishing to use this route.

B. LONG-TERM EFFECTS

The project is not anticipated to have any significant long-term adverse affects on wildlife and animal populations. The changes to the area drainage patterns and streams will have some long-term effects on aquatic systems. The project will not likely induce any significantly beneficial effects on aquatic or terrestrial flora or fauna.

The presence of the roadway itself may represent a potential long-term hazard to water quality since adverse effects from runoff and accidential spills can

many times during the life of the highway, or not at all. These pollutant sources have been shown to contain a variety of metalic pollutants and petrolcum deriver toxins which may produce systemic impacts which require time to become visible. Such impacts cannot be predicted as to their frequency or severity, but only acknowledged as potential an planned against.

The new alignment of U.S. 127 will cause an increase in noise along the route, due to the fact that the new route will occupy land that had relatively low noise levels.

Approximately two-hundred and fifty (250) acres will be converted to highway use foreclosing other development options for the foreseeable future.

The project will produce no long-term adverse impacts on the air quality of the region but will in fact produce a lower carbon monoxide burden thereby improving regional air quality over time.

Traffic conditions will be substantially improved beginning when the section is opened to traffic and continuing into the foreseeable future. The potential for accidents will be measurably reduced with the new highway, and important factor since the accident rate on U.S. 127 for example is thirty-eight percent (38%) above average.

The project will provide a more efficient and safe roadway which will improve police and fire protection, ambulance services and other public services. Travel to and from schools, churches, public and recreational facilities will improve.

The project will have no direct, adverse, short or long-term effects on health facilities, publicly owned lands, or social services nor is the project anticipated to adversely affect the elderly, school children, non-drivers, handicapped, pedestrians, bicyclists or any ethnic or special interest group.

VII. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

The elements discussed in this section are considered irreversibly and irretrievable committed only to the extent that they will be so for the foreseeable future for all time. Keeping this concept in mind it is more realistic to think of these resources as having been committed to a specific use which will foreclose all other options to which those resources could have been applied. The range of potential uses for resources will be curtailed as follows:

1. Earth, rock, metals, minerals, timber, etc used in the construction of the facility will be unavailable for other uses or to nature.

2. Fossil fuels consumed by machinery an used in the processing of raw materials shall be considered irretrievably committed as will all forms of energy used during construction.

3. Money which has been used to-date for planning and design of the project is considered irreversibly committed.

4. Land committed to highway use will foreclose other use options for the foreseeable future including conservation, preservation, wildlife habitat, and other forms of exploitive development such as agricultural, commercial, industrial, residential, recreational, etc.

The project is not anticipated to adversely affect any cultural resources, nor is it expected to accelerate exploitation of resources beyond the rate currently ongoing. It is hoped that the new highway facility will stimulate economic development and growth in the region and is therefore likely to precipitate land development.

The improved facility is also expected to enhance travel on both a local and regional perspective by providing decreased travel distances, and a safer, more pleasing travel route. Land development and economic growth, improved travel opportunities and access are desirable objectives for this area and are not anticipated to induce significantly adverse effects or irreversible commitments of natural or cultural resources which would curtail other more advantageous uses in the region.

VIII. IMPACT ON PROPERTIES AND SITES OF HISTORIC AND CULTURAL SIGNIFICANCE

No Section 4 (f) lands, natural landmarks, or archaeological sites are effected by this proposal. In accordance with the Procedures for the protection of Historic and Cultural Properties, issued by the Advisory Council on Historic Preservation. An historic reconnaissance survey and an archaeological survey of the project area was made and found that an historic site did exist near the project for which a nomination has been made to place it on the National Register of Historic Places. No such archaeological sites exist. The Department subsequently shifted the project alignment to avoid any involvement with the historic site and the Kentucky Bureau of Highways requested and has received a letter from the Kentucky Heritage Commission concurring that the proposed roadway improvements will not have an effect on the property or any other historic site and consequently have no objection to the undertaking of the project. (Copies of the letters are attached to this report in the appendix).

The subsoil under the entire project is of the Cynthiana Limestone Formation of Upper Ordovician Age. This limestone is made of crystalline hard limestone with inter-bedded thin shale layers. No rock slide, talus areas, sinks, or solution channels were observed in the area of the proposed project.

The National Geodetic Survey will receive not less than 90 days notification in advance of disturbance or destruction of any geodetic control survey monument by construction of the proposed project. Relocation of any disturbed or destroyed geodetic control survey monument will be included in the project funding.

IX. COMMENTS AND COORDINATION PRIOR TO THE DRAFT EIS

At the corridor public hearing held April 2, 1970, the following comments were made:

Mr. Andrew Byrd, then Superintendent of the Anderson County Board of Education, asked if the existing side roads would be blocked causing school buses to back track, or have underpasses. At the time all crossings were proposed at grade. With the current proposal some side roads have minor relocations, to tie into the proposed road, but all crossings are still at grade.

Mr. James Smith expressed concern over the effect the proposed road would have on his farm; the future use of his farm; the value of his farm, both tangible and intangible; and his need for a cattle underpass if the road is built. The construction of proposed KY 151 will divide Mr. Smith's farm in two which will have a detrimental effect to his farm in the short-term that cannot be completely rectified by a cattle underpass. While loss of agricultural land might be a hardship to Mr. Smith, it will have little effect on the total output of the area and in the long run the value of Mr. Smith's farm should increase greatly, due to road frontage on both sides of proposed KY 151. Mr. Nicholas Green let it be known that he approved the proposed corridor over any of the alternates.

Several property owners along the proposed corridor are concerned about fencing along the proposed road and

entrance locations to their land. The proposed project has a partial control of right-of-way classification, therefore, right-of-way fence will be built along the road unless exemptions are granted. Every remaining property parcel along the proposed routes will have access to one of the proposed roads.

Mr. Gene Cinnamon, and his partner, operate a business at the intersection of U.S. 127 and U.S. 127 By-Pass. They desire an entrance to U.S. 127 By-Pass if the existing intersection is disturbed. With the present proposal, the existing U.S. 127 and U.S. 127 By-Pass will not be disturbed physically.

Mr. Ellis Hotstetter asked about proposed traffic control measures at the intersection of KY 512 and KY 151 and U.S. 127. With the current proposal, turn lanes are the only traffic control measures that are anticipated since through traffic interruptions are felt to be a greater safety hazard than that faced by people entering the roadway from the connectors to existing U.S. 127 and KY 151. Since this time the line has been shifted so that the KY 151-U.S. 127 junction with an interchange and KY 512 intersects existing U.S. 127 in the same area as exists now.

An informal public hearing, with attendance in excess of 30 people, was held at the Anderson County

Courthouse on the evening of December 11, 1974 to inform those interested that plans were being prepared which will include an interchange at the KY 151-U.S. 127 intersection and that a Design Public Hearing would be held when those plans were sufficiently advanced to enable the Bureau of Highway's representatives to show property owners detailed but not necessarily final plans.

Very little opposition to the proposed project and the revisions was expressed. Even those having homes to be taken seemed mostly concerned with the time schedule and their compensation. Mr. Nick Green who lives on the Green-Wilson Road still thinks we should move our location 15' or even 10' westward to preserve the watershed into his pond. This request has been studied during the early stages of the project and the conclusion reached that such a move could not be justified.

Some of the property owners were concerned as to ingress and egress to several portions of their farms. They felt entrances should be provided opposite each other in order to reduce the length of travel to reach several areas. The majority of these cases are situated in the more urbanized areas. Further studies were made and additional access points were provided where feasible to alleviate adverse travel lengths.

X. PUBLIC HEARING AND CITIZEN INVOLVEMENT

A Design Public Hearing was held March 3, 1977 at the Anderson County Court House and was attended by 90 persons. The following comments were made at the Hearing.

Mr. Horace Cull, City Commissioner of Harrodsburg presented a petition, not as an official position of the city, signed by 401 people, residents of Mercer and Boyle County who are in favor of the project.

Mr. Nick Green, Chairman of the Farmdale Water District, was concerned about removal of water lines near Green-Wilson Road and he was assured if relocation of the lines is necessary then this would be the approach taken. Mr. Green also expressed concern about shifting the alignment to provide more drainage area for a pond on his property. It was explained that an earlier study did not recommend shifting the alignment.

Mr. Steve Trent, owner of a building occupied by 5 businesses and located on U.S. 127 and KY 151 near the intersection of KY 512 requested that the proposed connection from the existing to the proposed road be shifted to provide a more direct access to his businesses. The shifting of the connector road according to this request would result in a location within approximately 500 feet of the proposed KY 512 intersection and in the area of transition from four to two lanes. A distance

of approximately 1000 feet is now provided between the two points, which would be desirable when the ultimate lanes are added and in the event development would occur in this area. The proposed location also provides a more desirable access to the two properties located on the west side of proposed KY 151. It is the conclusion of the Kentucky Department of Transportation that the connector road be constructed as presented at the hearing.

Mr. John Reed requested that an entrance be provided to serve his property located on the west side of the proposed U.S. 127 between station 575+50 and station 581+00. Due to the requirement of spacing (1600 feet) of entrances on this type of facility and the fact that right-of-way taking does not sever Mr. Reed's farm an entrance should not be added at this location.

Mr. Arnold Clark spoke at the hearing and a written statement was submitted by Mr. Clark and Mr. Marion F. Metts, owners of a parcel located on KY 151 near the I-64 interchange. Their concern is the taking of right-of-way from commercial property to provide access to a proposed subdivision. Also they were concerned that no access is provided to the southern portion of their property. The frontage road construction is required, with the right-of-way proposed, to obtain sufficient distance between interchange ramp and entrance. It is recommended that an entrance be added to the plans to serve the southern portion of their property.

Mrs. Artie M. Miller submitted a written statement requesting a cattle pass to be provided due to the severance of farming operations. In appraising the property, consideration will be given for severing the farming operation and the land required for the proposed road which will be used in arriving at the compensation due the owner. In order to provide a cattle underpass the grade would have to be raised to accommodate an underpass. Therefore, with consideration for severing of farming operations included in the appraisal, the additional cost of the cattle underpass would be at the expense of the owner. Entrances will be provided to serve the farm on both sides of the new roadway, right-of-way fencing will be constructed by the Bureau of Highways and access to the property will be provided during construction.

