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FINAL

**ENVIRONMENTAL STATEMENT
(SUPPLEMENTAL)**

U.S. 30

BENTON AND LINN COUNTIES

PROJECT NO. F-30-6 AND F-30-7

PENDING APPROVAL

Prepared By

April 6, 1978

Date

**IOWA DEPARTMENT OF TRANSPORTATION
PLANNING AND RESEARCH DIVISION
OFFICE OF PROJECT PLANNING**

In Cooperation With

**U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION**

MARCH 1978

U.S. 30
FROM U.S. 218 IN BENTON COUNTY
TO STONEY POINT ROAD
(WEST CORPORATION LINE OF CEDAR RAPIDS)
IN LINN COUNTY

ADMINISTRATIVE ACTION
FINAL (SUPPLEMENT)
ENVIRONMENTAL IMPACT STATEMENT

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
and
IOWA DEPARTMENT OF TRANSPORTATION
PLANNING AND RESEARCH DIVISION

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

DATE

REGIONAL ADMINISTRATOR
FEDERAL HIGHWAY ADMINISTRATION

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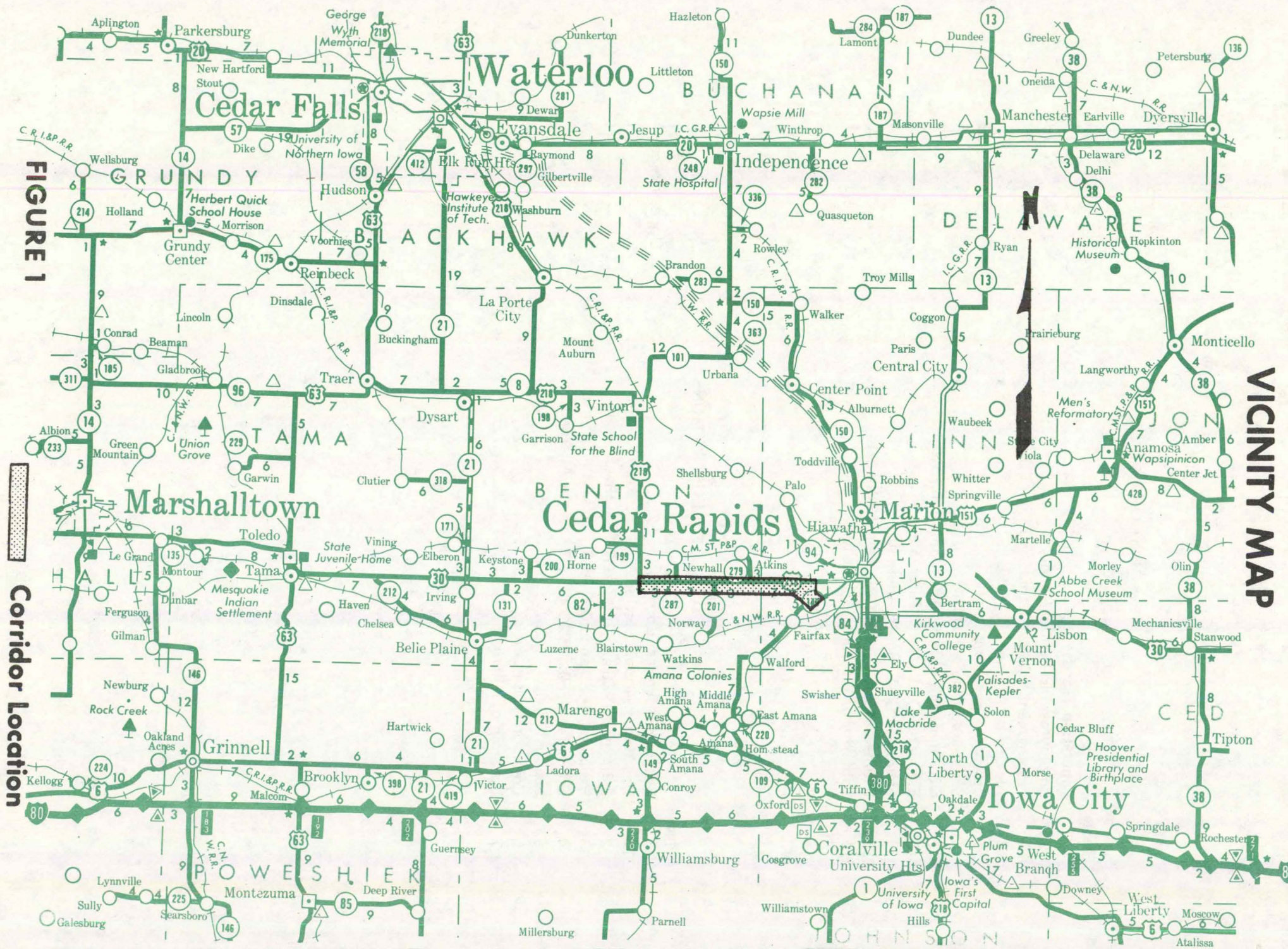


FIGURE 1

Corridor Location

VICINITY MAP

FEDERAL HIGHWAY ADMINISTRATION
ADMINISTRATIVE ACTION
FINAL ENVIRONMENTAL STATEMENT (SUPPLEMENTAL)

U.S. 30
BENTON AND LINN COUNTIES, IOWA

SUMMARY OF STATEMENT
MARCH, 1978

Project Description

The proposed project involves consideration of a segment of U.S. 30 in Benton and Linn Counties. The project begins at U.S. 218 in Benton County and ends just west of Iowa 149 in Linn County. The location of the project can be seen in Figure 1. The proposed facility would replace the existing two-lane highway with a four-lane divided highway with access limited to 0.5 mile intervals. The length of the project is approximately 16 miles.

Actions Required By Other Federal Agencies

No subsequent federal actions due to this proposed action are required.

Probable Environmental Impacts

The environmental impact of the proposed project includes the estimated displacement of 29 homes and seven businesses. It would also divert 425 acres of land used primarily for agriculture to highway use. Noise levels and highway-related air pollution are expected to increase slightly.

Benefits to be derived from the project include a safer and more efficient transportation system for local and through traffic. This project would also serve to complete a bypass for most of U.S. 30 and U.S. 218 through Cedar Rapids.

Alternatives

Four alternatives were considered for this project. They included an alternate utilizing the present alignment of U.S. 30; an alternate on new location 0.5 mile north of present U.S. 30; and an alternate on new location 0.5 mile south of present U.S. 30. The fourth alternate considered was the "Do-Nothing" alternative.

These alternates were contained in the Draft Environmental Statement (FHWA-IA-EIS-71-14-D) and the Final Environmental Statement (FHWA-IA-EIS-71-14-F). However, in view of the Iowa Department of Transportation's attempt to minimize the conversion of prime agricultural land to highway right-of-way purposes a new concept was developed along the present alignment of U.S. 30. This new concept, which is contained in

this Supplemental Statement, considers a modified access design which utilizes much of the existing facility and would be constructed in two phases. This new concept would also require taking much less of the prime farm land in this area.

The Iowa Department of Transportation Commission on August 23, 1977, authorized the design and ultimate construction of the Present Alignment Alternate utilizing the new concept.

Reviewing Agencies

A Supplemental Draft Environmental Statement for this project was sent to the following reviewing agencies and individuals.

Federal Agencies:

- Department of Housing and Urban Development
- Department of Agriculture
- Department of Interior
- Department of Health, Education, and Welfare
- Environmental Protection Agency
- Army Corps of Engineers
- Federal Aviation Administration
- Federal Railroad Administration
- Federal Energy Administration
- U.S. Coast Guard

State Agencies:

- Office of Planning and Programming
- Iowa Development Commission
- Iowa Department of Soil Conservation
- Iowa Conservation Commission
- Iowa Natural Resources Council
- Iowa Department of Environmental Quality
- Iowa State Historical Society
- State Historic Preservation Officer
- Office of State Archaeologist
- Iowa Department of Agriculture

Local Agencies:

- Benton County Board of Supervisors
- Benton County Conservation Board
- Linn County Board of Supervisors
- Linn County Conservation Board

Linn County Regional Planning Commission
Mayor, City of Cedar Rapids
East Central Iowa Association of Regional Planning Commissions

Private Organizations:

Iowa Confederation of Environmental Organizations

The Draft statement was made available to the Council on Environmental Quality on March 11, 1977.

The following persons can be contacted for additional information concerning this proposed project and environmental impact statement.

H. A. Willard, Division Administrator
Federal Highway Administration
Ames, Iowa 50010
Telephone 515-233-1664

Robert L. Humphrey, Project Planning Engineer
Iowa Department of Transportation
Highway Division, Office of Project Planning
Ames, Iowa 50010
Telephone 515-296-1225

LOCATION OF 4-LANE SECTION ON PRESENT U.S. 30

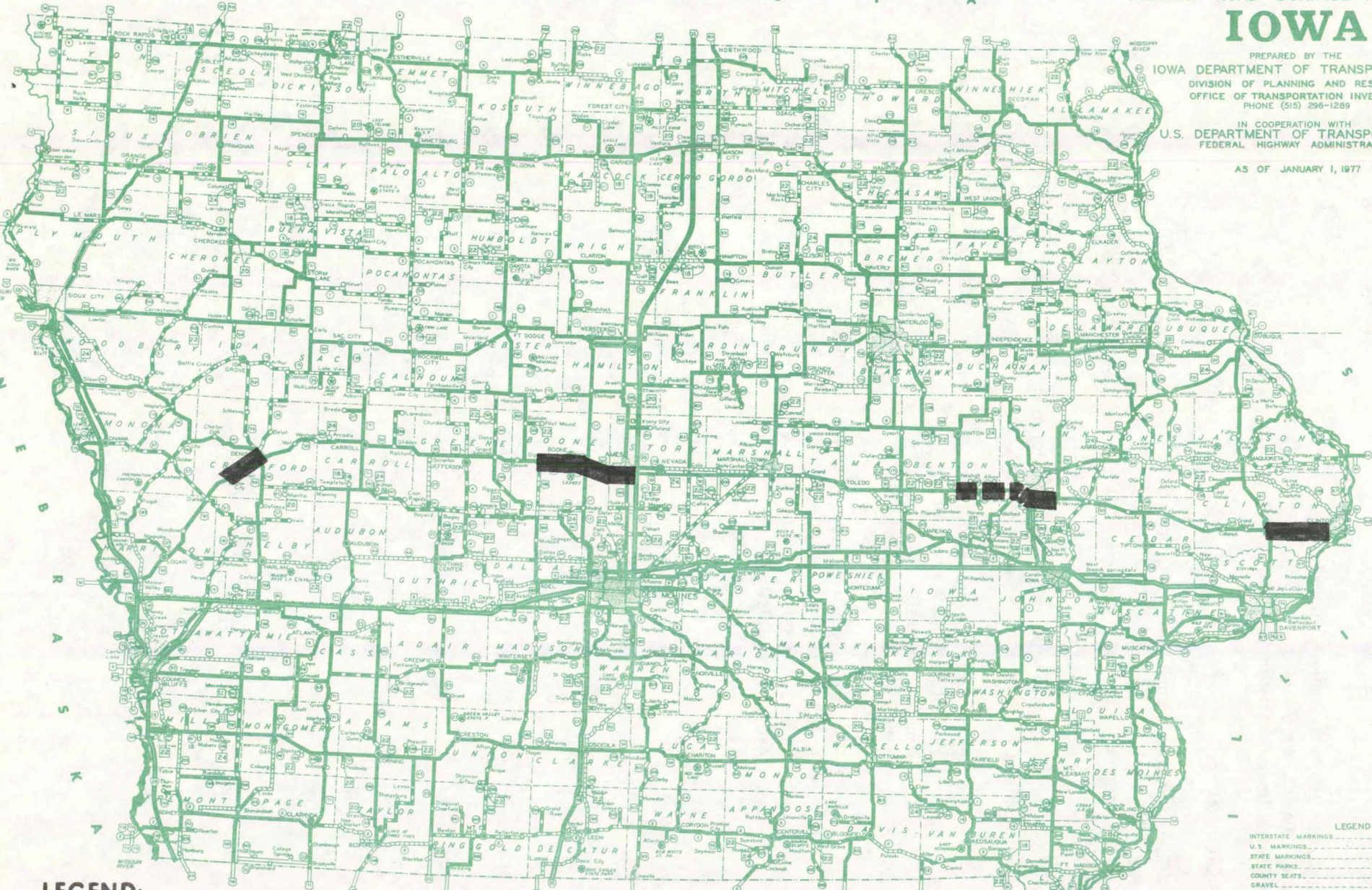
M I N N E S O T A

PRIMARY ROAD SURFACE WIDTH MAP
IOWA

PREPARED BY THE
IOWA DEPARTMENT OF TRANSPORTATION
DIVISION OF PLANNING AND RESEARCH
OFFICE OF TRANSPORTATION INVENTORY
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IN COOPERATION WITH
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

AS OF JANUARY 1, 1977



LEGEND:

-  PRESENT 4-LANE
-  TO BEGIN 4-LANE CONST. IN 1978
-  PROJECT AREA CONTAINED IN THIS E.I.S.

- LEGEND**
-  INTERSTATE MARKINGS
 -  U.S. MARKINGS
 -  STATE MARKINGS
 -  STATE PARKS
 -  COUNTY SEATS
 -  18 FOOT
 -  20 FOOT
 -  22 FOOT
 -  24 FOOT
 -  4 LANE
 -  DESIGNATED CONSTRUCTION SURFACE WIDTH

NEED FOR PROJECT

Present U.S. 30 is a major transcontinental route across the northern half of the United States. The route extends from Portland, Oregon to Atlantic City, New Jersey. U.S. 30 is a major arterial route across Iowa passing through the cities of Carroll, Ames, Marshalltown, Cedar Rapids, and Clinton.

The section of U.S. 30 under consideration in Linn County was paved in 1926 and the section in Benton County in 1927. Both sections were paved to a width of 18 feet. In 1949 and 1950 these sections were widened to 24 feet and resurfaced. They were again resurfaced in 1964 and 1976.

The present facility follows a straight horizontal alignment, however, the vertical geometrics are deficient resulting in several miles of no-passing zones. The number of accidents on U.S. 30, between U.S. 218 and the west corporate limits of Cedar Rapids, have ranged from 32 to 50 per year over the past five years. In 1975, there were 42 accidents including one fatality. The accident rate for this section of U.S. 30 in 1975 was 1.28 per million vehicle miles. The statewide accident rate for rural primary highways was 1.68.

The 1977 sufficiency rating for U.S. 30 in the project area ranges from 16 to 25 which falls within the critical range. Sufficiency ratings are composed of three major categories which measure the roadway's structural adequacy, safety and capability to accommodate specific traffic volumes with a minimum of conflict. A rating of 90-100 is classified as excellent; 80-89 is good; 65-79 is fair; 50-64 is tolerable; and 0-49 is critical.

The need for improvement in the project area is also evidenced by high traffic volumes. The estimated 1980 and 2000 average daily traffic for each of the three alternates under consideration are shown in Figures 2, 3 and 4. The estimated 1980 average daily traffic ranges from 6630 at U.S. 218 to 17,800 at the east end of the project near Cedar Rapids.

U.S. 30 was designated as part of Iowa's Expressway System which was adopted by the Iowa State Highway Commission in 1968. Iowa's 1976 Transportation Plan revised the previously designated Freeway-Expressway System with a proposed State Arterial Highway System. U.S. 30 has been included in this Arterial System with heavily traveled segments slated for four-lane construction by the year 1992. Portions of U.S. 30 have been built to four-lanes as shown in Figure 1A. They include a 7-mile section between Dow City and Denison; a 24-mile section from Ogden to Interstate 35 southeast of Ames; a 7-mile section from U.S. 218 in Cedar Rapids to Iowa 13; and a 20-mile section from DeWitt to Clinton. Right-of-way is now being acquired for the relocation of U.S. 30 from U.S. 218, south of Cedar Rapids, northwesterly to Iowa 149. A temporary connection will be provided, as part of this project, from the end of the project just west of Iowa 149 northerly following Stoney Point Road to present U.S. 30. The grading for this four-lane segment is scheduled to begin in 1978.

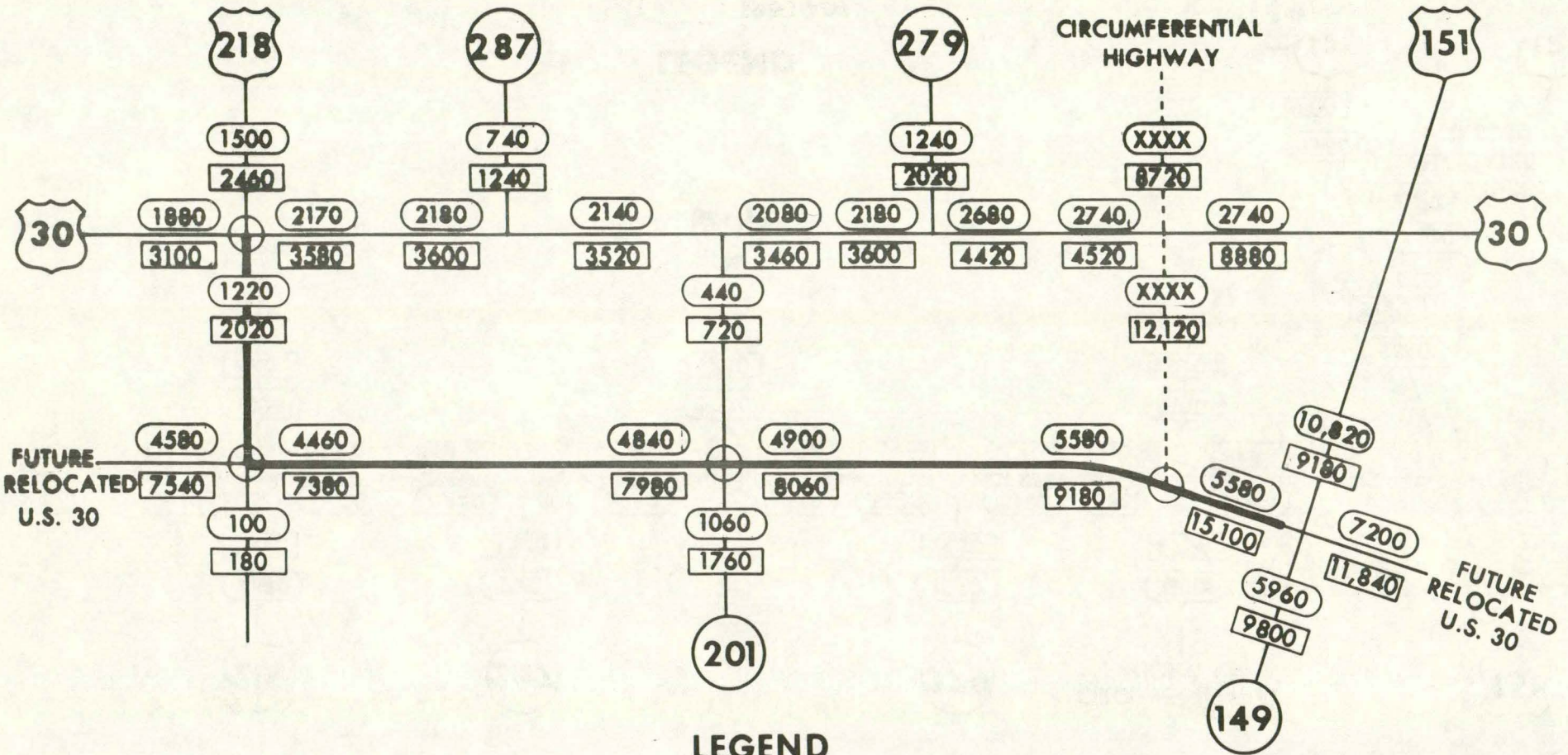
A planning report was prepared for this project in May, 1970. Corridor public hearings were held in June and November, 1970. A draft environmental statement was approved by

the Federal Highway Administration in November, 1971 and the final environmental statement, which recommended the south alternate, was approved by the Federal Highway Administration in May, 1972. Location approval was granted by the Federal Highway Administration, for the south alternate, in October, 1972.

Due to the growing concern for minimal usage of agricultural land for highway right-of-way purposes a restudy was conducted in the Spring of 1976 to determine if a different concept could utilize the existing alignment of U.S. 30. This restudy was published in April, 1976, and an informational meeting was held in August, 1976, which covered the change in concept on the existing alignment of U.S. 30.

A request for retraction of location approval for the south alternate was submitted by the Iowa Department of Transportation in October, 1976. This Supplemental Environmental Impact Statement assesses the impact of a four-lane concept utilizing the existing alignment which was not contained in the 1971 Draft Environmental Statement or 1972 Final Environmental Statement. This U.S. 30 project, from U.S. 218 to Iowa 149, is scheduled for right-of-way acquisition in fiscal year 1981 and for Phase 1 grading in 1982 in the current Five-Year Construction Program.

**ESTIMATED 1980 AND 2000 AVERAGE DAILY TRAFFIC
ON THE SOUTH ALTERNATE
AND RESIDUAL TRAFFIC ON U.S. 30**

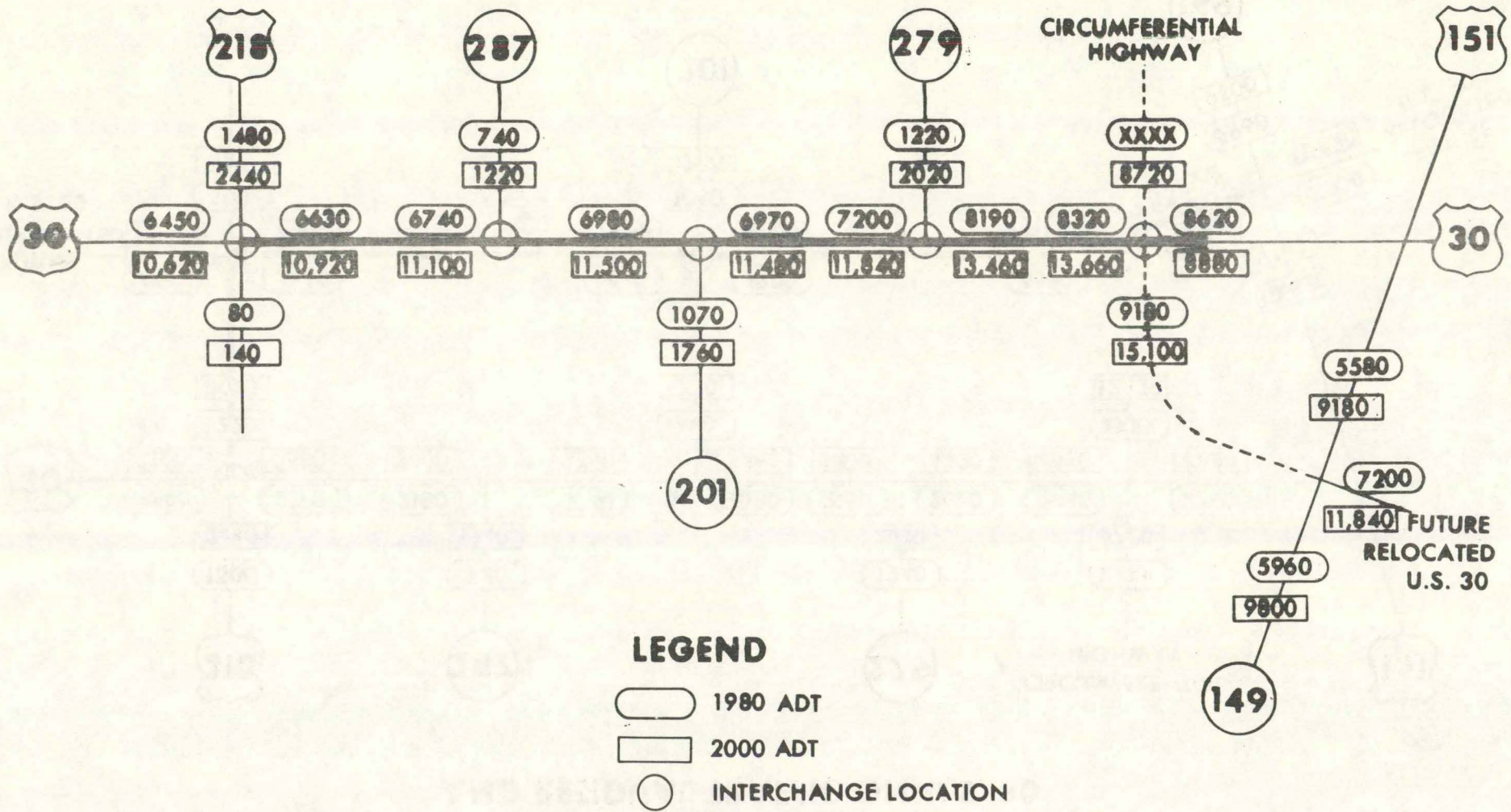


LEGEND

- 1980 ADT
- 2000 ADT
- INTERCHANGE LOCATION

Figure 2

ESTIMATED 1980 AND 2000 AVERAGE DAILY TRAFFIC ON PRESENT U.S. 30 ALIGNMENT



LEGEND

- 1980 ADT
- 2000 ADT
- INTERCHANGE LOCATION

Figure 3

**ESTIMATED 1980 AND 2000 AVERAGE DAILY TRAFFIC
ON THE NORTH ALTERNATE
AND RESIDUAL TRAFFIC ON U.S. 30**

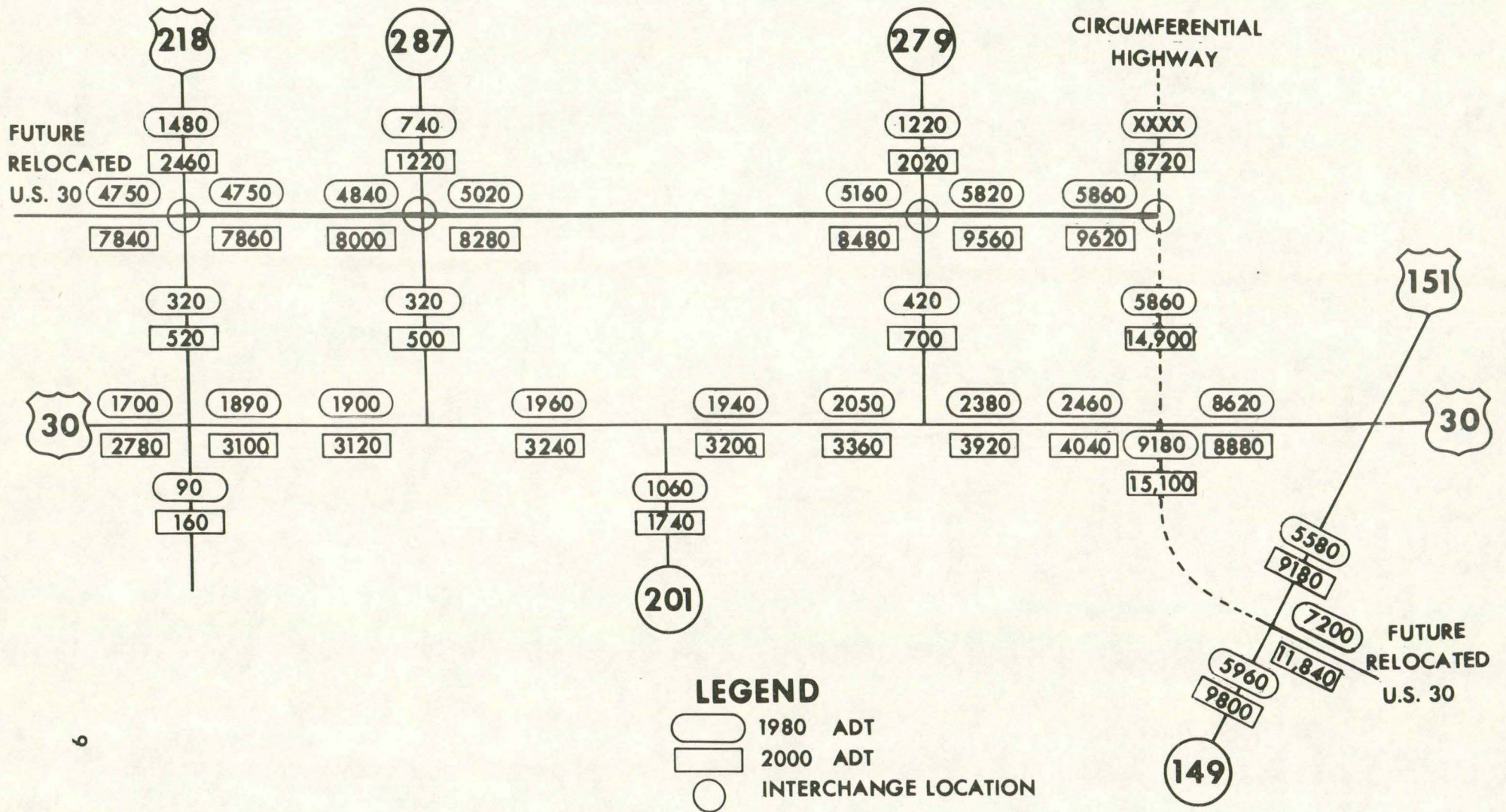


Figure 4

DESCRIPTION OF THE PROPOSED ACTION

The proposed project is to improve the existing two-lane segment of U.S. 30 between U.S. 218 in Benton County and Iowa 149 in Linn County. The proposed action will provide for a four-lane divided facility with the median width determined in the design phase. A 64-foot wide median was used for estimating purposes in this supplement.

