



DEPARTMENT OF TRANSPORTATION
MINNESOTA HIGHWAY ADMINISTRATION

791390

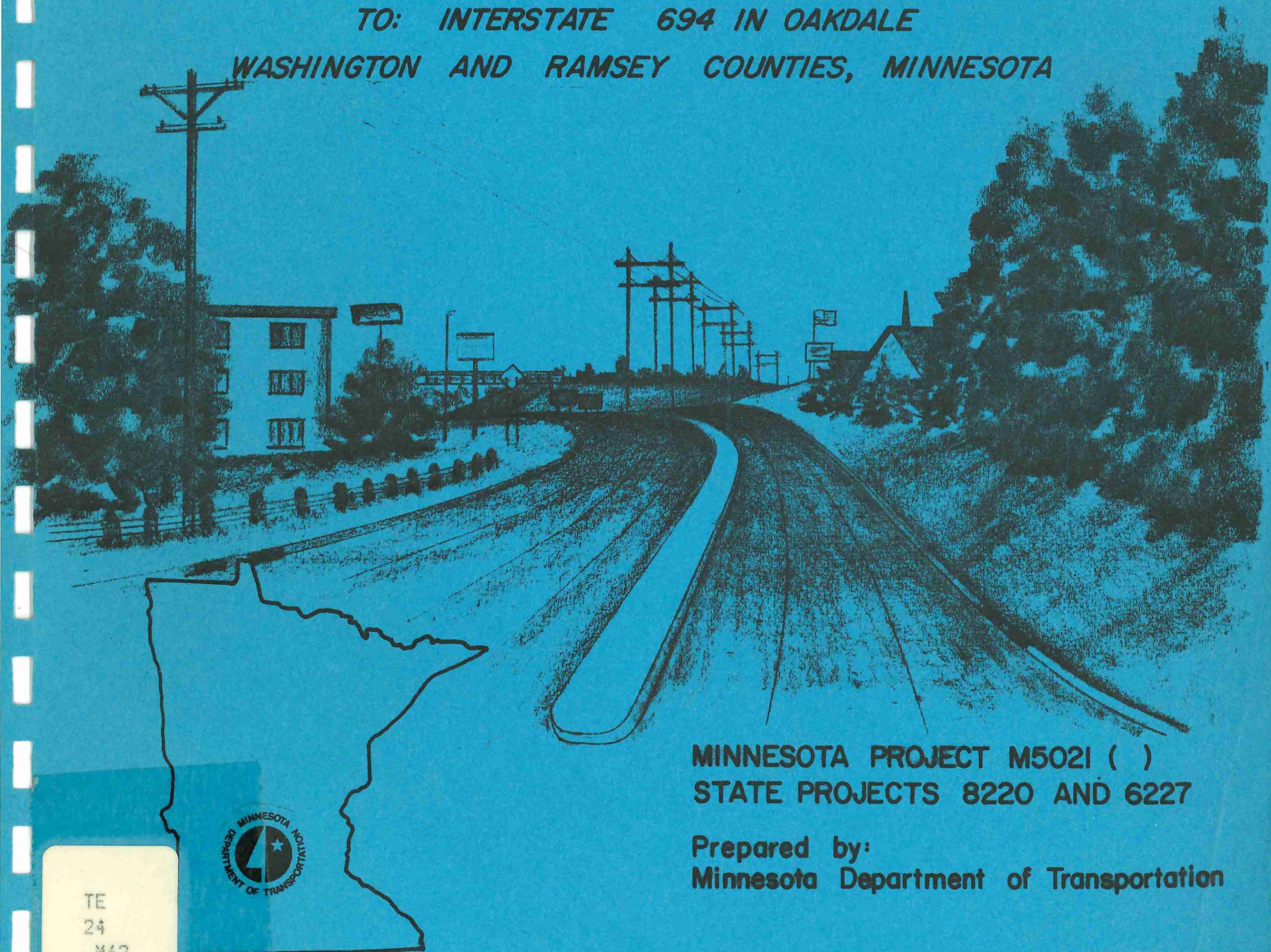
**DRAFT
ENVIRONMENTAL
IMPACT STATEMENT
FOR**

T.H. 120

FROM: INTERSTATE 494 IN WOODBURY

TO: INTERSTATE 694 IN OAKDALE

WASHINGTON AND RAMSEY COUNTIES, MINNESOTA



MINNESOTA PROJECT M5021 ()
STATE PROJECTS 8220 AND 6227

Prepared by:
Minnesota Department of Transportation

Trunk Highway 120 in Washington and Ramsey Counties, Minnesota

Minnesota Project M5021 ()
State Projects 8220 and 6227

From Interstate 494 in Woodbury

To Interstate 694 in Oakdale

ADMINISTRATIVE ACTION

DRAFT

ENVIRONMENTAL IMPACT STATEMENT

PRELIMINARY 4(f) DOCUMENT
U. S. DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

and

MINNESOTA DEPARTMENT OF TRANSPORTATION

Submitted pursuant to 42 U. S. C. 4332(2)(C), 23 U. S. C. 128(a),
49 U. S. C. 1653(f) and Minnesota Statutes, Section 116D.01 et seq.

Feb 8, 1979
Date

2-9-79
Date

K. K. McRae
K. K. McRae
Director of Transportation Services
Bureau of Policy and Planning
Minnesota Department of Transportation

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

SUMMARY SHEET
Federal Highway Administration
Administrative Action Environmental Statement

(X) Draft () Final
(X) Preliminary 4(f) Document

Highway Agency Information Contact

District Director
Minnesota Department of Transportation, District 9, Box 2050,
3485 Hadley Avenue North, North St. Paul, Minnesota 55109
770-2311

Division Administrator
U.S. Department of Transportation
Federal Highway Administration
Suite 490, Metro Square Building, St. Paul, Minnesota 55101
725-7001

Description of Proposed FHWA Action

Type:	Four lane expressway
Route:	T.H. 120
Termini:	(North) I-694; (South) I-494
Length:	8.12 Miles
Counties:	Ramsey County, Washington County
Community:	North St. Paul, Maplewood, Oakdale, Woodbury
State:	Minnesota

Action by Other Agency

A Corps of Engineers Section 404 Permit will be required at the crossing of Battle Creek and for filling in wetland areas.

Summary of Environmental Impacts and Adverse Effects

The proposed action will provide safer and more efficient access to residential, commercial, institutional and industrial facilities along the T.H. 120 corridor, particularly from major employment centers such as the 3-M Company to residential areas. Use of service roads will protect residential districts from through traffic. Commercial, institutional and industrial property, both existing and proposed, will benefit from improved inter-community access and access to metropolitan routes via the parallel I-494 facility. Air pollution will not be an adverse factor. Neighborhood segmentation will not be a major factor due to existing alignment.

Adverse effects of the proposed action include the acquisition of approximately seventy residential structures, 16 commercial structures (primarily gasoline stations), and the loss of over 1000 trees. Noise pollution (70 dba level) will affect up to 187 residential structures by 1995, based on projected traffic volumes. Water quality will be affected temporarily during construction. Existing wetlands will be permanently reduced by approximately 5 acres.

Summary of Major Alternatives

Alternatives include the improvement in various degrees of the existing alignment for the full road length; improvement of specific "need" segments while downgrading others for through traffic and replacing those segments with a bus transit corridor; provision of a serpentine through route on new alignment; and, a "do-nothing" no improvement scheme.

AGENCY LIST FOR ENVIRONMENTAL REVIEW
Federal Agencies

Director, Office of Federal Activities
Mail Code A-104
Environmental Protection Agency
Room 537 West Tower
Waterside Mall S.W.
Washington, D.C. 20460

Dept. of Housing & Urban Development
Minneapolis and St. Paul Area Office
6400 France Avenue South
Minneapolis, Minnesota 55435

Director, Office of Environmental Project Review
U.S. Department of the Interior
18th and C Streets NW
Washington, D.C. 20242

Environmental Protection Agency
Regional Administrator, Region 5
230 South Dearborn
Chicago, Illinois 60604

Dept. of Health, Education and Welfare
Assistant Secretary for Health & Service Affairs
H. E. W. North Building
Washington, D.C. 20202

Department of Agriculture
Office of the Secretary
Washington, D.C. 20250

Department of Commerce
Economic Development Administration
Midwestern Regional Office
32 West Randolph Street
Chicago, Illinois 60601

Department of Defense
Defense Civil Preparedness Agency
Federal Center
Battle Creek, Michigan 49106

Deputy Assistant Secretary
Department of Commerce
Office of Environmental Affairs
14th & Constitution Avenue
Washington, D. C. 20230

Assistant Secretary for Environment
Safety and Consumer Affairs
Department of Transportation
400-7th Street S.W.
Washington, D.C. 20591

Federal Power Commission
Regional Office
U.S. Custom House
610 South Canal Street, Room 1051
Chicago, Illinois 60607

District Engineer
Department of the Army
St. Paul District, Corps of Engineers
1210 U.S. Post Office and Custom House
St. Paul, Minnesota 55101

Federal Railroad Administration (FRA)
Region 4
Regional Director
536 S. Clark Street, Room 210
Chicago, Illinois 60605

Urban Mass Transportation Administration (UMTA)
Region 5
UMTA Representative
Suite 700
300 South Wacker Drive
Chicago, Illinois 60606

Acting Director
Division of NEPA Affairs
Department of Energy
Mail Station E-201, GTN
Washington, D.C. 20545

Executive Director
Advisory Council on Historic Preservation
Suite 430, 1522 K Street N.W.
Washington, D.C. 20005

State Agencies

State Planning Agency

Chairman (EQB)
Director, State Planning Agency
Room 101, Capitol Square Building
550 Cedar Street
St. Paul, Minnesota 55101

Pollution Control Agency

Director (EQB)
Minnesota Pollution Control Agency
1935 West County Road B2
Roseville, Minnesota 55113

Natural Resources

Commissioner (EQB)
Department of Natural Resources
Third Floor Centennial Building
658 Cedar Street
St. Paul, Minnesota 55155

Environmental Quality Board Staff

Administrator
Room 100, Capitol Square Building
550 Cedar Street
St. Paul, Minnesota 55101

Agriculture

Commissioner (EQB)
Department of Agriculture
Room 420, State Office Building
St. Paul, Minnesota 55155

Health

Commissioner (EQB)
Department of Health
717 Delaware Street S. E.
Minneapolis, Minnesota 55440

Energy Agency

Director (EQB)
Minnesota Energy Agency
740 American Center Building
150 East Kellogg Boulevard
St. Paul, Minnesota 55101

Historical Society

Fort Snelling Branch
Fort Snelling, Building 25
St. Paul, Minnesota 55111

Corps of Engineers

Chief
Environmental Regulatory Division
1135 U.S. Post Office
St. Paul, Minnesota 55101

Region 11 (Metropolitan Council)

Chairman
Room 300 Metro Square Building
7th and Robert Streets
St. Paul, Minnesota 55101

COUNTIES

Board of Commissioners
Ramsey County
Courthouse
15 West Kellogg Boulevard
St. Paul, Minnesota 55102

Board of Commissioners
Washington County
14900 North 61 Street
Stillwater, Minnesota 55082

CITIES

Mayor
City of Woodbury
2100 Radio Drive
Woodbury, Minnesota 55042

Mayor
City of Oakdale
1584 Hadley Avenue North
St. Paul, Minnesota 55119

Mayor
City of Maplewood
1380 Frost Avenue
St. Paul, Minnesota 55109

Mayor
City of North St. Paul
2526 East 7th Avenue
North St. Paul, Minnesota 55109

Mayor
City of Pine Springs
3060 Oakdale Drive
North St. Paul, Minnesota 55109

Mayor
City of White Bear Lake
250 Miller Avenue
White Bear Lake, Minnesota 55110

Mayor
White Bear Township
Highway 61
White Bear Lake, Minnesota 55110

Mayor
City of Birchwood
207 Birchwood Avenue
White Bear Lake, Minnesota 55110

Mayor
City of Landfall
7 Forest Heights
St. Paul, Minnesota 55119

Mayor
City of Lake Elmo
11194 Upper 33rd Street North
Lake Elmo, Minnesota 55042

Mayor
City of St. Paul
365 City Hall
St. Paul, Minnesota 55102

Mayor
City of Willernie
111 Wildwood Road
Willernie, Minnesota 55090

Mayor
City of Mahtomedi
600 Stillwater Road
Mahtomedi, Minnesota 55115

TABLE OF CONTENTS

		<u>Page</u>
Section I	Description of the Proposed Action and Alternates Considered, and the Social Economic and Environmental Context	1
I. 1	Description of Proposed Action	1
1. 1	Description	1
1.	Location	1
2.	Type of Facility	1
3.	Length & Right of Way Width	1
4.	Access Control	3
5.	Major Design Features	3
1. 2	Transportation Need	4
1.	Need & Justification for Proposed Action	4
2.	Deficiencies in the Existing Facility	4
3.	Benefits to State, Region & Community	9
4.	Summary of Traffic Studies Supporting Need	10
5.	Status of Proposed Action	12
6.	Description of Alternatives Under Consideration	13
I. 2	Social, Economic and Environmental Context	14
2. 1	Facility Corridor Jurisdictional Components	14
2. 2	Population, Employment and Housing	16
2. 3	Natural Features	21
2. 4	Transportation Facilities	29
Section II	Land Use	33
II. 1	Urbanization Pattern	33
II. 2	Land Use Planning	33
II. 3	Commercial Development	37
3. 1	Maplewood Mall	37
3. 2	North St. Paul	37
3. 3	Hillcrest Shopping Center	37
3. 4	St. Paul Central Business District	37
3. 5	Sunray Shopping Center	37
3. 6	Dayton Hudson Development	37
II. 4	Town Centers	38
II. 5	Industrial Development	38

TABLE OF CONTENTS (Cont.)

	<u>Page</u>
II. 6	Community Facilities 39
6.1	Community Facilities Map 1 39
6.2	Community Facilities Map 2 43
6.3	Community Facilities Map 3 44
II. 7	Open Space Characteristics 44
II. 8	Government Projects 45
Section III	Probable Impact of Proposed Action on the Environment 46
III. 1	Secondary Impacts 46
1.1	Urbanization 46
1.2	Population & Growth Change 47
1.3	Transportation Accessibility 47
III. 2	Primary Impacts 48
2.1	Natural, Ecological or Scenic Resources 48
2.2	Relocation of Persons & Businesses 50
2.2.1	Replacement Housing 51
2.2.2	Business Relocation 51
2.2.3	Neighborhood Disruption 51
2.3	Social Impacts 52
2.4	Air Quality 52
2.5	Noise Impacts 54
2.6	Drainage 56
2.7	Wetlands 59
2.8	Stream Modification/Impoundment 60
2.9	Flood Hazard 60
2.10	Water Quality 60
2.11	Construction Related Impacts 62
1.	Air Quality 62
2.	Water Quality 62
3.	Noise 63
4.	Vibration 63
III. 3	Summary of Benefits 63
3.1	Fire Access 63
3.2	Transit 63
3.3	Industrial/Commercial Developments 64
3.4	Pedestrian Environment 65
3.5	Service Roads & Neighborhood Protection 66

<u>TABLE OF CONTENTS (Cont)</u>		<u>Page</u>
Section IV	Alternatives	67
IV. 1	Description of Alternatives	67
	1.1 Alternative A1	67
	1.2 Alternative A2	67
	1.3 Alternative A3	67
	1.4 Alternative A0	73
	1.5 Alternative B	73
	1.6 Alternative C	76
IV. 2	Summary of Environmental Effects	79
	2.1 Existing Alignment Alternatives	79
Section V	Probable Adverse Environmental Effects Which Cannot Be Avoided	96
V. 1	Local Resource & 4(f) Lands	96
V. 2	Residential Relocation Effects	96
V. 3	Neighborhoods Environmental Effects	96
V. 4	Business Displacement	96
V. 5	Noise Effects	97
V. 6	Water Quality	97
V. 7	Service Roads and Neighborhood Protection	97
V. 8	Undesirable Land Use Patterns	97
V. 9	Secondary Impacts	98
Section VI	Relationship Between Local Short Term Use of Man's Environment and Maintenance and Enhancement of Long Term Productivity	99
VI. 1	Accessibility	99
VI. 2	Business Displacement/Economic Growth	99

<u>TABLE OF CONTENTS (Cont.)</u>		<u>Page</u>
VI. 3	Housing Relocation/Improved Facility Performance & Residential Development Pattern	99
VI. 4	Battle Creek Park	100
VI. 5	Traffic Pattern Changes	100
VI. 6	Construction Activities	100
VI. 7	Foreclosures on Future Options	101
Section VII	Irreversible & Irretrievable Commitments of Resources	102
VII. 1	Construction Activities	102
VII. 2	Land for Additional Right of Way	102
VII. 3	Wetlands	102
Section VIII	Impact on Properties and Sites of Historic and Cultural Significance	103
Appendix		104
Preliminary 4(f) Document		

TABLE OF EXHIBITS

	<u>Page</u>
Study Area/Metro Setting	2
Need Analysis	5
Jurisdictional Boundaries	15
Housing Characteristics	18
Housing Characteristics	19
Natural Features 1	22
Natural Features 2	23
Natural Features 3	24
Urbanization Watersheds	28
Transportation 1	30
Transportation 2	31
Transportation 3	32
Land Use 1995 1	34
Land Use 1995 2	35
Land Use 1995 3	36
Community Facilities Map 1	40
Community Facilities Map 2	41
Community Facilities Map 3	42
Wetlands/Drainage	57
Alternate A	68
Alternate A Example	69
Existing Condition	70
Alternate A1 Example	71
Alternate A2 Example	72
Alternate B	74
Alternate B Example	75
Alternate C	77
Alternate C Example	78
Land Use A 1	80
Land Use A 2	81
Land Use A 3	82

TABLE OF EXHIBITS (Cont.)

Page

Land Use B 1	87
Land Use B 2	88
Land Use B 3	89
Land Use C 1	92
Land Use C 2	93
Land Use C 3	94

SECTION I: DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATES CONSIDERED, AND THE SOCIAL ECONOMIC AND ENVIRONMENTAL CONTEXT

This section summarizes the proposed action by the Minnesota Department of Transportation (Mn/DOT) and the Counties of Ramsey and Washington, the indicated need for the proposed action and the overall characteristics of the area served by the proposed facility.

I. 1 Description of Proposed Action

I. 1. 1 Description:

1. Location:

The proposed action is located at the eastern edge of the Twin Cities metropolitan area on the western boundaries of the Cities of Woodbury and Oakdale in Washington County and on the eastern boundaries of the Cities of Maplewood and North St. Paul in Ramsey County. See Study Area/Metro Setting map, on the following page and Jurisdictional Boundaries map on Page 15.

2. Type of Facility:

- a. The existing facility is a two-lane section paved roadway with a variable width and paved or gravel shoulder. Existing traffic volumes average about 8,000 vehicles per day, but range from about 5,000 average daily traffic (ADT) to 10,000 ADT. (see page 11)
- b. The new facility is to be a four-lane divided roadway with shoulder and with a raised median of sufficient width to accommodate turn lanes. Projected 1995 traffic volumes range from 15,000 to 20,000 ADT for most of the route.

3. Length and Right-of-Way (R/W) Width:

The existing facility is approximately eight (8) miles in length and has a variable R/W width of minimum sixty-six (66) feet. The proposed facility will be approximately eight (8) miles in length and will require a minimum R/W width of one hundred twenty-six (126) feet with slope easements as required. Approximately 60 acres of land will be required for additional right-of-way to accommodate the proposed action.



	AIRPORTS		PROPOSED LTD. ACCESS
	INTERSTATE HWY.		T. H. 120 CORRIDOR AREA

ENVIRONMENTAL IMPACT STATEMENT	T.H.120
Study Area / Metro Setting	

4. Access Control:

- a. Existing: full control of access at interchanges with Interstate I-494, I-94 and I-694; partial control of access of grade intersections with Trunk Highway (T. H.) 212 and T.H. 36.
- b. New: partial control of access for all segments.

5. Major Design Features:

- a. Interchanges are located at:
 - I-694 (In place)
 - I-94 (In place)
 - I-494 (In place but will require modification)
- b. Grade separation structures exist at all interchanges listed in a.
- c. Additional grade separation structures are proposed to be located at the intersection of T.H. 36 under a separate action.
- d. At-grade intersections are proposed at all other street intersections.
- e. Railroad crossings are proposed at the Chicago Northwestern Railroad (grade separated structure) and the Soo Line (at-grade crossing).
- f. The proposed typical section for the roadway is urban in character, four lane divided with a median and curb and shoulders.
- g. Other proposed major features include maintaining drainage for Battle Creek and extensive retaining walls for the Chicago Northwestern Railroad approach embankments.
- h. Landscaping of boulevards is being considered.
- i. Horizontal alignment is relatively straight. Vertical alignment is gently rolling. No major cut and fill activities are anticipated.

Transportation Need:

1. Need and Justification for Proposed Action:

Need for an improved traffic facility is based on deficiencies in the existing facility and forecasted traffic and safety problems, which, in turn are based upon anticipated future urbanization within the corridor and upon the function of T.H. 120 as an important transportation link within this section of the Metropolitan Area. Justification for improvement is based on the consequences of increased traffic, and the improved safety of the roadway to accommodate forecasted traffic volumes.

The Need Analysis Diagram on the following page summarizes the need levels for the full length of T.H. 120 based on various traffic studies. Most importantly, the diagram depicts the varying function and need levels of various segments of the facility. The segment of road from I-94 to Minnehaha Avenue experiences a maximum need situation. Areas of moderate need include the T.H. 36/T.H. 120 intersection area, the segment between I-94 and I-494 along Lower Afton Road and the segment between T.H. 212 and Minnehaha Avenue.

2. Deficiencies in the Existing Facility:

The capacity of a transportation facility with at-grade intersections and the level of service at which it will operate are dependent to a great extent on the capacity of the intersections along the facility. Table I-1, (page 6) relates the level of service for an urban arterial street intersection.

Co Rd E / 244

A MODERATE

694(Not in contract area)

B MINIMUM

Co Rd C

C MODERATE

7th Ave

D MINIMUM

Stillwater Rd

E MODERATE

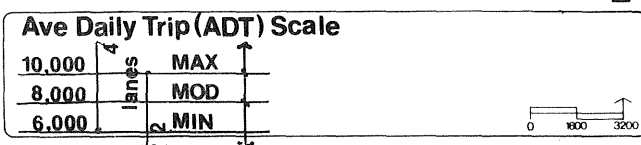
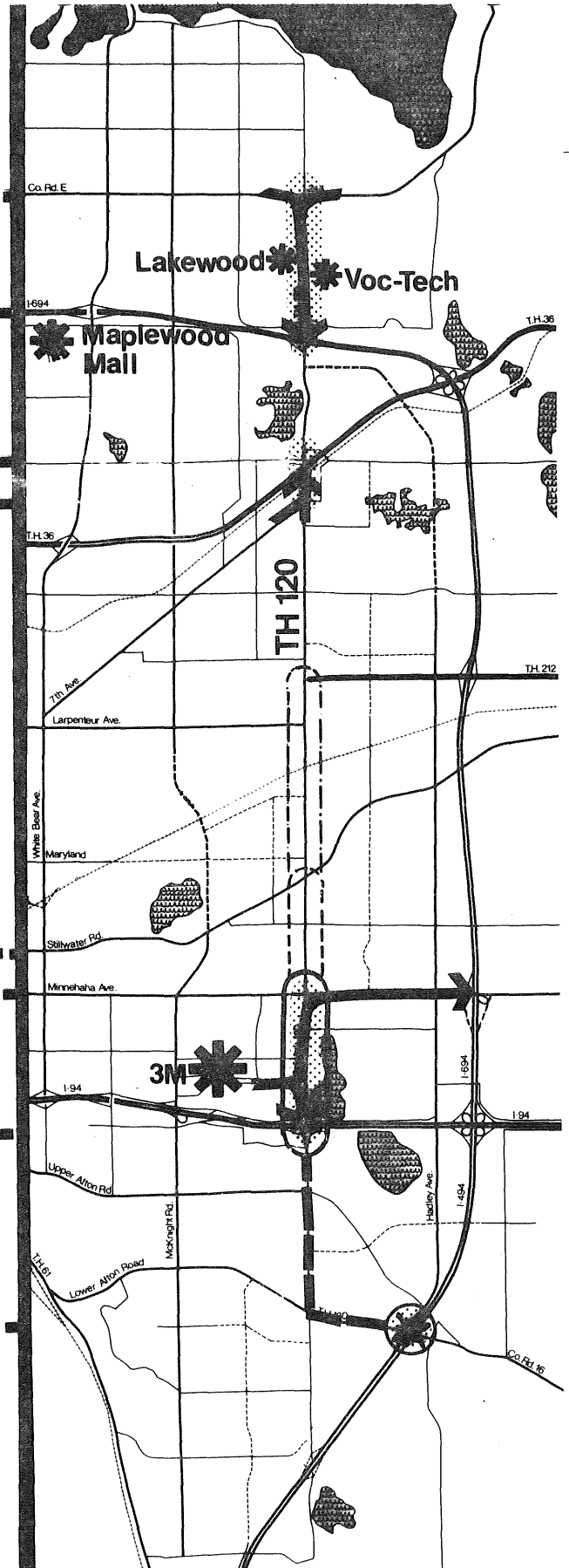
Minnehaha Ave

F MAXIMUM

G MODERATE

120/494 bridge

H BRIDGE COMPLETE



ENVIRONMENTAL IMPACT STATEMENT
T.H. 120
Need Analysis

TABLE I-1

LEVEL OF SERVICE FOR URBAN ARTERIAL STREET INTERSECTION

Level of Service	TRAFFIC FLOW CONDITIONS	
	Description	Average Overall Travel Speed
A	Free Flow (relatively)	30
B	Stable Flow (slight delay)	25
C	Stable Flow (acceptable delay)	20
D	Approaching Unstable Flow (tolerable delay)	15
E	Capacity: Unstable Flow (congestion; intolerable delay)	15
F	Forced Flow (jammed)	15

Source: Highway Capacity Manual

a. Existing deficiencies:

A capacity analysis of 1976 traffic on the existing street network indicates several deficiencies in traffic carrying capability. Table I-2 identifies the level of service of major intersections.

The intersections with (F) level of service (Forced Flow) are Stillwater Rd., Conway Ave., and Minnehaha Ave. The capacity of the intersection of 7th Avenue with T.H. 120 in North St. Paul is greatly reduced by autos entering the bank at certain times. Cars stack up to the north of the intersection waiting to enter the drive-in window of the bank, thus reducing southbound traffic flow on T.H. 120.

b. Projected deficiencies:

A capacity analysis of forecasted 1995 traffic for the existing street network indicates the inefficiency of the traffic carrying capability of T.H. 120.

TABLE I-2
INTERSECTION CAPACITY DEFICIENCIES FOR PEAK HOUR
TRAFFIC CONDITIONS

Cross Street	1976	Forecasted 1995
	Level of Service Existing System	Level of Service (Do-nothing) Alternate
I-694	A	D
Co. Rd. C	C	F
T.H. 36	D	F
7th Avenue	C	D*
Co. Rd. B	C	F
Holloway Avenue	B	F
T.H. 212	D	F
Larpenteur Avenue	D	F
Stillwater Road	F	F
Minnehaha Avenue	F	F
Conway Avenue	F	F
3M Road	B	C
I-94	B	E
Upper Afton	C	F
Lower Afton	C	F
I-494	A	F

* Existing bank entrance decreases capacity

In addition to deficient intersections, roadway characteristics which reduce capacity of the existing facility include:

- 1) Alignment - The curvature of the existing facility east of Silver Lake reduces travel speed. (See map page 40).
- 2) Grades - Excessive grades in the vicinity of Stillwater Road and Larpenteur Avenue reduce capacity as well as provide safety hazards.
- 3) Turn Lanes and Storage Lanes - Exist at only a few intersections at present. Additional turn lanes would greatly increase capacity of the facility.
- 4) Access Control - Many residences have direct access to T.H. 120 especially between Conway Avenue (see map page 41) and the northern limit of the study area (I-694). Reduction of direct access points would increase both capacity and safety.

c. Safety:

Accident incidences reported and logged for a nine year period from 1966 to 1974 are listed in Table I-3 on page 9. Although the limits of the accident report summary for T.H. 120 exceed the highway section limits by approximately one mile, it can be assumed to represent the study area. Items listed include property damage, personal injury, fatality and traffic volumes (ADT) on the road during the accident year.

Safety deficiencies in the existing facility include:

- 1) Intersections operating near capacity.
- 2) Poor sight distance near Larpenteur Avenue.
- 3) Direct access to T.H. 120 of many residences.
- 4) Driveways and entrances near intersections.
- 5) Inadequate lane capacity from Conway to Minnehaha.

The major safety problem relates to property damage at or in close proximity to intersections. Intersection control, turning movements and driveway access near intersection areas constitute a major hazard to life and property.

In 1974, the overall accident rate for the facility was 4.4 accidents per million vehicle miles; however, at the T.H. 36 intersection the rate was 19.6/MVM. The state-wide average rate for rural two-lane trunk highways is 2.5/MVM.

TABLE I-3

NINE YEAR ACCIDENT REPORT, 1966 - 1974
T. H. 120 from Junction I-494 to Junction T. H. 244

Year	Property Damage	Personal Injury	Fatality	Total Accident Units	Traffic Volume
1966	59	50	0	109	8000
1967	42	30	1	73	
1968	49	37	1	87	7800
1969	47	25	1	73	
1970	58	26	0	84	9400
1971	45	38	1	84	
1972	92	28	0	122	8600
1973	67	26	0	93	
1974	81	36	1	118	8400
					9 Year Average
Totals	540	296	5	843	8440

Source: Minnesota Highway Department, Rural Trunk Highway
Accident Report Summary 1966 - 1974.

3. Benefits to State, Region and Community:

The benefits expected by the proposed facility would include:

- a. The traffic capacity of the corridor will be increased to allow traffic flow at level of service B or better.
- b. Economic development potential will be increased through the reorganization and improvement of access to existing and proposed industrial and commercial areas.
- c. The proposed design with channelized intersections and turn lanes should reduce accident rates.

- d. Feasibility of public transportation is enhanced. Buses could operate on a less congested, continuous facility, providing reduced travel time and timely schedules to make riding more attractive. Provision would be made for bus turn outs in design.
- e. The facility would provide improved access to downtown North St. Paul creating a positive effect on business and employment.
- f. The facility will improve traffic circulation within adjacent municipalities by restoring the function of arterial and collector streets. Local streets would not have direct access and through traffic would be lessened in neighborhoods.
- g. The facility will provide opportunities for development of pedestrian pathway systems. Space is provided on either side of the facility for pedestrian walks and bikeways.
- h. Air pollution should be minimized. Traffic will flow more smoothly, with stopping and starting delays minimized by proper signal synchronization to minimize pollution.
- i. Aesthetics of the traffic facility will be improved by smoother roadway alignment and flatter backslopes and by landscaping boulevards.

4. Summary of Traffic Studies Supporting Need:

Design traffic volumes are based on Traffic Analysis Study (T. A. S.) 531-14 (March 1968) and T. A. S. 3059-14 (June 1968) as prepared by Mn/DOT Traffic Analysis Section.

Estimated 1985 Average Daily Traffic (ADT) and peak hour volumes based on the System 14 computer traffic assignment were increased by approximately 30% to obtain the 1995 design volumes.

Estimated traffic volumes were also obtained from the 3-M Company and from the Village of Maplewood (Howard, Needles, Tammen and Bergendoff, Consulting Engineers). 3-M volumes are in substantial agreement with design volumes. HNTB volumes north of T.H. 36 are somewhat higher than design volumes.

Table I-4 on the following page is a summary of traffic data for the project.

T.H. 120 TRAFFIC VOLUMES - TABLE I-4

<u>Cross Street</u>	<u>Existing ⁽¹⁾ 2-way ADT</u>	<u>1995 Proj. ⁽²⁾ 2-way ADT</u>	<u>Existing ⁽¹⁾ 1-way peak hr.</u>	<u>Existing Capacity 1-way peak hr.</u>	<u>1995 Proj. 1-way peak</u>
I-694	7590	16000	260	550	950
Co. Rd. C	8800	19000	420	550	1180
T.H. 36					
7th Avenue	9675	14000	480	550	870
Co. Rd. B					
Holloway Ave.	8250	16000	460	700	990
T.H. 212					
Larpenteur Ave.	9050	13000	590	700	920
Stillwater Road					
Minnehaha Ave.	10200	12000	710	700	1330
Conway Ave.	9850	20000	1010	900	2560
3M Road	12500	20000	1680	2300	2170
I-94					
Upper Afton Rd.	8950	22000	620	750	1470
Lower Afton Rd.	8875	8000	390	550	490
I-494					

(1) Data based on 1976 Mn/DOT traffic counts.

(2) Data based on Mn/DOT System 14 assignments.