A written statement by Mr. D. L. Greenburg, Attorney, representing Maurice Watts, Elwood Burgin, Calvin Morgan and John Dadisman was submitted to the District Office. The main concern of Watts, Burgin, and Morgan is that Alternates A or B would be more practical and economical and less disruptive to their businesses. The concern of Mr. Dadisman is that the preferred alignment is located in the center of potential subdivision with a portion landlocked. The two alternates (A and B) discussed on pages 47 and 48 of this statement provided for an at-grade intersection at the route junction near KY 512. The justification for the preferred alignment is well

documented on pages 46 through 58 of this statement and was presented at the Public Hearing. The at-grade intersection would not be sufficient to handle the volume of traffic at the two routes without creating a hazardous intersection for the route junction. In a meeting with the group January 10, 1977 two schemes for location of the new roadway were presented by the group represented by Mr. Greenburg. The two schemes required locating the new line near the existing U.S. 127 and Old U.S. 127 intersection with reverse curvature and placing the interchange near a subdivision. It is the Bureau's recommendation that the alignment not be changed due to the fact that their line introduces sharper reverse curvature and does not obtain alignment desirable for a facility of this type, would create a less than desirable intersection at Old U.S. 127 and would require additional travel distance. A cost study will be made of the landlocked area versus the cost of the service road and the right-of-way required for its construction for Mr. Dadisman and appropriate measures will be taken.

Mr. Baxter Napier requested a meeting to discuss the possibility of providing some material for the construction of the road from his property on the east side of KY 151. After discussions of required procedures of not specifying sources of material and also the time element involved Mr. Napier agreed that it would be to his advantage to take care of the excavation himself.

Mr. Raymond Hoskins in a written statement requested a review of the plans concerning taking of his yard frontage, for a frontage road through his property to an adjoining property, and the taking of and apple orchard. A service road was required to prevent landlocking of approximately 10 acres of the Dadisman property. The service road was based on economics. That is the value of the landlocked area versus the cost of the service road and the right-of-way required for its construction.

In summation, with the exception of the group represented by Mr. Greenburg the major concern of those speaking at the hearing and submitting written statements were not in oppostion to the project, but were requests for changes or additions of entrances, which will be given consideration in the final design.

Therefore it is the recommendation of the Kentucky Department of Transportation that the preferred alignment be approved.

A P P E N D I X

ENVIRONMENTAL PROTECTION AGENCY
REGION IV
1421 Peachtree St., N.E., Atlanta, Georgia 30309

May 15, 1973

Mr. R. A. Johnson
District Engineer
Kentucky Department of Highways
P. O. Box 5270-North Station
Lexington, Kentucky 40505

Dear Mr. Johnson:

We have reviewed the advance information for Lawrenceburg-Frankfort Road and Lawrenceburg-Grafenburg Road in Anderson-Franklin Counties, Kentucky and offer the following comments which we hope will be of help in the preparation of your draft environmental impact statement.

First, we suggest that the environmental impact statement indicate whether or not there are any streams, lakes, or other bodies of water located within the drainage area of the proposed project. If so, the statement should discuss their water quality, their water use classification, and the expected impact of the project on their water quality.

The statement should also include the efforts that will be made during planning, design, construction, and maintenance stages to divert bridge and road runoff, to prevent obstruction of the natural flow of crossing streams, and to minimize erosion. We suggest that erosion control measures as outlined in the Department of Transportation's Instructional Memorandum 20-3-70 and/or other measures should be mentioned, especially those items dealing with the prompt application of seeds and fertilizer and the protection of seed beds with a mulch to prevent erosion of the slopes and preserve water quality in the adjacent watercourses.

We further suggest a mesoscale and microscale analysis for the project, using the "California Air Quality Manuals."

If we can be of further assistance in any way please let us know.

Sincerely,

Sheppard N. Moore

Sheppard N. Moore
Chief, EIS Staff

see pp. 31-37

THOMAS C. [illegible]
COMMISSIONER

JOHN T. [illegible]
DIRECTOR

COMMONWEALTH OF KENTUCKY
DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION
DIVISION OF AIR POLLUTION
FRANKFORT, KENTUCKY 40601
TELEPHONE (502) 564-3382

March 26, 1974

Mr. M. R. Devin
Environmental Engineer
Division of Environmental Systems
Department of Transportation
Frankfort, Kentucky 40601

Dear Mr. Devin:

The proposed project, Lawrenceburg-Frankfort Road and the Lawrenceburg-Grafenburg Road, project numbers SP 37-125-5L, SP 3-11-8L, SP 3-31-3L, and SP 37-85-5L, was given preliminary review to determine if a detailed review would be required pursuant to Regulation AP-11, "Review of New or Modified Indirect Sources." This review, concerning the effect of the associated mobile source activity on air quality as related to expected ambient concentrations of carbon monoxide, photochemical oxidants and nitrogen oxides following construction, indicates that the project will not come under the purview of Regulation AP-11.

During the course of the preliminary review, it was determined that the emissions resulting from the mobile source activity associated with the project alternatives (as proposed) should not prevent or interfere with the attainment or maintenance of the ambient air quality standards. Further, the source should operate in compliance with the control strategy and all local, State, and Federal regulations which are part of the Kentucky Implementation Plan.

If you have further questions concerning this review, please contact Mr. Robert Zerbonia at (502) 564-6844.

Sincerely,

Roger Blair, RAB

Roger Blair, Acting Director
Development and Evaluation Program

RB:bjh

see pp. 79-31

FEB 2 1976

DIVISION OF DESIGN

Kentucky Heritage Commission

401 Wapping Street

Frankfort, Kentucky 40601

January 28, 1976

E. K. Capito, Director
Department of Transportation
Division of Design
State Office Building
Frankfort, Kentucky 40601

Dear Mr. Capito:

Thank you so much for your letter of January 23, 1976, concerning the Frankfort-Lawrenceburg-Graefensburg Road project in Anderson and Franklin Counties. My staff and I have reviewed the new alignment for this project and concur with your assessment that no historic or architectural resources will be affected. Therefore, I endorse the selection of this new alignment.

Permit me to commend the Kentucky Department of Transportation for its fine efforts and cooperation on this project. I am especially pleased that this alignment change has been determined feasible and justifiable, and I appreciate the efforts made by the department to preserve the Montjoy House and its environ to the extent of completely rerouting the project.

If my office may be of further assistance, please feel free to call on me.

Sincerely yours,

Eldred W. Melton

(Mrs.) Eldred W. Melton
Executive Director and
State Historic Preservation Officer

see pp. 34, 54, & 67

Kentucky Heritage Commission
104 Bridge Street
Frankfort, Kentucky 40601

May 6, 1976

R. K. Capito, Director
Department of Transportation
Division of Design
State Office Building
Frankfort, Kentucky 40601

Dear Mr. Capito:

My staff and I have reviewed the archeological survey for the US 172-KY 151 highway project in Anderson and Franklin Counties. Our review indicates that no sites included in or eligible for inclusion in the National Register of Historic Places will be affected. Therefore, we have no objections to this project.

Sincerely yours,

Eldred W. Melton

(Mrs.) Eldred W. Melton
Executive Director and State
Historic Preservation Officer

see pp. 34, 54-6 67

FEDERAL POWER COMMISSION
WASHINGTON, D.C. 20426

IN REPLY REFER TO:

October 5, 1976

Mr. R. A. Johnson
District Engineer
Kentucky State Dept. of
Transportation
District Highway Office No. 7
P. O. Box 11127
Lexington, Kentucky 40511

Dear Mr. Johnson:

I am replying to your request for comments on the Draft Environmental Impact Statement for U. S. 127 and KY 151 relocation in Anderson and Franklin Counties, Kentucky.

Our review concentrated basically on those areas of the electric power and natural gas industries for which the Federal Power Commission has jurisdiction by law, or where the staff has special expertise in evaluating environmental impacts involved with the proposed action. It does not appear that there would be any significant impacts in our areas of concern nor serious conflicts with Federal Power Commission responsibilities should this action be undertaken.

Thank you for the opportunity to review this statement.

Sincerely,

Jack M. Heinemann
Acting Advisor on
Environmental Quality

ROBERT D. BELL
SECRETARY

JULIAN M. CARROLL
GOVERNOR

COMMONWEALTH OF KENTUCKY
DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PROTECTION
FRANK L. STANONIS
COMMISSIONER
FRANKFORT, KENTUCKY 40601

MEMORANDUM

October 11, 1976

TO: Environmental Review, Office of Planning & Research
Department for Natural Resources & Environmental Protection

THROUGH: Frank L. Stanonis, Commissioner, Bureau of Environmental Protection, Department for Natural Resources & Environmental Protection

FROM: John T. Smither, Director, Division of Air Pollution Control
Department for Natural Resources & Environmental Protection

SUBJECT: Environmental Impact Statement #76-36 Draft Environmental Impact Statement, Department of Transportation, U.S. 127 and Kentucky 151

Review of the Draft Environmental Impact Statement - Department of Transportation U.S. 127 and KY 151 (76-36) has been performed by the Division of Air Pollution Control.

The draft E.I.S. presents no new developments since the March 1974 dialogue. Therefore, except to remind the Department of Transportation of Kentucky Air Pollution Regulation 401 KAR 3:060, Section 14, our contemporary review concurs with Mr. Zerbonia's letter of March 26, 1974.

JTS/WP/jh

See pp. 29-31

Kentucky Heritage Commission
401 Bridge Street
Frankfort, Kentucky 40601

October 12, 1976

Mr. R. A. Johnson
District Engineer
Department of Transportation
Post Office Box 11127
Lexington, Kentucky 40511

Dear Mr. Johnson:

Thank you for providing this opportunity to review the "Draft Environmental Impact Statement--Administrative Action for US 127 and KY 151 relocation in Anderson and Franklin Counties, Kentucky." As far as historic and archeological resources are concerned, the Kentucky Department of Transportation has complied with the letter and the spirit of existing preservation legislation. This office has no objections to the DEIS; and, I once again commend your efforts.

Sincerely yours,

Eldred W. Melton

(Mrs.) Eldred W. Melton
Executive Director and
State Historic Preservation Officer

cc: Office of Planning and Research
Department for Natural Resources and Environmental Protection

Goddpastor

UNIVERSITY OF KENTUCKY
LEXINGTON, KENTUCKY 40506

COLLEGE OF ARTS AND SCIENCES
DEPARTMENT OF ANTHROPOLOGY

22 Oct. 1976

Mr. Robert D. Bell, Secretary
Office of Planning and Research
Dept. for Natural Resources and
Environmental Protection
6th Floor, Capital Plaza Tower
Frankfort KY 40601

Re: Draft Environmental Impact Statement, relocation of U.S. 127 and KY 151 in Anderson and Franklin Counties, Ky.

