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...SPORTATION

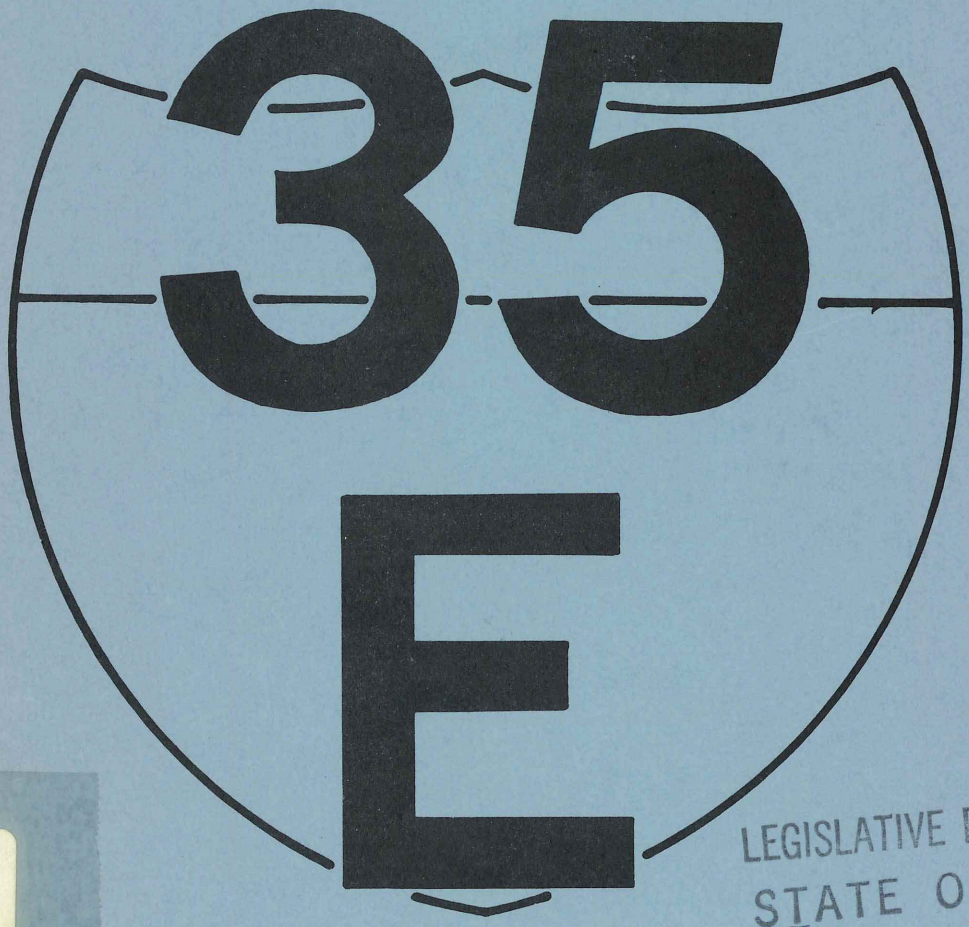
FEDERAL HIGHWAY ADMINISTRATION

DRAFT ENVIRONMENTAL STATEMENT

FOR

INTERSTATE 35E

IN DAKOTA COUNTY, MINNESOTA;
FROM: SOUTH JCT. I35 to JCT. T.H. 110



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MINNESOTA DEPARTMENT OF HIGHWAYS
MINNESOTA PROJECT I 35E-4( )
STATE PROJECT 1982

FHWA-MN-EIS-76-04-D
Federal Highway Administration
Region 5

MINNESOTA PROJECT I 35E-4( )
STATE PROJECT 1982

INTERSTATE HIGHWAY 35E IN DAKOTA COUNTY, MINNESOTA FROM SOUTH JUNCTION WITH INTERSTATE 35 TO JUNCTION WITH STATE TRUNK HIGHWAY 110

ADMINISTRATIVE ACTION

DRAFT

ENVIRONMENTAL IMPACT STATEMENT

U.S. DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

AND

STATE OF MINNESOTA

Department of Highways

SUBMITTED PURSUANT TO: 42 U.S.C. 4332 (2) (C)

AND MINNESOTA STATUTES, SECTION 116D.01 et seq.

6-16-'76
Date

Frank D. Marzitelli
Frank D. Marzitelli, Commissioner
Minnesota Department of Highways

6-18-'76
Date

E. Dean Carlson
E. Dean Carlson
Division Administrator
Federal Highway Administration

Highways and roads.
Environmental Impact Statements.

E53.7
906

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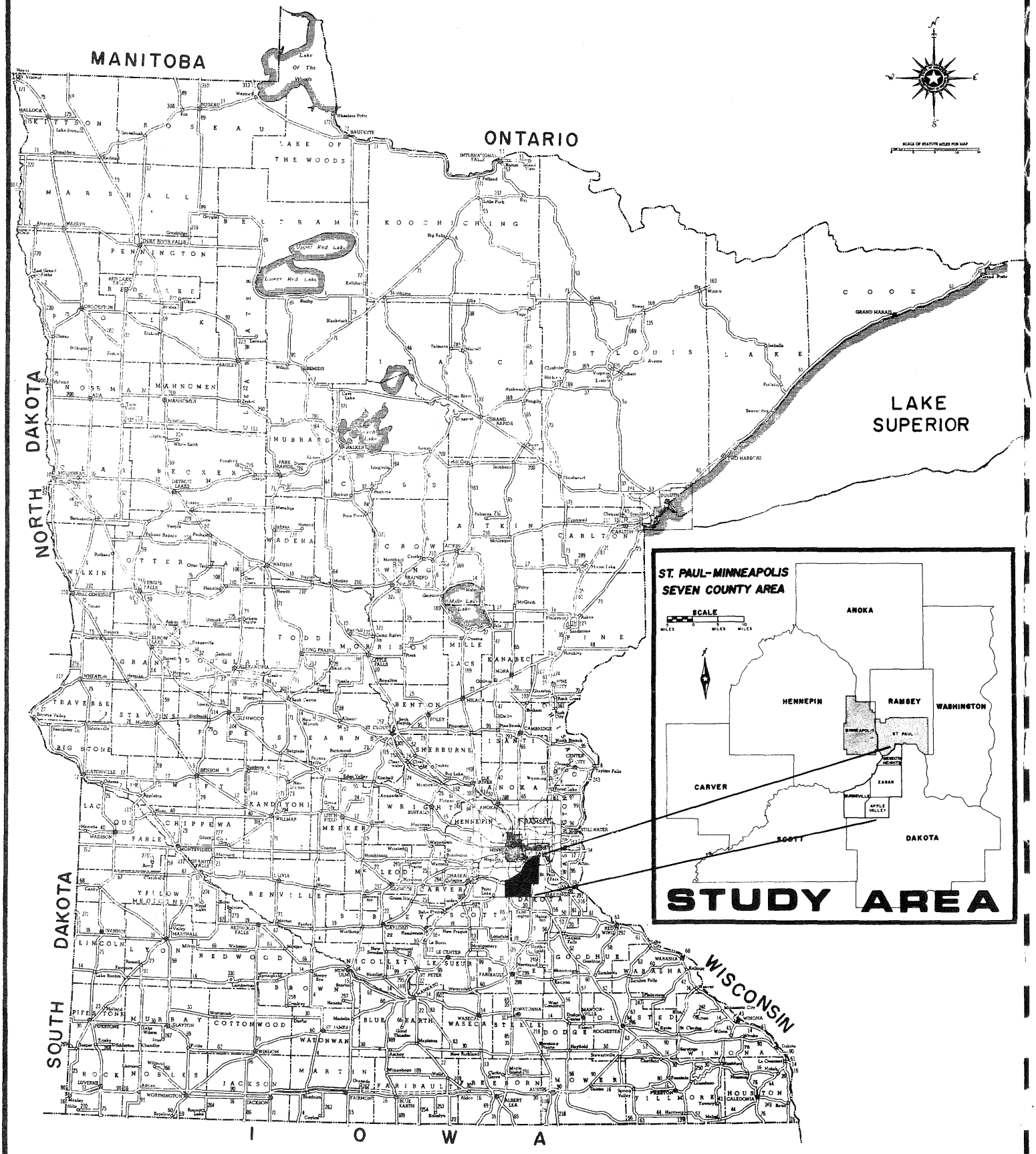


Base Map Prepared By Transportation And Transit Planning And Programming Division, Revised January 1973.

FEDERAL HIGHWAY ADMINISTRATION
ADMINISTRATION ACTION ENVIRONMENTAL STATEMENT

(X) Draft ( ) Final

( ) Section 4(f) Statement attached

ADDITIONAL INFORMATION ABOUT THE PROPOSED ACTION AND ABOUT THE ENVIRONMENTAL STATEMENT CAN BE OBTAINED FROM:

District Engineer
Minnesota Highway Department - District 9
3485 Hadley Avenue North
P. O. Box 2050
North St. Paul, Minnesota 55109
612-770-2311

Division Administrator
Federal Highway Administration
Suite 490, Metro Square Building
St. Paul, Minnesota 55101
612-725-7001

DESCRIPTION

The Proposed Federal Highway Administration Action is the participation of Federal Aid-Interstate funds in the building of 13 miles of a four to six lane freeway, designated I-35E, on new alignment through northwestern Dakota County, Minnesota.

The Proposed Action would begin at its interchange with I-35 in Burnsville, pass through the cities of Apple Valley and Eagan, and terminate near its interchange with TH 110 in Mendota Heights.

The Proposed Action would require a U.S. Department of the Army, Corp of Engineers, Section 404 Permit.

ALTERNATIVES

This statement considers three alternatives for providing a transportation link between I-35 and TH 110, through the Study Area.

1. Alternative A1, a design alternative of the Proposed Action that would bridge over Blackhawk Lake, a lake in central Eagan.

2. Alternative A2, a design alternative of the Proposed Action that would pass to the east of Blackhawk Lake.

3. No-build, the alternative of not building the Proposed Action.

STATE GOVERNMENT AND MULTI-STATE RESPONSIBILITIES

There would be no impact on state government as a result of any controls associated with the implementation of the Proposed Action. The Proposed Action would have no impact on adjacent states or on any multi-state responsibilities.

SUMMARY OF BENEFICIAL AND ADVERSE ENVIRONMENTAL IMPACTS

The Proposed Action would:

1. provide a more safe and more efficient transportation link than that which now exists.

2. help in the implementation of goals expressed in the comprehensive plans of all communities directly involved.

3. aid in the implementation of metropolitan goals and planning,especially in northwestern Dakota County.

4. displace 20 to 25 existing homes and 250 to 270 acres of farm lands.

5. remove 27 to 28 acres of wetland, 250 to 275 acres of deciduous trees, and several hundred acres of wildlife habitat.

6. increase the rate of urbanization of northern Dakota County and especially of the four communities through which it passes.

COMMENTS ON THIS ENVIRONMENTAL STATEMENT HAVE BEEN REQUESTED FROM THE FOLLOWING AGENCIES AND PUBLIC GROUPS:

U.S. Department of Agriculture
U.S. Department of the Army
Corps of Engineers, St. Paul District
U.S. Department of Housing and Urban Development
U.S. Department of Interior
U.S. Department of Transportation
Second Coast Guard District
Federal Railroad Administration
Federal Aviation Administration
Urban Mass Transportation Administration
Advisory Council on Historic Preservation
Council on Environmental Quality
Environmental Protection Agency
Federal Energy Administration
Minnesota Department of Aeronautics
Minnesota Department of Economic Development
Minnesota Environmental Quality Board
Minnesota Historical Society
Minnesota Department of Natural Resources
Minnesota Pollution Control Agency
Minnesota State Planning Agency
Metropolitan Council (A-95 Clearinghouse)
Metropolitan Transit Commission
Metropolitan Airport Commission
Metropolitan Waste Control Commission
Dakota County
City of Apple Valley
City of Burnsville
City of Eagan
City of Mendota Heights

SECTION I

INTRODUCTION

THE FEDERAL ACTION

The proposed Federal Highway Administration (FHWA) action is the participation with Federal-aid Interstate Funds in the construction of a 13-mile section of freeway designated as I-35E. The highway section under consideration would extend from a partially completed interchange with I-35 in Burnsville to an existing interchange with Trunk Highway (TH) 110 in Mendota Heights. TH 110 is the major east-west highway of the suburban area south of St. Paul. It is a major traffic generator with a current daily traffic volume of 25,000 vehicles.

DESCRIPTION OF THE PROPOSED ACTION

Location

The Proposed Action is wholly within the cities of Apple Valley, Burnsville, Eagan, and Mendota Heights, all developing suburbs of the St. Paul-Minneapolis Metropolitan Area.

It would be a complete access controlled freeway with service to adjacent areas, streets, and highways only at interchanges. Interchanges are proposed (from south to north) at I-35W, County State Aid Highway (CSAH) 42, County Road (CR) 11, CSAH 23 (future TH 36), CSAH 32 (Cliff Road), CSAH 30, CSAH 31 (Pilot Knob Road), CR 28 (Yankee Doodle Road), CSAH 26 (Lone Oak Road), I-494, and TH 110.

Blackhawk Road, 138th Street, Deerwood Drive, Mendota Heights Road, and Wagon Wheel Trail would bridge over the Proposed Action, but would not have access to it.

Design Features

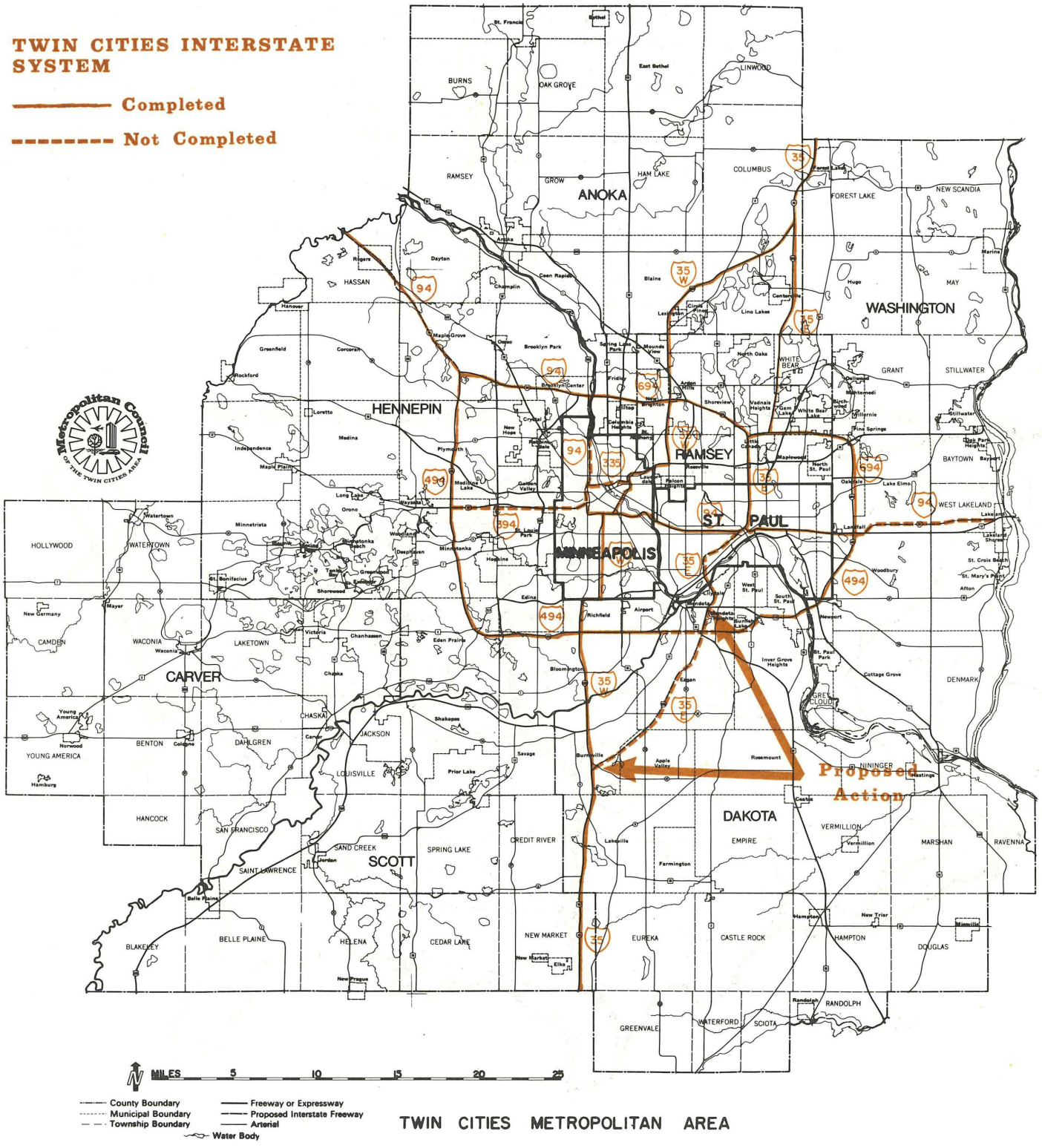
From I-35W to CSAH 23, the Proposed Action would be a basic four-lane freeway. From CSAH 23 to TH 110, it would be a six-lane freeway. The rural design would include a depressed grass-covered median to separate the roadways. The average right of way width would be 300 feet (exclusive of interchanges).

Design Criteria

The design speed would be 70 miles per hour. The maximum percentage of grade would be 3 percent and the maximum curvature would be 3 degrees.

Estimated Traffic

Traffic forecasts indicate that by the year 2000, the Proposed Action would carry from 25,000 vehicles per day near its southern terminus up to 100,000 vehicles per day just south of its junction with I-494.



TWIN CITIES METROPOLITAN AREA

Transportation Planning

The impetus for the planning of the Proposed Action was a Congressional directive to the Bureau of Public Roads (now Federal Highway Administration) to plan and construct, in cooperation with the State Highway Departments, a national system of interstate highways. The Federal Highway Act of 1956 "declared it to be essential to the National interest to provide for early completion of Interstate Highways as authorized and designated in the Federal Aid Highway Act of 1944."

Although the early need for the Interstate System emphasized national defense, I-35E has taken on an important role in the transportation planning of the local communities, the region, and the state.

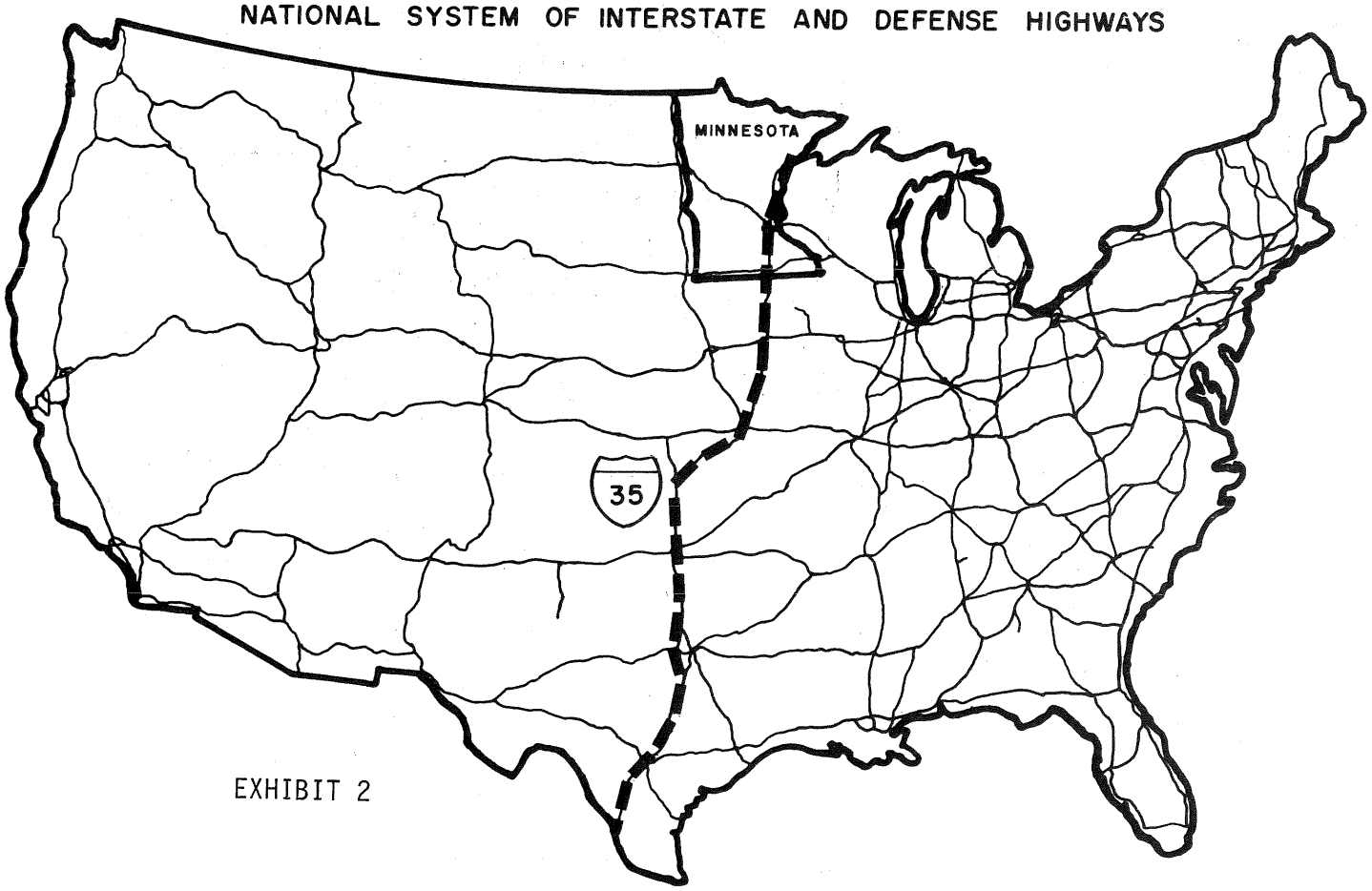


EXHIBIT 2

National

The National System of Interstate and Defense Highways is nearing completion. When completed, it will connect 90 percent of the nation's cities with populations of 50,000 or more. It will serve over 50 percent of the nation's urban and rural population. The system will comprise about 1.2 percent of the total mileage of all streets and highways in the United States, but will carry 20 percent of all the traffic.

I-35 from Texas to Duluth, Minnesota is nearing completion. The 13 miles of this proposal and five miles in St. Paul are the only designated sections of I-35 which are not constructed between the southern Iowa border and Duluth.

I-35 is an important link in interstate movement of people, agricultural products, livestock, commercial and industrial goods, and recreational and tourist traffic.

State

The State Highway Department developed a "Backbone System"[1] of state highway routes in 1972 as a planning tool to establish priorities for future state highway needs. The 30 year program was based on a financially realistic comparison of need versus the funding ability of the State.

EXHIBIT 3

[1] A Backbone Concept For Development of Minnesota Trunk Highways, Minnesota Highway Department, July 1972.

The basic criteria used to determine the priority of the state routes was their ability to:

1. Promote outstate economic development;
2. Satisfy travel demands on major recreational routes;
3. Serve the maximum number of highway users.

In the Twin Cities metropolitan area, the backbone system was based on data developed through the Transportation Planning Program, a cooperative effort of the Minnesota Highway Department, Metropolitan Council (MC)[1], Metropolitan Transit Commission (MTC)[2], the seven counties, and the municipalities.

The Proposed Action is an integral part of the State Backbone System.

Metropolitan

The purpose of the Interstate System is to not only improve cross country movement, but also to improve movement within cities. In the Metropolitan Area, the planning envisioned serving both central cities of Minneapolis and St. Paul. Thus, I-35 was split into two routes: I-35W to serve Minneapolis and I-35E to serve St. Paul. The balancing of transportation between the two halves of the Metropolitan Area is an important factor in the implementation of MC growth policies.

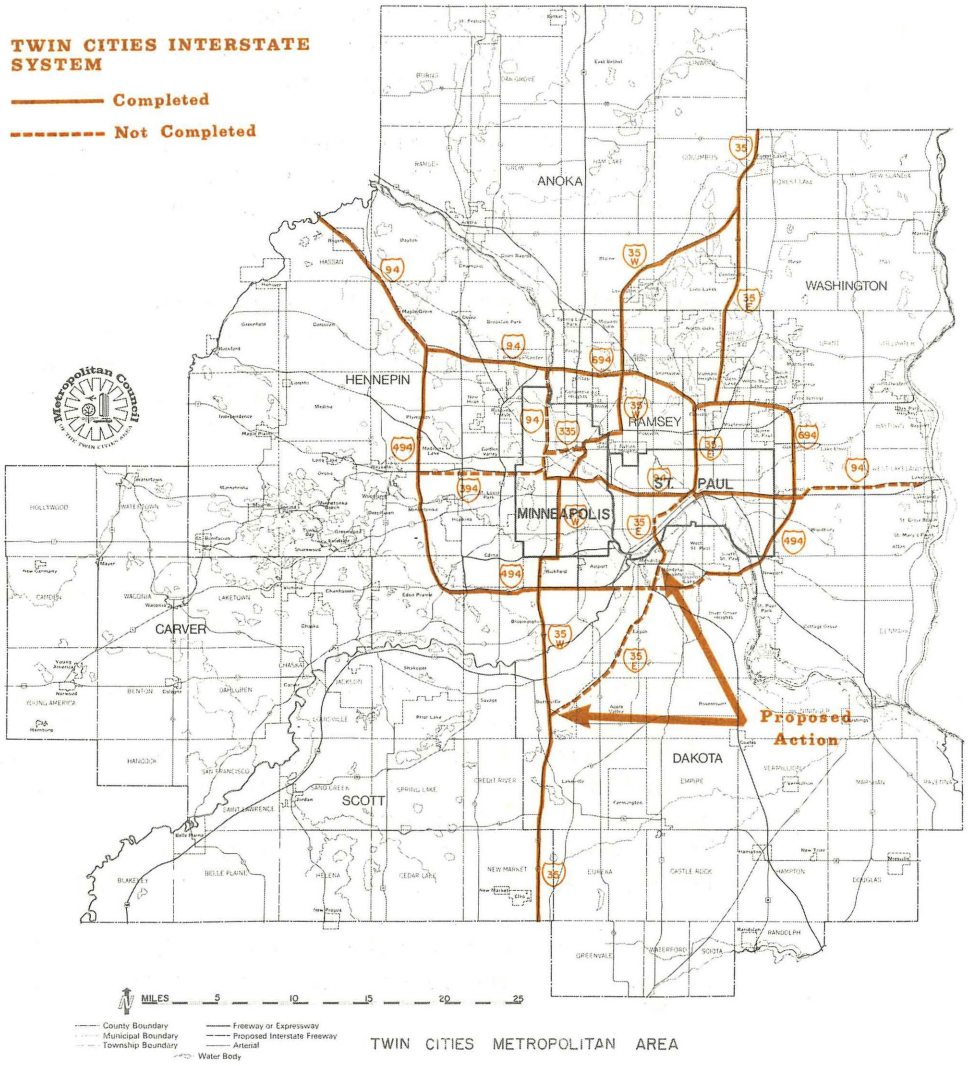
The Proposed Action is consistent with the Metropolitan Council Principal Arterial Plan of the Transportation Chapter, Metropolitan Development Guide (MDG). The MDG is the comprehensive plan for the Minneapolis-St. Paul metropolitan area prepared and adopted by the Metropolitan Council.

---

[1] The MC, under the authority of the Minnesota Legislature, is the planning coordinator for the St. Paul-Minneapolis 7-county metro area. The Governor has designated it as the Metropolitan Planning Organization and as the Regional A-95 Clearing House. The MC also serves as the 3-C Planning Agency for the Metropolitan Area.

[2] The MTC, by authority from the Minnesota Legislature, has responsibilities to prepare a transportation development program to implement the policy plan of the Metropolitan Council. The MTC owns and operates the metropolitan transit system.

EXHIBIT 4



The 1975 Session of the Minnesota Legislature directed the Metropolitan Council, with the aid of the affected cities, to reevaluate the need for completion of the Interstate System in the seven county metropolitan area. The review included an analysis of the financial and social impacts of alternative Interstate routes or transit substitutes. The Council's final report to the Minnesota Legislature in January, 1976, urged the completion of the Proposed Action.