5. Status of Proposed Action:

In 1933, the route was established by Legislative Statute 117 as Trunk Highway (T.H.) 100. In 1962, a two mile segment south of Lower Afton Road was dropped from the system while 0.74 mile of Lower Afton was added. In 1965 the route designation was changed from T.H. 100 to T.H. 120. T.H. 120 was added to the Federal Aid Urban street system in 1972 with concurrence by FHWA, Mn/DOT, and Washington and Ramsey Counties.

Current Status:

The existing traffic facility is under the jurisdiction of Mn/DOT. Upon completion of I-494 and I-694 located approximately one mile to the east of the existing facility, the function of T.H. 120 changed from that of a major metropolitan transportation facility to a facility serving the inter-municipality needs of adjacent communities. With this change in function, it became appropriate to study the upgrading of T.H. 120 for turnback to Ramsey and Washington Counties. The facility will be improved to adequately accommodate 1995 traffic volumes and primarily serve adjacent municipalities.

It is anticipated that the project will be funded in part by the Federal Urban Systems Funds and in part by the State Trunk Highway Turnback Funds. Construction of the project will very likely be accomplished in stages due to lack of available funding for the entire length at one time. While precise stages and sections have not yet been identified, it appears likely that the area in the vicinity of the 3M Company, possibly from I-94 northerly to Old Stillwater Road, will be ranked the highest priority. Next in line will probably be either the section from Old Stillwater Road northerly to T.H. 36 or the segment between I-94 and I-494. The lowest priority appears to be the segment between T.H. 36 and I-694.

Timing of construction will depend upon several factors including available funding, right of way acquisition process and the current design and review process. Time of project completion is almost totally dependent upon available funding.

6. Description of Alternatives Under Consideration:

Alternatives under consideration involve design alternates for improving the existing alignment and/or acquiring new right-of-way in close proximity to the existing alignment. A second level of alternates were generated to demonstrate diagrammatic potentials for the reduction of adverse environmental impacts along certain roadway segments.

a. Existing Alignment Alternatives:

These alternates are referred to as Alternative A Series which consists of A_0 (do nothing alternative), A_1 (minor modified alternative), and A_2 (major modified alternative).

A_0 : The existing roadway facility will exist in its present status with few, if any, major improvements.

A_1 : The minor modified improvement proposes a four-lane divided highway facility with minimal restriction on public and private access ways.

A_2 : The major modified improvement proposes a four-lane divided highway facility with limited access.

b. Diagrammatic Alternatives:

These alternates are conceptual diagrammatic proposals generated to measure methods of minimizing adverse environmental impacts. They are described as follows:

B. Alternate B is an intermittent transit way facility which improves certain segments of the existing facility to a four-lane divided highway and maintains other segments as transit way right-of-way prohibiting through automobile traffic.

C. Alternate C proposes a continuous four-lane divided highway facility which is serpentine in alignment in order to circumvent certain environmental conditions.

The impacts of the proposed improvement affect an area comprised of varying yet interrelated elements such as numerous multi-level jurisdictional units, land use elements, and transportation systems as well as social, economic and environmental factors. This impact area will be defined as the Facility Corridor and will provide the base for an assessment of potential impacts.

1. Facility Corridor Location: Metropolitan Setting Map, Page 2 graphically illustrates the location of the corridor within the metropolitan area. The corridor is six miles from the St. Paul CBD and is located in the eastern sector of the Twin Cities metropolitan area along the boundaries of Ramsey County and Washington County.
2. Facility Corridor Limits: The limits of the corridor extend in an east-west direction from I-694/494 to McKnight Road, approximately three miles; and in a north-south direction from I-694 to I-494 and Century Avenue, approximately eight and one-half miles.

I. 2. 1

Facility Corridor Jurisdictional Components:

As depicted on the following Jurisdictional Boundaries Map, the T.H. 120 corridor is comprised of the following counties and communities.

1. Counties:
 - a. Ramsey County
 - b. Washington County
2. Communities:

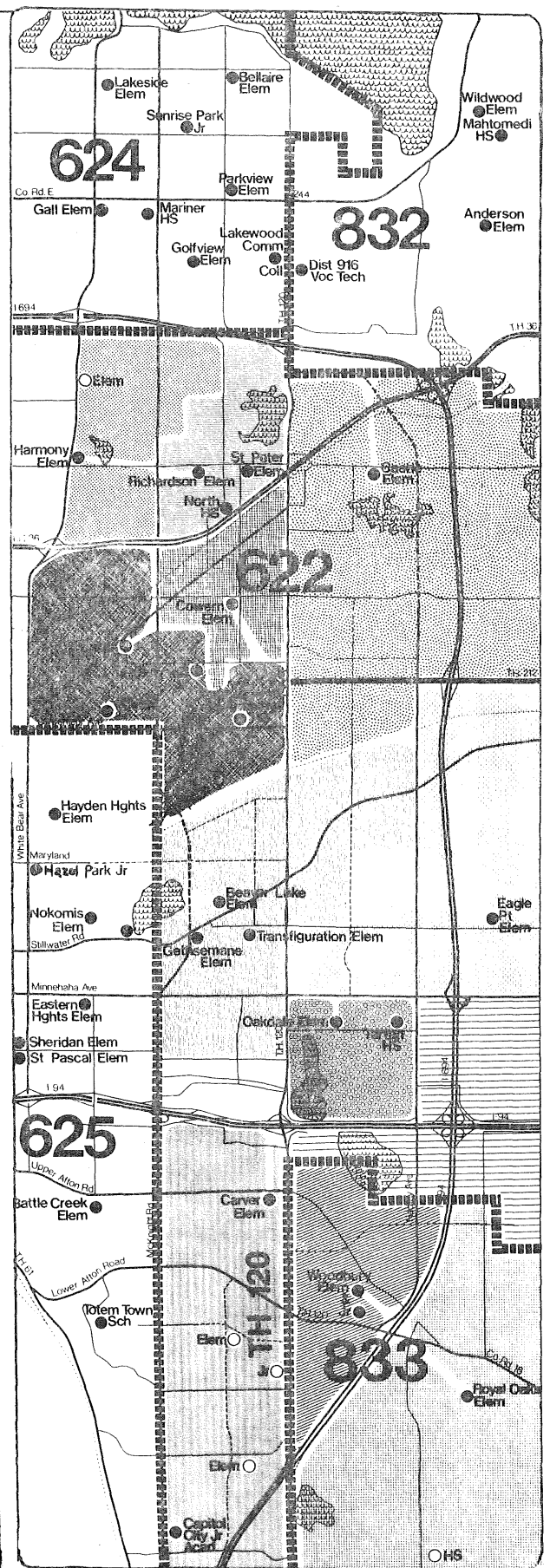
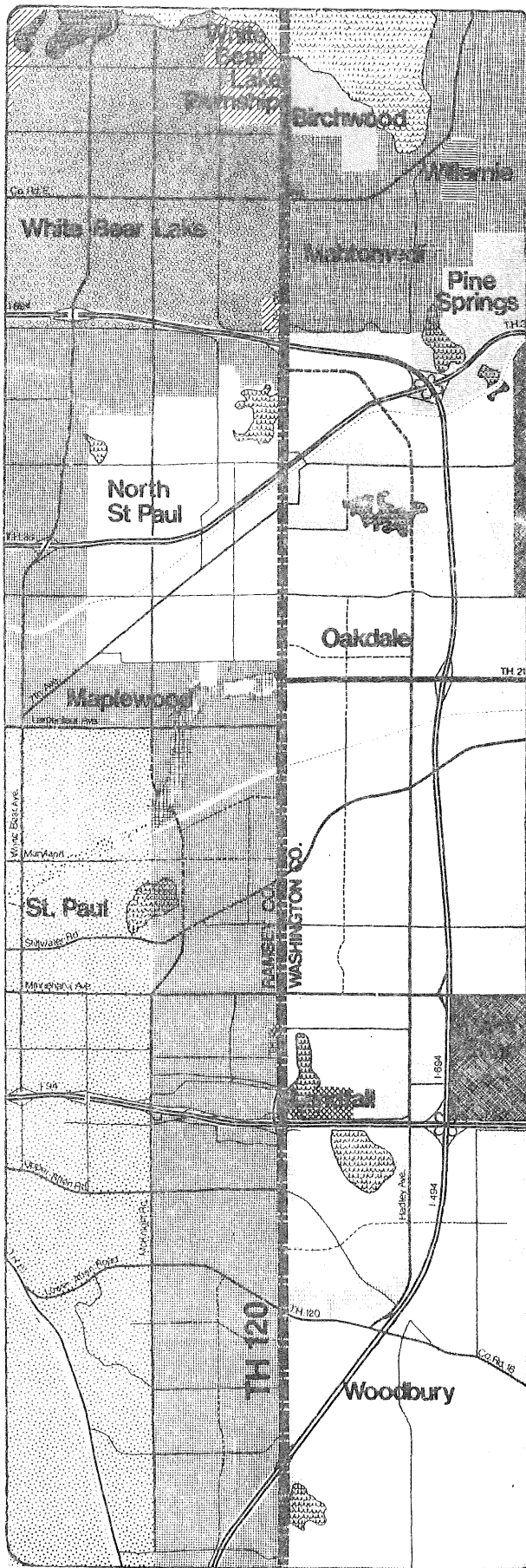
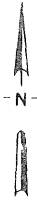
Primary Communities are those communities adjacent to and directly affected by the improvement. Secondary Communities are those communities which constitute the remainder of the 120 corridor.

- a. Primary Communities consist of the following:

Woodbury	North St. Paul
Oakdale	Maplewood

- b. Secondary Communities consist of the following:

Pine Springs	Lake Elmo
White Bear Lake	St. Paul
White Bear Township	Willernie
Birchwood	Mahtomedi
Landfall	



Municipal/Co	Educational	SERVICE AREA public elementary
MUNICIPALITY	SCHOOL	625 SCHOOL DISTRICT NO.
COUNTY LINE	PROPOSED SCHOOL	DISTRICT BOUNDARIES

0 1/4 1/2 3/4 1

ENVIRONMENTAL IMPACT STATEMENT

T.H. 120

Jurisdictional Boundaries

The Metropolitan Council has forecasted population, employment and households based upon the assumption that its Development Framework policies will be implemented. The Council hopes to restrict new development to areas already serviced with necessary transportation facilities, sanitary sewer facilities and other essential services. Data contained in this section was taken from the Metropolitan Development Guide.

1. Population Change

It is a matter of record that "edge" communities such as the four primary corridor communities have been receiving the bulk of the Metro Area population growth of recent years. The tabulation below documents this past growth along and in vicinity of the proposed action. Following significant population growth during the 1960's, North St. Paul has now stabilized at its population saturation level of about 13,000 persons and is expected to receive only minor infill growth in future years. The other three communities have grown significantly since 1960 with Maplewood, a first tier suburb, registering the largest gain at over 10,000 new residents. All three are expected to grow substantially in coming years. The proportion of ethnic minority groups within the four communities is extremely small at less than one percent of total. This composition is not expected to change significantly in coming years.

POPULATION TRENDS/FORECASTS, PRIMARY CORRIDOR COMMUNITIES
TABLE I-5

Municipality	1960	1970	1974	2000	1960-74	1974-2000
					Increase	Increase
N. St. Paul	8,520	11,950	12,650	13,100	4,130	450
Maplewood	18,519	25,186	29,144	65,500	10,625	36,356
Oakdale	4,297	7,795	10,588	32,500	6,291	21,912
Woodbury	3,014	6,184	7,912	47,500	4,898	39,588

2. Employment Change

Employment forecasts for the four primary communities are similar to population projections in that job levels in all but North St. Paul are expected to increase substantially in future years. The tabulation on the following page shows that Maplewood currently far outshadows the other municipalities due largely to the extensive 3M complex located within its borders.

TABLE I-6

EMPLOYMENT FORECASTS, PRIMARY CORRIDOR COMMUNITIES

Municipality	1970	2000	Increase	
			No.	Per cent
N. St. Paul	1,795	3,600	1,805	100
Maplewood	12,003	34,600	22,597	188
Oakdale	482	22,000	21,518	4,464
Woodbury	1,200	21,100	19,900	1,658

3. Housing Change/Characteristics

Past growth of new housing units in the corridor communities has paralleled population increases described earlier since housing and population are directly interrelated.

The chart on the next page lists housing characteristics in the corridor communities in 1977. Most of the communities have 3.5 to 4.0 persons per unit. Of the primary communities, only Woodbury shows a larger figure of over 4.0 persons per unit. Woodbury is also the exception in terms of the average value of owner-occupied units with housing units in that category valued between \$45,000 - \$50,000. The remaining three primary communities are within the \$40,000 - \$45,000 range. (1977)

In terms of renter occupied units North St. Paul has the greater percentage of all the primary communities (30-40%). North St. Paul is the more urbanized of the corridor communities (excluding St. Paul) and has the highest density. Maplewood and Oakdale have substantially less renter occupied units, 20-30% and 10-20%, respectively; however, their higher growth potential over the next few years in terms of apartment development should increase the renter occupied units. Woodbury has less than 10% renter occupied units and is presently the most oriented to home ownership. (See chart on page 19)

The corridor communities are developing into strong residential communities with substantial family sizes. They are principally single family detached residential communities but some have a significant apartment inventory. The communities east of T.H. 120 are not as developed as those west of the roadway but urbanization patterns indicate relatively full development throughout the corridor by 1995.

4. Neighborhood Descriptions:

Neighborhoods can be partially defined by the elementary school service area supporting a given residential area; however, with

**PERSONS
OCCUPIED**

**PER
UNIT**

**AVERAGE VALUE OF
OWNER-OCCUPIED
UNITS 1977**

COMMUNITY	PERSONS OCCUPIED					AVERAGE VALUE OF OWNER-OCCUPIED UNITS 1977				
	Less than 2.5	2.5-3	3-3.5	3.5-4	Over 4	Less than \$35000	\$35000-40000	\$40000-45000	\$45000-50000	Over \$50000
White Bear Lake				●			●			
Mahtomedi				●			●			
Willernie					●			●		
Lincoln				●				●		
Pine Springs		●				●				
Birchwood				●				●		
Oakdale				●			●			
Maplewood				●			●			
N. St. Paul				●			●			
St. Paul		●					●			
Landfall		●				●				
Woodbury					●			●		

**PER CENT OF UNITS
RENTER OCCUPIED**

COMMUNITY	Less than 10%	10 - 20%	20 - 30%	30 - 40%	Over 40%
White Bear Lake		●			
Mahtomedi		●			
Willernie		●			
Lincoln		●			
Pine Springs		●			
Birchwood		●			
Oakdale		●			
Maplewood			●		
N. St. Paul				●	
St. Paul					●
Landfall	●				
Woodbury	●				

changes in mobility patterns (school bus vs. pedestrian movement vs. private vehicle pick-up/drop off) the elementary school service area is not entirely adequate to define residential neighborhoods. Resident attitudes, identifications, civic group associations and other cultural behavioral patterns also provide neighborhood definition.

Notwithstanding, since the corridor has many as yet undeveloped residential areas, and many residential districts are just emerging as identifiable areas, it is difficult to assess and assign boundaries to residential neighborhoods. Therefore, the school service areas will be utilized as guides and should not be construed as delineating a residential neighborhood in all aspects.

The Jurisdictional Boundaries map, Page 15, denotes school service areas for the corridor. In most cases, T.H. 120 serves as a boundary to residential/school service areas. Only two areas cross T.H. 120 - the Beaver Lake and Woodbury Elementary school districts. Again, two communities and two counties are involved along with a residential district split by an existing arterial (T.H. 120); hence it does not constitute a true residential neighborhood.

The larger, less developed service area/residential districts are located east of T.H. 120.

Civic groups, a strong indicator of residential neighborhood identity, are beginning to emerge in the corridor communities. Examples of such groups are as follows:

CARE - Citizens Against Residential Exploitation
(Beam Avenue area)

Battle Creek Residents

Hadley Avenue Resident Group

Northeast Maplewood Feasibility Study Committee

Further monitoring of such groups will be beneficial in the accurate description of emerging neighborhoods.

Natural Features:

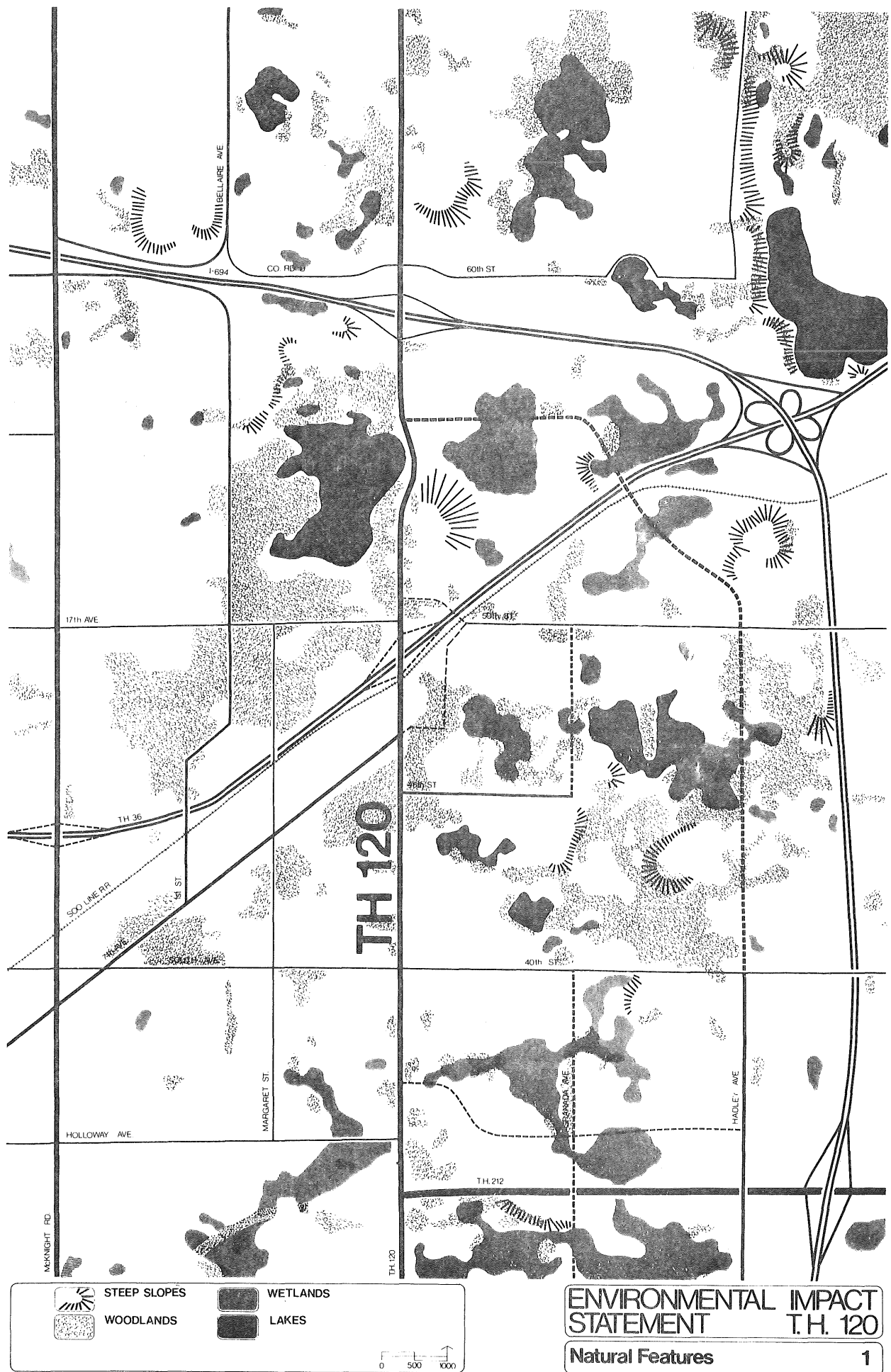
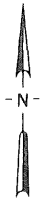
The Natural Features survey involves those elements which collectively comprise the physical structure of the natural environment. These elements include wetlands, lakes, drainage, slopes, woodlands, mineral deposits, ground water, watersheds and floodplains and are described below. (See Natural Features Maps 1-3 on the following pages)

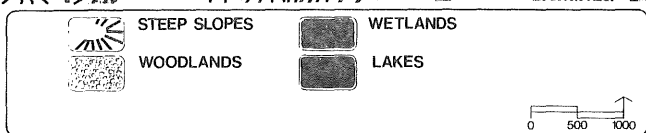
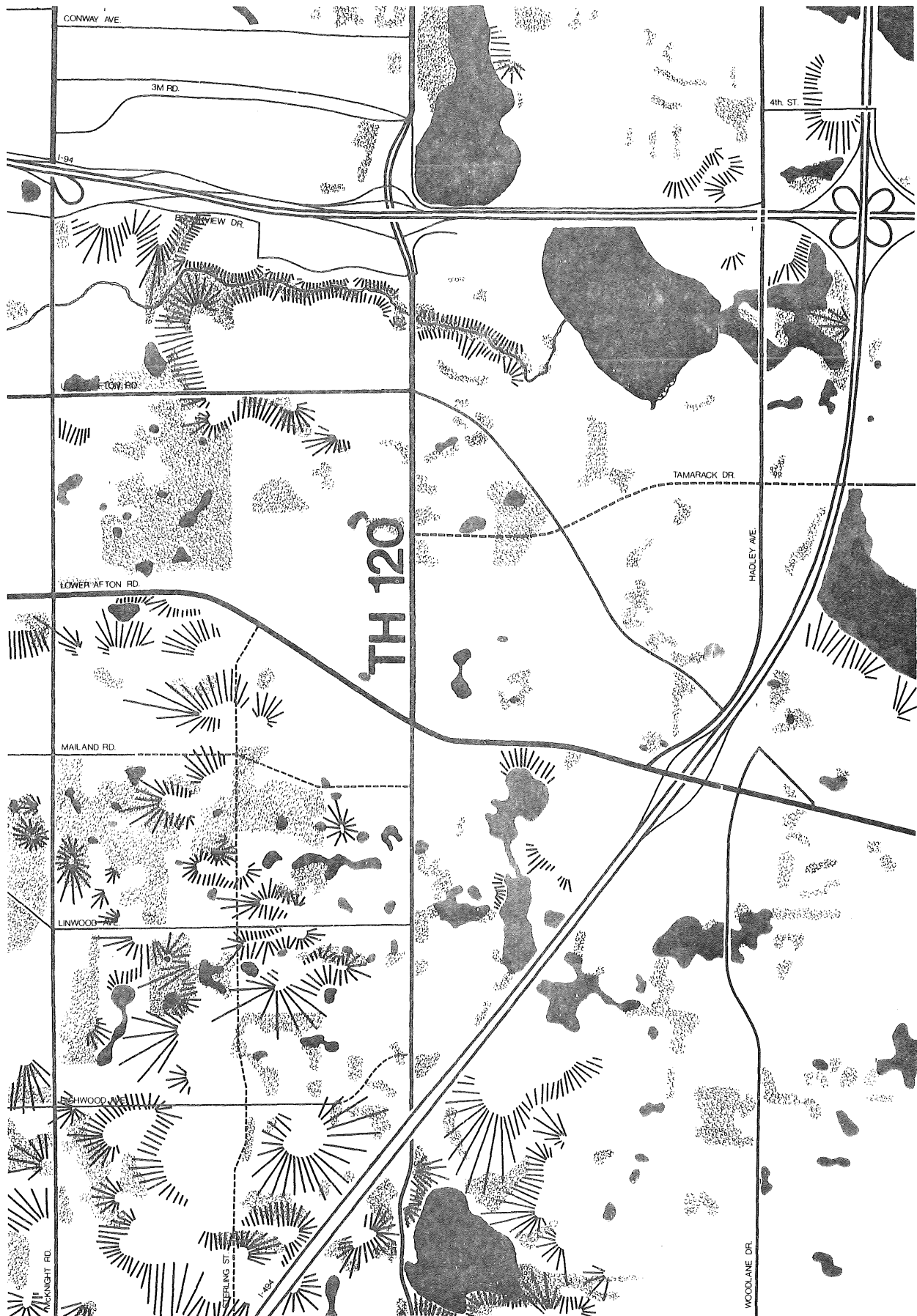
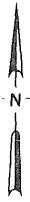
1. Wetlands and Lakes:

Wetlands and lakes are scattered throughout the facility corridor as illustrated on the Natural Features Maps. In the northern section (see Natural Features Map 1) between I-694 and T.H. 212, Silver Lake and Mud Lake are the predominant water bodies and Silver Lake immediately borders the existing right-of-way of T.H. 120. Wetlands in this section are located east of T.H. 120 and north of T.H. 36; between 40th and 50th Streets in the vicinity of Hadley Avenue; and east and west of T.H. 120 immediately north of T.H. 212. The names of all lakes are denoted on the Community Facilities maps (Pages 40-42)

The central portion of the facility corridor contains the largest number of wetland areas as shown on Natural Features Map 2. The major wetland configuration lies east of T.H. 120 between Tanners Lake and T.H. 212. Tanners Lake is the predominant water body in this area.

The southern sector of the corridor, see Natural Features Map 3, contains one major lake, Battle Creek Lake. Wetland areas in this section are much smaller in size and are dispersed throughout the area. As such, they do not constitute a major natural feature. Battle Creek is a major natural feature of this southerly section and flows under T.H. 120 between Upper Afton Road and I-94.





2. Slopes and Woodlands:

Slope and woodland characteristics vary considerably within the corridor. The northern section is relatively free of slopes and has substantial woodland areas only around the Silver Lake area. The middle section again has relatively few major slope areas but has more woodland areas, although small, scattered throughout the wetland areas. The southern section of the corridor has substantial slope areas south and west of the southerly terminus of T.H. 120 and, therefore, is of little impact on the proposed improvement. The only area containing any significant slope conditions interacting with T.H. 120 is the Battle Creek crossing.

Woodland species are predominantly deciduous with Elm trees dominating but with significant numbers of Oak and Poplar distributed throughout the area. Isolated stands of coniferous (evergreen) trees also exist primarily within developed residential properties. Concentrations of trees in danger of disruption from the improvement are at the following locations: I-494 and T.H. 120, between Lower Afton Road and I-94, just south of the Stillwater Blvd. - T.H. 120 intersection, between T.H. 212 and 7th Avenue, and between 17th Avenue and Joy Park. Major mature trees, particularly Elms are scattered along the route in the front yards of residential properties.

3. Mineral Deposits and Ground Water:

The surficial geology in the area of T.H. 120 is prominently glacial deposits. The thickness of the glacial drift over the bedrock averages approximately 100' with the extreme of 200' in the vicinity of Lower Afton Road. Beneath this is Platteville Limestone and Decorah Shale to a depth of approximately 850' above sea level. The St. Peter Sandstone follows to a depth of about 700' above sea level, beneath which is the Prairie du Chien Group to a depth of 600' above sea level. The bedrock continues with St. Lawrence and Fraconia formations, Eau Claire Sandstone, Mount Simon Sandstone and the Hinkley Sandstone to approximately sea level.

The primary mineral deposit in the area is gravel due to the glacial drift in the area, pushed down by the advance of the Des Moines Lobe and the Grantsburg Sublobe from the Wisconsin glaciation of the Pleistocene Period. The terminal moraine is evident at the north end of the project approximately one mile to the west following a south westerly direction.

Ground water can be encountered in the glacial drift with wells completed in sand and gravel, yielding 240 - 2,000 GPM for large diameter wells. The layers of Decorah Shale and Platteville Limestone yield little water supplies to wells. The St. Peter Sandstone yields from 9 to 100 GPM and is used for domestic supply. The Prairie du Chien Group and Jordan Sandstone constitutes the major aquifer in the area. These two aquifers supply about 75% of the ground water in the metropolitan area, with yields ranging from 85 to 2,765 GPM. The elevation of the potentiometric surface water in these two aquifers range from 875' in the north to 750' in the area of Lower Afton Road.

4. Watersheds/Floodplains/ Drainage:

Three watershed districts provide input to the study of natural features within the T.H. 120 corridor: Rice Creek Watershed District, Valley Branch Watershed District, and Ramsey/ Washington Metropolitan District. The latter District includes the Battle Creek Watershed.

The Valley Branch District is located in both Ramsey and Washington Counties at the northern terminus of the study corridor. In Ramsey County, the district extends from 17th Avenue (County Road C) in North St. Paul, northward to T.H. 244 and westward to Helen Street. This section of the watershed district includes Silver Lake and a number of small ponds. In Washington County, the District borders the Ramsey-Washington County boundary and generally extends southeasterly to the St. Croix River. The District area directly affecting the study corridor in Washington County extends from a point on the county line south of 40th Street northward along the county line to 17th Avenue at which point the District extends into Ramsey County.

Floodplains within the Valley Branch Watershed District affecting the T.H. 120 corridor circumvent the perimeter of Silver Lake along and on both sides of a waterway connecting Lake Fork Waterway from a point just north of Highway 212 and extending westerly and southerly along said waterway into the Eagle Point/Lake Elmo system.

The critical floodplain area of this district is at the Silver Lake and the "Silver/Long" waterway confrontation point with T.H. 120.

A major water storage site within the corridor and a part of the Valley Branch District is located around the perimeter of and

including Mud Lake to the east of T.H. 120. Watershed District plans propose a waterway system which will connect Mud Lake South to a small lake immediately north of 40th Street and north to the "Silver/Long" existing waterway north of T.H. 36.

The major Valley Branch westerly watershed divide parallels T.H. 120 north of Highway 212 to a point south of Silver Lake, then continuing westerly along 17th Avenue to Helen-Bellaire Street, then northward along said street and continuing north to I-694.

The major drainage flow areas sensitive to any development, alteration or manipulation are Silver Lake and the "Silver/Long" connection, the area south of T.H. 212 in the vicinities of Larpenteur Avenue and Battle Creek.

5. Fish and Wildlife

The U.S. Fish and Wildlife Service was contacted for review and comment on the effects the proposed action would have on the wildlife in the area.

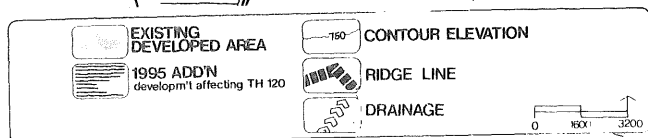
In January of 1978 the staff of the Fish and Wildlife Service conducted a field review in the area of the proposed action and determined that the number of wetland areas affected would depend on the alternative chosen. The required grading and construction activities could permanently reduce wetland areas by several acres.

Of greatest concern to the Fish and Wildlife Service is the area between I-694 and Minnehaha Avenue. Approximately 18 wetland areas could be affected along with encroachment of Battle Creek Park and open areas.

Between I-494 and Minnehaha Avenue possibly 5 wetland areas could be affected. The Fish and Wildlife staff commented that the impact on these could be minimized by compromising the design standards to some extent, i. e., introducing steeper slopes, etc.

At the time a final alignment is fixed and the scope of action is determined the U.S. Fish and Wildlife Service will make a complete analysis and offer specific comments relative to the impact of the proposed action on the natural environment. Alternatives will be studied and all possible measures will be taken to minimize or avoid loss of wildlife habitat.

There is no known impact on the habitat of any threatened or endangered species.