Dear Mr. Bell:

I appreciate the opportunity to review the referenced draft EIS. I am concerned with the first paragraph in Section VIII, on page 40. It is stated that a reconaissance survey of historical sites and archaeological sites was made. The alignment was shifted to avoid an historic site (see page 33) and no archaeological sites were found. I assume that the letter from the Kentucky Heritage Commission listed on page 53 is offered in support of the statement concerning archaeological sites.

I have contacted Ms. Betty McGraw, staff archaeologist in the Kentucky Department of Transportation who did the survey and she has informed me that no report of that survey has been circulated. Furthermore, she has indicated that test excavations have been scheduled by the Ky DOT on localities which were identified. Thus I am at loss to interpret the comments of the State Historic Preservation Officer on page 53.

It is indicated on page 33 of the EIS draft that the right of way alignment was shifted to avoid an historic property in the process of being nominated to the National Register. It is not clear that an archaeological survey has been performed on the modified alignment.

For clarification of these matters it seems obvious that the survey report by Ms. McGraw should be finished and circulated for review. I would advise you that this should be done as soon as possible.

Please contact me if I can be of further assistance with regards to this draft EIS.

Sincerely Yours,

R. Berle Clay

State Archaeologist

cc: Mr. R. K. Capito

See KYDPT Response page 86

KYDOT RESPONSE:

Paragraph #1:

The referenced letter from the Kentucky Heritage dated May 6, 1976 is offered in support of the statement concerning archaeological sites.

See Appendix page 81

Paragraph #2:

The archaeological survey has been prepared and sent to Dr. Clay after the date of the letter from Dr. Clay of October 22, 1976. No test excavations were recommended and no further archaeological work is necessary.

Paragraph #3:

An archaeological survey was performed on the changed alignment.

Paragraph #4:

The report has been finished and furnished to Dr. Clay.

See Appendix page 81

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
REGION IV
50 7TH STREET N.E.
ATLANTA, GEORGIA 30323

November 9, 1976

OFFICE OF THE
REGIONAL DIRECTOR

HEW-701-10-76

R.A. Johnson, District Engineer
Department of Transportation
District Highway Office No. 7
Post Office Box 11127
Lexington, Kentucky 40511

Subject: Section 4332 (2) (c) Title 42, United States Code
Anderson-Franklin Counties
Lawrenceburg-Graefenburg Road (Ky 151)
Frankfort-Lawrenceburg Road (U.S.127)
F 226 (12); S.P. 3-31-3L & S.P. 37-85-5L
and
F 134 (11); S.P. 3-11-8L & S.P. 37-125-5L
Item Nos. 7-113.0 & 7-114.0
FHWA-KY-EIS-75-09-D

Dear Mr. Johnson:

We have reviewed the subject draft Environmental Impact Statement. Based upon the data contained in the draft, it is our opinion that the proposed action will have only a minor impact upon the human environment within the scope of this Department's review. The impact statement has been adequately addressed for our comments.

Sincerely yours,

Philip P. Sayre

Philip P. Sayre
Regional Environmental Officer
DHEW - Region IV

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
333 Waller Avenue, Lexington, KY 40504

November 15, 1976

Mr. R. A. Johnson, District Engineer
Department of Transportation
District Highway Office No. 7
Post Office Box 11127
Lexington, KY 40511

Dear Mr. Johnson:

Subject: Review of Draft Environmental Impact Statement, FHWA-KY-EIS-75-09-D, Anderson-Franklin Counties, Lawrenceburg-Graefenburg Road and Frankfort-Lawrenceburg Road

A copy of the above-referenced draft environmental impact statement was referred to this office for review and comment. The following comments are offered with a view of improving the usefulness of the impact statement as a revelation of the project impacts.

1. The statement does not mention whether individual farm units will be severed, how many will be severed, or whether structures such as underpass culverts will be utilized to reduce such impacts.

2. An estimate of the acreage of farmland to be used by the project is given. However, the nature of this land is not described, and more specifically, no mention is made of whether or not there is prime farmland involved which will be lost. This agency will be glad to assist in developing this information if it is desired.

3. The statement would be strengthened by adding a description of the amounts and kinds of wildlife habitat that would be removed and of the amounts and kinds of wildlife that now use the habitat. Also useful would be a description of the kind and amount of vegetation that will replace that which is removed.

4. The statement provides a listing of the kinds of aquatic fauna that would be affected but would be strengthened by including some measurements of the amounts of the various kinds of fauna.

5. On page 25 there is an indication that in conjunction with channel changes certain mitigation measures would be proposed. It seems fitting that the statement be definite in this respect.

See KYDOT Response pages 90-91

KYDOT RESPONSES:

Comment #1:

There will be 17 farm units severed if the proposed project is built. No structures such as cattle passes will be included in the plans.

See pages 10 and 26.

Comment #2:

Of the 250 acres to be taken by the proposed project 74 acres are considered prime farm land. 63 acres of the 180 acres in Anderson County is frime farm land and 11 acres of the 70 acres in Franklin County is considered prime farm land.

See page 21.

Comment #3:

First, concerning loss of wildlife habitat. Construction practices, right-of-way clearing, and paving will wither eliminate or significantly alter a total of 250 acres. Of this amount, 28 acres are forested and 222 acres are non-forested. Forested acreage consisted of 3 acres of bottomland hardwood, 10 acres of cedar, and 15 acres of upland hardwood. Non-forested acreage consisted of 3 acres of brushland, 5 acres of residential areas, 60 acres of cultivated or rowcrop areas, 62 acres of improved pasture, and 92 acres of unimproved pasture.

Second, concerning amounts and kinds of wildlife that use the habitat, consultation with the Franklin County Conservation

United States Department of the Interior

OFFICE OF THE SECRETARY

Southeast Region / 148 Cain St., N.E. / Atlanta, Ga. 30303

ER 76/966

November 16, 1976

Mr. Robert E. Johnson
Division Administrator
Federal Highway Administration
Post Office Box 563
Frankfort, Kentucky 40601

Dear Mr. Johnson:

This is in response to the request for the Department of the Interior's comments on the draft environmental statement for U.S. 127 and Kentucky 151, Anderson and Franklin Counties, Kentucky. We have reviewed this statement for impacts on cultural, recreational, geological, hydrological, fish and wildlife resources and offer the following comments.

The loss of agricultural land is inappropriately dismissed as unimportant after being compared to total agricultural acreage in the counties. The fact that there is other wildlife habitat of a similar kind elsewhere does not negate the impact of the loss of such habitat in a development project.

The concept that wildlife will be affected only during construction of the project is incorrect. While the actual amount of habitat being eliminated is small, it is being lost in a permanent fashion, and this should be pointed out in a discussion of the environmental impacts of the project.

We offer no further comments at this time. Thank you for the opportunity to review and comments on the draft statement.

Sincerely yours,

June Whelan

(Miss) June Whelan
Special Assistant to the Secretary
Southeast Region

cc:
Mr. R. A. Johnson
District Engineer
Kentucky Department of Transportation
No. 7
P. O. Box 1127
Lexington, Kentucky 40511

See KYDOT Response page 93

ROBERT D. BELL
SECRETARY

JULIAN M. CARROLL
GOVERNOR

COMMONWEALTH OF KENTUCKY
DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION
OFFICE OF THE SECRETARY
FRANKFORT, KENTUCKY 40601
TELEPHONE (502) 564-3350

November 17, 1976

Mr. R. A. Johnson, District Engineer
Department of Transportation
District Highway Office No. 7
P. O. Box 11127
Lexington, Kentucky 40511

RE: Draft Environmental Impact Statement on U.S. 127 and KY 151 Relocation in Anderson and Franklin Counties. (76-36)

Dear Sir:

The aforementioned Environmental Impact Statement has been circulated to the Kentucky Environmental Review Agencies for their possible comments. Enclosed are the comments returned by them. Any late comments will be forwarded to your agency.

Sincerely,

Robert D. Bell

ROBERT D. BELL
SECRETARY

Enclosure

THE DIVISION OF PLUMBING STATES:

If homes or buildings are relocated or of areas of ground are taken by the proposed new road construction there maybe some difficulty in reconstructing subsurface disposal systems since this area is not served by a sanitary sewer system.

See p. 27

ROBERT D. BELL
Secretary

JULIAN M. CARROLL
Governor

COMMONWEALTH OF KENTUCKY
DEPARTMENT FOR NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PROTECTION
FRANK L. STANONIS
COMMISSIONER
FRANKFORT, KENTUCKY 40601

October 27, 1976

MEMORANDUM

TO: Ed Hartowicz
Assistant Director
Division of Water Quality

FROM: John R. Glass
Environmental Supervisor
Division of Water Quality

RE: U. S. 127 and Ky. 151 relocation in Anderson and Franklin Counties

The relocation of U. S. 127 and Ky. 151 will impact three streams in Anderson and Franklin Counties. The Department of Transportation's biological evaluation of these streams appears adequate and thorough enough. The Central Biological Staff investigated the proposed site and found no reason to object to the project on a water quality basis. The staff feels that if mitigation measures are followed as stated in the proposed plans, the impact will probably be kept within acceptable limits.

JRG:paw

See pp. 31-37

KYDOT RESPONSES

Paragraph #3:

First, there were 5 residences selected for noise analysis in Green Meadows Subdivision that will suffer a 10 dBA or greater impact.

See pages 37-43 and Appendix for Noise Analysis pages 134-144

Second, the residences in the vicinity of station 490+00 are the only sites anticipated to undergo a 10 dBA impact or greater along US 127.

See pages 39-40 and Appendix for Noise Analysis pages

Thirdly, Mitigation Measures have been studied and discussed.

See pages 41-43 and Appendix for Noise Analysis pages 134-144

Because of questions about the ultimate scope of the proposal and about the extensive rechanneling, we request that the final EIS be submitted for prior concurrence by TES under the provisions of paragraph 9(c)(1)(d) of DOT Order 5610.1B.

Thank you for the opportunity to review this draft statement.

Judith T. Connor

See KYDOT Response page 103

KENTUCKY HISTORICAL SOCIETY
OLD STATE HOUSE
P. O. Box H
Frankfort, Kentucky 40601
502-564-3016

March 24, 1977

Mr. R. A. Johnson, District Engineer
Bureau of Highways
P. O. Box 11127
Lexington, Kentucky 40511

Dear Mr. Johnson:

Your letter to General William Buster, Director of the Kentucky Historical Society, was referred to me.

The proposed highway construction on the Lawrenceburg-Graefenburg Road (KY 151) and Frankfort-Lawrenceburg Road (KY 127) will not affect any Kentucky Historical Highway Markers.

