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FINAL
ENVIRONMENTAL IMPACT STATEMENT
AND SECTION 4(f) EVALUATION



MISSISSIPPI RIVER BRIDGE
AT WABASHA, MINNESOTA

PREPARED BY
STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION

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FHWA-MN-EIS 80-01-F
Region 5

Minnesota Trunk Highway 60 and Wisconsin State Highway 25
Mississippi River Bridge & Approaches at Wabasha, Minnesota
From U.S. 61 at Wabasha, Minnesota to W.S.H. 35 at Nelson, Wisconsin

Minnesota Project F 108-( ) & F 046-( )
Minnesota State Project 7910 & 7911
Wisconsin Project ID 7172-0-00

FINAL
ENVIRONMENTAL IMPACT STATEMENT & SECTION 4(f) EVALUATION

Submitted Pursuant to 42 U.S.C. 4332 (2) (c) and
49 U.S.C. 1653(f) and M.S. 116D.01 et. seq. by the
U.S. Department of Transportation
Federal Highway Administration
and
Minnesota Department of Transportation
and
Wisconsin Department of Transportation

Cooperating Agencies
United States Coast Guard
Minnesota State Historical Society
Minnesota Department of Natural Resources

3/17/83
Date of Approval

For Mn/DOT: Assistant Commissioner
Technical Services Division

JUL 11 1983
Date of Approval

/s/
For FHWA: Director Office Of
Environmental Program

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The proposed action is for a highway bridge facility to replace the existing bridge and approaches over the Mississippi River at Wabasha, Minnesota. The proposed Alternative 3B is 1.0 mile long. The facility will contain two 12 ft. wide traffic lanes, 8 ft. wide bridge and rural shoulders, 10 ft. wide urban shoulders, and require the use of Section 4(f) property.

SUMMARY

Description of Proposed Action

The proposed action is for a highway bridge facility to replace the existing bridge and approaches over the Mississippi River at Wabasha, Minnesota. The subject bridge carries Minnesota Trunk Highway 60 (TH 60) and Wisconsin State Highway 25 (WSH 25) between Wabasha, Minnesota and Nelson, Wisconsin. Study termini are the TH 60 - US 61 Junction in Wabasha and the WSH 25 - WSH 35 junction in Nelson, see exhibit No. 3 on page 3. The study length is 3.9 miles.

Viable alternatives considered vary in length from 1.0 to 1.8 miles. Study length exceeds alternative lengths since the study area extends to logical termini, highway intersections, for purposes of more complete determination of project effects. The proposed facility will contain two 12 foot wide traffic lanes with 8 ft. wide bridge and rural shoulders and 10 ft. wide urban shoulders. Estimated cost is 14.4 million dollars.

Other Governmental Actions

Other government agencies are not proposing any significant actions in the same geographic area.

Alternatives

The following major alternatives were considered:

Alternative 1 :	Bridge - Church Avenue
Alternative 1A:	Bridge - Church Avenue (existing streets to U.S. 61)
Alternative 1B:	Bridge - Maiden Avenue
Alternative 3A:	Bridge - Walnut Avenue (new alignment to US 61)
Preferred Alternative 3B:	Bridge - Walnut Ave. (existing streets to US 61)
Alternative 3C:	Bridge - Walnut Ave. (existing US 61 intersection)
Alternative 4 :	Bridge - Bailey Avenue
Alternative 4A:	Bridge - Bailey Avenue (skewed main river channel crossing)
Alternative 4B:	Bridge - Bailey Avenue (curvelinear main river channel crossing)
Alternative 6 :	No Build (close bridge after 10 years)

Alternative locations are shown on Exhibits No. 4, 10, 46 on pages 4, 17 & 147. Significant Impacts are tabulated on p. 175. All build alternatives involve 4(f) areas. The basis for the selection of Alternative 3B is presented on pages 23 and 25.

In addition to the major alternatives listed above, several other alternatives including up and downstream corridors, channel relocation, lift bridge, replace at existing location, tunnel and ferry were considered and dismissed for social, economic, or environmental reasons as described in the Alternatives section.

Environmental Impacts

Beneficial:
- Continuity of social-economic area
- Continuity of interstate transportation system
- Improved highway safety
- Reduced highway travel time
- Increased highway capacity
- Reduced highway maintenance
- Continued viability of the Historic Commercial District.

Adverse:
-Pass through Historic Commercial District (displace a warehouse, residence and garage)
-Displace one historic building (Chiropractic Clinic) located outside the Historic Commercial District
-Use 2.0 acres of 4(f) areas
-Displace 7 residences and 1 commercial building in addition to the historical displacements
-Change noise levels
-6.1 Acres of wetlands bridged or filled in the corridor.

Controversy

A build alternative without adverse impacts is not possible because of the topography and land use in the area. Therefore each alternative is somewhat controversial with regard to its individual adverse impacts. As a result of public and agency comments, alternative design variations 1A, 1B, 4A and 4B were added subsequent to the Draft EIS. Although the preferred alternative 3B is the most desirable based on an evaluation of all impacts, the impacts on historic and residential properties have caused concern among some Wabasha residents. The adverse impacts will however, be adequately mitigated as described in this FEIS.

Actions required by other Federal Agencies

1) U.S. Army Corps of Engineers Section 404 Permit and right of way authorization
2) U.S. Coast Guard Bridge Permit

State EIS Requirements

Minnesota Environmental Quality Board (MEQB):

This project has been reviewed under MEQB regulations and found to be a major action with potential for significant environmental effects. This FEIS will be formally submitted to the MEQB.

Impact on State Government by Federal Controls:

State Government will be influenced by Corps of Engineers Section 404 and Coast Guard Permits and U.S. Fish and Wildlife jurisdiction over the Upper Mississippi Wildlife and Fish Refuge. Anticipated funding is 76%-80% Federal with Minnesota and Wisconsin sharing the remainder.

Multi-State Responsibilities:

The proposed action is located on the Minnesota-Wisconsin border and will affect both States. The project development is a joint Minnesota-Wisconsin effort, with Minnesota acting as the lead agency under an agreement executed by the two States in 1974.

State Permits

State permits required include Minnesota Department of Natural Resources (MDNR) waters permit, Wisconsin Department of Natural Resources (WDNR) waters permit, and Minnesota Pollution Control Agency (MPCA) 401 certification.

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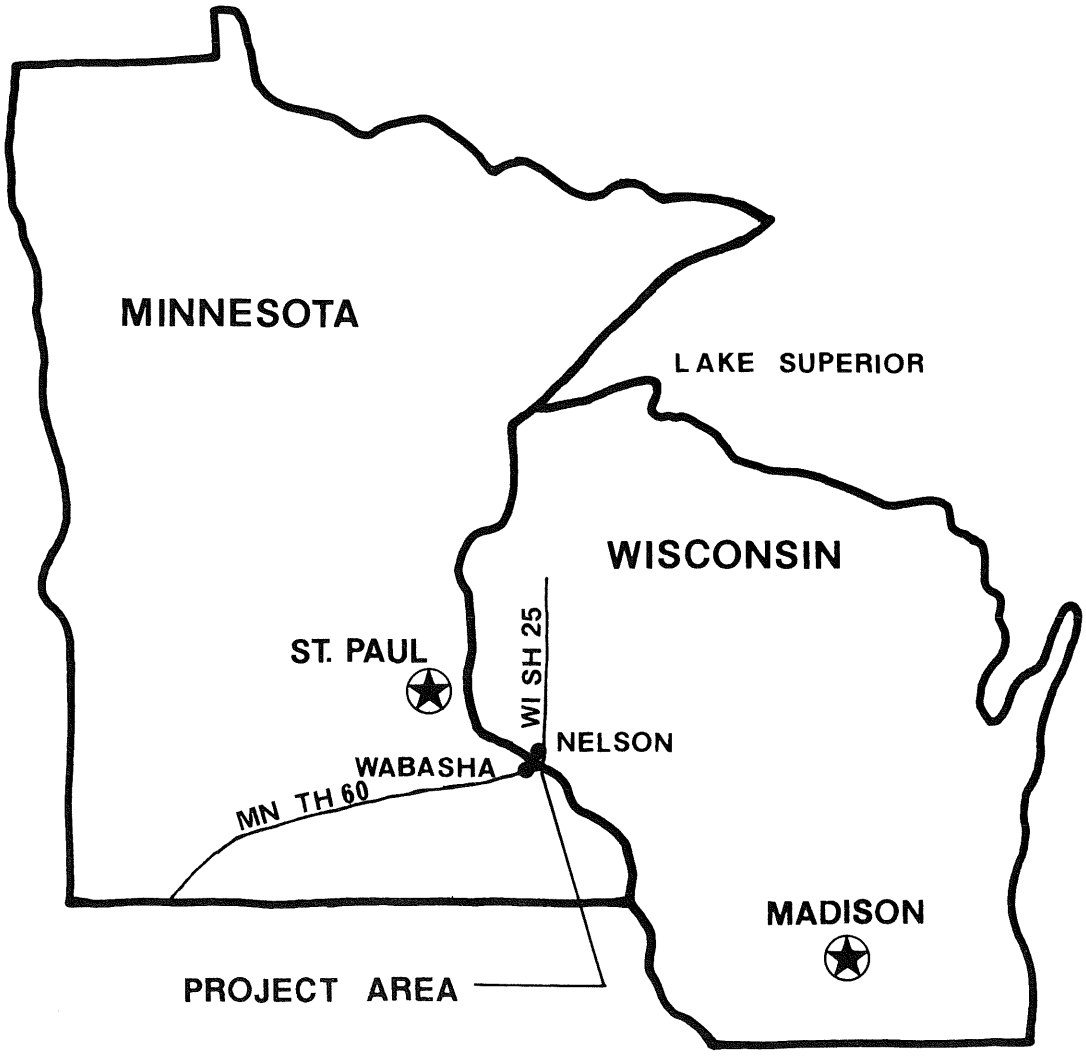


Exhibit No. 1:

STATE INDEX MAP

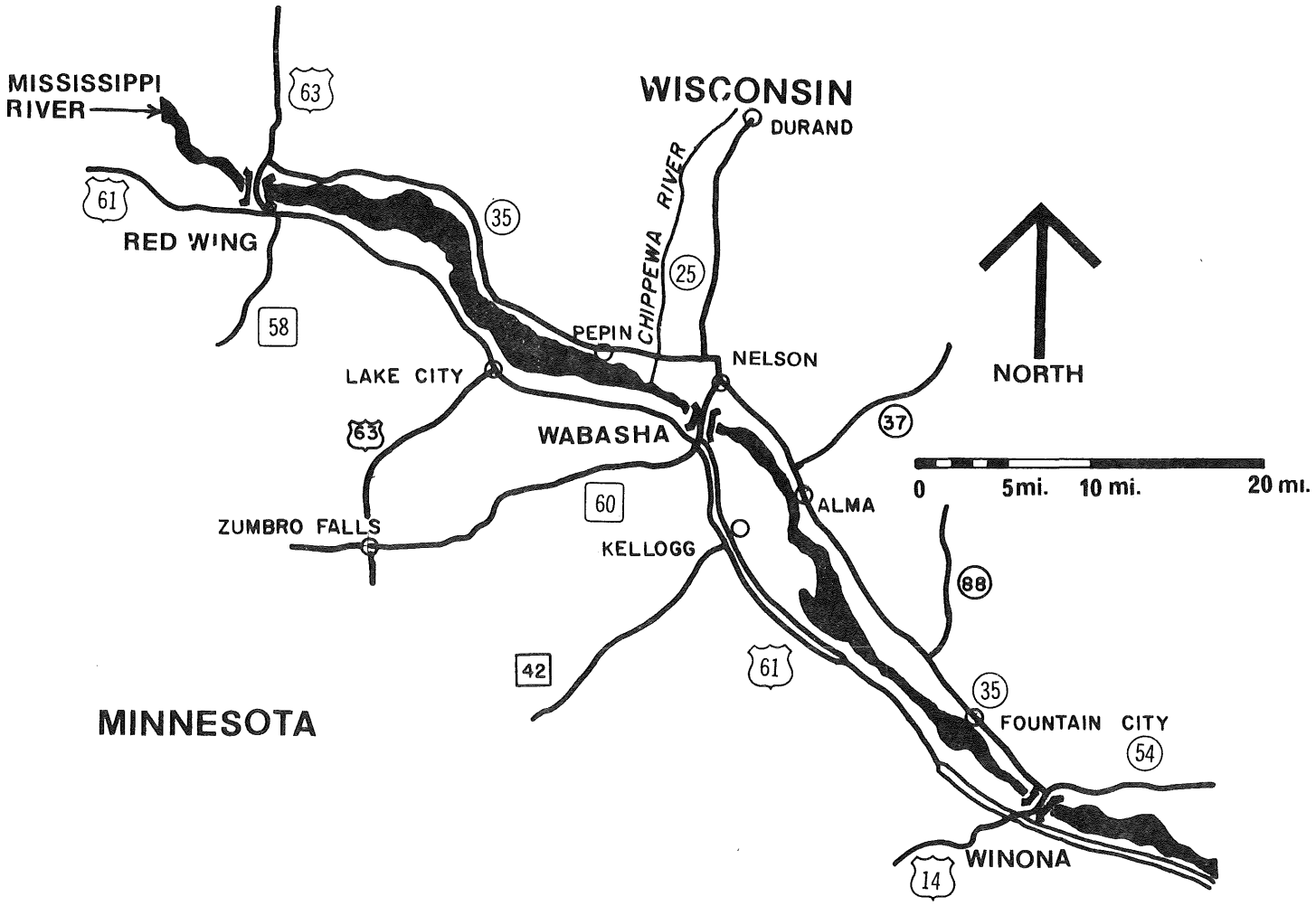


Exhibit No. 2:

REGIONAL MAP

EXHIBIT No. 3
AREA SETTING

NORTH

SCALE
0 1000 2000

NELSON
END STUDY AREA
SH 35
100 YEAR FLOOD PLAIN
SH 25
UPPER MISSISSIPPI RIVER
FEDERAL WILD LIFE AND FISH REFUGE
MISSISSIPPI RIVER
TEEPEOTA POINT
CHIPPEWA RIVER
WISCONSIN
INTERSTATE BRIDGE
MINNESOTA
WABASHA
OLD ZUMBRO RIVER BED
TH 60
C.M.S.T.P.&P.
US 61
READS LANDING
BEGIN STUDY AREA

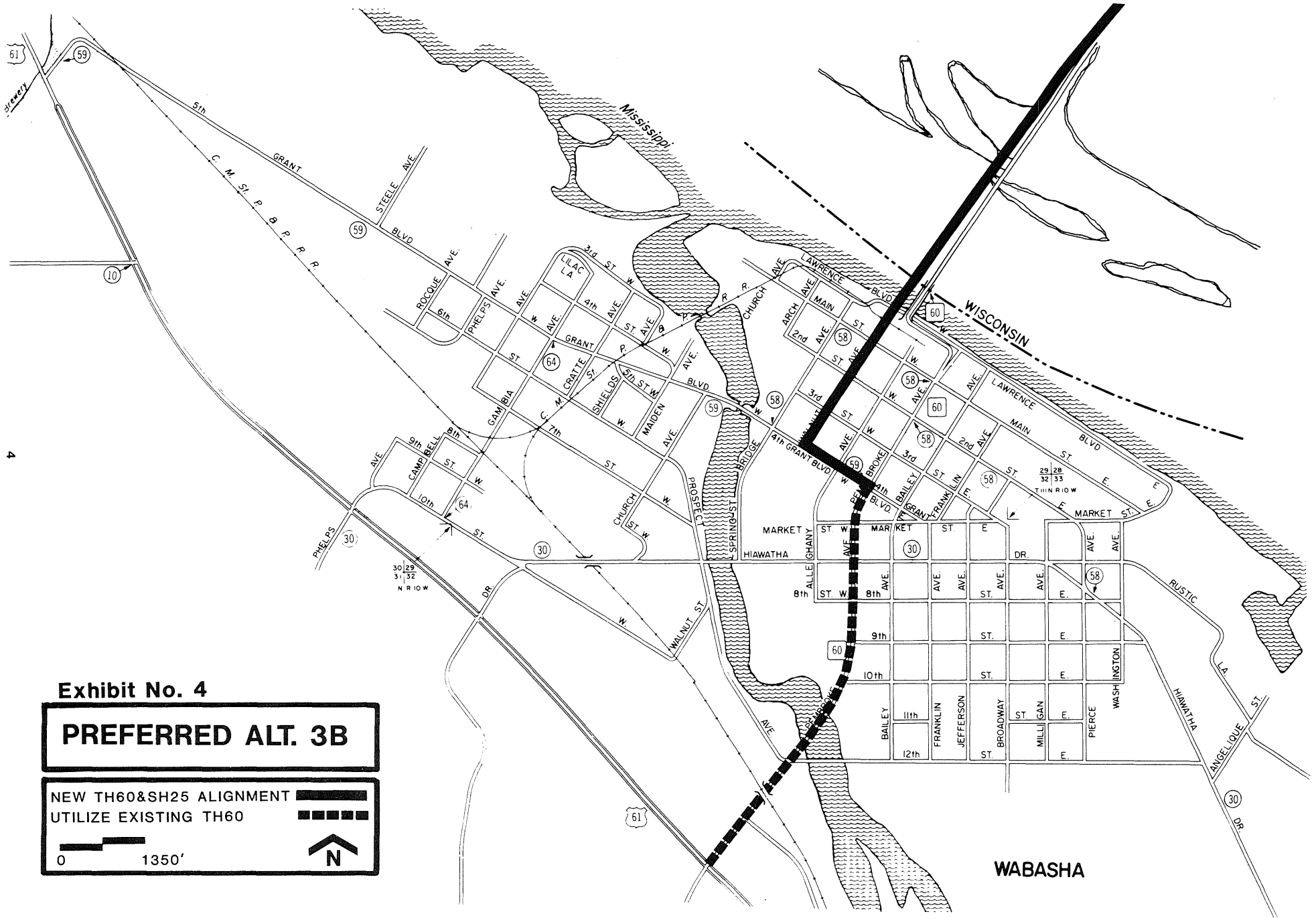


Exhibit No. 4

PREFERRED ALT. 3B

NEW TH60&SH25 ALIGNMENT
UTILIZE EXISTING TH60

0 1350'

N

I. PURPOSE OF AND NEED FOR ACTION

A. Existing Facility

The existing bridge was constructed in 1931 by a private firm, the Wabasha-Nelson Bridge Company and operated as a toll structure until 1947. It was then purchased jointly by states of Minnesota and Wisconsin at a cost of $400,000 and now operates toll-free. The two states share in the maintenance of it also but not in equal portions. Wisconsin maintains the easterly 526 feet and Minnesota maintains the remainder plus the navigation and aircraft obstruction lights.

The existing structure is 2229 feet long, 19 feet wide curb to curb, contains no sidewalks and consists of 52 spans. The 2229 ft. length includes a 671 ft. long concrete Through Girder on the Minnesota approach, a 422 ft. long high truss over the navigation channel, a 608 ft. long Deck Truss and a 528 ft. long concrete Through Girder on the Wisconsin Approach. Existing navigation clearances are 62 ft. vertical and 403 ft. horizontal. The piers under the high truss and deck truss are supported by original untreated wood piling further reinforced with steel piling in 1969. These piers are protected by rock filled sheet pile cells capped with concrete.

The bridge was constructed prior to the construction of the 9 ft. deep navigation channel and the series of lock and dams on the Mississippi which established pool levels and created a wider width of flow. Piers which were initially constructed on dry land are now located within the river and subjected to river currents. The original pier pilings are untreated oak logs bottomed in the gravel foundation.

Some of the present deficiencies were built into the original structure, others have resulted from the age of the bridge. The very narrow 19' width and severe approach geometrics of the original design are totally incompatible with modern roadway standards. The Wabasha approach has 2 right angle curves with radii of 50 ft. and 100 ft. and a 6% vertical grade. These combined with the narrow width and marginal load capacity -- operating rating HS 18.0 (1) -- result in a permissible speed of only 10 m.p.h. over the bridge. Trucks are not permitted to meet on the bridge and automobiles can pass on the approach curves only with considerable caution. Trucks are required to maintain a minimum interval of 200 feet.

See Exhibits No. 5 thru 7 on pages 7 and 8.

(1) HS is an AASHTO bridge lane loading classification system. The number refers to a design vehicle weight. An HS20 rating allows unrestricted bridge usage by trucks with legal axle loads.

Structural deficiencies due to age and other causes have caused extensive repairs several times since 1968 and have increased the frequency and cost of routine maintenance work. In June, 1968 one pier became undermined to such an extent that it collapsed. After a complete investigation of all pier foundations, a new pier was placed on new piling. In 1969 new piling was driven at all piers located within the river and concrete and gravel filled caissons placed to protect them from damage from barge collisions. These repairs cost $480,000, or more than the original purchase price of the entire bridge.

In 1970, a barge struck a pier caisson and required an expenditure of $6,500 to repair. Additional repairs to the abutments, deck, and approaches plus cleaning, painting and replacement of bridge lighting has required an expenditure of approximately $80,000 during the period from 1971 thru 1978.

While the pier reinforcement completed in 1969 appears to have eliminated the possibility of further pier collapse from undermining or barge collision, the portion of the bridge most subject to deterioration and additional repair is the bituminous treated timber deck and steel stringers. These are subjected to cycles of wetting and drying, impact and abrasion from traffic and ice treatment salts. Repair and replacement of some deck planking is required almost every year.

In the Spring of 1974, it was necessary to make substantial deck repairs including the reinforcement of several steel deck stringers and floor beams.

These were weakened from deterioration caused by moisture and ice treating chemicals. It was necessary to close the bridge to all truck traffic for several days and to require reduced truck loadings for several weeks while the repairs were made. This diversion of trucks created some economic hardships for businesses. The repairs cost approximately $50,000.

The bridge is inspected annually. The 1980 inspection indicated that the substructure and deck have minimum adequacy to tolerate present traffic and immediate rehabilitation is necessary. The superstructure structural items need major repair. As a result, weight restrictions were placed on the bridge in May, 1980. The maximum allowable gross weights are 15 tons and 24 tons for single units and combination units respectively. Mn/DOT maintenance forces repaired the most deteriorated sections of the bridge deck in 1980 and 1981 at a cost of $100,000. The 1981 bridge



Exhibit No. 5: OBLIQUE PHOTO OF BRIDGE



Exhibit No. 6: MAIN SPAN HIGH TRUSS - 422 feet long, 19 feet wide curb to curb, no sidewalks.



Exhibit No. 7: MINNESOTA APPROACH - 50 feet radius curve, 10 MPH speed limit.

inspection indicates the estimated remaining life of the structure is 5 years. However the useful life of the structure can be extended by additional extraordinary maintenance and/or further weight restrictions.

The Minnesota Department of Transportation (Mn/DOT) uses a Sufficiency Rating System to help determine construction priorities. The sufficiency rating consists of assigning a numerical value related to the condition, safety, and service features of a highway segment. Segments of TH 60 from the U.S. 61 jct. to the center of the subject bridge have 1981 Sufficiency Ratings of 44 to 62, whereas the Minnesota statewide average is 71. The below statewide average rating indicates these segments of TH 60 should be evaluated for reconstruction.

B. System Linkage

The subject bridge is the only direct link in the area between the transportation systems on each side of the Mississippi River. No river ferry service exists. The nearest river crossings are 30 miles upstream at Red Wing and 30 miles down-stream at Winona.

Transportation systems serving Wabasha, Minnesota parallel the river, except for TH 60 which generally extends east-west through southern Minnesota. Parallel systems are U.S. Highway 61, a principal arterial route, and the Chicago, Milwaukee St. Paul, & Pacific Railroad. Parallel systems in Nelson, Wisconsin, are WSH 35, a principal arterial route, and the Burlington Northern Railroad.

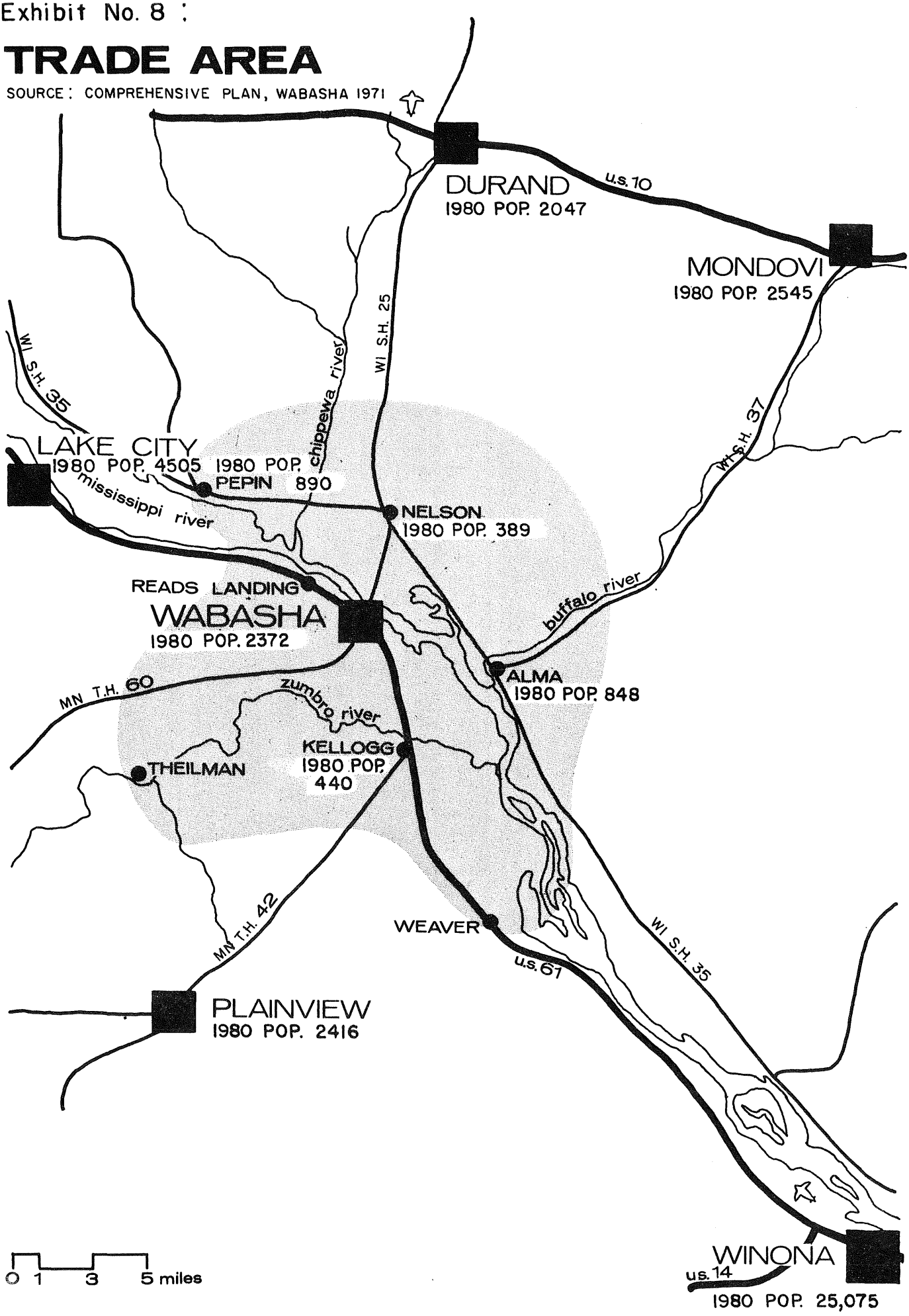
Wisconsin State Highway 25 extends northerly from Nelson approximately 87 miles.

C. Social Service Demands

Minnesota TH 60 extends generally in an east-west direction through southern Minnesota while WSH 25 extends northerly through western Wisconsin. Because of this lack of direction continuity between the routes in the two states and the predominance of smaller towns along both routes, the existing bridge carrys a relatively small percentage of long distance trips. The bulk of the trips originate in or are destined for locations within 25 miles of the structure. A 1967 origin-destination study (2) revealed that approximately 75% to 80% of the traffic volume on TH 60 in Wabasha is local. A large percentage of the trips crossing the existing bridge are work, shopping, or social trips between the Pepin-Nelson-Alma area in Wisconsin and Wabasha. The bridge allows the Wabasha-Nelson area to function in a sense as a single economic and social unit.

(2) TAS 570, 1967 Wabasha O-D Report, Office of Transportation System Planning, Mn/DOT.

Exhibit No. 8 :


TRADE AREA
SOURCE: COMPREHENSIVE PLAN, WABASHA 1971
DURAND
1980 POP. 2047
u.s. 10
MONDOVI
1980 POP. 2545
WI S.H. 25
WI S.H. 35
chippewa river
WI S.H. 37
LAKE CITY
1980 POP. 4505
1980 POP.
PEPIN 890
mississippi river
NELSON
1980 POP. 389
READS LANDING
WABASHA
1980 POP. 2372
buffalo river
ALMA
1980 POP. 848
MN T.H. 60
zumbro river
KELLOGG
1980 POP.
440
THEILMAN
MN T.H. 42
WEAVER
u.s. 61
WI S.H. 35
PLAINVIEW
1980 POP. 2416
0 1 3 5 miles
WINONA
u.s. 14
1980 POP. 25,075

The Wabasha trade area, as defined in the Wabasha Comprehensive Plan, is shown in Exhibit No. 8, Page 10.

Wabasha provides retail and other community services to the Nelson area which in turn provides a significant percentage of the Wabasha labor force. Wabasha businessmen stated that from 15% to 60% of their customers come from Wisconsin, in a survey conducted in 1969 (3). Survey results indicated that on the average 40% of the business trade comes from Wisconsin.

Wabasha also provides medical services for the same general trade area shown on Exhibit No. 8. Records at St. Elizabeth's Hospital in Wabasha indicate that 44% of the inpatients were from Wisconsin in 1977. The Community Clinic in Wabasha also stated that about half of their patients are Wisconsin residents.

D. Traffic Capacity

The existing 1978 Average Annual Daily Traffic (AADT) on the bridge is 2700 and the projected AADT for the year 2000 is 4300 (4). Predicted traffic characteristics for the year 2000 are shown in the following table. Traffic volumes for preferred alternative 3B are shown on Exhibit No. 9 on the following page.

Table No. 1 Predicted Traffic Characteristics Across Bridge Year 2000

Vehicle Type	ADT
Pass. cars & 4 tire trucks	3798
Single unit - 2 axle - 6 tire trucks	200
Single unit - 3 axle trucks	67
Tractor-Truck - 3 axle	14
Tractor-Truck - 4 axle	12
Tractor-Truck - 5 axle	192
Buses & Trucks with Trailer	17
Total ADT	4300
Total Heavy Commercial ADT	502
Total DHV (Design Hourly Volume)	559
Directional Distribution	60%-40%

(3) Planning Studies, a basis for comprehensive planning for Wabasha, Minnesota 1970, The Hodne/Stageberg Partners, Inc., Minneapolis, Minnesota.

(4) System Planning & Analysis Report S-149, 1973, Office of System Planning Mn/DOT.

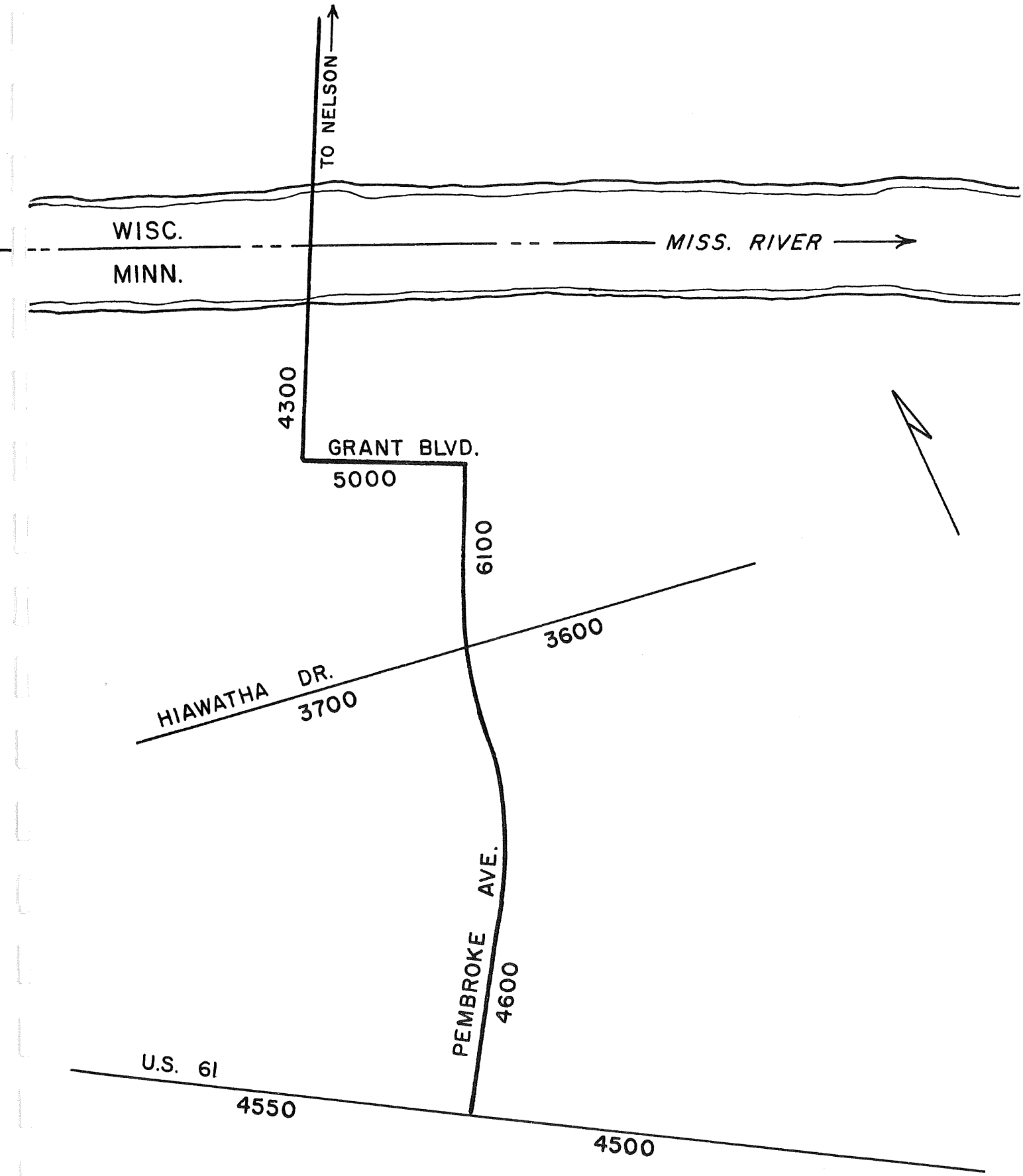


EXHIBIT NO. 9:
TRAFFIC VOLUME
YEAR 2000 (ADT)
PREFERRED ALT. 3B

The 19 feet bridge width, sharp curves on Minnesota approach, and 10 MPH speed limit severely restrict the traffic capacity of the existing structure. The existing level of service (5) is D to E as a result of the low travel speed and delays caused by trucks on the Minnesota approach. As traffic volumes increase, delays will increase and level of service will become E for longer periods of time.

The proposed action will provide level of service B to C and be consistent with the level of service of adjacent highways.

E. Safety

The narrow width and substandard horizontal and vertical alignment of the existing structure present a large potential for accidents. Accident rates for the years 1977 through 1979 are shown in the following table. The statewide averages listed are for similar type highways. Analysis of reported accidents shows clustering on the Minnesota approach and at intersections in Wabasha near the bridge. No fatalities have occurred within the past 4 years. The majority of the accidents occurring on the bridge are property damage and related to the narrow roadway width and poor geometrics.

Table No. 2 Accident Rate Per Million Vehicle Mile (rmvm)*

Year	TH 60 (U.S. 61 to center of bridge) length 1.26 mile	WSH 25 (center of bridge to Wisc. 35) length 2.61 mile
	rmvm	rmvm
1977	14.7	3.1
1978	13.8	3.1
1979	10.6	2.6 (6 months)
3 year Average	12.9	3.0
1978 statewide average	6.3	2.7

*rmvm = rate per million vehicle miles

The proposed action will reduce the accident potential by providing a wider bridge and improved horizontal and vertical alignment.

(5) Level of service is a qualitative measure of traffic flow using letters A thru F. Level A being free flow and level F being completely jammed. Highway Research Board Special Report 87, Highway Capacity Manual, 1965.

F. Social and Economic Effects of No Build

Not replacing the bridge in the near future will cause severe adverse social and economic effects. Maintaining the existing bridge beyond an additional 10 years will be extremely difficult. When maintenance becomes impractical, the bridge will be closed. The closing would sever the only transportation link between the two halves of the trade area shown on Exhibit No. 8. As a result, Wisconsin residents would be forced to travel greater distances for social and community services. Wabasha's retail trade would be reduced significantly due to the loss of Wisconsin customers. The labor force which uses the bridge daily would be forced to travel an additional distance up to 120 miles per day, relocate, or seek new employment. Long term effects include economic disaster for the City of Wabasha, reduced availability of community and medical services for Wisconsin residents, and a severe change in traffic patterns.

G. Modal Interrelationships

The study area is served by two modes of transportation, railroad and highway. Although a considerable amount of barge traffic passes through the area, no barge terminals exist at Wabasha or Nelson. However, some preliminary planning is occurring for a possible barge terminal at Wabasha. No airports exist in the study area. The nearest airports (general aviation) being north of Nelson and at Winona, Minnesota approximately 7 and 30 miles respectively from Wabasha. In addition to the railroads and highways mentioned under System Linkage on page 9, Wabasha is served by an inter-city bus route operated by Greyhound Bus Lines. The bus route follows U.S. 61 in Minnesota. Direct bus service between Wabasha and Nelson is not provided. No local bus service exists. The study area is served by one taxicab company located in Wabasha. The proposed facility includes reasonable width bridge shoulders which will be adequate for the anticipated light to moderate bicycle and pedestrian volumes. The lack of alternate modes reinforces the need for the proposed action.

H. Transportation Planning

Minnesota:

TH 60 is part of the Federal Aid Primary System.

An Interim Service Level Classification Plan was adopted in 1966 as the basis for developing the State Trunk Highway System. That plan classifies TH 60 as a Trunk Highway in the study area.

The 1990 National Functional Classification Study classified all of the nation's public roads according to type and character of service. TH 60 is designated as a Minor Arterial in the study area.

The Mn/DOT/Plan, the current transportation development guide for the State of Minnesota, lists the subject action for the Fiscal Year 1984-85 biennium.

Replacement of the existing structure is number 12 of 470 on the statewide bridge replacement program priority list.

The Comprehensive Plan (6) for the City of Wabasha stressed the importance of the bridge to the area and need for replacement in the general vicinity of the existing structure.

Winsconsin:

WSH 25 is part of the Federal Aid Secondary System.

The 1990 National Functional Classification Study designated WSH 25 as a Minor Arterial in the study area.

Replacement of the existing structure is number 26 of 338 on the statewide bridge replacement priority list.

(6) Comprehensive Plan Wabasha Minnesota 1971 by The Hodne/Stageberg Partners, Inc., Minneapolis, Minnesota.

II. ALTERNATIVES INCLUDING PROPOSED ACTION

Type of Facility

The existing mode of transportation and physical constraints of the project area limit the types of feasible facilities to the following three:

1. highway - bridge
2. highway - tunnel
3. highway - river ferry

The highway-bridge facility was selected over the tunnel facility since the tunnel would have a first cost approximately twice that of the bridge, have relatively high operational costs, and could have significant adverse environmental impacts. The river-ferry facility was not selected because it would result in a poor level of service and not be consistent with adjacent transportation systems.