The Metropolitan Council proposes transit usage in the proposed corridor, consisting of express buses operating in mixed traffic. Busses are currently the most feasible transit alternative in the Twin City metropolitan area. The Proposed Action would allow preferential treatment for buses at interchanges.

Local

The thoroughfare plans of all of the affected communities and of Dakota County have concurred in the metropolitan need of a major arterial highway in the corridor of the Proposed Action. Comprehensive planning of the communities have further incorporated the corridor into their land-use development.

TH 13 has occasionally been mentioned as a location for the Proposed Action. In light of the many "parallel route" controversies throughout the nation, this is a valid local concern.

Regional, county, and local planning have continually emphasized the need for TH 13 as an important local access thoroughfare. The primary function of TH 13 is to fulfill adjacent land access needs and to serve the short trips. The primary function of the Proposed Action is to provide access only to major local roads and to serve the longer trips.

TH 13 currently fulfills both needs - the local access need and the through trip need. While it serves as the primary commuter route between the Study Area[1] and St. Paul, it also provides access at 30 street intersections, 23 commercial entrances, 23 residential entrances, and 16 other points. TH 13 serves a total of 92 access points between I-35W and TH 110. Between comparable termini, the Proposed Action would provide only a total of seven access points to local streets and freeway to freeway interchanges at I-35 and at I-494. No other access would be allowed.

Because of TH 13's role in local thoroughfare planning, it has not been considered a reasonable location for I-35E.

Relationship to Total Transportation Requirements

Exhibit 5 shows the relationship of the Proposed Action to the total transportation plans of the area. It also shows the relationship of the area's proposed highway transportation system to the Twin City International Airport.

The Proposed Action is one of several transportation projects in the area designed to fulfill the Metropolitan Council arterial plans. I-494 across northern Dakota County, I-35E in St. Paul, and the Proposed Action are the only segments of the Interstate system remaining to be completed in the southeast quadrant of the Metropolitan Area. Separate EIS's are being prepared for the I-494 and the St. Paul I-35E highway sections.

---

[1] The Study Area includes all of the cities of Apple Valley, Burnsville, Eagan, and Mendota Heights. For a further description, See page 30.

EXHIBIT 5

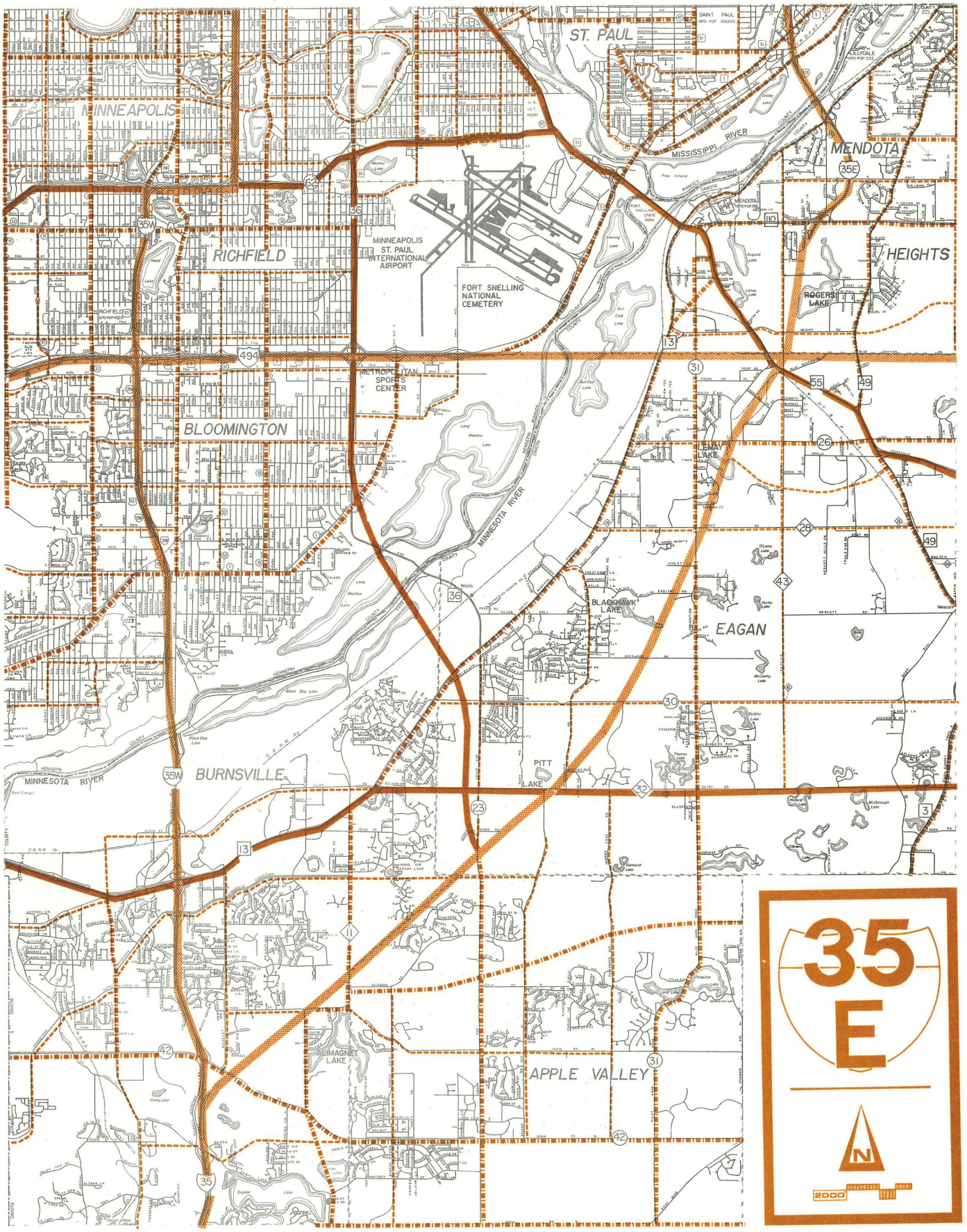
FUNCTIONAL CLASSIFICATION

Principal Arterial

Intermediate Arterial

Minor Arterial

Collectors



SOURCE: Metropolitan Functional Classification Plan (map) Approved By The Transportation Advisory Board on 1-21-76.

DEFICIENCIES OF EXISTING TRANSPORTATION SYSTEM

The original intent for the Proposed Action was not to replace an existing, deficient highway. Instead, as part of the Interstate Highway System, the Proposed Action is the result of a decision to add mileage to the original system to include various large cities across the nation and the resultant split of I-35 into an east leg and a west leg to accommodate both St. Paul and Minneapolis.

Capacity

The Study Area was largely rural during the early corridor development and existing routes were still adequately handling needs. Urban development began in the Study Area as the Metropolitan Area grew in the 1960's. Today, the I-35W and TH 36 river crossings, the east approach to the Mendota Bridge, and over 50 percent of TH 13 from I-35W to the Mendota Bridge are at or are near capacity (Level of Service[1] E or F).

The majority of the remaining routes are operating at a Level of Service C or better. A small portion of CR 43 (Lexington Ave.), just south of TH 110, and a portion of CSAH 23 (Cedar Ave.), from CSAH 32 to CSAH 38 (Palomino Drive), are operating at a Level of Service D.

Future Capacity Needs

Transportation projects are generally designed to handle traffic at a Level of Service C, 20 years beyond the completion date.

The Metropolitan Planning Section of the State Highway Department, therefore, estimated traffic volumes in the Study Area for the year 2000.[2] They based their estimates on the latest population, employment, and dwelling unit projections of the Metropolitan Council. The estimates considered vehicle occupancy, trips per person, and transit useage.

---

[1] The Level of Service is a measure of traffic congestion on a scale from A to F. Level of Service A represents free flow, little or no restrictions in maneuverability, and little or no delay. Level of Service F represents a forced flow and intolerable congestion. Levels B through D represent the transition between A and F. (Highway Capacity Manual, Highway Research Board Special Report 87, 1965, pp 78-87).

[2] Comprehensive Traffic Report, FAI-35E, System Planning and Analysis Report M-177, Minnesota Highway Department, April 1976. This report is available for review and copying upon request.

Exhibit 6 shows the year 2000 existing street network traffic forecast without the Proposed Action. A comparison of the year 2000 traffic volumes with the year 1974 traffic volumes shows a substantial increase for the major north-south roads. Even with the planned upgrading of the north-south roads, the level of service for TH 13 and CSAH 31 (Pilot Knob Road) will probably reach Level F before year 2000.

EXHIBIT 6

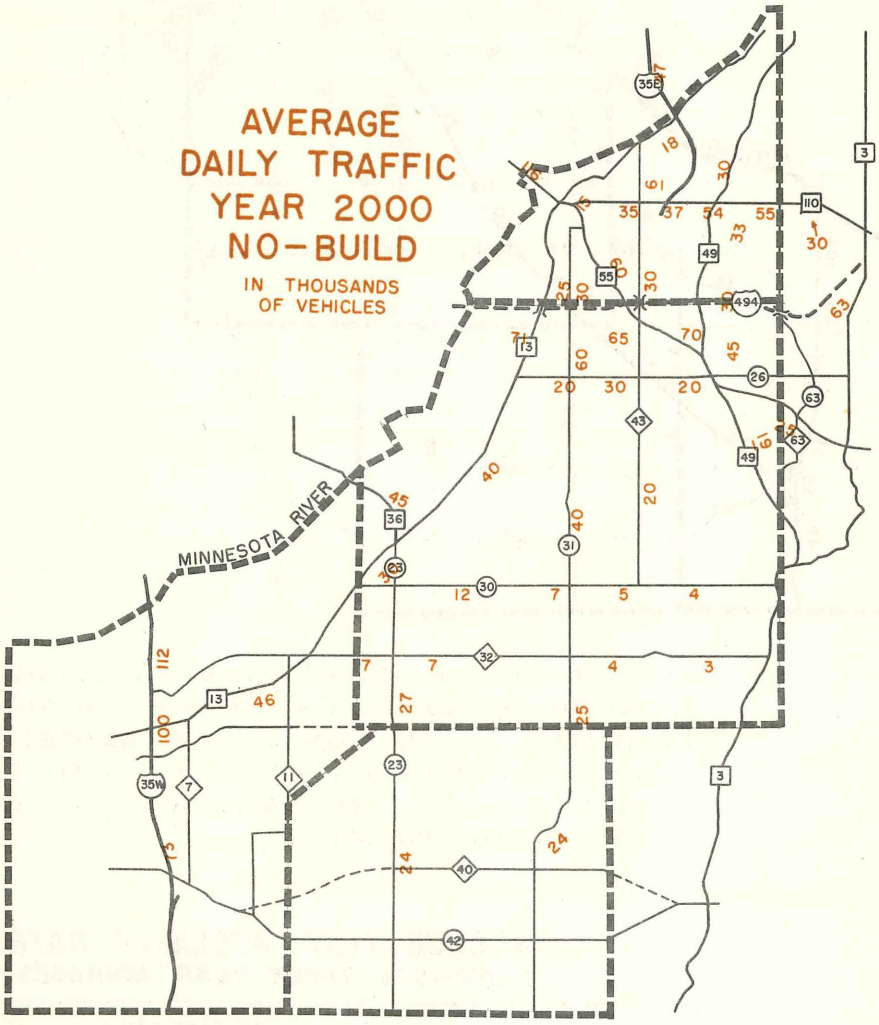
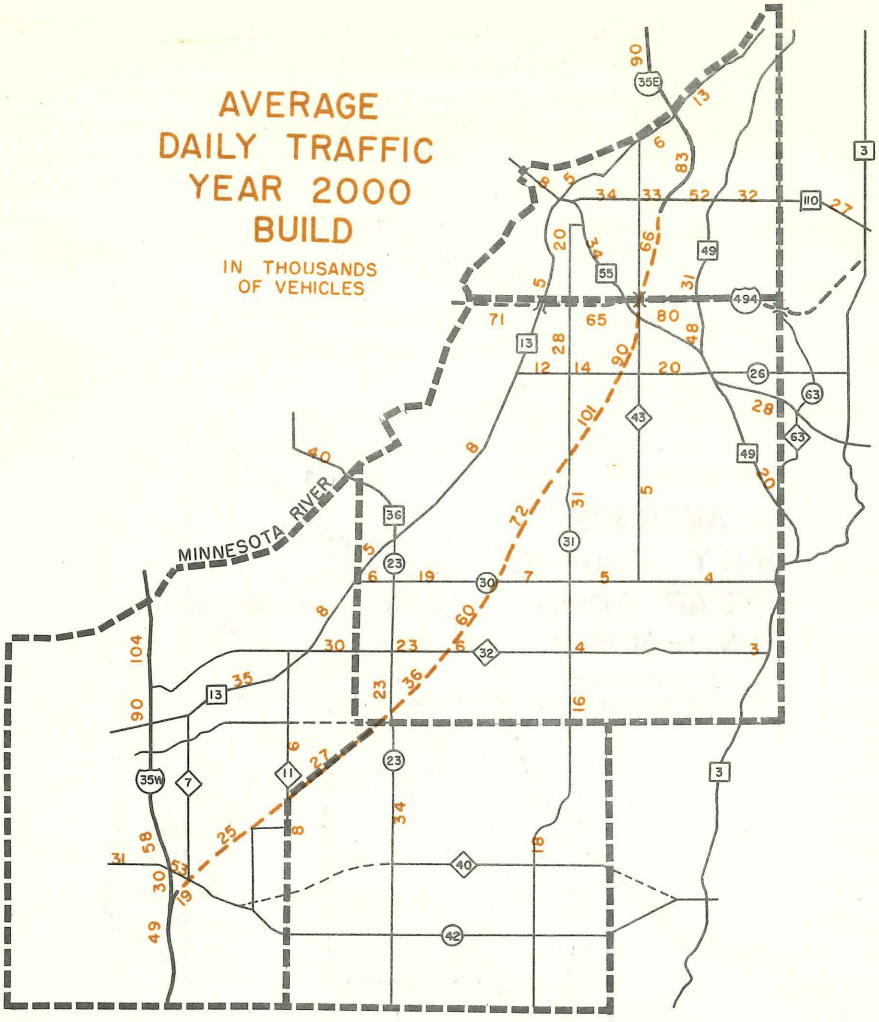


Exhibit 7 shows the distribution of year 2000 forecasted traffic if the Proposed Action is added to the existing transportation network. A result of redistributing traffic would be the improvement of levels of service on almost all of the Study Area roads. An exception would be the drop to Level of Service E on CSAH 23, from CSAH 38 to the proposed corridor. The year 2000 level of service along the Proposed Action would be B or better, from the 35W junction to CSAH 30. North of CSAH 30 to TH 110 it would be in the Level of Service C to E range.

EXHIBIT 7



Safety

Although the Proposed Action was not originally intended to replace an existing deficient highway, delays in implementing the proposal have resulted in the overtaxing of TH 13's ability to move traffic safely. TH 13 carries the bulk of the traffic which would be carried by the Proposed Action.

INTERSECTION ACCIDENT RATES
(1972-1974 THREE YEAR AVERAGES)

T.H.	INTERSECTION	AVERAGE DAILY APPROACH VOLUMES	ACCIDENTS PER YEAR	ACCIDENT RATE (ACC/MILLION APPROACH VEH.)
13	NICOLLET AVE	20,000	23	3.1
13	12th AVE / PARKWOOD	16,200	25	4.2
13	C.S.A.H. 32 (CLIFF RD)	22,000	37	4.7
13	CO. RD. 28 (YANKEE DOODLE)	18,300	14	2.1
13	TH 55	46,000	73	4.4
AVERAGE OF 20 HIGHEST VOLUME SIGNALIZED EXPRESSWAY INTER-SECTIONS (ST. PAUL METRO AREA)		23,800	17	1.9

TABLE 1

Table I compares the accident rate relationship of several TH 13 interesections to the average of the 20 highest volume, signalized, expressway intersections in the St. Paul metropolitan area. The TH 13 intersection accident rates are significantly higher than the area average. Only three of the 20 intersections had accident rates over 3.0.

Future Safety Expectations

A national study found that accident, injury, and fatality rates on Interstate Highways are between 30 and 76 percent of the comparable rates on conventional highways, before the Interstates were opened to traffic.[1] The experience of freeway design in the St. Paul metropolitan area substantiates these statistics.

Table 2 shows that freeway accident rates in the St. Paul metropolitan area are substantially lower than the conventional highway accident rates. While highway planners cannot forecast future accident rates, the redistribution of traffic to the Proposed Action should effectively reduce accidents.

TABLE 2

ST. PAUL METRO AREA
AVERAGE ACCIDENT RATES
PER ONE MILLION VEHICLE MILES

ROAD TYPE	ACCIDENT RATE	SEVERITY RATE[1.]
2 LANE RURAL	2.56	5.62
2 LANE URBAN	5.91	10.82
4 LANE RURAL	2.24	4.81
4 LANE URBAN	5.01	9.95
FREEWAY (Urban & Rural)	1.96	3.49

1. SEVERITY RATE: Standard rate adjusted for severity by applying weighted factors for property damaged, personal injury and fatalities.

Cedar Avenue (TH 36 and CSAH 23) also has a high accident rate. A separate Environmental Impact Statement for TH 36, Report No. FHWA-Mn-EIS-74-4-F, filed with the Council on Environmental Quality on March 31, 1976 discusses the proposed upgrading of the Cedar Avenue corridor.

---

[1] Interstate System Accident Research Study #1, U.S. Department of Transportation, FHWA.

STATUS OF LAND USE PLANNING

Comprehensive land use planning is an ongoing objective of all of the Study Area communities. Dakota County is also applying land use planning on a more generalized county level, and the Metropolitan Council (MC) maintains and continuously updates a comprehensive development guide to help shape growth on the metropolitan level. The Metropolitan Council processes the community and county plans to ensure their compatability with each other and their consistency with regional planning. Legislation in 1976 gave the MC the authority to enforce mandatory comprehensive planning by all communities in the 7-county metropolitan area.

Existing Land Use

Some of the recent growth (within the last 5 to 10 years) may be a reflection of comprehensive development plans. Much of the existing land use in the Study Area, however, developed prior to comprehensive land use development guides.

The map on the facing page shows the existing land uses.

All of the Study Area communities have made and are continuing to make a concerted effort to restrict development in the proposed corridor since the location public hearing in 1959. The impact of displacement of existing development by the proposal is minimal because of this effort.

Land use that the Proposed Action would require is over 75 percent agricultural and open grasslands. The second highest required land use is public roads. The predominance of these two land uses is an indicator of the undeveloped nature of the corridor.

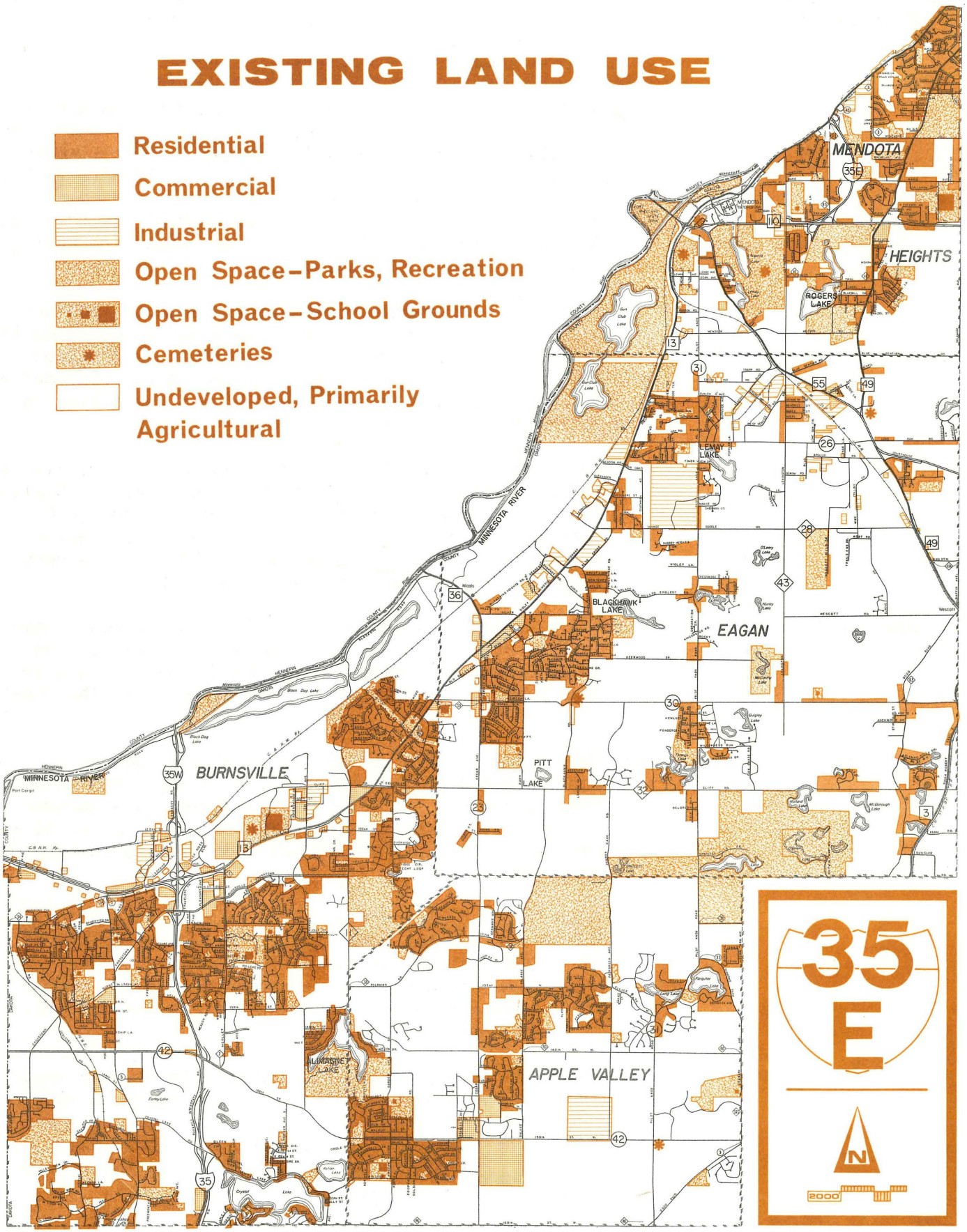
Some of the agricultural land in the study area is actively farmed; much of it is lying idle. In either case, most of it appears to be held in the anticipation of urban development.

Although not directly in the path of the Proposed Action, the most significant developed land use adjacent to the proposal would be the residential developments of Palomino Hills in Apple Valley and Ville du Parc in Burnsville. The Proposed Action would pass between the two residential areas and would impact them with noise and visual intrusion. Detailed impact evaluations are in Section III.

Developers platted both residential areas with knowledge of the proposed freeway corridor location.

EXISTING LAND USE

- Residential
- Commercial
- Industrial
- Open Space–Parks, Recreation
- Open Space–School Grounds
- Cemeteries
- Undeveloped, Primarily Agricultural



Local Comprehensive Planning

Compatability between the proposed freeway corridor and adjacent land use is an important concern of all Study Area communities since the development of their comprehensive plans.

Mendota Heights was the first Study Area community with an official comprehensive plan. Their plan, completed in 1957, was instrumental in helping to establish the location of I-35E from the Mississippi River to TH 55. Mendota Heights has not developed an updated comprehensive plan although it has kept current its thoroughfare and open space plans which have been used during the development of this action.

Burnsville prepared a comprehensive plan in 1965 and has been following it quite closely as is reflected in the existing land use. The largest single proposed land use adjacent to the Proposed Action is residential. To date, the land adjacent to the Proposed Action is generally undeveloped.

Apple Valley completed a comprehensive land use plan in 1972, and Eagan completed its plan in 1974. Both plans recommend the bulk of their undeveloped lands to be residential. Apple Valley proposes a large tract of industrial land near its center and Eagan has a very large industrial park in its northern third.

Compatibility

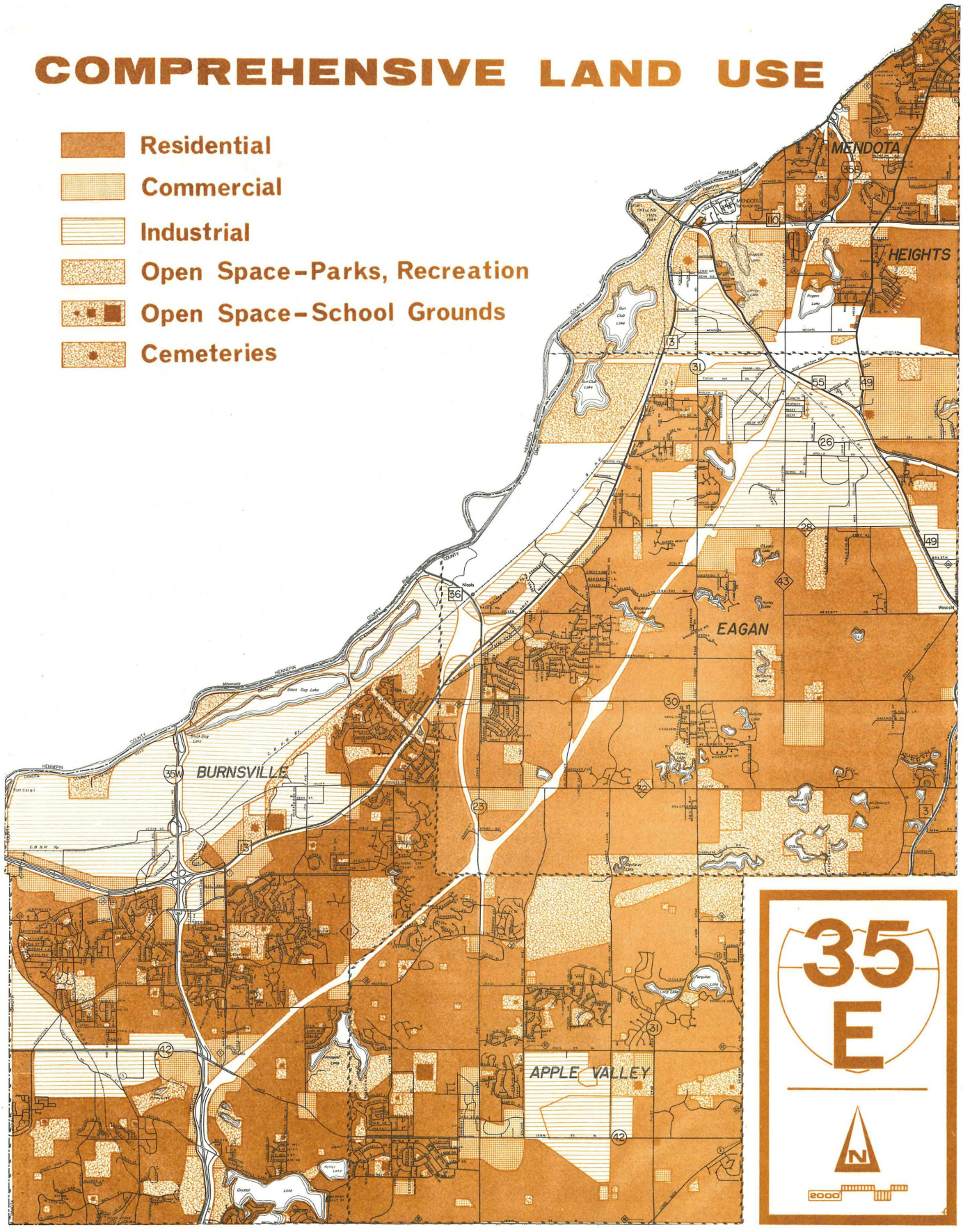
While residential land use is often considered incompatible with freeways, the developers of all of the Study Area comprehensive plans recommended a considerable amount of residential use adjacent to the Proposed Action.

The Burnsville plan specifically discourages only strip commercial and industrial land use along major thoroughfares. The Eagan plan, however, discourages single family dwellings adjacent to the Proposed Action and recommends only medium and high density residential development.