The standards for this project will provide for interchanges at primary road intersections, at grade crossings for county roads and one intermediate access per mile. All access will be purchased and access roads will be constructed where necessary from farms or businesses to a crossroad. Exact location of access roads and intermediate access points will be determined in the design phase.

The proposed corridor under consideration is all within a rural area. However, the eastern portion of the project, in Linn County is included in the Cedar Rapids Urbanized Area and is beginning to develop with a number of new homes and mobile home parks. The length of the project is approximately 16 miles.

The Supplemental Draft Environmental Statement included a connection from present U.S. 30 to Iowa 149 on new location. This connection followed the alignment of the proposed Cedar Rapids Circumferential Highway. A definite alignment for this highway has not been established at this time. Therefore, the location of the connection from U.S. 30 to Iowa 149 and the location and type of interchange with U.S. 30 will be determined in the future after completion of a location study for the Circumferential Highway.

SOCIAL, ECONOMIC, AND ENVIRONMENTAL CONTEXT OF THE AREA

Summary of Technical, Social, and Economic Studies

During the years that the U.S. 30 Expressway project has been under consideration, the Iowa Department of Transportation and the Benton and Linn County Regional Planning Commissions have prepared various studies depicting the social, economic, and environmental features of the area and identifying community policy objectives and plans. These reports have been used in the examination of the content of the project and, as such, the information presented in these studies will be summarized here.

Cedar Rapids Origin and Destination Traffic Study (1965) - This report was prepared by the Iowa State Highway Commission and provides information on the travel habits of residents of Cedar Rapids as well as those passing through survey stations located outside of the city, such as the one contained in this study, which was located on U.S. 30, west of the corporate limits of Cedar Rapids. This information has helped to determine the relationship between land development and travel patterns, and to form a reliable foundation for making future travel projections.

Planning studies prepared in recent years by the Iowa Department of Transportation include the U.S. 30 Expressway Planning Report for Benton and Linn Counties published in May, 1970, the Final Environmental Impact Statement for the U.S. 30 Expressway in Benton and Linn Counties published in March, 1972, and the U.S. 30 Location Restudy for Benton and Linn Counties published in April, 1976. The original planning report completed in 1970 and the Final Environmental Impact Statement completed in 1972 studied the social, economic, and environmental effects of three possible alternate locations for the U.S. 30 Expressway in the study area. An alignment 0.5 mile south of the existing highway was recommended in both studies. The Location Restudy completed in April, 1976, briefly studied upgrading the existing alignment to a four-lane facility. An additional report, the Final Environmental Impact Statement for Interstate 380 in Cedar Rapids also contains some social and economic data relevant to the U.S. 30 project area under study.

1990 Transportation Plan: Cedar Rapids - Marion Metropolitan Area (December, 1970) - This report was prepared by the Linn County Regional Planning Commission and presents transportation plans for the Metropolitan Area integrated with the future land use plans of the City and the Immediate surrounding rural environs. The design consideration included in the report provides for a rational balance of public facilities and private land development. The Transportation Plan includes the Circumferential Highway and relocated U.S. 30 southwest of Cedar Rapids, located between Iowa 149 and U.S. 218.

1995 Major Street Plan - Linn County Metropolitan Area Technical Report (Adopted August 1974 - Ammended August 1976) - This report was prepared by the Department of Planning and Redevelopment for the Linn County Regional Planning Commission and emphasizes the "re-appraisal and advancement of the Major Streets portion of the 1990

Plan" for Cedar Rapids, Marion, Hiawatha, Robins and adjacent unincorporated areas. The re-evaluation is based on "relating known travel patterns to basic socio-economic data, such as, population, employment, autos and land use within the study area." Future travel patterns can be made from the preceding estimates. This street plan also includes the Circumferential Highway and relocated U.S. 30 southwest of Cedar Rapids. However, the location of the Circumferential Highway is shown one mile west of the location shown for it in the 1990 Transportation Plan.

Physical Factors For Planning - Benton County, Iowa (July, 1972) - This report was prepared by the Benton County Regional Planning Commission as Phase One in the preparation of a long range Comprehensive Plan for the county. The report summarizes the existing land use, the housing element, the natural and cultural resources, and streets, thoroughfares and transportation. Reference is made, in the report, to upgrading U.S. 30, across Benton County, to expressway standards.

These reports are available at the Office of Project Planning, Highway Division, Iowa Department of Transportation.

Natural Environment

The soils of Iowa are grouped into soil associations indicating areas within which a repeating pattern of soil types are found. In Benton County, the proposed project starts in an area of Tama-Muscatine soil association and proceeds into the Kenyan-Floyd-Clyde association to terminate in the same soil association in Linn County. Both of these soil types have a high productive capacity with favorable climatic conditions.

The average precipitation in the Benton and Linn County area amounts to 33 inches per year, with 19.5 inches normally falling in the five month period of May through September. Because of the plentiful rainfall during the growing season, the climate is ideal for agriculture.

The mean annual temperature in this area is 48 degrees F. and varies from 22 degrees F. in January to 75 degrees F. in July. Prevailing winter winds are from the northwest and are generally stronger than the humid summer winds, which prevail from the southwest.

Social Environment

Population growth patterns within Benton County are similar to those recorded throughout the state which show a gradual shift in population from rural to urban. In Linn County population growth patterns have shown a steady growth rate since 1950. Population trends in Benton and Linn County are shown in Table 1. Current estimates by the Linn County Regional Planning Commission predict a 41.9% increase to 195,300 by the year 1995 for the Cedar Rapids metropolitan area including Marion, Hiawatha, Robins and adjacent unincorporated areas. This area had a population of 137,663 in 1970.

TABLE 1

STUDY AREA POPULATION TRENDS

	1970	1960	1950	1960-1970 % Change	1950-1960 % Change
Benton County	22,885	23,422	22,656	-2	+3
Rural	9,325	10,345	10,622	-9	-2
Urban	13,560	13,077	12,034	+3	+8
Linn County	163,213	136,899	104,274	+19	+31
Rural	20,180	22,093	17,388	-8	+27
Urban	143,033	114,806	86,886	+24	+32
State of Iowa	2,825,041	2,757,537	2,621,073	+2	+5
Rural	756,812	849,605	925,110	-11	-8
Urban	2,068,229	1,907,932	1,695,963	+8	+12

Source: 1970 U.S. Bureau of Census Report

According to the 1972 Statistical Profile of Iowa only 0.1% of the Benton County population is non-white while the figure in Linn County (also in Cedar Rapids) is 1.5%.

Land use in the project area is almost entirely agricultural. In fact, 97.1% of the total land acreage in Benton County and 86.2% of the total acreage in Linn County is in agricultural use. In Benton County, where the average farm size in 1970 was 256 acres, 48.8% of the total farms were operator owned while 51.2% of the farms were rented by the operator. In Linn County, where the average farm size in 1970 was 187 acres, a greater number of the operators, 56.4% owned their own farms. It is a fact that many farms in Iowa stay in the same family for several generations as they are generally passed down from parents to their children.

The following discussion of public facilities and services includes a description of fire and police protection, health centers and ambulance service, educational facilities, religious institutions and public utilities in the project area.

Fire protection in the project area is provided by volunteer fire departments from the surrounding communities of Van Horne, Newhall, Norway, and Atkins. Areas within the city limits of Cedar Rapids are served by the fire department of that city.

Police protection in the rural areas of Benton and Linn Counties is provided by the respective county sheriffs offices. Police protection in Cedar Rapids is provided by a personnel force of 153. The communities of Van Horne, Newhall, Norway, and Atkins also have police protection.

Hospital and medical care in the study area is provided almost exclusively by the Cedar Rapids and Vinton communities. Hospitals in Cedar Rapids include Mercy, a 415-bed facility and St. Luke's Methodist, a 620-bed hospital. There are two ambulance services in Cedar Rapids, one of which is based at Mercy Hospital. Virginia Gay Hospital and the North Benton Ambulance Service are both located in Vinton.

There are several religious institutions located in communities near the study area. Van Horne and Norway both have Catholic, Lutheran, and Methodist Churches; Newhall has a Catholic, a Lutheran and a Presbyterian Church; Atkins has a Lutheran and a Presbyterian Church; and, Watkins has a Catholic Church. In addition, Cedar Rapids has 108 congregations of 54 denominations.

Automotive and bus movement to and from educational facilities is an influencing factor in transportation planning. Highways have been associated with major advancements in public education since the turn of the century. Small rural schools which were commonplace a few years ago have been consolidated into municipal areas where possible within each school district. The demand for improved education has caused a consequent upgrading of teaching and educational facilities. Without bussing of students within the school district, consolidation would not have been possible.

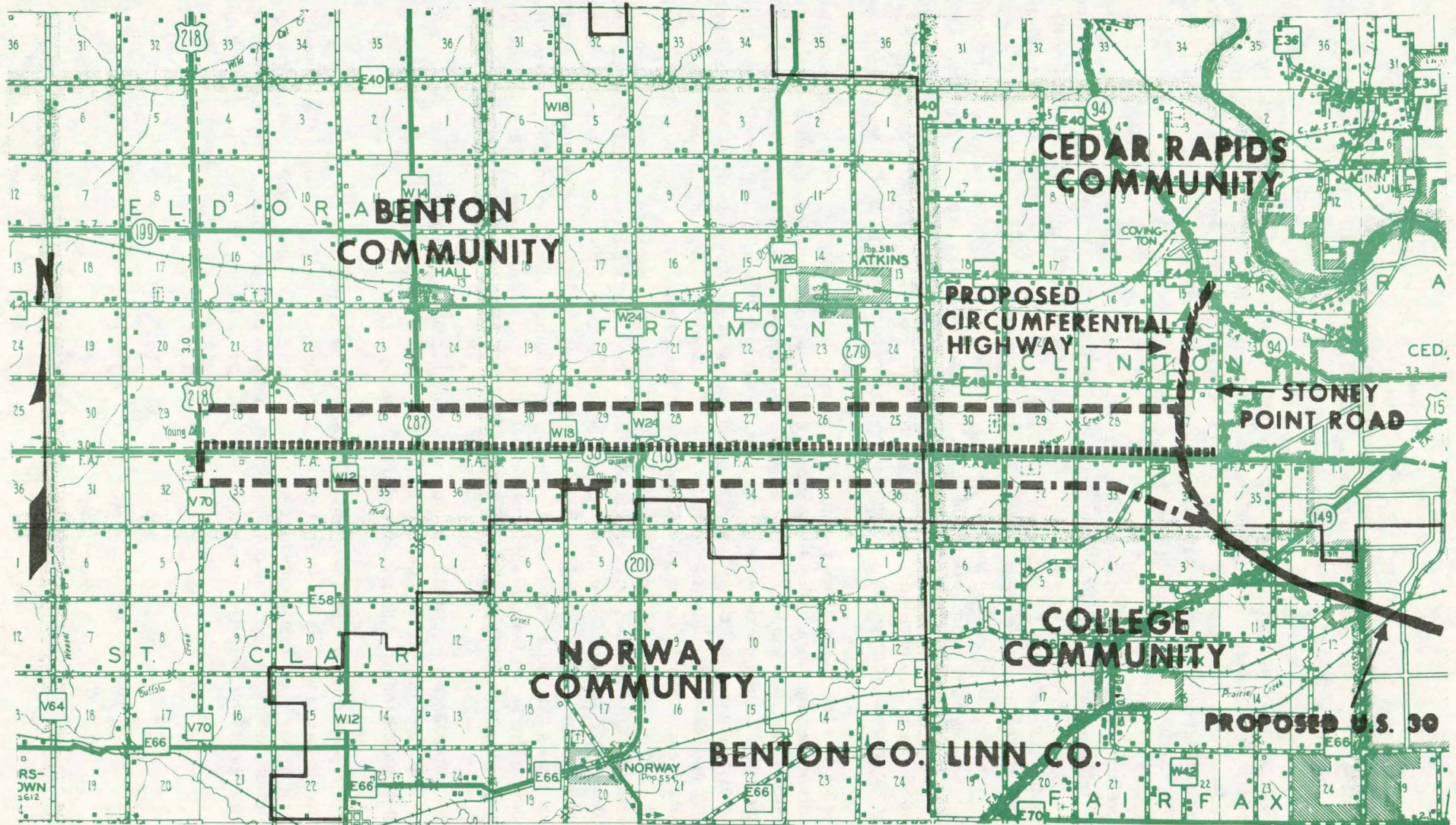
The map shown in Figure 5 indicates boundaries of the three school districts involved in the project study area. The Benton Community School District which encompasses the U.S. 30 project area in Benton County has an elementary school in Atkins, an elementary and junior high school in Newhall and a senior high school in Van Horne. Parochial schools in the Benton County study area are located in Atkins and Newhall. The Cedar Rapids Community School District is served by 28 elementary schools, 6 junior high schools, and 3 high schools, all located in Cedar Rapids. Residents of the school district in the U.S. 30 study area attend schools located in the southwest attendance area of the city. The schools located in that area are Coolidge, Truman and Hoover Elementary Schools, Taft Junior High School and Jefferson High School. Several parochial elementary and senior high schools are also located in Cedar Rapids.

The final school district located in the proposed study area is the College Community School District. All of the districts' schools (two elementary, one intermediate, one junior high, and one senior high) are located in southwestern Cedar Rapids.

The bussing systems of the Benton and Cedar Rapids Community School Districts utilize existing U.S. 30 for a good part of their routes both in transporting students from the rural areas as well as between communities.

There are three colleges located in Cedar Rapids. Coe College is a four-year liberal arts college with 1200 full-time students. Its campus, located downtown, is the focal point for most of the cultural activities in Cedar Rapids. Mt. Mercy College is a four-year liberal arts college with an enrollment of 744 students. Kirkwood Community College is the Area X vocational-technical school serving Cedar Rapids and the immediate seven-county area,

SCHOOL DISTRICTS WITHIN THE U.S. 30 EXPRESSWAY CORRIDOR



LOCATION OF ALTERNATES

NORTH ALTERNATE ————
SOUTH ALTERNATE - · - · - ·

PRESENT ALIGNMENT ·········
ALTERNATE

Figure 5

including Benton and Linn Counties. The college, which is within commuting distance from the entire area, offers 45 career programs. The 1976 enrollment includes approximately 3,600 students in the vocational-technical and arts and sciences programs.

Rural projects do not involve as many public utilities as urban projects. However, telephone lines and electrical power lines, either located overhead or buried underground, run adjacent to U.S. 30 and all intersecting side roads along the entire project length. No power substations, metering stations, or natural gas pipelines are located in the project corridor.

Several modes of transportation other than highways have become an integral part of the total transportation system in Benton and Linn Counties. The C.M. St. P. & P. Railroad line runs adjacent to, and two miles north of, existing U.S. 30 in the project area. The line runs across the state of Iowa from Council Bluffs and Sioux City on the western border to north of Clinton, on the eastern border. The C. & N.W. Railroad line runs adjacent to, and three to four miles south of U.S. 30 in the project area. The line also crosses the state, as it runs from Missouri Valley to Clinton. A third line, the C. R. I. & P. Railroad line runs from Mason City south through Vinton, Cedar Rapids, Davenport, and Burlington. The Illinois Central Gulf Railroad provides service to Cedar Rapids from its main line at Manchester. The Cedar Rapids and Iowa City Railway Company provides service between these two cities.

Airports in the study area are located in Vinton and Cedar Rapids. The Vinton Municipal Airport is classified as a basic utility airport and has a 2600-foot long paved runway and a 1700-foot long turf runway. The Cedar Rapids Municipal Airport is classified as an air carrier airport and has two paved runways, 7000 feet and 5700 feet long. The airport provides passenger and cargo service to such cities as Ottumwa and Des Moines, Iowa; Moline and Chicago, Illinois; Rochester and Minneapolis, Minnesota; Sioux Falls, South Dakota; Kansas City, Missouri; Omaha, Nebraska; and Denver, Colorado.

Scheduled intercity bus service in Benton and Linn Counties is provided by five carriers, Continental Trailways, Greyhound Lines, Jefferson Lines, Missouri Transit and Scenic Hawkeye Stages. Only two of the bus lines, however, utilize U.S. 30: Greyhound Lines, which travels U.S. 30 across the state, and Jefferson Lines, which travels U.S. 218 from the Minnesota border to Cedar Rapids. The other three carriers originate in Cedar Rapids and utilize other routes going north and south.

The importance of aesthetics in our daily lives has substantially increased. Art and the visual impact of objects have become of great concern as people are recognizing the positive psychological benefits of pleasing views and attractive spaces.

The topography within the proposed corridor is almost entirely open, rolling, and cultivated farmland. The landscape is in tillage much of the year offering the motorist a panoramic view of Iowa's greatest natural resource. Non-tilled areas support vigorous vegetation, which in turn not only supports wildlife, but also creates a variety of pleasing views. About the only visual intrusion into this setting is the farmsteads which dot the

countryside and an occasional commercial establishment (i.e., motel, service station, or cafe), located adjacent to U.S. 30. Most farmsteads in the study area contain a grove of trees, as well as the usual farm buildings. A few small streams are crossed by the U.S. 30 alignment. Mud Creek, located in Benton County and Morgan Creek, located in Linn County, are both situated in gently rolling basins, and are almost entirely used for agricultural purposes. No large areas of timber exist near the highway corridor; however, a commercial apple orchard located approximately one mile west of Cedar Rapids provides an aesthetically attractive area as viewed from the highway. As one nears the Cedar Rapids Metropolitan Area, the buildup of residential and commercial areas can be seen on both sides of the highway. Gently rolling agricultural farmland again is the predominant feature southwest of Cedar Rapids, in the area of the proposed Circumferential Highway. No examples of multiple use of space currently exist along the highway corridor.

There are no county or state parks located within the immediate study area. However, Benton County contains eight county recreation areas, the closest of which is located approximately 7 miles south of U.S. 30, near Blairstown. Palisades-Kepler State Park, located approximately 9 miles east of Cedar Rapids, just south of U.S. 30, is the only state park in the two county study area. Linn County also contains several county conservation areas; these include five county parks, six public use areas, four game management areas, four preserves, and two historical areas. The closest areas to the U.S. 30 corridor are Morgan Creek Park, located 1.5 miles north of U.S. 30 at the WCL of Cedar Rapids and the Rock Island Preserve, located approximately 4 miles north of U.S. 30, just east of Cedar Rapids.

Economic Setting

In Benton County, the project corridor is located in a rural environment which is economically dominated by agriculture. Land use in the project area is nearly 100% agricultural, and little development exists which is not agriculturally oriented.

Employment as with land use, is also dominated by agriculture in the Benton County portion of the project. As evidenced in Table 2, nearly one out of every four workers is engaged in agricultural occupations.

TABLE 2

EMPLOYMENT IN BENTON COUNTY - 1970

Professional, Technical, and Kindred	570
Managers and Administrators	657
Sales Workers	399
Clerical and Kindred	1,032
Craftsmen, Foremen and Kindred	938
Operatives	1,398
Laborers	372
Farmers and Farm Managers	1,451
Farm Laborers and Foremen	433
Service Workers	1,185
TOTAL	8,435

The Linn County segment of the project corridor is also heavily influenced by agriculture; however, this section is located adjacent to the Cedar Rapids metropolitan area, which is the center of economic activity for the entire study area. The Linn County portion is somewhat of a transitory zone between rural and urban environments. A few small commercial enterprises and some non-farm residential development are apparent in this section of the project corridor.

There are no manufacturers or processors in the project area or in the small communities adjacent to the project corridor. Cedar Rapids, however, contains over 200 manufacturers and processors, employing over 27,000 persons, and provides the major source of non-agricultural employment in the study area. Five of these manufacturers employ over 1000 workers each. They are Collins Radio Co. - data processing equipment; Iowa Mfg. Co. - asphalt pavers; Link-Belt Speeder, Division of FMC Corp. - power shovels and cranes; Quaker Oats Co. - grain products; and Wilson & Co., Inc. - canned meats. In addition, St. Lukes and Mercy Hospitals both employ over 1,000 persons.

Table 3 gives the 1970 employment figures for the Cedar Rapids Metropolitan Area and for Linn County.

TABLE 3
EMPLOYMENT IN CEDAR RAPIDS AND LINN COUNTY-1970

	Cedar Rapids	Linn County
Professional, Technical & Kindred	7,663	10,472
Managers & Administrators	4,120	5,595
Sales Workers	4,086	5,344
Clerical & Kindred	8,420	11,510
Craftsman, Foremen & Kindred	5,792	8,692
Operatives	8,439	12,282
Laborers	1,765	2,499
Farmers & Farm Managers	53	1,432
Farm Laborers & Foremen	170	514
Service Workers	5,721	7,928
TOTAL	46,229	66,268

As evidenced by the employment figures, Linn County is much more industrialized than Benton County, mainly due to the influence of the Cedar Rapids Metropolitan Area. Even though the labor force in Linn County is approximately eight times greater than the labor force in Benton County, the number of workers engaged in agriculture in the two counties, is nearly equal.

A few commercial establishments, such as gas stations, cafes, and motels are located adjacent to U.S. 30 in the rural portions of the project area. They depend upon motorists using U.S. 30 for their economic livelihoods.

The total per capita income for the counties involved in the U.S. 30 corridor compare very favorably with the national and statewide average per capita incomes as shown in the following table:

TABLE 4
PER CAPITA INCOME - 1973

U.S. (Base)	\$5,041
Iowa	\$5,347
Benton County	\$5,338
Linn County	\$5,365

Today's concept of agriculture includes production, processing, manufacturing, servicing, utilization and marketing. It is this agricultural family that forms an important foundation for Iowa's expanding economy.

Iowa farmers produce over 7 billion dollars worth of crops and livestock each year. In fact, Iowa leads the nation in livestock marketing, producing over 23% of the nation's pork supply and 12% of the nation's grain fed beef supply. Because of these facts, the value of Iowa's farmland has risen dramatically in the last several years. In 1965, the average value of an acre of farmland was \$279. In 1975, the average was \$801/acre, an increase of 287%. In 1975 the average value of land in Benton County was \$978/acre while in Linn County it was \$1,021/acre.

LAND USE PLANNING

Land use in the study area is primarily agricultural, although spot commercial development has occurred adjacent to U.S. 30 at a few isolated locations in both Benton and Linn Counties. The majority of the commercial establishments located in the corridor are of the motel-cafe-gas station variety; others include a bridal boutique, a junk yard-auto body shop, a commercial orchard and a building contractor. A small area of residential development has also occurred adjacent to U.S. 30 in Benton County, five miles east of the U.S. 218-U.S. 30 Junction.

Benton County currently has no zoning regulations and has no plans for future zoning. Linn County, on the other hand, does have existing zoning regulations and a future land use plan. The rural portions of the project located between the Benton County Line and the West Corporate Limits of Cedar Rapids, as well as the area southwest of the city, are presently zoned agricultural.

The Linn County Regional Land Use Plan was prepared by the Linn County Regional Planning Commission as a documentation of the future land use policies of urbanized Linn County and the smaller incorporated areas and unincorporated parts of the county. The future county-wide plan shows that, for the most part, land in the Linn County project corridor is designated agricultural. There are small areas designated commercial just west of the west corporate limits of Cedar Rapids and at the proposed interchange with the Circumferential Highway. An open space corridor has been reserved for the circumferential highway and the improvement of U.S. 30. Morgan Creek, which crosses U.S. 30 approximately 2.5 miles west of Cedar Rapids, has also been designated as an open space corridor.

A review of federal projects in Benton and Linn Counties shows no pending federal actions which would be in conflict with the proposed project.

PROBABLE IMPACT OF THE PROPOSED ACTION ON THE ENVIRONMENT

Natural, Ecological or Scenic Resources

The project area in southeastern Benton and southwestern Linn Counties consists of gently rolling, mostly agricultural land transected by only a few small streams. Timber in the region is confined mainly to groves located on farms and in sparse lands adjacent to the waterways. Tall grasses are found periodically along these waterways and along fence rows, ditches alongside county roads, railroad right-of-way, and highway right-of-way.

One of the two largest population concentrations of the Ring-necked Pheasant within the State is in east-central Iowa. The pheasant is found in the grasses adjacent to the small streams, in grassy draws alongside cultivated fields, along heavily vegetated fence rows, in the grassy ditches adjacent to county gravel roads, along properly vegetated railroad right-of-way and along existing highway right-of-way where the conditions are similar.

Cottontail Rabbit are found in many of the same areas as the pheasant, although in smaller numbers due to a lack of another prime rabbit habitat, timbered regions. The Fox Squirrel is found in the small stands of timber previously described, although not in abundant numbers, again due to the lack of proper habitat. Other mammals that may be found in the area, but to a lesser extent include the Red Fox, Raccoon, Striped Skunk, and a variety of small rodents.

Songbirds such as the Mourning Dove, Turtle Dove, and Meadowlark as well as an occasional Red-Winged Blackbird are found along the drainage areas. Other birds indigenous to the region are crows, sparrows, and occasionally Chickadees and starlings. There are no known threatened or endangered species in the project area.

Nearby fields supply a source of food for the wildlife. The proposed project will disturb the wildlife habitat somewhat during construction, however, the increase in right-of-way will provide more wildlife habitat after completion of the project.

The Iowa Department of Transportation does not mow any established highway rights-of-way until after July 1. This policy was instituted to insure that nesting habitat within the right-of-way would not be disturbed during the peak nesting period. After July 1, mowing is restricted to medians and to cutting a single swath along foreslopes. Backslopes and ditch bottoms are left in their natural state. Bridge berms and similar areas are planted with ground cover vegetation such as crown vetch, thus eliminating the need for mowing.

Blanket spraying of rights-of-way is not practiced. The use of herbicides, mainly 2, 4-D, is limited to the control of isolated noxious weeds. When spot spraying is necessitated, the herbicide is applied in an emulsion form to minimize drift.

Control of outdoor advertising is provided by Iowa law. It defines what types of outdoor advertising will be permitted within visibility of the roadway of primary and interstate

highways in Iowa, restricts their location and spacing, sets standards for size and lighting, and provides for the removal of those signs which fail to comply with these regulations. This law establishes a permit system whereby all owners of signs regulated by the provisions of the legislation, except for signs specifically exempted, are required to make application for a permit and pay a fee for the privilege of display. These permits facilitate the Highway Division in monitoring the location and erection of outdoor advertising devices, and monies from the fees collected are deposited in the highway beautification fund.

The proposed action of providing a four-lane facility will result in a more efficient facility in terms of energy expenditure. Present U.S. 30 in the project area has many no-passing zones. The large volume of traffic using this section of U.S. 30 creates a situation for the inefficient use of fuel. As faster-moving vehicles approach slower-moving vehicles, a sudden reduction in speed is often necessary. Conversely, when an opportunity to pass is available, fast acceleration is used. Both of these conditions results in excess fuel consumption. This project will also bypass Cedar Rapids, eliminating the stop and go driving within the city which also contributes to increased fuel consumption.

An analysis of the proposed alternates was made to give a better understanding of road design on fuel consumption. A typical one-mile section was used for the analysis from Iowa 279 to the Benton-Linn County Line. Tables and graphs contained in *National Cooperative Highway Research Report III* were used to determine the gallons per mile consumption rates. These rates were determined for four classes of vehicles: passenger cars, pickup trucks, tractor semi-trailer trucks, light duty trucks and busses. The following table shows the calculated rates for the one mile section of U.S. 30 for the year 2000.

TABLE 5
ESTIMATED FUEL CONSUMPTION

Alternate	Gallons Per Mile Per Day
Do-Nothing	1,640
Present Alignment (New Concept)	1,230
North or South	1,130*

*Also includes consumption on existing U.S. 30.

The consumption rate for the Present Alignment Alternate is greater than for the North or South alternates because the grades are steeper on the existing lanes which would be utilized with this alternate; whereas flatter grades would have been used where the facility was all on new location.