Major Alternatives

The following six highway-bridge alternatives were considered in the Draft EIS:

Alternative 1 Church Ave.
Alternative 3A Walnut Ave. (New alignment to US 61)
Preferred Alt. Alternative 3B Walnut Ave. (Existing Sts. to US 61)
Alternative 3C Walnut Ave. (Existing US 61 Inter.)
Alternative 4 Bailey Ave.
Alternative 6 No Build

The following four design variations were placed under consideration as a result of public hearing and Draft EIS comments:

Alternative 1A: Church Ave. (Existing Streets to US 61)
Alternative 1B: Maiden Ave.
Alternative 4A: Bailey Ave. (Skewed main river channel crossing)
Alternative 4B: Bailey Ave. (Curvelinear main river channel crossing)

Alternative locations and profiles are shown on Exhibits No. 10 and 11 on the following two pages.

Description of Major Alternatives

The major alternatives are described on the following five pages. All build alternatives include removal of the existing bridge after the replacement structure is open to traffic. Existing bridge piers will be removed to an elevation equal to or below that of the stream bed.

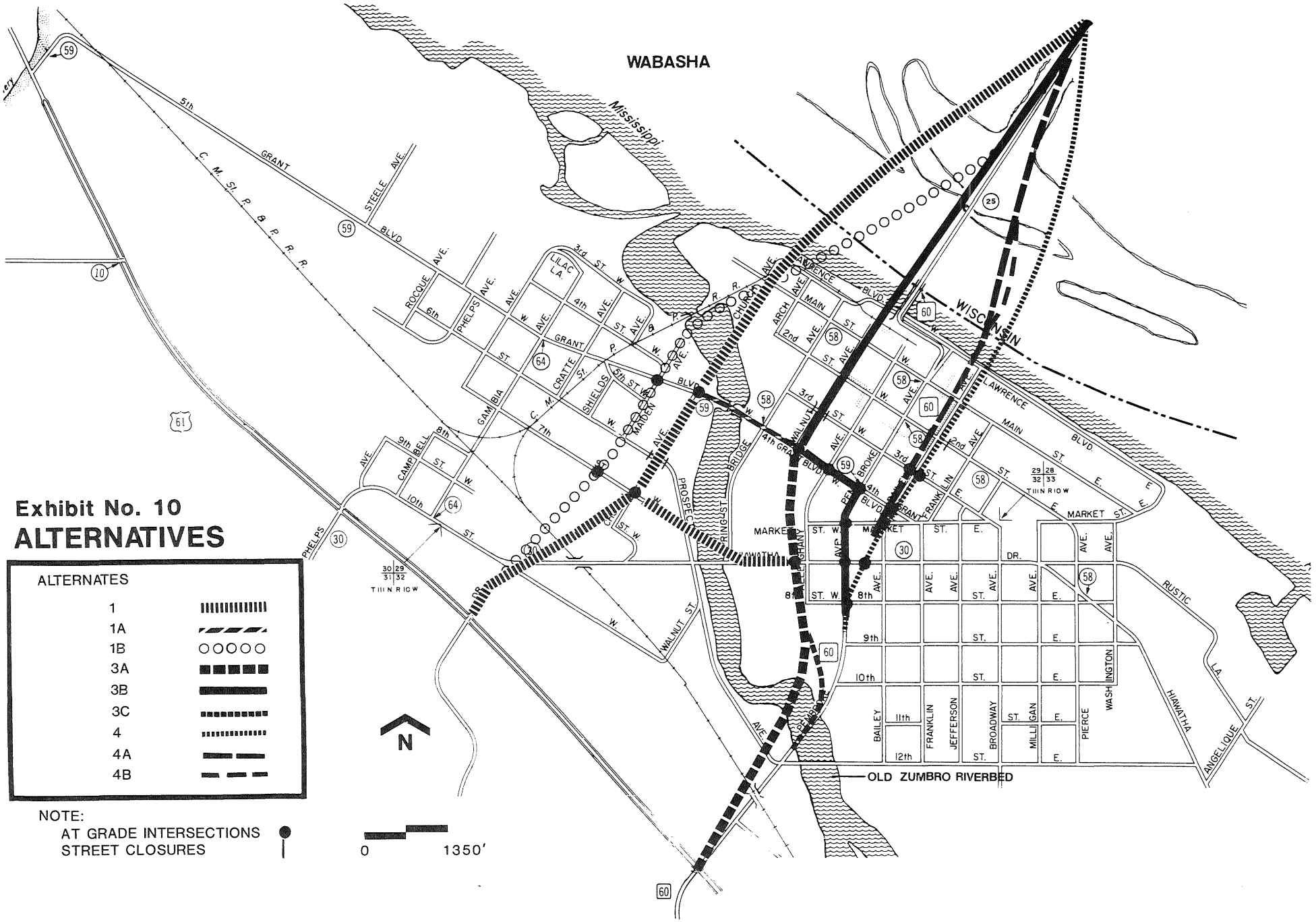


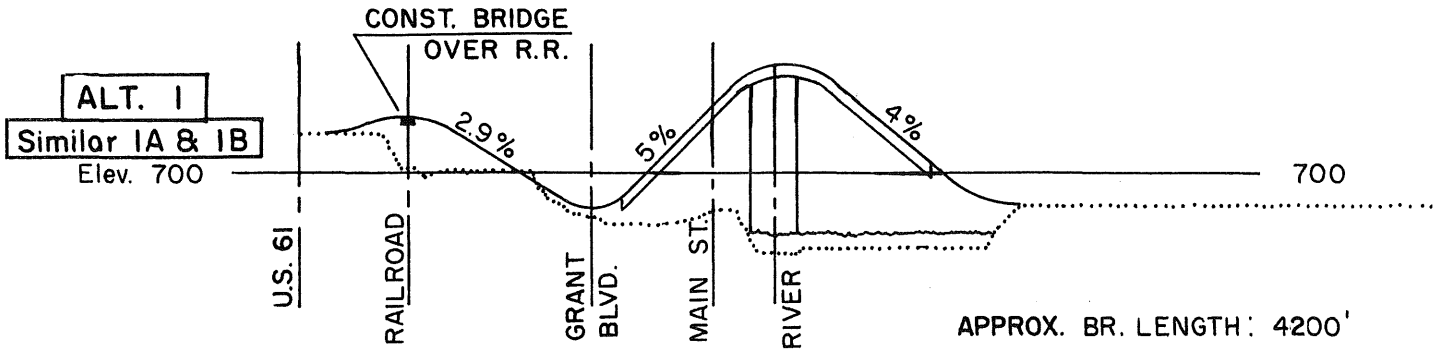
Exhibit No. 10

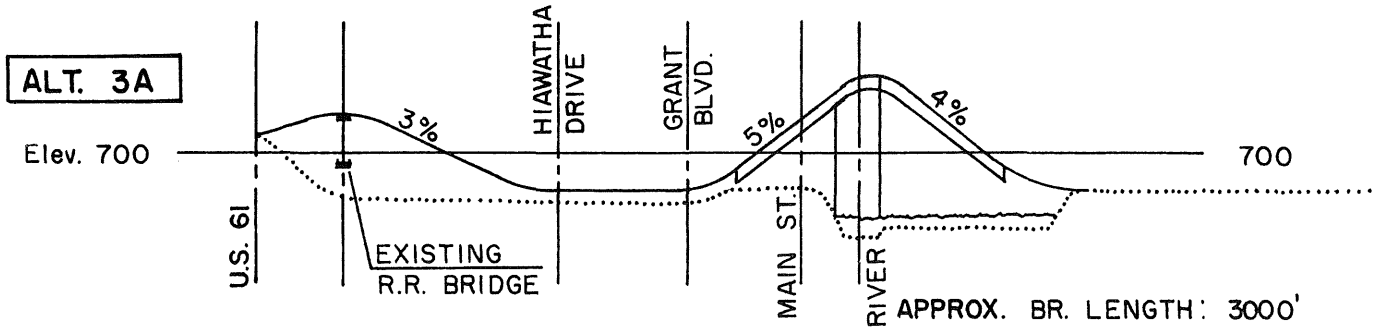
ALTERNATIVES

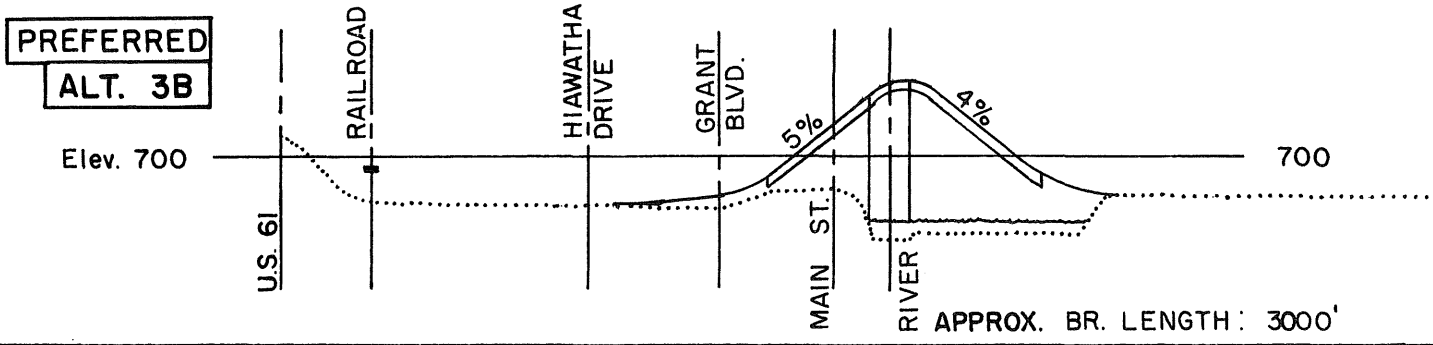
ALTERNATES

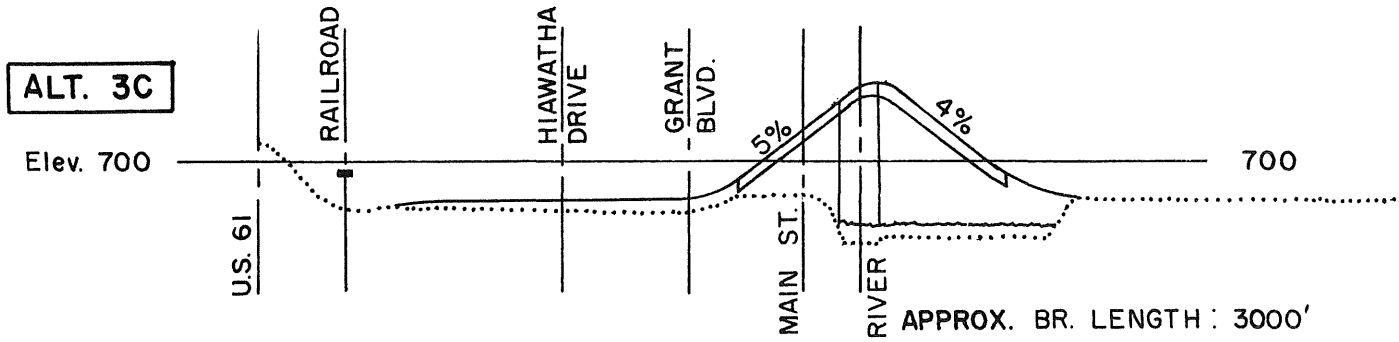
- 1
- 1A
- 1B
- 3A
- 3B
- 3C
- 4
- 4A
- 4B

NOTE:
AT GRADE INTERSECTIONS
STREET CLOSURES









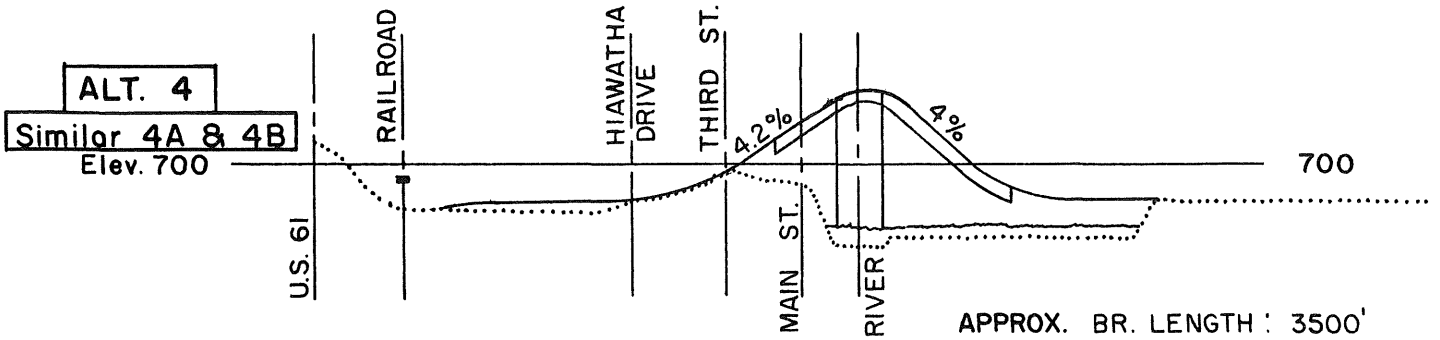


Exhibit No. 11: ALTERNATE PROFILES

SCALES: 1" = 2000' HORZ.
1" = 100' VERT.
normal river elev. 666.55
high water elev. 679.5 4·20·65
100 yr. flood elev. 678

Alternative 1	The bridge would be located approximately 900 feet northwest (upstream) of the existing structure and at a 20° skew with the navigational channel. The Minnesota approach would be two blocks westerly of the Wabasha business district, following Church Avenue in part, pass over the C. M. St. P. & P. Railroad, and intersect U.S. 61 about 3,300 feet northwest of the existing T.H. 60 - U.S. 61 junction. The first at grade intersection in Minnesota, would be at Grant Boulevard. Hiawatha Avenue would be reconnected with TH 60 at the 7th St. W. intersection. The Wisconsin approach would connect with existing WSH 25 about 1,400 feet northerly of the existing bridge abutment.
Alternative 1A	Alignment from Wisconsin to Grant Boulevard in Wabasha would be indentical to Alternative 1. The Minnesota approach would then follow Grant Boulevard from Church Avenue to Pembroke Avenue and then utilize existing TH 60 to reach U.S. 61.
Alternative 1B	The bridge would be located approximately 800 feet northwest (upstream) of the existing structure and at a 30° skew with the navigational channel. The Minnesota approach would be two blocks westerly of the Wabasha business district, following Maiden Avenue in part, pass over the C. M. St. P. & P. Railroad, and intersect U.S. 61 about 3,300 feet northwest of the existing T.H. 60 - U.S. 61 junction. The first at grade intersection in Minnesota would be at Grant Boulevard. Hiawatha Avenue would be reconnected with TH 60 at the 7th St. West intersection. The Wisconsin approach would connect with existing WSH 25 about 1,000 feet northerly of the existing bridge abutment.
Alternative 3A	The bridge would be located about 120 feet northwest of and parallel to the existing structure. The Minnesota approach would pass near the west edge of the Wabasha business district, touchdown at Grant Boulevard, pass through the Cental Athletic Field, go over the C. M. St. P. & P. Railroad and connect with the existing TH 60 - U.S. 61 junction. Pembroke Avenue would be reconnected to TH 60 near 9th Street. The Wisconsin approach would connect with existing WSH 25 about 1,100 feet northerly of the existing bridge abutment.
Alternative 3B (Preferred)	Alignment from WSH 25 to Grant Boulevard is identical to 3A. The Minnesota approach will follow Grant Boulevard from Walnut Avenue to Pembroke Avenue and then utilize existing TH 60 to reach U.S. 61 and thereby avoid passing through the Central Athletic Field. Specific design commitments are described in the mitigation discussions in the Environmental Consequences Section.

Alternative 3C — Alignment is identical to 3A except that instead of passing over the C. M. St. P. & P. Railroad in Wabasha, the existing T.H. 60 alignment from the Old Zumbro Riverbed to U.S. 61 would be utilized.

Alternative 4 — The bridge would be located approximately 1,000 feet downstream from the existing structure. The Minnesota approach would pass near the east edge of Wabasha business district, touch down at 3rd Street, follow Bailey Avenue in part, connect with Pembroke Avenue near 8th Street East, and then follow existing T.H. 60 to U.S. 61. The Wisconsin approach would connect with WSH 25 about 1,100 feet northerly of the existing bridge abutment.

Alternative 4A — The bridge would be located approximately 850 feet downstream from the existing structure and at a 15° skew with the navigational channel. The Minnesota approach would be parallel to and about 15 feet westerly of the Alternative 4 approach. The 15 foot shift was made to avoid acquiring property from the historic Grace Memorial Episcopal Church. The first at grade intersection in Minnesota would be at 3rd Street. The Wisconsin approach would connect with existing WSH 25 about 900 feet northerly of the existing bridge abutment.

Alternative 4B — Horizontal alignment is identical to Alternative 4A except the main channel span alignment consists of 1° 45' curve. The curved main channel span requires an increased depth of bridge structure which in turn would cause the first at grade intersection in Minnesota to be located at 4th Street.

Alternative 6 — No build, includes maintaining the existing facility as long as practicable and then closing the bridge. The estimated remaining life of the bridge is 5 years. However, by using extraordinary maintenance the life could possibly be extended an additional 5 years. The bridge would be closed in 1992.

Alignment features of the major build alternatives are listed in the following table:

Table 3: Approximate Alignment Features Of Major Build Alternatives

	Alt. 1	Alt. 1A	Alt. 1B	Alt. 3A	Preferred Alt. 3B	Alt. 3C	Alt. 4	Alt. 4A	Alt. 4B
Total Mainline Length	8100 ft.	6800 ft.	8200 ft.	9100 ft.	5500 ft.	8300 ft.	8200 ft.	8100 ft.	8100 ft.
R/W Required	35 Ac.	21 Ac.	33 Ac.	35 Ac.	19 Ac.	33 Ac.	33 Ac.	31 Ac.	31 Ac.
Approx. Bridge Length	4200 ft.	4200 ft.	4000 ft.	3000 ft.	3000 ft.	3000 ft.	3500 ft.	3000 ft.	3200 ft.
Max. Br. Grade	5%	5%	4.5%	5%	5%	5%	4.2%	5%	4%
Max. Br. Curve	3°	3°	4°	Tangent	Tangent	Tangent	5°30'	4°	3°
Est. Construction Cost (Million)	$20.8	$19.5	$20.9	$16.6	$13.7	$15.1	$15.6	$16.2	$15.9
Est. R/W and Relocation Cost (Million)	$ 0.3	$ 0.1	$ 0.3	$ 1.0	$ 0.7	$ 0.9	$ 0.9	$ 0.8	$ .8
Est. Total Project Cost (Million)	$21.1	$19.6	$21.2	$17.6	$14.4	$16.0	$16.5	$17.0	$16.7

NOTE: Cost estimates are based on current (1981-1982) average prices.

Other Alternatives

In addition to the major alternatives considered, several other alternatives as listed below were considered and dismissed prior to the DEIS.

Alternative	Reason for Dismissal
Upstream corridor from N. Jct. Wisc. 25 & 35 to NW edge of Wabasha	More than double construction length and cost - greatly increased wetland impacts.
Downstream corridor between Wisc. 37 & Minn. 42 near Kellogg, Minnesota	Severe adverse social-economic impacts to Wabasha and Nelson - more than double construction length, cost and natural resource impacts.
Alt. 2 Bridge Ave.	Would be adjacent to or displace a national historic site (Anderson Hotel located on the corner of Bridge Ave. and Main St.)
Alt. 3 Rebuild at or near existing location	Substandard Minnesota approach alignment - 1 to 2 year interruption of service during construction.

Alternatives 5A and 5B begin at the intersection of Pembroke Ave. and Main St. (the touchdown intersection for the existing bridge). To meet the intersection elevation at Pembroke and Main and provide navigational vertical clearance over the river requires a lift bridge (Alt. 5A) or relocating 10,000 ft. of the navigational channel (Alt. 5B). Relocating the touchdown point a greater distance from the river to allow gaining elevation over the navigational channel would displace several businesses and a church or a school.

Alt. 5A Pembroke Ave. with low level lift bridge.	Lift bridge length required (400') for navigation not practicable - reduction in level of service - emergency service disruption.
Alt. 5B Pembroke Ave. with 10,000 foot navigational channel relocation.	Severe adverse environmental impacts - additional cost - discouraged by Corps of Engineers.
Sub-alternate: TH 60 - US 61 Interchange	Not warranted under current conditions and policy.

TSM Alt.

Traffic System Management alternatives, such as prohibiting heavy commercial traffic and maintaining the bridge for passenger vehicle use only, are not feasible because the nearest river crossings are approximately 30 miles distant and the existing bridge is near the end of its useful life.

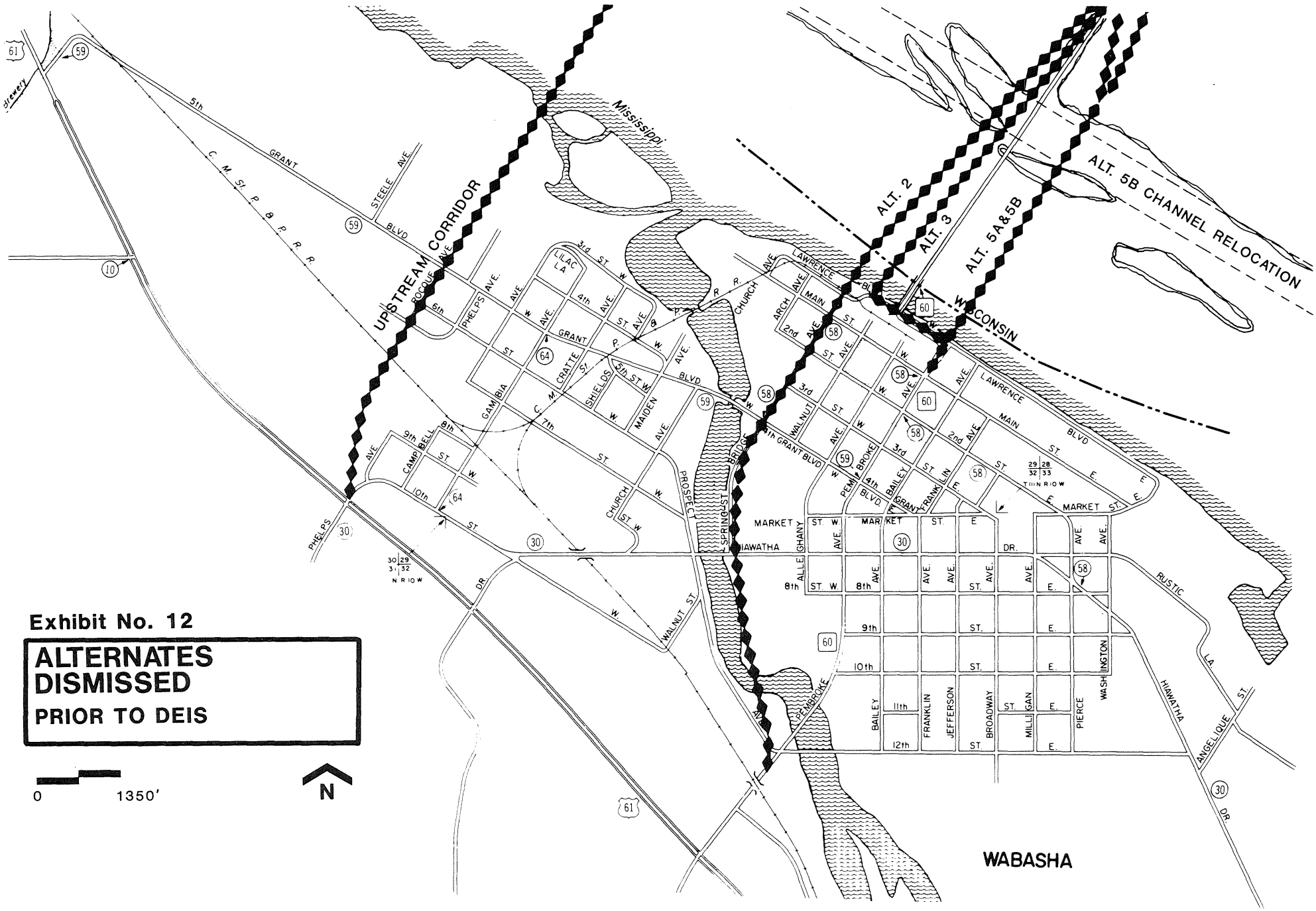
Locations of alternatives dismissed prior to the DEIS, except the downstream corridor, are shown on Exhibit No. 12 on the following page.

Preferred Alternative

Alternative 3B is selected as the preferred alternative based on an overall evaluation of all significant factors. The evaluation considered agency and individual comments on the Draft EIS; public hearing comments; social, economic and environmental impacts; bridge alignment; cost; permit requirements; and Federal and State laws and regulations. A matrix comparing significant impacts and measures of all build alternatives is contained on page 175. The minimal adverse impact or most desirable measure in each category is shaded blue and the maximum adverse impact or least desirable measure is shaded brown. When impacts in a category are similar for more than one alternative, all similar impacts are shaded. As indicated by the amount of blue under Alternative 3B, that alternative has the greatest number of minimal impacts and most desirable measures.

Because of the topography, land use, and existing facility location, an alternative without any adverse impacts is not possible. Therefore none of the alternatives considered to date will satisfy everyone to the extent typically desired. As a result, the selection process evolved into determining which alternative has the least adverse impacts, has the most desirable measures, is consistent with laws and regulations, and provides a safe and efficient transportation system.

The matrix on page 175 shows that Alternative 3B has minimal impacts on total 4(f) lands, wetlands and backwater, total right of way, economics, and has the most desirable total cost and bridge alignment. Alternative 3B is therefore established as having minimal impacts in more categories than any other alternative. The matrix also shows that Alternative 3B has maximum impacts on historic property, noise, and relocations. Examination of the impacts on historic property, noise, and relocations reveals that the displacement of historical buildings is the only adverse impact unique to Alternatives 3A, 3B and 3C.


ALT. 2
ALT. 3
ALT. 5A&5B
ALT. 5B CHANNEL RELOCATION
UPSTREAM CORRIDOR
Mississippi
WISCONSIN
WABASHA
Exhibit No. 12
ALTERNATES DISMISSED
PRIOR TO DEIS
0
1350'
N

All build alternatives involve at least a partial realignment of TH 60 in Wabasha and therefore will change the location of some highway noise and displace homes. Approximately one half of the receptors listed as exceeding noise standards for Alternative 3B will not experience any noise level changes from this action since they are located on the segment of existing TH 60 (from Grant Blvd. to Highway 61) which will be utilized by Alternative 3B.

Alternative 3B will displace 8 homes and 3 commercial buildings while most of the other alternatives would displace 6-9 homes and 3 or 4 commercial buildings. The relocation impact of Alternative 3B is therefore undesirable but similar to most of the alternatives.

The historic impacts of Alternative 3B result from passing through the Historic Commercial District (displacing three buildings within the Historic District) and displacing one historic building located outside the Historic District. Since the bridge will be elevated (provide approximately 20 ft. to 35 ft. vertical clearance above ground level) through the Historic District, existing vehicular and pedestrian travel patterns within the Historic District will be perpetuated. Mitigation of historic impacts will include recording all four buildings prior to demolition or relocation, moving the First Congregational Parsonage, moving the Replogle House and its garage (livery stable) if relocation is determined to be prudent and feasible by the MSHPO and FHWA, appropriate landscaping and site development beneath and adjacent to the bridge, and aesthetic consideration of the bridge features. These measures have been determined to be adequate mitigation as documented in the Memorandum of Agreement (MOA) between the Advisory Council on Historic Preservation, Federal Highway Administration, and Minnesota State Historic Preservation Officer contained on pages 127-128. Historic impacts and mitigation are discussed in greater detail on pages 110-128

In summary, Alternative 3B is selected as the preferred alternative because it has the greatest number of minimal impacts, two of its three maximum impacts (noise and relocations) are not significantly different from those of most of the alternatives; the third maximum impact (historic) will be adequately mitigated as documented in the MOA; minimizes the use of non historic Section 4(f) Land; is consistent with executive Orders on wetlands and floodplains; provides excellent bridge alignment; is the lowest cost build alternative; and is acceptable to agencies with permit authority.

The project development schedule and design features are listed in the following two tables.

Table 4: Project Development Schedule

Project Development Report	March 5	1975
Draft EIS	May 28	1980
Location Public Hearing	Sept. 24 & 25	1980
Final EIS	Spring	1983
Location Approval	Spring	1983
Layout Approval	Summer	1983
Design Public Hearing	Summer	1983
Design Study Report Approval	Summer	1983
Determine Construction Limits	Spring	1983
Acquire Right of Way (1st phase)	Fall	1984
Approval P. S. & E.	Fall	1984
Construction Letting (1st phase)	December	1984
Completion	Fall	1987

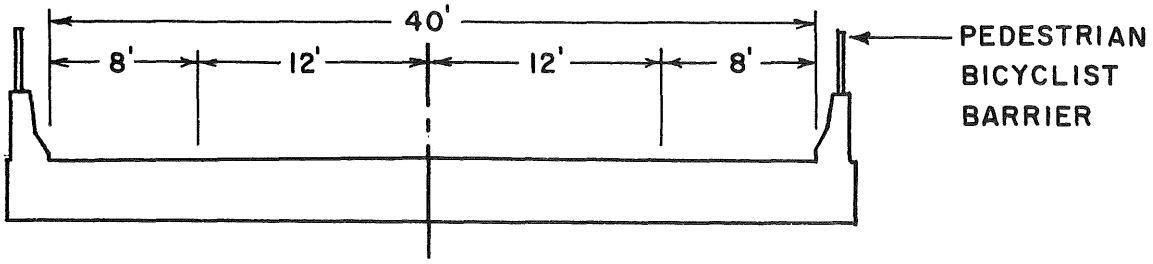
Table 5: Design Features

No. of Traffic Lanes	2
Traffic Lane Width	12 ft.
Typical Design Speed	50 MPH
Approximate Bridge Length	3000 ft.
Navigational Clearance:	
Vertical*	60 ft. above normal pool or 52 ft. above the 2% flowline, whichever is greater.
Horizontal*	403 ft. minimum (identical to existing bridge)
Non-Bridge Hwy. Section:	
Rural**	2 lane w/8 ft. shoulders
Urban**	2 lane w/parking lane and curb and gutter
Access Control	Partial

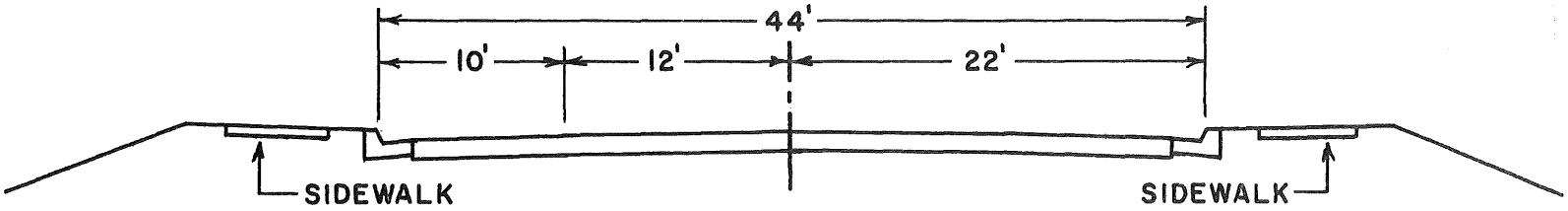
*Actual vertical and horizontal clearances and pier locations for the proposed bridge shall be approved by the Commandant, U.S. Coast Guard (33 U.S.C. Section 525). Minimum navigational clearance criteria was established at a meeting on February 20, 1975. Meeting participants were the U.S. Coast Guard, U.S. Fish & Wildlife Service, FHWA, Mn/DOT and four barge companies.

**Typical sections are shown on Exhibit No. 13 on the following page.

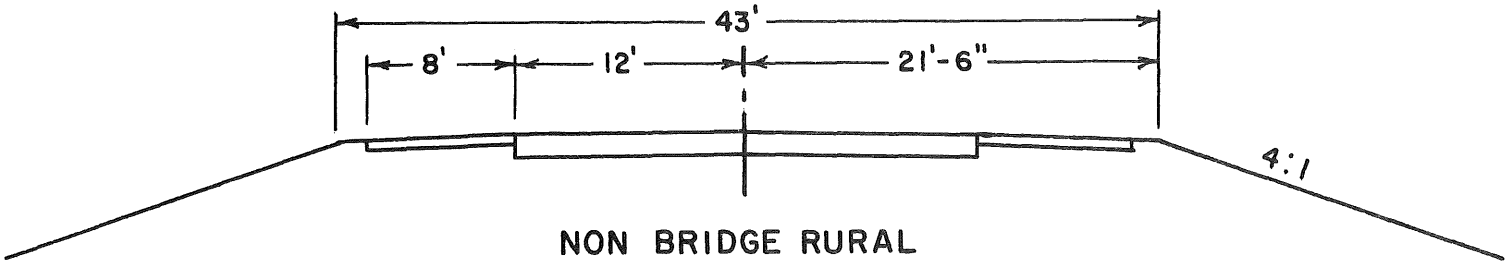
Exhibit No. 13: TYPICAL SECTIONS



STRUCTURE CROSS SECTION



NON BRIDGE URBAN



NON BRIDGE RURAL

III. AFFECTED ENVIRONMENT

A. Natural Environment

1. Topography

Southeastern Minnesota is located on a plateau of bedrock which is extensively dissected by the Mississippi River and its tributaries. The plateau rises more than 500 feet above the Mississippi River Valley. The floor of the river valley is level to gently rolling.

The proposed project is located within this valley near the confluence of the Mississippi and Chippewa river valleys. See Exhibit No. 3 on page 3. Granular deposits from the Chippewa River have sedimented much of the valley at this confluence.

Alluvial deposits form a vast floodplain which is roughly 3 miles wide. The present channel of the Chippewa River empties into the Mississippi River three miles north of subject bridge.

The main channel of the Mississippi River is located on the western edge of this floodplain, adjacent to Wabasha. At the Wabasha Bridge the main channel of the Mississippi River is about 1800 feet wide. A navigation channel is located on the extreme western edge of the main channel. This navigation channel is approximately 400 feet wide and varies from 15 to 22 feet deep. Water depth across the rest of the main channel varies from 4 to 10 feet. Bottom sediments in this channel are probably fine to coarse sands. Sediment in the navigation channel is probably coarser. River currents are constantly resuspending and redepositing this sediment resulting in unstable bottom conditions.

A huge complex of braided channels and meandering backwaters exist between the main channel of the Mississippi River and the Wisconsin side of the floodplain. Except where dredging has maintained deeper channels adjacent to WSH 25, water depth in these backwaters varies from less than 2 to 5 feet. West of WSH 25, the dredged depth varies from 6 to 10 feet. East of WSH 25 access to the boat ramp is maintained at 12 to 15 feet. More than 20 square miles of backwaters exist within a 5 mile radius of the Wabasha Bridge.

The backwaters are partially isolated from the main channel of the river by natural levees, a wing dam and dredged materials deposited along the banks of the main channel.

A former channel of the Zumbro River cuts through the City of Wabasha. Segments of the old channel are flooded with backwaters from the Mississippi River. The old Zumbro Riverbed is shallow, 3 to 6 feet water depths, and contains much silt and sediment in the study area. Much of the old Zumbro Riverbed is classified as Type 5 wetland, see Exhibit No. 25 on page 92.

2. Soils

The City of Wabasha has been built on alluvial deposits from the Mississippi River and its tributaries. The soils in Wabasha, between the Mississippi River and U.S. 61 range from unconsolidated sand, near the river to well drained sandy loam on high ground farther back from the river. Soils are fairly stable and highly permeable. Natural fertility of these alluvial deposits is relatively low. The backwater sediments on the Wisconsin side of the river are predominately sandy and organic alluvial deposits.

The geological profile is shown in Exhibit No. 14 on the following page.

3. Terrestrial Vegetation

The backwaters on the Wisconsin side are undeveloped areas of floodplain forest, isolated marshes and running side channels. Lowland Hardwoods are the major vegetation type within the Mississippi River floodplain. Tree species found in the floodplain, near the Wabasha Bridge, include elm, maple, cottonwood and willow. Understory plants include prickly ash, virginia creeper, wild grape, red osier dogwood and poison ivy.

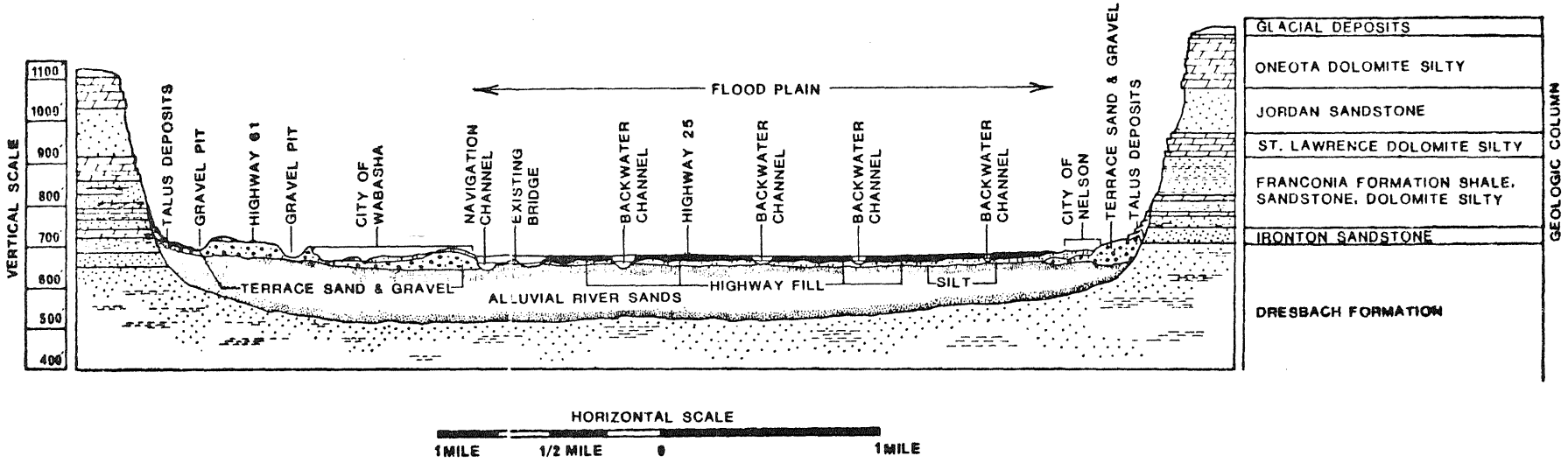
4. Aquatic Vegetation

Submerged and floating aquatic vegetation is scarce in the main river channel and those side channels which receive some direct river flow. Aquatic vegetation is abundant only in backwaters which are isolated from direct river current. Refer to Exhibit No. 25, page 92 for locations of major beds of aquatic vegetation. The dominant species found in these backwaters are coontail and lesser duckweed. Other species include wild celery, elodea, curled leaf, floating leaf and snailseed pondweeds and mud plantain. Periphyton (attached algae) is abundant on most of the submerged vegetation. Emergent vegetation found along the margins of these backwaters include cattail, bulrush and arrowhead. Wetland grasses and forbs found adjacent to backwaters include cord grass, reed canary grass, rice cut grass, sedge, wild millet and smartweed.

Exhibit No. 14: GEOLOGICAL PROFILE

CROSS SECTION · MISSISSIPPI RIVER VALLEY

WABASHA MN. TO NELSON WI. CROSSING



The former Zumbro River channel in Wabasha is in a highly developed area. It is surrounded by city and farmlands. The channel has been filled in several areas for buildings, roads and recreational lands. The channel still contains considerable wetland vegetation, especially south of the present T.H. 60 crossing. Wetland vegetation in the old channel consists of patches of lowland hardwoods, brush, marsh grasses and aquatic vegetation. Dominant species of aquatic vegetation include waterlilies, duckweed, coontail and cattails. North of Hiawatha Avenue the channel is too deep to support rooted aquatic vegetation.

5. Wildlife

The maze of backwater channels, islands and wetlands on the Wisconsin side of the Mississippi River are prime wildlife habitat. A wide variety of species occur there. Muskrat, beaver, raccoon and gray squirrels are the most common mammals. White tailed deer, red fox and mink also occur. Water snakes, bullsnakes, frogs and turtles are common. Water birds found in the area include herons, egrets and terns. However, rookeries of these colonial waterbirds do not occur along any of the proposed alignments. Several species of ducks are abundant and extensive stands of lowland hardwoods offer excellent woodduck nesting habitat. Waterfowl use the backwater marshes for nesting and also for resting and feeding during spring and fall migrations. Hawks, owls and songbirds are numerous and include a variety of species.