Regardless of residential type, proper planning of the future residential property is the responsibility of the developer and the community to ensure minimal impact. The State Highway Department reviews proposed plats adjacent to highway rights of way and comments on their compatibility.

The noise levels predicted by the State Highway Department for the Proposed Action will also be provided to the Study Area municipalities to make them aware of the future noise impacts to currently undeveloped properties. The municipalities can use this information to plan development adjacent to the corridor.

COMPREHENSIVE LAND USE



Regional Comprehensive Planning

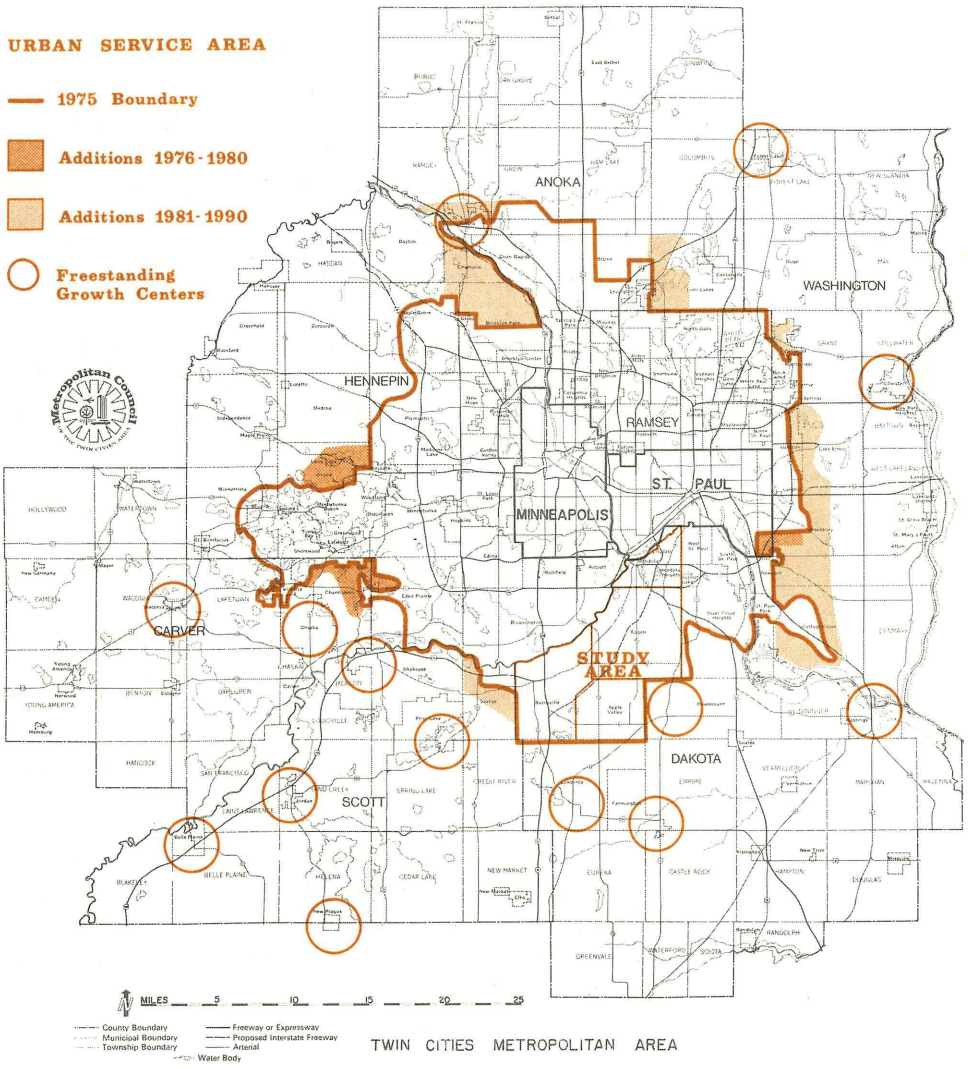
The Metropolitan Council of the Twin Cities Metropolitan Area is responsible for the control of growth on the metropolitan level. The Development Framework Chapter of the Council's Metropolitan Development Guide serves as a guide to the local units of government on decisions affecting metropolitan systems and regional development.

The Development Framework Chapter defines the Urban Service Area as that portion of the Metropolitan Area in which governmental agencies should support urban development and redevelopment. The Metropolitan Council's long range planning indicates that expansion of the Urban Service Limit should involve the following areas:

> Existing Urban Service Area -- This portion of the Metropolitan Area has metropolitan sewer service available, has good highway access, transit service, and most municipal services. Development and redevelopment in this well-serviced area are of high priority.
>
> Additions to the Urban Service Area, 1975-1980 -- These areas are planned to receive metropolitan system improvements, particularly transportation and sewer service, during the latter half of the decade.
>
> Additions to the Urban Service Area, 1980-1990 -- These areas are contiguous to the built-up area and are the next logical place for urban development to take place. They will require investment in metropolitan sewer and transit service and highway facilities as well as substantial investments in municipal and school district facilities and services.
>
> Freestanding Growth Centers -- These are small cities that have been designated as growth centers so that metropolitan investments can be concentrated in a limited number of rural centers that can potentially absorb urban growth. These small cities offer a living alternative to traditional large city and suburban living as well as to scattered housing tracts in rural areas.

Exhibit 10 shows the service areas as they relate to the Study Area. All of the Study Area is located within the Existing Urban Service Area. It is therefore a high priority development area recommended for urban growth by the Metropolitan Council.

EXHIBIT 10



TWIN CITIES METROPOLITAN AREA

The Study Area is one of the least developed areas still in proximity to the central cities of St. Paul and Minneapolis. One reason for the slow growth is attributed to inadequate transportation. Transportation facilities will be improved considerable over the next several years, and the Proposed Action is one of several proposed projects.

The Metropolitan Council has endorsed the completion of I-35E as consistant with Metropolitan Comprehensive Planning.

For a more comprehensive discussion of purpose and need of the Proposed Action and the analysis of land use planning, see Transportation Planning Report For I-35E in Dakota County, Minnesota Highway Department, April 1976.

The Purpose and Needs section discusses the National history of the Interstate System as it relates to I-35. Once the decision to include routes through the urban centers of St. Paul and Minneapolis was made at the national level, the specific locations for the new routes became primarily a local matter.

The State Highway Department established the location for I-35E from TH 110 to West 7th Street in St. Paul after a public hearing in December, 1958. This section opened to traffic in 1966.

Location Public Hearing

The location public hearing for the Proposed Action was in Burnsville on August 24, 1959. The alternates to Layout #1 shown in Exhibit 11 were presented.

The Bureau of Public Roads (BPR-now, FHWA) approved Alternate 2 in January 1960. Alternate 2 is basically the Proposed Action as described on page 2. Extensive urbanization since 1960 has eliminated Alternates 1 and 3 of Layout #1 from consideration as reasonable alternatives to the Proposed Action.

The portion of the Proposed Action from CSAH 26 (just south of proposed I-494) to TH 110 was designed concurrently with I-494. FHWA authorized right of way acquisition for this portion in 1965, and it was completed in 1969.

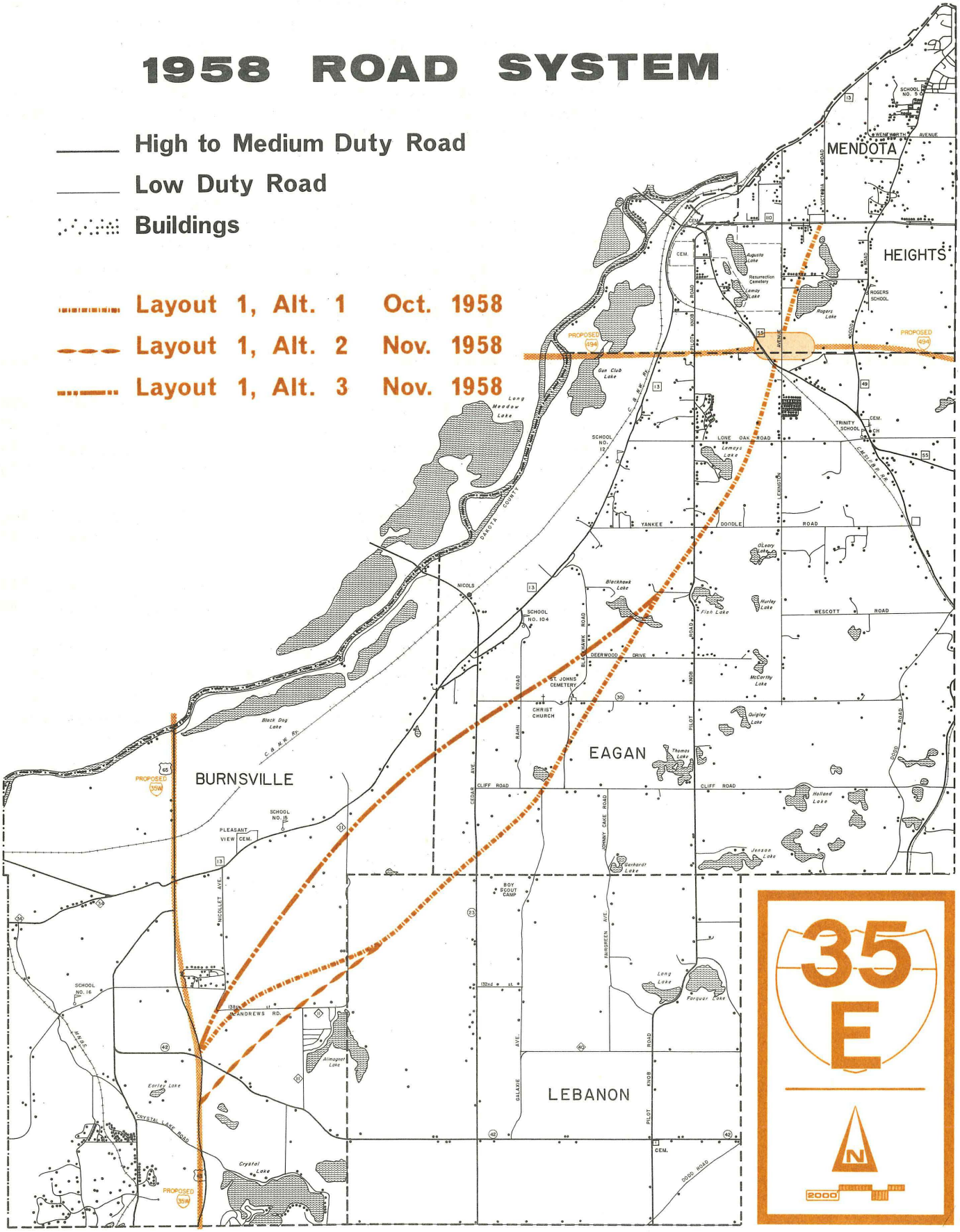
Design Public Hearing

A public hearing to discuss design features for the portion of I-35E from I-35 to CSAH 26 was held on April 8, 1970, at Metcalf Junior High School in Burnsville.

Study Documentation

The FHWA received a Design Study Report for the west portion, from I-35 to Cedar, in July 1971. They approved the study report in November 1971. The FHWA also received an environmental re-evaluation from the State Highway Department. The FHWA approved it in August 1971. Right of way acquisition started immediately after receiving all approvals.

The FHWA received a combined Design Study Report and environmental re-evaluation for the portion from Cedar Avenue to CSAH 26 in December 1971. They withheld approval, however, and since the entire uncompleted highway section had not advanced to the grading and drainage stage, they determined that a full environmental Impact Statement was necessary to comply with the National Environmental Policy Act of 1970.


1958 ROAD SYSTEM
High to Medium Duty Road
Low Duty Road
Buildings
Layout 1, Alt. 1 Oct. 1958
Layout 1, Alt. 2 Nov. 1958
Layout 1, Alt. 3 Nov. 1958
MENDOTA HEIGHTS
EAGAN
BURNSVILLE
LEBANON
PROPOSED 494
PROPOSED 35W
35E
2000

The FHWA and State Highway Department jointly started the Environmental Impact Statement for the portion of I-35E through Dakota County in September 1973.

Current Status

All detail design of the project halted when the environmental study began. Only preliminary corridor design, as necessary to aid the environmental analysis, continued.

The State Highway Department acquired only the right of way that the FHWA had authorized for purchase prior to August 1971, and it postponed the remainder. By December 31, 1975, 37 percent of the total right of way needed for the Proposed Action had been acquired at a cost of $3,250,000.

Future Activities

The following dates are estimates of future activities:

Location-Design Public Hearing	Third Quarter, 1976
Final EIS	Second Quarter, 1977
Design Study Report	Second Quarter, 1977
Resume R/W Acquisition	Third Quarter, 1977
Begin Construction	
a. TH 110 to Cedar	Third Quarter, 1980
b. Cedar to I-35	Third Quarter, 1977
Open to Traffic	
a. TH 110 to Cedar	Second Quarter, 1983
b. Cedar to I-35	Second Quarter, 1980

If the Action is approved as proposed, construction could start from I-35 to Cedar Avenue. All right of way is available for the Proposed Action along this section with the exception of the property necessary for a temporary connection to Cedar Avenue.

SECTION II

ALTERNATIVES

This statement considers three alternatives for providing a transportation link between I-35 and TH 110 through the Study Area.

Alternative A1

1) Alternative A1, a design alternative of the Proposed Action that would bridge Blackhawk Lake. The bridge would be a three span structure that would clear the normal high water by about 15 feet. The two piers would be within the normal high water area, but the distance between them would be enough to avoid interfering with boats on the lake.

Alternative A2

2) Alternative A2, a design alternative of the Proposed Action that would pass to the east of Blackhawk Lake.

No-build

3) No-build, the alternative of not building the Proposed Action.

The two build alternatives are identical except for an alignment deviation from CR 32 to the intersection of CR 28 and CR 31, a distance of approximately 3.5 miles. They would both include building an Interstate Freeway on new alignment through the Study Area.

The No-build Alternative would include maintaining the present highways by adding turn lanes, channelling structures, and traffic signals, by repairing shoulders, and by resurfacing roadways. These would be minimal improvements that would not change the basic character and would change only slightly the capacity of the existing highways.

Transit

This statement does not consider any separate alternatives for mass transit. The Metropolitan Council's transportation plans do not include any separate mass transit facilities for this corridor.[1] The Council's plans for 1990 do include express busses in mixed traffic from I-35W to TH 36. They also include express busses in mixed traffic and metered ramps with special bus access from CSAH 23 (future TH 36) to St. Paul. The design of the freeway ramps would allow them to readily incorporate the future metering and special access ramps.

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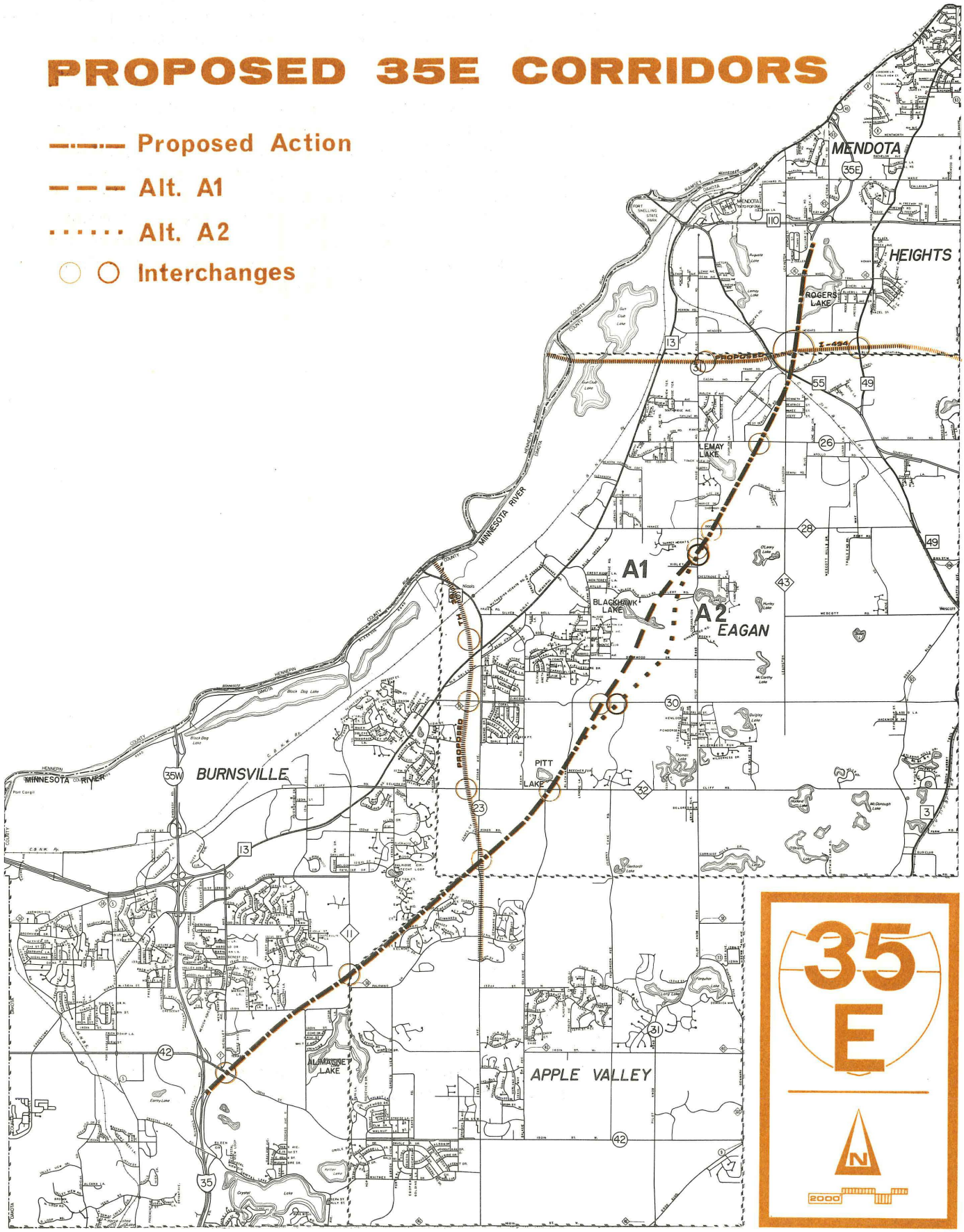
[1] Metropolitan Transportation Development Guide--Transportation Plan, April 10, 1975.


PROPOSED 35E CORRIDORS
Proposed Action
Alt. A1
Alt. A2
Interchanges
MENDOTA
HEIGHTS
ROGERS LAKE
LEMAY LAKE
MINNESOTA RIVER
A1
A2
BLACKHAWK LAKE
EAGAN
BURNSVILLE
PITT LAKE
ALIMAGNET LAKE
APPLE VALLEY
35E
N
2000

The Metropolitan Transit Commission, in a position paper to the Interstate Study Committee, stated that their plans include no more than busses in mixed traffic for the entire length of I-35E through Dakota County.[1]

Equal Consideration of Alternatives

The three alternatives are all under equal consideration. After the public hearing for this proposed action, the State Highway Department and the Federal Highway Administration will jointly select one of them. They will base the selection on the impacts that this study determines, on the comments made during the public hearing, and on the comments the various agencies and individuals make on the Draft Environmental Impact Statement.

---

[1] Letter from Doug Kelm, Chairman, Metropolitan Transit Commission to the Interstate Study Committee, September 5, 1975

SECTION III

DESCRIPTION OF THE STUDY AREA AND PROBABLE IMPACTS OF THE PROPOSED ACTION

The purpose of this section is to inventory the significant environmental features and to describe the significant beneficial and detrimental environmental consequences of the Proposed Action.

The environmental inventory considers first the underlying physical features, then the overlying natural and ecologic features, and finally the social and economic elements of the human environment. The assessment includes both primary and secondary impacts.

The primary impacts are directly caused by the Proposed Action and are the disruptions to the environment within the specific corridor and immediately adjacent to it. The secondary impacts are the impacts to the surrounding region that the Proposed Action would stimulate or induce.

Most of the material in this section was obtained from comprehensive reports prepared by an interdisciplinary team of the State Highway Department. Each report has a reference near the end of its respective subsection. The reports are available for review at the Minnesota Highway Department District 9 Headquarters, 3485 Hadley Avenue No., North St. Paul. A complete list is in Appendix A.

Project Setting

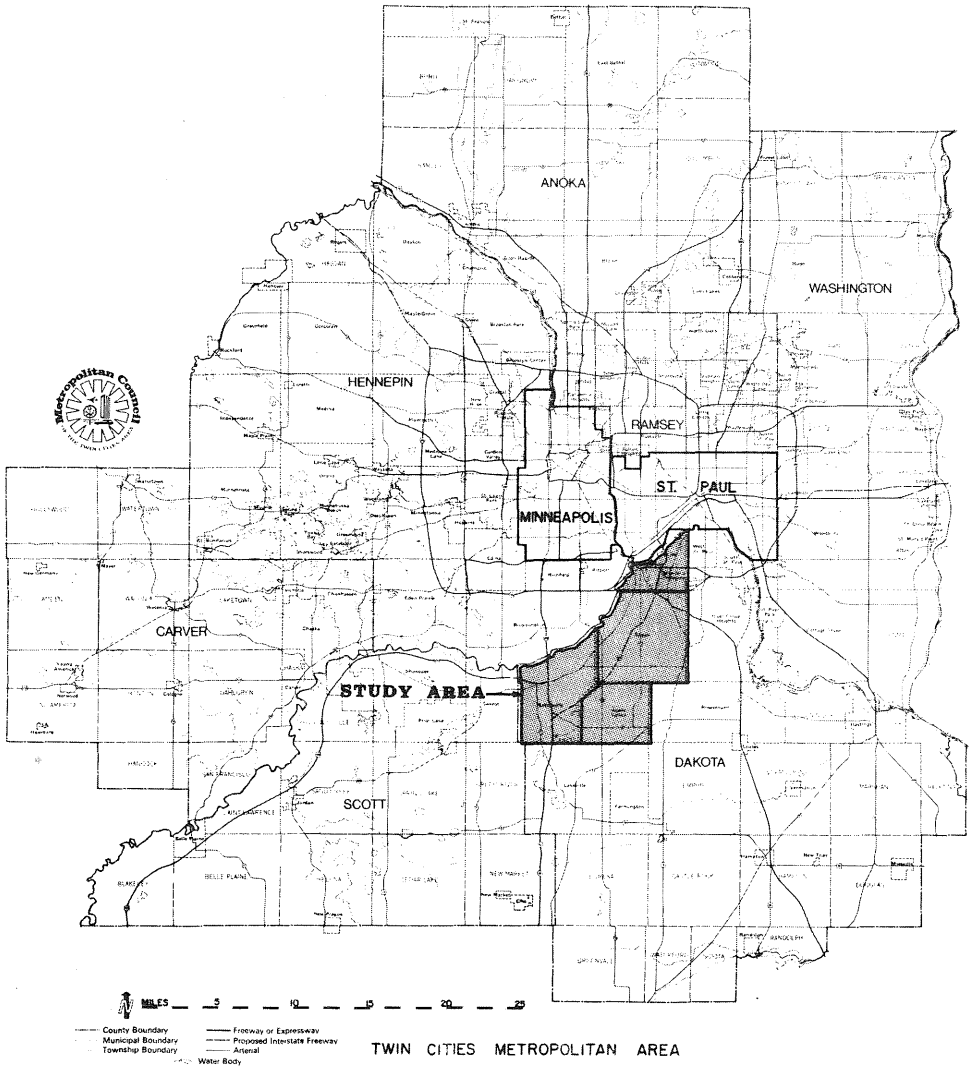
Regional

The St. Paul-Minneapolis Metropolitan Area is the principal population center of the state. It is the major banking, corporate, transportation, and cultural center, not only for Minnesota, but for the entire Upper Midwest area of Minnesota, North Dakota, South Dakota, northern Iowa, and western Wisconsin.

Between 1960 and 1970, the St. Paul-Minneapolis Metropolitan Area grew 23 percent. It was the third fastest growing of the 15 largest metropolitan areas in the United States. Dakota County, during the same time period, nearly doubled its population. The bulk of Dakota County's growth took place in the northwestern communities which the Proposed Action passes through.

The decision to implement the Proposed Action will have impacts on the entire metropolitan area and on the state.

Most of the primary and secondary impacts, however, would occur in a relatively confined geographic area surrounding the Proposed Action. The selection of a Study Area, therefore, was made to help quantify impacts by comparing the projects potential impacts on the chosen Study Area's natural, social, and economic make-up.



Study Area

The area chosen for detailed study of the project's impacts includes the whole of the four communities that the project passes through. The communities are Mendota Heights, Eagan, Apple Valley, and Burnsville.

The Minnesota and Mississippi Rivers form the northern boundary of the Study Area. This physical barrier separates the Study Area from the cities of St. Paul and Minneapolis and has acted as a deterrent to the growth of the area.

Historical population trends indicate that the Study Area did not begin a significant population gain until after 1950. From 1950 to 1960 all of the Study Area communities more than doubled their population. The entire Study Area population increased four-fold.

TABLE 3

HISTORICAL POPULATION GROWTH[1]

AREA	1870	1920	1950	1960	1970	1975
APPLE VALLEY	216	361	377	5,143	8,502	15,315
BURNSVILLE	361	419	583	2,716	19,940	31,274
EAGAN	670	857	1,185	3,381	10,398	17,686
MENDOTA HEIGHTS	444	757	2,107	5,028	6,168	7,258
STUDY AREA TOTALS	1,691	2,394	4,252	16,268	45,008	71,533
METRO AREA TOTALS	109,340	759,518	1,185,694	1,523,956	1,874,380	2,031,000

[1] SOURCE: U.S. BUREAU OF CENSUS

From 1960 to 1970, the Study Area population again grew 400 percent. The 1975 population estimate indicates that this growth trend is continuing.

