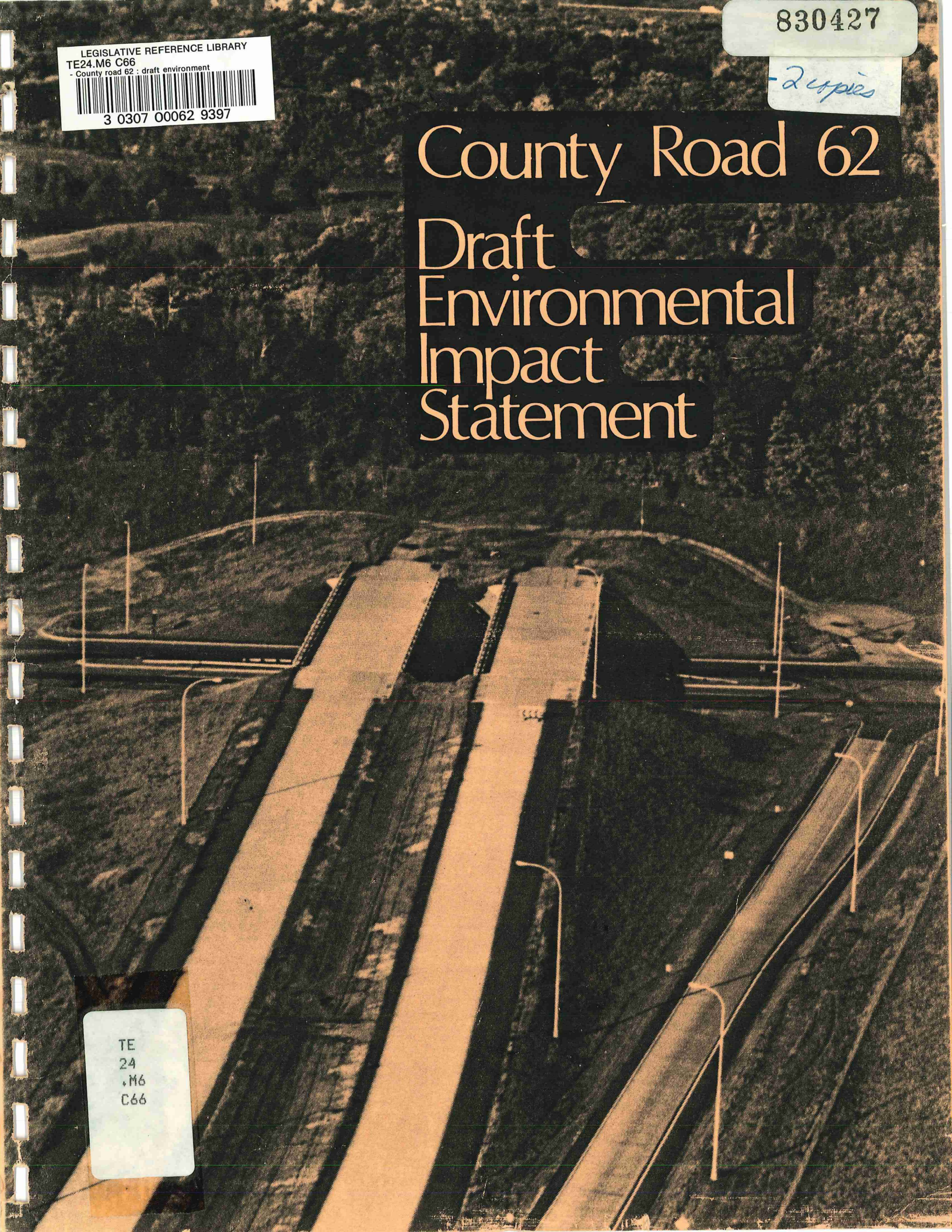
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Draft Environmental Impact Statement



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CSAH 62
From CSAH 4 in Minnetonka/Eden Prairie, Hennepin County, Minnesota
To CSAH 61 in Minnetonka/Eden Prairie, Hennepin County, Minnesota
S.P.27-662-38; M5168( ) and S.P.27-662-37; M5168 ( )

DRAFT ENVIRONMENTAL IMPACT STATEMENT

Submitted Pursuant to:
42 U.S.C. 4332(2)(c)
and Minnesota Statute 116D.01 et reg.

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION
AND
STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION
AND
HENNEPIN COUNTY DEPARTMENT OF TRANSPORTATION

Cooperating Agencies:

Minnesota Pollution Control Agency

Participating Government Units:

Metropolitan Council
City of Eden Prairie
City of Minnetonka

12/20/82	Herbert O. Klossner	Director D.O.T.
Date of Approval	For Hennepin County DOT	Title
12-21-82	John D. Patrick FOR GORDON M FAY	DIRECTOR, STATE AID
Date of Approval	For Minnesota DOT	Title
1/20/83	Vince R. Lake	Division Administrator
Date of Approval	For FHWA	Title

The following individuals may be contacted for additional information concerning this document:

James J. Bednar
Assistant Area Engineer
Federal Highway Admin.
490 Metro Square Bldg.
St. Paul, MN 55101
(612) 725-5956

C.E. Weichselbaum
District State Aid Engineer
Minnesota DOT, District 5
2055 North Lilac Drive
Golden Valley, MN 55422
(612) 545-3761

Vern Genzlinger
Design Engineer
Hennepin County DOT
320 Washington Ave. S.
Hopkins, MN 55343
(612) 935-3381

ABSTRACT: This Draft EIS documents the impacts associated with the extension of CSAH 62 from CSAH 61 to CSAH 4 as a multi-lane, limited access facility in Hennepin County. The major objective of the proposed project is to complete the metropolitan highway system and provide a more direct route between Minneapolis and the southwestern suburbs. The environmental consequences of the project alternatives, incuding the no-build alternative, are documented and compared such that a preferred alternative may be selected.

Comments on this Draft EIS are due by MAR 29 1983 and should be sent to: Herbert Klossner, Hennepin County DOT, 320 Washington Ave. S., Hopkins, MN 55343.

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CHAPTER 1: SUMMARY

Project Description

County Road (CSAH) 62, the Crosstown, is a major east-west highway along the southern boundary of Minneapolis, developed along the 62nd Street corridor. The existing facility is a limited access freeway from CSAH 61 (Shady Oak Road) in Eden Prairie-Minnetonka to just west of TH 55 (Hiawatha Avenue) in Minneapolis.

The proposed action is to extend County Road 62 westerly to I-494 as an intermediate arterial and to transition to a minor arterial facility from I-494 to CSAH 4 (Eden Prairie Road). The total length of the project is approximately 2.5 miles. The corridor for the proposed improvement is located along the border between Minnetonka and Eden Prairie. Figure 1 shows the project location with respect to the seven-county metropolitan region, and Figure 2 shows the corridor study limits. For reference throughout the report, Figure 2 is also included as a fold out figure in the back.

At the present time no east-west road is located along the border of Minnetonka and Eden Prairie between CSAH 61 and I-494. From I-494 to CSAH 4 the existing highway is County Road CSAH 67, a two-lane road with no access control and two at-grade railroad crossings.

Alternatives

The Scoping Report presented a full range of alternatives; when each alternative is combined with all other alternatives a total of 360 alternatives resulted. Through the scoping process this number was reduced to five alternatives and associated sub-alternatives for study in detail in the Draft Environmental Impact Statement for the County Road 62 project. The alternatives are grouped by roadway section, except for the no-build alternative.

For the build alternatives, two roadway options are studied between CSAH 4 and I-494 and two options between I-494 and CSAH 61. Three sub-alternatives are being studied at the western terminus to address traffic flow, future traffic volumes on Townline Road, and impacts to the wetland area. Two sub-alternatives are being studied at Nine Mile Creek to address the options of bridge or culvert crossings.

Each of the alternatives being considered is summarized in Table 1.

TABLE 1

ALTERNATIVES CONSIDERED

ALTERNATIVE 1: No-Build

Under this alternative the Draft Environmental Impact Statement discusses the impacts which are anticipated if no roadway construction is undertaken.

COUNTY ROAD 62 ALTERNATIVES FROM CSAH 4 (Eden Prairie Road) to I-494:

ALTERNATIVE 2: Upgrading of Existing Alignment with the Railroad Crossing At-Grade (Figure 6)

The existing roadway would be widened from two to four lanes on the existing alignment and the Chicago-Northwestern and the Milwaukee Road railroad tracks would be crossed at-grade. All existing intersections would be maintained with signalization provided as warranted.

ALTERNATIVE 3: Relocation with the Railroad Crossing Grade Separated (Figure 8)

A four-lane roadway would be built, approximately 160 feet north of the existing road from Baker Road to Birch Island Road. A bridge structure would be constructed to carry County Road 62 over both the Chicago-Northwestern and Milwaukee Road railroad track. The existing road would be maintained as a frontage road for existing businesses and residences.

WESTERN TERMINUS SUBALTERNATIVES (Figure 9)

Three subalternatives to Alternatives 2 and 3 were studied at the western terminus of the proposed project with CSAH 4.

SUBALTERNATIVE A - Existing intersections. The roadway would be widened on the existing alignment and the project would terminate at the existing intersection of CSAH 67 with CSAH 4.

SUBLATERNATIVE B - Realignment to Townline Road west of CSAH 4. A four way intersection would be built with CSAH 4, and the proposed County Road 62 roadway would continue west of CSAH 4, curving south to connect with Townline Road.

SUBALTERNATIVE C - Alignment through Edge of Wetland. The proposed road would depart from the existing alignment and curve through the northern edge of the Birch Island Lake wetland. A four-way intersection would be constructed at CSAH 4, providing a direct connection with Townline Road.

COUNTY ROAD 62 ALTERNATIVES FROM I-494 to CSAH 61 (Shady Oak Road):

ALTERNATIVE 4: Rowland Road Grade Separated (Figure 6)

County Road 62 would be built as a four-lane divided roadway with Rowland Road constructed over County Road 62 on a two-lane bridge. The first at-grade intersection with County Road 62 would occur at the Beach Road/ Clearwater Drive intersection which would be signalized if warranted. Signalized intersections would also be constructed at the east and west ramps with I-494 if warranted.

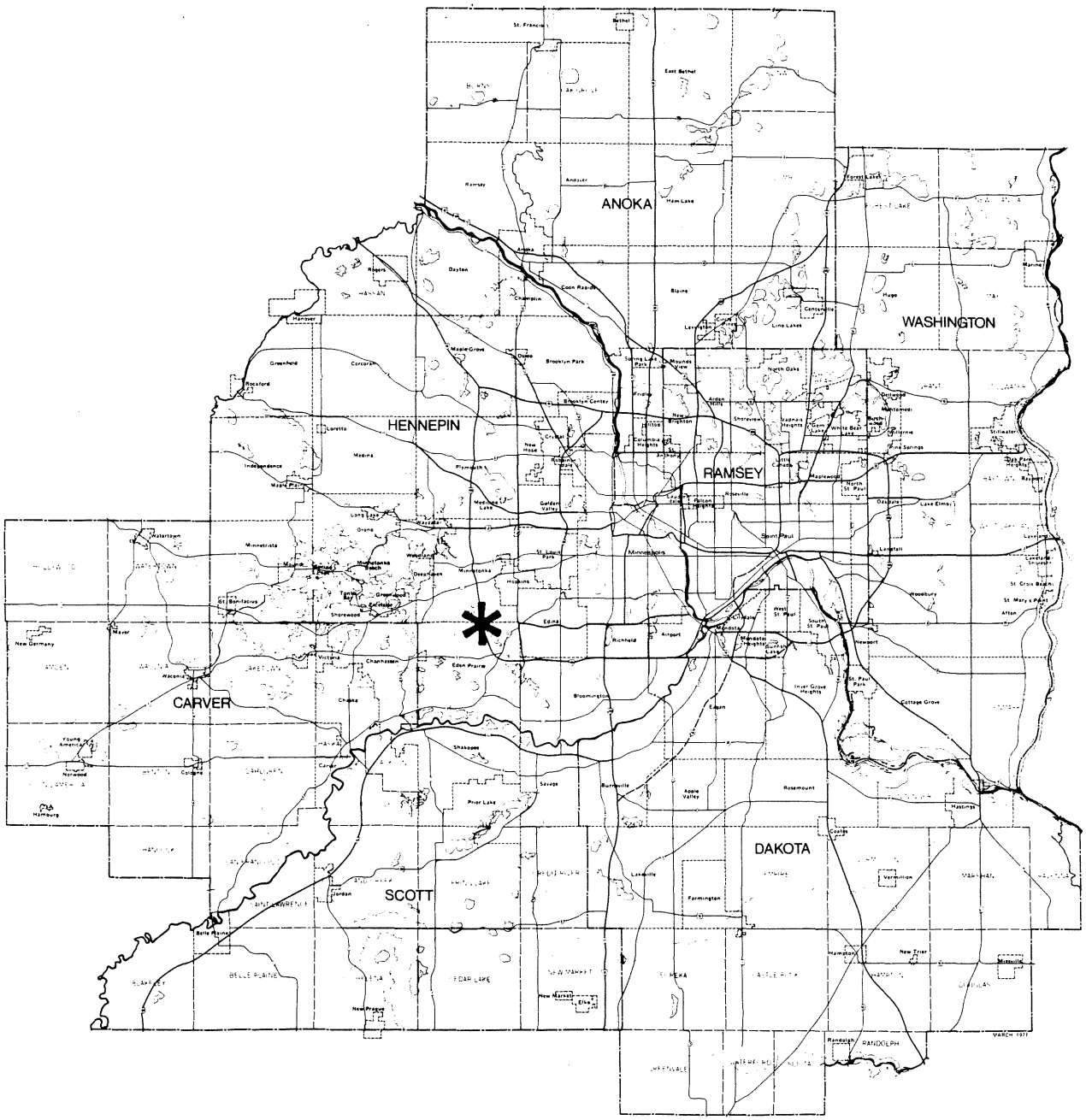
ALTERNATIVE 5: Rowland Road At Grade (Figure 8)

This alternative would build County Road 62 as a four-lane divided highway with the first at-grade intersection at Rowland Road. At-grade intersections would also be built at Beach Road/Clearwater Drive and the east and west ramps of I-494.

NINE MILE CREEK CROSSING SUBALTERNATIVES (Figures 10 and 11)

Two subalternatives to Alternatives 4 and 5 were studied for the crossing of Nine Mile Creek:

SUBALTERNATIVE A - Bridge crossing
SUBALTERNATIVE B - Culvert crossing



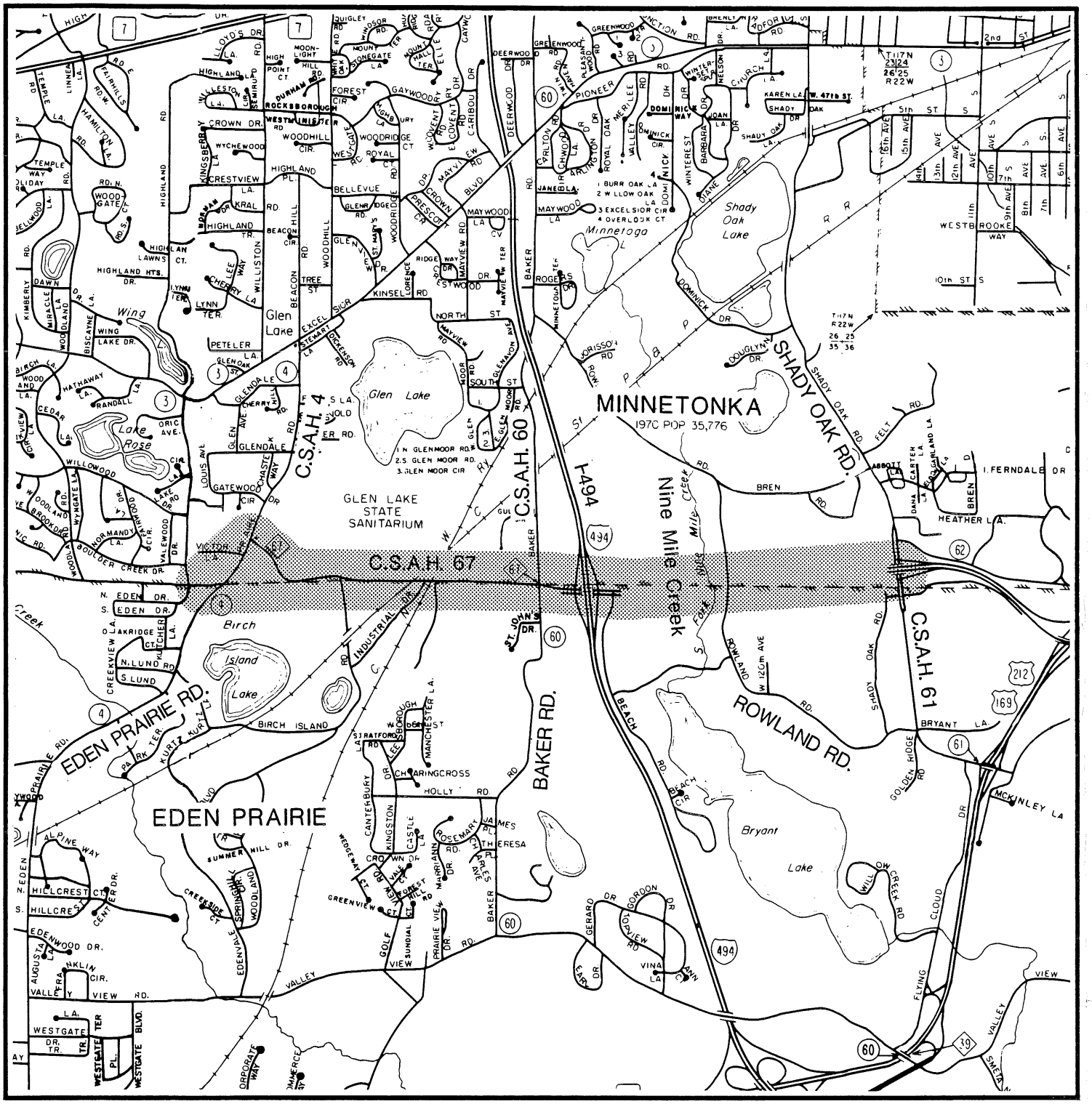
County Road 62

Environmental Impact Statement

REGIONAL LOCATION

FIGURE 1

north 0 10 20 miles



County Road 62

Environmental Impact Statement

STUDY AREA LOCATION

FIGURE 2

north 0 1/8 1/4 mile

Significant Environmental Impacts

Three areas of significant environmental impacts have been identified for the proposed action.

- Decreased user costs - The construction of the highway link from I-494 to CSAH 61 will have the beneficial impact of decreased user costs. Energy consumption will be reduced by 15 to 20 percent by decreasing circuitous travel. Reduced travel is anticipated to average 14,250 vehicle miles per day over the first 20 year life of the facility. In addition to less energy consumption, users will benefit from reduced travel time and traffic volumes will be reduced on parallel roads.

- Impacts at western terminus - The western terminus of the project, the intersection of County Road 62 with CSAH 4, is located on the edge of a large wetland. Each of the three subalternatives considered in the area will result in an undesirable impact. Maintaining the existing off set intersections is disruptive to east-west traffic movement. Continuing County Road 62 west of County Road 4 to meet Townline Road would disrupt an existing residential neighborhood and require the displacement of six families. Placing the proposed County Road 62 alignment along the edge of the wetland would require the use of 1.32 acres of wetland.

- Erosion control and visual impacts - The topography of the land between I-494 and Shady Oak Road is steeply rolling and requires large cut and fill sections for the proposed highway. Steep cuts and fills can have significant impacts on erosion and sedimentation as well as adverse visual impacts.

Areas of Controversy

Issues which have been raised concerning the proposed action include the following:

- Need for the project - The transportation plans of both cities, through which the project is located, propose the construction of County Road 62 to I-494 as an intermediate arterial and to CSAH 4 as a minor arterial. However, the need for the highway is questioned. Analysis of the build and no-build traffic forecasts show that completing County Road 62 to I-494 will provide a link in the metropolitan highway system which will reduce vehicle miles traveled, save energy, and lower traffic volumes on parallel highways in Minnetonka and Eden Prairie.

- Impacts on local streets - Traffic volumes on local streets such as Townline Road, Baker Road, Clearwater Drive, and Rowland Road may increase under the various build alternatives. Design considerations have been recommended to minimize the potential adverse impacts of increased traffic volumes. Traffic related environmental impacts, such as potential noise levels and air quality, are addressed in this document specifically for Townline Road as requested by the City of Eden Prairie during the scoping process.

- Nine Mile Creek Crossing - Nine Mile Creek is a small stream located in a scenic wooded valley with steep side slopes in the area of the proposed highway crossing. Although the drainage of the stream can be easily accommodated with culverts, the fill of approximately 40 feet across the valley raises the issue of aesthetics. A bridge alternative for crossing Nine Mile Creek has been assessed to address this concern.

- Access at Rowland Road - Access between County Road 62 and Rowland Road would provide a second regional access point to Bryant Lake Park and additional east-west circulation for local residents. Access at Rowland Road would be the first at-grade intersection on County Road 62 for westbound traffic and may cause a safety hazard. Also, some local residents are concerned that adverse land use impacts may occur if access is allowed at Rowland Road, while others support access because it would raise the value of adjacent undeveloped land.

4(f) and 6(f) Involvement

Bryant Lake Park, a regional park owned by Hennepin County, is located in Eden Prairie. The park is adjacent to the southern boundary of the proposed roadway between I-494 and CSAH 61, at the crossing of Nine Mile Creek, see Figure 20. The proposed roadway has been aligned to pass north of the park to avoid the use of park land and to avoid any adverse environmental impacts upon the recreational use of the park.

The proposed highway will cross the Nine Mile Creek corridor which is proposed to be developed as part of the metropolitan regional trail system for bicycle, pedestrian and equestrian use. At the trail crossing, the land required for the proposed highway is owned by the City of Minnetonka and dedicated for highway right-of-way use.

Therefore, the proposed action does not require involvement with Section 4(f) of the Department of Transportation Act or Section 6(f) of the Land and Water Conservation Fund Act.

Impact on County and State Government of Federal Controls

The construction of the proposed project with federal funds has been approved by the Transportation Advisory Board and Metropolitan Council for the 1981-1983 Federal Aid Urban Program.

The use of federal aid stipulates that specific federal policies, procedures, and design criteria must be satisfied by the county and state government. Both the Hennepin County Department of Transportation and the Minnesota Department of Transportation are affected by these controls.

Multi-State Responsibilities

The project will have no impact on adjacent states, therefore, no multi-state responsibilities are involved.

CHAPTER 2: PURPOSE OF AND NEED FOR ACTION

Project Background

In the late 1950's, action was taken to provide a major east-west crosstown highway along the southern boundary of Minneapolis, the 62nd Street corridor. Construction began in 1961 on a limited-access freeway which is now completed from CSAH 61 (Shady Oak Road) in Eden Prairie-Minnetonka to just west of TH 55 (Hiawatha Avenue) in Minneapolis. The Hennepin County Department of Transportation, with the Minnesota Department of Transportation and the Federal Highway Administration, proposes to extend the Crosstown (CSAH) 62 highway from its present terminus at CSAH 61 to I-494 and on to CSAH 4.

Construction of the proposed roadway from CSAH 61 to I-494 will extend the western portion of County Road 62 to complete the metropolitan highway system in this area. The location of County Road 62 and its interchange with I-494 was recommended in the 1959 study entitled Highway Planning for Hennepin County Minnesota. As other highways were built in the area some features necessary for the completion of County Road 62 were constructed: the bridge and east ramps of a diamond interchange at CSAH 61 and a full diamond interchange at the intersection with I-494. These structures define and limit the roadway location options to be considered during this study.

County Road 62 will provide access between the developed suburban residential areas of Minnetonka and Eden Prairie with the metropolitan centers of Minneapolis and St. Paul.

The following section discusses the assessment of the need for this proposed highway action. This section includes a description of the existing transportation system, the regional and local transportation policies which are applicable to this project, existing transportation conditions, and future travel needs.

Existing Transportation System and Policies

The Metropolitan Council is the designated agency responsible for regional planning in the Minneapolis-St. Paul metropolitan area. Regional transportation goals have been developed by the Metropolitan Council and are documented in the Metropolitan Development Guide.[1/] The basic philosophy of the transportation policies is to more efficiently utilize the existing transportation investment within the metropolitan area.

The 1990 Metropolitan Highway System Plan is designed to "satisfy the Transportation and Development Framework policies and to provide the metropolitan area with good accessibility during off peak hours of travel."

1/ Metropolitan Development Guide, Metropolitan Council, July, 1976.

The metropolitan highway system consists of principal and intermediate arterials which combine to provide regional and subregional accessibility. The proposed action is a recommended element of the Metropolitan Highway System Plan. The existing County Road 62 highway functions as an intermediate arterial providing an east-west transportation corridor presently connecting County Road 18, State Highways 100 and 55 and Interstate Highway 35W, as shown in Figure 3. The proposed action will provide a direct connection with I-494, and is therefore consistent with the function of County Road 62 as an intermediate arterial and with the transportation policies of the Metropolitan Council, Hennepin County, Eden Prairie and Minnetonka.

The proposed highway is located along the border of the cities of Eden Prairie and Minnetonka. The comprehensive plans of both cities show the future extension of County Road 62 from CSAH 61 to I-494.

Existing Transportation Conditions

EXISTING ROADWAYS WITHIN THE STUDY AREA

The existing road which serves east-west traffic between CSAH 4 and I-494 is CSAH 67. West of CSAH 4 east-west traffic uses Townline Road. No road exists in the corridor between I-494 and CSAH 61 to serve east-west traffic and motorists must seek alternative routes.

CSAH 67

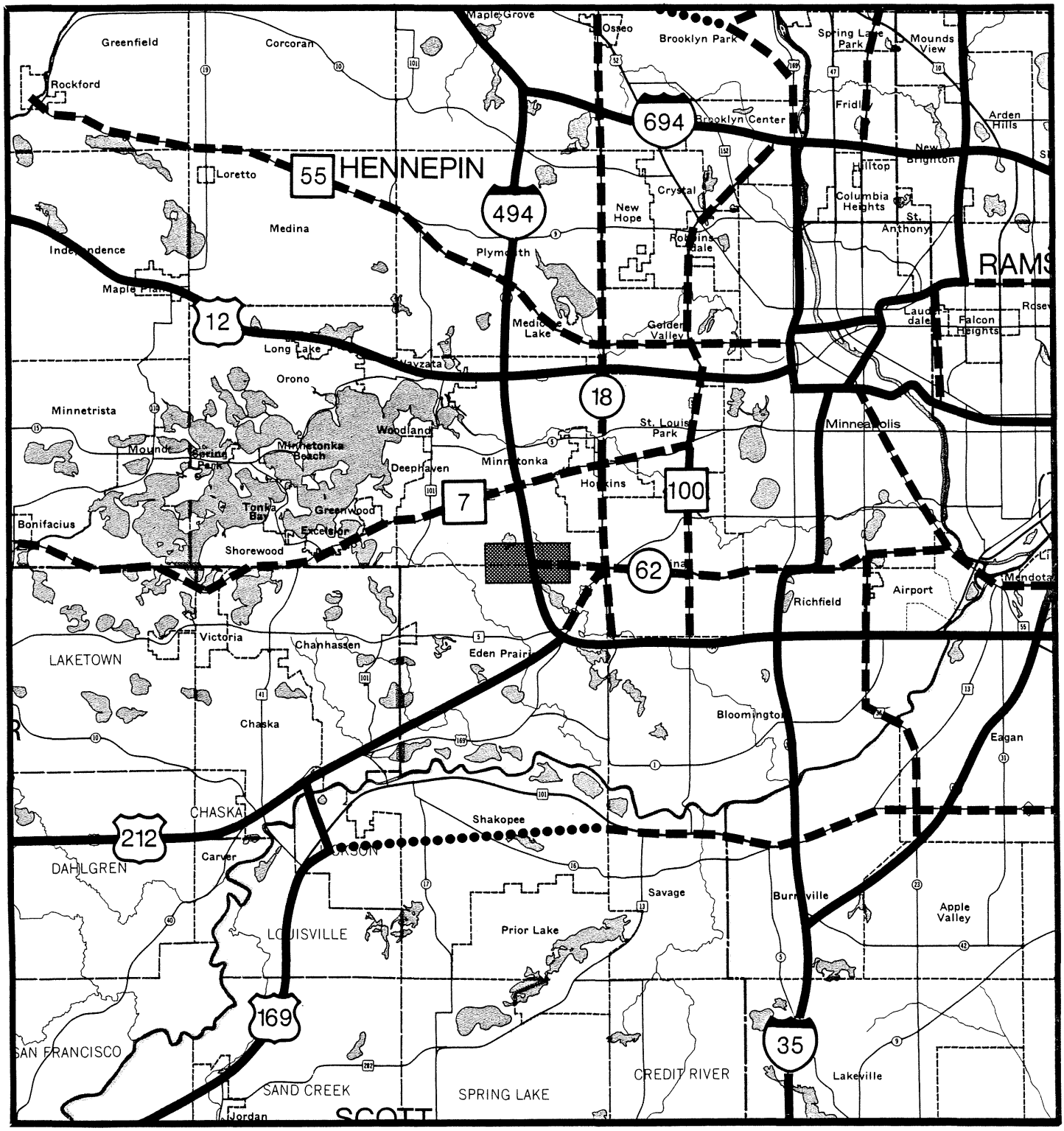
CSAH 67 is a two-lane bituminous road with gravel shoulders of varing width. Surface run-off is carried by grass-lined ditches to the West Branch of Nine Mile Creek and adjacent wetlands. Access to the road is unrestricted and includes at-grade intersections with CSAH 4, Birch Island Road, Industrial Drive, the Chicago-Northwestern and Milwaukee Road railroad tracks, Baker Road and the ramps with I-494, as well as, several private driveways.

CSAH 67 is classified as a minor arterial by the Metropolitan Council, and in the transportation plans of Hennepin County, Eden Prairie and Minnetonka and is proposed to function as a minor arterial in the future. The existing traffic volumes on CSAH 67 range from 3,600 to 5,150 vehicles per day, as shown in Figure 4. These volumes are within the capacity of the existing two lane roadway.

Townline Road

Townline Road is a narrow two-lane, asphalt paved road with gravel shoulders and grass-lined ditches. The vertical alignment is deficient due to steep vertical curves which do not provide adequate site distance. Access to the road is unrestricted; local streets and private drives are allowed at-grade access at numerous points.

Towline Road presently functions as a local street however, the road is classified a minor arterial by the Metropolitan Council, Hennepin County, Eden Prairie and Minnetonka.



County Road 62

Environmental Impact Statement

METROPOLITAN HIGHWAY SYSTEM

FIGURE 3

- **PROJECT LOCATION**
- **PRINCIPAL ARTERIAL**
- **INTERMEDIATE ARTERIAL**
- **RESERVED RIGHT-OF-WAY (Final Location Not Determined)**

north

Future Travel Needs

DEMOGRAPHIC FORECASTS

Land development in the corridor of the proposed highway has been limited in the past by the steeply rolling terrain and lack of convenient access to utilities and transportation facilities. Recently, however, two intensive office-industrial areas have been developed near the eastern terminus of the proposed highway project.

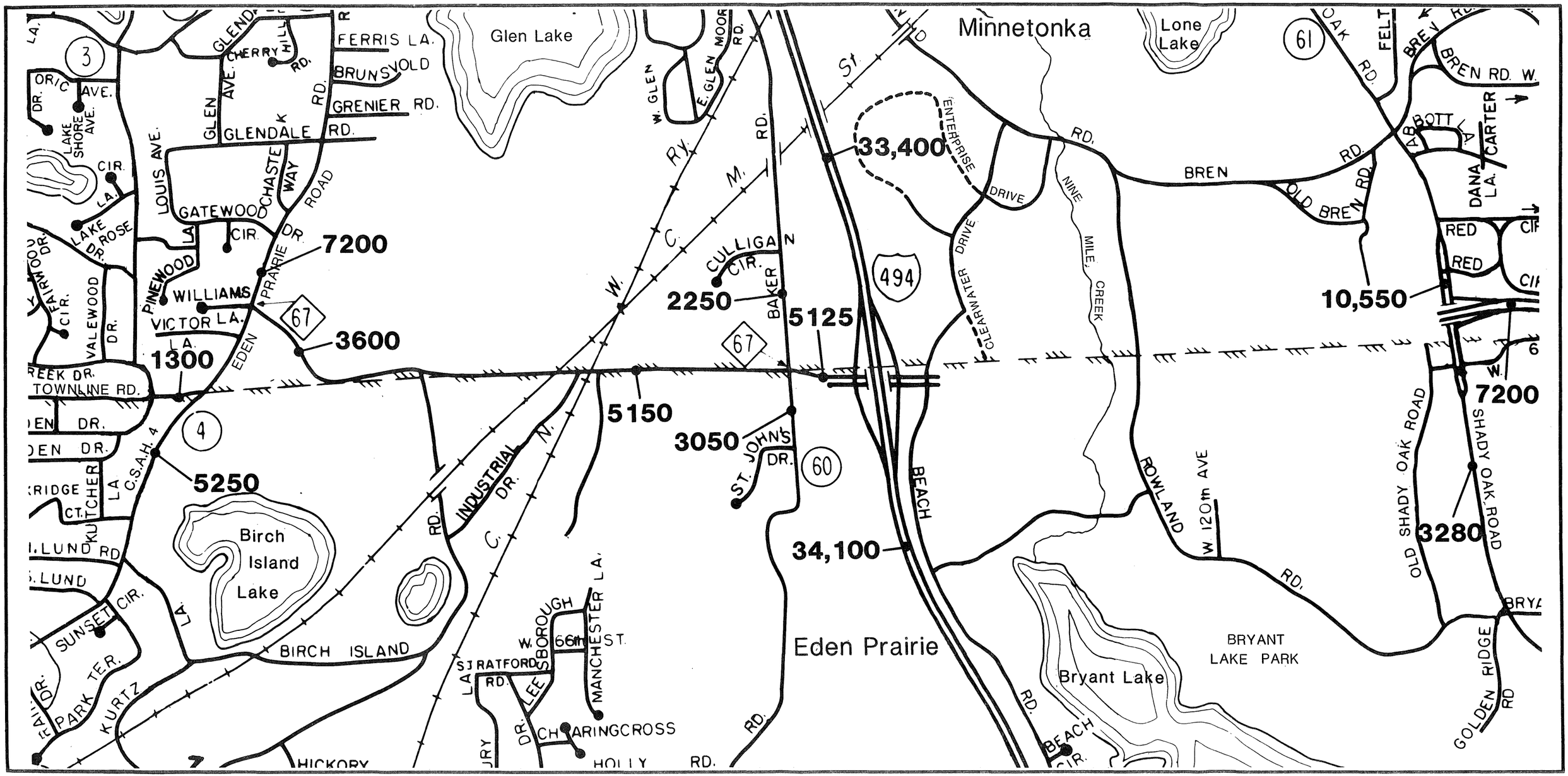
Land use forecasts of employment, dwelling units, and population for the year 2000 have been made by the Metropolitan Council and by the Cities of Eden Prairie and Minnetonka. The land use data developed by the Metropolitan Council for forecasting growth by the year 2000 do not reflect the large concentration of employment located at the eastern terminus of the project.

The Metropolitan Council forecasts assume that the County Road 62 extension from Shady Oak Road to I-494 will be built. Planning staff from both municipalities agree that the rate of land use development along the County Road 62 corridor will be affected by whether or not the proposed highway is built. Table 2 summarizes the land use data forecasts for the corridor by traffic analysis zone. The Metropolitan Council transportation staff and development framework staff agree that the regional forecasts will have to be updated and that the local socio-economic forecasts are acceptable for use in traffic forecasts.

FUTURE TRAVEL DEMAND

Traffic forecasts for the County Road 62 corridor have been made based upon the travel forecasting model of the Metropolitan Council and the Minnesota Department of Transportation and upon the revised demographic data provided by the municipalities. The significant increase in employment in the vicinity of the eastern terminus of the County Road 62 corridor results in higher traffic forecasts for the proposed highway than the Metropolitan Council year 2000 traffic forecasts. Future traffic volumes with the build and no build alternatives are shown in Figure 5.

The documentation of these higher forecasts has been accepted by the Metropolitan Council transportation staff as appropriate input for the preparation of the Draft Environmental Impact Statement and Location/Design Study Report.



County Road 62

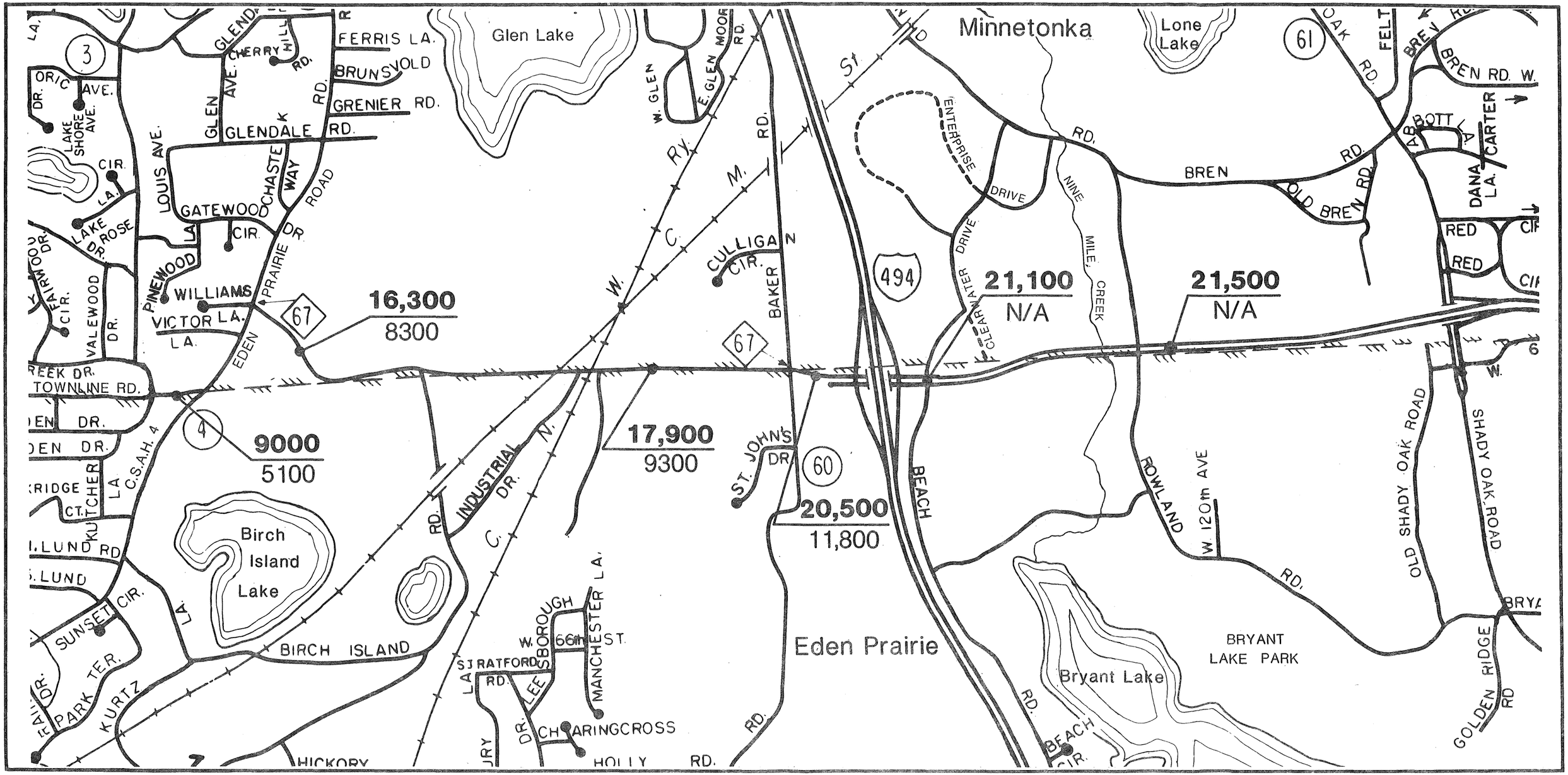
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EXISTING TRAFFIC VOLUMES
1980 AVERAGE DAILY TRAFFIC

SOURCES: MINNESOTA DEPARTMENT OF TRANSPORTATION
HENNEPIN COUNTY DEPARTMENT OF TRANSPORTATION
CITY OF EDEN PRAIRIE

FIGURE 4

north 0 500 1000 2000



County Road 62

Environmental Impact Statement

FUTURE TRAFFIC VOLUMES

000 2000 ADT "BUILD" ALTERNATIVES

000 2000 ADT "NO BUILD" ALTERNATIVE

N/A NOT APPLICABLE

FIGURE 5

north 0 500 1000 2000

TABLE 2

LAND USE FORECASTS

METRO COUNCIL

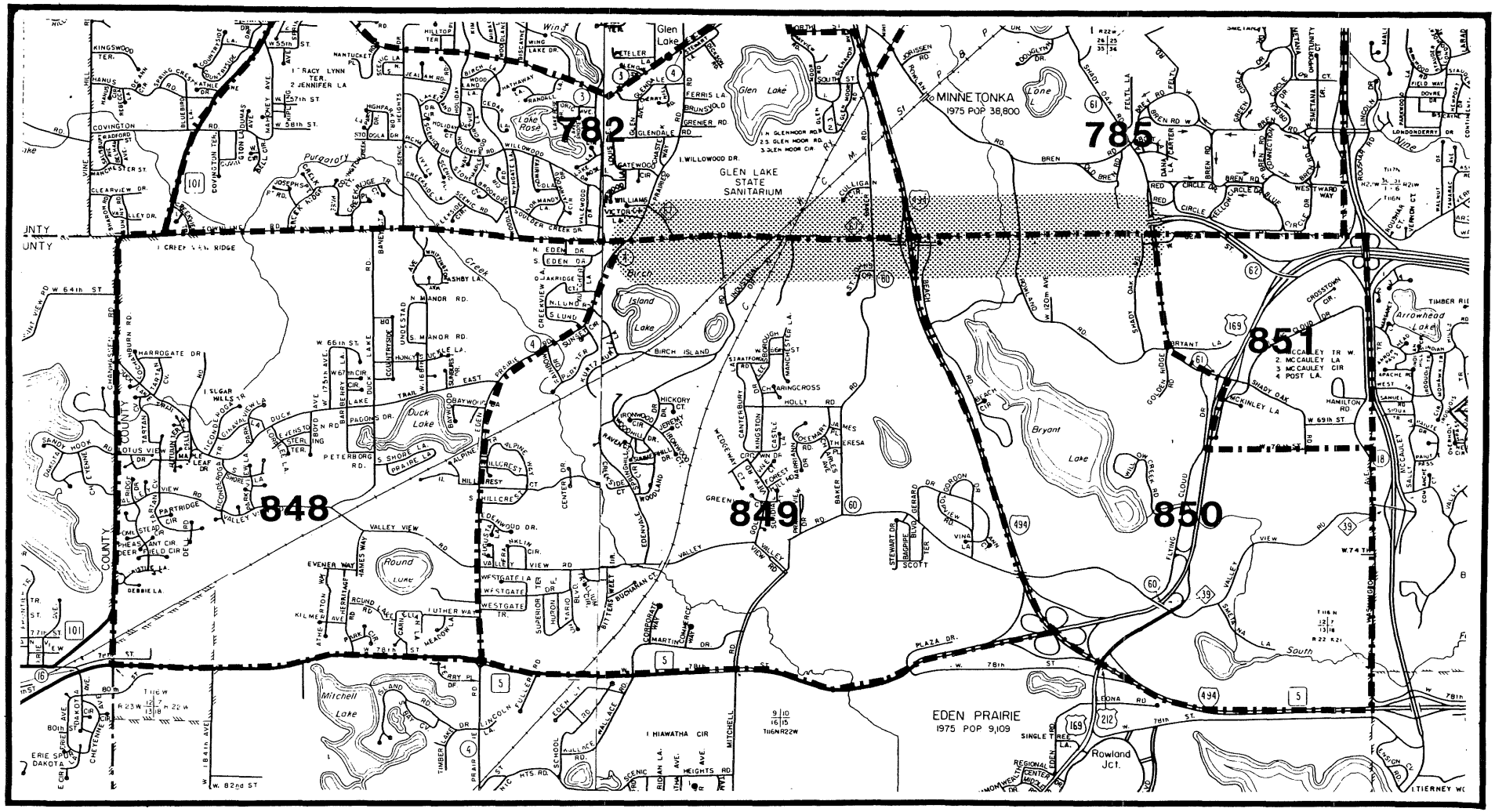
TRAFFIC ANALYSIS ZONE	YEAR 2000 EMPLOYMENT	YEAR 2000 DWELLING UNITS	YEAR 2000 POPULATION
782	2,600	1,600	4,910
785	4,600	600	1,476
SUB-TOTAL	7,200	2,200	6,386

MINNETONKA

	YEAR 2000 BUILD EMPLOYMENT	YEAR 2000 BUILD DWELLING UNITS	YEAR 2000 BUILD POPULATION	YEAR 2000 NO-BUILD EMPLOYMENT	YEAR 2000 NO-BUILD DWELLING UNITS	YEAR 2000 NO-BUILD POPULATION
782	2,600	2,494	6,983	1,835	2,037	5,886
785	12,000	2,129	4,911	10,000	1,460	3,448
SUB-TOTAL	14,600	4,623	11,894	11,835	3,497	9,334

EDEN PRAIRIE

				YEAR 2000 BUILD EMPLOYMENT	YEAR 2000 BUILD DWELLING UNITS	YEAR 2000 BUILD POPULATION	YEAR 2000 NO-BUILD EMPLOYMENT	YEAR 2000 NO-BUILD DWELLING UNITS	YEAR 2000 NO-BUILD POPULATION
848	500	3,000	8,443	400	2,200	6,900	400	1,700	4,760
849	2,500	2,600	7,369	850	2,500	7,500	850	2,444	6,843
850	600	1,000	2,694	1,600	650	1,790	1,600	458	1,282
851	1,600	110	281	3,500	385	1,305	3,500	320	896
SUB-TOTAL	5,200	6,710	18,787	6,350	5,735	17,495	6,350	4,922	13,781
TOTAL	12,400	8,910	25,173	20,950	10,358	29,389	18,185	8,419	23,115



County Road 62

Environmental Impact Statement

TRAFFIC ANALYSIS ZONES

000 TRAFFIC ANALYSIS ZONE

CROSSTOWN EXTENSION CORRIDOR

FIGURE 5A

north

Townline Road

The existing traffic volume on Townline Road is low - 1,300 vehicles per day - and reflects the road's present function as a local street in a residential area.

Future traffic volume forecasts for Townline Road are an average daily traffic (ADT) of 5,100 for the no build alternative and 9,000 ADT for the build alternatives. The traffic volumes forecast for the year 2000 build alternatives will exceed the capacity of the existing road.

County Road 62 from CSAH 4 to I-494 (Existing CSAH 67)

Under the no-build alternative, traffic volumes on CSAH 67 will range from 8,300 to 11,800 vehicles per day. These volumes will exceed the capacity of the existing road. Traffic forecasts with the build alternatives range from 16,300 to 20,500 between CSAH 4 and I-494, which will require a four-lane facility.

County Road 62 from I-494 to CSAH 61

Future traffic volumes for the build alternative for County Road 62 between I-494 and CSAH 61 are forecast to range from 21,100 to 21,500 ADT. These volumes indicate that a four-lane facility will be required.

EXISTING AND FUTURE TRAVEL PATTERNS

Existing regional and local travel patterns will be altered by the proposed County Road 62 extension. The degree of change in travel patterns due to the proposed action have been forecasted by the Minnesota Department of Transportation.

Regional Patterns

Regional travel patterns, represented by traffic volumes, have been forecasted by the Minnesota Department of Transportation using the System 2A model with year 2000 computer-routed average daily traffic. These forecast traffic volumes for the highway system surrounding the County Road 62 corridor for both the build and no-build alternatives.

The existing situation and the no-build alternative require traffic to follow a circuitous route when traveling east-west in the area. Westbound traffic which would use the proposed County Road 62 extension now uses parallel routes such as Excelsior Boulevard on the north, or Trunk Highway 5 on the south. Over the next 20 years, an average of 14,250 additional vehicle miles per day will be traveled within the existing highway system. This significant amount of circuitous travel requires additional consumption of gasoline and diesel fuels, cost in time to the motorist, and increased traffic on parallel routes which are presently reaching capacity.

Local Travel Patterns

The existing local highway system in the project area is composed of north-south routes such as County Road 4, Baker Road and Shady Oak Road which provide access to the major east west routes: Excelsior Boulevard in Minnetonka and Trunk Highway 5 in Eden Prairie. As residential and commercial growth continues in these two cities, the local road system will be required to handle this additional traffic. A directional change in local travel patterns would occur with implementation of the proposed action as trips are "attracted" to the path which provides the shortest travel distance.

The Transportation Impacts section of Chapter 5: Environmental Consequences presents a detailed comparison of the build and no-build alternatives relative to accessibility, traffic volumes, and safety.

CHAPTER 3: ALTERNATIVES

Alternatives Considered

A full range of alternatives have been considered for the County Road 62 project. The universe of alternatives includes alternatives considered in the past for this segment of highway and alternatives developed to respond to current issues and conditions in the study area. The following sections discuss three types of alternatives which were considered:

- Transportation system management alternatives
- No-build alternatives
- Build alternatives

TRANSPORTATION SYSTEM MANAGEMENT ALTERNATIVES

Transportation system management (TSM) alternatives include the full range of minor improvements as well as resurfacing, reconstruction and rehabilitation actions to maximize the use and energy efficiency of the existing highway. For the County Road 62 highway project, transportation system management has been considered for the existing road from CSAH 4 to I-494 and is reflected in the alternative of upgrading on the existing alignment with no grade separation at the railroad tracks.

The Metropolitan Transit Commission's long-range plan for mass transit in the County Road 62 corridor is to provide bus service. Therefore, no specific transit alternatives, such as high-occupancy vehicle lanes, light rail transit, etc. have been considered for this project. All roadway alternatives include street-related design features to accommodate buses, such as adequate turning radii, lane widths and grades.

NO BUILD ALTERNATIVES

The no-build alternative has been considered in detail for this highway project. The no-build alternative is defined for two highway segments - from CSAH 4 to I-494 and from I-494 to CSAH 61.

The no-build alternative from CSAH 4 to I-494 would leave the existing two lane road to be maintained with minor reconstruction types of activities to allow the continuing operation of the roadway. These activities could include patching, grading of shoulders or other safety improvements.

The no-build alternative from I-494 to Shady Oak Road would result in no road being built to link the two highways. Under this alternative County Road 62 would terminate at CSAH 61, as it exists today.

BUILD ALTERNATIVES

The universe of build alternatives that were considered in the Scoping Report are grouped into two highway segments:

- Alternatives from CSAH 4 to I-494
- Alternatives from I-494 to CSAH 61

Alternatives from CSAH 4 to I-494

Horizontal alignment options considered were the following:

Upgrade on Existing Alignment - Widen the existing two-lane roadway to four lanes on the existing alignment. All existing intersections would be maintained with signals provided where warranted.

Relocation - Provide a four-lane roadway, 160 feet north of the existing road between Baker Road and Birch Island Road. Proposed County Road 62 would have at-grade intersections with Baker Road and Birch Island Road and a grade-separation with the railroad tracks. The existing road would remain as a frontage road for existing businesses and residences.