Social Impacts

Since the three proposed alternate alignments for U.S. 30 traversed rural areas, no residential neighborhoods would have been divided. U.S. 30 presently continues directly

into Cedar Rapids, whereas the selected alternate will bypass the city on Stoney Point Road temporarily and on the Circumferential Highway eventually. This will result in through traffic being removed from the existing highway through Cedar Rapids. This will provide improved cohesiveness to the existing and any future residential areas adjacent to present U.S. 30. Current and future land use plans in Cedar Rapids show the majority of land zones in the present U.S. 30 corridor are commercial, and as such, very few residential neighborhoods exist.

Since the access control standards proposed will allow for access every half-mile, rural families will continue to retain previous community contacts. None of the alternates pass through a neighborhood established with a cultural, racial or religious identity and, as such, no minority groups will be affected by the improvement.

With the decrease in traffic expected on present U.S. 30 through Cedar Rapids, when the bypass is completed, persons using the route should experience a faster, safer, more efficient route when commuting to recreational areas, cultural and community facilities and public institutions in the city. The proposed four-lane highway will also benefit those people living west of Cedar Rapids who desire to use these facilities, as well as other facilities throughout the study area. The bypass of Cedar Rapids should provide improved access to Palisades Kepler State Park, located approximately nine miles east of Cedar Rapids, just south of U.S. 30.

This proposed project will incorporate many features to provide greater safety for the motoring public. These will include medians to separate traffic, horizontal and vertical alignments consistent with design speeds, and controlled access points designed for better sight distance. With the "Do-Nothing" Alternate, traffic growth would continue on the present highway and congestion would increase.

The proposed four-lane improvement will provide a safer, faster, more efficient route for emergency vehicles, such as ambulances, fire trucks and police vehicles, in the rural areas of the two counties and, if necessary, on into Cedar Rapids. The "Do-Nothing" Alternate would have invited a congested situation which would have hampered movement and decreased the efficiency of those services.

The bussing systems of the three school districts located within the study area utilize existing U.S. 30 for a good part of their routes. The proposed four-lane alternate will provide greater safety in the bussing of school children, than the existing facility. The limited access, however, will demand some changes in the existing bus routes, with more utilization of county roads and frontage roads. School district boundaries will not be affected by the proposed project.

The proposed four-lane facility will provide a faster and safer highway for students of the parochial schools and students commuting to colleges in Cedar Rapids.

Future residential growth in the Cedar Rapids Metropolitan Area will occur near the fringe areas of the city, including the area between the existing incorporated area and the

proposed Circumferential Highway. But, a recent trend has been one of seeking a residence in a small community or rural area which is within commuting distance of a larger city. A four-lane facility, such as U.S. 30, shortens time and distance between locations, thus intensifying the attraction of residential land within smaller communities such as Atkins, Newhall, Norway and Van Horne, and rural areas of the two counties.

Where conditions are favorable, a highway can serve as a catalyst to land utilization. Data from previous studies show that the impact of a highway is greatest on adjacent land, especially when this land is sold in smaller parcels and used more intensively. Conversion of agricultural or vacant land to a residential, commercial, or industrial use initiates an increase in land values.

Conversely, property values may decrease where a new highway makes adjacent land less desirable to potential buyers, such as when a four-lane facility is routed through a residential area. In either case, the highway improvement which causes these changes is usually on new alignment and causes significant changes to the landscape and major alterations in traffic patterns.

Location immediately along a modern highway has made it possible for industry and commerce to put itself within easy communication of those aspects of society upon which it depends--sales areas, labor markets, supplies and raw materials. Areas around interchanges tend to develop these businesses faster and more intensively than areas having poor accessibility.

Property values can, therefore, be expected to increase the most near the interchange locations along the project corridor. The loss or severance of primary agricultural land, however, could detract somewhat from some of the benefits of property value increases at interchange locations. Use of the present alignment will require the least amount of additional right-of-way and cause a minimum effect on agricultural land.

Land adjacent to the proposed U.S. 30 corridor alignments is primarily in agricultural production. Benton County has no zoning regulations so it is possible that commercial establishments could locate adjacent to the new highway in the future. In Linn County, however, land use change will have to occur in an orderly and prescribed manner. The bypass of Cedar Rapids should open up the entire area in that portion of the city to future residential development as documented in the Linn County Regional Land Use Plan.

Loss of agricultural land for this proposed project will result in the removal of land from the tax rolls. Property value increases due to potential commercial and residential development should replenish any taxes lost. The tax base, therefore, will not be significantly affected by this project.

The "Do-Nothing" Alternate would have exerted no positive influence on existing land values nor the tax base. The potential for land development and a corresponding rise in property values would not have been encouraged by this alternate.

Construction Impacts

The construction phase of a highway project causes some adverse environmental impacts. These impacts, which are usually temporary, affect the noise level and air and water quality of the project area. Although they are not as significant as long-term environmental impacts, measures will be taken to minimize harm resulting from construction activities.

Noise generated by heavy-duty construction equipment used throughout the project stages causes a temporary disturbance to anyone in proximity to the site. Although this disruption is temporary in nature, contractors are expected to exercise good judgment in minimizing the noise as much as possible. Contract specifications will include measures to minimize adverse construction noise impacts to the adjoining community. Properly equipped and maintained construction machinery and restriction of especially noisy construction activity to daylight hours are requirements to be included.

Landscape wastes will be created as a result of clearing, grubbing, and construction operations. These wastes may be used in the project fill, hauled to a suitable landfill or burned on the premises. The Iowa Department of Environmental Quality enforces the statewide requirement that the disposal, by open burning, of landscape wastes originating on the premises and produced in clearing, grubbing and construction operations is allowed only when such burning is limited to areas located at least one-quarter mile from any inhabited buildings. In addition, open burning is confined to daylight hours and to periods of favorable wind speed and direction. These burnings create infrequent, short-duration air pollution episodes which do not permanently alter the local air quality, but they contribute additional particulates and hydrocarbons to the atmosphere. In an urban area, such as Cedar Rapids, it is especially necessary to avoid contributing further to the potential for air pollution.

The state's air quality standards require that measures be taken to prevent particulate matter in quantities sufficient to create a nuisance from becoming airborne (*Section 657.1, Code of Iowa, 1975*). Fugitive dust precautions include application of suitable materials, such as asphalt, oil, water or chemicals to areas giving rise to airborne dust. Installation and use of containment or control equipment to enclose or limit the emissions resulting from the handling and transfer of dusty materials such as aggregates are required. Open-bodied vehicles transporting materials likely to give rise to airborne dusts must be covered at all times when in motion.

The water table in the area of the proposed improvement is not expected to be affected by this highway construction. Drainage patterns in the area will be crossed by the highway alignment, however. In order to avoid damage to local drainage facilities, tile lines and

outlets will be adapted to the highway facilities' drainage system. Any existing terraces intercepted by construction will be blocked or diked at the point of interception.

The problem of deteriorating water quality in the vicinities of Mud and Morgan Creeks, through increased turbidity and erosion, is recognized as a possibility during the construction period. Positive steps will be taken to minimize potential damage from wind and water erosion. The area of erodible soil exposed by clearing and grubbing operations or grading will be limited to localize any damage potential to a controllable size. Temporary pollution control practices will be instituted during construction. These include construction of temporary berms, dikes, dams, sediment basins, slope drains and use of temporary mulches, mats, seeding or other control devices or methods as necessary to control erosion. Cut slopes will be seeded and mulched as the excavation proceeds to the extent considered desirable and practicable. Temporary pollution control measures will be used to correct conditions during construction that were not foreseen during the design stage; that are needed prior to installation of permanent pollution control features; or that are needed temporarily to control erosion that develops during normal construction practices. Temporary pollution control may include work outside the right-of-way where such work is necessary as a result of roadway construction (borrow pit operations, haul roads, and equipment storage sites, etc.)

Contractors are also required to incorporate erosion control features into the project as soon as possible. "Under no conditions shall the amount of surface area of erodible earth material exposed at one time by excavation, borrow, or fill within the right-of-way exceed 750,000 square feet, without prior approval by the engineer." (*Iowa DOT Standard Specifications for Construction and Maintenance*). Sodding, mulching, seeding and control of surface drainage are among the permanent measures employed for erosion control.

Various species of plants are used to control soil and water erosion as well as to provide wildlife habitat. Many of these plants have deep and fibrous root systems which stabilize the soil. In addition, they provide a complete vegetative cover that protects the soil from wind and raindrop impact. A seed mixture consisting of three domestic grasses, three legumes and one native prairie specie is used for permanent seeding of highway rights-of-way.

Kentucky 31 fescue, which makes up the highest proportion of this seed mixture, is unparalleled for erosion control. This and the other domestic grasses (brome and ryegrass) become established within three or four months, providing food and cover for wildlife in addition to erosion control. The legumes (alfalfa, trefoil, and clover) increase soil fertility by their contribution to the soil's usable nitrogen content.

Native prairie species offer a wide variety of functional plantings. Since they are perennials and most so-called weed species are annuals, the native prairie plants are extremely competitive once they become established. The variety of species in this group provides many forms and colors, reduces the likelihood of destruction by a single disease and diminishes the need for maintenance since neither mowing nor blanket spraying is needed for weed control. The prairie species are also historically compatible plants for Iowa whose rich agricultural soil was developed under prairie vegetation. However, seed supplies

for native prairie species are scarce and expensive, and these grasses often require three to five growing seasons to become established.

Possible borrow areas needed for the construction of U.S. 30 have not been determined at this time. The borrow needs and possible sites will be determined at the final design stage. If, borrow areas are deemed necessary, several measures will be taken to minimize harm. In general, all borrow areas will be planned for restoration by means of removing and replacing the topsoil, except in those areas which obviously will not require topsoil replacement. Such areas include lake or pond type borrows, borrows in urban areas and sites having potential for development, borrow areas where no topsoil exists in its original condition and borrows where restoration by fertilizing, mulching, reseeding or other appropriate measures to provide vegetative cover or prevent erosion is specifically documented and agreed to by the property owner involved prior to plan completion. Borrows which are incorporated into the project as an integral part of the roadway design by means of widening ditches and/or flattening backslopes in areas of normal excavation shall be treated in the same manner as the remainder of the project. No borrow areas will be located on Federally owned land.

As stated previously, telephone lines and electrical power lines run adjacent to U.S. 30 and all intersecting county side roads. Plans for relocation of these public facilities, which will occur at the construction stage, will be coordinated with the respective companies to insure that essential services to the public will be maintained at all times.

Relocation

Twenty-three homes and seven businesses are estimated to be displaced by this project; in addition 425 acres of good quality cropland will be diverted to roadway use. The exact number of displacements will be determined during the design phase of this project.

The North and South Alternates would have required taking one farm home for each alternate. No businesses would have been taken with either alternate. The North Alternate would have required 704 acres of land for right-of-way purposes while the South Alternate would have required 542 acres.

The disruption to residences and businesses displaced by this project will be offset by acquisition payments supplemented by relocation assistance. The acquisition payment is the payment made to the owner for land and buildings. This amount is based on fair market value as determined by current sales and current prices. In addition, the Iowa Department of Transportation, under the provisions of the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 and Chapter 316, Code of Iowa, 1975, will provide relocation assistance to all eligible relocatees of a highway project. The relocation assistance program assists owners and tenants displaced by a highway project by acquiring

decent, safe, and sanitary housing for them. Both tenants and owners qualify for relocation assistance by meeting minimum residence requirements. Any individual or family who has owned and occupied or rented a dwelling for at least 90 days before the start of negotiations is eligible to receive payments for residential moving expenses, closing costs incurred in purchasing another dwelling and, possibly, a replacement housing payment. Any individual or family that has owned and occupied their own home for at least 180 days before the start of negotiations is also eligible for additional compensation to offset increased interest payments on a replacement dwelling.

A field review of the project corridor revealed that nearly all of residences involved are farm homes. As such, it would seem likely that most of these displaced families will want to relocate to replacement houses built or moved onto their same farm or property. However, if some families prefer to move to a city, there are sufficient rental or sales units available in Cedar Rapids. Available housing in other communities near the study area is limited.

If adequate replacement housing is not available at the time right-of-way negotiations begin, then "last resort" housing could be applied. Programmed replacement housing as a "last resort" is provided for under Section 206 of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970. This Act stipulates that if the local agency determines it is in the public interest to proceed with the construction of the Federal-Aid project and it cannot do so because of an inadequate supply of comparable replacement housing, then it may, as a last resort, provide the necessary housing by use of funds authorized for the highway projects.

The businesses which are estimated to be displaced by this project include three restaurants, one gas station and one motel. Part of a junkyard and a segment of a mobile home park will also be required. These displacements will have an adverse economic impact on the owners of the affected establishments. However, they will be paid just compensation for their businesses plus relocation assistance. In addition, if they so choose to relocate along the new four-lane highway, the business should again assume an economic climate comparable to present conditions, and in future years economic growth should accompany a predicted increase in annual average daily traffic volumes. The effect on the community caused by the displacement of these businesses is expected to be minimal. It will cause some inconvenience to residents in the area who use these facilities, however, the same type of commercial establishments are located in nearby towns and in Cedar Rapids. Also, one restaurant and two motels which are now located along U.S. 30 in the project area will not be affected.

Problems of land severance occur whenever a highway project is proposed in a rural area. The problem, however, is much more severe when the alignment is on new location, such as on the half-section line, as was the case with the North and South Alternates. The problem is not as serious when the improvement occurs on an existing alignment. The North and South Alternates would have resulted in the fewest relocations; however, these alternates would have also required a larger amount of farmland to be converted to highway use. Conversely, the alternate utilizing the existing alignment would require many more

relocations, but would also convert significantly less farmland to highway use.

Due to the limited number of minorities in the area and the primarily rural nature of the proposed corridor, it is not anticipated that the Present Alignment Alternate will adversely affect a particular neighborhood, group or segment of the study area population. After a field review of the corridor and a review of 1970 census data, it is not anticipated that this project will be in conflict with the provisions of Title VI of the Civil Rights Act of 1964.

Noise Impacts

Before assessing the noise impact of this project upon the environment, an overview of noise, its measurement, composition, effect, prediction, and control is warranted. If further elaboration is required, reference to the manual, *Fundamentals and Abatement of Highway Traffic Noise*, (Bolt, Beranek, and Newman, U.S. Department of Transportation, 1970), should provide a more detailed explanation of the noise problem.

Measurement: Just as "feet" are used to measure distance, and "degrees" are used to measure temperature, "decibels" are used to measure sound intensity. Decibels (dB) are logarithmic units which serve as a reference to sound pressure. The reference point; (OdB), is the level upon which noise is measured.

Frequency: The normal frequency range of hearing for most people extends from a low frequency of 20 Hertz to a high frequency of 10,000 to 15,000 Hertz. A given sound can be divided into frequency components. For example, it can be determined how much of the noise is low, middle, or high frequency.

Weighting Networks: Sound level meters have the capability of filtering out certain frequency ranges. The A-scale weighting circuit is normally used because it approximates the frequency response to the average young human ear. Studies have revealed that when people make relative judgements of the "loudness" or "annoyance" of a noise, their evaluations most closely correspond to the A-scale levels of those noises.

Traffic Noise: Vehicles generate noise during their operations over roadways as a result of engine and exhaust, tire-roadway interaction, brakes, air disturbance and chassis and load vibration. The total sound varies, depending upon the number of vehicles, vehicle types, the operating speed, and the physical design of the road.

Effect of Noise: The degree of disturbance or annoyance due to unwanted noise depends essentially upon three things:

1. The level and type of the intruding noise.
2. The level of background noise present before the new noise source is introduced.
3. The nature of the working or living activity (land use) of the people occupying the area where the noise is heard.

Prediction: Research conducted by the National Cooperative Highway Research Program has established a method by which highway noise may be predicted. The parameters incorporated into the analysis are: design hour traffic volumes, percentage of trucks, speed, distance from the highway to the noise receiver, and the design features of the roadway. Comparison of the predicted value to the existing ambient noise level indicates the probable noise impact of the project upon the location selected for analysis.

Noise abatement: There are two methods by which highway noise may be reduced: (1) better muffler systems and other vehicle noise controls; and (2) highway noise control design features. The first technique is an area that must be treated by industrial modifications or legislative restrictions or guidelines. However, the incorporation of noise abatement design techniques is a method which can be employed, where needed, by the state highway departments. If the proposed highway project has a severe noise impact upon the environment, and alignment changes are neither feasible nor prudent, noise abatement procedures should be investigated.

Seven sites were selected to represent those noise sensitive land uses in the project corridor. Six of the seven sites are rural farm residences. The seventh site is a rural motel. All seven of the sites are located adjacent to the present U.S. 30 alignment. The present ambient noise level at the seven sites was measured according to the procedure described in the previously referenced manual, *Fundamentals and Abatement of Highway Traffic Noise*, (Bolt, Baranek and Newman, U.S. Department of Transportation, 1970). With this procedure, the present L10 (noise level exceeded 10% of the time) can be determined at a 95% confidence level. The design year (2000) L10's were predicted using the procedure of the National Cooperative Highway Research Program Reports 117 and 144. This method was also used to predict the generalized 70dBA noise contour distance for the year 2000. These noise contours can be of value when incorporated into future land use plans.

The Federal-Aid Highway Program Manual 7-7-3 established L10 design standards which are not to be exceeded by highway traffic noise. Seven of the eight sites fall under land use Category B. In this category, the design standard is an L10 level of 70dBA for the exterior of the building. One site, a motel, comes under activity category E. For this category the design standard is an L10 of 55dBA for the interior of the building. Figure 6 lists the various land use categories and the design noise levels desirable for each.

A summary of the noise study data collected and predicted for each of the sites can be found in Table 6. Location of the sites can be found on the aerial photos at the end of the study.

Site 1 is a single farm residence located approximately two miles east of the beginning of the project. This site represents three residences which are located between the beginning of the project and Iowa 287. These will be the only residences remaining adjacent to U.S. 30 in this area after project completion. The present L10 level is 70dBA; the predicted 2000 L10 for the "build" alternate is 74dBA. The L10 for the "no build" alternate is 76dBA. As can be seen, present noise levels at this site already equal the applicable design level. The four

Common Outdoor Noise Levels	Noise Level dBA	Common Indoor Noise Levels
	--110--	Rock Band
Jet Fly-over at 1000 ft.	--105--	
	--100--	Inside Subway Train (New York)
Gas Lawn Mower at 3 ft.	--95--	
	--90--	Food Blender at 3 ft.
Combine at 50 ft. Diesel Tractor or Truck at 50 ft. Snowmobile at 50 ft. Noisy Urban Daytime	--85-- --80--	Garbage Disposal at 3 ft. Shouting at 3 ft.
	--75--	
Gas Lawn Mower at 100 ft.	--70--	Vacuum Cleaner at 10 ft.
Commercial Area	--65--	Normal Speech at 3 ft.
	--60--	
	--55--	Large Business Office
Quiet Urban Daytime	--50--	Dishwasher next room
	--45--	
Quiet Urban Nighttime	--40--	Small Theatre, Large Conference Room (Background)
Quiet Suburban Nighttime	--35--	Library
	--30--	
Quiet Rural Nighttime	--25--	Bedroom at Night Concert Hall (Background)
	--20--	
	--15--	Broadcast and Recording Studio
	--10--	
	--5--	Threshold of Hearing
	--0--	

COMMON INDOOR AND OUTDOOR NOISE LEVELS
Adapted from: Bolt Beranek and Newman Inc.,
Fundamentals and Abatement of Highway Traffic Noise, 1973

DESIGN NOISE LEVEL/ACTIVITY RELATIONSHIPS

Activity Category	Design Noise Levels-dBA		Description of Activity Category
	L _{eq}	L ₁₀	
A	57 (Exterior)	60 (Exterior)	Tracts of lands in which serenity and quiet are of extraordinary significance and serve an important public need, and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose. Such areas could include amphitheaters, particular parks or portions of parks, or open spaces which are dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet.
B	67 (Exterior)	70 (Exterior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, picnic areas, recreation areas, playgrounds, active sports areas, and parks.
C	72 (Exterior)	75 (Exterior)	Developed lands, properties or activities not included in categories A and B above.
D	--	--	For requirements on undeveloped lands see paragraphs 11a and c, FHMP 7-7-3.
E	52 (Interior)	55 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals and auditoriums.

TABLE 6
SUMMARY OF NOISE STUDY DATA

Site No.	Represents	Distance From Centerline of Near Lane	Existing L10 (dBA)	Predicted L10 For Year 2000-Build (dBA)	Predicted L10 For Year 2000-No Build (dBA)	Number Receptors Exceeding Applicable Design Level (dBA)	Estimated Distance From Near Lane Centerline to 2000 70 dBA L10 Contour
1	3 Residences	115'	70	74	76	3	217'
2	9 Residences 1 Motel	85'	72	75	76	3	235'
3	14 Residences 15 Mobile Homes	95'	73	75	77	7	249'
3A	10 Residences	310'	66	69	68	0	249'
4	3 Residences 1 Motel	95'	72(47)	75(50)	77(52)	0	248'
5	8 Residences	130'	72	74	75	4	238'
6	1 Residence	90'	70	74	76	1	242'

() computed interior L10 level.

decibel increase predicted for the future is not a large increase and would not be considered a significant impact when compared to the noise levels presently being experienced. The predicted future level will, however, be in excess of applicable design standards.

Site 2 represents those noise sensitive land uses located adjacent to U.S. 30 between Iowa 287 and Iowa 201. Nine homes and one motel will remain in this area after project completion. Six of the nine homes are situated in a small housing development located approximately one mile west of Iowa 201 on the north side of U.S. 30. It is anticipated several additional homes will be built in the area in the next several years. On-site noise monitoring and inspection revealed that due to the natural shielding effects of the topography as well as the fairly large distance between the roadway and the residences no noise sensitive areas will be exposed to noise levels in excess of 70dBA. The present noise level for the near residence is an L10 of 66dBA. The predicted 2000 L10 is 68dBA. The project will have a very minor impact on this particular development.

Site 2 itself, as well as the two remaining homes and the motel are expected to experience exterior L10 noise levels in excess of 70dBA by the year 2000. The present L10 at site 2 is 72dBA. The predicted year 2000 L10 for the "build" alternate is 75dBA; for the "no build" alternate the L10 is 77dBA.

Site 3 represents those noise sensitive land uses located adjacent to U.S. 30 between Iowa 201 and Iowa 279. Fourteen residences and fifteen mobile homes will remain in the area after project completion. The present L10 at Site 3 is 73dBA. The predicted year 2000 L10 is 75dBA. Five of the residences and two of the mobile homes are within the predicted year 2000 70dBA noise contour.

Site 3A is a residence located just west of the Iowa 279-U.S. 30 intersection. This residence represents those noise sensitive receptors along the entire length of the U.S. 30 project corridor where the proposed additional lanes of roadway will be built between the existing roadway and the noise sensitive receptor. Thirty sites are presently located adjacent to U.S. 30 to which the previously described situation would be applicable. However, twenty of the thirty sites are to be removed or relocated under present project plans. Site 3A represents the ten residences which will remain after project completion. The present L10 at site 3A is 66dBA. The predicted year 2000 L10 is 69dBA. These L10 levels are the highest levels that will be experienced by any of the ten sites. At all ten sites the year 2000 L10 was approximately 3 decibels higher than the present L10 level. Therefore in those instances where the construction of new roadway takes place between the existing facility and those noise sensitive receptors which remain after project completion, the noise levels will not be noticeably greater than for those receptors where construction of the additional lanes takes place away from the receptor.

Site 4 is a motel located approximately one and one half miles east of Iowa 279. This site represents the three noise sensitive receptors located along a two mile length of U.S. 30 east of Iowa 279. The site itself is the only receptor of the three close enough to U.S. 30 to be within the predicted year 2000 70dBA contour. Since Site 4 is a motel and there were no

identifiable exterior noise sensitive activities, interior L10 noise levels were calculated. This interior L10 calculation was also made for the previously mentioned motel associated with site 2. Interior L10 noise levels are calculated by first measuring the exterior L10 level. From this exterior level a specified number of decibels is subtracted, based on the type of material used in the construction as well as the condition and type of windows used in the building. The motel at site 4 is of masonry construction with single glazed windows which are normally closed. This situation will provide a 25 decibel insulation factor. The motel at site 2 is of wood frame construction with single glazed windows which are also normally closed. This will provide an approximate 20 decibel insulation factor. Subtracting the 25 decibels from the present exterior L10 of 72dBA results in an interior level of 47dBA for site 4. The predicted year 2000 interior L10 is 50dBA. For the motel at site 2, the predicted exterior L10 for the year 2000 is 73dBA. Subtracting 20 decibels from this level gives an interior L10 of 53dBA. The year 2000 L10 level at both motels is below the design standard of 55dBA as specified by the category E activity use relationship.

Site 5 is located approximately three miles east of Iowa 279. This site represents noise sensitive receptors located adjacent to U.S. 30 in an area extending from a point two miles east of Iowa 279 to a point four miles east of Iowa 279. Eight residences are expected to be in this area after project completion. The present L10 is 72dBA. The year 2000 L10 for the "build" alternate is 74dBA. For the "no build" alternate the L10 is 75dBA. Of the eight residences in this area, four will be exposed to noise levels in excess of the design standard by the year 2000.

Site 6 is a residence located near the end of the project corridor at the intersection of U.S. 30 and Stoney Point Road. This is the only noise sensitive receptor which will remain in this area after project completion. The present L10 is 70dBA. The predicted year 2000 L10 for the build alternate is 74dBA. For the "no build" alternate the predicted L10 is 76dBA.

Project Noise Mitigation and Abatement

There are two methods by which highway traffic noise may be reduced: (1) Better muffler systems and other vehicle noise controls; and (2) highway noise control design features or noise abatement structures. The first technique is beyond the control of the highway planner. The second technique can be used if shown to be feasible, prudent, and effective. Each noise sampling site was studied in order to determine if noise abatement procedures would be feasible, prudent, or effective if incorporated into the proposed project.

All noise sites studied, as well as the noise sensitive receptors they represent will experience an increase in traffic noise levels by the year 2000. For all receptors the increase in noise levels by the year 2000 will generally be in the two to four decibel range. And except for the ten residences represented by site 3A, the increase in future noise levels will be greater than this if the "no build" alternate is selected. A total of twenty receptors which are presently located near U.S. 30 will experience exterior L10 levels in excess of 70dBA by

the year 2000. These twenty receptors consist of two motels, two mobile homes, and sixteen single residences.

As was previously noted, the two motels did not have any identifiable exterior noise sensitive activities. Because of this, interior L10 levels were calculated and found to be within the prescribed design level. No specific noise abatement procedures will be recommended for the two motels. Noise impacts will be minor.

With the exclusion of the two motels, eighteen receptors will still exceed the applicable design level by the year 2000. These receptors are represented by sites, 1, 2, 3, 5, and 6. Of the eighteen, thirteen are single isolated rural residences. There are two instances in which the receptors are close enough to one another to be considered together for noise abatement purposes. Two residences located near the beginning of the project and represented by site 1 are approximately 100 feet apart. Site 3, a residence, and two nearby mobile homes are approximately 300 feet apart. A total of fifteen separate areas were analyzed and examined to determine if noise abatement procedures would be feasible and prudent.

Design techniques, involving either alignment changes or grade changes, which can reduce noise impacts were first analyzed. Since all the sensitive receptors are situated close to the existing U.S. 30 roadway and the project concept minimizes the amount of reconstruction to be done on this roadway, alignment and/or grade changes will generally not be a feasible method of achieving reduced noise levels. Of the fifteen areas analyzed, only one will be effected by reconstruction of the existing roadway. Site 2, a residence, is now located approximately 125 feet from U.S. 30. After reconstruction the distance will be 85 feet. Because of the natural topography in this area, the roadway will be cut five to six feet below the elevation of this residence. The depressed nature of the roadway will provide a small amount of attenuation. Automobile generated noise will be reduced slightly. There will be no reduction of truck generated noise. The possibility of providing greater attenuation by cutting the road grade even lower was investigated. It was determined that this would not be a feasible alternative. The additional right-of-way required would result in the removal or relocation of this residence. It should be pointed out that the L10 levels shown on Table 6 are based on a level topography. The possibility that the topography may attenuate noise levels by natural shielding is not considered unless it is evident such shielding may have a significant effect on a particular sensitive receptor. This was the case in the previously described housing development located near Station 980.

With design techniques involving alignment or grade changes being eliminated as a viable noise abatement alternative, the use of noise abatement structures was examined next. An effective method of attenuating highway noise is the construction of a noise wall or earthen berm or a combination of both, between the noise source and the sensitive receiver. Although berms are more aesthetically pleasing and normally lower in cost than are walls, there are several factors which can limit their feasibility or effectiveness. The two primary factors being the availability of suitable fill material and adequate right-of-way between the roadway and the receptor. Noise walls, on the other hand, require very little right-of-way, but are quite costly to build and can look out of place in a rural setting.