Sincerely,

Dianne Wells

Dianne Wells, Chairman
Kentucky Highway Marker Program

See pp. 67-68

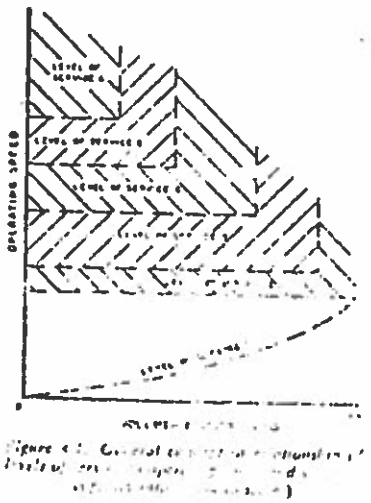
pass. A relatively satisfactory operating speed is still obtained, with service volumes perhaps suitable for urban design practice.

Level of service D approaches unstable flow, with tolerable operating speeds being maintained though considerably affected by changes in operating conditions. Fluctuations in volume and temporary restrictions to flow may cause substantial drops in operating speeds. Drivers have little freedom to maneuver, and comfort and convenience are low, but conditions can be tolerated for short periods of time.

Level of service E cannot be described by speed alone, but represents operations at even lower operating speeds than in level D, with volumes at or near the capacity of the highway. At capacity, speeds are typically, but not always, in the neighborhood of 30 mph. Flow is unstable, and there may be stoppages of momentary duration.

Level of service F describes forced flow operation at low speeds, where volumes are below capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. The section under study will be serving as a storage area during parts or all of the peak hour. Speeds are reduced substantially and stoppages may occur for short or long periods of time because of the downstream congestion. In the extreme, both speed and volume can drop to zero.

These levels of service are depicted conceptually in Figure 4.1.



MEMORANDUM TO: Marx Anderson
Assistant District Engineer
for Pre-construction

FROM: Don Tyre
Relocation Assistance Agent

DATE: September 17, 1975

SUBJECT: Anderson-Franklin County
F 134(11); F 226(12)
Frankfort-Lawrenceburg-Graefenburg Road
(US 127-KY151)
Item Nos. 7-113.0, 7-114.0
Availability of Replacement Housing

The following is submitted as further information concerning the availability of replacement housing on the subject projects.

1. The following is a breakdown of the estimated price of the owner occupied dwellings within the proposed Right of Way.

12,000 - 20,000 - 2
20,000 - 30,000 - 2
30,000 - 40,000 - 4

There is no rental property being acquired on these projects.

There are no major businesses or non-profit organizations to be relocated within the proposed right of way. There is one service station and three farm buildings to be relocated.

The approximate economic level of those to be displaced is estimated to be between 12,000 and 20,000 a year.

The available dwellings for sale within the financial means of those displaced are as follows:

12,000 - 20,000 - 5
20,500 - 30,000 - 8
30,500 - 40,000 - 4

The above information was obtained from classified sections of the Anderson County News, Frankfort State Journal and personal contacts with the local Real Estate agencies.

All of the residences taken are safe, decent, and sanitary and should be taken care of in the normal relocation assistance procedure.

see pp. 20-21

DT:mh

Water Quality and Aquatic Ecosystem Analysis

Anderson and Franklin Counties
Lawrenceburg-Grafenburg Road (KY 151)
Lawrenceburg-Frankfort Road (US 127)
S. P. 37-125-5L
S. P. 3-11-8L
S. P. 30-31-3L
S. P. 37-85-5L
F134 (11), F226 (12)
Item No. 7-113.0, 7-114.0

Prepared by
E. G. Amburgey
Stephen Rice
K. Lakshminarayan
A. W. Berry

Date: November 25, 1974

I. WATER QUALITY AND AQUATIC ECOSYSTEM WITHOUT THE PROJECT.

Streams in Project Area

Topographically, the region along the proposed corridor consists of broad gently sloping ridges dissected by numerous drains. The proposed project would include construction in two major drainage basins, Kentucky River Drainage Basin and the Salt River Drainage Basin. The largest portion of the project would be in the Kentucky River Drainage Basin and would be drained by South Benson Creek.

The project would impact primarily three streams. These streams are:

1. Unnamed tributary of Hammond Creek.
2. Unnamed tributary of South Benson Creek.
3. South Benson Creek.

The streams are relatively low flow streams with South Benson Creek being the largest of the three. The South Benson Creek drainage receives runoff primarily from agricultural areas and the existing road. The Hammond Creek tributary receives runoff from an area that is a mixture of residental, agricultural, and light industrial or commercial.

Water Quality Criteria

The Commonwealth of Kentucky has two major water quality regulations which define water quality requirements for all surface waters in the State. The regulations are:

1. WP-4-1: Water Quality Standards for Waters of the Commonwealth of Kentucky.
2. WP-6-2 Use Classification of Waters, Treatment Requirements, and Compliance.

Recent developments indicate that virtually every stream segment in the State must meet the most stringent criteria of all use classifications. These stringent standards would include pH (6.0 to 9.0), average daily dissolved oxygen at least 5.0 mg/l, and maximum stream temperature increase of 5^{o} F.

Water Quality and Aquatic Ecosystem Evaluation of the Streams in the Project Corridor

The three streams in the project corridor were sampled during October of 1974 to develop enough data to qualitatively evaluate the existing water quality and aquatic ecosystem composition. All chemical parameters were determined by using a HACH Portable Water Quality Kit (DR-EL/2 with conductivity probe)

Table 1: Water Quality Data on Streams in the Project Corridor

Stream Name	S. Benson Cr.	Tributary S. Benson Cr.	Tributary Hammond Cr.
Date Sampled	10-4-74	10-8-74	10-4-74
Apparent Color		23 units	17 units
Chloride			10 mg/l
Total Hardness	230 mg/l	265 mg/l	195 mg/l
Ammonia Nitrogen		.33 mg/l	
Nitrate Nitrogen	.7 mg/l	.9 mg/l	.7 mg/l
Dissolved Oxygen	15 mg/l	7 mg/l	10 mg/l
pH	8.3	7.5	7.6
Ortho Phosphate	.3 mg/l	.37 mg/l	.48 mg/l
Specific Conductance	380 micromhos/cm	470 micromhos/cm	300 micromhos/cm
Air Temperature	23°C=73.4°F	16°C=60.8°F	16°C=60.8°F
Water Temperature	16°C=60.8°F	11°C=51.8°F	10°C=50.0°F
Turbidity	15 FTU	12 FTU	8 FTU

The aquatic ecosystem data indicated that South Benson Creek is a healthy, productive stream supporting a good population and diversity of fish (including one gamefish and two panfish species) and invertebrates. The field data was found to meet state requirements for all parameters monitored.

There is one known point discharge into South Benson Creek upstream from the project area. This discharge is from Alton Mobile Home Park. The discharge location is indicated on Exhibit 3. This treatment plant has a capacity of 9000 gallons and utilizes an extended aeration treatment plant.

Stream Name: Unnamed Tributary of South Benson
Date: 10-8-74
Physical Description:

Recent climatic conditions----------dry weather
Average width----------11 feet
Average depth----------8 inches (range 6" - 2')
Bottom type----------rubble and gravel
Pool/Riffle Ratio----------60/40
Shade---------- 80%
Type of Stream Bank----------weeds, trees
Vegetation

Date: 10-30-74
Biological Description:

Fish Fauna: Kentucky Bass (Mircropterus puctulatus)
Green Sunfish (Lepomis cyanellus)
Common Shiner (Notropus cornutus)
Rosefin Shiner (Notropus ardens)
Creek Chub (Semotilus atromaculatus)
White Sucker (Catostomus commersoni)
Darters (Percidae)

Invertebrate Fauna: Crawfish (Decapoda)
Mayfly larvae (Ephemeroptera)
Sowbugs (Isopoda)
Leeches (Hirudinea)
Caddis fly larvae (Tricoptera)
Sideswimmers (Amphipoda)
Water striders (Gerridae)
Snails (Gastropoda)
Asiatic clam (Corbicula)

Other Life Observed: Some aquatic vegetation

Field data acquired on the small stream characterized its water quality as good. The area adjacent to this stream is primarily in pasture with a small

vegetation and the presence of the giant water bug and dragonfly larvae indicates that this stream is being affected by domestic sewage. The dissolved oxygen concentration (10 mg/l) indicates that there is enough oxygen during the day for aquatic life. However, the critical time for polluted streams is at night when aquatic vegetation go into the respiration stage and decomposition of organic material continues to utilize oxygen. The presence of pollution resistant species such as creek chub, bluntnose minnow, and white sucker and the absence of less hardy species such as darters may indicate that the quality of aquatic life is being affected by pollutants. Petroleum films were also observed floating in the stream in a few places.

There is a point source discharge upstream from the sampling site. This discharge is from the Country Kitchen Restaurant, and probably explains the abundant algal growths in the stream. The discharge location is shown on Exhibit 3.

II. WATER QUALITY AND AQUATIC ECOSYSTEM IMPACT OF THE PROPOSED ACTION.

This section will delineate both the generalized water quality and aquatic ecosystem impacts which can be expected to occur due to highway construction and the specific water quality impacts associated with the proposed project.

Generalized Water Quality and Aquatic Ecosystem Impacts Associated with the Construction of Highway Systems.

EROSION AND SEDIMENTATION

Erosion and sedimentation often exert the most significant potential water quality impact associated with highway construction, due to the magnitude of land moving activities associated with this construction. Sediment pollution has been a primary reason for the degradation of many miles of stream in Kentucky.

Sediment which enters the waterways may exert various detrimental effects on water quality and the aquatic ecosystem. Sediment in the water increases the cost of water treatment, reduces reservoir storage capacity, clogs navigable channels, and adversely affects aquatic life.

Sediment may decrease sunlight penetration into surface waters, thereby decreasing photosynthetic activity. Decreased photosynthetic activity will lead to a reduction in dissolved oxygen levels, decreased phytoplankton growth, and a depletion of aquatic ecosystem food levels. The impact of high sediment loads on an aquatic environment is to reduce considerably both the kinds of organisms present and their total numbers.

Sediment particles can settle on bottom materials and smother mussels, other benthic invertebrates and fish eggs. In fast moving streams, sediment can create abrasive action along the stream channel, scouring off attached and free moving benthic organisms.

Nutrients absorbed into fine grained soil particles can cause accelerated eutrophication in the streams and in farm ponds that receive some drainage from the project area.