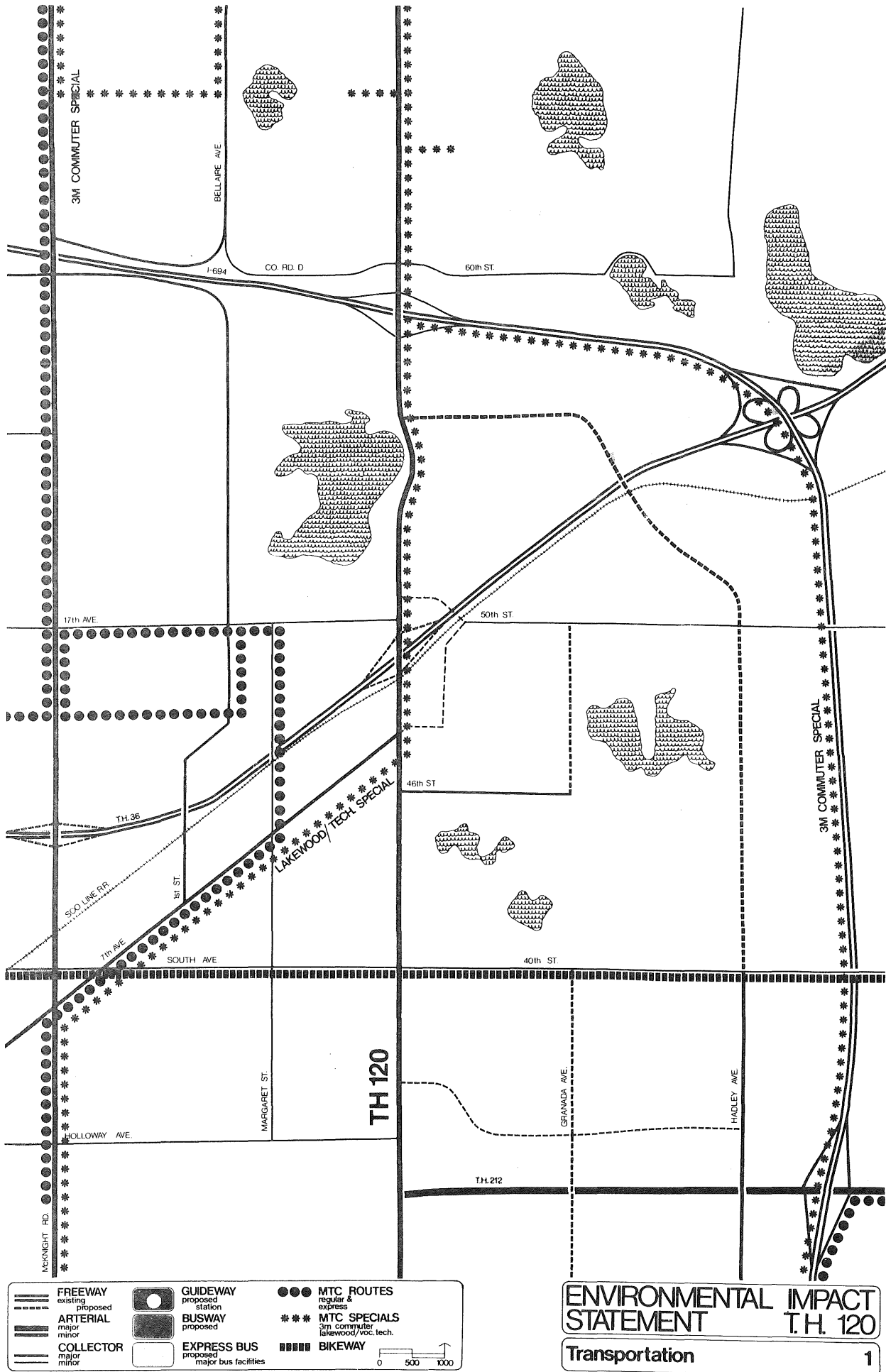
I.2.4

Transportation Facilities:

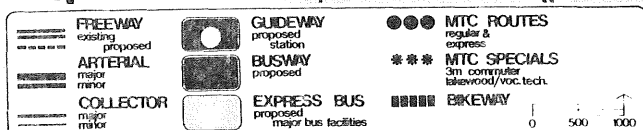
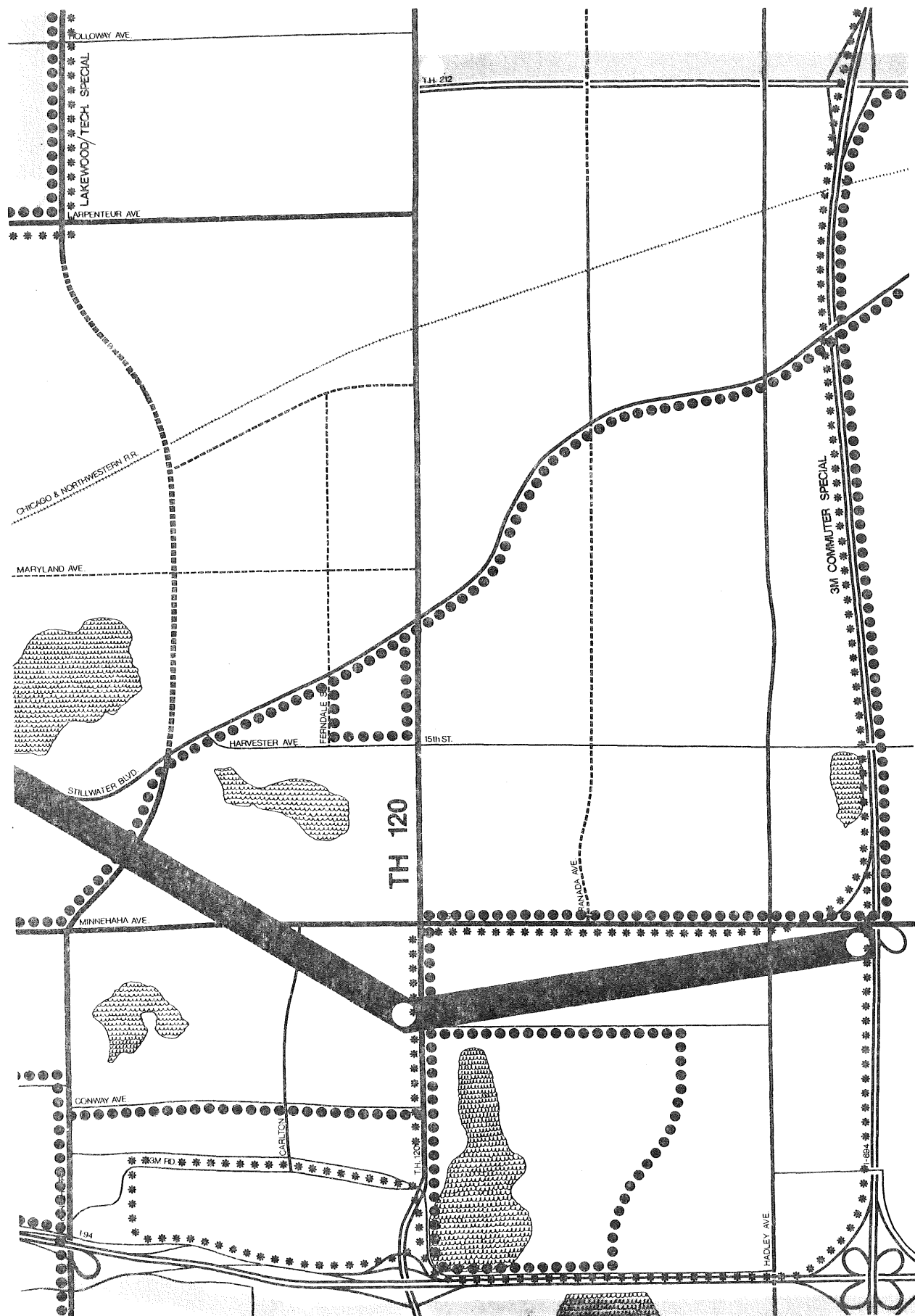
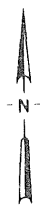
1. Transportation facilities are indicated on Transportation maps 1 through 3, pages 30-32. Highway facilities are movement channels for people and goods and are, therefore, an integral part of every activity framework. The major north-south facilities are I-694/494, Hadley Avenue, T.H. 120, and McKnight Road. Major east-west facilities are, from north to south, I-694, T.H. 36, 7th Avenue, T.H. 212, Larpenteur Avenue, Stillwater Road, Minnehaha Avenue, I-94, Upper Afton Road and Lower Afton Road.
2. Metropolitan Transit Commission (MTC) bus systems utilize T.H. 120 in varying capacities. Transportation maps 1 through 3 illustrate the types of service on T.H. 120. A bikeway system is presently being implemented throughout the corridor. These bikeways are denoted on the Transportation maps. Principal bikeway systems are South Avenue/40th Street (existing) and the I-94 area (proposed).

Metropolitan Transit Development Program - 1973-1990
 Metro Council/Metro Transit System Plan - Status 1990
 Metropolitan Council "How to Get There by Bus"

Source:

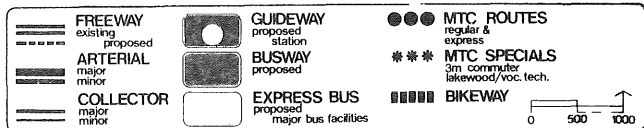
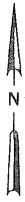


ENVIRONMENTAL IMPACT STATEMENT
T.H. 120
Transportation
1



**ENVIRONMENTAL IMPACT
STATEMENT** TH 120

Transportation 2



ENVIRONMENTAL STATEMENT	IMPACT T.H. 120
Transportation	3

SECTION II: LAND USE

This section describes the existing pattern and type of urban development within the T.H. 120 corridor and reviews the status of comprehensive planning within the affected area as of mid-1976. The Mandatory Planning Act passed by the State Legislature in 1976 requires all communities, counties and school districts to prepare Comprehensive Plans consistent with Metro Council's Metropolitan Development Guide.

II. 1.

Urbanization Pattern

The Urbanization/Watershed Map on page 28 shows existing urban development and development expected to affect T.H. 120 by the year 1995. Urbanization from the expanding Twin Cities area has reached and extended past T.H. 120 in some cases. Urbanization trends are determined largely by utility and buildable land availability along with general market trends. By 1995, urbanization is projected to fully utilize the majority of buildable land within the I-694/494 loop. Metropolitan Council strategy emphasizes limiting development to areas now provided with major transportation and utility systems.

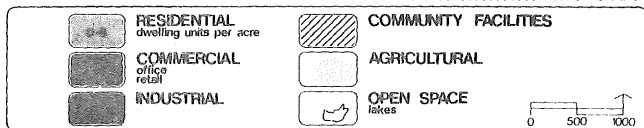
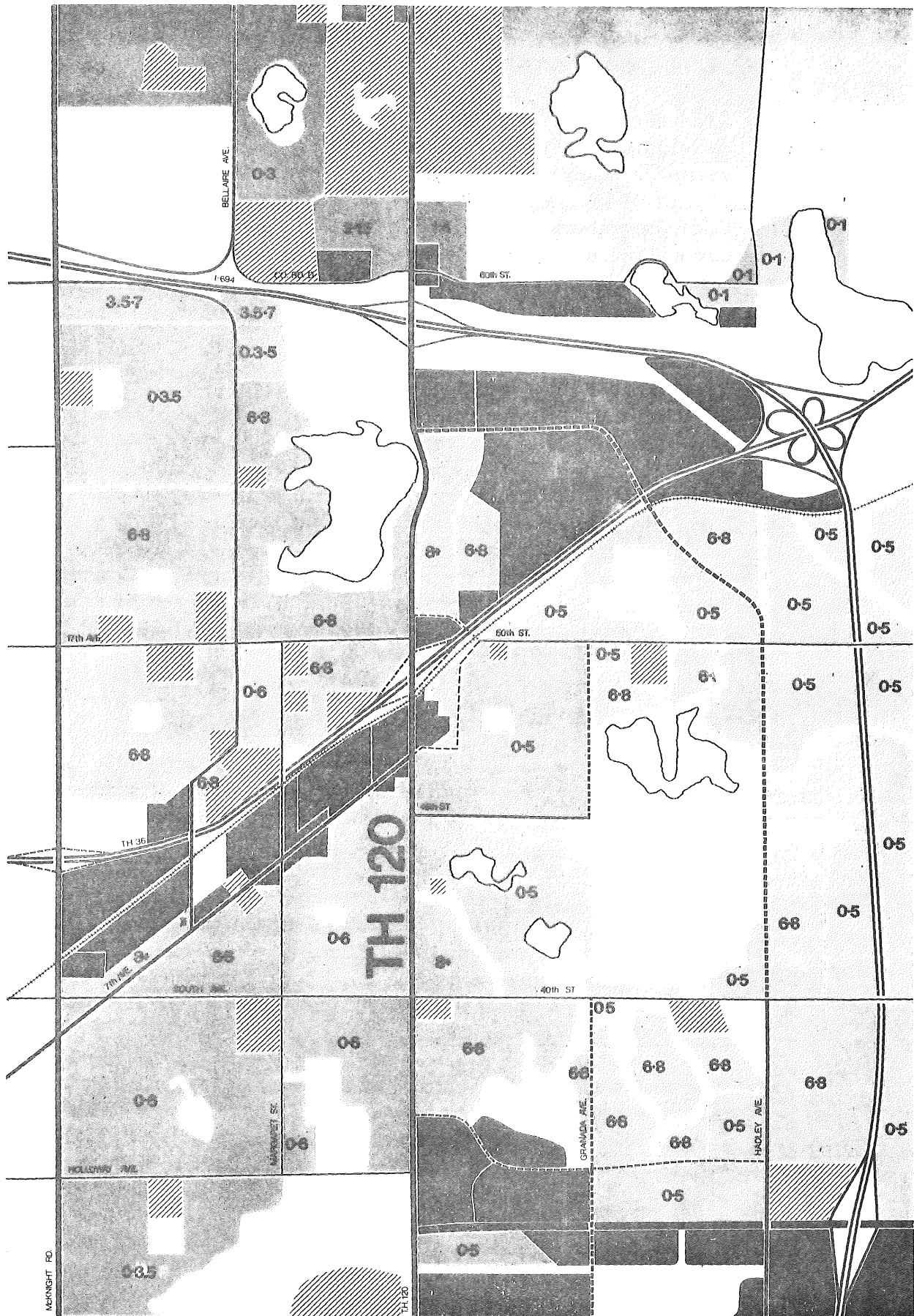
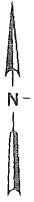
II. 2.

Land Use Planning

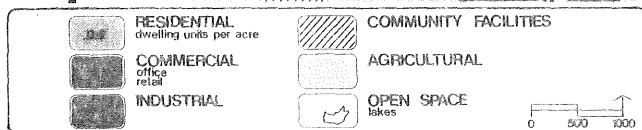
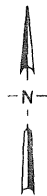
Land Use Maps 1-3 on the following pages graphically depict land use by major category as proposed by the affected municipalities. Essentially, the authority and responsibility for land use planning and control rests with affected municipal governments; however, the Metropolitan Council of the Twin Cities Area is charged by the Minnesota Legislature with coordination of planning and development efforts within the seven county metropolitan area. As projects and plans are prepared and referred to the Metro Council for comment, the Council evaluates them for conformance with the official Metropolitan Development Guide.

The counties of Washington and Ramsey have little land planning influence within the T.H. 120 corridor. Washington County has a formal planning agency but its activities are largely concerned with the rural area subject to urbanization beyond the I-694/494 loop.

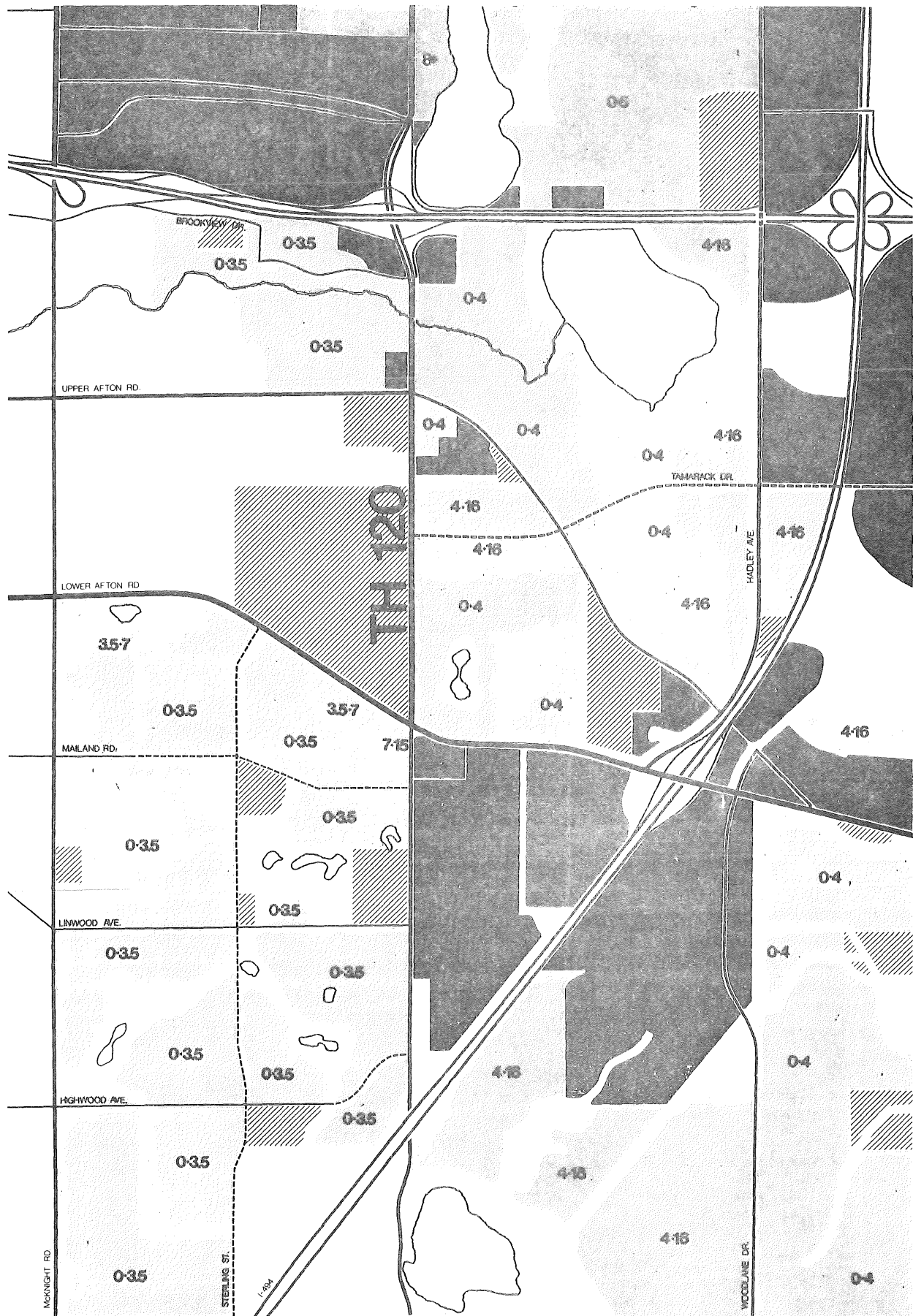
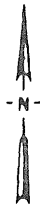
Among the four "primary" corridor communities of North St. Paul, Maplewood, Oakdale and Woodbury, all but North St. Paul have adopted Comprehensive Plans for guiding future growth and development and all four have zoning ordinances in



**ENVIRONMENTAL IMPACT
STATEMENT**
T.H. 120
Land Use 1995 **1**



**ENVIRONMENTAL IMPACT
STATEMENT** **TH 120**
Land Use 1995 **2**



0-6	RESIDENTIAL dwelling units per acre	[Hatched Box]	COMMUNITY FACILITIES
[Dark Gray Box]	COMMERCIAL office retail	[White Box]	AGRICULTURAL
[Black Box]	INDUSTRIAL	[Wavy Line Box]	OPEN SPACE lakes

0 500 1000

ENVIRONMENTAL IMPACT STATEMENT	T.H. 120
Land Use 1995	3

effect. All four communities also have active Planning Commissions; however, North St. Paul feels that since the community is fully developed, there is no need for a Comprehensive Plan and its Planning Commission is concerned only with zoning ordinance administration.

The planning process in the three remaining corridor communities is quite active and current. Maplewood and Oakdale's Comprehensive Plans were adopted in 1973 and the latter is in process of updating. Woodbury's 1972 Plan is also in updating process. Additionally, Maplewood and Woodbury each have a professional planner on their permanent staff and Oakdale retains a planning consultant firm.

The planners or building/zoning officials in each of the four communities report that the proposed improvement of T.H. 120 to four lane divided status is compatible with their Comprehensive Plans or, in the case of North St. Paul, with its future road plans. Individual residents in North St. Paul, however, have raised concern about the project.

The remainder of this section describes existing and proposed land use by major category.

II. 3. Commercial Development

Commercial Developments and in particular major diversified centers exist and are proposed for areas just beyond the facility corridor limits. The following list summarizes the diversified centers:

- II. 3. 1 Maplewood Mall (existing): Located south of I-694 and just west of White Bear Avenue, (major);
- II. 3. 2 North St. Paul Central Business District (existing): Located south of T.H. 36 and just west of T.H. 120, (minor);
- II. 3. 3 Hillcrest Shopping Center (existing): Located at White Bear Avenue and Larpenteur, (minor);
- II. 3. 4 St. Paul Central Business District (existing): Located on I-94 west of I-35E, (major);
- II. 3. 5 Sunray Shopping Center (existing); Located north of I-94 and west of McKnight Road, (minor);
- II. 3. 6 The Dayton Hudson Development Corporation has proposed a major diversified shopping center to be located in the Northeast Quadrant of I-494 and Lower Afton Road.

The Maplewood Mall facility may potentially affect neighborhoods located between the mall and T.H. 120 due to traffic flows of shopping oriented traffic. Also, the North St. Paul CBD generates intersection-access problems with T.H. 120 at 7th Avenue. The Dayton Hudson Development Corporation proposal will exert some influence, not yet measurable, on T.H. 120. The needs are primarily in the Minnehaha Avenue to Lower Afton Road area where T.H. 120 will link with east-west connections having access across I-694/494 to the major development areas.

Smaller retail-commercial and business service centers or clusters are located at major arterial intersections throughout the corridor. Existing developments located at T.H. 120 and T.H. 36 will be affected by any improved interchange at this location. Small service centers exist at Stillwater Boulevard and T.H. 120, Minnehaha Avenue/T.H. 120, Conway Avenue/T.H. 120 and Upper Afton Road/T.H. 120. These complexes present problems and potentials related to growth, disruption, access and economic viability in respect to the emerging diversified centers.

II. 4.

Town Centers

Town Centers within the T.H. 120 facility corridor consist solely of North St. Paul's central business district. This town center combines government, shopping, service, industry and residential elements. The remainder of the corridor communities are relatively undeveloped and do not yet have established town centers. Developing diversified centers most likely will fill this need in the future.

II. 5.

Industrial Development

Industrial developments are an important part of the future T.H. 120 physical, social and economic structure. Major industrial centers are proposed or have already begun at the following locations within the corridor from north to south.

II. 5. 1

Between I-694, T.H. 36 and the residential lands east of T.H. 120, there is a potential industrial complex whose development must wait for sewer facilities.

II. 5. 2

An industrial center exists in North St. Paul south of T.H. 36 and north of 7th Avenue along the railroad tracks.

II. 5. 3

An industrial area is proposed for the area east of T.H. 120 and on both sides of the existing section of T.H. 212 and encompassing land east from T.H. 120 to I-694; and along T.H. 120 south from T.H. 212 to the railroad tracks;

II. 5. 4

3-M Company's existing research and office center at I-94 and T.H. 120 acts as the major employment/traffic generator and activity center within the corridor. This office/research complex extends westward from T.H. 120 to McKnight Road and north to Minnehaha Avenue from I-94. In addition, a new 3-M Center is being developed in the area of T.H. 212, east of I-694.

II. 5. 5

Another proposed industrial center is located along T.H. 120 at the southeastern quadrant of the intersection of Century Avenue and Lower Afton Road; land east of I-494 and south of Lower Afton Road is presently in the development stage and is proposed as a substantial industrial center.

Industrial centers, both existing and proposed, will require improved circulation networks and accessibility controls for both employees and business related activities. Industrial centers along T.H. 120 are located in close proximity to major regional routes and will require improved access along those segments of T.H. 120 which act as linkages to regional routes. Improvement of segments of T.H. 120 may encourage reduction of traffic levels through residentially oriented segments.

II. 6.

Community Facilities

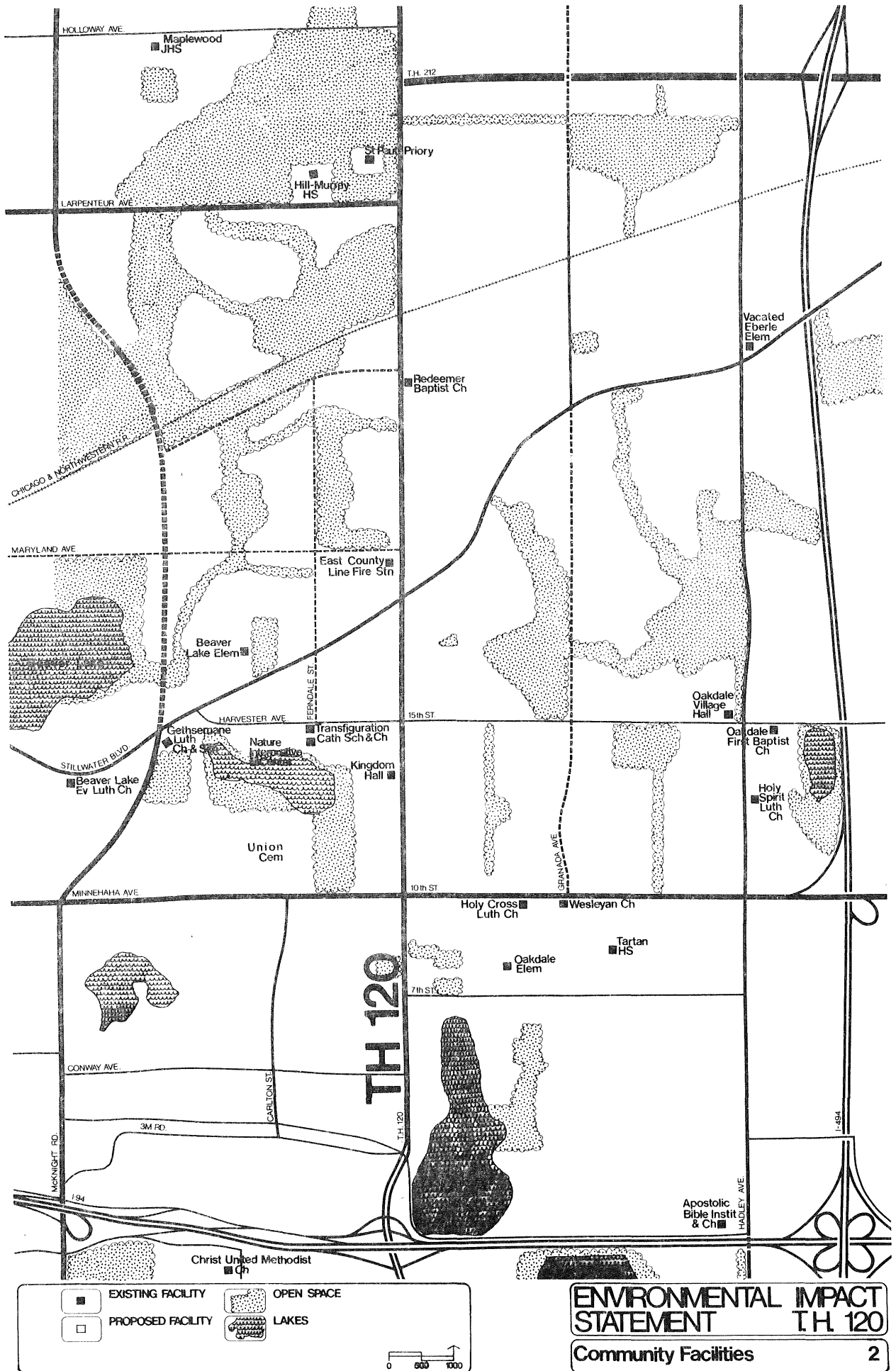
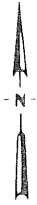
The Communities Facilities maps on the following pages depict existing and proposed facilities, open space elements and lakes throughout the corridor. Major elements having influence on T.H. 120 are the following items from north to south:

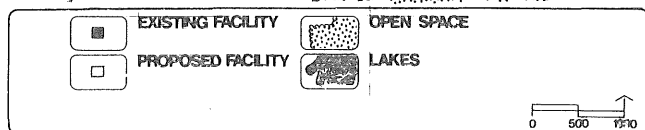
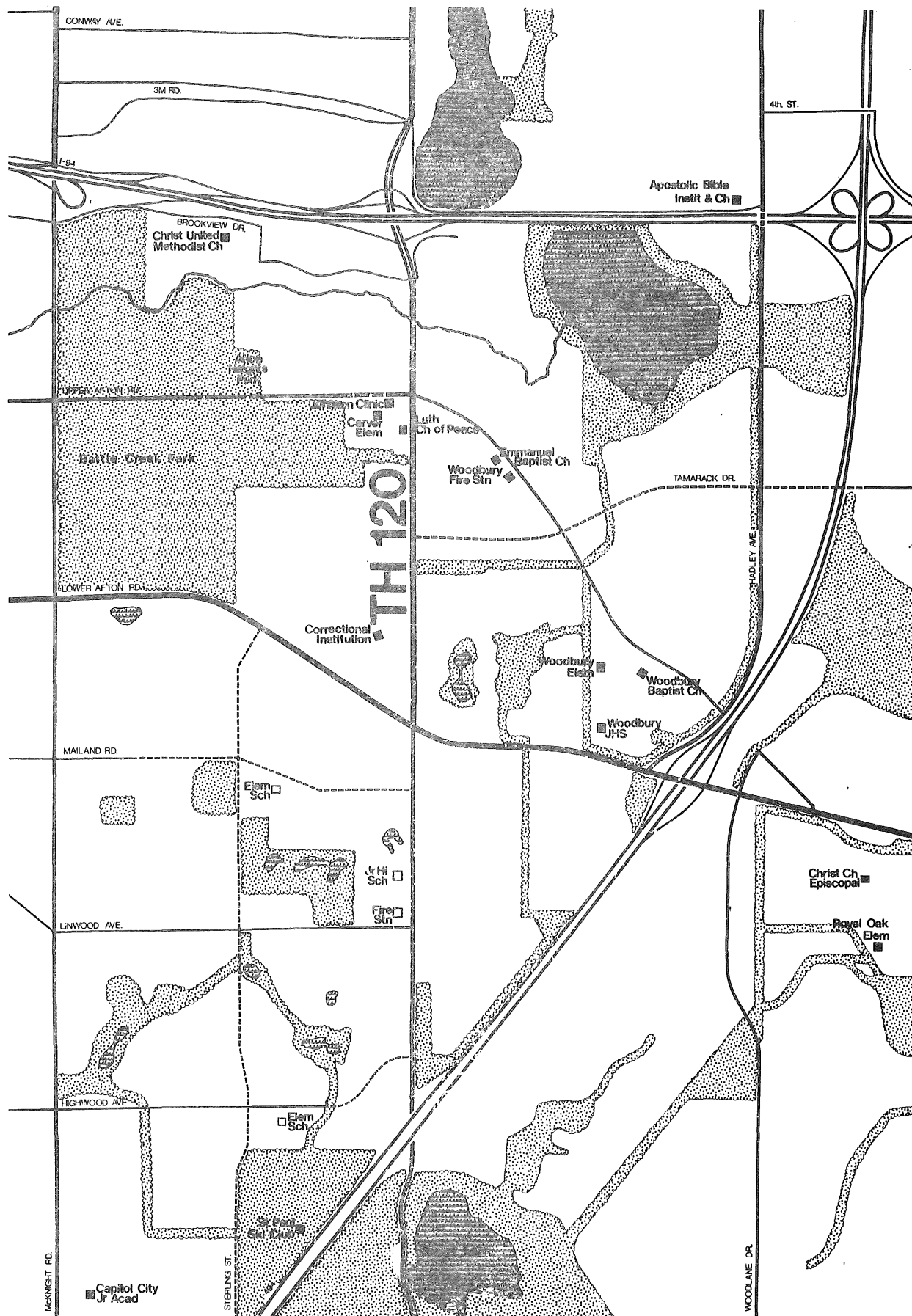
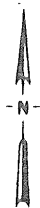
II. 6. 1

Community Facilities Map 1

1. Educational:

Lakewood Community College (north of I-694)
No. 916 Vocational Technological School (north of I-694)
St. Peter School
Cowern Elementary School





ENVIRONMENTAL IMPACT STATEMENT
T.H. 120
Community Facilities **3**

2. Religious:

Lakewood Evangelical Free Church
St. Peter Church
Assembly of God Church
North Presbyterian Church
St. Michael and All Angels Church
House of Prayer Lutheran Church

3. Public and Semi-Public:

Lakeview Cemetery
Evergreen Cemetery
Joy Park/Silver Lake Park/Dorothy Park
St. Mary's Cemetery
Oakdale Volunteer Fire Hall
Mud Lake Park
Central Park
Masonic Temple
North St. Paul Medical Clinic
North St. Paul Post Office
North St. Paul Village Offices
Various Trail Systems as denoted on map
Galls Golf Course

II.6.2

Community Facilities Map 2

1. Educational:

Maplewood Junior High School
Hill-Murray High School
Beaver Lake Elementary School
Transfiguration School
Tartan High School
Oakdale Elementary School

2. Religious:

Redeemer Baptist Church
Kingdom Hall
Holy Cross Lutheran Church
Wesleyan Church
St. Paul Priory
Geth Semene Lutheran Church
Transfiguration Church

3. Public and Semi-Public:

East County Line Fire Station
Nature Interpretive Center (proposed)
Union Cemetery
Various Trail Systems as denoted on map

II. 6. 3

Community Facilities Map 3

1. Educational:

Carver Elementary School
Woodbury Elementary School
Woodbury Junior High School
Proposed Junior High School
Proposed Elementary School

2. Religious:

Christ United Methodist Church
Lutheran Church of Peace
Emmanuel Baptist Church
Woodbury Baptist Church

3. Public and Semi-Public:

Afton Heights Park
Johnson Clinic
Battle Creek Park
Woodbury Fire Station
Correctional Institution (Ramsey County)
Various Trail Systems as denoted on map

Overall, there are approximately 23 churches and 23 schools within the T.H. 120 corridor. Access to these facilities must be made available in a safe and efficient manner to handle peak hour school bus and auto vehicle traffic flows. Major institutions such as the Correctional Institute, St. Paul Priory and the Community College and Vocational Technical School all have unique and specific service functions and attendance patterns which must be accommodated by their servicing arterial.