The former Zumbro River channel in Wabasha supports the same kinds of wildlife as the Wisconsin side of the river valley. However, disturbances by man have reduced its value for wildlife to a moderate level.

Except for a few small tracts of grassland and cropland the uplands West of the Mississippi River, in and around Wabasha, are all commercial or residential developments. These lands have low value for wildlife.

The Wisconsin side of the floodplain is used heavily for hunting and trapping. However, the area west of WSH 25 is closed to all hunting during the Wisconsin Waterfowl Season.

6. Wetlands

All wetlands within the project area are contiguous with the Mississippi River. These wetlands can be separated into wetlands associated with the former Zumbro River channel, on the Minnesota side, and wetlands associated with the Mississippi River floodplain, on the Wisconsin side. Wetlands

associated with the former Zumbro channel total approximately 135 acres in area, while wetlands contiguous with the Mississippi River floodplain total well into the tens of thousands of acres, if not significantly larger.

The larger wetland basins have been broken down into types and classified according to U.S.F.W.S. Circular 39. Refer to Exhibit No. 25, page 92 for locations of the various wetlands. Descriptions of the various wetlands found along the proposed alternatives are as follows:

Type 1 Seasonally Flooded Basins; The soil is covered with water, or waterlogged during variable seasonal periods, but is usually well drained during much of the growing season. Vegetation varies greatly according to the season and duration of flooding, but primarily includes weeds and grasses.

Type 1L Seasonally Flooded Lowland Hardwoods: These are floodplain hardwoods which are inundated during periods of high water. Wetlands of this type offer considerably greater wildlife habitat than do the other type 1 wetlands. These wetlands are often interlaced with permanent backwater channels.

Type 2 Inland Fresh Meadow; The soil is usually without standing water during most of the growing season, but waterlogged within at least a few inches of the surface. Vegetation includes grasses, sedges, rushes and various broad leaved plants.

Type 5 Inland Open Fresh Water; Shallow areas of open water having water depths from 3 to 10 feet. Vegetation includes pondweeds, elodea, wild celery, coontail, and waterlilies.

Type 6 Shrub Swamps; The soil is usually waterlogged during the growing season and is often covered with as much as 6 inches of water. Vegetation can include alders, willows, buttonbrush and dogwood.

7. Threatened and Endangered Species

Bald Eagle

The Bald Eagle (Haliaeetus leucocephalus) is currently listed as a threatened species by the U.S. Fish and Wildlife Service. The eagles are known to winter along the Mississippi River from mouth of the Chippewa River at Reads Landing to Teepeeota Point located about six miles downstream. See Exhibit No. 3 on page 3. The Wabasha bridge is situated approximately in the middle of this segment of river. The eagles have concentrated along this

segment because it is the only large area of the river that remains open during winter. The water is kept open by constant flow from the Chippewa River. The eagles are dependent upon open water areas for food. The open waters attract schools of fish, crippled waterfowl, and contain dead fish, all of which the eagles feed upon.

Counts of wintering eagles along the open water segment have been conducted by the U.S. Fish and Wildlife Service and a local chapter of the Audubon Society. These counts indicate that the total number of wintering eagles has varied over the years from 55 to 3 birds. The distribution and number of eagles wintering in the Wabasha area is directly related to the availability of open water and associated prey species. During severe winters (e.g., 1978-79) and mild winters (e.g., 1979-80) the size of the available feeding areas decreases or increases accordingly. Temperature (which indicates the amount of open water available) is directly related to the number of eagles in the project area.

Migrant eagles arrive from October through December and most remain in the area until the first major breakup of river ice, usually during March. During the winter, the eagles feed and roost throughout the open water segment of river. Small groups and single eagles have been observed feeding and roosting in tall trees along the river bank just upstream and downstream of the present Wabasha bridge. The eagles usually keep a distance of 400-500 feet away from the bridge. It is not uncommon for the birds to use the bridge area. However, the area around Reads Landing is the most important for the wintering eagles. This area received the most frequent use and has the highest concentration of birds. It is especially important as winter progresses and the area of open water shrinks.

No eagle nests are known to occur along any of the proposed alignments or along the Mississippi River from Reads Landing to Teepeeota Point. The region has been used by nesting eagles in the past and could potentially be used again in the future.

Peregrine Falcon

The Peregrine Falcon (Falco peregrinus), currently listed as endangered species, has a range which includes both Minnesota and Wisconsin. The Mississippi River bluffs between Minnesota and Wisconsin, including those in the Wabasha area, have been listed as potential nesting sites for reintroduction of the Peregrine Falcon. The bluffs which could be used for nesting are located several miles from the proposed project.

Higgin's Eye Pearly Mussel

A species of clam, the Higgin's Eye Pearly Mussel (Lampsilis higginsi), currently designated an endangered species, has been known to occur in portions of the Upper Mississippi River, including the project area. However, a survey undertaken during the summer of 1979 did not reveal the presence of Lampsilis higginsi or any other endangered species of mussels.

8. Fisheries

The Mississippi River near Wabasha supports a substantial and varied fishery. Many species of game and roughfish inhabit the many backwater areas and main river channel within the project area.

Fish species known to utilize the river and adjacent backwaters include walleye, sauger, northern pike, large and smallmouth bass, black crappie, bluegill, rock bass, white bass, yellow perch, various species of bullhead, channel and flathead catfish, redhorse, river carpsucker, bowfin, drum, carp and various minnow species. Angling pressure in the immediate area is considerable.

A rock wing dam is located approximately 200 feet upstream and parallel to the existing bridge. The dam extends from a nearby island to the edge of the main river channel. Wing dams and the scour holes they produce offer excellent fish habitat and are used heavily by anglers.

The former Zumbro River channel, within the town of Wabasha also supports a fishery but not as varied as that of the Mississippi River. The channel has resident populations of sunfish, crappies and various species of roughfish. Bass and walleyes are known to migrate in from the Mississippi River during the spring. Fishing is common in the channel, with most angling pressure located below Hiawatha Avenue.

Most of the fish species present in the river use the many backwater channels as spawning and nursery areas. A survey by the Wisconsin Department of Natural Resources could not pinpoint specific spawning beds along any of the suggested bridge alignments due to turbid water conditions. However, fish spawning undoubtedly occurs in the area and the backwater channels are invaluable as fish nursery areas.

9. Flood Plain

The major portion of this project will be constructed within the Mississippi River floodplain. Refer to Exhibits No. 3 & 25 for the delineation of the 100 year floodplain.

10. Groundwater

Groundwater usually moves at right angles to topographic contours from upland to lowland areas. Near Wabasha, the direction of groundwater movement is from the bedrock plateau west of Wabasha toward the alluvial sediments deposited by the Mississippi River. Wabasha is able to obtain most of its groundwater from near surface aquifer of saturated alluvial and valley fill deposits of the river.

Carbonates and bicarbonates are the major ions present in the groundwater. Most of the bedrock aquifers have been eroded back from the Mississippi River. The bedrock plateau is nearly 1.5 miles west of the present channel of the Mississippi River.

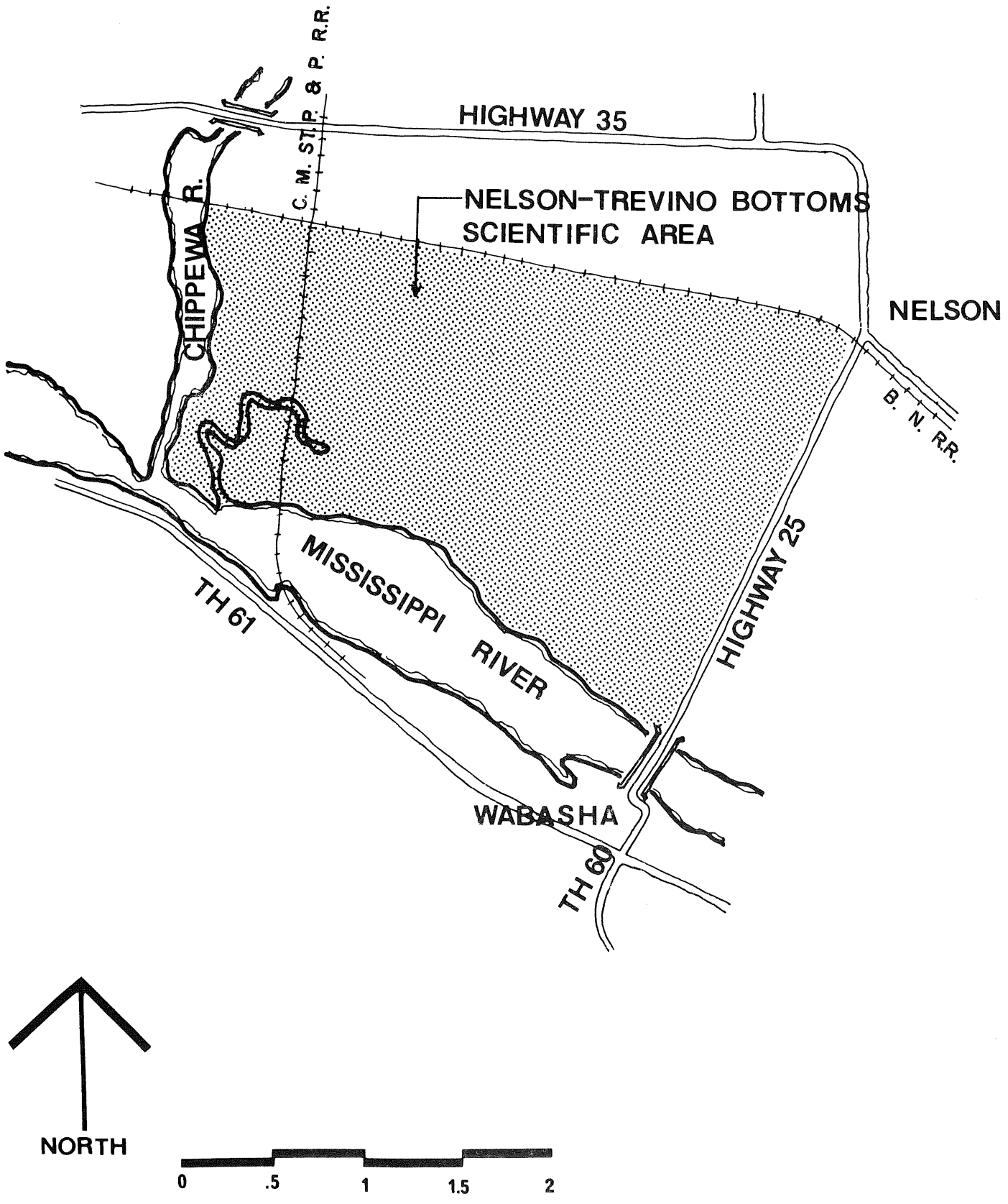
11. Upper Mississippi River Wild Life and Fish Refuge

The area between the Mississippi River main channel and the Burlington Northern Railroad in Wisconsin is included in the Upper Mississippi River Wild Life & Fish Refuge. This refuge contains 195,093 total acres and extends from the Chippewa River southerly to Rock Island, Illinois, a distance of approximately 284 miles. Of the total refuge area, 33,000 acres are in Minnesota and 88,000 are located in Wisconsin. Purchase of the refuge commenced in 1924 following an Act of Congress and continued into the 1930's. The land is owned by the federal government with approximately 82,000 acres under the jurisdiction of the Department of the Interior (U.S. Fish and Wildlife Service) and the remainder under the jurisdiction of the Department of Defense (U.S. Army Corps of Engineers). Through mutual agreement, the Crops of Engineers retain flowage rights while the U.S. Fish and Wildlife Service retain wildlife management rights.

Part of the refuge in the Nelson-Wabasha area is a waterfowl refuge only. West of WSH 25, the refuge is closed to waterfowl hunting at all times and to all hunting and trapping during the State waterfowl season. It is otherwise open to all hunting, fishing or trapping as permitted by the State of Wisconsin. On the east side of WSH 25, the refuge is open to all hunting, trapping, and fishing permitted by the State of Wisconsin including waterfowl.

12. Scientific Area

The 3740 acre portion of the refuge on the west side of WSH 25, is also designated by the State of Wisconsin as the "Nelson - Trevino Bottoms Scientific Area," see Exhibit No. 15 on the following page.



NELSON-TREVINO BOTTOMS SCIENTIFIC AREA

Exhibit No. 15:

This designation was given to this and other areas in Wisconsin to aid in preserving tracts of land or water in an undisturbed or almost undisturbed condition. The lands so designated are generally publicly owned and are selected by the Wisconsin Scientific Areas Preservation Council on the basis of the quality, uniqueness, diversity and potential value for research and formalized class use. This Council does not acquire or hold land but acts instead as an advisory agency in the selection, acquisition and use of scientific areas.

The portion of the refuge west of WSH 25 is also being considered by the Department of the Interior for possible inclusion in the National Wilderness Preservation System. A study was completed in 1974 by the U.S. Fish and Wildlife Service and recommended that this and all other areas of the Upper Mississippi River Wild Life and Fish Refuge not be designated a wilderness area. However, consideration is still being given to inclusion of this area in the National Wilderness Preservation System.

A boat access is located on the east embankment of WSH 25 near the northeastern terminus of the existing bridge. This access is located on a backwater channel, which is navigable by small boats to the main river.

Another boat access is located in Minnesota on the west bank of the former Zumbro River channel in Wabasha, above the railroad crossing upstream from the Mississippi River. Boat accesses are shown on Exhibit No. 18 page 46.

13. Climate

Coldest Month:	January	Hottest Month:	July
Mean Daily Max	27.3°F		87°F
Mean Daily Min	9.4°F		65°F
Ave. annual precipitation			29 inches
Ave. annual snow			44 inches
No. days over 90°			14
No. days between killing frosts			125
Prevailing wind direction			southeast
Prevailing wind speed			9 MPH

Mississippi River: Annual Ave. Flow = 23,700 CFS
100 yr. Flow =240,000 CFS
Ice-Mid December to Mid March
Typical ice thickness = 15 inches

B. Social Environment

1. History

Wabasha, Minnesota is built on the site of one of the earliest pioneer settlements on the upper Mississippi River. In 1826 Augustine Rocque made a winter camp at the location. By 1838 it was called Cratte's Landing

after Oliver Cratte who was the first white man to build a permanent building in what is now the city. The settlement was officially named Wabasha in 1843 after a progression of Dakota Sioux chiefs named Wapashaw. The town was surveyed and laid out in 1855 and incorporated in 1857.

2. Population

The recent population history of Wabasha, Nelson, and the two counties in which they are located is listed below:

Table 6: Population (source U. S. Census)

Area	1950 Total	Year 1960 Total	1970 Total	1970 non-white	1980 Total
City of Wabasha	2,468	2,500	2,371	1	2,372
Wabasha County	16,878	17,007	17,224	27	19,335
Village of Nelson	NA*	NA*	383**	0	389
Buffalo County	14,719	14,202	13,743	17	14,309

* Not available since Nelson was not incorporated until June, 1978.
** 1978 Population

Population in the area has declined slightly during the 1960-1970 period primarily as a result of reduced industrial activity. For planning purposes however, moderate population gains are expected over the next two decades. Gains are expected as a result of agricultural employment stabilizing, tourism/recreation activity increasing, and industrial employment rising moderately.

3. Housing

Table 7: Housing Unit Summary

Area	No. of Units 1960	No. of Units 1970	No. of Units 1980
City of Wabasha	701	778	942
Village of Nelson	NA	NA	175
Wabasha County	4,859	5,827	7,604
Buffalo County	4,499	4,597	5,273

Sources: Background Report, Southeastern Minnesota Areawide Planning Organization 1974

Census Notes - Regional Housing Data Mississippi River Regional Planning Commission 1973

1980 Census

Analysis of the number of housing units indicates the number of farm dwelling units are diminishing while non-farm units are increasing.

A survey conducted during the summer of 1978 revealed 49 available homes in the project area.

4. Transportation Facilities

Table 8: Transportation Facilities

	Wabasha	Nelson
Highways	U.S. 61, Minn. 60	Wisc. 25, Wisc. 35
Highway Load Limits	Minn. 60 - 6 Tons	Legal
Miles to Interstate Hwy.	37 to I-90	41 to I-94
Rail Lines	1 - C.M.St.P. & P.	1 - BN
Rail Service	Freight	Freight
No. of Truck Lines	5	-
No. of Truck Terminals	1	0
Nearest Airport	30 Mi. - Winona	5 Mi. General Service
Inter City Bus	Greyhound	0
Taxicab Companies	1	0
Navigable Water Depth	9 Feet	9 Feet

The study area of the Mississippi River is included in Pool 4 created by Lock and Dam No. 4 at Alma, Wisconsin.

Although neither Wabasha or Nelson have barge terminals, the bridge clearances required for barge traffic do affect the geometrics of the interstate bridge. Commercial barge traffic has significantly increased since the completion of the 9 feet deep navigational channel in 1939. Corps of Engineers records show the total barge traffic in the St. Paul District has increased from 1.1 million tons in 1940 to 26.2 million tons in 1978. The total number of lockages at Lock and Dam No. 4 was 5,127 in 1977 including 3,027 pleasure boat lockages.

The predominant commodities shipped by barge are grain, coal, and petroleum. The nearest barge terminals are located at Alma, Wisconsin and Red Wing, Minnesota at distances of 7 miles downstream and 25 miles upstream respectively from Wabasha.

5. Recreation

Recreational activities available within the study area include:

Boating, waterskiing, fishing, swimming, hunting, picnicking, camping, golfing, tennis, canoeing, ice skating, ice hockey, snow skiing, snowmobiling, bowling, scenic drives, nature walks, and routine park and athletic field activities. Nearby facilities are shown on Exhibit No. 46, page 147.

A summary of park and recreation areas within the city of Wabasha is as follows:

Table 9: Wabasha Park & Recreation Acreage

Type of Facility	Number of Facilities	Acreage (approximate)
Neighborhood Parks	4	7
School Playgrounds	2	1
Community Parks	4	28
Undeveloped Areas	4	18
TOTAL	14	54 Acres

All build alternatives will affect some park and recreation areas. These areas are shown on Exhibits No. 16 and 46 on pages 41 and 147 respectively and include the following:

A. Upper Mississippi River Wild Life and Fish Refuge, a 195,000 acre federally owned game refuge located in Wisconsin.

B. Mississippi River Park, a narrow one acre passive use park owned by the City of Wabasha and located between Lawrence Blvd. and the Mississippi River.

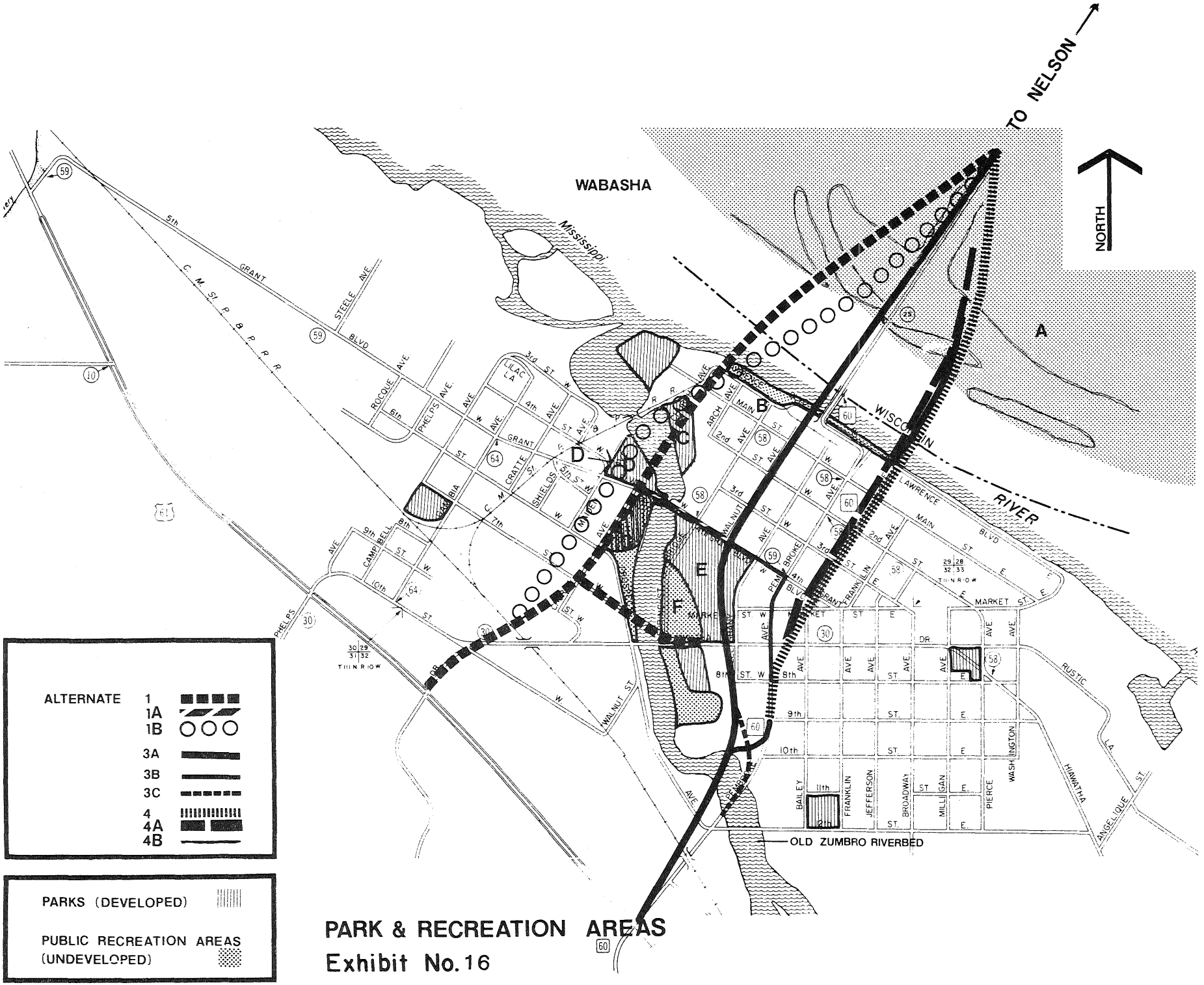
C. City Campgrounds, a 2.6 acre area with camping hookups owned by the City of Wabasha and located along the north side of the Old Zumbro Riverbed near Church Avenue.

D. Ikes Park, a 4.4 acre well developed park (includes boat ramp) owned by the City of Wabasha and located along the south side of the Old Zumbro Riverbed and north of Grant Blvd.

E. Central Athletic Field, a 10.7 acre area which includes ball fields, skating rinks and tennis courts owned by the City of Wabasha and located south of Grant Blvd. and west of Alleghany Avenue.

F. County Fairgrounds, a 6.0 acre area used for county fair midway, leased by Wabasha County from the City of Wabasha located north of Hiawatha Drive and east of the Old Zumbro Riverbed. This area is mostly utilized as an unimproved open space park or parking for events at the adjacent athletic field.

G. Ed Malone Memorial Park, a 9.2 acre partially developed park used for fishing, picnicking and hiking. Facilities include two picnic shelters, rest rooms trails, and parking lot. Owned by the City of Wabasha and located west of the Old Zumbro Riverbed and south of Grant Blvd.



PARK & RECREATION AREAS
Exhibit No. 16

Wabasha Recreation Plan

The 1974 City of Wabasha Recreation Plan (7) used the guidelines that a community should provide 10 acres of park land, exclusive of special use parks and athletic fields, for 1,000 persons in its urban area. The plan indicated that Wabasha provided 18.5 acres of park and recreational land (excluding one half of the Central Athletic Field due to its frequent high school use) whereas a population of 2500 requires 25 acres. The Recreation Plan recommended two neighborhood playgrounds be acquired in southeast Wabasha, additional acquisition and development of areas along the Old Zumbro Riverbed from the Mississippi River to Pembroke Avenue, and protection of natural areas along the Old Zumbro Riverbed south of Pembroke Avenue.

Current review of Wabasha facilities reveals that a neighborhood park has been acquired at 12th Street East and Bailey Avenue as suggested by the Recreation Plan. That park contains 2.4 acres and is being developed with ball fields and playground facilities. Wabasha currently provides about 25 acres of park and recreation land (excluding school playgrounds, undeveloped areas and one half of the Central Athletic Field), an amount equal to that suggested by the Recreation Plan.

Wabasha's current park improvement plans include the following:

J. C.'s Park (12th Street East and Bailey Avenue) - landscaping and ball field construction.

Ed Malone Park (West side of Old Zumbro Riverbed between Grant Blvd. and Hiawatha Drive) landscaping and trails.

County Fairgrounds (East of Old Zumbro Riverbed and north of Hiawatha Drive) - The County Fairboard is searching for another fairground location and is currently considering four different areas. Long range city plans, if the fairgrounds are relocated, are for picnic facilities, landscaped open space areas, and a swimming pool.

(7) Recreation Plan City of Wabasha July, 1974 by Wallace, Holland, Kastler, Schmitz and Company, Consulting Engineers and Planners, Rochester, Minnesota and Mason City, Iowa.

6. Historic and Architectural Sites

The following properties in Wabasha are listed on the National Register of Historic Places (date indicates the year of listing):

Anderson Hotel (1978) Originally the Hurd House constructed in 1856, the Anderson Hotel is the oldest operating hotel in the State of Minnesota. The structure has been restored to an 1880 decor and includes 40 rooms, dining facilities, and an ice cream parlor.

First Congregational Parsonage (1980) Constructed in 1872 and an excellent example of a frame Italianate residence. Currently houses the Wabasha Chiropractic Clinic.

Grace Memorial Episcopal Church (1980) Constructed in 1900, this stone church is an exceptional example of the English Gothic style.

Wabasha Commercial District (1982) An area approximately three and a half blocks long and one block wide containing 59 principal buildings. Most of the buildings were constructed in the latter half of the 19th century and present strong similarities in scale, form, materials and stylistic features. The Wabasha Commercial District is recognized as a well preserved example of an early Minnesota river town.

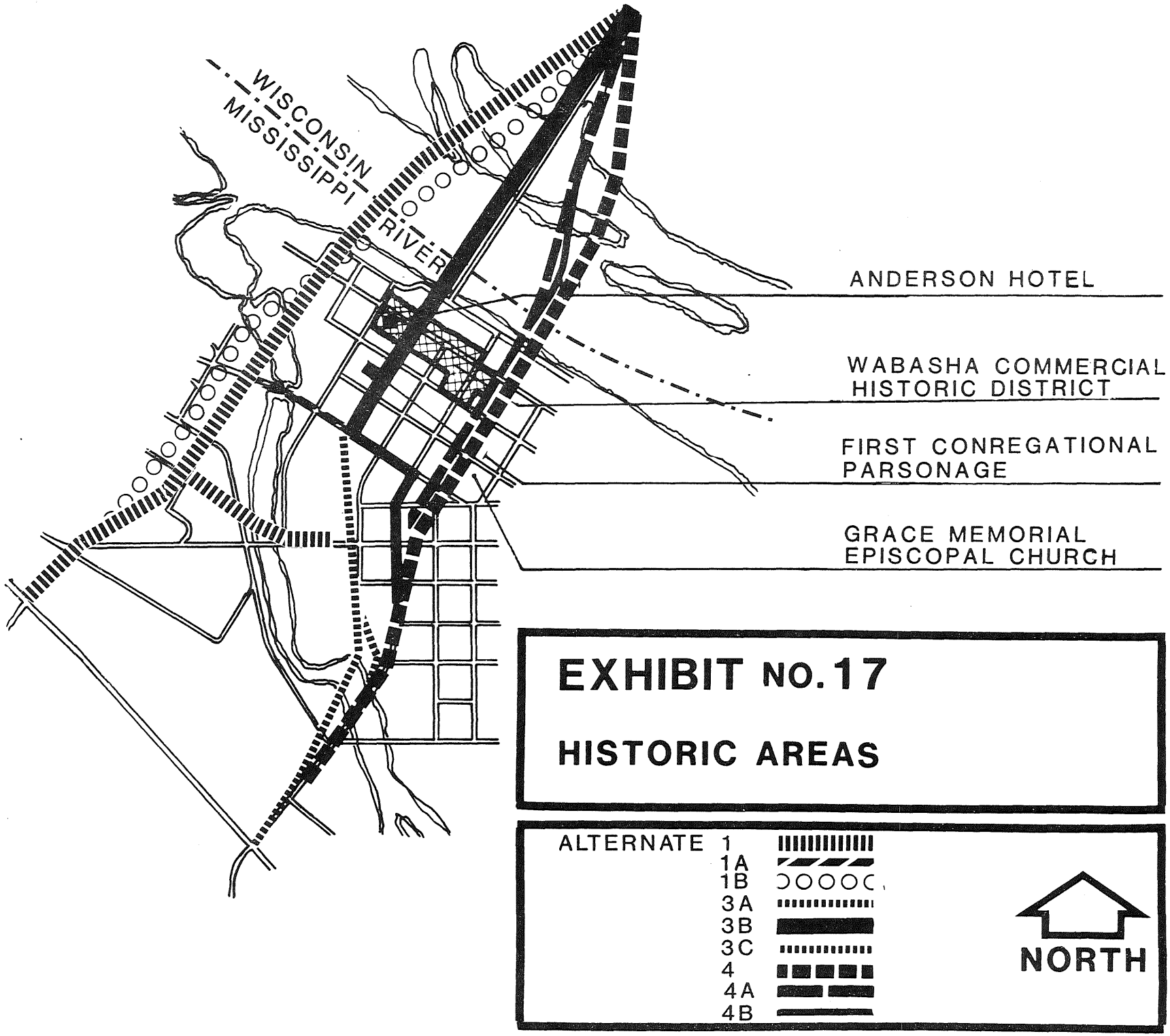
A detailed description of the historic properties is contained in a report entitled AN HISTORICAL SURVEY OF THE ALTERNATE ROUTES FOR PROPOSED TRUNK HIGHWAY 60 IN WABASHA, MINNESOTA February 1980. The location of historic properties is shown on Exhibit No. 17 on page 44.

The Wisconsin State Historic Preservation Officer (SHPO) indicates that there are no known historic or architectural sites in the Wisconsin segment of the study area. A copy of the SHPO's letter is contained in the appendix, page A-3.

7. Archaeological Sites

Investigation by the Minnesota Historical Society revealed that only one archaeological site was known to exist within the study area. The site consisted of 5 large burial mounds when recorded in 1883. All surface features of that site have been completely destroyed by housing and city streets.

Surveys revealed an area of archaeological potential along the east bank of the Old Zumbro Riverbed between TH 60 and Hiwatha Drive. Test excavations made in 1975 indicate that no archaeological materials exist in that location, see correspondence in the appendix, page A-7.


WISCONSIN
MISSISSIPPI
RIVER
ANDERSON HOTEL
WABASHA COMMERCIAL
HISTORIC DISTRICT
FIRST CONREGATIONAL
PARSONAGE
GRACE MEMORIAL
EPISCOPAL CHURCH
EXHIBIT NO. 17
HISTORIC AREAS
ALTERNATE 1
1A
1B
3A
3B
3C
4
4A
4B
NORTH

Investigation by the Wisconsin State Archaeologist revealed that there are no archaeological sites in the Wisconsin segment of the study area along the group 3 alternates.

8. Community Facilities

Table 10: Community Facilities

	Wabasha*	Nelson
No. of Hotels	1 - 40 Rooms	1
No. of Motels	2 - 30 Units	0
No. of Hospitals	1 - 48 Beds	0
No. of Doctors	6	0
No. of Dentists	3	0
No. of Churches	5	2
No. of Marinas	2	0
No. of Golf Courses	1 - Private	0
No. Public Libraries	1 - 14,431 Vol.	0
Post Office	2nd Class	3rd Class
No. Meeting Facilities	6	1
No. of Banks	1	1
Newspapers	1 - Weekly	1 - Weekly
Radio Stations	1 - AM	0
Industrial Sites	2 - 32 Acres	0
Elementary Schools	2 - 292 Pupils	Nearest 5 Mi.
Middle Schools	1 - 219 Pupils	Nearest 5 Mi.
High Schools	1 - 344 Pupils	Nearest 7 Mi.
Parochial Schools	1 - 137 Pupils	0
Nearest College	Winona - 30 Mi.	Winona - 34 Mi.
City Government	Mayor-Council	Village Board
Police Force	4	0
Fire Department	28 - Volunteer	Volunteer
Municipal Water Source	Wells	Wells
Storage Capacity	800,000 Gallons	-
Pumping Capacity	660 Gal/Min.	200 Gal/Min.
Average Demand	447,000 G/D	24,000 G/D
Sewage Plant Capacity	350,000 G/D	36,000 G/D
Average Demand	200,000 G/D	20,000 G/D

*Minnesota Department of Economic Development 1982.

Major community facilities in Wabasha are shown on Exhibit No. 18 on the following page. Most of Nelson's community facilities are located near the study area north termini, will not be affected by the proposed action and are not shown on the exhibit.

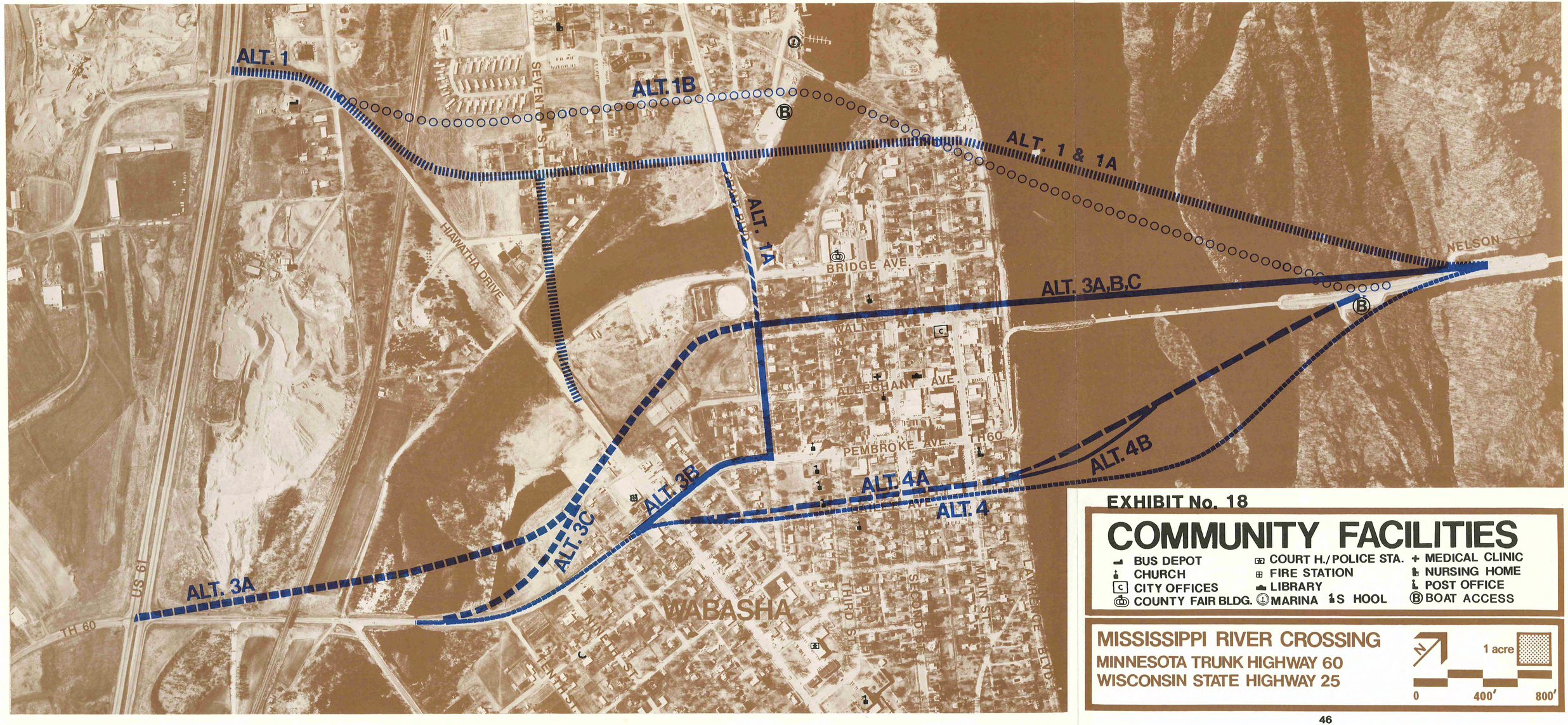


EXHIBIT No. 18

COMMUNITY FACILITIES

- BUS DEPOT
- CHURCH
- CITY OFFICES
- COUNTY FAIR BLDG.
- COURT H./POLICE STA.
- FIRE STATION
- LIBRARY
- MARINA
- SCHOOL
- MEDICAL CLINIC
- NURSING HOME
- POST OFFICE
- BOAT ACCESS

MISSISSIPPI RIVER CROSSING
MINNESOTA TRUNK HIGHWAY 60
WISCONSIN STATE HIGHWAY 25

N

1 acre

0 400' 800'

C. Economic Setting

Wabasha's economic functions are primarily a rural trade and service center and secondarily a manufacturing center. Related to the primary and secondary functions are roles of administration, education, and medical center.

Nelson's economic function is a rural trade and service center. Economic indicators are summarized in the following table:

Table 11: Economic Indicators*

	City of Wabasha		Wabasha County, Minnesota		Buffalo County, Wisconsin	
Employment:	(1976)	(Feb.1982)	(1970)	(Apr. 1982)	(1975)	(1982)
Manufacturing	89	89	1245	9473 total	150	6000 total
Non-Manufacturing	430	447	5185		5590	
Unemployment Rate		6%		8.2%		11.5%
Per Capita Income:						
(1969)	$2,341		$2,498		$2,248	
(1975)	$3,747		$3,958		$4,019	
(1979)	NA		$7,447		NA	
Retail Sales:						
(1975)	$7.0 Million		$37.9 Million		$17.1 Million	
(1980)	$15.3 Million		$59.6 Million		NA	
Assessed Valuation:						
(1978) Taxable Property	$5.4 Million		$66.4 Million		$137.4 Million	
Mill Rate (total)	0.1135		0.0866		0.0192	

* Source: Minnesota Department of Economic Development, and Mississippi River Regional Planning Commission.

Leading industrial employers in the City of Wabasha are listed in the following table:

Table 12: Wabasha Industries

Firm	Product/Service	No. Employees
International Multifoods	Flour	48
Wabasha Ready-Mix	Cement	10
Dolphin Products, Inc.	Canoes	6
Great River Industries, Inc.	Plastic Fabricator	7
IBP Equipment/Merit Export	Metal Working Equip. Overseas Marketing	11

D. Land Use

1. Planning

Land use planning in Wabasha is performed by the City Planning Commission. Existing and proposed land use is identified in the Wabasha Minnesota Comprehensive Plan. (6) Although not officially adopted, the Comprehensive Plan is used as a guide for land use development.

Land use planning in Wisconsin is performed by the Nelson Planning Commission, Buffalo County Zoning Committee and Mississippi River Regional Planning Commission.

The U.S. Fish and Wildlife Service manages the Upper Mississippi River Federal Wildlife and Fish Refuge. Use of the Mississippi River main channel is controlled by the U.S. Army Corps of Engineers and U.S. Coast Guard.

2. Zoning

The City of Wabasha and Village of Nelson both adopted new zoning ordinances in 1980. Buffalo County Wisconsin has operated with a zoning ordinance since the mid 1960's. The Wabasha Zoning Map is shown on Exhibit No. 19 on the following page.

3. Existing and Planned

Existing and possible planned land uses are shown on Exhibits No. 19 thru 22 on pages 49 thru 52. As shown on those exhibits, no major changes in land use are planned in the project area. Exhibit No. 21 shows a new bridge and realignment of T.H. 60 at a location similar to that provided by Alternative 1. The Wabasha Comprehensive Plan did not discuss the various alternate routes available at that time (1971), but did indicate an initial preference for the location shown on Exhibit No. 21. The Plan states that other routes may be more desirable after further study and public hearings and the basic concept of the Land Use Plan will probably not change if an alternate route within the City is selected.