Western Terminus at Existing CSAH 4 Intersection - Terminate the roadway project at the existing intersection with CSAH 4. To follow basically the existing alignment, a 12° horizontal curve would be required.

Western Terminus Through Wetland - Continue the County Road 62 alignment in a straight westerly direction and cross a 30-acre wetland on fill or structure. The resulting intersection with CSAH 4 would line up with Townline Road, which continues in a westerly direction.

Vertical alignment options considered were the following:

At-Grade with Railroad - County Road 62 would have at-grade crossings with the Chicago-Northwestern and Milwaukee Road railroad tracks.

Grade Separation with Railroad - There would be a structure to carry County Road 62 over both the Chicago-Northwestern and Milwaukee Road railroad tracks.

One access option was considered:

Restricted Direct Land Access - Direct land access would be restricted to street crossings and to major commercial or industrial land uses.

Alternatives from I-494 to CSAH 61

Horizontal alignment options considered were the following:

Alignment Centered on Minnetonka/Eden Prairie Boundary - The centerline of the roadway would coincide with the Minnetonka/Eden Prairie boundary, thereby placing the highway equally in each city.

Alignment Curving South into Eden Prairie - The alignment would curve south into Eden Prairie in order to avoid cutting into the crest of some hills and to minimize environmental consequences. This alignment was requested by Eden Prairie in the early 1970's.

Alignment North into Minnetonka - The highway would be routed almost entirely within Minnetonka parallelling the boundary with Eden Prairie. This alignment avoids conflicts with Bryant Lake Park.

Vertical alignment options considered were the following:

High Profile over Nine Mile Creek - Two 615-foot bridges would carry eastbound and westbound County Road 62 traffic over Rowland Road and the south fork of Nine Mile Creek.

Middle Profile over Nine Mile Creek - There would be an at-grade intersection between County Road 62 and Rowland Road. The crossing of Nine Mile Creek would be either by a pair of bridges or a fill and culvert structure.

Low Profile over Nine Mile Creek - County Road 62 would cross Nine Mile Creek with either bridges or a fill and culvert structure. Rowland Road would cross over County Road 62.

Access options are discussed below:

No Access/Freeway - County Road 62 would be a four lane roadway, two lanes in each direction, with full access control. With full access control, Rowland Road would bridge over County Road 62 and Beach Road/Clearwater Drive would bridge under the highway. The interchange with I-494 would be a cloverleaf.

At-grade Intersection with I-494 Ramps - County Road 62 would be built as a four-lane divided arterial and would meet the east ramps of I-494 at-grade. This would require signalized intersections at both east and west ramps of I-494, as warranted.

At-grade intersection with Beach Road/Clearwater Drive - Beach Road/Clearwater Drive would meet County Road 62 with an at-grade intersection. The intersection would occur approximately 580 feet east of the existing Beach Road access to County Road 62. Signalization of the intersection would be provided as warranted.

At-Grade Intersection with Rowland Road - The first at-grade intersection of the four-lane County Road 62 extension would be with Rowland Road. The intersection would be signalized if warranted.

Frontage Roads - A frontage road connecting Beach Road with Rowland Road would be built to provide local circulation and direct regional access to Bryant Lake Park. Two sub-options would be; a road adjacent to County Road 62, and a road detached from the County Road 62 alignment. Both frontage road sub-options would require a structure over Nine Mile Creek.

Access Between Rowland Road and CSAH 61 - A new access point would be built east of Rowland Road and west of CSAH 61 to serve future land uses planned.

Combined Options

The full range of alternatives would be defined by combining the horizontal alignment, vertical alignment, access options, and no-build alternative for both segments of highway, a total of 360 possible design combinations.

The next section of this report discusses the process used to narrow the range of alternatives to a feasible combination of design alternatives for detailed study in the Draft Environmental Impact Statement.

Scoping of Alternatives

INTRODUCTION

The scoping of alternatives is the process by which the universe of alternatives were narrowed and refined to reach those alternatives to be addressed in the Draft Environmental Impact Statement. The scoping process used for this project included the following steps:

- A Draft Scoping Report was prepared and circulated to appropriate Federal, State and local agencies and presented at information meetings in Minnetonka and Eden Prairie.

- A formal scoping meeting was held to present the findings of the Draft Scoping Report and receive comments.

- Comments made at the scoping meeting and written comments received were analyzed and the alternatives to be considered were expanded to address the significant issues raised.

The Final Scoping Report documents in detail the scoping process which is summarized here.

Three broad impact areas were considered for narrowing the range of alternatives:

- Significant environmental constraints

- Roadway function and projected traffic volumes
- Relative costs

SIGNIFICANT ENVIRONMENTAL CONSTRAINTS

Any roadway improvement built through the County Road 62 corridor must respond to the existing and proposed land uses and environmental constraints. Three areas which could be significantly impacted by the proposed project are Bryant Lake Regional Park, the Nine Mile Creek corridor and the large wetland located near CSAH 4.

Bryant Lake Regional Park

Bryant Lake Regional Park has recently been acquired by the Hennepin County Park Reserve District for development as a regional facility. (See Figure 12).

The location of Bryant Lake Regional Park within the study area impacts the horizontal alignment of the crosstown extension. As described earlier, three alternative alignments were considered:

- Alignment centered on Minnetonka/Eden Prairie boundary
- Alignment curving south into Eden Prairie
- Alignment north into Minnetonka

The alignment centered on the Minnetonka/Eden Prairie boundary and the alignment curving south into Eden Prairie would both involve a significant taking of parkland. To minimize and avoid any impact upon Bryant Lake Park, the horizontal alignment curving north into Minnetonka was recommended in mid-1970. The selection of this alternative is still valid.

The City of Minnetonka has received plats designating an approximate 300-foot strip north of the Minnetonka/Eden Prairie boundary between Clearwater Drive and Rowland Road as an outlot for future highway right-of-way.

Therefore, it was determined that the horizontal alignment alternatives of curving south into Eden Prairie and centering on the Eden Prairie/ Minnetonka border be dropped from further consideration.

Nine Mile Creek

The County Road 62 corridor crosses Nine Mile Creek just west of Rowland Road. Nine Mile Creek is a small, intermittent stream which is designated as a public open space corridor in both Minnetonka and Eden Prairie. The section of Nine Mile Creek which is located in the highway study area also forms a part of the metropolitan regional trail system and is proposed to be developed for equestrian and bicycle/pedestrian trails.

The land required for the proposed highway at Nine Mile Creek is owned by the City of Minnetonka and dedicated for highway right-of-way use. Therefore, the proposed action does not reuqire involvement with Section 4(f) of the Department of Transportation act.

Any proposed alternative for crossing Nine Mile Creek must be able to sensitively accomplish the following:

- Maintain equestrian and bicycle/pedestrial trails.
- Enhance the public open space corridor.
- Provide a suitable waterway opening to avoid adverse flooding impacts.

Crossing Nine Mile Creek with properly designed bridges could preserve the natural and recreational resources of the stream and valley. The fill and culvert alternative of crossing Nine Mile Creek, which would be less costly than bridges, could also be designed to be aesthetically compatible with the surrounding terrain and recreational uses in the trail corridor.

Therefore, it was determined that both bridge and culvert alternatives be evaluated in the Draft Environmental Impact Statement.

Wetland

A large wetland of approximately 30 acres is located near the western terminus of the project. The wetland has been identified as a "palustrine emergent" wetland by the St. Paul field office of the U.S. Fish and Wildlife Service. Two roadway alternatives were initially proposed in the area of the wetland:

- Western terminus using the existing CSAH 4 intersection
- Western terminus through wetland

In the comments prepared in response to the Project Development Report, the U.S. Fish and Wildlife Service stated that crossing the wetland on fill or structure, "would cause irreparable damage to waterfowl habitat and other wildlife species," and that the wetland is necessary to the maintenance of area water quality. The U.S. Environmental Protection Agency, the Minnesota Department of Natural Resources and the Minnesota Pollution Control Agency also raised concerns about the alternative of going through the wetland.

The roadway alternative that passes through the wetland offers significant traffic operational improvements when compared to the offset intersections of the other alternative that goes around the wetland on the existing roadways. The offset intersections will result in two turning movements for vehicles desiring to travel east and west of CSAH 4, will increase the traffic volume on CSAH 4 between the offset intersections, and most likely require two traffic control devices. Both the City of Minnetonka and Eden Prairie requested that an alternative be studied which would provide a four-way intersection between County Road 62 and CSAH 4.

Alternative alignments were developed at the western terminus to provide a better intersection, allow continuous movement to Townline Road, and minimize impacts to the wetland.

If the proposed action includes an alternative which will use any portion of a wetland, a Wetlands Finding must be filed documenting that there is no feasible or prudent alternative to construction in the wetlands and that the proposed project includes all practicable measures to minimize harm to the wetlands. Therefore, alternatives were analyzed which would avoid the wetland, as well as the alternative which would use the wetland.

In response to the above considerations, the following build alternatives were determined for further analysis in the Draft Environmental Impact Statement:

- Existing Alignment and Intersections - The intersections of County Road 62 and Townline Road with CSAH 4 would remain as the existing configuration and east-west through traffic would be required to jog 1000 feet along CSAH 4. Taking of wetland would be avoided.

- Realignment to Townline Road West of CSAH 4 - The County Road 62 alignment would be extended through the existing intersection with CSAH 4 and then curve to the south to meet Townline Road. The taking of wetland would be avoided. The residential neighborhood west of CSAH 4 would be significantly impacted.

- Alignment Through Edge of Wetland - The County Road 62 alignment would cross the edge of the wetland to intersect with CSAH 4 at Townline Road. This alternative replaces the consideration of an alignment straight through the wetland.

ROADWAY FUNCTION AND PROJECTED TRAFFIC VOLUMES

The second impact area considered for narrowing the range of alternatives was roadway function and projected traffic volumes. The roadway design for County Road 62 must reflect the highway's transportation function within the overall system and must efficiently handle the forecasted traffic volumes for the corridor. Two transportation planning factors were applied during this analysis: functional classification and traffic volumes forecasted for the year 2000.

Functional Classification

As defined in the Metropolitan Development Guide, functional classification involves the determination of what function each roadway should perform before determining street width, speed limit, intersection control or design features. The functional classification system consists of five classes of roadways in the metropolitan area: principal arterials, intermediate arterials, minor arterials, collectors and local streets. Principal arterials and intermediate arterials are considered part of the metropolitan roadway system.

County Road 62 from Shady Oak Road to I-494 is classified as an intermediate arterial and, as an extension of the existing crosstown, functions as part of the metropolitan roadway system.

County Road 62 from I-494 to Eden Prairie Road is designated a minor arterial. This functional classification indicates the transitional role of this segment of highway between the metropolitan system and the municipal systems of predominantly collector and local roads in western Minnetonka and Eden Prairie.

An implication of the change in function of County Road 62 between CSAH 61 and CSAH 4 is the location and frequency of local access to the roadway. The transition from intermediate arterial to minor arterial is a transition from no direct land access, except major traffic generators, to only restricted direct land access. The range of alternatives which address at-grade intersections at Beach Road, Clearwater Drive, and Rowland Road, were taken into the detailed study because of the transitional character of the roadway function. However, providing an additional access point east of Rowland Road was not feasible because it would occur too close to the west ramps of the CSAH 61 interchange.

Direct land access was also a limiting factor in the combined option of upgrading on existing alignment with a railroad grade separation between CSAH 4 and I-494. Because access cannot be maintained to adjacent properties or crossroads, this option was dropped.

Forecasted Traffic Volumes

The estimated future traffic volumes, shown in Figure 5, are based on year 2000 computer traffic assignments by the Minnesota Department of Transportation and reflect the municipal land use forecasts for the build and no-build alternatives. Traffic volumes are forecasted to reach an average daily traffic volume of 21,500 on County Road 62 between CSAH 61 and I-494, 20,500 between I-494 and CSAH 60, and 17,900 ADT between CSAH 60 and CSAH 4, for the build alternatives.

The traffic volume forecasts indicate that a freeway level facility is not required in the study area to handle traffic volumes. The range of volumes, from 17,900 to 21,500, also indicates that a four-lane roadway will provide an adequate level of service. Therefore, the freeway alternative was dropped.

RELATIVE COSTS

When defining the universe of alternatives discussed earlier in this report, no consideration was given to construction costs. However, construction costs and the ability to provide local matching money to secure federal funds were factors considered during the scoping process. Alternatives which would require exceptionally high cost, while providing no appreciably greater benefit, were not recommended for detailed study in the Draft Environmental Impact Statement. Two areas where costs were considered to be a significant factor were the Nine Mile Creek Crossing and the Frontage Road alternatives.

Nine Mile Creek Crossing

The three alternative profiles considered for crossing Nine Mile Creek and their estimated costs are shown in Table 3 below:

TABLE 3

ESTIMATED COSTS RELATIVE TO NINE MILE CREEK CROSSING

PROFILE	ESTIMATED COST[1/]
High Profile - two 615 foot bridges	$ 7.75 million
Middle Profile - with bridges	$ 5.1 million
Low Profile - with bridges	$ 6.65 million

1/ Total highway construction cost from CSAH 61 to Baker Road in 1979 dollars.

Source: Hennepin County Department of Transportation

The high profile option which has the highest cost and does not provide additional benefit to the project was dropped from detailed study.

Frontage Roads

Frontage road options were designed both north and south of proposed County Road 62 to address the issues of providing local access in Eden Prairie between Beach Road and Rowland Road and to provide a more direct route to the proposed Bryant Lake Regional Park from the regional highway system. The frontage road options would also require a crossing of Nine Mile Creek which would cost from $633,000 to $1,160,000 on the north, and $900,000 to $1,000,000 on the south.

Since a south frontage road would encroach upon existing parkland and local and regional access could be provided with other alternatives at less cost, it was determined that the frontage road alternatives not be retained for detailed study.

CONCLUSIONS

Based upon the preliminary analysis of significant environmental constraints, roadway function, projected traffic volumes and relative costs, a number of options were dropped from detailed study in the Draft Environmental Impact Statement. These are summarized in Table 4.

The alternatives which have been retained for detailed study are summarized in the following section of this report.

TABLE 4

SUMMARY OF ALTERNATIVES DROPPED FROM DETAILED STUDY
IN THE DRAFT ENVIRONMENTAL IMPACT STATEMENT

ALTERNATIVE DROPPED	BASIS
From Shady Oak Road to I-494:	
• Horizontal alignment centered on Minnetonka/Eden Prairie boundary	• Alternative requires acquisition of parkland.
• Horizontal alignment curving south into Eden Prairie	• Alternative requires acquisition of parkland.
• High profile over Nine Mile Creek	• Requires higher cost without providing additional benefit to project.
• No access/freeway	• Traffic volumes do not require this level of facility and greatly impacts local circulation.
• Access between Rowland Road and Shady Oak Road	• Intersection would occur too close to west ramps of Shady Oak Road interchange for safe traffic operations.
• South Frontage Road	• Requires high cost of crossing Nine Mile Creek ($900,000 to $1,000,000), would require acquisition of parkland, would have significant negative visual impact on the park, and other alternatives exist to provide the access that results from the frontage roads.
• North Frontage Road	• Requires high cost of crossing Nine Mile Creek ($633,000 to $1,160,000), duplicates existing local access along Bren Road, and other alternatives under consideration provide benefits of a service road.
From I-494 to Eden Prairie Road:	
• Western terminus through Wetland	• Results in irrepairable damage to waterfowl habitat and wildlife. • Results in damage of wetlands function in maintaining area water quality. • Requires additional construction cost of $850,000 to $4,000,000.
• Upgrading on existing alignment with grade-separated crossing of railroad	• Access cannot be maintained to adjacent property owners because of fill required.

Description of Alternatives

The alternatives retained following the scoping process for detailed analysis in the Draft Environmental Impact Statement are described in this section. Included in the descriptions of each alternative are the location, termini and major design features such as number of lanes, right of way required and typical section.

ALTERNATIVE 1: NO BUILD

Under this alternative, the Draft Environmental Impact Statement discusses in detail the impacts which are anticipated if no roadway construction is undertaken.

With the no-build alternative from CSAH 4 to I-494 the existing two-lane road would be maintained with minor construction activities to allow continuing operation of the roadway. These activities could include resurfacing, grading of shoulders or other safety improvements.

In the no-build alternative from I-494 to CSAH 61, no road would be constructed to link those two highways. With this alternative County Road 62 would terminate, as it does today, at CSAH 61.

ALTERNATIVE 2: UPGRADE ON EXISTING ALIGNMENT WITH THE RAILROAD CROSSING AT-GRADE

This alternative, shown in Figure 6, is located in the western half of the proposed highway corridor between CSAH 4 and I-494. The western terminus of this alternative, the County Road 62 intersection with CSAH 4, is being evaluated with three subalternatives which are described later.

With Alternative 2 the existing roadway would be widened from two to four lanes on the existing horizontal alignment with the centerline shifting approximately 14 feet to the north. The Chicago-Northwestern and the Milwaukee Road railroad tracks would be crossed at-grade. All existing intersections, including private drives, Baker Road and the west ramps of I-494, would be maintained with signalization provided as warranted.

The proposed roadway section, shown in Figure 7, would consist of four 12-foot lanes and curb and gutter for a total 52-foot section. The width of right-of-way required would vary to a width of approximately 140 feet.

ALTERNATIVE 3: RELOCATION WITH RAILROAD GRADE SEPARATED

This alternative, shown in Figure 8, is located between CSAH 4 and I-494, as is Alternative 2. This alternative can also be combined with either of the three western terminus subalternatives.

Alternative 3 consists of a four-lane roadway to be located approximately 160 feet north of the existing road from Birch Island Road to Baker Road. A bridge structure would be constructed to carry proposed County Road 62 over both the Chicago-Northwestern and Milwaukee Road railroad tracks. The existing road, CSAH 67, would be maintained as a frontage road for local access to properties to the south.

The proposed roadway section would be the same as Alternative 2, as shown in Figure 7. The width of right-of-way required would vary to a maximum width of approximately 200 feet.

WESTERN TERMINUS SUBALTERNATIVES

Three subalternatives, shown in Figure 9, have been analyzed for the wetland area and intersection of proposed County Road 62 with CSAH 4. These alternatives have been studied to address the issues of avoiding impacts to the wetland and providing an efficient intersection with County Road 62, CSAH 4 and Townline Road.

Subalternative A: Existing Alignment and Intersections

This subalternative proposes that County Road 62 to be widened to four lanes on its existing alignment to the present intersection with CSAH 4. The typical section, Figure 7, would consist of a 52-foot roadway with four 12-foot lanes and turn lanes as appropriate at the intersection. The intersection would be signalized if warranted.

Subalternative B: Realignment to Townline Road West of CSAH 4

This subalternative was proposed to study the impact of avoiding the wetland and providing a continuous connection between County Road 62 and Townline Road. The alignment follows the existing County Road 67 alignment, curves slightly into the wetland to provide a four-way intersection with County Road 4, and then curves to the south to realign with Townline Road.

The typical section for this subalternative would be a 52-foot roadway with four 12-foot lanes as shown in Figure 7. At the intersection, turn lanes would be provided as appropriate and signals would be provided as warranted.

Subalternative C: Alignment Through Edge of Wetland

This subalternative curves through the edge of the wetland to line up at CSAH 4 across from the future extension of Townline Road. West of CSAH 4 the proposed alignment would taper into the existing Townline Road alignment. The existing intersection of County Road 67 at CSAH 4 would be closed.

The typical section for this subalternative would be a 52-foot roadway with four 12-foot lanes as shown in Figure 7. The intersection with CSAH 4 would be signalized if warranted, and turning lanes would be provided.

C.S.A.H. 4 TO I-494

SEE FIGURE 9 FOR WESTERN TERMINUS SUBALTERNATIVES

MATCH LINE "A"

ALTERNATIVE 2
(UPGRADE ON EXISTING ALIGNMENT WITH THE RAILROAD CROSSING AT-GRADE)

BIRCH ISLAND ROAD

INDUSTRIAL DRIVE

MATCH LINE "B"

I-494 TO C.S.A.H. 61

MATCH LINE "B"

I-494

BELLEVIEW AVENUE

SUBALTERNATIVE A

ALTERNATIVE 4 (ROWLAND ROAD GRADE SEPARATED)

CANADIAN PACIFIC RAILROAD

ROWLAND ROAD

SUBALTERNATIVE B

OLD SHAKOPEE ROAD

SHADY OAK ROAD

W. 82ND STREET

County Road 62

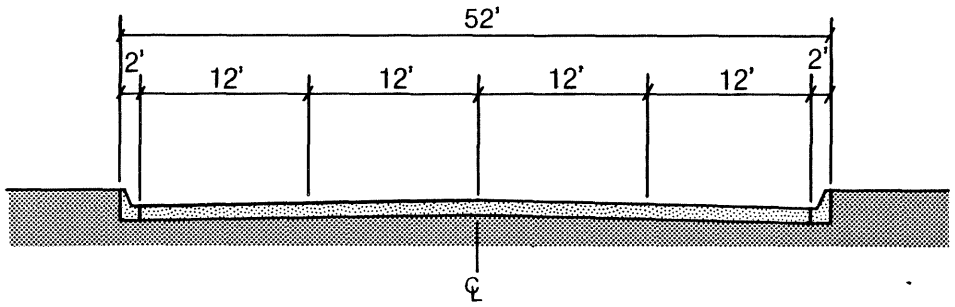
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HIGHWAY ALTERNATIVES 2 AND 4

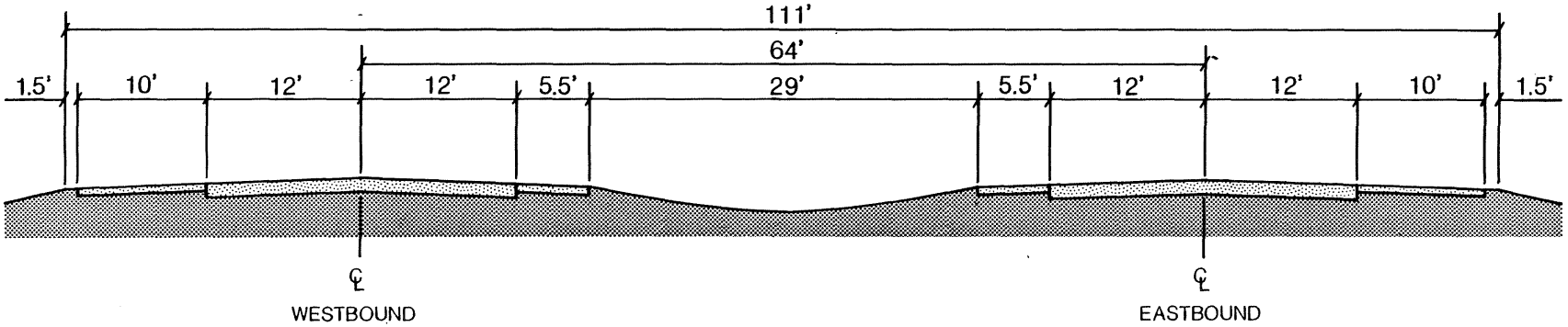
FIGURE 6

north

0 100 200 400 800



TYPICAL SECTION 52' ROADWAY



TYPICAL SECTION FOUR-LANE DIVIDED ROADWAY

County Road 62

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TYPICAL SECTIONS

FIGURE 7

ALTERNATIVE 4: ROWLAND ROAD GRADE SEPARATED

This alternative, shown in Figure 6, is located in the eastern half of the proposed highway corridor between I-494 and CSAH 61. The horizontal alignment is tied on the west to the existing interchange with I-494 and on the east to existing interchange of County Road 62 and CSAH 61. After beginning at the I-494 interchange centered on the border of Minnetonka and Eden Prairie the alignment curves north into Minnetonka to avoid Bryant Lake Regional Park.

At-grade access with this alternative would be at the ramps with I-494 and Beach Road/Clearwater Drive. Signalization would be provided as warranted. Rowland Road would be constructed over County Road 62 on a two-lane bridge.

The proposed roadway section, as shown in Figure 7, would be a four-lane divided highway with 12-foot lanes and a 29 foot grass median. The right-of-way width required would be 300 feet.

ALTERNATIVE 5: ROWLAND ROAD AT-GRADE

This alternative, shown in Figure 8, is located between I-494 and CSAH 61 and has the same horizontal alignment and typical section as Alternative 4.

With this alternative, access would be provided to Rowland Road with an at-grade intersection. At-grade intersections would also occur at the I-494 ramps and Beach Road/Clearwater Drive, the same as Alternative 4. Signalization would be provided as warranted.

NINE MILE CREEK CROSSING SUBALTERNATIVES

Two subalternatives have been analyzed for the crossing of Nine Mile Creek which is located in a steep valley. Each of the subalternatives can be combined with either Alternative 4 or Alternative 5 and are shown in Figures 10 and 11.

Subalternative A: Bridge Crossing

Under this subalternative, County Road 62 would cross Nine Mile Creek with two bridges, one carrying eastbound traffic and one carrying westbound traffic. Each bridge would be approximately 465 feet in length. The profiles for this subalternative with Alternatives 4 and 5 are shown in Figures 10 and 11.

Subalternative B: Culvert Crossing

Under this subalternative, crossing of Nine Mile Creek would be accomplished with fill and culvert construction. A culvert opening would be provided to adequately handle the hydraulic requirements of Nine Mile Creek and a separate or adjacent culvert would be provided to accommodate the regional trail. The profiles for this subalternative with Alternatives 4 and 5 are shown in Figures 10 and 11.

SEE FIGURE 9 FOR WESTERN TERMINUS SUBALTERNATIVES

C.S.A.H. 4 TO I-494

← MATCH LINE "A"

ALTERNATIVE 3
(RELOCATION WITH RAILROAD GRADE SEPARATED)

MATCH LINE "B" →

C.S.A.H. 4

BIRCH ISLAND ROAD

INDUSTRIAL DRIVE

I-494 TO C.S.A.H. 61

SUBALTERNATIVE A

←MATCH LINE "B"

C.S.A.H. 61

I-494

BERGER AVENUE

SUBALTERNATIVE B

ALTERNATIVE 5 (ROWLAND ROAD AT-GRADE)

ROWLAND ROAD

TRAIL

C.S.A.H. 61

W. BROAD STREET

OLD SHADY OAK ROAD

SHADY OAK ROAD

County Road 62

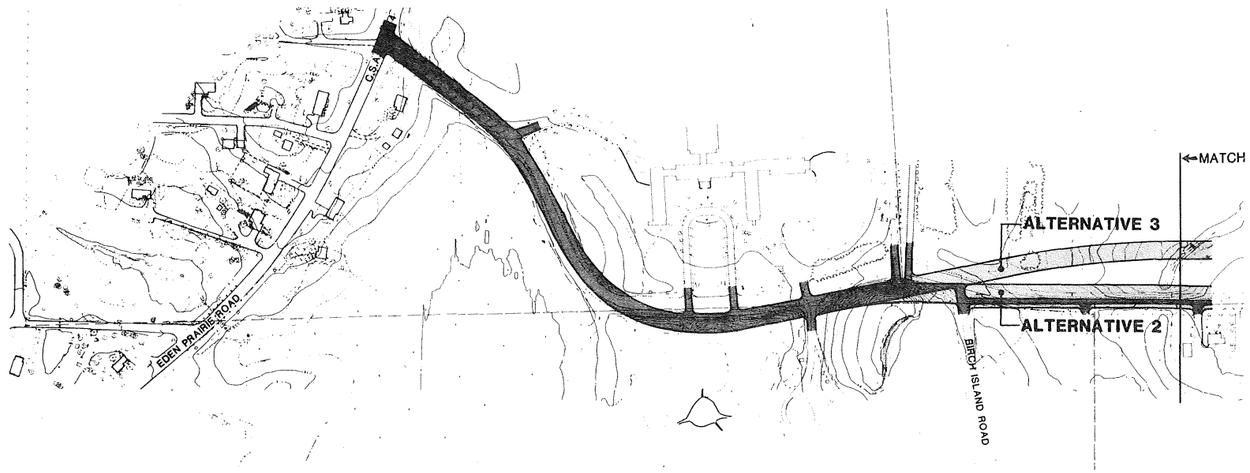
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HIGHWAY ALTERNATIVES 3 AND 5

FIGURE 8

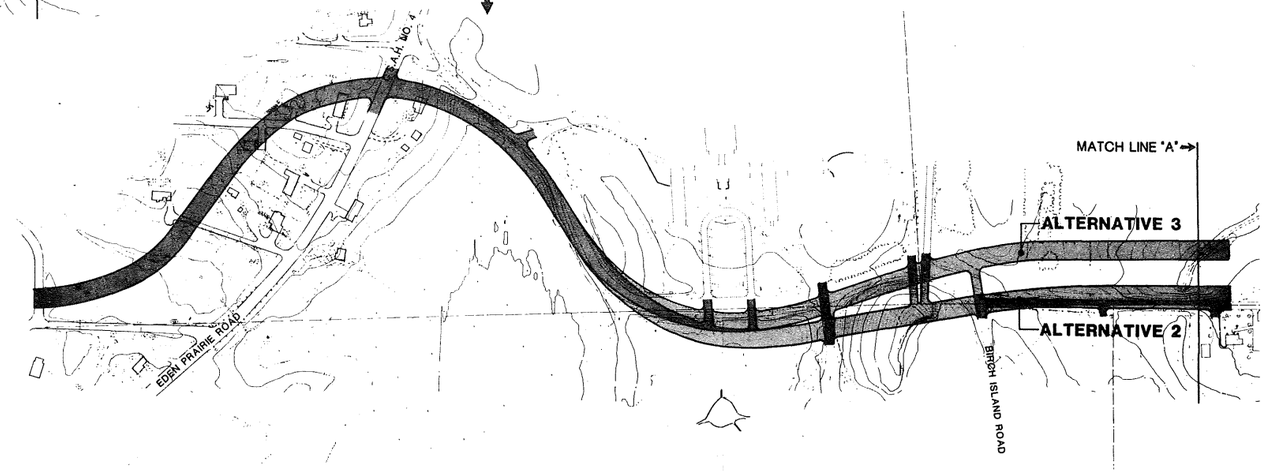
north

0 100 200 400 800

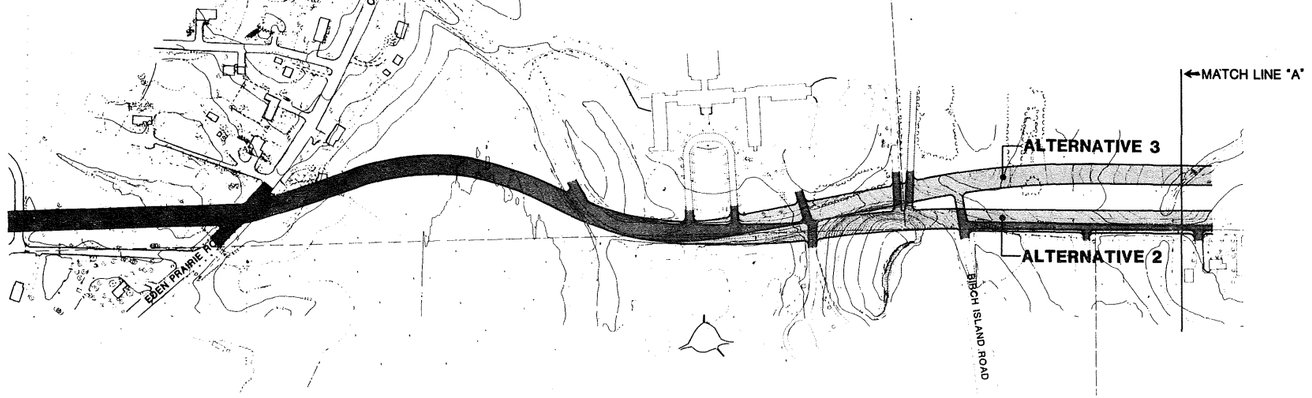


SUBALTERNATIVE A

SUBALTERNATIVE B



SUBALTERNATIVE C



County Road 62

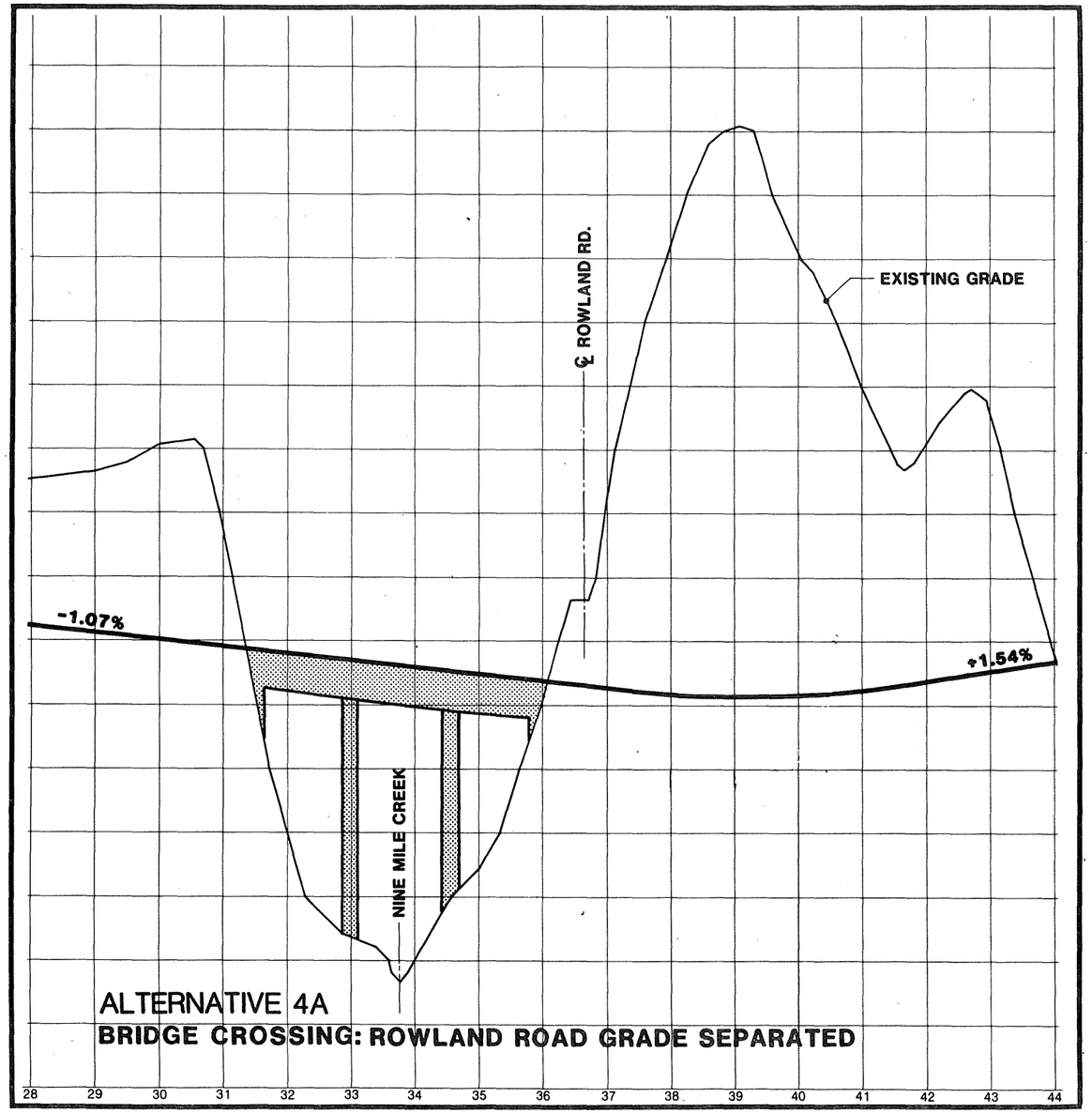
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WESTERN TERMINUS SUB-ALTERNATIVES

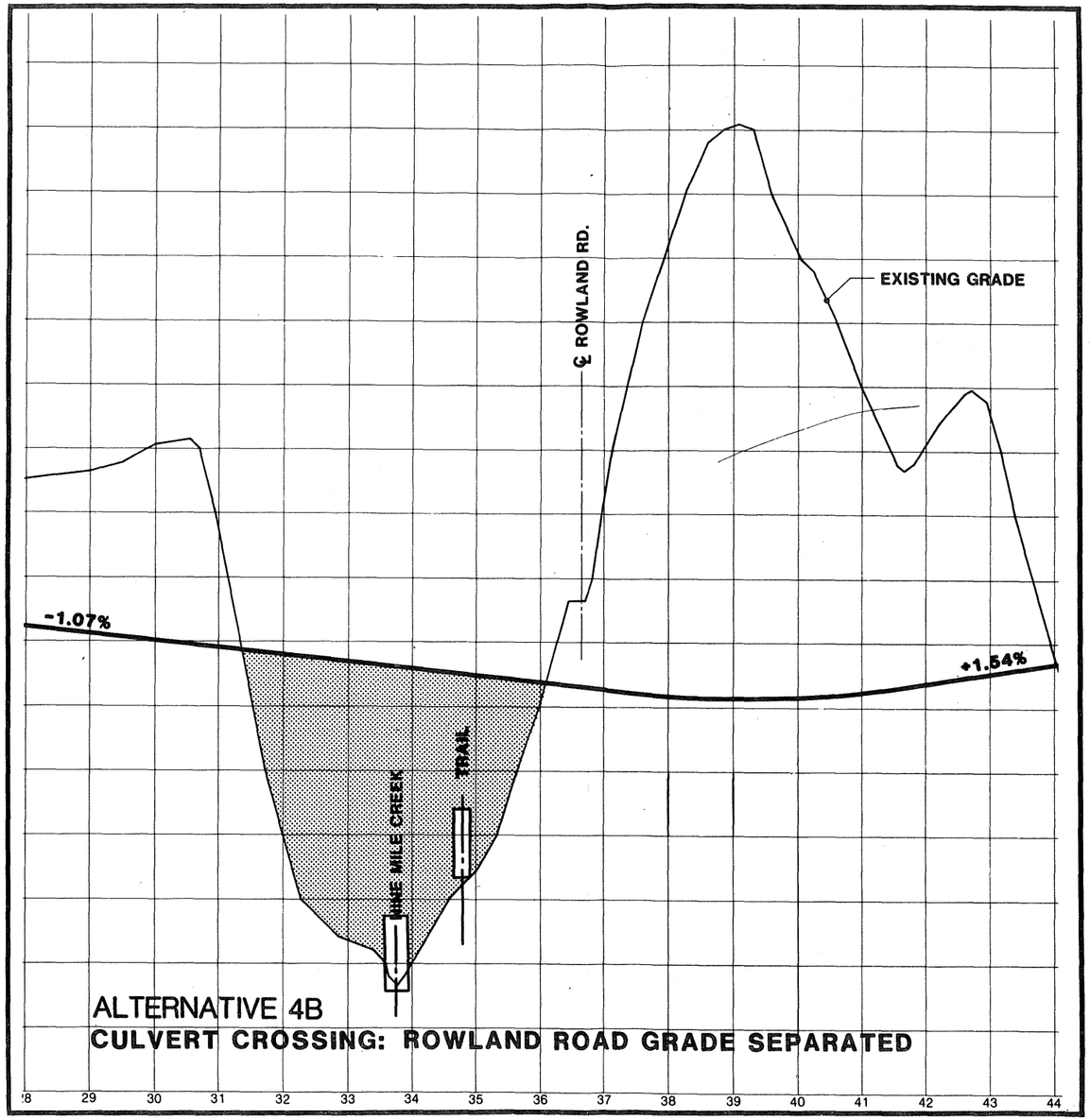
FIGURE 9

north

0 100 200 400 800



ALTERNATIVE 4A
BRIDGE CROSSING: ROWLAND ROAD GRADE SEPARATED



ALTERNATIVE 4B
CULVERT CROSSING: ROWLAND ROAD GRADE SEPARATED

County Road 62

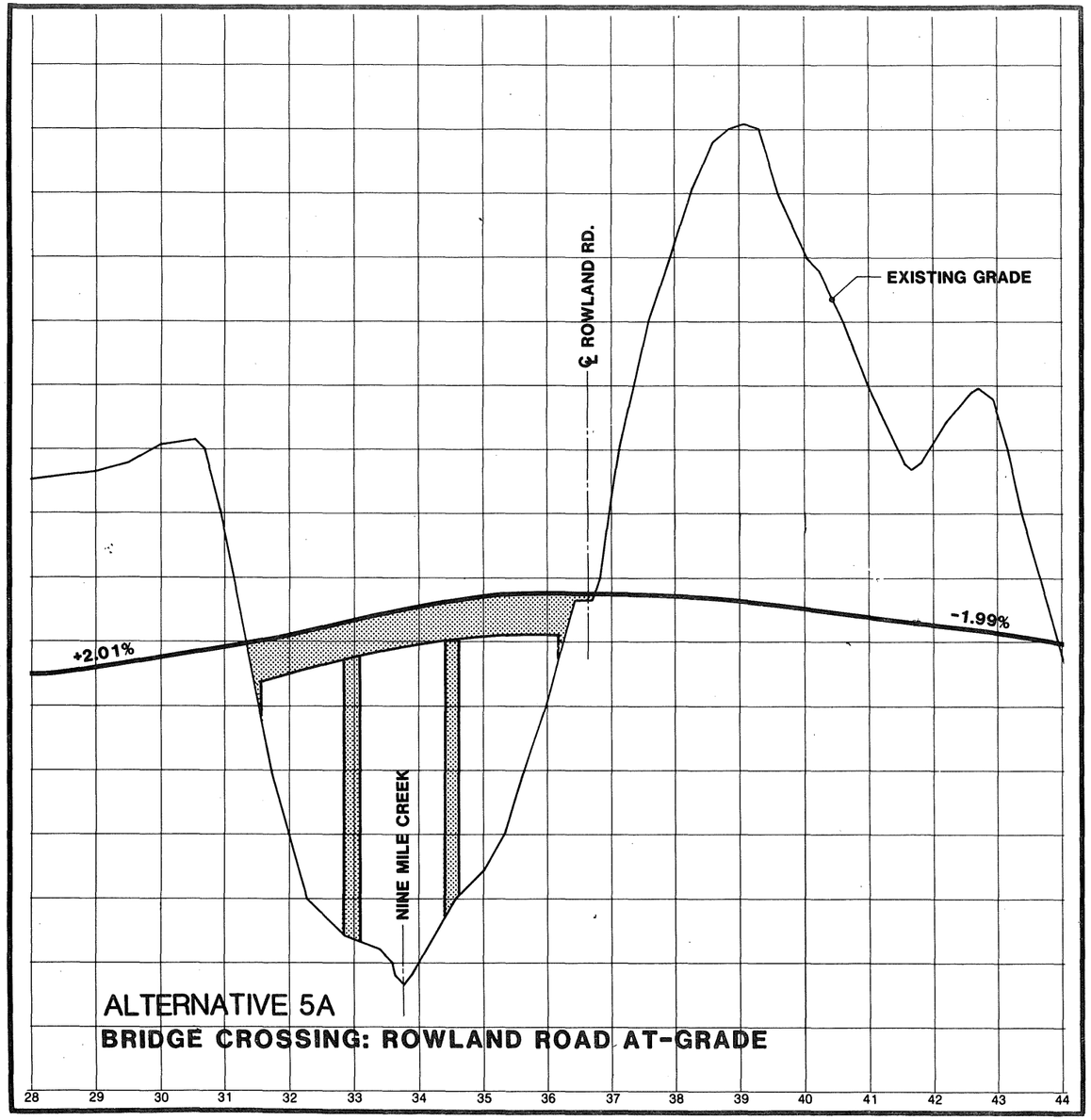
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FROM I-494 TO C.S.A.H. 61

NINE MILE CREEK CROSSING SUBALTERNATIVES

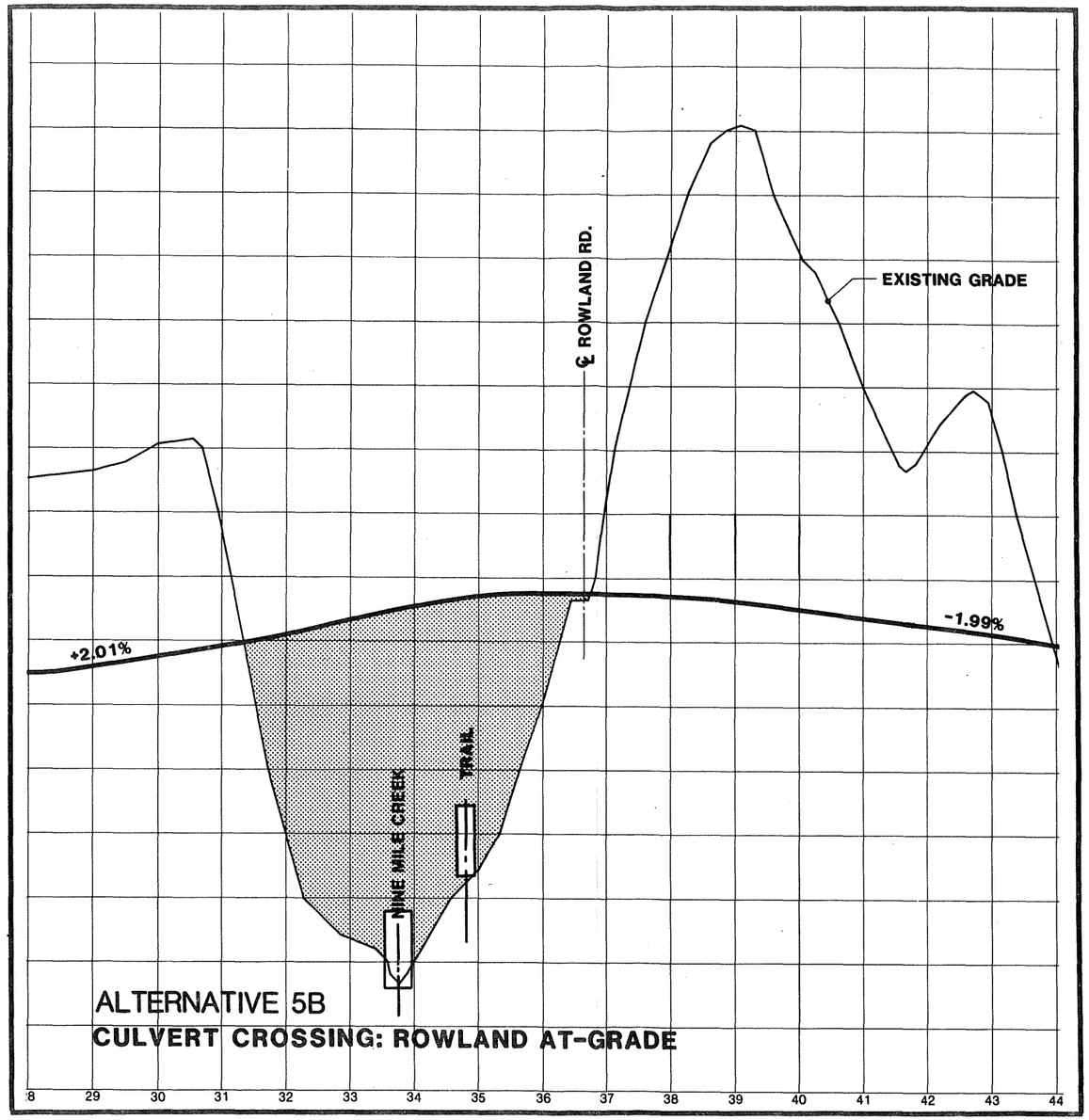
WITH ALTERNATIVE 4: ROWLAND ROAD GRADE SEPARATED

FIGURE 10



ALTERNATIVE 5A

BRIDGE CROSSING: ROWLAND ROAD AT-GRADE



ALTERNATIVE 5B

CULVERT CROSSING: ROWLAND AT-GRADE

County Road 62

Environmental Impact Statement

FROM I-494 TO C.S.A.H. 61

NINE MILE CREEK CROSSING SUBALTERNATIVES

WITH ALTERNATIVE 5: ROWLAND ROAD AT-GRADE

FIGURE 11

CHAPTER 4: AFFECTED ENVIRONMENT

This chapter describes the study area in regard to its present and future social, economic and environmental characteristics. Identified in this chapter are environmentally sensitive areas and the status of land use planning within the proposed highway corridor. The anticipated impacts of the proposed roadway construction upon the existing environment are described in Chapter 5.

Social and Economic Conditions

DEMOGRAPHIC DATA

The proposed highway corridor is located in two western suburbs of the metropolitan area, Eden Prairie and Minnetonka. Both cities are developing suburbs which have experienced significant growth over the past 10 years and are forecasted to continue to grow through the year 2000. The most recent available data indicates the population in these communities is relatively young, having a greater percentage of persons under 18 than the metropolitan average. Household size and income are also greater than the metropolitan average.

There are no minority populations or concentrations of ethnic, elderly or handicapped persons located in the highway corridor who would be adversely affected by the proposed roadway construction.

Table 5 summarizes the demographic characteristics of the two communities in which the proposed highway would be located and compares them with the metropolitan area.

TABLE 5

POPULATION AND COMMUNITY CHARACTERISTICS

Characteristic	Eden Praire	Minnetonka	Metropolitan Area
Persons (1980)	16,263	38,683	1,985,873
% under 18 years (1980)	33.6%	30.5%	28.0%
Average Household Income (1977)	$23,308 (est.)	$26,500	$20,334 (Suburban)
Average Household Size (1980)	3.01	3.00	N/A

Source: Minnesota Population and Housing Characteristics, 1980 Complete Count Census Data, Minnesota Analysis and Planning System, Agricultural Extension Service, University of Minnesota.

POPULATION, EMPLOYMENT AND HOUSEHOLDS

Demographic forecasts of population, employment, and household units in Eden Prairie and Minnetonka have been made for the year 2000 by the Metropolitan Council based upon the disaggregation of the regional forecasts. The cities of Eden Prairie and Minnetonka have also forecast population, employment and household data based upon recent dwelling unit counts, employment surveys, and approved development plans.

Table 6 summarizes the Metropolitan Council and the municipal forecasts of population, employment, and households for the year 2000. These projections are based on construction of County Road 62 to I-494 as called for in the Metropolitan Transportation Plan.