TABLE 4

FUTURE POPULATION GROWTH[1]

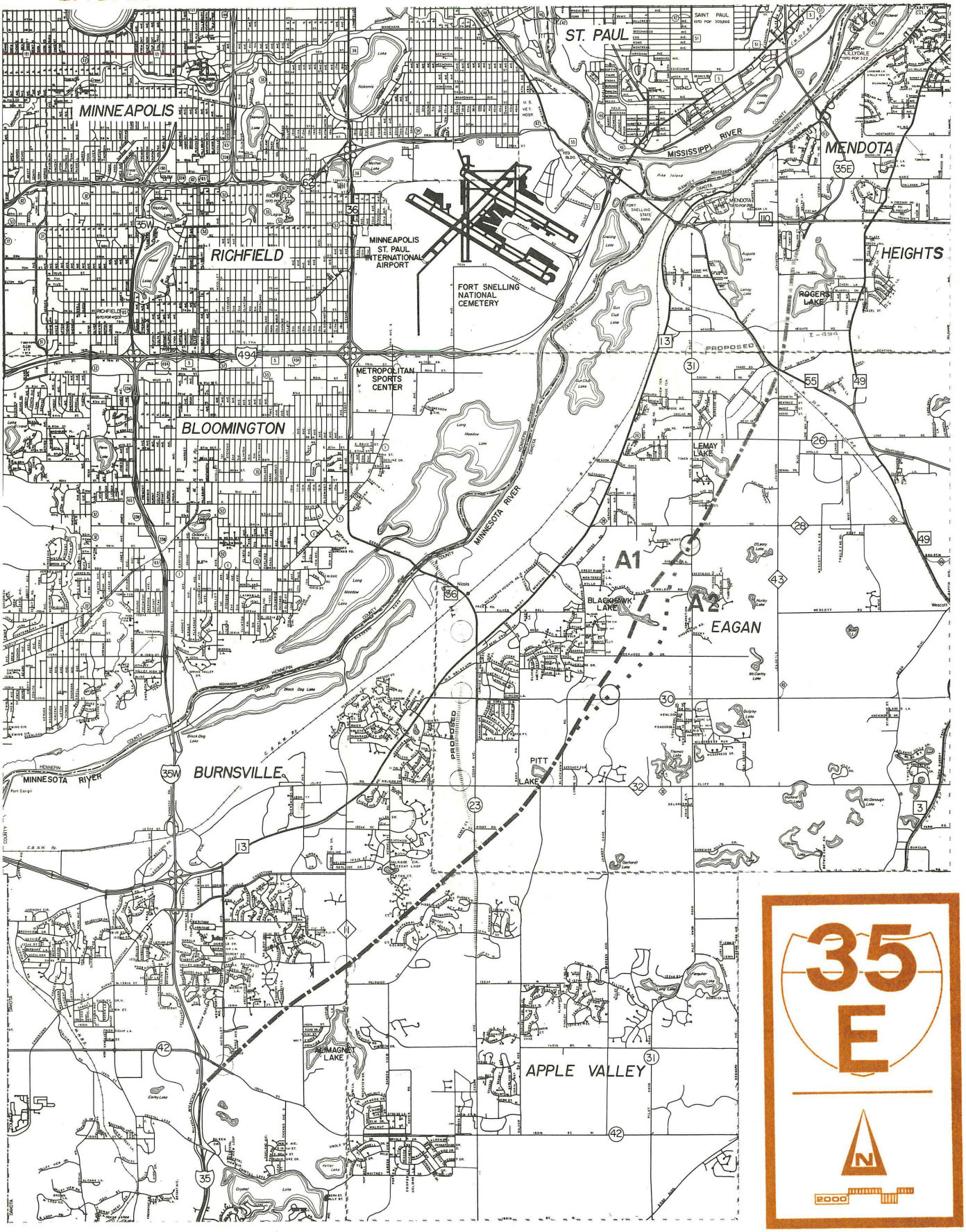
AREA	1970	1975	1980	1990	2000
APPLE VALLEY	8,502	15,315	22,750	39,650	55,000
BURNSVILLE	19,940	31,274	41,000	63,400	76,000
EAGAN	10,398	17,686	28,900	52,200	75,200
MENDOTA HEIGHTS	6,168	7,258	9,700	14,500	20,100
STUDY AREA TOTALS	45,008	71,533	101,305	169,750	226,300
METRO AREA TOTALS	1,874,380	2,031,000	2,195,000	2,560,000	2,888,000

[1] SOURCE: METROPOLITAN COUNCIL ESTIMATES

STUDY AREA COMMUNITIES

MENDOTA HEIGHTS
EAGAN
APPLE VALLEY
BURNSVILLE

Municipal Boundary
County Boundary



GEOLOGY

Bedrock

At the base of the bedrock is a 5½ mile thick layer of volcanic rock. On top of the volcanic rock are several hundred feet of varying layers of sandstones, shales, and limestones. The layers vary from a few inches to over 100 feet thick (Exhibit 14).

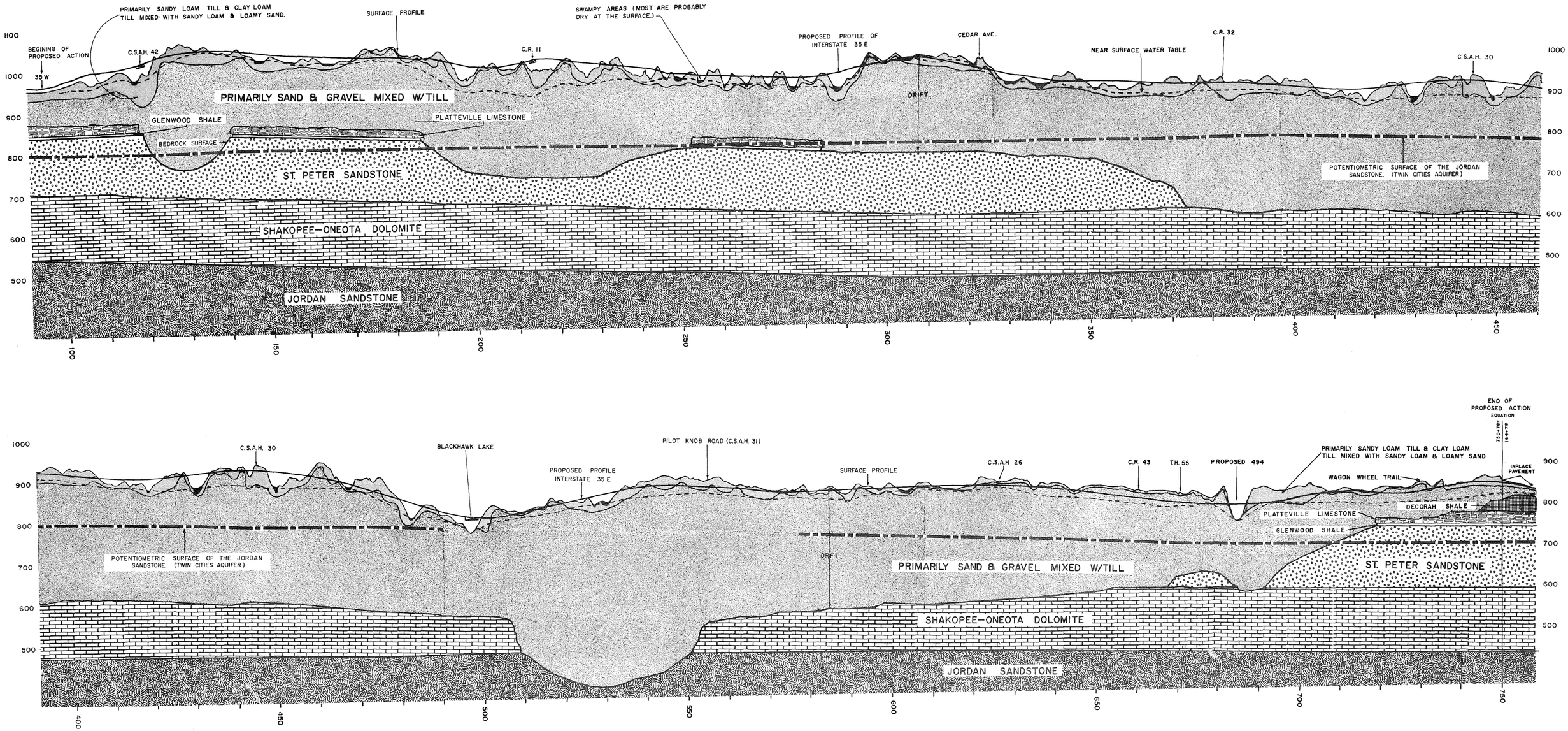
The bedrock is a part of the metropolitan area syncline, a downfold or trough in the rock layers. The low point of this syncline is generally on an east-west line through the University of Minnesota, north of the Study Area. All of the rock layers in the Study Area downslope to the north at about 20 feet per mile.

The bedrock forms a solid, stable base under the Study Area. It has no active faults, and earth movement is not a problem. The Proposed Action would not cut into the bedrock and would not have an impact on it. The No-build Alternative would not have any impact on the bedrock.

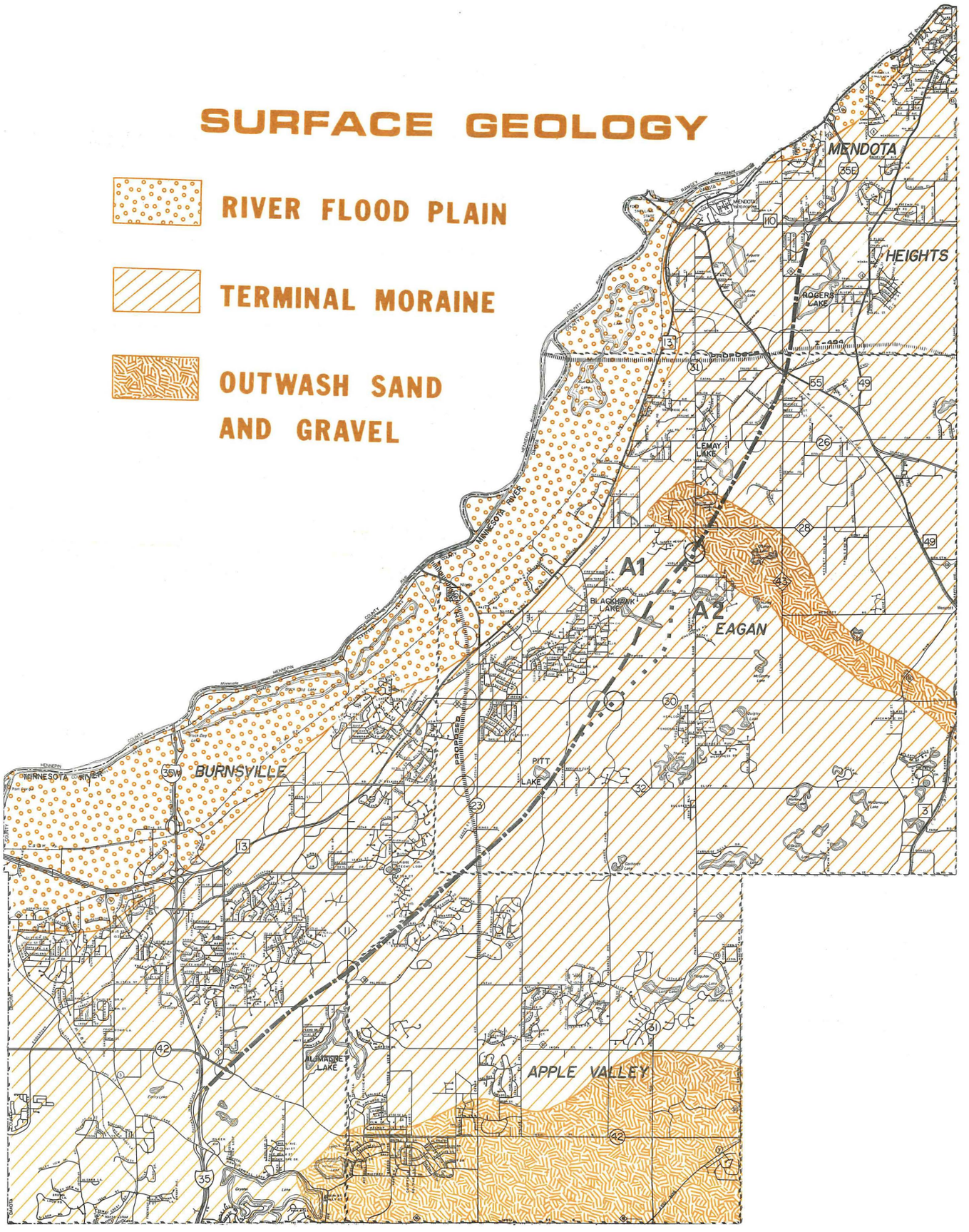
GEOLOGIC PROFILE

I 35E (ALTERNATE 1)

SCALE: HORIZONTAL 1000'
VERTICAL 100'



LEGISLATIVE REFERENCE LIBRARY
STATE OF MINNESOTA


SURFACE GEOLOGY
RIVER FLOOD PLAIN
TERMINAL MORAINE
OUTWASH SAND AND GRAVEL
MENDOTA
HEIGHTS
ROGERS LAKE
LEMAY LAKE
MINNESOTA RIVER
A1
A2
BLACKHAWK LAKE
EAGAN
PROPOSED
PITT LAKE
BURNSVILLE
MINNESOTA RIVER
ALIMAGNET LAKE
APPLE VALLEY

Topography and Soils

The glaciers of the last two million years formed the topography of the Study Area. They left an accumulation of glacial drift (rock debris) from 100 to 500 feet thick.

The glaciers formed three striking, and different, natural feature areas. The northwestern part of the Study Area is a river flood plain; the southern part is a glacial outwash plain; the central part is a band of hills and ponds, a glacial terminal moraine. As we shall see later, the effects of the glaciers continue to this day.

River Flood Plain

The flood plain of the Minnesota River is a broad, flat valley. The Minnesota River is an underfit river, that is, it is too small for the size of its valley. Instead of eroding the valley, it tends to fill it in with silt and muck. The deposit in the flood plain is now about 100 feet thick.

The flood plain is an area of farms swamps, flood plain lakes, separated oxbow lakes, and woods. It is generally undeveloped, but it does have some industrial development.

The Proposed Action parallels the river flood plain and is approximately 1½ miles away. Neither the Proposed Action nor the No-build Alternative would impact it.

Outwash Plain

The outwash plain is characterized by long rolling hills with gentle slopes. It has a moderately developed drainage pattern.

The texture of the outwash plain is generally uniform. The material is sand and fine gravel with some silt and clay. Boulders are not common. The stable, well drained subsoils of the outwash plain make it a highly desireable area for development.

The Proposed Action would cross only a finger of the outwash plain in central Eagan and would have no significant impact on it.

Terminal Moraine

The terminal moraine roughly parallels the Minnesota River Valley. The moraine is an area of unsorted material (till) piled up into short, steep hills with ponds and potholes in between. It has an immature drainage pattern. The material is generally clayey with frequent boulders and pockets of sand and gravel.

The Proposed Action would lie almost entirely in the terminal moraine. The problems associated with the slopes, the poor drainage, and the clayey soils of the moraine would make construction through the area less than desirable. Moving the highway alignment to another location within the Study Area would not relieve these problems. They would not be insurmountable, however, and current design and construction techniques would significantly reduce the impact.

For a further discussion of the geology of the Study Area, see Bedrock and Glacial Geology, Interstate 35E, Northern Dakota County, Minnesota Highway Department 1976.

Ground Waters

Near-Surface Water Table

The Study Area contains two major levels of ground waters (see Geologic Profile, page 33). The upper level is the near-surface water table. The near-surface water table generally follows, in a modified way, the contour of the land surface. The lakes and swamps of the Study Area often indicate its surfacing above the land. It may rise or fall according to the seasonal or annual variations of precipitation.

The Jordan Acquifer

The lower level of ground water is the Jordan aquifer (water bearing rock or soil). The aquifer is contained in the Jordan sandstone layer which lies under 500 to 600 feet of sedimentary rock and glacial drift. It is a major source of municipal water in the Twin City Metropolitan Area.

Perched Water

In addition to the two major water levels, the soils of the Study Area contain impermeable layers which hold up limited areas of perched water. The perched water tables are not directly connected to the near-surface water table, but they, too, might be underground or might surface as a pond or swamp. Perched water might also flucuate with seasonal precipitation.

Surface Waters

Watershed Characteristics

Except for the Minnesota River, no well defined water courses are in the Study Area. Lakes, ponds, and swamps occupy the low areas of the rolling topography. Individual watersheds are quite small.

Runoff is currently contained within the individual watersheds. Eventually, proposed storm sewer development by the Study Area communities will connect the numerous watersheds with outlets into the Minnesota or Mississippi Rivers and into some of the larger Study Area lakes.

Wetlands

The wetlands of the Study Area consist mainly of lakes, marshes, swamps, wet meadows, potholes, sloughs, and river bottoms.

These wetlands form a part of the regional ecosystem and provide valuable habitat for waterfowl, furbearers,

small mammals, and a myriad of aquatic species. Wetlands not only serve wildlife, but they also provide an essential link in the water cycle. They contribute to the recharge of the near-surface water table and thus contribute to the ecological stability of the area.

Exhibit 16 catalogues all wetlands of the Study Area according to the definitions of the U.S. Fish and Wildlife Service Circular 39 (1971). The Fish Lake designations are from the Minnesota Department of Conservation (now MDNR), Division of Game and Fish, Special Publication No. 45 (1967), "Metropolitan Lake Inventory".

Impacts to Water Resources

Wetland Removal

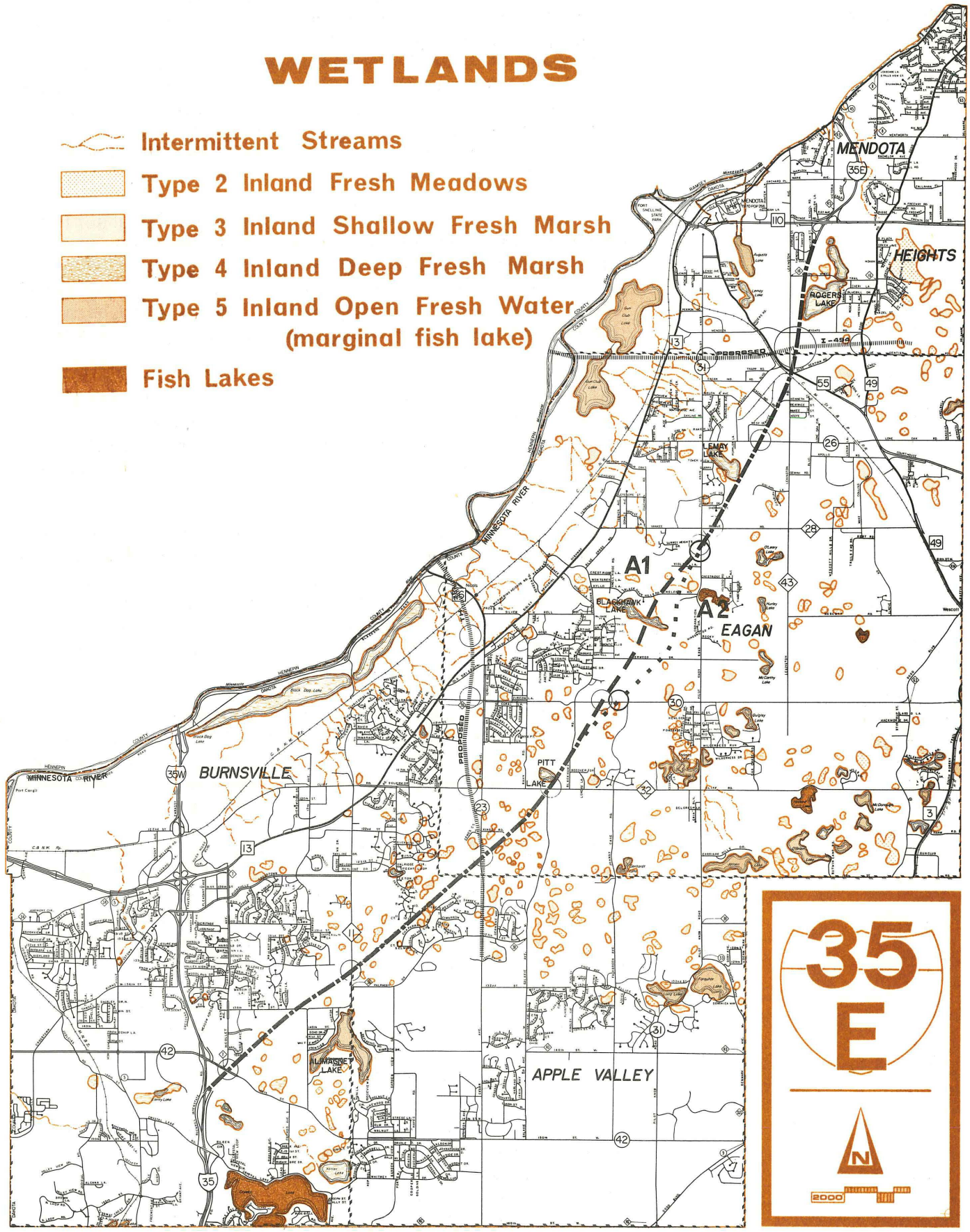
The most direct impact to water resources would be the filling or bridging of wetlands. Table 5 gives a comparison of wetland types impacted by the two design alternatives. The actual acres which would be filled cannot be determined at this preliminary stage. The table, therefore, lists the total acres of wetlands within the right of way, all of which would not be eliminated.

TABLE 5

Wetland Type	Alternate A1 (acres)	Alternate A2 (acres)
Type 2 Marsh	20	21
Type 3 Marsh	4	4
Type 4 Marsh	2	0
Type 5 Marsh	2	2
Fish Lakes	0	0
Total	28	27

The difference between the impacts of Alternative A1 and Alternative A2 is not significant.

The removal of approximately 28 acres of wetlands by the Proposed Action accounts for 2 percent of the total acreage of the corridor. Dakota County contains approximately 16,000 acres of wetlands, about 4 percent of its total area. The Study Area contains over 2,300 acres of wetlands, also about 4 percent of its total area.


WETLANDS
Intermittent Streams
Type 2 Inland Fresh Meadows
Type 3 Inland Shallow Fresh Marsh
Type 4 Inland Deep Fresh Marsh
Type 5 Inland Open Fresh Water
(marginal fish lake)
Fish Lakes
MENDOTA
HEIGHTS
ROGERS LAKE
EMMY LAKE
A1
A2
BLACKHAWK LAKE
EAGAN
MINNESOTA RIVER
BURNSVILLE
PITT LAKE
ALIMAGNET LAKE
APPLE VALLEY
35E
2000

Highway Drainage

Highway drainage design is based on two basic principles: to perpetuate flows across the highway right of way and to keep to a minimum the diversion of runoff from one watershed to another. Initially, the Proposed Action would have ponding in watersheds adjacent to the roadway. Many of these ponds would eventually be provided with outlets into the Mississippi and Minnesota Rivers and the larger Study Area Lakes as a result of municipal storm sewer construction.

Because of the morainic soils, surface and subsurface drainage requirements would be extensive. The presence of many perched water tables makes the extent of subsurface drainage needs uncertain until actual construction. Dewatering of perched water would be a local impact and would not impact the overall groundwater levels.

The State Highway Department's soils investigation unit is investigating an area of potential impact. At a point 400 feet south of Rogers Lake (Mendota Heights) the Proposed Action cuts below the lake surface water level.

The investigation will help determine whether the lake is a perched water body or an expression of the near-surface water table. An understanding of the geologic characteristics of the lake will help determine the the design and construction techniques necessary to avoid impact, if any, to the lake or to the subsurface water of the area.

Erosion/ Sedimentation

Sedimentation caused by erosion is a potential impact of the Proposed Action. Sedimentation can cover and eliminate plant growth, cause high turbidity in water supplies, settle out in ponding areas and reduce their storage volume, and restrict groundwater recharge.

Sedimentation can impact all wetlands adjacent to construction activities. Several protective measures are available to reduce this potential. Wood fiber mats, mulches, special seed mixtures, berms, dikes, slope drains, special ponding areas, and sedimentation basins reduce erosion during construction.

Borrow pits outside of the construction corridor would be treated for erosion control. Restoration would include cleaning shaping, replacement of topsoil and re-establishing vegetation.

The type and placement of erosion control measures would be partially developed during detail planning and would continue to be developed throughout the construction phase. The contractor and construction engineer would cooperate throughout the construction phase

to implement erosion control practices. Proper application of erosion control procedures would limit sedimentation to near natural conditions.

Salts - Surface Waters

Drainage into ponds and lakes would contain varying amounts of chemical pollutants. The most common chemical pollutant from highway runoff and the easiest to estimate are the chloride compounds used in deicing operations.

Average annual concentrations of chlorides exceeding 500 mg/l would occur in approximately 15 of 45 ponding areas required for stormwater runoff. The 15 ponding areas would have high concentrations because runoff would be almost totally highway originated and the watershed would be too small (less than 35 acres) to allow greater dilution. The concentrations in ponding areas of the larger watersheds and the concentrations in the area's lakes would be minimal.

The ponding area salt concentrations would not be high enough to significantly impact wildlife. Aquatic plants intolerant of high salt levels, however, would eventually be replaced by plants with higher tolerance levels.

Private Water Supplies

Salt concentrations in lakes and ponding areas have the potential for polluting the groundwater tables. Near-surface groundwater pollution is unlikely to occur in shallow wells beyond 75 feet from the highway, however, because of the filtering action of the soil.

A survey of shallow wells along the Proposed Action indicated that no wells are within 200 feet of the corridor.

Public Water Supplies

The use of municipal water supplies will soon eliminate the need for shallow wells. The Study Area communities all obtain their water from the Jordan Sandstone formation of the Twin City Artesian Basin.

During the development of this project the Minnesota Department of Natural Resources (DNR) raised the question of possible contamination of the Jordan formation via Blackhawk Lake due to a window in the Dolomite cap of the Jordan formation (Exhibit 14, page 33). Consultation with the DNR and the U.S. Geological survey determined that pollution of the Jordan formation was highly unlikely since it appears that groundwater is escaping through the window rather than recharging.

The Proposed Action, therefore, should not have any impact to public water supplies.

Efforts to Minimize Impacts of Salts

There are now no economical alternatives to deicing chemicals. To limit the amount of deicing chemicals appearing in the runoff, the State Highway Department uses the minimum amount of chemicals necessary to insure safe operation of the roadway. To insure minimum usage, truck spreaders are calibrated periodically and individual truck salt application rates are recorded for each segment of roadway. The State Highway Department uses sand, sodium chloride, and calcium chloride in the deicing mixture. The percentage of each constituent in the deicing mixture depends on roadway condition, temperature, and type of storm. The sand is stockpiled with an average of 5 percent sodium chloride to prevent freezing and this mixture is adequate for use during less severe storms. For more severe storm conditions, additional sodium chloride and calcium chloride are added to the sand.

The following standard policies further minimize harm from deicing salts:

1. When precipitation begins, under certain atmospheric conditions, the application of deicing chemicals will prevent the bonding of snow and ice to the pavement surface. Much less salt is then needed to obtain a dry pavement.

2. Efforts have been made and will continue to be made to find ways of reducing the amount of salt used to keep our highways safe for winter driving conditions. A salt monitoring and reduction program has decreased salt usage by 42 percent based on a five-year average. Further reduction has been accomplished by using more efficient mixing and spreading methods. The quantity of salt required can also be reduced by using a combination of CaCl and NaCl (Calcium and Sodium Chloride). This combination will also decrease the potential for environmental damage.

3. Salt and salt-sand stockpiles will be covered and kept away from ponds, wells, water supplies, and drainage ways.

For a more comprehensive analysis of water resources, see Ground Water Data for Environmental Impact Statement, I-35E, October 1975, and Preliminary Hydraulics and Water Quality Analysis, I-35E, April 1976, Minnesota Highway Department.

Chemical and Oil Spills

The pollution from chemical and oil spills would probably be local and would not contaminate water resources near the Proposed Action. The State Highway Department's procedure in case of oil or chemical spills is to first contain the spill by placing a sand ditch block on the downstream side of the spill. If possible, highway maintenance forces remove the spilled material by pumping or sponging. If it is not possible to remove the material before it soaks into the soil, the maintenance forces remove the contaminated soil, haul it to an appropriate dump, and replace it with clean soil. The State Highway Department's maintenance forces automatically call the Minnesota Pollution Control Agency (MPCA) in any accident involving oil or chemical spills. The MPCA monitors the clean up and the impacts.

Section 404 Permit

In addition to State and local permits, the Proposed Action will require a Section 404 permit from the Corp of Engineers. This permit is required for all projects that require fill material to be placed into navigable waters, contiguous wetlands,or water bodies five acres or larger. The Proposed Action would require fill in a waterbody larger than five acres.

VEGETATION

Description

The major vegetation types of the Study Area are mixed-oak, mixed-hardwoods, sedge willow, and mixed grasses. The mixed-oak type consists primarily of bur, red, and white oaks. The mixed-hardwoods type consists primarily of elm, green ash, boxelder, aspen, and cottonwood. The mixed-oaks and mixed-hardwoods generally support the same understory.

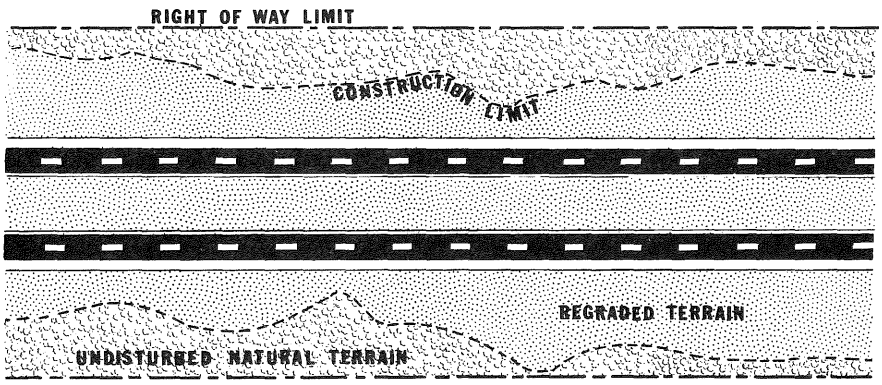
The mixed-grasses type includes a wide variety of grasses and non-woody vegetation that is generally in idle farmlands, pasturelands, and cultivated lands.