Site 1 is one of the thirteen single isolated homes which will experience noise levels in excess of the design level by the year 2000. A detailed analysis of possible use of the barrier concept to reduce noise levels at this site was done. The analysis determined what type of barrier would be required to achieve at least a ten decibel reduction and what would be required for only a five decibel reduction. Because earthen berms are not as costly to build as walls, it was decided that any barrier constructed would achieve as much of the needed barrier height as possible through the use of a berm. Unfortunately because of very restricted right-of-way at Site 1, the highest the berm could be constructed was five feet, with an average of about three feet. In order to achieve at least a five decibel reduction, a total barrier height of 14 to 18 feet is required. As can be seen the berm will furnish only a relatively small part of the needed height. A noise wall of from 9 to 18 feet would have to be placed on the berm to achieve the overall required height for a five decibel reduction. The wall and berm would have to be 18 to 22 feet high in order to achieve a ten decibel reduction. The length of either barrier would be approximately 400 feet. Using the latest available unit-cost estimates, the overall cost of the five decibel as well as the ten decibel barrier was calculated. The overall cost of the five decibel barrier would be approximately \$30,000; that of the ten decibel barrier approximately \$36,000. Considering the benefit-cost ratio, the five decibel barrier would not be nearly as cost effective as the ten decibel barrier. However, a \$36,000 expenditure in order to achieve a ten decibel reduction for only one residence is not reasonable or prudent, and would not be in the best interest of the general public.

The possibility of implementing noise abatement procedures for the twelve other isolated homes in the project corridor was also examined. It was determined that in order to provide a ten decibel reduction in noise levels at each home, an expenditure on a per site basis of from \$35,000 to \$45,000 would be necessary. In relation to the total project costs, this level of expenditure is not reasonable or prudent. Because noise abatement procedures can not be implemented without an excessive expenditure of funds, exceptions to the design level will be granted for the thirteen isolated residences in the project corridor.

As was noted earlier, there were only two instances in which noise sensitive receptors were in close enough proximity to each other to be considered together for noise abatement purposes. One site concerns two residences located approximately 100 feet apart in an area near the beginning of the project. It was found that at this particular site noise abatement structures would neither be feasible nor prudent. The major problems were a lack of adequate right-of-way between the roadway and the receiver, interference with access to the site, and high cost. Because of these problems an exception to the design level will be granted for these two homes. It is suggested however that since the present concept shows an access road being constructed between the roadway and the site, the possibility of raising the grade of this access road be studied. This could provide some partial noise abatement.

Site 3 is the only other site on this project in which sensitive receivers are located fairly close to one another. Besides the site itself, which is a frame home, fifteen mobile homes are located along an approximately 800 foot length of right-of-way in this area. The frame home and two mobile homes located 300 feet to the west will be subjected to an L10 in

excess of 70dBA by the year 2000. Possible noise abatement strategies were thoroughly examined for this site. Because there is not an adequate amount of right-of-way between the roadway and the receivers it would not be feasible to construct any type of noise barrier for this site. In addition, because the site is near an intersection a barrier of sufficient length to be fully effective could not be constructed. Because noise abatement would not be feasible and would lack effectiveness, it will be necessary to grant an exception to the design level for these three sensitive receivers.

Although it would appear that little can be done to alleviate the levels of traffic noise now being experienced by existing sensitive receptors, future problems may be avoided by taking note of the noise contour distances shown in Table 6. It is recommended that future construction take place at least 250 feet from the roadway. Only non-noise sensitive activities should occur, or structures be built, within the 250-foot contour distance. Compatible land use is one of the better methods of assuring that noise will be less of a problem in the future.

Summary

The noise environment of the proposed U.S. 30 project corridor has been described. A total of 65 noise sensitive receivers were identified as remaining adjacent to U.S. 30 after right-of-way acquisition. The present ambient noise levels at these receivers was compared to predicted year 2000 noise levels for both a "build" and "no build" alternatives. For the "build" alternate, all sensitive receivers will experience a two to four decibel increase over present noise levels by the year 2000. All but 10 of the receivers would experience an even greater increase with the "no build" alternate. Eighteen receivers will experience noise levels in excess of the specified design level. The possibility of incorporating noise abatement techniques into the project were analyzed. In all cases such techniques were found to be infeasible, imprudent, or ineffective. Exceptions to the design level for these eighteen receptors will be granted. The overall impact this project will have on future noise levels will be minor. For the most part, the project will actually result in future noise levels being lower than what would occur if no construction takes place.

Construction Noise

Those areas being identified as being sensitive to traffic noise may also be subjected to increased noise levels during the construction period. Heavy equipment associated with road construction can emit high levels of noise. Contractors through contract provisions will be instructed to limit noise as much as possible. All internal combustion engines, used for any purpose on the job or related to the job, should be equipped with a muffler of the type recommended by the manufacturer. No internal combustion engine will be operated without said muffler. Faulty or damaged mufflers must be replaced. Machinery must be properly maintained at all times in order to limit engine noise as well as other extraneous noise.

Air Quality

Existing air quality within the U.S. 30 project corridor is not significantly affected by technological contamination. Traffic operating on the existing network of roadways comprises the major source of air pollution within the study area. Contaminates emitted by motor vehicles include carbon monoxide, oxides of nitrogen, hydrocarbons, and particulate matter, especially lead. Oxides of sulfur are also emitted since the introduction of the catalytic converter. Carbon monoxide is the most lethal of these contaminants as well as the most stable. Reactions of hydrocarbons and oxides of nitrogen in the presence of sunlight produce a form of pollution commonly referred to as smog.

Two primary factors are to be considered when determining the potential for highway related air pollution, these factors being meteorological or weather conditions, and traffic volumes. Pollution potential is high when calm, sunny conditions prevail. These conditions support the formation of photochemical oxidants as well as their accumulation, because the winds needed to disperse the pollutants are absent. Such meteorological conditions are not common in the U.S. 30 corridor. Traffic volumes or size of the pollution source is the second major factor. When traffic volumes are high, a high pollution potential exists. The Iowa Department of Environmental Quality (DEQ) has established certain cutoff traffic volumes according to basic roadway design and anticipated operating speeds in its *Guidelines for Review of Federally-funded Highway Projects*. The guidelines require that a mathematical analysis of air quality be made a part of the Environmental Impact Statement if projected critical year traffic volumes equal or exceed the specified cutoff volumes. The critical year is defined as that year when traffic volumes and degree of emission control result in the highest pollution potential. If critical year volumes are expected to be below those established by DEQ, the project under consideration is deemed to be of no immediate concern because of its very minor air quality impact. The following table makes this comparison for determination of consistency with the State Implementation Plan (SIP) for maintenance of the national ambient air quality standard (NAAQS).

TABLE 7
DETERMINATION OF PROJECT AIR
POLLUTION POTENTIAL

DEQ Cutoff Volumes		Estimated Peak U.S. 30 Traffic for Critical Year (1980)*	
1-hr.	8-hr.	1-hr.	8-hr.
10,320	60,120	1,700	9,500

*Peak 1980 volumes expected to occur near the eastern terminus of the project, just west of Cedar Rapids. 50 mph, Table III, *Guidelines of the Department of Environmental Quality for Review of Federally-Funded Highway Projects*, revised December 12, 1974.

As the above data indicates, the predicted peak critical year traffic volumes are well below the cutoff volumes established by the DEQ. No significantly adverse effects are expected to occur to the air quality in the project corridor. The project is therefore consistent with the SIP for the maintenance of the natural ambient air quality standards.

Although long term air quality impacts due to this project are expected to be insignificant, the short term effect due to construction could be objectionable. All equipment associated with construction is expected to be in good running order and tuned properly in order to minimize exhaust emissions. Additionally, contract documents will specify adherence to DEQ's *Rules and Regulations Relating to Air Pollution Control* (1972) Sections 4.2 Open Burning, 4.3(2)c Fugitive Dust, 4.3(2)d Visible Emissions, and 3.1(1) Permits.

The proposed project is not expected to affect the health and welfare of those living in the U.S. 30 corridor. Because of the rural nature of the project as well as relatively low traffic volumes the adverse effects due to vehicle emissions will be very minimal. Favorable meteorological conditions will facilitate rapid dilution of pollutants to low levels.

Water Quality Impacts

This proposed project is not expected to have any significant impact on the water quality in the study area. Two small streams will be crossed by the proposed project. The source of these streams are near the proposed corridor.

Mud Creek crosses the project corridor in Benton County between U.S. 218 and Iowa 287. At this point, it drains an area of approximately 8-10 square miles. Mud Creek is a tributary of Prairie Creek which empties into the Cedar River in the southeast side of Cedar Rapids.

Morgan Creek crosses the project corridor in Linn County just east of the Benton County line. This stream drains approximately 9-12 square miles at its crossing of the corridor. Morgan Creek empties into the Cedar River near the northwest corner of Cedar Rapids.

The U.S. Army Corps of Engineers was contacted and requested to determine if a Section 404 permit would be needed for these two stream crossings. They have replied that no Section 404 permit authorization would be required for this project.

These streams are dry during periods of low rainfall. Therefore, sedimentation of the stream is expected to be minimal during construction of this project. However, contractors are required to incorporate temporary erosion control measures to minimize soil loss during construction and provide permanent erosion control features as soon as possible after construction. Refer to "Construction Impacts" for details of these erosion control measures.

The quality of ground water is not expected to change due to construction of this project. The amount of deicing chemicals used on this highway facility will double due to

the proposed construction of four-lanes of pavement where two now exist. A method of prewetting salt with liquid calcium chloride before application to the road surface has been devised by the Maintenance Department at the Iowa Highway Division. This prewetting technique provides accelerated deicing of pavement at temperatures down to zero degrees Fahrenheit, cuts salt waste, reduces salt usage up to 40% and reduces salt runoff. Evidence has shown that the use of these deicing chemicals has not inhibited the growth of grasses or plants on existing four-lane roadways in the state, or had any significant effect on alluvial aquifers.

Stream Modification and Flood Hazard

No channel modifications of Mud Creek or Morgan Creek are anticipated at this time. The structures for Mud Creek and Morgan Creek will be designed to handle any flood water without causing increased flooding.

ALTERNATIVES

Three alternate alignments have previously been considered for this proposed project. They were contained in the May, 1970, Planning Report and a Draft Environmental Impact Statement approved by the Federal Highway Administration in November, 1971. One alignment proposed was located 0.5 mile north of present U.S. 30 and one was located 0.5 mile south of present U.S. 30. The third alternate followed the general alignment of present U.S. 30. All of these alternates were based on Class II standards in Benton County with access only at one-mile intervals. In Linn County, the proposed facility would have been constructed to Class I standards with access only at interchanges.

The south alternate was selected by the Iowa State Highway Commission and was contained in a Final Environmental Statement approved by the Federal Highway Administration in 1972. However, because of the growing concern for minimal usage of land for highway right-of-way purposes, a new concept has been developed utilizing the present alignment of U.S. 30 and allowing access at $\frac{1}{2}$ mile intervals. All of the alternatives that have been considered in the past along with the revised concept on the present alignment of U.S. 30 are discussed on the following pages.

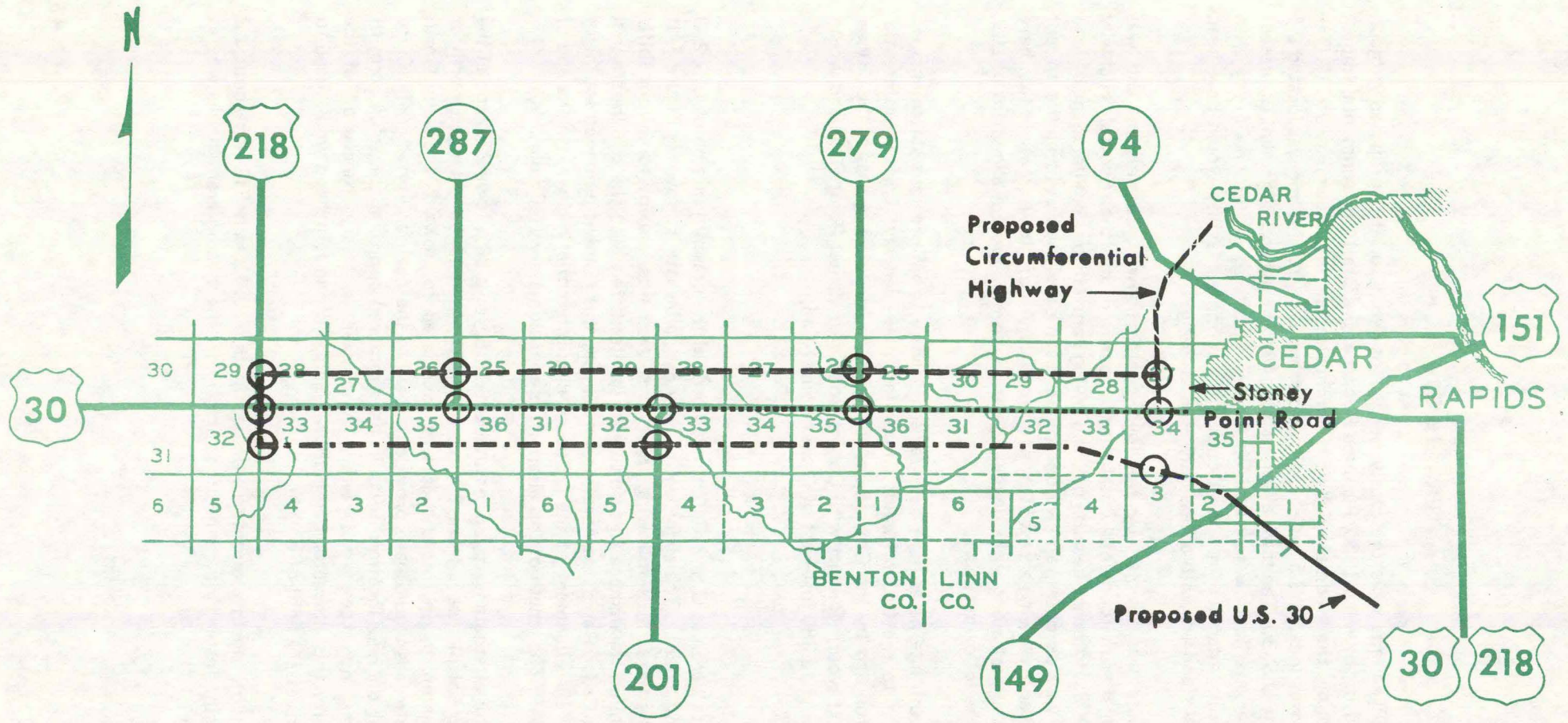
The north and south alternates have been revised slightly, from previous statements, to allow for connections to the Cedar Rapids Circumferential Highway. The circumferential highway has been proposed by the City of Cedar Rapids to provide a bypass of the city on the west and north. It would connect with Collins Road near Center Point Road and would interchange with Interstate 380 just west of Center Point Road.

North Alternate

The north alternate began at U.S. 218, 0.5 mile north of the present junction of U.S. 218 and U.S. 30 in Benton County. The alignment of the north alternate is shown in Figure 7. It extended easterly from U.S. 218 following the half section line, except for minor shifts north or south to minimize damage to farmsteads. It intersected with the circumferential highway west of the Cedar Rapids corporation line. From this point it extended southerly and southeasterly on the alignment of the proposed circumferential highway to the end of the project at Iowa 149. The length of this alternate is approximately 16.0 miles.

Interchanges for this alternate were proposed at U.S. 218, Iowa 287, Iowa 279, and at the proposed circumferential highway. Iowa 201 was not proposed to be extended north of present U.S. 30. Therefore, no interchange was considered for Iowa 201 on the North Alternate. Most local roads would have provided access to the new facility at grade. Since this alternate was all on new location it would have required approximately 704 acres of right-of-way, however, no access roads would have been necessary. Nearly all of the right-of-way needed for this alternate is agricultural land and one farmstead would need to be acquired for the necessary right-of-way.

The alignment for the north alternate contained in the 1971 Draft EIS was about 1.2 miles shorter in length. Instead of connecting directly to the circumferential highway as



LOCATION OF ALTERNATES

- North Alternate ---
- Present Alignment Alternate
- South Alternate - . - .
- Location of Interchanges ○

Figure 7

shown in Figure 7 it curved to the southeast west of the proposed intersection with the circumferential highway; it then continued on a diagonal alignment to the end of the project at Iowa 149.

The estimated costs for the North Alternate are shown in Table 8 and are based on 1976 costs.

TABLE 8
ESTIMATED COST - NORTH ALTERNATE

Earthwork	Paving	Structures	Right-of-way	Total
\$3,995,000	\$10,062,000	\$2,862,000	\$2,767,000	\$19,686,000

South Alternate

The south alternate is shown in Figure 7. This alternate was selected from the alternates contained in the 1971 Draft EIS and was the basis for the Final EIS. This alternate began 0.5 mile south of the present intersection of U.S. 218 and U.S. 30 in Benton County. U.S. 218 would have been extended south for 0.5 mile to connect with the new alignment of U.S. 30.

The south alternate extended easterly, from the west ¼ corner of section 33-T83N-R10W, following the half section line to near the center of section 33-T83N-R8W. From this point the alignment curved to the southeast to the end of the project at Iowa 149. The length of this alternate is approximately 14.9 miles including the 0.5 mile extension of U.S. 218.

Interchanges for this alternate were proposed at the extension of U.S. 218, Iowa 201, and at the circumferential highway. Iowa 287 and Iowa 279 were not proposed to be extended south of present U.S. 30. Therefore, no interchanges were considered for these highways on the South Alternate. Most other local roads would have had access to the new facility at grade. This alternate was all on new location and passed through prime agricultural land. It required the acquisition of approximately 542 acres of land for right-of-way. One farm home would have been acquired. No access roads were necessary for this alternate.

The alignment for the south alternate in this statement was the same as shown in the 1971 Draft EIS, however, an interchange had been added at the intersection with the proposed circumferential highway.

The estimated costs for the South Alternate are shown in Table 9 and are based on 1976 costs.

TABLE 9

ESTIMATED COST - SOUTH ALTERNATE

Earthwork	Paving	Structures	Right-of-way	Total
\$3,375,000	\$8,982,000	\$2,198,000	\$2,331,000	\$16,886,000

Present Alignment Alternate

The present alignment alternate is shown in Figure 7. This alternate was included in the previous Draft EIS with three alternatives on the present alignment of U.S. 30. These alternatives included (1) adding two new lanes on the north and utilizing the existing pavement for two-lanes; (2) adding two new lanes on the south and utilizing the existing pavement for two-lanes; (3) removing the existing pavement and reconstructing four new lanes. Depending on the alternative, the number of farmsteads which would have been acquired range from 9 to 20; while the number of businesses that would be acquired ranged from one to seven.

The Iowa Department of Transportation Commission in its continuing effort to reduce the usage of agricultural land for highway purposes, on August 23, 1977, approved the new concept for the Present Alignment Alternate and authorized proceeding with design. They also approved the construction of interchanges at primary highways to provide greater safety at these intersections.

The new concept for the present alignment alternate, which shifts the new lanes to the north and south in order to minimize damages, begins just west of the proposed interchange with U.S. 218 in Benton County and extends easterly, following the general alignment of U.S. 30, to near the north $\frac{1}{4}$ corner of Section 34, 0.5 mile west of the west corporate limits of Cedar Rapids. From this point it would extend southerly and southeasterly, concurrent with the alignment of the proposed Cedar Rapids Circumferential Highway, terminating at the western end of the proposed Iowa 149 interchange. This interchange is included with the U.S. 30 relocation project between Iowa 149 and U.S. 218 southwest of Cedar Rapids. The alignment for the Circumferential Highway is tentative at this time. Therefore, the exact alignment will be determined following completion of a location study and the holding of a public hearing.

This alternate would also extend east on existing U.S. 30 from the circumferential interchange to Stoney Point Road at the west corporation line of Cedar Rapids. This extension would provide a four-lane connection to an urban project now being designed, which will provide a four-lane highway from Stoney Point Road easterly to the existing four-lane facility in Cedar Rapids.

This new concept for the improvement of the present alignment of U.S. 30 is proposed to be completed in two phases. The Initial Phase would provide for construction of two

additional lanes along the existing two lanes; the Second phase would provide for the reconstruction of the existing two lanes of U.S. 30 at some time in the future. This section of existing U.S. 30 was resurfaced in 1976 and should provide an adequate surface for several years.

The proposed Initial Phase construction would provide for a 24-foot pavement separated from the existing pavement by a median. The median width will be determined during the design phase. The alignment of the two new lanes would be shifted north or south of the existing U.S. 30 alignment to avoid cemeteries and the acquisition of as many farmsteads and businesses as possible. The aerial photographs indicate the location of new lanes upon which this concept is based and recommends the crossing of present U.S. 30 three times with the new construction. However, during the design phase additional consideration will be given to any further line shifts which might mitigate impact, reduce costs and address current safety standards. At points where new lanes cross present U.S. 30, construction work would be implemented in stages to keep the project area open to traffic.

The Initial Phase construction would provide 10-foot stabilized shoulders on the outside and 6-foot stabilized shoulders on the median side of the new two-lane pavement. The foreslopes will be 6:1 in areas with fill five feet or less. Second Phase construction will provide for upgrading the remaining sections of existing roadway to these standards.

All access will be purchased and access roads will be constructed where necessary during the Initial Phase. Access to the new facility will be provided at all existing county roads and are tentatively proposed with one intermediate access between the county roads. However, the final determination of the need for an access point between every county road will be made in the design stage of the project. The aerial photographs show tentative placement of these proposed access roads for estimating purposes. The section of this project between U.S. 30 and Iowa 149 will not be constructed during the Initial Phase, but will be built later after a definite alignment has been determined for the Circumferential Highway. It would be on new location and provide two 24-foot roadways separated with a median.

Sufficient right-of-way would be acquired during the Initial Phase, except for the connection between U.S. 30 and Iowa 149, so that Second Phase construction may be accomplished without the purchase of any additional right-of-way. This will require purchase of land from both sides at most locations. This alternate would require the acquisition of 29 homes and seven businesses. It would also require the acquisition of 425 acres of additional land which is virtually all used for agriculture. There are no timbered areas that would be affected except for trees around the farmsteads that would be acquired.

Interchanges are proposed at the intersections of U.S. 218, Iowa 287, Iowa 201, Iowa 279, and the Cedar Rapids Circumferential Highway. A cloverleaf interchange has been shown at the circumferential highway; however, this interchange is for illustrative and estimating purposes only, with the ultimate interchange type and location determined during the location study for the circumferential highway. Other roads in the project area would have access to the new facility at grade.

The length of this latest proposed Present Alignment Alternate and Initial Phase construction, from approximately 0.5 mile west of U.S. 218 to just west of the Iowa 149 interchange is 15.6 miles. The estimated construction costs for the Initial Phase construction and Second Phase construction are shown in Table 10.

The estimated cost for the 15.6 miles Initial Phase construction includes adding two-lanes to the existing facility from just west of U.S. 218 through the circumferential highway interchange; the interchanges at U.S. 218, Iowa 287, Iowa 201, Iowa 279, and the two loops north of U.S. 30 and the two ramps south of U.S. 30 at the Cedar Rapids Circumferential Highway Interchange; approximately 5.2 miles of 4-lane construction at the five interchange locations and lane crossovers; and 1.5 miles of four-lane construction from present U.S. 30 south and southeasterly to the end of the project at the west side of the Iowa 149 interchange.

The estimated cost for the Initial Phase also includes an additional 0.25 mile of two-lane construction from the east end of the Cedar Rapids Circumferential Highway interchange east to Stoney Point Road and all of the additional right-of-way needed for both the Initial Phase and Second Phase construction.

The estimated cost for Second Phase construction includes reconstruction of the remaining two-lanes of present U.S. 30 between the five interchanges and the crossovers and the 0.25 mile section from the east end of the Cedar Rapids Circumferential Highway interchange to Stoney Point Road. It does not include any construction on the 6.74 miles of Initial Phase 4-lane construction through the interchanges, crossovers and south of U.S. 30 to Iowa 149.

TABLE 10

ESTIMATED COST
PRESENT ALIGNMENT ALTERNATE

	Earthwork	Paving	Structures	Right-of-way	Total
Phase 1	\$3,313,000	\$8,277,000	\$3,764,000	\$2,903,000	\$18,257,000
Phase 2	689,000	1,894,000	477,000	---	3,060,000
TOTAL	\$4,002,000	\$10,171,000	\$4,241,000	\$2,903,000	\$21,317,000

The "Do-Nothing" alternate was also considered for this project. However, it would not have provided a facility which would improve the capacity and safety which is needed on this section of U.S. 30. Refer to "Need for Project" for a discussion of existing conditions.

Probable Beneficial and Adverse Effects

The Present Alignment Alternate will require less miles of highway to maintain. If either

the North or South Alternates were selected, maintenance of the existing route would still be required.

The reconstruction of the present U.S. 30 route would result in a higher level of service for all traffic in this corridor. Construction of either the North or South alternates would have resulted in large volumes of traffic still using the old route and they would not have had the benefit of the higher type of operation afforded by a new facility (Refer to Figures 2, 3, and 4).

A Class II access control facility for the Present Alignment Alternate, which would permit access at one mile intervals, would require approximately 11 miles of access roads. The proposed concept, which permits access at 0.5 mile intervals, would require approximately five miles of access roads and would save approximately 80 acres of land.

Table 11 summarizes the three alternates which were considered for this project.

TABLE 11
SUMMARY OF THE THREE ALTERNATES

	North Alternate	South Alternate	Present Alignment Alt. (New Concept)**
Length (Miles)	16.0	14.9	15.6
Fuel Consumption Per Mile/Day	1,130 Gal.*	1,130 Gal.*	1,230 Gal.
Residences Displaced	1	1	29
Businesses Displaced	0	0	7
Acres of Land Required	704	542	425***
No. of Interchanges	4	3	5
Estimated Cost	\$19,686,000	\$16,886,000	\$21,317,000
Noise Exceptions	0	0	13

*Also includes consumption on existing U.S. 30.

**Figures shown are based on the ultimate improvement.

***Does not include amount of land required for relocating homes or farmsteads.

**PROBABLE ADVERSE ENVIRONMENTAL EFFECTS
WHICH CANNOT BE AVOIDED**

The construction of this U.S. 30 project will cause some adverse environmental effects which cannot be avoided. This project would cause the displacement of 29 homes, 7 businesses and 425 additional acres of land for right-of-way. The additional land required consists mostly of cropland and pasture land. Noise and air pollution is expected to increase in the proposed corridor.

THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The primary objective of planned development is to ensure that short-term uses of the environment do not conflict with long-term productivity. Due to the large and often irreversible commitment of resources in highway projects, this relationship must be carefully evaluated during the planning process. Initially, the environment of the corridor would be disturbed by the short-term effects of construction. These include the noise, dust and exhaust emissions from the operation of heavy equipment and an increased potential for soil erosion from denuded ground surfaces.

The most significant long-term adverse impact is the alteration of the existing landscape necessary for construction of a highway. The terrain within the project corridor would require reshaping to obtain a smooth grade line for the facility. However, this would result in only a small amount of cropland, and pastureland being removed from production.

The foreseen impacts from the use of the existing environment for a long-term facility must be weighed against the anticipated long-term benefits in justifying a highway project such as this. The major benefit from this project will be reduced congestion and increased safety for motorists using this heavily traveled U.S. 30-U.S. 218 corridor. The project will also complete a U.S. 30 and U.S. 218 bypass of Cedar Rapids.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

Investment in a highway project is a long-term commitment of the elements that make up the project. Resources that must be committed to a highway project include:

Space - This commitment is not necessarily irreversible. If in the future it becomes desirable to change this land use, it would be possible to remove the highway and adapt the land to other uses. This would, however, be a very remote probability. In some cases, there are multiple use possibilities for space over, under and around a highway project. The most common example, and one which could be applicable to this project, is the maintenance and enhancement of surface water drainage around and under the highway.

Existing Landscape - In the construction of most highways the existing shape of the land must be altered to conform to a desirable design for vehicle transportation. Because of both engineering and aesthetic considerations, it is desirable to keep this alteration to a minimum. A highway that blends with the surrounding terrain is not only more attractive but most often is more economical to build. This factor is being considered in the planning for this project, but in some areas the existing configuration of the landscape within the corridor would be changed due to the cutting and filling necessary to achieve the modern grade standards of a highway.

The sacrifice of mature trees dispersed throughout the project corridor, whether they serve simply as visual amenities, function as windbreaks, or provide wildlife protection, would be a loss of aesthetic quality wherever they occur. The loss of trees must be regarded as a permanent commitment of a treasured resource.