In order to mitigate adverse impacts from highway construction, erosion and sedimentation control measures should be enforced rigorously. The Kentucky Department of Transportation has special provisions to guide in the enforcement of these control measures.

the relation of the abundance of each species to each other. It does not express the total weight of fish per surface acre or the productivity of the stream. Nor does it necessarily mean that the same species were presented in the channelized stream after 15 years as were present in the natural streams.

Burnside (1967) in a study in 1966 on a stream that had a channelization project which began in 1947 noted that there was little difference between channelized and unchannelized sections in total number of species collected, but some species showed substantial decrease in abundance especially in the minnow family, sunfish family (which includes smallmouth bass, largemouth bass, Kentucky bass, and bluegill), and catfish family.

Trautman (1939) studied a stream in 1939 that had channelization work begun in 1887. He found there was a drastic decrease in relative abundance from channelized sections, and several species had disappeared.

In summation it appears that channelized sections of stream have a very small percentage of the standing crop of both invertebrates and fish that was found in the natural stream and that game fish appear to be even more affected than other fish species. The mean species diversity is also reduced. Recovery of the new channel is very slow; the species diversity appears to recover after 15 years but the standing crop (total number, or weight of fish) will not recover significantly in 40 years.

The effects of channel changes are sufficiently adverse that these alterations should be avoided whenever possible. Alternates should be considered to minimize or eliminate channel changes associated with the construction of transportation facilities. If the channel changes are indeed unavoidable, then the following general mitigation measures should be considered to lessen the impact of major channel changes (1000 feet or longer).

1. Adding curvature and meanders to channel change alignment to minimize loss of length.
2. Varying bottom slope in individual channel changes to create variations in velocity and depth of flow.
3. Approximating natural stream width with channel change width.
4. Approximating natural stream bank slope with channel change bank slopes.
5. Revegetating banks of the channel change with trees indigenous to the area in concentrations conforming with the cover on the natural stream.
6. Refraining from unnecessary rip-rapping above the high flow level on the bank because this practice retards the rate of revegetation and succession of the stream bank.
7. Approximating the natural pool-riffle ratio by using gabion riffle structures and non-uniform placement of bottom materials (i. e. placing large boulders, etc.).
8. Designing channels to have adequate depth of flow during dry weather to maintain habitats for aquatic life. This might include side pools, slanting stream beds to provide shallow side and deep side, and using a small channel within the main channel to carry this flow.
9. Scheduling work on channel change for the dry autumn season.

Water Quality and Aquatic Ecosystem Impacts Associated with the Project

EROSION AND SEDIMENTATION

Topographically, the region traversed by the proposed project consists of broad, gently sloping ridges divided by numerous drains. Clayey soils occur on these rolling lands. A brown silt loam surface and a yellowish brown, plastic clayey subsoil occur both on the ridge tops and the side slopes. Silt loam occurs mostly on the nearly level to gently sloping ridge tops. The soil permeability varies from slow to moderately slow. Ground slopes vary primarily from 0-20%. The rock zone occurs more than 3.5 feet from the surface for most of the project. The generalized soil type has been classified as the Lowell-Mercer-Faywood Association.

The project lies within the drainage basin of the Salt River and the Kentucky River. Most of the drainage basin is of trellis pattern with South Benson Creek and its branches forming the main parallels on either side of the proposed alignment. The west side slope and the east side slope are drained by South Benson Creek, a headwater tributary of the Kentucky River. The ground water varies primarily as a result of variations in geologic conditions.

On the proposed new alignment the cuts vary from 10 to 34 feet. The embankment sections are more common than cut sections on the linear basins. The embankment heights vary from 15 to 27 feet. These lengthy embankment sections create the potential for erosion from steep slopes and obstruction of the natural drainage patterns. In addition, these embankment sections require the filling of several farm ponds along the alignment.

Potential soil erosion at different sections has been estimated utilizing the Universal Soil Loss Equation and SCS, Technical Guide II-H-2, Calculating Soil Loss from Graded, Sloping and Unprotected Construction Sites. The potential soil loss has been estimated to range from 170 to 560 cubic yards per exposed acre. The areas with the highest potential for soil loss are shown on Exhibit 3. These areas have a high potential based primarily on either the height of embankment/cut or the proximity to streams.

Some of these high potential erosion and sedimentation areas are listed and discussed below.

1. Approximate station 538 - In this area, there is a cut of approximately 20 feet.
2. Approximate station 553 - In this area, there is an embankment of approximately 19 feet. The west side of this embankment has the potential for sedimentation of the headwaters of South Benson Creek. Extra attention should be given to on-site erosion control in this area.
3. Approximate station 595 - In this area, there is a cut of approximately 25 feet. The top and ends of these cut sections are particular susceptible to erosion.
4. Approximate station 605 - In this area, there is a cut of approximately 24 feet.

III. STEPS TO BE TAKEN TO MITIGATE ADVERSE IMPACTS

Strict enforcement of the Kentucky Department of Transportation's Special Provisions Nos. 46-D and 57-D would help minimize adverse impacts from erosion and sedimentation. Special attention to erosion and sedimentation control at the areas of high potential would further mitigate these effects. The necessary bid items to allow for on-site control of erosion and sedimentation would be part of the plans and specifications. (Temporary seeding, ditch checks, top of fill berms, and silt checks and basins).

In the channel change sections, the following mitigation measures would be proposed.

I. South Benson Creek
   1. Construct at least 2 riffle structures (no more than 2 feet above flow line) in the channel change.
   2. Place small dumped stone deflectors between riffle structures.
   3. Randomly place varying size rock material throughout the channel change.

II. Unnamed tributary of South Benson Creek
   1. Add artificial meanders to replace loss length of stream.
   2. Place small rock flow retard dams at approximately 100 foot spacing. Gabions should not be used to construct these small flow retard dams and natural deterioration should be allowed to occur.
   3. Create a non-uniform bottom slope by scooping out pockets (not more than 1 1/2 feet deep and 40 feet long).

In addition, the revegetation of the banks of these channelized sections should be accelerated by planting trees indigenous to the area (i. e. elms, black walnut, and hackberry).

From Bluegrass ADD, Regional Water and Sewer Plan, 1973

DRAINAGE BASIN MAP

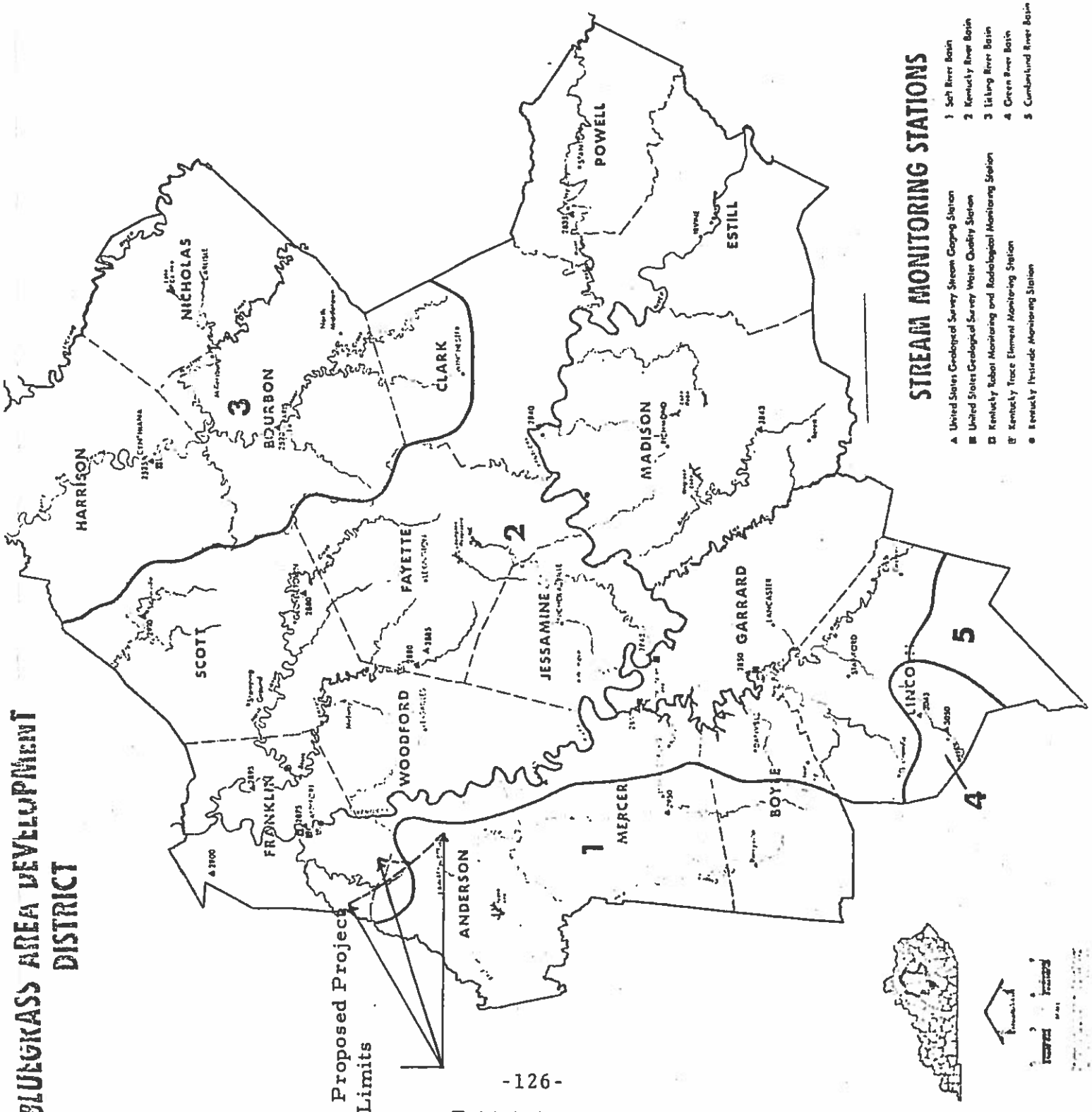
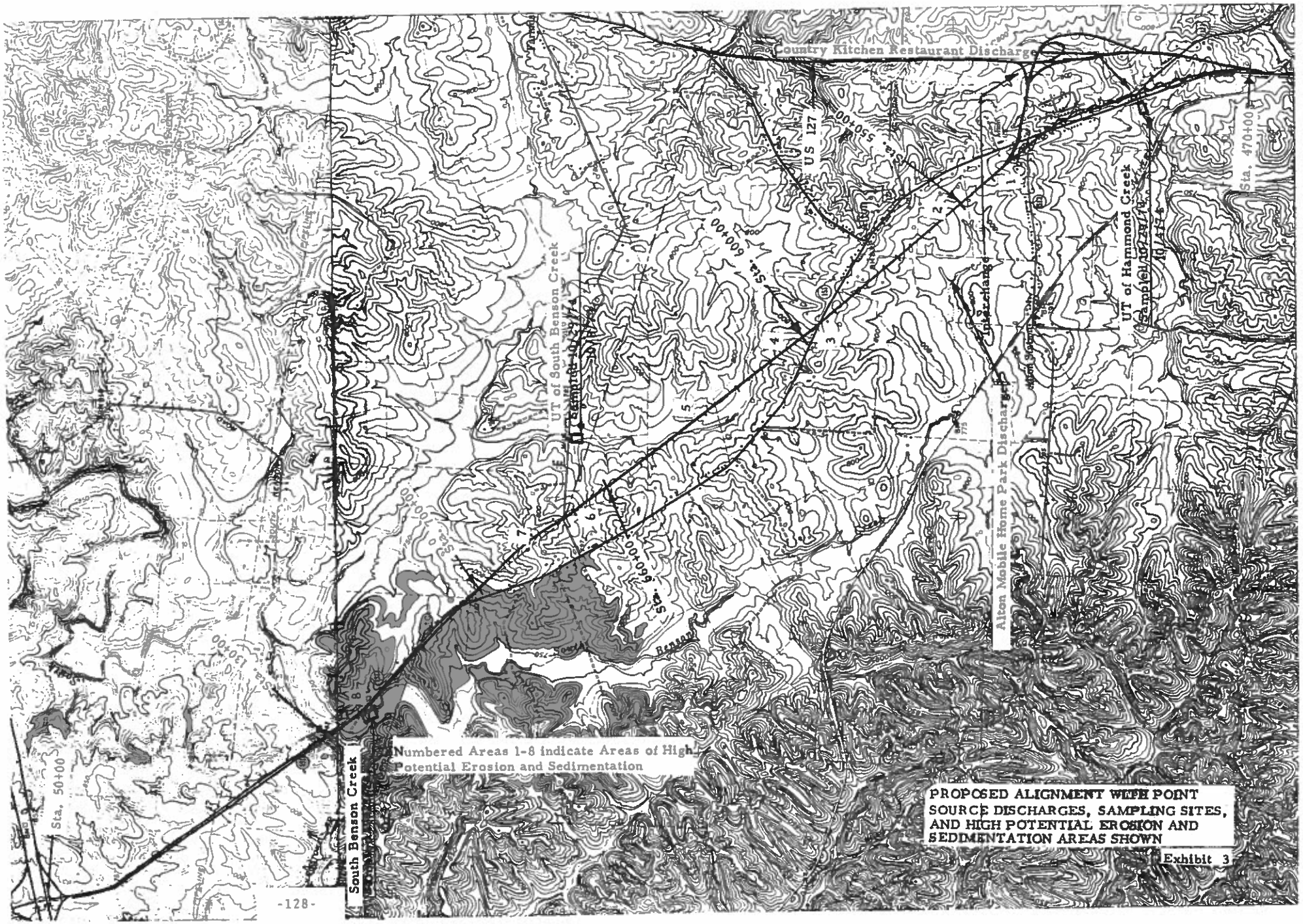