Generally, the sedge-willow type is in the river flood plain, the mixed oak and mixed-hardwood types are in the morainic areas, and the mixed-grasses type is in the outwash plain (see Glacial Geology map, page 34).

Near the intersection of CSAH 42 and I-35 is a prairie meadow remnant that is apparently unique to the Study Area.[1] The Proposed Action would pass within 200 feet of it (see area G, Exhibit 17).

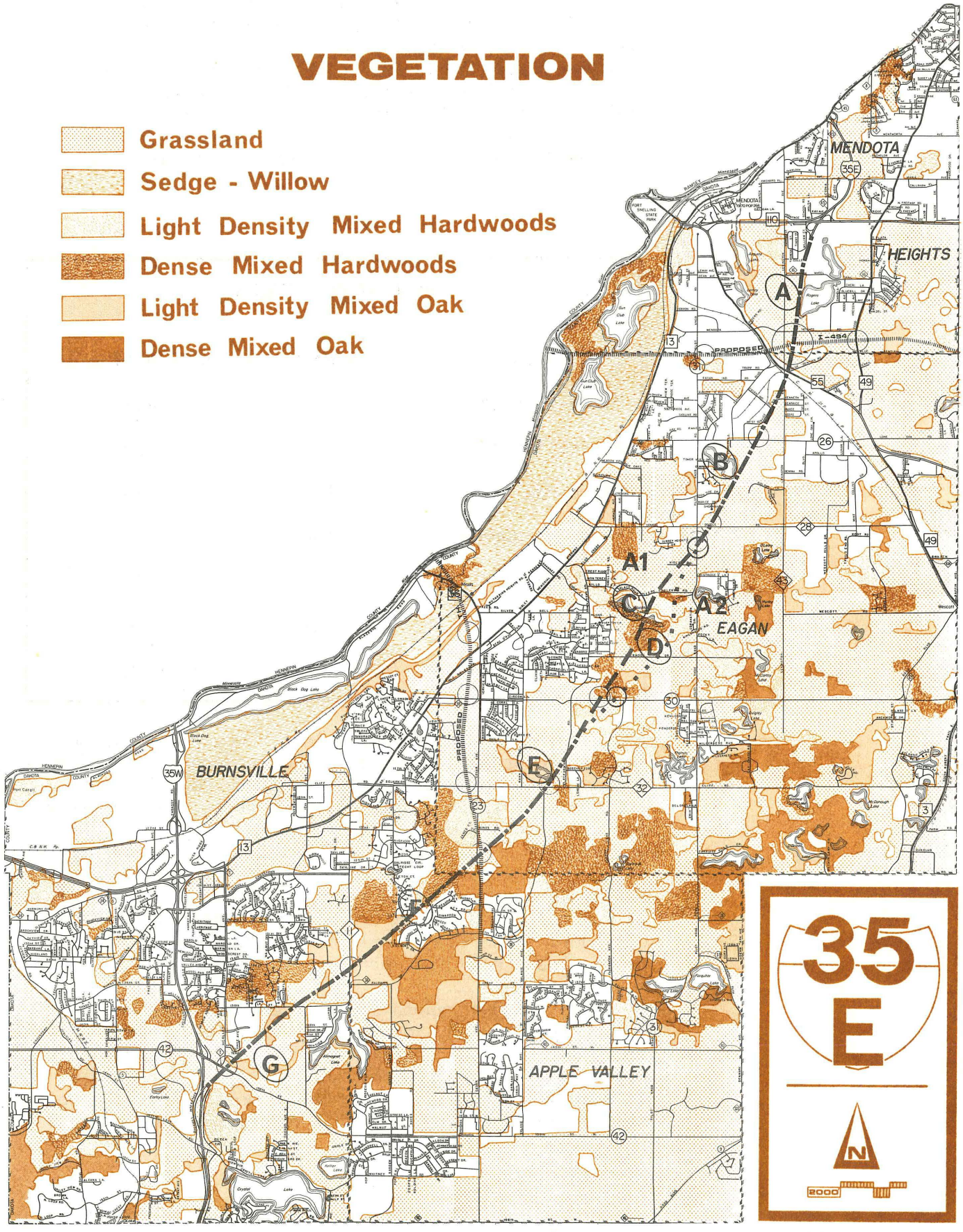
Impacts

The major impacts to vegetation would be the direct removal of the vegetation during construction. Table 6 page 46, shows the acreages of vegetation types within the corridors of the two build alternatives. These acreages, however, are probably generous. The actual construction limits are generally well within the right of way.



[1] This unique feature was brought to the attention of the State Highway Department by Donald B. Vogtman, Consulting Biologist for Brauer and Associates. Brauer and Associates are the planning consultants for the Ridges medical complex.

VEGETATION


Grassland
Sedge - Willow
Light Density Mixed Hardwoods
Dense Mixed Hardwoods
Light Density Mixed Oak
Dense Mixed Oak
MENDOTA
HEIGHTS
EAGAN
BURNSVILLE
APPLE VALLEY
PROPOSED
A
A1
A2
B
C
D
E
F
G
35E
35W
35
E
N
2000

The mixed-oak and mixed-hardwood areas are a remnant of the hardwood forests of southeastern Minnesota that until 1850 covered most of the Study Area and the northern third of Dakota County. Farming and urbanization, however, have reduced the hardwood forest to about 9,000 acres which are scattered throughout the Study Area. The Proposed Action would impact the remaining acres of hardwood forest by removing approximately 275 acres of woodlands along Alternative A1 and 260 acres along Alternative A2. Woodlands cover the Study Area to such an extent that movement of the alignment to avoid impacting them is not feasible.

TABLE 6

VEGETATION IMPACTS

Land Class	Alternative A1	Alternative A2
Mixed-grasses	437	426
Agricultural	249	270
Mixed-oak	173	170
Mixed-hardwoods	104	88
Wetlands	27	28
Urbanized	143	156
Total	1133	1138

The corridor of the Proposed Action would cut through the wooded areas and would expose the trees along the edges of the corridor to wind pressure to which they are not accustomed. Some of these trees, particularly the young or the overly mature would be lost from windthrow.

The highway construction could also change the amount of moisture in the soil of the areas adjacent to the corridor. The rise or fall of moisture could kill some of the trees near the corridor.

In dense mixed-hardwood stands, removing the forest canopy trees during construction would increase the amount of sunlight available to the natural understory vegetation. The increased sunlight would generate a gradual shift in the vegetation to more light-tolerant species and would increase the density of the understory

along the edge of the corridor. The increased edge vegetation would provide more food and cover and would probably attract more birds and small mammals than a dense forest canopy would.

Salt used for snow removal could impact the adjacent vegetation. The heaviest salt concentrations and therefore the most impacts would be from 10 to 30 feet from the edge of the roadway pavement. Right of Way limits, however, would extend beyond 30 feet from the roadway edge, and most impacts would be confined to the corridor. The landscaping of the corridor would include salt-tolerant species (see landscaping concept, page 79). Adjacent to the corridor, the vegetation would gradually shift to more tolerant species. As the distance from the corridor increases, the impact would rapidly diminish.

Seven areas are especially critical, and the construction plans would include provisions to protect them (see Exhibit 17). These areas are:

A) West shoreline of Rogers Lake
B) East shoreline of Lemay Lake
C) Blackhawk Lake area
D) Area of dense mixed-hardwoods between Blackhawk Lake and Deerwood Drive
E) Pitt Lake area at the junction of Galaxie Avenue and Cliff Road
F) Wooded area around Palomino Hills-Ville du Parc residential areas
G) Prairie meadow remnant near CSAH 42.

Efforts to Minimize Harm

Construction operations would disturb only those areas specifically required for the construction of the Proposed Action. The rest of the area within the right of way would be left undisturbed.

A physical barrier, a snow fence or wire netting, would protect those areas that are especially critical. Where possible, the barrier would be far enough from any trees to prevent root damage from compaction of the soil or from physical damage. Where it is not possible to present root damage, the trees would be pruned to balance the aboveground mass with the root mass.

The contractor would be liable for any unavoidable damage to the vegetation and especially to any trees.

For a further discussion of the impacts to vegetation, see Vegetation, Surface Water, & Wildlife Review of Proposed I-35E Through Eagan, Mendota Heights, Burnsville and Apple Valley, Minnesota Highway Department. Sept. 1975, pp. 10-19.

WILDLIFE

Habitat

The necessary requirements of food, water, shelter, and reproduction areas make up the basic habitat requirements to sustain wildlife. The Study Area contains substantial amounts of habitat of varying qualities to sustain a great variety of wildlife.

The value of habitat to wildlife is closely related to the type and quality of vegetation. The quality of vegetation is in turn dependent on soil fertility, water availability, and the extent of development. Exhibit 18 shows the habitat quality in the Study Area.

The Minnesota River Valley provides the most significant quality and quantity of wildlife habitat within the Study Area. If an animal's range extends into this part of Minnesota, it is very likely that the animal will be in the valley.

Mammals

The only species of large mammals in the Study Area is the white-tailed deer. A sizeable population of deer live within the Minnesota River Valley. The deer range, however, into the nearby upland hardwoods in the areas where food and cover are available.

The more common species of small mammals in the Study Area are squirrels, rabbits, muskrats, raccoons, skunks, woodchucks, fox, weasel, and several members of the mice and vole families. Beaver, badger, and mink are not as abundant.

Birds

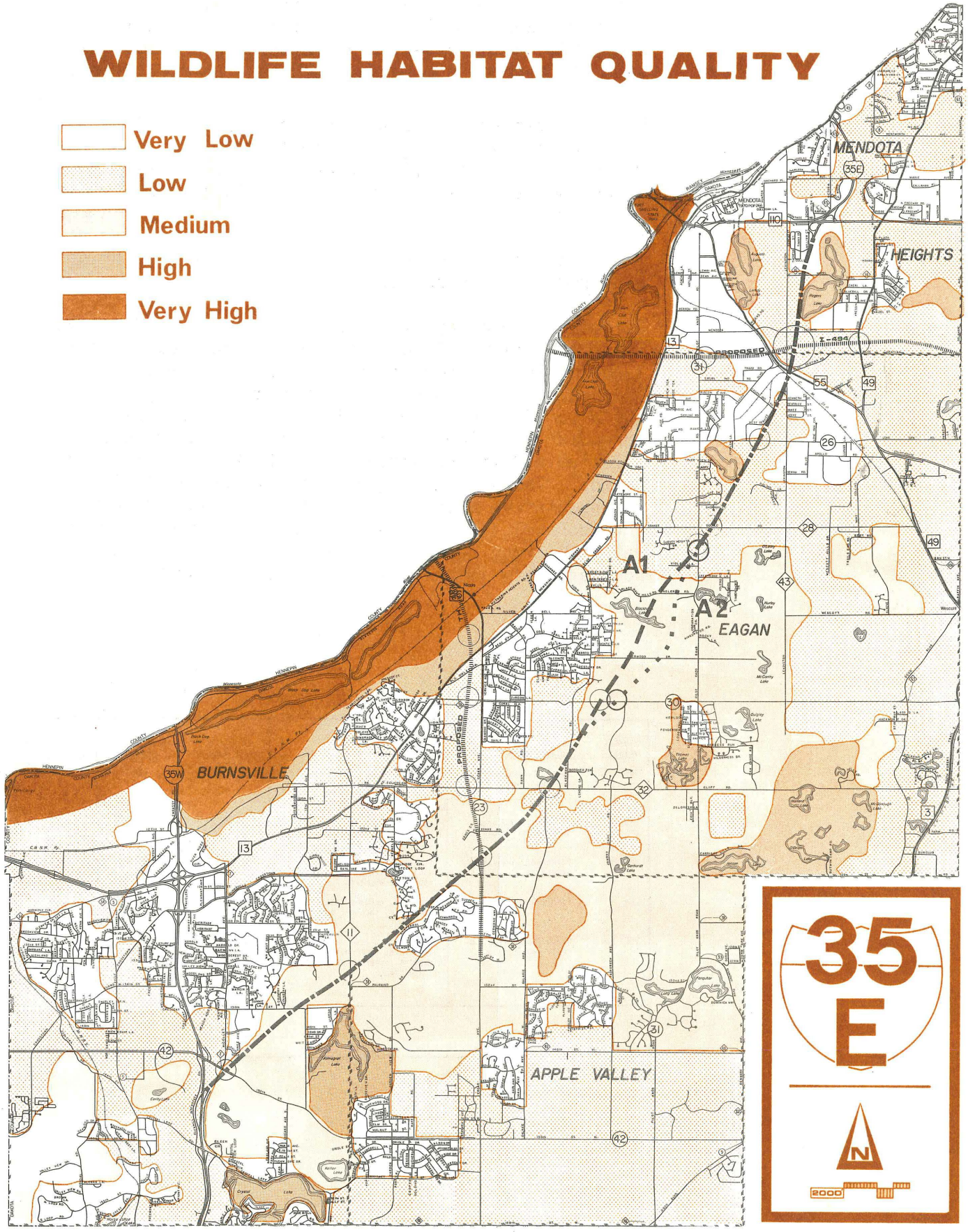
The Study Area supports a wide variety of upland birds, songbirds, shore birds, raptors, and waterfowl. The most common upland bird is the pheasant. Common shorebirds include herons, bitterns, plover, rails, snipe, sandpipers, and blackbirds. The great egret is extending its range into the Study Area.

The Study Area contains a great variety of songbirds. The common raptors include the red-tailed hawk, broad-winged hawk, sparrow hawk, and great horned owl.

Waterfowl are abundant in the river valley and in the numerous marshlands of the northern half of the Study Area. The more common species are mallards, blue-winged teal, wood-ducks, and American coot.

Fish

Fish Lake, Crystal Lake, Bald Lake, and Holland Lake are the only lakes within the Study Area that the MDNR classifies as fish lakes.


WILDLIFE HABITAT QUALITY
Very Low
Low
Medium
High
Very High
MENDOTA
HEIGHTS
EAGAN
BURNSVILLE
APPLE VALLEY
A1
A2
PROPOSED
35E
35W
2000

Crystal Lake was reclaimed with fish toxicants in 1965 and was stocked with northern pike, bass, crappies, and bluegills. Very little information is available on the other three lakes. They seem, however, to support a good bass and panfish population.

MDNR classifies Alimagnet Lake as a marginal fish lake. Private landowners, a local sportsman's club, and the Department of Natural Resources have cooperated to stock the lake with northern pike. Bullheads are also abundant.

The Study Area does not contain any threatened or endangered animal species.

Impacts

Direct and immediate impacts on wildlife would be the loss of habitat. Since plant and animal species exist together in a rather delicate balance, alteration of the habitat would produce corresponding changes in the wildlife populations. The degree of change is dependent upon the amount and value of the vegetation affected and the dependency of wildlife on that vegetation. Table 7 catalogues the wildlife habitat and representative wildlife directly impacted within the corridors of the Proposed Action. The loss of habitat to highway construction within the Study Area would not seriously impact the population of any species.

TABLE 7

WILDLIFE HABITAT SYNOPSIS

Habitat Value	Interdependent Habitat Relationships	Most Common Species	Tolerance to Development	Alternative A1 (acres)	Alternative A2 (acres)
Very High	Lakes, meadows, rivers, wetlands, woodlands	Fish, ducks, herons, egrets, raptors, pheasants, grouse, rabbits, squirrels, raccoon, deer, furbearers, songbirds	Very low	37	0
High	Wetlands, woodlands, grasslands, farmlands	Pheasants, grouse, rabbits, squirrels, raccoon, songbirds, waterfowl, raptors, furbearers	Low	292	317
Medium	Farmlands, grasslands, woodlands	Pheasants, grouse, rabbits, squirrels, raccoon, rodents, raptors, songbirds	Medium	409	435
Low	Farmlands, grasslands	Pheasant, grouse, rabbits, squirrels, raccoon, songbirds, rodents	High	343	331
Very Low	Urban Forest (residential, industrial)	Pheasants, grouse, rabbits, squirrels, raccoon, rodents, pigeons, sparrows, starlings, songbirds	Very High	50	50
			Totals	1131	1133

(1) See Exhibit , Page

The Proposed Action would interfere with present animal movement patterns and would probably cause some animal deaths. A check of auto- deer collisions recorded by the Department of Natural Resources within the Study Area showed 60 auto-killed deer in 1973 and 64 in 1974. Several locations had a high incidence of deer-auto collisions. These locations are within linear vegetation bands extending from the Minnesota River Valley to various woodlots and agricultural fields within the Study Area. Deer tend to follow these vegetational bands in their movements between the river valley and other portions of the Study Area. The Proposed Action bisects some of these bands, so the possibility of deer auto collisions does exist. Movement patterns of small animals would also be hampered.

As time passes, animal populations would adjust to the severance and the number of highway kills would reduce. This adjustment usually takes three to four years. Fencing along the highway would totally sever the movement of many intermediate sized animals.

Efforts to Minimize Harm

The efforts to minimize harm to wildlife would consist mainly in conserving or in reestablishing the wildlife habitat. Construction activities would only disturb the vegetational areas, and therefore the habitat areas, required for construction of the Proposed Action.

The disturbed areas would receive revegetation. One of the criteria used in the selection of grasses and shrubs for revegetation would be their usefulness for food and cover for songbirds and small animals.

Maintenance practices followed after construction are also important. By request of the Minnesota Department of Natural Resources, mowing of roadside ditches is delayed until after the pheasant nesting season. As a result of this practice, roadside ditches have become an important part of the reproduction habitant of the pheasant. See also Vegetation, page 44, and Water Resources, page 37.

For a more comprehensive analysis of wildlife, see Vegetation, Surface Water & Wildlife Review, Minnesota Highway Department, September 1975, pp. 20-38.

CHEMICAL CONTROLS

Fertilizers

The construction plans would include commercial, granular fertilizer for establishing the ground cover disturbed by construction. These granular fertilizers are mixtures of compounds of nitrogen, phosphorus, and potassium. They do not include any urea, gaseous, or liquid fertilizers. On new construction projects, an analysis of the topsoil for fertility, texture, and PH determines the type and application rate of fertilizer.

The fertilizer which heavy moisture leaches out is generally an excess of what the soil and plant life can use. The matching of fertilizer quantity to soil deficiencies minimizes leaching of fertilizers into ground waters, and the amount of leaching should be insignificant. Mulching further limits or minimizes movement, through leaching, into ground waters.

Fertilizer which is matched to the topsoil promotes the establishment of a dense, vigorous turf in a minimum of time after construction activities expose the soils. Fertilizer minimizes erosion and thus sedimentation into waters, and it conserves moisture for plant use.

Highway fertilizers do not seem to be a significant contaminant of natural waters, but they do provide a positive impact by preventing erosion and sedimentation.

Insecticides and Fungicides

Insecticides and pesticides would be used only in specific areas where infected trees are a danger to neighboring trees. These chemicals are a potential hazard to the environment, but they are effective where no other method of insect or fungus control has proven effective, and avoiding their use could present a much greater danger. Their use along highways is rare.

The State Highway Department has a representative on the Minnesota Environmental Quality Council Task Force which conducts an ongoing review of pesticide usage.

Herbicides

Highway maintenance operations use spot spraying of herbicides in specific problem areas to kill noxious weeds and brush growing within the safety clear zone (30 feet from edge of pavement). The rest of the right of way remains untreated. A combination of an antidrift emulsion, an invert sprayer, and using low wind velocity days minimizes wind drift.

A herbicide-asphalt mixture eliminates all plant growth in areas that cannot be readily mowed such as around guardrails. Herbicides are a hazard to plant growth beyond the treated area, and the stickiness of the asphalt prevents the spread of the herbicide by runoff. The asphalt also prevents erosion of the soil.

The benefits of herbicides include maintenance of roadside beauty, more effective erosion control (grasses grow more readily after removal of noxious weeds, and reduction of accident potential involving wildlife by removal of tall weeds and brush alongside the roadway.

Analysis

The State Highway Department conducted an air quality analysis for the Proposed Action to determine its consistency with the State's air quality implementation plan and with the Federal air quality guidelines.

The air quality analysis followed the U.S. Environmental Protection Agency's "Guidelines for Air Quality Maintenance planning and analysis, Volume 9: Evaluating Indirect Sources." The analysis estimated pollution concentrations contributed by the traffic forecasted to use the corridor. The traffic generated pollutants added to the anticipated background concentrations indicates the total future concentrations of pollutants.

The only pollutant the analysis studied in detail was carbon monoxide (CO) because it is the only transportation related Priority I pollutant in the Minneapolis-St. Paul Air Quality Control Region.

CO is relatively inert and estimates of its concentrations from motor vehicles are reliable.

Standards

The State air quality implementation plan, administered by the Minnesota Pollution Control Agency, has standards for maximum CO concentrations of 30 parts per million (ppm) for a one hour period and 9 ppm for an eight hour average. Federal standards for CO concentrations, enforced by the U.S. Environmental Protection Agency, are a maximum of 35 ppm for a one hour period and 9 ppm for an eight hour average.

Predicted CO Levels

Predicted levels of pollutants are estimates for worst case traffic and weather conditions. Under these conditions, the following forecasts are for two representative locations along the Proposed Action corridor and for one location along TH 13.

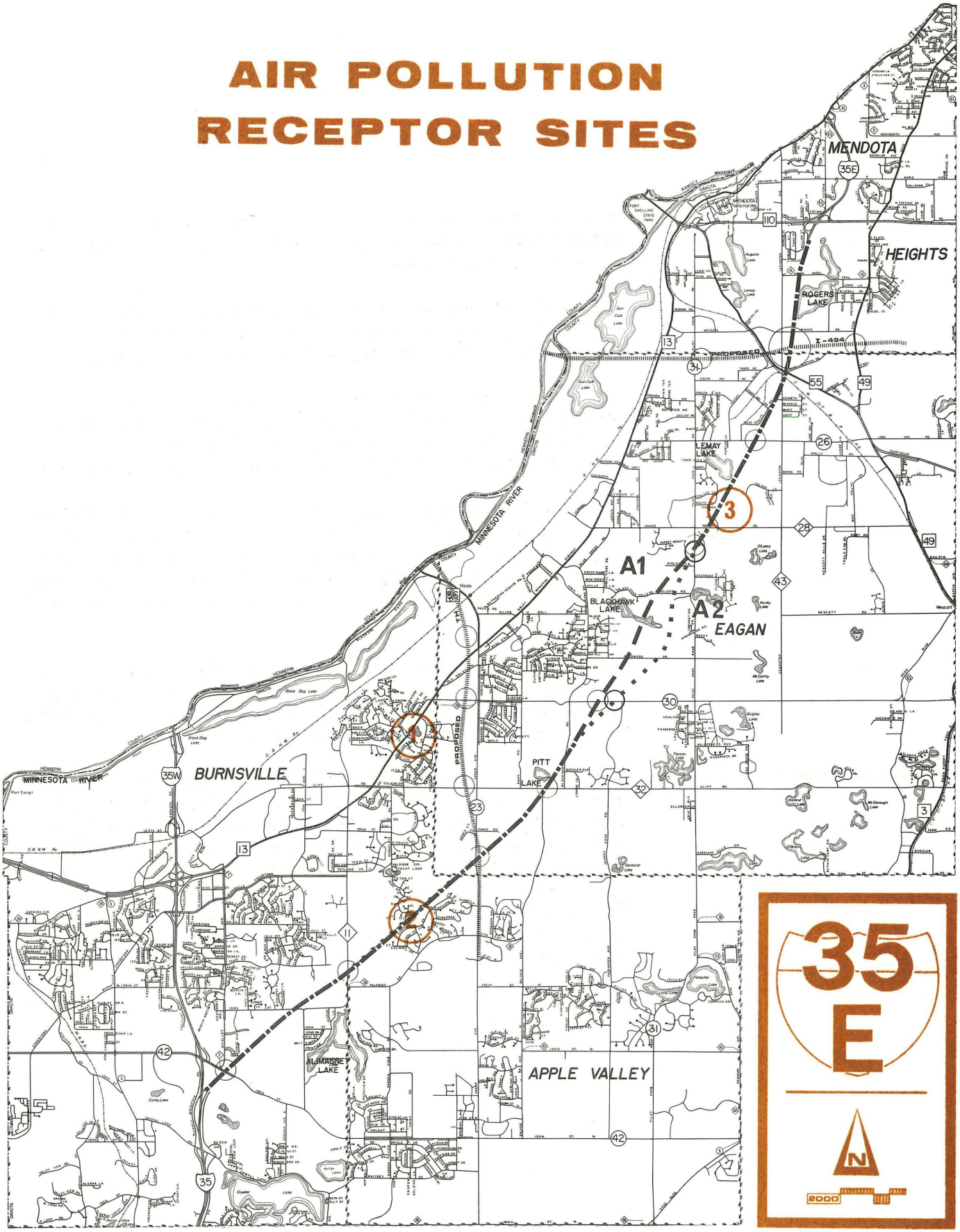
TABLE 8

CO CONCENTRATIONS[1] (ppm) FOR PEAK HOUR AND HIGH 8 HOUR AVERAGES

RECEPTOR	ALTERNATE	1975		1980		1983[2]		1990		2000		STANDARDS STATE		STANDARDS FEDERAL	
		8hr	1hr	8hr	1hr	8hr	1hr	8hr	1hr	8hr	1hr	8hr	1hr	8hr	1hr
1	PROPOSED ACTION	–	–	–	–	–	–	–	–	0.5	1.5	9.0	30.0	9.0	35.0
	NO BUILD	2.7	7.5	1.0	2.9	–	–	1.2	2.9	0.5	2.9	9.0	30.0	9.0	35.0
2	PROPOSED ACTION	–	–	–	–	0.9	2.2	0.6	1.4	0.6	1.5	9.0	30.0	9.0	35.0
	NO BUILD	–	–	–	–	0.7	1.7	0.4	1.0	0.4	1.0	9.0	30.0	9.0	35.0
3	PROPOSED ACTION	–	–	–	–	1.3	4.1	0.9	2.6	1.1	3.6	9.0	30.0	9.0	35.0
	NO BUILD	–	–	–	–	0.7	1.7	0.4	1.0	0.4	1.0	9.0	30.0	9.0	35.0

[1] Concentrations = Ambient + Traffic Generated.
[2] 1983 = 1 Year After Estimated Opening Of Proposal.

AIR POLLUTION RECEPTOR SITES



Because of the insignificant values obtained for the years shown in the table, no interim years concentrations were forecasted.

The analysis demonstrates that the maximum CO concentrations at the receptor sites will be within the Minnesota and Federal ambient air quality standards.

The air quality study also forecasts that the 1985 vehicle pollutants in the St. Paul Central Business District (CBD) would be below the 1975 levels and would be significantly below the prescribed standards.

The Proposed Action would be a minimum of eight miles from the St. Paul CBD. Traffic forecasts show that only 7 percent of the vehicles on the Proposed Action, south of proposed I-494, would go to the St. Paul CBD. Traffic to the Minneapolis CBD would be approximately 3 percent.

Based on the findings of the air quality study, it is the opinion of the FHWA and the State Highway Department that the Proposed Action would be consistent with the State Implementation Plan for air quality.

Air Quality Report

The State Highway Department's "I-35E Air Quality Report" documents the air quality study. The Department sent the report to the Minnesota Pollution Control Agency (MPCA) and the U.S. Environmental Protection Agency for review and comment. Responses from both agencies concurred in the basic conclusions of the Air Quality Report. The MPCA agreed that the action would be consistent with the State Implementation Plan.

The Proposed Action would conform to FHWA design noise level standards as outlined in Federal-Aid Highway Policy Manual (FHPM) 7-7-3. Table 9 shows FHWA design noise levels for various land uses.

FHWA Design Noise Levels

TABLE 9

F.H.W.A.