(6) Comprehensive Plan Wabasha, Minnesota 1971

ZONING DISTRICT MAP

Exhibit No. 19:

CITY OF WABASHA

LEGEND

- R-1 Single-family Residential
- R-2 Multi-family Residential
- RD Rural Development
- B-1 General Commercial
- B-2 Highway Commercial
- I General Industry
- C Conservancy

NORTH

0 800 2400 3200

Adopted by the Wabasha City Council
Effective

Mayor

ATTEST
City Clerk

Exhibit No. 20:

1970 LAND USE / COMMUNITY FACILITIES

Source: COMPREHENSIVE PLAN, WABASHA 1971

LAND USE

RESIDENCE
- SINGLE FAMILY
- TWO FAMILY
- MULTIPLE FAMILY
- MOBILE HOME
- SINGLE FAMILY, FARM

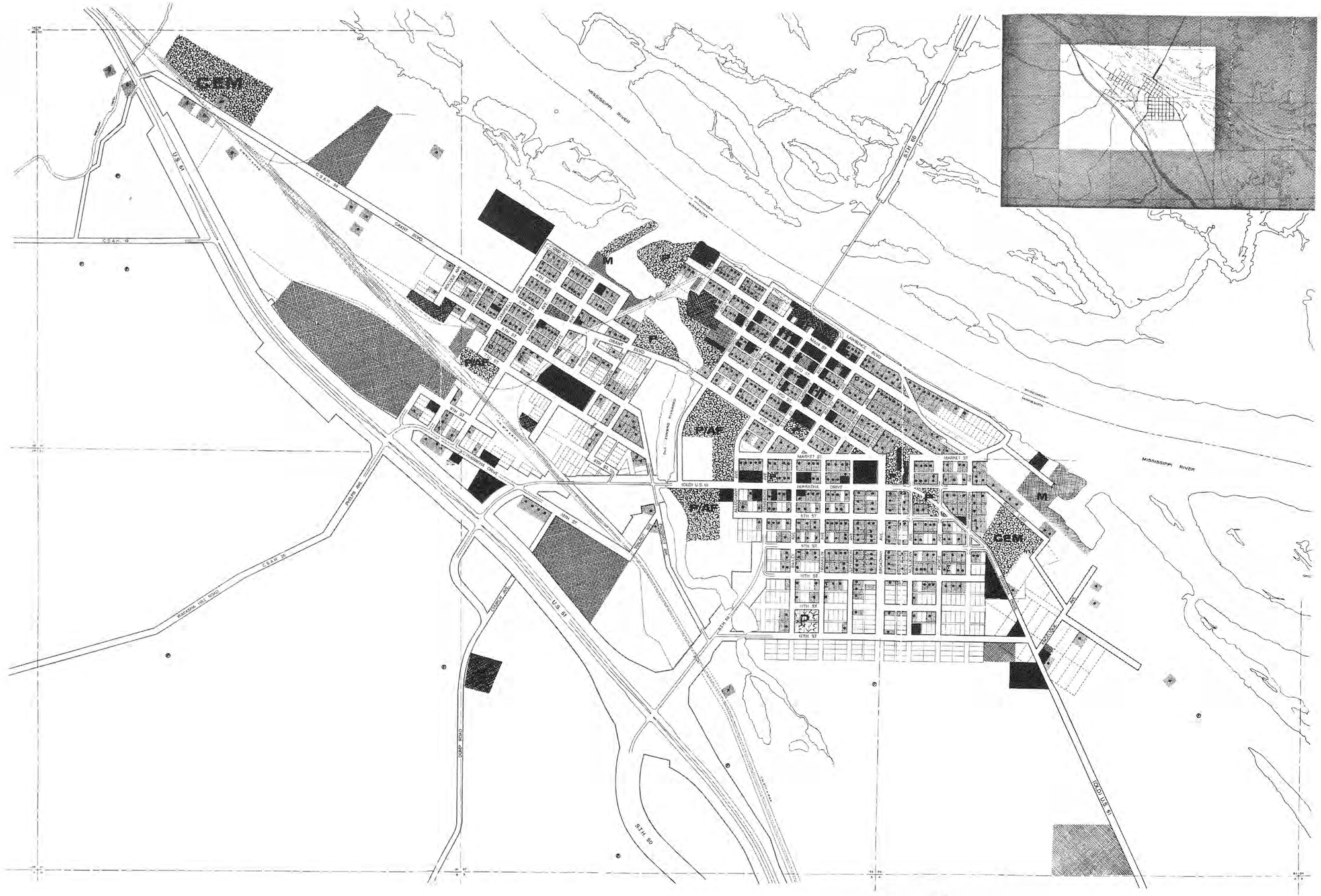
COMMERCE
- RETAIL COMMERCE

INDUSTRY
- MANUFACTURING
- NON-MANUFACTURING/ HEAVY-COMMERCE

PUBLIC / SEMI-PUBLIC
- BUILDINGS
- OPEN SPACE

COMMUNITY FACILITIES

S	PUBLIC SCHOOL
PS	PAROCHIAL SCHOOL
C	CHURCH
CV	CONVENT
A	U.S. ARMY RESERVE
PO	U.S. POST OFFICE
CH	COUNTY COURT HOUSE/JAIL
G	COUNTY GARAGE
F	CITY HALL/ FIRE DEPARTMENT
L	LIBRARY
H	HOSPITAL
NH	NURSING HOME
W	WATER SYSTEM FACILITIES
SP	SEWAGE TREATMENT PLANT
M	MARINA
P	PARK/ PLAYGROUND
AF	ATHLETIC FIELD
CEM	CEMETERY



PREPARATION OF THIS MAP WAS FINANCIALLY AIDED THROUGH A FEDERAL GRANT FROM THE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT AUTHORIZED BY SECTION 701 OF THE HOUSING ACT OF 1954, AS AMENDED, AND ADMINISTERED BY THE STATE PLANNING AGENCY, OFFICE OF LOCAL AND URBAN AFFAIRS. SEPTEMBER 1968

0 400 800 FEET N

WABASHA MINNESOTA

Exhibit No. 21:

COMPREHENSIVE PLAN (UNOFFICIAL)

Source: COMPREHENSIVE PLAN, WABASHA 1971

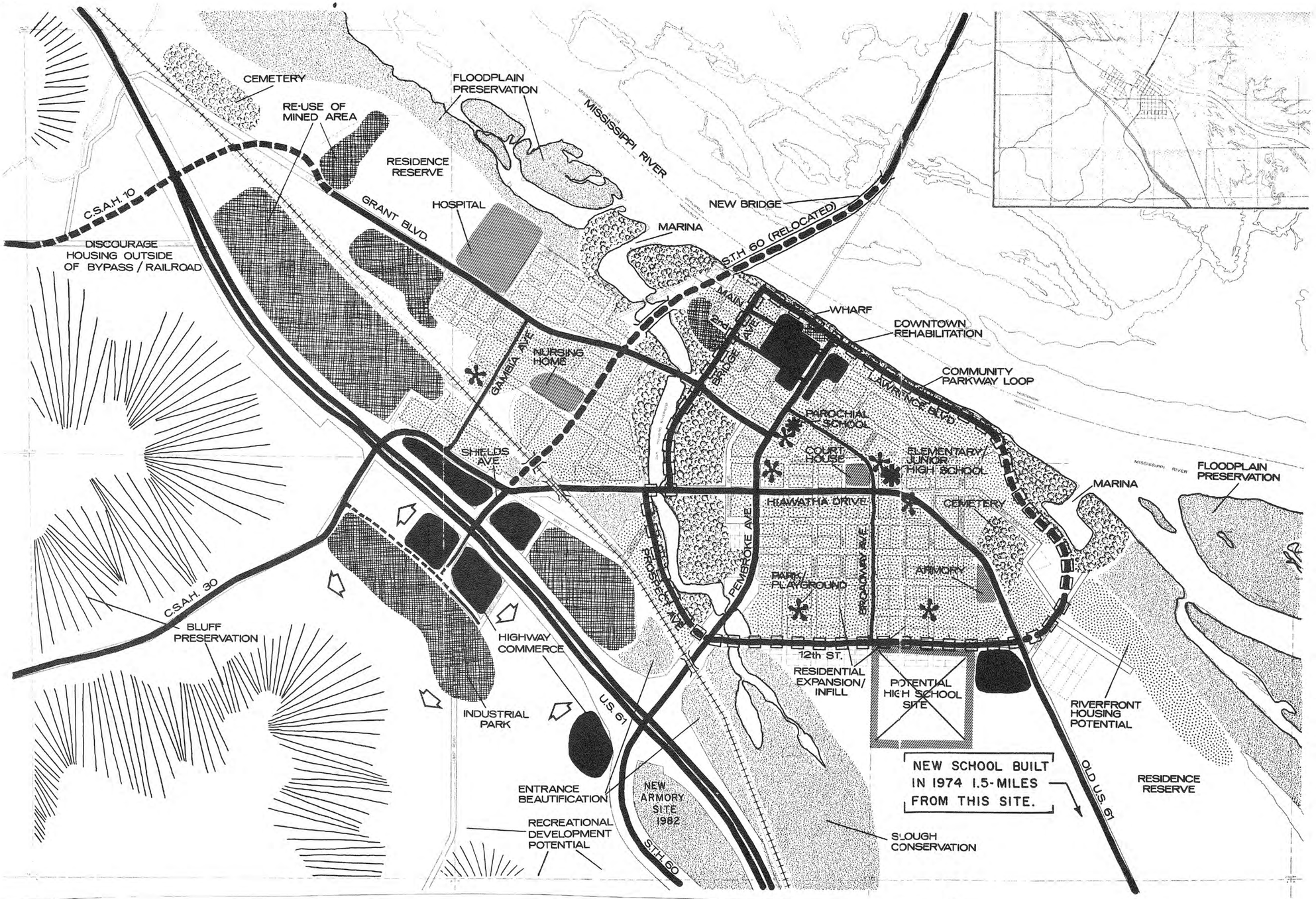
LAND USE

- RESIDENCE
- COMMERCE
- INDUSTRY
- PUBLIC/SEMI-PUBLIC
- PARK/OPEN SPACE
- PRESERVATION/ CONSERVATION

CIRCULATION

- EXPRESSWAY
- ARTERIAL
- PARKWAY
- COLLECTOR

NOTE: DASHED LINES INDICATE PROPOSED ROUTES



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SEPTEMBER 1968

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WABASHA MINNESOTA

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FIRE DEPARTMENT

HOME
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REATMENT PLANT

GROUND
FIELD

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ANNING AGENCY, OFFICE OF LOCAL
SEPTEMBER 1968

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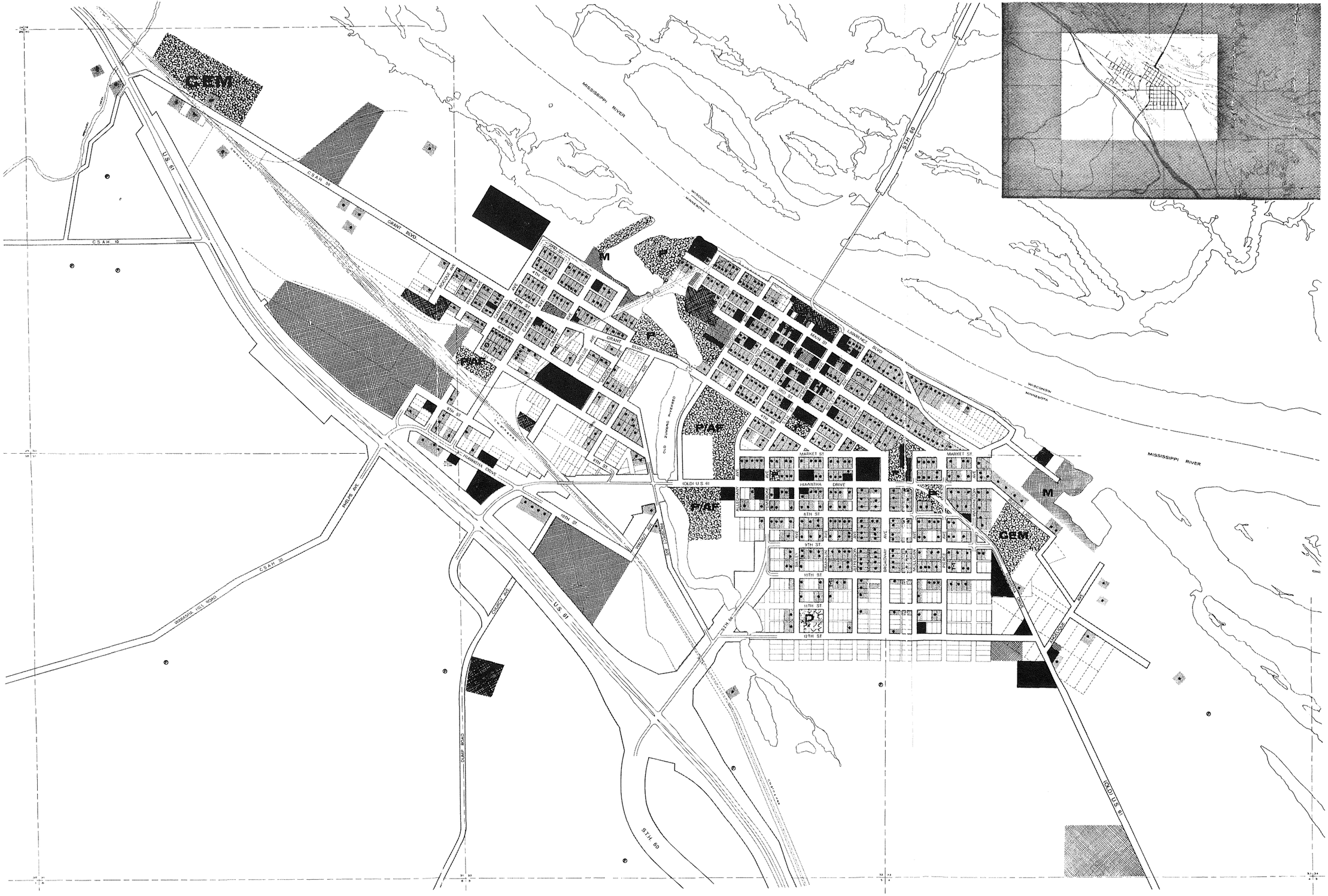

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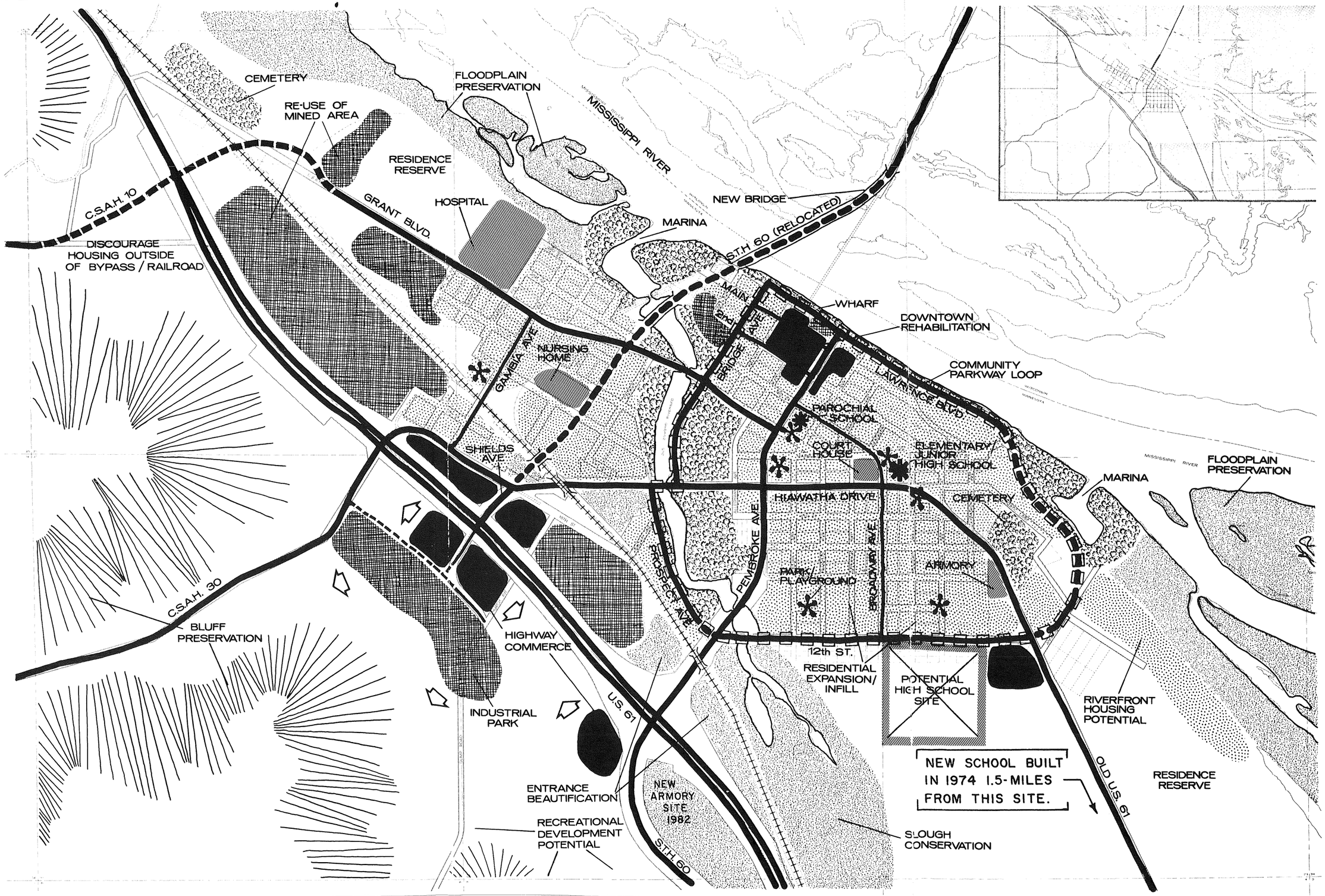

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HOUSING ACT OF 1954, AS AMENDED.
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SEPTEMBER 1968

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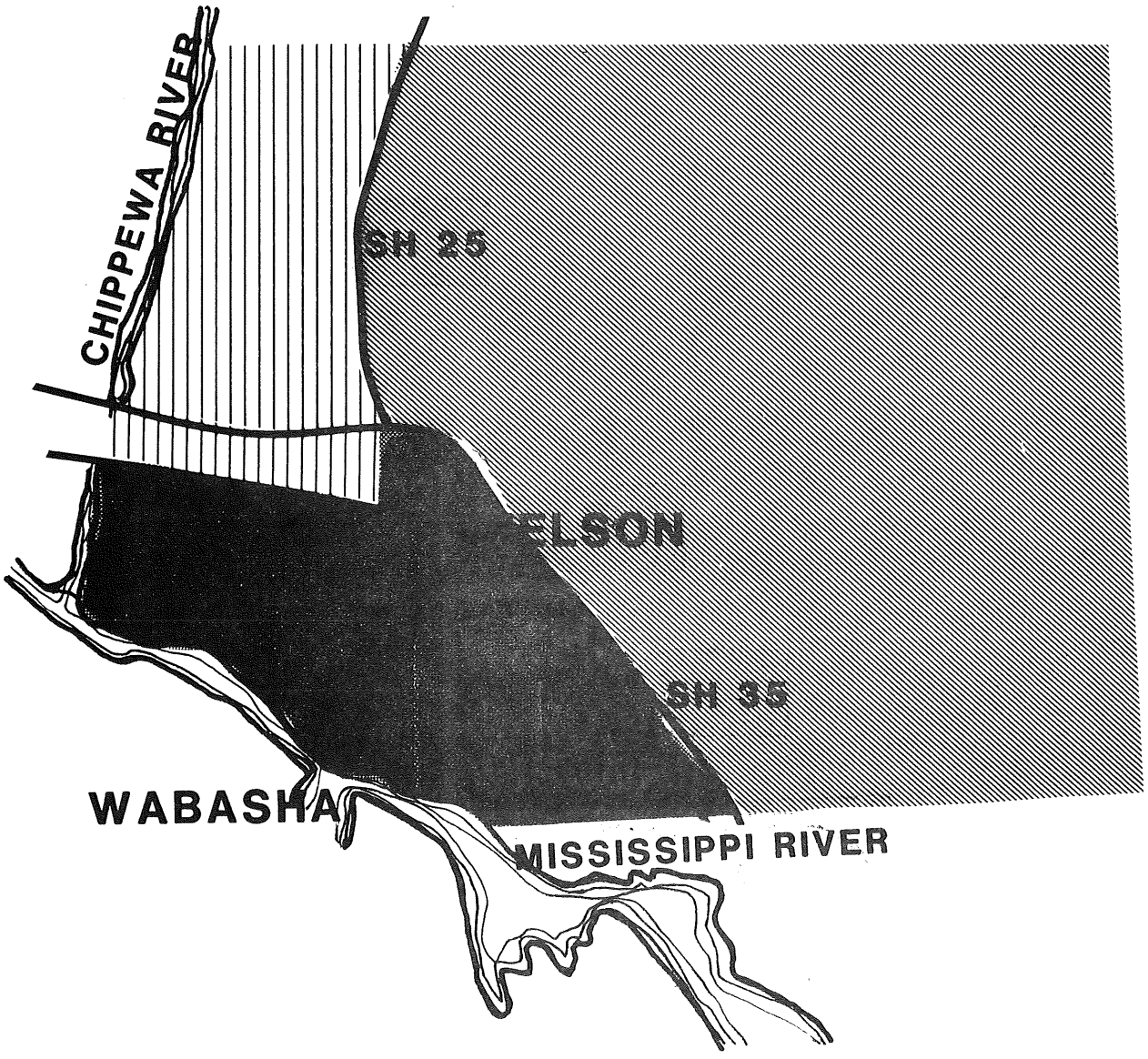
EXHIBIT NO. 22 :

LAND USE PLAN-NELSON WISCONSIN AREA



IV. ENVIRONMENTAL CONSEQUENCES

Impacts of both regional and local significance for the major alternatives considered are included in this section. The format used for discussion of long term build impacts is 1) Direct Beneficial, 2) Direct Adverse, 3) Secondary, and 4) Mitigation. Construction impacts are described on pages 157 thru 172. No build impacts are described on pages 172 and 173. Significant impacts are summarized in the Impact Matrix on page 175.

A. Transportation

1. Direct Beneficial:

a. Continued Linkage of the area highway transportation systems in Minnesota and Wisconsin will be provided. The proposed action will insure existing regional traffic patterns by perpetuating the only Mississippi River crossing for a distance of 30 miles up or downstream.

b. Improved Safety produced by modern standards of width and geometrics will greatly reduce the potential for collisions and other accidents. A semi-trailer unit negotiating the existing right angle curve at the foot of the Wabasha approach for instance must use the entire available width of roadway. Although all alternatives comply with Federal and State safety standards, alternatives 3A and 3C are the most desirable from the safety viewpoint since they provide nearly tangent bridge alignment, whereas alternatives 1, 1A, 1B, 4, 4A and 4B include horizontal curves on the bridge at areas with steep grades. Preferred Alternative 3B provides desirable bridge alignment, but includes two right angle turns on city streets. However, the two right angle turns proposed include appropriate turn lanes, one free flow leg, and large intersection radii and will provide an efficient highway facility.

c. Increased Capacity of the roadway produced by improved width and geometrics. At the present time the existing bridge and approaches constitute a bottleneck on the highway 60 - 25 route; the bridge having a capacity of approximately half of that of adjacent segments of the roadway. A new bridge and approaches would have a capacity similar to that of the adjacent segments, thereby eliminating the capacity bottleneck.

d. Reduced Maintenance. Because of the age of the present structure (52 years) and its now obsolete features, maintenance costs are increasing and can be expected to increase at an accelerated rate. Routine maintenance costs which have averaged $20,000 annually over the past 10 years will increase and the potential for non-routine maintenance work such as the major deck repair performed in 1974 and 1980 would also increase. Over $600,000 of major, non-routine maintenance has been required since 1968. Routine maintenance on the new structure will be minimal.

e. Reduced Travel Time resulting from a higher allowable running speed on the bridge and approach. At 10 m.p.h., it now requires a vehicle about 2.5 minutes to negotiate the bridge and 5½ minutes to travel between Wabasha and Nelson. A new structure on improved alignment will reduce this by 2 minutes on every vehicular crossing. The reduction in travel time will be a significant improvement in service especially for emergency vehicles and for the many short distance trips between Wabasha and Nelson.

f. Eliminate the effects of future bridge closings. The disruption of the economy of the Wabasha - Nelson area and the loss of emergency medical care to areas in Wisconsin are two of the more significant effects created by the temporary closing of the present bridge for repairs several times during the past eight years. These events can be anticipated to occur again and at greater frequency as the bridge continues to age. The uncertainty over the condition of the existing bridge has probably had some dampening effect on potential new developments. These effects would be eliminated by replacement of the bridge.

2. Direct Adverse:

Wabasha Traffic Patterns will be changed since all the alternatives involve at least a partial realignment of TH 60 in Wabasha, see Exhibit No. 10 on page 17.

Present traffic patterns are produced by the use of Pembroke, Bridge, and Gambia Avenues as the major north-south streets and Second Street, Grant Boulevard, Twelfth Street, and Hiawatha Drive as the major east-west streets in Wabasha. All other streets are either relatively low volume collector or local streets.

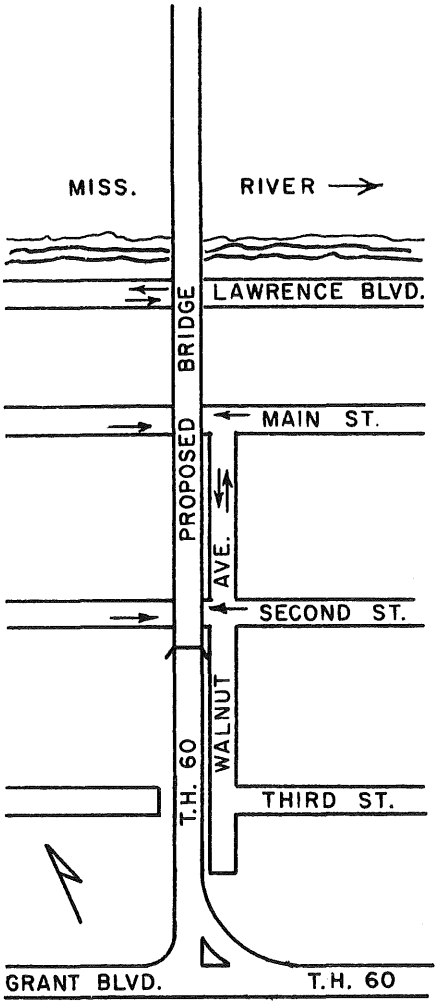
Alternative 1 would produce several changes in these patterns. The most significant would be use of four blocks of Church Avenue for Highway 60, use of 7th Street and Grant Boulevard as entrances to the city from Highway 61 to the north replacing Hiawatha Drive, and use of Grant Boulevard as the entrance to Wabasha from Wisconsin. Portions of Church Avenue, 7th Street, and Grant Boulevard would thus experience increases in traffic. Church Avenue and 7th Street would experience a change in function from local streets to major streets.

Alternative 1 also produces an intersection of U.S. Highway 61 approximately 5/8 miles northerly of the existing intersection of the two highways. It thus requires that Highway 60 be routed over Highway 61 for this distance and forces motorists following Highway 60 to pass through two major intersections rather than the single intersection now existing. Traffic volumes at the intersections will probably never reach a magnitude sufficient to warrant installation of traffic signals or construction of grade-separated interchanges at both locations.

Alternative 1A would continue the existing T.H. 60 traffic patterns from U.S. 61 to Grant Blvd. T.H. 60 would then utilize the six block segment of Grant Blvd. from Pembroke Ave. to Church Ave. Alternative 1A is identical to Alternative 1 from the intersection with Grant Blvd. to the Wisconsin terminus. Grant Blvd. would be the downtown entrance from Wisconsin. The most significant traffic pattern change would be the routing of T.H. 60 on a six block segment of Grant Blvd.

Alternative 1B would cause traffic pattern changes similar to those of Alternative 1, except 1B is located along Maiden Ave. (one block westerly of Church Ave). The most significant change would be the routing of TH 60 on a two block segment of Maiden Ave. Grant Blvd. and 7th St. would serve as entrances to the city.

Alternatives 3A, 3B, 3C, 4, 4A and 4B retain the single existing highway 60-61 intersection and minimize the maneuvers required to follow highway 60. During initial construction of Hwy. 61, additional right of way was acquired at the highway 60 intersection to accommodate future construction of an interchange if ever warranted. Warrants for major traffic control measures at the existing intersection are more apt to be met if a second highway 60 - 61 intersection is not created.



ALT. 3B
TRAFFIC PATTERNS

Alternative 3A would take thru traffic from Pembroke Ave. and place it on new alignment from U.S. 61 to Grant Boulevard. Grant Blvd. would become the entrance to the city from Wisconsin. Pembroke Ave. would be reconnected to TH 60 near Ninth St. and serve as a downtown feeder route. By placing the approach to one side of and parallel with Walnut Ave., existing traffic patterns would be perpetuated except that a 1/2 block of Walnut Ave. north of Grant Blvd. would be closed and Third St. would dead end at the bridge approach.

Preferred Alternative 3B will continue the existing traffic patterns from U.S. 61 to Grant Blvd. Grant Blvd. would be utilized as TH 60 for two blocks from Pembroke Ave. to Walnut Ave. Grant Blvd. would become the downtown entrance from Wisconsin. Traffic movements on Walnut Ave. would be the same provided by Alternative 3A. Alternative 3C would result in the same traffic patterns as Alternative 3A except that the existing Pembroke Ave. - U.S. 61 intersection would be perpetuated.

Alternative 4 would require use of Third Street as a major entrance to the city from Wisconsin thus increasing the traffic on portions of that street. The continuity of Second Street as an east-west through street would be disrupted at Bailey Avenue as insufficient vertical clearance would exist to permit Second Street to be carried under the bridge approach. One way streets adjacent to the bridge approach between Lawrence Boulevard and Second Street would reduce the effects of the Second Street closing since Main Street would be carried under the bridge.

The continuity and effectiveness of Bailey Avenue as a north-south street would be impaired although the one way pair would restore north-south circulation at least in the central business district. Operational problems at Third Street would not permit extension of the one way streets southerly to Third Street.

Alternative 4A is identical to Alternative 4 except the segment parallel to Bailey Ave. would be located 15 ft. more westerly.

Alternative 4B traffic patterns are identical to those of Alternatives 4 and 4A except the first intersection from Wisconsin would be at Fourth St., Third St. would dead end at the bridge approach, and Second St. would continue beneath the bridge.

Traffic pattern changes resulting from the proposed action are all of only local significance with the exception of the second TH 60 - U.S. 61 intersection created by Alternative 1.

3. Secondary: Increased Traffic volumes resulting from the improved facility will be the most transportation related secondary impact. Traffic Analysis (4) indicates that the proposed facility will generate approximately 620 AADT two years after the facility is opened to traffic. The generated traffic will not adversely affect the level of service of the proposed facility or adjacent transportation systems.

4. Mitigation: Mitigation measures applicable to all build alternatives include parallel offset alignment, local one way pairs, underpasses, and under bridge parking.

Mitigation for the preferred alternative includes the use of parallel offset alignment, underpasses, and under bridge parking. As shown on the sketch on page 56, the only disruption of existing traffic patterns will be on Third St. westerly of Walnut Ave. and on Walnut Ave. near Grant Blvd. The affected streets carry low volume residential traffic. The traffic pattern changes will be extremely local -- confined to residents in a four block area. Under bridge parking is described under Historic Mitigation on page 121.

B. Social

1. Direct Beneficial: Insure Continuity of the socio-economic area which is divided by the Mississippi River. The proposed action will allow Wabasha and Nelson to continue to function nearly as a single socio-economic unit as evidenced by the existing heavy local traffic on TH 60 in Wabasha. A large percentage of trips are between the Pepin, Nelson, Alma Area and Wabasha.

2. Direct Adverse: a. Neighborhood Character Changes will result in Wabasha.

Alternatives 1 and 1B would pass through a small residential neighborhood, sparsely developed residential areas, and city parks.

Alternative 1A would transverse a small residential neighborhood, three city parks, and then utilize Grant Blvd. (CSAH 59) adjacent to city parks and residential areas to existing TH 60.

(4) Systems Planning & Analysis Report S-149.

Alternatives 3A, 3B, and 3C would alter the character of a two block long mixed commercial and residential area between Lawrence Blvd. and Second St. and a two block long residential area between Second St. and Grant Blvd. Alternatives 3A and 3C also pass through the central athletic field.

Preferred Alternative 3B utilizes a two block segment of Grant Blvd. (CSAH 59) to reach existing TH 60 from the segment common with Alternatives 3A and 3C. The two block segment of Grant Blvd. is residential with the exception of being adjacent to the central athletic field for one block.

Alternatives 4, 4A and 4B would pass through an eight block long developed area which is basically residential with several scattered businesses.

The neighborhood character changes will be from residential to highway frontage type. The impact of Alternatives 1 and 1B would probably be greater than that of the other alternatives since Alternatives 1 and 1B would pass through more residential type areas with less existing traffic than the other routes. Although all alternatives would cause localized impacts, the overall neighborhood character of Wabasha will not be significantly affected. No public services or social institutions will be displaced.

Preferred Alternative 3B will alter neighborhood character for a length of six blocks (four blocks adjacent to Walnut Ave. and two blocks on Grant Blvd.) Alternative 3B will be elevated (12 ft. to 40 ft. vertical clearance) on a bridge structure through the two blocks from Lawrence Blvd. to Second St. Those blocks are mostly commercial to the east and residential to the west of Alternative 3B. The proposed bridge is therefore located at an existing change in neighborhood character. Since the bridge will provide sufficient vertical clearance for continuation of existing neighborhood activities, the change in this area will be aesthetic and psychological. Site development of the TH 60 corridor, as described in the mitigation section, will insure that the proposed facility is compatible with the adjacent neighborhoods.

The two block segment from Second St. to Grant Blvd. is residential. Alternative 3B will be elevated on a bridge structure near Second St. and transition down to near natural ground by means of retaining walls near Grant Blvd. Since direct access to adjacent

property will not be allowed in this area because of the differences in roadway and natural ground elevations and the nearness of the Grant Blvd. intersection, the proposed facility will form a barrier to neighborhood movements for about one block between Third St. and Grant Blvd. However since most neighborhood movements occur at one block intervals on streets and sidewalks, the barrier impact of the roadway will be minimal. Although the proposed mitigation measures will soften the intrusion of the highway facility, some adjacent residents may find the change undesirable and react accordingly.

The remaining two block segment -- Grant Blvd. from Walnut Ave. to existing TH 60 -- is not expected to experience significant changes because Grant Blvd. is a County State Aid Highway (CSAH 59) with moderate existing traffic. The 1982 ADT on CSAH 59 is about 1500.

b. Social Desire Paths will be disturbed in the area of the Walnut Ave. and Grant Blvd. intersection as a result of the elevated approach, relocations, and changes in traffic concentration. Such disturbances will be localized and would be experienced by all build alternatives.

3. Secondary: a. Community Cohesion is anticipated to improve as a result of replacing the existing substandard bridge with a modern transportation facility.

b. Land use Changes associated with neighborhood character alterations could cause localized changes in social patterns. Localized changes will not adversely affect the overall social climate in Wabasha. As explained in the Land Use Section, the City of Wabasha recently adopted a zoning ordinance and thereby has an effective means of controlling land use changes.

c. Social Services Demand will increase slightly as a result of the increased traffic generated by the proposed facility. Although the new bridge could generate up to 15% additional traffic, the social services desires of that traffic are not expected to tax the social service capacity of the area.

4. Mitigation: Social desire paths will be perpetuated whenever possible. Features such as sidewalks, underpasses, and offset alignment will be utilized to facilitate local pedestrian and vehicle movements and to minimize neighborhood impacts. Mitigation measures in the TH 60 corridor from Lawrence Blvd. to Grant Blvd. will include landscaping, sidewalks, a playground, parking facilities, and aesthetic treatment as described on page 121 .

C. Economic

1. Direct Beneficial:

a. Trade Area Continuity will be perpetuated by the proposed action. As shown on Exhibit No. 8 on page 10, the Wabasha trade area is divided in half by the Mississippi River with the subject bridge being the only transportation link located within the trade area.

b. Highway Efficiency will improve as a result of the improved vertical and horizontal alignment and increased bridge width. The proposed bridge will have a 50 MPH design speed compared to the 10 MPH speed limit on the existing structure. Travel time on the bridge will be reduced by about 75%. The proposed Minnesota approach will have a maximum grade of 5% compared to the existing 6%. The improved geometrics will allow a more uniform running speed and reduce vehicle fuel consumption. The proposed action will reduce passenger car fuel consumption about 14% (8) per trip across the bridge.

2. Direct Adverse:

Acquisition of 19 to 35 Acres of additional right of way including 3 to 9 residences and 0 to 4 commercial buildings. The acquisitions will result in an annual tax loss of $4900 to $9300 for the City of Wabasha. The tax loss represents 0.7% to 1.4% of the 1978 gross tax due in Wabasha.

Preferred Alternative 3B requires acquisition of 19 acres of right of way including 8 residences and 3 commercial buildings. The initial annual tax loss will be $8600 which is 1.3% of the 1978 gross tax due in the City of Wabasha.

However the Mn/DOT relocation assistance program insures that no person shall be displaced until adequate replacement housing has been provided for or is built.

(8) Based on two way average, Environmental Assessment Notebook Series, Notebook 3, p. 190, U.S. DOT 1975.

Since the owners of the commercial buildings affected have indicated they will relocate in Wabasha and several of the residential displacees are also expected to relocate within Wabasha, the actual tax loss to the City will be considerably less than $8600 per year.

3. Secondary:

a. Access to the Central Business District in Wabasha will be revised. Alternatives 1, 1A, 1B, 3A, 3B, 3C and 4B use Grant Blvd. as a downtown feeder route. Alternatives 4 and 4A use Third St. to provide access to the central business district (CBD). Increases in travel distance to the CBD from TH 60 range from 4 to 8 blocks. Even though convenient CBD access from TH 60 will be provided, traffic from Minnesota can avoid any additional travel by using Pembroke Ave.

Since the preferred alternative utilizes existing TH 60 from Highway 61 to Grant Blvd., the existing access from Minnesota to the CBD will be perpetuated. Alternative 3B passes through the CBD two blocks westerly of existing TH 60 and provides convenient access to the CBD from Wisconsin. Therefore no significant adverse impacts on Wabasha's economy are expected. However, the changes in alignment will be undesirable to some highway oriented businesses. The proposed action could therefore cause migration and/or some economic loss to a few traffic-sensitive businesses. However, that impact is not expected to be significant since about 75% of the traffic on TH 60 in Wabasha is local.

b. Traffic Generated by the proposed facility will cause a slight increase in area revenues through increased transportation related spending. Although the magnitude of revenues resulting from generated traffic is unknown, the effect will be beneficial to the area economy.

4. Mitigation:

A fair market price will be paid for acquired lands and property. Because of the relocation opportunities and assistance program, most displaced residents and businesses are expected to relocate in Wabasha and thereby reduce the tax loss impact. At grade intersections nearest to the CBD will be utilized to provide the most direct access possible to downtown businesses. Features such as sidewalks, underpasses, offset alignment, and under bridge parking will be incorporated where appropriate to provide convenient access to the CBD.

D. Relocation

1. Direct Beneficial:

None

2. Direct Adverse: a. Residences Displaced range from 2 to 9 in number for the various alternatives. The following table lists the number of residences displaced by each alternative.

Table 13: Residences Displaced

Alternative	No. of Residences
1	7
1A	2
1B	6
3A,3B,3C	8
4	9
4A,4B	7

The price range of the residences displaced by the preferred alternative are listed in the following table.