II. 7.

Open Space Characteristics:

Recreation Open Space is a major amenity element within the T.H. 120 facility corridor and has potential as a major traffic generator. Although the majority of parks and open space

facilities depicted on the Land Use 1995 maps (pages 34-36) and the Community Facilities maps (pages 40-42) are proposed open space concentrated around lakes, wetland areas and areas of interesting natural features. Recreational open space will be concentrated around existing and developing institutional facilities. Bikeways, trails and other open space linkages will most likely be a combination of "hard" and "soft" treatments, both paved or improved and natural spaces.

The Community Facilities maps depict the location, relative size and interrelationships of the area open space system, both existing and proposed.

II. 8.

Government Projects:

There are no known federal or state government projects other than roadways which will be impacted by the proposed action. McKnight Road to the west has been proposed for improvement to a four-lane arterial status and I-694/494 is complete as a regional route.

Local governmental jurisdictions adjacent to the proposed action have designated T.H. 120 as a major arterial in the community plans. In addition, the community of Woodbury has proposed an interchange on Century Avenue with I-494. If this measure were implemented, the traffic patterns on Lower Afton Road would be altered; however, no public agency has endorsed the Woodbury proposal.

SECTION III: PROBABLE IMPACT OF PROPOSED ACTION ON THE ENVIRONMENT

This section identifies the beneficial and detrimental environmental consequences anticipated to occur if the proposed action takes place. Possible measures to minimize potential adverse effects are discussed.

Environmental consequences or impacts break down into two categories - secondary (indirect) and primary (direct). Primary impacts are those which have direct impact upon the narrow band within or adjacent to the highway such as housing displacement or noise pollution. Secondary impacts are more indirect and are induced by the highway improvement such as more rapid land development or changed social patterns.

III. 1

Secondary Impacts

III. 1. 1

Urbanization:

As depicted on the map on page 28, urbanization patterns are projected to encompass all developable lands west of I-494/694 by 1995 regardless of the proposed action. Existing urbanization has already developed along both sides of existing T.H. 120 to a large extent.

With increasing land values and subsequent increasing taxes throughout the corridor, development pressure on presently undeveloped but buildable land should be intense between 1975 and 1995.

Although difficult to assess, the improvement of T.H. 120 may increase urbanization rates by improving access from residential areas to major employment centers. The 3-M Company presently has research facilities on T.H. 120 at I-94 with additional expansion proposed east of I-694 north and south of T.H. 212. This factor, along with the numerous livability characteristics in the eastern sector of the Twin Cities metropolitan area (White Bear Lake, exurban single family detached homes/open space characteristics and improved metropolitan circulation systems) will encourage continued urbanization.

It should be stressed, however, that T.H. 120 is a north-south arterial and does not provide circulation between the metropolitan area and the corridor area, an east-west function. Moreover, the facility services residential-employment functions previously generated by forces other than T.H. 120 and most likely will assist in alleviating existing and future congestion and traffic flow.

III. 1. 2

Population and Growth Change:

As discussed in Section I, the corridor communities are experiencing substantial growth in population and employment. All communities are experiencing the effects of urbanization and its by-products, such as the need for improving T.H. 120.

New housing, new community facilities, and expanding commercial and industrial centers are developing throughout the corridor. Adequate improved arterials must accompany this growth to provide better auto vehicle flow and public and private transit capability. Since the existing research center for 3-M was completed in 1955, employment has reached approximately 8,500 people. Projections by 3-M indicate a total of 16,000 employees by the 1980's. Coupled with the new proposed center, a potential doubling of 3-M employees within and adjacent to the T.H. 120 corridor is probable. Improved circulation systems will be necessary to service the new neighborhoods and services generated by such employment centers.

As mentioned above, the proposed action may increase population growth rates by improving access from residential areas to employment centers.

III. 1. 3

Transportation Accessibility:

For persons not owning or otherwise having access to automobiles (elderly, handicapped, non-drivers, transit-dependent, etc.) transit facilities are operative along segments of the existing facility and such transit facilities can be incorporated into Alternatives A, B and C or some modification of all three (see Transportation maps 1-3 (Pages 30-32)).

The Metropolitan Transit Commission has studied several alternative mass transit systems for potential application to the area. A fixed guideway system was one of the alternatives studied. Such a system would not operate along the corridor but would cross it in a general east/west direction from the northwest at the 3-M Company with a station to be located in that general area. The fixed guideway proposal is not being implemented at present. Metro Council's 1990 Transit System Plan places major reliance on a bus system as opposed to a fixed guideway system.

The other transit systems which exist within the corridor and which would connect to any future fixed guideway metropolitan system consist of the following:

- a. Lakewood/Vocational Technical special bus-transit from 7th Avenue/T.H. 120 north to Lakewood Community College and No. 916 Vocational Technical School;
- b. Regular and express bus-transit service along Stillwater Boulevard. In addition, a loop is formed in this vicinity from Stillwater Boulevard/T.H. 120 on the northeast, south along T.H. 120 to 15th Street, west along 15th Street - Harvester Avenue to Ferndale Street and then north along Ferndale to Stillwater Boulevard;
- c. 3-M Company commuter bus-transit intersecting T.H. 120 at Minnehaha Avenue from the east (I-694) and directed south along T.H. 120 to the 3-M complex and I-94;
- d. Regular and express bus-transit along the same route as (c) with additional connections from T.H. 120 to 7th Street on the east and to Conway Avenue on the west;
- e. Regular and express bus-transit exists along Upper and Lower Afton Roads with a short segment connecting Tamarack Drive to Upper Afton Road;
- f. Proposed Express Bus facilities include T.H. 36 (stop at McKnight Road only) stop area within corridor; T.H. 212 east of T.H. 120 with stop at T.H. 120 (connects to proposed express bus facility along proposed T.H. 212 alignment); along I-94 with stop at T.H. 120; and along Lower Afton Road (stop at I-494 is only stop within corridor).

Overall, improving the existing T.H. 120 facility by either the establishment of a mass transit bus corridor system or an improved highway allowing transit vehicle access will at least maintain and probably improve accessibility for elderly, handicapped, non-driver, transit-dependent and others throughout the corridor.

III. 2

Primary Impacts

III. 2. 1

Natural, Ecological or Scenic Resources:

There are no national or state resources within the immediate corridor to be adversely affected.

Some local resources will be impacted by the proposed action. The degree of impact will be determined by the specific design alternative selection. General impacts consist of the following, from north to south:

1. Joy Park, a Ramsey County facility, will experience no adverse impact. No use of land from Joy Park will be required.

Silver Lake is a small recreational lake with high crowding potential and of significant recreational value. Its value as a natural amenity is high.

The new alignment relocated to the east of the existing facility will be a beneficial impact by generating additional usable open space along the eastern shoreline of Silver Lake. A potential open space connection could be realized along the shoreline between Joy Park on the north and Silver Lake Park on the south. In addition, visual accessibility of the lake would be substantially improved for the public.

2. Lake area located to the south of C & NW Railroad in Oakdale has additional protection for shoreline due to relocation of proposed action to the west of the existing two-lane facility. Existing controlled access to a new service road (T.H. 120) will further reduce traffic congestion and related pollution factors.
3. Institutional open space belonging to St. Paul Priory would be acquired involving over four acres of land and a frontage of 1200 feet. A Priory surface parking lot would be partially disrupted as well as a slope along the frontage area that presently serves as a visual and acoustical buffer from the existing facility.
4. An existing county park, Battle Creek Park, south of Upper Afton Road and having approximately 50 feet of frontage along T.H. 120 will be affected when the existing facility is widened from its present centerline. Approximately 2,500 square feet of land would be acquired. (See 4(f) Statement)

5. County Workhouse property over 75 feet in width and extending the full length of the frontage along T.H. 120 would be acquired to protect existing residential structures to the east.
6. Trail right-of-way can potentially be developed as a part of the T.H. 120 proposed improvement. In Woodbury, the designated municipal trail right-of-way parallel to T.H. 120 can compatibly be integrated into the proposed improvement and provide a natural linear open space-buffer-circulation facility the full length of T.H. 120 in Woodbury.

III. 2. 2

Relocation of Persons and Businesses:

The Minnesota Department of Transportation, District 9 Relocation Office located at 3485 Hadley Avenue North, North St. Paul, Minnesota will be responsible for providing the relocation service for this project. In order to accomplish this relocation in an orderly and expedient manner, the acquisition will be staged to allow adequate time for all personal contacts.

The District 9 Relocation Office has made a survey of the homes and businesses to be displaced by the acquisition of property. The Relocation Office has analyzed the relocation problems in accordance with Federal Highway Program Manual Volume 7, Chapter 5, Section 3 (FHPM 7-5-3). As to the number of homes to be acquired as indicated earlier in this report, there are 71 homes and one multiple dwelling required. The family characteristics here are of moderate income level, middle-aged families for the most part, with no apparent minorities. The community itself is basically a neighborhood type interspersed with farm land in the area of Holloway Avenue and also near Lower Afton Road. The taking of these homes will not change the basic community structure.

The Relocation Office will insure that all persons without regard to race, color, religion or national origin, will be relocated into decent, safe and sanitary housing within the financial means of the families, and in an area that is generally as desirable with respect to the type of neighborhoods, schools, commercial shopping areas and distance to any social institutions, such as religious and community facilities.

The State of Minnesota will make all relocation payments according the FHPM 7-5-3. These payments are listed in the Relocation Booklet which is given to each individual relocatee and is fully explained to them at the time of the first contact.

III. 2. 2. 1

Replacement Housing

The Relocation Office of the Minnesota Department of Transportation, to provide replacement housing, maintains many contacts with the various housing, apartment, and real estate agencies in this area.

A review of the MLS listings of housing in August 1975 indicated approximately 190 homes were available in the general area of the proposed construction. New housing is available in the general area of this project in Oakdale, Woodbury and Maplewood.

These listings indicated that there is an adequate number of homes available for the relocatees. There is also a large amount of land available in the Washington and Dakota County areas available for construction sites for new housing. Should there be a problem in securing adequate in-place housing at the time of the proposed construction, the Relocation Office will take the necessary measures to provide for construction of new homes.

III. 2. 2. 2

Business Relocation

A total of 16 businesses will be acquired for this project. Half of the businesses are gasoline service stations while the others are retail stores (3), repair services (2) and miscellaneous. It is estimated these businesses provide jobs for approximately 100 employees. Adequate lands are now available for the reconstruction of these businesses. With the lands that are available and with the businesses of these types, it is anticipated they can be relocated without significant difficulty.

III. 2. 2. 3

Neighborhood Disruption

Due to the fact that T.H. 120 is an existing highway which also is the boundary for two counties and four communities, residential neighborhoods and districts have not developed across T.H. 120. This fact has lessened the neighborhood segmentation factor and minimized this form of community disruption.

Regardless of jurisdictional control, areas where residential structures face both sides of T.H. 120 and are serviced directly by the road will be disrupted by building acquisition on one side or the other. Some communities such as North St. Paul have the opportunity to strengthen residential boundaries as a result of the T.H. 120 improvement. By eliminating access from T.H. 120 onto residential streets through construction of cul-de-sacs and service roads, neighborhoods can be relieved of through traffic.

The most adverse impact on residential neighborhoods all along the corridor is noise pollution. This form of disruption affects at least the first row of residential structures along the improvement. A more detailed description of adverse noise effects will be discussed further in this Section.

III. 2. 3

Social Impacts:

In general, the effect of the proposed action upon various population groups (elderly, students, handicapped, low income, minority, pedestrians, bicyclists, and those dependent upon public transportation) will be beneficial rather than adverse. As mentioned previously, the proposed facility generally does not segment neighborhoods and elementary school districts; hence, access to community facilities and services will generally not be affected. Public transportation on T.H. 120 will be improved by the action thus benefitting those dependent upon this mode and potentially improving accessibility to jobs and shopping. Traffic signalization and channelization will provide for safe and convenient crossing of the facility.

III. 2. 4

Air Quality:

An air quality study was undertaken in late 1976 and early 1977 by the District 9 Air and Noise Section, and a report is available for review at Mn/DOT District 9 Office, Oakdale, Minnesota. The study was conducted to determine if the proposed T.H. 120 project is consistent with the Federal Highway Administration's (FHWA) Ambient Air Quality Guidelines and the Minnesota Air Quality Implementation Plan.

The air quality analysis followed the U.S. Environmental Protection Agency's (EPA) "Guidelines for Air Quality

Maintenance Planning and Analysis, Volume 9: Evaluating Indirect Sources". The Volume 9 factors include:

- a) Wind speed of 1 meter per second
- b) Wind direction of 10° to the roadway
- c) 8 hour persistence factor of 0.6
- d) Pasquill-Gifford Stability Class D is used for the worst case
- e) Volume 9 background concentrations of 5ppm for 1 hour and 2 ppm for 8 hour were assumed because no air monitoring has been done in this area.
- f) EPA - 42 Supplement 5 emission factors were also used.

The analysis estimated pollution concentrations contributed by the traffic forecasted to use the corridor. The traffic generated pollutants added to the background figures result in the total pollutant concentrations.

The only pollutant the analysis studied was carbon monoxide (CO) because it is the primary transportation related Priority 1 pollutant in the Minneapolis/St. Paul Air Quality Control Region.

Predicted levels of pollutants were computed at the most critical receptor sites. Under the worst case traffic and weather conditions the following results were determined:

	<u>Parts Per Million</u>	
	<u>One Hour</u>	<u>Eight Hour Average</u>
1976	6.9	2.5
1985	3.1	1.1
1995	2.5	0.7
1995*	1.8	0.7
('no build')		

*The reason that the 1995 'no build' result is lower is that the receptor is located further from the in-place roadway than from the proposed alignment.

The results of the analysis demonstrates that the maximum CO concentrations at critical receptor sites are within the State and Federal ambient air quality standards. State standards for maximum CO concentrations are 30 ppm for a one hour period and 9 ppm for an eight hour average. Federal standards are a maximum of 35 ppm for a one hour period and 9 ppm for an eight hour average.

This project lies within the Minneapolis/St. Paul AQCR (Air Quality Control Region). Three pollutants in this metropolitan region are of specific concern and have been identified as Priority 1: particulates, sulfur oxide, and carbon monoxides (CO).

The Minnesota State Implementation Plan (SIP) contains a Transportation Control Plan which was submitted to EPA in May, 1973, outlining strategy to insure that the CO standards would be met. The transportation control plan is under an ongoing evaluation program. This plan presently applies only to the downtown areas (CBD) of St. Paul and Minneapolis. Therefore, it is determined that these project alternates are consistent with the SIP.

The worst case site for receptors was based on maximum peak hour traffic volumes and close proximity of residential structures. For each alternate the worst case site remained unchanged.

The completion of this highway project should minimize air pollution and have no effect on the St. Paul CBD. Traffic will flow more smoothly due to additional lanes and signal improvements. The improved roadway will also make public transportation more feasible and convenient.

III. 2. 5

Noise Impacts

The following is the Executive Summary from the Noise Analysis Report, January 1977, prepared by the Minnesota Department of Transportation. This preliminary noise impact evaluation is available at Mn/DOT, District Nine Office, Oakdale, Minnesota.

This proposed construction project is considered related to traffic noise and existing land use/activities are within its influence. The area is highly developed, predominately residential, and most undeveloped land is designated as open space.

Existing noise levels and predicted noise levels (year 1995 traffic) were obtained according to procedures of F.H.P.M. 7-7-3.

Noise levels, obtained in April 1976, do not presently exceed design noise level ($L_{10}70\text{dBA}$) for any of the residential areas.

The No-Build Alternate would create an impact (over $L_{10}70\text{dBA}$) on 246 residential units (activity areas). The average residence is located within 100 feet and would have a future (1995) noise level of $L_{10}76\text{dBA}$.

Analysis of the five build alternates showed that future (1995) traffic would create noise impacts on residential areas as follows:

BUILD ALTERNATES									
Area	Existing	A-1		A-2 & A-3		B		C	
	<u>L₁₀</u>	<u>L₁₀</u>	<u>Units*</u>	<u>L₁₀</u>	<u>Units*</u>	<u>L₁₀</u>	<u>Units*</u>	<u>L₁₀</u>	<u>Units*</u>
1	64	72	16	72	16	(a)	0	(a)	0
2	61	76	37	76	37	76	37	(a)	0
3	61	75	8	75	8	75	9	75	8
4	70	75	21	75	21	(b)	0	(a)	0
5	68	77	41	77	24	77	41	(a)	0
6	68	75	24	75	17	(a)	0	75	11
7	68	68	0	68	0	68	0	68	0
8	68	75	3	75	3	75	3	(c)	0
9	63	75	23	75	23	75	23	(a)	0
10	63	75	14	75	14	(a)	0	(a)	10
Units Acquired for Construction		(59)		(83)		(28)		(28)	
Remaining Units above L ₁₀ 70dBA		187		163		113		29	

NOTES

* Residential Impact L₁₀ 70. The L₁₀ noise level is the average for each area based on distance to houses.

(a) Revised traffic route, no impact calculated.

(b) No improvement planned, assumed direct routes into 3M which would lower traffic through area.

(c) Residences acquired.

Abatement by conventional barriers is limited by the restricted right of way and lack of full access control. Alternates A-1, A-2 and A-3 would likely require exceptions to design noise level for most residences. Alternates B and C would require exceptions. The Noise Study Report will be submitted when neighborhood goals and desires are known, and an alternate selected.

Coordination with Local Officials:

All cities, counties and regional development commissions in Minnesota were furnished with copies of "The Audible Landscape". The Minnesota Department of Transportation reviews all proposed plats adjacent to state highways. A noise impact assessment is made and submitted to the approving authority with recommendations when appropriate. Coordination with local officials will continue throughout the project development process.

III.2.6

Drainage:

The study area is generally characterized by gently rolling terrain with numerous low areas where intermittent and permanent ponds and waterways have formed. Precipitation falling upon the highway right-of-way is dissipated by a combination of evaporation, seepage into the soil and run-off. Run-off for the study area eventually enters the Mississippi River, as shown on the Urbanization/Watersheds map on page 28.

The proposed drainage plan for the project utilizes much of the area's natural drainage system. Precipitation falling upon the roadway will be collected within the curb and gutter and carried via a storm sewer system to existing ditches, waterways or ponding areas. All ponding areas to be utilized have outlets. During construction, temporary sedimentation basins will be utilized to protect existing ponding areas from siltation and other debris.

Twelve existing ponding areas or waterways will receive highway drainage. Drainage from the proposed project will follow approximately the same pattern as presently exists. Highway drainage along T.H. 120 will outlet as follows:
(See Map next page)

1. Between I-494 and Parkwood Drive, drainage will outlet into an existing waterway and flow southward to Carver Lake and eventually into the Mississippi River.
2. Between Parkwood Drive and Oakwood Drive, drainage will outlet into a ditch on the south side of Lower Afton Road and flow into the Mississippi River.
3. Between Oakwood Drive and Upper Afton Road, drainage will outlet into a natural waterway and flow into the Mississippi River via Battle Creek.
4. Between Upper Afton Road and Brookview Drive, drainage will outlet directly into Battle Creek.
5. Between Brookview Drive and Conway Avenue, drainage will outlet into Tanners Lake and flow via storm sewer into Battle Creek Lake and Battle Creek. A siltation pond will be required at this outlet.
6. Between Conway Avenue and Stillwater Road (T.H. 212), drainage will outlet into an existing ditch near 9th Street North and flow into Tanners Lake. A siltation pond will be required to remove debris and sediment from the run-off prior to entering Tanners Lake.
7. Between Stillwater Road and the Chicago and Northwestern Railroad, drainage will outlet into existing waterways which flow into Beaver Lake and ultimately into the Mississippi River.
8. Between the C&NWRR and Larpenteur Avenue, drainage will outlet into an existing wetland area and flow southwesterly into Beaver Lake.
9. Between Larpenteur Avenue and Holloway Avenue, drainage will outlet into a ponding area (Holloway Pond) near T.H. 212 as proposed by the City of North St. Paul. Flow leaving the ponding area will utilize the North St. Paul storm sewer system to County Ditch No. 18.
10. Between Holloway Avenue and 44th Street North, drainage will outlet into a ponding area southeast of the intersection of South Avenue (County Road B) and T.H. 120. Outflow from this pond will enter the North St. Paul storm sewer system and ultimately flow into County Ditch No. 18. It will be necessary to increase the size of the ponding area, as the North St.

Paul system is somewhat limited in capacity. An alternate to increasing ponding capacity would be to take this drainage to the southeast and into the adjacent drainage area.

11. Between 44th Street North and 19th Avenue, drainage will outlet into a ditch along the north side of T.H. 36 east of T.H. 120. This ditch will carry drainage into the wetland area to the east and subsequently to Long Lake.
12. Between 19th Avenue and I-694, drainage will outlet into the wetland area east of Silver Lake described above. No water from the roadway will enter Silver Lake.

With the drainage system as outlined above, all highway drainage would enter the existing drainage system within a relatively short period of time. Run-off would be increased over that existing due to an increase in paved areas and a decrease in the time of concentration. An increase in ponding area near South Avenue in North St. Paul will be necessary to accommodate this flow.

III.2.7

Wetlands:

In August 1975, the Department of Natural Resources made an investigation of the wetlands in the immediate area of the proposed action and classified the wetlands involved. The DNR uses the U.S. Department of Interior wetlands classification for typing wetlands as shown below:

Inland Fresh Areas

Type 1	Seasonally flooded basins or flats
Type 2	Inland fresh meadows
Type 3	Inland shallow fresh marshes
Type 4	Inland deep fresh marshes
Type 5	Inland open fresh water
Type 6	Shrub swamps
Type 7	Wooded swamps
Type 8	Bogs

The DNR reports that all existing wetlands within the immediate area of the proposed action are either Type 3 or 4 wetlands - shallow or deep fresh marshes.

It appears that the proposed action would directly affect the existing wetland system at 23 points. (See Map page 57) The effect would be 1) construction limits encroaching into the wetland, 2) drainage from the proposed facility into the wetland, or 3) both of the above.

The type of impact will be alteration of the wetland, most likely by fill material or other structural means, and additional surface runoff discharging into 12 existing wetlands or waterways. As reported in previous Section III.2.6, drainage from the proposed action will follow approximately the same pattern as presently exists, however, greater quantities of runoff will result due to greater amounts of non-porous surface.

III.2.8

Stream Modification/Impoundment:

No water impoundment is proposed as a part of the proposed action except for drainage into 12 existing ponding areas as described previously in Section III.2.6.

No diversion, deepening or other modification of a stream or body of water is proposed as a part of the proposed action.

III.2.9

Flood Hazard:

The proposed action does not encroach upon any flood plain. Since most of the proposed route is located at the upper end of the Mississippi River Watershed (See Map page 57), it follows that flood hazards will be minimal or non-existent. Where the proposed action crosses waterways, culverts or other structures, measures adequate to accommodate peak flows will be provided. The crossing of Battle Creek will likely require a 404 permit from the Corps of Engineers.

III.2.10

Water Quality:

This project will adversely affect the water quality of storm-water runoff receptors. The project doubles the number of lane miles on T.H. 120 and the corresponding storm-water runoff constituent loadings. The storm sewer systems required for drainage of T.H. 120 have quite small contributing drainage areas and, therefore, the dilution of runoff constituents is minimal. Constituent concentrations at the discharge points will be high. When compared with the constituent runoff concentrations from the contributory urban areas, however, the highway runoff concentrations are quite low.

Erosion and subsequent sedimentation will occur during construction of this project. However, because the proposed grade closely follows the natural ground, thereby minimizing cuts and fills, the potential for erosion on this project will also be minimized. Temporary erosion control measures should effectively control what erosion will occur.

This project will require placement of fill in several wetland areas adjacent to the roadway. A Corps of Engineers Section 404 Permit will be required.

Fertilizers will be used to improve the growth supportive ability of the soil, if required. A soil test will indicate what nutrients will be required and their rates of application. Because the application is a one-time measure, it should not be a problem on this project.

Herbicides and pesticides will likely not be required on this project because of its urban environment, and will, therefore, not be a problem on this project.

Use of deicing salts on this project will increase because of the additional lane miles. The concentrations will also increase because of minimal dilution in the highway storm sewers.

Traffic-related constituent loadings should also increase because the additional lanes will increase the traffic-carrying capability of T.H. 120. Although the concentrations of several constituents may be quite high, they are generally insignificant when compared to runoff from the surrounding urban area.

The relatively straight alignment and flat grades of the proposed project makes the possibility of accidental chemical spills highly unlikely.

Criteria for a State Oil-Spill Removal Contingency Plan have been developed by the Hazardous Materials Safety Committee. This is an autonomous committee unattached to any government agency and is composed of members from both the public and private sector. The committee has published a booklet which outlines a plan of action in the event of an accidental spill of any hazardous material. They also list the phone numbers of the Environmental Protection Agency, Coast Guard, and Pollution Control Agency for rapid notification in the event of a spill. The carrier has the primary responsibility for such notification.

The Pollution Control Agency, upon notification of an accidental hazardous material spill, will dispatch personnel to supervise the clean-up activity. If the spill is discovered by Mn/DOT Maintenance personnel, they radio the Dispatcher who also notifies the PCA and relays important information relative to the spill (contained in the HMS Committee booklet) to the Maintenance personnel. Mn/DOT Maintenance personnel will work to contain the spill until the PCA personnel arrives.

In the past, quick response by Mn/DOT Maintenance forces has been successful in limiting the area affected by spills.

A Water Quality Report was prepared by the District Nine Hydraulics Section and is available for review at Mn/DOT District Nine offices.

III.2.11

Construction Related Impacts:

Potential problems associated with construction of the proposed action relate to air and water quality, noise, and vibration.

1. Air Quality

Primary potential air quality problems during construction are odors associated with diesel and gasoline exhausts of construction equipment, and possible uncontrolled fugitive dust from grading operations and from excavation and sand storage areas. This will be minimized by proper maintenance of construction equipment and the control of open slopes by wetting or other containment. Extensive cut and fill operations are not anticipated for the project since few significant changes from the existing profile will be made. In the event of seriously limited dispersion conditions, curtailment of construction will be considered.

2. Water Quality

Erosion is the primary cause of any decrease in water quality during construction. The prospect of significant erosion is slight since extensive cut and fill operations are not anticipated. The use of proper construction methods will further minimize any decrease in water quality during construction.

3. Noise

Minnesota Standard Specification for Highway Construction Section 7, Sub-Section 1701, states in part that the Contractor shall comply with all applicable laws, ordinances, regulations, order and decrees in the performance of the construction. This would include any local noise control laws. No unique noise receptors have been identified in the areas that would be impacted by the proposed construction and the construction activity is not expected to generate unusual or excessive noise.

4. Vibration

It is anticipated that grading and leveling will be carried out without blasting and the amount of pile driving will be limited to bridge construction. Therefore, two of the most serious problems associated with construction activity will be non-existent or limited.

III. 3

Summary of Benefits to Land Use and Related Services

III. 3. 1

Fire Access:

The East County Line Fire Station in Maplewood and the proposed fire station in Maplewood south of Lower Afton Road will both have improved and efficient access to emergencies. Also, due to the additional through lane in each direction, plus segregated turning movement facilities, the proposed action will provide more efficient travel time and movement for ambulances, police vehicles and other emergency vehicles.

III. 3. 2

Transit:

The improved facility will benefit proposed express bus facilities improvements at T.H. 212, I-94 and at I-494 and Lower Afton Road. Major benefits will include improved north-south accessibility by automobile and public/private transit vehicles to station areas as well as improved pedestrian access along the T.H. 120 corridor. In addition, school

buses will continue to utilize the T.H. 120 arterial and will benefit from the expanded facility.

III. 3. 3

Industrial/Commercial Developments:

Industrial and commercial developments, existing and proposed, will benefit from the improvement of T.H. 120 in terms of improved access to the developments from T.H. 120 and access along T.H. 120 from the facility sites to metropolitan and regional routes. As these major resource centers develop, traffic generation in the vicinity of the sources will increase along with substantial increases in turning movements, service vehicle functions and consumer vehicle activity. The provision of additional through lanes along with the development of turning lanes will provide more efficient flow to, from and around these resource centers.

The major resource centers in need of improved circulation facilities are the following:

1. Proposed commercial-industrial development east of T.H. 120 between I-694 and T.H. 36; access is restricted primarily to T.H. 120 with close access to metropolitan and regional routes.
2. Entrance to the North St. Paul Central Business District at 7th Avenue immediately south of T.H. 36.
3. Proposed commercial-industrial development east of T.H. 120 at T.H. 212 and extending south to the Chicago and Northwestern Railroad; primary access will be from T.H. 120 and secondary access will be from Granada Avenue extended.
4. T.H. 120 improvements will benefit the small commercial complex at T.H. 120 and Minnehaha Avenue by alleviating hazardous ingress-egress movements and coordinating all turning movements with through traffic flow.
5. The 3-M complex west of T.H. 120 north of I-94 will benefit from proposed improvements in terms of employee and service vehicle access; further benefits will result with improvement of the existing T.H. 120/I-94 interchange area to promote direct or near direct access from 3-M to I-94 without unnecessary residential disruption.

6. The proposed commercial-industrial development east of Century Avenue south of T.H. 120 and west of I-494 will generate major new traffic volumes in the future; assuming no access to I-494 at Century Avenue most volumes associated with the complex will occur along T.H. 120 from I-94 to I-494. Residential districts north and east of T.H. 120 will also contribute major traffic volumes to T.H. 120 thus compounding a potential congestion problem. With proper turning movements along with an expanded road facility, efficient traffic movement in and around this development area will be achieved. In addition, the extension of Hadley Avenue south of T.H. 120 paralleling I-494 will contribute to greater efficiency in traffic flow, better access to I-494 (thus protecting residential areas) and relieving traffic pressure from Century Avenue and T.H. 120.
7. The proposed Dayton/Hudson regional shopping center located in the northeast quadrant of I-494 and Lower Afton Road will generate major new traffic volumes in the future. Construction is scheduled to start in 1979 on the 1,100,000 square foot facility.

III. 3. 4

Pedestrian Environment:

Proposed pedestrian grade separated facilities may be available as a result of the proposed action and, if so, will be constructed with the proposed action. Potential locations for these pedestrian facilities are the following:

1. Immediately south of the I-694/T.H. 120 interchange on T.H. 120; this link would connect Joy Park with the Oakdale trail system and subsequently provide access to Silver Lake, Dorothy Park and Silver Lake Park on the west.
2. Immediately south of the partial T.H. 212 intersection with T.H. 120; this would connect the proposed Maplewood trail system to that of Oakdale's and provide access to the west of T.H. 120 to a proposed Ramsey County park, Hill Murray Parochial High School, St. Paul Priory and Maplewood's open space system.
3. Access through the I-94/T.H. 120 interchange area is limited and not improved as a result of the proposed action; the 3-M facility generates major pedestrian flow through the I-94 portal.

4. Halfway between Upper and Lower Afton Roads connecting the Woodbury trail system to open space systems in Maplewood.
5. On Lower Afton Road immediately east of the Park Hills development; this would coincide with the Woodbury trail system.

III. 3. 5

Service Roads and Neighborhood Protection:

Service roads can generally provide improvements to traffic flow, ingress-egress and to the reduction of hazardous traffic movements. New service roads as well as the retention of the existing two-lane facility as a service road will present positive opportunities to preserve residential neighborhoods and districts from through traffic and other potentially unsafe conditions.

All of the proposed service roads will strengthen the boundaries of residential districts and will effectively eliminate non-residential traffic movements.

SECTION IV: ALTERNATIVES

IV.1

Description of Alternatives

As a response to the needs and critical issues identified as a part of the overall facility planning process, six alternatives were developed consisting of three modifications of the proposed action (A: A₁, A₂, A₃,); a "do-nothing" alternate (A₀); and, two-sub-alternates which conceptually respond to environmental needs and issues (B: Intermittent Auto/Transit Concept; C: Serpentine Alignment).

The remainder of this section summarizes location and design characteristics of each alternative.

IV.1.1

Alternative A₁: Existing Alignment Minor Modified Urban Section (Diagrams on following pages).

1. Existing alignment is utilized for roadway.
2. Four lane divided highway with median.
3. Public and private access basically retained.
4. Urban section containing no shoulders.
5. Left turn lanes provided in median at major intersections.
6. Right turn lanes provided at major intersections where traffic patterns dictate.