DESIGN NOISE LEVEL/LAND USE RELATIONSHIPS

Land Use Category	Design Noise Level - L_{10} [1]	Description of Land Use Category
A	60 dBA[2,3] (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 officials for activities requiring special qualities of serenity and quiet.
B	70 dBA (Exterior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, picnic areas, recreation areas, playgrounds, active sports areas, and parks.
C	75 dBA (Exterior)	Developed lands, properties or activities not included in Categories A and B above.
D	---	For requirements on undeveloped lands see paragraphs 5A(5) and (6), this PPM.
E	55 dBA (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals and auditoriums.

SOURCE: Federal Aid Highway Program Manual 7-7-3

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[1] L_{10} - indicates the rate of occurrence of a given noise level. An L_{10} indicates that the given level is exceeded 10 percent of the time.

[2] dB - decibel, a measurement of sound pressure waves on the logarithmic scale. An increase of 10 dB doubles the perceived loudness.

[3] A - A scale, the scale on sound measuring meters that is weighted to duplicate the sounds heard by the human ear.

The table below summarizes the state noise standards as administered by the Minnesota Pollution Control Agency. The design of the Proposed Action would include all reasonable efforts to comply with the state standards, considering technical feasibility and cost of compliance.

TABLE 10

State Noise Regulations

STATE NOISE REGULATIONS

The Minnesota Pollution Control Agency (M.P.C.A.), as of November 27, 1974, has approved noise levels standards to control noise pollution. Noise levels were established for three classifications of land use: residential, commercial, and industrial. The residential (similar to Federal Category B), has a lower noise level for night hours (10:00 PM to 7:00 AM). The noise level goals are: Residential $L_{10}65$ dBA (Night $L_{10}55$ dBA), commercial $L_{10}70$ dBA and industrial $L_{10}80$ dBA.

Noise Study

The State Highway Department used field measurements to determine existing noise levels and used the National Cooperative Highway Research Program 117-144 method with year 2000 estimated traffic volumes to predict the future noise levels. These noise levels were for the noisiest hour of the day, the 4-5:00 p.m. peak traffic hour.

Impacts

Table 11 summarizes the existing and predicted noise levels for developed land uses along the Proposed Action corridor.

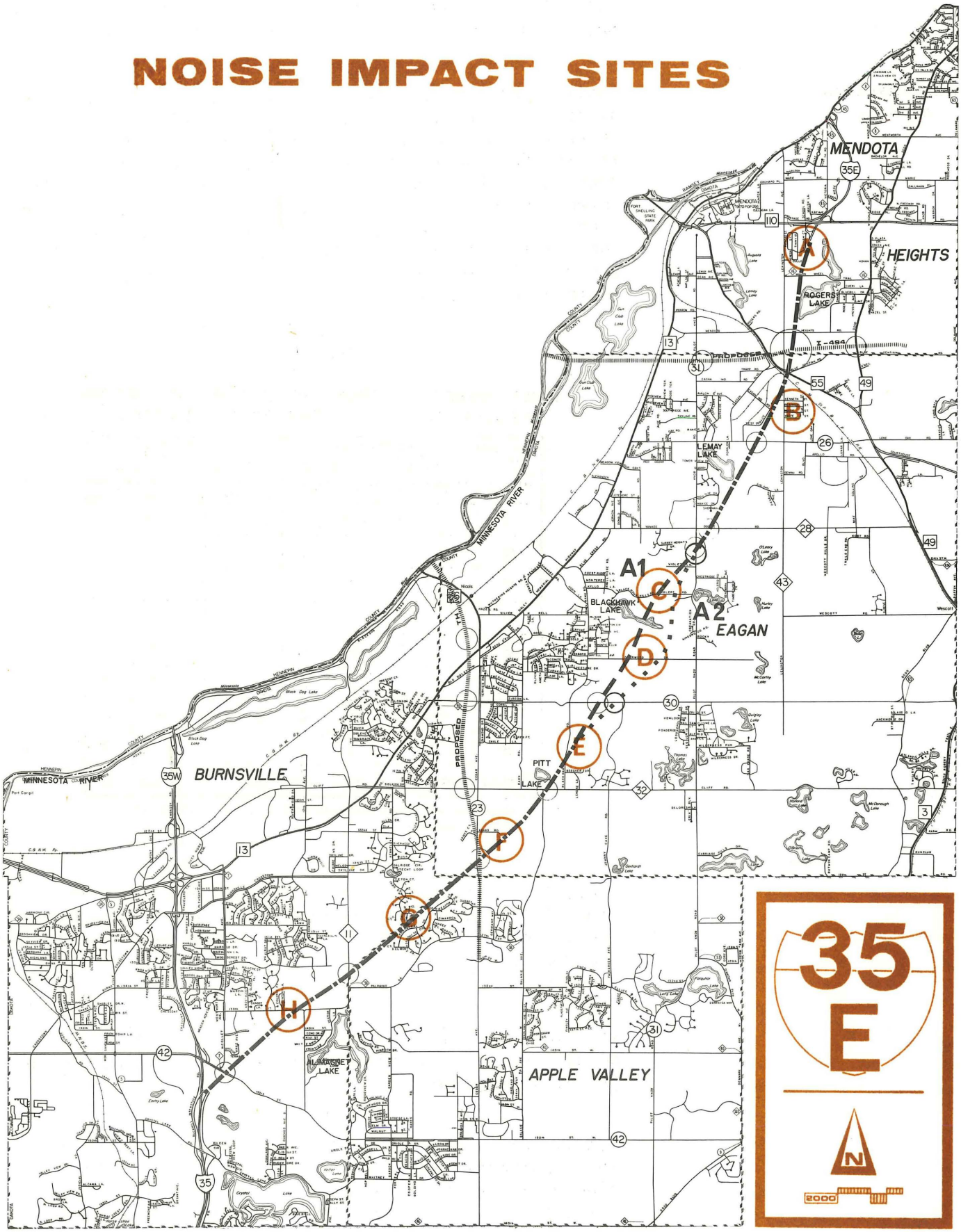
SUMMARY OF NOISE ANALYSIS

TABLE 11

ANALYSIS SITE SEE MAP	DESCRIPTION	CHARACTER OF LAND USE	F.H.W.A. LAND USE CATEGORY	EXISTING NOISE LEVEL (L_{10} – dBA)	APPLICABLE STANDARD F.H.W.A.	APPLICABLE STANDARD STATE	PREDICTED NOISE LEVEL (YEAR 2000)	NOISE TREATMENT FEASIBLE	NOISE LEVEL AFTER TREATMENT
A	Valley View Heights I-35E at TH 110	RESIDENTIAL	B	53	70	65	76	YES	≥65
B	East of Lexington Avenue Between TH 55 and C.S.A.H. 26	RESIDENTIAL	B	53	70	65	77	YES	≥65
C	C.S.A.H. 31 (Pilot Knob Rd.) to Blackhawk Lake	RESIDENTIAL	B	60	70	65	76	NO	NA
D	Blackhawk Lake to Deerwood Drive	RESIDENTIAL	B	55	70	65	76	NO	NA
E	C.S.A.H. 30 to Blackhawk Road	RESIDENTIAL	B	68	70	65	75	NO	NA
F	Kings Road at C.S.A.H 23 (Cedar Ave)	RESIDENTIAL	B	—	70	65	74	NO	NA
G	Palomino Hills and Ville du Parc	RESIDENTIAL	B	55	70	65	74	YES	≥65
H	Heather Hills and 138th Street	RESIDENTIAL	B	50	70	65	73	NO	NA

EXHIBIT 20

NOISE IMPACT SITES



All existing developed land uses that are within impact distance of the Proposed Action are residential.

Alternatives A1 & A2

Table 12 breaks down the noise impact by alternate and by total number of residential units impacted. Of the 58 residences impacted by future noise levels exceeding the FHWA design noise level of 70 dBA, noise abatement can reasonably protect 51 of them. The remaining seven residences are isolated sites which will require further study to determine the extent of the impact and the feasibility of protection. Exceptions to the FHWA design noise levels may be necessary for these seven isolated residences.

TABLE 12

NOISE IMPACT OF PROPOSED ACTION ON EXISTING RESIDENTIAL UNITS (YEAR 2000 ESTIMATE).

ANALYSIS SITE MAP	ALTERNATE A_1 UNITS WITH NOISE LEVELS EXCEEDING				ALTERNATE A_2 UNITS WITH NOISE LEVELS EXCEEDING			
	L_{10} 70 dBA		L_{10} 65 dBA		L_{10} 70 dBA		L_{10} 65 dBA	
AREA	WITHOUT ABATEMENT	WITH ABATEMENT	WITHOUT ABATEMENT	WITH ABATEMENT	WITHOUT ABATEMENT	WITH ABATEMENT	WITHOUT ABATEMENT	WITH ABATEMENT
A	20	0	49	0	20	0	49	0
B	7	0	33	0	7	0	33	0
C	1	1	7	7	2	2	4	4
D	1	1	1	1	0	0	1	1
E	3	3	8	8	3	3	6	6
F	1	1	3	3	1	1	3	3
G	24	0	64	0	24	0	64	0
H	1	1	3	3	1	1	3	3
Total	58	7	168	22	58	7	163	17

ESTIMATES ARE MADE ASSUMING NO NATURAL BARRIERS EXIST AFTER CONSTRUCTION.

Control of land use to avoid incompatible development along the Proposed Action is a function of local government. Noise abatement of future development adjacent to the Proposed Action would be the responsibility of the developer.

The State Highway Department will provide the future noise forecasts to the municipalities to help plan adjacent development.

Additional right of way was purchased by the State Highway Department along the Proposed Action through Palomino Hills and Ville du Parc (Area G, Exhibit 20) in anticipation of the need for noise abatement.

No-build

The initial noise levels for the No-build Alternative would be the same as those that exist in the Study Area today. Noise levels would rise steadily as traffic volumes increase. The greatest impact from the No-build would be felt along TH 13.

Current noise levels along TH 13 exceed the FHWA design noise levels for land use catagory B. The No-build traffic volume for the year 2000 would result in a 6 dBA increase to the existing levels. This would create a wide noise impact zone, impacting a substantial number of people. Since the current design of TH 13 would not handle all of the projected traffic increase and because construction of noise abatement would eliminate many of the existing impacted sites, the actual impact is difficult to assess.

For a more detailed discussion of noise analysis, see Noise Analysis Report, SP 1982 (I-35E), Minnesota Highway Department, 1976.

Introduction

Individually, the cities of the Study Area offer the following facilities and services: fire protection, police protection, community planning, local street construction and maintenance, and building inspection.

The other community services come from regional, state, and county units of government. The library is the only county facility in the Study Area. The rest of the county facilities are in the county seat, Hastings, in Rosemount, and in Farmington. State and regional facilities such as drug treatment centers are available in Minneapolis and St. Paul.

School districts are independent of the other units of government.

Many of the community facilities such as churches and medical clinics are not governmental, and their areas of influence are not clearly defined.

Administrative and Other Governmental Buildings

Each of the four cities has an administration building (City Hall) and a municipal maintenance building (see exhibit, facing page). The administration buildings house the administration, police, and, in Burnsville and Apple Valley, the fire department.

The administration buildings are not generally in the center of their city, but are on local major thoroughfares. None of the alternatives would have a significant impact on the municipal buildings.

Police and Fire Protection

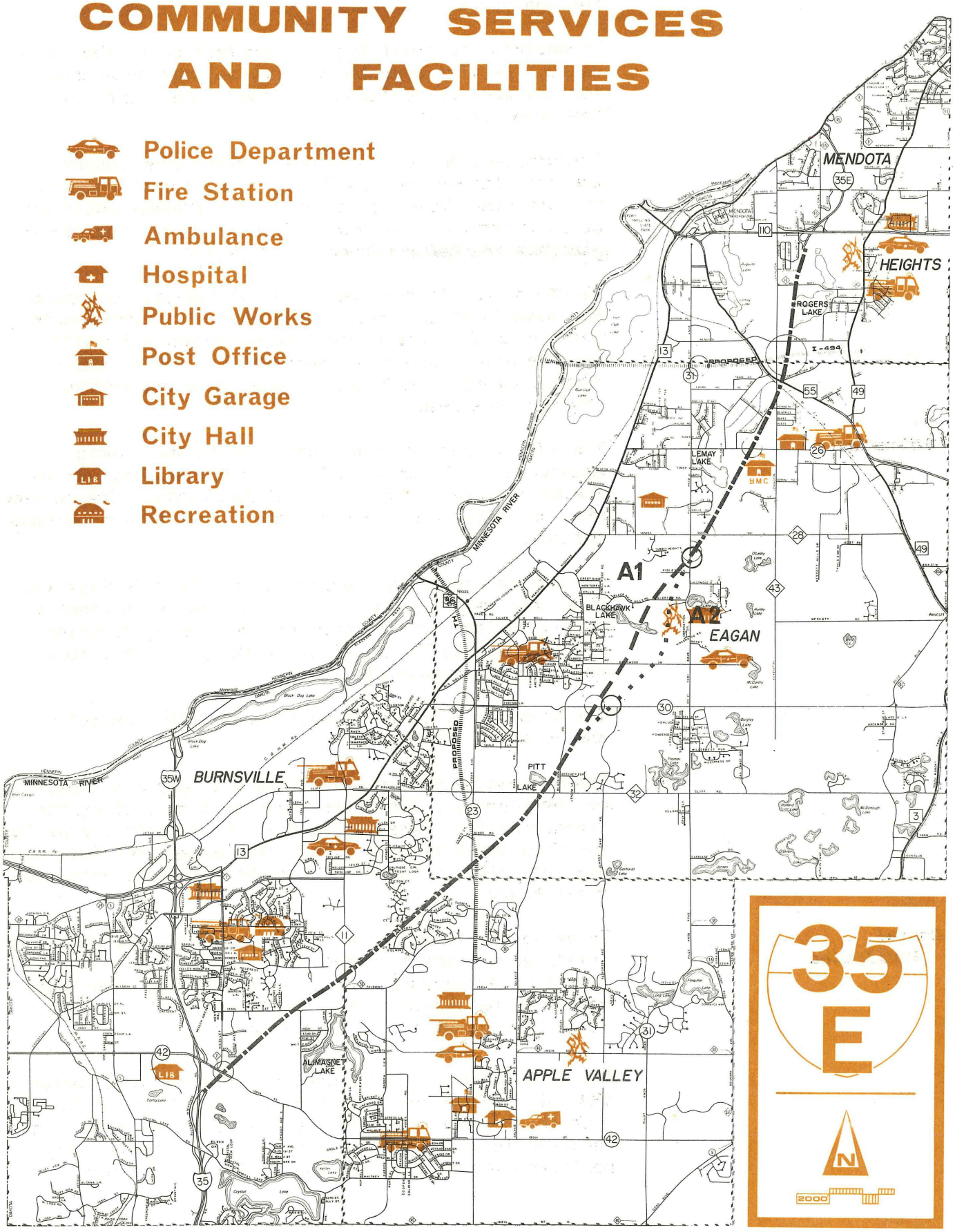
Each of the four cities in the Study Area has its own full-time police department.

Although the police departments are independent of one another, they are related through mutual-aid pacts. They are also supported by the Dakota County Chief's Association, the Dakota County Sheriff's Association, the State Crime Bureau, and the Civil Defense System.

Apple Valley, Eagan, and Mendota Heights have volunteer fire departments. Burnsville's public safety officers are both police and firemen. Burnsville and Apple Valley house their fire departments in their city halls. Eagan and Mendota Heights house them separately.

COMMUNITY SERVICES AND FACILITIES

- Police Department
- Fire Station
- Ambulance
- Hospital
- Public Works
- Post Office
- City Garage
- City Hall
- Library
- Recreation



As with the police departments, the fire departments are related to those of the other local communities through mutual-aid pacts.

In addition to providing fire protection to the residents, the fire departments provide emergency care for any serious accident on either local roads or on the freeways.

The Proposed Action would not isolate any presently developed areas from police or fire protection. As the new areas develop, however, the freeway would act as a constraint that local officials must consider in planning emergency service.

The No-build Alternative would not isolate any areas. But some intersections already become saturated with traffic during rush hours, making access difficult for the police and fire departments. Access would become more difficult as the area develops and as traffic increases.

Libraries

The only library in the Study Area is the Dakota County Main Library on CSAH 42 in Burnsville. It is the main library for all of Dakota County. The county does not expect to build any new libraries in the near future.

Two mobile libraries operate out of the main library. They make regular stops in many of the neighborhoods, mainly in the northern part of the county, to bring the library facilities within walking distance to as many people as possible.

The No-build Alternative would have little impact on the library system.

The Proposed Action would not have a negative impact on the library. One of the reasons for locating the library at this location is that the directors expected the Proposed Action to give better access for the bookmobiles going to Eagan and for the residents going to the library.

Postal Facilities

Three post offices serve the Study Area. The Proposed Action would impact postal delivery only on routes that include severed roads, but the change in mileage would not be significant. The No-build Alternative would have no impact on postal delivery.

The U. S. Postal Service opened a Bulk Mailing Center (BMC) in 1975 in northern Eagan. One of the criteria used in choosing the site was the location of the Proposed Action. It would greatly ease the hauling of mail from the rail center in St. Paul to the BMC.

Shopping Centers

Existing shopping facilities are primarily grouped in small, local shopping centers scattered throughout the Study Area. All shopping requires some driving.

The Study Area contains no open regional shopping centers. Developers, however, are now building a center at the junction of CR 42 and I-35. It will be open in 1977. It will serve an area that extends north to the Minnesota and Mississippi Rivers and south to Albert Lea. The developers expect 250,000 people to support the center. It will thus be a major traffic generator with traffic in excess of 25,000 vehicle trips per day.

One of the requirements of a major center is good traffic access. The Proposed Action would aid the traffic flow to the north and east. The No-build Alternative would have no beneficial impacts, and by restricting traffic, it would have some adverse impacts.

Medical Facilities

The Study Area contains no hospitals, and the residents depend on regional facilities. Hospital care is available in St. Paul, Minneapolis, Shakopee, Farmington, Bloomington, and South St. Paul.

Fairview Community Hospitals is now building a complete medical complex at 138th Street and Nicollet Avenue in Burnsville. (see Area #9, Exhibit 25, page 77). It will have a hospital, a nursing home, ambulance service, and several clinics. Some of these facilities should be open by 1977 or 1978 and the complex should be complete by 1984.[1]

Ambulance services within the Study Area are available from two sources. It is also available from a private service located outside of the Study Area.

The Proposed Action would not have any significant impact on any present medical facilities, but would provide better access to facilities outside of the Study Area.

The future Fairview medical complex will be a regional facility, and will probably generate a significant amount of traffic. The Proposed Action would substantially benefit the medical complex by providing safe and convenient access to the site.

Cemeteries

The Study Area contains 9 cemeteries. The Proposed Action would affect none of them.

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[1] The Ridges, Brauer and Associates, Inc. 1974. p. 28

Schools

The Study Area includes parts of four school districts: Districts #191, #194, #196, and #197.

The Study Area contains 15 elementary schools, three junior high schools, and three senior high schools. Of these, St. Thomas Academy in Mendota Heights is the only private school.

The Proposed Action would not impact the schools. The nearest school to either of the two alternatives is St. Thomas Academy, about 1,000 feet from the Proposed Action corridor. At this distance noise would not be a problem.

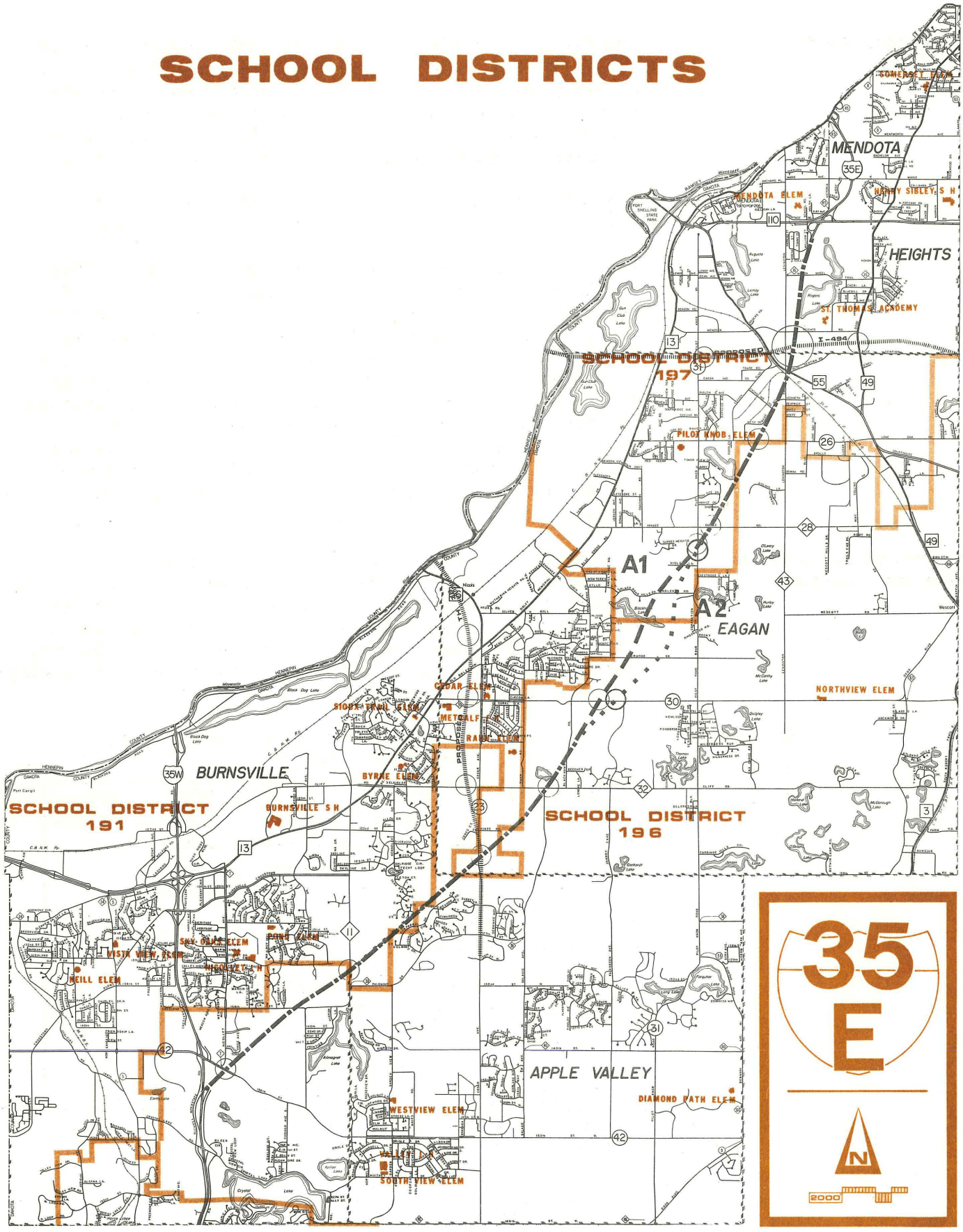
Construction of this project would sever three roads and might require changing the school bus routes, but it would not isolate any presently developed areas. As new areas develop, however, the highway would be a constraint to be considered in bus route planning.

The school districts have already anticipated this problem, and in 1969 the Minnesota Legislature passed permissive legislation that allowed Independent School Districts #191 and #196 to exchange territory and to establish their common boundary along the centerline of the proposed highway action. At that time they could not agree on how to equitably exchange areas of equal student populations and tax-lands, and they dropped the issue.

Since then the Legislature has changed the school funding laws, and the need for the school districts to balance the number of students with an appropriate amount of tax land is no longer critical. Realigning the boundaries along the highway centerline would reduce the probability of isolating new areas as they develop.

The No-build Alternative would have no direct impacts on the schools. As the traffic increases, however, it could cause safety problems. The potential of this problem can be seen by reviewing the build versus the no-build traffic volumes on the local road system (see pages 11 and 12).

SCHOOL DISTRICTS



Historical Society Review

The Minnesota Historical Society (MHS), under an agreement with the State Highway Department and the Federal Highway Administration, conducts archeological Reconnaissance surveys of the proposed highway projects. The MHS reviews a proposed project's potential impact on sites of archeological, or cultural significance.

The MHS also surveys a project's potential impact to sites of historical and architectural significance.

The MHS surveyed the Proposed Action corridor in 1974. The Exhibit on the facing page shows the location of the known sites of significance within and adjacent to the Study Area, identified by the Historical Society. The State Historical Preservation Officer and the Federal Highway Administration conclude that the Proposed Action will have no effect upon any properties possessing historical, architectural, archeological, or cultural value which are included in or are eligible for inclusion in the National Register of Historic Places. See Appendix A for letter from the State Historic Preservation Officer.

Unrecorded Discoveries During Construction

If construction operations uncover any unrecorded archeological remains, the State Highway Department construction specifications require that the contractor restrict or suspend operations in the immediate are of the discovery until the State Historical Society can study the discovery, determine its value, and develop a method of preserving it.

TABLE 13

CULTURAL SITES IN BURNSVILLE, EAGAN, APPLE VALLEY, AND MENDOTA HEIGHTS

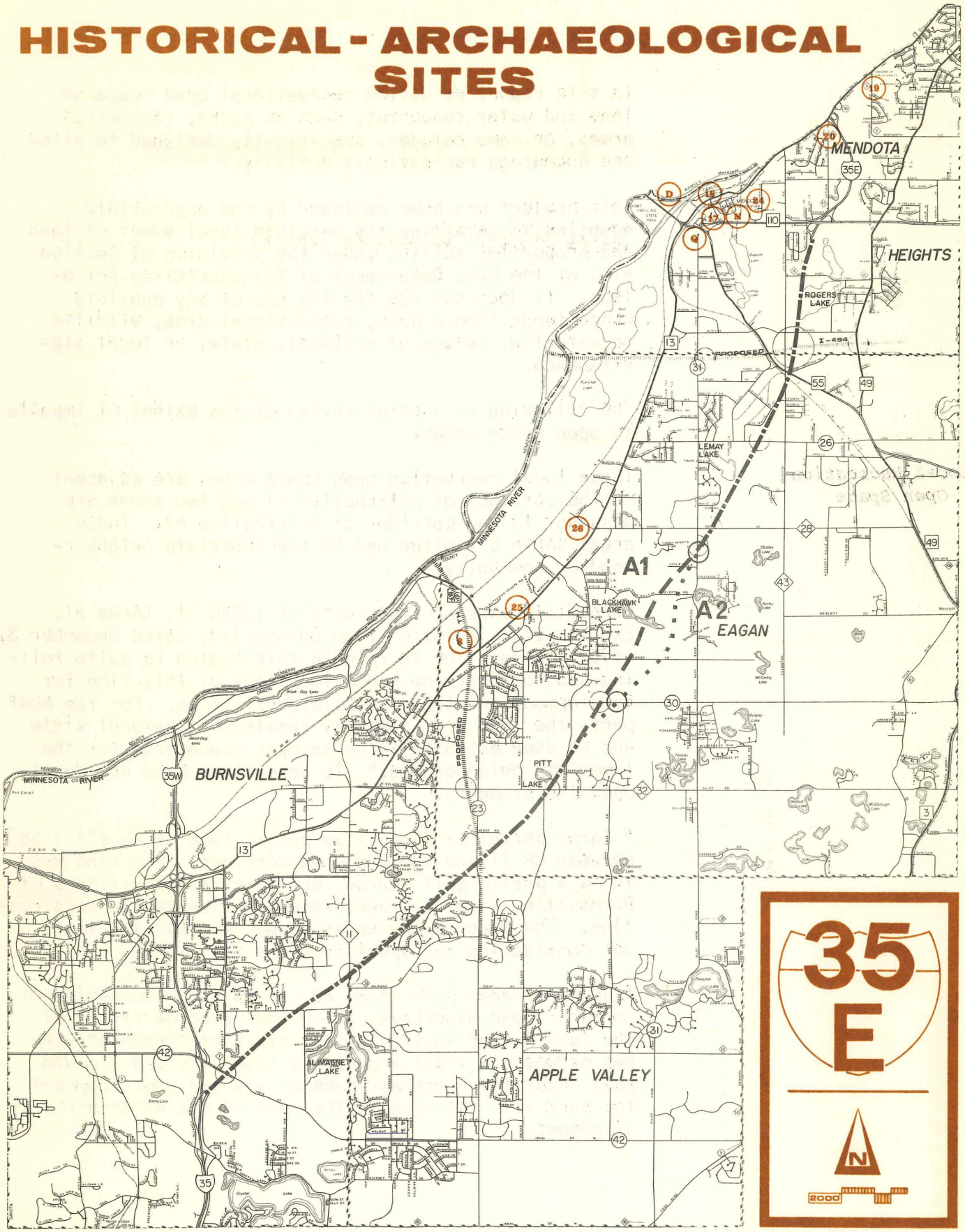
MAP SYMBOL	SITE NO. OR NAME	LOCATION	SITE TYPE	CONDITION	STATUS
8	DK-8	NW¼, Sec. 19, T27N, R23W	Burial Mounds	Disturbed	Under Consid., SP. 1925
17	DK-17	W½, NW¼, Sec. 27, T28N, R23W	Burial Mounds	Disturbed	I
18	DK-18	W¼, NW¼, Sec. 27, T28N, R23W	Burial Mounds	Disturbed	U
19	DK-19	SW¼, SW¼, Sec. 13 & SE¼, SE¼, Sec. 14, T28N, R23W	Burial Mounds	Disturbed	I
20	DK-20	SE¼, NW¼, Sec. 23, T28N, R23W	Burial Mounds	Disturbed	U
24	DK-24	Sec. 27, T28N, R23W	Historic Army Cantonment	Excellent	P*
25	DK-25	SE¼, Sec. 18, T27N, R23W	Historic Aboriginal Burials	Disturbed	U
26	DK-26	SE¼, SW¼, Sec. 8 & NE¼, NW¼, Sec. 17, T27N, R23W	Historic Aboriginal Burials	Disturbed	U
D	Old Fort Snelling Historic District	Jct. Minn. & Miss. Rivers	Military	Restored	P*
Q	Pilot Knob	Sec. 28, T28N, R23W	Historic Landmark	Excellent	?
N	Old Mendota Historic District, Mendota		Historic	Excellent	P*

NO SITES RECORDED IN BURNSVILLE OR APPLE VALLEY

SITE STATUS DESIGNATIONS:

U—Unknown, Investigation Required To Determine Status.
P—Preservation, Unique And/Or Significant Site—Should Not Be Disturbed.
S—Salvageable, Significant But May Be "Mitigated" Through Salvage, Excavation Or Moving.
I—Insignificant, Site Thin Or Disturbed Requiring No Further Consideration.
*—National Registrar.