Construction materials - These include cement, sand, gravel, asphalt, steel, aluminum and other products typical of large-scale construction. In all probability these elements will be committed permanently. In the event of future highway removal, some of the metals could be recycled. Any utilization of used construction material would depend on needs and economics at the time. The cost of the land, construction materials and labor for the project are also an irretrievable commitment.

Construction machinery - The equipment, motor fuels and lubricants used during construction are irreversible commitments. The quantities of these products currently being expended on a highway project are becoming more significant in relation to national use and declining availability. However, these resources are considered to be beneficially employed in a responsible long-term capacity.

Future commitments - By constructing this facility, a commitment of future expenditures is made for such things as daily maintenance for the duration of the use of the highway. The major natural resource committed within thy project corridor is the land, most of which is presently undeveloped or committed to agriculture.

IMPACT ON PROPERTIES AND SITES OF HISTORIC AND CULTURAL SIGNIFICANCE

In order to protect those features of our environment which remind us of our cultural heritage, the Iowa Department of Transportation has developed a program for the systematic identification of cultural resources which may be affected by proposed highway improvement projects. The program is designed to provide for early identification and evaluation of these effects in order to insure that project location and design decisions are made in an informed manner. Steps in the program, in their normal order of occurrence, include: (1) early contact and coordination with the Office of the State Archaeologist (OSA) and the State Historic Preservation Officer (SHPO) at the time of project A-95 Review; (2) survey and report preparation activity by the Iowa DOT staff Cultural Resources Specialist for historic and architectural resources; (3) archaeological survey and report preparation by OSA's Highway Surveys Archaeologist; (4) submission of a combined Cultural Resources Survey Report to the SHPO for review and comment; and (5) written response by the SHPO based upon his review of the report. Every effort is made to complete this sequence and obtain a written response from the SHPO for inclusion in the Draft Environmental Impact Statement. However, the report for this project was not completed in time to include in the Draft EIS.

The combined Cultural Resources Survey Report for this project was sent to the State Historic Preservation Officer for his review on December 19, 1977. His comments on this report are contained in the letter on the following page. The report contained the following summary:

"The archaeological assessment of the proposed project was successful in locating one archaeological site (13LN158) north of the project area. No other archaeological sites were located. Since borrows have not yet been designated, an inspection needs to be conducted prior to clearing and grubbing for this project. The archaeological potential on and near present alignment appears low. The historical assessment was unsuccessful in locating information pertaining to important events of local, state, or national significance. The architectural assessment located one structure of possible importance (Group II) within the project corridor. One bridge being displaced is recently remodeled and both bridges are of standard design."

An archaeological inspection of all borrow sites will be conducted after their locations have been determined. The architectural structure mentioned above is a two-story, wood-frame house built before the Civil War. Its location can be seen on aerial photo plate 11, in the back of this EIS, near Station 1115 on the north side of existing U.S. 30. Based on the review by the SHPO, one additional structure was identified as appearing to be eligible for the National Register of Historic Places. Its location can be seen on aerial photo plate 6 near Station 920 on the north side of U.S. 30. Neither of these houses will be displaced by the project, based on the concept developed in this EIS.

The entire Cultural Resources Survey Report for this project is available at the Planning and Research Division of the Iowa Department of Transportation. A review of the National Register of Historic Places indicated no historic sites in the project area.

DIVISION OF HISTORIC PRESERVATION
IOWA STATE HISTORICAL DEPARTMENT

ADRIAN D. ANDERSON, DIRECTOR
STATE HISTORIC PRESERVATION OFFICER

January 20, 1978

Mr. Robert Humphrey
Dept. of Transportation
Highway Division
826 Lincoln Way
Ames, Iowa 50010

Re: F-30-6, F-30-7, a reconstruction of U.S. 30 in Benton and Linn Counties

Dear Mr. Humphrey:

We have received the report: "F-30-6 and F-30-7, Reconstruction, Linn and Benton Counties; by John Hotopp, Debra Burnight, Emilie Lawrence, and Michael Lipsman: December, 1977". The review of the above referenced project by the Division of Historic Preservation has resulted in the following recommendations:

ARCHAEOLOGY: It is recommended that the proposed project proceed, contingent upon the borrow areas being reconnoitered prior to initial clearing and grubbing.

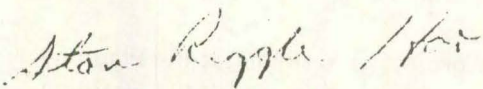
ARCHITECTURE and HISTORY: Two structures merit recording if they are to be demolished (as they appear to be eligible for the National Register of Historic Places):

Fig. 4: Full HABS recording

Fig. 10: Photographic recording following HABS standards, plus sketch floor plans

If the Division can be of additional assistance at this time, please let us know.

Sincerely,


Adrian D. Anderson, Director
State Historic Preservation Officer

ADA/eb

cc: John Hotopp

COMMENTS AND COORDINATION

Comments received on the earlier Draft Environmental Statement for this project are included in the Final Environmental Statement (FHWA-IA-EIS-71-14-F). This document is available at the Highway Division of the Iowa Department of Transportation and the Iowa Division Office of the Federal Highway Administration.

This supplemental statement was prepared because of the Iowa Department of Transportation's attempt to reduce the number of acres of agricultural land that would have been required for right-of-way with the South Alternate which was selected previously. A revised concept utilizing the present alignment of U.S. 30 was developed which would reduce the amount of land required for the project.

This section is divided into two parts identified as A and B. Part A consists of letters received, and responses to these letters, from reviewing agencies analyzing the Supplemental Draft Environmental Impact Statement. This Draft Statement was circulated in March, 1977.

Part B is a summary of comments received at the corridor public hearing and a summary of the contents of letters received within the specified time period after the hearing. The public hearing was held in Atkins, Iowa on April 28, 1977, with 148 members of the public attending.

Comments from Agencies Reviewing the Draft EIS

Copies of the Supplemental Draft Statement were sent to the following reviewing agencies for their comment, written replies were received from those agencies preceded by an asterisk (*).

Federal Agencies:

- Department of Housing and Urban Development
- *Department of Agriculture
- *Department of Interior
- *Department of Health, Education, and Welfare
- *Environmental Protection Agency
- *Army Corps of Engineers
- *Federal Aviation Administration
- *Federal Railroad Administration
- Federal Energy Administration
- *U.S. Coast Guard

State Agencies:

- *Office of Planning and Programming
- Iowa Development Commission

- Iowa Department of Soil Conservation
- Iowa Conservation Commission
- Iowa Natural Resources Council
- Iowa Department of Environmental Quality
- *Iowa State Historical Society
- State Historic Preservation Officer
- *Office of State Archaeologist
- *Iowa Department of Agriculture

Local Agencies:

- Benton County Board of Supervisors
- Benton County Conservation Board
- Linn County Board of Supervisors
- *Linn County Conservation Board
- *Linn County Regional Planning Commission
- *Mayor, City of Cedar Rapids
- *East Central Iowa Association of Regional Planning Commissions

Private Organizations:

- Iowa Confederation of Environmental Organizations

Part A - Comments from agencies reviewing the Draft Environmental Impact Statement and responses to the pertinent social, economic and environmental comments.

UNITED STATES DEPARTMENT OF AGRICULTURE

SOIL CONSERVATION SERVICE

823 Federal Building, Des Moines, Iowa 50309

May 4, 1977

Robert L. Humphrey
Project Planning Engineer
Department of Transportation
Highway Division
826 Lincoln Way
Ames, Iowa 50010

Dear Mr. Humphrey:

The supplemental draft environmental impact statement for U. S. 30 in Benton and Linn Counties that was addressed to Dr. T. C. Eyerly, Coordinator of Environmental Quality Activities on March 11, 1977 was referred to the Soil Conservation Service for review and comment.

We have no comments about this supplemental statement.

We appreciate the opportunity to review and comment on this work.

Sincerely,



William J. Brune
State Conservationist

Your review of the Supplemental Draft EIS has been noted.



ER-77/252

United States Department of the Interior
OFFICE OF THE SECRETARY

MISSOURI BASIN REGION
DENVER, COLORADO 80225

Mr. Leon N. Larson
Division Administrator
Federal Highway Administration
P.O. Box 627
Ames, Iowa 50010

Dear Mr. Larson:

This is in response to the request for the Department of the Interior's review and comments on the draft environmental statement for U.S. 30, Benton and Linn Counties, Iowa.

The statement notes (p. 25) that "The proposed project will disturb the wildlife habitat somewhat during construction; however, the increase in right-of-way will provide more wildlife habitat after completion of the project." This is an essentially accurate assessment since, in this and similar areas of intense, fence-to-fence agriculture, highway rights-of-way (with their associated plantings) often provide the only significant habitat for wildlife. We would recommend, however, that the existing U.S. 30 alignment be followed instead of creating a new alignment north or south of the present U.S. 30 location.

When the location phase has been completed and right-of-way acquired, there may be odd parcels of land included in right-of-way acquisition which will not be directly affected by construction. We suggest that selected areas be allowed to revert and/or be seeded to suitable native grass, forb and shrub species and ultimately fenced to prevent or minimize livestock encroachment and road kills. This should be coordinated with the Iowa Conservation Commission. If these areas were allowed to revert by natural succession, maintenance responsibilities, either by the Iowa Department of Transportation or the Iowa Conservation Commission, would be minimal or unnecessary.

We note that the State Archeologist and State Historic Preservation Officer have been consulted. Therefore, we suggest that their recommendations be followed concerning the need for an archeological and historic survey. If cultural resources of National Register quality are discovered in the project's area of potential impact, the Advisory Council on Historic Preservation's "Procedures for the Protection of Historic and Cultural Properties" (36 CFR 800) should be implemented.

The Iowa Department of Transportation Commission has approved the present US 30 alignment alternate for design and ultimate construction.

The Iowa Department of Transportation does coordinate with the Iowa Conservation Commission on parcels of excess land not suitable for agriculture or other productive purposes.

Refer to letters from the State Archaeologist and State Historic Preservation Officer in this section.

2

Mr. Leon N. Larson, FHWA, Ames, Iowa

Letters from the State Historic Preservation Officer and State Archeologist containing their views and recommendations should be included in the final statement along with any other pertinent documentation that may result from compliance with the Council's "Procedures."

If borrow areas are required, site selection, design and post-construction use should be coordinated with the Iowa Conservation Commission.

Sincerely,

/S/ JOHN RAYBOURN

John E. Raybourn
Regional Environmental
Review Officer

cc: Federal Highway Administration, Region 7, Kansas City, Missouri
Iowa Department of Transportation, Des Moines, Iowa

The Iowa Department of Transportation does coordinate with the State Conservation Commission on post-construction use of some borrow sites, usually lake type borrows, when a simple fee title is obtained. However, many times a temporary easement is obtained for a borrow site with the area returning to the original owner after the fill material has been excavated.



DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
REGION VII
FEDERAL BUILDING
601 EAST 12TH STREET
KANSAS CITY, MISSOURI 64106

OFFICE OF
THE REGIONAL DIRECTOR

May 11, 1977

Mr. Robert L. Humphrey
Project Planning Engineer
Department of Transportation
Highway Division
826 Lincoln Way
Ames, Iowa 50010

Dear Mr. Humphrey:

Re: Draft Environmental Impact Statement
US 30 Benton and Linn Counties, Iowa

We have reviewed the above referenced project and appreciate the opportunity to comment.

Please be advised that this project has no apparent impact on the program of the Department of Health, Education, and Welfare.

Sincerely,

William H. Henderson
William H. Henderson
Regional Environmental Officer

Your review of the Supplemental Draft EIS has been noted.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII
1735 BALTIMORE
KANSAS CITY, MISSOURI 64108

April 29, 1977

Mr. Hubert A. Willard
Division Administrator
Federal Highway Administration
P.O. Box 627
Ames, Iowa 50010

Dear Mr. Willard:

U.S. 30, Benton and Linn Counties, Iowa

We have reviewed the Draft Supplemental Environmental Impact Statement for the project identified above. The project and statement are rated ER-2. This rating means our agency has environmental reservations with the project and the statement should contain additional information to fully evaluate project impacts. We are particularly concerned with the noise impacts associated with the proposed project. The following are our comments.

The revised project would upgrade U.S. 30 to a four-lane facility using existing right-of-way instead of relocating the highway one-half mile north or south of the present alignment. While this proposal would require the acquisition of less agricultural land, which is commendable, noise impacts associated with the project would increase. Table 6 of the statement indicates receptors adjacent to existing U.S. 30 currently experience noise levels equal to or higher than the noise standards set forth in Federal-Aid Highway Program Manual 7-7-3. As a result of the proposed action, noise levels for the year 2000 would further increase for these receptors although less than with the "No-Build" alternative. We have environmental reservations with these noise levels since they apparently would not be mitigated.

We do not believe the noise analysis conducted for this project accurately reflects the noise impacts associated with the project. While the Table 6 data appear correct, the receptors identified are located on the opposite side of U.S. 30 from where the new lanes would be constructed. According to the aerial photos, an additional 25 receptors would be closer to the noise source since the new lanes would be constructed between them and existing U.S. 30. The final statement should contain present and projected noise levels at these receptors for both the proposed project and the "No-Build" alternative.

Refer to "Noise Impacts" which has been rewritten to respond to all comments on noise.

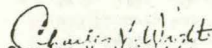
A discussion of mitigative measures in the supplement contends the use of earth berms for noise abatement is not feasible since they would require the acquisition of additional agricultural land. Where the receptor sites would be close enough to the highway to be impacted by noise, it seems the land between the receptor sites and the highway would not likely be productive agricultural land. Thus, we believe berms should be the subject of further site specific evaluation in the final statement.

The supplement suggests that because of the hilly topography, larger and more expensive noise barriers would be required. However, this statement is not supported with any specific documentation. Hilly topography may lend itself to the use of road cuts as a noise attenuating action. Again, this measure is site dependent and should be investigated for specific sites in the final statement. The report states a cost benefit analysis shows barriers to be "too costly to be justified." The final statement should identify the evaluative criteria utilized in making this determination and explain in detail the costs and benefits of barriers on a site specific basis for all receptors.

Page 46 of the supplement indicates interchanges at Iowa 287, Iowa 201, and Iowa 279 could be eliminated and the existing intersections with U.S. 30 would still function effectively. The final statement should indicate whether the present at grade intersections would remain without the proposed interchanges. Based on the low traffic volumes on these state highways, we would prefer the use of at grade intersections which would preserve additional productive farmland.

We appreciate the opportunity to review this draft supplemental statement. Please furnish this office with three copies of the final statement when it is officially filed with the Council on Environmental Quality.

Sincerely yours,


Charles V. Wright
Acting Regional Administrator

In order to provide greater safety for the motorist, the Iowa Department of Transportation has approved construction of these three interchanges.



DEPARTMENT OF THE ARMY
 ROCK ISLAND DISTRICT CORPS OF ENGINEERS
 CLOCK TOWER BUILDING
 ROCK ISLAND, ILLINOIS 61201



IN REPLY REFER TO

NCRED-PB

4 MAY 1977

Mr. Robert L. Humphrey
 Highway Division
 Iowa Department of Transportation
 826 Lincoln Way
 Ames, Iowa 50010


Dear Mr. Humphrey:

This office has reviewed the Draft Environmental Statement (Supplemental), US 30, Benton and Linn Counties. Project No. F-30-6 and F-30-7.

Portions of the project may require Department of the Army permit authorizations. The draft statement does not address the Section 10 and/or Section 404 permit requirements. Activities requiring Section 404 permit authorization must meet the criteria set forth in 40 CFR-230 (Section 404b Guidelines). A discussion of the impacts anticipated in regard to these guidelines should be incorporated in the final statement.

I recommend that you contact Mr. Monte Hines, Permits and Statistics Branch, for direct coordination in determining permit requirements. Once determinations are made and/or permits issued, such information should be included in the final environmental statement.

Sincerely yours,


 DOYLE W. McCULLY
 Chief, Engineering Division

Refer to "Water Quality Impacts" which includes a discussion of the Section 404 permits.



DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

CENTRAL REGION
601 EAST 12TH STREET
KANSAS CITY, MISSOURI 64106



MAR 17 1977

Mr. Robert L. Humphrey
Project Planning Engineer
Iowa Department of Transportation
826 Lincoln Way
Ames, Iowa 50010

Subject: US 30
Benton-Linn Co's
US 218 to IA 149
F-30-6, F-30-7

Dear Mr. Humphrey:

We have reviewed the subject Draft Environmental Impact Statement, and find that this project does not have any significant environmental impact on the resources within our jurisdiction.

Thank you for the opportunity to comment.

Sincerely,

A handwritten signature in cursive script, appearing to read "Melvin J. Fischer".

MELVIN J. FISCHER
Chief, Planning Branch

Your review of the Supplemental Draft EIS has been noted.



DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION
~~WASHINGTON, D.C. 20590~~

1807 Federal Office Building
911 Walnut Street
Kansas City, Missouri 64106

May 16, 1977

Mr. Robert L. Humphrey
Project Planning Engineer
Highway Division
Iowa Department of Transportation
800 Lincoln Way
Ames, Iowa 50010

Dear Mr. Humphrey:

I have reviewed the Environmental Statement, (Supplemental), involving improvements to U. S. Route 30 in Benton and Linn Counties. Inasmuch as no railroads are involved the Federal Railroad Administration has no comments on the effects of the Statement.

I note on page 17 the listing of three railroads that operate in either Benton or Linn Counties; the Milwaukee Road, the Rock Island and the North Western. The Cedar Rapids and Iowa City Railway Company, an Intra-state Carrier, operates in Linn County.

The Waterloo Railroad owns track between Waterloo and Cedar Rapids but no train operation exists between the two cities. The Company maintains switching service in Cedar Rapids.

Finally, the Illinois Central Gulf Railroad serves Cedar Rapids. You may wish to include these three carriers among the transportation modes.

Sincerely,

H. R. Bird
Director of Railroad Safety

These two railroads have been added to the list of railroads serving the Cedar Rapids area.



DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

MAILING ADDRESS (dpl/eis)
COMMANDER
SECOND COAST GUARD DISTRICT
FEDERAL BLDG
120 MARKET ST
ST LOUIS MO 63102

16475
Ser 032
12 April 1977

Iowa Dept. of Transportation
Highway Division
826 Lincoln Way
Ames, IA 50010

Gentlemen:

We have reviewed the draft environmental impact statement for U.S. 30, Benton and Linn Counties, Project No. MF-30-6 and F-30-7. We have no comment to offer on this document.

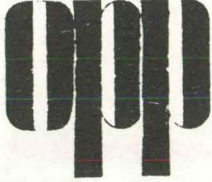
Your review of the Supplemental Draft EIS has been noted.

Thank you for the opportunity to review this environmental impact statement.

Sincerely,

C. E. JOHNSON, JR.
Environmental Protection Specialist
By direction of the District Commander

Copy to:
COMDT (G-WEP-7)
DOT SECREP Region VII
DOT (tes), Office of Environmental Affairs
CEQ (5)



STATE OF IOWA

Office for Planning and Programming

523 East 12th Street, Des Moines, Iowa 50319 Telephone 515/281-3711

ROBERT D. RAY
Governor

STATE CLEARINGHOUSE

ROBERT F. TYSON
Director

PROJECT NOTIFICATION AND REVIEW SIGNOFF

Date Received: March 14, 1977 State Application Identifier: 720232
 Review Completed: May 5, 1977

APPLICANT PROJECT TITLE:

U.S. 30, Benton-Linn Counties, F-30-6, F-30-7

APPLICANT AGENCY:	Department of Transportation	Ames, Iowa 50010
Address	Highway Division	Robert L. Humphrey
	826 Lincoln Way	Project Planning Engineer

FEDERAL PROGRAM TITLE, AGENCY AND CATALOG NUMBER:	Highway Research Planning and Construction
	Department of Transportation
	Federal Highway Administration
	Catalog No. 20.205

AMOUNT OF FUNDS REQUESTED: NA

PROJECT DESCRIPTION:

The proposed project includes a draft environmental statement(supplement) for U.S. 30 in Benton and Linn Counties. Project No. F-30-6 and F-30-7.

The State Clearinghouse makes the following disposition concerning this application:

- No Comment Necessary. The application must be submitted as received by the Clearinghouse with this form attached as evidence that the required review has been performed.
- Comments are Attached. The application must be submitted with this form plus the attached comments as evidence that the required review has been performed.

STATE CLEARINGHOUSE COMMENTS:

The Clearinghouse has considered the attached correspondence concerning the Historical and Archaeological significance of the F-30-6 and F-30-7 project and feels that the reply to the questions of the Iowa State Historical Department by the State Archaeologist that proper actions are being taken to protect any historical and archaeological significant sites in the area.

P. James Willard
 Federal Funds Coordinator

IOWA STATE HISTORICAL DEPARTMENT
DIVISION OF THE STATE HISTORICAL SOCIETY

Loren N. Horton,
Field Services

Iowa City, Iowa 52240



March 31, 1977

Mr. A. Thomas Wallace, Jr.
Federal Funds Coordinator
Office for Planning and Programming
523 East 12th Street
Des Moines, Iowa 50319

Dear Mr. Wallace:

This is in response to your cover letter of 22 March 1977 regarding the SAI Letter of Intent and draft Environmental Impact Statement for Project No. 720232, U.S. 30, Benton-Linn Counties, F-30-6, F-30-7.

We have reviewed the material, especially that found on pages 25-26, and page 55. I do disagree with the statement on page 55 that there are no potential historic sites in the project area. Apparently they mean that no historic sites in the area have yet been nominated to the National Register. We have no specific knowledge of historic, architectural, or archeological sites in the project area, but until a survey is made, we cannot categorically state that none are present. After the Historic Preservation Officer and the Office of State Archeologist have commented, we can be more sure of the significant sites or the lack thereof.

We will do research in the secondary literature about the area, and if we find anything, then I will submit another letter of comment. In the event that we do not find anything of significance, this letter will stand as our comment. In case there are further hearings, or further printed material about this project, we are interested in being informed. Thank you for the opportunity to comment on the proposed action.

Very truly yours,

Loren N. Horton
Loren N. Horton
Field Representative

LNH/af

Refer to the following letter from the State Archaeologist for the correct interpretation of the statement on page 55 of the Draft EIS.

The University of Iowa

Iowa City, Iowa 52242

Office of the State Archaeologist

(515) 353-5175, 353-5177



April 19, 1977

Mr. A. Thomas Wallace
Office for Planning and Programming
523 East 12th Street
Des Moines, Iowa 50319

RE: Draft Environmental Statement, U.S. 30, Benton and Linn Counties, SAI 720232

Dear Mr. Wallace:

Perhaps I can clear up the questions raised in your letter of April 14.

We received this project on March 22, 1977, at which time it went into our active file following our regular procedure (see letter of April 4, 1977 from Stanley Riggle, Historic Preservation, to Merrill D. Beal).

The study will be conducted and included in the Final EIS as stated in the Supplemental Draft EIS dated February, 1977, paragraph 2, page 55.

I believe Mr. Horton was misled by the statement on page 55 that "There are no historic or potential historic sites on the register in the project area." What was meant was that no historic sites are currently on the register and none have been nominated.

One final note, this office is not part of the Division of Historic Preservation as indicated in the last paragraph of your letter of April 14. The OSA is a separate state agency administered by the Board of Regents through The University of Iowa.

If you have any further questions about this project, please feel free to contact me.

Sincerely,

Duane C. Anderson
State Archaeologist

DCA:bh
cc: Stanley Riggle,
Loren Horton

April 4, 1977

Merrill D. Deal, Regional Director
United States Department of the Interior
National Park Service
Midwest Region
1709 Jackson Street
Omaha, Nebraska 68102

Re: Project No. 720232, U.S. 30 in Benton-Linn Counties, P-30-6 and F-30-7.

Dear Mr. Deal:

The Division has been advised by Mr. John Hotopp (ILOT archaeologist) that a cultural resources survey report of the above proposal project is in progress. The report will provide a basis for recommending the necessity and scope of additional investigation.

Refer to pages 59 and 60.

Sincerely,

A. Stanley Riggle
Chief, Archaeological Survey

RSR/af

cc: Robert Humphrey, ILOT
John Hotopp
Thomas Wallace, OIP

Iowa State University of Science and Technology



Cooperative Extension Service

Ames, Iowa 50010

Administrative Offices

● Curtis Hall
Telephone 515-294-4576

May 4, 1977

Mr. Robert L. Humphrey
Project Planning Engineer
Highway Division
Department of Transportation
826 Lincoln Way
Ames, Iowa 50010

Dear Mr. Humphrey:

I am responding to the Draft Environmental Statement for Project Numbers F-30-6 and F-30-7.

The fewer acres of land required with the present alignment alternative is impressive, plus the indication that maintenance of the existing route with either of the other alternatives raises questions of need in an energy conscious society.

Your review and comments on the Supplemental Draft EIS have been noted.

Sincerely,

Charles E. Donhove
Dean and Director and
Chairman, State USDA
Rural Development Committee

CED:jem

cc: State USDA RD Committee

DEPARTMENT OF CONSERVATION

Linn County, Iowa

BOX NO. 163-4

CENTRAL CITY, IOWA 52214

TELEPHONE: 319-398-3505
319-408-1145

May 4, 1977

Ref: US 30
Benton-Linn Co's US 218 to IA 149
F-30-6, F-30-7

Mr. Robert L. Humphrey
Project Planning Engineer
Department of Transportation
Highway Division
826 Lincoln Way
Ames, Iowa 50010

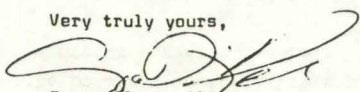
Dear Mr. Humphrey:

I am herewith submitting a report I have prepared in regards to the Draft Supplement Environmental Impact Statement.

This report was reviewed and approved by the Conservation Board at its special meeting on Monday, May 2. In addition to the observations in the report please note that the interchange on Plate 20 appears to be in error. It is our understanding that the subject interchange is to be one (1) mile west of Stoney Point Road.

The alignment of the proposed Circumferential Highway and location of the interchange is tentative at this time. The exact alignment will be determined following completion of a location study and the holding of a public hearing.

Very truly yours,


George D. Hamilton
Director

GDH/bwa
Encls.

LINN COUNTY CONSERVATION DEPARTMENT

5/2/77

DRAFT SUPPLEMENT ENVIRONMENTAL IMPACT STATEMENT, U.S. 30 from
U. S. 218 in Benton County to Iowa 149 in Linn County.

BY: George D. Hamilton, Director Linn County Conservation
Department

The report referred to was submitted to the Conservation Office on March 11, 1977. At the request of the Conservation Board the draft supplement has been reviewed and inspection made of the portion of highway 30 in Linn County in an effort to determine the possible impact of this project on areas of concern of the County Conservation Board.

The primary concern of the County Conservation Board is restricted to those lands and waters that are under its control and those things that occur in the vicinity of these areas that may have some impact on the ability of the area to fulfill its role in the county park system.

The proposed project is 1½ miles south of Morgan Creek Park, the closest county owned area to the project. I can find no reason to believe that the proposed project would have any negative impact on Morgan Creek Park except to the extent that the proposed work may influence water quality in Morgan Creek itself. The positive impact is related to the extent to which this proposed project will improve the transportation system in the Cedar Rapids area.

The question of water quality in Morgan Creek is primarily related to those activities that will take place during the construction stage and will consist of sediment entering Morgan Creek. It would seem that the corrective measures set forth on page 30 of the Draft environmental statement will reduce the impact of erosion and sedimentation on the water quality in Morgan Creek. Some concern should be expressed, however, for the following statement on page 30, "cut slopes will be seeded

DEPARTMENT OF CONSERVATION

Linn County, Iowa

BOX NO. 160-4

CENTRAL CITY, IOWA 52214

TELEPHONE: 319-398-3505
319-438-1145

May 4, 1977

Ref: US 30
Benton-Linn Co's US 218 to IA 149
F-30-6, F-30-7

Mr. Robert L. Humphrey
Project Planning Engineer
Department of Transportation
Highway Division
826 Lincoln Way
Ames, Iowa 50010

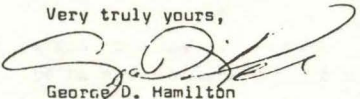
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Very truly yours,


George D. Hamilton
Director

GDH/bwa
Encls.

5/2/77

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BY: George D. Hamilton, Director Linn County Conservation Department

The report referred to was submitted to the Conservation Office on March 11, 1977. At the request of the Conservation Board the draft supplement has been reviewed and inspection made of the portion of highway 30 in Linn County in an effort to determine the possible impact of this project on areas of concern of the County Conservation Board.

The primary concern of the County Conservation Board is restricted to those lands and waters that are under its control and those things that occur in the vicinity of these areas that may have some impact on the ability of the area to fulfill its role in the county park system.