IV.1.2

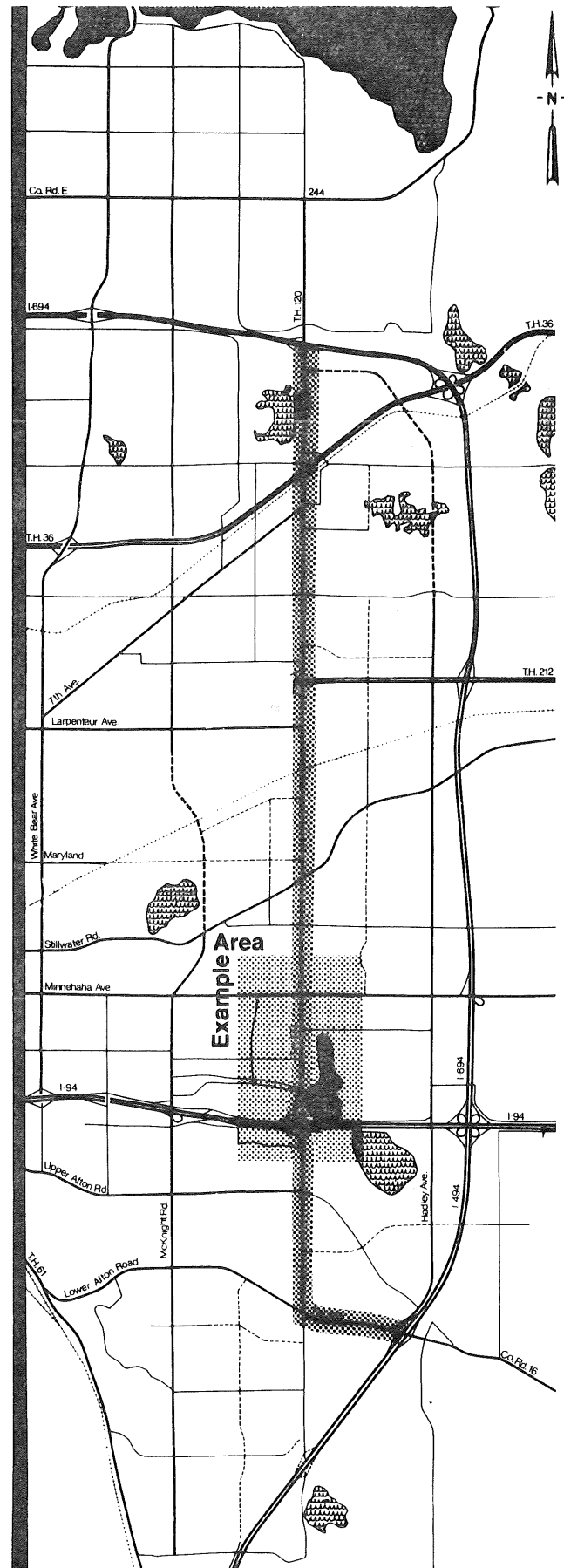
Alternative A₂: Existing Alignment Major Modified Urban Section (Diagrams on following pages).

1. Existing alignment is utilized for frontage road.
2. Four lane divided highway with median.
3. Public and private access restricted to coordinated, control intersections.
4. Urban section containing no shoulders.
5. Left turn lanes provided in median at major intersections.
6. Right turn lanes provided at major intersections where traffic patterns dictate.
7. Service roads provide access to adjacent facilities in many areas.
8. Cul-de-sac facilities are used to restrict access to T.H. 120.

IV.1.3

Alternative A₃: Existing Alignment Major Modified with Shoulders.

1. Same as A₂ except that shoulders are provided on both sides of facility.

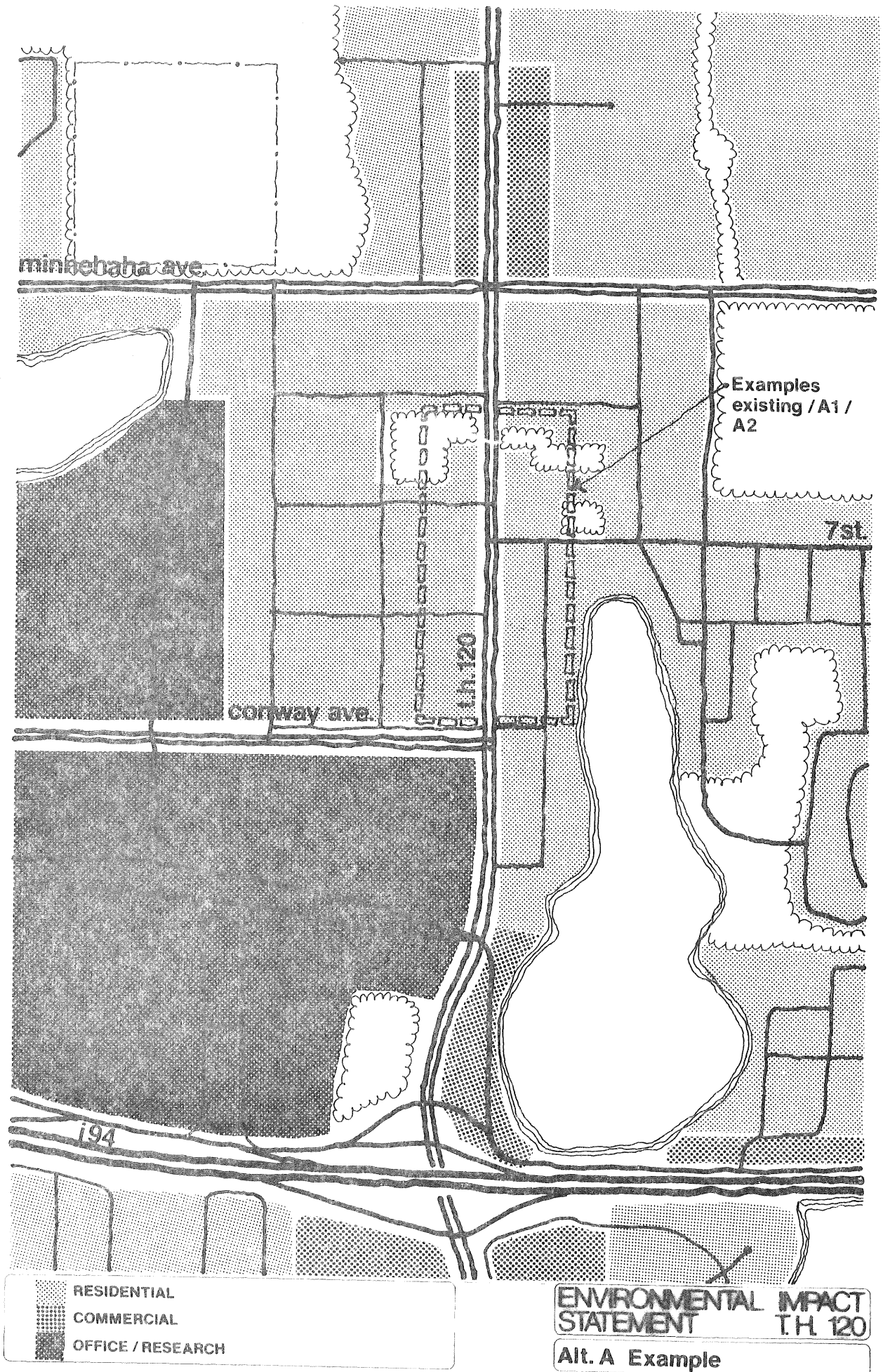
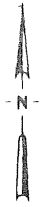


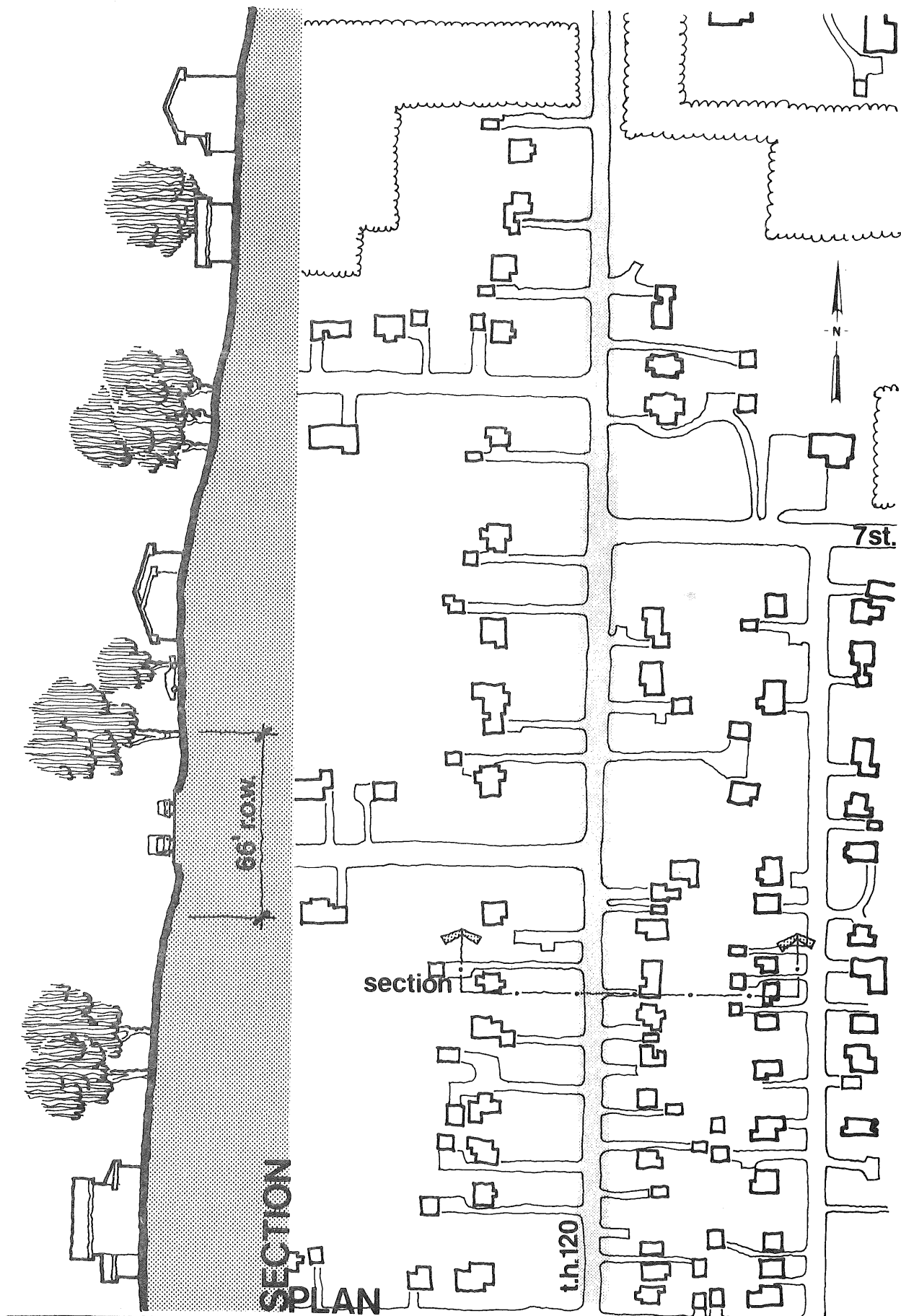
Improvement on Existing Alignment

0 1000 3200

ENVIRONMENTAL IMPACT
STATEMENT T.H. 120

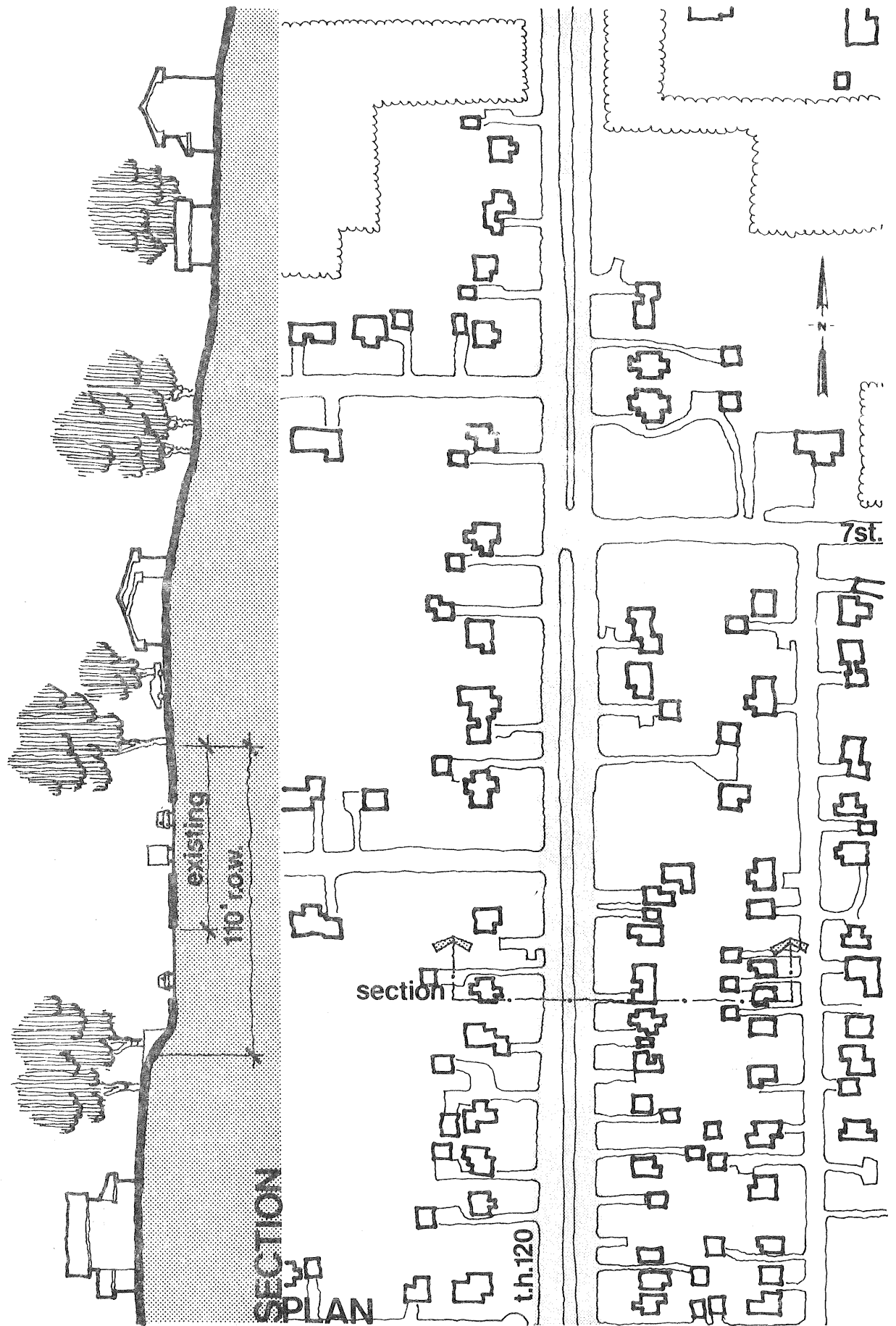
Alternate A





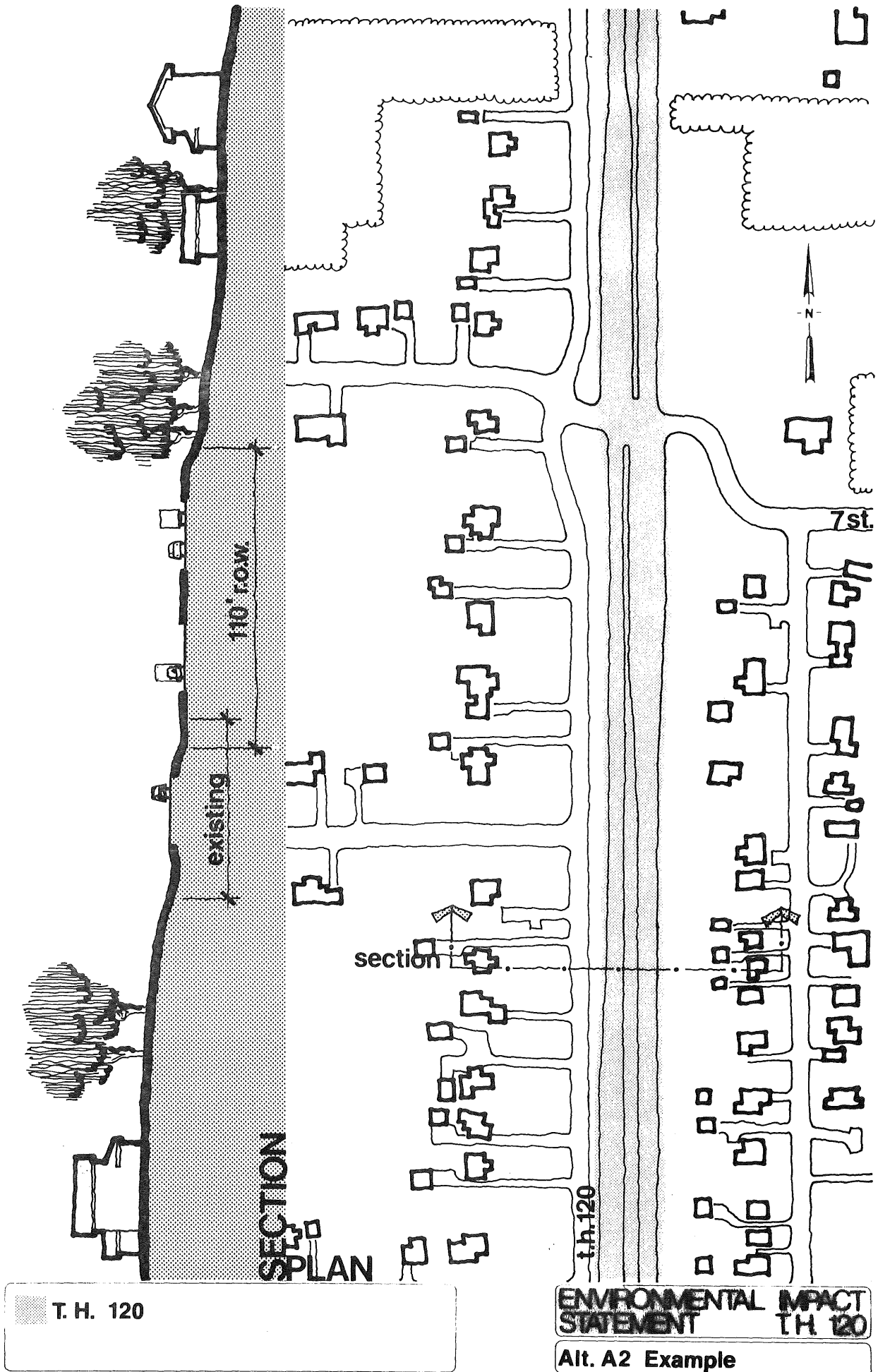
T. H. 120

ENVIRONMENTAL IMPACT
STATEMENT T. H. 120
Existing Condition



T.H. 120

ENVIRONMENTAL IMPACT
STATEMENT T.H. 120
Alt. A1 Example



2. Public and private access permitted from shoulders at selected points.

IV. 1. 4

Alternative A₀: "Do-nothing"

1. Existing alignment remains in its present form.
2. Two lane non-divided highway.
3. Public and private access is unrestricted.
4. Any improvements, such as turn lanes, would be minimal and most likely implemented at local cost.

IV. 1. 5

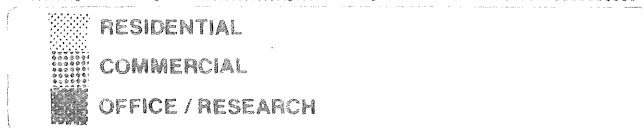
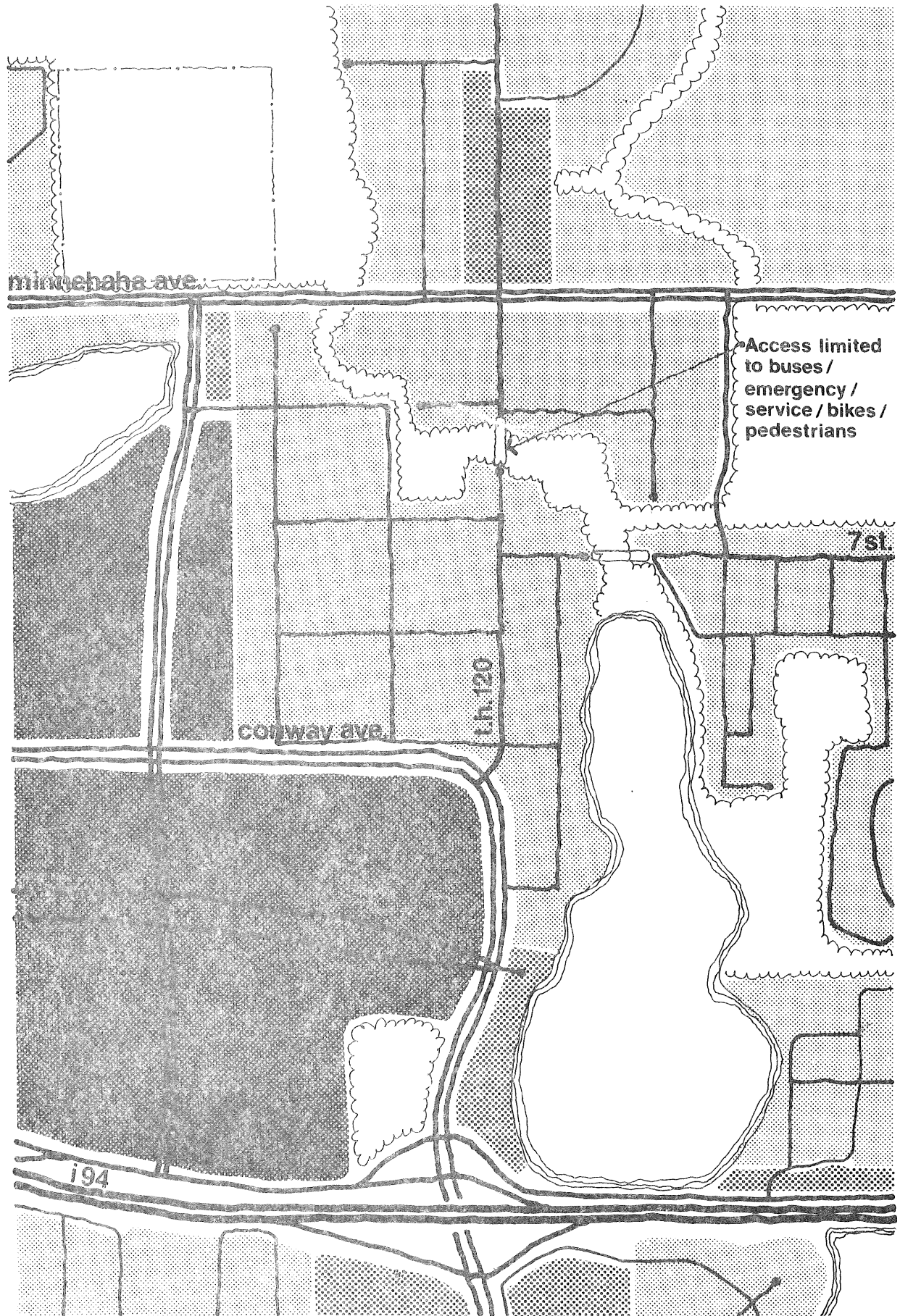
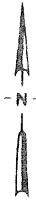
Alternative B: Intermittent Auto/Transit Concept (Diagrams on following pages).

1. Existing alignment is utilized for roadway but has varying circulation functions.
2. Four lane divided highway with median combined with two lane transit/service road characteristics for specific segments of alignment.
3. Public and private access restricted to coordinated control intersections for four lane segments in addition to limited-vehicle restrictions for two lane segments; local neighborhood traffic would be permitted on two lane segments along with public service and transportation vehicles.
4. Roadway sections for four lane segments could be either the urban section or the section with shoulders.
5. Left turn lanes provided in median at major intersections where applicable.
6. Right turn lanes provided at major intersections where traffic patterns dictate.
7. Service roads provide access to adjacent facilities along four lane segments where necessary.
8. Cul-de-sac facilities are used to restrict access to T.H. 120.
9. Segments of the existing T.H. 120 roadway are to be utilized as service roads.
10. Major traffic flows would be diverted at specified points to parallel north-south roadways by means of east-west arterials.

-
- The map illustrates the proposed Interstate 35 (I-35) corridor through the Minneapolis-St. Paul area. The corridor is shown as a thick, dark line running north-south. Numbered markers 1 through 6 are placed along this corridor to indicate specific locations. The 'Example Area' is highlighted with a shaded pattern, covering a central portion of the map. The map includes major highways such as I-94, I-494, I-694, and I-120. Local streets like White Bear Ave, 7th Ave, Larpenteur Ave, Stillwater Rd, Minnehaha Ave, Upper Allen Rd, Lower Allen Road, McKnight Rd, and Hadley Ave are also shown. Water bodies are depicted with a wavy pattern. A north arrow is located in the top right corner.

A number line starting at 0 and ending at 3200. There is a tick mark at 1600. A horizontal line segment is drawn from 0 to 1600. At 1600, there is a vertical line segment going up, then a horizontal line segment going right to 3200, and finally a vertical line segment going up with an arrowhead.

Alternate B



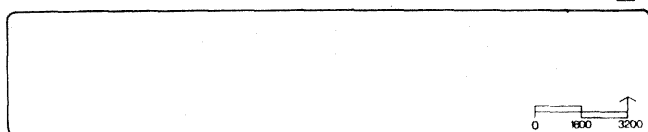
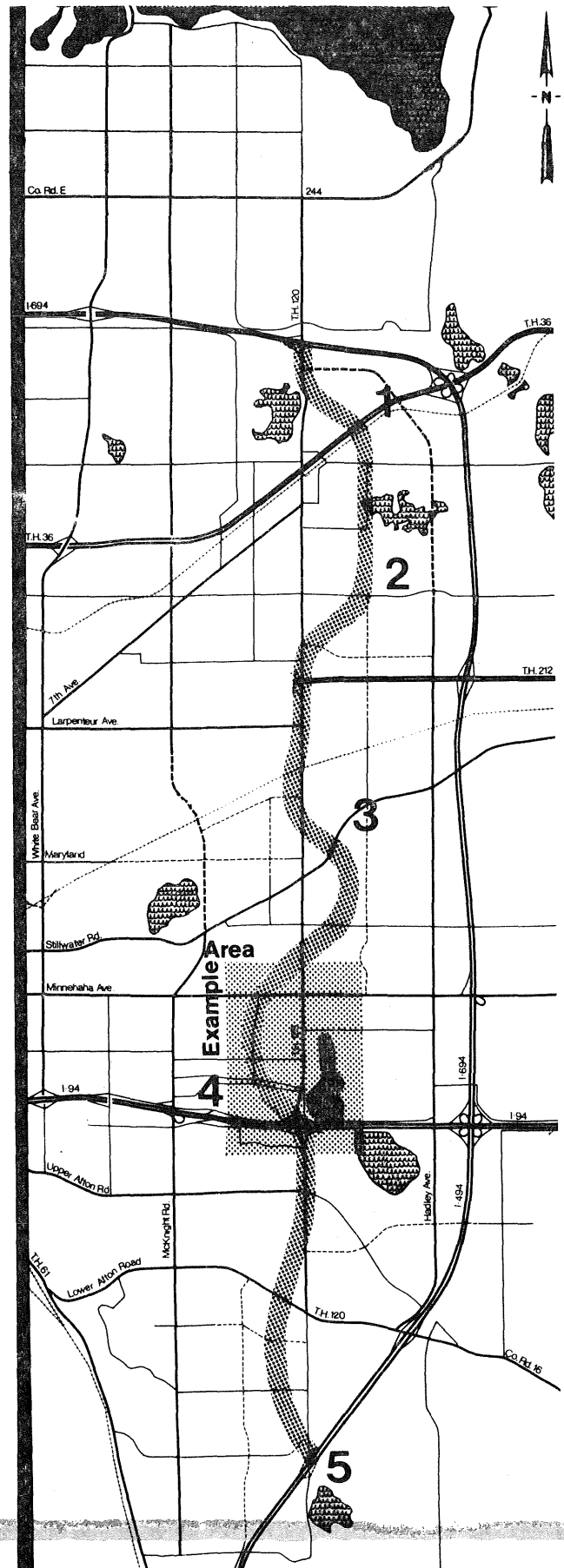
ENVIRONMENTAL IMPACT
STATEMENT T.H. 120
Alt. B Example

IV. 1.6

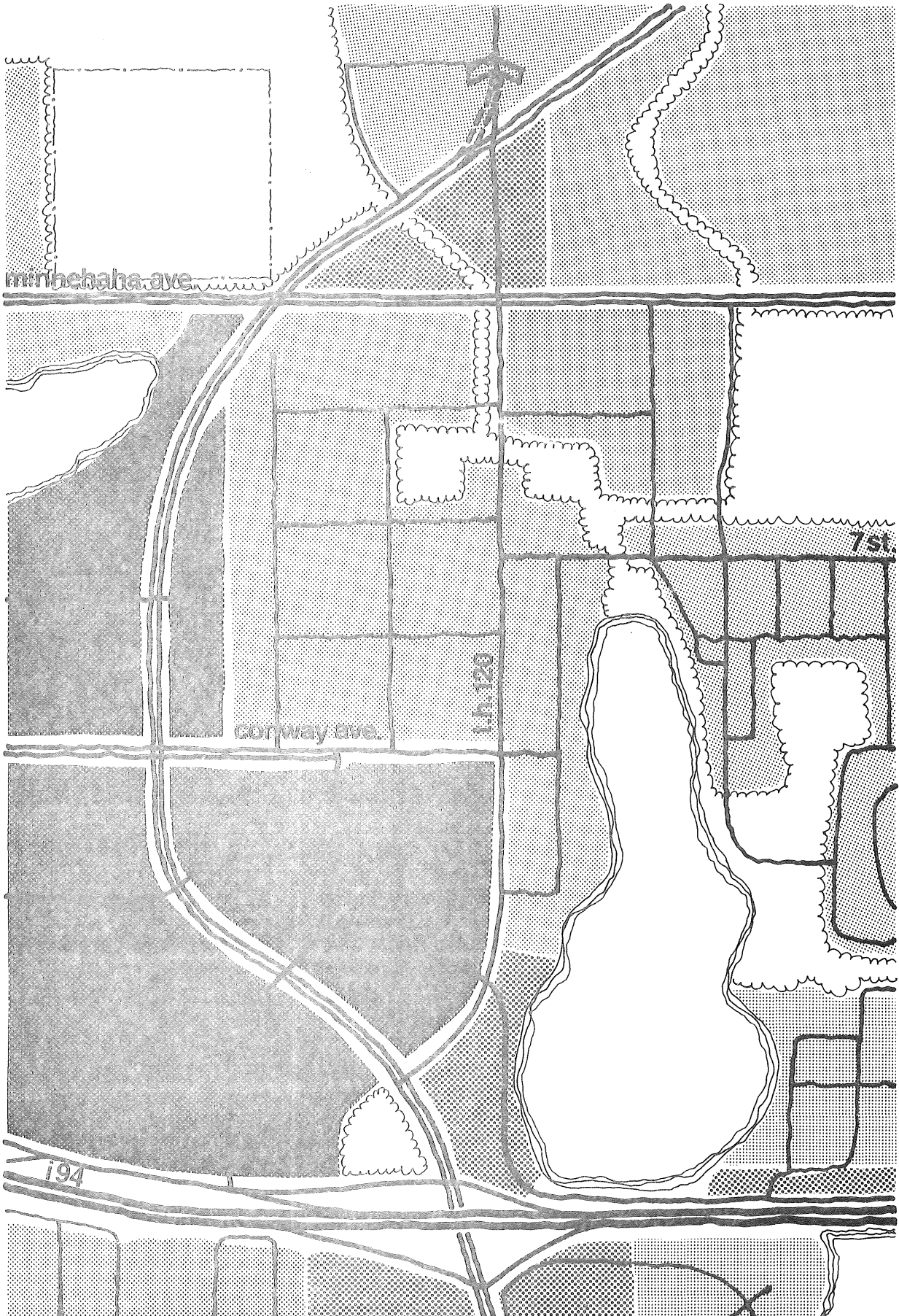
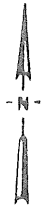
Alternative C: Serpentine Alignment (Diagrams on following pages).

1. New alignment is utilized for improvement with approximately half of alignment occurring within each county.
2. Four lane divided highway with median.
3. Public and private access restricted to coordinated control intersections.
4. Shoulders provided along both sides.
5. Left turn lanes provided in median at major intersections.
6. Right turn lanes provided at major intersections where traffic patterns dictate.
7. Service roads provide access to adjacent facilities in many areas.
8. Cul-de-sacs are used to restrict access to T.H. 120.
9. Segments of the existing T.H. 120 facility would revert to neighborhood collector streets and service roads.

1. New location for T.H. 36/T.H. 120 intersection.
2. Roadway skirts existing residential areas.
3. Road circumvents commercial area and provides better organization of intersection facilities.
4. Roadway goes through 3-M property to provide direct access to prime user; also skirts residential area to the east and defines the west shore Tanners Lake neighborhood.
5. Possible connection of I-494 at Century Boulevard.



ENVIRONMENTAL IMPACT STATEMENT
T.H. 120
Alternate C



	RESIDENTIAL
	COMMERCIAL
	OFFICE / RESEARCH

ENVIRONMENTAL STATEMENT	IMPACT I.H. 120
Alt. C Example	

IV. 2

Summary of Environmental Effects

The series of maps denoted Land Use A (1-3), Land Use B (1-3), and Land Use C(1-3) denote the land use frontage by type on T.H. 120 by 1995 according to the assembled comprehensive plans of the primary communities. These maps and their land uses, both existing and proposed, reference the effects on the road of adjacent uses and the effects on these uses from the road.