Exhibit 1



PROPOSED ALIGNMENT WITH POINT SOURCE DISCHARGES, SAMPLING SITES, AND HIGH POTENTIAL EROSION AND SEDIMENTATION AREAS SHOWN

Exhibit 3

REFERENCES

Bayless, Jack and Smith, W. B., "The Effects Upon the Fish Populations of Lotic Waters in Eastern North Carolina," North Carolina Wildlife Resources Commission, Division of Inland Fisheries.

Blair, Blair, Brodkorb, Cagle, and Moore, 1957, Vertebrates of the United States, McGraw-Hill Book Co., New York.

Bluegrass Area Development District Regional Water and Sewer Plan, Bluegrass Area Development District, June 30, 1973.

Burnside, K. R., 1967, "The Effects of Channelization of Fish Populations in Boeuf River in Northeast Louisiana, "Louisiana Wildlife and Fisheries Commissio Baton Rouge, Louisiana.

Calculating Soil Loss from Graded, Sloping, and Unprotected Construction Site, Soil Conservation Survey, Technical Guide II-H-2.

Eddy, Samuel, 1969, How to Know the Freshwater Fishes, Wm. C. Brown Co. Publishers, Dubugue, Iowa.

Kentucky Framework Water Plan, Division of Water, Dept. Nat. Resources, Oct. 1971.

Kentucky State Continuing Plan, Dept. of Nat. Resources and Environmental Protection, FY 1974.

Louder, D. E., Tarplee, W. H. and Weber, A. J., 1971, "Evaluation of the Effects of Channelization on Fish Populations in North Carolina's Constal Plain Streams," North Carolina Wildlife Resources Commission.

Pennak, R. W., 1953, Freshwater Invertebrates of the United States, Ronald Press Co., New York.

Predicting Rainfall-Erosion Losses from Cropland East of the Rocky Mountains, Agricultural Handbook No. 282, U. S. Dept. of Agriculture, May 1965.

Public and Industrial Water Supplies of Kentucky, U. S. Geological Survey, Information Circular 20.

Standard Methods for the Examination of Water and Wastewater, American Public Health Association, Dec. 1971.

Trautman, M. B., 1939, The Effects of Man-made Modifications on the Fish Fauna in Lost and Gordon Creeks, Ohio, Between 1887-1938, Ohio Jour. Sci. 39 (5): 275-288.

Species	Length	Total No.
Micropterus punctulatus (spotted bass)	2"	1
	3"	1
	Subtotal	2
Lepomis cyanellus (green sunfish)	1"	1
	2"	5
	3"	4
	5"	1
	Subtotal	11
Lepomis megalotis (longear sunfish)	2"	4
	4"	1
	Subtotal	5
Lepomis macrochirus (bluegill)	1"	26
	2"	14
	Subtotal	40
Catostomus commersoni (white sucker)	2"	1
	Subtotal	1
Campostoma anomalum (stoneroller)	3"	1
	Subtotal	1
Notropis ardens (rosefin shiner)	1"	36
	2"	32
	Subtotal	68
Notropis cornutus (common shiner)	1"	5
	2"	30
	3"	13
	4"	2
	5"	1
	Subtotal	51
Pimephales notatus (bluntnose minnow)	1"	33
	2"	21
	Subtotal	54
Semotilus atromaculatus (creek chub)	2"	2
	3"	1
	Subtotal	3
Etheostoma caeruleum (rainbow darter)	1"	12
	2"	5
	3"	1
	Subtotal	18

Invertebrates collected indicated that this stream is being impacted by sediment and organic nutrients. Sowbugs (Isopoda) dominated the invertebrates collected with scuds (Amphipoda) and crayfish (Decapoda) also present in good numbers. No typical "clean water" riffle inhabiting invertebrates were collected.

Stream Name: Unnamed tributary of Hammond Creek

The small size and minimal construction activity to be associated with this stream did not seem to warrant another complete field survey. The 1974 study indicated that this stream was being affected by organic nutrient enrichment. It would be classified from a fishery use standpoint as a bait stream with game-fish and pan-fish using it for spawning purposes and as a rearing ground for their young.

SPR:djb

CC: G. F. Hughes, Jr.
E. G. Amburgey
W. E. Blackburn

NOISE ANALYSIS

U.S. 127 & KY 151

ANDERSON & FRANKLIN COUNTY

SP 3-31-3L, SP 3-11-8L

SP 37-85-5L, SP 37-125-5L

F 134 (11), F 226 (12)

ITEMS NO. 7-113.0, 114.0

PREPARED BY:

JOSEPH A. MANLEY

DESIGN ENGINEER
DISTRICT 7

U.S. 127 & KY 151
ANDERSON & FRANKLIN COUNTIES
NOISE ANALYSIS

The highway-generated noise impact of this project has been analyzed in accordance with Federal Highway Administration Manual (FHPM) 7-7-3. An effective, quantitative noise impact analysis must first determine the impacted noise sensitive receptors, establish by measurement the existing noise levels, predict the future (Design Year) noise levels, compare the predicted noise levels with applicable standards, and if necessary, discuss the feasibility of the various abatement methods.

NOISE SENSITIVE RECEPTORS

The project is located in Northern Anderson County and Southern Franklin County and is composed of two distinct sections: (1) U.S. 127 a North-South route connecting Lawrenceburg with Frankfort and eastbound I-64 traffic; and (2) KY 151, an East-West route connecting Lawrenceburg with westbound I-64 traffic. The affected area is predominantly rural farmland with one subdivision, Green Meadows, which is north of Lawrenceburg and a group of houses along existing U.S. 127, located at the southern most portion of the project. The project was analyzed using the preferred route for the proposed alternative to be compared to the existing and do-nothing alternative.

A total of twelve noise receptors were selected for study. Table I describes these receptors.

(4) KY 151, one mile west of U.S. 127, L_{10} = 67 dBA;

(5) Typical farm road off U.S. 127, L_{10} = 45 dBA;

(6) Mid-neighborhood, Green Meadows Subdivision, L_{10} = 45 dBA.

The field measurements were obtained using a General Radio Company (GR) 1551-C sound level meter and a GR 1521-B graphic level recorder. Measurement times were restricted to morning and afternoon peak traffic periods, and the accepted meteorological constraints were obeyed. The system was calibrated before and after the day's use.

ANTICIPATED NOISE LEVEL FOR THE DESIGN YEAR 1992

The highway-generated noise levels in terms of L_{10} (noise level exceeded ten percent of the time), were predicted using the Kentucky Department of Transportation's time sharing computer program HYNOIS. HYNOIS is a combination of the National Cooperative Highway Research Program (NCHRP) Report 117, "Highway Noise, A Design Guide for Highway Engineers," and the Barrier Nomograph Procedure, as taught by the Federal Highway Administration (FHWA) in its course "Fundamentals and Abatement of Highway Traffic Noise." HYNOIS also includes a FHWA-approved modification to NCHRP Report 117 which improves the accuracy of the prediction model by localizing it for Kentucky conditions. This modification is based on Kentucky Department of Transportation Division of Research Report 379, "Evaluation of the Traffic Noise Prediction." Table II shows the results of the computer predictions.

APPLICABLE NOISE STANDARD

Table I of FHPM 7-7-3 give Design Noise Level/Land Use relationships for various types of land developments. Land Use

relieve congestion. The facility as it now exists causes a problem with the congestion and accident problem and will only tend to worsen as traffic increases.