Table 14: Price Range of Residences Displaced by Alt. 3B

Estimated Price (1980) $ Thousands	Number of Residences
20 to 30	1
30+ to 40	0
40+ to 50	4
50+ to 60	3

Of the eight residences displaced by Alternative 3B, six are owner occupied, one is tenant occupied, and one is occupied by the owners on the main floor and tenants on the second floor. Two of the residences are owned by retired couples and one residence is owned by an elderly widow. No handicapped or minorities are involved.

Availability of homes and undeveloped land in the project area indicates relocation of displaced residents will not be a problem. A survey conducted in the summer of 1980 revealed 19 available homes in the City of Wabasha and 16 available homes in Sand Prairie, an area south of Wabasha along the Mississippi River. The price range of available housing is shown in the following table.

Table 15: Available Housing

Price Range (1980) $ Thousands	Wabasha	Sand Prairie
20 to 30	1	1
30+ to 40	4	3
40+ to 50	2	3
50+ to 60	5	2
Over 60	7	7
Total	19	16

THE MAJORITY OF AVAILABLE HOMES ARE SIMILAR IN SIZE AND TYPE TO THOSE THAT WILL BE DISPLACED. THE CONCEPTUAL STAGE RELOCATION PLAN IS CONTAINED IN THE APPENDIX.

Previous surveys of available housing conducted in 1974, 1978 and 1979 indicate the housing market has remained relatively constant for several years. Housing availability at the time displacement occurs is likely to be similar.

Although previous surveys indicated rental housing was in short supply, a 1982 survey reveals that the number of units for rent has increased substantially in the past few years. Two mobile homes, 4-one bedroom apartments, and 4-two or more bedroom apartments were available in June 1982 within the City of Wabasha. The Wabasha Housing Authority has recently completed expansion of the Mapleleaf Apartment complex. The expansion has increased the number of rental units for the elderly from 45 to 69. In addition, 8-two bedroom and 8-three bedroom family units have been constructed. Also the Wabasha Apartments offer subsidized rent in 21-two bedroom and 3-one bedroom units. Therefore an ample supply of rental housing now exists.

b. Commercial Buildings Displaced range from 0 to 4 for the various alternatives as shown in the following table.

Table 16: Commercial Buildings Displaced

Alternative	Commercial Buildings
1,1A,1B	0
3A,3C	mill office mill warehouse chiropractic clinic veterinarian office
3B	mill office mill warehouse chiropractic clinic
4,4A,4B	auto dealership garage TV repair shop car wash

Operators of the commercial buildings displaced by preferred alternative 3B indicate they will relocate in Wabasha. The mill office and warehouse are part of the International Multifoods mill and elevator complex. Replacement facilities should be located near the mill and elevator for convenience. Location of the chiropractic clinic does not appear to be critical. Commercial properties are available for sale or rent which appear suitable for the mill office and chiropractic clinic. Also as described under historical mitigation on page 127, the chiropractic clinic building will be moved and thereby available for continued use as the chiropractic clinic. Although no other warehouses are currently available near the elevator, commercial and industrial property is available in the event building is necessary.

3. Secondary:

a. Displacement of 8 residences will result in an increased demand for housing and related services in the Wabasha area. However since the number of available housing units is four times the number of residences being displaced, the impact will not be significant. The proposed relocations will not inhibit access to employment opportunities or any community services and facilities.

b. Business Displacement is not expected to be a significant impact because the businesses affected plan to relocate in Wabasha. The secondary impact will therefore consist of a temporary inconvenience or brief shut down during the physical relocation of the businesses.

c. Concurrent Displacement will not result from any known Federal, State, or community projects.

4. Mitigation:

Fair and just compensation will be made for the lands and buildings acquired for the proposed action. A Comprehensive Relocation Assistance and Payment Program will be utilized to assist displacees.

Residential displacees will receive assistance in locating safe, decent, and sanitary housing. Displacees may be eligible for relocation payments involving replacement housing payment or rent supplement, moving expenses, closing costs, interest differential, appraisal fees, and last resort housing. Negotiations for property acquisition will commence as early as possible to allow the maximum time for finding suitable housing. The normal allowance of 120 days in which to vacate following acquisition should provide ample time to carry out an orderly and humane relocation program. Housing resources are available to all relocatees without discrimination.

Business organizations may be eligible for the following relocation payments; moving expenses, payment for time spent searching for replacement business or site, and appraisal fees. Relocation assistance will be afforded to the affected businesses in accordance with FHWA Notice N6600.9, April 3, 1980, RELOCATION PLANNING FOR DISPLACED BUSINESSES.

E. Air Quality

1. Direct Beneficial:

Diversion of through traffic from Pembroke Ave. in downtown Wabasha will result in approximately a 15% reduction in carbon monoxide and lead concentrations in that area. As shown in tables 17 and 18 on the following pages, the receptor on existing TH 60 (Alt. 6) has slightly higher concentrations than receptors on other alternates.

Carbon monoxide and lead concentrations for all alternatives comply with Federal and State standards.

2. Direct Adverse: Slight changes in concentrations of carbon monoxide and lead in the atmosphere.

The air quality impact of the proposed improvement has been analyzed. The proposed improvement is not anticipated to have significant air quality impacts and is considered consistent with the approved State Implementation Plan (SIP). A Memorandum of Understanding with the Minnesota Pollution Control Agency (MPCA) specifies: 1) that prior consultation with the MPCA is considered as accomplished for highway sections outside of a Standard Metropolitan Statistical Area (SMSA); and 2) an air quality analysis, which demonstrates that the project is considered consistent with the approved SIP, is considered as accomplished for highway proposals outside of a SMSA where the annual average daily traffic is not expected to exceed 20,000 vehicles per day (including intersecting traffic) within 10 years following construction. The proposed action meets these criteria. This project is in an area where the State implementation plan is not required to contain any transportation control measures. Therefore, the conformity procedures of 23 CFR 770 do not apply to this project.

Carbon Monoxide: The EPA 1975 Volume 9 screening procedure, Evaluating Indirect Sources, updated with the EPA 1978 emission factors was also used to estimate the peak carbon monoxide concentration at the nearest critical receptor along each alternate. The screening procedure assumptions include a 1 meter per second wind at 10° to the roadway (variable direction at intersections), a Pasquill-Gifford stability classification of "D", an 8-hour persistence factor of 0.6, 10% cold starts at 20° F, a 1988 background concentration of 2.1 and 1.0 ppm for 1 and 8 hour periods respectively, and a 1999 background concentration of 1.2 and 1.0 ppm for 1 and 8 hour periods respectively.

Predicted CO concentrations and Federal and State standards are tabulated below for periods one and eleven years after estimated construction completion.

Table 17: Estimated Carbon Monoxide Concentrations (PPM)

	Receptor*	Peak 1-Hour Concentration 1988	1999	Peak 8-Hour Concentration 1988	1999
1	Alt. 1-Park	3.1	1.7	1.4	1.1
2	Alt. 3A, B & C - House	3.4	1.8	1.4	1.2
3	Alt. 4-School Yard	3.6	1.9	1.5	1.2
4	Alt. 6-Bank	3.8	N/A	1.6	N/A
	Federal Standard	35	35	9	9
	State Standard	30	30	9	9

*Worst case sensitive receptor for corridors 1, 3 & 4, concentrations at park & school yard R/W and at nearest wall of house & bank. Receptor locations are shown on Exhibit No. 24 page 73.

Lead

The analysis of the airborne lead from this project indicates no violations of the lead standard.

The airborne lead concentration at the nearest critical receptor (9) along each alternate has been analyzed using a procedure based upon a 1-31-78 FHWA memorandum, "Proposed National Ambient Air Quality Standard for Lead". This procedure has been reviewed by the FHWA and the Minnesota Pollution Control Agency (MPCA).

Mn/DOT has checked with MPCA (12-11-78) and has been informed that: There are no lead monitoring results and no known point sources of lead in the project area.

The worst case receptor locations have been analyzed. This analysis takes into account major crossroads and parallel highways as well as this proposed project. A background level of 0.008 μg/m3 is assumed. No violations of the lead standard (1.50 micrograms per cubic meter) were indicated, see following table.

Table 18: Lead Concentrations (μg/m3)

	Receptor*	Existing 1979	1988
1	Alt. 1-Park	0.1	0.1
2	Alt. 3A, B & C - House	0.5	0.2
3	Alt. 4-School Yard	0.1	0.2
4	Alt. 6-Bank	1.3	0.2
	Federal Standard	1.5	1.5

*Same receptors used for CO analysis, locations shown on Exhibit No. 24, page 73.

3. Secondary: None

4. Mitigation: None

(9) Same receptors used for CO analysis, locations shown on Exhibit No. 24, page 73.

F. Noise

In accordance with FHPM 7-7-3, the proposed action is classified as a Type 1 project since highway construction and partial access control are involved.

This section provides a summary of noise impacts with regard to existing and predicted noise levels at sensitive receptors along each alternative. Sufficient data is presented to indicate the magnitude of noise impacts. More detailed noise information is contained in the PRELIMINARY NOISE ANALYSIS REPORT. That report is a technical supplement to this EIS and is available from the Mn/DOT upon request.

The PRELIMINARY NOISE ANALYSIS REPORT has been furnished to federal, state and local agencies for review and comment. Agency comments are contained in the appendix. A Final Noise Report will be prepared subsequent to the selection of an alternative and initiation of preliminary roadway design.

Receptors

Representative sensitive noise areas along each corridor are listed in Table 20 page 70. These 14 areas are representative of susceptible receptors and land use along the various alternatives. Area locations are shown on Exhibit No. 24 page 73.

Noise Levels

Noise levels for the existing facility and alternatives in the year 2000 were calculated using the FHWA NOISE MODEL RD-77-108 computer program. Existing noise levels for the build alternatives were estimated from 1978 field readings and cross checked by computer noise models NCHRP 117/144 and FHWA NOISE MODEL RD-77-108. Noise levels are dependent on a number of factors such as average running speeds, surface conditions, shielding conditions, and volume of cross-road traffic, many of which cannot be determined with any great certainty at this time.

The noise predictions are based on projected traffic counts for the year 2000 but use present day traffic noise emissions for comparison. At the present time there are programs in operation to lower the noise output of traffic related noise generators. Areas of concern are muffling systems on trucks and tire designs. The Minnesota Pollution Control Agency, in cooperation with the Environmental Protection Agency has established a maximum noise level of 83 dBA at 50 feet for trucks traveling at 35 miles per hour.

The present average noise level at 50 feet for trucks traveling at 35 miles per hour is 82 dBA. Actual future noise level should tend to be lower than the predicted levels.

Current and future noise level contours for the existing facility are shown on Exhibit No. 23, page 72. Predicted future noise contours and 1978 field readings for the build alternatives considered in the DEIS are shown on Exhibit No. 24, page 73. Noise levels for the alternatives added subsequent to the DEIS were evaluated, but are omitted from the noise contour map for clarity.

Standards

Federal and State noise standards are listed in Table 19 below.

Table 19: Federal Design Noise Levels and State Noise Standards

State-Minnesota Pollution Control Agency*

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

*NPC-2 - Noise Standards; Adopted September 17, 1974. The above standards apply only to Minnesota. Wisconsin has adopted the Federal Noise Standards as their State Standards.

Federal Design Noise Levels and State Noise Standards

Federal - FHWA*

Activity Category	Design Noise Level - L_{10}	Description of Activity Category
A	60 dBA (exterior)	Tracts of lands in which serenity and quiet are of extraordinary significance and serve an important public need, and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose. Such areas could include amphitheaters, particular parks or portions of parks, or open spaces which are dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet.
B	70 dBA (exterior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, picnic areas, recreation areas, playgrounds, active sports areas and parks.
C	75 dBA (exterior)	Developed lands, properties or activities not included in categories A and B above.
D	N/A	Undeveloped lands.
E	55 dBA (interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals and auditoriums.

* FHPM 7-7-3, Figure 3-1.

Noise Definitions

dB = Decibel is a unit of sound pressure level.

dBA = A unit of sound level used as a measure of human response to sound. dBA is obtained through the use of A-weighting characteristics specified by ANSI Standard S1.4-1971.

L_{10} = The sound level that is exceeded 10 percent of the time for the period under consideration.

L_{50} = The sound level that is exceeded 50 percent of the time for the period under consideration.

A list of common indoor and outdoor noise levels is contained in the appendix on page A-40.

1. Direct Beneficial: Noise Levels will Decrease along existing TH 60 in downtown Wabasha as a result of the proposed realignment. A decrease of 5 to 8 dBA is expected as a result of diversion of through traffic.

2. Direct Adverse: Noise Levels will Increase along the selected alternative. Existing and future noise levels at representative areas along each alternative are listed in the following table. Existing noise levels were estimated from 1978 field readings adjusted for time and day of week. Future noise levels were interpolated from Exhibit No. 24.

Table 20: Existing & Future Exterior Noise Levels dBA (without abatement)

Alternative Number	Receptor* Area Number	Land Use	FHWA Standards DHV L_{10}	MPCA Daytime Standards L_{10}	MPCA Daytime Standards L_{50}	Existing 1978 L_{10}
1	(1)	Residential	70	65	60	55
1	(2)	Park	70	70	65	57
1	(3)	Residential	70	65	60	59
3A, B & C	(4)	Park	70	70	65	55-63
3A, B & C	(5)	Residential	70	65	60	60
3A, B & C	(6)	Commercial	75	70	65	60
3B	(7)	Residential	70	65	60	60
4	(8)	Residential	70	65	60	57
4	(9)	Church	70	65	60	59
4	(10)	Residential	70	65	60	57
3B, 4 & 6	(11)	Campground	70	65	60	69
6	(12)	School	70	65	60	68
6	(13)	Commercial	75	70	65	68
3A, B, C & 6	(14)	Refuge	70	70	65	68

*Locations shown on Exhibit No. 24 page 73.

NOTE: The year 2000 L_{10} noise levels calculated using DHV are identical to the daytime peak L_{10} levels. Therefore, the DHV and daytime noise levels are listed in only one column in Table 20. The column titled Future Yr. 2000 (DHV & Daytime) should be compared against both Federal FHWA Standards and State MPCA Daytime Standards. Existing Nighttime L_{10} noise levels are estimated to be 5 to 8 dBA less than the existing L_{10} noise levels.

at Representative Receptor Areas

Future Yr. 2000 (DHV & Daytime)		MPCA Nighttime Standards		Future Yr. 2000 Nighttime		Receptor* Area Number
L_{10}	L_{50}	L_{10}	L_{50}	L_{10}	L_{50}	
70	60	55	50	64	54	(1)
60-70	50-60	70	65	55-65	44-54	(2)
67	56	55	50	62	51	(3)
60-72	50-62	70	65	55-67	44-56	(4)
72	62	55	50	66	56	(5)
66	55	70	65	60	50	(6)
71	61	55	50	65	55	(7)
70	60	55	50	64	54	(8)
72	62	55	50	66	56	(9)
66	55	55	50	60	50	(10)
71	61	55	50	65	55	(11)
73	63	55	50	67	57	(12)
73	63	70	65	67	57	(13)
70	60	70	65	64	54	(14)

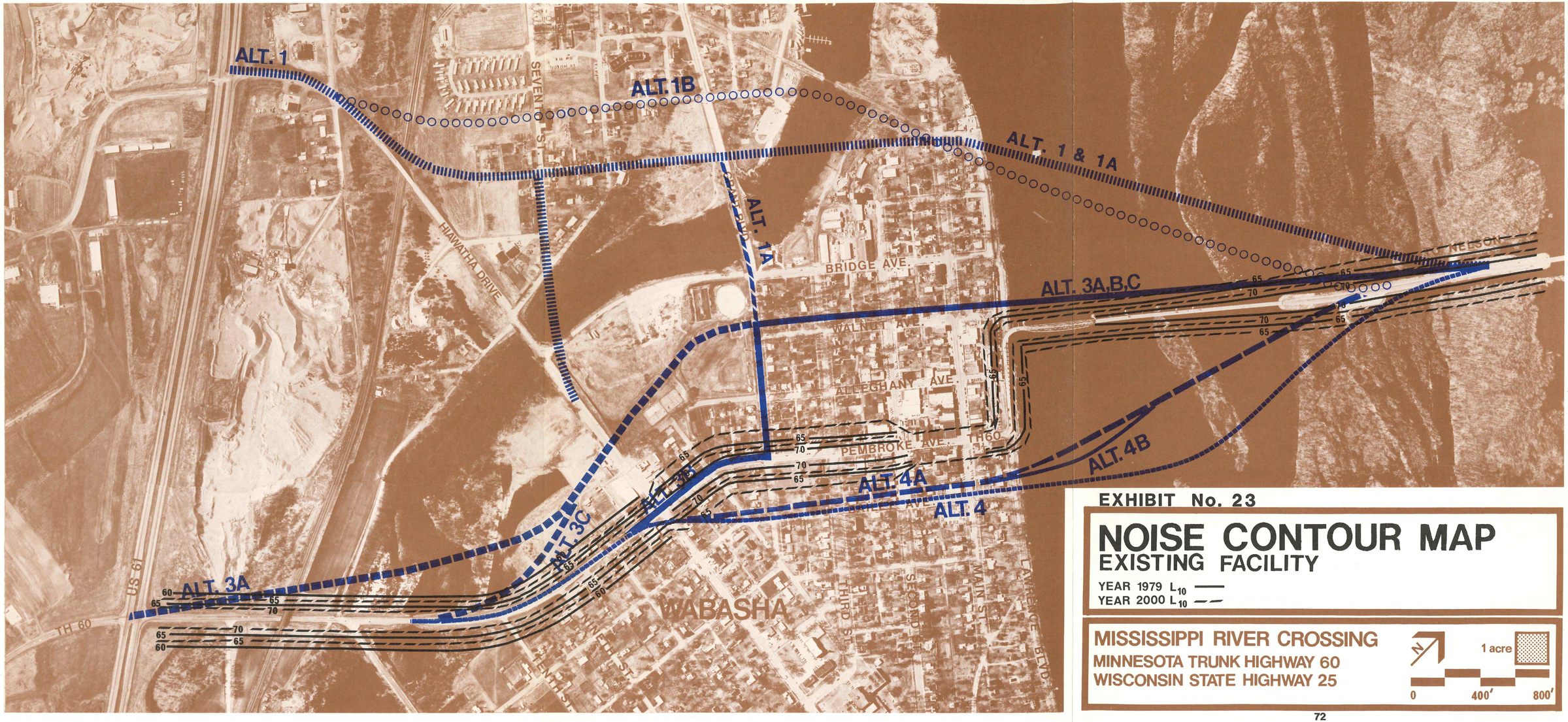


EXHIBIT No. 23

NOISE CONTOUR MAP
EXISTING FACILITY

YEAR 1979 L_{10} ——
YEAR 2000 L_{10} – –

MISSISSIPPI RIVER CROSSING
MINNESOTA TRUNK HIGHWAY 60
WISCONSIN STATE HIGHWAY 25

1 acre
0 400′ 800′

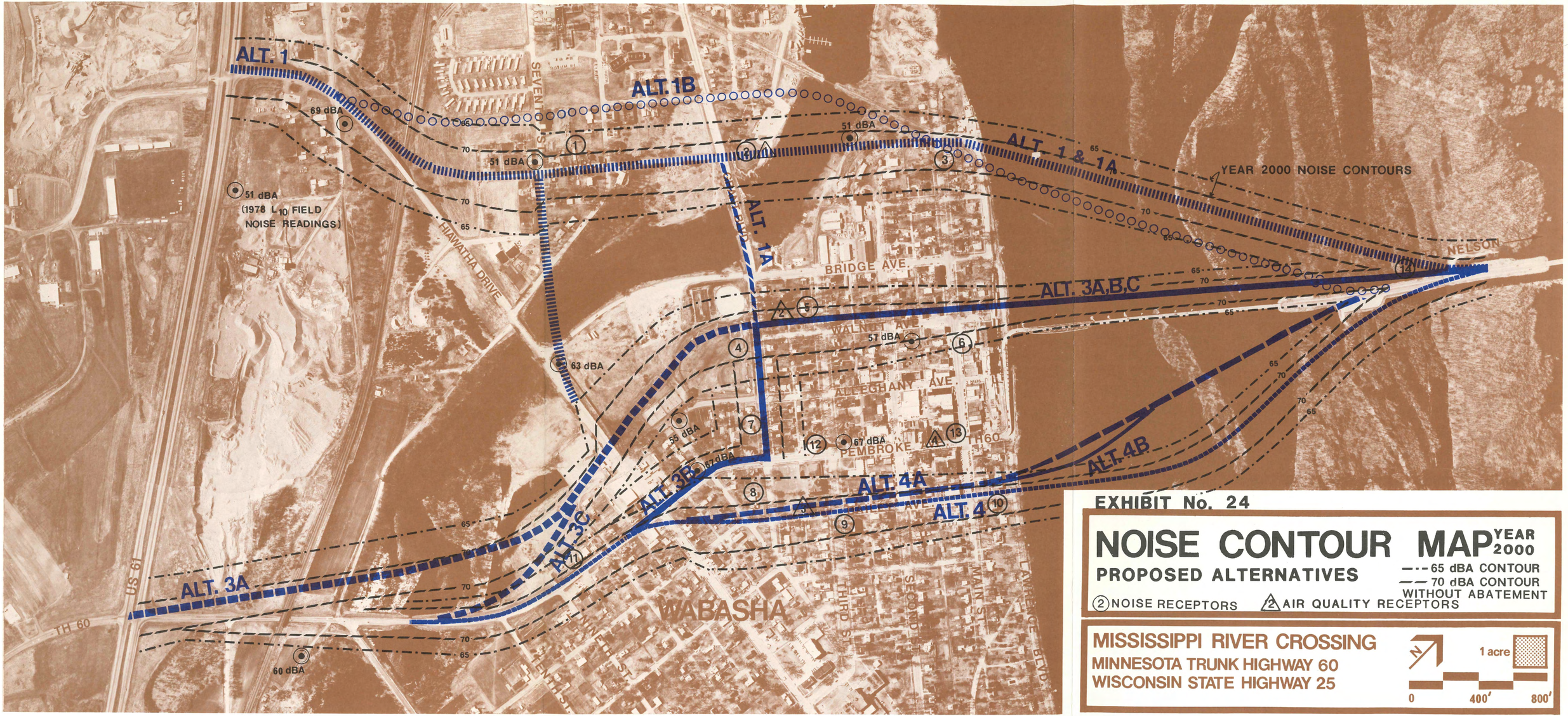


EXHIBIT No. 24

NOISE CONTOUR MAP YEAR 2000

PROPOSED ALTERNATIVES

---65 dBA CONTOUR
——70 dBA CONTOUR
WITHOUT ABATEMENT

(2) NOISE RECEPTORS (2) AIR QUALITY RECEPTORS

MISSISSIPPI RIVER CROSSING
MINNESOTA TRUNK HIGHWAY 60
WISCONSIN STATE HIGHWAY 25

N
1 acre
0 400' 800'

Analysis indicates that noise levels will exceed Federal Design Noise Levels and State Standards at several receptors on all alternatives. The number of receptors exceeding standards are listed in the following table.

Table 21: Number of Individual Receptors Exceeding Federal and State Noise Standards

Alternative No.	Existing 1978 Federal	Existing 1978 State	Proposed 2000 Federal	Proposed 2000 State	Abatement Studied
1	0	1	0	15	yes
1A (Existing TH 60)	0 (0)	12 (12)	28 (13)	50 (28)	yes
1B	0	0	5	29	yes
3A	0	0	1	25	yes
Preferred 3B (Existing TH 60)	0 (0)	12 (12)	25 (13)	60 (28)	yes
3C	0	0	1	25	yes
4, 4A & 4B	0	0	13	46	yes
6	3	18	44	62	no

NOTE: Alt. 6 in the year 2000 is for the existing facility since the bridge would be closed in the year 1992 under the no build alternative. Numbers in parenthesis are receptors along existing TH 60.

As can be seen from the table, any of the build alternatives would result in fewer receptors exceeding standards than the existing facility.

Although Table 21 indicates preferred Alternative 3B has a greater number receptors with noise levels above standards than the other build alternatives, closer examination reveals the total noise impact for Alternative 3B is similar to most of the other build alternatives. The number of receptors listed in Table 21 includes all receptors from Highway 61 to the Mississippi River in Wabasha. Since Alternatives 1A and 3B utilize a significant length of existing TH 60 -- Highway 61 to Grant Blvd. -- the number of receptors exceeding standards on that segment of existing TH 60 are listed in parenthesis in Table 21. The receptors along the segment of existing TH 60 which will be utilized by Alternative 3B, are currently experiencing TH 60 noise and will be relatively unaffected by the proposed action. Therefore subtracting the number in parenthesis from the preceding adjacent number in Table 21 provides the number of receptors on new alignment which will experience noise levels above standards. Performing the subtraction in Table 21 shows that the number of receptors exceeding standards on the new alignment segment of Alternative 3B is in the range of the other build alternatives.

In addition to comparing noise levels to standards, the magnitude of noise level changes are used to evaluate noise impacts. The intrusiveness of a noise is related to its increase above the levels to which a listener is accustomed. Increases of 0-9 dBA above ambient will generally cause from no observed reaction to sporadic complaints, while increases greater than 16 dBA will cause widespread complaints and possible community action (10).

The magnitude of noise level changes can be determined from Table 20. The segment of Alternative 3B from Highway 61 to Grant Blvd. (existing TH 60) will experience a slight increase in noise. Noise receptor number 11 (a private campground) is predicted to experience an L_{10} increase from 69 dBA in 1978 to 71 dBA in the year 2000. Traffic noise level changes less than 3 dBA will not be perceptible to most people.

The segment of Alternative 3B on new alignment in Wabasha is six blocks in length (two blocks on Grant Blvd and 4 blocks parallel to Walnut Ave). Receptors along the six block length are mostly single family residences except for the Central Athletic Field south of Grant Blvd. and the commercial district near the Mississippi River. Future noise contours are shown on Exhibit No. 24 on page 73. Representative existing and future noise levels in the six block area are tabulated in Table 20 under receptor areas number 4, 5, 6 and 7.

Examination of the residential areas (receptors number 5 and 7) indicates they will experience L_{10} noise level increases of 11 to 12 dBA by the year 2000, exceed State standards by 6 or 7 dBA. Although the future noise levels are near Federal standards, the 11 to 12 dBA increase is sufficient to cause a moderate impact. However only the residences nearest the roadway will experience the 11 to 12 dBA increase. Residences with more than the minimum setback from the roadway will experience less noise increase due to the greater distance and screening effect of the closer residences. Also the majority of the receptors are located on Grant Blvd. which is an existing County State Aid Highway and are therefore somewhat accustomed to highway noise.

(10) Sawley, R. J. and Gordon, C. G., "A Comprehensive Survey of the Noise in Communities Around Boeing Field," Seattle, Report 1709, Bolt Beranek and Newman Inc. (January, 1969).

The Central Athletic Field (noise receptor number 4) will experience noise level increases of 5 to 9 dBA by the year 2000 and comply with Federal and State standards except for a 35 ft. wide strip adjacent to Grant Blvd. Noise levels within the 35 ft. wide strip will be from 70 to 72 dBA. The noise impact on the Central Athletic Field will be slight since most of the facility will comply with standards and the noise increase will be small.

Noise levels in the commercial district (noise receptor number 6) will increase approximately 6 dBA by the year 2000 and comply with standards. TH 60 being elevated on a bridge structure in the commercial district will also help make the highway noise seem less intrusive. As a result, the noise impact on the commercial area will be slight.

3. Secondary:

Changes in land use and neighborhood deterioration as a result of highway noise are expected to be slight. No secondary impacts are anticipated on the segment of Alternative 3B which utilizes existing TH 60 and County State Aid Highway 59 (Grant Blvd.) The area with the greatest potential for secondary impacts is the three block segment of Walnut Ave. from Grant Blvd. to Main St. The two blocks from Grant Blvd. to Second St. are predominantly single family residential. The block between Second and Main Streets is mostly residential to the west and commercial to the east. Some residents in this area may find the highway noise objectionable and therefore elect to relocate to a quieter location. As a result, some change in ownership and neighborhood character may occur. However as a result of city zoning and judicious highway right of way development, significant land use changes are not expected.

Noise impacts are of local significance only. The total traffic related noise received by the study area will not increase as a result of the proposed action. The slight increase in noise from generated traffic will be offset by the reduction resulting from improved geometrics and mitigation measures.

4. Mitigation:

As indicated by Table 21 on page 74, abatement measures were considered for all build alternatives. Evaluation of the noise abatement measures listed below indicates that the only practical measure for preferred Alternative 3B is a park fence adjacent to the Central Athletic Field. Although the primary purpose of the park fence is to control pedestrian movements and to screen the athletic field from vehicle headlights, a noise level reduction of 3 to 5 dBA will result. Since the future noise levels in the Central Athletic Field are predicted to

be 60 to 72 dBA without the fence, the 3 to 5 dBA reduction will insure that noise levels are below the 70 dBA standard. The fence will be designed as a park fence with screening, pedestrian control, and aesthetic considerations foremost and then evaluated for noise attenuation. Additional emphasis on noise attenuation is not warranted because a noise reduction of only 2 dBA is needed to comply with State and Federal noise standards. Also the perceived effectiveness of a noise barrier is often more influenced by aesthetics and landscaping than by acoustical performance (11).

The following abatement measures were studied for all alternatives.

a. Acoustical Barriers including walls and mounds are the most effective noise abatement method currently in use. Mounds or earth berms are not suitable for this action because of the limited right of way available near sensitive receptors.

   Noise walls however, could be constructed at locations such as the central athletic field where the proposed profile and natural ground are approximately the same elevation. Noise walls adjacent to the athletic field will be multi-purpose providing pedestrian control and athletic event containment as well as noise reduction. Noise level reductions of 3 to 5 dBA are expected from such walls. However, noise walls are not feasible for other areas because of the limited distance between receptors and roadway, elevation differences, adverse aesthetic and psychological impacts, openings required for driveways, and setbacks from intersections necessary to provide safe sight distance. Barriers are not usually effective on highways which have only partial control of access.

b. Sound Insulation is not a practical abatement measure for this project. Sound insulation of existing buildings is relatively expensive and does not reduce noise levels at outdoor areas. Sound insulation is suitable for large public buildings with little outside use such as hospitals and churches.

   Sound insulation for schools and churches impacted by this action is not warranted since preliminary analysis indicates interior noise levels will comply with standards.

(11) HIGHWAY NOISE BARRIERS, NCHRP 87, Transportation Research Board, Washington, D.C., December 1981.

c. Vegetative Screens dense enough to provide a 5 dBA attenuation require a substantial amount of additional right of way and are therefore not practicable for the proposed action. Dense vegetation about 50 feet deep and 15 to 30 feet high is needed to produce a noticeable reduction in noise levels. Due to the physical problem of transplanting trees and establishing an effective vegetative screen, this measure is only considered where the required vegetation already exists. No such vegetation exists along any of the subject alternatives. Landscape plantings will be used where appropriate and although they do not provide attenuation, a psychological reduction in noise irritation often results.

d. Traffic Management Measures including prohibition of certain vehicle types, time use restrictions, modified speed limits, and traffic control devices do not lend themselves to this project. The subject facility is the only river crossing for a distance of 30 miles up or downstream. Special traffic management measures would be an inconvenience to the traveling public and inconsistent with the adjacent transportation systems.

e. Roadway Surface Type is being investigated to determine its effect on noise. The Mn/DOT is currently involved in a variety of research projects to determine the long term noisiness of various surface types and to develop a procedure for classifying pavements on the basis of noisiness. Until such studies are completed, the present state of the art does not allow for incorporation of pavement noise into surface type determination procedures. Ideally the surface type selected will represent the optimum combination of safety, durability, economic, and noise factors.

f. Acquisition of Noise Impacted Property and the creation of a buffer zone is the most positive means of meeting all noise standards. However, such a technique is only practical in relatively undeveloped areas. The excessive cost of acquiring developed property, additional relocations, and maintenance of excess right of way make the acquisition of noise impacted property undesirable for the proposed action.

   This measure will however remain viable throughout the project development process and may become practicable at some locations after the construction limits are better defined.

g. Alignment Changes are not a viable means of abating traffic noise for this project. A corridor outside of Wabasha is not desirable because of the existing equal distance of up and downstream river crossings and the desirability of utilizing a 2.4 mile segment of existing Wisconsin SH 25. Slight alignment revisions of the alternatives would result in negligible changes in noise impacts. A depressed roadway is not feasible because of the flood level and navigational clearance required over the Mississippi River main channel.

h. Copies of "The Audible Landscape" have been furnished to all Cities, Counties, and Regional Development Commissions in Minnesota by the Mn/DOT. This handbook provides guidance for land use planning, plat layout and building design for compatible development near traffic noise corridors.

i. Proposed Plats for land adjacent to all Minnesota State Highways are submitted to the Department for review prior to plat approval. When potential for noise impact is identified in the review process, it is noted in the review comments to insure that the approving authority is aware of an existing or possible highway noise impact on proposed noise sensitive areas.

j. Noise Impacts for which no prudent solutions are available will be experienced by residential receptors along Grant Blvd. and Walnut Ave. as described on page 75, some residences will receive moderate increases in noise levels and corresponding impacts. Examination of noise abatement measures (see pages 76 - 79) indicates no prudent solutions are available.

The noise analysis in this report examines the worst case condition by comparing existing neighborhood and commercial noise levels with the year 2000 traffic noise levels. Whereas the initial impact will be noise level changes resulting from relocating highway traffic when construction is completed. Since the opening year traffic volume will be less than the year 2000 volume, the initial noise levels will be lower than the year 2000 levels.

G. Energy

1. Direct Beneficial: Total Energy Consumed will be reduced as a result of the proposed action. As shown in Table 22 on the following page, all of the build alternatives require significantly less total energy than the no build alternative.

Table 22: Total Energy Consumption*

Alternative	Direct BTU/day	Indirect BTU/day	Construction BTU/day	Total BTU/day	Total BBL Crude/day
1	5.18×10^7	4.56×10^7	6.27×10^7	1.60×10^8	27.6
1A	5.26×10^7	5.12×10^7	5.78×10^7	1.62×10^8	27.9
1B	5.32×10^7	4.59×10^7	6.29×10^7	1.62×10^8	27.9
3A	4.53×10^7	4.26×10^7	5.68×10^7	1.45×10^8	24.9
3B	4.72×10^7	4.52×10^7	4.66×10^7	1.39×10^8	24.0
3C	4.62×10^7	4.35×10^7	5.05×10^7	1.40×10^8	24.2
4	4.39×10^7	4.24×10^7	5.29×10^7	1.39×10^8	24.0
4A	4.33×10^7	4.20×10^7	5.29×10^7	1.38×10^8	23.8
4B	4.25×10^7	4.17×10^7	5.29×10^7	1.37×10^8	23.6
6 (No Build)	6.24×10^8	5.57×10^8	0	1.18×10^9	203.6

* Total energy consumption listed is the average daily energy consumption for the 25 year period after construction of the proposed bridge. The No Build Alternative assumes the existing bridge will be closed after the first 5 years of the 25 year period and that one half of the traffic projected for the build alternatives will cross the river at Red Wing or Winona and the other half of the projected traffic will disappear during the last 20 years of the 25 year period.

Total energy consumption is the sum of direct energy consumption, indirect energy consumption, and construction energy consumption. Direct energy consumption refers to fuel consumption to propel vehicles. Indirect energy consumption includes energy consumption required for vehicle replacement, vehicle maintenance, roadway maintenance and peripheral energy effects. Construction energy consumption is the energy required to construct the proposed action.

The methodology identifies total energy consumption for all alternatives, using characteristics as vehicle miles traveled, travel speed, and construction cost as inputs. All energy calculations are based on the document titled ENERGY REQUIREMENTS FOR TRANSPORTATION SYSTEMS (12).

As shown in Table 22, Alternative 4B has the lowest total energy consumption. Preferred Alternative 3B requires about 1.7% more energy than Alternative 4B. Table 22 indicates that the group 4 and group 3 alternatives require approximately the same amount of energy consumption and the group 1 alternatives require slightly more energy than the other build alternatives. However since the accuracy of the analysis methodology is $\pm$10%, there is no significant difference between the build alternatives.

Other possible no build alternatives such as Transportation System Management, High Occupancy Vehicle lanes, and interface with other transportation modes are not appropriate for the proposed action. The proposed action will however encourage energy conservation by providing a bridge facility suitable for pedestrians and bicyclists use.

2. Direct Adverse: None

3. Secondary: None

4. Mitigation: None

(12) ENERGY REQUIREMENTS FOR TRANSPORTATION SYSTEMS, Federal Highway Administration NCHRP Project 20-7, Task 8.

H. Water Quality (13)

MPCA Standards And Classifications

The Minnesota Pollution Control Agency (MPCA) classifies streams and rivers according to their potential public uses. Categories of use or users are:

	Classification
Domestic Consumption	1
Fisheries and Recreation	2
Industrial Consumption	3
Agriculture and Wildlife	4
Navigation and Waste Disposal	5
Other Uses	6
Limited Resource Value Waters	7

The 7 uses are subject to minimum chemical and biological quality standards denoted by the letters (A-D). Standard (A) is most restrictive (of the highest quality) and (D) is least restrictive.

Maintenance of water quality in receiving waters is achieved by applying the most restrictive standard (A-D). The Mississippi River at Wabasha is classified 2B, 3B, 2C, 3C, 4A, 4B, 5 and 6. The old Zumbro Riverbed has the same classification as the Mississippi River. The applicable water quality standards have been summarized in Table 23 on the following page.

Physical And Chemical Characteristics

The MPCA monitors water quality of the Mississippi River at several locations near Wabasha. While water quality data immediately at Wabasha is scanty, more complete data is available from sites upstream and downstream of the project area. Refer to Table 24 for summaries of MPCA water quality sampling for the Mississippi River at Red Wing, Wabasha, Kellogg and Lock and Dam No. 5, located 37, 0, 8, and 22 miles respectively along the river from Wabasha.

The Mississippi River at Wabasha contains abundant amounts of nutrients, sediment and dissolved matter. Upstream, above Lake Pepin, at Red Wing, the concentrations of nutrients and sediment are generally higher. Lake Pepin acts as a trap for sediments and nutrients causing relatively lower concentrations to occur downstream of the lake at Wabasha and other locations. Despite this cleansing effect, the Mississippi River's mean concentrations below Lake Pepin, still violate state standards for Copper, Fecal Coliform, Oil and Grease, and Cyanide.

(13) Source: Natural Resource Assessment, Mn/DOT Office of Environmental Affairs 1979.

Table 23: Water Quality Standards (MPCA 1978)

Parameter	River Standard	Effluent Standard
Suspended Solids		30 mg/1
Turbidity	25	25
Specific Conductance	1,000 umhos/em	
Ammonia (N)	1 mg/1	.2 mg/1 as unionized ammonia
BOD		25 mg/1
Dissolved Oxygen	6 mg/1, April 1 - May 31 5 mg/1, at other times	
pH	6.5 - 8.5	6.5 - 8.5
Chloride	100 mg/1	
Oil & Grease	.5 mg/1	free of visible oil
Cyanide	.005 mg/1	.12 mg/1
Chromium	.05 mg/1	7.0 mg/1
Copper	.01 mg/1	.4 mg/1
Iron	1 mg/1	10 mg/1
Lead (non-filterable)	.05 mg/1	
Zinc	.076 mg/1	7.6 mg/1
Nickel	.1 mg/1	10 mg/1
Fecal Coliform	200 MPN/100 ml	200 MPN/100 ml

Table 24: Water Quality Parameters - Mean River Concentrations*

Parameter	Miss. R. at Red Wing (R. Mi. 797)	Miss. R. at Wabasha (R. Mi. 760)	Miss. R. at Kellogg (R. Mi. 752)	Miss. R. at Lock & Dam 5 (R. Mi. 738)
Years of Record	1967 - 1977	1967 - 1968	1971 - 1974	1974 - 1977
Turbidity	17.6 (FTU)	14.86 (FTU)	7.29 (FTU)	11.24 (FTU)
Conductivity (UMHO)	399	297	307	324
BOD mg/l	5.21	3.414	3.55	3.75
COD				32.89
Total Solids	278.75	225.71	202.7	229.8
NH_3 -N	.798	.376	.324	.306
NO_2 -N	.0425	.0329	.025	.050
NO_3 -N	.626	.6929	.951	.863
Total Phosphorous	.332	.2414	.26	.212
Sodium	23.13		9.67	9.02
Chloride	21.3	9.5	9.8	14.56
Copper	.010			.0121
Chromium			.0074	.008
Iron	.457		.638	.774
Lead	.010		.0112	.012
Nickel	.013		.0107	.0118
Zinc	.0137		.0229	.0177
F-Coliform MPN	580.6	445.7	211.4	494
Oil & Grease mg/l			4.05	1.10
Cyanide			.0125	.016

* MPCA "STORET" data. All concentrations are mean values from all sampling done at these locations for variable sampling periods.