IV. 2. 1

Existing Alignment Alternatives (A): (Diagrams following)

1. Alternative A₁: Existing Alignment Minor Modified Urban Section.

a. Overall Beneficial Effects

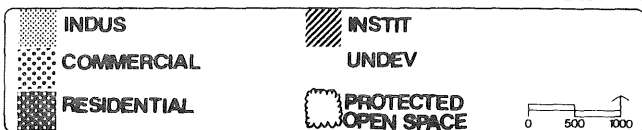
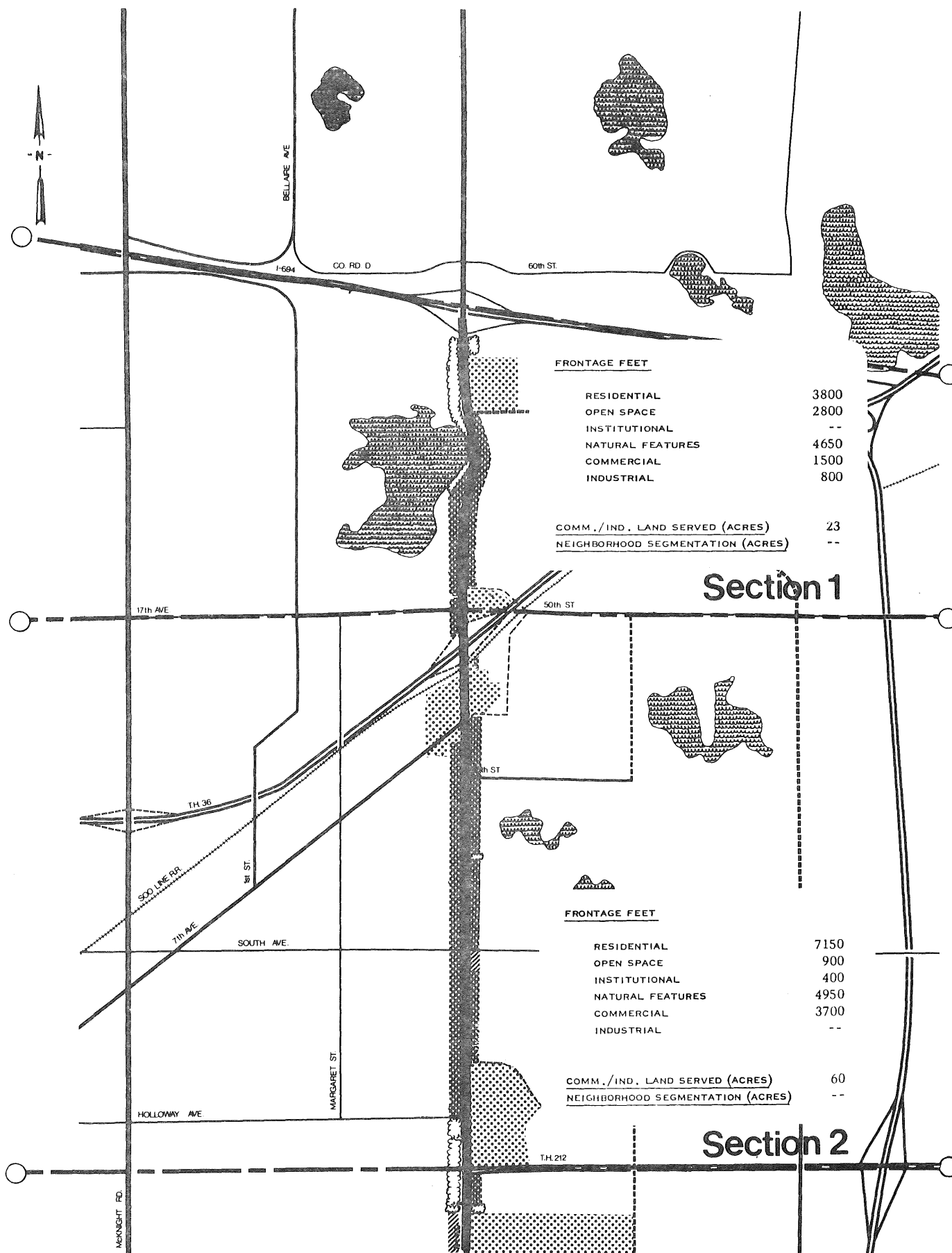
Beneficial effects of A₁ include reduced traffic congestion at peak hour travel period due to additional through lanes as well as left turn lanes at key inter-sections. The proposed 'urban' section reduces the amount of land needed for right-of-way. Unrestricted public and private access reduces motorist travel time. The added lanes contribute to safer and more efficient access to major employment centers such as 3-M Commercial developments which will benefit from increased exposure and access.

b. Overall Adverse Effects

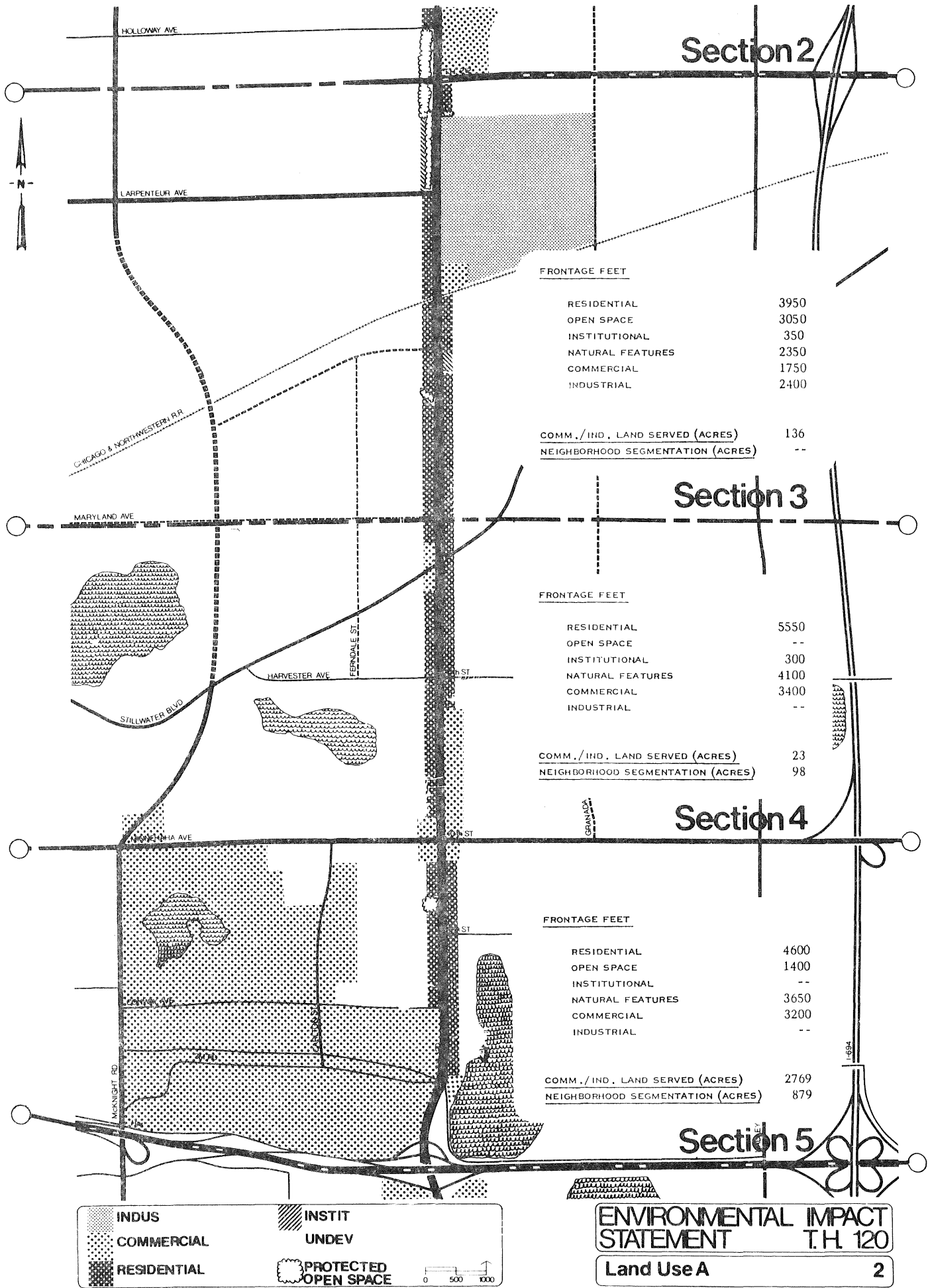
The expanded right-of-way no matter how limited will require the acquisition of residential, commercial and institutional property. Due to the lack of shoulders, right hand turning movements coupled with unrestricted access will generate potential safety hazards and will disrupt through traffic flows in the curb lane. Many residential structures are affected by both acquisition and increased noise pollution. Numerous unrestricted access points reduce the potential use of and effectiveness of noise pollution barriers. Natural features such as trees, shrubs and other plantlife will be removed.

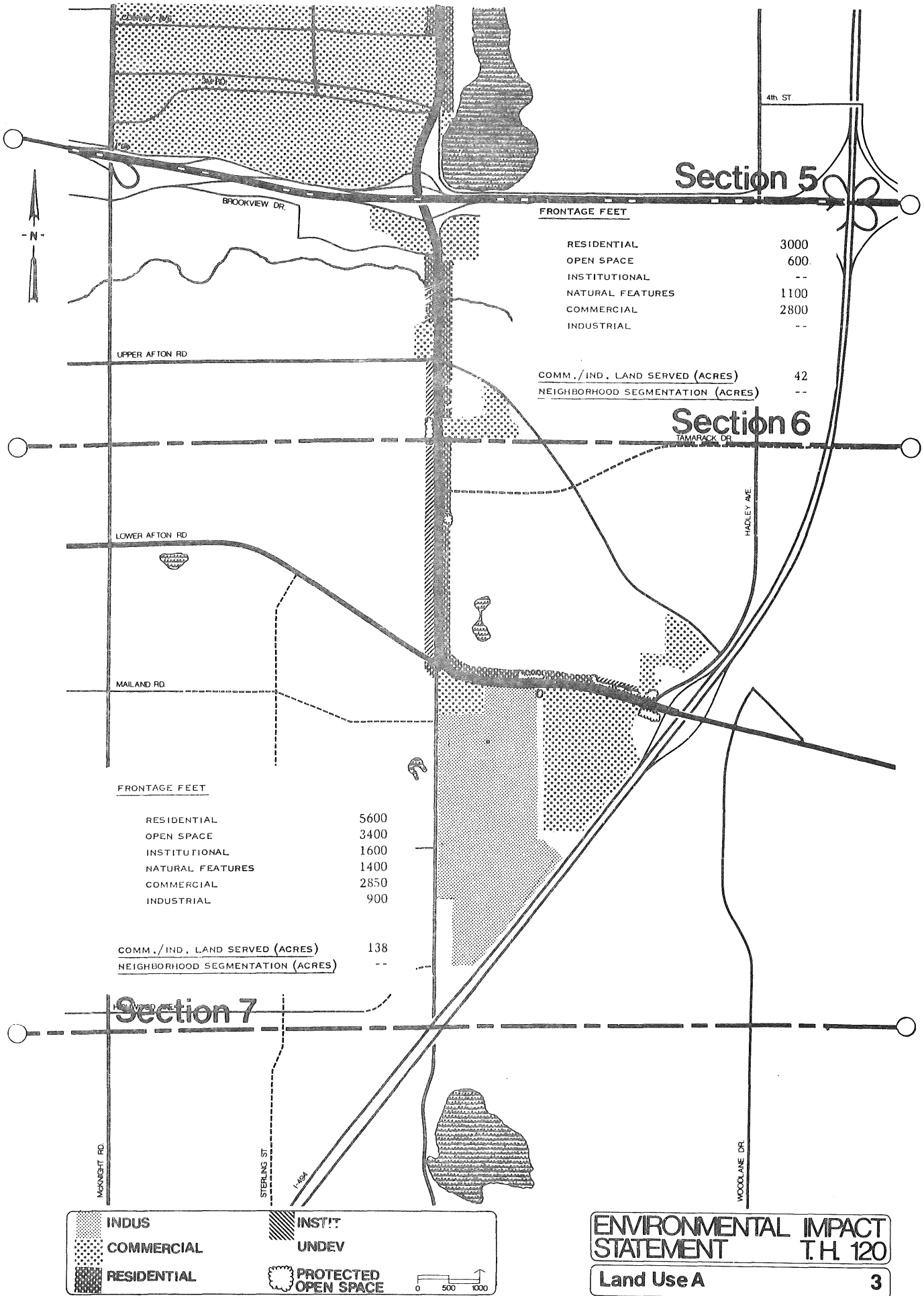
c. Data - Alternative A₁

Residential structures acquired	40
Commercial structures acquired	9
Trees removed	625



ENVIRONMENTAL IMPACT
STATEMENT T.H. 120
Land Use A 1





Wetlands filled	1.8 acres
Water areas filled	.12 acres
Noise impact	187 homes

Frontage Feet Served:

Residential	33,650 feet
Open Space	12,150
Institutional	2,650
Natural Features	22,200
Commercial	19,200
Industrial	4,100

Commercial/Industrial Land Served
in Acres

3,191 acres

Neighborhood Segmentation

977 acres

2. Alternative A₂: Existing Alignment Major Modified Urban Section.

a. Overall Beneficial Effects

Beneficial effects of A₂ include as A₁ a reduction in traffic congestion during peak hour travel periods due to the increased number of lanes and key left and right turn lanes where needed. In addition, the restriction of access to key intersections reduces safety hazards and eliminates numerous turning movements which hamper through traffic flow. The use of service roads and cul-de-sacs reduces safety hazards while restricting unnecessary through traffic from residential neighborhoods.

Air pollution will not be a significant factor in this improvement.

b. Overall Adverse Effects

Due to the expanded right-of-way and added service roads, the acquisition of residential, commercial and institutional property will be necessary. The lack of shoulders increases safety hazards due to disabled vehicles. Also, trees, wetland areas and other forms of plantlife are disrupted by the proposed improvement. Noise pollution adversely affects the residential structures adjacent to the roadway.

c. Data - Alternative A₂

Residential structures acquired	61
Commerical structures acquired	9
Trees Removed	940
Wetlands filled	3.9 acres
Water areas filled	.14 acres
Noise impact	163 homes

Frontage Feet Served:

Residential	33,650
Open Space	12,150
Institutional	2,650
Natural Features	22,200
Commerical	19,200
Industrial	4,100

3. Alternative A₃: Existing Alignment Major Modified with Shoulders

a. Overall Beneficial Effects

Alternative A₃ combines design elements of A₁ and A₂ in that public and private access is permitted along the facilities but only from shoulders. This design allows for undisrupted through traffic flow while simultaneously allowing space for disabled vehicles and vehicles making turning movements from the right-of-way via shoulders. The use of service roads and cul-de-sac facilities reduce through traffic in residential neighborhoods and provide a safer more efficient circulation system.

Access to employment centers and to commerical and institutional facilities is increased as a result of the improvement without undue traffic disruption to residential areas. Alternate A₃ provides the most extensive protection of Silver Lake due to its relocation further east of the present alignment thus allowing more open space along the lake and less danger of water contamination from road oriented pollutants. Air pollution is not a major adverse factor.

b. Overall Adverse Effects

Alternative A₃ requires the most amount of adjacent land for the expanded right-of-way. The addition of

shoulders along with service road facilities requires the acquisition of more residential structures than any of the other A alternatives. Noise levels will not appreciably change from those of A₁ and A₂. The disruption to natural features along the right-of-way is more extensive in A₃ than in alternatives A₁ and A₂.

c. Data - Alternative A₃

Residential Structures acquired	73
Commerical structures acquired	11
Trees removed	1,137
Wetlands filled	5.1 acres
Water areas filled	.66 acres
Noise impact	163 homes

Frontage Feet Served:

Residential	33,650 feet
Open Space	12,150
Institutional	2,650
Natural Features	22,200
Commercial	19,200
Industrial	4,100

4. Alternative A₀ "Do-Nothing"

a. Overall Beneficial Effects

Alternative A₀ would consist of the existing alignment with no major improvements with the exception of turn lanes at key intersections and improved signalization. Due to the lack of any expansion of right-of-way in A₀, no measurable acquisition of residential, commerical or institutional land or structures will take place. Unrestricted access would remain to all facilities and no disruption to existing natural features would occur.

b. Overall Adverse Effects

Based on traffic need data compiled by Mn/DOT and Ramsey and Washington Counties, improvement and upgrading of the facility is necessary to reduce congestion along the highway particularly during peak hour travel periods. In addition, major industrial facilities such as the 3-M

Company generate major traffic volumes during peak hours which the existing facility cannot efficiently and safely distribute. Also, with no major improvement in drainage facilities along the route, potential for adverse runoff of pollutants remains a hazard to wetlands and other water ponding areas.

The proposed land use in the four primary communities (Maplewood, North St. Paul, Oakdale and Woodbury) adjacent to the facility indicates substantial commercial and residential developments will eventually be established along the route. Improved access to these facilities will be necessary at some time in the future to assume safe and efficient circulation along T.H. 120.

c. Data - Alternative A₀

Residential structures	0
Commercial structures acquired	0-5*
Trees removed	0
Wetlands filled	0 acres
Water area filled	0 acres
Noise impact	246 homes

Frontage Feet Served:

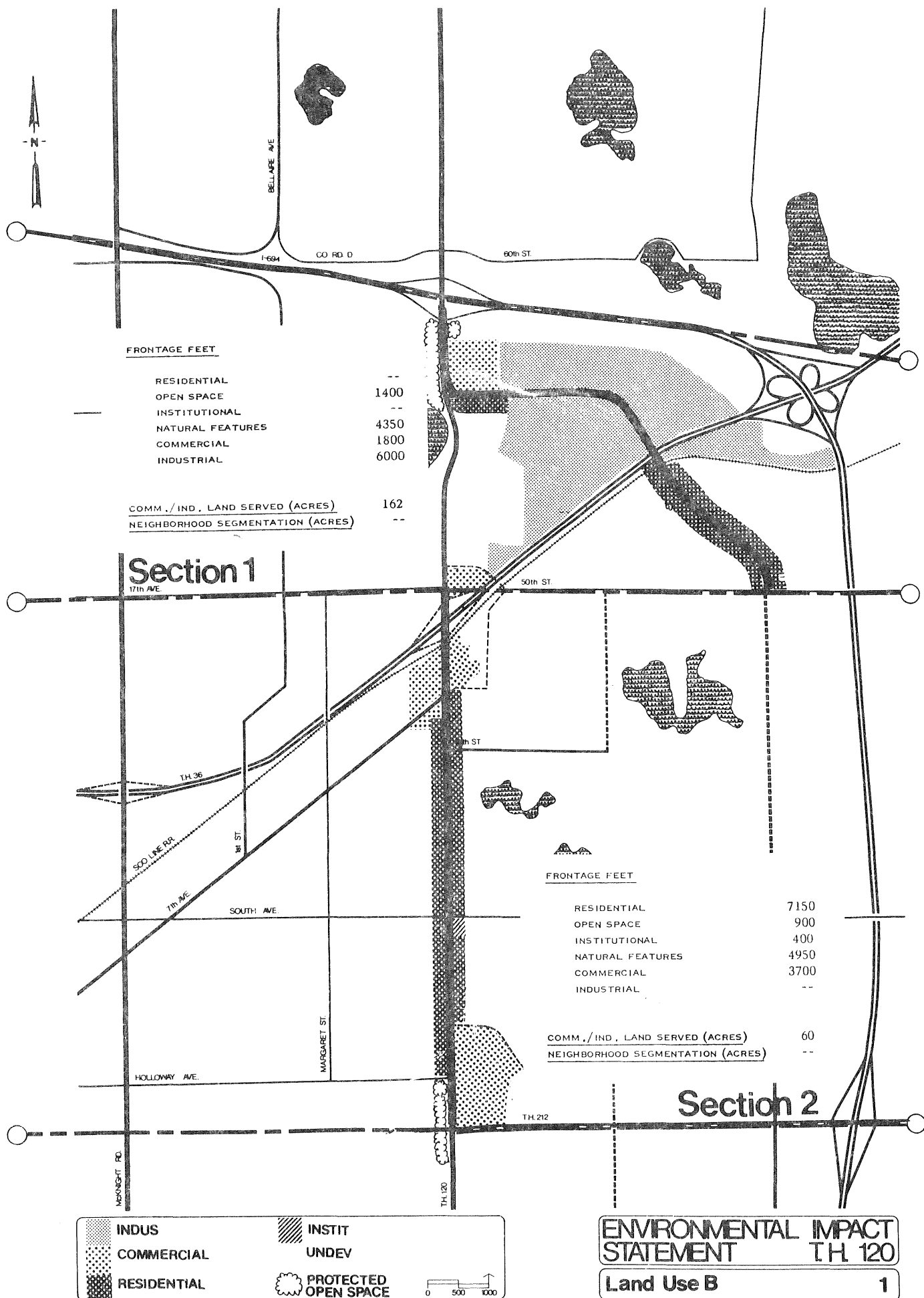
Residential	33,650 feet
Open Space	12,150
Institutional	2,650
Natural Features	22,200
Commercial	19,200
Industrial	4,100

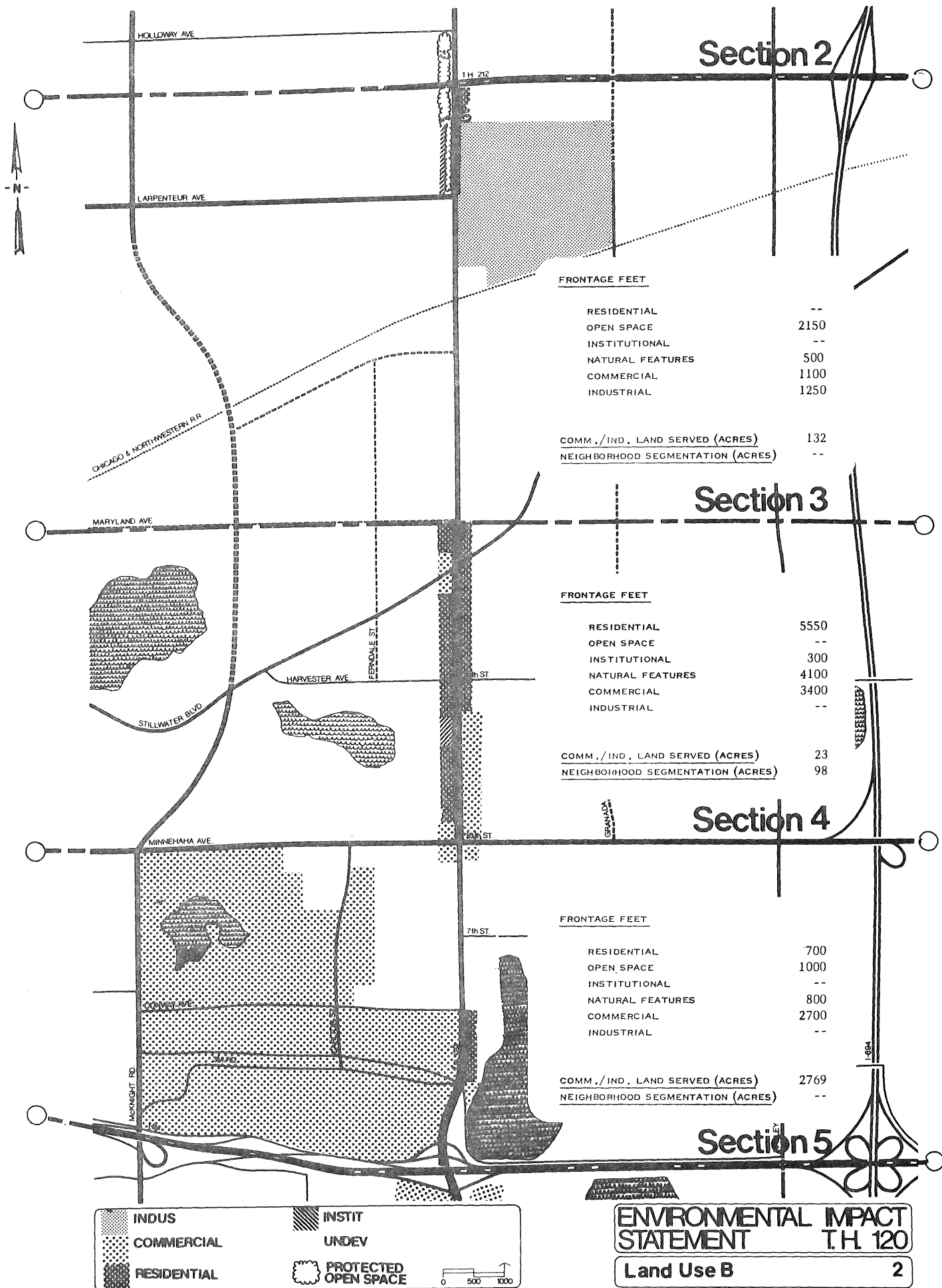
* depends on location of turn lanes

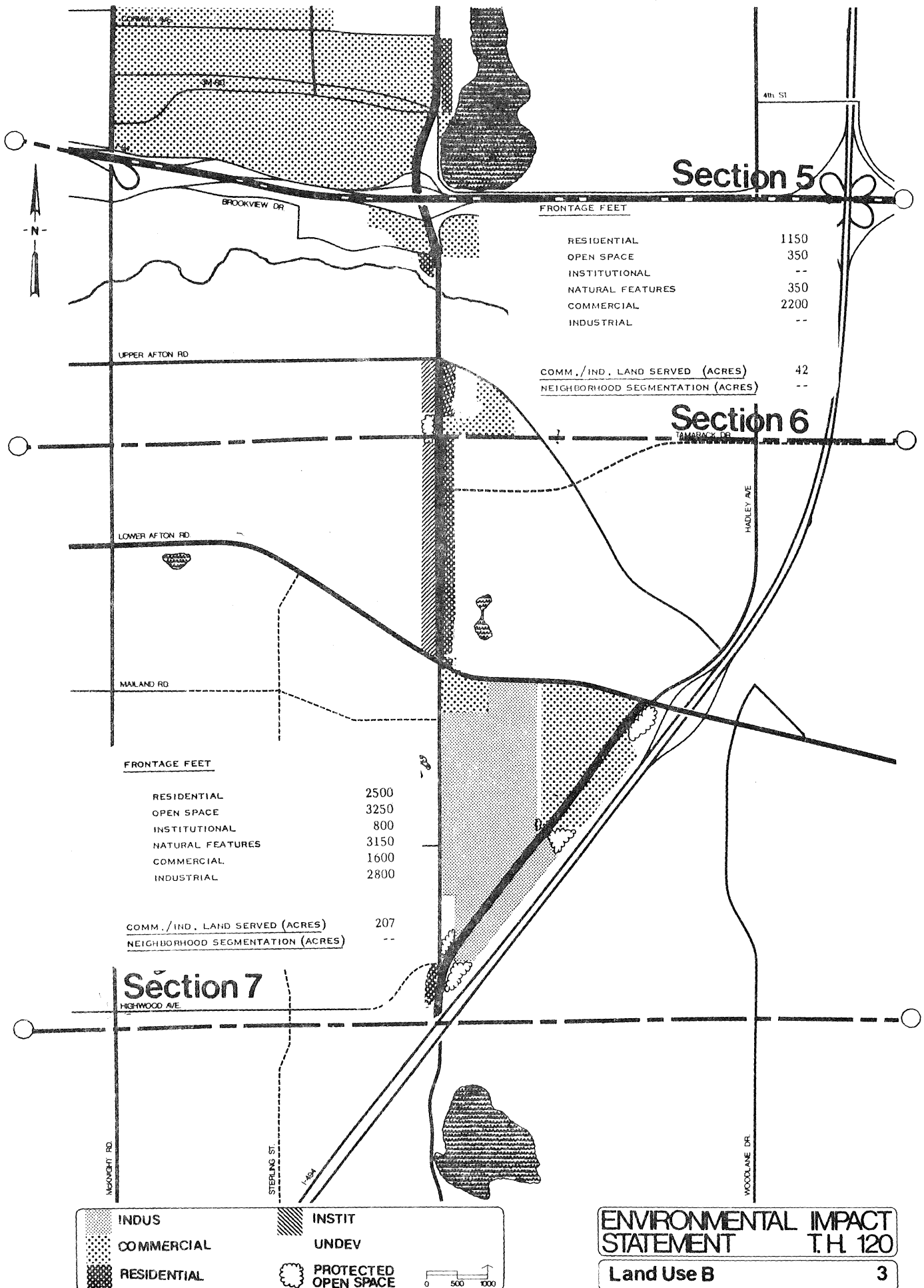
5. Alternative B: Intermittent Auto/Transit Concept
(Assumes a combination of "do-nothing" and A₃ alternatives)
(Diagrams on following pages)

a. Overall Beneficial Effects

Alternative B combines a "do-nothing" alternate with that of a major improvement. The segments of the facility which are improved connect industrial and commercial facilities to major east-west arterials and highways which in turn are connected to I-494/694 on the east and major arterials on the west.







This alternative directs major traffic flows to parallel inter-community and regional routes. Major residential areas are protected from through traffic flows and from truck traffic. In addition, the full length of the T. H. 120 route is utilized as a transit corridor for buses (express and local) and private transit vans (such as the 3-M van program). This alternate decreases construction costs and land acquisition as well as reduces noise pollution impacts for many residential segments of the route.

It preserves residential districts as well as lessens impacts on natural resources adjacent to the facility.

This alternative redefines the function of arterials parallel to interstate highways by redistributing inter-community traffic to the interstate. Also, the full length of T. H. 120 would remain as a corridor for emergency vehicles and local residential traffic.

b. Overall Adverse Effects

Alternative B diverges from the standard arterial system and the Metropolitan Transportation Program for arterials. Difficulties arise in regulating the type of traffic which would be permitted to use the auto/transit corridor. Signage of the two lane segments would be difficult in terms of preventing through traffic flows. Also, traffic diverted to other north-south arterials will cause increased traffic flows on those arterials.

c. Data - Alternative B

Residential structures acquired	46
Commercial structures acquired	5
Trees removed	612
Wetlands filled	3.2 acres
Water areas filled	0 acres
Noise impact	113 homes
Frontage Feet Served:	
Residential	17,050
Open Space	9,050
Institutional	1,500
Natural Features	18,200
Commercial	16,500
Industrial	10,050
Commercial/Industrial Land Served in Acres	
Neighborhood Segmentation	98 acres

d. Jurisdictional Effects

Alternative B does not meet the turnback requirements of the Department of Highway and Trunk Highway System

regulations as specified in Minnesota statutes, sections 161.082 subdivisions 1 and 2, 161.16 subdivision 4 and 161.161. In addition, Alternative B does not meet the requirements for the Metropolitan Council Transportation Planning Program TPP Class II arterial.