TABLE 6

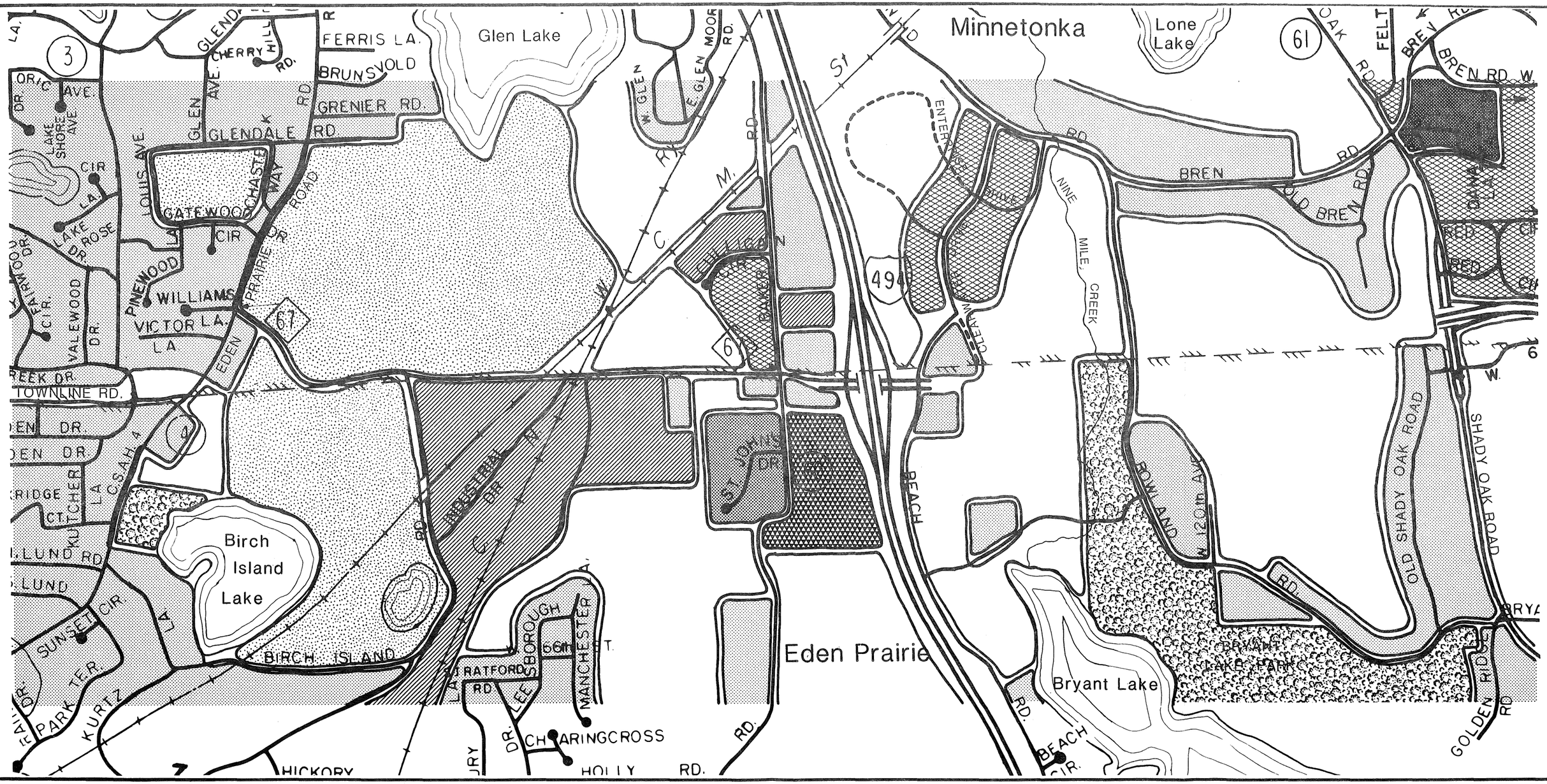
YEAR 2000 FORECASTS
POPULATION, EMPLOYMENT AND HOUSEHOLD DATA

	EDEN PRAIRIE			MINNETONKA		
Source	Population	Dwelling Units	Employment	Population	Dwelling Units	Employment
Metropolitan Council Forecast	33,300	12,010	16,000	44,500	16,145	29,130
Municipal Forecasts	35,490	11,358	16,900	52,186	19,176	33,093

LAND USE

The existing land use in the proposed highway corridor consists of parcels of open land which are being developed for residential, commercial and industrial use. Two large areas of County-owned land are located in the Corridor: the former Glen Lake Sanitarium Site, which is now used by several public agencies for various programs, and Bryant Lake Regional Park. The existing pattern of land use is shown in Figure 12.

Residential land use, within or adjacent to the proposed action, is predominately single family residential and is located west of CSAH 4. A medium density residential area is located off Baker Road on the south side of the corridor, and a light scattering of single family homes are located between I-494 and CSAH 61.



County Road 62

Environmental Impact Statement

EXISTING LAND USE

- LOW DENSITY RESIDENTIAL
- MEDIUM DENSITY RESIDENTIAL
- HIGH DENSITY RESIDENTIAL
- COMMERCIAL
- PUBLIC
- PARK
- OFFICE
- INDUSTRIAL
- UNDEVELOPED

FIGURE 12

north 0 500 1000 2000

Industrial land uses are located in Eden Prairie clustered along the Chicago-Northwestern and Milwaukee railroad tracks. Commercial and office buildings are located in Minnetonka at the Baker Road intersection and the Clearwater Drive intersection.

Two areas of high density, multi-use development are located at the eastern terminus of the project; Opus II in Minnetonka and the proposed City West development in Eden Prairie. Both developments consist of office and high density residential uses.

The significant open space areas found in the corridor are the large wetland area associated with Birch Island Lake, wetlands located northwest of the Baker Road intersection, the Nine Mile Creek corridor and Bryant Lake Regional Park.

COMMUNITY SERVICES

The County Road 62 highway corridor is located along the border between Eden Prairie and Minnetonka. The school districts found within this corridor are independent school district 274 in Minnetonka and district 272 in Eden Prairie, shown in Figure 17. These districts provide elementary, junior high, and senior high schools for area students. There are no public school buildings located within the highway corridor. A cooperative school rehabilitation center is located on County Road 67 in Eden Prairie across from the Glen Lake Sanitarium.

Physical Environment

AIR QUALITY

The proposed highway action is located in an area of low density land uses with many undeveloped tracts of land. The ambient air quality in the corridor was monitored in May and June, 1981 to establish the background carbon monoxide concentrations found in the area. The carbon monoxide monitoring results indicate a maximum 1-hour concentration of 2.3 parts per million and a maximum 8-hour concentration of 1.6 parts per million.

The background levels of carbon monoxide are well below Federal and State air quality standards and reflect the undeveloped character of the adjacent land use in the corridor.

NOISE

Ambient noise levels were determined by monitoring sound levels at twelve sites throughout the study area. Monitored sound levels for L_{10} ranged from 54 to 66 dBA. In all cases, the existing sound levels are below the Federal Design Noise Levels.

TOPOGRAPHY AND VISUAL ENVIRONMENT

The topography in the study area varies from steeply rolling in the east to more gently rolling in the west. The physiographic relief of the eastern half of the project, from I-494 to CSAH 61, is steeply rolling with some slope gradients in excess of 40 percent. The dominant slope gradient is from 8 to 25 percent. In the scenic Nine Mile Creek valley elevations range from 1,012 feet on the ridgetop just east of Rowland Road down to 877 feet at Nine Mile Creek.

The rolling topography in this area is called the Minnetonka Highlands, a part of the St. Croix Moraine. The ridges and hills have narrow summits with slope lengths generally around 200 feet or less. The combination of wetlands surrounded by wooded hills intermingled with grasslands and abandoned fields provides pleasant scenic views.

SOILS AND GEOLOGY

The predominant soil association in the project area is the Peaty Muck-Hayden-Burnsville association. This association is characterized by level organic soils and hilly to steep, moderately fine-textured to moderately coarse-textured soils that developed in glacial till.

The steeply rolling topography of the area is the result of two glacial events. The first occurred during the Cary subage of the Wisconsin glaciation. During that period the Superior lobe advanced from the northeast and terminated in the vicinity of the project area leaving behind a terminal moraine called the St. Croix moraine. The rolling topography of the St. Croix moraine was only moderately affected during the Mankato Subage giving the landscape its present day character.

Soils in the deep cut and high embankment construction areas between I-494 and County Road 61 consist of various sand mixtures ranging from clean sands to sandy clays. Unprotected, the steeper sandy slopes could become potential erosion problems during heavy rains, as could open sand ditches and the area adjacent to Nine Mile Creek. Proper mitigation measures can significantly reduce the erosion potential.

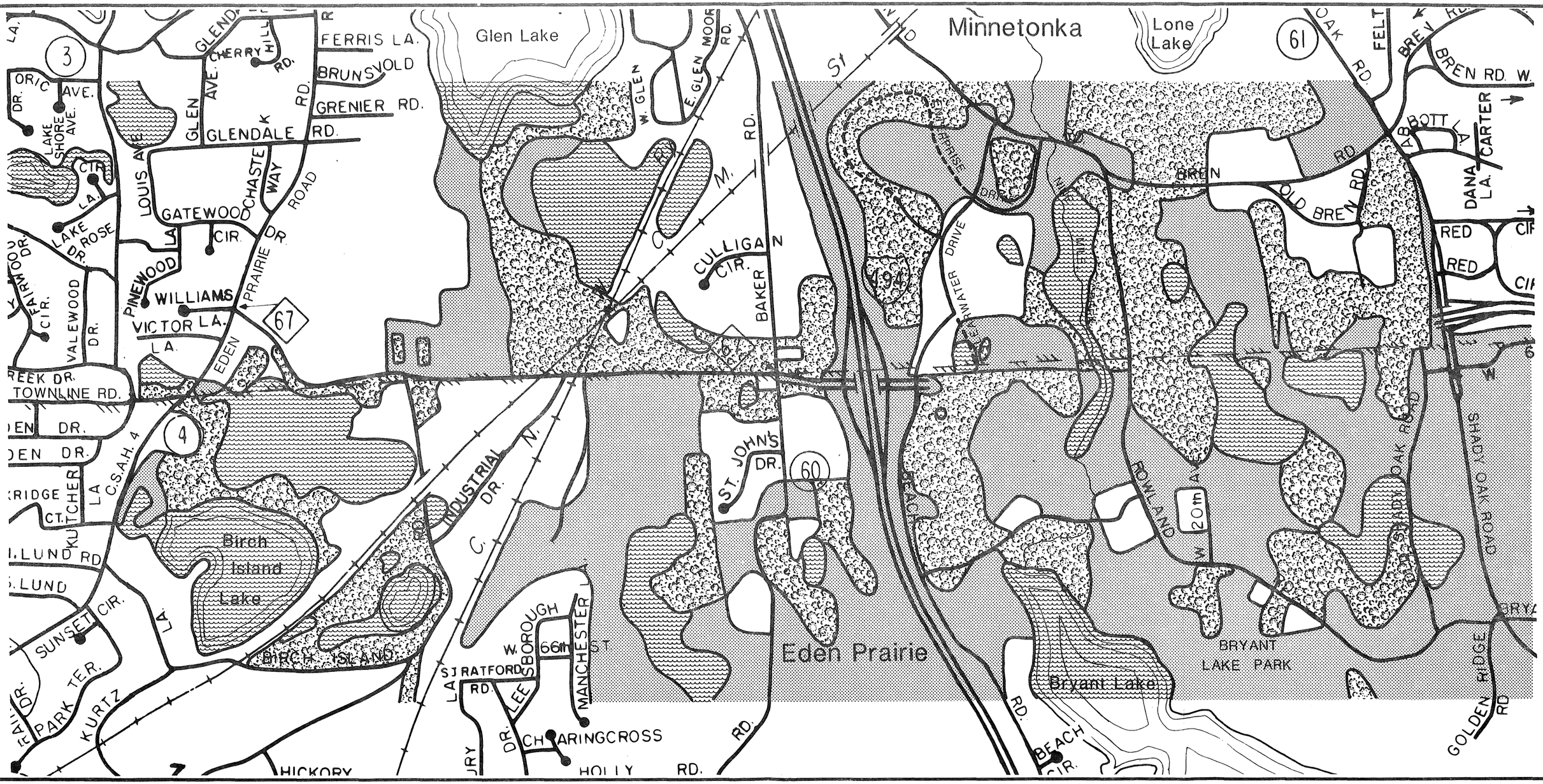
CLIMATE

Hennepin County has a continental, temperate climate with average daily summer temperatures ranging from 59°F to 87°F. Average winter temperatures range from 5°F to 25°F. The average precipitation is 27 inches per year with a range of 10 inches in 1910 to 50 inches in 1949. Prevailing winds average 10 mph and generally originate from the northwest in the winter and the southeast in summer.

Meteorology and climatology are important considerations in determining the impacts of the proposed facility on air quality and surface water runoff.

VEGETATION AND WILDLIFE

Vegetation in the study area consists of wooded ridges, open meadows and wetland areas, as shown in Figure 13. The wooded areas contain mature stands of oak and elm with some aspen and white birch, and developing under-stories. Open meadow areas found in the study area are cropped for hay or used for grazing.


Glen Lake
Minnetonka
Lone Lake
Eden Prairie
Bryant Lake
Birch Island Lake
FERRIS LA.
BRUNSVOLD
GRENIER RD.
GLENDALE RD.
GLEN AVE.
CHERRY HILL RD.
LOUIS AVE.
CHASTEK WAY
PRAIRIE DR
ROAD
GATEWOOD CIR.
PINEWOOD LA
WILLIAMS
VICTOR LA.
EDEN
TOWNLINE RD.
LAKE ROSE DR.
FAIRWOOD DR.
CIR.
VALEWOOD DR.
CREEK DR.
DEN DR.
RIDGE CT.
KUTCHER LA
LUND RD
LUND
SUNSET CIR.
PARK TER.
KURTZ
HICKORY
C.S.A.H. 4
INDUSTRIAL BLVD.
C.M. RD.
W. GLEN RD.
E. GLEN MOOR RD.
CULLIGAN CIR.
BAKER RD.
ST. JOHN'S DR.
SAINT ANDREW'S CT.
SAINT ANDREW'S DR.
SAINT ANDREW'S RD.
SAINT ANDREW'S ST.
SAINT ANDREW'S WAY
SAINT ANDREW'S LA.
SAINT ANDREW'S PL.
SAINT ANDREW'S CIR.
SAINT ANDREW'S TER.
SAINT ANDREW'S PKWY.
SAINT ANDREW'S BLVD.
SAINT ANDREW'S AVE.
SAINT ANDREW'S HWY.
SAINT ANDREW'S RTE.
SAINT ANDREW'S ROUTE
SAINT ANDREW'S TRAIL
SAINT ANDREW'S PATH
SAINT ANDREW'S WALK
SAINT ANDREW'S RUN
SAINT ANDREW'S CREEK
SAINT ANDREW'S RIVER
SAINT ANDREW'S LAKE
SAINT ANDREW'S POND
SAINT ANDREW'S MARSH
SAINT ANDREW'S SWAMP
SAINT ANDREW'S BOG
SAINT ANDREW'S FEN
SAINT ANDREW'S MOOR
SAINT ANDREW'S HEATH
SAINT ANDREW'S DOWN
SAINT ANDREW'S HILL
SAINT ANDREW'S MOUNTAIN
SAINT ANDREW'S VALLEY
SAINT ANDREW'S GLEN
SAINT ANDREW'S DALE
SAINT ANDREW'S COMBE
SAINT ANDREW'S CLOUGH
SAINT ANDREW'S DENE
SAINT ANDREW'S DEAN
SAINT ANDREW'S HOLLOW
SAINT ANDREW'S GULLY
SAINT ANDREW'S RAVINE
SAINT ANDREW'S CANYON
SAINT ANDREW'S GORGE
SAINT ANDREW'S PASS
SAINT ANDREW'S GAP
SAINT ANDREW'S NOTCH
SAINT ANDREW'S COL
SAINT ANDREW'S SADDLE
SAINT ANDREW'S RIDGE
SAINT ANDREW'S CREST
SAINT ANDREW'S SUMMIT
SAINT ANDREW'S PEAK
SAINT ANDREW'S TOP
SAINT ANDREW'S HEAD
SAINT ANDREW'S CAPE
SAINT ANDREW'S POINT
SAINT ANDREW'S HEADLAND
SAINT ANDREW'S PROMONTORY
SAINT ANDREW'S ISLAND
SAINT ANDREW'S ISLET
SAINT ANDREW'S KEY
SAINT ANDREW'S REEF
SAINT ANDREW'S SHOAL
SAINT ANDREW'S BANK
SAINT ANDREW'S SHALLOW
SAINT ANDREW'S FLAT
SAINT ANDREW'S MUDFLAT
SAINT ANDREW'S SANDBAR
SAINT ANDREW'S SPIT
SAINT ANDREW'S BEACH
SAINT ANDREW'S SHORE
SAINT ANDREW'S COAST
SAINT ANDREW'S LITTORAL
SAINT ANDREW'S INTERTIDAL
SAINT ANDREW'S SUBTIDAL
SAINT ANDREW'S ABYSSAL
SAINT ANDREW'S HADAL
SAINT ANDREW'S TRENCH
SAINT ANDREW'S DEEP
SAINT ANDREW'S ABYSS
SAINT ANDREW'S CHASM
SAINT ANDREW'S RIFT

The combination of woods and meadows provides habitat for deer, ring-necked pheasants, and other small mammals and birds. The vegetation and wildlife associated with the wetland areas are discussed in a later section entitled "Wetlands".

As urbanization continues in both Minnetonka and Eden Prairie, the vegetation and wildlife habitat along the County Road 62 corridor will dwindle. Both cities have numerous lakes, streams, wetlands and wooded areas remaining for wildlife, scenic and recreational uses. Also, both cities require developers to protect and integrate significant vegetation into residential, commercial and industrial developments, wherever possible.

PARKLAND, OPEN SPACE AND RECREATION AREAS

Parkland and open space located in the highway corridor are shown in Figure 12, Existing Land Use. The two areas of recreational use are Birch Island Lake, with its adjacent wetland, and Bryant Lake Regional Park which is connected with an open space corridor along Nine Mile Creek to parkland in Minnetonka.

Birch Island Lake - This lake and its surrounding wetland is used as an interpretive area, and passive recreational activities such as picnicing. All recreational areas developed around this lake are to the south, outside the proposed highway corridor, and would not be altered or impacted by the proposed action.

Bryant Lake Regional Park - This 158 acre park was recently acquired by Hennepin County for development as a regional park facility. Existing recreational activities include picnicing, swimming, and fishing. A horse stable, operated as a vocational training center, is also located on the park property and provides recreational horseback riding along Nine Mile Creek for people who boarding horses. Hennepin County Park Reserve intends to buy another 70 acres for an approximate total of 230 acres.

The proposed highway alignment was moved to the north to avoid the need for taking land from Bryant Lake Park, or having an environmental impact on park use.

HISTORIC AND ARCHAEOLOGICAL SITES

No sites of historical or archaeological significance are located within the proposed highway corridor.

SURFACE WATER

The County Road 62 highway corridor is located within the Nine Mile Creek watershed basin. Nine Mile Creek is approximately 15 miles long from its beginning in Hopkins, Minnesota to its outflow at the Minnesota River. The proposed highway will cross two tributaries to the South Fork of Nine Mile Creek, which for the purposes of this study are referred to as Nine Mile

Creek and the West Branch of Nine Mile Creek. Both streams drain into Bryant Lake. Figure 14 shows the existing drainage patterns in the study area.

Nine Mile Creek - This intermittent stream, located in a steep, wooded valley is approximately five feet wide in the area of the proposed highway crossing. The stream does not support game fish, however, it does provide a continuous wildlife corridor between Shady Oak Lake and Bryant Lake. The proposed highway crossing is located approximately one-half mile upstream from the creek's outlet to Bryant Lake.

West Branch of Nine Mile Creek - This small, ditch-like stream is approximately three feet wide and is crossed by the existing road with a culvert. In the vicinity of proposed County Road 62 crossing the stream drains a gently rolling open meadow. South of the highway corridor the stream combines with the outlet from Birch Island Lake to form County Ditch 34, which drains into Bryant Lake.

Lakes located within one-half mile of the highway corridor include: Birch Island Lake, Glen Lake, Bryant Lake and Lone Lake.

WETLANDS

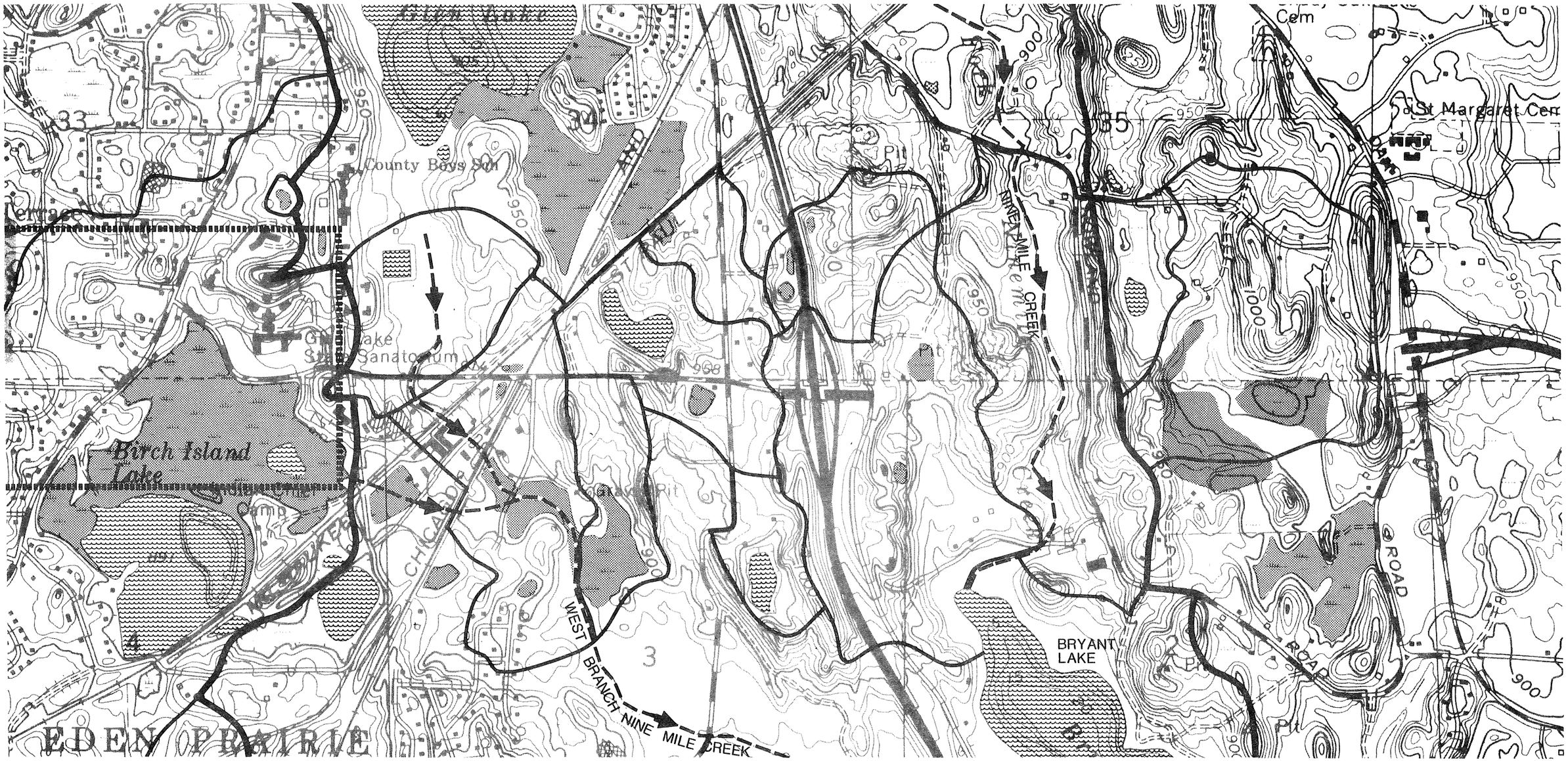
Numerous wetlands are found in the County Road 62 highway corridor and the surrounding area. Wetlands serve a significant role in the environment by maintaining water quality, serving as storage areas for surface runoff, and providing habitat for a variety of wildlife. The wetlands found within or adjacent to the proposed highway corridor are shown in Figure 14.

The occurrence of wetlands is fairly evenly distributed across the entire route location study area. Type 3 wetlands, Inland Shallow Fresh Marshes, occur most commonly and are generally less than five acres in size. There are about 25 acres per square mile of Type 3 wetlands occurring at a frequency of 4 per square mile. Table 7 summarizes the wetland types which are located partially or wholly within the County Road 62 corridor.

GROUND WATER

The quantity and quality of ground water in the Nine Mile Creek watershed is interdependent with surface water; and the use or disruption of one may affect the availability of the other. The ground water table fluctuates according to hydrologic events in response to uses by man, such as wells.

The ground water table in the Nine Mile Creek watershed is recharged by surface water in some areas. In other areas, the groundwater is a major source of supply to the surface water. The intermittent low water flow of Nine Mile Creek is the result of seepage from the higher ground on either side of the creek. The future low flow in Nine Mile Creek will be dependent upon the future level of the groundwater table, and the extent to which groundwater is used for private and municipal water supplies.



County Road 62

Environmental Impact Statement

SURFACE WATER DRAINAGE PATTERNS AND WETLANDS

- STANDING WATER
- WETLAND AREA
- MAJOR WATERSHED BOUNDARY
- SUBBASIN BOUNDARY
- CREEKS

FIGURE 14

north

0 500 1000 2000

TABLE 7

WETLANDS LOCATED WITHIN THE COUNTY ROAD 62 CORRIDOR

Wetland or Water Body Type		Number	Acres	% of Total Wetland Acres	% of Study Area Acres	No. of Wetlands Per Sq. Mile	Acres/ Square Mile	Average Wetland Size (Ac.)
1	Seasonally Flooded Basins or Flats	4	41.7	6.9	2.0	1.2	12.6	10.4
2	Inland Fresh Meadows	6	42.7	7.0	2.0	1.8	12.9	7.1
3	Inland Shallow Fresh Marshes	14	79.6	13.1	3.7	4.2	24.1	5.7
4	Inland Deep Fresh Marshes	1	2.8	0.4	0.1	0.3	.8	2.8
5	Inland Open Fresh Water	4	356.7	58.7	16.7	1.2	108.1	89.2
6	Shrub Swamps	6	83.8	13.8	3.9	1.8	25.4	14.0
Total Wetlands		35	607.2	99.9	28.6	10.5	183.9	17.3

**Total Study Area Acres 2,133.3 Square Miles 3.3

* Classification according to Shaw and Fredine, U.S. Fish and Wildlife Service Circular No. 39, 1971 ed.

**Study area acres based on a strip 1/2 mile on either side of the proposed route alignment.

One residential well is located in the vicinity of the future construction limits of the roadway. If the well is within the right-of-way limits the well and well shaft will be filled and sealed in accordance with the applicable provisions of Mn/DOT 2104, and in accordance with the regulations and standards set forth in the "Water Well Construction Code" adopted by the Minnesota Board of Helath on April 11, 1974 as required by the provisions of Mn/DOT 1701.

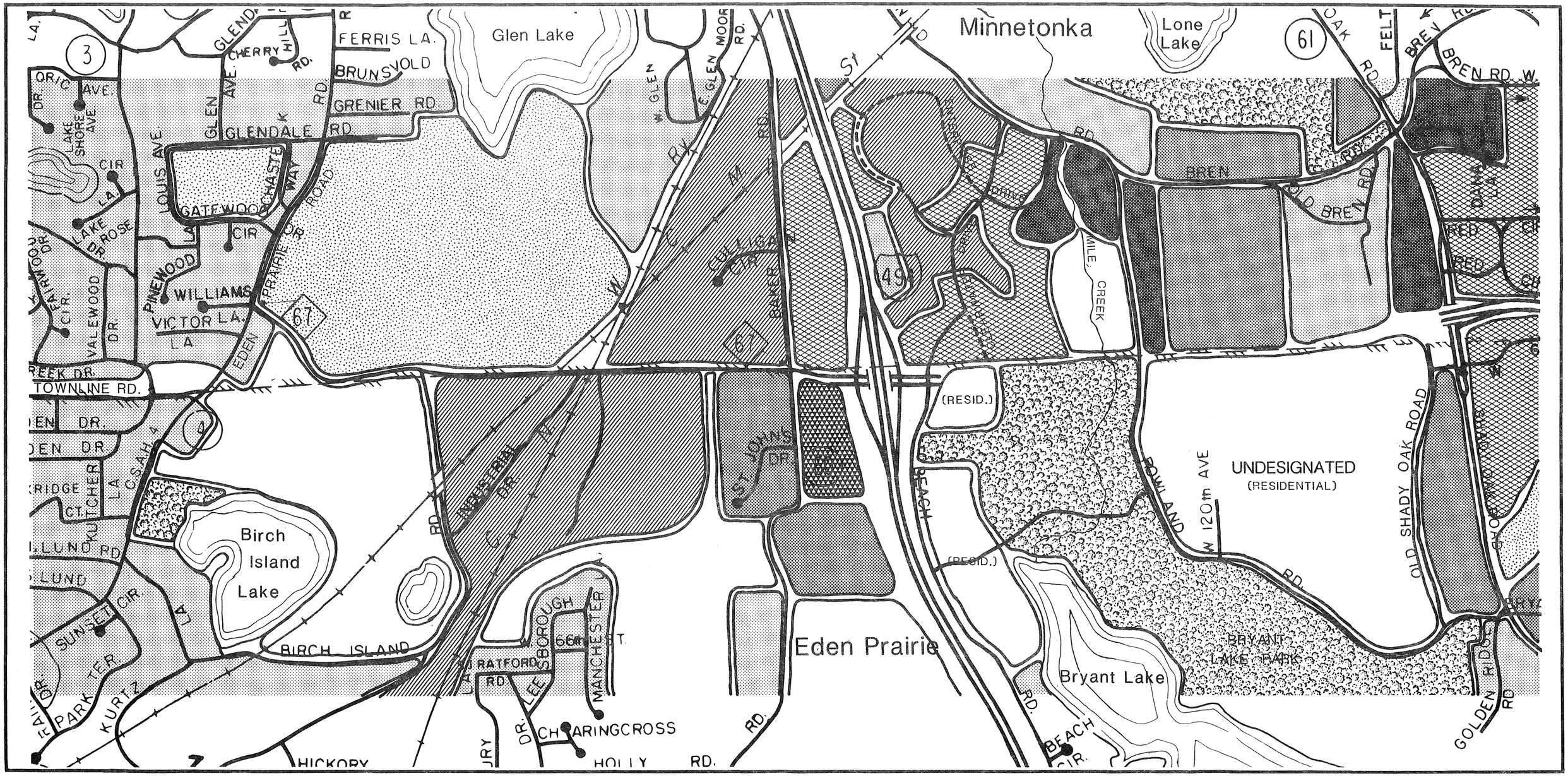
Land Use Planning

METROPOLITAN PLANNING EFFORTS

The Metropolitan Council is the regional planning agency with jurisdiction over the entire project area. The Council sets policy goals for the seven county metropolitan area, as a whole, and for five planning areas ranging from metropolitan centers to rural areas. The project is located in the urbanizing area as designated by the Council. The plans and policies for urbanizing areas are contained in the Metropolitan Development Guide and cover the areas of recreation, housing, transportation, health and sewers.

COUNTY AND MUNICIPAL PLANNING EFFORTS

Comprehensive plans have been developed by Hennepin County and the Cities of Eden Prairie and Minnetonka in conformance with the Metropolitan Land Planning Act; and the plans have been approved by the Metropolitan Council. Each city has prepared proposed land use plans to guide local decision making as proposals are received for new developments. The proposed land uses planned adjacent to the County Road 62 highway corridor are shown in Figure 15.



County Road 62

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PROPOSED LAND USE

- LOW DENSITY RESIDENTIAL
- MEDIUM DENSITY RESIDENTIAL
- HIGH DENSITY RESIDENTIAL
- COMMERCIAL
- PUBLIC
- PARK
- OFFICE
- INDUSTRIAL
- OPEN SPACE

FIGURE 15

north 0 500 1000 2000

CHAPTER 5: ENVIRONMENTAL CONSEQUENCES

Summary of Environmental Consequences

To aid in the comparison of project alternatives, environmental consequences for each portion of the project are shown in Table 8. The table presents those impacts which are suited to a summary comparison. A more detailed discussion of environmental consequences is included in subsequent sections of this chapter.

Four areas of significant environmental impacts have been identified as consequences of the proposed action. Two are areas of beneficial environmental impacts and two are areas of adverse environmental effects.

A significant beneficial impact of the proposed action is that it will implement the completion of the regional highway system in the area by completing the County Road 62, Crosstown, to I-494. The completion of this link in the system will lead to the second significant beneficial impact of the proposed action which is the decrease in energy consumption and user costs.

A significant adverse environmental effect of the project is the potential use of wetlands for some of the highway alternatives at the western terminus of County Road 62 with CSAH 4. Avoiding the wetland entirely, and providing a four-way intersection with Townline Road, would require the taking of six residences. The second potential adverse environmental effect would occur in the eastern half of the project corridor. The steeply rolling terrain between I-494 and CSAH 61 will require deep cuts and fills, which will cause unavoidable adverse visual impacts and the potential for erosion. These impacts will be minimized by selective grading, revegetation and other erosion control techniques to blend the highway slopes with the surrounding environment and provide permanent erosion control.

TABLE 8
SUMMARY OF ENVIRONMENTAL CONSEQUENCES

Significant Effects

	FROM C.S.A.H. 4 TO I-494						FROM I-494 TO C.S.A.H. 61			
	NO-BUILD	ALTERNATE 2 EXISTING ALIGNMENT RR AT-GRADE	ALTERNATE 3 NEW ALIGNMENT OVER RAILROAD	SUB-ALT A EXISTING ALIGNMENT	SUB-ALT. B REALIGN TO TOWNLINE WEST OF C.S.A.H 4	SUB-ALT. C THROUGH EDGE OF WETLAND	ALTERNATE 4 ROWLAND ROAD OVER CR 62	ALTERNATE 5 ROWLAND ROAD AT-GRADE W/C.R. 62	SUBALTERNATE A BRIDGE	SUBALTERNATE B CULVERT
TRANSPORTATION				Not consistent with Minnetonka	Not consistent with Minnetonka	Consistent with Minnetonka and Eden Prairie				
Transportation Plans	Not consistent	Consistent	Consistent	Consistent with Eden Prairie			Consistent	Consistent		
Accessability	No improvement	Moderate improvement	Moderate improvement	Minor improvement	Moderate improvement	Moderate improvement	Major improvement	Major improvement	N/A N/A	N/A N/A
PROJECT CAPITAL COST 1982 DOLLARS	0	$1.5 million	$3.7 million	2A: $1.1 million 3A: $1.3 million	2B: $1.5 million 3B: $1.7 million	2C: $1.9 million 3C: $2.1 million	4 with Subalt. A: $9.2 million 4 with Subalt. B: $6.6 million 5 with Subalt. A: $8.4 million 5 with Subalt. B: $5.7 million			
LAND USE PLANNING	Not consistent	Consistent	Consistent	Consistent	Not consistent	Consistent	Consistent	Consistent	N/A	N/A
SOCIAL					N/A			29,400		
Population Growth (Year 2000)	23,100	23,100	23,100	N/A	Affects neighborhood west of CSAH 4	N/A	29,400	Improves access between neighborhoods	N/A	N/A
Neighborhood Cohesion	No effect	No effect	No effect	No effect		No effect	No effect		No effect	No effect
DISPLACEMENT AND RELOCATION	0	0	0	0	6 residences	1 residence	0	0	0	0
ECONOMIC										
Employment (Year 2000 TAZ's in Corridor)	18,200	18,200	18,200	N/A	N/A	N/A	21,000	21,000	N/A	N/A
PARKS, RECREATION AREAS	No use of land	No use of land	No use of land	No use of land	No use of land	No use of land	No use of land	No use of land, improves access to Regional Park	No use of land	No use of land, visually impacts trail
HISTORIC PRESERVATION	No use of land or adverse effect	No use of land or adverse effect	No use of land or adverse effect	No use of land or adverse effect	No use of land or adverse effect	No use of land or adverse effect	No use of land or adverse effect	No use of land or adverse effect	No use of land or adverse effect	No use of land or adverse effect
ENERGY (Equivalent Barrels of Crude/Day)	62.2	26.9	28.6	N/A	N/A	N/A	24.0	23.3	N/A	N/A
AIR QUALITY										
Conformance with SIP	In conformance	In conformance	In conformance	In conformance	In conformance	In conformance	In conformance	In conformance	In conformance	In conformance
Conformance with Standards	No violations	No violations	No violations	No violations	No violations	No violations	No violations	No violations	No violations	No violations
NOISE (Number of residences exceeding acceptable levels)										
FHWA Design Noise Levels	0	0	0	0	0	0	0	0	N/A	N/A
MPCA Daytime Standard	15	0	0	16	15	11	2	2	N/A	N/A
MPCA Nighttime Standard	34	13	10	53	63	35	4	4	N/A	N/A
VEGETATION AND WILDLIFE HABITAT	No Effect	19.5 acres taken	19.5 acres taken	(See Wetlands)	(See Wetlands)	(See Wetlands)	44.1 acres taken	44.1 acres taken	No significant effect	May disrupt movement of wildlife
SURFACE WATER MODIFICATION	No Effect	No significant effect	No significant effect	No significant effect	No significant effect	No significant effect	No significant effect	No significant effect	No significant effect	No significant effect
WATER QUALITY	No Effect	No significant effect	No significant effect	No significant effect	No significant effect	No significant effect	No significant effect	No significant effect	No significant effect	No significant effect
WETLANDS (Acres Affected)	No Effect	No effect	Visual impact	0.46 acres	1.38 acres	2.32 acres	0.4 acres	0.4 acres	No effect	No effect
FLOODPLAINS	No Effect	<1 acre feet	<1 acre feet	<1 acre feet	<1 acre feet	5.8 acre feet	No effect	No effect	No effect	2.0 acre feet
VISUAL IMPACT	No Effect	No effect	No sensitive receptors	No effect	Visual intrusion to residential neighborhood	Visual intrusion to residential neighborhood	No sensitive receptors	No sensitive receptors	Visual intrusion for trail users	Obstructs view of valley for trail users

ENVIRONMENTAL EFFECTS AND MITIGATION MEASURES

Transportation Impacts

The transportation-related impacts of the County Road 62 alternatives are described in the following categories:

- Conformance with and support of local and regional long-range transportation plans.
- Level of accessibility provided to the motorists.
- Traffic impacts upon the local street system.
- Relative safety characteristics of the roadway.

LOCAL AND REGIONAL TRANSPORTATION PLANNING

The Metropolitan Council's "1990 Metropolitan Highway System Plan" includes the completion of County Road 62 from I-494 to CSAH 61 as an intermediate arterial. As part of the Council's Transportation Development Guide/ Policy Plan, the implementation of the extension of County Road 62 to I-494 is integral to the orderly growth and development of the communities in the area, as well as the regional plan. The implementation of this project supports the regional goals contained in the Metropolitan Development Guide's "Development and Investment Framework."

Eden Prairie and Minnetonka, the municipalities directly impacted by the proposed project, have been actively involved in planning for the proposed highway. Under the cities' transportation and land use planning process, right-of-way has been preserved for the new facility, local circulation and land uses have been planned which complement the proposed highway, and access to existing and planned development has been considered. These transportation and land use plans support both the need for and the location of the proposed facility.

The Hennepin County Transportation Plan proposes that County Road 62 be constructed from I-494 to CSAH 61 as an intermediate arterial and constructed as a minor arterial from I-494 westward to CSAH 4.

In conclusion, the build alternatives are consistent with and supportive of the local, county and regional transportation plans while the no-build alternative is inconsistent and non-supportive of those plans.

ACCESSIBILITY

The build alternatives will improve regional accessibility in the southwest suburbs. The level of accessibility was measured by comparing the vehicle miles of travel required between the build and no-build alternatives. The

no-build alternative will require more vehicle miles of travel, which is estimated to average an additional 14,250 vehicle miles per day over the first 20 years of the project.

An example of how the no-build alternative will result in more miles of travel is to consider trips southbound on I-494 desiring to go east on existing County Road 62. Using the existing road system, the trip follows a circuitous route along I-494 to TH 212/169 and then back to County Road 62, a length of 4.5 miles. Under the build alternatives the trip would use new County Road 62, which would reduce the distance to approximately 2.0 miles. A similar reduction would be realized for trips westbound on County Road 62 desiring to go north on I-494.

TRAFFIC IMPACTS ON THE LOCAL STREET SYSTEM

The travel patterns around the County Road 62 corridor will vary significantly depending upon whether or not the County Road 62 project is built. In order to assess the difference between the build and no-build alternatives on the adjacent roadway system, the Minnesota Department of Transportation analyzed the distribution of travel within the area directly influenced by the project. This local influence area is shown in Figure 16.

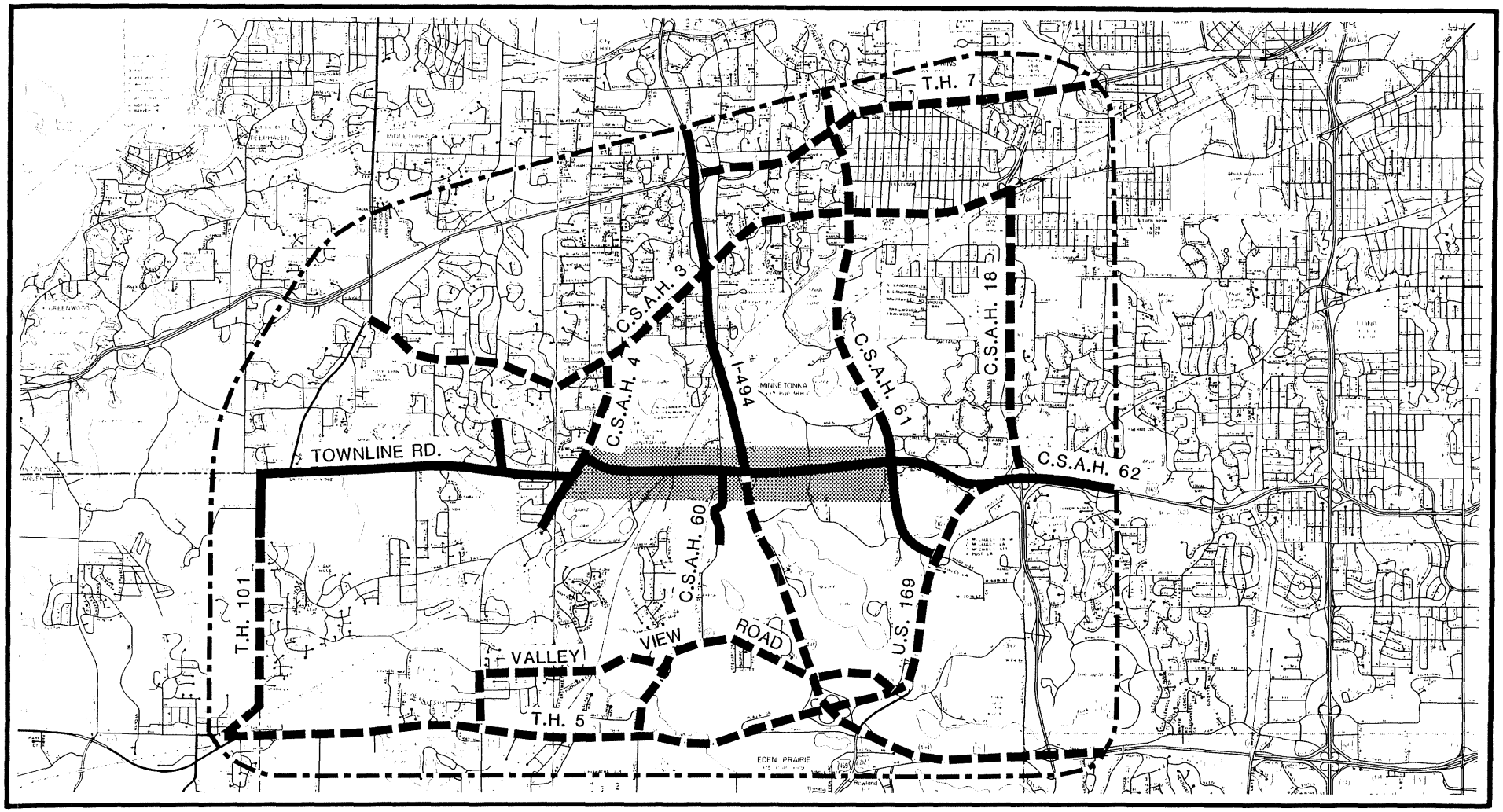
The roads within the influence area will have different traffic volumes in the year 2000 depending upon whether the County Road 62 highway is completed from I-494 to CSAH 61. Figure 16 illustrates the relative traffic volumes on local roads based on the following categories:

- Roads which will have traffic volumes greater with the build alternative than with the no-build alternative.
- Roads which will have greater traffic volumes with the no-build alternative than with the build alternative.

Traffic Impacts with Build Alternatives

The local roads which will have higher traffic volumes with the build alternatives than with the no-build alternative are: Townline Road, and short segments of TH 101 and Woodland Road, Eden Prairie Road (CSAH 4) south of CSAH 67, Baker Road and Shady Oak Road (CSAH 61). Several measures are proposed to minimize traffic impacts upon the local street system. Intersections with proposed County Road 62 will be designed with left and right turn lanes to provide adequate capacity at the intersections. Traffic signals will be provided as warranted. Baker Road will be reconstructed south of proposed County Road 62, to improve the horizontal alignment and increase capacity.

The western terminus intersection with Townline Road will be designed to be compatible with the future upgrading of Townline Road when traffic volumes warrant. The year 2000 traffic projections for Townline Road indicate that a two-lane road with 10 foot shoulders will be needed to accommodate future traffic volumes. Hennepin County has acquired some of the right-of-way



County Road 62

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TRAFFIC IMPACTS ON LOCAL ROADS

- PROJECT AREA
- BOUNDARY OF LOCAL INFLUENCE AREA
- BUILD TRAFFIC GREATER THAN NO BUILD
- NO BUILD TRAFFIC GREATER THAN BUILD

FIGURE 16

north

necessary for the upgrading of Townline Road and will consider adding this project to the road program as funding becomes available.

Traffic Impacts with the No-Build Alternative

The local roads which will have higher traffic volumes with the no-build alternative than with the build alternatives are the major east-west roads which parallel the County Road 62 corridor. In Minnetonka these roads are Trunk Highway 7, and Excelsior Boulevard (CSAH 3). Several north-south local roads in Minnetonka would also be impacted by higher traffic volumes: Eden Prairie Road (CSAH 4) north of CSAH 67, Shady Oak Road and County Road 18.

In Eden Prairie the following local roads would experience higher traffic volumes with the no-build alternative: Valley View Road (CSAH 60), Trunk Highway 5, Chanhassen Road (TH 101), and Eden Prairie Road and Mitchell Road between TH 5 and Valley View Road.

The no-build alternative will result in higher traffic volumes on more local roads than the build alternative.

HIGHWAY SAFETY

The safety characteristics of proposed County Road 62 will be an improvement to the existing situation and the no-build alternative. Accident rates are typically higher for roadways with unrestricted control of access, as exists on the present road between CSAH 4 and I-494. Some of the build alternatives will provide safer operating characteristics than others and the comparison of each is summarized below.

Western Terminus Subalternatives

Subalternative A requires east-west traffic traveling between County Road 62 and Townline Road to jog along CSAH 4 and complete turning movements at two intersections. The same movements are also required for the no-build alternative. Subalternatives B and C provide one intersection between Townline Road/County Road 62 and CSAH 4 which would allow smoother traffic flow, fewer turning movements, and safer operating conditions at the western terminus.

Alternatives 2 and 3

Alternate 2 proposes to widen the existing road to four lanes, allow existing entrances to adjacent properties to remain, and cross the railroad tracks at-grade. Accident rates are typically higher along roads with unrestricted access control as proposed in Alternate 2. Alternate 3 would provide a safer driving condition because access is controlled. The existing road would be retained as a frontage road for local access when the proposed County Road 62 facility is constructed to the north. This alternative also eliminates potential auto/train accidents by bridging the highway over both railroad tracks. As traffic volumes increase and adjacent land use becomes fully developed, Alternate 3 would provide a safer roadway.

Alternatives 4 and 5

The proposed highway between I-494 and CSAH 61 will transition in function from an intermediate arterial, freeway design on the east to a minor arterial with at-grade intersections on the west. Alternative 4 proposes the first at-grade intersection for westbound traffic to occur at the Beach Road/Clearwater Drive intersection. Alternative 5 proposes the first at-grade intersection to occur at Rowland Road. Both alternatives will provide a high level of safety because four-lane, divided facilities have relatively low accident rates.

Project Costs

The project costs, including right-of-way acquisition, have been estimated for each alternative and subalternative. The costs were derived from generalized unit costs for the typical roadway sections planned. Table 9 summarizes the project cost, in 1982 dollars, for each of the build alternatives.

TABLE 9

ESTIMATED PROJECT COSTS
(Millions - 1982 Dollars)

Alternative	Right-of-Way Acquisition	Construction	Total
Between CSAH 4 and I-494:			
Alternative 2	$0.1	$1.5	$1.6
Alternative 3	$0.3	$3.7	$4.0
Western Terminus			
Subalternative A	0	$1.1-1.3	$1.1-1.3
Subalternative B	$1.2	$1.5-1.7	$2.7-2.9
Subalternative C	$0.2	$1.9-2.1	$2.1-2.3
Between I-494 and CSAH 61:			
Alternative 4A	$1.3	$9.2	$10.5
Alternative 4B	$1.3	$6.6	$7.9
Alternative 5A	$1.3	$8.4	$9.7
Alternative 5B	$1.3	$5.7	$7.0
TOTAL			$9.7-17.4

Future Land Use and Community Planning

The extension of County Road 62 has been anticipated for many years by the Metropolitan Council, Hennepin County, and the communities of Eden Prairie and Minnetonka. Future land use and community planning have been coordinated with the potential for a highway facility in this location.

REGIONAL PLAN

The Metropolitan Council has based its regional plans and projections upon the completion of County Road 62 between I-494 and CSAH 61. The completion of this highway link is projected for construction by 1990. The project is an element of the Council's Transportation Development Guide/Policy Plan and will become a part of the regional highway system.

The County Road 62 corridor is located entirely within the area designated for planned urbanization in the Metropolitan Council's "Development Framework." Although much of the corridor is presently open and undeveloped, the area is planned for steady change to urbanization over the next ten years.

COUNTY PLAN

The Hennepin County Department of Transportation is coordinating the plans for the proposed highway with the other county facilities located in the corridor, Glen Lake Sanitarium and Bryant Lake Regional Park. Both the sanitarium site and the park site are large enough to allow existing and future sensitive uses to be located away from any adverse environmental impacts from the highway, such as air or noise impacts. Access to the two sites from proposed County Road 62 will be maintained or enhanced depending upon the alternative selected. Alternative 5, Rowland Road At-Grade would improve both local and regional access to Bryant Lake Regional Park.

The proposed action is consistent with the Hennepin County Transportation System Study,[1/] which is the County transportation plan.

MUNICIPAL PLANS

Eden Prairie and Minnetonka have developed comprehensive plans in accordance with the Metropolitan Land Planning Act. Both plans show the completion of County Road 62 from CSAH 4 to I-494 as a minor arterial and from I-494 to CSAH 61 as an intermediate arterial.

1/ Hennepin County Department of Public Works, 1976

Land uses planned adjacent to the proposed highway are compatible with a high volume roadway and include industrial, medium density residential and open spaces, which serve as buffers to more sensitive land uses, such as single family residential and park use. Both municipalities have an extensive plan review process for proposed developments to ensure conformance with their land use and transportation plans. The review of proposed developments allows the appropriate design considerations such as setbacks, berming and landscaping to be incorporated into a development to minimize potential highway impacts.

NO-BUILD ALTERNATIVE

The no-build alternative is not consistent with the regional, county, or municipal plans for the area.

Social Impacts

POPULATION

The proposed action will have an effect upon the growth of population in the highway corridor. Much of the undeveloped land along the proposed highway is planned for residential development; however, the steep terrain between I-494 and CSAH 61 has limited the extension of roads and utilities into the area. The construction of the proposed highway would provide the access to transportation and utilities necessary to continue development. Table 10 summarizes the projected population growth anticipated in the highway corridor for the year 2000 for the build and no-build alternatives.