1. Direct Beneficial: None

2. Direct Adverse: Slight Effluent Increase will result from the increased bridge width and generated traffic.

Pollutants Associated With Highway Runoff

A number of pollutants are contained in drainage from highway facilities including the following:

1) Sediment, generated by erosion or dredging during construction, winter sanding practices and accumulation on roadways.

2) Chloride, from the application of highway deicing chemicals.

3) Other pollutants which include:

a) Heavy metals such as lead, zinc, chromium, copper and nickel.

b) Petroleum product residues such as rubber, n-paraffin, grease, gas and oil.

c) Asbestos fibers.

These pollutants are residues of motor vehicle emissions or arise from the wearing of tires and mechanical parts.

d) Pesticides and herbicides.

e) Nutrients such as nitrogen and phosphorous.

These pollutants result from normal maintenance of highway rights-of-way and from the accumulation of dust, dirt and plant residues.

Runoff Impacts

Potential water quality impacts were analyzed by the Mn/DOT Office of Environmental Affairs. That analysis is documented in the Natural Resource Assessment report for this project. Copies of the Natural Resource Assessment report can be obtained from the Mn/DOT Office of Environmental Services, St. Paul, Minnesota.

The Natural Resource Assessment report concludes that runoff from the proposed project will have no appreciable effect on the quality of the Mississippi River. The slight amount of additional contaminants from generated traffic will not render the water less useful or valuable. No changes in MPCA classification for waters in the area will result from the proposed action. No major resultant change in species compostion of the aquatic community is expected.

Deicing Salt

Deicing salt is 90% or more sodium chloride by weight. Runoff from the Wabasha Bridge which will seasonally have high concentrations of sodium chloride, discharges into the Mississippi River. The mean chloride concentration of the Mississippi River near Wabasha, is approximately 15 mg/1. This concentration may be considered to be the average chloride concentration for streams in Minnesota, as the watershed of the Mississippi River encompasses approximately 2/3 of the state.

Sodium chloride is the most innocuous of water pollutants. Only in high concentrations is sodium chloride toxic to fish and wildlife. Lethal effects were noted on fish when concentration of 8000 mg/1 were reached (Clemens and Jones 1954), on fish fry at concentrations of 3800 mg/1 (Edmister and Gray 1948) and on invertebrates at 3000 mg/1 (Anderson 1948, Clemens and Jones 1954). Concentrations of 2000 mg/1 have been shown to affect the development of fish eggs (Doudoroff and Katy 1953).

Sodium chloride is presently applied at an average rate of 1.5 tons/lane mile/year. With the bridge lane width increasing by 26% the salting rate will increase correspondingly. Also while the length of bridge will increase slightly (Alt. 3A, B, or C) or increase greatly (Alt. 1 & 4) over the existing bridge, the overall length of roadway will not vary significantly. Roadway lengths within construction limits vary from 1.7 miles (Alt. 3B & C) to 1.5 miles (Alt. 1). The existing facility has a length of 1.6 miles. The average amount of deicing salt applied, will vary from approximately 6 tons/year (Alt. 3B & C) to 5 tons/year (Alt. 1). The average existing amount applied is approximately 4.5 tons/year.

Sodium chloride concentrations in bridge runoff cannot be accurately determined, but concentrations of chloride in excess of 2000 mg/1 may occur. This concentration is unlikely to be maintained as the large volume of the Mississippi River, in relation to the volume of bridge runoff, will dilute the high chloride concentration of bridge runoff.

Because the river dilutes deicing salts effectively and because sodium chloride has low toxicity, the influence of deicing salt runoff on the chemical and biological characteristics of the river will not be significant.

Hazardous Spills

When hazardous spills of toxic materials occur, it is the responsibility of the transport company to notify the MPCA and arrange for corrective measures to be taken. Depending on the magnitude of the spill, the MPCA may send inspectors to survey the situation and

recommend the implementation of cleanup procedures. Mn/DOT maintenance personnel may also be called to assist in cleanup procedures on highway rights-of-way.

Evaluation of possible drainage collection systems for the proposed bridge, did not reveal any feasible system. Because of the bridge length, temperature variations, and winter sanding, a manifold stormwater catchment system is not practical. However, the storm sewer proposed for TH 60 leading to the bridge in Wabasha, will afford an opportunity for containment of hazardous spills on that segment of TH 60. A Spill Prevention Control and Countermeasure Plan (SPCC) will be submitted with appropriate water permit applications. Preferred Alternative 3B has the least potential for spills on the bridge since it provides the shortest bridge length and most tangent bridge alignment.

Groundwater Impacts

Replacement of the Wabasha bridge and possible realignment of TH 60 will have no impact on the regional bedrock aquifer system. The nearest bedrock aquifer is over 1/2 mile from proposed construction limits of TH 60. There should be little affect on the near surface alluvial aquifer. Near surface sediments are highly permeable, but the short residence time of groundwater in this area should reduce potential problems relating to highway runoff. Groundwater discharges into the Mississippi River.

3. Secondary: None

4. Mitigation:

a. To the extent possible, bridge piers will be located on land rather than in backwater channels.

b. Highway runoff will not be directly outletted into sensitive areas such as mussel beds.

I. Fisheries (13)

1. Direct Beneficial: None

(13) Source: Natural Resource Assessment, Mn/DOT, O.E.A. 1979

2. Direct Adverse: Destruction of about 0.5 acre of fish habitat.

The major potential fisheries impact is the filling of backwater channels for bridge approach and pier construction. Fill will directly destroy small amounts of fish spawning and nursery areas. Bridge approach fill could also indirectly destroy fish spawning and nursery areas in backwater channels if flow from the main channel is cut off. An exchange of water with the main channel must be maintained or the backwater channels stagnate and will not support fish and other aquatic organisms.

Beginning an elevated roadway near Wisconsin Highway 25 will limit loss of fish habitat. However, some bridge approach fill must be done in order to connect the bridge to the existing roadway. Fill must be placed in the backwater channel immediately adjacent to the inplace fill. Although the area will vary slightly depending upon the alternate selected and final bridge design, approach fills will cover about 0.5 acre of fish habitat, see Exhibit No. 25 page 92.

As shown on Exhibit No. 25, the fill required for Preferred Alternative 3B is adjacent to the existing roadway at the Wisconsin end of the bridge. Flow in the backwater channel at that area will be perpetuated by relocating the channel to the edge of the proposed fill area.

Given the large area of backwater channels available in the immediate area, this loss will not have a major effect on local fish populations.

Construction of bridge piers will cause a loss of habitat. However, demolition of the existing bridge, with its greater number of piers, will yield more open water for fish habitat.

Anticipated Number of Bridge Piers Northerly of Minnesota Shore

Alt. 1	Alt. 3A, B & C	Alt. 4	Existing
16	14	20	29

The wing dam upstream of the existing bridge lies between the proposed routes for Alternatives 1 and 3 (Refer to Exhibit No. 25). Alternate 3 skirts the downstream edge of the dam while Alternate 1 lies upstream of the dam by several hundred feet. Construction of either alternative should not result in any alteration of the wing dam and no effect on the quality of fish habitat the dam provides, is anticipated.

3. Secondary: None

4. Mitigation:

a. Water flow in backwater channels which will be filled will be maintained. Water flow will be perpetuated by rechannelization prior to filling the backwater channel.

b. To the extent possible, gravel and concrete in the existing pier caissons will be placed on the streambed. These materials will cause current breaks, increase habitat diversity and attract fish, particularly walleye.

J. Stream Modification

1. Direct Beneficial: None

2. Direct Adverse: Backwater Channels adjacent to the WSH 25 roadway will be displaced by approach fill. As can be seen on Exhibit No. 25, page 92 , backwater channels exist on both sides of the WSH 25 roadway between the main channel and Wisconsin Bridge B6-24. All of the build alternatives cross one of these backwater channels. No other stream modification is proposed.

Preferred Alternative 3B will encroach on the backwater channel on the upstream side of WSH 25 for a length of about 700 ft.

Coordination with the Minn. DNR, Wisconsin DNR, and U.S. Fish & Wildlife revealed that flow must be maintained in the subject backwater channels to recharge other backwater channels and to allow fish migration.

3. Secondary: None

4. Mitigation: Flow in the affected backwater channel will be perpetuated by reconstructing the channel around the approach fill.

L. Flood Plains

Executive Order 11988 concerning flood plain management was issued in May, 1977. The Water Resources Council has interpreted the Order as stating that no federal monies may be spent within the 100-year flood plain of any stream, lake or wetland unless no practicable alternative exists to avoid the flood plain and that all possible measures to minimize harm to the flood plain are taken.

The proposed action has been analyzed in accordance with FHWA's Flood Plain Regulations FHPM 6-7-3-2 effective November 15, 1979.

Since the flood plain is about 14,000 feet wide at the project site, construction of a bridge in this area requires construction within the flood plain by definition. The entire flood plain near the existing bridge is shown on Exhibit No. 3, page 3. The base 100 year flood plain near Wabasha and alternative encroachments are shown on Exhibit No. 25 on page 92. As shown on Exhibit No. 25, the approach fill for Preferred Alternative 3B within the 100 year flood plain, is located at the Wisconsin end of the proposed bridge. The proposed and existing approach fills in Wisconsin are located within the floodway. The existing approach fill not utilized as a foundation for the proposed fill (a peninsula about 350 ft. long) will be allowed to remain as is to help perpetuate the existing backwater flow patterns and to provide additonal parking space for the adjacent boat ramp. The peninsula could also be used as a fishing jetty.

The floodway at the proposed bridge location is 13,355 ft. wide (14). Since the 100 year flood plain is approximately 14,000 ft. wide, as shown on Exhibit No. 3, the floodway includes the entire flood plain except for a few hundred feet at the edge of the flood plain boundary. Although most of the proposed bridge piers and the Wisconsin approach fill will be located in the floodway, hydraulic analysis (15) discloses that the proposed action will not result in any stage increase over the inplace condition. The proposed action is therefore consistent with the regulatory floodway and FEMA/FIA coordination is considered complete. The Alternatives Section of this document, pages 16 thru 27 lists all alternatives considered for this action. No practicable alternative exists which would avoid flood plain encroachment.

Hydraulic analysis indicates the proposed action will not affect floodwater elevations. Since the hydraulic capacity of the proposed facility will be slightly greater than the existing structure, and the proposed approaches will have a smaller hydraulic silhouette than the existing approaches, the impact to the flood plain will be negligible.

None of the alternatives will increase flooding, therefore this action will not increase the risk of property loss or of hazard to life.

(14) CITY OF WABASHA, FLOOD INSURANCE STUDY, U.S. Dept. of Housing & Urban Development, Federal Insurance Administration, March 1978.

(15) Hydraulic Analysis S.P. 7910 & 7911 (TH 60), Mn/DOT, July 8, 1982.

Since the proposed action is for replacement of an existing facility, the most noticeable impact to the flood plain will be the appearance of the new bridge and approaches. The appearance of the new facility on the edge of the three mile wide flood plain should not detract from the natural beauty and spaciousness of the flood plain. Bridge details and color will be selected to harmonize with the environment.

Impacts to natural flood plain values are discussed in the Water Quality, Fisheries, Wildlife & Wetlands, and Stream Modification sections of this EIS.

The proposed action will not significantly affect aquaculture, outdoor recreation, natural moderation of floods, water quality maintenance or groundwater recharge.

The proposed action will not encourage additional base flood plain development. Partial access control will be acquired to prohibit future entrances and thereby inhibit flood plain development. However, the new facility will perpetuate highway service to existing developments. Much of the flood plain development in the project area is park or recreational in nature. Park and recreational uses with low flood damage potential and which do not obstruct flood flows are allowed in the flood way by the Wabasha Flood Plain Zoning Ordinance.

The mitigation discussions in the Water Quality, Fisheries, Wildlife and Wetland, Stream Modification and Construction sections of this EIS contain information supporting the determination that all possible measures to minimize harm to the flood plain will be taken.

This action offers little opportunity to preserve impacted flood plain values. However, the new bridge will be of greater total and individual span length and therefore bridge more of the flood plain than the existing facility. Also removal of the existing bridge will result in restoration of the flood plain at that area.

In accordance with FHPM 6-7-3-2, the proposed action will not significantly encroach on the flood plain.

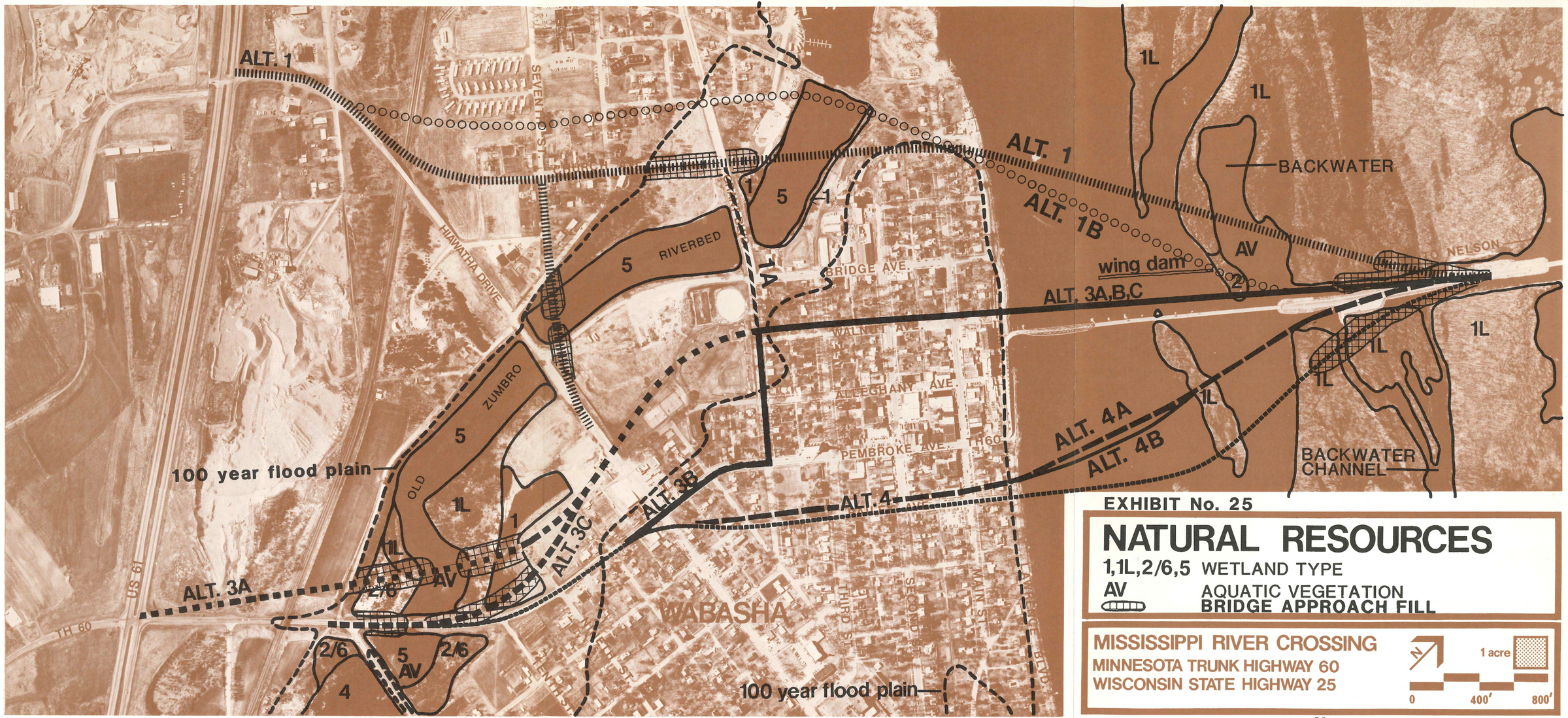


EXHIBIT No. 25

NATURAL RESOURCES

1,1L,2/6,5 WETLAND TYPE

AV AQUATIC VEGETATION

BRIDGE APPROACH FILL

MISSISSIPPI RIVER CROSSING

MINNESOTA TRUNK HIGHWAY 60

WISCONSIN STATE HIGHWAY 25

N

1 acre

0 400′ 800′

L. Flood Hazard

1. Direct Beneficial: None

Approximately 2400 feet of existing T.H. 60 between U.S. 61 and 8th Street in Wabasha is below the 100 year flood elevation of 678. Most of this segment is at elevation 676. The existing sag vertical curve under the C.M.St. P.&P. Railroad was covered with about 5 feet of water during the flood of record in 1965, see Exhibit No. 11 profiles. During the past 25 years T.H. 60 in Wabasha has been closed on 3 different occasions (duration of 1 to 3 days) because of inundation. Wisconsin State Highway 25 across the flood plain -- from the subject bridge to near Nelson -- is 1.5 to 2.5 ft. above the 100 year flood elevation.

Alternatives 1, 1B and 3A could provide roadways a minimum of one foot above the 100 year flood elevation and thereby be relatively unaffected by floods. Alternatives 1A, 3B, 3C, 4, 4A and 4B would utilize the existing vertical alignment under the C.M.St.P.&P. Railroad and be subject to inundation at that location.

Preferred Alternative 3B utilizes existing T.H. 60 horizontal and vertical alignment from U.S. 61 to Grant Blvd. and therefore does not provide a connection from the proposed bridge to U.S. 61 above the 100 year flood elevation. However, the roadway construction provided by Alternative 3B (approximately two blocks on Grant Blvd. and one block adjacent to Walnut Ave.) will be at or above the 100 year flood elevation. Therefore the preferred alternative will neither reduce or increase the flood hazard to highway users. During periods of high water, emergency vehicles and highway users can utilize Hiawatha Avenue which is at about the 50 year flood elevation. Although flood waters along the Old Zumbro Riverbed higher than the 50 year flood elevation isolate east Wabasha from west Wabasha, T.H. 60 across the Old Zumbro Riverbed is not the community's only evacuation route. The preferred alternative will provide a roadway which is compatible with future roadway projects above the 100 year flood elevation if any such projects are ever planned or implemented.

Coordination with Corps of Engineers revealed that none of the alternatives would have any adverse flood effects on the City of Wabasha. The Corps has investigated a dike system for Wabasha, but because of a benefit-cost ratio of less than 1.0 planning has ceased. None of the alternatives conflict with possible future flood control projects.

2. Direct Adverse: None

3. Secondary: None

4. Mitigation: None

M. Wetlands and Wetlands Finding (13)

Executive Order 11990

Executive Order 11990 "Protection of Wetlands" specifies that new construction in wetlands shall be avoided unless there is no practicable alternative to such construction and the proposed action includes all practicable measures to minimize harm to wetlands. All of the build alternatives under consideration involve wetlands.

1. Direct Beneficial: None

2. Direct Adverse: Each build alternate disturbs a small area of floodplain forest (Type 1L wetland) on the Wisconsin side of the river. Most of the forest area affected will be cleared and spanned with bridge structure. A small part of the total impacted area would be filled for roadway embankments to make the bridge approaches, see Exhibit No. 25 page 92.

All build alternates except 3B also impact the former Zumbro River channel in Wabasha. Partial filling of this channel will be necessary for road crossings. Alternates 1, 1A, 1B and 3A include a bridge over the channel. Minimal impacts upon vegetation and wildlife are anticipated in the uplands in Wabasha. This area lacks wildlife habitat since it is heavily developed. Table 25 gives the approximate area of wetland vegetation that would be impacted by each alternative.

Wetlands filled for embankments will be destroyed. Alternate 3A fills roughly three times more wetland area than the other alternates because this route must be elevated to pass over the railroad tracks just west of the channel. Alternates 3B, 3C, & 4 pass under the railroad on existing T.H. 60.

(13) Natural Resource Assessment, Mn/DOT, O.E.S. 1979.

Wetlands spanned by bridge structure will change. The bridge deck is approximately 50 feet wide. Low steel elevation of the bridge ranges from 5 to 50 feet above the wetlands. Beneath the bridge, large trees will be removed, while brush emergent and submerged aquatic plants will probably remain. Plant density and composition also alters by shading from the bridge deck. Plant species which require full sunlight may not thrive beneath the bridge deck.

Table 25: Wetland Impacts (Acres)*

Alternates		Wetland Types 1	1L	2	1/6	2/6	5	Total (Acres)
1 & 1A	Filled	1.0	1.0	-	0.3	-	1.0	3.3
	Bridged	-	5.0	-	-	-	.5	5.5
	Total							8.8
1B	Filled	0.5	1.5	-	-	0.3	0.8	3.1
	Bridged	-	1.2	0.3	-	-	-	1.5
	Total							4.6
3A	Filled	2.0	4.5	-	-	2.0	4.0	12.5
	Bridged	-	1.0	0.3	-	-	-	1.3
	Total							13.8
3B	Filled	0.5	1.5	-	-	-	.8	2.8
Preferred	Bridged	-	1.0	0.2	-	-	-	1.2
Alt.	Total							4.0
3C	Filled	2.0	1.8	-	-	0.3	1.0	5.1
	Bridged	-	1.0	0.3	-	-	-	1.3
	Total							6.4
4	Filled	0.5	1.5	-	-	0.3	.8	3.1
	Bridged	-	5.0	-	-	-	-	5.0
	Total							8.1
4A & 4B	Filled	0.5	1.2	-	-	0.3	0.8	2.8
	Bridged	-	2.3	-	-	-	-	2.3
	Total							5.1

*Acreages listed in Table 25 include areas that could be effected by the shadow of the bridge and approach. The areas of wetlands immediately beneath the bridge are approximately ¼ to ½ the acreages listed. Wetlands are shown on Exhibit No. 25 on page 92.

Clearing of highway right-of-way will open up the dense canopy of lowland hardwoods to sunlight. This will encourage growth of forbes and shrubs along the edges of the right-of-way. These plants will add species diversity to the flood plain which is predominantly covered by lowland hardwoods and may provide new habitat for some wildlife species.

Preferred Alternative 3B effects less acres of wetlands than the other build alternatives. The 4 acres effected represent about 0.04% of the approximately 10,000 acres of wetlands in the area. As shown on Exhibit No. 25, Alternative 3B only impacts wetlands in Wisconsin adjacent to the SH 25 roadway fill.

Wisconsin Side

On the Wisconsin side of the river Alternative 3 has less impact than Alternatives 1 and 4. The main impacts of Alternate 3 (A, B and C variants are identical in Wisconsin) involves the filling of 0.4 acre of a backwater channel which runs parallel along the north side of W.H. 25 and the bridging of the tip of an island just off shore. The tip of the island affected is a 1 1/2 acre sedge-grass meadow. It is the only sedge-grass meadow in the project vicinity on the Wisconsin side. The relative scarcity of this habitat type may make this island locally important to wildlife in the area for nesting and feeding. About 0.2 acre of the sedge-grass meadow would be spanned by the bridge.

Impacts associated with Alternate 1 and 1A include fill of 0.2 acres of the channel along the north side of W.H. 25, the fill and bridging of 6.0 acres of floodplain forest including two islands in the river and the bridging of a major concentration of aquatic vegetation. The concentration of aquatic vegetation including coontail, pondweeds, and duckweeds is located in a shallow, protected bay north of W.H. 25 between the nearest island and the floodplain forest. This aquatic vegetation may be important as a feeding area for local waterbirds since it is the only major weedbed in the project vicinity on the Wisconsin side.

Impacts of Alternate 1B include the fill of 0.4 acres of the backwater channel on the north side of WSH 25, the fill and bridging of 2.7 acres of floodplain forest and the bridging of a major concentration of aquatic vegetation.

The main impacts of Alternate 4 include: fill of 0.1 acre of the backwater channel which parallels the south side of W.H. 25, two bridgings of the same channel where it makes a loop to the south of W.H. 25, fill and bridging of 6.5 acres of floodplain forest including the tips of two islands and bridging of an exposed sand bar located south of W.H. 25 between the nearest wooded island and the floodplain forest. This sand bar contains several stumps and logs and is valuable to wildlife as a resting and loafing site.

Alternate 4 is considered to have more potential impact upon wildlife than Alternate 1 because of its greater involvement with backwater channels.

Alternative 4A and 4B impacts are identical and include fill of 0.2 acre of backwater channel adjacent to the south side of WSH 25 and fill and bridging of 3.5 acres of floodplain forest.

Minnesota Side

Alternative 1, 1A & 1B river bridges would extend all the way across to the west side of the old Zumbro River channel in Wabasha. However, about 1.0 acre of the channel would be filled for a connection between Seventh Street and Hiawatha Drive with Alts. 1 & 1B. The portion of the old Zumbro River channel bridged by T.H. 60 and filled for the connector is poor habitat for wildlife. The channel consists of an area of open water that is too deep to support rooted aquatic plants. Shoreline vegetation is also limited. This part of the channel is bordered by a boat landing, picnic area, undeveloped campground, athletic fields and the County Fairgrounds. Those facilities result in considerable disturbance to the channel area from boat traffic, campers, picnickers and other human activities which also make this part of the channel undesirable for wildlife.

Alternate 3A has the most impact upon the old Zumbro River channel. This alternate crosses the channel on a 1,000 foot long fill section at a height of about 20-50 feet above the existing normal pool elevation. This portion of the Wabasha channel is in a relatively natural state that provides fairly good habitat for wildlife. It consists of a mixture of lowland hardwoods, shrub swamp, wet meadow and small patches of cattails. The open water in the channel contains coontail, yellow water lillies and duckwood.

This alternate fills 4.0 acres of floodplain forest, 4.0 acres of open water and 4.0 acres of shrub swamp, wet meadow and seasonably flooded basins in the Wabasha channel.

Preferred Alternative 3B does not affect any wetlands on the Minnesota side of the Mississippi River, see Exhibit No. 25. Alternate 3B crosses the Old Zumbro Riverbed on the existing TH 60 roadway and no construction is proposed for the segment of existing TH 60 (U.S. 61 to Grant Blvd.) utilized by Alternate 3B.

Alternates 4, 4A and 4B would cross the Wabasha channel about 300 feet south of Alternate 3A on the existing TH 60 fill. Thus, these alternates would have less impact than Alternate 3A since they would only involve enlarging of the existing fill slopes. Alternate 3C,

while basically following the existing roadway, will require fill of an additional .3 acre of open channel, .3 acre of floodplain forest and 1.5 acre of seasonally flooded basin. However, Alternatives 3C, 4, 4A and 4B have more impact on the Wabasha channel than Alternates 1, 1A and 1B because they cross the channel in an area that is more valuable for wildlife.

In summary, Alternate 3A has the most wetland impact because it results in fill and permanent loss of 3 to 4 times as much wetland as any of the other alternatives. Alternates 4, 4A, 4B, 1, 1A and 1B would have the second most impact followed by Alternate 3C. Alternate 3B has the least impact.

No practicable alternative exists which would avoid construction in wetlands. Reconstruction of the bridge at the existing location would have the least impact on wetlands. That alternative is not practicable because of the substandard Minnesota approach and two year interruption of service required for construction.

4. Mitigation:

Displacement of wetlands and wildlife habitat will be minimized by using 4:1 inslopes in wetland areas rather than the more common 6:1 inslopes. The 4:1 inslopes comply with Mn/DOT Technical Memorandum No. 79-18-RD-2 which provides guidelines for roadway cross sections in wetlands.

Removal of the existing bridge after the replacement structure is completed will result in the unbridging of about 1.2 acres of Type 5 wetlands in Wisconsin. The existing bridge piers will be removed to an elevation approximately equal to that of the stream bed. These removals will improve the quality of the 1.2 acres of wetlands.

Removal of the existing approach fill at the Wisconsin end of the bridge was considered. An area about 350 ft. long and 100 ft. wide of the existing approach will not be utilized as a foundation for the proposed approach and could therefore be removed. However, coordination with governing agencies indicates that allowing the approach fill to remain inplace (to help perpetuate existing backwater flow patterns and provide parking spaces for the adjacent boat ramp) is more desirable than removing the fill and recreating about 0.8 acre of wetland. Due to the large amount of nearby wetlands, about 10,000 acres, replacement of impacted wetlands is not proposed.

Formal Wetlands Finding

DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION E.O. 11990 - WETLANDS FINDING
Minn. Proj. F 108-( ) and F 046-( )
Minn. State Project 7910 & 7911 (TH 60)
Wisc. Project ID 7172-0-00.

This statement sets forth the basis for a finding that there is no practicable alternative to construction in the wetlands located in the Wisconsin approach corridor of the proposed Federal Aid bridge replacement project, and that the highway proposal includes all practicable measures to minimize harm to the wetlands which may result from such use. This finding is made in accordance with the requirements of Executive Order (E.O.) 11990 on the Protection of Wetlands, dated May 24, 1977.

Wetlands Affected

The preferred Alternative 3B, will impact about 4 acres of wetlands in the Mississippi River backwaters, see discussion on pages 94-100 and Exhibit No. 25. Approximately 10,000 acres of wetlands exist in the project area.

Alternatives

No practicable alternative exists which would avoid construction in wetlands. Reconstruction of the bridge at the existing location would have the least impact on wetlands. That alternative is not practicable because of the substandard Minnesota approach and two year interruption of service required for construction. A discussion of all alternatives considered, is contained in Section II of this report, beginning on page 16.

Measures to Minimize Harm

Discussions contained in the Stream Modification, Wetlands, Fisheries, Wildlife, and Construction Impacts sections of this FEIS describe measures to minimize harm to wetlands. A listing of measures included in the proposed action follows:

1. Use of 4:1 fill inslopes instead of 6:1 inslopes in wetlands.

2. Maximum utilization of the existing Wisconsin approach fill.

3. Continuation of backwater flow patterns.

4. Restriction of construction activities in wetlands outside of the construction limits.

5. Utilization of appropriate temporary erosion control measures such as filter cloth, mulch, sediment traps, and hay or straw bales.

6. Permanent erosion control protection by sodding, seeding, mulching, and riprap.

7. Compliance with all special provisions of water and wetland related permits.

Coordination and Public Involvement

The proposed action has been coordinated with, among others, the U.S. Department of the Interior -- including Fish and Wildlife Service, U.S. Environmental Protection Agency, Corps of Engineers, Minnesota Pollution Control Agency, and Minnesota and Wisconsin Departments of Natural Resources. Comments from those agencies are contained in section VII of this FEIS.

The public was advised that the proposed action will affect wetlands by a statement in the public hearing notices.

Conclusion

Based upon the above considerations, it is determined that there is no practicable alternative to the proposed new construction in wetlands and that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use.

N. Wildlife and Threatened or Endangered Species

1. Direct Beneficial: None

2. Direct Adverse: All build alternatives destroy some wildlife habitat. As described on page 31, the most valuable wildlife habitat consists of wetlands, backwater channels and islands associated with the Mississippi River and former Zumbro River channel. Small tracts of upland habitat also exist along the C.M.St.P.&P.RR. in Wabasha. Exhibit No. 25 shows that nearly all of the wildlife habitat effected is classified as wetlands. Therefore the relative impact of each alternative on wildlife can be determined from Table 25 which lists acres of wetlands impacted.

Table 25 indicates that Alternative 3A has the greatest impact on wildlife. Alternatives 1 and 4 have the second greatest impact followed by 1A and 3C. Alternatives 1B, 4A & 4B are next, and Preferred Alternative 3B has the least impact. Although Table 25 lists identical acres of wetland impacts for Alternatives 1 and 1A, Alternative 1 has greater wildlife impacts than 1A since 1 would also impact habitat along the C.M.St.P.&P.RR.

Alternative 3B will only noticeably impact wildlife habitat adjacent to the existing SH 25 roadway and bridge in Wisconsin. Although Alternative 3B will impact about 4 acres of habitat in Wisconsin, only two acres of habitat will be filled. One of those acres will be covered by the roadway surfacing and therefore lost, the other acre will be converted from wetland habitat to upland habitat in the form of roadside fill slopes. The other two acres impacted will be bridged by the proposed structure and

therefore available for wildlife use. Considering the abundance of surrounding wildlife habitat -- the Upper Mississippi River Wild Life and Fish Refuge contains 195,093 acres -- no significant wildlife impacts will result. However, wildlife in the impacted 4 acres (mostly small mammals, aquatic amphibians and snakes, and water fowl) will be forced to compete for habitat in the surrounding refuge.

A survey conducted in 1979 revealed one large concentration of mussels in the project area. Although 21 species of mussels were identified, no threatened or endangered species were found. The mussel bed is approximately 35 ft. wide and 5 ft. to 10 ft. offshore on the Minnesota side of the river. The bed extends the entire length of the 4,000 ft. survey study area, see Exhibit No. 26 on the following page. Water depth at the bed varies from 4 ft. to 20 ft. The substrate is rocks, gravel and sand. Mussel density within the bed is 5.8 mussels per square meter.

All build alternatives will impact the mussel bed since the main channel pier on the Minnesota side of the navigational channel will be constructed in or adjacent to the mussel bed. The exact bridge pier location will not be determined until later in the project development process. The pier will not be located in the mussel bed if practicable. However, assuming the worst case -- pier located within the mussel bed -- an 80 ft. to 100 ft. segment of the bed would be destroyed. Loss of that small segment of the bed area (2.0% - 2.5% of the bed within the study area) will not have a significant effect on local mussel fauna since an ample quantity and quality of water, substrate, glochidia hosts, and viable mussels will not be impacted. If the pier is not located within the mussel bed, the only impact on mussels will be temporary as described in the Construction section of this FEIS.

Threatened and Endangered Species

Bald eagles which winter in the vicinity of the Wabasha bridge could be disturbed by construction activities associated with this project. Once the bridge is built it is assumed the eagles would still find the area suitable habitat since they feed and roost around the present highway and bridge. The disturbance to the eagles and possible avoidance of the bridge area should not adversely affect them since it is a temporary impact and since it involves only a small portion of the wintering area which is not heavily used nor critical

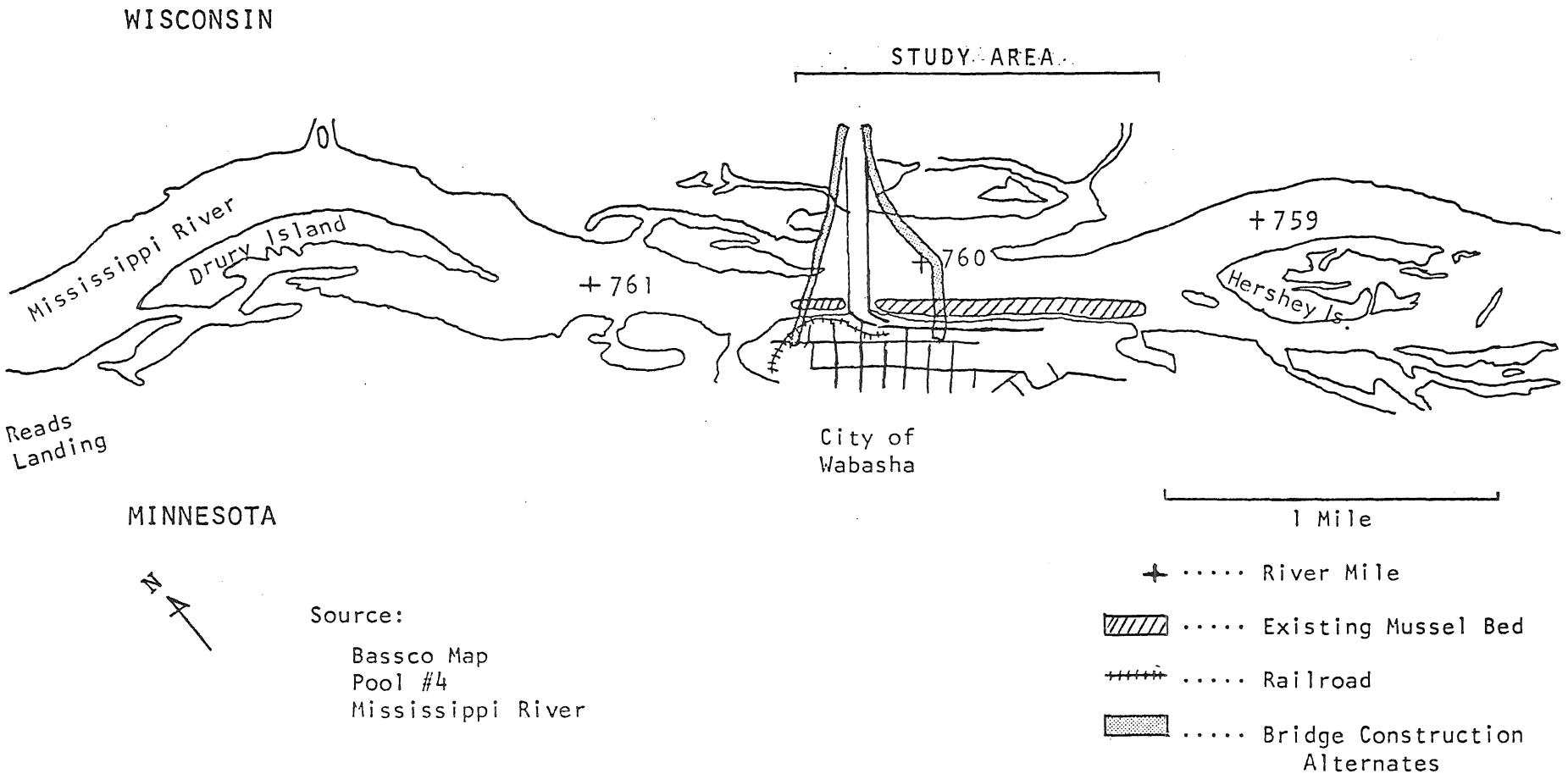


Exhibit No. 26: MUSSEL BED LOCATION

to their survival. This project would not affect the Reads Landing area which is the area primarily used by the wintering eagles.

Higgin's Eye Pearly Mussel

A survey for the Lampsilis higginsi (Higgin's Eye Pearly Mussel) was performed by a consultant during June and July 1979. The survey included sampling upstream and downstream of each proposed bridge alignment with crowfoot bars or clam rakes. The location of all dense mussel beds were documented and hand sampled by certified skin divers. The survey did not reveal the presence of Lampsilis higginsi or any other endangered mussels within the study area, see correspondence in the appendix.

Peregrine Falcons

The proposed action will have no impacts on Peregrine Falcons. This species migrates through the State of Minnesota but does not currently nest here. A review of the project area by the Mn/DOT Wildlife Biologist did not reveal any potential nesting sites for the peregrine falcon.

No other threatened or endangered species exist in the project area.

In accordance with Endangered Species Act requirements, the FHWA and Mn/DOT processed a biological assessment for the Bald Eagle and Higgin's Eye Pearly Mussel. The U.S. Fish and Wildlife biological opinion states that the proposed action is not likely to jeopardize threatened or endangered species, see correspondence on the following page. As a result of the biological coordination, noisy construction activities that adversely effect Bald eagles will be restricted from December through March. Coordination required by the Endangered Species Act is considered complete.

3. Secondary:

None

4. Mitigation:

Habitat disturbance will be minimized by using 4:1 inslopes in wetland areas rather than the usual 6:1 inslopes. Mitigation measures to be utilized during construction are described in the Construction section of this FEIS.