The proposed project is 1½ miles south of Morgan Creek Park, the closest county owned area to the project. I can find no reason to believe that the proposed project would have any negative impact on Morgan Creek Park except to the extent that the proposed work may influence water quality in Morgan Creek itself. The positive impact is related to the extent to which this proposed project will improve the transportation system in the Cedar Rapids area.

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Page -2-

and mulched as the excavation proceeds to the extent considered desirable and practicable", our experience on highway 13 and highway 30 in 1976 suggests that there is an unnecessary time lapse between the time that the soil is disturbed and corrective erosion control measures are taken.

Items of concern that are not directly related to any area under the control of the Conservation Board but which represent more broad concerns for contributing to a healthy environment should also be noted. In this regard it is suggested that IDOT utilize native prairie species or at least portions of the road side on the project in question. It is recognized that prairie grass seed is expensive and that to seed the entire road side to these species may introduce cost factors that are difficult to work with. However, by making the recommendation that portions be devoted to native prairie species would seem to be an attainable and worthwhile goal. Another item of concern is the lack of any provision in the draft environmental statement for road side plantings. Such plantings improve the aesthetics of the highway and contribute to noise abatement.

It should be noted that the supplemental draft environmental statement under review replaces an earlier environmental statement and has reduced the amount of agricultural land required for the project. It would seem appropriate to congratulate IDOT for having made this effort.

George D. Hamilton
George D. Hamilton
Director

GDH
GDH/pm

City of
Cedar
Rapids



Office of the Mayor
3rd Floor, City Hall, Cedar Rapids, Iowa 52401

May 5, 1977

Mr. Robert L. Humphrey
Project Planning Engineer
Department of Transportation
826 Lincoln Way
Ames, Iowa 50010

Dear Mr. Humphrey:

I wanted to take this opportunity to respond to your letter of March 11, 1977, concerning an environmental impact assessment of the proposed reconstruction project of U.S. 30 from U.S. 218 in Benton County to Iowa 149 in Cedar Rapids.

I am hereby enclosing a copy of Mr. Don Salyer's memorandum on the subject; a report from the Transportation Technical Advisory Committee of the Linn County Regional Planning Commission; a copy of the report from the Environmental Review Committee of the Regional Planning Commission; a copy of the Non-Metro Coordinating Committee report; and a copy of a memo from Jon Janda, Public Works Director, regarding this matter.

I believe the abovementioned memoranda adequately express my views on the project. If you have any additional questions, please don't hesitate to contact me.

Sincerely,

A handwritten signature in dark ink, appearing to read "Donald J. Canney".

Donald J. Canney
Mayor

DJC:llk

Encs.

Your review of the Supplemental Draft EIS has been noted.



LINN COUNTY REGIONAL PLANNING COMMISSION

6th Floor - City Hall - Cedar Rapids, Iowa - 52401 - 319 398-5041

May 4, 1977

Mr. Robert L. Humphrey
Project Planning Engineer
Iowa Department of Transportation
Highway Division, Office of Project Planning
Ames, Iowa 50010

Dear Mr. Humphrey:

The Linn County Regional Planning Commission through its staff and committees have reviewed the proposed concept for reconstruction of U.S. 30 from U.S. 218 in Benton County to Ia. 149 in Cedar Rapids and have formulated the comments contained in the attached Committee reports.

The comments are supportive of the reuse of existing right-of-way in the present U.S. 30 corridor but also express concern regarding a lack of conformance to the approved metropolitan 1995 Major Street Plan. Those concerns are that:

- 1) The interchange of U.S. 30 and the proposed Northwest Circumferential should be shifted approximately one mile to the west from the location one half mile west of Stoney Point Road which has been illustrated in the Draft EIS supplement and in materials distributed at the April 28, 1977 Corridor Location Public Hearing. That shift, made in the early 1970's during the advancement of the major street plan from 1990 to 1995, allows the orderly development of western Cedar Rapids to continue and avoids the unnecessary disruption of two major parks by the Northwest Circumferential.
- 2) An interchange between the U.S. 30 bypass and Stoney Point Road as shown in the approved 1995 Major Street Plan is needed to provide adequate access to and from the western part of Cedar Rapids.

A definite alignment will not be determined for the Cedar Rapids Circumferential Highway until a location study has been completed and a public hearing held. The circumferential highway and an interchange are shown on maps and aerials in this Final EIS for illustrative purposes only.

The need for an interchange at Stoney Point Road and spacing to provide acceptable operation will be determined during the location study for the Cedar Rapids Circumferential Highway.

Mr. Robert L. Humphrey
 Page Two
 May 4, 1977

In addition to those comments which relate to the proposed project, a number of comments regarding the draft EIS report are offered:

- 1) Reference is made to the 1990 Transportation Plan for the Cedar Rapids - Marion Metropolitan Area. That document was succeeded by the 1995 Major Street Plan in August, 1974.
- 2) The quoted population projection for Cedar Rapids (156,750) is also outdated and very high in light of recent trends.
- 3) Some of the data regarding health services may be dated.
- 4) The College Community School district's facilities are located in southern Cedar Rapids, not in Ely. There is no school in Fairfax. There are 28 not 32 public elementary schools operating in the Cedar Rapids Community School system.
- 5) There appears to be some confusion in the report's Land Use Planning section caused by a lack of distinction between land use plans and zoning.

The 1995 Major Street Plan has been added and referred to in this Final EIS. It is summarized under "Summary of Technical, Social, and Economic Studies."

The population projection for Cedar Rapids has been revised.

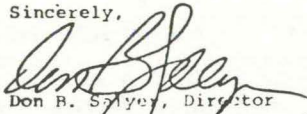
The section on health care has been rewritten.

This information has been used to revise the discussion on schools.

The section on Land Use Planning has been revised.

Thank you for the opportunity to comment on this project.

Sincerely,


 Don B. Sawyer, Director
 Department of Planning and Redevelopment
 Linn County Regional Planning Commission

DBS:RFS:lb



LINN COUNTY REGIONAL PLANNING COMMISSION

6th Floor - City Hall - Cedar Rapids, Iowa - 52401 - 319 398-5041

April 7, 1977

**TRANSPORTATION TECHNICAL ADVISORY COMMITTEE REPORT TO THE
METROPOLITAN COORDINATING COMMITTEE**

**Subject: Draft Environmental Impact Study
U.S. 30**


Following a review of the proposed reconstruction and new construction of U.S. 30 as described in the subject document, this Committee has the following comments relative to effects upon the transportation system operation:

- 1) The proposed interchange of existing U.S. 30, the U.S. 30 Bypass and the Northwest Circumferential should be shifted westerly to an alignment similar to that shown in the approved 1995 Major Street Plan, thereby maintaining system continuity without disrupting existing city and county parks.
- 2) An interchange between the U.S. 30 Bypass and Stoney Point Road as shown in the approved 1995 Major Street Plan is needed to provide adequate access to and from the western part of Cedar Rapids.

Refer to response on Circumferential Highway comment in preceding letter from the Linn County Regional Planning Commission (page 83).

This Committee recommends that these comments be forwarded to the Iowa Department of Transportation for its consideration in subsequent work on the U.S. 30 project.

Respectfully submitted,








Don B. Salyer, Vice Chairman (Acting Chair)
Transportation Technical Advisory Committee

Moved by Mr. Janda
Seconded by Mr. Meyer
Motion carried.

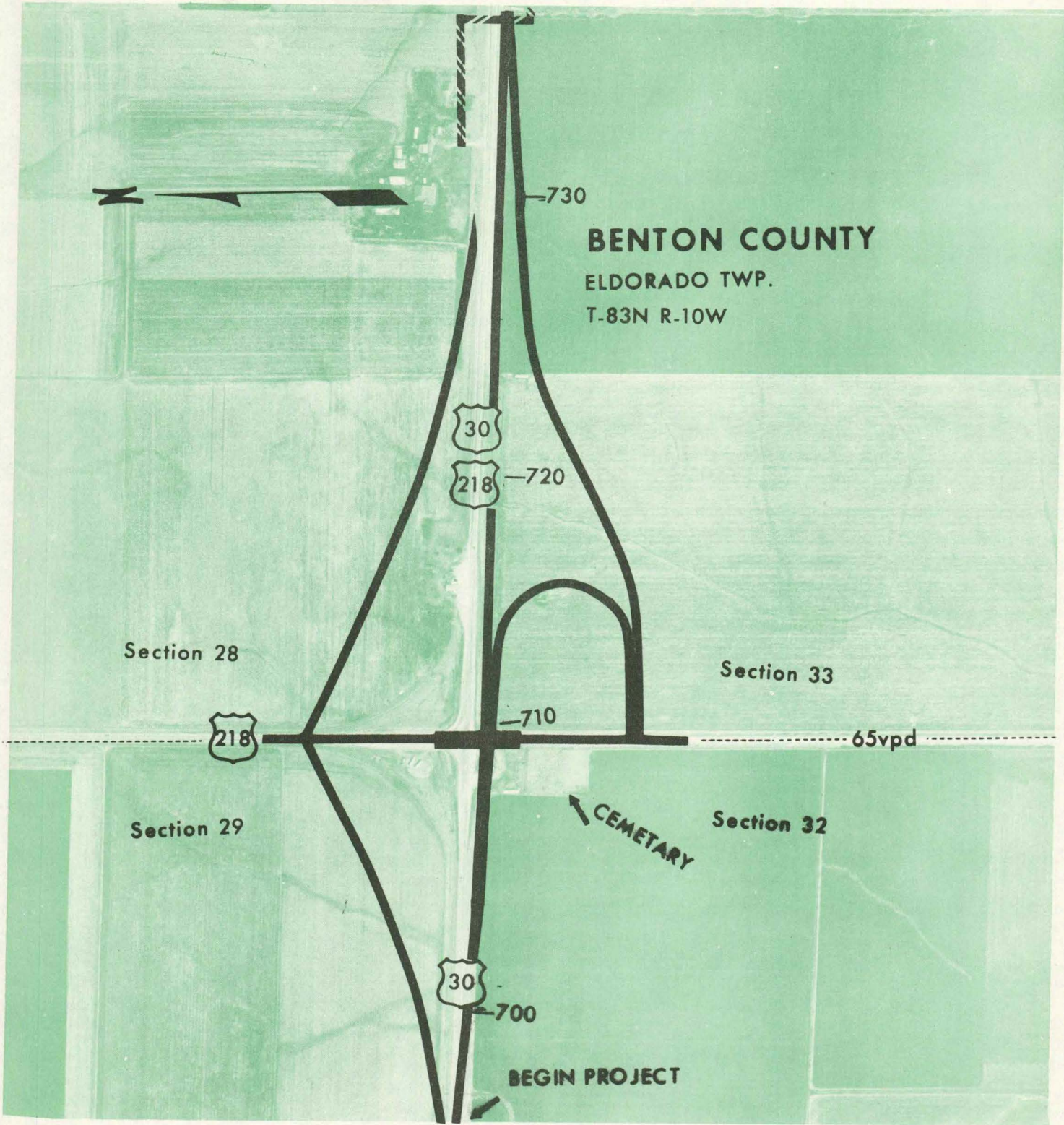
AERIAL PHOTOGRAPHS OF PROJECT AREA

LEGEND

-  Proposed Construction
-  Proposed Access Roads
-  Cedar Rapids Corporation Line
-  Section Lines
-  Noise Sensitive Receivers
- 50 v.p.d. 1974 Average Daily Traffic (vehicles per day)

NOTE:

The above symbols represent approximate locations on the following aerial photographs and are not to scale.



SCALE: 1 INCH = 500 FEET

PLATE 1



-770

BENTON COUNTY

ELDORADO TWP.

T-83N R-10W

Section 34

Section 27

70vpd

Section 28

Section 33

-760

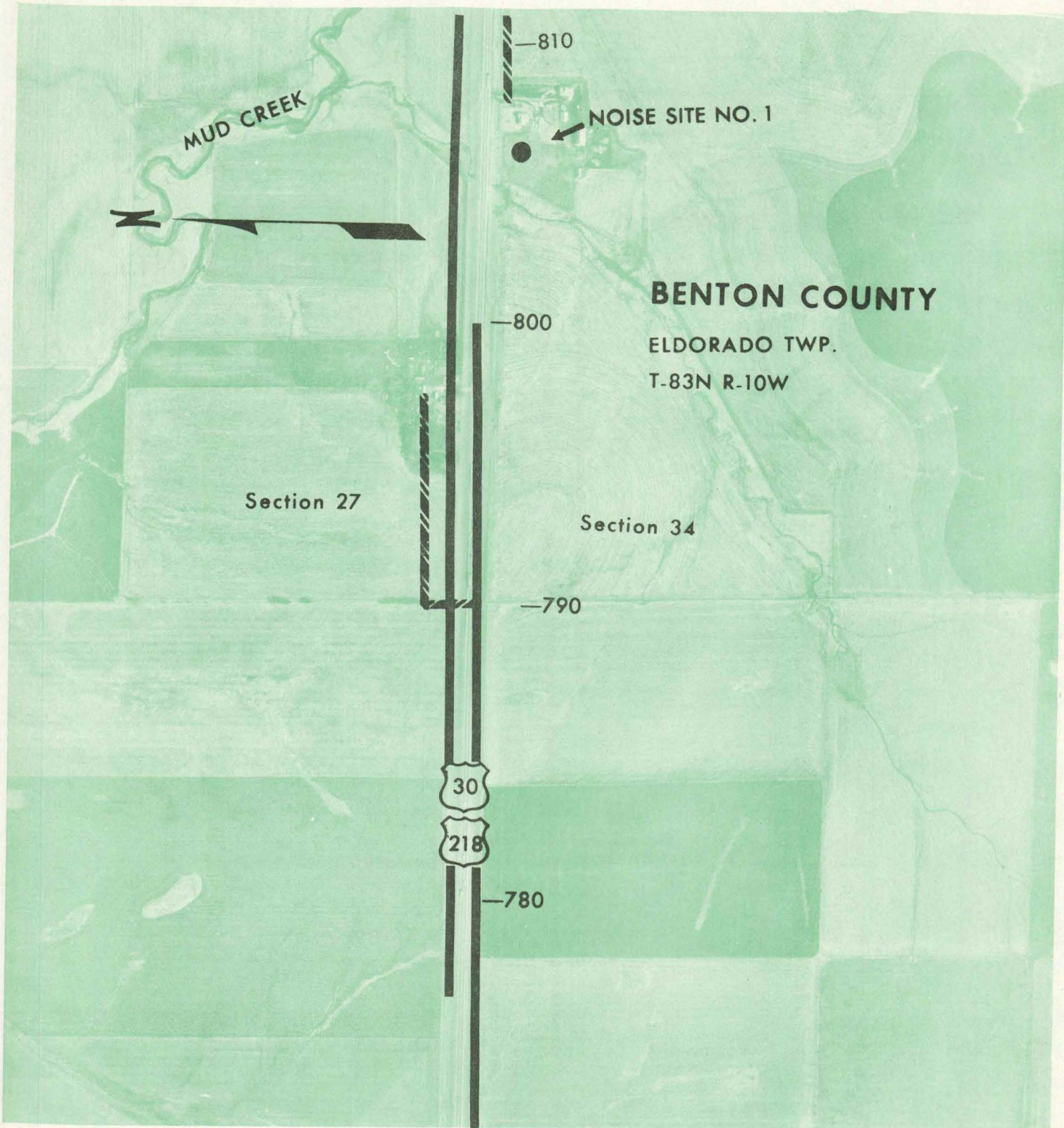


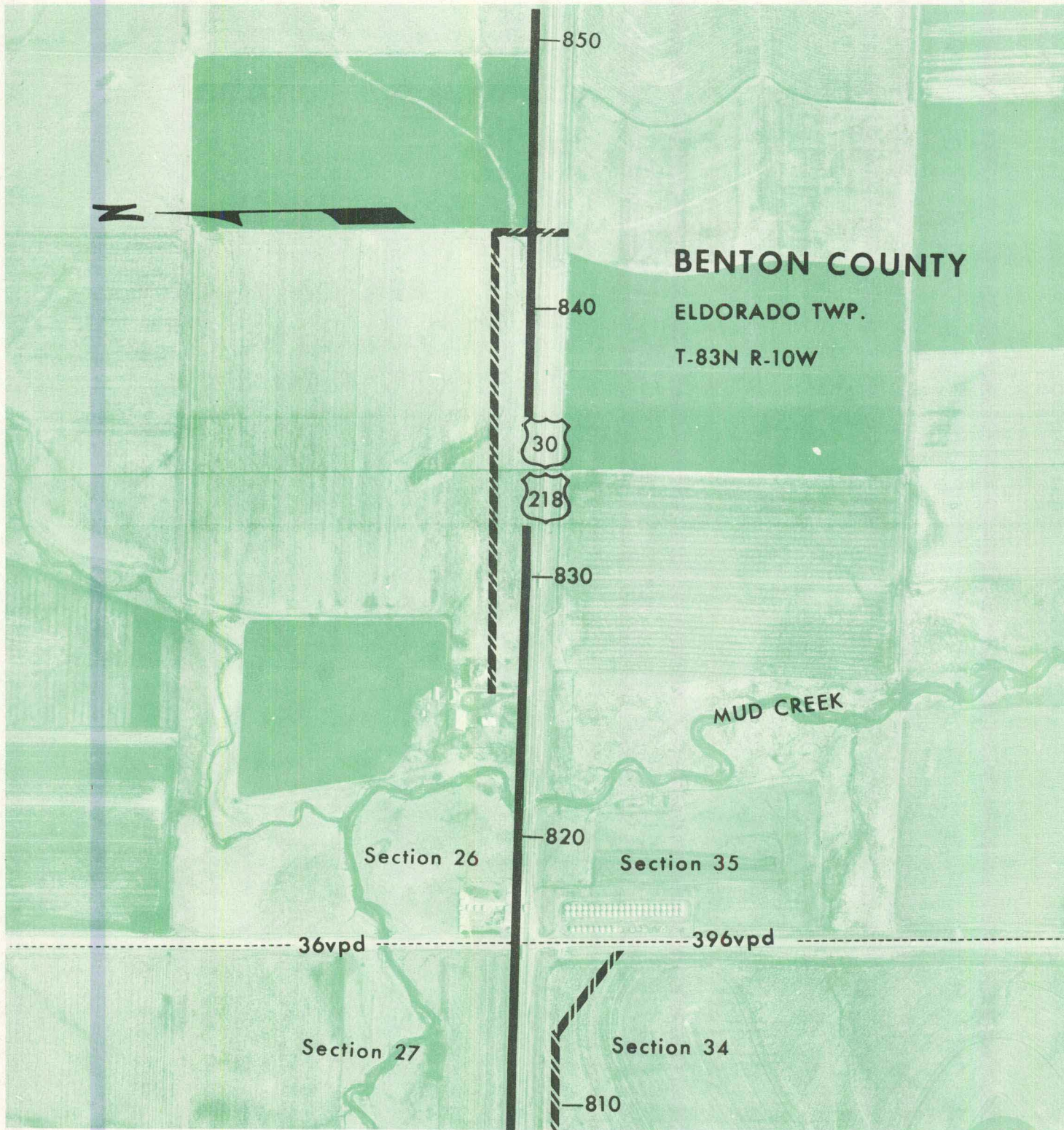
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-740

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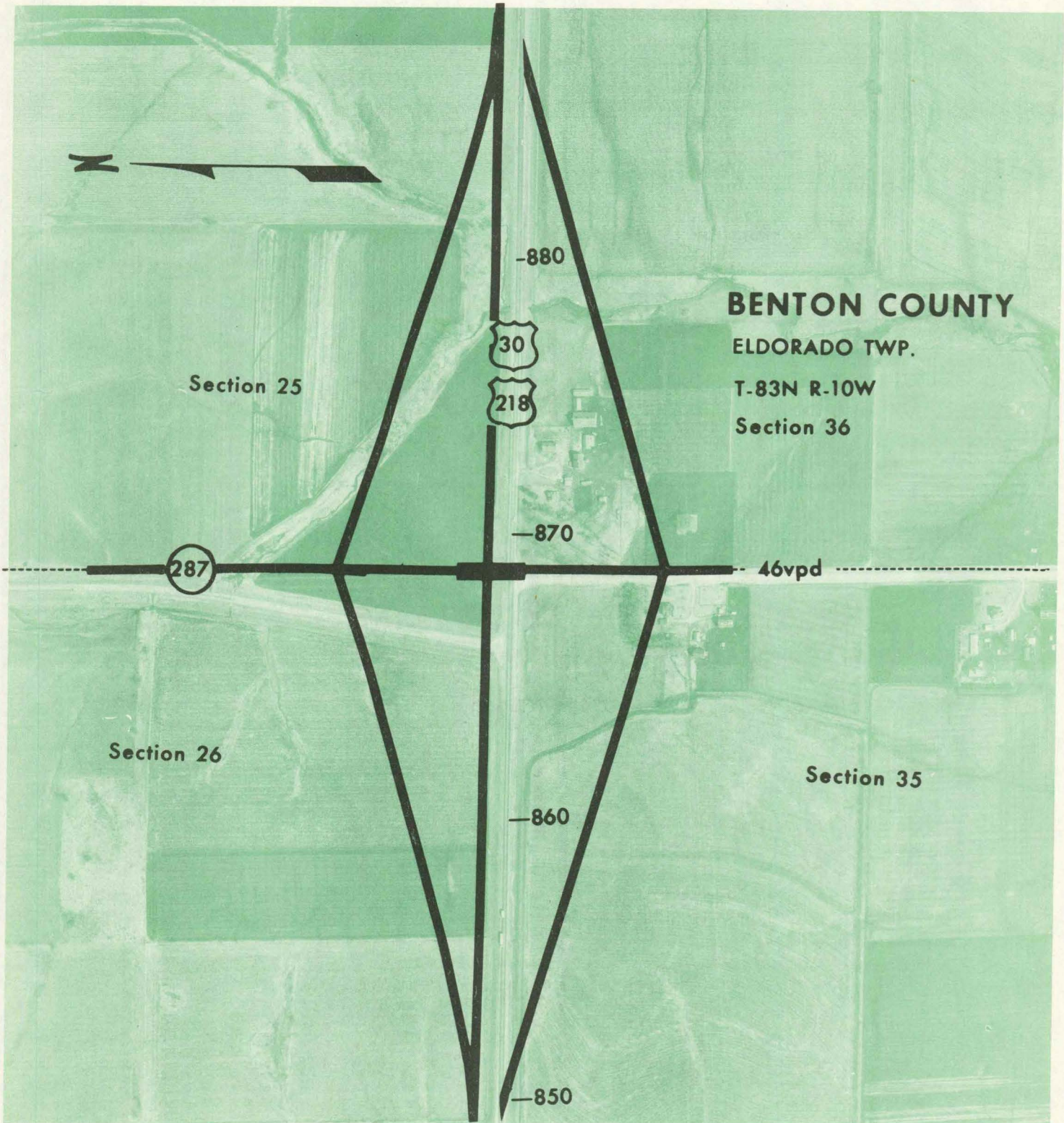
PLATE 2





SCALE: 1 INCH = 500 FEET

PLATE 4



BENTON COUNTY

ELDORADO TWP.

T-83N R-10W

Section 36

Section 25

Section 26

Section 35

287

-880

30

218

-870

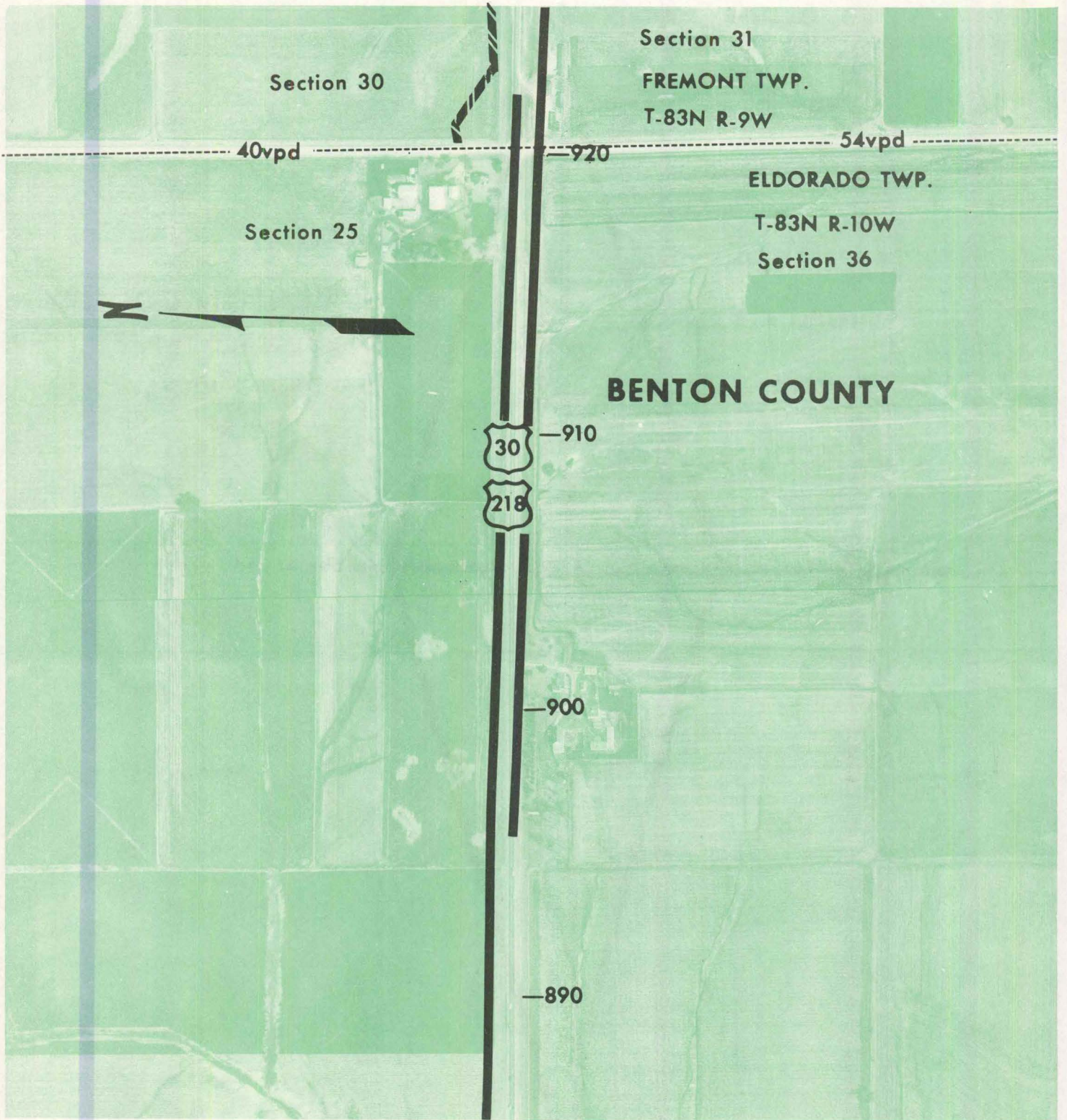
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-860