TABLE 10

YEAR 2000 POPULATION IN THE HIGHWAY CORRIDOR

	No-Build Alternative	Build Alternative	Percent Difference
Eden Prairie	13,780	17,500	+ 27%
Minnetonka	9,330	11,890	+ 27%
TOTAL	23,110	29,390	+ 27%

The no-build alternative would tend to limit full development of housing and population in Minnetonka and Eden Prairie along the County Road 62 corridor. The growth will either occur here over a longer period of time or occur elsewhere in the Twin Cities metropolitan area.

COMMUNITY COHESION

The County Road 62 corridor, which follows the municipal boundary between Eden Prairie and Minnetonka, will have little or no adverse impact upon community cohesion. However, the residential neighborhood located west of CSAH 4 would be disrupted by Subalternative B.

The automobile is the major source of transportation in this suburban area, and no pedestrian facilities or bicycle paths are presently located within the highway corridor. The proposed action will maintain pedestrian access between Minnetonka and Eden Prairie along Nine Mile Creek and will allow future bicycle access along the trail. Alternate 5, Rowland Road At-Grade, would provide an additional access point and improve the local circulation pattern in the northern section of Eden Prairie where no local east-west road system presently exists.

The no-build alternative will have no adverse effects on community cohesion. However, this alternative does not offer the opportunity to improve vehicular, pedestrian and bicycle circulation within or between Eden Prairie and Minnetonka.

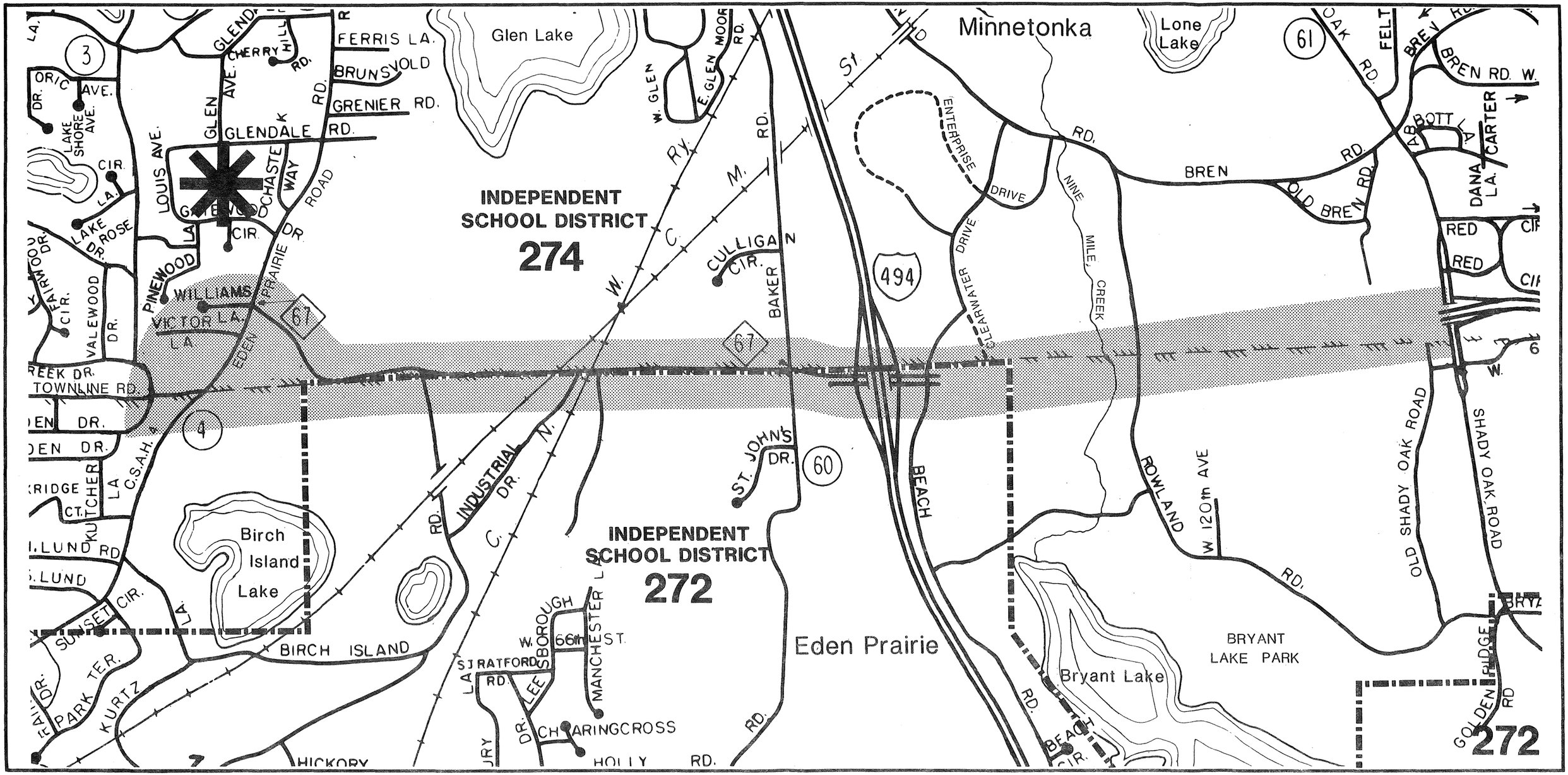
COMMUNITY SERVICES

Implementation of the proposed action will enhance accessibility to public services and facilities in both communities, and access to regional facilities, such as hospitals in St. Louis Park and Edina, would also be improved.

No public facilities, such as schools, fire and police stations, libraries, medical clinics, or municipal offices will be displaced by the proposed action. One public facility, Gatewood Elementary School, is located within the highway corridor, as shown in Figure 17. The proposed highway will maintain all existing roadway connections between the two communities, therefore, no pedestrian, bicycle auto or bus access to schools or other community services will be impacted.

Emergency vehicles such as fire, police and ambulance service would be improved to residential areas, such as the neighborhood located along Beach Road. The addition of an at-grade intersection of Rowland Road and County Road 62 would provide the desired alternate emergency routes to this isolated neighborhood.

The no-build alternative would have no immediate impacts on community facilities and services, as long as current traffic volumes are maintained. School, police, fire, ambulance and institutional access would remain unchanged. As traffic volumes increase, particularly on parallel routes such as Valley View Road and Excelsior Boulevard, police, fire, and emergency vehicle response time will be impaired during peak hours.



County Road 62

Environmental Impact Statement

COMMUNITY SERVICES

- SCHOOL DISTRICT BOUNDARY
- SCHOOL
- HIGHWAY CORRIDOR

FIGURE 17

north 0 500 1000 2000

Economic Impacts

The economic impacts of the proposed action have been evaluated in two areas: the tax revenue lost from removing land from the tax base for use as highway right-of-way and the ultimate increase in the tax base from expected development.

TAX BASE IMPACTS

The proposed action would impact the tax base of the municipalities and school districts by removing approximately 17 to 25 acres of taxable land for highway right-of-way. The extent of this loss is the result of the amount of taxable property acquired and the total assessed value of the land.

Table 11 summarizes the right-of-way to be acquired in each municipality for the alternatives being considered.

TABLE 11

RIGHT-OF-WAY TO BE ACQUIRED
(acres)

	Eden Prairie	Minnetonka
Alternative 2	0	0.76
Alternative 3	0	2.9
Subalternative A	0	0
Subalternative B	0	5.75
Subalternative C	0	2.20
Alternative 4	5.7	10.3
Alternative 5	5.7	10.3

The City of Minnetonka would absorb the greater tax loss. The impact of this loss will be minimal and will be offset by the development of vacant land in the highway corridor. In addition to the communities and school districts, the build alternatives would also impact the tax base of Hennepin County, the Nine Mile Creek Watershed District, the Metropolitan Transit Commission and the Metropolitan Council. Their tax bases are so large, however, that the impact would be insignificant.

EMPLOYMENT AND DEVELOPMENT IMPACTS

The proposed project will improve the transportation accessibility of the area, which will improve its potential for economic and employment growth. Employment projections for the year 2000 were developed for the traffic analysis zones immediately adjacent to the proposed highway. These projections, shown in Table 12, were developed by the cities of Eden Prairie and Minnetonka and reflect the impact of the build alternatives on the timing of development in the corridor.

TABLE 12

YEAR 2000 DEVELOPMENT IN THE HIGHWAY CORRIDOR

	No-Build Alternative		Build Alternatives		Percent Change	
	Emp.	D.U.	Emp.	D.U.	Emp.	D.U.
Eden Prairie	6,350	4,922	6,350	5,735	0%	17%
Minnetonka	11,835	3,497	14,600	4,623	23%	32%
TOTAL	18,185	8,419	20,950	10,358	15%	23%

Under the no-build alternative total employment in the highway corridor in the Year 2000 would be 15 percent less than with the build alternative. The total employment forecasted would eventually occur in later years in the corridor or in other portions of the Twin Cities Metropolitan Area.

The development of housing units would also be stimulated by construction of the proposed highway. Improved accessibility to the regional highway system would support medium to high density residential development. The no-build alternative would result in approximately 23 percent fewer dwelling units constructed in the corridor by the year 2000.

The additional employment and residential growth which will be stimulated by the project will offset the tax losses due to the acquisition of highway right-of-way.

Property Displacement and Relocation

RIGHT-OF-WAY REQUIRED AND EXISTING LAND USE IMPACTS

The proposed highway action will require the acquisition of right-of-way and some alternatives require the displacement of residences. The location of the highway between Eden Prairie and Minnetonka has been proposed for many years and several parcels of right-of-way have been acquired by Hennepin County or reserved for future highway use by the local community.

Figure 18 shows the location of existing right-of-way in the corridor and Table 13 summarizes the existing land uses displaced by the proposed action.

TABLE 13

LAND USES DISPLACED BY THE PROPOSED ACTION
(Acres)

EXISTING LAND USE	CSAH 4 to I-494					I-494 to CSAH 61
	Alt. 2	Alt. 3	Subalt A	Subalt B	Subalt C	Alt. 4 & 5
Residential	0.6	0.6	0	8.6	1.0	0
Commercial/Office	5.2	10.3	0	0	0	0
Industrial	1.7	3.5	0	0	0	0
Public	0	0	10.3	9.5	12.0	0
Undeveloped	6.9	13.8	0	3.4	3.4	41.8
TOTAL	14.4	18.2	10.3	21.5	16.4	41.8

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

The displacement of residential buildings would be required with western terminus subalternatives B and C. Subalternative B would displace six residences and subalternative C would displace one residence, as shown in Figure 19.

No special groups, such as minorities, elderly, handicapped or low income persons will be displaced by the alternatives considered.

The no-build alternative would have no acqusition, displacement or relocation impacts.

MITIGATION MEASURES

The availability of replacement housing in Eden Prairie and Minnetonka and adequate financial assistance for relocation will reduce the impacts of potential residential relocation.

The Hennepin County Department of Transportation will fulfill the provisions of the Uniform Relocation Assistance Act to ensure that each displaced household is relocated into housing that is decent, safe and sanitary, is in the same general neighborhood (if desired), and is affordable within the financial means of the household. The Minnesota Department of Transportation Relocation Office maintains a current listing of housing and the list is available to any relocatee. Persons of lower income are given priority for public housing.

A displaced owner-occupant may receive a supplemental replacement housing payment of up to $15,000. This payment is the amount, if any, which when added to the amount Hennepin County pays for the acquired dwelling, equals the actual cost which the owner pays for a comparable dwelling or the amount determined by Hennepin County as necessary to purchase a comparable

dwelling, whichever is less. Increased interest payments are provided to eligible owner-occupants to compensate for the increased cost required for financing a replacement dwelling. Residents are also reimbursed for moving costs, closing costs, and appraisers' fees.

A relocation plan, as appropriate to the recommended alternative, will be described in the Final Environmental Impact Statement.

Parks, Recreation Areas and Wildlife Refuges

No land from a publicly owned park, recreation area or wildlife refuge will be used for any of the project alternatives. The public parks found within the highway corridor are Birch Island Lake Park and Bryant Lake Regional Park. A regional trail is proposed along Nine Mile Creek. The relationship of the proposed highway alternatives to the parks and trail is shown in Figure 20 and discussed below.

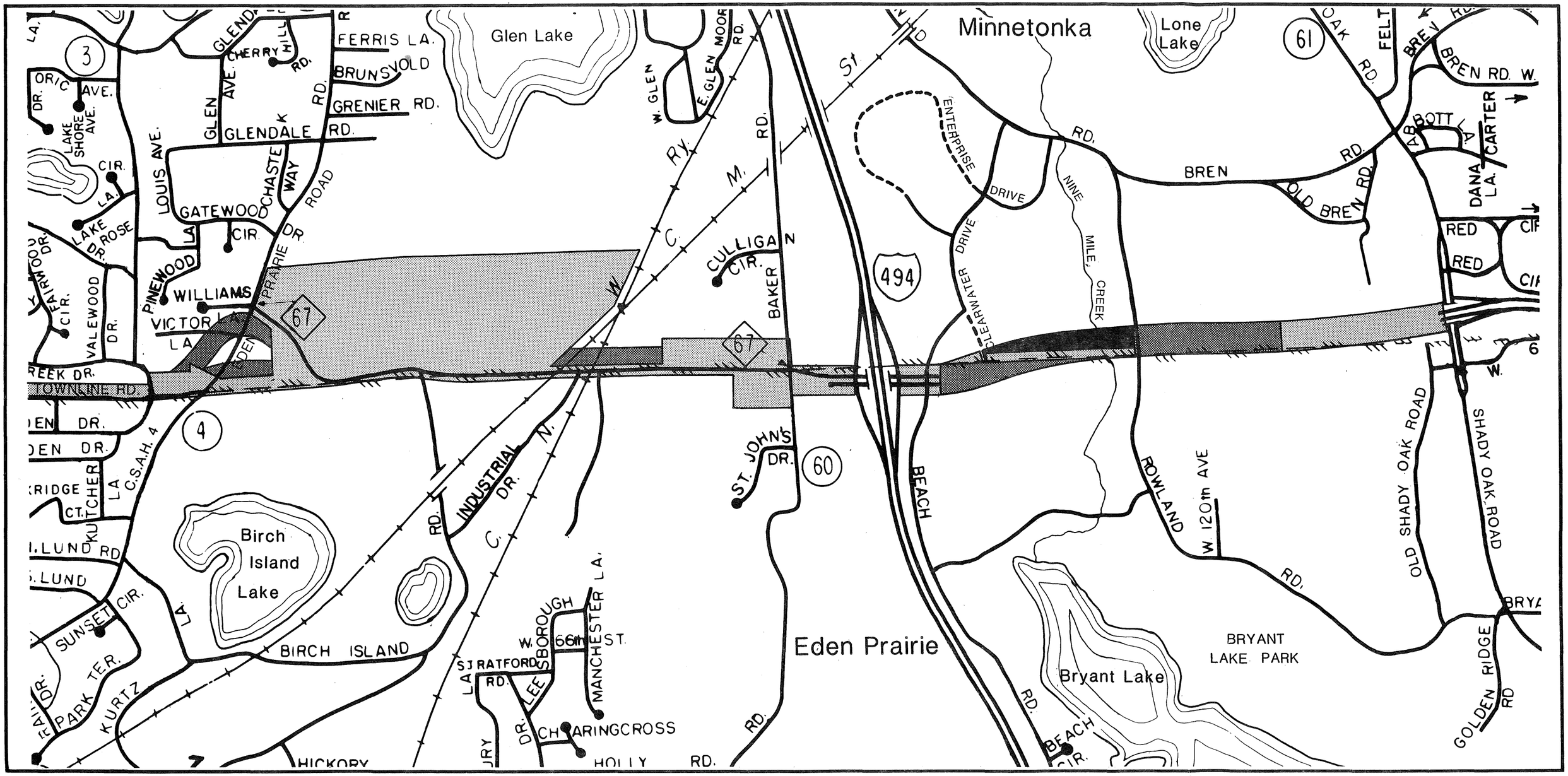
Birch Island Lake Park - Birch Island Lake Park is a 17-acre, Eden Prairie park located near the western terminus of the project. The alternative passing closest to the park is subalternative C, which is located .25 mile to the north. Recreational activities in the park will not be disrupted due to the proposed action. Local access to the park by Eden Prairie residents will not be adversely impacted by any proposed highway alternatives.

Bryant Lake Regional Park - Bryant Lake Regional Park was recently acquired from Eden Prairie by the Hennepin County Park Reserve District for development into a regional park facility. None of the existing or proposed parkland to be acquired will be required for the proposed County Road 62 alternatives in this area, alternatives 4 and 5.

The future plans for the park anticipate a period of low use over the next five years followed by growth to a future volume of 2,000 people on a peak weekend day. The service area of the park is for users from the southwest suburbs of Edina, Hopkins, West Bloomington, Eden Prairie, and Minnetonka. The main entrance to the park is planned to remain near the present entrance from Rowland Road.

The improvement of regional access to Bryant Lake Park will vary depending upon the alternative selected between I-494 and CSAH 61. Alternative 4, Rowland Road grade-separated, will improve access to the park from the north and west by providing the highway link between I-494 and Shady Oak Road. Alternative 5, Rowland Road at-grade, would further improve access to the park for regional traffic from I-494 and local traffic from the west by allowing traffic access to Rowland Road from County Road 62.

Regional Trail - A regional trail corridor is proposed by the Metropolitan Council along Nine Mile Creek for use as a bicycle, pedestrian and equestion trail. The land required for the highway crossing of the trail is owned by the City of Minnetonka and dedicated for highway use. Both the bridge and culvert crossing alternatives at Nine Mile Creek will be designed to allow a recreational trail.



County Road 62

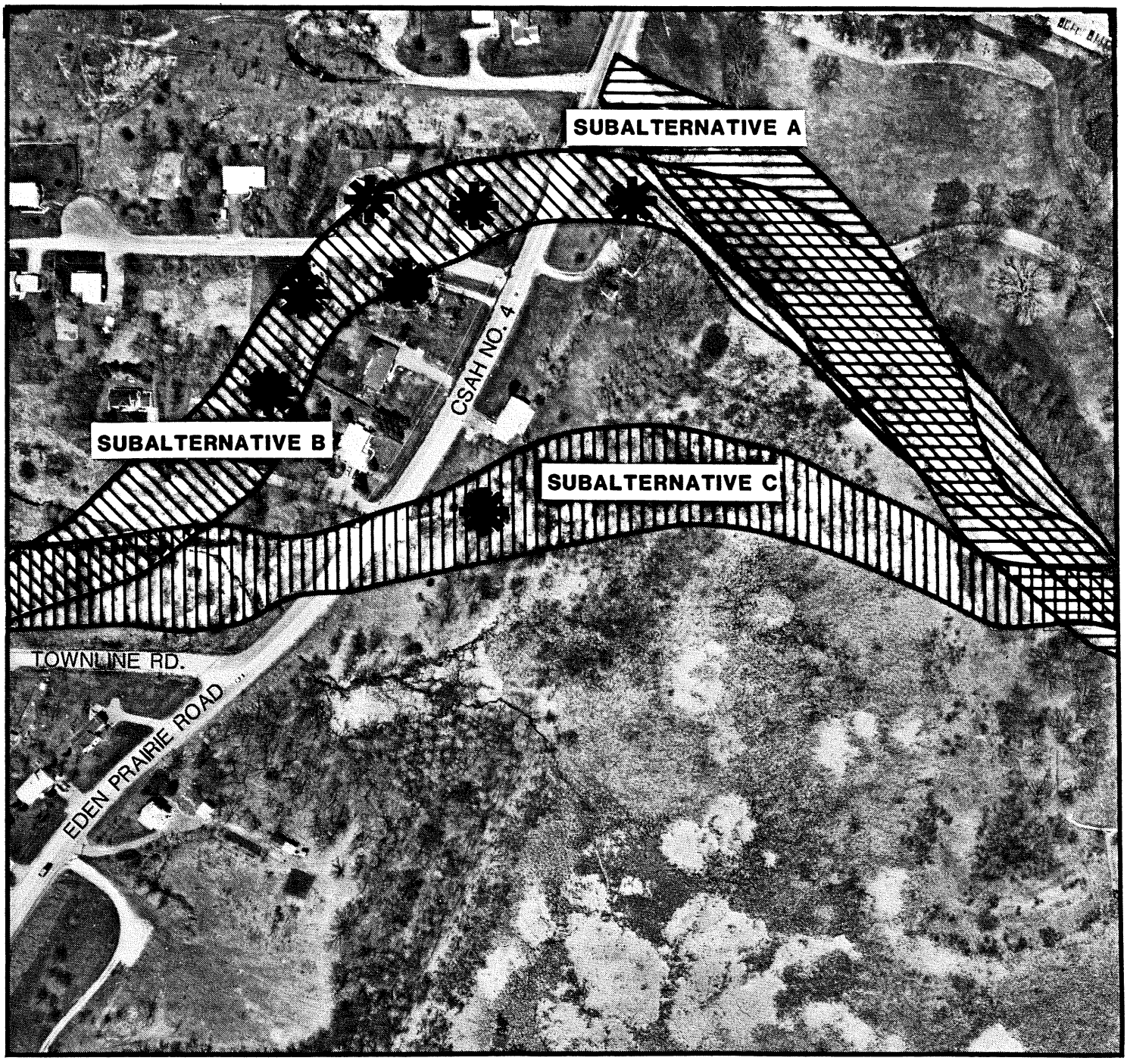
Environmental Impact Statement

RIGHT-OF-WAY REQUIRED

- PROPERTY OWNED BY HENNEPIN COUNTY
- PROPERTY DEDICATED FOR HIGHWAY USE
- PROPERTY TO BE ACQUIRED

FIGURE 18

north 0 500 1000 2000



County Road 62

Environmental Impact Statement

RESIDENTIAL DISPLACEMENTS REQUIRED

FIGURE 19

CONSTRUCTION LIMITS

RESIDENCES DISPLACED

north 0 100 200 feet

Historic and Cultural Sites

There are no recorded prehistoric or historic sites located within the proposed study area. An archaeological investigation was conducted for the site bordering Nine Mile Creek in Minnetonka and no archaeological sites were found.

The State Historic Preservation Officer has reviewed the project information and has found that the County Road 62 project will have no adverse effect on sites of historic, architectural, cultural, or archaeological significance which are on the National Register, or eligible for inclusion on the National Register. The letter from the State Historic Preservation Officer making this determination is included in Chapter 8, Comments and Coordination.

Energy Impacts

Guidelines for the preparation of energy impact analyses for environmental studies suggest that the following items be addressed:

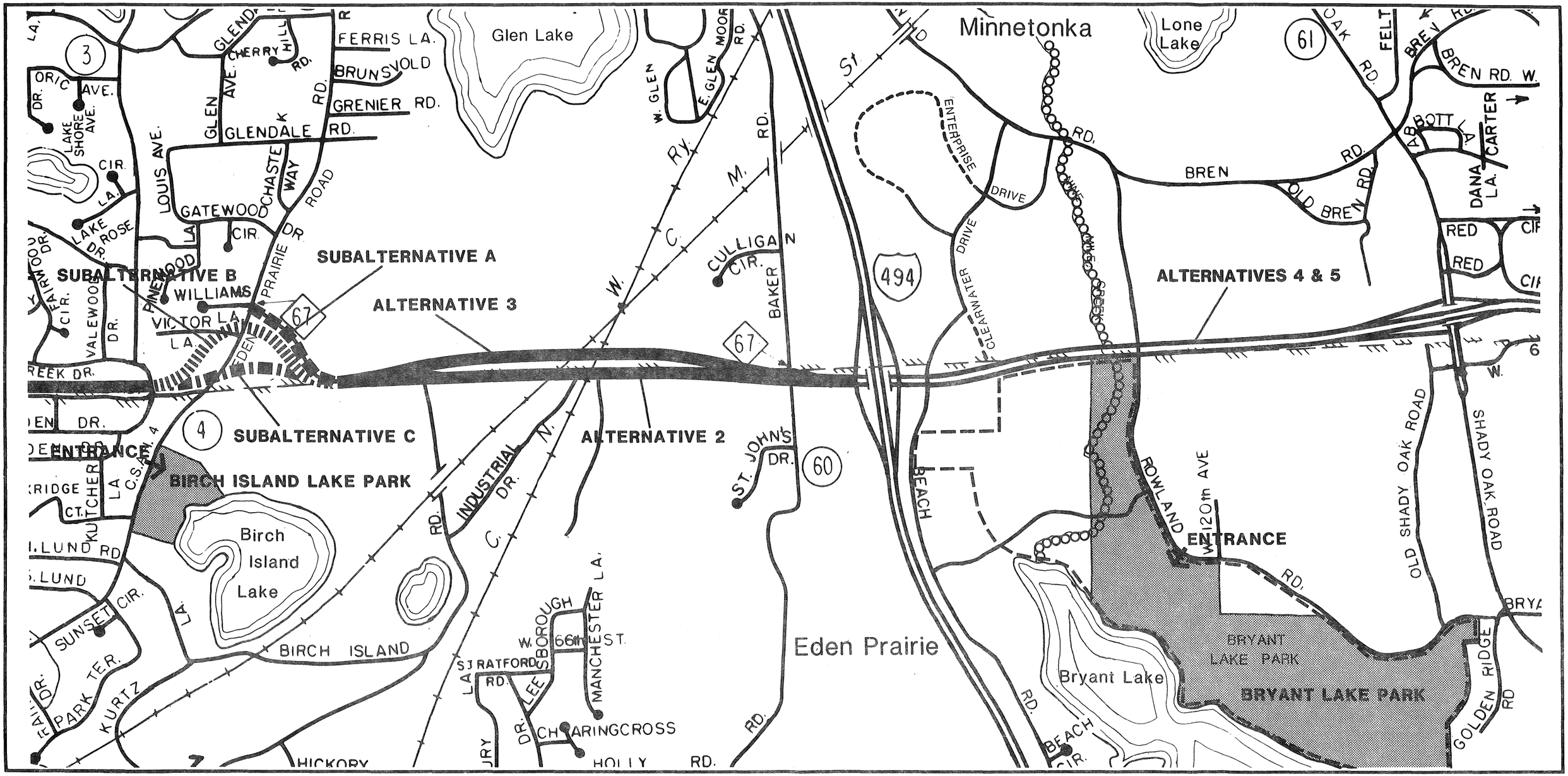
- All feasible build alternatives,
- The no-build alternative in conjunction with the implementation of transportation system management type improvements,
- High occupancy vehicle lanes, preferential treatment measures and intermodal coordination techniques.

For proposed County Road 62, all build alternatives and the no-build alternative were analyzed in terms of energy impacts. High occupancy vehicle lanes, preferential treatment measures and intermodal coordination techniques were not considered because they had been ruled out as appropriate alternatives for this corridor as discussed in Chapter 3.

BACKGROUND

The energy analysis for County Road 62 included both the direct and the indirect energy consumption of each alternative. Direct consumption consists of the gasoline and diesel fuels required to power vehicles. Indirect consumption consists of the energy required for vehicle manufacture and maintenance, roadway construction and maintenance, and peripheral energy needs considered to be the direct result of the facility.

The data used for the analysis included the vehicle breakdown by type and volume, facility characteristics such as gradients and curvature, operating characteristics of the roadway, construction costs, and the many energy



County Road 62

Environmental Impact Statement

PUBLIC PARKS LOCATED NEAR HIGHWAY CORRIDOR

- PARK
- FUTURE BRYANT LAKE PARK BOUNDARY
- REGIONAL TRAIL PROPOSED

FIGURE 20

north 0 500 1000 2000

conversions necessary to relate energy equivalents required for the various processes performed.

The source of data for energy consumption rates, and factors affecting rates of consumption, were obtained from the FHWA manual "Energy Requirements for Transportation Systems". Regional factors that supersede the FHWA manual were obtained from the Minnesota Department of Transportation Handbook, "Transportation Energy Analysis".

ENERGY CONSUMPTION

The annual direct and indirect energy consumption for each of the build and no-build alternatives is summarized in Table 14. The total direct and indirect energy consumption is the measure of the energy impact of each alternative.

TABLE 14

ANNUAL ENERGY CONSUMPTION
($\times 10^9$ BTU)

	BUILD ALTERNATIVE				NO-BUILD ALTERNATIVE	
	2	3	4	5	CSAH4 to I-494 [1]	I-494 to CSAH61 [2]
Direct Energy	22.51	25.25	21.03	20.08	23.62	42.12
Indirect Energy						
Veh. Manf.	7.33	7.33	5.75	5.75	7.33	12.41
Veh. Maint.	16.95	16.94	13.28	13.28	16.94	28.62
Fac. Const.	3.30	6.40	11.70	10.60	-	-
Fac. Maint.	1.06	1.06	.92	.92	.52	-
Peripheral	-	-	-	-	-	-
Total Energy $\times 10^9$ BTU	56.86	60.47	50.73	49.33	48.41	83.15
Total Energy (Bbl Oil/Day)	26.90	28.60	24.00	23.30	22.90	39.30

1bbl = 5.8×10^6 BTU

1. The no-build alternative west of I-494, assumes the same volumes as alternatives 2 or 3 in order to allow a more accurate comparison of various build/no-build combinations.

2. The no-build alternative east of I-494 includes the energy costs of all vehicle trips that would have used the link (Alt. 4 and 5) plus the energy costs of the additional vehicle miles traveled due to circuity of travel.

The relative energy consumed was analyzed by combining the various alternative segments and totaling the energy used to get the net energy consumed, as summarized below:

Alternative Combinations	Consumption (Barrels Crude/Day)	% of No-Build
Alternates 2 + 4	50.9	82
Alternates 3 + 4	52.6	85
Alternates 2 + 5	50.2	81
Alternates 3 + 5	51.9	84
Alternates 2 + No-Build (I-494 to CSAH 61)	66.2	107
Alternates 3 + No-Build (I-494 to CSAH 61)	67.9	109
Alternates 4 + No-Build (CSAH 4 to I-494)	46.9	76
Alternates 5 + No-Build (CSAH 4 to I-494)	46.2	74
No-Build (CSAH 4 to CSAH 61)	62.1	100

The results of the energy study indicate a definite decrease in energy consumption as a result of constructing County Road 62 from I-494 to CSAH 61. Annual energy consumption is reduced by 15% to 20%+. This occurs because the energy consumed for construction is more than offset by the reduced circuity of travel realized when the I-494 to CSAH 61 link is provided. Reduced travel is anticipated to average 14,250 vehicle miles per day over the first 20 year life of the facility.

The worst case, Alternative 3 + the No-Build (I-494 to CSAH 61), consists of upgrading County Road 62 west of I-494 to include a railroad overpass, but no improvement east of I-494.

The most energy efficient combination, Alternative 5 + the No-Build (CSAH 4 to I-494), consists of not upgrading CSAH 67 west of I-494 and constructing County Road 62 east of I-494 with an at-grade intersection at Rowland Road. The construction of County Road 62 west of I-494 for safety and capacity reasons, however, would still result in an overall reduction of close to 20% with the Alternative 4 + 2 (RR at-grade) combination, a significant beneficial impact.

Air Quality Impacts

An air quality analysis technical report has been prepared on the proposed project and has been reviewed by the Minnesota Pollution Control Agency and the U.S. Environmental Protection Agency. The analysis describes the effects of the proposed project relative to total pollutant burden, carbon monoxide concentrations, lead concentrations, particulates and construction impacts. This section of the report summarizes the air quality impacts of the proposed highway project and a detailed discussion of air quality is contained in the Appendix.

REGULATORY FRAMEWORK

The air quality analysis was prepared pursuant to the Federal Ambient Air Quality Standards as part of the 1970 Clean Air Act and the State of Minnesota Ambient Air Quality Standards.

Minnesota air quality regulations call for permits for indirect sources such as highways. County Road 62, from I-494 to CSAH 61, will have an average annual daily traffic volume greater than 20,000 vehicles per day. Since the highway will be constructed within the seven county metropolitan area, an indirect source permit will be required for construction.

POLLUTANT BURDEN ANALYSIS

A pollutant burden analysis quantifies the total emissions of various pollutants within a large geographic area. Emissions of hyrocarbons, carbon monoxide, and nitrogen oxides from transportation sources have been estimated for the seven-county metropolitan area for the build alternatives in the years 1990, 2000, and 2010. Differences between the build and no-build alternatives have been estimated within the local influence area of the project in the year 2000.

Regional Emissions

An inventory of regional emissions from transportation sources was prepared by the Minnesota Department of Transportation and the analysis was done using the SAPOLLUT-SAPLSM computer program package. Based on the regional highway network and travel demand, this model calculates regional emissions of HC, CO and NOx resulting from transportation sources. The highway network modeled includes County Road 62 as specified by the build alternatives. Table 15 shows the results of this analysis.

TABLE 15

SEVEN COUNTY METROPOLITAN AREA EMISSIONS (kg/Day)
County Road 62 Build Alternative

YEAR	CARBON MONOXIDE	HYDROCARBONS	NITROGEN OXIDES	VEHICLE MILES
1990	937,988	46,897	87,079	31,610,500
2000	800,745	38,849	79,822	35,350,900
2010	882,061	43,010	88,015	39,533,800

Local Influence Area Emissions

In order to estimate the difference between the build and no-build alternatives, an analysis of travel within the area directly influenced by the project was done. This local influence area is shown in Figure 16. Within this area, the most logical route used for many vehicle trips depends strongly on whether or not the County Road 62 project is built. An analysis of vehicle trips in the area indicates that the build alternatives will generate 1,523,900 miles of travel in the year 2000. The no-build alternative will generate 1,542,400 miles of travel. Based on average regional emission rates in 2000, the difference in pollutant emissions has been calculated and is shown in Table 16.

TABLE 16

LOCAL INFLUENCE AREA EMISSIONS (kg/Day)
YEAR 2000

ALTERNATIVE	CARBON MONOXIDE	HYDROCARBONS	NITROGEN OXIDES	VEHICLE MILES
BUILD	34,516	1,676	3,444	1,523,900
NO-BUILD	34,935	1,696	3,485	1,542,400

This project is in an air quality nonattainment area where the State Implementation Plan (SIP) is required to contain transportation control measures. The transportation planning process was reviewed by the Federal Highway Administration (FHWA) on November 12, 1981 and the plan was determined to conform to the SIP which was (conditionally) approved by the U.S. Environmental Protection Agency on June 16, 1980. The transportation Improvement Program (TIP) was determined to conform to the SIP on January 18, 1982. This project was included in the plan and the TIP, both conforming to the SIP. Therefore, pursuant to 23 CFR 770, the project conforms to the SIP.

CARBON MONOXIDE ANALYSIS

Carbon monoxide concentrations were predicted for both the build alternatives and the no-build alternative in the vicinity of the project area. The purpose of this analysis was to determine the consistency of the project with State and Federal Air Quality Standards. The years 1986, 1996, and 2006 were analyzed to address the estimated time of completion plus one, ten, and twenty years. The total CO concentration at a point is the sum of background CO, which was determined through monitoring, and local CO sources which were modeled.

Applying the procedures outlined in the guidelines, which are described in detail in the "Air Quality Analysis Report", the 1-hour background concentration is 2.2 PPM and the 8-hour background is 1.8 PPM.

Methodology for Carbon Monoxide Analysis

Carbon monoxide concentrations resulting from the proposed project were predicted using the Modified ISMAP model. ISMAP is an integrated traffic flow, emissions, dispersion model for predicting carbon monoxide concentrations resulting from mobile sources. A detailed discussion of the methodology for carbon monoxide analysis is included in the Appendix.

Receptor sites were selected both on the basis of existing land use and future roadway characteristics. The sixteen receptor sites analyzed are shown in Figures 21 and 21a and represent a mix of both sensitive land uses and areas where maximum CO concentrations would be expected. The same receptor sites were analyzed for both the build and no-build alternatives.

Receptor sites R1, R2, R3, R4, R10, and R11 are all located at existing residences. Receptors R5, R6, and R7 are located on the grounds of the Glen Lake State Sanitarium. Receptor R15 is located in Bryant Lake Regional Park. The remainder of the receptor sites are located on undeveloped land.

Predicted Carbon Monoxide Concentrations and Impacts

The predicted carbon monoxide concentrations for the years 1986, 1996, and 2006 are shown in Tables 17, 18, and 19 respectively. These concentrations are the maximums modeled for the three wind directions and include a 1-hour background of 2.2 PPM and an 8-hour background of 1.8 PPM.

The carbon monoxide analysis identified no violations of either the 1-hour or the 8-hour state and federal standards. Three general areas have been identified where concentrations approach, but do not exceed, the 8-hour standard of 9.0 PPM. These areas are the intersection of County Road 62 and CSAH 4, the intersection of County Road 62 and the northbound entrance ramp to I-494, and the intersection of County Road 62 and Baker Road (CSAH 60).

The railroad grade crossing alternatives will not have significantly different impacts on air quality. The tracks carry approximately eight trains per day. The trains are composed of 50 to 150 cars and generally travel at 30 to 35 miles per hour. Thus, each train would introduce less than 3 minutes of delay with an at-grade crossing. This delay, spread over the course of a day, would have a minimal effect on ambient air quality conditions.

Neither the build nor the no-build alternatives are expected to cause any violations of state or federal carbon monoxide standards. The project will have no impact on traffic volumes or carbon monoxide concentrations in the Minneapolis or St. Paul central business districts. For these reasons, both the build and no-build alternatives are consistent with the Minnesota State Implementation Plan.

LEAD ANALYSIS

Lead concentrations resulting from County Road 62 and major cross streets have been predicted for the year 1986. Receptor site 12 from the carbon monoxide analysis has been analyzed. The procedure used is based on a January 31, 1978 FHWA memorandum entitled "Proposed National Ambient Air Quality Standard For Lead." The concentration predicted for the build alternatives in 1986 is 0.28 ug/m^3. For the no-build alternative, the 1986 predicted concentration is 0.23 ug/m^3. These values are both well below the federal ambient standard of 1.5 ug/m^3 quarterly average. Since this receptor is influenced by I-494, the highest volume roadway in the project area, lead concentrations in other areas are expected to be less than those predicted.

Noise Impacts

The County Road 62 project is defined as a Type 1 project according to the August 9, 1982 update of Volume 7, Chapter 7, Section 3 of the Federal Aid Highway Program Manual (FHPM 7-7-3). A project is classified as Type 1 if it includes the construction or reconstruction of a highway on new location. The probable noise impacts of the alternatives under consideration have been analyzed and documented in a "Preliminary Noise Analysis" which has been reviewed by the U.S. Environmental Protection Agency and the Minnesota Pollution Control Agency for review.

A summary of the probable noise impacts of the County Road 62 alternatives and appropriate mitigation. Measures are presented in this section and a detailed discussion of noise impacts is contained in the Appendix.

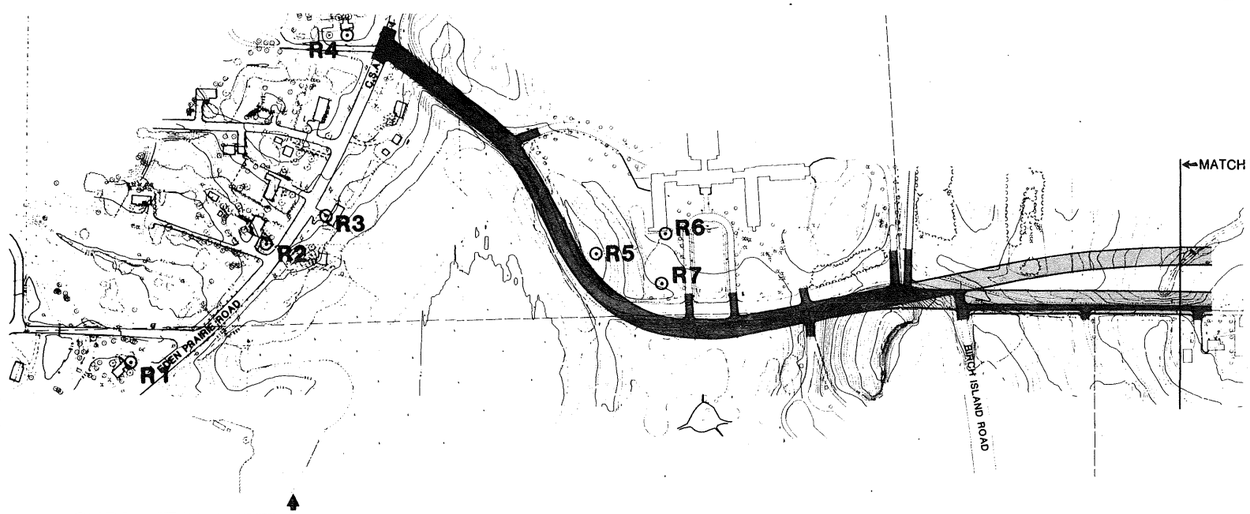
The noise regulations applicable to the County Road 62 project include the Federal Noise Abatement Criteria documented in the August 9, 1982 update to FHPM 7-7-3 and the Minnesota State Noise Standards identified in Regulation NPC-2.

EXISTING NOISE LEVELS

Existing sound levels were monitored by Hennepin County at twelve sites throughout the study area. The results of the monitoring determined that, in all cases, the sound levels are below both the Federal Design Noise Levels and, except for Site 9, are also within the State Noise Standards.

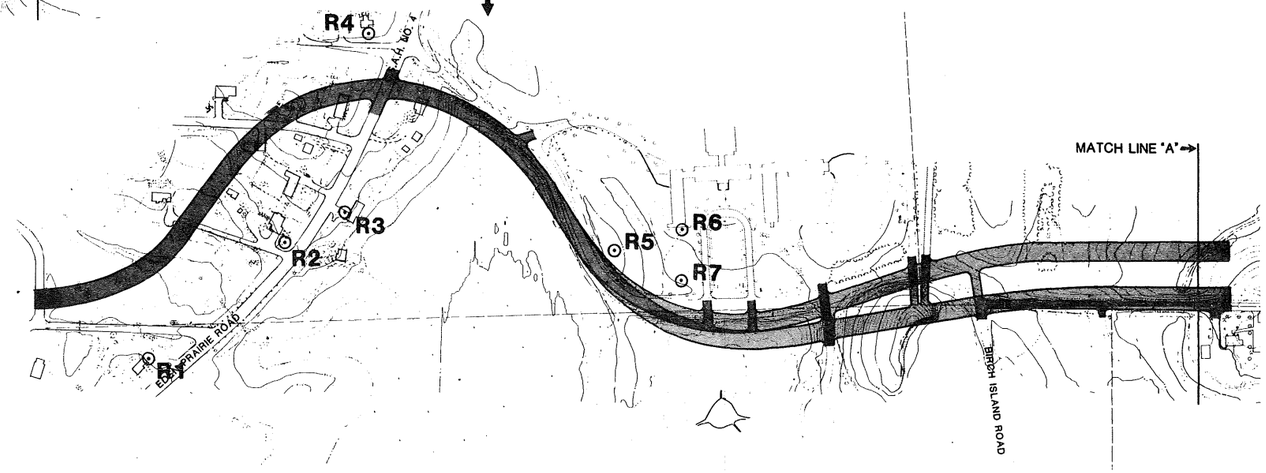
PREDICTED NOISE LEVELS

The FHWA RD-77-108 Highway Traffic Noise Prediction Model (Manual Method) was used in this study to predict noise levels.

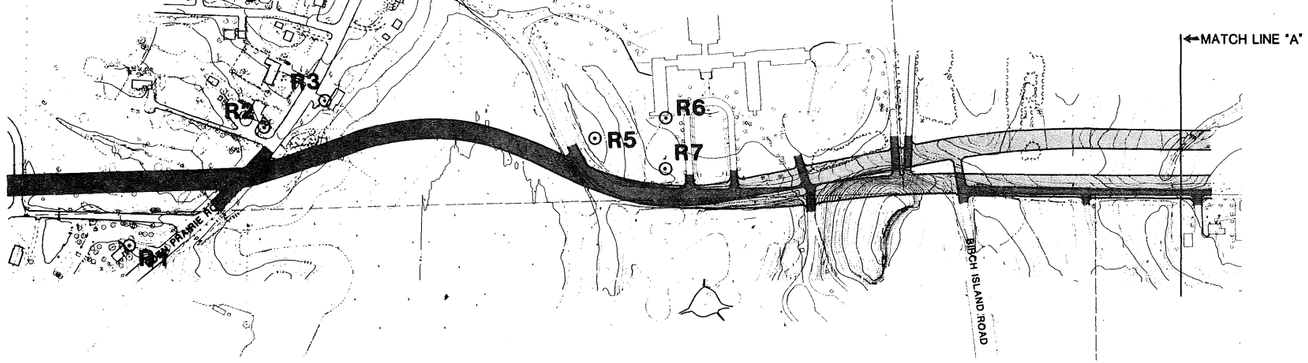


SUBALTERNATIVE A

SUBALTERNATIVE B



SUBALTERNATIVE C



County Road 62

Environmental Impact Statement

CARBON MONOXIDE RECEPTOR SITES

⊙ R7-RECEPTOR NUMBER

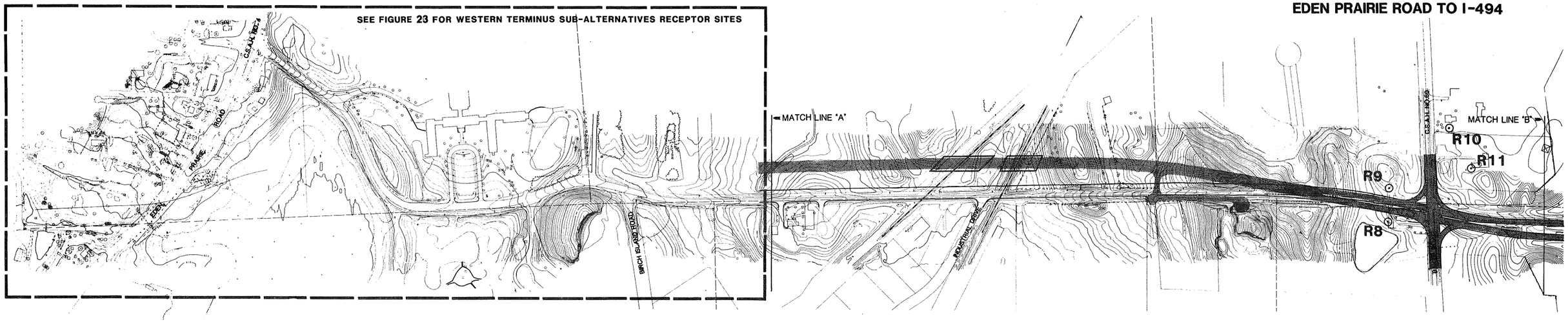
FIGURE 21

north

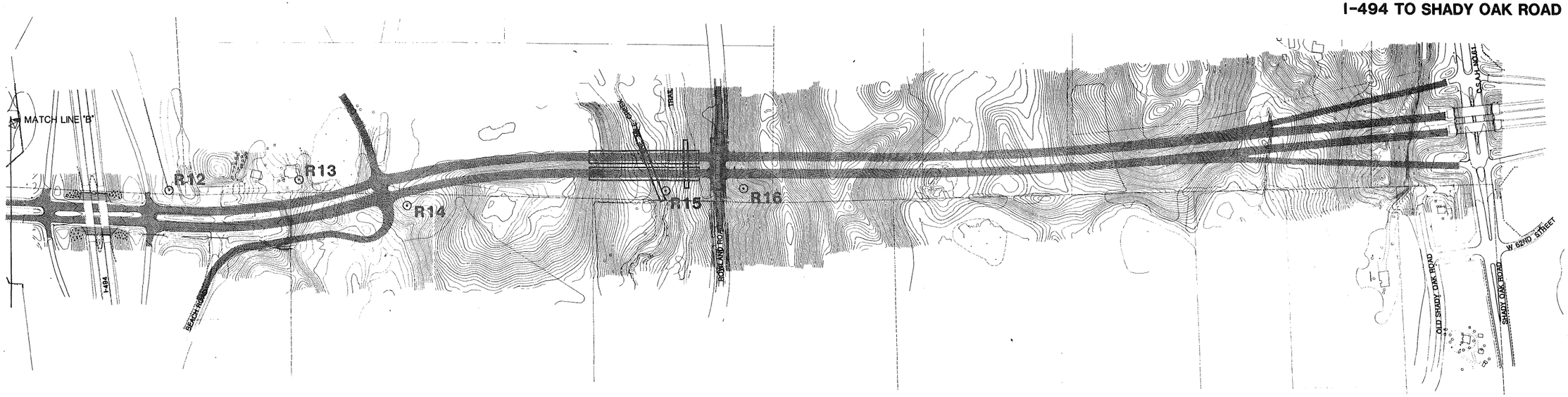
0 100 200 400 800

SEE FIGURE 23 FOR WESTERN TERMINUS SUB-ALTERNATIVES RECEPTOR SITES

EDEN PRAIRIE ROAD TO I-494



I-494 TO SHADY OAK ROAD



County Road 62

Environmental Impact Statement

CARBON MONOXIDE RECEPTOR SITES

⊙ R7- RECEPTOR NUMBER

FIGURE 21A

north

0 100 200 400 800

TABLE 17

CARBON MONOXIDE CONCENTRATIONS (PPM)

YEAR 1986

RECEPTOR	ALTERNATIVES	1 HOUR CONCENTRATION	8 HOUR CONCENTRATION	RECEPTOR	ALTERNATIVES	1 HOUR CONCENTRATION	8 HOUR CONCENTRATIO
1	1	2.6	2.1	7	1	2.5	2.0
1	2A, 3A	3.9	3.0	7	2A, 3A	2.8	2.2
1	2B, 3B	2.6	2.1	7	2B, 3B	2.6	2.1
1	2C, 3C	3.0	2.3	7	2C, 3C	3.2	2.5
2	1	3.5	2.7	8	1	4.1	3.1
2	2A, 3A	3.8	2.9	8	4A, 4B, 5A, 5B	8.7	6.4
2	2B, 3B	2.7	2.1	9	1	4.2	3.2
2	2C, 3C	10.8	7.8	9	4A, 4B, 5A, 5B	3.7	2.9
3	1	2.6	2.1	10	1	4.5	3.4
3	2A, 3A	2.8	2.2	10	4A, 4B, 5A, 5B	3.7	2.9
3	2B, 3B	2.7	2.1	11	1	3.4	2.6
3	2C, 3C	4.2	3.2	11	4A, 4B, 5A, 5B	4.5	3.4
4	1	3.2	2.5	12	1	3.9	3.0
4	2A, 3A	7.6	5.6	12	4A, 4B, 5A, 5B	8.6	6.3
4	2B, 3B	6.5	4.8	13	1	3.0	2.4
4	2C, 3C	3.8	2.9	13	4A, 4B, 5A, 5B	5.9	4.4
5	1	2.6	2.1	14	1	2.8	2.2
5	2A, 3A	3.0	2.4	14	4A, 4B, 5A, 5B	7.3	5.4
5	2B, 3B	2.7	2.2	15	1	2.5	2.0
5	2C, 3C	3.9	3.0	15	4A, 4B	3.8	2.9
6	1	2.4	2.0	15	5A, 5B	3.7	2.8
6	2A, 3A	2.7	2.1	16	1	2.5	2.0
6	2B, 3B	2.5	2.0	16	4A, 4B	3.8	2.9
6	2C, 3C	3.4	2.6	16	5A, 5B	3.4	2.7

TABLE 18

CARBON MONOXIDE CONCENTRATIONS (PPM)

YEAR 1996

RECEPTOR	ALTERNATIVES	1 HOUR CONCENTRATION	8 HOUR CONCENTRATION	RECEPTOR	ALTERNATIVES	1 HOUR CONCENTRATION	8 HOUR CONCENTRATI
1	1	2.6	2.1	7	1	2.5	2.0
1	2A, 3A	3.8	2.9	7	2A, 3A	2.8	2.2
1	2B, 3B	2.5	2.0	7	2B, 3B	2.5	2.0
1	2C, 3C	2.9	2.3	7	2C, 3C	3.2	2.5
2	1	3.6	2.8	8	1	4.1	3.1
2	2A, 3A	3.7	2.9	8	4A, 4B, 5A, 5B	8.8	6.4
2	2B, 3B	2.6	2.1	9	1	4.3	3.3
2	2C, 3C	10.3	7.5	9	4A, 4B, 5A, 5B	3.7	2.8
3	1	2.6	2.1	10	1	4.5	3.4
3	2A, 3A	2.8	2.2	10	4A, 4B, 5A, 5B	3.8	2.9
3	2B, 3B	2.6	2.1	11	1	3.3	2.6
3	2C, 3C	4.1	3.1	11	4A, 4B, 5A, 5B	4.3	3.3
4	1	3.4	2.6	12	1	3.8	3.0
4	2A, 3A	7.8	5.7	12	4A, 4B, 5A, 5B	8.7	6.3
4	2B, 3B	6.3	4.7	13	1	2.9	2.3
4	2C, 3C	3.7	2.8	13	4A, 4B, 5A, 5B	6.1	4.5
5	1	2.6	2.1	14	1	2.7	2.2
5	2A, 3A	3.0	2.3	14	4A, 4B, 5A, 5B	7.3	5.4
5	2B, 3B	2.7	2.1	15	1	2.5	2.0
5	2C, 3C	3.8	2.9	15	4A, 4B	3.9	3.0
6	1	2.4	2.0	15	5A, 5B	3.7	2.9
6	2A, 3A	2.7	2.1	16	1	2.5	2.0
6	2B, 3B	2.4	2.0	16	4A, 4B	3.8	2.9
6	2C, 3C	3.3	2.6	16	5A, 5B	3.4	2.7

TABLE 19

CARBON MONOXIDE CONCENTRATIONS (PPM)

YEAR 2006

RECEPTOR	ALTERNATIVES	1 HOUR CONCENTRATION	8 HOUR CONCENTRATION	RECEPTOR	ALTERNATIVES	1 HOUR CONCENTRATION	8 HOUR CONCENTRATIC
1	1	2.7	2.2	7	1	2.6	2.1
1	2A, 3A	4.1	3.2	7	2A, 3A	2.9	2.3
1	2B, 3B	2.6	2.1	7	2B, 3B	2.6	2.1
1	2C, 3C	3.0	2.4	7	2C, 3C	3.4	2.6
2	1	4.0	3.1	8	1	7.9	5.8
2	2A, 3A	4.1	3.2	8	4A, 4B, 5A, 5B	10.8	7.8
2	2B, 3B	2.7	2.2	9	1	5.1	3.8
2	2C, 3C	12.3	8.9	9	4A, 4B, 5A, 5B	4.1	3.1
3	1	2.6	2.1	10	1	5.0	3.8
3	2A, 3A	2.9	2.3	10	4A, 4B, 5A, 5B	4.3	3.2
3	2B, 3B	2.7	2.1	11	1	10.1	7.4
3	2C, 3C	4.3	3.3	11	4A, 4B, 5A, 5B	4.5	3.4
4	1	4.2	3.2	12	1	5.3	4.0
4	2A, 3A	9.0	6.6	12	4A, 4B, 5A, 5B	11.7	8.5
4	2B, 3B	7.5	5.5	13	1	3.7	2.8
4	2C, 3C	4.1	3.1	13	4A, 4B, 5A, 5B	7.5	5.5
5	1	2.7	2.1	14	1	3.2	2.5
5	2A, 3A	3.1	2.4	14	4A, 4B, 5A, 5B	9.3	6.8
5	2B, 3B	2.7	2.2	15	1	2.7	2.2
5	2C, 3C	4.1	3.1	15	4A, 4B	4.3	3.3
6	1	2.5	2.0	15	5A, 5B	4.1	3.1
6	2A, 3A	2.7	2.1	16	1	2.7	2.1
6	2B, 3B	2.5	2.0	16	4A, 4B	4.3	3.2
6	2C, 3C	3.6	2.8	16	5A, 5B	3.8	2.9

A total of fourteen representative noise sensitive receptor sites were identified in the corridor, shown in Figures 22 and 22a. Noise levels were predicted at each receptor for the year 2000 for all project alternatives including the no-build alternative.