Coordination:

Interagency coordination has been maintained throughout the development of this project to insure its consistency and compatibility with State and Federal policies for protection of the environment. Reviews have been conducted by the Department of Interior, U.S. Fish & Wildlife Service, Minnesota Department of Natural Resources, Wisconsin Department of Natural Resources, and U.S. Corps of Engineers. Comments from these agencies are included in the Appendix.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Federal Building, Fort Snelling
Twin Cities, Minnesota 55111

IN REPLY REFER TO:
ES

DEC 2 1982

Mr. William R. Lake
Division Administrator
U.S. Department of Transportation
Federal Highway Administration
Suite 490, Metro Square Building
7th and Robert Streets
St. Paul, Minnesota 55101

Dear Mr. Lake:

This letter responds to your October 22, 1982 request for Section 7 consultation in accordance with the Endangered Species Act of 1973, as amended, for the proposed replacement of the T.H. 60 bridge over the Mississippi River at Wabasha in Wabasha County, Minnesota.

As identified in your above referenced letter and accompanying documents, the threatened bald eagle (Haliaeetus leucocephalus), and the endangered Higgin's eye pearly mussel (Lampsilis higginsi) have been known to occur within this area of the Upper Mississippi River. Another federally designated endangered species that was not discussed in your letter is the peregrine falcon (Falco peregrinus). Presently, the peregrine falcon is a transient species in Minnesota and Wisconsin and is mentioned here because attempts are being made to reestablish its population along the Upper Mississippi River; five immature falcons were released this past summer near Kellogg, Minnesota, approximately six miles south of Wabasha. At this time, there is no designated critical habitat in the project area for any of the above species.

The biological assessments prepared for the bald eagle and Higgin's eye pearly mussel indicate that project-related impacts to these species are possible. Although no specimens of the endangered mussel were found during the mussel survey conducted for this project, a large and diverse mussel bed is located along the entire length of the project area. It is conceivable that this bed could contain individuals of L. higginsi. To avoid and minimize adverse project-related impacts to the mussel bed, we understand the following measures will be incorporated into the project design and construction:

(1) The main support pier on the Minnesota side of the navigation channel will not be located in the mussel bed if practicable.

(2) Physical disturbance of the river bed from the middle of the navigation channel to the Minnesota shore will be minimized.

(3) Temporary erosion controls such as hay bale check dams, filter fabric fences and sedimentation basins will be constructed before exposing areas to erosion which could enter the Mississippi River.

(4) Riprap and/or sod will be placed upon all disturbed areas immediately adjacent to the Minnesota side of the river as soon as practical for permanent erosion controls.

(5) Seeding and mulching of all disturbed areas will occur as soon as possible.

The Upper Mississippi River near Read's Landing, Wabasha and Teepeota Point is used extensively by wintering bald eagles. Although eagle use occurs near the existing and proposed bridge locations, major roosting and feeding areas are located a sufficient distance from the project site that disturbances should be minimal. Although bridge replacement will result in the loss of some perching sites, other suitable sites are located in the immediate vicinity. To avoid and minimize possible disturbances to wintering eagles, we understand the following measures will also be taken:

(a) The contractor will not conduct highly disturbing construction activities (e.g., impact pile-driving) from December 1 to March 30 or until eagles depart in the spring if prior to March 30, as determined by the Mn/DOT wildlife biologist and USFWS. Activities less disturbing in nature (e.g., construction of access roads, vibratory pile-driving, superstructure assembly) will be allowed during the winter months.

(b) Construction activity may be reviewed and modified as warranted, if it is determined jointly by the Mn/DOT wildlife biologist and USFWS that eagles are being significantly impacted by construction.

(c) The above restrictions will only be imposed on activities east of the main channel (not including construction of the navigation channel piers).

Based on the information contained in the biological assessments, the proposed measures to be taken to avoid and minimize project impacts, and discussions with various Service employees, it is our biological opinion that the proposed replacement of the Wabasha bridge will not jeopardize the continued existance of the bald eagle, Higgin's eye pearly mussel or peregrine falcon. However, should the proposed project as now planned be modified or altered, or should new information become available which indicates that the proposed bridge replacement may affect listed species, you must reinitiate this consultation.

We appreciate the opportunity to offer our comments on this project and look forward to future coordination efforts between our agencies. If there are any questions regarding this letter, please contact Mr. Richard F. Berry of our St. Paul Field Office at (612) 725-7131.

Sincerely yours,

James C. Gritman
Acting Regional Director

cc:MN DNR, St.Paul/Rochester
WI DNR, Madison

O. Land Use

1. Direct Beneficial: None

2. Direct Adverse: Conversion of existing land use to highway right of way. The build alternatives considered require from 19 to 35 acres of right of way, see Table 28.

Preferred Alternative 3B minimizes direct land use changes since it requires the least amount of right of way and utilizes existing T.H. 60 and C.S.A.H. 59 where possible.

Preliminary right of way requirements by land use for Preferred Alternative 3B are shown in the following table.

Table 26: Preliminary Right of Way Requirements for Preferred Alternative 3B

Location	Land Use	Acres
Wisconsin	River & Refuge	12
Minnesota		
Wabasha	River	1.9
	Conservancy	0.5
	Residential	4.6
		19.0 Total

Of the total 7.0 acres of right of way required in the City of Wabasha, 1.9 acres are located in the main channel of the Mississippi River and 2.6 acres are existing street and road right of way. The net amount of developed land required is therefore only 2.5 acres. The 2.5 acres is a strip approximately 70 ft. wide adjacent to Walnut Ave. and extends from Grant Blvd. to the Mississippi River. As shown on Exhibit 19, Walnut Ave. is the border for a change in land use at the western edge of the CBD -- Second St. to Lawrence Blvd. Zoning to the east of Walnut Ave. in this area is commercial and industrial and zoning to the west is residential. Alternative 3B is therefore located at an existing change in land use on the western edge of the CBD.

3. Secondary: The proposed action is not expected to cause any major land use changes since it is consistent with existing and planned land use and all alternatives make use of portions of existing city streets.

The size of the city and rate of development or redevelopment within the central portion of the city make Wabasha less susceptible to land use change from a relocation of a portion of its traffic load. Recent downtown development includes a drive in bank, bowling alley, VFW Club, and remodeling/location changes of a few businesses. Some commercial development -- auto parts, welding shop, and electrical warehouse -- has occurred near the Hiawatha Drive - Church Street intersection. There has also been some growth in light industry/commercial activity located in the industrial park southwest of U.S. 61. The City of Wabasha adopted a new zoning ordinance in 1980. The zoning map is shown on Exhibit No. 19 on page 49. The zoning ordinance provides Wabasha an effective means of controlling land use.

Traffic studies indicate that the bulk of traffic on Trunk Highway 60 is local traffic with possibly as little as 25% being thru traffic. Thus the incentive or need for development of traffic sensitive businesses along any new route of Trunk Highway 60 is minimized. However, minor localized land use changes can be expected as highway oriented businesses migrate toward the new highway location.

None of the build alternatives will stimulate enough low density, energy intensive development in outlying areas to have a significant adverse impact on the existing community. The rate of development in Wabasha is expected to be more influenced by factors such as the economy, inflation, money supply, service needs and population trends than by the proposed action. However the location of TH 60 may influence the location of some developments.

Alternatives 1 and 1B could result in the 7th Street intersection and U.S. 61 intersection areas becoming more attractive for commercial development.

Alternatives 1A, 3A, 3B and 3C could increase commercial pressure in the Grant Blvd. and Pembroke Ave. areas.

Alternatives 4, 4A and 4B could attract some commercial development to the Hiawatha Drive intersection area.

Preferred Alternative 3B will not cause any significant land use changes because it utilizes existing TH 60 and CSAH 59 for most of its length in Wabasha and only relocates TH 60 two blocks westerly in the central business district. Highway access to developments on existing TH 60 from U.S. 61 to Grant Blvd. will not change. Convenient access to the CBD will be provided by C.S.A.H. 59 and Pembroke Ave. (existing T.H. 60). Since the proposed action will not generate the need for additional

development or change in adjacent land use and the City of Wabasha controls land use through zoning, no significant land use changes will be induced.

The proposed action has been coordinated with the appropriate planning agencies and determined to be compatible with existing and planned land use. Early coordination revealed the following concerns:

Wabasha - The new bridge must provide convenient access to downtown businesses.

Federal
Refuge - The existing Wisconsin approach should be utilized as much as possible to minimize encroachment.

Preferred Alternative 3B is consistent with the above concerns.

4. Mitigation:

Right of way will be acquired at a fair market price in accordance with current regulations and procedures. The highway corridor from Grant Blvd. to the Mississippi River will be developed to be compatible with adjacent land use. Development will include landscaping, under bridge parking, a play area and an historical focal point area as described in the Historical and Section 4(f) mitigation sections of this FEIS.

P. Historic and Archaeological

Wisconsin Historic

The Wisconsin State Historical Preservation Officer (WSHPO) has determined that no buildings of historical or architectural significance listed on or eligible for the National Register of Historic Places will be affected by any of the alternatives in Wisconsin. See WSHPO correspondence in the appendix, page A-3.

Wisconsin Archaeological

The Wisconsin State Historical Society highway archaeologist has determined that no archaeological sites exist along the group 3 alternatives (Alternative 3A, B, & C) in Wisconsin. The highway archaeologist indicates that any archaeological sites likely to be found along Alternatives 1 or 4 would probably be hunting camps or fishing stations and not extensive villages. See correspondence in the appendix, pages A-4 and A-5.

Minnesota Archaeological

Investigation by the Minnesota Historical Society reveals no archaeological sites in Minnesota will be affected by any of the alternatives. The only known site has been destroyed by housing and city streets. Also the only area with archaeological potential affected by the alternatives was sampled by test excavations and found to contain no archaeological materials. See Correspondence in the appendix, pages A-6 and A-7.

Minnesota Historic

As described on page 43 , the following properties in Wabasha are listed on the National Register of Historic Places: Anderson Hotel, First Congregational Parsonage, Grace Memorial Episcopal Church, and Wabasha Commercial District. Historical property locations are shown on Exhibits No. 17 and 27.

Section 106 Procedures:

Federally funded projects which could affect historic properties on or eligible for the National Register of Historic Places are governed by Section 106 of the National Historic Preservation Act of 1966. Section 106 procedures and 36 CFR 800.4(d)(Advisory Council on Historic Preservation regulations) require the following:

- Determination of National Register eligibility by the Secretary of the Interior. On April 3, 1980, the Keeper of the National Register (acting for the Secretary of the Interior) determined that the Wabasha Commercial District, Grace Memorial Episcopal Church, and First Congregational Parsonage are eligible for the National Register, see correspondence in the appendix, pages A-8 & 9. Those properties have subsequently been listed on the National Register.

- Determination of effect and adverse effect. Information presented later in this section identifies that all build alternatives effect historic properties and that Preferred Alternative 3B and Alternatives 3A, 3C, 4, 4A and 4B adversely effect historic properties.

- A Preliminary Case Report requesting comments from the Advisory Council on Historic Preservation (ACHP). The Preliminary Case Report was submitted to the ACHP on September 3, 1981. Comments from the ACHP on the Preliminary Case Report and related FHWA correspondence are contained in the appendix on pages A-10 thru 12.

- The FHWA, SHPO and Executive Director of the ACHP shall be consulting parties to consider alternatives which avoid adverse effects or satisfactorily mitigate adverse effects.

- The consulting parties shall execute a Memorandum of Agreement (MOA) specifying how the proposed action is to proceed, including mitigation measures. The executed MOA is contained on pages 127 and 128.

Effects: The Minnesota State Historic Preservation Officer's (MSHPO) opinion that all build alternatives affect historic properties and that Alternatives 3A, 3B, 3C, 4, 4A and 4B adversely affect historic properties is contained in the appendix on pages A-13 thru 19.

All Build Alternatives: All of the build alternatives have the impacts listed below. The location and magnitude of these common impacts do, however, vary with alternative.

Direct effects include 1) changes in traffic patterns resulting from the relocation of T.H. 60, 2) reduction in vehicle related noise and air pollutants on Pembroke Avenue (existing T.H. 60).

Indirect effects include 1) some economic loss to traffic sensitive businesses along existing T.H. 60, 2) continued trade area continuity.

Construction effects include temporary increases in dust, noise and vibrations.

Adverse Effects: None of the above mentioned effects are of sufficient adverse magnitude to be classified as adverse effects.

A review of studies of effects of highway changes in Minnesota indicates that minor highway relocations and bypasses of small towns do not cause any significant adverse impacts. In general, gross retail sales increased along the old route and the new route. Traffic sensitive businesses such as cafes, gas stations and motels on the old route have recorded

increases in volume at most locations and decreases at some locations. Also traffic congestion and accident rates were reduced. The studies reviewed were conducted by the University of Minnesota for Mn/DOT on the following towns: Faribault, Austin, Luverne, Adrian, Worthington, Fergus Falls, and Hinckley.

Changes in traffic patterns are discussed on pages 54-57. Although each of the build alternatives would close one or two local streets in Wabasha, any traffic inconvenience would be confined to the adjacent block. Minor street closings will not cause any noticeable traffic congestion because of the low traffic volumes and excess existing capacity. Major streets and collectors will be perpetuated or rerouted for efficient movement of vehicles.

The scale of traffic pattern changes and magnitude of resulting impacts should be viewed in perspective. Wabasha has a population of 2372 and is a rural trade and service center. Because the nearest similar competing business district is 14 miles distant at Lake City, the nearest river crossings are approximately 30 miles upstream and 30 miles downstream, and about half the Wabasha trade area is located in Wisconsin, changing traffic patterns a few blocks is unlikely to have any significant overall adverse effects.

The reduction in vehicle noise and air pollutants on Pembroke Avenue will be beneficial to adjacent historic properties.

The possible economic loss to some traffic sensitive businesses could be distressing to those few businesses but will not be significant to the overall Commercial District. Convenient access to the Commercial District is provided by all the alternatives, about 75% of the T.H. 60 traffic in Wabasha is local, and the nearest competing business district is 14 miles away.

Perpetuating the trade area continuity will help insure Wabasha's economic stability which should include the capacity to maintain historical properties. The possible economic loss to traffic sensitive businesses is very small when compared to the economic loss and decay that would result from severing the trade area by not replacing the existing bridge.

Preliminary noise and vibration (16) reports indicate construction noise and vibrations will not be significantly adverse.

(16) EVALUATION OF POTENTIAL IMPACTS OF CONSTRUCTION AND TRAFFIC VIBRATIONS... S.P. 7910-07 and 7911-05 T.H. 60 Mn/DOT, Office Of Materials Engineering December 1980.

Mitigation: Changes in traffic patterns will be mitigated by specific traffic engineering features which will be developed during detail design of the undertaking. The main purpose of the undertaking is to provide a safe and efficient transportation system. During detail design, traffic volumes will be further analyzed and specific features such as turn lanes, bypass lanes, intersection geometrics, traffic control, informational signing and lighting will be determined. Since the majority of the T.H. 60 traffic in Wabasha is local, the intersection nearest the bridge will be solicitously designed to provide for safe and efficient traffic movements between T.H. 60 and the Commercial District.

Possible economic loss to traffic sensitive businesses will be partially mitigated by the traffic engineering features provided as mitigation for traffic pattern changes. Additional mitigation will include Mn/DOT coordination with the Wabasha Zoning Authority and City Council to prompt local control of competing business development. The City of Wabasha adopted a land use zoning ordinance in 1980. The zoning ordinance greatly improves Wabasha's ability to control land use and development.

Mitigation for temporary increases in dust resulting from construction activities will include appropriate street cleaning/sweeping and application of water as directed by the Project Engineer.

Construction noise will be controlled by Mn/DOT Standard Specifications for Highway Construction, Section 7, Subsection 1701 which states, in part, that the contractor shall comply with all applicable laws, ordinances, regulations, orders and decrees in performance of the construction. This includes federal, state and local noise control ordinances. The City of Wabasha has a noise ordinance which governs unmuffled engine noise.

Construction vibrations will be controlled as warranted to prevent significant adverse effects. The vibration evaluation report indicates that high-energy construction activities such as diesel pile driving could cause possible building damage at some locations if not controlled. Therefore alternate less-vibration producing construction techniques will be specified in the contract and/or high-energy construction activities will be professionally monitored prior to full scale work to establish site specific vibration characteristics and control. Structures within about 100 feet of any high-energy activity will be surveyed prior to construction to establish preconstruction conditions. Careful selection of construction methods and field monitoring will eliminate the possibility of damage to historical and any other buildings.

Individual Alternatives: A description of individual alternatives, effects, and mitigation follows. Only effects and mitigation which are in addition to those common to all build alternatives are discussed.

Alternative 1: T.H. 60 would be located two blocks westerly from the historic Commercial District. The distance from the intersection nearest the bridge end (Church & Grant) to the center of the Commercial District (Main & Alleghany) would be seven blocks. No historic property would be displaced.

Effects: Those common to all build alternatives plus a change in view of the bridge. Although the magnitude of the aesthetic effect is dependent upon the viewer, careful attention to aesthetic details will insure that the overall effect is not adverse. Alternative 1 is located no closer than two blocks to historic properties and will not notably alter the aesthetic setting of any historic properties.

Adverse Effects: None

Mitigation: That common to all build alternatives plus aesthetic mitigation. Mitigation for the change in view of the bridge will include aesthetic detailing that is compatible with the bridge setting. Details such as color, superstructure type, lighting standards and retaining walls will be given as much aesthetic consideration as is practicable.

Alternative 1A: Alignment from Wisconsin to Grant Boulevard in Wabasha would be identical to Alternative 1. The Minnesota approach would then follow Grant Boulevard (2½ blocks southerly from the edge of the historic Commercial District) from Church Avenue to Pembroke Avenue and then utilize existing T.H. 60 to reach U.S. 61.

Effects: Same as those of Alternative 1 except traffic pattern changes would be slightly less since existing T.H. 60 would be utilized from Grant Boulevard to T.H. 61.

Adverse Effects: None

Mitigation: Same as for Alternative 1.

Alternative 1B: Alignment in Wabasha would be similar to Alternative 1 except located one block westerly. The closest this alternative would come to historic property would be about two blocks westerly of the corner of the historic Commercial District. The distance from the intersection nearest the bridge end (Maiden & Grant) to the center of the Commercial District (Main & Alleghany) would be eight blocks.

Effects: Same as those of Alternative 1.

Adverse Effects: None

Mitigation: Same as for Alternative 1.

Preferred Alternative 3B & Alternatives 3A & 3C: These alternatives have coincident alignment at historical properties and will, therefore, be described together. T.H. 60 will pass through the Commercial District parallel to Walnut Avenue on a bridge structure elevated approximately 27 to 45 feet above street level. The Minnesota approach will also pass through the historical property at 305 West 2nd Street. The distance from the intersection nearest the bridge end (Walnut & Grant) to the center of the Commercial District (Main & Alleghany) is four blocks. One building on the National Register outside the historic district plus three buildings within the historic district will be displaced.

Effects: Direct effects in addition to those common to all build alternatives include:

Displacement of three buildings within the Commercial District - warehouse at 307 West Main Street, private residence at 305 West Main Street, and a garage at the rear of 305 West Main Street. Photos of these buildings are Exhibits No. 28, 29 and 30 on the following pages.

Displacement of one historic building located outside the Commercial District - First Congregational Parsonage, currently a chiropractic clinic, at 305 West 2nd Street, see Exhibit No. 32.

Acquisition of 0.6 acre of the Commercial District for highway right of way.

Aesthetic change in the Commercial District, as a result of the bridge structure passing through the District.

Exhibits No. 35 and 36 show how the proposed bridge could appear in the Commercial District.

Change in location of highway noise and air pollutants.

Indirect effects and construction effects would be those common to all build alternatives.

Adverse Effects: Displacement of four buildings, acquisition of 0.6 acre of the Commercial District, and aesthetic change in the Commercial District.

Minor Effects: Mn/DOT considers the noise and air pollutant changes to be minor and not adverse for the following reasons:

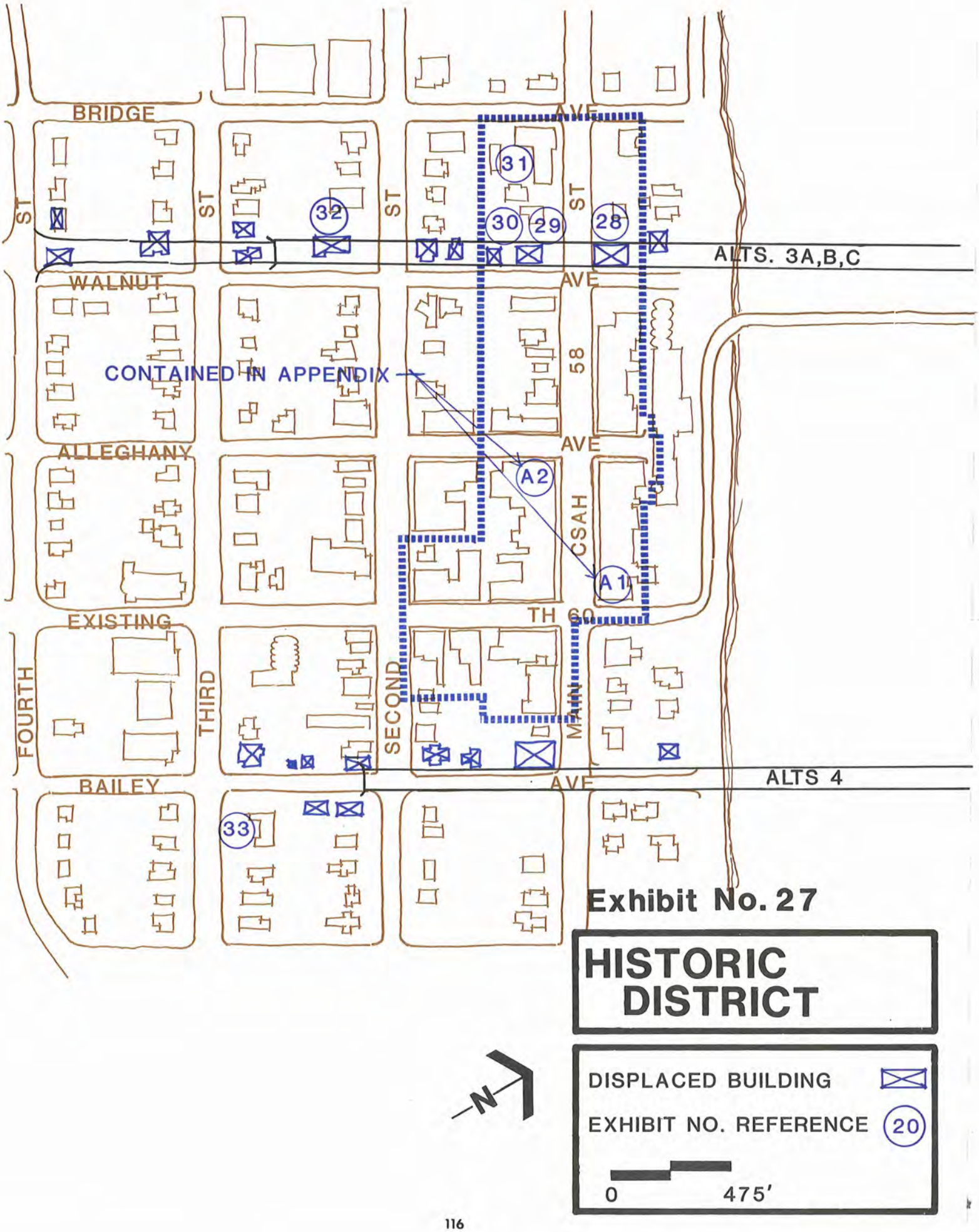

BRIDGE
WALNUT
ALLEGHANY
EXISTING
BAILEY
FOURTH
THIRD
SECOND
MAIN
ST
AVE
CSAH 58
TH 60
ALTS. 3A,B,C
ALTS 4
CONTAINED IN APPENDIX
31
32
30
29
28
A2
A1
33
Exhibit No. 27
HISTORIC DISTRICT
DISPLACED BUILDING
EXHIBIT NO. REFERENCE 20
0
475'
N

Exhibit No. **28**:

307 West Main St.
International
Milling Co.

Warehouse
(Livery Stable 1887)
1½ story, brick,
stucco covered
Displaced by 3A,
B or C.

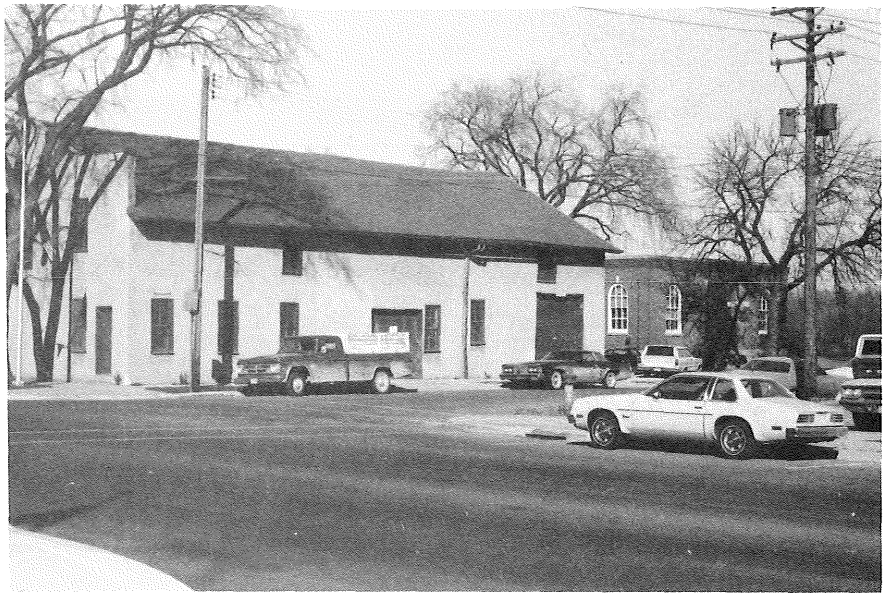


Exhibit No. **29**:

305 West Main St.
Private Residence
(Replogle House
1916)
2-story, red brick
Displaced by 3A,
B or C.



Exhibit No. 30:

Rear of 305 West Main facing Walnut Avenue
Garage
(M. McKenzie Livery Stable Ca. 1893)
2-story, brick veneer
Displaced by 3A, B or C.



Exhibit No. 31:

333 West Main St.
Anderson Hotel
(Hurd House 1856)
3-story, red brick
As seen from the corner of Main St. and Walnut Ave.



Exhibit No. **32**:

305 West 2nd St.
Chiropractic Clinic
(First Congregational Parsonage - 1872)
2-story frame
Displaced by 3A, B or C.

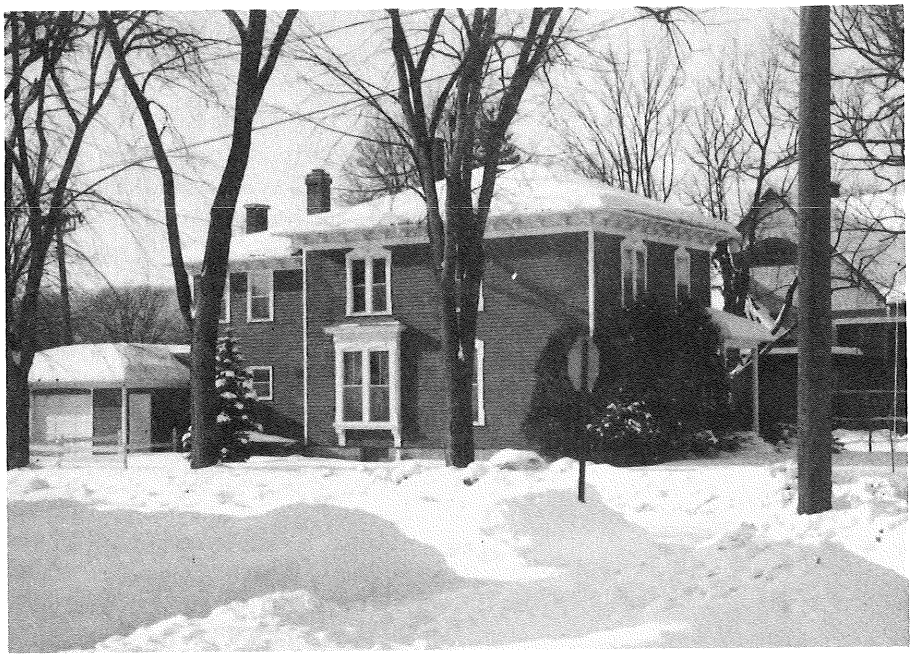
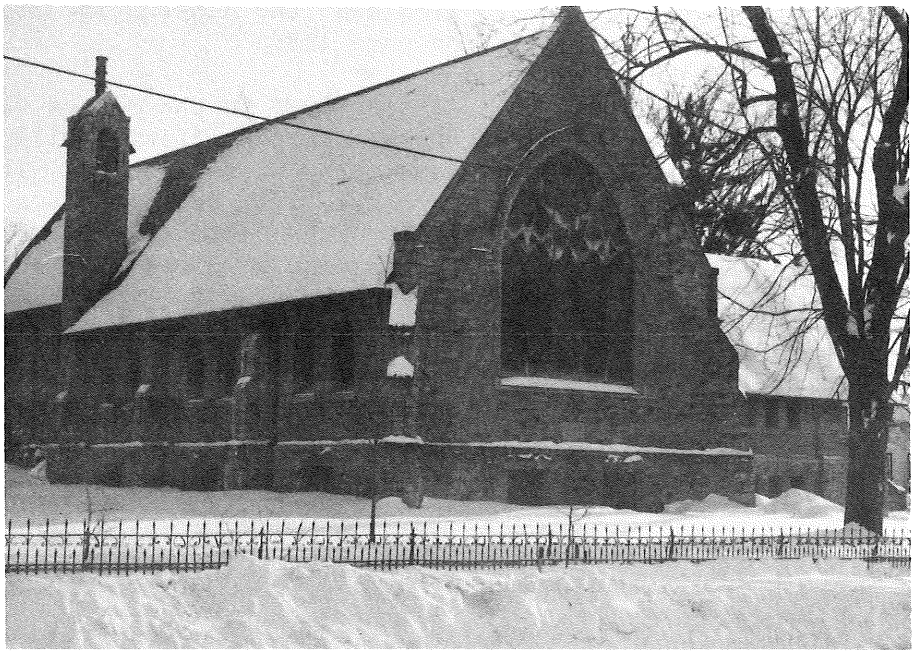


Exhibit No. **33**:

205 East 3rd St.
Grace Memorial Episcopal Church
(1900)
50 ft. east of Alt. 4 traffic lane.



The change in location of highway noise and air pollutants should result in a slight overall reduction of vehicle noise and pollutants to the Commercial District because an at grade highway will be replaced by an elevated roadway. The air quality analysis and the "Air Pollutant Emissions for the Wabasha Bridge" (17) report indicate a change in concentration locations. However, all vehicle related air pollutants are, and will continue to be, far below State and Federal standards. Changes in noise levels can be seen on the noise contour maps in the Noise section of this FEIS.

Effects on the Anderson Hotel (most prominent building in the western part of the Commercial District) will include a slight increase in noise levels and a change in view of the bridge. Noise levels will increase from a current 60 dBA to about 65 dBA in the year 2000. The noise impact will be minor since the human ear usually cannot detect noise level changes less than about 3 dBA and the levels are below State and Federal Standards. The view of the bridge from the hotel will change since the existing bridge is about 470 feet from the hotel and the Alternative 3B bridge will be about 140 feet from the nearest wall of the hotel. The bridge will be elevated 30-35 feet in that area and about the same elevation as the hotel roof. A photo of the Anderson Hotel taken from near the Alternative 3B, location is contained on page 118.

Mitigation: As specified in the MOA on pages 127 and 128, all four buildings effected will be recorded prior to demolition or relocation. The First Congregational Parsonage will be moved to a site approved by the MSHPO. The Replogle House and its garage (livery stable) may be moved if the FHWA and MSHPO conclude that relocation is prudent and feasible. Special consideration will be given to the design of the structure over the Historic Commercial District. Landscape plantings will be provided to soften the intrusion of the highway on the District.

(17) AIR POLLUTANT EMISSIONS FOR THE WABASHA BRIDGE, Mn/DOT, Environmental Planning Section, Oct. 1980.

Careful coordination, design, and construction will help reduce aesthetic impacts and blend the highway corridor with the historic setting. The specific mitigation features described in this report indicate the opportunity for prudent use of the highway corridor.

The 0.6 acre of Commercial District that will be acquired for highway right of way is mostly comprised of the lots of the three displaced buildings. Mitigation will include developing these lots as parking lots, park like open areas, and a historical focal point area similar to that shown on the exhibits on the following pages. The proposed corridor development plan was developed with coordination and input from the MSHPO, Wabasha City Council, Bridge Task Force, and local citizen groups. The corridor development plan shown on Exhibit No. 34 is only a concept at this time. The final corridor plan will be developed during the detailed design process and fully coordinated with all appropriate governmental and citizen groups. Federal and state funds will be utilized to provide surfacing, landscaping, and historical mitigation (such as the historical focal area) in the corridor. However, recreational enhancement (such as playground equipment) is not eligible for federal or state transportation funding and would be the City of Wabasha's responsibility.

No mitigation is proposed or warranted for changes in location of vehicle related air pollutants. Vehicle emissions will be increased in the new highway corridor and be decreased in the existing highway corridor. Existing and future air pollutant concentrations are far below State and Federal Standards.

Noise mitigation measures considered in the Preliminary Noise Analysis Report include acoustical barriers, sound insulation, vegetative screens, traffic management, roadway surface type, acquisition of noise impacted property, and alignment changes. Analysis of these measures reveals that effective utilization is only realized on expressways or freeways. None of these measures would be effective in the Wabasha urban setting. No practicable noise abatement measures have been identified for the Commercial District.

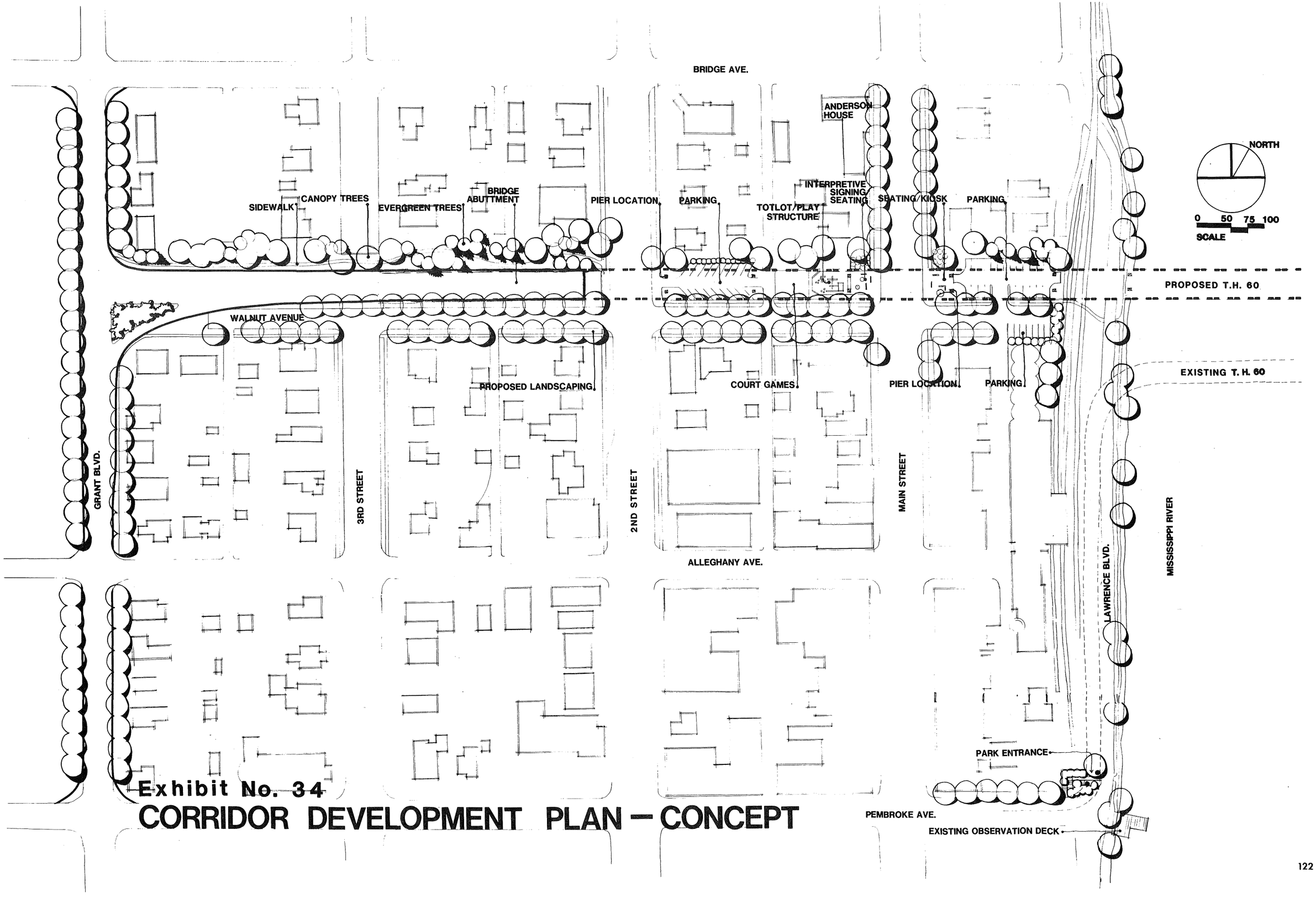


Exhibit No. 34

CORRIDOR DEVELOPMENT PLAN — CONCEPT

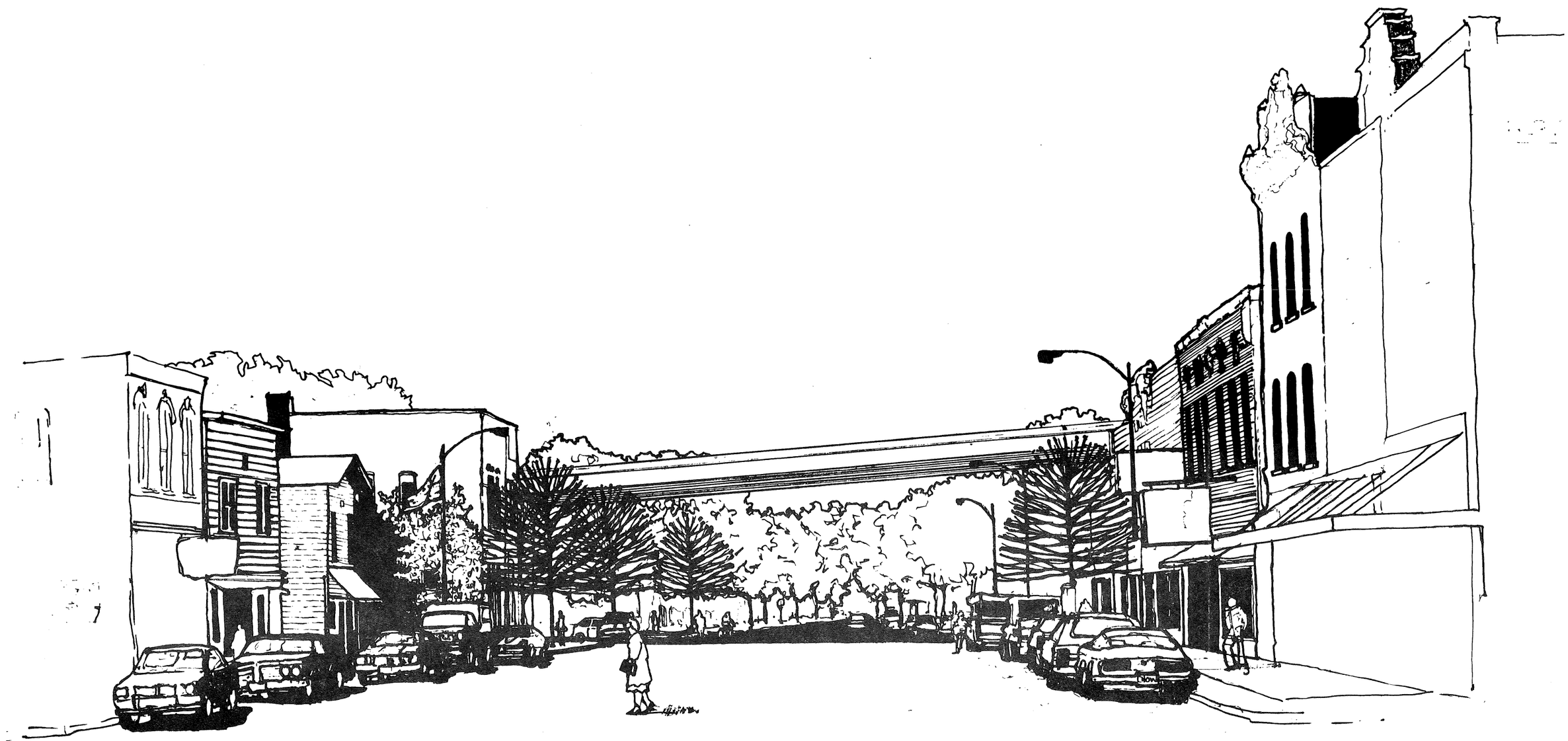


Exhibit No. 35

HISTORIC DISTRICT MAIN ST. PERSPECTIVE

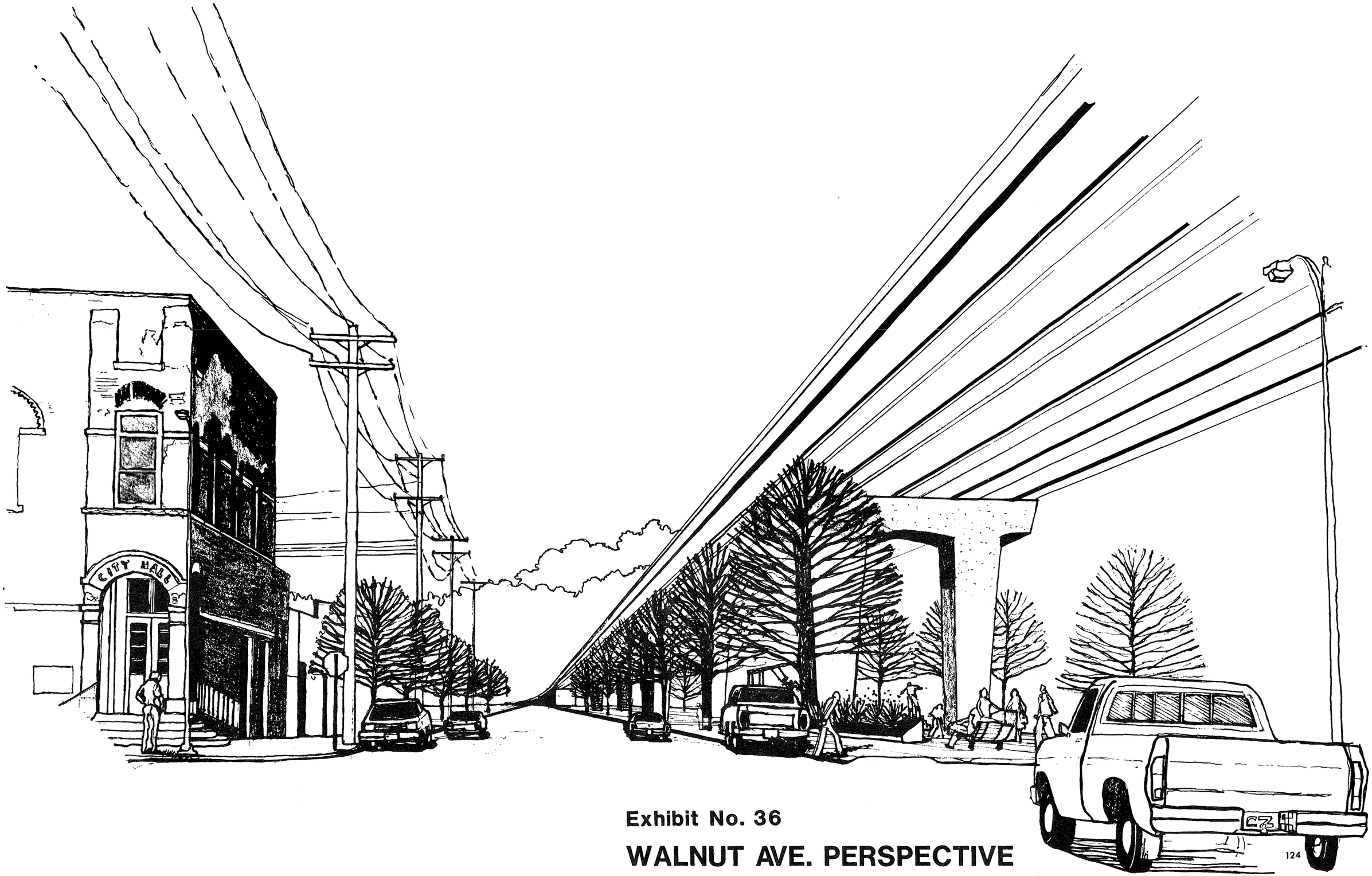


Exhibit No. 36

WALNUT AVE. PERSPECTIVE

Alternative 4: Trunk Highway 60 would be located one half block from the easterly edge of the Commercial District, centered over Bailey Avenue, and elevated 12 to 35 feet on a bridge structure. The Minnesota approach would also pass through the westerly edge of the historic Grace Memorial Episcopal Church property. The nearest edge of the traffic lane would be 50 feet from the church. The distance from the intersection nearest the bridge end (3rd Street & Bailey Avenue) to the center of the Commercial District (Main & Alleghany) would be four blocks. No historic buildings would be displaced.