HISTORICAL - ARCHAEOLOGICAL SITES



In this report we define recreational open space as land and water resources, such as parks, recreation areas, or game refuges, specifically designed to allow and encourage recreational activity.

This project has been reviewed by the appropriate agencies to determine the possible involvement of land and properties falling under the provision of Section 4(f) of the U.S. Department of Transportation Act of 1966. It does not require the use of any publicly owned lands from a park, recreational area, wildlife or waterfowl refuge of national, state, or local significance.

The following is a brief review of the extent of impacts to open space areas.

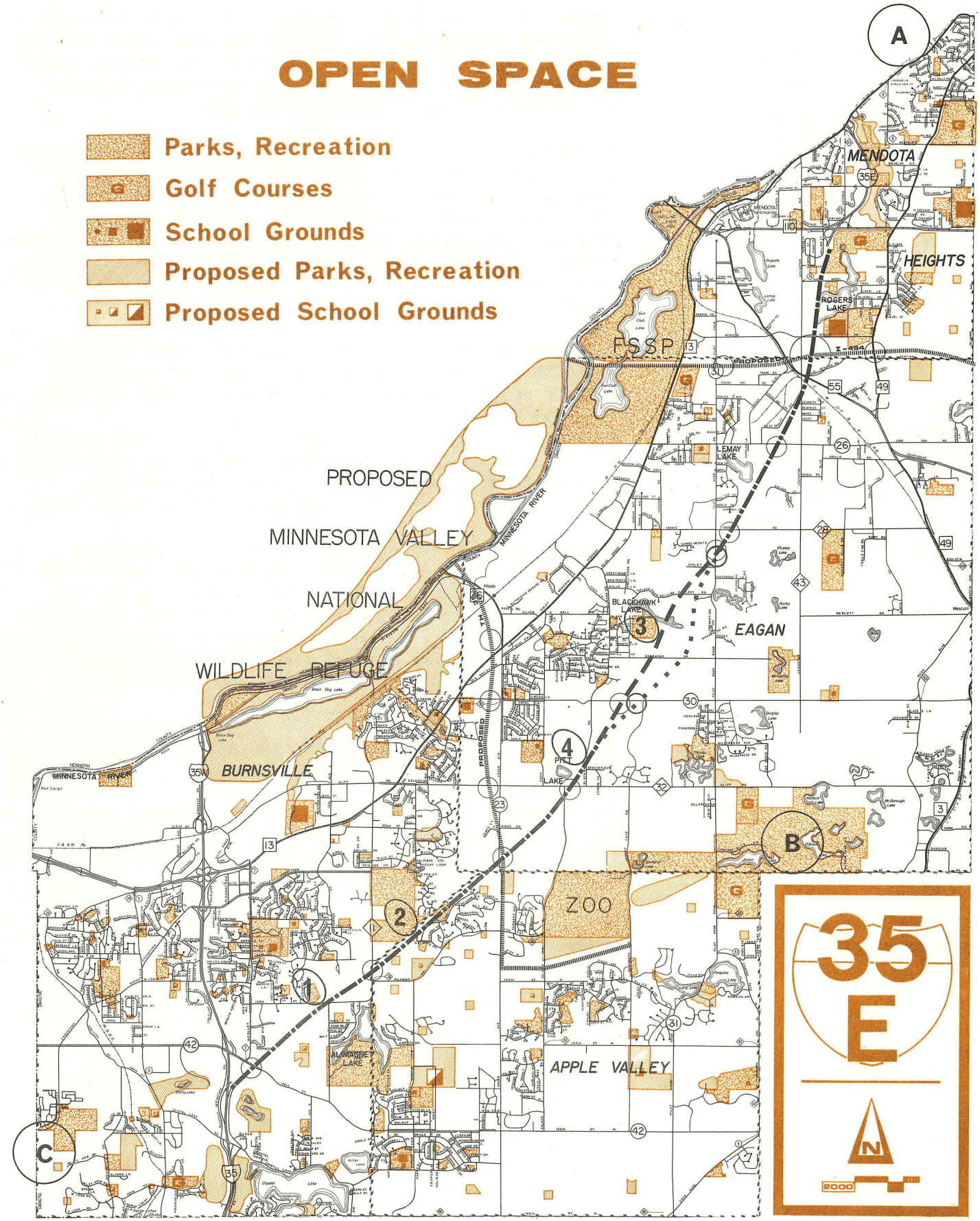
Local Recreation Open Space

Three local recreation open space areas are adjacent to the corridor of Alternative A1 and two areas are adjacent to the corridor of Alternative A2. These areas serve a limited use to the immediate neighborhood or community.

Burnsville owns an area north of 138th St. (Area #1, Exhibit 24). A letter from Burnsville, dated December 3, 1970, states, "The terrain in this region is quite rolling and there are no specified plans at this time for development for organized play activities. For the most part, the land will probably remain in a natural state and be used essentially as an open space area for the immediate neighborhood." To date, they have not developed the property.

A large parcel of Burnsville public land (Area #2) lies between CR 11 and the proposed corridor. The land was to be a public golf course, but in 1974 the citizens of Burnsville defeated a bond issue to finance the construction. The land is now undeveloped, and Burnsville is not considering any specific plans for it.

A 40 acre Eagan park (Area #3) abuts the Alternative A1 corridor near Blackhawk Lake. The owner-developer of the land on the south and east sides of Blackhawk Lake has proposed a trail around the lake. The trail would pass under the Blackhawk Lake bridge and would connect the park with the area to the east of the Alternative A1 alignment.



LEGISLATIVE REFERENCE LIBRARY
STATE OF MINNESOTA

Eagan anticipates that the park will have picnic facilities and nature trails. The active uses would be near the northwest corner of the park and the highway would not significantly impact them. Alternative A2 would not have any direct impacts on the park.

A proposed trail (Area #4) would intersect the Proposed Action near Blackhawk Road. The trail would follow a powerline easement through Eagan and into Burnsville. The State Highway Department is cooperating with the City of Eagan to coordinate the design of the two facilities. Eagan does not currently have any jurisdiction over the trail but proposes to acquire the property at a future date.

The remainder of the local recreation areas are scattered throughout the Study Area. None of the alternatives would have any direct impacts on any of them.

Regional Recreation Open Space

In the Twin Cities Metropolitan Area, regional recreation open space is any area that the Metropolitan Council has determined to be of regional significance. Three such areas are in or adjacent to the Study Area.

Ramsey County is developing the Lillydale Regional Park (Area A) between Mendota Heights and the Mississippi River. Lebanon Hills Park (Area B) is on the southern border of Eagan and connects to the Minnesota Zoological Garden. Murphy-Hanrahan Park (Area C) is along the southwest edge of the Study Area, but the majority of its land is in Savage and Credit River.

The Lillydale Park is about 300 acres. Lebanon Hills and Murphy-Hanrahan Parks are considerably larger at 2,200 and 2,700 acres, respectively.

The Proposed Action would not directly impact any of the three regional parks and would not generate a significant increase in their use. Improved access, however, would aid some open space users.

State Recreational Open Space

Two open space areas of State significance are in the Study Area. The Fort Snelling State Park (FSSP, Exhibit 24) is in the Minnesota River bottoms along the northern edge of the Study Area. The Minnesota Zoological Gardens (Zoo, Exhibit 24) is near the center of the Study Area, in northern Apple Valley.

The portion of the Fort Snelling State Park in the Study Area is relatively undeveloped. The Proposed Action would not impact this open space area. The No-build Alternative would have a minor negative impact of increased highway related pollutants caused by a higher volume of traffic on TH 13.

Minnesota Zoological Gardens

The Minnesota Zoological Gardens will be one of the major open space and cultural attractions in the Study Area. The Minnesota Zoological Board estimates that this 480 acre zoo will attract 1.3 million visitors per year after it opens in 1977. They expect that by the year 2000 it will attract 2.2 million visitors per year.

The zoo will be a major traffic generator. On summer peak days, it could generate as much as 8,000 to 9,000 vehicles per day. It will generate very little traffic in the colder months.

The Zoo Board believes that most of the traffic will originate from, or at least funnel through, the Twin City Metropolitan Area, and that the traffic will use the major freeways and highways to get to the zoo. They believe that 90 per cent of all zoo traffic will approach the site by way of I-35W, I-35E, and TH 36 (Cedar Avenue) when they are all complete.

The Proposed Action, then, would have a positive impact on the zoo. "One of the primary reasons for selecting this site was the fact that I-35E would be accessible as a major traffic mover, both to and from the zoo site."[1] Since the closest part of the zoo is almost a mile from the highway corridor, the Proposed Action would not have any direct negative impact on it.

The No-build Alternative would have a negative impact on the zoo; it would not provide the major access from St. Paul that is needed for such a large traffic generator. It would not significantly affect the traffic from Minneapolis that would use I-35W or TH 36.

National Recreation Open Space

No recreation open spaces of national significance are in the Study Area. The U. S. Department of Interior, Fish and Wildlife Service, however, has proposed a large wildlife area in and adjacent to the Study Area.

The proposed Minnesota Valley National Wildlife Refuge (Exhibit 24) stretches along the river valley from Carver to Eagan. Management responsibilities will be shared by the various political subdivisions along the river, but the majority of the responsibility will belong to the Fish and Wildlife Service, who will manage it as a National Wildlife Refuge. The Fish and Wildlife Service is now preparing an environmental impact statement for the proposed area.

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[1] Letter from Donald D. Bridgewater, Director, Minnesota Zoological Garden, March 6, 1974.

The Proposed Action would not have any direct or indirect impacts to any existing or proposed National Recreational Open Spaces. The No-build Alternative would possibly have a minor impact of increased pollution from increased traffic on TH 13.

Private Recreation Open Spaces

The Proposed Action would impact the Mendakota Country Club which is in the southeast quadrant of the I-35E and TH 110 interchange. Highways border three of its sides. The corridor of the Proposed Action abuts the golf course, but of the three adjacent highway corridors, the I-35E corridor is the farthest away from the areas of active use.

An undeveloped buffer of land lies between the fairways and the corridor. The negative visual impact of the corridors would be minimized with landscaping.

Introduction

This section considers the physical appearance of the Proposed Action and the impacts on the beauty of the Study Area. It will also discuss a landscape concept plan to reduce the impacts and to help blend the Proposed Action into the surrounding natural landscape.

The integration of a highway into the landscape is important to both the driver and the resident. The pleasure of driving and the feeling of safety depends, in part, on how well the highway blends into the landscape. Pleasant views and diverse landscapes are visually more stimulating and appealing to the driver and are, therefore, more desirable. A well planned highway might also minimize the negative attitudes of nearby residents.

The Study Area

The far northern part of the Study Area is a broad and generally undeveloped river valley. The central part is a band of steep hills, ponds, lakes, and woods. The southern part is an area of rolling hills, grasslands, and farms. It is also a growing, urbanizing portion of the Twin City Metropolitan Area, and so, it is quickly becoming an area of residential, commercial, and industrial developments. Large areas that were formerly farms or woods are now interspersed with industrial parks, shopping centers, or housing developments.

View of the Road

Sensitive Human Areas

The view of the road includes the visual impacts of the Proposed Action on the Study Area residents and on the sensitive human areas such as homes and parks.

The principal components of the view of the road include its surface, structures, lights, and the cut and fill areas of the roadway. The viewer's perception of the highway depends on factors such as the setting, the weather, and the distance from the highway. The evaluation of the view of the road depends on the attitudes of the viewer, on his physical point of view, on how well the highway blends with the surrounding topography, and on the purposes of the adjacent sensitive human areas.

The most sensitive areas are residences. Other sensitive human activity areas are hospitals, schools, churches, parks, and public places.

The Proposed Action would impact the view for four existing housing developments, an existing golf course, three planned open space areas, and the Ridges medical complex. The remaining adjacent lands are undeveloped.

Residential Areas

The housing areas would all require noise attenuation (sound barriers) that would also act as sight barriers to existing views.

The highway corridor would pass through open, undeveloped land in the vicinity of Valley View Heights (Area #1, Exhibit 25) and the Lexington Avenue (Area #2) residential areas. The topography at these two locations would place the highway considerably lower than the homes.

Near Valley View Heights, the highway would lie in a natural low area which would allow visual and noise screening without obscuring the view to the opposite hill. Near Lexington Avenue, it would be depressed in a flat area with the resulting noise and visual screening acting as a complete barrier to the view of the opposite side of the highway. As the opposite side land use at this point is industrial, the aesthetic view could result in a positive impact.

Adjacent to the Palomino Hills (Area 3) and Ville du Parc (Area 4) residential areas, the Proposed Action would pass through rolling terrain and would require extensive clearing of vegetation. Because of the rolling topography, the freeway would be alternately elevated and depressed. Total depression is not possible because of drainage restraints along this area.

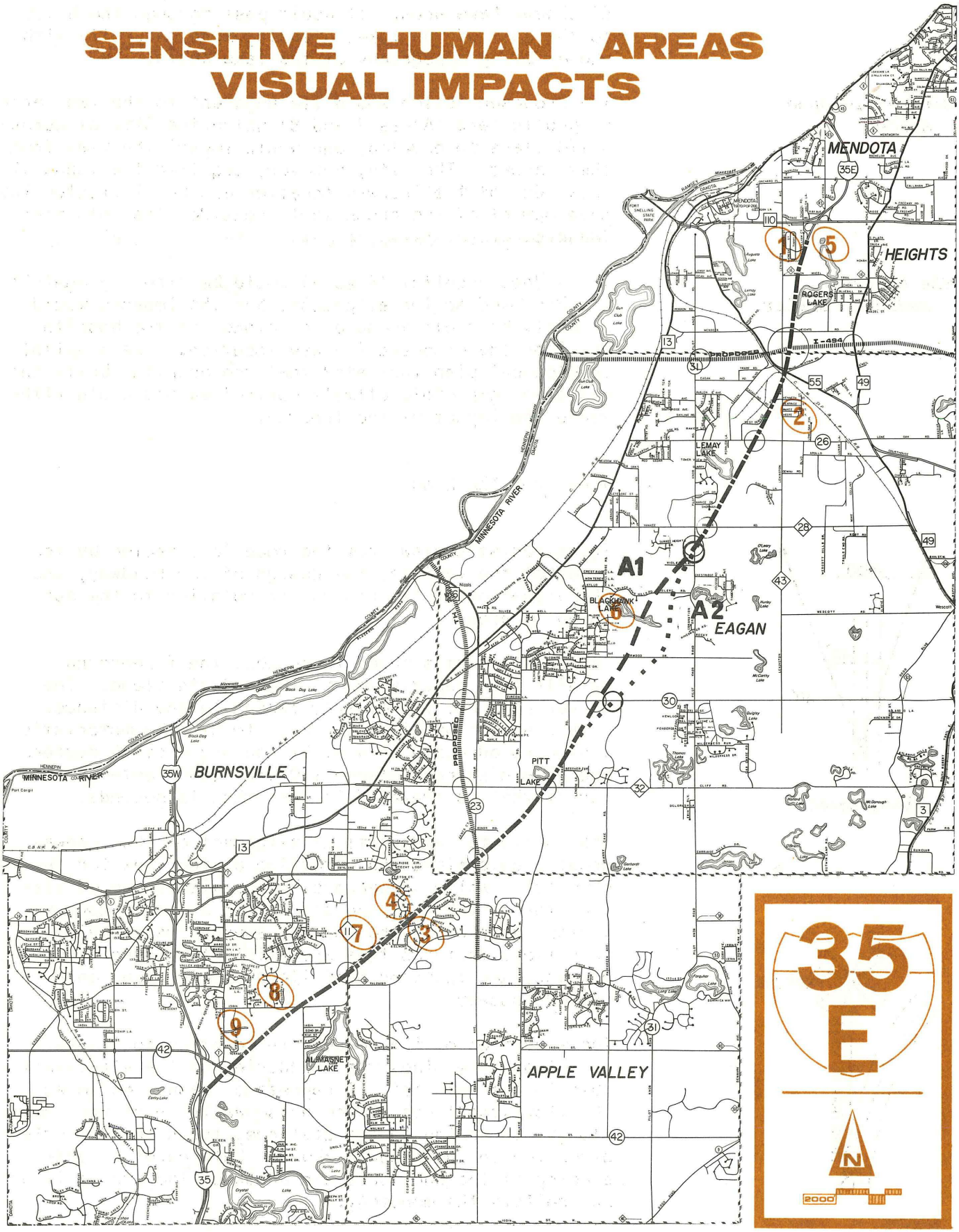
Country Club

The Mendakota Country Club (Area 5) is adjacent to the Proposed Action at the junction with TH 110. The partially constructed alignment south of TH 110 has existed for several years. A vegetative barrier along the golf course edge would minimize the view of the freeway.

Blackhawk Lake

Alternative A1 would bridge Blackhawk Lake (Area 6) near the lake's narrowest point. Because the bridge is elevated over the natural topography as it crosses the lake, users of Eagan's recreation area along the southwestern edge of the lake would be aware of the visual intrusion of the bridge. The bridge would also disrupt the view for the residents who live on the hills surrounding the lake.

SENSITIVE HUMAN AREAS
VISUAL IMPACTS



Alternative A2 would have less visual impact to the Blackhawk Lake area. It would pass through the hills to the east of the lake, blending more naturally with the existing topography of the lake basin.

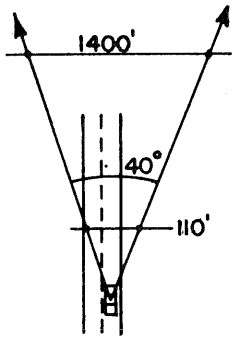
Burnsville Open Space

The Proposed Action would lie adjacent to the two parcels of public land (Areas 7 and 8) which the City of Burnsville plans to develop, and would impact the view from these areas. The city, however, acquired the lands with knowledge of the freeway location and has indicated that development of the areas would consider the potential impacts.

The Ridges Medical Complex

The Ridges hospital (Area 9) would be directly against the Proposed Action alignment, but the impacts would probably be small because the plans for the hospital consider the proposed freeway location. The hospital development plan indicated that the hospital buildings would be completely climate controlled and could withstand the impact of the freeway.

View From The Road

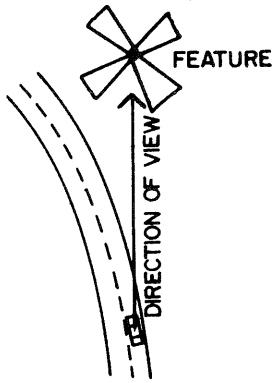


Design Speed

The motorist's view from the road is affected by the speed of the vehicle, the design of the roadway, and the elevation of the roadway in relation to the surrounding area.

As the motorist's speed increases, the foreground details fade rapidly and moving objects blend. The driver does not see clearly except in the distance. At a speed of 60 miles per hour (mph), the motorist's vision is adequate only within an angle of 40 degrees and at a distance between 110 and 1,400 feet--an interval that is traveled in less than 15 seconds.

The horizontal and vertical alignment of the roadway greatly determines the direction of the view for the motorist. While passengers have a wide sweep of vision, the driver must operate within a narrow cone of vision centered on the roadway ahead. He can view only those features that are within that cone. He can, however, see features that lie directly ahead on a curved roadway.



The elevation of the roadway in relation to its surroundings determines the boundaries of the view available to the motorist. A depressed roadway encloses the view; the lines of the noise walls or of the backslopes converging in the distance, focus the driver's attention on the roadway ahead. Only careful landscaping of the enclosure can break up the strong lines and relieve the monotony.

Elevated roadways allow a panoramic view. The foreground objects do not block distant views, and there is no sense of boundary restrictions.

Alternative A1 is depressed as it approaches Blackhawk Lake. The motorist would be aware of the lake only momentarily as he crossed the bridge. Alternative A2 would reveal the lake for a longer period of time and would provide a better view of the lake for the motorist.

The types and variety of features in a view determines its quality. Generally, the motorist will consider natural features such as water or woodlands, or sites of historic or architectural significance, such as churches and schools, as being of a better quality than those of commercial, industrial, or multi-family housing developments, or of gravel pits or billboards.

Generally, the quality of the view increases as the variety increases. The Proposed Action would run through a rugged landscape, and the view from the roadway would change rapidly. The differing colors, textures, and shapes of the Study Area's hills, ponds, woodlands, and farms would provide enough variety for a high quality view.

The natural view from the road will be eventually lost to urbanized development. The degree of change will depend on the amount of consideration given the roadway in the planning of the adjacent land uses.

Actions to Minimize Harm

Landscape Concept

The purposes of landscaping are to minimize the highway impacts and blend the roadway into the natural setting, to reduce the future roadside maintenance and potential safety hazards, and to reduce noise in order to create a more aesthetically pleasing and functional highway.

The following are the principles on which the landscaping plan is based:

1. As much of the existing vegetation as possible would be retained. These existing materials are usually of high quality. They include oak, elm, ash, maple, and evergreen trees.

2. Plant materials would be used individually and in masses to provide interesting and attractive views.

3. Boulevard plantings (large decidious trees such as ash or maple) would be used on freeway right-of-way, next to a frontage road to provide a visual buffer.

4. Mass plantings would be used:

   - to naturalize the slope areas and to break the monotonous view of the noise walls for the residents. For the motorist, plantings should undulate and vary in form to create a visually interesting, and safe, travel corridor.

   - to integrate bridge structures into the slopes by planting near abutments. These plantings would receive a good mulch of wood chips to reduce maintenance, aid plant growth, and improve appearance.

   - to increase the survival rate of plant material, which, when in a mass, tend to be more protected from elements. Most damage occurs on the edges.

5. The species of plant material--ground covers, shrubs, vines, trees, or grasses--would be selected to provide food for wildlife, particularly song birds.

The soils, slopes, sun, moisture, orientation, exposure, and drainage vary at each planting site; therefore, the landscape plan would give special consideration to the selection of plant species at each site to ensure survival.

The landscape plan would also consider the visual qualities of the plants such as texture, size, form, seasonal color changes, and density. It would also consider the plant's tolerance to de-icing salts and other contaminants and to their tolerance to temperature extremes.

Both motorists and nearby residents desire an attractive highway; the motorist expects to have a pleasing view of the road; the resident desires to see a pleasant view to preserve his property value and to maintain his quality of life. Proper plant selection, design, installation, and maintenance would help safeguard these values.

For a further discussion of the impacts to aesthetics, see Aesthetic Evaluation and Landscape Concept, I-35E in Dakota County, Office of Environmental Services, Minnesota Highway Department, 1975.

Introduction

The basic demographic data for the Study Area is from the 1970 U.S. Census Data. The State Highway Department, however, conducted a survey[1] which indicated that more than 60 percent of the Study Area residents did not live in the Study Area in 1970.

The major reason for the number of new residents is the substantial population growth in the Study Area communities. The Study Area grew from 45,005 persons in 1970 to 71,533 persons by 1975, a 59 per cent increase in five years.

Based on an analysis of area housing construction (housing costs reflecting the medium and high income characteristics of the residents coupled with a lack of low income construction), it appears that current population composition should be generally similar to the 1970 Census Data. The 1970 Census Data therefore describes the population characteristics while the State Highway Department survey describes the housing and employment characteristics.

TABLE 14

	Study Area	SMSA
AGE		
Total Persons	45,005	1,813,647
18 years and younger	48.9%	38.1%
19 to 64 years	49.4%	53.2%
65 years and older	1.7%	8.7%
MARITAL STATUS		
Total Persons 14 years and Older	26,858	1,294,298
Married	76.5%	62.2%
Unmarried	23.5%	37.8%

[1] Transportation and Attitude Survey for Interstate 35E in Dakota County, Minnesota, 1976. Minnesota Highway Department

Age

The Study Area population is young; almost half are 18 years or younger; less than 2 per cent are 65 years or older. More than three-fourths older than 14 years are married.

The 1970 census shows that the elderly persons are not concentrated. Thus the Proposed Action would have no impact on elderly persons.

TABLE 15

	Study Area	SMSA
RACE		
Total Persons	45,005	1,813,647
White	99.4%	97.2%
Non-White	0.6%	2.8%
SPANISH LANGUAGE SPEAKING PEOPLE		
Total Persons	45,068	1,813,647
Persons Speaking Spanish	0.4%	0.9%
NATIVITY AND PARENTAGE		
Totals Persons	45,068	1,813,647
Native of Native Parentage	89.9%	92.3%
Native of Foreign or Mixed Parentage	8.6%	3.0%
Foreign Born	1.5%	3.0%

Minorities

The 1970 census does not indicate any concentrations of racial or ethnic minorities. The Study Area population contains a very low percentage of non-white, Spanish speaking, or foreign-born persons. Ninety percent were born of native-born parents.

The impacts on racial or ethnic minorities, then, would be small and isolated.

TABLE 16

SCHOOL ENROLLMENT

	Study Area	SMSA
Total enrolled, 3 to 34 years	15,968	570,078
Nursery	3.2%	2.1%
Kindergarten	8.4%	6.2%
Elementary	62.7%	54.3%
High School	19.8%	23.9%
College	5.9%	13.6%

SCHOOL YEARS COMPLETED

	Study Area	SMSA
Total persons 25 Years and older	20,443	928,219
Less than elementary	2.0%	6.4%
Completed Elementary	14.3%	27.5%
Completed High School	59.7%	51.3%
Completed College	24.0%	14.8%
Median school years completed	13.1%	12.4%

Education

School enrollment is predominantly in elementary school. This correlates to the high percentage of young people in the Study Area. A majority of the population over 25 years has completed high school, and many have completed college. The Study Area has a significantly larger percentage of college educated persons than the total SMSA has.