The daytime and nighttime noise levels predicted for both existing and future traffic volumes for the build and no-build alternatives are shown in Tables 20 and 21. The predicted noise levels are based on the noisiest conditions and represent the upper level of noise anticipated from the proposed action.

IMPACT ASSESSMENT

The methods used for determining the noise impacts of the proposed County Road 62 action were the following:

- Comparison of the predicted noise levels with both Federal Noise Abatement Criteria and State Noise Standards.
- Comparison of the predicted future noise levels with existing noise levels, as predicted.
- Comparison of predicted future noise levels for the build alternatives with the no-build alternative future noise levels.

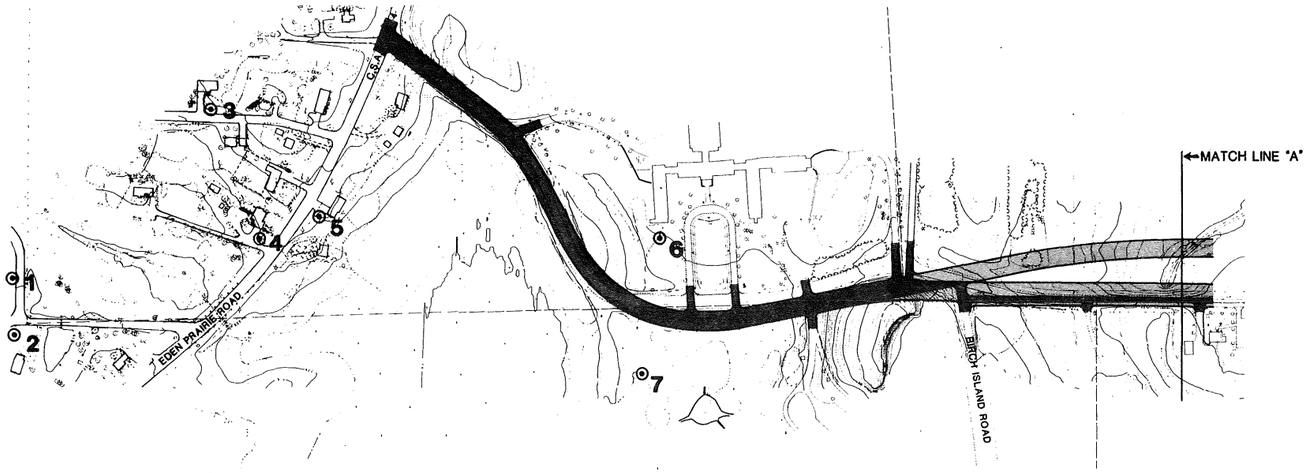
Comparison of predicted Noise levels with Federal Noise Abatement Criteria and State Noise Standards

FHWA Noise Abatement Criteria are exceeded three times under the build alternatives. When the predicted noise levels are compared with the State Noise Standards, three of the same sites exceed the daytime standards for each of the build alternatives. The only exception is Site 2 where the daytime standards are exceeded under subalternative A but not subalternatives B and C. Only Site 7 (alternatives 2 and 3), Site 11, and Site 12 (alternatives 4 and 5) do not exceed the nighttime standards.

The number of residences which would be impacted by noise levels was determined by plotting noise contours for the allowable standards along the proposed highway corridor. Table 22 summarizes the number of residences impacted by noise for the build and no-build alternatives. No residences will experience noise levels exceeding the federal standard of L_{10} 70. State daytime standards are exceeded for residences near the western terminus of the project. State nighttime standards are exceeded for residences along the entire corridor.

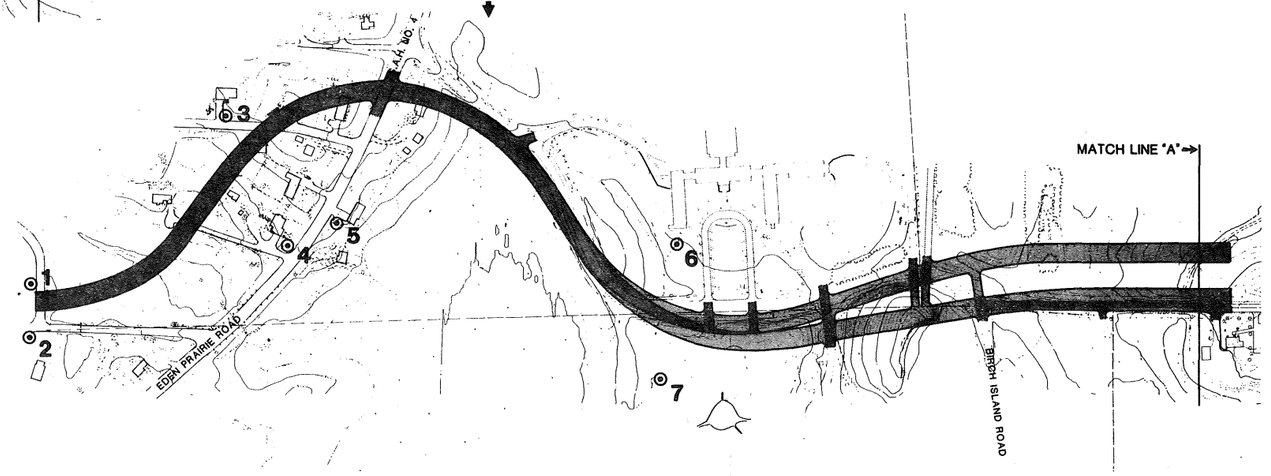
Comparison of Predicted Future Noise Levels with Existing Noise Levels

The second method to determine noise related impacts compared existing noise levels, as predicted, with future noise levels. Generally, noise impacts can be expected when the future noise levels are substantially

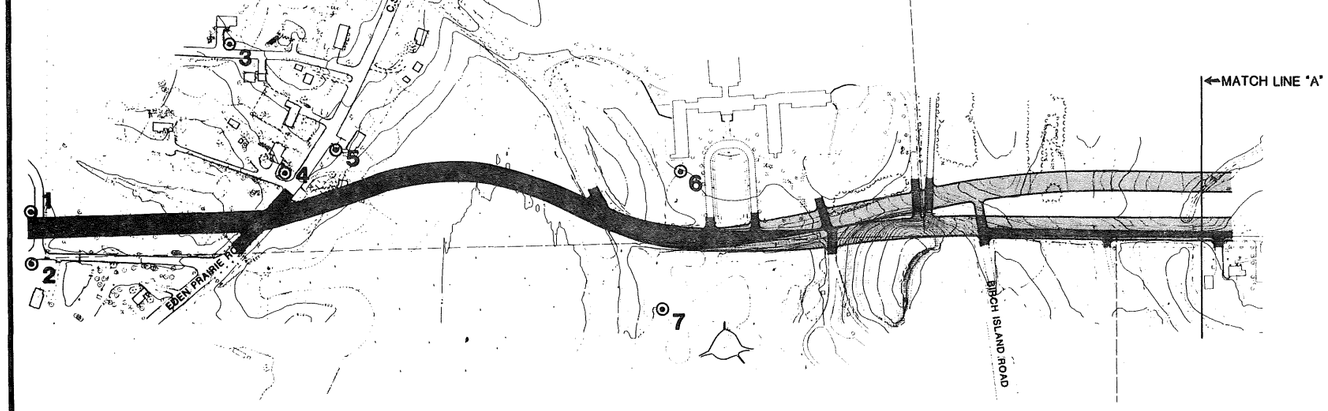


SUBALTERNATIVE A

SUBALTERNATIVE B



SUBALTERNATIVE C



County Road 62

Environmental Impact Statement

NOISE SENSITIVE RECEPTOR SITES

⊙ 7-RECEPTOR NUMBER

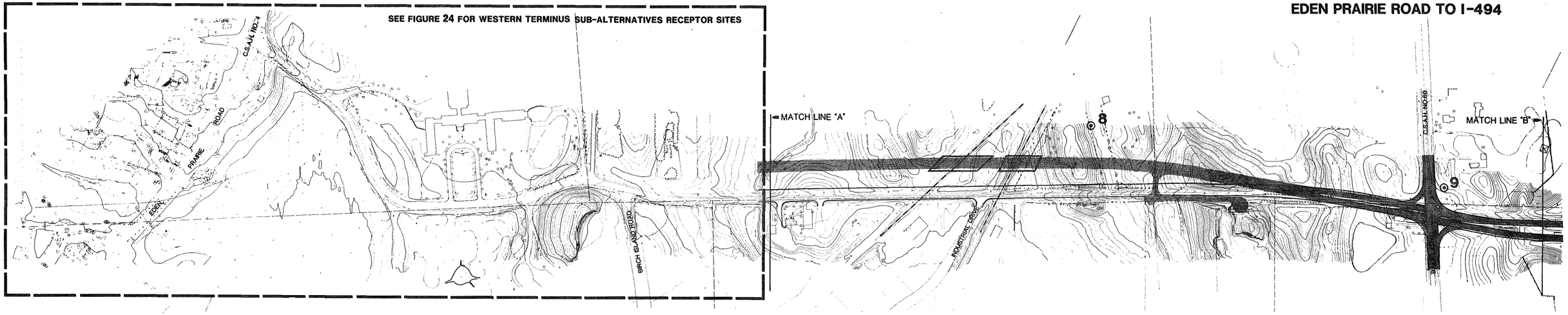
FIGURE 22

north

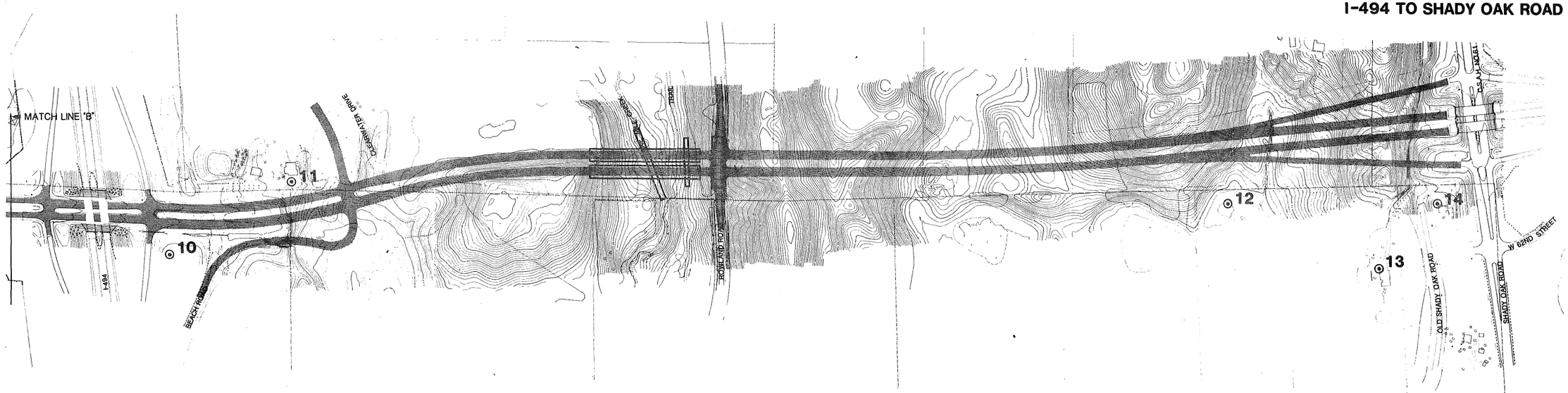
0 100 200 400 800

SEE FIGURE 24 FOR WESTERN TERMINUS SUB-ALTERNATIVES RECEPTOR SITES

EDEN PRAIRIE ROAD TO I-494



I-494 TO SHADY OAK ROAD



County Road 62

Environmental Impact Statement

NOISE SENSITIVE RECEPTOR SITES

⊙ 7-RECEPTOR NUMBER

FIGURE 22A

north

0 100 200 400 800

TABLE 20

PREDICTED DAYTIME NOISE LEVELS - dBA

Site	EXISTING[1]		FUTURE															
			Alt. 1[1]		Sub-Alt. A[2]		Sub-Alt. B[2]		Sub-Alt. C[2]		Alt. 2		Alt. 3		Alt. 4		Alt. 5	
	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}
1	53.9	58.2	53.9	58.2	56.2	60.2	59.8	63.7	57.3	60.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	64.1	68.2	64.1	68.2	66.4	70.6	59.2	63.1	60.1	63.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	49.1	53.6	52.8	57.9	54.3	59.6	60.6	64.7	53.5	58.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	60.4	64.5	64.1	68.1	65.6	69.9	64.7	68.8	64.2	68.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	60.3	64.8	65.7	69.4	67.2	71.2	66.1	69.8	66.3	70.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	51.3	55.3	55.0	59.4	N/A	N/A	N/A	N/A	N/A	N/A	56.9	62.0	56.9	62.0	N/A	N/A	N/A	N/A
7	52.8	56.8	56.5	60.4	N/A	N/A	N/A	N/A	N/A	N/A	63.0	67.3	63.0	67.3	N/A	N/A	N/A	N/A
8	48.7	53.3	51.2	56.1	N/A	N/A	N/A	N/A	N/A	N/A	54.4	60.1	57.4	62.5	N/A	N/A	N/A	N/A
9	53.0	57.4	56.6	61.5	N/A	N/A	N/A	N/A	N/A	N/A	58.3	63.5	58.3	63.5	N/A	N/A	N/A	N/A
10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	59.5	65.3	59.5	65.3
11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	64.0	68.8	64.0	68.8
12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	61.8	66.6	61.8	66.6
13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	54.4	59.7	54.4	59.7
14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	57.9	63.1	57.9	63.1

N/A - Not Applicable (The receptor is not adjacent to the proposed alignment).

1/ Existing (1980) and future (2000) noise levels were not predicted for Sites 10 through 11 because the sites are not adjacent to a major roadway in the corridor. Daytime monitored sound levels in the areas, however, are shown in Table A-10. The future sound levels are expected to be comparable to the monitored sound levels.

2/ In order to facilitate comparison among the alternatives, the predicted noise levels at Sites 3, 4 and 5 represent traffic related noise from both County Road 62 and Eden Prairie Road.

TABLE 21

PREDICTED NIGHTTIME NOISE LEVELS - dBA

	EXISTING[1]		FUTURE															
			Alt. 1[1]		Sub-Alt. A[2]		Sub-Alt. B[2]		Sub-Alt. C[2]		Alt. 2		Alt. 3		Alt. 4		Alt. 5	
Site	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}
1	51.0	55.3	51.0	55.3	53.3	57.8	56.9	61.3	54.4	58.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	61.2	65.2	61.2	65.2	63.5	67.6	56.3	60.7	57.2	61.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	46.2	50.9	49.9	55.8	51.5	57.6	57.7	62.4	50.6	56.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	57.5	61.6	61.2	65.2	62.8	67.1	61.9	66.0	61.3	65.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	57.4	61.4	62.8	66.9	64.4	68.3	63.3	67.4	63.4	67.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	48.4	52.7	52.1	56.3	N/A	N/A	N/A	N/A	N/A	N/A	54.0	59.2	54.0	59.2	N/A	N/A	N/A	N/A
7	49.9	54.0	53.6	57.7	N/A	N/A	N/A	N/A	N/A	N/A	60.1	64.5	60.1	64.5	N/A	N/A	N/A	N/A
8	45.8	50.5	48.4	53.7	N/A	N/A	N/A	N/A	N/A	N/A	51.5	57.8	54.5	59.9	N/A	N/A	N/A	N/A
9	50.1	54.0	53.7	59.6	N/A	N/A	N/A	N/A	N/A	N/A	55.4	60.9	55.4	60.9	N/A	N/A	N/A	N/A
10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	56.7	61.9	56.7	61.9
11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	61.2	65.7	61.2	65.7
12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	59.0	63.9	59.0	63.9
13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	51.5	57.5	51.5	57.5
14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	55.0	60.5	55.0	60.5

N/A - Not Applicable (The receptor is not adjacent to the proposed alignment).

1/ Existing (1980) and future (2000) noise levels were not predicted for Sites 10 through 14 because the sites are not adjacent to a major roadway in the corridor. Future sound levels are expected to be comparable to existing sound levels in the area.

2/ In order to facilitate comparison among the alternatives, the predicted noise levels at Sites 3, 4 and 5 represent traffic related noise from both County Road 62 and Eden Prairie Road.

TABLE 22

RESIDENCES IMPACTED BY NOISE LEVELS[1/]
Based Upon FHWA Design Noise Levels and State Noise Standards

Road Segment	ALT. 1	ALT. 2			ALT. 3			ALT. 4	ALT. 5
		A	B	C	A	B	C		
RESIDENCES WITHIN L_{10} 70 dBA NOISE CONTOUR:[2/]									
Western Terminus of Project to CSAH 4	0	0	0	0	0	0	0	N/A	N/A
CSAH 4 to Birch Island Road	0	0	0	0	0	0	0	N/A	N/A
Birch Island Road to Baker Road	0	0	0	0	0	0	0	N/A	N/A
Baker Road to I-494	0	0	0	0	0	0	0	N/A	N/A
I-494 to Shady Oak Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	0
RESIDENCES WITHIN L_{50} 60 dBA NOISE CONTOUR:[3/]									
Western Terminus of Project to CSAH 4	15	16	14	11	16	14	11	N/A	N/A
CSAH 4 to Birch Island Road	0	0	1	0	0	1	0	N/A	N/A
Birch Island Road to Baker Road	0	0	0	0	0	0	0	N/A	N/A
Baker Road to I-494	0	0	0	0	0	0	0	N/A	N/A
I-494 to Shady Oak Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2	2
RESIDENCES WITHIN L_{10} 50 dBA NOISE CONTOUR OR L_{50} 55 dBA NOISE CONTOUR:[4/]									
Western Terminus of Project to CSAH 4	31	50	60	50	50	60	50	N/A	N/A
CSAH 4 to Birch Island Road	3	3	3	5	3	3	5	N/A	N/A
Birch Island Road to Baker Road	0	11	11	11	8	8	8	N/A	N/A
Baker Road to I-494	1	2	2	2	2	2	2	N/A	N/A
I-494 to Shady Oak Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4	4

NA - Not Applicable

1/ The number of residences represents a tabulation of structures only and does not reflect the number of dwelling units.
2/ Represents FHWA Design Noise Levels (Activity Category B)
3/ Represents State Daytime Noise Standard (NAC-1)
4/ Represents State Nighttime Noise Standard (NAC-1). The contour furthest from the roadway was considered.

higher (approximately 10 dBA or more) than the existing noise levels. For comparative purposes, a change of 3 dBA is typically considered the smallest noticeable change over an extended period of time. A 10 dBA change in noise, however, is perceived by most people to represent a doubling or halving of the "loudness" of a sound. Site 3 (subalternative B), Site 7 (alternatives 2 and 3), and Site 8 (alternative 3) are considered substantially higher than the existing noise levels, as predicted.

Comparison of Noise Levels between the Build and No-Build Alternatives

This evaluation was conducted to determine the future noise impacts that are likely to occur even if no improvements are made. Several of the sites are expected to experience only slight noise increases under the Build alternatives while the noise levels at Site 2 (subalternatives B and C) will actually be less than the predicted no-build alternative noise levels. The remaining sites are expected to experience noise increases in the 5 to 8 dBA range with the Build alternatives, an increase considered to be "quite noticeable."

NOISE ABATEMENT MEASURES

Due to the noise impacts identified, noise abatement measures will be analyzed. The following types of noise abatement may be considered for County Road 62.

- Traffic management measures - these may include use restrictions for certain vehicle types or modified speed limits.

- Alteration of vertical or horizontal alignments - this may be considered during final design of the selected alternative.

- Construction of noise barriers - barriers may take the form of either a wall or an earthen berm. The decision to construct noise barriers should be based on resident input and cost effectiveness evaluations.

- Acquisition of property to serve as a buffer zone - this option could be used to prevent incompatible land uses from developing too close to the highway.

Table 23 shows those roadway segments where noise abatement should be considered. Each of the segments identified contain at least one receiver expected to experience noise in excess of state nighttime or state daytime noise standards or FHWA noise abatement criteria. The decision to provide abatement will be made on a segment by segment basis during final design of the selected alternative. The decision will be based on the feasibility of abatement to noise standards, the cost effectiveness of abatement and resident input. Where abatement is not provided, a variance will be requested from the Minnesota Pollution Control Agency.

TABLE 23

ABATEMENT TO BE CONSIDERED FOR THE BUILD ALTERNATIVES

Road Segment	Sites	Side of Road	ABATEMENT TO BE CONSIDERED						
			Sub-Alt. A	Sub-Alt. B	Sub-Alt. C	Alt. 2	Alt. 3	Alt. 4	Alt. 5
Western Terminus of Project to CSAH 4	1, 3, 4[1]	North	Yes	Yes	Yes	N/A	N/A	N/A	N/A
	2	South	Yes	Yes	Yes	N/A	N/A	N/A	N/A
CSAH 4 to Birch Island Road	6	North	N/A	N/A	Yes	Yes	Yes	N/A	N/A
	5[2], 7	South	Yes	Yes	N/A	No	No	N/A	N/A
Birch Island Road To Baker Road	8	North	N/A	N/A	N/A	Yes	Yes	N/A	N/A
		South	N/A	N/A	N/A	No	No	N/A	N/A
Baker Road to I-494	9	North	N/A	N/A	N/A	Yes	Yes	N/A	N/A
		South	N/A	N/A	N/A	No	No	N/A	N/A
I-494 to Shady Oak Road	11	North	N/A	N/A	N/A	N/A	N/A	Yes	Yes
	10, 12, 13, 14	South	N/A	N/A	N/A	N/A	N/A	Yes[3]	Yes[3]

N/A - Not Applicable (The receptor is not adjacent to the proposed alignment.)

[1] Site 4 is located south of County Road 62 in Sub-Alternative B.

[2] Site 5 is located north of County Road 62 in Sub-Alternative C.

[3] Does not apply to Site 12.

Vegetation and Wildlife Impacts

The impact of the proposed project alternatives on the vegetation and wildlife resources in the area was determined by examining recent aerial photography, literature research and field observation. Three areas of impacts are discussed here: threatened and endangered species, unique vegetation and habitat, and habitat quality and use.

THREATENED AND ENDANGERED SPECIES

The proposed project is within the range of the peregrine falcon, an endangered species listed in the U.S. Fish and Wildlife Service Red Book. Even though observations of the peregrine falcon may be made in the area, there are no bluff areas along major water courses in or near the proposed highway corridor which would provide potential nesting sites for the reintroduction of the peregrine falcon.

Another animal species, listed as of special concern by the Natural Heritage Program, is the Blanding's Turtle. According to the Minnesota Natural Heritage Program, no records of this species exist for the project corridor, but Hennepin County is part of the original range of the Blanding's Turtle. The proposed project alternatives will not impact any open water habitats which are suitable for this species.

The proposed build alternatives and the no-build alternative will have no impact upon threatened or endangered species.

UNIQUE VEGETATION AND HABITAT

Mature stands of "Big Woods" maple-basswood forest, with intact understories, are considered to be threatened by the Minnesota Natural Heritage Program. One wooded area which will be impacted by the proposed highway action is the wooded ridge on the east side of Rowland Road. A field investigation of the ridge indicates that the woods are a mixture of young white birch and aspen with older oaks and elms. The ridge has been fairly uniformly disturbed in the past due to grazing. Therefore, the woods is not a native, undisturbed "Big Woods" forest.

No other areas of potential unique vegetation are located in the highway corridor.

HABITAT QUALITY AND USE

The proposed highway project is located in an urbanizing area which is surrounded by urban development, limiting the long term ability of the area to support diverse wildlife populations. However, certain types of wildlife do inhabit the area and these species will be minimally affected by a new highway facility. The major wildlife habitat areas within the corridor are the wetlands, streams and wooded ridges. Table 24 summarizes the acres of habitat taken for each highway section.

TABLE 24

SUMMARY OF WILDLIFE HABITAT TAKEN

Habitat	Highway Section CSAH 4 to I-494	I-494 to CSAH 61	Total
Woods	11.5 Acres	21.0 Acres	32.5
Grass/Meadow	1.7 Acres	20.4 Acres	22.1
Wetlands	2.3 Acres	0.4 Acres	2.7
TOTAL	15.5 Acres	44.8 Acres	57.3 Acres

Water Quality Impacts

The major pollutants associated with roadway operations are the following:

- deicing salts used to clear ice and snow,
- traffic-related pollutants which originate from the combustion of petroleum products and wear of vehicle components,
- hazardous materials spilled in roadway accidents.

The contribution of each of these sources to potential water quality degradation is discussed in the following sections. A more complete discussion of water quality is given in the technical report, "Water Resources" prepared for this study.

DEICING SALTS

The Hennepin County Department of Transportation applies a mixture of sand and salt to roadway surfaces during the winter season to aid in the clearing of ice and snow to promote safe roadway operation. The average annual rate of application of the salt-sand mixture in the study area is 9.9 tons per lane mile. The seasonal average percentage of salt in the mixture is 35 percent.

To evaluate the effect of deicing salts on receiving waters, a "worst case" predictive methodology was used which assumed that the entire annual salt application is discharged to receiving waters during the spring snowmelt. The roadway runoff will travel to wetlands or holding ponds before discharge to receiving waters. Based on these assumptions, the predicted values of chlorides in the receiving waters are shown in Table 25. Under the Minnesota Water Quality Standards and classification of receiving waters, the streams and lakes in the area should not exceed the chlorine level of 250 milligrams per liter.

TABLE 25

PROJECTED CHLORINE CONCENTRATIONS IN RECEIVING WATERS

Subbasin	Receiving Water	Tributary Area (Acres)	CHLORIDE CONCENTRATION (milligrams/liter)
A	Birch Island Lake	337.0	166
B, C, D & E	West Branch Nine Mile Creek	195.0	158
F	Wetland	64.7	505
G, H	Nine Mile Creek	295.2	191
I	Wetland	29.0	273
J	Wetland	142.0	280

As shown in Table 25, three of the six receiving waters would have chloride concentrations in excess of the 250 milligrams per liter standard for the build alternatives. The concentrations from subbasins I and J exceed the standard by approximately 10%. This 10% variance is within the accuracy of the calculations and, therefore, the projected chlorine concentrations are considered to meet the chloride water quality standard. The receiving waters for subbasins I and J are wetland areas which function as wildlife habitat which can tolerate higher levels of chlorides for the short period of time during spring runoff.

In subbasin F, the projected chloride concentration is 100% greater than the 250 milligram per liter standard. This results from the fact that the tributary area to the receiving water is very small, compared to the amount of roadway which drains to the wetland. No significant adverse impact to the wetland habitat is anticipated because the wildlife can tolerate higher levels of chlorides for short periods of time.

Since the high chloride concentration in the receiving waters occurs only during the spring run-off period, and the chloride concentrations of the receiving waters are below the appropriate standard, it can be concluded that the chlorides in highway run-off will not significantly affect existing surface water quality.

Like surface water, groundwater chloride concentrations will be minimally affected by the proposed highway. The frozen ground during part of the spring run-off and the highway run-off to the drainage ditches and ponding areas reduce the amount of chlorides which can enter the groundwater. Since the groundwater table is high, 0 to 15 feet, throughout all of the study area and private wells in the glacial till are about 100 feet deep, considerable dilution of the chlorides will take place before any possible withdrawal for consumption.

The groundwater in the glacial till is not a direct source of recharge water for the deeper wells in the area. Since the deeper wells are protected by the rock layers underlying the glacial till and by iron well casting, considerable dilution of the chloride will occur before withdrawal and therefore, no effect on the chloride concentration in the deeper wells is expected.

TRAFFIC-RELATED POLLUTANTS

The major pollutants associated with vehicle operation are petroleum products and several heavy metals, including lead, copper, chromium, nickel and zinc. These materials are deposited within the highway right-of-way and are washed to receiving waters during heavy rainfalls.

To identify potential problem areas a predictive "worst case" analysis was applied which made use of pollutant loading rates measured in a study in the Washington DC metropolitan area.[1/] This methodology compares favorably to model watersheds, with measured water quality data, from the Twin Cities area. The FHWA methodology[2/] for predicting water pollutants in highway runoff was also run, for comparative purposes, and it was found that the FHWA model does not give accurate results for Minneapolis-St. Paul watersheds. A detailed discussion of the methodology used for computing pollutant concentrations is contained in the "Water Resources Report" for County Road 62.

The impact of the combined highway and future land use run-off on the receiving waters of the study area will be minimal. Of the water quality parameters analyzed only three, chromium, copper and oil, are predominate constituents of highway runoff.

The predicted amount of oil (or grease and petroleum) to be found in the receiving waters due to the proposed roadway and adjacent land uses is a small percent, less than one percent to 6 percent of the standard for the receiving water. Similarly, chromium levels are predicted to range from 4 to 20 percent of the standard for the receiving water. The incremental concentration of copper predicted from highway runoff ranges from 5 percent to 30 percent of the applicable standard of 0.01 milligrams per liter.

The traffic pollutants analysis concludes that runoff from proposed highway represents an insignificant amount of additional pollutant load to Nine Mile Creek, the West Branch of Nine Mile Creek and the wetlands in the highway corridor.

HAZARDOUS SPILLS

The proposed highway will carry truck traffic, including the transport of hazardous materials such as petroleum and other chemicals. While the roadway will be designed to promote traffic safety, accidents may occur which result in the release of hazardous materials.

Alternatives 4 and 5 propose a bridge or culvert crossing of Nine Mile Creek. The crossing is located .55 miles upstream from Bryant Lake, which is used for recreational swimming. This factor makes the creek crossing a critical location for controlling hazardous spills.

1/ Contributions of Urban Roadway Usage to Water Pollution, Donald Shaheen, Biospherics, Inc. Rockville, Md., 1975.

2/ Predictive Procedures for Determining Pollutant Characteristics in Highway Runoff, Federal Highway Administration, February, 1981.

For either a bridge or culvert crossing of the creek, a containment pond may be proposed to capture runoff from the highway in this section. A control structure at the holding pond would have the capability to retain hazardous spills until they can be treated or removed to an acceptable disposal site.

A similar retention pond design may be proposed for the West Branch of Nine Mile Creek.

NO BUILD ALTERNATIVE

The no-build alternative will not result in any adverse water quality impacts.

MITIGATION MEASURES

All proposed segments of County Road 62 will be designed to release runoff to natural ponding areas such as wetlands or to man-made water retention ponds. These ponds will aid in settling out solids and bound chemicals before release to receiving waters, including the potentially high concentrations of copper and lead previously discussed.

Wetlands Impacts

Five wetlands are located within the County Road 62 corridor and would be impacted by some alternatives of the proposed action.

The five wetlands, labeled "a" through "e", were analyzed for the impacts of the highway alternatives upon the vegetative and hydraulic character of the wetland. The wetlands descriptions include their classification according to the "Classification of Wetlands and Deepwater Habitat of the United States" published by the U.S. Fish and Wildlife Service.

The description of each wetland and potential impacts are discussed below and summarized in Table 26:

TABLE 26

SUMMARY OF POTENTIAL WETLAND IMPACTS

WETLAND	CLASSIFICATION	TOTAL ACRES	IMPACTED ACRES	IMPACTING ALTERNATIVE
"a"	Type 1	3.3	0.83	Subalternative B
			1.00	Subalternative C
"b"	Type 3, 6 and 1	49.1	0.46	Subalternative A
			0.55	Subalternative B
			1.32	Subalternative C
"c"	Type 4	2.8	Visual	Alternative 3
"d"	Type 3	1.0	0.03	Alternatives 4 and 5
"e"	Type 1	31.9	0.37	Alternatives 4 and 5

WETLANDS "a" AND "b"

Description

Two wetlands are found at the western terminus of the project, as shown in Figure 23. Wetland "a", located west of CSAH 4 and north of Townline Road, is 3.3 acres in size, classified Type 1 and connected hydrologically to wetland "b" by a culvert under CSAH 4. The most common species of vegetation found in the wetland are willow, boxelder and reed canary grass. Wetland "a" is surrounded on three sides by residential development and its habitat serves as cover for small birds and mammals.

Wetland "b", located south of County Road 62 and east of CSAH 4, is 49.1 acres in size and is classified predominantly as Type 3, with some Type 1 and Type 6 wetlands on the fringe. The wetland is hydrologically connected with Birch Island Lake and is drained by a county ditch to the east. Vegetation in the wetland is predominantly cattail with some smaller areas of willow, reed canary grass, and raspberries. This wetland is a habitat for waterfowl, ring-necked pheasants and other wetland wildlife species.

Impacts of Alternatives - The highway alternatives which would impact wetland "a" are subalternatives B and C. Each alternative would require the removal of vegetation and placement of fill to construct the highway. Subalternative B would take 0.8 acres of wetland and subalternate C would take 1.0 acres of wetland.

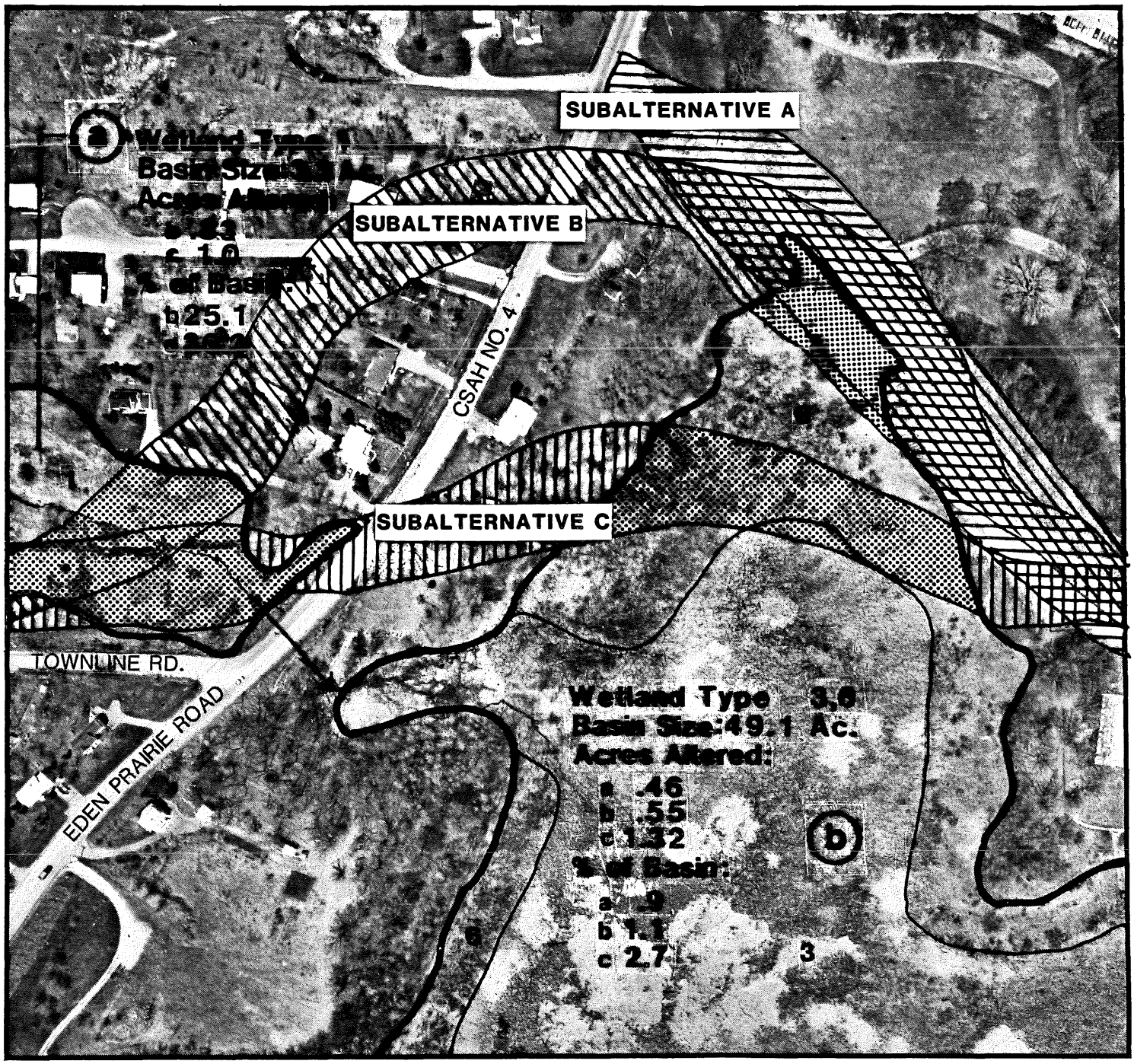
The highway alternates which would impact wetland "b" are all of the western terminus alternatives: Subalternatives A, B and C. Subalternatives A and B require minimal encroachment into the wetland; 0.46 acres for subalternative A and 0.55 acre for subalternative B. Subalternative C would require the placement of fill in 1.32 acres of the wetland and would also isolate a small 5.05 wetland area from the main basin.

WETLAND "c"

Description - Wetland "c", shown in Figure 24, located north of County Road 62 and west of Baker Road, is 2.75 acres in size and classified Type 4. Vegetation in the wetland includes pond lilies in the open water area and willow, reed canary grass and cattails along the fringe. The steep slopes surrounding the south and west sides of the wetland are wooded with white oak, white birch, hackberry, red oak and basswood.

The wetland is visually isolated from the existing alignment of County Road 62 by a steep bank vegetated with trees and shrubs which provides security for waterfowl, red-winged blackbirds, ring-necked pheasants and other wildlife species associated with the wetland.

Impacts of Alternatives - The proposed highway action will not require filling in wetland "c". The impact of constructing alternative 3 would be the removal of the vegetative barrier between the highway and the wetland



County Road 62

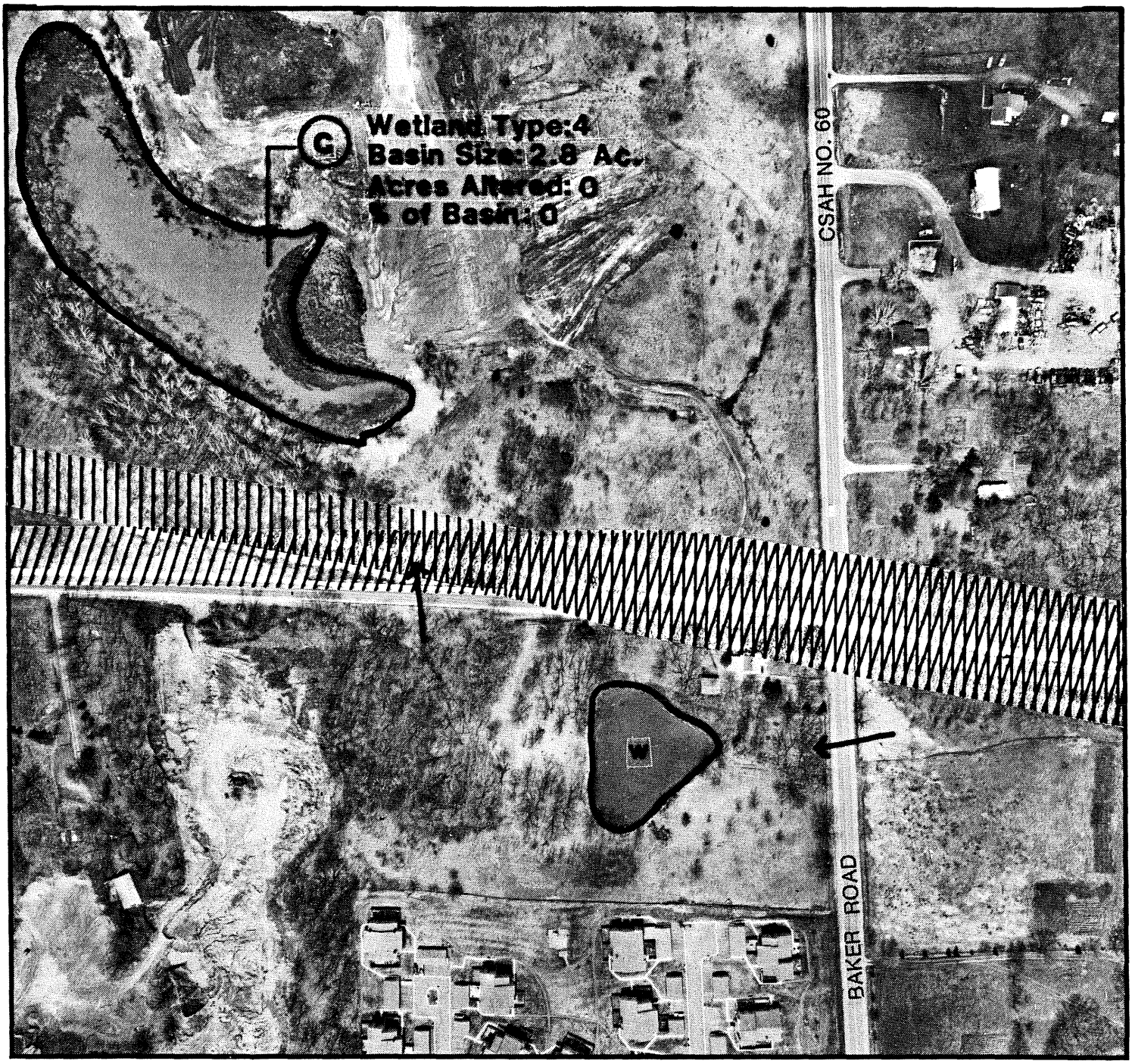
Environmental Impact Statement

WETLANDS "a" AND "b"

FIGURE 23

- HYDROLOGICAL CONNECTION / DIRECTION OF FLOW
- 3 — WETLAND TYPE
- ROUTE LOCATION
- WETLAND IMPACT
- W — WATER

north 0 100 200 feet



County Road 62

Environmental Impact Statement

WETLAND "c" FIGURE 24

HYDROLOGICAL CONNECTION / DIRECTION OF FLOW

3 WETLAND TYPE

ROUTE LOCATION

WETLAND IMPACT

W WATER

north 0 100 200 feet

causing a temporary disruption of the use patterns of the wildlife inhabiting the wetland. Once construction activity would cease, wildlife would adjust to the traffic flow through the area.

WETLAND "d"

Description - Wetland "d", shown in Figure 25, located north of proposed County Road 62 and east of I-494, is 1.0 acre in size and classified as Type 3. Vegetation in the wetland includes cattails, reed canary grass and willows. The wetland is used by waterfowl, red-winged blackbirds, swallows and a variety of songbirds and small mammals. The area immediately around the wetland has been disturbed for development as an office/research complex.

Impacts of Alternatives - Alternatives 4 and 5 of proposed County Road 62 will require a minor encroachment of wetland "d", filling 0.03 acres. The platting of Clearwater Drive by the City of Minnetonka was approved independent from the County Road 62 alignment, and will require 0.39 acres of wetland.

WETLAND "e"

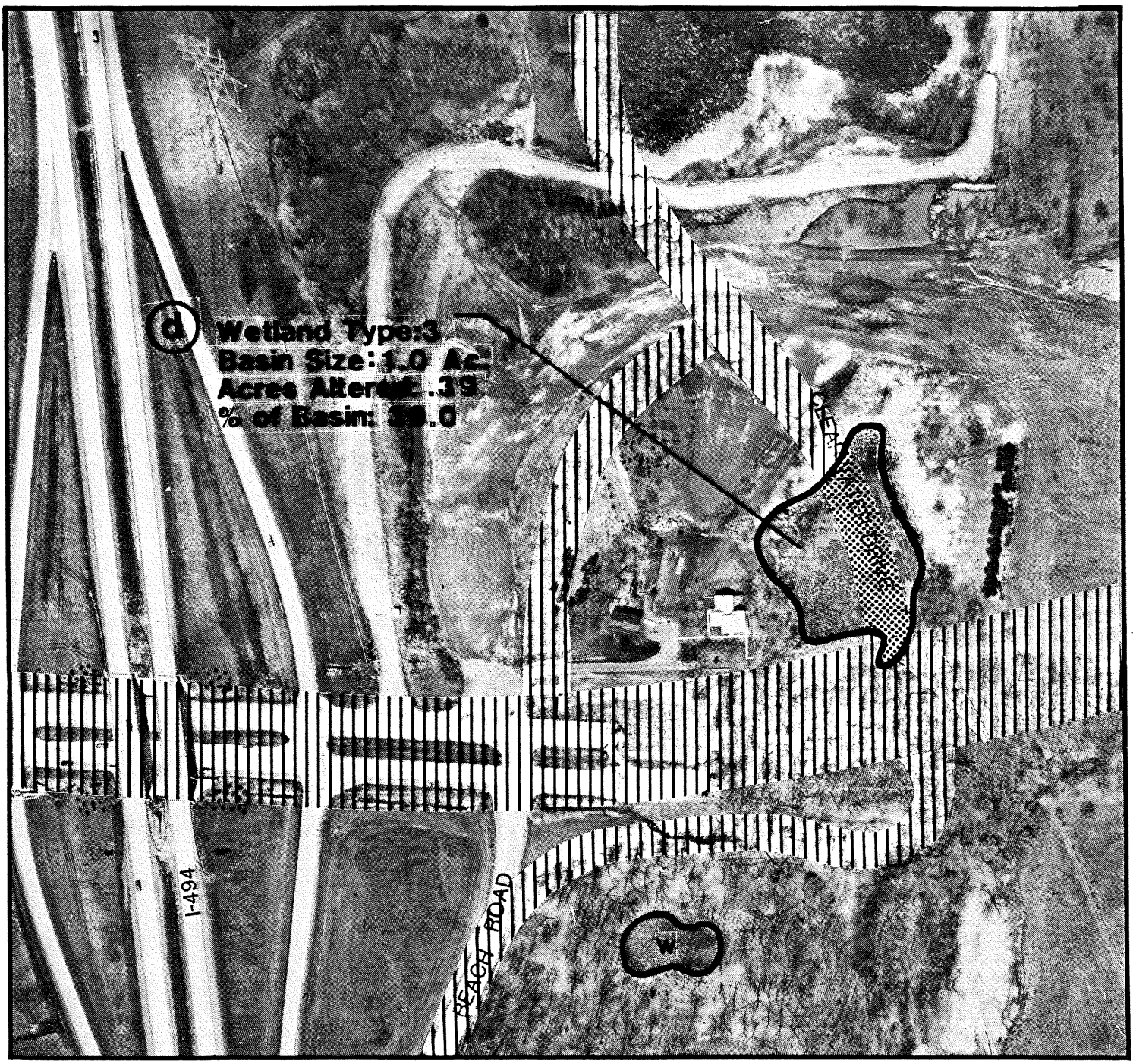
Description - Wetland "e", shown in Figure 26, crosses the County Road 62 corridor between Rowland Road and Shady Oak Road, is 31.1 acres in size and classified Type 1. Figure 30. The major portion of the wetland basin lies south of the proposed County Road 62 alignment and the proposed highway would cross a shallow drainage swale. The predominant vegetation in the wetland is reed canary grass with a few scattered willows. The wetland is part of a larger agricultural meadow which is cropped for hay limiting the use of the area for nesting birds.

Impacts of Alternatives - Alternates 4 and 5 would sever this wetland into two tracts and would fill 0.37 acres. Natural drainage between the two segments would be maintained by providing a culvert under the highway.