6. Alternative C: Serpentine Alignment (Diagrams following)

a. Overall Beneficial Effects

Alternative C is a continuous upgraded facility similar to A₁, A₂ and A₃. The differences consist of the serpentine alignment, which bypasses major residential areas and provides direct access from I-94 to the 3-M Company properties.

b. Overall Adverse Effects

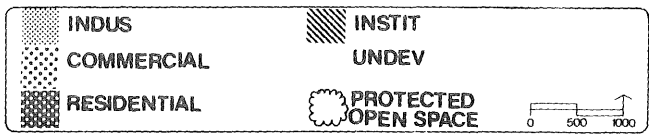
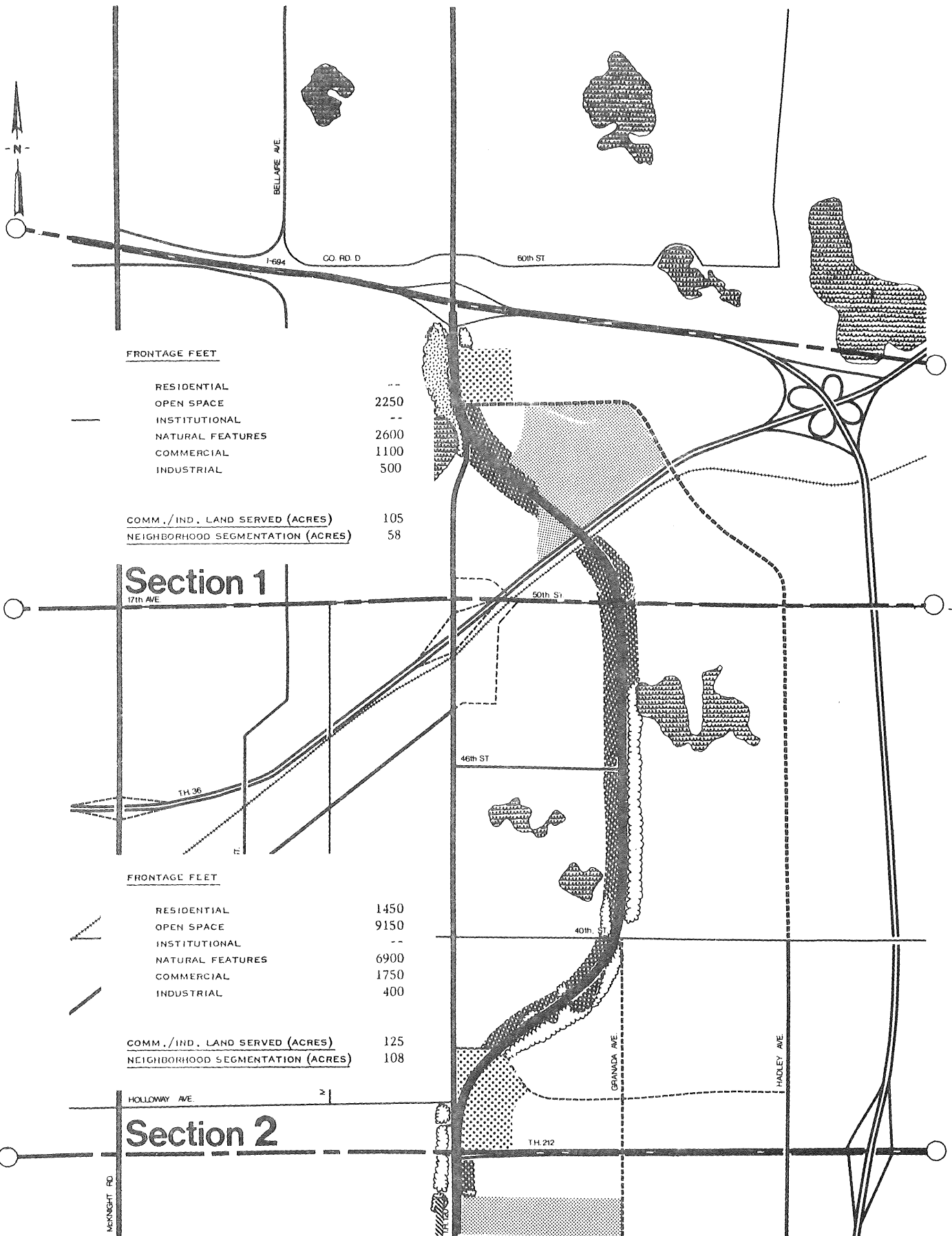
This alternative which bypasses the developed residential areas along T.H. 120, will have to be located through major wetland areas and future residential land. In addition, future land use patterns may be adversely affected by the new alignment, encouraging new commercial growth in otherwise residential zones. Intersection realignments also present difficulties due to the new alignment of T.H. 120.

c. Data - Alternative C

Measurements for impacts related to Alternative C are difficult to obtain due to a new alignment and undeveloped land areas. However, an estimated 28 structures would be acquired and 29 would receive significant noise impact. In addition, 22,150 feet of natural features and protected open space would be exposed to the new arterial.

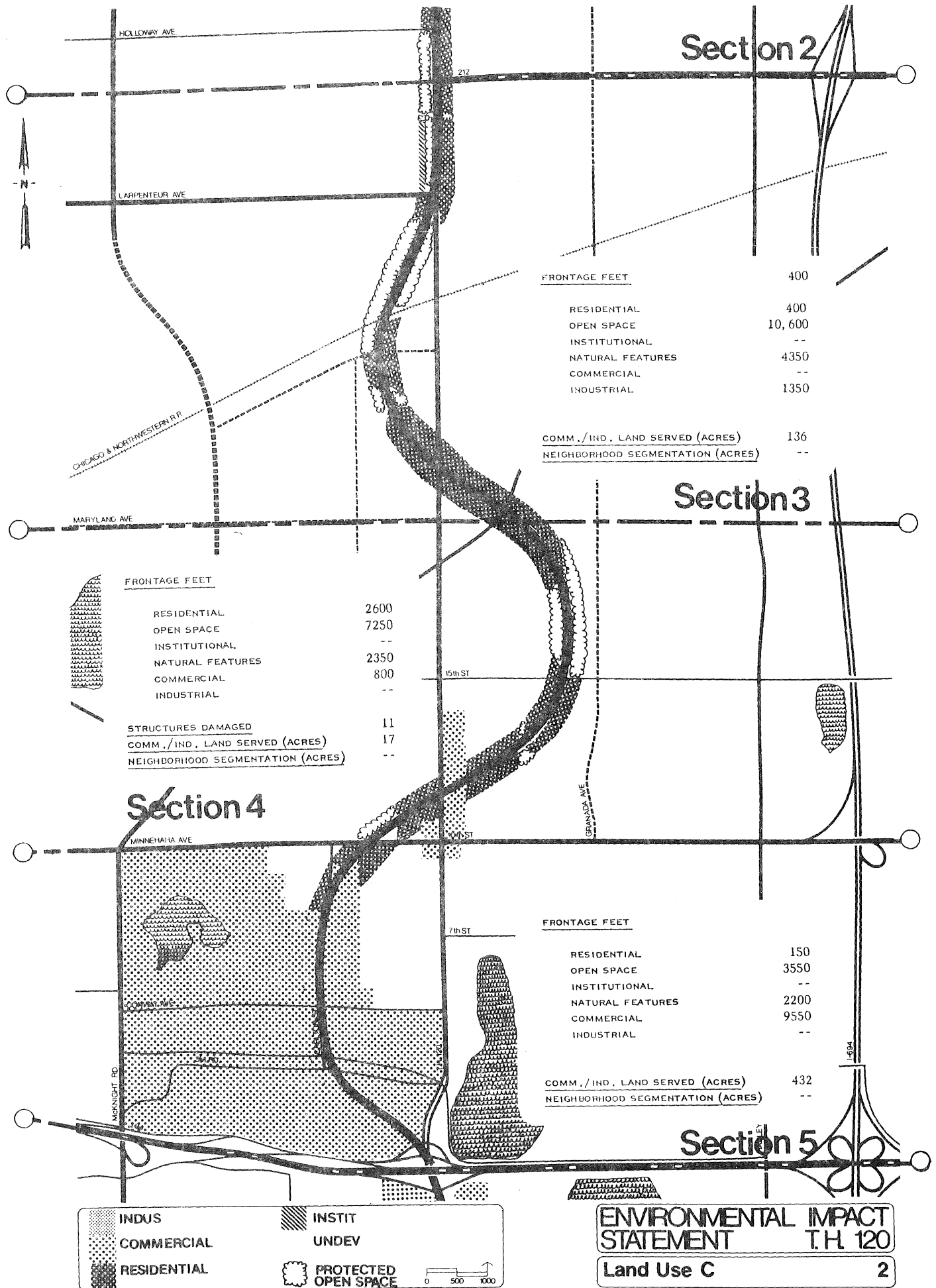
Frontage Feet Served:

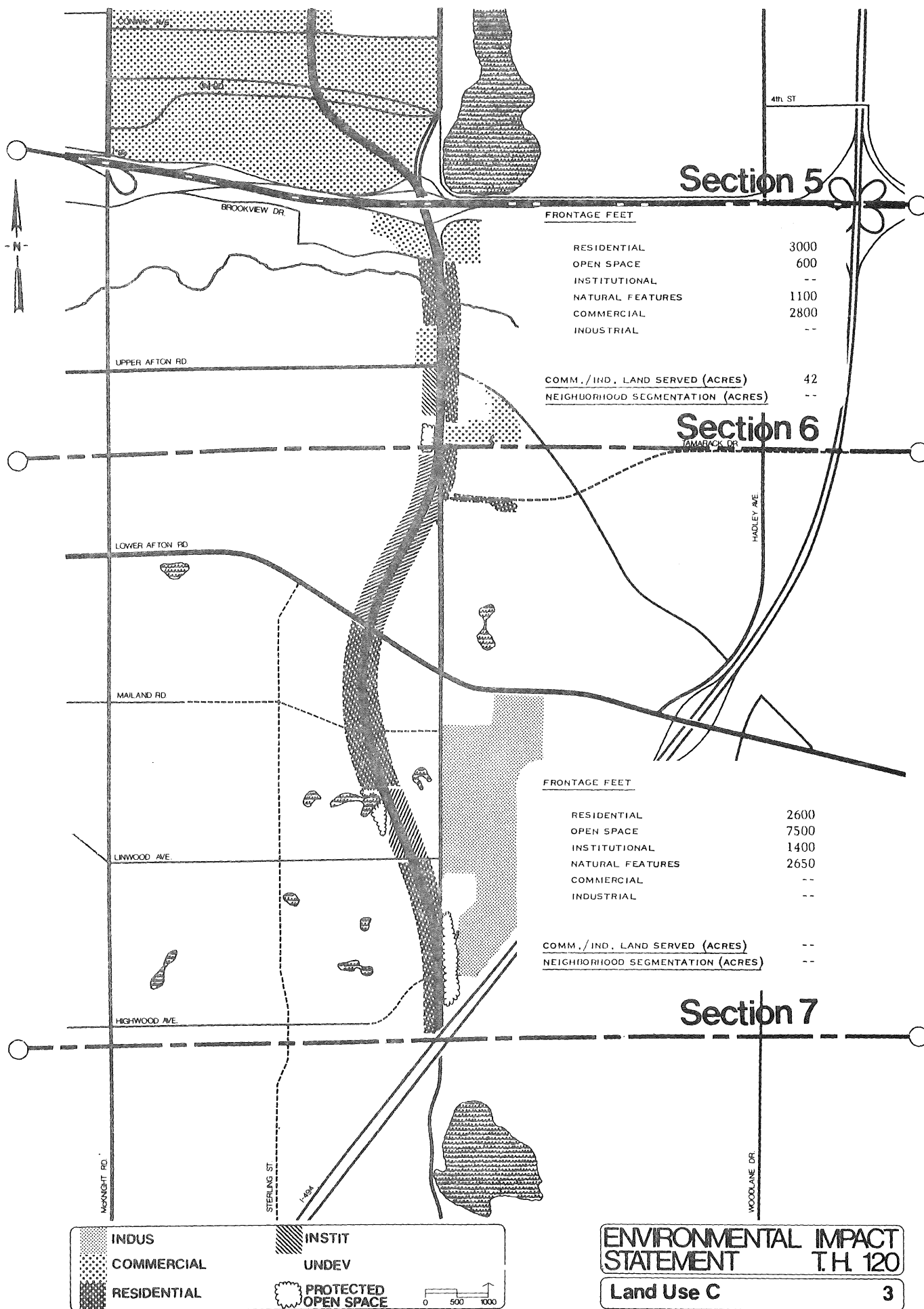
Residential	10,200 feet
Open Space	38,900
Institutional	1,400
Natural Features	22,150
Commercial	16,000
Industrial	2,250



ENVIRONMENTAL IMPACT
STATEMENT T.H. 120

Land Use C 1





Commercial/Industrial Land Served in Acres	857 acres
Neighborhood Segmentation	166 acres

d. Jurisdictional Effects

Alternative C does not meet the turnback requirements of Mn/DOT and Turnback Highway System regulations as specified in Minnesota Statutes, sections 161.082 subdivisions 1 and 2, 161.16 subdivision 4 and 161.161.

SECTION V: PROBABLE ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

Should the proposed action be implemented, certain adverse effects will occur which cannot be avoided even with the use of reasonable measures to minimize harm. These effects are described in this section.

V.1 Local Resources and 4(f) Lands

V.1.1 A small portion of Battle Creek Park, an existing Ramsey County Park facility, would be acquired as a result of the improvement. The parcel of land to be acquired is approximately 50 feet in depth and 50 feet in length. This would constitute a 4(f) land disruption.

V.1.2 If all trees within the construction limits are removed, an estimated 1,130 trees would be affected. These consist primarily of elm, oak and poplar.

V.2 Residential Relocation Effects

Approximately 70 residential structures will be acquired as a result of the proposal. The City of Oakdale experiences the most severe relocation effect with approximately 50 structures proposed for acquisition.

V.3 Neighborhood Environmental Effects

Noise pollution is the most adverse unavoidable effect on remaining residential neighborhoods. In addition, the edge of residential neighborhoods are disrupted through acquisition of housing. Access across T.H. 120 is made more difficult from neighborhood to neighborhood as a result of the expanded highway and its restricted pedestrian access. Residential areas left remaining along one side of the new T.H. 120, or residential areas which have limited access due to the improvement, will experience reductions in neighborhood character and livability qualities.

V.4 Business Displacement

A total of 16 business establishments, primarily service stations, will be displaced as a result of the proposed action.

Noise Effects

Noise pollution will adversely affect up to 187 structures by 1995 depending on the build alternative chosen for implementation. If the "no build" alternate is chosen, noise pollution will adversely affect 246 structures by 1995. If new construction continues along T.H. 120 in the same general patterns and approximate distance from the facility, substantially more residential and commercial structures will be adversely affected by 1995.

Water Quality

Lakes, streams and ponding areas will be subjected to contaminated surface water run-off. These contaminants include erosion sediments, deicing agents and other chemical spillage due to potential accidents. Erosion will be the primary cause of decreases in water quality resulting from construction of this project.

Service Roads and Neighborhood Protection

Service road construction would eliminate direct access to T.H. 120 for many residences. This has been considered an adverse effect by some residential homeowners; however, a "trade-off" occurs due to the fact that most service roads will reduce or eliminate through non-residential traffic from neighborhoods. The use of turnarounds in the North St. Paul area will cause additional maneuvers for local emergency vehicles.

Undesirable Land Use Patterns

Commercial "strip" developments along the roadway and commercial-intersection developments requiring numerous access points in close proximity to T.H. 120 intersections are also "undesirable". However, many of these land use problems will require the attention of the local communities as well as the application of strong development controls to discourage isolated residential areas, "strip" commercial facilities and hazardous access points to intersection facilities. Improvement of the facility to better service non-residential uses such as the 3-M Company and the proposed commercial-industrial complex south of Lower Afton Road will adversely affect established residential districts oriented to T.H. 120. Inter-community coordination will be encouraged to coordinate development and open space systems across municipal and county borders.

V. 9

Secondary Impacts

V. 9.1

Pollutants will be increased due to the increased demand for accessibility. The development of more roadways and improved roadways will provide less traffic congestion which in turn will facilitate access to desired services. This generates more miles per person, increases trip length and generates greater demand for energy consumption which requires extraction of energy fuels.

V. 9.2

The acquisition and subsequent relocation of residential and commercial properties, if not replaced within the particular community will cause a loss of tax revenue.

V. 9.3

Drainage patterns will be temporarily disrupted and would increase the potential for adverse runoff and/or artificial ponding of water.

SECTION VI: RELATIONSHIP BETWEEN LOCAL SHORT TERM USE OF MAN'S ENVIRONMENT AND MAINTENANCE AND ENHANCEMENT OF LONG TERM PRODUCTIVITY

The primary long-term gains derived from the proposed action are an improved transportation facility which, in turn, will decrease traffic congestion and increase traffic safety, convenience and regional accessibility to neighborhoods and businesses. Primary losses resulting from the action are increased noise pollution levels due to increased traffic, and loss of homes and businesses, trees, and wetland areas due to additional land acquisition.

A brief description of some "trade-offs" that will occur between short and long term environmental gains and losses is presented below.

VI.1

Accessibility

At present, numerous homes and some businesses gain direct access via T.H. 120. In order to achieve increased safety and capacity, the proposed facility will generally not provide such direct access. Thus, while local access to abutting property will be decreased, regional accessibility will be increased due to improved level of service provided by the proposed facility.

VI.2

Business Displacement/Economic Growth

A total of 16 business establishments will be acquired as a result of the proposed action of which one half are automobile service stations. An estimated 100 employees will be affected. While all of the businesses will be offered relocation assistance, it is anticipated that some will go out of business. These short term economic losses will be offset by relocation of some businesses into physically and economically more amenable locations, and by development of new businesses to serve increasing corridor population levels supported by increased regional accessibility provided by the proposed facility.

VI.3

Housing Relocation/Improved Facility Performance and Residential Development Pattern

Some 70 homes will be acquired for additional right of way; however, most of these homes front directly onto T.H. 120 which is an undesirable development pattern. An arterial street should not provide such direct access for safety and capacity reasons. Additionally, livability qualities of homes which face arterial streets are negatively affected by traffic impacts - noise and visual pollution.

Thus, while short term inconvenience may result for some dwelling occupants, a more appropriate long term residential development pattern will be achieved.

Battle Creek Park

An estimated 50 feet of frontage will be acquired from Battle Creek Park as a result of the project. The 4(f) Statement included within this document describes the necessity for taking this park land. By acquiring this narrow strip of undeveloped park land, approximately 10 existing dwellings on the opposite side of the roadway can be preserved. In addition, the proposed action could allow installation of a pedestrian crossing over T.H. 120 which would link Battle Creek with Woodbury's open space system. Thus, the loss of a small amount of park land would be more than offset by providing the opportunity to connect existing and evolving open space systems within the corridor.

Traffic Pattern Changes

Traffic patterns will be temporarily changed during construction periods by use of by pass routes or alternate north/south routes. Traffic patterns will be permanently changed by the design of the facility which restricts access to local streets. By channeling traffic to community collector and arterial streets, the new facility will benefit adjacent residential areas by minimizing "foreign" traffic intrusion. Thus, while some individual trips will be made less convenient and direct, the overall traffic pattern that evolves will be quite logical and will reinforce existing and future land use districts within the corridor.

Construction Activities

Construction will most likely be phased in two-mile increments per year. This will facilitate the improvement on the segments where the need is greatest while reducing the disruption along the entire length. However, construction truck traffic and noise will occur along T.H. 120 as a result of normal construction activity. This will be particularly troublesome to homeowners.

Phased incremental construction is not always the most satisfactory method of alleviating short term adverse construction effects. Secondary annoyances such as the transportation of materials, the hauling of heavy equipment and so on will continue for an extended period of time no matter what segment of roadway is being constructed. A short term-intermediate benefit may be the construction of larger sections at one time and during the same construction season to compact and lessen the extended nuisance of construction effects.

The comparison between the energy and materials consumed to build the proposed facility and any increased productivity resulting from the facility cannot be accurately made. Given the continued use of automobiles and present rider/vehicle behavior characteristics, the materials consumed for construction of this facility most likely will increase safety and potentially save human lives.

Foreclosures on Future Options

Any replacement of natural features with hard surfaced artificial features forecloses the future existence of those natural features. Also, the improvement of T.H. 120 as a four lane divided arterial will foreclose any future north/south rapid transit corridor options.

SECTION VII: IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

Those natural and cultural resources which will be permanently lost or destroyed as a result of the proposed action are described below.

VII.1

Construction Activities

Fuels, equipment, construction materials and human resources used in undertaking the proposed action will be irretrievably lost.

VII.2

Land for Additional Right of Way

Approximately 60 acres of land will be acquired for additional right of way to accommodate the proposed action. Some of this land will be transformed from present urban usage (residential, commercial, public) while the presently undeveloped land will not be available for urban purposes other than as a highway facility.

VII.3

Wetlands

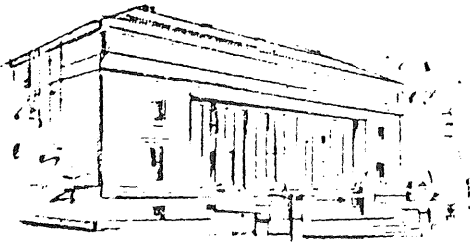
The extensive wetland system within the T.H. 120 corridor will be directly affected by construction operations at 23 points. Required grading and filling activities will permanently reduce existing wetland resources by approximately five acres.

SECTION VIII: IMPACT ON PROPERTIES AND SITES OF
HISTORIC AND CULTURAL SIGNIFICANCE

The proposed action has been reviewed by the State Historic Preservation Officer. This review "reveals the location of no sites in any of the proposed alignments of historic, cultural or architectural significance". (See letter dated March 16, 1976 in Appendix) Prehistoric archaeological materials may exist within Alternate C, particularly in the 3M vicinity; hence, this area will be investigated should Alternate C be chosen.

The Division Administration has concurred in the determination of the State Historic Preservation Officer. (See letter dated April 2, 1976 in Appendix) These letters constitute adequate documentation of compliance with the requirements of 36 CFR Part 800.

APPENDIX



MINNESOTA HISTORICAL SOCIETY

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

March 16, 1976

Mr. C. P. Kachelmyer
Preliminary Design Engineer
Highway Department
Room 612E Highway Building
St. Paul, Minn. 55101

Re: MHD S.P. 6227-21, S.P. 8220-03 (T.H. 120)
From I-494 in Woodbury to I-694
In North St. Paul
Ramsey & Washington Counties

Dear Mr. Kachelmyer:

The project described above 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 in any of the proposed alignments of historic, cultural, or architectural significance. There are, moreover, no sites of archaeological significance in either alignment "A" or alignment "B". In alignment "C", however, there may be prehistoric archaeological materials, particularly in the "3M" vicinity (north of I-94 and west of present T.H. 120). This area should be investigated should alignment "C" be chosen.

I would also point out that although these proposed alignments transect a small portion of Battle Creek Park, that area does not possess any historical or archaeological significance which would be affected by the proposed activity.

I hope that this sufficiently replies to your inquiry. If not, please do not hesitate to contact me for additional comment.

Sincerely,

Russell W. Fridley
State Historic Preservation Officer

RWF:bh



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
REGION 5
Suite 490, Metro Square Building
St. Paul, Minnesota 55101

April 2, 1976

IN REPLY REFER TO:

Mr. Frank D. Marzitelli
Commissioner
Department of Highways
St. Paul, Minnesota

Re: Minn. Proj. M 5021()
S.P. 6227-21 and 8220-03 (TH 120)

Dear Mr. Marzitelli:

Your March 25, 1976 letter forwarded a March 16, 1976 letter from the State Historic Preservation Officer indicating review of the subject projects revealed no properties within the area of the undertaking's potential environmental impact that are included in or eligible for inclusion in the National Register of Historic Places. We concur in such identification.

Mr. Fridley's letter of March 16, and your letter of March 25, and this letter are considered to constitute adequate documentation of compliance with the requirements of 36 CFR Part 800. This should be mentioned appropriately in the DEIS being developed for this highway section.

Sincerely yours,

E. Dean Carlson
Division Administrator

COPIES:

F.D. Marzitelli
W.C. Merritt
L.A. Korth
P.G. Velz
K.K. McRae-Linzie
R. Rozas-Hylland
A.J. Berka
B.E. McCarthy
R.A. Elasky
C.P. Kachelmyer
File

PRELIMINARY 4(F) DOCUMENT

TABLE OF CONTENTS

PAGE NO.

SECTION I - PURPOSE AND NEED	1
A. Need	1
B. Purpose	1
SECTION II - PROJECT DESCRIPTION	1
A. Location	1
B. Existing Conditions	3
C. Proposed Design Features	3
SECTION III - 4(f) PARKLAND	3
A. Location and Size	3
B. Type	3
C. Available Recreational Activities	4
D. Facilities Existing and Planned	4
E. Usage	4
F. Relationship to other similarly used Lands in the Vicinity	5
G. Access and Effect Thereon	5
H. Ownership	6
I. Applicable Clauses Affecting Title	6
J. Unusual Characteristics of the 4(f) Location	6
K. Location and Amount of Land to be Used	6
L. Facilities Affected	6
M. Physical Effects	11
1. Air	11
2. Noise	12
3. Water	12
SECTION IV - DESIGN ALTERNATES	13
A. Location Considerations	13
B. Alternatives	13
1. Do-Nothing Alternate	13
2. Preferred Alternate	14
3. East By-Pass Alternate	14
C. Conclusion	18

TABLE OF CONTENTS (CONT)

	<u>PAGE NO.</u>
SECTION V - MITIGATION	18
A. Noise	18
B. Water	18
C. Air	19
D. Access	19
E. Aesthetics	19
F. Coordination	19
SECTION VI - SUMMARY	20
A. Coordination	20
B. Letters and Comments	20
C. Conclusion	20

TABLE OF EXHIBITS

<u>EXHIBIT</u>	<u>PAGE NO.</u>
Project Location	2
Battle Creek Park	7
Community Open Space	8
Property Ownership	9
4(f) Location Photographs	10
Do-Nothing Alternate	15
Preferred Alternate	16
East By-Pass Alternate	17

SECTION I: PURPOSE AND NEED

A. NEED

Need for the proposed project is based on deficiencies in the existing facility and on future traffic and safety deficiencies based upon anticipated future urbanization within the transportation corridor. Justification for the proposed project is based on the consequences of increased traffic flow, the ability of the roadway to accommodate forecasted traffic volumes and resulting safety.

B. PURPOSE

Section 4(f) of the Department of Transportation Act and Section 138 of Title 23, U.S.C. prohibits the use of park land unless:

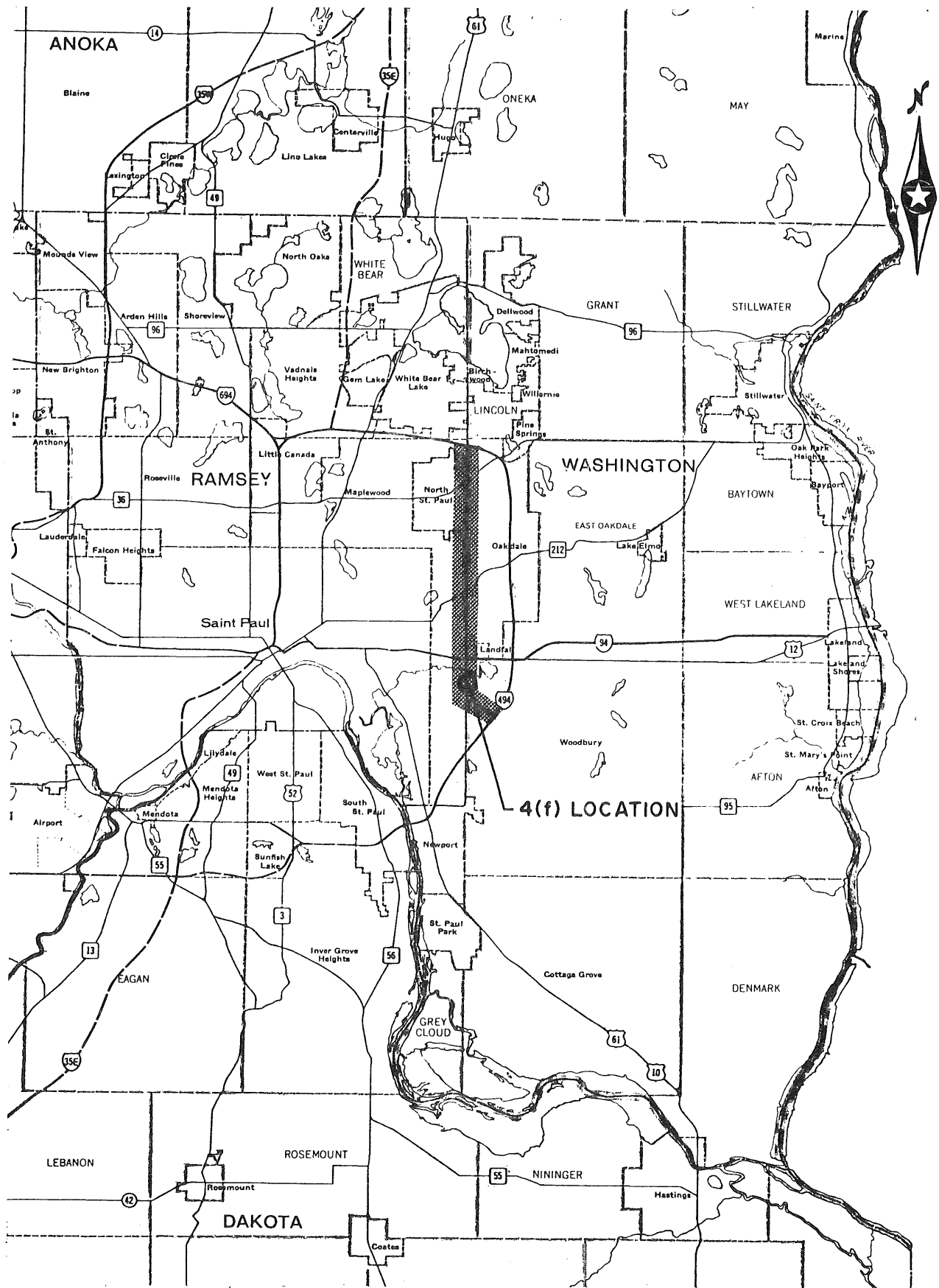
1. There is no feasible and prudent alternative to the use of such land, and
2. Such program includes all possible planning to minimize harm resulting from such use.

The purpose of this Section 4(f) Statement is to document the considerations, consultations and alternate studies made to support the acquisition of land from Battle Creek Park for reconstruction of T.H. 120 (Century Avenue) within the City of Maplewood, Minnesota.

SECTION II: PROJECT DESCRIPTION

A. LOCATION

The highway segment to be reconstructed includes approximately 8.12 miles of Trunk Highway 120 extending from I-494 on the south to I-694 on the north and lies in portions of North St. Paul, Maplewood, Oakdale and Woodbury. (See map page 2). That portion of the highway segment under consideration, (hereinafter referred to as the 4 (f) location) is located in the City of Maplewood and the City of Woodbury, between Lower Afton Road and Upper Afton Road. (See map page 2). The 4 (f) location consists of the westerly fifty (50) feet of a fifty (50) foot wide strip of Battle Creek Park.



0 5
SCALE IN MILES

PROJECT LOCATION MAP



PROJECT LIMITS

B. EXISTING CONDITIONS

T.H. 120 is presently constructed as a two lane paved roadway of variable width with paved or gravel shoulders utilizing a minimum right-of-way of sixty-six (66) feet. The roadway does not provide for any direct access to Battle Creek Park which lies to the west.

Existing land use/development within the immediate area of the T.H. 120 corridor consists primarily of such medium intensity activities as commercial, retail, single family residential, agricultural and religious uses.

C. PROPOSED DESIGN FEATURES

The proposed facility consists of a four-lane divided roadway with shoulders and a median of sufficient width to accommodate separate right and left turn lanes. The proposed roadway would not provide direct access to Battle Creek Park.

SECTION III: 4 (f) PARKLAND

A. LOCATION AND SIZE

Battle Creek Park is located in the City of Maplewood and the City of St. Paul in an area bounded on the north by Interstate 94, on the west by U.S. Highway 61, on the south by Ramsey County State Aid Highway 39 (Lower Afton Road) and on the east by Minnesota Highway 120 (Century Avenue). (See map page 7).

The park contains approximately 700 acres of land of which only the eastern extremity containing 0.05 acres is considered for use by the proposed facility.

B. TYPE

Battle Creek Park is a multi use recreational facility with a wide range of natural features including; ponds, forest, grassland areas and Battle Creek. The park contains a wide variety of trees, with shrub brush and many natural grasses.

C. AVAILABLE RECREATIONAL ACTIVITIES

The following existing activities are found in the Battle Creek Park area.

1. Family picnics and outings.
2. Local employee lunches and recreation.
3. Student activities. (Active recreation, nature hikes, etc.)
4. Passive recreation (Cards, chess, conversation, etc.)
5. Active recreation. (Skiing, football, softball, nature outings, games, etc.)
6. Trail system. (Exploration, education and enjoyment.)

D. FACILITIES EXISTING AND PLANNED

The park currently contains the following facilities:

1. Trails
2. Ponding areas
3. Picnic areas
4. Downhill skiing area
5. Forest and rolling grasslands

The planned upgrading of existing facilities and construction of new facilities for Battle Creek Park is illustrated on page 7. Phase I construction has been funded and includes the following improvements.

1. Paving and upgrading existing trail systems.
2. Construction and paving of access roads and parking areas.
3. Improvements to ski areas.
4. Construction and improvement of picnic areas.

E. USAGE

An analysis of the types of visitors and users of the park reveals the following:

1. Individuals
2. Church groups
3. Nature groups
4. Boy Scout groups
5. Girl Scout groups
6. Grade school classes
7. Junior high classes
8. Sports enthusiasts
9. Area employees

No statistics are available on the number of park users, however, with the wide range of individuals using the facilities on a year-round basis, the number of users is estimated to be in the thousands.

F. RELATIONSHIP TO OTHER SIMILARLY USED LANDS IN THE VICINITY

Battle Creek Park is considerably more extensive both in size and range of facilities, than any public open space facility in St. Paul, Maplewood, or Woodbury. The major difference is that the park under study is a county facility and the many open spaces in the vicinity are city owned and operated facilities. (See map page 8).

The Battle Creek Park trail system may join the Woodbury trail system sometime in the future, however the Woodbury trail system is in the early stages of development and specific information concerning location is not yet available.

G. ACCESS AND EFFECT THEREON

Access to Battle Creek Park presently includes several modes of transportation including pedestrian, bicycle, automobile and bus, with access roads and storage facilities. The major access roads to the park include the following: (See map page 7).

1. Upper Afton Road
2. Lower Afton Road
3. T.H. 120 (indirectly)
4. Highway 61
5. McKnight Road
6. White Bear Avenue

Reconstruction of T.H. 120 will not directly affect vehicular access to the park, however access should be improved indirectly by reduced traffic congestion in the T.H. 120 corridor.