Special Groups

Because all roads bridging over it would have sidewalks, the Proposed Action would not significantly impact pedestrians or bicyclists either positively or negatively.

The Study Area is now highly dependent on automobiles for transportation. The Proposed Action would not change this dependency and would not, therefore, create any signficant changes in the mobility or lifestyles of nondrivers or those dependent on public transportation. Population density, a factor in the efficiency of public transportation, will probably remain low.

The Proposed Action would not directly impact community services and facilities for the handicapped or illiterate persons. An increase in urbanization, however, would result in an increase in the number and in diversity of services.

TABLE 17

OCCUPATION	Study Area	SMSA
Total All Workers	16,129	759,606
White Collar Workers	67.4%	56.7%
Blue Collar Workers	32.6%	43.3%
INCOME		
Median Family Income	$13,825	$11,682
Median Unrelated Individual Income	$ 5,329	$ 3,461

Occupation

More than two-thirds of the Study Area workers are white collar workers; according to the 1970 census, the category containing the largest percentage of Study Area workers is the professional, technical, and related fields.

Income

The largest percentage of families in the Study Area earned between $10,000 and $14,000 per year in 1970. Seventy-one per cent earned between $10,000 and $24,999. The percentage of families with incomes less than $5,000 per year is very low.

TABLE 18

PLACES OF EMPLOYMENT	
Total Workers	
Anoka County	0.3%
Carver County	0.4%
Dakota County	30.0%
Hennepin County	50.0%
Ramsey County	16.0%
Scott County	2.0%
Washington County	0.5%
Rest of Minnesota	0.7%
Out of State	0.1%

The 1975 survey showed that 70 percent of the workers went outside of the county to work; a breakdown by municipality shows that more than 80 percent went out of the Study Area to work. The Proposed Action would aid those workers who work in the eastern portion of the metropolitan area. The industrial area of Eagan is becoming increasingly important and is drawing more of the workers. The Proposed Action would provide access both from the southern areas and from Ramsey and Washington Counties. Many of the Eagan industrial area workers are local workers from the Study Area.

The No-build Alternative would not directly impact the present access of the workers to the employment areas of the metropolitan area, but as traffic increases, it would not provide the necessary access.

NEIGHBORHOODS

Description

Until the 1950's the Study Area was generally a rural and sparsely populated area. Portions of Mendota Heights and a strip along TH 13 were the only significantly developed parts of the Study Area. Since then the area has grown steadily and rapidly.

Most of the growth has been in defined groups and clusters of homes built by developers. The Study Area neighborhoods generally identify with these groups and clusters.

Impacts

The corridor for the Proposed Action has been a part of the Study Area since 1959. As the section on land use planning shows (page 14), the Study Area communities have prevented development of the corridor, and as the area grew, the neighborhoods developed around it.

The Proposed Action, then, would not impact neighborhood cohesion by isolating or by bisecting any established neighborhoods.

HOUSING

The Study Area now contains over 20,000 residences and is growing so rapidly that the 1970 census tract data is too far out of date to provide a valid analysis of the housing.

The 1975 Transportation Information and Attitude Survey, however, provides a good indication of the type and age of the housing.

TABLE 19

TYPE OF DWELLING	Apple Valley	Burnsville	Eagan	Mendota Heights	Study Area
Single family farm or single family residence	77%	66%	67%	98%	70%
Multiple family residence	5%	14%	19%	2%	12%
Townhouse or Condominium	8%	15%	14%	0	13%
Mobile Home	10%	5%	0	0	5%
LENGTH OF RESIDENCE					
5 years or less	62%	62%	62%	33%	61%
6 to 10 years	29%	25%	17%	24%	24%
11 years or more	9%	13%	21%	43%	15%

The survey indicated that 61 percent of the residents had lived in the Study Area five years or less, 85 per cent have lived in the Study Area 10 years or less. The survey also indicated that 86 per cent own or are buying their homes. The indication, then, is that the Study Area contains a large number of single family homes that are 10 years old or newer.

Impacts

The two alternatives of the Proposed Action would each require purchasing residences as a part of the right-of-way requirements.

TABLE 20

RESIDENCES REQUIRED FOR RIGHT OF WAY BY VALUE	Alternative A1	Alternative A2
Under $25,000	4	6
$25,000 to $50,000	10	12
$50,000 and over	6	7
Total	20	25

Alternative A1 would require 20 residences and Alternative A2 would require 25 residences. A residence is defined as a single-family home, a mobile home, or a farmstead. Neither of the build alternatives would require any multiple-family residences such as apartment buildings or duplexes. The No-build Alternative would not require any homes. Residents from four homes have already been relocated.

TABLE 21

RESIDENCES REQUIRED FOR RIGHT OF WAY

BY MUNICIPALITY

	Alternative A1	Alternative A2
Apple Valley	1	1
Burnsville	0	0
Eagan	16	21
Mendota Heights	3	3
Total	20	25

For a comprehensive discussion of socio-economic impacts, see I-35E Dakota County Social Economic Report, January 1976, Minnesota Highway Department.

Right of Way Requirements

The Proposed Action would require converting approximately 1100 acres of land, currently not used for transportation, to highway right of way. It would also incorporate an additional 100 acres of existing roadway into the freeway design to perpetuate the local street system.

TABLE 22

LAND USES DISPLACED BY THE PROPOSED ACTION

EXISTING LAND USE	ALTERNATE 1		ALTERNATE 2	
	ACRES	BUILDINGS	ACRES	BUILDINGS
INDUSTRIAL	58	0	58	0
COMMERCIAL	3	0	3	0
RESIDENTIAL	78	20	84	25
TAX EXEMPT	31	0	31	0
PUBLIC ROADS	100	0	105	0
UNDEVELOPED	909	0	913	0

Existing Land Use Impacts

Table 22 catagorizes the land uses impacted.

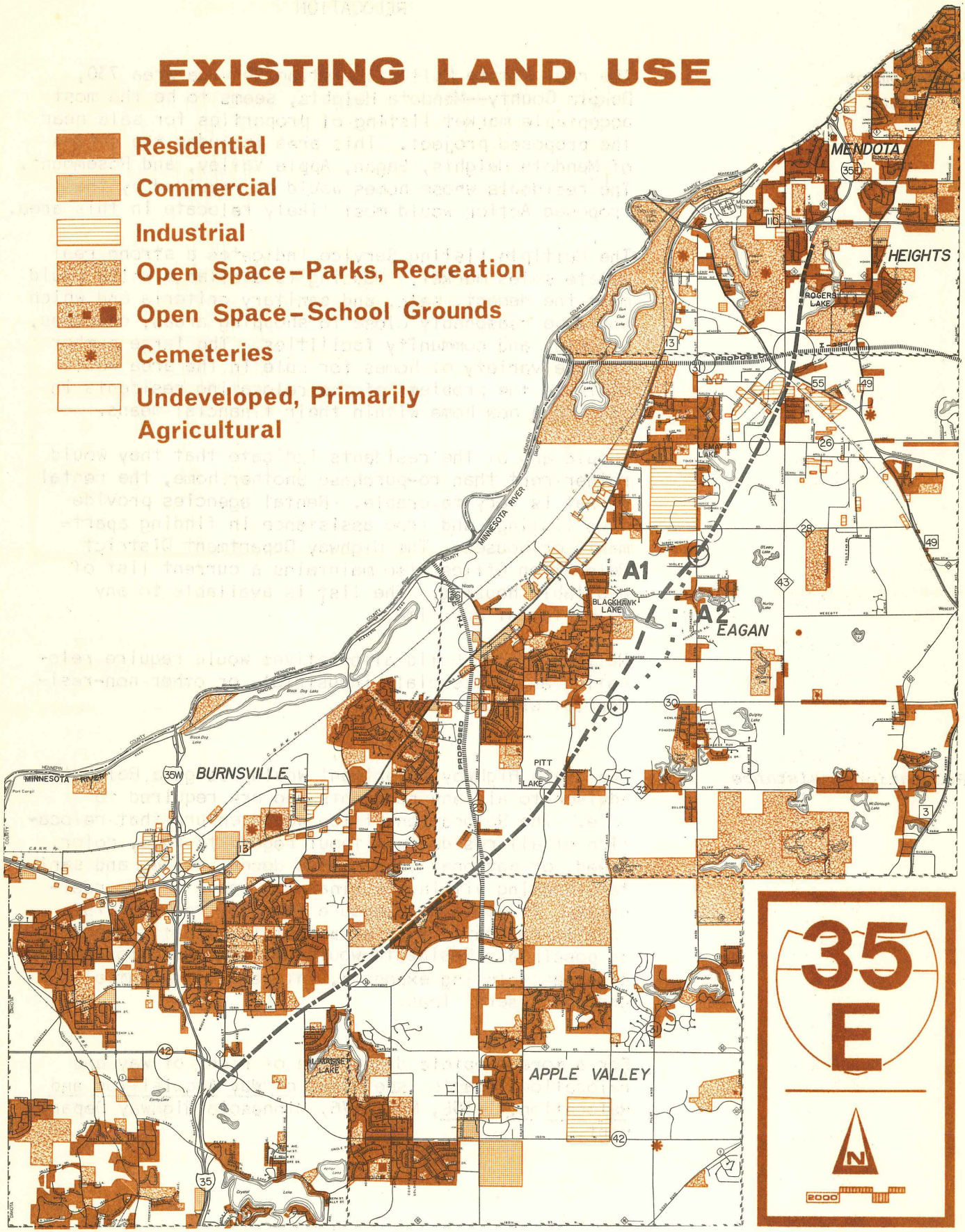
The amount of undeveloped land is high because the Study Area communities have not allowed development to occur in most of the corridor. An exception to the municipal control is the residential development along Alternative A2. The Alternative A2 design is a recent modification of the Proposed Action which have not had the protection of long term development restraints.

The differences between the impacts of land displacement by the Alternate designs occurs only to residential property.

The commercial and industrial land displaced is vacant land contiguous to active industrial land uses. No commercial or industrial buildings or facilities would be displaced.

Approximately 37 percent of the total right of way for the Proposed Action has been acquired at a cost of $2,500,000. Almost all of the right of way has been acquired between I-35 and CSAH 23 (Cedar Ave.-future TH 36). On the north end of the Proposed Action most of the right of way between CSAH 26 and TH 110 has been acquired.

The total right of way acquisition would affect 132 to 134 separate properties.


EXISTING LAND USE
Residential
Commercial
Industrial
Open Space-Parks, Recreation
Open Space-School Grounds
Cemeteries
Undeveloped, Primarily Agricultural
MENDOTA
HEIGHTS
ROGERS LAKE
MINNESOTA RIVER
A1
A2
BLACKHAWK LAKE
EAGAN
PROPOSED T.H.
PITT LAKE
BURNSVILLE
MINNESOTA RIVER
APPLE VALLEY
35E
N
2000

Replacement Housing

The real estate Multiple Listing Service area 730, Dakota County--Mendota Heights, seems to be the most acceptable market listing of properties for sale near the proposed project. This area includes the cities of Mendota Heights, Eagan, Apple Valley, and Rosemount. The residents whose homes would be required by the Proposed Action would most likely relocate in this area.

The Multiple Listing Service indicates a strong real estate sales market. Housing is available which would meet the decent, safe, and sanitary criteria and which would be reasonably close to shopping areas, churches, schools, and community facilities. The large number and the variety of homes for sale in the area would minimize the problems of the relocating residents in finding a new home within their financial means.

Should any of the residents indicate that they would rather rent than re-purchase another home, the rental market is very favorable. Rental agencies provide free listings and free assistance in finding apartments or houses. The Highway Department District Relocation Office also maintains a current list of available housing. The list is available to any relocatee at any time.

Neither of the build alternatives would require relocating any commercial, industrial, or other non-residential establistments.

Relocation Assistance

The State Highway Department would assign a Relocation Advisor to aid any residents who are required to move. The Relocation Office would ensure that relocation of all residents without regard to race, color, creed, or national origin into decent, safe, and sanitary housing within the financial means of the residents. It would also ensure that the resident is able to relocate in an area that is as satisfactory as possible. Residents would be reimbursed for moving expenses, closing expenses, interest differential, and appraisers' fees.

For a more complete discussion of right of way and relocation impacts, see Right of Way Acquisition and Relocation, I-35E, May 1976, Minnesota Highway Department.

Tax Structure

The Proposed Action would impact the tax base of the municipalities and the school districts by removing approximately 1070 acres of taxable land for right of way.

Table 22 compares the total assessed valuation of each municipality and school district to the assessed valuation of the required right of way. The assessed valuation is a percentage (varying with the tax district) of the assessor's market estimate of the property.

TABLE 23

RIGHT OF WAY IMPACT ON ASSESSED VALUATION

TAX DISTRICT	TOTAL ASSESSED VALUATION	ASSESSED VALUATION OF NEEDED R/W		% OF TOTAL ASSESSED VALUATION	
		ALTERNATE 1	ALTERNATE 2	ALTERNATE 1	ALTERNATE 2
MENDOTA HEIGHTS	29,299,414	199,000	199,000	0.7	0.7
EAGAN	64,093,077	663,000	698,000	1.0	1.1
APPLE VALLEY	36,375,755	44,000	45,000	0.1	0.1
BURNSVILLE	124,611,963	224,000	224,000	0.2	0 2
SCHOOL DISTRICT 191	134,269,815	508,000	508,000	0.3	0.3
SCHOOL DISTRICT 196	89,984,079	464,000	496,000	0.5	0.6
SCHOOL DISTRICT 197	115,566,006	578,000	577,000	0.5	0.5

The impacts to the tax districts (municipalities or school districts) varies greatly. Eagan would receive the most impact; the Proposed Action would require approximately 1 percent of Eagan's property tax base. It would also impact the tax base of Dakota County, the watershed district, the Metropolitan Transit Commission, the Metropolitan Mosquito Control District, and the Metropolitan Council. They all receive funds based on property taxes. Their tax bases are so large, however, that the impact would probably be insignificant.

Impacts to Business

Study Area

Many of the businesses in the Study Area are on TH 13. Directing traffic off TH 13 and onto the Proposed Action would remove much of the traffic that now passes by these businesses. This would not, however, necessarily cause a negative impact. Research into the effects of bypassing communities and businesses indicates that bypassing itself does not necessarily have a negative impact. Bypassing usually enhances the economic environment by removing through-traffic and by reducing congestion.

The No-build alternative, however, would probably have a negative impact on Study Area businesses. A survey of Study Area businessmen indicated that for about half of them, delays in building the Proposed Action had slowed growth and increased costs.[1]

Regional

The Proposed Action would be a link in the network of highways around the seven county Twin City Metropolitan Area and would be a part of the network that connects the metropolitan area to other cities in the Upper Midwest. As such, it would have impacts beyond its termini.

A survey indicated that less than a third of the Study Area businessmen limit their market area to Dakota County. The rest said their market area includes all of the metropolitan area, the Upper midwest, or national-international areas.

The Proposed Action would also provide access for other areas such as the St. Paul Central Business District and the South St. Paul industrial area.

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[1] I-35E Dakota County Social-Economic Report, January 1976 Minnesota Highway Department

Induced Growth

The Proposed Action would induce impacts beyond the immediate corridor. Completion of the Proposed Action would provide safer and faster access to a considerable amount of undeveloped land in and around the Study Area. Better access is an important factor in the urban growth cycle. This stimulation of growth could change existing patterns of social and economic activity and could impact the natural and aesthetic resources of the area. Not building the Proposed Action would not eliminate the eventual impacts of development, but it would probably significantly delay them.

Development would likely occur first near the interchange areas and would eventually reach throughout the Study Area. Induced growth beyond the Study Area would probably extend into Lakeville, along I-35 and Cedar Avenue, and west into Savage along TH 13 and CSAH 42.

The impacts from induced growth would generally be the same as the direct impacts that construction of the Proposed Action, itself, would cause. Wildlife would suffer through the loss of habitat. Water resources would be depleted by urban site development and water resources could be degraded by additional residential, commercial, and industrial pollutants and waste waters. Aesthetic and natural terrain features would be altered and natural vegetation reduced.

If unchecked, urban development could strain existing urban services before adequate new services are offered. The social and economic impact to the communities could be substantial.

Most of these secondary impacts of the Proposed Action would be minimized through proper land use planning and through the exercise of local and regional controls on development. The Study Area communities and the Metropolitan Council are prepared to control the growth that the Proposed Action would induce.

As discussed in "Status of Land Use Planning", Section I, the Proposed Action is an important part of the Metropolitan Council's Development Framework for an orderly control of growth within the seven-county metropolitan area. The Metropolitan Council defined the Urban Services Limit as the area in which it would like to place urban growth for the most efficient use of regional services and resources.

Many of the urban services such as water and sewer are already available in the undeveloped portions of the Study Area. The impact of new growth to these areas would be less than to many other areas in the region that are not prepared for development.

The comprehensive plans of the Study Area communities and of the Metropolitan Council also address the conservation and preservation of natural areas. The ultimate impact of urbanization on the natural features will depend heavily on the controls developed and enforced by the communities.

Local comprehensive plans and the Metropolitan Development Guide control growth beyond the Urban Services Limit. Control of urban services beyond the urban service limit and the Council's influence on rural development along the urban fringe will reduce the impacts of induced development beyond the Study Area.

Impacts to St. Paul Street System

If the Proposed Action does increase the rate or amount of urbanization in Dakota County, an impact would be the increased traffic entering St. Paul. Traffic forecasts indicate that seven percent of the traffic generated on the Proposed Action south of proposed I-494 would enter the St. Paul Central Business District and another 28 percent would go to various destinations throughout the remainder of St. Paul. The traffic increase would have varying impacts depending on the status of the section of proposed I-35E in St. Paul.

Not constructing I-35E in St. Paul, but constructing the Proposed Action in Dakota County, could result in an overloading of the St. Paul street system by the combined city traffic and the Dakota County generated traffic. Among the streets impacted most would be Shepard Road, West 7th Street, Lexington Avenue, and Snelling Avenue. The construction of I-35E in St. Paul would reduce impacts on local streets by removing some of the local generated traffic.

Not constructing either of the proposed sections would reduce the Dakota County generated impacts to the St. Paul city streets. Much of the Dakota County traffic would be diverted from the proposed I-35E corridor to widely scattered alternate routes and river crossings to reach their destinations. As the alternate routes become congested, reduced accessibility could become a factor to reduce the amount of urbanization in Dakota County.

A more thorough discussion of the impacts of construction of I-35E in St. Paul will be addressed in a separate Environmental Impact Statement.

Energy Use

The exact energy use impacts that the Proposed Action would generate are difficult to predict. Some general trends, however, are apparent.

The smooth traffic flow and absence of steep grades of a freeway enable vehicles to be more fuel efficient by traveling at steadier speeds. Studies indicate that driving on a freeway uses 20 percent less fuel than driving the same distance on at-grade arterial streets with traffic signals. Estimates indicate that each 1 percent shift from at-grade arterials to new freeways results in a national fuel savings of 0.1 percent.

Building a new freeway in a rapidly growing area, however, might generate more highway use that would offset any gains from more efficient operation. But usage generation is difficult to quantify because movement needs are dependent on more than highway availability and quality.

The Proposed Action would encourage low density, single-family housing. This type of housing is less efficient in fuel use than multi-family housing or than apartments. Low density housing discourages the use of energy efficient mass transit systems because they are then too inefficient to be worth implementing. The Study Area has and will continue to have low population density. The year 2000 density will probably be about 2,400 people per square mile. Transit will therefore be a supplementary mode rather than a prime mover. Auto dependence will probably be high.

Construction of the Proposed Action would also require fuel for construction materials, operations, and equipment.

For a more complete discussion of energy use see Transportation Planning Report For I-35E in Dakota County, Minnesota Highway Department. April 1976 pp. 60-68.

Robert Hustad, "Mass Transit Impact on Energy Consumption," S.A.E. Special Report 383, July 1973.

SECTION IV

THE PROBABLE ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

Section III discussed the significant impacts of the Proposed Action. This section will reiterate the probable adverse impacts which could not be avoided or reduced to acceptable levels.

Relocation

Residents from four homes have already been relocated. Alternative A1 would require purchasing an additional 20 residences, and Alternative A2 would require purchasing an additional 25 residences. The actual costs that residents incur during relocation would be reimbursed. The social impact of forced relocation, however, is impossible to quantify and would probably not be fully mitigated. The impacts of the Proposed Action on the residents' established life patterns would not be reduced to an acceptable level in all cases.

Property Acquisition

Alternative A1 would require purchasing 132 properties, and Alternative A2 would require purchasing 134 properties. The property owners would be reimbursed for the full market value of the property, but they would not be reimbursed for any direct or indirect social or economic impacts such as foreclosing the option of future income from their property or for any disruption of their plans.

Water Resources

The most significant impact to water resources would be the direct displacement of wetlands. Of approximately 2,300 acres of wetlands in the Study Area, approximately 28 acres would fall within the corridor of the Proposed Action and would be filled or altered.

Vegetation and Wildlife

The Proposed Action would require reshaping 280 acres of woodlands, 400 acres of grasslands, and 29 acres of wetlands, and would be an unavoidable reduction of wildlife habitat. The impact would be the greatest to the larger animals which cannot adapt to the presence of the highway or the loss of habitat.

Aesthetics

The Proposed Action would be a visual intrusion. Post construction landscaping would not fully mitigate the loss of existing natural features.

SECTION V

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

Short-Term

A major impact in the construction of a highway is the relocation of people and businesses. The Proposed Action would require the relocation of people from 20 to 25 residences. It would not impact any businesses.

Several impacts would occur all through the construction period. Construction equipment and activities would cause localized air and noise pollution. Bypasses and temporary lane closures would disrupt traffic on local streets. Relocation of gas, sewer, water, and electricity lines may cause a temporary disruption of service.

An immediate loss would occur to the tax base and would be directly proportional to the amount of land needed for right of way.

Long-Term

A significant long term loss to the environment would be the loss of vegetation and wetlands as wildlife habitat. An immediate loss would occur during construction. Subsequent losses would occur with increased urban development. Because the Study Area is in an urbanizing area, close to the central cities, the urban development appears inevitable. The Proposed Action, however, would likely accelerate the urban growth.

The Proposed Action would convert the land use of almost 1200 acres of land that could otherwise be used for farming, homes, commercial or industrial facilities, or open space.

Noise increases along the corridor would be a long term impact to adjacent properties. The noise would be a parameter needing consideration during future development.

The immediate gains of safety, capacity, and time savings would continue as long-term benefits. The design would consider the future growth of the area and would anticipate the long-term need. The design would avoid early obsolescence of the highway.

The Proposed Action would provide better access for the residents to a wide array of cultural, social, economic and employment opportunities.

The long-term increase in value to the remaining tax base would more than offset the short-term loss from removal of 1200 acres of taxable lands.

The long-term benefits of helping to place urban growth in its proper perspective within the Metropolitan Region would aid in the implementation of the Metropolitan Development planning process and should outweigh the losses of both the short-term impacts and the long-term impacts through more efficient use or urban services and resources.

SECTION VI

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

IRREVERSIBLE & IRRETRIEVABLE COMMITMENTS OF RESOURCES

The magnitude of the Proposed Action indicates a significant commitment of resources including:

1. The land required for right of way, including the freeway corridor proper, allied facilities such as interchanges and separations, and excess right of way not suitable to redevelopment.

2. Displacement of residences and utilities.

3. The material for construction such as steel, energy, cement, aggregate, and soil.

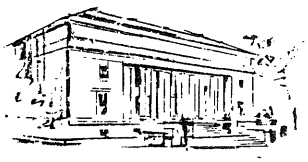
4. Manpower used in the design, construction, and maintenance.

5. Funds to design, construct, and maintain the highway.

Freeways also encourage specialized transportation related developments in the areas adjacent to the them. The freeway may facilitate the transition of land to other uses, but the community ultimately controls land use.

The improved accessibility that the Proposed Action would provide would increase the options for development.

APPENDIX A



MINNESOTA HISTORICAL SOCIETY
690 Cedar Street, St. Paul, Minnesota 55101 • 612-296-2747

13 February 1976

Mr. C. P. Kachelmyer
Preliminary Design Engineer
612E Highway Building
St. Paul, Minnesota 55155

Dear Mr. Kachelmyer:

RE: S.P. 1982 (T.H. 35E)
From 0.4 Mi. S. of CSAH 26
in Eagan to T.H. 110 in Mendota Heights

Both the Survey and Planning section and the Highway Archaeology section of the Minnesota Historical Society have reviewed the project described above pursuant to the State Historic Preservation Officer's responsibilities under the National Historic Preservation Act of 1966, Executive Order 11593, and Advisory Council Procedures 36 CFR 800.

This review analyzed the project area for the existence of historic, archaeological, architectural, and cultural sites which are on or are eligible for inclusion on the National Register of Historic Places. Neither sites on nor sites eligible for inclusion on the Register have been found in the area. Therefore, no sites within the jurisdiction of any of the laws and regulations mentioned above will be affected by the proposed project.

So as to avoid any later questions I am anxious particularly to point out that neither the Mendota Historic District nor the Fort Snelling Historic District will be affected by the highway described above.

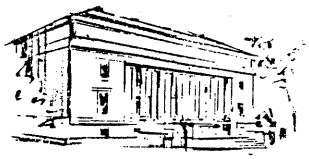
Thank you for your continued attention to historic preservation values in your planning process.

Sincerely,

Russell W. Fridley

Russell W. Fridley
State Historic Preservation Officer

RWF/fr



MINNESOTA HISTORICAL SOCIETY
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612E Highway Building
St. Paul, Minnesota 55155

Dear Mr. Kachelmyer:

RE: S.P. 1982 (T.H. 35E)
From Jct T.H. 35 and T.H. 35W
In Burnsville to 0.4 Mi. S. of
CSAH 26 in Eagan
Dakota County

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Sincerely,

Russell W. Fridley

Russell W. Fridley
State Historic Preservation Officer

RWF/fr

APPENDIX B

LEGISLATIVE REFERENCE LIBRARY
STATE OF MINNESOTA

SUPPORTING DOCUMENTS

Aesthetic Evaluation and Landscape Concept, I-35E in Dakota County. Minnesota Highway Department, Office of Environmental Services. St. Paul: 1975. 27 pp.

Air Quality Report, S.P. 1982 (I-35E). Minnesota Highway Department, District Nine Resource Section. Oakdale, Minnesota: February 1976. 21 pp.

Ground Water Data for Environmental Impact Statement, S.P. 1982 (I-35E). Minnesota Highway Department, Materials Section, Geology Unit. St. Paul, Minnesota: October 1975. 3 pp.

Interstate 35E Bedrock and Glacial Geology Study for Environmental Impact Statement, Northern Dakota County. Minnesota Highway Department, District Nine Preliminary Design Section, Oakdale, Minnesota: April 1976. 6 pp.

I-35E Dakota County Social Economic Report. Minnesota Highway Department, District Nine Resource Section, Socio-Economic Unit. Oakdale, Minnesota: January 1976. 85 pp.

Noise Analysis Report, S.P. 1982 (I-35E). Minnesota Highway Department, District Nine Resource Section. Oakdale, Minnesota: February 1976. 41 pp.

Preliminary Hydraulics & Water Quality Analysis for I-35E. Minnesota Highway Department, District Nine Hydraulics Section. Oakdale, Minnesota: March 1976. 52 pp.

Right of Way Acquisition and Relocation. Minnesota Highway Department, District Nine Right of Way Section. Oakdale, Minnesota: May 1976. 33 pp.

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Transportation Information and Attitude Survey for Interstate 35E in Dakota County, Minnesota. Minnesota Highway Department, District Nine Resource Section. Oakdale, Minnesota: January 1976. 85 pp.

Transportation Planning Report for I-35E in Dakota County. Minnesota Highway Department, District Nine Resource Section, Transportation Planning Unit. Oakdale, Minnesota: April 1976. 92 pp.

Vegetation, Surface Water & Wildlife Review of Proposed I-35E Through Eagan, Mendota Heights, Burnsville & Apple Valley. Minnesota Highway Department, Office of Environmental Services. St. Paul: September 1975. 42 pp.

These reports are available at:

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