REGULATORY ACTIONS AND MITIGATION MEASURES

Permit regulations by the U.S. Army Corps of Engineers and the Minnesota Department of Natural Resources (DNR), apply to any filling in wetland "b". A DNR permit would also be required for impacts to wetland "c". Other wetlands in the study area are not subject to regulation.

At this point, specific measures to mitigate wetland impacts have not been developed. The Final Environmental Impact Statement will identify the preferred alternative for County Road 62 and specific wetland mitigation techniques will be discussed. Also, if appropriate, a Wetlands Finding will be prepared in accordance with Executive Order 11990, Protection of Wetlands.



County Road 62

Environmental Impact Statement

WETLAND "d" FIGURE 25

HYDROLOGICAL CONNECTION / DIRECTION OF FLOW

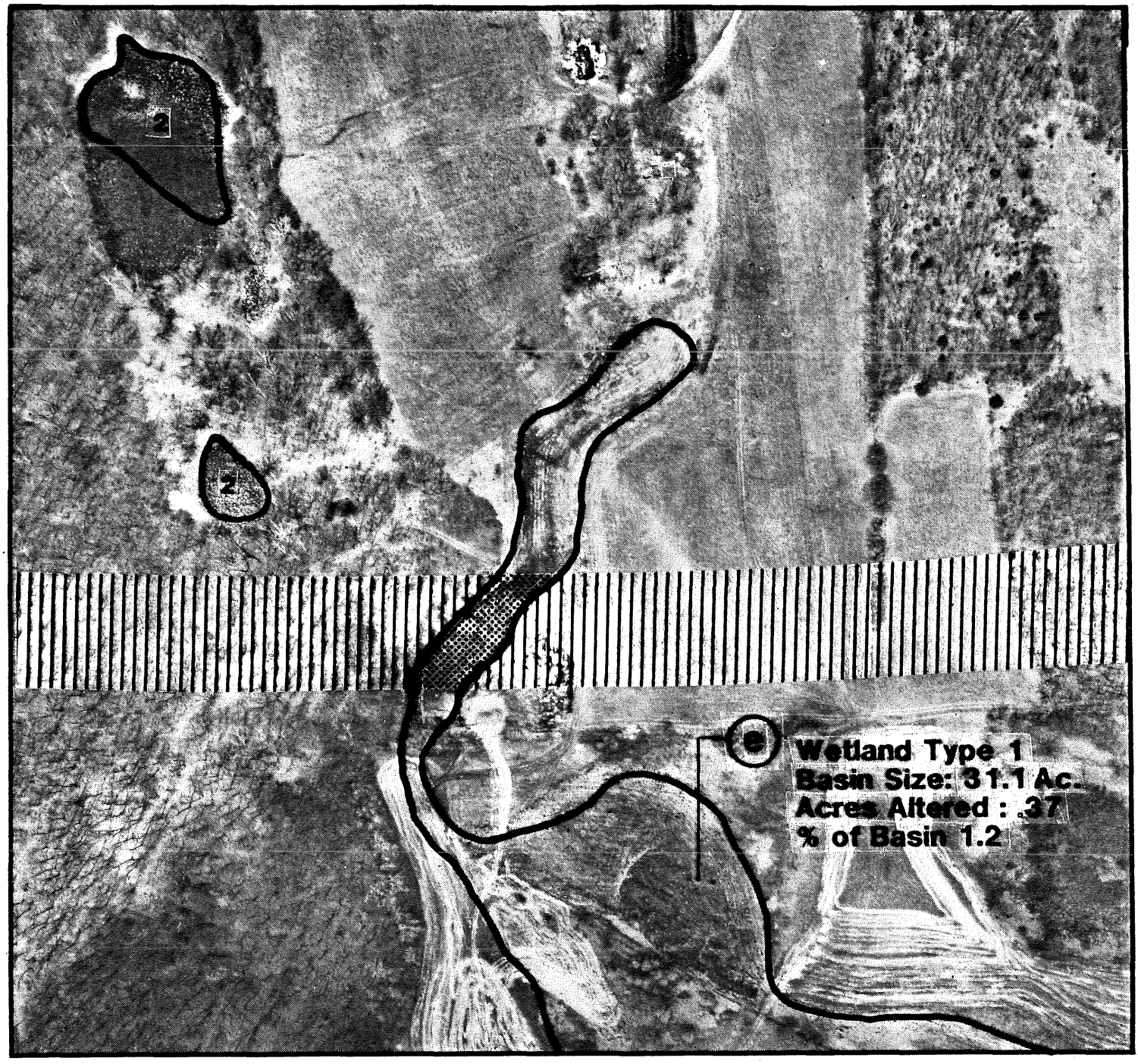
3 WETLAND TYPE

ROUTE LOCATION

WETLAND IMPACT

W WATER

north 0 100 200 feet



County Road 62

Environmental Impact Statement

WETLAND "e"

FIGURE 26

HYDROLOGICAL CONNECTION / DIRECTION OF FLOW

3 WETLAND TYPE

ROUTE LOCATION

WETLAND IMPACT

W WATER

north 0 100 200 feet

Floodplain Impacts

In recent years the U.S. Department of Housing and Urban Development has been establishing flood levels on selected rivers and streams in the country. The purpose of this is to delineate the 100-year flood elevation along rivers and streams to make federally subsidized insurance available to existing development in the floodplain and to assist those considering development in the floodplain. The base (or 100-year) floodplain is that area having a one percent chance of flooding in any given year.

The 100-year floodplain limits for lakes and streams in the County Road 62 corridor were developed from data presented in the "Nine Mile Creek Watershed District - Overall Plan." The floodway is that area of the stream's cross-section where most of the water is conveyed downstream. This area of the stream has the highest potential for property damage and loss of life. The floodplain is that area of the stream's cross-section that is characteristically shallower than the floodway. Usually in the floodplain small volumes of water are conveyed relative to the floodway. Therefore, the potential for property damage and loss of life is not as great.

Policies have been established to aid planning programs for public facilities in or near floodplains. The floodplains in the proposed County Road 62 corridor have been analyzed for potential impacts in accordance with Executive Order 11988, Floodplain Management and Federal Highway Program Manual 6-7-3-2.

FLOODPLAIN ENCROACHMENT IMPACTS

The 100-year floodplains in the study area are potentially affected by proposed County Road 62 at three locations: Birch Island Lake wetlands, West Branch of Nine Mile Creek and Nine Mile Creek. These locations are shown in Figure 27 and are described in more detail below. A summary of potential floodplain effects is given in Table 27.

TABLE 27

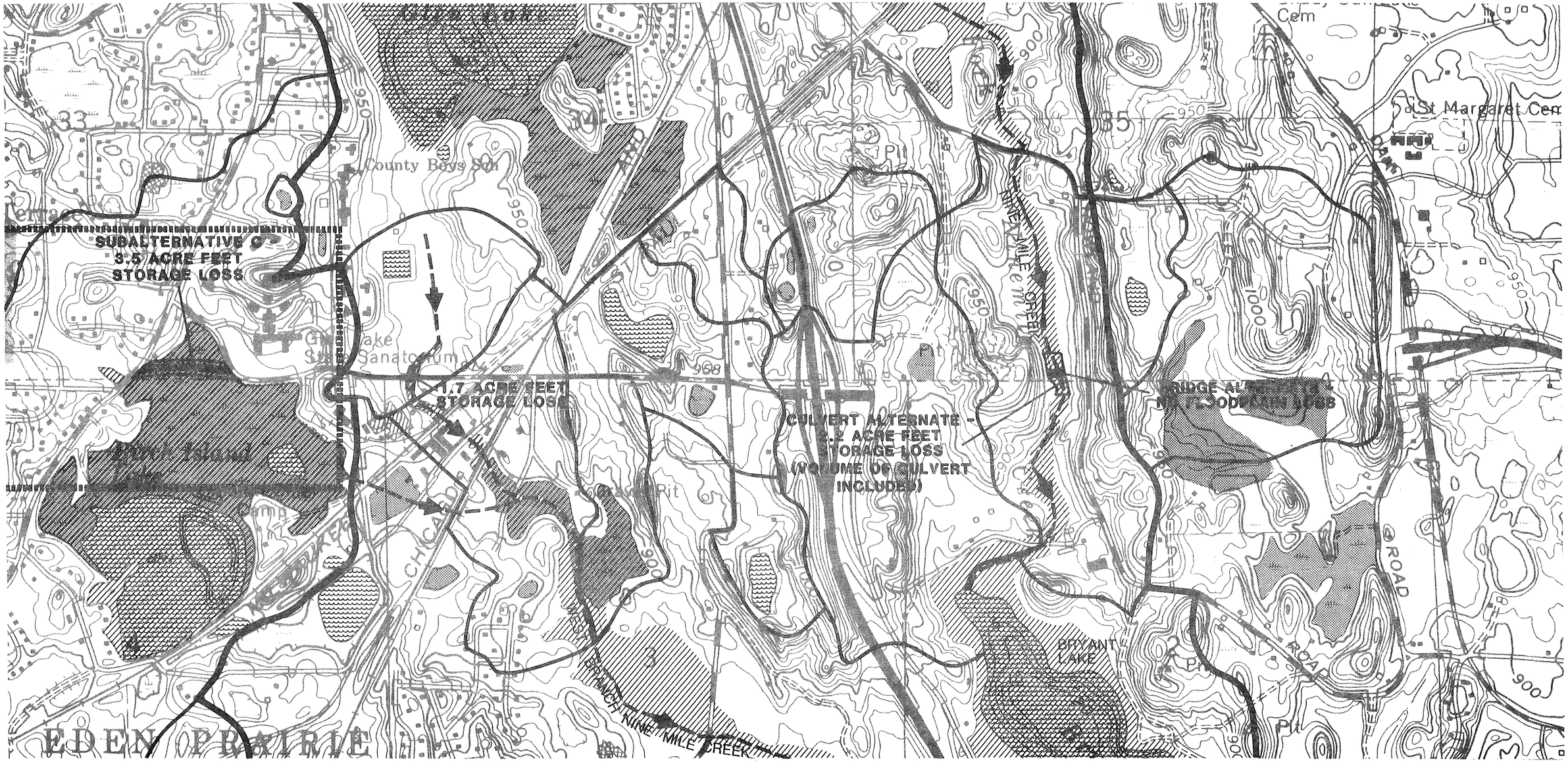
SUMMARY OF FLOODPLAIN IMPACTS

Body of Water Affected	Type of Encroachment	Flood Storage Lost (Acre-Feet)	Mitigative Measures to Minimize Floodplain Impacts	Remarks
Birch Island Lake	Insignificant	5.8	Yes	For Subalternative C the recommended mitigative measure is to enlarge the wetland area immediately north of the proposed roadway.
West Branch of Nine Mile Creek	Insignificant	< 1	No	Very localized impacts, all insignificant.
Nine Mile Creek	Insignificant	2	No	Very localized impacts. A very small stage increase will have no effect on the floodplain.

Birch Island Lake Wetland

The proposed highway alternatives along the north side of Birch Island Lake at the western terminus of proposed County Road 62 would not significantly impact the floodplain of Birch Island Lake. The roadway does not directly nor indirectly support base floodplain development, nor is it a longitudinal encroachment.

The area around Birch Island Lake is completely developed, with residential development on the west side and the Glen Lake State Sanitarium on the north side; therefore no land is available for development in the floodplain of Birch Island Lake. In addition, the Cities of Eden Prairie and Minnetonka have restrictions on new development in floodplains. The proposed roadway is not a longitudinal encroachment on the floodplain because only a small portion of the floodplain (about 1,000 feet) along the Lake is affected. The risk to the County Road 62 facility from damage due to flooding is very small since the floodplain is that associated with a lake (rather than a river) where water is essentially standing and therefore cannot erode the roadway. The design of the roadway in the Birch Island Lake area will be such that flooding of the roadway will not occur and that adequate protection of any slopes within the floodplains will be included in the design.


SUBALTERNATIVE C -
3.5 ACRE FEET
STORAGE LOSS
1.7 ACRE FEET
STORAGE LOSS
CULVERT ALTERNATE -
2.2 ACRE FEET
STORAGE LOSS
(VOLUME OF CULVERT
INCLUDED)
RIDGE AL
ACRE FEET
STORAGE LOSS
County Boys Sch
St Margaret Cem
Cem
Pit
Pit
Pit

At this location there are three possible configurations of the proposed roadway: subalternatives A, B and C. Of these subalternatives, C requires the greatest use of the floodplain, or approximately 5.8 acre-feet of flood storage lost to the roadway. This loss is about 3.9 percent of the total flood storage available for Birch Island Lake. The stage increase for the lake due to the lost storage is less than one-tenth of a foot. Therefore, there is no significant risk of flooding to the surrounding property or hazard to life. The lost flood storage can be mitigated to some extent by enlarging the wetland to the north of the proposed roadway where existing County Road 67 is currently situated along the edge of Birch Island Lake.

The other two subalternatives, A and B, take little or no flood storage from Birch Island Lake because the proposed roadway location for these subalternatives is over in-place County Road 67. Therefore, total floodplain impacts for these subalternatives are insignificant.

In summary, because there is no longitudinal encroachment, no significant encroachment, no significant risk to flooding of property or hazard to life, no adverse impact on natural or beneficial floodplain values and because the proposed facility is not a community's only evacuation route, it can be concluded that the impact of the proposed facility on the floodplain of Birch Island Lake is insignificant.

West Branch of Nine Mile Creek

Proposed County Road 62 would affect the floodplain at the crossing of the West Branch of Nine Mile Creek. The impact upon the floodplain is insignificant, there is no potential for direct or indirect support of base floodplain development, no longitudinal encroachment, no risk of damage to the facility due to flooding, and no significant impact on the natural and beneficial floodplain values.

The crossing of the creek at this location is at a point near the beginning of the creek; therefore, the flow is very small and has a minimum potential for doing any damage to the proposed roadway. To convey the stream across the roadway, a culvert will be used. The culvert will be designed to minimize any stage increase. Less than one acre-foot of storage of the 100-year flood level will be lost due to the proposed roadway. There will not be any roadway access to the areas along proposed County Road 62.

Nine Mile Creek

Proposed County Road 62, affect the floodplain at the crossing of Nine Mile Creek. The impact upon the floodplain is insignificant, there is no potential for direct or indirect support of base floodplain development, no longitudinal encroachment, no risk of damage to the facility due to flooding, and no significant impact on the natural and beneficial floodplain values.

Subalternative B for the crossing of Nine Mile Creek has the greater impact of the two subalternates for the creek crossing. Subalternative B consists of placing fill with culverts in the steep valley of Nine Mile Creek. The

fill will encroach on the floodplain and result in a loss of flood storage of about 2 acre-feet at the 100-year flood level. This is an insignificant loss of floodplain storage because Nine Mile Creek is located in a steep valley which is generally unbuildable near the creek and because the proposed crossing is near the top of the watershed where the flood flows are relatively small.

Since the proposed roadway will be on fill between 40 and 50 feet above the water surface there is very little potential for flooding of the roadway and therefore damaging it or interrupting traffic. The culvert(s) in the fill will be designed to pass the 100-year flood with minimal effect on Nine Mile Creek. During periods of low flow the culvert(s) will function as a means of allowing wildlife to move to one side or the other of the proposed County Road 62.

NO-BUILD ALTERNATIVE

The no-build alternative will have no effect on floodplain areas.

Surface Water Impacts

The proposed County Road 62 study area lies within the Nine Mile Creek drainage basin. The major basin is divided into numerous subbasins which have their own drainage characteristics.

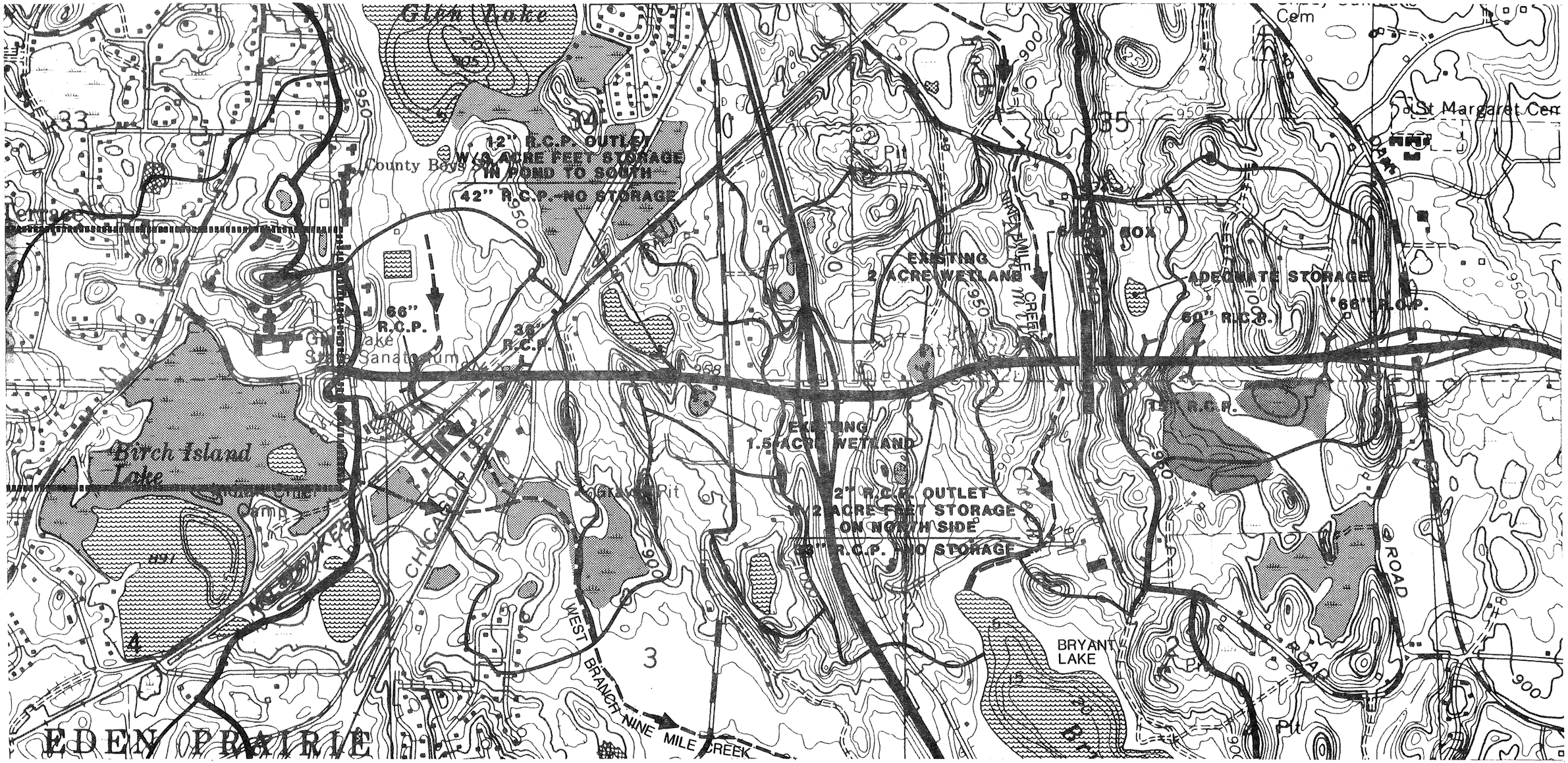
The subbasins which will be affected by the alternatives for the County Road 62 highway have been analyzed to maintain natural drainage patterns and minimize flooding. Most of the subbasins that contain a portion of County Road 62 have a ponding area to obtain the peak runoff, to store runoff from the highway and to provide an area in which suspended solids and some contaminents can be removed. The major basin, sub-basins, ponds and existing drainage system is shown on Figure 14. The proposed storm water drainage plan is shown in Figures 28, 29 and 30. The impacts of the County Road 62 alternatives within each subbasin are summarized in Table 28 and discussed below.

SURFACE WATER IMPACTS

Subbasin A

Existing drainage in this 337-acre subbasin is to Birch Island Lake and its adjacent 49 acre wetland. A county drainage ditch is the outlet for the basin to the West Branch of Nine Mile Creek. Land use in the subbasin is single family residential and the Hennepin County owned Glen Lake Sanitarium property.

Future drainage in this subbasin will not be altered significantly by the proposed highway alternatives. Runoff from the highway can be accommodated in the existing wetlands for water storage. Drainage structures have been located and sized for each of the western terminus subalternatives.



County Road 62

Environmental Impact Statement

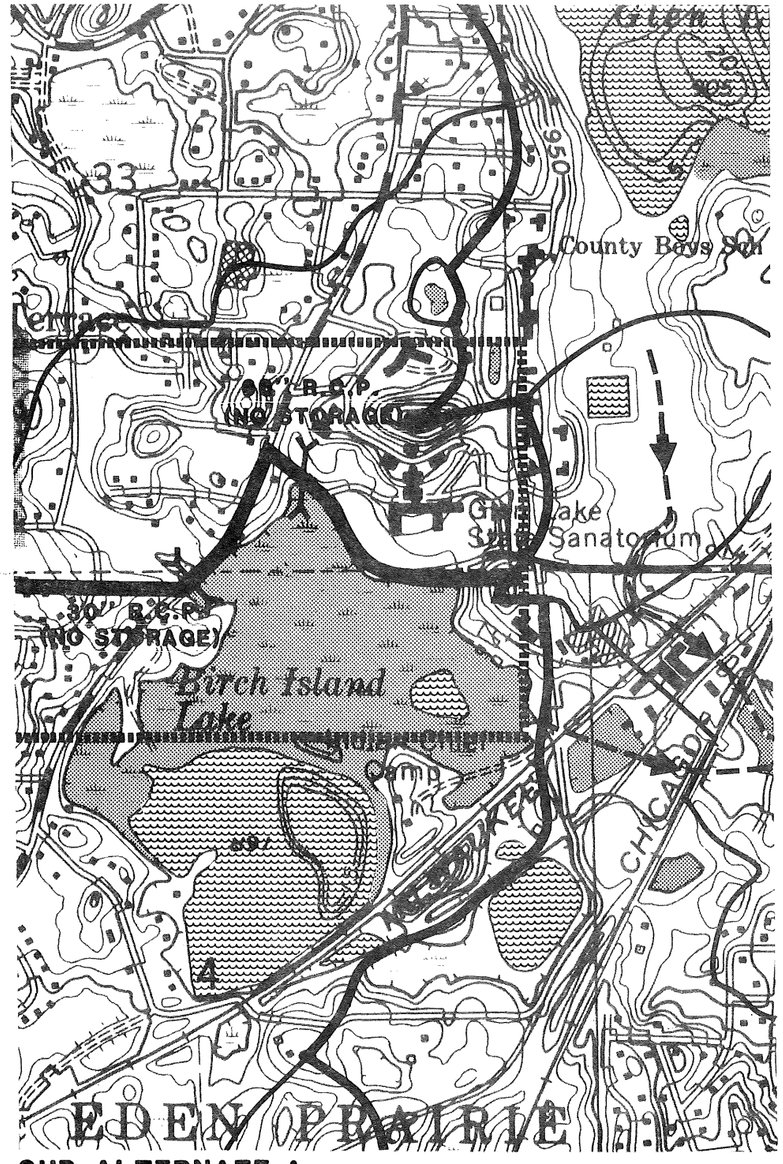
FUTURE DRAINAGE WITH ALTERNATIVE 2 - RAILROAD CROSSING AT-GRADE AND ALTERNATIVE 4 - ROWLAND ROAD GRADE SEPARATED

- STANDING WATER
- WETLAND AREA
- MAJOR WATERSHED BOUNDARY
- SUBBASIN BOUNDARY
- CREEKS

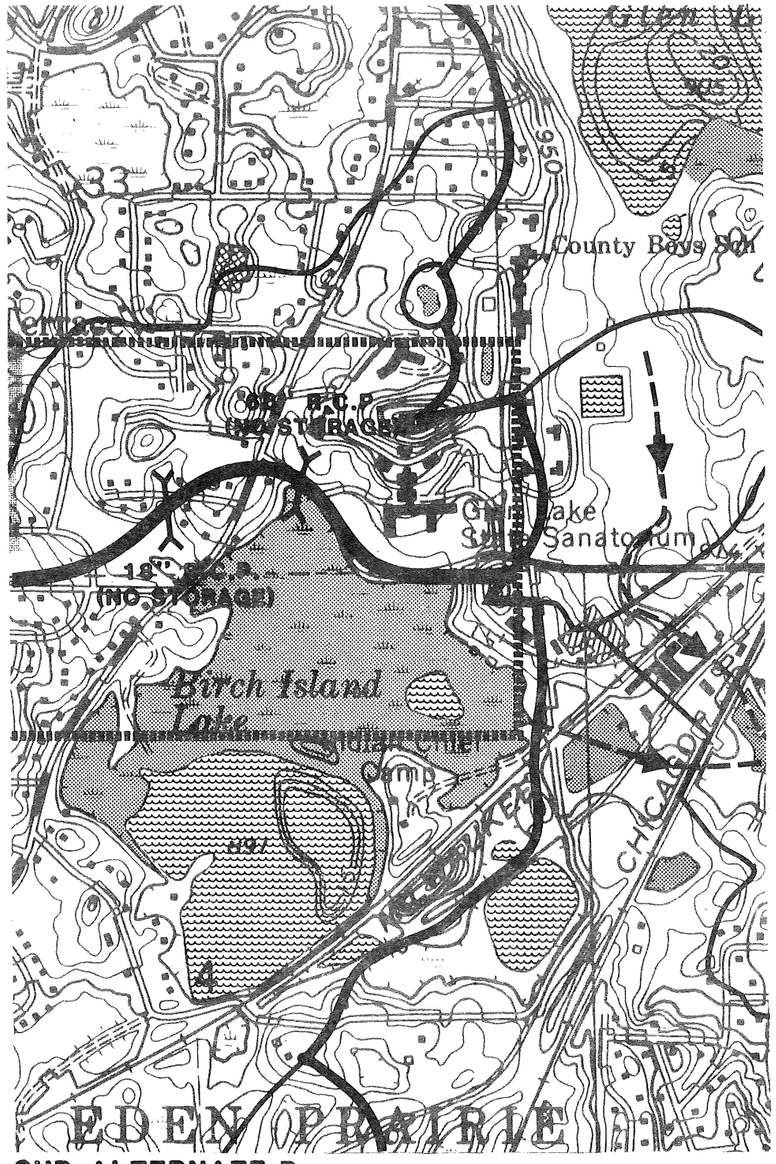
FIGURE 28

north

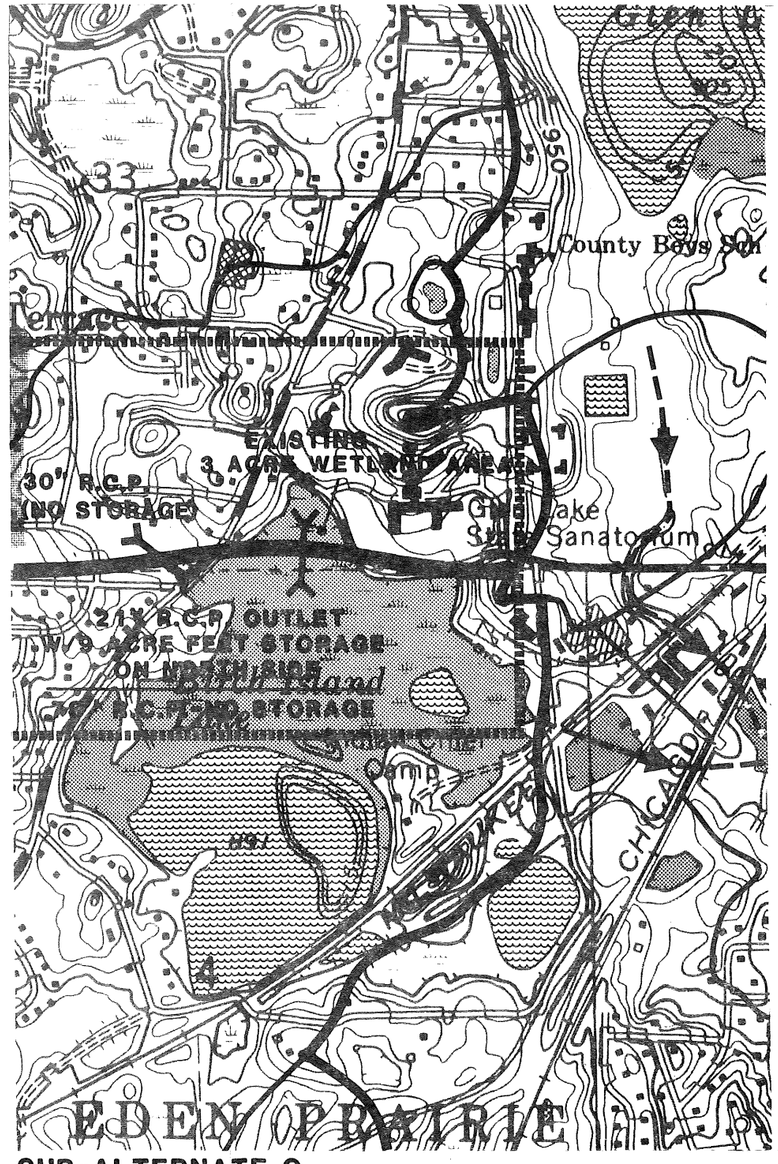
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SUB-ALTERNATE A



SUB-ALTERNATE B



SUB-ALTERNATE C

County Road 62

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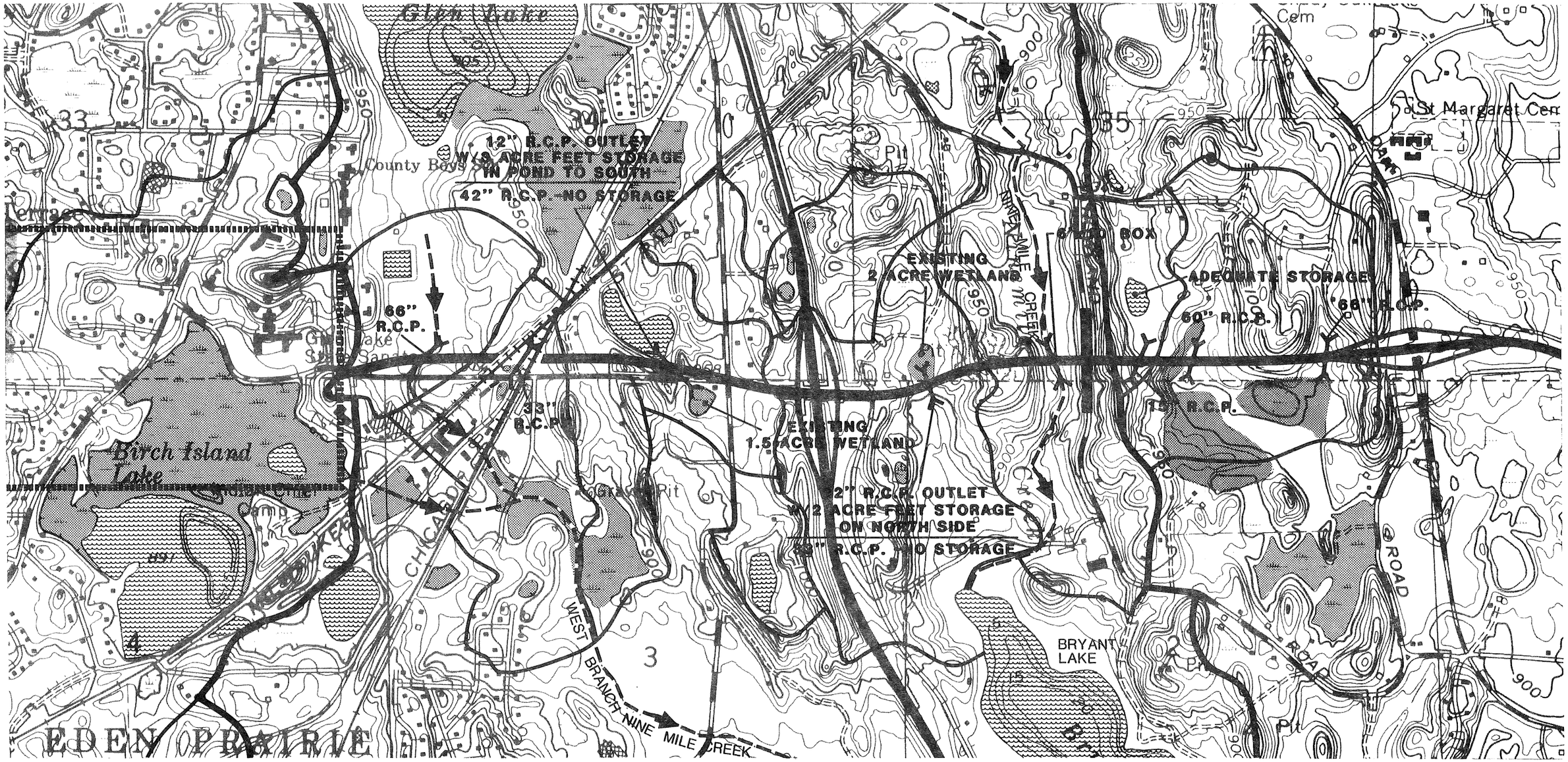
FUTURE DRAINAGE WITH WESTERN TERMINUS SUBALTERNATIVES

- STANDING WATER
- WETLAND AREA
- MAJOR WATERSHED BOUNDARY
- SUBBASIN BOUNDARY
- CREEKS

FIGURE 29

north

0 500 1000 2000



County Road 62

Environmental Impact Statement

FUTURE DRAINAGE WITH ALTERNATIVE 3 - RAILROAD CROSSING GRADE SEPARATED AND ALTERNATIVE 5 - ROWLAND ROAD AT-GRADE

- STANDING WATER
- WETLAND AREA
- MAJOR WATERSHED BOUNDARY
- SUBBASIN BOUNDARY
- CREEKS

FIGURE 30

north

0 500 1000 2000

TABLE 28

SUMMARY OF SURFACE WATER ANALYSIS AND IMPROVEMENTS BY SUBBASIN

Drainage Area	Size (Acres)	Existing Ponding (Acres)	Existing Outlet	Adequacy of Existing Condition	Proposed Improvement
A	337.0	0.0	2 - CMP's	Inadequate	Utilize existing wetland for water storage, provide an approximately 78" culvert beneath County Road 62, or an approximately 21-inch diameter culvert depending on storage requirements.
B	56.8	0.0	42" RCP	Inadequate	Provide an approximately 66" outlet beneath County Road 62.
C	7.0	0.0	Branch of Nine Mile Crk.	Adequate	None.
D	93.2	0.0	Branch of Nine Mile Crk.	Inadequate	Provide an approximately 36" outlet beneath County Road 62.
E	38.0	0.0	Branch of Nine Mile Crk.	Adequate	None.
F	64.7	7.0	None	Inadequate	Utilize existing wetland and pond for water storage, provide an approximately 42" outlet beneath County Road 62.
G	175.4	0.5	Bryant Lake	Inadequate	Utilize existing wetland for water storage, provide an approximately 42" outlet beneath County Road 62.
H	141.8	0.0	Nine Mile Crk.	Adequate	None.
I	29.0	3.5	None	Inadequate	Provide an approximately 15" outlet beneath County Road 62.
J	142.0	3.0	None	Inadequate	Utilize existing wetland for water storage, provide two outlets beneath County Road 62 (approximately 60" and 66"), provide overflow outlet to existing marsh area to south.

Concern has been raised by state and federal agencies that subalternative C would adversely impact the wetland by reducing the wetland area by severance. The proposed drainage plan for subalternate C would provide water storage in the 5 acre portion of wetland which is severed and provide a drainage structure connection to the main wetland to minimize adverse effects.

Subbasin B

Existing drainage in this 56.8 acre subbasin is to the West Branch of Nine Mile Creek which bisects the subbasin. The existing land use is open meadow which is grazed by horses.

Future highway runoff for this area will flow directly into the West Branch of Nine Mile Creek after appropriate sedimentation devices are used to control the quality of the discharge water. A 66" reinforced concrete pipe culvert is proposed for the creek crossing.

Subbasin C

Existing drainage in this 7 acre subbasin is directly into the West Branch of Nine Mile Creek. Land use in the area is light industrial.

Future highway runoff for this area will flow directly into the West Branch of Nine Mile Creek. The amount of available development space in this area is limited and the need for sedimentation, as a means of controlling water quality in the discharge water, may not be necessary.

Subbasin D

Existing drainage in this 93.2 acre subbasin is into the West Branch of Nine Mile Creek and several small wetlands which total approximately 2 acres. Land use in the area is composed of two railroads and light industry in the north and single family residential in the south.

Future drainage across the proposed highway can be handled with a 36" reinforced concrete pipe under County Road 62. Surface runoff will be discharged directly to the West Branch of Nine Mile Creek after appropriate sedimentation techniques are used to control water quality.

Subbasin E

Existing drainage in this 38 acre subbasin contains no development or ponding areas and drains into wetlands adjacent to the West Branch of Nine Mile Creek. The southerly portion of the area is a gravel pit.

Future runoff from the proposed highway will be discharged into the wetland adjacent to the West Branch of Nine Mile Creek after appropriate sedimentation techniques are used.

Subbasin F

Existing drainage in this 64.7 acre subbasin is to two wetlands which receive surface runoff from the area. The larger wetland on the northside of the proposed roadway covers 5.5 acres and the wetland on the south side covers 1.5 acres. Land use consists of office/commercial, single family residential and undeveloped land.

The recommended future drainage control is to utilize the existing wetland on the south side of proposed County Road 62 as a ponding storage area with a 42" pipe underneath the roadway to the pond on the north side. The existing 5.5 acre pond will accommodate the majority of proposed highway runoff, however, final design will determine whether an outlet to the 5.5 acre pond towards Glen Lake will be required.

Subbasin G

This 175.4 acre subbasin contains approximately 0.7 mile of I-494 along its western boundary. The topography of this area is steeply rolling with scattered wooded slopes. A 2 acre, isolated wetland, classified as a Type 3 is located in the subbasin. Land use in the subbasin includes an office park, single family residential and open land which is planned for acquisition by Hennepin County to enlarge Bryant Lake Regional Park. The area also includes portions of Nine Mile Creek and Bryant Lake.

The recommended future drainage plan is to direct highway runoff to the existing wetland on the north side of proposed County Road 62 for ponding and storage to minimize water quality impacts to Bryant Lake. A 42" pipe beneath County Road 62 is proposed to handle runoff generated by the roadway and future development. However, final design will determine the sizing required for storage and discharge.

Subbasin H

Existing drainage in this 141.8 acre subbasin empties directly into Nine Mile Creek which bisects the area. The topography is steeply rolling with wooded slopes and open meadows. Land use in the area consists of scattered single family residential, undeveloped parkland and a horse stable immediately adjacent to Nine Mile Creek. The Nine Mile Creek corridor is used as a horse and pedestrian trail between Bryant Lake in Eden Prairie and Minnetoga Lake in Minnetonka.

Future highway runoff will be discharged to Nine Mile Creek after appropriate sedimentation ponding is used to control water quality. Two subalternatives for crossing Nine Mile Creek, a bridge crossing or a culvert crossing have been analyzed for drainage impacts. A bridge crossing at the elevation required for the highway alignment (approximately 40 feet above Nine Mile Creek) would provide a more than adequate hydraulic opening for stream flow. For the alternative of crossing the creek with a culvert drainage could be handled by a 6 foot by 10 foot box culvert structure.

Subbasin I

Existing drainage in this 29 acre subbasin is to a 2.5 acre pond and one acre wetland area. Land use in the area is predominantly undeveloped with a few scattered single family residences.

Future highway runoff will be drained overland or in a grasslined open channel areas where sedimentation can occur. A 15" pipe should be provided beneath proposed County Road 62 to drain the portion of this area which will be isolated by the roadway being built, because it is not feasible to pond or otherwise divert water from that isolated area.

Subbasin J

This 142 acre subbasin is gently to steeply rolling and drains to a 31 acre Type 1 wetland. The wetland is part of a larger agricultural meadow that is periodically cropped for hay. Land use in the is predominantly undeveloped with some scattered single family residences.

The proposed highway will divide this area into three separate watersheds: an east and west half north of County Road 62 and one large area south of County Road 62. For future drainage a 60" pipe beneath County Road 62 for outlet of the northwest area and a 66" pipe underneath County Road 62 for the northeast area should be provided. Future drainage will discharge to the existing wetland on the southside of the proposed highway. An outlet to the south of the wetland is recommended, if warranted, in the final design.

NO-BUILD ALTERNATIVE

The no-build alternative will not require modification of any surface water resources.

MITIGATION MEASURES

Where bank or channel work is required construction areas will be limited and temporary and permanent erosion control measures will be used. The best method to reduce erosion is to minimize the area of soil exposed and the time the soil is exposed. This can be accomplished through the construction of temporary and permanent erosion control structures, proper construction scheduling of the required grading, and the immediate follow-up with the turf establishment practices.

Temporary erosion control will include haybale erosion checks or a filter fabric perimeter of embankment construction where the eroded slope is susceptible to transfer to water bodies or a storm sewer system. Haybale checks will be used in ditches and at aprons to reduce the velocity of water and to settle out erosion materials. Haybales will be used to encircle inlets to culverts and the storm sewer system to impede further sediment transport.

Permanent erosion control measures may include the ponding of storm sewer waters to increase sediment reduction through settlement before discharge into natural water bodies. Other permanent measures may include riprapping of culvert outlets to reduce flow energy or the use of energy disipators or surge basins of flow velocities require.

Section 1803.5 of the Minnesota Department of Transportation's "Standard Specifications for Highway Construction" will be strictly adhered to during construction as it relates to erosion control. The specifications, among other things, call for the quick installation of erosion control devices, provide the engineer with the authority to limit the exposed surface area, and require the contractor to install temporary erosion control devices during the earthwork operations.

Visual Impacts

The aesthetic or visual impact of a highway is determined by the number of people who will regularly view the highway. Within the County Road 62 corridor, two areas of existing use have been identified as areas sensitive to visual impacts: the residences located at the western terminus of the project and the users of Bryant Lake Park.

At the western terminus of the project, the clearing of vegetation and the new alignments proposed by subalternatives B and C will be visible to the single family homes located west of CSAH 4. The subalternative C alignment offers the best potential for leaving a natural vegetative screen between the neighborhoods and the proposed highway, which would minimize the visual impact in this area.

The second visually sensitive area is at Bryant Lake Park and the crossing of Nine Mile Creek. Here the terrain is steeply rolling with wooded slopes. The crossing of Nine Mile Creek is located north of the park boundary and visually remote from the major activity areas of the park. The highway crossing will be viewed by hikers and horseback riders along Nine Mile Creek.

Two subalternatives are proposed for crossing the Nine Mile Creek valley. Subalternative A, a bridge, would be visually less intrusive because vistas of the creek valley would not be obstructed for park users. Subalternative B proposes to cross the valley with a fill and culvert structure. The fill required with this alternative will obstruct the views of persons hiking in the park and intrude upon the existing natural beauty of this area.

Mitigation measures to minimize the visual impacts of subalternative B would include the following:

- A large, arched culvert would be designed to accommodate both Nine Mile Creek and a recreational trail. This would allow the continued recreational use of the stream as a hiking corridor and would also minimize the impacts to wildlife.

- Fill slopes would be sensitively graded to blend with the surrounding terrain.

- The disturbed area would be revegetated with a combination of grasses and seedlings of species common to the area and having high suitability as wildlife habitat.

Through the use of vegetative screening, sensitive grading and revegetation of disturbed areas, the visual impacts of the build alternatives can be minimized. The no-build alternative will have no visual impact on the area.

Construction Impacts

The construction of the proposed action will create several temporary impacts. At this time, plans call for the construction of the portion of County Road 62 between I-494 and CSAH 61 before constructing the western half of the project. The eastern half of the project will be under construction for one or two construction seasons depending on the type of structure selected for the Nine Mile Creek crossing. The western half of the project is expected to take one construction season to complete.

The most significant construction impacts will be local changes in air quality, noise levels, and water quality due to the operation of construction equipment. Other short-term effects will include minor traffic disruptions and detours. A construction traffic plan will be developed to minimize disruption to adjacent streets and properties. All of the potential construction impacts can be managed and will not be significant.

AIR QUALITY

Any of the build alternatives will cause an impact on air quality during construction activities. Section 1717 of the Minnesota Department of Transportation's "Standard Specifications for Highway Construction" will be strictly adhered to during construction as it relates to air quality.

By disturbing the vegetative ground cover and excavating soil material, construction activities will cause dust and dirt to become airborne. Control of particulate matter from construction activities is regulated by State Air Quality Rule APC-6 which requires construction contractors to minimize the amount of particulates which become airborne. Contractors may be required to clean access roads, water haul roads and revegatate exposed areas to control particulate emissions. One of the particulate control strategies in the State Implementation Plan is stricter enforcement of APC-6. To implement this strategy, the construction contracts for County Road 62 will contain a provision requiring the contractor to submit a Dust Control Plan for approval by the Hennepin County project engineer. This plan will need to address the requirements of APC-6, specifying dust abatement measures which will be used during each stage of construction. The steep slopes in the eastern half of the project area are recognized as a potential erosion problem, and measures to stabilize the slopes and minimize erosion are being planned as part of the project. Erosion control measures such as slope revegetation will also aid in particulate control.

Construction activities can also result in increased vehicle emissions due to traffic delays and detours. This type of impact will occur during construction of the western half of this project. Traffic desiring to use existing County Road 67 through this area will experience some delays during construction. This delay will be minimized by constructing the westbound lanes of County Road 62 north of County Road 67 first. During this construction, traffic can continue to use County Road 67 and will experience slight delays due to construction vehicle movements only. When the westbound lanes are complete, traffic can be shifted to them while construction of the eastbound lanes is in progress. This general plan should minimize traffic delays and vehicle emissions during construction.

NOISE

Construction related noise originates from the equipment used on the site. During a typical work cycle, construction equipment may be idling, preparing to perform a task or operating at full level. It may also be congregated at a specific point or spread out over a larger area. Because of these factors, the construction site noise levels tend to rise and fall to a listener.

The noisiest equipment likely to be employed during construction is earth moving equipment. Typical peak noise levels associated with this type of equipment are shown in Table 29.

TABLE 29

TYPICAL CONSTRUCTION EQUIPMENT PEAK NOISE LEVELS

Equipment Type	No. Mfrs. in Sample	Total No. of Models in Sample	Peak Noise Level (dBA) Range	Average
Cranes	7	17	70-94	79
Backhoes	5	6	74-92	83
Front loaders	5	30	75-96	85
Dozers	8	41	65-95	85
Graders	3	15	72-92	84
Scrapers	2	27	76-98	87

SOURCE: Reagan, Jerry A. and Charles A. Grant, Highway Construction Noise: Measurement Prediction and Mitigation

Assuming no pile driving or blasting will be required, the average construction related noise levels will probably be in the 85 dBA and 90 dBA range at 50 feet from the center of activity. Based on these noise levels and assuming no shielding from either terrain or buildings, all residences within approximately 1/2 mile from the center of the project will be temporarily impacted to some degree.

The contractor will be required to comply with all local ordinances which govern construction noise.

The impact of construction related noise, however, can be minimized by ensuring all equipment is properly muffled and the hours of construction activity are strictly enforced. It is recommended that construction activity be limited to a twelve hour period from 7:00 AM to 7:00 PM. Other potential mitigative measures could include: turning off idling equipment; scheduling equipment operations to keep average noise levels low and relatively uniform in time; and designating haul roads for construction equipment access in locations where the noise impact will be minimal. Whenever possible, noise barriers should be constructed before other elements. Temporary noise barriers may also be used.

WATER QUALITY

The grading and other construction operations needed to implement the proposed action will cause erosion in some of the project area. Construction between I-494 and CSAH 61 will be particularly susceptible to adverse erosion impacts due to the steep terrain and large cut and fill areas required though this area.

Temporary erosion control techniques will be combined with permanent erosion control measures to minimize the amount of disturbed area exposed to erosion. Hennepin County utilizes the erosion control techniques required by Section 1717 of the Minnesota Department of Transportation Standard Specifications which include setting construction limits, implementing temporary erosion control measures such as sedimentation basins and slope drains, and promoting rapid revegetation of the construction areas.

There will be no disposal of gasoline or other hazardous liquids in surface waters. These materials will be stored and used in a way to minimize the chance of spills. The contractor will be monitored for compliance with Hennepin County standards in the field.

TRAFFIC OPERATION

The proposed project can be implemented with minimal impact on traffic operations on local streets. Rowland Road traffic would be temporarily detoured during construction. Construction from CSAH 4 to I-494 would be done while maintaining traffic on the existing road. Some temporary disruptions would be experienced by local motorists. A traffic plan will be developed in the design phase to address detours and the maintenance of traffic movement during construction.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

The proposed action will result in certain adverse effects which cannot be avoided even after the incorporation of mitigation measures. These impacts are summarized below.

FINANCIAL COMMITMENTS

The implementation of the proposed action will require the expenditure of approximately $9.7 to $17.4 million which will not be available for other uses. This commitment of public funds is unavoidable with the build alternatives.

PROPERTY ACQUISITION AND RELOCATION

All build alternatives will require the acquisition of property and subalternative B and C at the western terminus of the project will require the acquisition of residences. The acquisition of residences will necessitate the relocation of individuals which would result in an unavoidable impact upon those people, even though financial reimbursement will be made for physical losses.

AESTHETICS

The proposed action will introduce a new visual intrusion in corridor between I-494 and CSAH 61 and expand with the existing visual intrusion between CSAH 4 and I-494. The alternatives to provide the railroad grade separation and the culvert crossing of Nine Mile Creek will have an unavoidable visual impact.

NOISE

There will be unavoidable increases in noise levels due to the proposed project. Even with extensive mitigation measures, noise levels may exceed State Standards in some cases. In these areas, variances will be requested from the Minnesota Pollution Control Agency.

VEGETATION AND WILDLIFE

The construction of the proposed project will result in the conversion of approximately 57.3 acres of vegetation and wildlife resources to roadway facilities.

WATER QUALITY

The construction and use of the roadway facility will generate surface runoff which carries several types of pollutants, including salts, metals and particulates. These pollutants will be contained to the extent feasible in holding ponds, however, there will be minor adverse water quality effects in receiving waters.

SHORT-TERM USES OF THE ENVIRONMENTAL VERSUS THE MAINTENANCE OF LONG-TERM PRODUCTIVITY

In general, the commitment of resources which are considered irreversible and irretrievable directly relate to the trade-offs inherent in the short-term use of the environment versus the maintenance of long-term productivity. Each of the resource areas discussed under the next section, "Irreversible and Irretrievable Commitments of Resources," are discussed below in terms of their effect upon long-term productivity.

LAND AND LAND RESOURCES

The land committed to highway use will be unavailable for long-term future productivity. In addition, all of the natural and man-made resources now occupying this land will be eliminated and will provide no further social or economic benefits to the communities in the area or the region as a whole. This loss of future productivity is to be replaced by the more immediate benefits offered by the proposed project including such things as improved transportation service and efficiency, increased development potential, and enhanced social interaction.

ENERGY AND MATERIAL RESOURCES

The materials consumed in the construction of the facility will be unavailable for other uses. These uses include the construction of other non-highway facilities. However, the energy consumed in the construction, maintenance, and operation of the facility is less than the energy consumed by the no-build alternative (measured in units of petroleum products).

FINANCIAL RESOURCES

Significant financial commitments to the project include acquisition, potential relocation, and construction costs. These public dollars will not be available for other uses. In addition, the land converted to highway use represents a small reduction in tax base. These costs are to be recovered through more efficient travel and reduced user costs and an increase in the overall tax base due to the improved accessibility and more intense development of lands served by the facility.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS

Commitments of resources which are considered either wholly or in part as irreversible and irretrievable fall into six major categories described in this section.