Construction of the proposed roadway will not hinder any future provisions for a pedestrian/bicycle pathway adjacent to T.H. 120. A grade separation for pedestrian and vehicular traffic may be provided to allow for the physical connection of the Maplewood and Woodbury trail systems.

H. OWNERSHIP

Battle Creek Park is presently owned by Ramsey County, and is operated and fully maintained by the Ramsey County Parks and Open Space System, with direct control under the jurisdiction of the Ramsey County Board of Commissioners, Ramsey County, Minnesota. The relationships of ownership are shown on page 9 for the park and all adjoining properties.

The three residential properties located between the 4 (f) location and the County Workhouse are no longer being considered for proposed park acquisition. (See letter from Ramsey County Open Space System in Section VI.)

I. APPLICABLE CLAUSES AFFECTING TITLE

There are no special or applicable clauses affecting the site's title, as it is written at present, in relation to the 4 (f) considerations being examined.

J. UNUSUAL CHARACTERISTICS OF THE SECTION 4(f) LAND

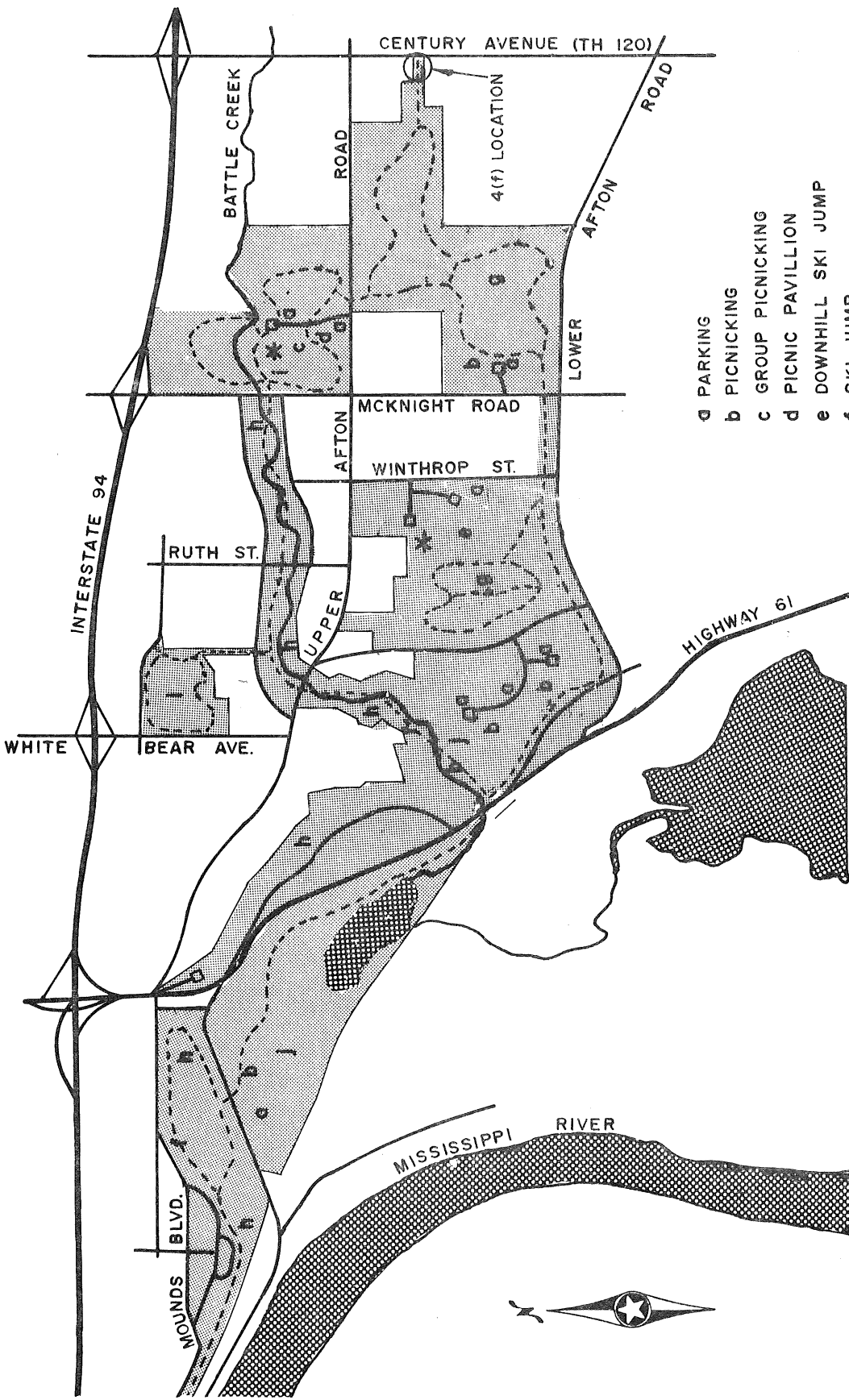
The dominant unusual characteristic of the Battle Creek Park site is that the activities and supportive facilities which exist at present are located to the west of the land to be used by the proposed facility. Specifically, there are no means of access, no activities, and no supportive facilities in the portion of the park to be used by the proposed facility (see map next page). The portion of the park affected does have the unusual characteristic of being located in a small valley and does have a dense area of trees on its southern edge.

K. LOCATION AND AMOUNT OF LAND TO BE USED

The portion of land to be used is located at the extreme eastern edge of Battle Creek Park, and consists of an area of land approximately 2500 square feet or .05 acres. (See map page 7).

L. FACILITIES AFFECTED

The acquisition of the proposed 4 (f) location will not affect any park facilities as there are none located in this area of the park. In addition, there will be no significant effect on the proposed trail system in this area.



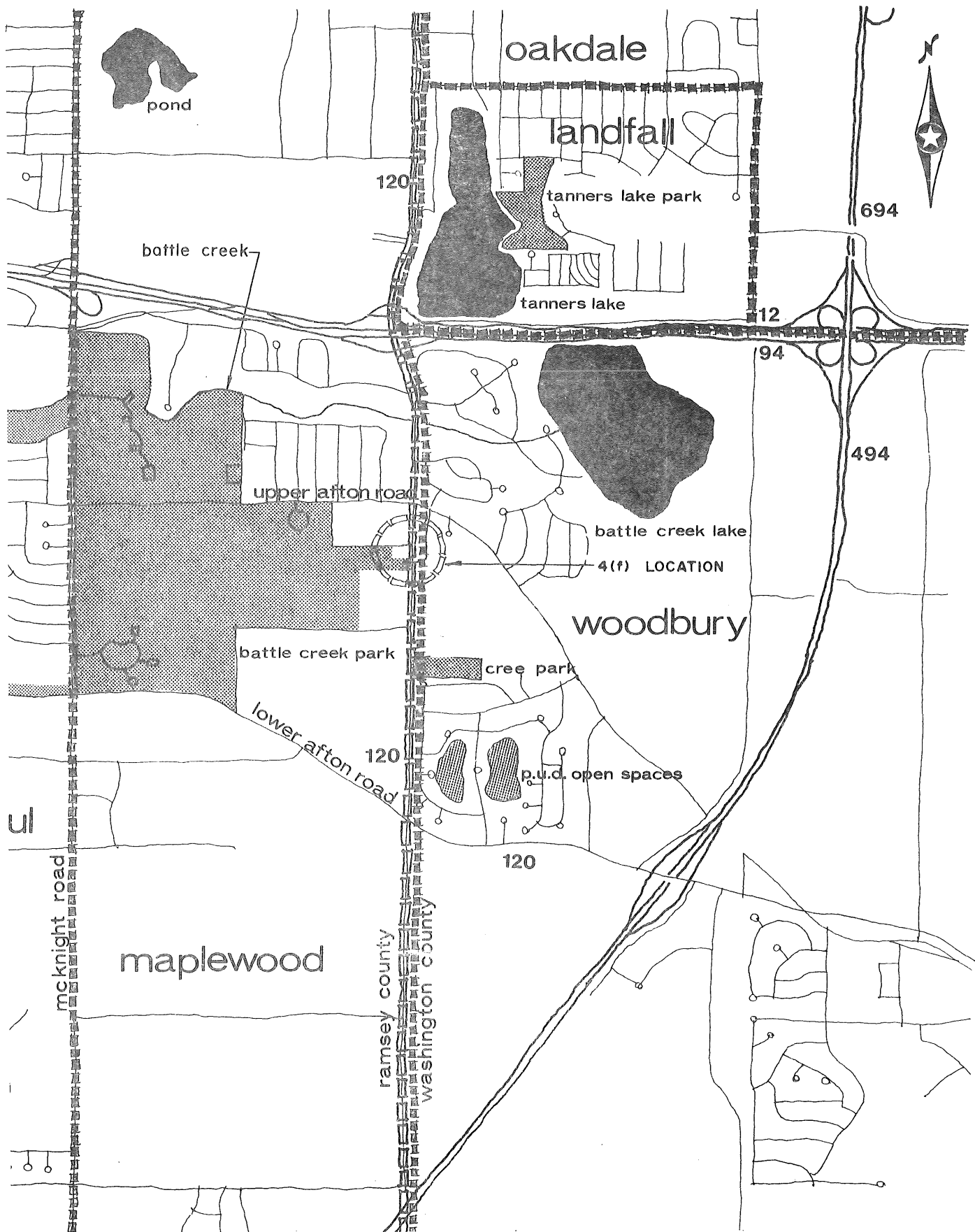
- a PARKING
- b PICNICKING
- c GROUP PICNICKING
- d PICNIC PAVILLION
- e DOWNHILL SKI JUMP
- f SKI JUMP
- g CROSS COUNTRY SKIING
- h EROSION CONTROL AND REHABILITATION
- i PONDING AREA
- j GRADING/PLANTING / SEEDING
- HIKING/SKIING TRAILS

* PHASE I (1978) DEVELOPMENT
INCLUDING TRAIL SYSTEM.

BATTLE CREEK REGIONAL PARK DEVELOPMENT PLAN

0 1/4 1/2
SCALE IN MILES

BATTLE CREEK PARK



0 2000
SCALE IN FEET

COMMUNITY OPEN SPACE

UPPER AFTON ROAD



SCHOOL DISTRICT 622
9.50
ACRES

.51
ACRES

.52
ACRES

.95
ACRES

LUTHERAN
CHURCH OF
PEACE
3.4
ACRES

4(f) LOCATION
0.05 ACRES

HIGHWAY DRAINAGE
DITCH ESMT.

.91 ACRES

E. SPRINGSTROM
6.73
ACRES

ROAD EASEMENT

.27 ACRE	J. EMMOTT .63 ACRES
-------------	---------------------------

T.H. 120 (CENTURY AVENUE)

BATTLE CREEK PARK

PROPOSED R/W

CITY - COUNTY WORKHOUSE
FARMLAND
39.0
ACRES

EXISTING R/W

0 200
SCALE IN FEET

PROPERTY OWNERSHIP



LOOKING WEST



LOOKING EAST

JANUARY 1978

4(f) LOCATION PHOTOGRAPHS

M. PHYSICAL EFFECTS

1. AIR

An Air Quality Report was prepared by The Minnesota Department of Transportation (Mn/DOT) District Nine Office in June of 1976. The air quality analysis followed the U.S. Environmental Protection Agency's (EPA) "Guidelines for Air Quality Maintenance Planning and Analysis, Volume 9: Evaluating Indirect Sources".

The analysis estimated pollution concentrations contributed by the traffic forecasted to use the corridor. The traffic generated pollutants added to the background figures result in the total pollutant concentrations.

The only pollutant the analysis studied was carbon monoxide (CO) because it is the primary transportation related Priority 1 pollutant in the Minneapolis/St. Paul Air Quality Control Region.

The State Air Quality Implementation Plan is administered by the Minnesota Pollution Control Agency (MPCA). State standards for maximum CO concentrations are 30 ppm for a 1 hour period and 9 ppm for an 8 hour average. Federal standards, enforced by the EPA, are a maximum of 35 ppm for a 1 hour period and 9 ppm for an 8 hour average.

Predicted levels of pollutants were computed at the most critical receptor sites. Under the worst case traffic and weather conditions the following results were determined:

Parts Per Million

	<u>One Hour</u>	<u>Eight Hour Average</u>
1976	6.9	2.5
1985	3.1	1.1
1995	2.5	0.7
1995(No Build)	1.8	0.7

The reason that the 1995 "No Build" result is lower is that the worst case receptor is located further from the inplace roadway than from the proposed alignment.

The results of the analysis demonstrates that the maximum CO concentrations at critical receptor sites are within the State and Federal ambient air quality standards.

2. NOISE

Mn/DOT District Nine Office prepared a Noise Analysis Report for the highway segment in January of 1977. Noise levels (L_{10} dBA) were analyzed for the 1995 "No Build" and for the 1995 "Build" alternatives. For the section of roadway adjacent to the 4(f) land, the following noise levels were predicted at a distance of 300' from the centerline of the roadway using the N.C.H.R.P. 117/144 method.

1995 No Build L_{10}	66.5 dBA
1995 Build L_{10}	67.5 dBA

The Federal Highway Administration (F.H.W.A.) and the Minnesota Pollution Control Agency (M.P.C.A.) have set a minimum standard of $L_{10}70$ dBA for park areas not designated for picnicking or camping. There is no planned park development within 300' of the highway in this strip and thus would not be an area of regular human use.

3. WATER

The drainage easement lying just south of the 4(f) location provides for runoff from the surrounding area and drains westerly into Battle Creek Park. There is no conflict between acquisition of the 4(f) land and existing drainage in this area.

Due to increased roadway area, pollutants resulting from runoff from the roadway will increase from existing levels. However, compared to the size and concentrations of the adjacent urban area runoff the pollutants from the roadway are minimal. Erosion control measures will be taken during construction so that the impact from this source will be minimized. Please refer to Section V for mitigation measures.

A Water Quality Report was prepared by the Mn/DOT District Nine Office and is available for review.

SECTION IV: DESIGN ALTERNATES

A. LOCATION CONSIDERATIONS

During the development of the T.H. 120 preliminary design, a number of location alternatives were developed based on the following factors:

1. Traffic considerations for all modes of traffic.
2. Impact on displacement and relocation.
3. Impact on neighborhood characteristics and land use.
4. Environmental considerations.
5. Relationship to other improvements (safety, police, fire, etc.)
6. Cost analysis.
7. Aesthetics and urban design.
8. Community impact.
9. Alternatives based on existing conditions and commitment of resources/interest.
10. Roadway geometry.

This section will only analyze the location considerations which were studied for the immediate vicinity around the 4 (f) location. The alternatives are as follows:

1. Do nothing.
2. Use existing T.H. 120 alignment (Preferred alternate).
3. Shift the alignment east of the 4 (f) location. (East Bypass alternate).

B. ALTERNATIVES

1. DO NOTHING ALTERNATE

The present conditions (1977) can be summarized as unacceptable both in terms of traffic movements and the general adverse impact currently generated on the surrounding areas. Characteristics of these current conditions along the route are:

- a. Bottlenecks at many intersections during morning and evening peak hours.
- b. Large traffic queues on side streets in both directions.
- c. Accessibility to the 3M Company is disruptive and hazardous to the area neighborhoods.
- d. Awkward accessibility to U.S. 12/I-94 and I-694.

- e. Severe pedestrian - vehicle conflict with no provision for pedestrian movement along the corridor.
- f. Deteriorated roadway conditions.

2. PREFERRED ALTERNATE

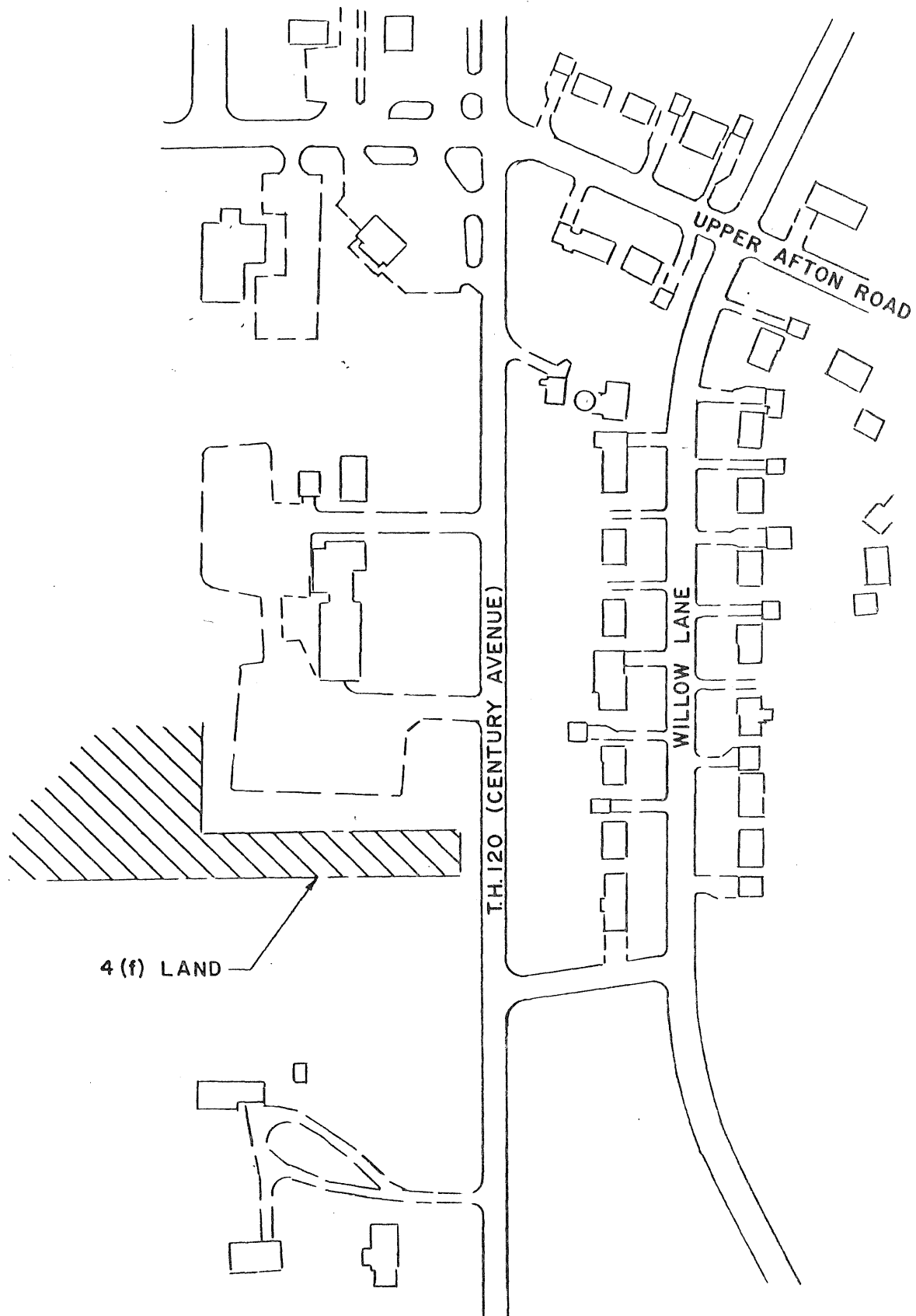
This alternate provides for the utilization of the existing T.H. 120 alignment and right-of-way (see map page 16) and provides the following:

- a. Improvement of T.H. 120 route as proposed.
- b. Additional R/W width acquired to the west (park side) minimizing disruption to adjacent developed neighborhoods in Woodbury.
- c. No relocation of existing single family residential structures in the immediate area of the project.
- d. Acquisition of approximately .05 acres of 4 (f) type parkland.

3. EAST BY-PASS ALTERNATE

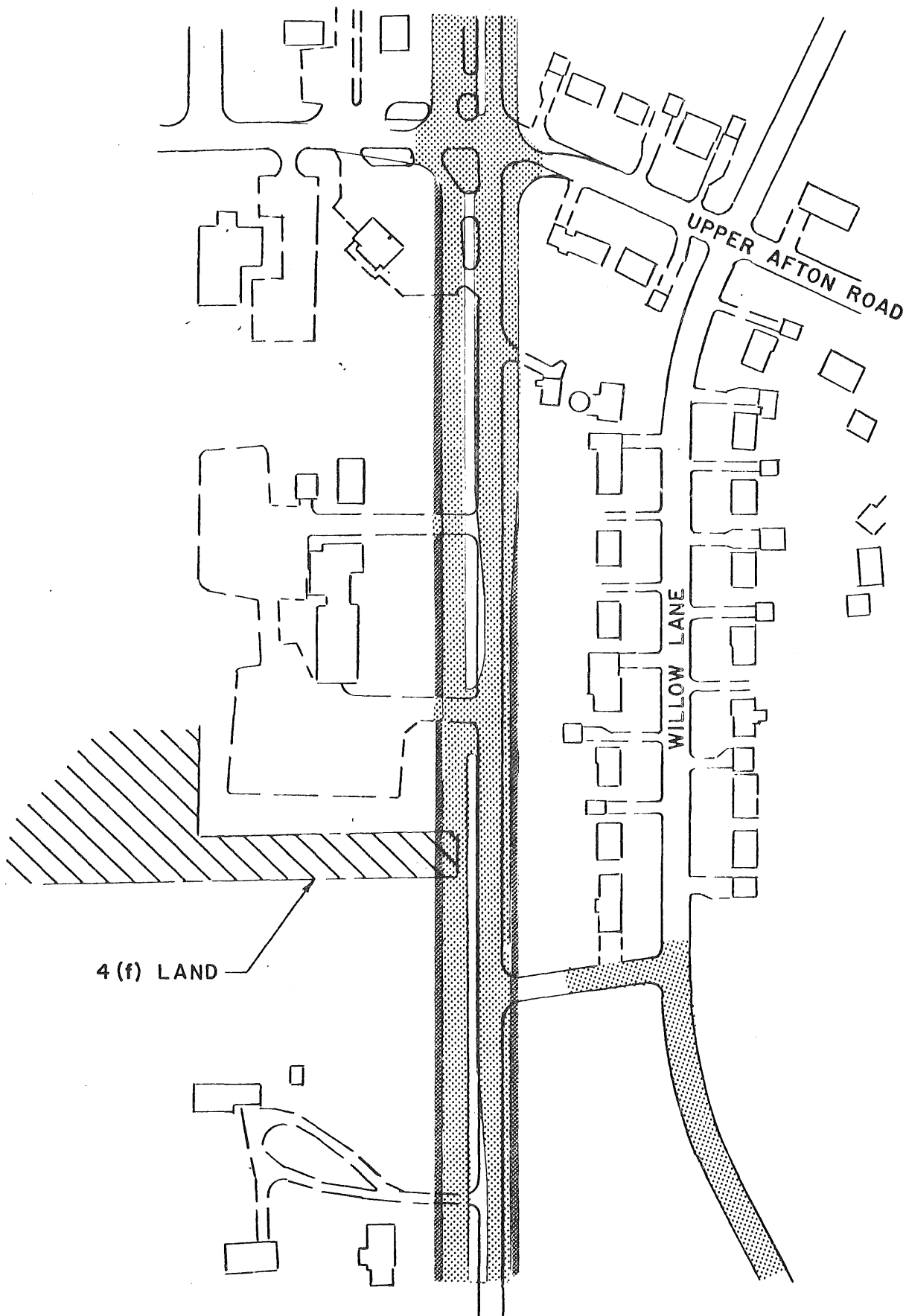
By introducing three horizontal curves the proposed alignment is shifted far enough to the east to avoid any encroachment on the 4 (f) land. (See map page 17). This alternate provides the following:

- a. Improvement of T.H. 120 route as proposed.
- b. The preservation of the 4 (f) land in question. (.05 acres)
- c. The removal of 9 single family residential structures in the immediate area of the project site.
- d. Increased horizontal curvature.
- e. A more expensive construction cost (because of the additional right-of-way to be acquired).
- f. A less suitable location oriented within closer proximity to residential structures rather than toward open space.



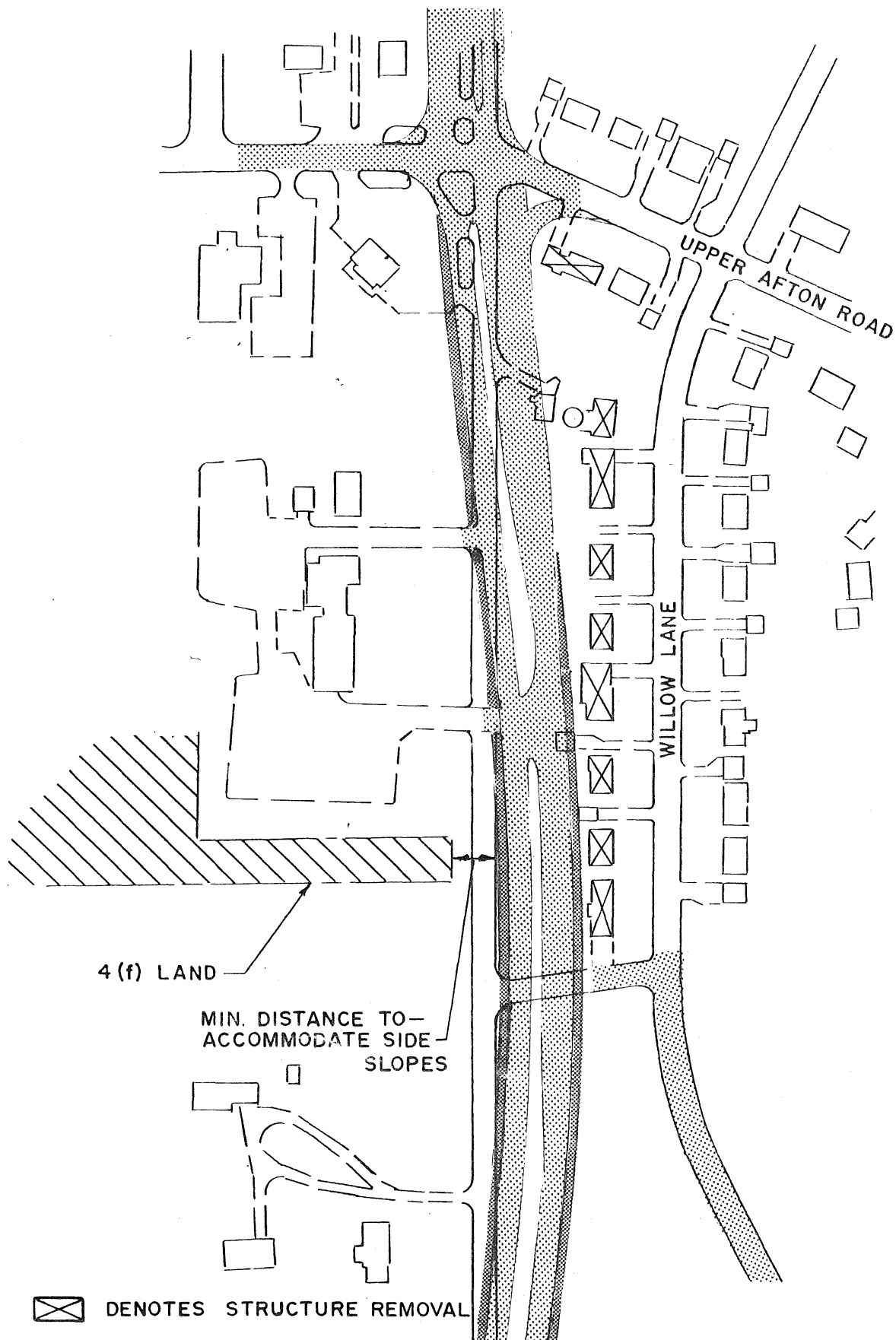
0 100 200
SCALE IN FEET

DO NOTHING ALTERNATE



0 100 200
SCALE IN FEET

PREFERRED ALTERNATE



0 100 200
SCALE IN FEET

EAST BY-PASS ALTERNATE

The major result of this action is to significantly reduce the rear lot size of the homes located along the east side of T.H. 120, resulting in devaluation of property and ultimate relocation. The extensive use of retaining walls in this area is unacceptable from both an aesthetic and economical viewpoint.

C. CONCLUSION

The "Do-Nothing" alternate is not deemed a viable solution based on the unacceptable traffic and level of service conditions encountered now and estimated for the future.

The "By-Pass" alternate is unacceptable due to the additional R/W required, and the ramifications thereof, at the expense of saving 0.05 acres of 4 (f) type park land.

Therefore, the choice of using the original T.H. 120 alignment and acquiring the 4 (f) land is a reasonable alternative.

SECTION V: MITIGATION

A. NOISE

The abatement of noise on this project by conventional barriers is considered unreasonable. The design and traffic function of the minor arterial is to serve adjacent land uses. The construction of barriers would sever this type of use and could provide only partial noise abatement near the numerous intersection areas.

B. WATER

Water pollution during construction will be minimized through the use of berms, sediment basins, mulches, slope drains, hay bales and other erosion control devices and methods. All preventative measures shall be in accordance with the rules, regulations and standards established by the Minnesota Pollution Control Agency, and in accordance with the provisions of the Minnesota Department of Transportation.

C. AIR

As previously stated in Section III there are no adverse air quality impacts associated with this project.

D. ACCESS

As previously stated in Section III there is no direct vehicular access existing or proposed to Battle Creek Park from T.H. 120. Reconstruction of T.H. 120 will not hinder any future provisions for a pedestrian/bicycle pathway adjacent to the roadway. A grade separation for pedestrian and vehicular traffic may be provided at the 4 (f) location in the future if necessary.

E. AESTHETICS

Landscape considerations such as trees, bushes and shrubs will be a part of the plans for the reconstruction of T.H. 120. In addition, berm construction to facilitate partial noise reduction and to minimize adverse visual impacts will also be included in the project.

F. COORDINATION

Coordination with agencies having jurisdiction with regard to mitigation will include but not be limited to those agencies listed in Section VI of this document.

SECTION VI: SUMMARY

A. COORDINATION

This document will be reviewed by the Department of Interior, the Department of Housing and Urban Development, The Department of Agriculture, and the Ramsey County Park and Recreation Department and their comments and considerations will be included in the final 4(f) statement.

B. LETTERS AND COMMENTS

This draft contains only one letter from the Ramsey County Park Department which indicates no anticipated adverse effect on Battle Creek Park. However, the final 4 (f) statement will contain all letters and comments with regard to this draft.

C. CONCLUSION

After reviewing the various alternatives and studying the magnitude of the impacts resulting from encroachment on the 4 (f) land, it is concluded that no prudent and feasible alternative exists to the purchase of the 4 (f) land in question. Furthermore, all possible planning to minimize harm to the remaining adjacent park land has been included in this document.

December 23, 1975

RECEIVED

DEC 24 1975

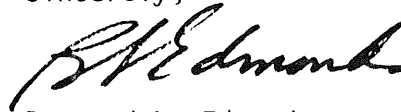
Hodne-Stageberg Partners Inc.
Attention: Mr. Kermit Crouch
116 E. 22nd Street
Minneapolis, Minnesota 55404

Dear Mr. Crouch:

I have learned that a 50' x 50' parcel of land in the Battle Creek Park will be necessary for the right-of-way of State Highway 120, Century Avenue. The Ramsey County Parks planning staff has reviewed the impact that this transfer of park property will have on the park. We have determined that it will not have a detrimental effect on the park.

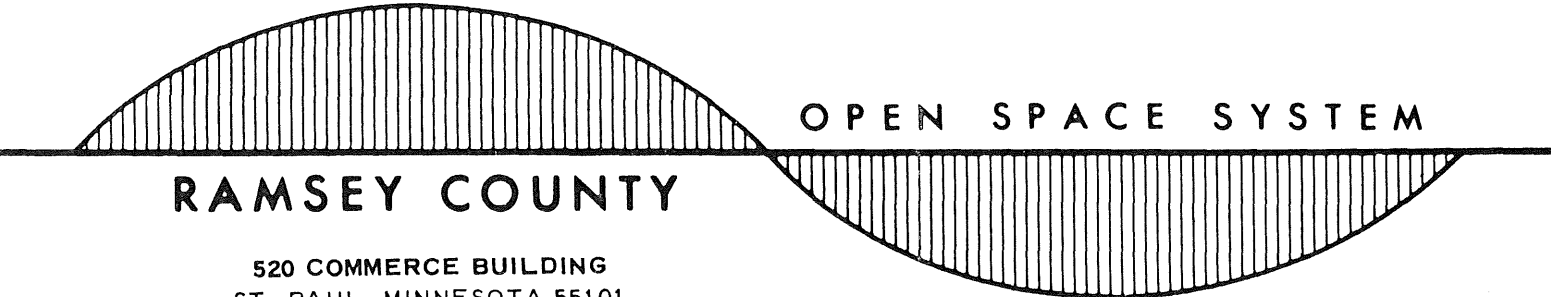
As a point of clarification, the three residential properties between the above mentioned land and the County Workhouse property are within the proposed park boundary, but have not been acquired to date.

Sincerely,



Bernard L. Edmonds
Director of Parks & Recreation

BLE:ama



RAMSEY COUNTY

520 COMMERCE BUILDING
ST. PAUL, MINNESOTA 55101
TELEPHONE 298-5566

OPEN SPACE SYSTEM