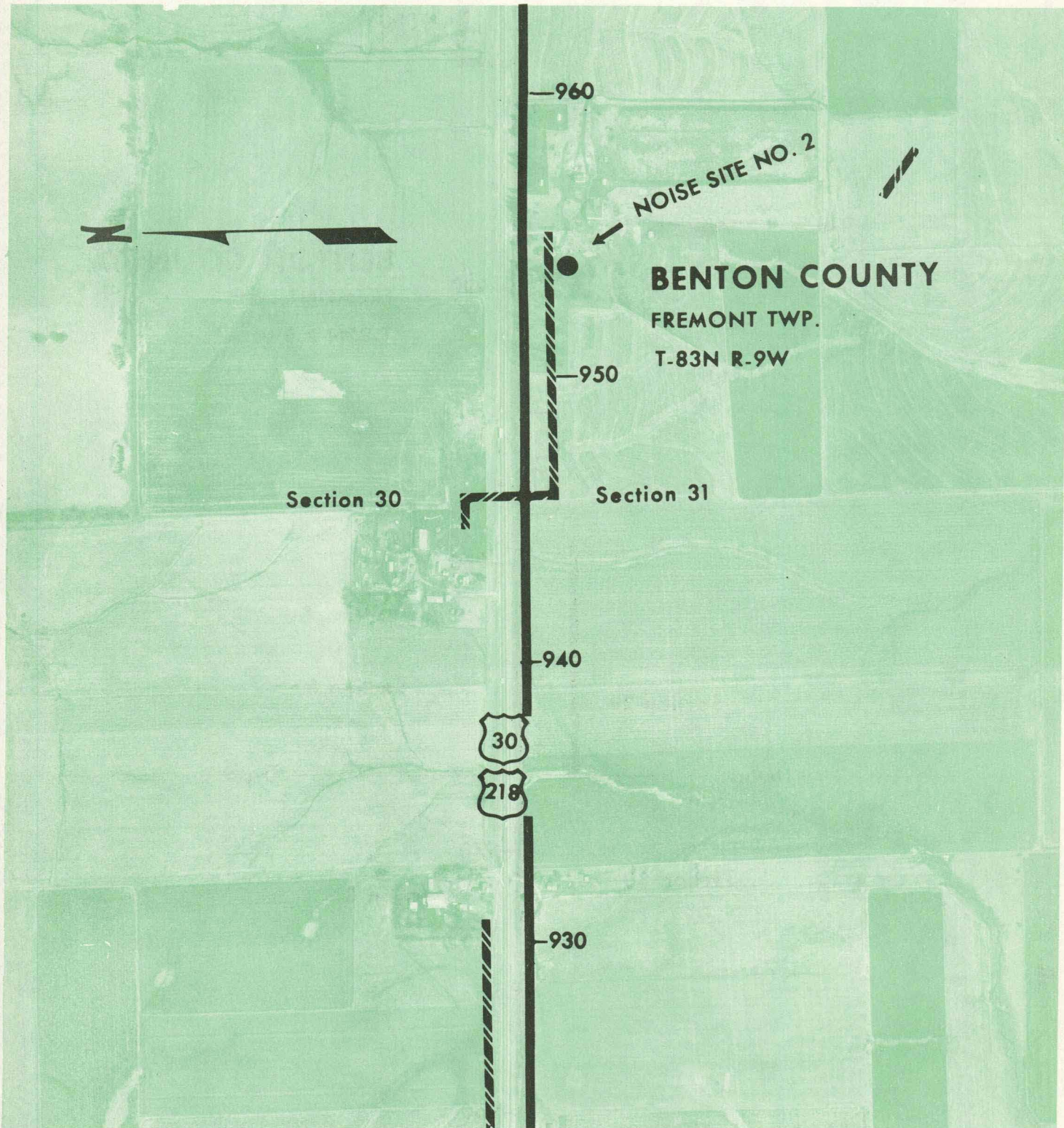
-850

SCALE: 1 INCH = 500 FEET

PLATE 5

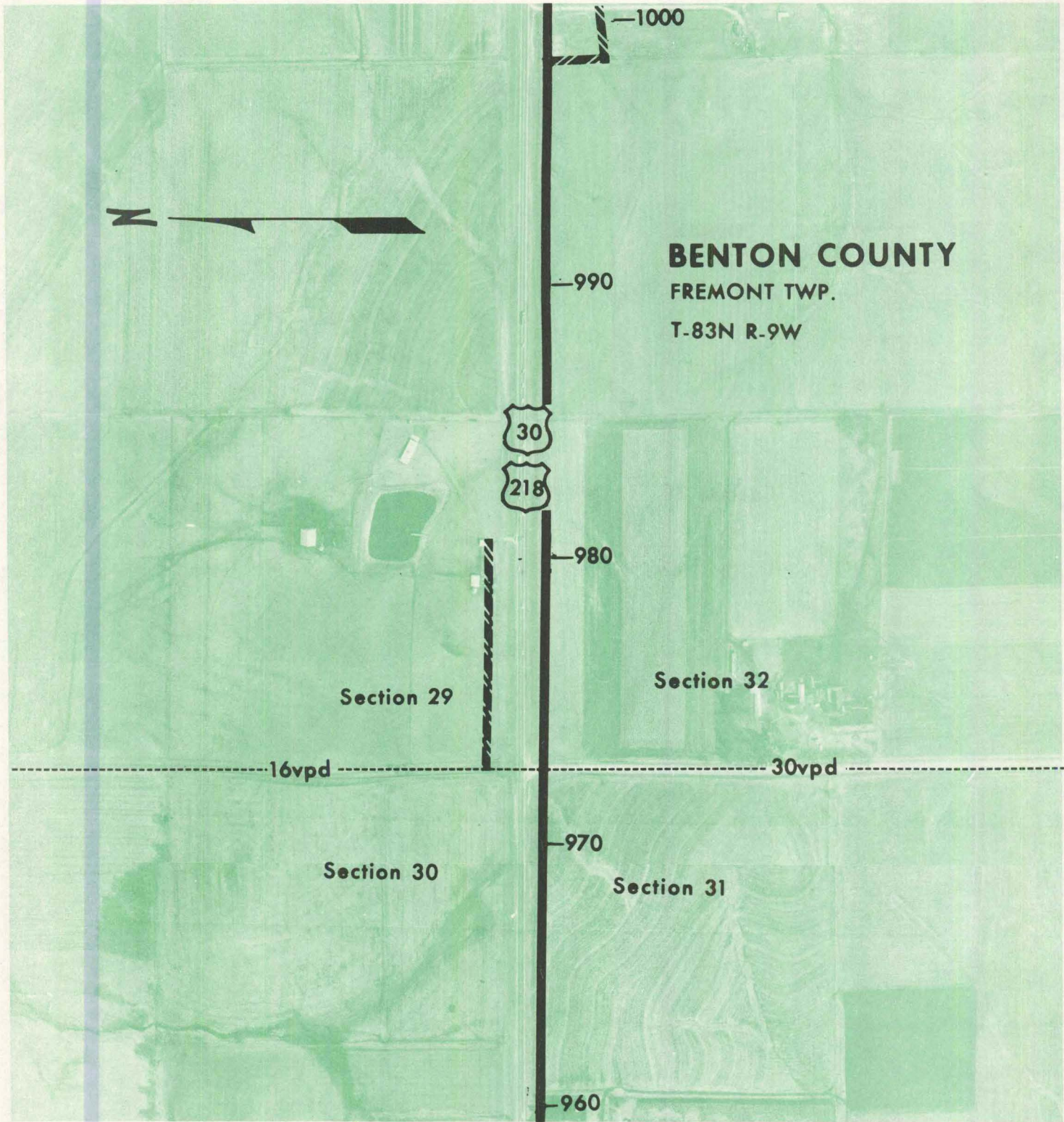


SCALE: 1 INCH = 500 FEET	PLATE 6
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SCALE: 1 INCH = 500 FEET

PLATE 7



BENTON COUNTY
FREMONT TWP.
T-83N R-9W



Section 29

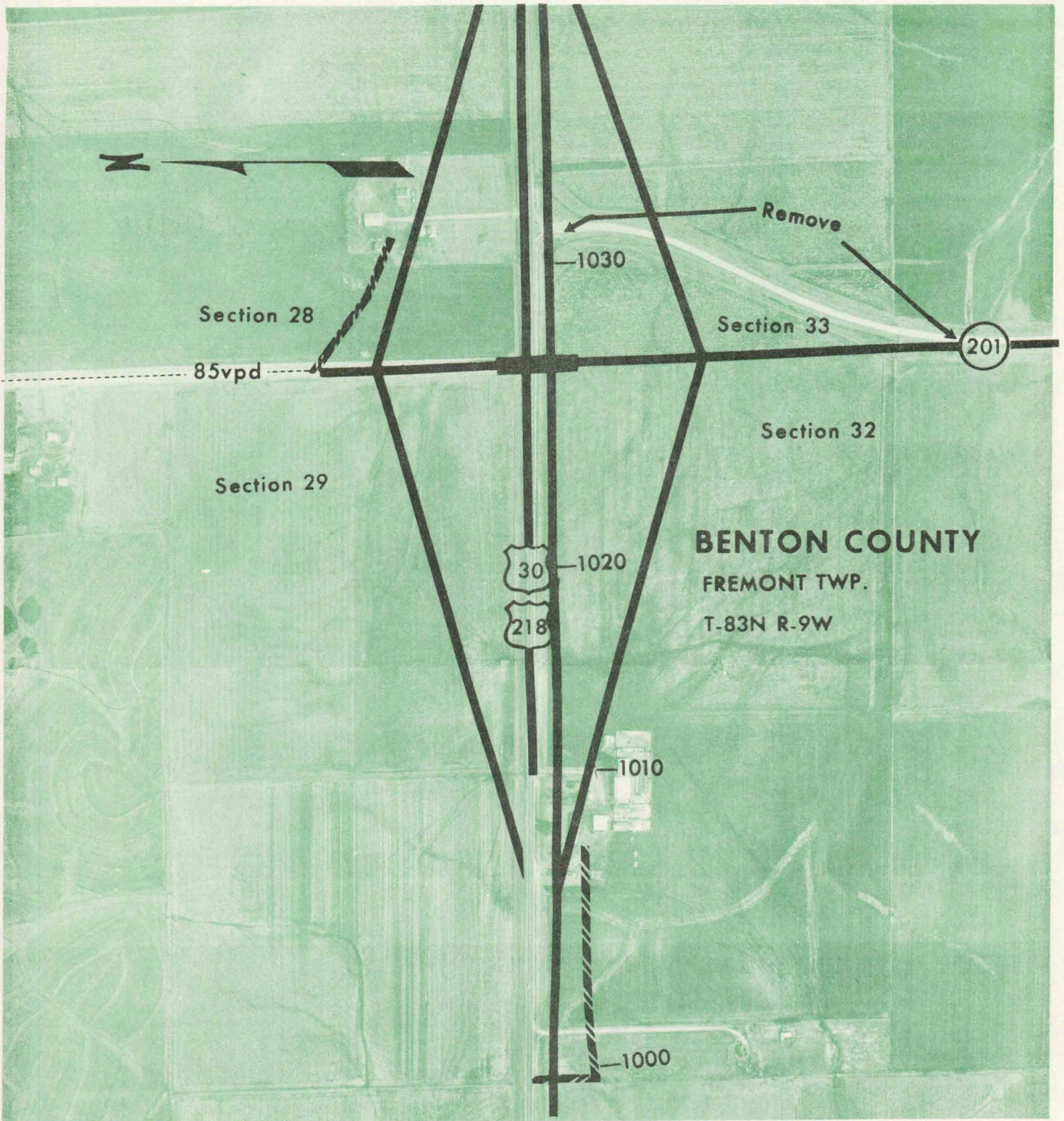
Section 32

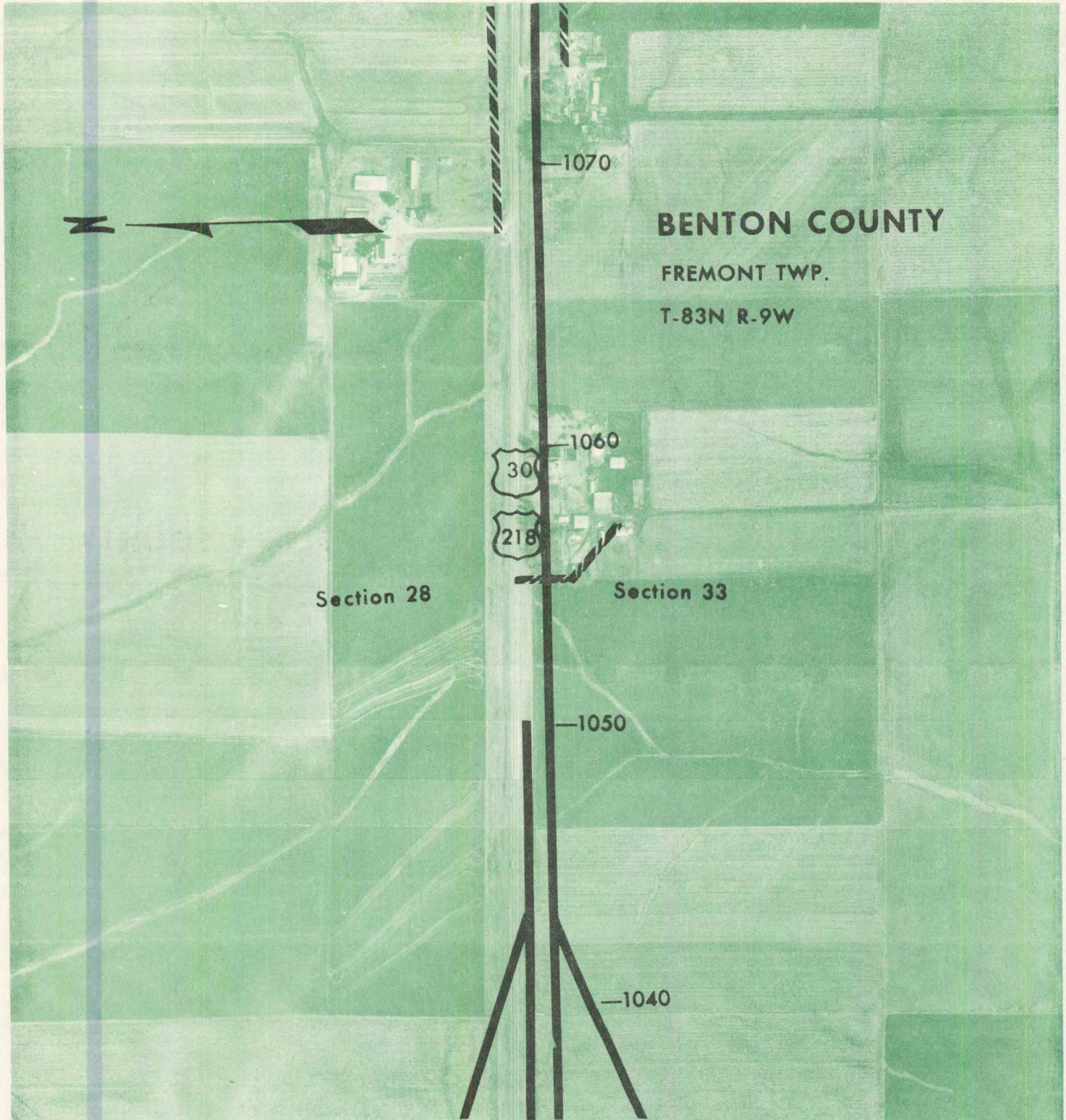
Section 30

Section 31

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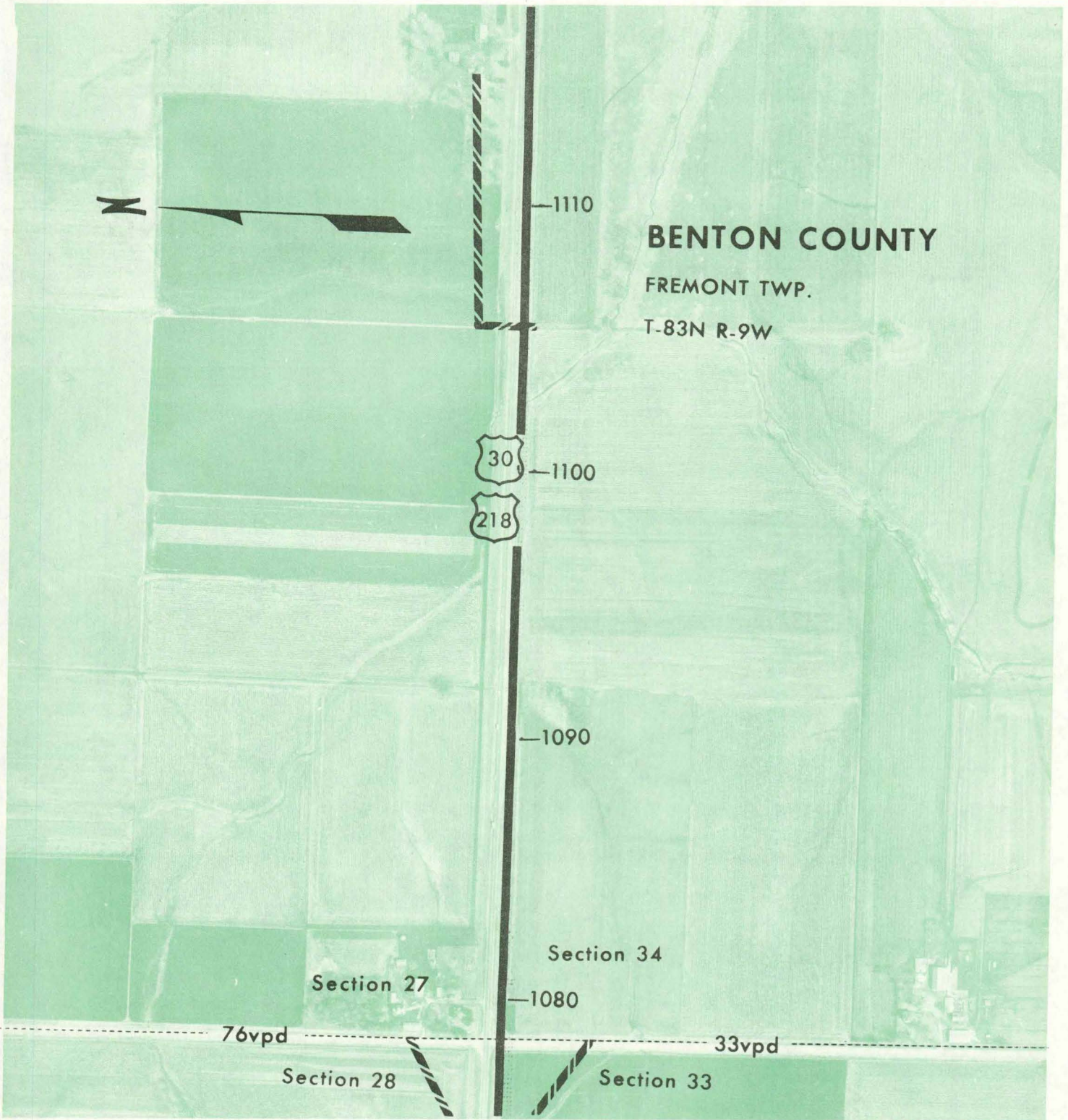
PLATE 8





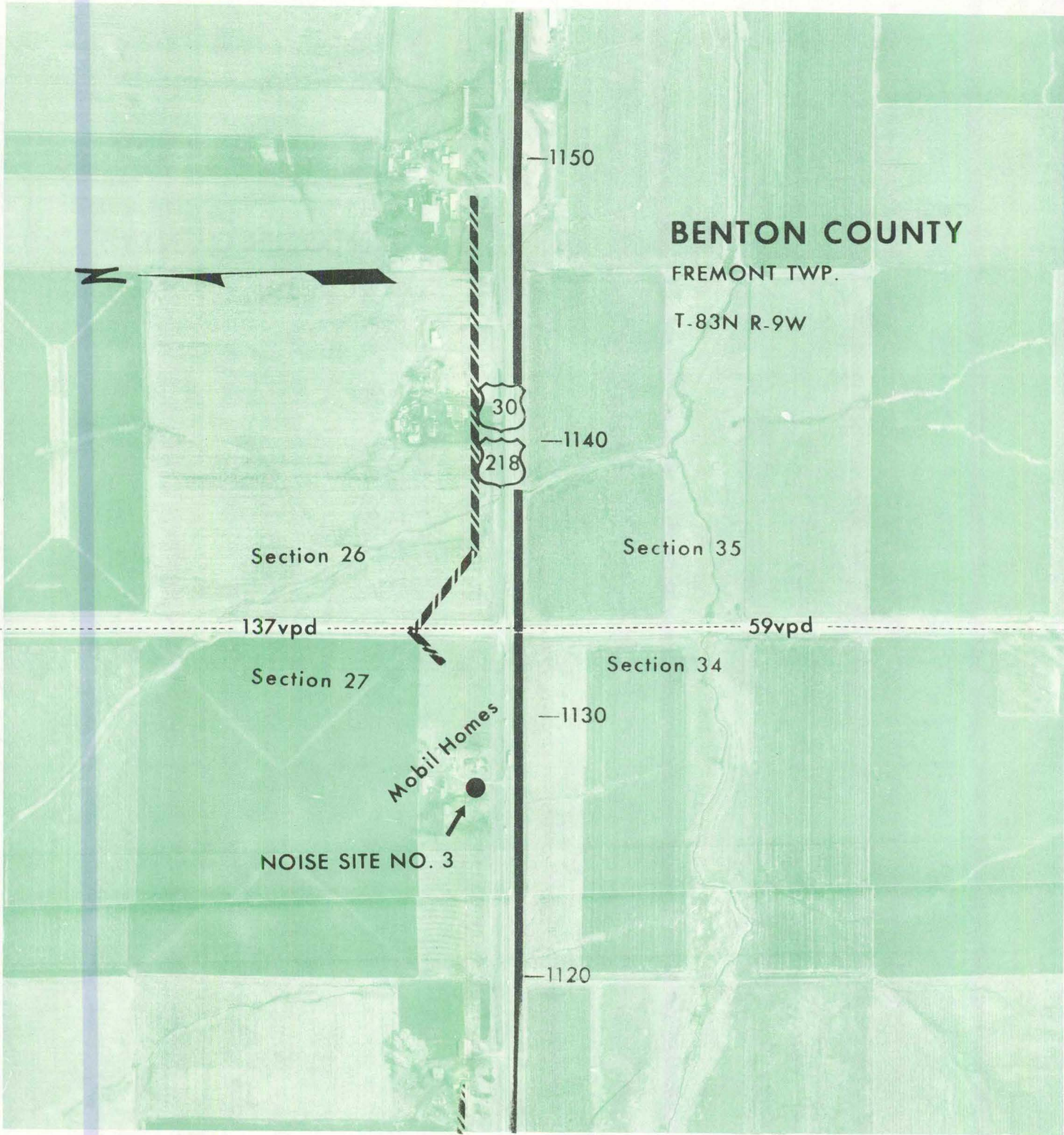
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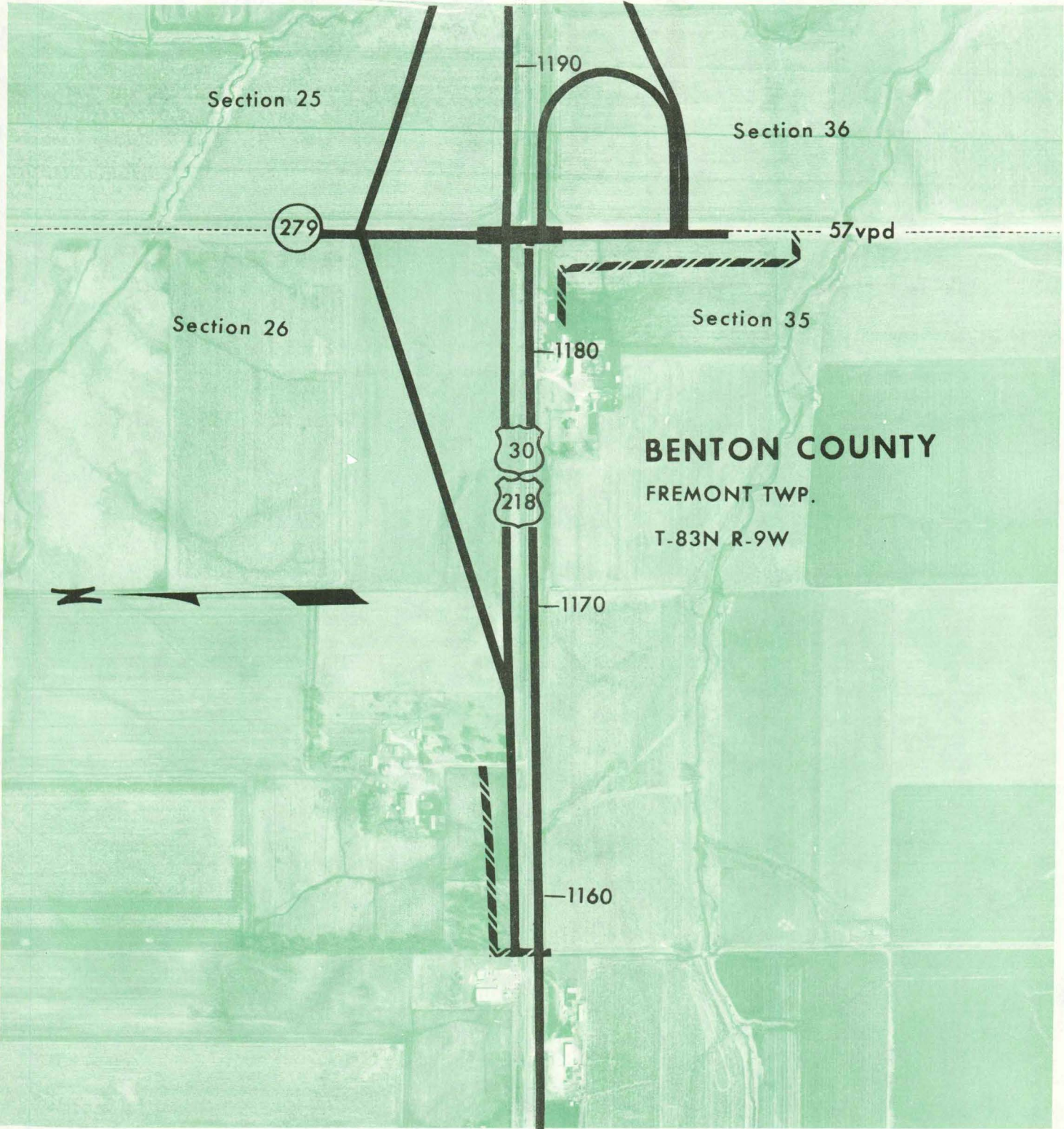
PLATE 10