LAND CONSUMPTION

The project build alternatives involve the commitment of approximately 60 acres of land to transportation use. While this land might be retrieved in the long term, within the scope of the foreseeable planning period this represents an irreversible and irretrievable commitment. In addition, greater amounts of land will be consumed for non-highway development under the build alternatives. This, however, is consistent with the regional development plan.

NATURAL RESOURCES

Within the right-of-way required for construction of the proposed project, all vegetation, animal habitat, and wetlands will be committed. Some wetlands and other natural features will be preserved and enhanced by the project.

SOCIAL/CULTURAL RESOURCES

The potential displacement and relocation of residences, and other manmade private resources would be considered irreversible and irretrievable commitments.

ENERGY RESOURCES

Several energy resources will be committed to the project including coal, petroleum, natural gas, electrical, and manpower expenditures for both construction and maintenance of the facility.

MATERIALS

The project build alternatives will result in the commitment of such materials as steel, cement, sand, aggregate, petroleum products, and water which are largely irreversible and irretrievable except for those items which have some salvage value and can be recycled.

FINANCIAL RESOURCES

Funds expended in the design, construction, and maintenance of the facility will be totally committed and unavailable for other uses.

CHAPTER 6: LIST OF PREPARERS

The following people were primarily responsible for preparing the Draft Environmental Impact Statement.

Name Education Professional Discipline	Experience	Project Responsibilities
BENNETT-RINGROSE-WOLSFELD-JARVIS-GARDNER, INC.		
Richard P. Wolsfeld B.S.C.E., M.C.P. P.E. - Minnesota A.I.C.P. Transportation Planning	16 years, transportation planning, traffic engineering, and EIS preparation	Overall project manager in charge of agency coordination, public information, and project progress
Susan E. Roux B.S.L.A. P.L.A. - Minnesota Transportation and Environmental Planning	12 years, environmental and transportation planning, and EIS preparation	Assistant project manager in charge of transportation and environmental related elements including travel demand, land use, social, economic, and aesthetic impacts
Gary J. Erickson B.S.C.E., M.B.A. P.E. - Minnesota Civil Engineer	13 years, transportation planning, preliminary design, and EIS preparation	Preliminary design and energy impacts
Richard H. Nau B.S. Computer Modeling	4 years computer modeling and air quality analysis	Air Quality impacts
Lee W. Keller B.S., M.A. Transportation Planning	8 years, transportation and transit planning	Noise impacts
Franklin J. Svoboda B.S. Biology	16 years, wildlife biologist and wildlife management	Wetlands, vegetation and wildlife impacts
Daniel W. Cook B.C.E. Engineering	4 years, water resources analysis and planning	Floodplains, surface water and water quality impacts

LIST OF PREPARERS (Continued)

Name Education Professional Discipline	Experience	Project Responsibilities
HENNEPIN COUNTY DEPARTMENT OF TRANSPORTATION		
Vern Genzlinger B.S.C.E. Transportation	20 years	Project Manager for Henneping County DOT
David Schmidt B.S.C.E. Transportation	24 years	Project Coordinator
James Ault B.S.C.E.	23 years	Hydraulics Engineer
Tenner Tangen B.S.C.E.	26 years	Bridge Engineer
MINNESOTA DEPARTMENT OF TRANSPORTATION		
Charles Weichselbaum	30 years	Project Manager for Mn/DOT Office of State Aid
FEDERAL HIGHWAY ADMINISTRATION		
James Bednar B.S.C.E.	5 years	Project Manager

CHAPTER 7: DISTRIBUTION OF COPIES OF DRAFT ENVIRONMENTAL IMPACT STATEMENT

The Draft Environmental Impact Statement will be circulated to the following agencies, organizations and interested persons for review and comment:

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 Health, Education and Welfare
U.S. Department of Interior
Fish and Wildlife Service
Heritage Conservation and Recreation Service
U.S. Department of Transportation
Federal Railroad Administration
Federal Aviation Administration
Urban Mass Transportation Administration
U.S. Department of Commerce
Advisory Council of Historic Preservation
Defense Civil Preparedness Agency
Environmental Protection Agency
Federal Energy Administration
Federal Power Commission
Minnesota Energy Agency
Minnesota Department of Agriculture
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
Hennepin County Park Reserve District
City of Eden Prairie
City of Minnetonka

CHAPTER 8: COMMENTS AND COORDINATION

MINNESOTA HISTORICAL SOCIETY
FOUNDED IN 1849
690 Cedar Street, St. Paul, Minnesota 55101 • (612) 296-6126

27 July 1981

Mr. C. P. Kachelmyer
Preliminary Design Engineer
Department of Transportation
Room 604 - Transportation Bldg.
St. Paul, MN 55155

Dear Mr. Kachelmyer:

RE: Hennepin County
CSAH 62 (SP 27-662-37)
Grade and Surface
From CSAH 4 to CSAH 60

MHS Referral File Number: L 480/M 234

Thank you for the opportunity to review and comment on the above project. It has been reviewed pursuant to responsibilities given the State Historic Preservation Officer by the National Historic Preservation Act of 1966 and the Procedures of the National Advisory Council on Historic Preservation (36CFR800).

This review reveals the location of no sites of historic, architectural, cultural, or archaeological significance within the area of the proposed project. There are no sites in the area which are on the National Register or eligible for inclusion on the National Register, and, therefore, none which may be affected by your proposal.

Again, thank you for your participation in this important effort to preserve Minnesota's heritage.

Sincerely,

Russell W. Fridley

Russell W. Fridley
State Historic Preservation Officer

RWF/sl

cc: Scott Anfinson
Fort Snelling

DEPARTMENT OF THE ARMY
ST. PAUL DISTRICT, CORPS OF ENGINEERS
1135 U. S. POST OFFICE & CUSTOM HOUSE
ST. PAUL, MINNESOTA 55101

REPLY TO
ATTENTION OF:
NCSCO-RF (SF 81-623-29)

Ms. Susan Roux
BR & W Consulting Engineers
2829 University Avenue S.E.
Minneapolis, Minnesota 55418

14 AUG 1981

Dear Ms. Roux:

We have reviewed the Scoping Report on the proposed extension of County Road 62. A Department of the Army permit would be required for the discharge of any dredged or fill material in the wetland located at the western terminus of the project.

Inclosed is an application form, to apply for a permit. Also include several color photos of the work site.

The temporary placement of fill material into any waterbody/wetland for purposes such as temporary stream crossings, bypass roads, cofferdam construction, or storage sites may require a Department of the Army permit. If your project will, or may, include any temporary placement of fill material, please include this in the permit application.

The proposed crossing of Nine Mile Creek at sec. 35, T. 117 N., R. 22 W., is authorized by an existing nationwide permit at 33 CFR 323.4-2(a)(1), the work is accomplished in compliance with the inclosed conditions and management practices.

Sincerely,

HAROLD E. TAGGATZ
Chief, Regulatory Functions Branch
Construction-Operations Division

2 Incl
As stated

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION V
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

cc: Vern Genzlinger
Dave Schmidt
Dick Wolsfeld
Design File 62/6839

REPLY TO ATTENTION OF:

16 JUL 1981

Mr. Herbert O. Klossner
Director
Hennepin Department of Transportation
320 Washington Avenue, South
Hopkins, Minnesota 55343

RE: SC-FHW-F40176-MN
(81075)

Dear Mr. Klossner:

We have completed our review of the Scoping Document for the proposed extension of CSAH 62 from CSAH 4 to CSAH 61 in Hennepin County. We understand that the bridge and east ramps of a diamond interchange at Shady Oak Road and a full diamond interchange at the intersection of I-494 have already been constructed.

The significant environmental issues that should be emphasized in the preparation of the Environmental Impact Statement (EIS) for the proposed project have been identified within the scoping document as park impacts, wetlands, noise intrusion, wildlife habitat, water quality and secondary impacts due to potential changes in adjacent land use. In addition, the crossing of Nine Mile Creek may require a Corps of Engineers Section 404 permit.

Our letter of July 9, 1981, indicated that because of travel constraints, we were unable to attend the scheduled scoping meeting. However, if you feel that a site visit and/or coordination meeting involving our Agency is still necessary to clarify issues raised during this early scoping process, please let me know. We should be able to make the necessary arrangements for a trip to Minneapolis to discuss or see the project.

The attached comments indicate specific instances where we believe additional information should be developed. A further analysis of impacts should result in identifying that alternative which satisfies the project objectives while minimizing adverse impacts. If you have any questions regarding our comments, please contact Arlene Kaganove of my staff at 312-886-6686.

Thank you for providing us the opportunity to review and comment on the Scoping Document.

Sincerely yours,

Barbara Taylor Backley

Barbara Taylor Backley, Chief
Environmental Impact Review Staff
Office of Environmental Review

Attachment

RECEIVED
JUL 20 1981
HENNEPIN COUNTY
DEPT. OF
TRANSPORTATION

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION V
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

62/6839
HOK
JLK
DWS
[redacted]
VG

REPLY TO ATTENTION OF:

Mr. Vern Gezlinger
Design Engineer
Hennepin County Department of
Transportation
520 Washington Avenue, South
Hopkins, Minnesota 55343

16 OCT 1981

RE: SC-FHW-F40176-MN
(81075)

Dear Mr. Gezlinger:

We are writing in regard to the site visit of September 17, 1981, concerning the extension and upgrading of CSAH 62 in the towns of Minnetonka and Eden Prairie, Hennepin County, Minnesota. This site visit was arranged to view the wetland area at the western terminus of the project near the intersection of CSAH 62 and Eden Prairie Road. This wetland was orginally avoided by following the present alignment of CSAH-62. However, the communities involved requested that an alignment through the wetland be considered to eliminate the curve around the wetland and provide a better intersection between Eden Prairie Road and Townline Road (CSAH-62). Townline Road is presently located approximately 1/4 mile south of CSAH-62.

While this wetland is not a unique area, we believe there are alternatives to impacting this area. Because of our concern for the protection of wetlands, we are requesting consideration of an additional alternative which would avoid the wetland and still provide a safe intersection at Eden Prairie Road. This alternative would require the relocation of Townline Road north through a residential area. We are not recommending this alternative only requesting that it be considered and be evaluated in order to compare impacts of all alternatives. In order to assess the impacts of this realignment, a noise monitoring site should be considered for location in the residential community to determine existing noise levels and predict future noise levels. Relocations and community disruptions will also be factors to be considered in assessing this alignment.

If the realignment of Townline Road is not feasible and the wetland must be crossed, mitigation plans to offset the loss of wetlands should be developed. Mitigation could include the creation of wetlands in other areas, enhancement of the remaining portion of the severed wetland, purchase of wetland areas, and etc.

Several other smaller wetland areas were seen while on the site visit. One area west of Baker Road and north of CSAH-62 would be impacted if the proposed improvement was relocated north of the existing road. It appears this wetland could be avoided and it will not be necessary to impact this area. The other wetland is located east of I-494, where Clearwater Drive would be relocated. This wetland

is small and isolated from other similar areas. The environmental impact statement (EIS) for this proposal should determine whether Clearwater Drive could be realigned to avoid this area and if this area could be enhanced in anyway. To determine if it is feasible to protect area, its function needs to be determined; therefore, the EIS should provide an evaluation of this wetland.

One other area of natural environmental impact is Nine Mile Creek. This creek is a small stream in a large valley. The depth and width of the valley will require the construction of a bridge or a large amount of fill. The cost of constructing a bridge across the valley could be prohibitive, but the use of culverts and fill could spoil the natural setting of the valley and its use as a wildlife corridor and open space area. Consideration should be given to the use of a structure that incorporates a combination of fill and bridge/culvert across the creek. This would provide a corridor adjacent to both sides of the creek for wildlife and recreational use.

We appreciate the opportunity to see the project area and the cooperation shown to us by the staff of BRW. If we can be of further assistance or you wish to meet with us to discuss our comments or any additional project changes feel free to contact us.

Sincerely yours,

Barbara Taylor Backley

Barbara Taylor Backley, Chief
Environmental Impact Review Staff
Office of Environmental Review

62/6839

United States Department of the Interior

FISH AND WILDLIFE SERVICE

IN REPLY REFER TO:

St. Paul Field Office, Ecological Services
538 Federal Building and U.S. Court House
316 North Robert Street
St. Paul, Minnesota 55101

July 6, 1981

Mr. Herbert O. Klossner, Director
Hennepin County Dept. of Transportation
320 Washington Avenue South
Hopkins, Minnesota 55343

Dear Mr. Klossner:

This is in response to your June 12, 1981, notice of the scoping meeting to be held on July 9, 1981, for the proposed extension of CSAH 62 from CSAH 4 to CSAH 61 in Hennepin County.

We want to be a continuing part of the scoping process for this project, but due to scheduling conflicts, we will not be able to attend the meeting. The issue of initial concern to us, the 30-acre wetland at the intersection of CSAH 4 and CSAH 62, was identified in our February 18, 1981, correspondence to Mr. Gordon M. Fay (copy attached). Our position regarding the proposed alignments remains that we recommend maximum use of the existing alignment to avoid encroachment into the wetland and resultant loss of an area that provides valuable habitat for waterfowl and other wildlife species.

If it is acceptable to you, we will contact one of the three project directors after July 13, 1981, to discuss the scoping meeting and any other issues that we may identify as being of concern to us.

Sincerely,

Richard F. Berry

Richard F. Berry
Field Office Supervisor

Attachment

cc: Vern Genzlinger
Dave Schmidt
[redacted]
Design File 62/6839

H. B. Walter
2/18/81
Berry
2/18/81

February 18, 1981

Mr. Gordon M. Fay
Director, Office of State Aid
Minnesota Dept. of Transportation
Transportation Building
St. Paul, Minnesota 55155

Dear Mr. Fay:

The U.S. Fish and Wildlife Service has reviewed the Project Development Report for S.P. 27-662-38; M 5168 and S.P. 27-662-37; M 5168, the proposed improvement and construction of CSAH 62 from CSAH 4 to CSAH 61 in Hennepin County.

Our review of the document leads us to express concern about possible adverse environmental impacts. At the western terminus of the project, southeast of the existing intersection of CSAH 4 and CSAH 62, there is a palustrine emergent wetland of approximately 30 acres dominated by cattails, reed canarygrass, and willows (FWS/OBS 79-31, Classification of Wetlands and Deepwater Habitats of the United States, December 1979) formerly referred to as a Type 3 wetland. One of the alternatives under consideration for improving the CSAH 62 and CSAH 4 intersection is crossing the wetland area on fill or structure. This alternative is not supported by the Fish and Wildlife Service because of the irreparable damages that will be done to this area presently providing habitat for waterfowl and other wildlife species. In addition, this wetland also makes a positive contribution to the water quality of the area by trapping silt and organic matter and preventing at least a portion of these materials from reaching streams and lakes where they can cause adverse ecological changes. Maximum use of the existing alignment to avoid encroachment into the wetland area is our recommended alternative for improvement of the CSAH 4 and CSAH 62 intersection. In addition, use of this alternative will provide clear conformance with the requirements of Executive Order 11990 - Protection of Wetlands.

Should the above project require a permit from the U.S. Army Corps of Engineers, these comments do not in any way preclude additional and separate evaluation and comments by the Service pursuant to the Fish and Wildlife Coordination Act.

These comments have been prepared under the authority of and in accordance with provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et. seq.) and are consistent with the intent of the National Environmental Policy Act of 1969. These projects were examined for their conformance with Section 4(f) of the Department of Transportation Act (P.L. 89-670, 80 Stat. 931) and Executive Orders 11988 and 11990 of May 1977.

Sincerely,

Richard F. Berry
Field Office Supervisor

cc: Minn. DNR, St. Paul

SPFO:NWalters:bl:2/18/81:x7131

United States Department of the Interior

NATIONAL PARK SERVICE
MIDWEST REGION
ANN ARBOR OFFICE
FEDERAL BUILDING
ANN ARBOR, MICHIGAN 48107

IN REPLY REFER TO:
1202-02
NPS 1-241

RECEIVED
JUL 13 1981
HENNEPIN COUNTY
DEPT. OF
TRANSPORTATION

July 10, 1981

Mr. Herbert O. Klossner, Director
Hennepin County Department of Transportation
320 Washington Avenue South
Hopkins, Minnesota 55343

Dear Mr. Klossner:

This is in response to your June 12 letter requesting our agency's participation in a scoping meeting concerning the preparation of an environmental impact statement for the proposed extension of CSAH 62 from CSAH 4 to CSAH 61 in Hennepin County, Minnesota.

Unfortunately, other program commitments preclude the degree of involvement as requested. However, the following comments are offered for your consideration.

Our review indicates that Bryant Lake Park has been acquired with financial assistance made available under the Land and Water Conservation Fund Act. Section 6(f) of the Act states:

> No property acquired or developed with assistance under this section shall, without the approval of the Secretary, be converted to other than public outdoor recreation uses. The Secretary shall approve such conversion only if he finds it to be in accord with the then existing comprehensive statewide outdoor recreation plan and only upon such conditions as he deems necessary to assure the substitution of other recreation properties of at least equal fair market value and of reasonably equivalent usefulness and location.

In this regard, you should contact the State Liaison Officer (SLO) who is responsible for administration of the Land and Water Conservation Fund program for local parks in the State of Minnesota. In Minnesota, you should contact Mr. Leland E. Newman, Director, Office of Local and Urban Affairs, 550 Cedar Street, St. Paul 55101.

We assume a Section 4(f) statement would also be prepared should the trail along Nine Mile Creek or Bryant Lake Park be impacted. Also, where applicable, we would like to see the following mitigation measures integrated into the construction process wherever parkland would be affected.

1. Vehicular and pedestrain access should be maintained. The potential for temporary entrances at new locations should be discussed with local park and recreation officials.

2. Temporary barriers or buffers which minimize adverse noise effects from construction equipment should be considered.

3. Permanent barriers or buffers which minimize adverse noise effects from highway traffic should be considered at Bryant Lake Park and Nine Mile Trail.

4. Any disruption of existing park utilities should be avoided. Such disruptions could cause interruptions in the provision of recreational services.

5. Vegetation in the area of construction should be protected from damage by heavy equipment. Trunks of trees should be protectively wrapped (2 x 4 lumber may be wired together and wrapped around trees for protection). Low branches which become damaged should be property pruned. Small shrubs which might be lost should be temporarily transplanted and returned to their original location after construction.

6. All areas should be restored to the preconstruction condition. Areas left bare by construction should be reseeded or sodded. All trees and shrubs lost or damaged should be replaced with landscaping material of at least equal size, value, and utility.

7. Soil compacted as a result of heavy machinery should be scarified or otherwise loosened to promote healthy plant growth.

8. All debris and surplus materials from construction should be removed from the area as construction progresses and not as a last minute clean-up effort. All possible precautions should be taken to prevent soil poisoning by spills of toxic materials such as oils, fuels, and solvents.

9. The feasibility of coordinating project construction with park-related construction activities should be investigated. The potential for development of bicycle/pedestrian lanes along disrupted areas should be discussed with park officials.

10. Park and recreation officials should be contacted about project scheduling. If possible construction activities should be planned to coincide with low usage periods when the least interference to delivery of recreational services would occur.

11. Consideration should be given to construction of access ramps to any existing or planned public boat launch areas in accord with Section 147 of the Federal-Aid Highway Act of 1976, P. L. 94-280, May 5, 1976. We note that such opportunities for access ramp development may exist at Bryant Lake Park and at Nine Mile Trail.

Also, we suggest you continue to consult with the State Historic Preservation Officer about potential impacts the project may have on cultural resources.

Sincerely,

David H. Shonk

David H. Shonk
Chief, Ann Arbor Office

cc: Vern Genzlinger
Dave Schmidt
[redacted]
62/6839

STATE OF MINNESOTA
DEPARTMENT OF NATURAL RESOURCES

Metro Region Headquarters, 1200 Warner Road, St. Paul, MN 55106

PHONE NO. 296-3573 FILE NO. _____

July 20, 1981

Hennepin County Department of Transportation
320 Washington Avenue South
Hopkins, Minnesota 55343

Attention: Mr. Herbert O. Klossner, P.E.

RE: ENVIRONMENTAL DOCUMENT REVIEW
HIGHWAY 62, CROSSTOWN EXTENSION

Dear Mr. Klossner:

In review of the above referenced document, is has been determined that the following protected waters would be affected which would require a DNR permit:

Nine Mile Creek	SW¼, Section 35, T117N, R22W
Wetland #27-786W(north of r/w)	SE¼, Section 35, T117N, R22W
Unnamed stream	SW¼, Section 34, T117N, R22W
Wetland #27-815W	SE¼, Section 33, T117N, R22W

The routing alternative through wetland #27-815W is contrary to DNR policy and the Department would encourage selection of an alternative that avoids the wetland.

If there are any questions concerning this matter, please feel free to call Mr. Roy Schultz (296-7523) for assistance.

Sincerely,

Karen Loechler

Karen Loechler
Regional Administrator

KLL/RS/ch

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JUL 16 1981
HENNEPIN COUNTY
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TRANSPORTATION

AN EQUAL OPPORTUNITY EMPLOYER

STATE OF
MINNESOTA
DEPARTMENT OF NATURAL RESOURCES
CENTENNIAL OFFICE BUILDING • ST. PAUL, MINNESOTA • 55155

January 20, 1982

Mr. V. T. Genzlinger
Chief, Design Division
Hennepin County Department
of Transportation
320 Washington Avenue South
Hopkins, Minnesota 55343

RE: S.P. 27-662-37 & 38, CSAH 62 Crosstown,
Minnetonka and Eden Prairie

Dear Mr. Genzlinger:

Based on our review of the Wetlands Assessment Report, the meeting with BRW and Hennepin County DOT on December 18, 1981, and our own field review, the Department of Natural Resources offers the following comments regarding the proposed CSAH 62 Crosstown improvements. The study areas and wetlands are identified as shown in the Wetland Assessment Report.

Study Area A:

Wetland a--Not a protected wetland; no DNR permit authority.

Wetland b--DNR prefers Alternative 3A (on present alignment with western terminus at present intersection). This wetland is of significant size and is of importance to fish and wildlife, including waterfowl, songbirds, shorebirds, pheasants, and small mammals. A new road alignment should not be put through this wetland.

This is a protected wetland (27-815W). Using the existing alignment (Alt. 1, 2, or 3A) would probably avoid any permit requirement for this wetland. Alternates 3B or 3C would require DNR permit review and would require mitigation for wetland losses if selected.

Study Area B:

Wetland c--A protected wetland (27-786W) which will not be altered below the ordinary high water level by the road. It must undergo permit review only if storm sewers outlet below the OHW.

Study Area C:

Wetland d--Although minimal impact would result on this small Type III wetland, the reconstruction of Clearwater Drive would reduce and seriously impact the utilization of this wetland by wildlife. This is not a protected wetland; however, it is our judgement that Clearwater Drive could be constructed to avoid the wetland or any filling of the wetland.

Crossing of South Branch, Nine Mile Creek--DNR prefers a bridge rather than a culvert at this location to preserve a corridor for wildlife and recreational travel along the creek. These uses presently occur and should be provided for in the project design.

Study Area D:

Wetland e--This type 1-2 wetland offers the greatest mitigation potential in that it is not a protected wetland. Any improvements would have to balance the negative impacts of any alterations to Wetland b (27-815W).

If you have any questions regarding these comments, please call Ken Wald of my staff at 296-4790.

Sincerely,

Thomas W. Balcom

Thomas W. Balcom
Environmental Review Coordinator

TWB:ap

cc: Earl Huber
Ron Harnack
Judy Boudreau
Susan Roux, BRW

bcc: Vern Genzlinger
Dave Schmidt
[redacted]
Design File 62/6839

Minnesota Pollution Control Agency

Mr. Herbert O. Klossner, P.E.
Director
Hennepin County Dept. of Transportation
320 Washington Avenue South
Hopkins, Minnesota 55343

Dear Mr. Klossner:

This letter transmits Agency staff comments on the draft scoping document for the proposed extension of CSAH 62. I hope these will be valuable in finalizing the scope of the environmental impact statement (EIS).

We support the selection of alternatives to be evaluated in the EIS process, including the dropping of the alternatives involving the high profile crossing of Nine Mile Creek and the western terminus through the wetland. We support evaluation of both bridge and culvert options for the creek crossing.

We have the following comments concerning specific issues to be addressed in the EIS:

1. It is our opinion that air quality should be added to the listing of major issues (pages 7-11). Control of total suspended particulates (TSP) during construction and levels of carbon monxide during use must be evaluated. It should be noted that if traffic volumes remain below 20,000 ADT, an Indirect Source Permit will not be required.

2. On page 8, discussion of major issue 10, "Noise," fails to mention that State noise standards must be met by the selected design.

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JUL 21 1981
HENNEPIN COUNTY
DEPT. OF
TRANSPORTATION

Phone: (612) 296-7301
1935 West County Road B2, Roseville, Minnesota 55113
Regional Offices · Duluth/Brainerd/Detroit Lakes/Marshall/Rochester
Equal Opportunity Employer

3. The potential for spills should be noted and given evaluation in the EIS. Appropriate control measures should be designed and spill control plans should be developed for the alternatives. If appropriate, spill control alternatives should be presented.

4. An erosion control plan should be developed for each alternative.

5. The EIS should discuss any future management plans for the wetland at the western terminus.

6. We note from Figure 8 that the roadway will pass through areas of steep relief. Consequently, the EIS ought to consider special landscape design measures to minimize the impact of the cuts and fills. We have seen examples of such techniques used by mountainous states, many of which may be applicable in this situation.

7. Water quality effects of winter deicing practices and vehicle-related water pollutants should be compared for the various alternatives.

The Agency agrees to be a "cooperating agency," in the NEPA process. However, due to resource commitments to other projects, our participation must be limited to a reviewing role. Agency participation in the EIS process will be coordinated by the Office of Planning and Review. Please address future correspondence to Deborah R. Pile, Environmental Review Coordinator, Office of Planning and Review.

Any questions about our comments may be directed to Gregg Downing, at (612) 297-3361.

Sincerely,

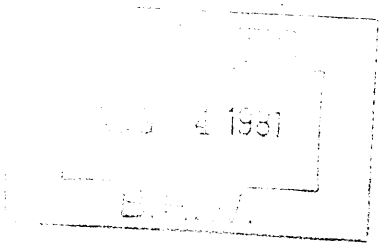
for Jay M. Heffern

Louis J. Briemhurst
Executive Director

cc: Steven Bahler
C. E. Weichselbaum
Vern Genzlinger

c: Vern Genzlinger
Dave Schmidt
~~BRW - D. Wolsfeld~~
Design File
62/6839





July 29, 1981

300 Metro Square Building
Saint Paul, Minnesota 55101
Telephone 612/291-6359

Herbert O. Klossner, P.E.
Director
Department of Transportation
Hennepin County
320 Washington Avenue South
Hopkins, MN 55343

RE: Scoping Report on Proposed Extension of CSAH 62 from Shady Oak Road to CSAH 4 in Minnetonka and Eden Prairie
Metropolitan Council Referral File No. 9872-1

Dear Mr. Klossner:

At its meeting on July 23, 1981, the Metropolitan Council considered the above report.

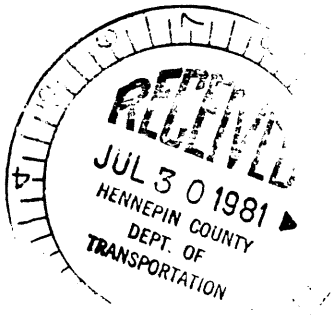
The scope of the potential natural resource impacts to be examined in the EIS is adequate. Regarding Bryant Lake Regional Park, it should be noted that the takeover of this park by the Hennepin County Park Reserve district has been completed. Access directly to the park from the Crosstown should be considered in dropping any alternatives from further study. The range of alternatives proposed in the scoping report will satisfy the transportation needs for this corridor.

Sincerely,

METROPOLITAN COUNCIL

Charles R. Weaver
Chairman

CRW:dk
cc: C. E. Weichselbaum, District State Aid Engineer, District 5, Minnesota Department of Transportation
Connie Kozlak, Metropolitan Council Staff



TD 31-252

Metropolitan Transit Commission

801 American Center Building St. Paul, Minnesota 55101 612/221-0939

July 16, 1981

Herbert O. Klossner, P.E.
Director
Hennepin County Department of Transportation
320 Washington Avenue South
Hopkins, MN 55415

Dear Mr. Klossner:

This is in response to the offer, dated June 12, 1981, to participate in the National Environmental Policy Act process as a cooperating agency.

On July 9, 1981, Dorene Roeglin of our staff attended the scoping meeting held at Minnetonka City Hall to assess the level of MTC involvement warranted in the proposed action. Since the need for MTC involvement appears at this point to be limited, it does not seem necessary that the MTC be a formal cooperating agency.

Because the MTC is interested in the project and because citizens in attendance at the scoping meeting felt transit is an issue that needs to be addressed in this study, we would like to be kept informed of the progress of this proposed action.

The MTC will assist the lead agencies or their consultant, if requested, in researching the potential for transit in the vicinity of the proposed project. Requests for such assistance should be directed to Ms. Roeglin in the Transit Development Department, 221-0939, Ext. 115.

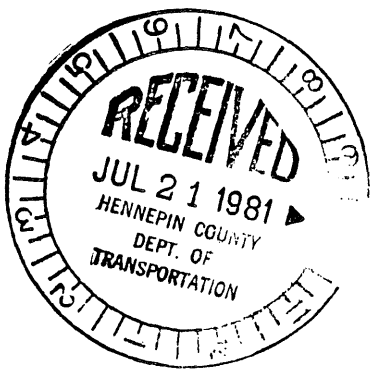
Sincerely,

Camille D. Andre
Chief Administrator

CDA/DYR/sm

cc: Dorene Roeglin, MTC
David Jessup, MTC

Vern Genzlinger
Dave Schmidt
~~RPH - Dick Wolsfeld~~
Design File 62/6839



METROPOLITAN
WASTE
CONTROL
COMMISSION
Twin Cities Area

18/6839
DWS
VG

RECEIVED
SEP 1 1981
B.R.W.

August 27, 1981

Mr. Herbert O. Klossner, Director
Department of Transportation
Hennepin County
320 Washington Avenue South
Hopkins, MN 55343

Dear Mr. Klossner:

We have reviewed the "Environmental Impact Statement" for the proposed extension of CSAH 62 from CSAH 4 to CSAH 61 in Hennepin County and have the following comments:

The Commission is concerned with this proposed highway extension only in what impact it may have on the structural integrity and access to any of our facilities such as gravity sewers, forcemains, lift stations, and meter station vaults, etc.

The Commission has interceptors in Eden Prairie from the boundary of Minnetonka immediately east of Nine Mile Creek (MSB-6801) and immediately west of the Chicago, Milwaukee, St. Paul and Pacific rail road tracks (MSB-7118) as shown on the attached drawing.

We have no objection to the construction of this highway extension provided we have unrestricted access to our meter (M-410 and M-411) facilities and no earth fill is placed over our sewers in excess of the pipe's designed capability.

It is requested that a copy of the design plans be furnished to the Commission for our review prior to construction of the facilities.

Sincerely,

George W. Lusher
Chief Administrator

cc: W. E. Sweet

GWL:WES:cll

RECEIVED
AUG 28 1981
HENNEPIN COUNTY
DEPT. OF
TRANSPORTATION

350 METRO SQUARE BLDG.
7TH & ROBERT STREETS
SAINT PAUL MN 55101
612 222-8423

recycled

Chicago, Milwaukee, St. Paul and Pacific Railroad Company
221 Third Avenue South
Minneapolis, Minnesota 55401

cc: Vern Genzlinger
Dave Schmidt
[redacted]
62/6839

July 8, 1981

File: 273-E

Mr. Vern Genzlinger, Design Engineer
Hennepin County Dept. of Transportation
320 Washington Avenue South
Hopkins, Minnesota 55343

Dear Mr. Genzlinger:

Please refer to Mr. Herbert O. Klossner's letter of June 12, 1981, regarding the preparation of an Environmental Impact Statement for the proposed extension of CSAH 62 from CSAH 4 to CSAH 61 in Hennepin County. We have been directed to send our comments to you for your consideration in preparing the EIS.

Considering the location of the crossing and the site distances involved, it is the Railroad's opinion that the grade separation (Alternate #4), 160 feet north of the existing Hwy 67 crossing, would be the best alternative for both the Railroad and the public, especially from a safety standpoint.

If Alternative #3 is chosen, it would require upgrading and widening of the existing grade crossing (due to the amounts of traffic anticipated, a rubber crossing type surface is recommended) and the renewing of the present automatic grade crossing warning devices with Cantelever flashing light signals and, most likely, gates.

It is also the feeling of the Railroad that an at grade crossing between a Railroad's main line and a Highway of this type would detract from the free flow of traffic through this portion of the corridor.

I would like to thank you for requesting our opinion in this matter and if you require any information, please contact my office and we will be happy to cooperate in any way we can.

Sincerely,

B. J. McCanna
Division Manager

DJI:lt

cc: Mr. G. U. Mentjes, Chicago, Room 898

Note: If it is not too much trouble, I would appreciate it if you could include Mr. G. U. Mentjes, Milwaukee Road, 516 W. Jackson Boulevard, Room 898, Chicago, IL 60606, in all further correspondence regarding this proposal.

RESOLUTION NO. 81 - 6574

RESOLUTION ACCEPTING THE DRAFT SCOPING REPORT FOR THE COUNTY ROAD #62 ENVIRONMENTAL IMPACT STATEMENT.

WHEREAS, the Hennepin County Department of Transportation has scheduled the letting of bids for the construction of CSAH #62 between CSAH #61 and CSAH #60 for the fall of 1983, and

WHEREAS, it is necessary that an Environmental Impact Statement be prepared prior to this construction, and

WHEREAS, it has been determined by the Hennepin County Department of Transportation that a scoping report should be prepared in accordance with the Council on Environmental Quality Regulations for Environmental Impact Studies, and

WHEREAS, Hennepin County did hire Bather, Ringrose, Wolsfeld, Jarvis, Gardner, Inc. to prepare a Draft Scoping Report for the Environmental Impact Study to cover the area proposed by the ultimate construction of CSAH #62 from CSAH #61 to CSAH #4, and

WHEREAS, the Draft Scoping Report for the construction of County Road #62 has been presented to the Minnetonka City Council for approval.

NOW THEREFORE BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MINNETONKA, MINNESOTA

1. That the Draft Scoping Report as submitted be revised to include a study to continue the County Road #62 alignment in a straight westerly direction near its proposed western terminus of CSAH #4, which would involve crossing a 30 acre wetland on fill or on a structure. This alignment would result in an intersection that lines up with the proposed South Town Line Road west of CSAH #4.

2. That the Draft Scoping Report as amended is hereby accepted in its entirety.

Adopted by the City Council of the City of Minnetonka on this 18th day of May, 1981.

Kenneth E. Yager

KENNETH E. YAGER, MAYOR

ATTEST:

Margaret E. Mullen

Margaret E. Mullen, City Clerk

Action on the above resolution

Motion for adoption: Radermacher
Seconded by: Hise
Voted in favor of:
Radermacher, Hanus, Hise, Deghetto and Yager
Voted against: none
Abstained: none
Absent: Higuchi and Gordon
Resolution adopted.

I hereby certify that the foregoing is a true and correct copy of a resolution adopted by the City Council of the City of Minnetonka at a duly authorized meeting held on the 18th day of May, 1981.

Margaret E. Mullen
Margaret E. Mullen, City Clerk

CITY OF EDEN PRAIRIE
HENNEPIN COUNTY, MINNESOTA

RESOLUTION NO. 81-111

RESOLUTION COMMENTING ON THE MARCH 1981 SCOPING REPORT FOR C.S.A.H. 62 (CROSS-TOWN HIGHWAY)

WHEREAS, BRW, the official Engineering Consultant Group for the Hennepin County Highway Department for the 62 Crosstown Environmental Impact Statement Process, has presented a Draft Scoping Report on the 62 Crosstown at the May 5, 1981 Eden Prairie City Council Meeting; and

WHEREAS, at the May 5 meeting, alternatives to be studied in a formal E.I.S. Process and alternatives to be dropped from further consideration were suggested by BRW; and

WHEREAS, Eden Prairie is one of the governmental entities affected by this proposed action, and has been requested to submit comments on it for consideration at the July 8, 1981 Scoping Meeting; and

WHEREAS, Eden Prairie has had a long-standing position on the 62 Crosstown Extension and it's effects on the Community; and

WHEREAS, a complete study of alternatives detailed in the March 1981 Scoping Report and the following alternatives is in the best interest of the health, safety, and general welfare of the citizens of the City of Eden Prairie,

NOW THEREFORE, BE IT RESOLVED BY THE EDEN PRAIRIE CITY COUNCIL AS FOLLOWS:

That in addition to the alternatives outlined in the March 1981 Scoping Report as being studied in the E.I.S., the City of Eden Prairie requests the following also be studied in the E.I.S.:

1. Layout No. 6, revised 12/4/75, Project No. 6839.

2. The need for building of the Crosstown at all must be clearly demonstrated in the E.I.S. Process.

3. The intersection of Co. Rd. 4 and Co. Rd. 62 should be studied in the E.I.S. and the alternative of a four-way intersection should be preserved.

4. "No Access" at Rowland Road Alternative should be carried to the E.I.S. in light of development pressures which would be created contrary to Eden Prairie's Comprehensive Guide Plan if access were given.

5. Upgrading of Townline Road west of Co. Rd. 4 should be studied with all 'build' alternatives, because of the additional traffic which would be generated.

6. A reduced design roadway (other than freeway standards) similar to Co. Rd. 62 west of I-494, with access control, should be studied for possible cost savings and less adverse impact.

7. The service road alternative from Beach Road to Rowland Road should be modified because of severe topographic constraint on the south side of the road, however, a service road on the north side of the Crosstown from Clearwater to Rowland should be studied.

ADOPTED, by the Eden Prairie City Council on June 16, 1981.

Wolfgang H. Penzel, Mayor

ATTEST:

John D. Frane, City Clerk

SEAL

CHAPTER 9: APPENDICES

References

This Draft Environmental Impact Statement is based on detailed analyses documented in the following technical reports prepared for the County Road 62 study. These technical reports are available for review at the Hennepin County Department of Transportation office, 320 Washington Avenue South, Hopkins, Minnesota.

Technical Report

1. Final Scoping Report, BRW Inc., October, 1981.

2. Wetlands Assessment Report, BRW Inc., November, 1981.

3. Energy Analysis Report, BRW Inc., November, 1981.

4. Air Quality Report, BRW Inc., May, 1982.

5. Preliminary Noise Report, BRW Inc., January 1982.

6. Water Quality Report, BRW Inc., May, 1982

Air Quality Analysis

An air quality analysis technical report has been prepared on the proposed project and has been reviewed by the Minnesota Pollution Control Agency and the U.S. Environmental Protection Agency. The analysis describes the effects of the proposed project relative to total pollutant burden, carbon monoxide concentrations, lead concentrations, particulates and construction impacts.

REGULATORY FRAMEWORK

The air quality analysis was prepared pursuant to the Federal Ambient Air Quality Standards as part of the 1970 Clean Air Act and the State of Minnesota Ambient Air Quality Standards.

National Ambient Air Quality Standards exist for sulfur oxides (SO_x), total suspended particulates (TSP), carbon monoxide (CO), ozone (O_3), hydrocarbons (HC), nitrogen dioxide (NO_2), and lead (Pb). The State of Minnesota has Ambient Air Quality Standards for sulfur oxides, particulate matter, carbon monoxide, photochemical oxidents, hydrocarbons, nitrogen oxides, and hydrogen sulfide. Of these pollutants, carbon monoxide, lead, hydrocarbons, and nitrogen oxides are directly related to transportation sources. Photochemical oxidents including ozone are formed through a chemical reaction involving hydrocarbons, nitrogen oxides, and sunlight making them secondary pollutants related to transportation sources. The federal and state standards for these transportation related pollutants are shown in Table 15.

The Federal Ambient Air Quality Standards are a part of the 1970 Clean Air Act. In addition to setting these standards, this act also required all states to submit a State Implementation Plan (SIP) for attainment of the standards. The 1977 amendments to the Clean Air Act required all states to meet the federal standards by December 31, 1982 and to revise their SIP to show how non-attainment areas could come into compliance by this date. The transportation portion of the revised Minnesota SIP addressed local concentrations of carbon monoxide in the Minneapolis and St. Paul central business districts and photochemical oxidants measured as ozone on a regional level.

Minnesota air quality regulations call for permits for indirect sources such as highways. County Road 62, from I-494 to CSAH 61, will have an average annual daily traffic volume greater than 20,000 vehicles per day. Since the highway will be constructed within the seven county metropolitan area, an indirect source permit will be required for construction. The permit expires 24 months after approval so it will be applied for at a later time.

POLLUTANT BURDEN ANALYSIS

A pollutant burden analysis quantifies the total emissions of various pollutants within a large geographic area. Emissions of hyrocarbons, carbon monoxide, and nitrogen oxides from transportation sources have been estimated for the seven-county metropolitan area for the build alternatives in the years 1990, 2000, and 2010. Differences between the build and no-build alternatives have been estimated within the local influence area of the project in the year 2000.

TABLE A-1

FEDERAL AMBIENT AIR QUALITY STANDARDS

Pollutant	Standard	
Carbon Monoxide	9 PPM (10000 ug/m^3)	Maximum 8-hr. concentration not to be exceeded more than once per year
	35 PPM (40000 ug/m^3)	Maximum 1-hr. concentration not to be exceeded more than once per year
Ozone	0.12 PPM (235 ug/m^3)	Maximum 1-hr. concentration not to be exceeded more than once per year
Hydrocarbons	0.24 PPM (160 ug/m^3)	Maximum 3-hr. concentration (6-9 AM) not to be exceeded more than once per year
Nitrogen Dioxide	0.05 PPM (100 ug/m^3)	Maximum annual arithmetic mean
Lead	1.5 ug/m^3	Maximum arithmetic mean averaged over a calendar quarter

STATE AMBIENT AIR QUALITY STANDARDS

Pollutant	Standard	
Carbon Monoxide	9 PPM (10000 ug/m^3)	Maximum 8-hr. concentration not to be exceeded more than once per year
	30 PPM (35000 ug/m^3)	Maximum 1-hr. concentration not to be exceeded more than once per year
Photochemical Oxidants	0.07 PPM (130 ug/m^3)	Maximum 1-hr. concentration not to be exceeded more than once per year
Hydrocarbons	0.24 PPM (160 ug/m^3)	Maximum 3-hr. concentration (6-9 AM) not to be exceeded more than once per year
Nitrogen Oxides	0.05 PPM (100 ug/m^3)	Maximum annual arithmetic mean

Regional Emissions

The County Road 62 project was included in the highway network used to model regional transportation emissions for the Transportation Control Plan portion of the Minnesota SIP. This Plan addressed regional emissions of hydrocarbons in relation to attainment of the ozone standard. The conclusion reached was that attainment of the ozone standard by December 31, 1982 was uncertain. Plan strategies which addressed hydrocarbons and ozone included a vehicle inspection/maintenance demonstration program, expanded ozone monitoring, and application of reasonably available control technology for stationary sources.

Since preparation of the SIP, there have been changes made to the regional highway network plan to reflect changes in planned highway construction and development expectations. In addition, the emission rates of vehicles have been recalculated using the new MOBILE 2 emissions model. An inventory of regional emissions from transportation sources was prepared by the Minnesota Department of Transportation using the SAPOLLUT-SAPLSM computer program package. The analysis was done using these revised assumptions. Based on the regional highway network and travel demand, this model calculates regional emissions of HC, CO and NOx resulting from transportation sources. The highway network modeled includes County Road 62 as specified by the build alternatives. Table A-2 shows the results of this analysis.

TABLE A-2

SEVEN COUNTY METROPOLITAN AREA EMISSIONS (kg/Day)
County Road 62 Build Alternative

YEAR	CARBON MONOXIDE	HYDROCARBONS	NITROGEN OXIDES	VEHICLE MILES
1990	937,988	46,897	87,079	31,610,500
2000	800,745	38,849	79,822	35,350,900
2010	882,061	43,010	88,015	39,533,800

Local Influence Area Emissions

In order to estimate the difference between the build and no-build alternatives, an analysis of travel within the area directly influenced by the project was done. This local influence area is shown in Figure 16. Within this area, the most logical route used for many vehicle trips depends strongly on whether or not the County Road 62 project is built. An analysis of vehicle trips in the area indicates that the build alternatives will generate 1,523,900 miles of travel in the year 2000. The no-build alternative will generate 1,542,400 miles of travel. Based on average regional emission rates in 2000, the difference in pollutant emissions has been calculated and is shown in Table A-3.

TABLE A-3

LOCAL INFLUENCE AREA EMISSIONS (kg/Day)
YEAR 2000

ALTERNATIVE	CARBON MONOXIDE	HYDROCARBONS	NITROGEN OXIDES	VEHICLE MILES
BUILD	34,516	1,676	3,444	1,523,900
NO-BUILD	34,935	1,696	3,485	1,542,400

This project is in an air quality nonattainment area where the State Implementation Plan (SIP) is required to contain transportation control measures. The transportation planning process was reviewed by the Federal Highway Administration (FHWA) on November 12, 1981 and the plan was determined to conform to the SIP which was (conditionally) approved by the U.S. Environmental Protection Agency on June 16, 1980. The transportation Improvement Program (TIP) was determined to conform to the SIP on January 18, 1982. This project was included in the plan and the TIP, both conforming to the SIP. Therefore, pursuant to 23 CFR 770, the project conforms to the SIP.

CARBON MONOXIDE ANALYSIS

Carbon monoxide concentrations were predicted for both the build alternatives and the no-build alternative in the vicinity of the project area. The purpose of this analysis was to determine the consistency of the project with State and Federal Air Quality Standards. The years 1986, 1996, and 2006 were analyzed to address the estimated time of completion plus one, ten, and twenty years. The total CO concentration at a point is the sum of background CO, which was determined through monitoring, and local CO sources which were modeled.

Carbon Monoxide Monitoring

Carbon monoxide was monitored continuously between May 20, 1981 and June 7, 1981 at the Eden Prairie Stables. The Eden Prairie Stables are located off Rowland Road, approximately 2,000 feet south of the proposed County Road 62 alignment. The purpose of the monitoring was to determine background CO concentrations. The CO monitoring results are summarized in Table A-4.

TABLE A-4

CARBON MONOXIDE MONITORING SUMMARY (PPM)

	Percentile*			
	50%	90%	99%	Maximum
1-hour	0.7	1.5	1.8	2.3
8-hour	0.7	1.3	1.5	1.6

* This is the percentage of measured concentrations below the specified concentration.

Background Concentrations

Procedures to calculate background CO concentrations are given in Guidelines for Air Quality Maintenance Planning and Analysis Volume 9 (Revised): Evaluating Indirect Sources. According to these procedures, CO data from a permanent monitor should be used for the background determination as long as the historical monitor is within 2 km of the indirect source. There are no historical CO monitors with 2 km of the proposed highway so the two-week monitoring data have been used for this analysis.

Applying the procedures outlined in the guidelines, which are described in detail in the "Air Quality Analysis Report", the 1-hour background concentration is 2.2 PPM and the 8-hour background is 1.8 PPM.

Methodology for Carbon Monoxide Analysis

Carbon monoxide concentrations resulting from the proposed project were predicted using the Modified ISMAP model. ISMAP is an integrated traffic flow, emissions, dispersion model for predicting carbon monoxide concentrations resulting from mobile sources.

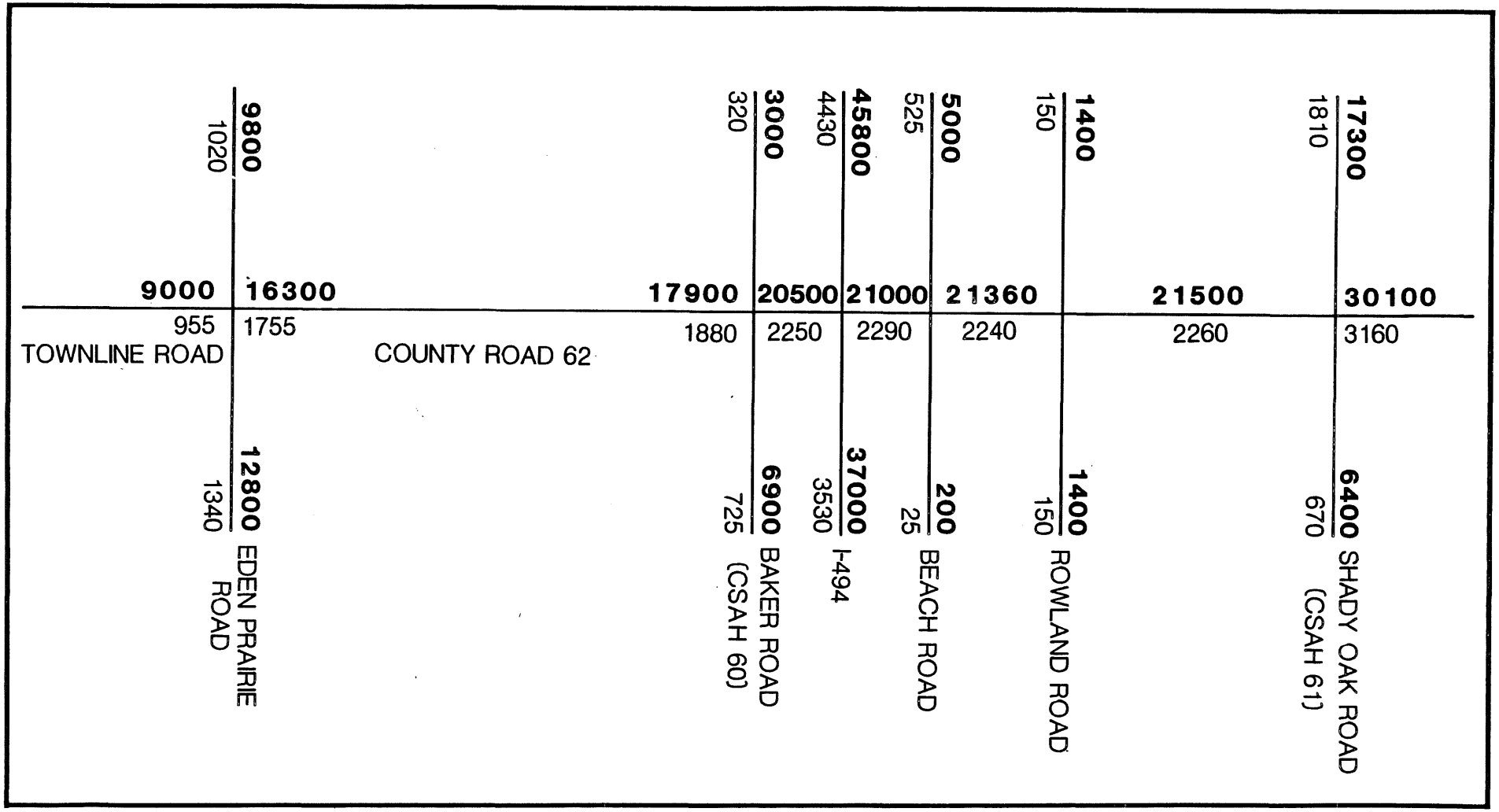
Emission rates are calculated separately for vehicles accelerating, decelerating, idling and cruising using the US EPA Modal Analysis Model. ISMAP, as described in the user's manual, uses the MOBILE 1 emissions model to adjust the calculated emission rates to the particular scenario characteristics modeled. To make use of the most recent EPA estimates of future emissions rates, MOBILE 1 was replaced by MOBILE 2 in the ISMAP model used on this project.