Sites 7, 8, 9, 10, 11, and 12 were the only sites along U.S. 127 anticapted to have major noise impacts. The noise level along U.S. 127 will increase but no major impacts are anticapted and none are expected to exceed 70 dBA.

If the "Do-Nothing" option is implemented the existing noise levels will increase by 2 dBA by 1992, due to increased traffic volumes. The proposed project if built will increase noise levels in some areas due to the alignment shift being located different from the existing alignment.

CONSTRUCTION NOISE

Certain measures will be taken by the Contractor when so directed by the Engineer to prevent construction noise from becoming a nuisance and detriment to the normal activities near the project. These measures may include, but not be limited to, dampening of metal surfaces on construction equipment, sound aprons, enclosures or physical barriers for stationary equipment and restriction of construction operations.

NOISE ABATEMENT STUDY

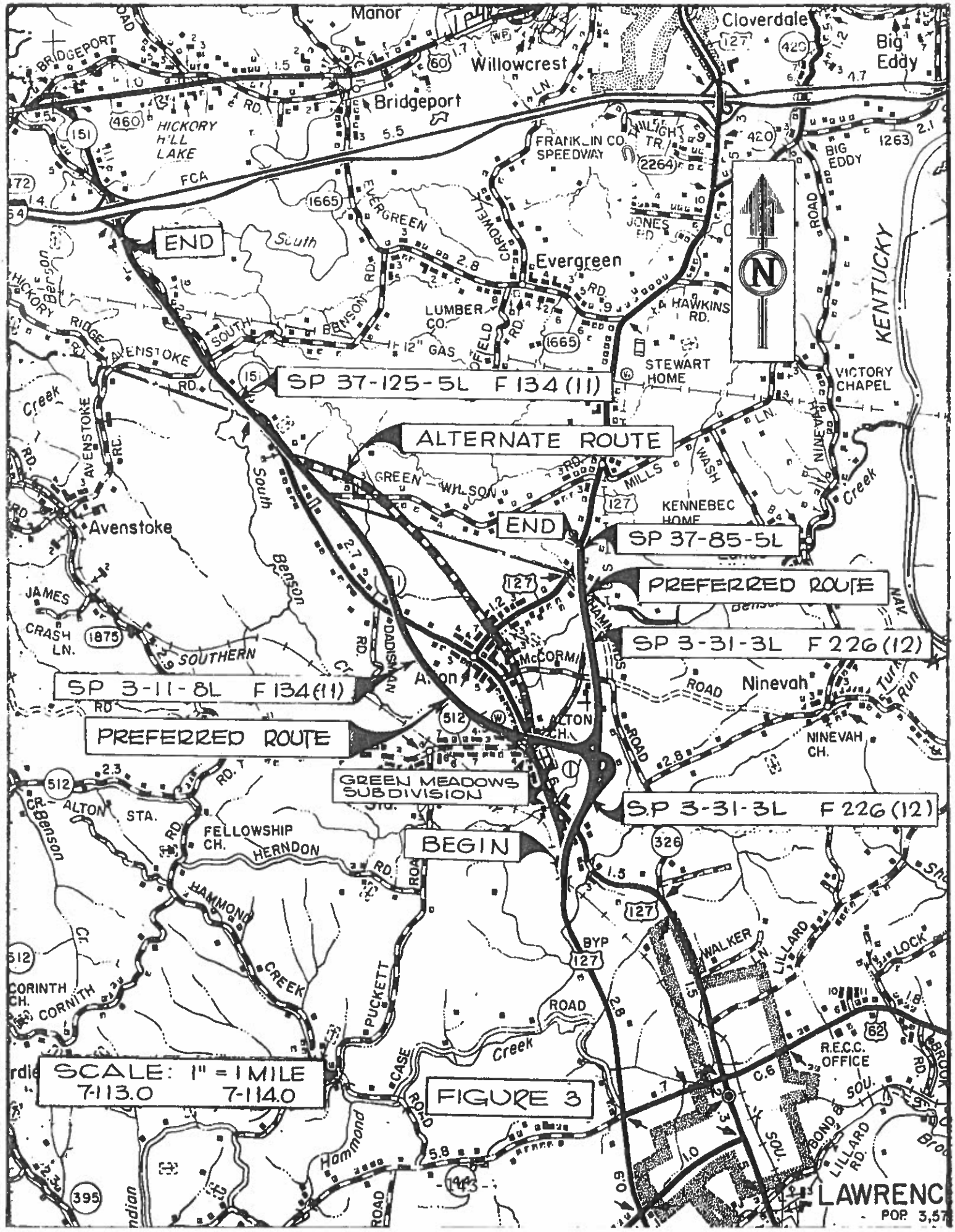
As can be seen from the noise level calculations in Table II twelve (12) Category B noise sensitive receptors were identified and studied for noise impacts resulting from operation of the proposed transportation facility. Of the 12 study sites 11 are predicted to incur major (10 ± dBA or more) noise impacts and/or violations of the FHWA noise level standards. This study is,

Site 5 is located in Green Meadows subdivision at the back corner of the subdivision 200' from station 521+00 of proposed KY 151. This site was representative of houses located as far away as 400'. A noise barrier of 1200' in length and 10' high was studied and would produce a noise reduction for this area between 200'-400' of -6 dBA. This barrier would cost $130,000 and protect 5 homes valued at around $125,000. Some maintenance problems would be caused because part of the wall would be built over an existing pond, to be filled in, and may be unstable. A wall or barrier at this location would detract from the aesthetics of the area.

Because of the economical, maintenance, and aesthetics aspects of the noise barriers studied it is not likely that noise abatement measures will be incorporated at this site.

Sites 7, 8, 9, 10, 11 and 12: The Design Noise Levels for these locations are above 70 dBA and incur major noise impacts ($10^{\pm}$ dBA or more) and violations of the FHWA noise level standards.

For Site 7 on the right of the proposed road has a predicted noise level of 74 dBA. If an earth berm barrier were erected for this site it would necessitate the taking of the house in question which would defeat the purpose of a noise barrier. A timber barrier at this site is estimated to cost $40,000 which would be protecting a $25,000 house. Also a timber barrier would cause safety and maintenance problems. It is not likely that noise abatement measures will be incorporated at Site 7.


END
SP 37-125-5L F 134(11)
ALTERNATE ROUTE
END
SP 37-85-5L
PREFERRED ROUTE
SP 3-31-3L F 226(12)
SP 3-11-8L F 134(11)
PREFERRED ROUTE
GREEN MEADOWS SUBDIVISION
S.P 3-31-3L F 226(12)
BEGIN
SCALE: 1" = 1 MILE
7-113.0 7-114.0
FIGURE 3
Manor
Cloverdale
Bridgeport
Willowcrest
Big Eddy
Evergreen
Avenstoke
Alton
Ninevah
KENTUCKY
FRANKLIN CO. SPEEDWAY
STEWART HOME
VICTORY CHAPEL
KENNEBEC HOME
FELLOWSHIP CH.
NINEVAH CH.
R.E.C.C. OFFICE
LAWRENC
POP. 3,57

SOCIO-ECONOMIC AND ENVIRONMENTAL ANALYSIS
ANDERSON-FRANKLIN COUNTIES
US 127 & KY 151

This study is to analyze the socio-economic impacts of the proposed reconstruction of US 127 and KY 151. The project begins at the north limits of the Lawrenceburg Bypass and ends at the newly constructed section of KY 151 that extends from the I 64 - Graefenburg Interchange to the Franklin-Anderson County line. Included in this is a corridor for US 127 toward Frankfort that will bypass Alton, to be constructed concurrently.

There are three alternates being considered in this project, Corridors A, B, and the Do-Nothing Alternate.

Corridor A contains an estimated 12 residences and seven farm buildings that would be displaced.

Corridor B contains one business, 10 residences, and four farm buildings requiring relocation assistance.

The Do-Nothing Alternate does not displace any right of way parcels, businesses, residents, or farm buildings. It would continue the use of US 127 that has a sufficiency rating of 44 out of 100. (A sufficiency rating is determined by combining pavement and shoulder widths, vertical and horizontal alignment deficiencies, and traffic volume, with an equation to determine the overall adequacy of a roadway. A rating under 50 points is considered very poor.)

Although this project is listed as a two-county project, it is almost entirely contained in Anderson County and shall be dealt with as if this were a single-county project in this report.

urban sprawl. Significant rural settlements that will be affected by this project, located north of Lawrenceburg, are Ninevah on KY 325 and of course, Alton on KY 151. Industrial land use is concentrated in the southeastern section of Lawrenceburg at the intersection of US 127 and US 127 Bypass. Existing industrial acreage is estimated to be 70 acres.

The projected compatability of existing land use and this project is not considered detrimental. There will be a rather small acreage of farmland lost due to the re-routing of the corridors; this is almost entirely cleared or cultivated fields. Overall it is estimated that urban and industrial growth will be stimulated by the completion of the project. The added safety and increased capacity will provide the 3,700 workers in the county, 47% of whom must travel outside the county for their employment, a more efficient means of transportation; since many must travel the existing facilities in question to the major urban areas. Also there is a substantial disparity between effective buying income and retail sales which indicates many retail purchases are being made in metro Louisville, Lexington, and Frankfort.

There are eight manufacturing firms in the general vicinity that employ between 25 and 300 employees. There is a current labor surplus available for industrial jobs in the labor market area. This, coupled with the six industrial sites available indicate a definite need to upgrade the transportation facilities to meet the projected level of traffic correlated with this growth.

The short term tax loss in this proposed project is considered minimal. This is feasible due to the probable immediate re-investment in upgraded

a few small businesses in Alton due to the decrease in traffic of the existing road. This is not considered significant, and the long range projection indicates that as urbanized living increases in the area, the need for these proprietaries (grocery store, gas station, etc.) will also increase. Some farm land will be taken, as previously stated, but not a significant amount when compared to the large portion of the county that is classified as rural farm. There will not be any noticeable effect in the county's production of farm goods.

In conclusion, the overall adverse impact of either Corridors A and B would be minimal, and of the Do-Nothing Alternate significant. The following factors should be noted for consideration:

(1) The adverse impacts of Corridors A and B are very similar to each other.