SCALE: 1 INCH = 500 FEET

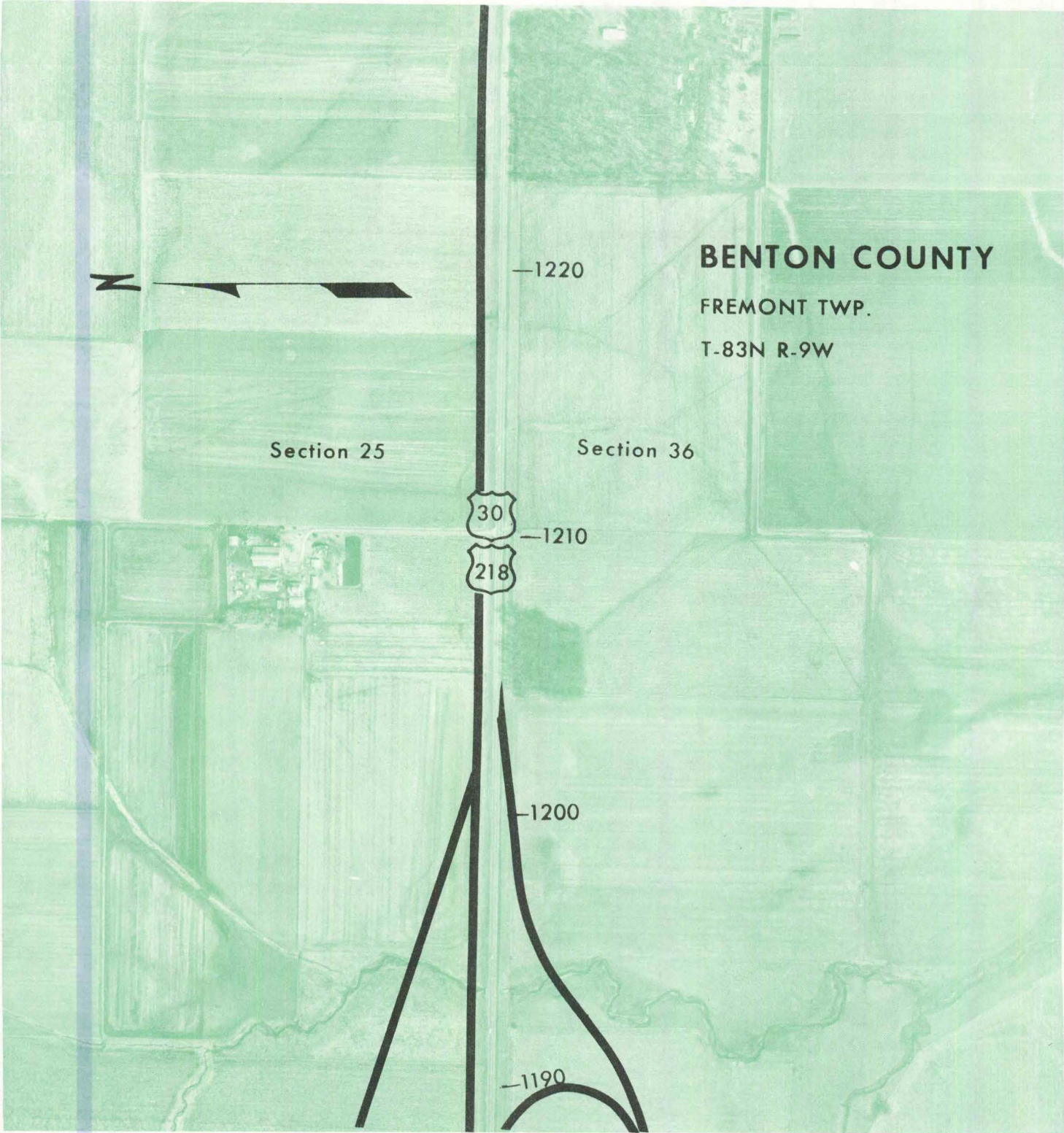
PLATE 11





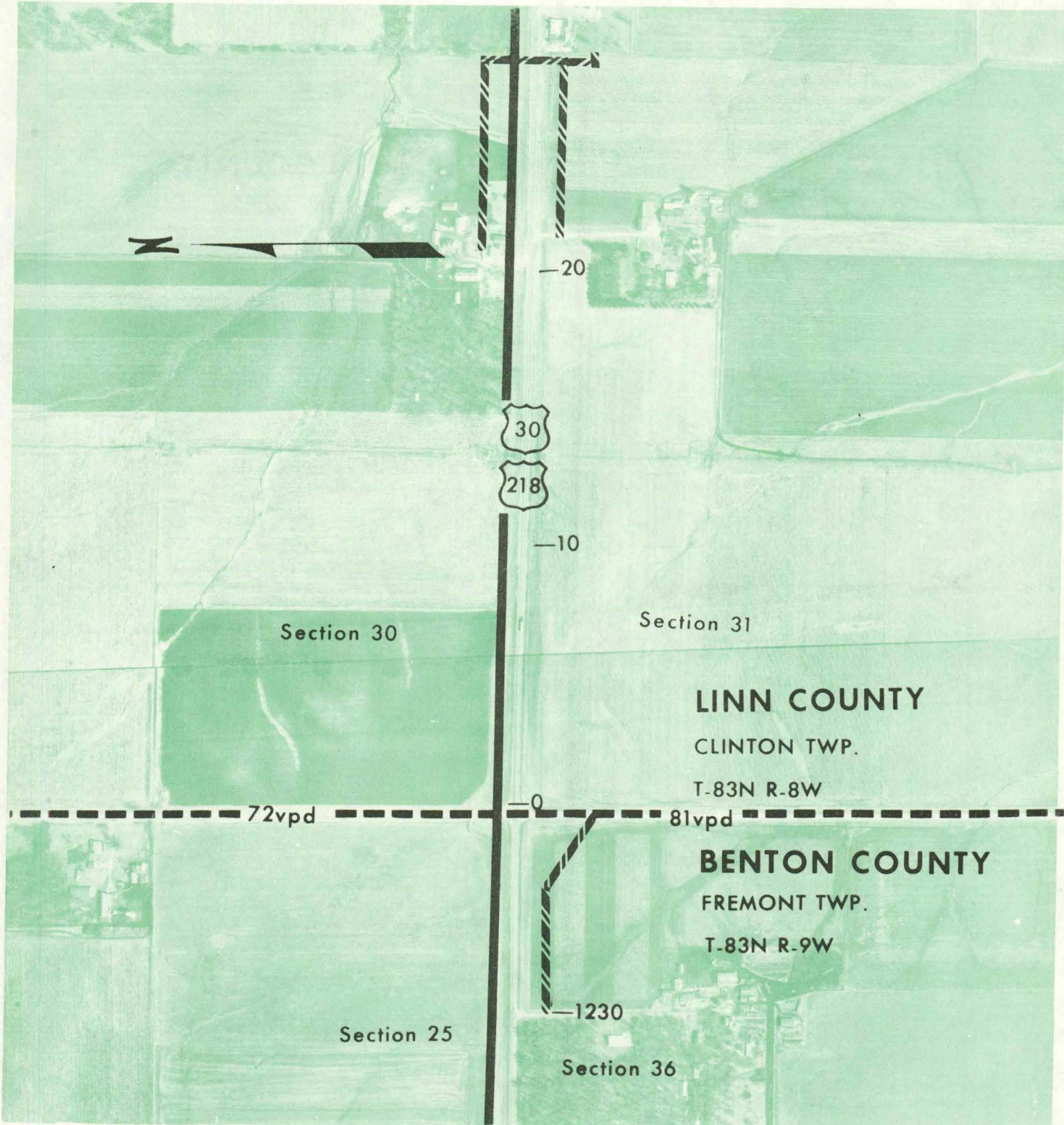
SCALE: 1 INCH = 500 FEET

PLATE 13



SCALE: 1 INCH = 500 FEET

PLATE 14



Section 30

Section 31

LINN COUNTY

CLINTON TWP.

T-83N R-8W

72vpd

0

81vpd

BENTON COUNTY

FREMONT TWP.

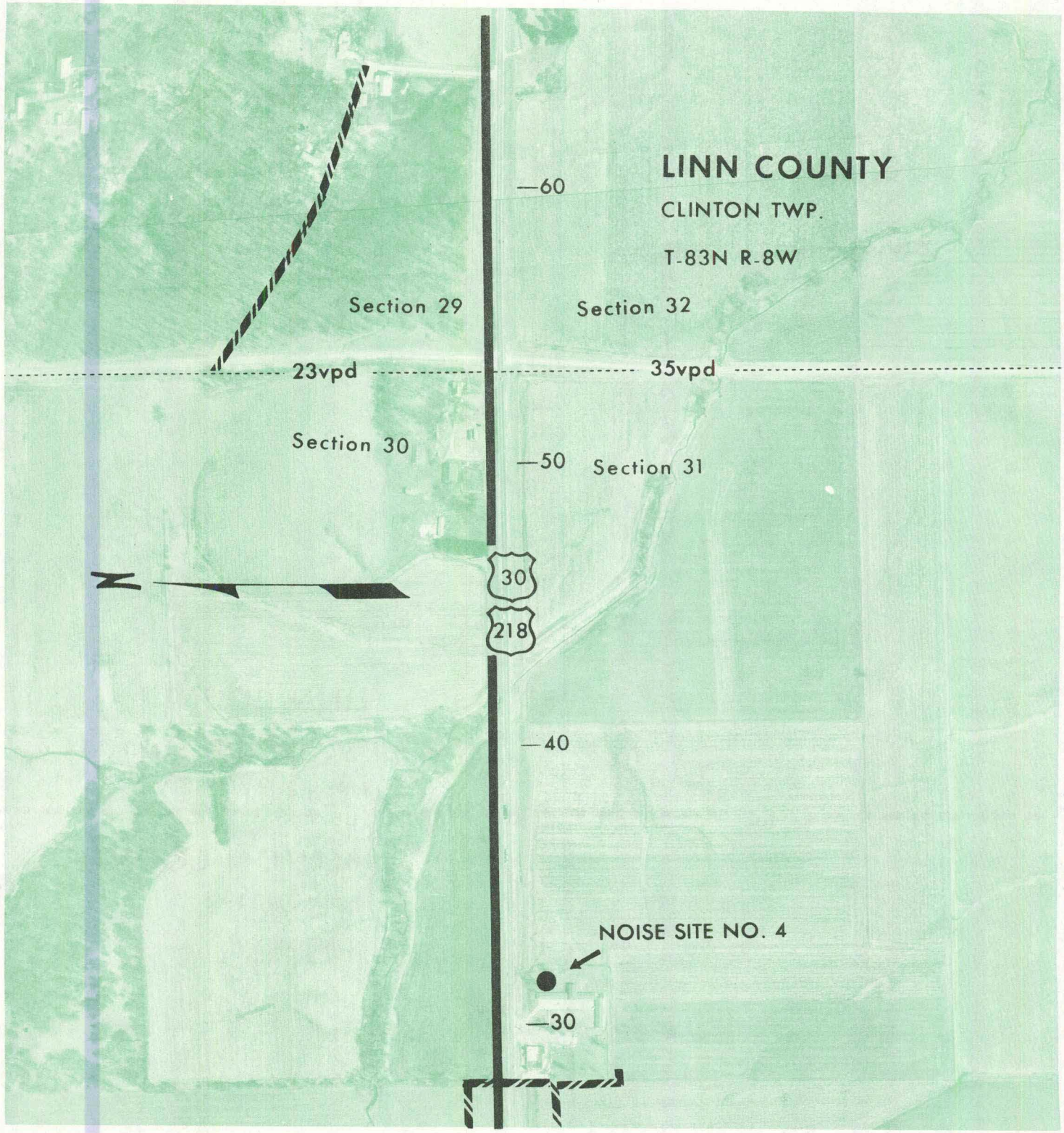
T-83N R-9W

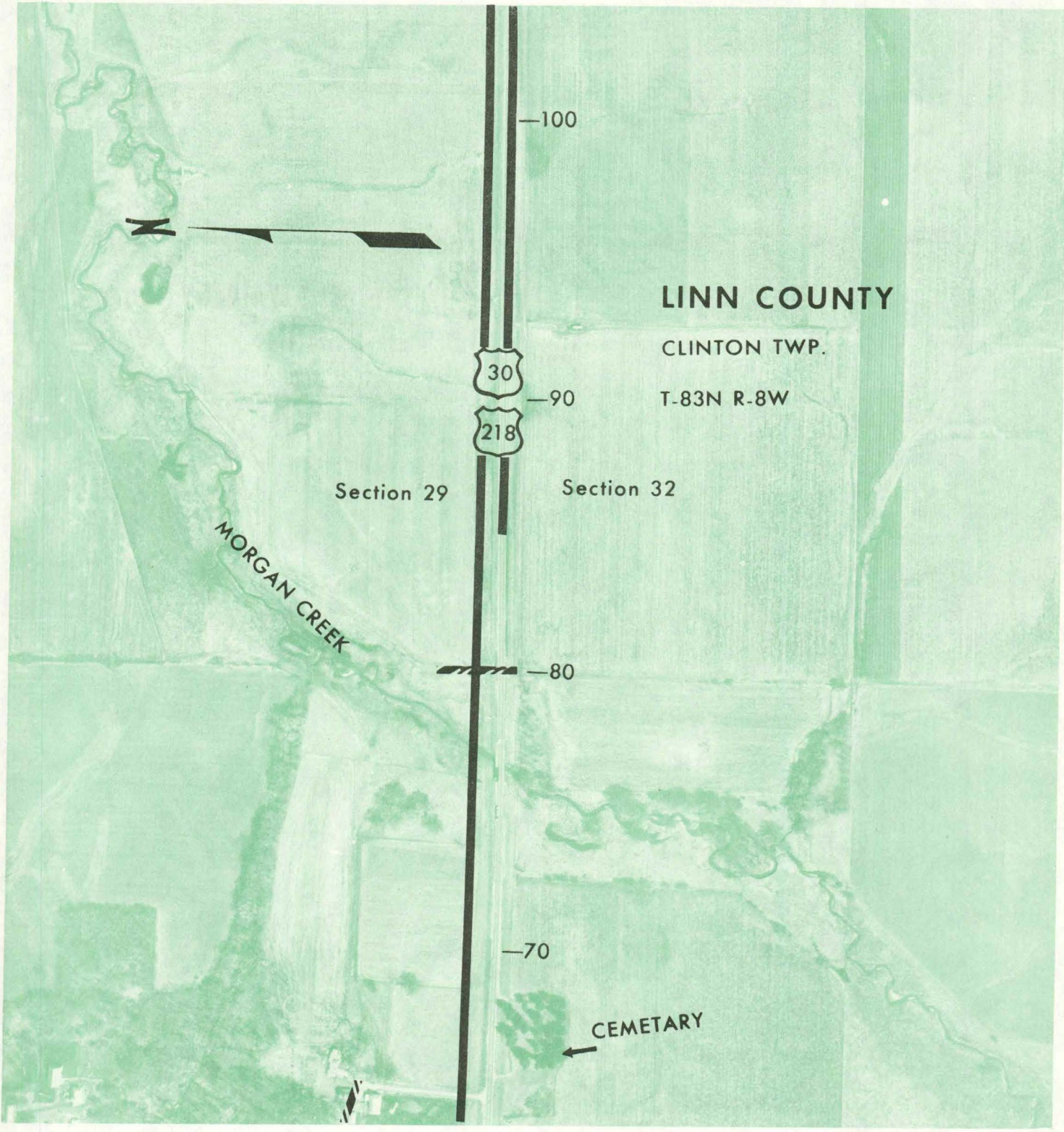
Section 25

1230

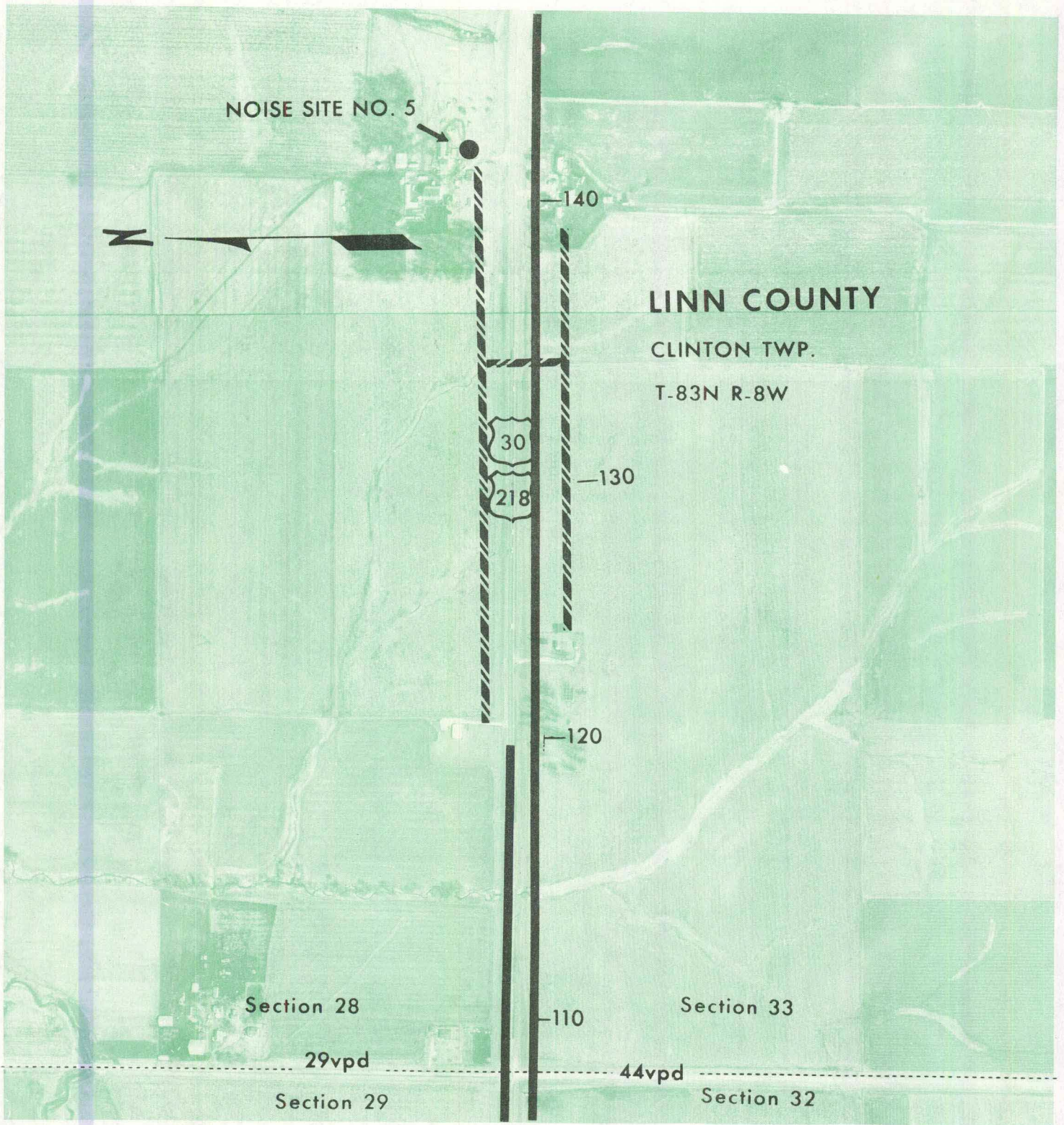
Section 36

SCALE: 1 INCH = 500 FEET PLATE 15





SCALE: 1 INCH = 500 FEET PLATE 17



SCALE: 1 INCH = 500 FEET

PLATE 18



LINN COUNTY
CLINTON TWP.
T-83N R-8W

NOTE: Location of Interchange and Circumferential Highway is tentative. The exact alignment will be determined after the location study for the Circumferential Highway has been completed.



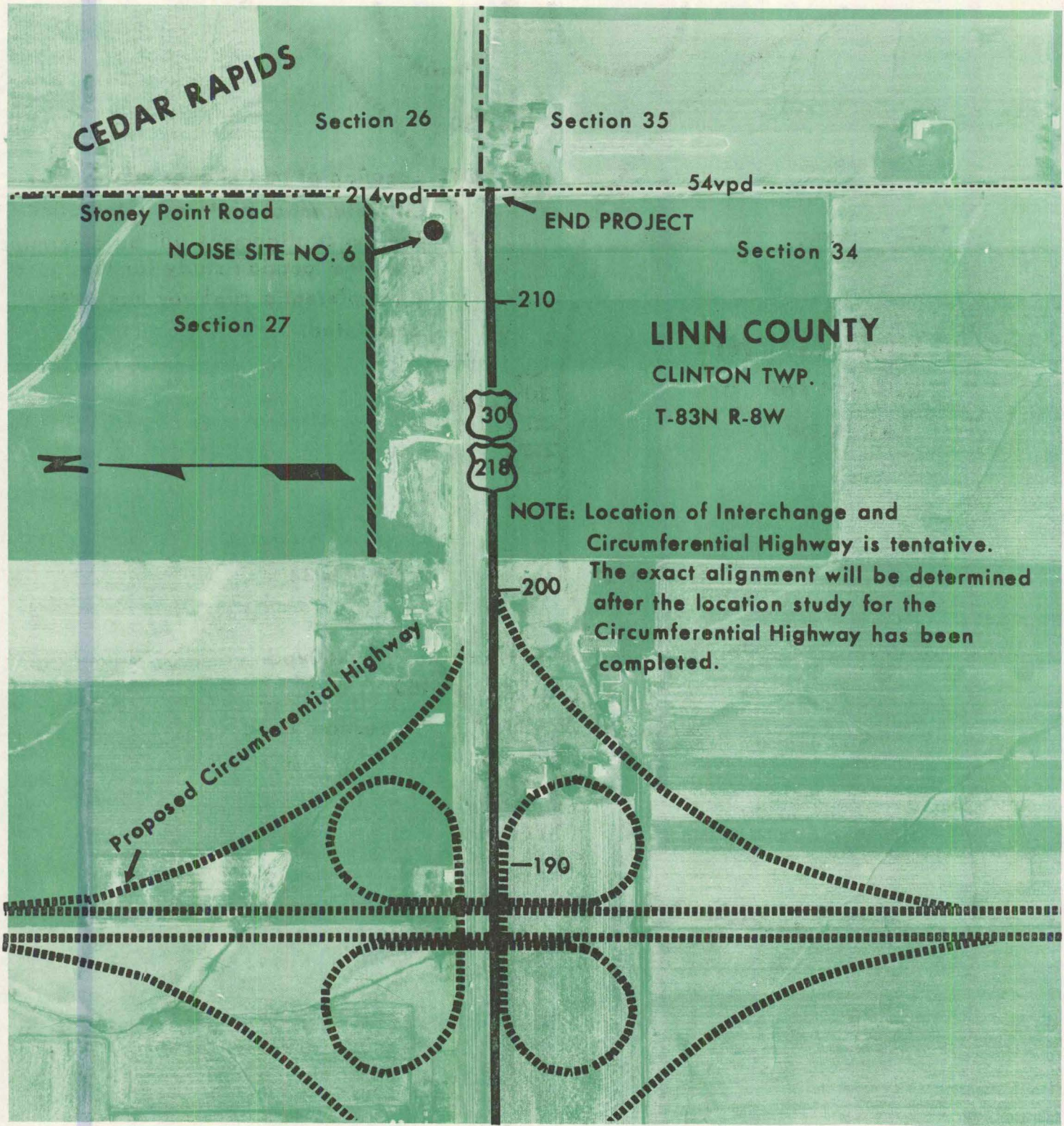
Section 27
Section 34
Section 28
Section 33

78vpd
280vpd

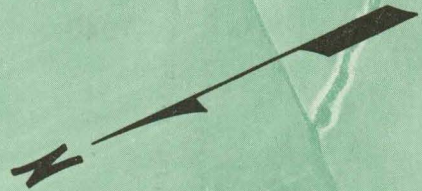
APPLE ORCHARD

180
170
160
150

SCALE: 1 INCH = 500 FEET **PLATE 19**



SCALE: 1 INCH = 500 FEET	PLATE 20
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LINN COUNTY

CLINTON TWP.

T-83N R-8W

Section 34

Proposed Circumferential Highway

980

990

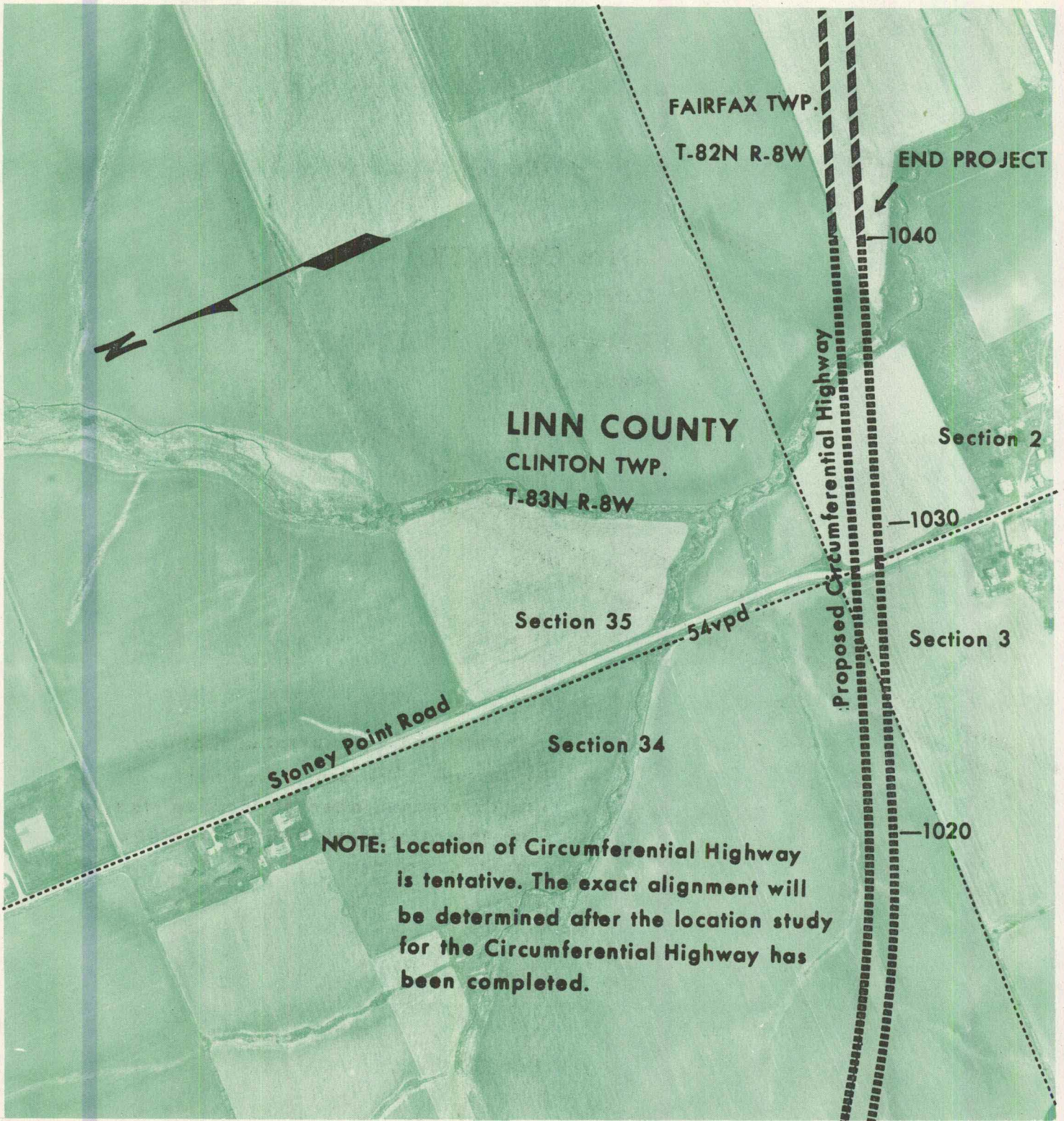
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1010

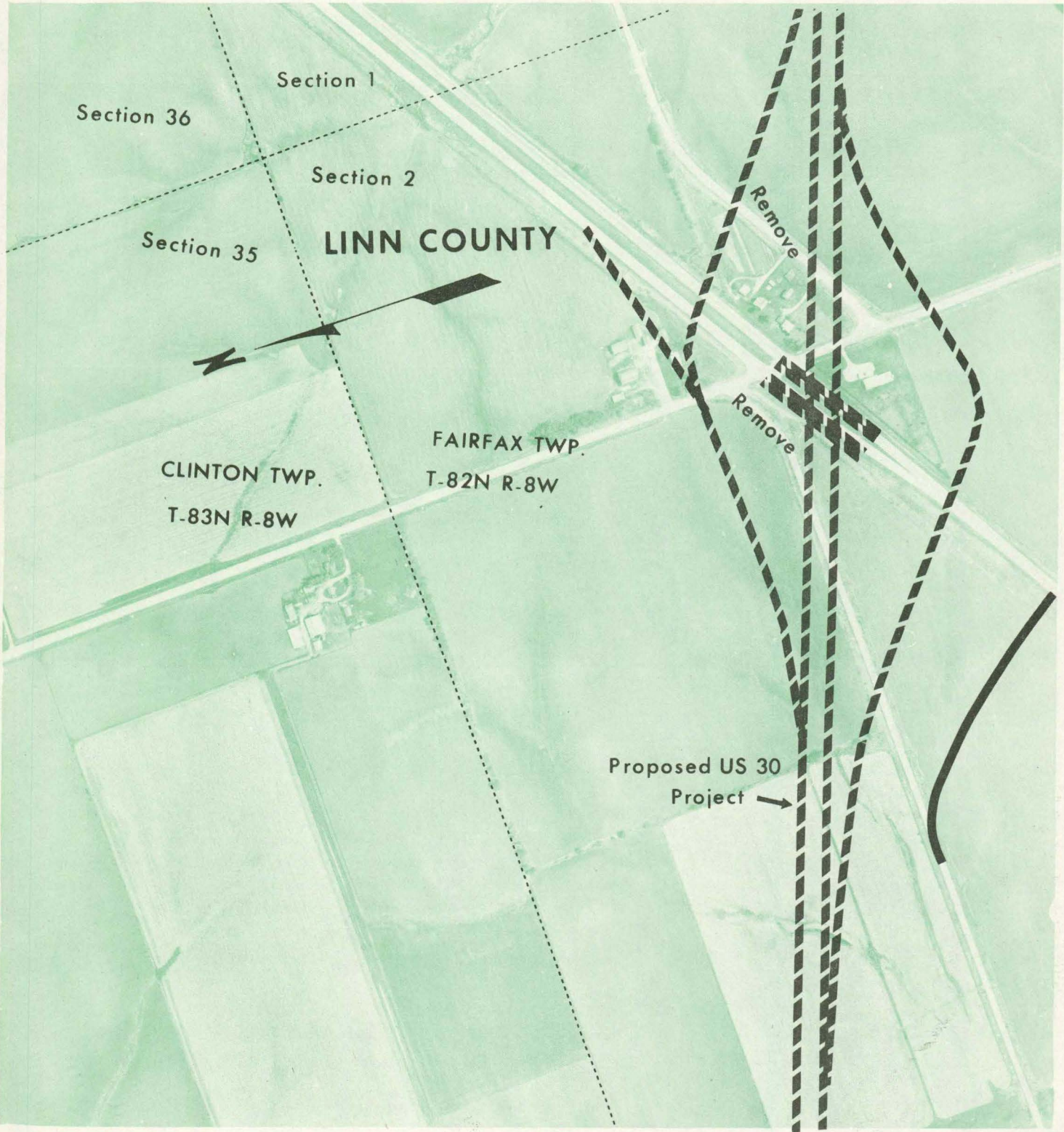
NOTE: Location of Circumferential Highway is tentative. The exact alignment will be determined after the location study for the Circumferential Highway has been completed.

SCALE: 1 INCH = 500 FEET

PLATE 21



SCALE: 1 INCH = 500 FEET	PLATE 22
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STATE LIBRARY OF IOWA



3 1723 02095 3550