The model was run using peak hour traffic volumes projected for the years 1986, 1996 and 2006. A persistance factor of 0.7 was used to adjust the predicted 1-hour concentrations to 8-hour average concentrations. This factor accounts for the lack of persistance of the worst case meteorology assumed for the peak hour. The estimated CO concentrations are still conservative since peak hourly traffic volumes, rather than the average hourly traffic for the peak 8 hours, were used for the 8-hour concentration estimate. The total CO concentration at each point is the sum of the modeled concentrations and background concentrations.

The 24-hour and peak 1-hour traffic volumes derived for this project for the year 2000 are shown in Figures A-1 and A-2. These year 2000 traffic volumes were factored to the analysis years based on the forecasted growth rate of vehicle miles traveled in the metropolitan area. Traffic in the year 1986 is expected to be 73% of year 2000 traffic. Traffic in 1996 is expected to be 91% and traffic in 2006 is expected to be 109% of the year 2000 traffic.

For both the build and no-build alternatives, it was assumed that 20% of the vehicles were operating in a cold-start mode. It was also assumed that 27% of the vehicles were operating in a hot-start mode.

The vehicle type mix used in the analysis was derived from a study of existing vehicle counts in the project area and EPA estimates of future diesel vehicle use. Table A-5 shows the vehicle type mix used in the analysis.



County Road 62

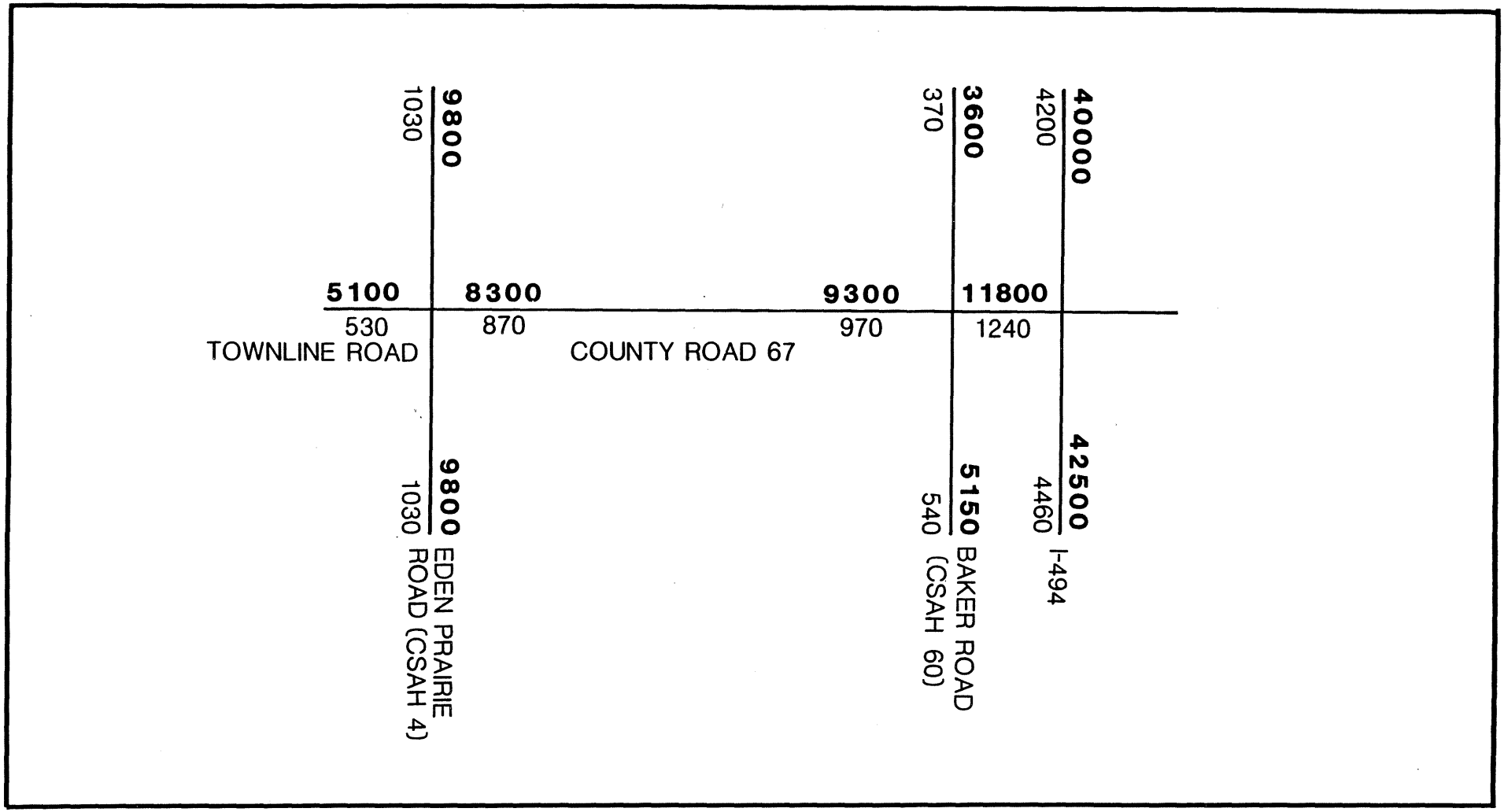
Environmental Impact Statement

TRAFFIC VOLUMES
YEAR 2000
BUILD ALTERNATIVES

0000 24 HOUR VOLUME
0000 PEAK ONE HOUR VOLUME

FIGURE A-1

north



County Road 62

Environmental Impact Statement

TRAFFIC VOLUMES
YEAR 2000
NO-BUILD ALTERNATIVE

0000 **24 HOUR VOLUME**
0000 **PEAK ONE HOUR VOLUME**

FIGURE A-2

north

Meteorological parameters used in the emissions and dispersion calculations include temperature, wind speed, wind direction, and Pasquill stability class. The ambient temperature used in the analysis was 20°F. Winds from the east, south-southwest, and west blowing at a speed of 1.0 meters per second were evaluated. Pasquill stability class D was used for all dispersion estimates. As stated previously, a persistance factor of 0.7 was used to adjust 1-hour concentrations to 8-hour concentrations to account for the lack of persistance of these worst case meteorological parameters.

Receptor sites were selected both on the basis of existing land use and future roadway characteristics. The sixteen receptor sites analyzed are shown in Figures 21 and 21a (Chapter 5), and represent a mix of both sensitive land uses and areas where maximum CO concentrations would be expected. The same receptor sites were analyzed for both the build and no-build alternatives.

Receptor sites R1, R2, R3, R4, R10, and R11 are all located at existing residences. Receptors R5, R6, and R7 are located on the grounds of the Glen Lake State Sanitarium. Receptor R15 is located in Bryant Lake Regional Park. The remainder of the receptor sites are located on undeveloped land.

TABLE A-5

VEHICLE TYPE MIX

	% Vehicle Miles Traveled	
Vehicle Type	1986	1996 2006
Light-Duty Gas Vehicle	77.9	67.2
Light-Duty Gas Truck < 6000 lbs.	8.2	7.2
Light-Duty Gas Truck 6000-8500 lbs.	4.8	4.8
Heavy-Duty Gas Vehicle	2.7	2.7
Light-Duty Diesel Vehicle	3.8	14.3
Light-Duty Diesel Truck	0.5	1.7
Heavy-Duty Diesel Truck	2.1	2.1
Motorcycle	0.0	0.0

Predicted Carbon Monoxide Concentrations and Impacts

The predicted carbon monoxide concentrations for the years 1986, 1996, and 2006 are shown in Tables A-6, A-7, and A-8 respectively. These concentrations are the maximums modeled for the three wind directions and include a 1-hour background of 2.2 PPM and an 8-hour background of 1.8 PPM. The concentrations are reported by alternative and the alternatives have been grouped where differences between them did not affect carbon monoxide concentrations. For example, at receptors 1 through 7, the railroad grade crossing did not affect carbon monoxide concentrations but the alignment subalternatives at the west terminus did. At receptors 8 through 14, concentrations were the same with Rowland Road at-grade or grade-separated.

The carbon monoxide analysis identified no violations of either the 1-hour or the 8-hour state and federal standards. Three general areas have been identified where concentrations approach, but do not exceed, the 8-hour standard of 9.0 PPM. These areas are the intersection of County Road 62 and CSAH 4, the intersection of County Road 62 and the northbound entrance ramp to I-494, and the intersection of County Road 62 and Baker Road (CSAH 60).

The intersection of County Road 62 and CSAH 4 is realigned under subalternative C to just south of receptor 2. This causes a maximum 8-hour concentration of 8.9 PPM at receptor 2 in the year 2006. The corresponding peak 1-hour concentration at this receptor is 12.3 PPM. Under either subalternative A or B, this intersection is located north of receptor 2 and predicted concentrations are significantly less.

Near the northbound entrance ramp to I-494 from County Road 62, any of the build alternatives are expected to cause a maximum 8-hour average concentration of 8.5 PPM at receptor 12 in the year 2006. Under the no-build alternative, the 8-hour concentration predicted at this point is 4.0 PPM. The corresponding 1-hour concentrations are 11.7 PPM for the build alternative and 5.3 PPM for the no-build alternative.

The intersection of Baker Road with County Road 62 is expected to cause elevated carbon monoxide concentrations under any of the build alternatives and the no-build alternative. Under the no-build alternative, an 8-hour concentration of 7.4 PPM is expected at receptor 11 in the year 2006. Although the build alternatives provide a significant increase in the capacity of this intersection, higher traffic volumes will result in a maximum 8-hour concentration of 7.8 PPM at receptor 8 in the year 2006.

The railroad grade crossing alternatives will not have significantly differant impacts on air quality. The tracks carry approximately eight trains per day. The trains are composed of 50 to 150 cars and generally travel at 30 to 35 miles per hour. Thus, each train would introduce less than 3 minutes of delay with an at-grade crossing. This delay, spread over the course of a day, would have a minimal effect on ambient air quality conditions.

TABLE A-6

CARBON MONOXIDE CONCENTRATIONS (PPM)

YEAR 1986

RECEPTOR	ALTERNATIVES	1 HOUR CONCENTRATION	8 HOUR CONCENTRATION	RECEPTOR	ALTERNATIVES	1 HOUR CONCENTRATION	8 HOUR CONCENTRATI
1	1	2.6	2.1	7	1	2.5	2.0
1	2A, 3A	3.9	3.0	7	2A, 3A	2.8	2.2
1	2B, 3B	2.6	2.1	7	2B, 3B	2.6	2.1
1	2C, 3C	3.0	2.3	7	2C, 3C	3.2	2.5
2	1	3.5	2.7	8	1	4.1	3.1
2	2A, 3A	3.8	2.9	8	4A, 4B, 5A, 5B	8.7	6.4
2	2B, 3B	2.7	2.1	9	1	4.2	3.2
2	2C, 3C	10.8	7.8	9	4A, 4B, 5A, 5B	3.7	2.9
3	1	2.6	2.1	10	1	4.5	3.4
3	2A, 3A	2.8	2.2	10	4A, 4B, 5A, 5B	3.7	2.9
3	2B, 3B	2.7	2.1	11	1	3.4	2.6
3	2C, 3C	4.2	3.2	11	4A, 4B, 5A, 5B	4.5	3.4
4	1	3.2	2.5	12	1	3.9	3.0
4	2A, 3A	7.6	5.6	12	4A, 4B, 5A, 5B	8.6	6.3
4	2B, 3B	6.5	4.8	13	1	3.0	2.4
4	2C, 3C	3.8	2.9	13	4A, 4B, 5A, 5B	5.9	4.4
5	1	2.6	2.1	14	1	2.8	2.2
5	2A, 3A	3.0	2.4	14	4A, 4B, 5A, 5B	7.3	5.4
5	2B, 3B	2.7	2.2	15	1	2.5	2.0
5	2C, 3C	3.9	3.0	15	4A, 4B	3.8	2.9
6	1	2.4	2.0	15	5A, 5B	3.7	2.8
6	2A, 3A	2.7	2.1	16	1	2.5	2.0
6	2B, 3B	2.5	2.0	16	4A, 4B	3.8	2.9
6	2C, 3C	3.4	2.6	16	5A, 5B	3.4	2.7

TABLE A-7

CARBON MONOXIDE CONCENTRATIONS (PPM)

YEAR 1996

RECEPTOR	ALTERNATIVES	1 HOUR CONCENTRATION	8 HOUR CONCENTRATION	RECEPTOR	ALTERNATIVES	1 HOUR CONCENTRATION	8 HOUR CONCENTRATIC
1	1	2.6	2.1	7	1	2.5	2.0
1	2A, 3A	3.8	2.9	7	2A, 3A	2.8	2.2
1	2B, 3B	2.5	2.0	7	2B, 3B	2.5	2.0
1	2C, 3C	2.9	2.3	7	2C, 3C	3.2	2.5
2	1	3.6	2.8	8	1	4.1	3.1
2	2A, 3A	3.7	2.9	8	4A, 4B, 5A, 5B	8.8	6.4
2	2B, 3B	2.6	2.1	9	1	4.3	3.3
2	2C, 3C	10.3	7.5	9	4A, 4B, 5A, 5B	3.7	2.8
3	1	2.6	2.1	10	1	4.5	3.4
3	2A, 3A	2.8	2.2	10	4A, 4B, 5A, 5B	3.8	2.9
3	2B, 3B	2.6	2.1	11	1	3.3	2.6
3	2C, 3C	4.1	3.1	11	4A, 4B, 5A, 5B	4.3	3.3
4	1	3.4	2.6	12	1	3.8	3.0
4	2A, 3A	7.8	5.7	12	4A, 4B, 5A, 5B	8.7	6.3
4	2B, 3B	6.3	4.7	13	1	2.9	2.3
4	2C, 3C	3.7	2.8	13	4A, 4B, 5A, 5B	6.1	4.5
5	1	2.6	2.1	14	1	2.7	2.2
5	2A, 3A	3.0	2.3	14	4A, 4B, 5A, 5B	7.3	5.4
5	2B, 3B	2.7	2.1	15	1	2.5	2.0
5	2C, 3C	3.8	2.9	15	4A, 4B	3.9	3.0
6	1	2.4	2.0	15	5A, 5B	3.7	2.9
6	2A, 3A	2.7	2.1	16	1	2.5	2.0
6	2B, 3B	2.4	2.0	16	4A, 4B	3.8	2.9
6	2C, 3C	3.3	2.6	16	5A, 5B	3.4	2.7

TABLE A-8

CARBON MONOXIDE CONCENTRATIONS (PPM)

YEAR 2006

RECEPTOR	ALTERNATIVES	1 HOUR CONCENTRATION	8 HOUR CONCENTRATION	RECEPTOR	ALTERNATIVES	1 HOUR CONCENTRATION	8 HOUR CONCENTRATI
1	1	2.7	2.2	7	1	2.6	2.1
1	2A, 3A	4.1	3.2	7	2A, 3A	2.9	2.3
1	2B, 3B	2.6	2.1	7	2B, 3B	2.6	2.1
1	2C, 3C	3.0	2.4	7	2C, 3C	3.4	2.6
2	1	4.0	3.1	8	1	7.9	5.8
2	2A, 3A	4.1	3.2	8	4A, 4B, 5A, 5B	10.8	7.8
2	2B, 3B	2.7	2.2	9	1	5.1	3.8
2	2C, 3C	12.3	8.9	9	4A, 4B, 5A, 5B	4.1	3.1
3	1	2.6	2.1	10	1	5.0	3.8
3	2A, 3A	2.9	2.3	10	4A, 4B, 5A, 5B	4.3	3.2
3	2B, 3B	2.7	2.1	11	1	10.1	7.4
3	2C, 3C	4.3	3.3	11	4A, 4B, 5A, 5B	4.5	3.4
4	1	4.2	3.2	12	1	5.3	4.0
4	2A, 3A	9.0	6.6	12	4A, 4B, 5A, 5B	11.7	8.5
4	2B, 3B	7.5	5.5	13	1	3.7	2.8
4	2C, 3C	4.1	3.1	13	4A, 4B, 5A, 5B	7.5	5.5
5	1	2.7	2.1	14	1	3.2	2.5
5	2A, 3A	3.1	2.4	14	4A, 4B, 5A, 5B	9.3	6.8
5	2B, 3B	2.7	2.2	15	1	2.7	2.2
5	2C, 3C	4.1	3.1	15	4A, 4B	4.3	3.3
6	1	2.5	2.0	15	5A, 5B	4.1	3.1
6	2A, 3A	2.7	2.1	16	1	2.7	2.1
6	2B, 3B	2.5	2.0	16	4A, 4B	4.3	3.2
6	2C, 3C	3.6	2.8	16	5A, 5B	3.8	2.9

In general, carbon monoxide concentrations are expected to decrease between 1986 and 1996 and increase between 1996 and 2006. The decrease in concentrations between 1986 and 1996 is mainly due to the effects of the Federal Motor Vehicle Emissions Control Program. This program requires that all new cars and trucks meet strict emission limitations. As these new cleaner cars replace older cars in the vehicle fleet, there will be an overall reduction in the average fleet emission rate. Between 1986 and 1996, this reduction more than compensates for increased traffic volumes resulting in decreased concentrations. Sometime after 1996, the entire vehicle fleet will be composed of cleaner cars, and from that point on, increases in traffic volumes, as projected between 1996 and 2006, will cause increased carbon monoxide concentrations.

Neither the build nor the no-build alternatives are expected to cause any violations of state or federal carbon monoxide standards. The project will have no impact on traffic volumes or carbon monoxide concentrations in the Minneapolis or St. Paul central business districts. For these reasons, both the build and no-build alternatives are consistent with the Minnesota State Implementation Plan.

LEAD ANALYSIS

Lead is emitted from transportation sources because of the tetraethyl lead used as gasoline additive. Newer vehicles equipped with catalytic converters are not compatible with leaded gasoline and must use unleaded gasoline. As these newer vehicles replace the older ones in the vehicle fleet, the use of leaded gasoline will decline as will the amount of lead emitted from transportation sources.

There are no point sources of lead in the vicinity of County Road 62. The Minnesota Pollution Control Agency has monitored lead in the metropolitan area but none of the sites are in the vicinity at County Road 62. Since there are no point sources near the project and no monitoring data available, a background lead concentration of 0.1 micrograms per cubic meter (ug/m^3) has been assumed.

Lead concentrations resulting from County Road 62 and major cross streets have been predicted for the year 1986. Receptor site 12 from the carbon monoxide analysis has been analyzed. This receptor is influenced by County Road 62, I-494, and the northbound entrance ramp to I-494. The procedure used is based on a January 31, 1978 FHWA memorandum entitled "Proposed National Ambient Air Quality Standard For Lead." The concentration predicted for the build alternatives in 1986 is 0.28 ug/m^3. For the no-build alternative, the 1986 predicted concentration is 0.23 ug/m^3. These values are both well below the federal ambient standard of 1.5 ug/m^3 quarterly average. Since this receptor is influenced by I-494, the highest volume roadway in the project area, lead concentrations in other areas are expected to be less than those predicted. Because of the continuing decrease in the use of leaded gasoline, lead concentrations in future years are also expected to be less.

Noise Analysis

The County Road 62 project is defined as a Type 1 project according to the August 9, 1982 update of Volume 7, Chapter 7, Section 3 of the Federal Aid Highway Program Manual (FHPM 7-7-3). A project is classified as Type 1 if it includes the construction or reconstruction of a highway on new location. The probable noise impacts of the alternatives under consideration have been analyzed and documented in a "Preliminary Noise Analysis"[1/] which has been reviewed by the U.S. Environmental Protection Agency and the Minnesota Pollution Control Agency for review.

PERMITTED NOISE LEVELS

The noise regulations applicable to the County Road 62 project include the Federal Noise Abatement Criteria documented in the August 9, 1982 update to FHPM 7-7-3 and the Minnesota State Noise Standards identified in Regulation NPC-2. These permitted noise levels are based on land use activity classifications and are presented in Table A-9.

EXISTING NOISE LEVELS

Existing sound levels were monitored by Hennepin County at twelve sites throughout the study area. The equipment used to monitor sound levels was a Metrosonics dB-601 Sound Level Analyzer. The procedure was to take measurements for three hour periods at the monitoring sites. The results of the monitoring determined that, are presented in Table A-10. In all cases, the sound levels are below both the Federal Design Noise Levels and, except for Site 9, are also within the State Noise Standards.

PREDICTED NOISE LEVELS

The FHWA RD-77-108 Highway Traffic Noise Prediction Model (Manual Method) was used in this study to predict noise levels. The input parameters and related assumptions are as follows:

- Location of sensitive receptors
- Traffic volume
- Vehicle mix
- Vehicle speeds
- Type of ground cover

1/ The "Preliminary Noise Analysis" is available for review at Hennepin County Department of Transportation, Hopkins, MN.

A total of fourteen representative noise sensitive receptor sites were identified in the corridor, shown in Figures 22, and 22a (Chapter 5). Noise levels were predicted at each receptor for the year 2000 for all project alternatives including the no-build alternative. The traffic forecasts used are the revised traffic based upon Minnesota Department of Transportation forecasts and local conditions. Automobile and truck design hourly volumes were used. For the prediction of nighttime noise levels the highest volume was assumed to be approximately 50 percent of the design hourly volumes. The vehicle mix for daytime and nighttime traffic were assumed to be the following:

	Daytime Percentage	Nighttime Percentage
Automobiles	95.2	95.2
Heavy Trucks	1.3	2.4
Medium Trucks	3.5	2.4

TABLE A-9

FEDERAL NOISE ABATEMENT CRITERIA

SOURCE: August 9, 1982 Update to FHPM 7-7-3

Hourly A - Weighted Sound Level - decibels (dBA) 1/

Activity Category	Leq(h)	$L_{10}(h)$	Description of Activity Category
A	57 (Exterior)	60 (Exterior)	Land on 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.
B	67 (Exterior)	70 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (Exterior)	75 (Exterior)	Developed lands, properties, or activities not included in Categories A or B above.
D	--	--	Undeveloped lands.
E	52 (Interior)	55 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

1/ Either $L_{10}(h)$ or Leq (h) (but not both) may be used on a project.

MINNESOTA STATE NOISE STANDARDS
SOURCE: NPC-2

Noise Area Classification (NAC)	General Land Use Types	Daytime Noise Level (7 AM to 10 PM)		Nighttime Noise Level (10 PM to 7 AM)	
		L_{10}	L_{50}	L_{10}	L_{50}
1	Residential & Institutional	65	60	55	50
2	Commercial & Recreational	70	65	70	65
3	Industrial	80	75	80	75

TABLE A-10

SOUND MONITORING RESULTS

Site	Measurement Location	Distance to Center of Near Lane	Time	Date	Monitored Sound Level - dBA[1/] L50	L10	Comments
1	E. of N. Eden Drive & S. of 62nd Street	50' - N. Eden Drive 32' - 62nd St.	9 AM-10 AM	10/29/81	51	59	Aircraft flyover, trains, construction activity
2	S. of Williams Lane	35' - Williams Lane	7:15 AM-8:15 AM	10/29/81	50	54	Aircraft flyover, trains
3	E. of CSAH 4 & N. of CSAH 67	100' - CSAH 4 105' - CSAH 67	7:30 AM-8:30 AM 10:00 AM-11:00 AM	9/23/81 9/24/81	57 54	63 63	
4	N. of CSAH 67	103' - CSAH 67	7:00 AM-8:00 AM 10:30 AM-11:30 AM	9/24/81 9/30/81	57 53	61 63	Chainsaw noise
5	N. of CSAH 67	165' - CSAH 67	10:30 AM-11:30 AM 3:00 PM-4:00 PM	9/23/81 9/23/81	54 57	64 63	
6	N. of CSAH 67	55' - CSAH 67	8:00 AM-9:00 AM 3:30 PM-4:30 PM	10/7/80 10/1/80	55 56	62 64	
7	N. of CSAH 67 & E. of CSAH 60	85' - CSAH 67 157' - CSAH 60	12:30 PM-1:30 PM 3:30 PM-4:30 PM	10/9/80 10/8/80	59 56	62 63	I-494 traffic noise I-494 traffic noise
8	S. of CSAH 67 & E. of Baker Road	161' - CSAH 67 136' - Baker Road	7:00 AM-8:00 AM 12:30 PM-1:30 PM	10/2/80 10/8/80	57 55	62 60	I-494 traffic noise I-494 traffic noise
9	S. of Co. Rd. 62 & W. of Beach Road	238' - CSAH 62 60' - Beach Road	7:15 AM-8:15 AM 2:30 PM-3:30 PM	9/30/80 10/7/80	63 61	66 65	I-494 traffic noise I-494 traffic noise
10	W. of Rowland Road	85' - Rowland Road	8:00 AM-9:00 AM 9:00 AM-10:00 AM	10/1/80 10/1/80	54 57	58 60	I-494 traffic noise I-494 traffic noise
11	E. of Rowland Road	108' - Rowland Road	2:30 PM-3:30 PM 2:45 PM-3:45 PM	10/1/80 9/24/80	59 53	63 58	I-494 traffic noise & civil defense siren I-494 traffic noise and heavy equipment noise
12	W. of Shady Oak Road	162' - Shady Oak Road	9:00 AM-10:00 AM 3:15 PM-4:15 PM	10/8/80 9/30/80	57 52	62 57	

1/ For Sites 1 and 2, only one hour was monitored at each site. At the remaining sites, 2 three hour periods were monitored. The values shown represent the highest hourly sound levels that were monitored during each 3 hour period.

TABLE A-11

SUMMARY OF NOISE SENSITIVE RECEPTOR SITES

Site	General Land Use	FHWA 1/ Activity Category	State 2/ NAC Category	Distance from Receptor to County Road 62 3/							
				Alt. 1 4/	Sub-Alt. A 4/	Sub-Alt. B	Sub-Alt. C	Alt. 2	Alt. 3	Alt. 4	Alt. 5
1	Residential	B	1	190	190	110	160	N/A	N/A	N/A	N/A
2	Residential	B	1	40	40	120	105	N/A	N/A	N/A	N/A
3	Residential	B	1	400	400	110	600	N/A	N/A	N/A	N/A
4	Residential	B	1	70	70	225	150	N/A	N/A	N/A	N/A
5	Residential	B	1	55	55	385	130	N/A	N/A	N/A	N/A
6	Nursing Home	B	1	220	N/A	N/A	N/A	255	255	N/A	N/A
7	Open Space	B	2	175	N/A	N/A	N/A	100	100	N/A	N/A
8	Residential	B	1	420	N/A	N/A	N/A	400	250	N/A	N/A
9	Residential	B	1	215	N/A	N/A	N/A	240	240	N/A	N/A
10	Residential	B	1	N/A	N/A	N/A	N/A	N/A	N/A	270	270
11	Office	C	2	N/A	N/A	N/A	N/A	N/A	N/A	135	135
12	Park	B	2	N/A	N/A	N/A	N/A	N/A	N/A	190	190
13	Residential	B	1	N/A	N/A	N/A	N/A	N/A	N/A	600	600
14	Residential	B	1	N/A	N/A	N/A	N/A	N/A	N/A	350	350

N/A - Not Applicable (The receptor is not adjacent to the proposed alignment.)

1/ Refer to Table A-9 for a description of the FHWA Activity Categories. Where two or more categories may apply, the most stringent category is used.

2/ Refer to Table A-9 for a description of the State NAC Categories. Where two or more categories may apply, the most stringent category is used.

3/ All distances are in feet and are single lane equivalent distances from the receptor to the roadway.

4/ These distances are from the receptor to CSAH 4 (Eden Prairie Road)

For the purpose of the noise analysis, uninterrupted traffic flow was assumed and operating speeds of 40 mph from CSAH 4 to I-494 and 50 mph from I-494 to CSAH 61. The ground cover between the roadway and the receiver was assumed to be acoustically soft, and shielding from terrain and buildings was not used in the analysis.

The daytime and nighttime noise levels predicted for both existing and future traffic volumes for the build and no-build alternatives are shown in Tables A-12 and A-13. The predicted noise levels are based on the noisiest conditions and represent the upper level of noise anticipated from the proposed action.

IMPACT ASSESSMENT

The methods used for determining the noise impacts of the proposed County Road 62 action were the following:

- Comparison of the predicted noise levels with both Federal Noise Abatement Criteria and State Noise Standards.
- Comparison of the predicted future noise levels with existing noise levels, as predicted.
- Comparison of predicted future noise levels for the build alternatives with the no-build alternative future noise levels.

Comparison of predicted Noise levels with Federal Noise Abatement Criteria and State Noise Standards

The results of comparing the predicted future noise levels with both FHWA Noise Abatement Criteria and State Noise Standards are shown in Tables A-14 and A-15.

FHWA Noise Abatement Criteria are exceeded three times under the build alternatives. When the predicted noise levels are compared with the State Noise Standards, three of the same sites exceed the daytime standards for each of the build alternatives. The only exception is Site 2 where the daytime standards are exceeded under subalternative A but not subalternatives B and C. Only Site 7 (alternatives 2 and 3), Site 11, and Site 12 (alternatives 4 and 5) do not exceed the nighttime standards.

The number of residences which would be impacted by noise levels was determined by plotting noise contours for the allowable standards along the proposed highway corridor. Table A-16 summarizes the number of residences impacted by noise for the build and no-build alternatives. No residences will experience noise levels exceeding the federal standard of L_{10} 70. State daytime standards are exceeded for residences near the western terminus of the project. State nighttime standards are exceeded for residences along the entire corridor.

Comparison of Predicted Future Noise Levels with Existing Noise Levels

The second method to determine noise related impacts compared existing noise levels, as predicted, with future noise levels, as shown in Table A-17. Generally, noise impacts can be expected when the future noise levels are substantially higher (approximately 10 dBA or more) than the existing noise

TABLE A-12

PREDICTED DAYTIME NOISE LEVELS - dBA

	EXISTING[1]		FUTURE															
			Alt. 1[1]		Sub-Alt. A[2]		Sub-Alt. B[2]		Sub-Alt. C[2]		Alt. 2		Alt. 3		Alt. 4		Alt. 5	
Site	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}
1	53.9	58.2	53.9	58.2	56.2	60.2	59.8	63.7	57.3	60.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	64.1	68.2	64.1	68.2	66.4	70.6	59.2	63.1	60.1	63.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	49.1	53.6	52.8	57.9	54.3	59.6	60.6	64.7	53.5	58.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	60.4	64.5	64.1	68.1	65.6	69.9	64.7	68.8	64.2	68.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	60.3	64.8	65.7	69.4	67.2	71.2	66.1	69.8	66.3	70.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	51.3	55.3	55.0	59.4	N/A	N/A	N/A	N/A	N/A	N/A	56.9	62.0	56.9	62.0	N/A	N/A	N/A	N/A
7	52.8	56.8	56.5	60.4	N/A	N/A	N/A	N/A	N/A	N/A	63.0	67.3	63.0	67.3	N/A	N/A	N/A	N/A
8	48.7	53.3	51.2	56.1	N/A	N/A	N/A	N/A	N/A	N/A	54.4	60.1	57.4	62.5	N/A	N/A	N/A	N/A
9	53.0	57.4	56.6	61.5	N/A	N/A	N/A	N/A	N/A	N/A	58.3	63.5	58.3	63.5	N/A	N/A	N/A	N/A
10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	59.5	65.3	59.5	65.3
11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	64.0	68.8	64.0	68.8
12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	61.8	66.6	61.8	66.6
13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	54.4	59.7	54.4	59.7
14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	57.9	63.1	57.9	63.1

N/A - Not Applicable (The receptor is not adjacent to the proposed alignment).

1/ Existing (1980) and future (2000) noise levels were not predicted for Sites 10 through 11 because the sites are not adjacent to a major roadway in the corridor. Daytime monitored sound levels in the areas, however, are shown in Table A-10. The future sound levels are expected to be comparable to the monitored sound levels.

2/ In order to facilitate comparison among the alternatives, the predicted noise levels at Sites 3, 4 and 5 represent traffic related noise from both County Road 62 and Eden Prairie Road.

TABLE A-13

PREDICTED NIGHTTIME NOISE LEVELS - dBA

	EXISTING[1]		FUTURE															
			Alt. 1[1]		Sub-Alt. A[2]		Sub-Alt. B[2]		Sub-Alt. C[2]		Alt. 2		Alt. 3		Alt. 4		Alt. 5	
Site	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}
1	51.0	55.3	51.0	55.3	53.3	57.8	56.9	61.3	54.4	58.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	61.2	65.2	61.2	65.2	63.5	67.6	56.3	60.7	57.2	61.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	46.2	50.9	49.9	55.8	51.5	57.6	57.7	62.4	50.6	56.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	57.5	61.6	61.2	65.2	62.8	67.1	61.9	66.0	61.3	65.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	57.4	61.4	62.8	66.9	64.4	68.3	63.3	67.4	63.4	67.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	48.4	52.7	52.1	56.3	N/A	N/A	N/A	N/A	N/A	N/A	54.0	59.2	54.0	59.2	N/A	N/A	N/A	N/A
7	49.9	54.0	53.6	57.7	N/A	N/A	N/A	N/A	N/A	N/A	60.1	64.5	60.1	64.5	N/A	N/A	N/A	N/A
8	45.8	50.5	48.4	53.7	N/A	N/A	N/A	N/A	N/A	N/A	51.5	57.8	54.5	59.9	N/A	N/A	N/A	N/A
9	50.1	54.0	53.7	59.6	N/A	N/A	N/A	N/A	N/A	N/A	55.4	60.9	55.4	60.9	N/A	N/A	N/A	N/A
10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	56.7	61.9	56.7	61.9
11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	61.2	65.7	61.2	65.7
12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	59.0	63.9	59.0	63.9
13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	51.5	57.5	51.5	57.5
14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	55.0	60.5	55.0	60.5

N/A - Not Applicable (The receptor is not adjacent to the proposed alignment).

1/ Existing (1980) and future (2000) noise levels were not predicted for Sites 10 through 14 because the sites are not adjacent to a major roadway in the corridor. Future sound levels are expected to be comparable to existing sound levels in the area.

2/ In order to facilitate comparison among the alternatives, the predicted noise levels at Sites 3, 4 and 5 represent traffic related noise from both County Road 62 and Eden Prairie Road.

TABLE A-14

IDENTIFICATION OF SITES THAT EXCEED FHWA NOISE ABATEMENT CRITERIA

Site	Alt. 1	Sub-Alt. A	Sub-Alt. B	Sub-Alt. C	Alt. 2	Alt. 3	Alt. 4	Alt. 5
1	-	-	-	-	N/A	N/A	N/A	N/A
2	-	Yes	-	-	N/A	N/A	N/A	N/A
3	-	-	-	-	N/A	N/A	N/A	N/A
4	-	-	-	-	N/A	N/A	N/A	N/A
5	-	Yes	-	Yes	N/A	N/A	N/A	N/A
6	-	N/A	N/A	N/A	-	-	N/A	N/A
7	-	N/A	N/A	N/A	-	-	N/A	N/A
8	-	N/A	N/A	N/A	-	-	N/A	N/A
9	-	N/A	N/A	N/A	-	-	N/A	N/A
10	N/A	N/A	N/A	N/A	N/A	N/A	-	-
11	N/A	N/A	N/A	N/A	N/A	N/A	-	-
12	N/A	N/A	N/A	N/A	N/A	N/A	-	-
13	N/A	N/A	N/A	N/A	N/A	N/A	-	-
14	N/A	N/A	N/A	N/A	N/A	N/A	-	-

N/A - Not Applicable (The receptor is not adjacent to the proposed alignment.)
(Yes) - Indicates the Predicted Noise Levels exceed the Noise Abatement Criteria.
(-) - Indicates the Predicted Noise Levels are either at or below the Noise Abatement Criteria.

TABLE A-15

IDENTIFICATION OF SITES THAT EXCEED STATE NOISE STANDARDS

	STATE DAYTIME STANDARDS								STATE NIGHTTIME STANDARDS							
Site	Alt. 1	Sub-Alt. A	Sub-Alt. B	Sub-Alt. C	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 1	Sub-Alt. A	Sub-Alt. B	Sub-Alt. C	Alt. 2	Alt. 3	Alt. 4	Alt. 5
1	-	-	-	-	N/A	N/A	N/A	N/A	Yes	Yes	Yes	Yes	N/A	N/A	N/A	N/A
2	Yes	Yes	-	-	N/A	N/A	N/A	N/A	Yes	Yes	Yes	Yes	N/A	N/A	N/A	N/A
3	-	-	-	-	N/A	N/A	N/A	N/A	Yes	Yes	Yes	Yes	N/A	N/A	N/A	N/A
4	Yes	Yes	Yes	Yes	N/A	N/A	N/A	N/A	Yes	Yes	Yes	Yes	N/A	N/A	N/A	N/A
5	Yes	Yes	Yes	Yes	N/A	N/A	N/A	N/A	Yes	Yes	Yes	Yes	N/A	N/A	N/A	N/A
6	-	N/A	N/A	N/A	-	-	N/A	N/A	Yes	N/A	N/A	N/A	Yes	Yes	N/A	N/A
7	-	N/A	N/A	N/A	-	-	N/A	N/A	-	N/A	N/A	N/A	-	-	N/A	N/A
8	-	N/A	N/A	N/A	-	-	N/A	N/A	-	N/A	N/A	N/A	Yes	Yes	N/A	N/A
9	-	N/A	N/A	N/A	-	-	N/A	N/A	Yes	N/A	N/A	N/A	Yes	Yes	N/A	N/A
10	N/A	N/A	N/A	N/A	N/A	N/A	Yes	Yes	N/A	N/A	N/A	N/A	N/A	N/A	Yes	Yes
11	N/A	N/A	N/A	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	-	-
12	N/A	N/A	N/A	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	-	-
13	N/A	N/A	N/A	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	Yes	Yes
14	N/A	N/A	N/A	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	Yes	Yes

N/A - Not Applicable (The receptor is not adjacent to the proposed alignment.)

(Yes) - Indicates the Prediced Noise Levels exceed State Standards.

(-) - Indicates the Predicted Noise Levels are either at or below State Standards.

TABLE A-16

RESIDENCES IMPACTED BY NOISE LEVELS[1/]
Based Upon FHWA Design Noise Levels and State Noise Standards

Road Segment	ALT. 1	ALT. 2			ALT. 3			ALT. 4	ALT. 5
		A	B	C	A	B	C		
RESIDENCES WITHIN L_{10} 70 dBA NOISE CONTOUR:[2/]									
Western Terminus of Project to CSAH 4	0	0	0	0	0	0	0	N/A	N/A
CSAH 4 to Birch Island Road	0	0	0	0	0	0	0	N/A	N/A
Birch Island Road to Baker Road	0	0	0	0	0	0	0	N/A	N/A
Baker Road to I-494	0	0	0	0	0	0	0	N/A	N/A
I-494 to Shady Oak Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	0
RESIDENCES WITHIN L_{50} 60 dBA NOISE CONTOUR:[3/]									
Western Terminus of Project to CSAH 4	15	16	14	11	16	14	11	N/A	N/A
CSAH 4 to Birch Island Road	0	0	1	0	0	1	0	N/A	N/A
Birch Island Road to Baker Road	0	0	0	0	0	0	0	N/A	N/A
Baker Road to I-494	0	0	0	0	0	0	0	N/A	N/A
I-494 to Shady Oak Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2	2
RESIDENCES WITHIN L_{10} 50 dBA NOISE CONTOUR OR L_{50} 55 dBA NOISE CONTOUR:[4/]									
Western Terminus of Project to CSAH 4	31	50	60	50	50	60	50	N/A	N/A
CSAH 4 to Birch Island Road	3	3	3	5	3	3	5	N/A	N/A
Birch Island Road to Baker Road	0	11	11	11	8	8	8	N/A	N/A
Baker Road to I-494	1	2	2	2	2	2	2	N/A	N/A
I-494 to Shady Oak Road	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4	4

NA - Not Applicable

1/ The number of residences represents a tabulation of structures only and does not reflect the number of dwelling units.
2/ Represents FHWA Design Noise Levels (Activity Category B)
3/ Represents State Daytime Noise Standard (NAC-1)
4/ Represents State Nighttime Noise Standard (NAC-1). The contour furthest from the roadway was considered.

TABLE A-17

INCREMENTAL DIFFERENCE BETWEEN EXISTING AND FUTURE NOISE LEVELS[1/]

	Alt. 1		Sub-Alt. A		Sub-Alt. B		Sub-Alt. C		Alt. 2		Alt. 3		Alt. 4		Alt. 5	
Site	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L10	L_{50}	L10	L_{50}	L_{10}
1	0	0	2.3	2.0	5.9	5.5	3.4	2.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	0	0	2.3	2.4	-4.9	-5.1	-4.0	-4.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	3.7	4.3	5.2	6.0	11.5	11.1	4.4	4.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	3.7	3.6	5.2	5.4	4.3	4.3	3.8	3.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	5.4	4.6	6.9	6.4	5.8	5.0	6.0	5.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	3.7	4.1	N/A	N/A	N/A	N/A	N/A	N/A	5.6	6.7	5.6	6.7	N/A	N/A	N/A	N/A
7	3.7	3.6	N/A	N/A	N/A	N/A	N/A	N/A	10.2	10.5	10.2	10.5	N/A	N/A	N/A	N/A
8	2.5	2.8	N/A	N/A	N/A	N/A	N/A	N/A	5.7	6.8	8.7	9.2	N/A	N/A	N/A	N/A
9	3.6	4.1	N/A	N/A	N/A	N/A	N/A	N/A	5.3	6.1	5.3	6.1	N/A	N/A	N/A	N/A
10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	[2/]		[2/]	
11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	[2/]		[2/]	
12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	[2/]		[2/]	
13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	[2/]		[2/]	
14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	[2/]		[2/]	

N/A - Not Applicable (The receptor is not adjacent to the proposed alignment.)

[1/] The incremental differences were computed using predicted daytime noise levels. The nighttime noise level differences are expected to be comparable. A minus sign in front of a value indicates the predicted future noise levels are less than the predicted existing noise levels.

[2/] The incremental difference between existing and future noise levels cannot be computed because existing noise levels were not predicted for this site. Monitored noise levels are not an approximate substitute because of background noise from other major roadways in the area.

levels. For comparative purposes, a change of 3 dBA is typically considered the smallest noticeable change over an extended period of time. A 10 dBA change in noise, however, is perceived by most people to represent a doubling or halving of the "loudness" of a sound. Site 3 (subalternative B), Site 7 (alternatives 2 and 3), and Site 8 (alternative 3) are considered substantially higher than the existing noise levels, as predicted. Of the sites listed above, Sites 3 and 8 exceed the State Noise Standards.

Comparison of Noise Levels for the Build Alternatives with Noise Levels for the No-Build Alternative

The last method to determine impacts compared the predicted noise levels of the build alternatives with the predicted noise levels of the no-build alternative, as shown in Table A-18. This evaluation was conducted to determine the future noise impacts that are likely to occur even if no improvements are made. Several of the sites are expected to experience only slight noise increases under the Build Alternatives while the noise levels at Site 2 (subalternatives B and C) will actually be less than the predicted no-build alternative noise levels. The remaining sites are expected to experience noise increases in the 5 to 8 dBA range with the Build Alternatives, an increase considered to be "quite noticeable."

NOISE ABATEMENT MEASURES

Due to the noise impacts identified, noise abatement measures must be considered. The following types of noise abatement may be considered for County Road 62.

- Traffic management measures - these may include use restrictions for certain vehicle types or modified speed limits.
- Alteration of vertical or horizontal alignments - this may be considered during final design of the selected alternative.
- Construction of noise barriers - barriers may take the form of either a wall or an earthen berm. The decision to construct noise barriers should be based on resident input and cost effectiveness evaluations.
- Acquisition of property to serve as a buffer zone - this option could be used to prevent incompatible land uses from developing too close to the highway.

Table A-19 shows those roadway segments where noise abatement should be considered. Each of the segments identified contain at least one receiver expected to experience noise in excess of state nighttime or state daytime noise standards or FHWA noise abatement criteria. The decision to provide abatement will be made on a segment by segment basis during final design of the selected alternative. The decision will be based on the feasibility of abatement to noise standards, the cost effectiveness of abatement and resident input. Where abatement is not provided, a variance will be requested from the Minnesota Pollution Control Agency.

TABLE A-18

INCREMENTAL DIFFERENCE BETWEEN THE NO-BUILD ALTERNATIVE AND THE BUILD ALTERNATIVES

Site	Sub-Alt. A		Sub-Alt. B		Sub-Alt. C		Alt. 2		Alt. 3		Alt. 4		Alt. 5	
	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	L10	L_{50}	L10	L_{50}	L_{10}
1	2.3	2.0	5.9	5.5	3.4	2.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	2.3	2.4	-4.9	-5.1	-4.0	-4.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	1.5	1.7	7.8	6.8	.7	.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	1.5	1.8	.6	.7	.1	.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5	1.5	1.8	.4	.4	.6	1.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A	N/A	1.9	2.6	1.9	2.6	N/A	N/A	N/A	N/A
7	N/A	N/A	N/A	N/A	N/A	N/A	6.5	6.9	6.5	6.9	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A	N/A	3.2	4.0	6.2	6.4	N/A	N/A	N/A	N/A
9	N/A	N/A	N/A	N/A	N/A	N/A	1.7	2.0	1.7	2.0	N/A	N/A	N/A	N/A
10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2/		2/	
11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2/		2/	
12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2/		2/	
13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2/		2/	
14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2/		2/	

N/A - Not Applicable (The receptor is not adjacent to the proposed alignment.)

1/ The incremental differences were computed using predicted daytime noise levels. The nighttime noise level differences are expected to be comparable. A minus sign in front of a value indicates the predicted build alternative noise levels are less than the predicted no-build noise levels.

2/ The incremental difference between no-build and build noise levels cannot be computed because no-build noise levels were not predicted for this site. Monitored noise levels are not an approximate substitute because of background noise from other major roadways in the area.

TABLE A-19

ABATEMENT TO BE CONSIDERED FOR THE BUILD ALTERNATIVES

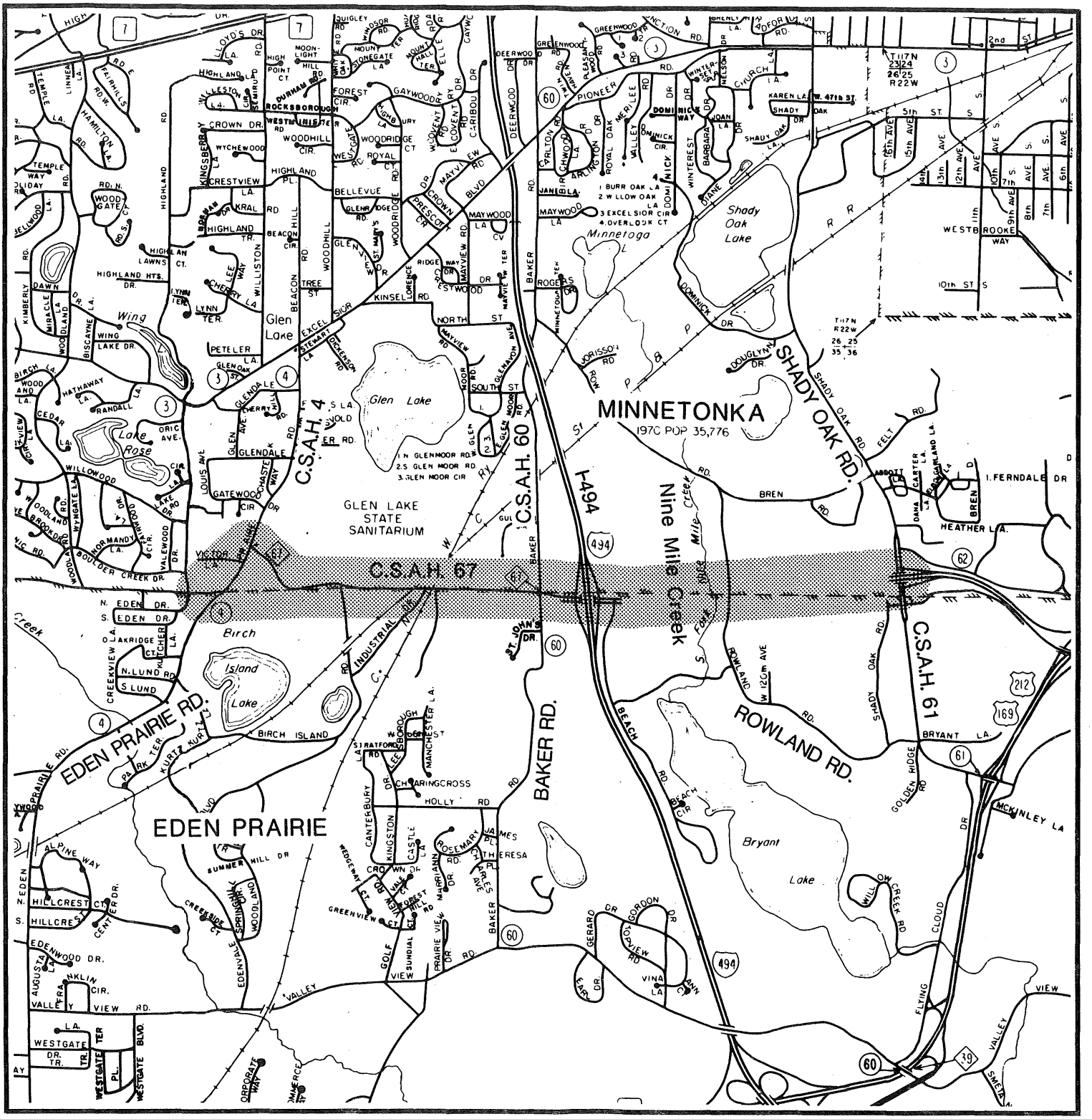
Road Segment	Sites	Side of Road	ABATEMENT TO BE CONSIDERED						
			Sub-Alt. A	Sub-Alt. B	Sub-Alt. C	Alt. 2	Alt. 3	Alt. 4	Alt. 5
Western Terminus of Project to CSAH 4	1, 3, 4[1]	North	Yes	Yes	Yes	N/A	N/A	N/A	N/A
	2	South	Yes	Yes	Yes	N/A	N/A	N/A	N/A
CSAH 4 to Birch Island Road	6	North	N/A	N/A	Yes	Yes	Yes	N/A	N/A
	5[2], 7	South	Yes	Yes	N/A	No	No	N/A	N/A
Birch Island Road To Baker Road	8	North	N/A	N/A	N/A	Yes	Yes	N/A	N/A
		South	N/A	N/A	N/A	No	No	N/A	N/A
Baker Road to I-494	9	North	N/A	N/A	N/A	Yes	Yes	N/A	N/A
		South	N/A	N/A	N/A	No	No	N/A	N/A
I-494 to Shady Oak Road	11	North	N/A	N/A	N/A	N/A	N/A	Yes	Yes
	10, 12, 13, 14	South	N/A	N/A	N/A	N/A	N/A	Yes[3]	Yes[3]

N/A - Not Applicable (The receptor is not adjacent to the proposed alignment.)

1/ Site 4 is located south of County Road 62 in Sub-Alternative B.

2/ Site 5 is located north of County Road 62 in Sub-Alternative C.

3/ Does not apply to Site 12.



County Road 62

Environmental Impact Statement

STUDY AREA LOCATION

FIGURE 2

north 0 1/8 1/4 mile