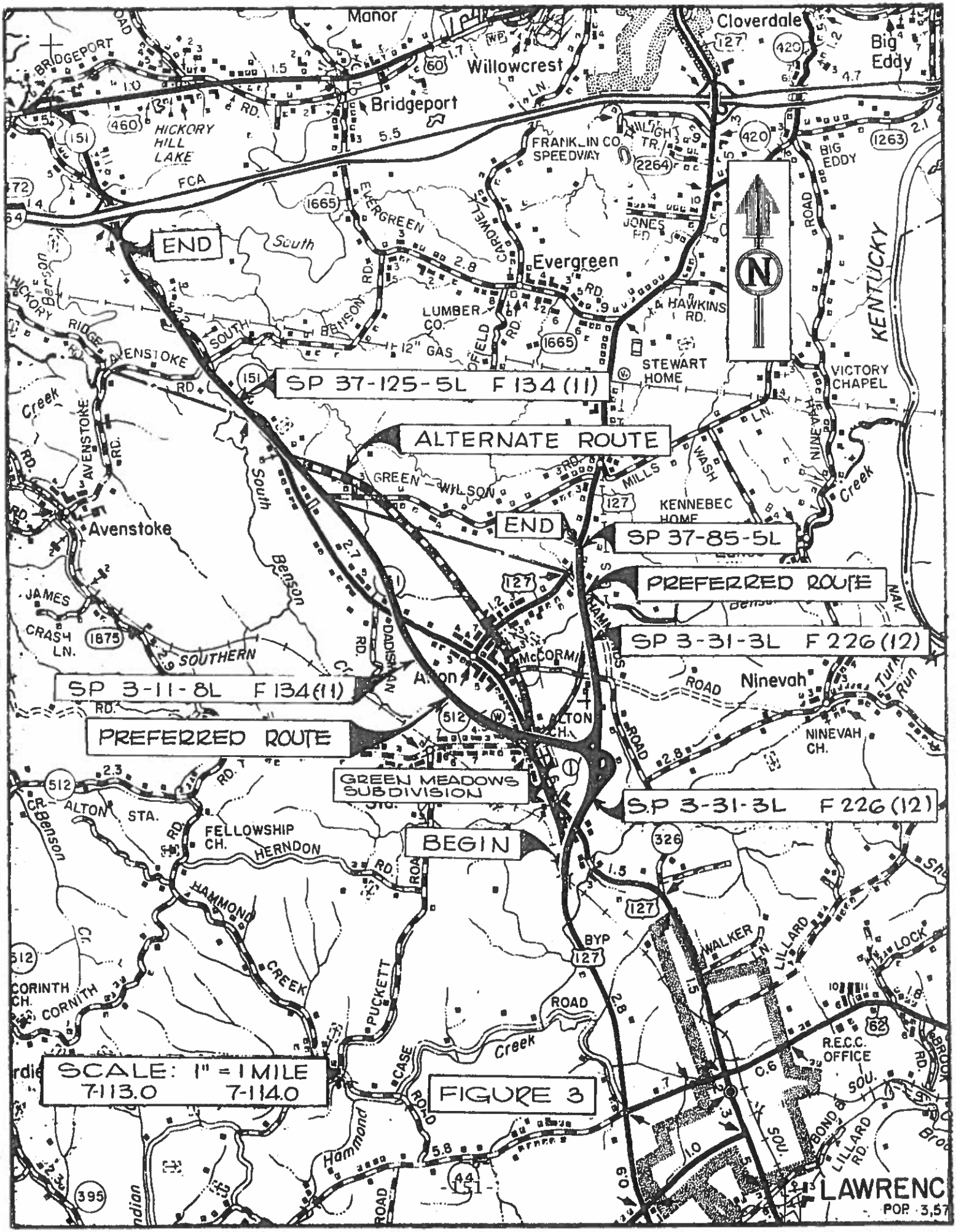
(2) The adverse impact of the Do-Nothing Alternate on the long range economic growth of the area is considered greater than that of either A or B.

(3) The beneficial long range economic impacts of either A or B outweigh their adverse impacts.

(4) A major north-south movement into the Bluegrass Region is via US 127 and KY 151, affording access to I-64 and Frankfort from Lawrenceburg and the Bluegrass Parkway.

(5) The land that is needed for the proposed project will place hardships on some individual farmers in the Alton area; however, these are not considered significant in view of the overall agricultural output.

dmn


END
SP 37-125-5L F 134(11)
ALTERNATE ROUTE
END
SP 37-85-5L
PREFERRED ROUTE
SP 3-31-3L F 226(12)
SP 3-11-8L F 134(11)
PREFERRED ROUTE
GREEN MEADOWS SUBDIVISION
S.P 3-31-3L F 226(12)
BEGIN
SCALE: 1" = 1 MILE
7-113.0 7-114.0
FIGURE 3
Manor
Cloverdale
Willowcrest
Bridgeport
Big Eddy
Evergreen
Avenstoke
Alton
Ninevah
KENTUCKY
FRANKLIN CO. SPEEDWAY
HICKORY HILL LAKE
LUMBER CO.
STEWART HOME
VICTORY CHAPEL
KENNEBEC HOME
ALTON CH.
NINEVAH CH.
FELLOWSHIP CH.
CORINTH CH.
R.E.C.C. OFFICE
LAWRENC
POP. 3,57

```
O=ANDERSON AND RT=KY 151 AND BMP>=0.000 AND EMP<=4.587
*****************************************************************************
O:ANDERSON                                    RT:KY  151      DIR:0   STN#:044
ROM MP:    0.000   AT: US 127                                 STATION TYPE:  4
 TO MP:    0.890   AT: KY 512
   2013    -9550       VOL86    -7680       VOL78    -8600       VOL70    -7040
  VOL93     7040       VOL85    -7590       VOL77     9260       VOL69    -6750
  VOL92    -7290       VOL84    -7340       VOL76    -7940       VOL68    -6350
  VOL91    -7390       VOL83     6040       VOL75     6860       VOL67     5820
  VOL90     7040       VOL82    -7870       VOL74    -7430       VOL66    -7210
  VOL89     8440       VOL81     9440       VOL73     7420       VOL65    -7180
  VOL88    -7840       VOL80    -8640       VOL72    -7320       VOL64    -7160
  VOL87    -7740       VOL79     9700       VOL71     7270       VOL63    -7130

*****************************************************************************
O:ANDERSON                                    RT:KY  151      DIR:0   STN#:052
ROM MP:    0.890   AT: KY 512                                 STATION TYPE:  4
 TO MP:    2.210   AT: OLD US 127
   2013   -10000       VOL86    -6240       VOL78    -7520       VOL70    -5840
  VOL93     7380       VOL85    -6160       VOL77     8140       VOL69     5470
  VOL92    -6770       VOL84    -5840       VOL76    -7100       VOL68    -6440
  VOL91    -6100       VOL83     4430       VOL75     6650       VOL67    -6440
  VOL90     5280       VOL82    -6560       VOL74    -6630       VOL66    -6430
  VOL89    -5900       VOL81     8320       VOL73     6570       VOL65    -6420
  VOL88    -6130       VOL80    -7500       VOL72    -6250       VOL64    -6420
  VOL87    -6230       VOL79     8410       VOL71     5780       VOL63    -6410

*****************************************************************************
O:ANDERSON                                    RT:KY  151      DIR:0   STN#:002
ROM MP:    2.210   AT: OLD US 127                             STATION TYPE:  2
 TO MP:    4.587   AT: FRANKLIN COUNTY LINE
   2013    -5470       VOL86    -3530       VOL78    -3050       VOL70    -3060
  VOL93    -3960       VOL85    -3460       VOL77     3080       VOL69     2990
  VOL92    -3940       VOL84    -3420       VOL76    -2930       VOL68    -2960
  VOL91    -3930       VOL83     3460       VOL75     2590       VOL67    -2920
  VOL90     3920       VOL82    -3230       VOL74     2950       VOL66    -2900
  VOL89    -3810       VOL81     2940       VOL73     2390       VOL65    -2890
  VOL88    -3700       VOL80    -3090       VOL72    -2940       VOL64    -2880
  VOL87    -3610       VOL79     3070       VOL71     3480       VOL63     2890
```

Green Wilson Rd MP 3.744

O=FRANKLIN AND RT=KY 151 AND BMP>=0.000 AND EMP<=3.305

****

O:FRANKLIN RT:KY 151 DIR:0 STN#:506

ROM MP: 0.000 AT: ANDERSON COUNTY LINE STATION TYPE: 2

TO MP: 0.682 AT: AVENSTOKE ROAD

2013	-3560	VOL86	-2830	VOL78	-2660	VOL70	2430
VOL93	-2900	VOL85	-2610	VOL77	2860	VOL69	2500
VOL92	-2900	VOL84	-2820	VOL76	-2670	VOL68	2300
VOL91	-2890	VOL83	2890	VOL75	2490	VOL67	2110
VOL90	-2890	VOL82	-2730	VOL74	-2670	VOL66	3300
VOL89	-2890	VOL81	2560	VOL73	2930	VOL65	2460
VOL88	2900	VOL80	-2630	VOL72	-2670	VOL64	2900
VOL87	-2860	VOL79	2470	VOL71	2720	VOL63	-2550

****

O:FRANKLIN RT:KY 151 DIR:0 STN#:568

ROM MP: 0.682 AT: AVENSTOKE ROAD STATION TYPE: 2

TO MP: 2.222 AT: I 64 INTERCHANGE

2013	-5500	VOL86	-3250	VOL78	-2330	VOL70	-2050
VOL93	-4100	VOL85	-3130	VOL77	-2380	VOL69	-1990
VOL92	3980	VOL84	-3040	VOL76	2420	VOL68	-1920
VOL91	-3860	VOL83	2990	VOL75	-2360	VOL67	-1860
VOL90	-3730	VOL82	-2740	VOL74	-2300	VOL66	-1800
VOL89	-3610	VOL81	-2470	VOL73	-2230	VOL65	-1740
VOL88	-3480	VOL80	2090	VOL72	-2170	VOL64	-1680
VOL87	-3360	VOL79	-2260	VOL71	-2110	VOL63	-1610

****

O:FRANKLIN RT:KY 151 DIR:0 STN#:509

ROM MP: 2.222 AT: I 64 INTERCHANGE STATION TYPE: 2

TO MP: 3.305 AT: US 60

2013	-2340	VOL86	-1510	VOL78	-1250	VOL70	1040
VOL93	-1710	VOL85	-1400	VOL77	1390	VOL69	-1120
VOL92	-1700	VOL84	-1290	VOL76	-1270	VOL68	-1100
VOL91	-1710	VOL83	1170	VOL75	1230	VOL67	-1070
VOL90	-1710	VOL82	-1190	VOL74	-1280	VOL66	1060
VOL89	-1740	VOL81	1000	VOL73	1430	VOL65	935
VOL88	1790	VOL80	-1180	VOL72	-1270	VOL64	1040
VOL87	-1640	VOL79	1160	VOL71	1390	VOL63	-1020