Effects: Direct effects in addition to those common to all build alternatives include:

Acquisition of a 20 foot wide strip of property (2860 square feet includes a wrought iron fence) from the westerly edge of the Grace Memorial Episcopal Church lot. See Exhibit No. 33.

Introduction of visual and audible elements that alter the setting of the Grace Memorial Church. Replacing a quiet residential street with a trunk highway would introduce visual (highway and bridge) and audible (traffic noise increase of 10-12 dBA) elements that detract from the setting of the Grace Memorial Episcopal Church.

Change in location of highway noise and air pollutants.

Indirect effects and construction effects would be the same as those common to all build alternatives.

Adverse Effects: Acquisition of a 20 foot wide strip of property from the Grace Memorial Episcopal Church property.

Introduction of visual and audible elements that alter the setting of the historic church.

Mitigation: Mitigation for acquisition of the 20 foot strip of property from the Grace Memorial Episcopal Church lot would include relocation of the wrought iron fence as desired by the church and special attention to aesthetic details. The aesthetics of such features as retaining walls, bridge rails, bridge abutment, and lighting standards will be detailed to be compatible with the area.

Mitigation for introduction of visual elements that alter the setting of the historic church would consist of the previously mentioned aesthetic measures for acquisition of the 20 foot strip of property.

Mitigation measures considered for the increase in traffic noise at the Grace Memorial Episcopal Church are described in the Preliminary Noise Analysis Report. Although seven noise abatement measures have been considered, no practicable measures have been identified for the Grace Memorial Episcopal Church.

No mitigation is warranted for changes in highway noise and air pollutants within the Commercial District because this alternative will reduce noise and air pollutants in the District by relocating T.H. 60 outside the District.

Although air pollutants would increase at the Grace Memorial Episcopal Church, the concentrations would be far below Federal and State standards and not warrant any mitigation.

Alternatives 4A & 4B: These alternatives would have identical horizontal alignment in Wabasha and be located parallel to and 15 feet westerly of Alternative 4. The 15 foot alignment shift enables these alternatives to avoid the historic Grace Memorial Episcopal Church property, but would require the acquisition of a narrow strip of property from the grade school located diagonally across the intersection from the church. Alternatives 4A and 4B differ slightly in their horizontal alignment over the main river channel, vertical alignment, and first at grade intersection. The intersection nearest the Alternative 4A bridge end would be 3rd Street and Bailey Avenue. The intersection nearest the Alternative 4B bridge end would be 4th Street and Bailey Avenue. The distance from the nearest intersection to the center of the Commercial District for Alternatives 4A and 4B would be four and five blocks respectively.

Effects: Direct, Indirect and Construction effects would be identical to those of Alternative 4 except shifted 15 feet westerly and no property would be acquired from the Grace Memorial Episcopal Church. Also the Alternate 4B traffic pattern changes would be slightly greater than Alternative 4 because the first at grade intersection would be one block more southerly.

Adverse Effects: Placing T.H. 60 on Bailey Avenue would introduce visual and audible elements that would alter the setting of the Grace Memorial Episcopal Church in the same manner as Alternative 4.

Mitigation: Mitigation measures would be identical to those of Alternative 4 except shifted 15 feet westerly and relocation of the wrought iron fence on the historic church property would not be necessary.

Advisory Council On Historic Preservation

1522 K Street, NW
Washington, DC 20005

MEMORANDUM OF AGREEMENT

WHEREAS, the Federal Highway Administration (FHWA), Department of Transportation, has determined that funding the replacement of Bridge #4588 and its approaches, carrying Trunk Highway 60 over the Mississippi River at Wabasha, Minnesota, will have an effect upon the Wabasha Historic District and the First Congregational Parsonage, properties included in or eligible for inclusion in the National Register of Historic Places, and has requested the comments of the Advisory Council on Historic Preservation (Council) pursuant to Section 106 of the National Historic Preservation Act (16 U.S.C. 470) and its implementing regulations, "Protection of Historic and Cultural Properties" (36 CFR Part 800);

NOW, THEREFORE, the FHWA, the Minnesota State Historic Preservation Officer (SHPO), and the Council agree that the undertaking shall be implemented in accordance with the following stipulations in order to take into account the effect of the undertaking on historic properties.

Stipulations

FHWA will ensure that the following stipulations will be carried out.

1. The First Congregational Parsonage (305 West 2nd Street), the Replogle House (305 West Main Street) and its garage (rear of 305 West Main Street), and the International Milling Co. warehouse (307 West Main Street) will be recorded prior to demolition or relocation so that there will be a permanent record of their history and appearance. The Historic American Buildings Survey (HABS) (National Park Service, Department of the Interior, Washington, D.C. 20243; 202-272-3533) will first be contacted to determine what documentation is required. All documentation must be accepted by HABS prior to the demolition or relocation. Copies of this documentation will be provided to the Minnesota SHPO.

2. A. The First Congregational Parsonage will be moved to preserve its historic and architectural values.

   B. The Replogle House and its garage may be moved if the FHWA, in consultation with the Minnesota SHPO, concludes that relocation is prudent and feasible. If the FHWA, with the concurrence of the Minnesota SHPO, determines that relocation is not feasible or prudent, the buildings may be demolished. If the FHWA and the Minnesota SHPO cannot reach agreement, the FHWA will refer the matter to the Council for its recommendations.

C. All moving of buildings will be planned in accordance with the Department of the Interior's "Moving Historic Buildings" (Attached) and in consultation with the Minnesota SHPO.

D. The Minnesota SHPO must approve the new site for each building to be relocated.

E. After relocations, the Minnesota SHPO will evaluate each building on its new site to determine whether or not it still meets the criteria of the National Register and will notify the Keeper of the National Register of his determination.

3. FHWA will consult with the Minnesota SHPO to give special consideration to the design of the structure over the Wabasha Historic District. Main Street, its adjacent sidewalks, and portions of the adjacent lots will be spanned by a single bridge span, with piers to be located sufficiently back from the existing property lines to provide an open view under the structure and to allow the relatively unimpeded normal flow of traffic within the District. Subject to constraints imposed by overall bridge design, a span length of up to 150 feet will be provided. In addition, landscape plantings will be provided to soften the intrusion of the highway on the District.

Execution of this Memorandum of Agreement evidences that the FHWA has afforded the Council a reasonable opportunity to comment on the undertaking and its effects on historic properties and that the FHWA has taken into account the effects of its undertaking on historic properties.

Lee R. Lake (date) 3/17/83
Federal Highway Administration

Russell W. Fridley (date) 3/8/83
Minnesota State Historic
Preservation Officer

Robert Dawey Feb 3 (date) 1983
Executive Director
Advisory Council on Historic Preservation

Alexander Aldrich (date) 3/31/83
Chairman
Advisory Council on Historic Preservation

Q. Final Section 4(f) Evaluation

All build alternatives effect public lands used for recreation related purposes and Alternatives 3A, 3B, 3C, 4, 4A and 4B also effect historic properties. Use of land from these areas for transportation purposes is governed by Section 4(f) of the 1966 Department of Transportation Act.

The format of this subsection complies with FHWA TECHNICAL ADVISORY T 6640.8 dated February 24, 1982.

1. Proposed Action: The proposed action -- replacement of a bridge and approaches -- is described on pages 16 thru 27.

2. Section 4(f) Resources: Recreation and historic areas are described generally on pages 35 thru 37 and 39 thru 44 and shown on Exhibits No. 16 and 46. A tabular description of 4(f) lands is contained on the following five pages.

3. Impacts: Preferred Alternative 3B requires the use of 2.0 acres of Section 4(f) land from four parcels. However, all build alternatives require the use of Section 4(f) land. The acres of 4(f) land displaced by each alternative are listed in Table 27 on page 135.

Parcel A

Exhibit No. 37: Upper Mississippi River Wild Life and Fish Refuge in Wisconsin



DESCRIPTION OF 4(f) PARCELS

ITEM	PARCEL A	PARCEL B	PARCEL C	PARCEL D
	Upper Miss. River Fish and Wild Life Refuge	Miss. River Park	City Campgrounds	Ike's Park
Size	195,093 Acres	1.0 Acre	2.6 Acres	4.4 Acres
Type	Recreational & Game Refuge	Recreational	Recreational	Recreational
Available Activities	Hunting, fishing, boating, trapping	Fishing, picnicking, hiking	Camping, boat launching, fishing	Picnicking, boat launching, fishing
Existing Facilities	Boat launch areas, toilets, parking areas, trash barrels	Picnic tables, trash barrels	Boat launch area, picnic tables, trash barrels, water	Picnic pavilion, boat launch area, barbeque pit, picnic tables, trash barrels, well, playground equipment, outdoor privies
Planned Facilities	None	Same as Existing	Same as Existing	Same as Existing
Usage	Moderate	Light	Light	Moderate
Relationship to Other Similar Lands	This refuge extends for 284 miles to the south.	Several similar use areas exist in Wabasha.	Several similar use areas exist in Wabasha. Others are planned.	There are several picnic type parks in Wabasha but this is one of the best equipped.
Access	Wisconsin State Highway 25, Mississippi River & Chippewa River (boat or pedestrian access only, no vehicular access)	Lawrence Blvd. (vehicular & pedestrian)	3rd Street (vehicular & pedestrian)	Grant Boulevard (vehicular & pedestrian)
Ownership	United States	City of Wabasha or C.M.St.P. & P. RR.	City of Wabasha, RR and Private	City of Wabasha

Deed Restrictions	None	None	None	Yes - public ownership contingent on use
Significance	Regional	Local	Local	Local
Unusual Character-istics	3740 Acres designated Wisc. Scientific & Natural Area, subject to flooding.	Subject to periodic flooding.	Subject to periodic flooding.	Subject to periodic flooding.
Existing Use Compatible with Local Goals & Plans	Yes	Yes	Yes	Yes
6(f)	No	No	No	No

ITEM	PARCEL E	PARCEL F	PARCEL G	PARCEL H
	Central Athletic Field	County Fairgrounds	Ed Malone Memorial Park	Historic Commercial District
Size	10.7 Acres	6.0 Acres	9.2 Acres	10.7 Acres
Type	Recreational	Recreational	Natural Area	Historical
Available Activities	Baseball, football, hockey, tennis, track, skating.	Annual county fair activities, unimproved open space, parking, fishing.	Fishing, picnicking.	Commerce, Residential
Existing Facilities	Baseball diamond, hockey rink, 2 tennis courts, toilets, illumination, equipment building, bleachers, football field	Bituminous surfaced walkways.	Benches, trash barrels	Residences, businesses, manufacturing, city offices.
Planned Facilities	Same as Existing	Picnic, game courts & open areas	Similar as Existing (fill & landscape)	Same as Existing
Usage	Heavy	Annual county fair, Light	Light	Moderate
Relationship to Other Similar Lands	This is the major athletic field in the City. Other smaller fields exist at several schools.	Only fairgrounds in Wabasha County, open space similar to Parcel G	Several similar use areas in Wabasha.	Includes most of downtown Wabasha.
Access	Grant Boulevard, Bridge Avenue, Alleghany Avenue (vehicular & pedestrian)	Bridge Avenue (vehicular & pedestrian)	Church Avenue & Grant Boulevard (vehicular and pedestrian)	Pembroke, Alleghany, Walnut & Bridge Avenue Second and Main St. (vehicular and pedestrian)
Ownership	City of Wabasha	City of Wabasha	City of Wabasha	Private except for City Hall & Post Office

Deed Restrictions	None	Yes - public ownership contingent on use	None	Unknown
Significance	Local	County Wide	Local	Local
Unusual Character-istics	Subject to periodic flooding. Is main athletic field in the City.	Subject to periodic flooding. Used once annually.	Subject to periodic flooding.	Business District late 19th century architecture.
Existing Use Compat-ible with Local Goals & Plans	Yes	Temporarily	Yes	Yes
6(f)	No	No	Yes	No

ITEM	PARCEL I	PARCEL J
	First Congregational Parsonage	Grace Memorial Episcopal Church
Size	0.26 Acre Tract	0.39 Acre Tract
Type	Historical	Historical
Available Activities	Chiropractic Treatment	Religious
Existing Facilities	Chiropractic Clinic	Church
Planned Facilities	Minor interior remodeling and outside restoration	Same As Existing
Usage	Moderate	Moderate
Relationship to Other Similar Lands	One block south of Historic Commercial District	One and one half blocks from Historic Commercial District
Access	Walnut Avenue & Second Street	Bailey Avenue & Third Street
Ownership	Private	Private
Deed Restrictions	Unknown	Unknown
Significance	Local	Local
Unusual Characteristics	Italianate Architecture 1872	English Gothic Architecture 1900
Existing Use Compatible with Local Goals & Plans	Yes	Yes
6(f)	No	No

Table 27: 4(f) Lands Displaced (acres)

Parcel	Alt. 1	Alt. 1A	Alt. 1B	Alt. 3A	Alt. 3B (Preferred)	Alt. 3C	Alt. 4	Alt. 4A	Alt. 4B	Alt. 6
A. Federal F. & W. Refuge	6.5	6.5	1.4	1.0	1.0	1.0	5.5	1.8	1.8	0
B. Miss. R. Park	0.1	0.1	0.1	0.1	0.1	0.1	0	0	0	0
C. City Campgrounds	0.7	0.7	0.7	0	0	0	0	0	0	0
D. Ike's Park	0.9	0.9	0	0	0	0	0	0	0	0
E. Central Athletic Field	0	0	0	3.8	0	3.8	0	0	0	0
F. County Fairgrounds	0.8	0	0.8	*	0	*	0	0	0	0
G. Ed Malone Park	1.3	0	0.5	0	0	0	0	0	0	0
H. Commercial District	0	0	0	0.6	0.6	0.6	0	0	0	0
I. First Congregational Parsonage	0	0	0	0.3	0.3	0.3	0	0	0	0
J. Grace Memorial Episcopal Church	0	0	0	0	0	0	0.1	**	**	0
TOTALS	10.3	8.2	3.5	5.8	2.0	5.8	5.6	1.8	1.8	0

*No land would be displaced, but use would change as a result of relocating Central Athletic Field facilities.

**No land would be displaced, but visual and audible elements out of character with the historic property would be introduced.

Parcel A

Upper Mississippi River Wild Life and Fish Refuge in Wisconsin

The viable build alternatives require from 1.0 to 6.5 acres of the refuge for highway use. None of the alternatives will increase or decrease physical impacts on refuge users. No change in vehicular or pedestrian access will result. Since all alternatives are located near the existing roadway, no new or significantly increased impacts will be introduced to the refuge. The proposed action will simply shift the location of existing impacts, such as noise, auto emissions, runoff and aesthetics from 90 to 500 ft.

Preferred Alternative 3B requires the use of 1.0 acres of refuge area adjacent to the existing WSH 25 roadway, see Exhibit No. 46. Alternative 3B has the least impact on the refuge since it requires the least area, is nearest the existing roadway and will not displace any refuge facilities. The entrance to the nearby boat ramp will be reconstructed and include a right turn lane from WSH 25, see Exhibit No. 38 on the following page. The existing WSH 25 roadway and fill between the end of the existing bridge and the boat ramp will not be needed for highway purposes but will be allowed to remain inplace to help perpetuate existing backwater flow patterns. Coordination with refuge managers indicates that use of that segment of roadway for additional boat ramp parking is desirable.

Impacts on natural resources within the refuge are described in the Water Quality, Fisheries, Stream Modification, Wetlands, and Wildlife Sections of this EIS.

In order to maintain a river crossing in the Wabasha area during the approximate 2.5 year construction period, the existing structure must remain intact while a new bridge is constructed. Use of a new location for a replacement bridge, therefore, is a necessity and because of the proximity of the refuge to the existing roadway on both sides, any relocation will require displacement of some portion of the refuge. This displacement can be avoided only if the bridge is not replaced.

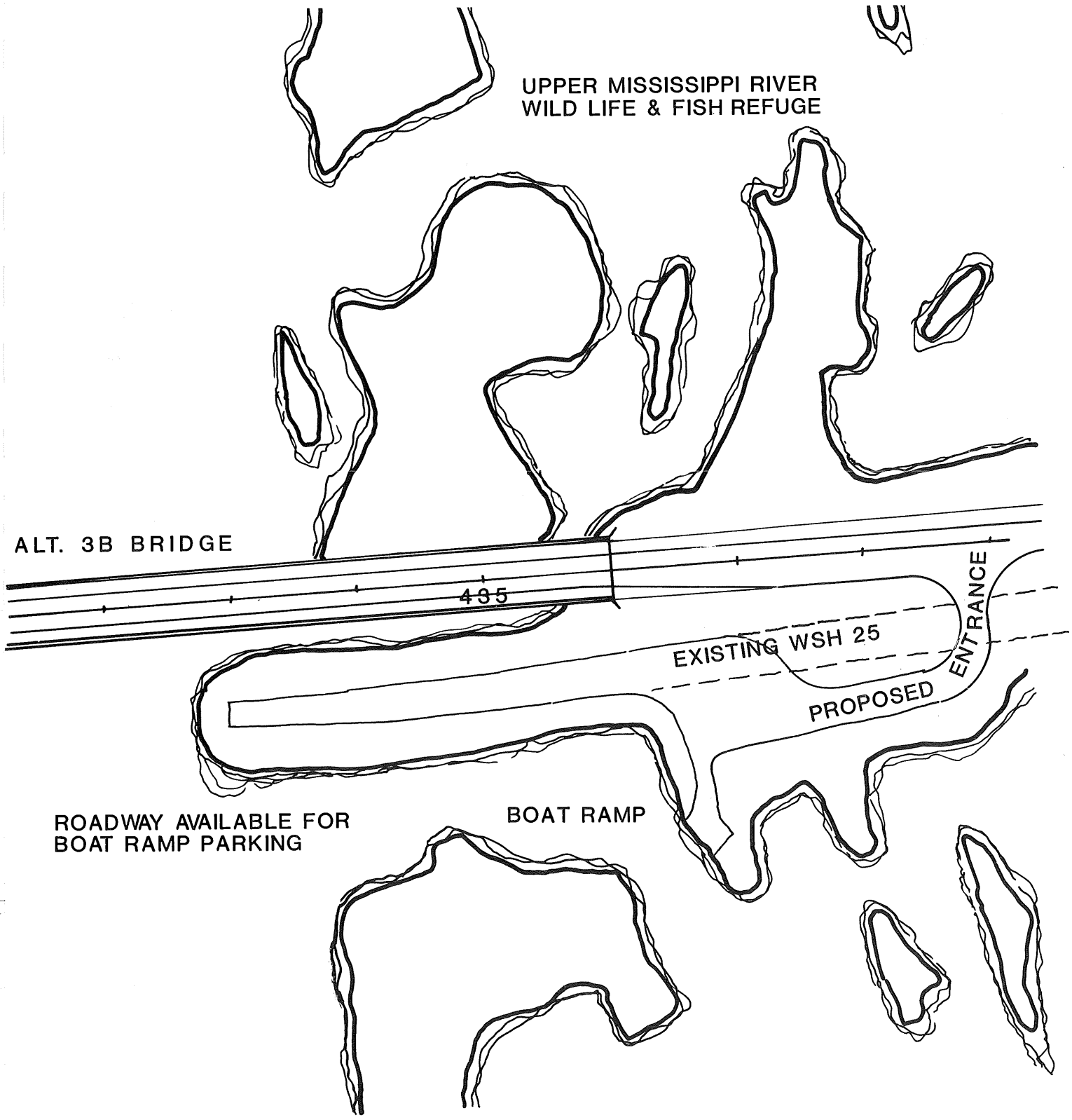


Exhibit No. 38

BOAT RAMP

N

Parcels B, C, D, E, F, G, H, I, and J are located in Wabasha.

Parcel B

Exhibit No. 39: Mississippi River Park

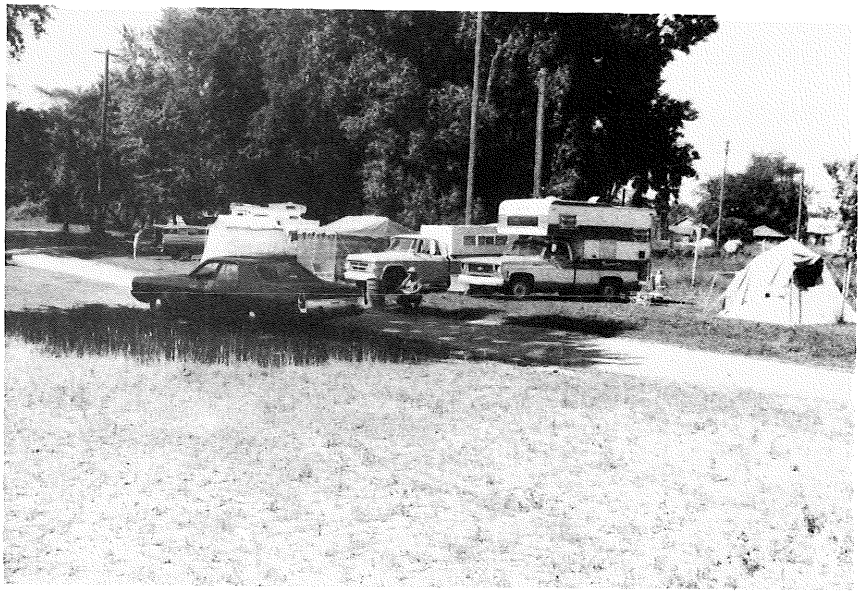


Alternatives 1, 1A, 1B, 3A, 3B,& 3C would be elevated through the Mississippi River Park. The group 1 alternatives would be located near the upstream end of this park. Preferred Alternative 3B and Alternatives 3A and 3C pass through the park about 120 ft. upstream from the existing bridge. The group 4 alternatives do not displace any Mississippi River Park land.

Alternative 3B will provide about 45 ft. vertical clearance through this park. Continued use of this relatively undeveloped linear park beneath the bridge is possible and will be encouraged. Effects include the presence of a bridge pier, changes in noise levels, and a different view of the bridge. Since the existing approach parallels this park for a distance of about 500 feet and then crosses at an elevation about 40 feet above the ground, the proposed action will not introduce any new or increased effects, but actually reduce the park's exposure to highway traffic impacts. The removal of the existing bridge structure adjacent to this park should encourage increased use and development. At the end of the nineteenth century this area included walkways and flower/gardens and was a lovely downtown river front park. The Wabasha City Council has expressed interest in redeveloping the Mississippi River Park and intends to explore possibilities with the adjacent landowner - - International Multifoods Inc.

Parcel C

Exhibit No. 40:
City Campground



Only Alternatives 1, 1A and 1B would impact the City Campground. As shown on Exhibit No. 46, Alternative 1 and 1A would pass through the center of the campground and Alternative 1B would be located near the western edge of the campground. All of the group 1 alternatives would span the City Campground with sufficient vertical clearance (20 to 25 feet) to allow the continuation of existing vehicular movements through the park. Although 2 or 3 camping spaces would be displaced, the area beneath the bridge could continue to be utilized as park land. Group 1 alternative impacts would include the following:

- loss of 2 or 3 camping spaces
- existence of 3 or 4 bridge piers
- noise level increases of 10 to 15 dBA
- visual appearance of bridge
- interruption of upward lines of sight
- corridor spanning 0.7 acres

Although the campground would become less desirable, the effects are not expected to be of sufficient magnitude to cause a change in use. Since campgrounds with hookups are dependent upon highway facilities for user access, campgrounds of this type are often located adjacent to highways.

Parcel D

Exhibit No. 41:
Ike's Park



Alternatives 1 and 1A would displace about 0.9 acre of land from Ike's Park. The bridge abutment would be located near the Old Zumbro Riverbed - Ike's Park shoreline. The displaced area is undeveloped and receives little use, except during the City's 4th of July celebration. The City of Wabasha has no current plans to improve this area of the park.

Developed park facilities nearest the proposed roadway include a surfaced parking area (100 feet to the west), playground equipment (175 feet to the west), and a picnic shelter (250 feet to the west). Pedestrian access to the portion of the park which would be located east of the Alternative 1 roadway may be possible underneath the bridge. A vertical clearance of about 10 feet would be provided near the Old Zumbro Riverbed shore. Small watercraft vertical clearance would be provided over the Old Zumbro Riverbed.

Impacts would include the following:

- displacement of 0.9 acre
- existence of bridge approach and abutment
- noise level increases of about 10 dBA
- visual appearance of the bridge
- interruption of lines of sight

Since Alternative 1 would displace an undeveloped area and be 175 feet from the nearest developed use area, no significant changes in use are anticipated.

As shown on Exhibit No. 46, Alternative 1B would be located adjacent to the westerly edge of Ike's Park. Although no park property would be displaced, Alternative 1B would be adjacent to the developed and high use area of the park. Alternative 1B would also displace Maiden Avenue which is the main access to the Ike's Park boat ramp and parking lot. Therefore, Alternative 1B would necessitate a new entrance to the parking lot and boat ramp. A feasible entrance location would be from the Grant Blvd. - Church St. intersection to the easterly edge of the parking lot.

Preferred Alternative 3B and Alternatives 3A, 3C, 4, 4A and 4B do not effect Ike's Park.

Parcel E

Exhibit No. 42:
Central Athletic
Field



Alternatives 1, 1B, 4, 4A and 4B would not effect the Central Athletic Field.

Alternative 1A would be adjacent to the northerly edge of the Central Athletic Field along Grant Blvd., see Exhibit No. 46. Although none of the Athletic Field would be displaced, the increased traffic on Grant Blvd. would increase noise levels and vehicle pedestrian conflicts. A solid wall/fence could be used along the northerly edge of the Athletic Field to control pedestrian movements, screen the traffic on Grant Blvd. and reduce noise levels.

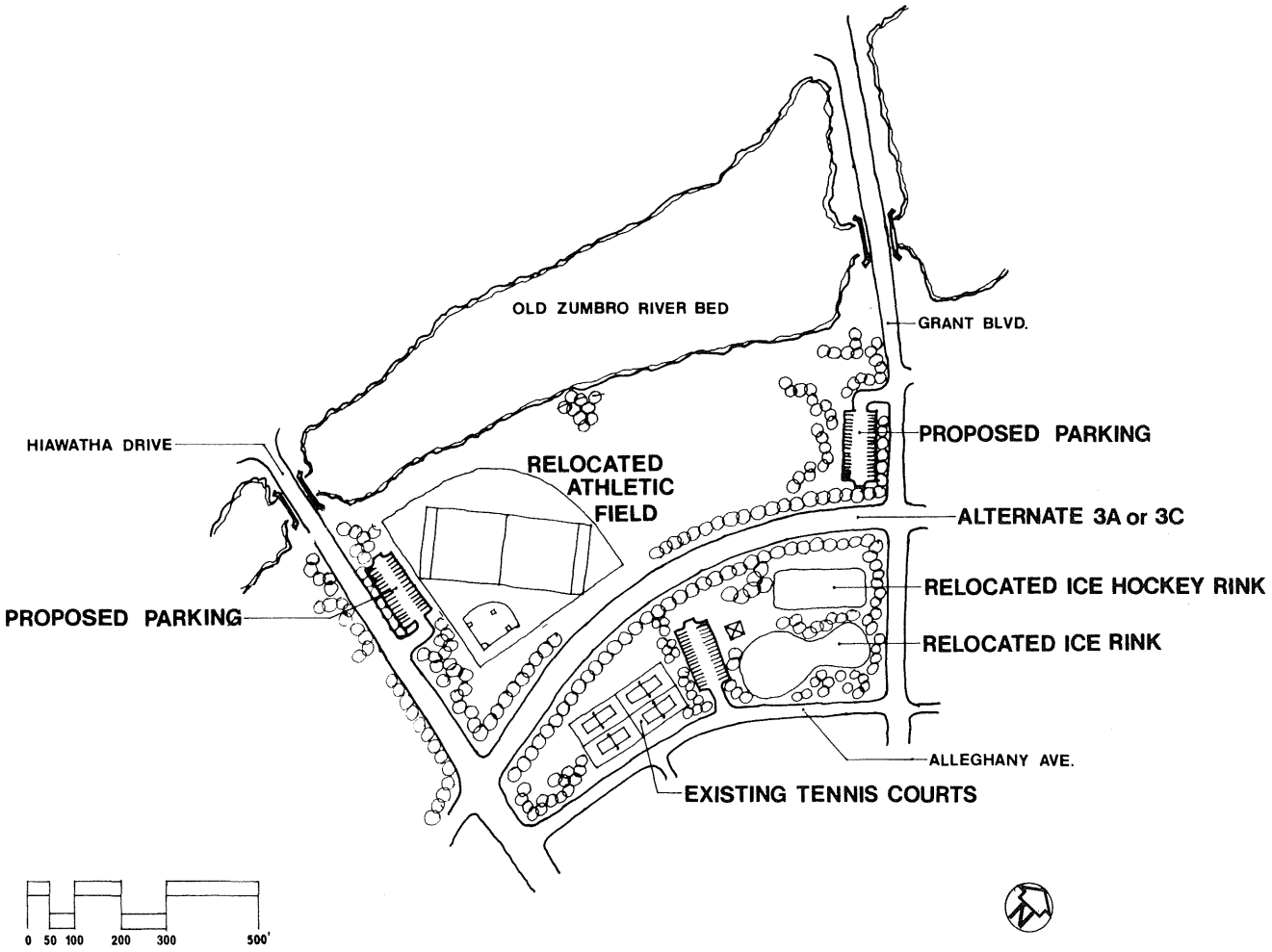
The Central Athletic Field would be affected equally by Alternatives 3A and 3C which have identical alignment through this park. The roadway corridor would pass through the existing combination baseball and football field and adjacent to the hockey and ice skating rinks as shown on Exhibit No. 46. The roadway elevation would be about 5 feet above natural ground through the park. The roadway would be constructed on fill with an inslope ratio of 4:1.

Alternative 3A and 3C impacts would include:

- displacement of 3.8 acres of land
- displacement of combination baseball and football field
- possible displacement of hockey and ice skating rinks
- noise level increases of about 10 dBA
- visual division of athletic field
- visual appearance of the roadway

Even though 3.8 acres would be displaced, all developed facilities could be relocated in the immediate area by utilizing the County Fairgrounds area. A possible relocation plan is shown in Exhibit No. 43. Such a relocation would significantly reduce the most serious impacts. Also as discussed in the noise section, the Central Athletic Field is an area where noise walls could be utilized. Noise walls could serve as a park fence and also reduce noise levels by about 5 to 10 dBA.

Preferred Alternative 3B impacts are similar to those of Alternative 1A, that is, no 4(f) land will be displaced but the increased traffic on Grant Blvd. will increase noise levels and pedestrian-vehicle conflicts. Impacts to Athletic Field users will not be significant, see discussions in the Noise and Pedestrian sections of this EIS. However, a solid fence will be provided between the athletic field and Grant Blvd. to minimize highway related impacts. The proposed fence -- from near Alleghany Avenue to near Bridge Avenue -- will screen traffic on Grant Blvd., Walnut Avenue, and T.H. 60 parallel to Walnut Avenue. The fence will reduce noise levels, headlight interference, movement distractions and help control pedestrian movements.



REARRANGEMENT of ATHLETIC AREA for ALTERNATE 3A or 3C

Exhibit No. 43:

Parcel F

Exhibit No. 44:
County Fairgrounds
(Center of photo
between channel
and light towers)



Alternatives 1 and 1B would require the use of about 0.8 acres of the County Fairgrounds for construction of the 7th Street to Hiawatha Drive connection.

The Alternative 3A and 3C corridor would be adjacent to the County Fairgrounds and would displace little, if any,of that area. However, if the ballfields displaced from the Central Athletic Field were relocated in the fairgrounds area, a change of use would result.

The county fairboard is currently seeking a new fairground location, since additional area is desired. The relocation plan shown in Exhibit No. 43 is compatible with long range city plans, if the fairgrounds are relocated.

The fairgrounds would be subject to noise and visual impacts similar to those of the adjacent Central Athletic Field.

Preferred Alternative 3B and Alternatives 1A, 4, 4A and 4B do not effect the County Fairgrounds.

Parcel G

Exhibit No. 45:
Ed Malone
Memorial Park



Alternative 1 would displace 0.8 acre of the Ed Malone park adjacent Church Ave. and about 0.5 acre of the park near Hiawatha Dr. (7th Street connection). The area displaced near Church Ave. includes a recently constructed parking lot. That lot, which has space for 40 vehicles, is the only parking area in the park. The 7th Street connection corridor would pass through a lightly developed area of the park, but would cross a hiking trail which is currently under construction. The parking lot and hiking trail were provided by LAWCON funding. Other impacts include noise level increases of 10 to 15 dBA and the visual appearance of the roadway.

Alternative 1B would displace the same 0.5 acre of park near Hiawatha Dr. (7th Street connection) as Alternative 1. Alternative 1B impacts would be identical to those of Alternative 1 near Hiawatha Dr.

Preferred Alternative 3B and Alternatives 1A, 3A, 3C, 4, 4A and 4B do not effect the Ed Malone Memorial Park.

Parcel H

The Historic Commercial District would be affected equally by Alternatives 3A, 3B and 3C. Preferred Alternative 3B impacts are described on pages 111 thru 120. Significant impacts include:

- displacement of 0.6 acre of land
- displacement of three buildings

The other build alternatives do not effect the Commercial District.

Parcel I

Only Alternatives 3A, 3B and 3C displace the historic First Congregational Parsonage. Impacts are described on pages 115 thru 120.

Parcel J

Only Alternatives 4, 4A and 4B effect the historic Grace Memorial Episcopal Church. Alternative 4 would displace about 17% of the church tract (including a wrought iron fence) and introduce visual and audible elements that detract from the church. Impacts are further described on pages 125 thru 126.

Alternatives 4A and 4B have identical horizontal alignment near the Grace Memorial Episcopal Church and, therefore, nearly identical impacts. These alternatives would introduce detracting visual and audible elements but not displace any church property. Impacts are more fully discussed on page 126.

Construction Impacts (All Parcels)

Construction activities will temporarily increase air, water and noise pollution. Control of construction operations by laws, regulations, specifications and special provisions will prevent 4(f) users and the environment from becoming significantly impacted. Although some activities may be annoying to 4(f) land users, no park or recreational area closings are anticipated. Construction impacts are discussed in greater detail in the Construction section on pages 157 thru 172.

4. Avoidance Alternatives:

The Alternatives and No Build sections of this EIS document that no feasible and prudent alternatives to the use of Section 4(f) land exist. The Alternatives discussion on pages 16 thru 27 indicates that the only feasible alternative which avoids Section 4(f) land is Alternative 6 (No Build). However, the No Build consequences described on pages 172 and 173 show that Alternative 6 is not prudent since the resultant closing of the bridge would cause severe adverse social, economic and transportation impacts. The Preferred

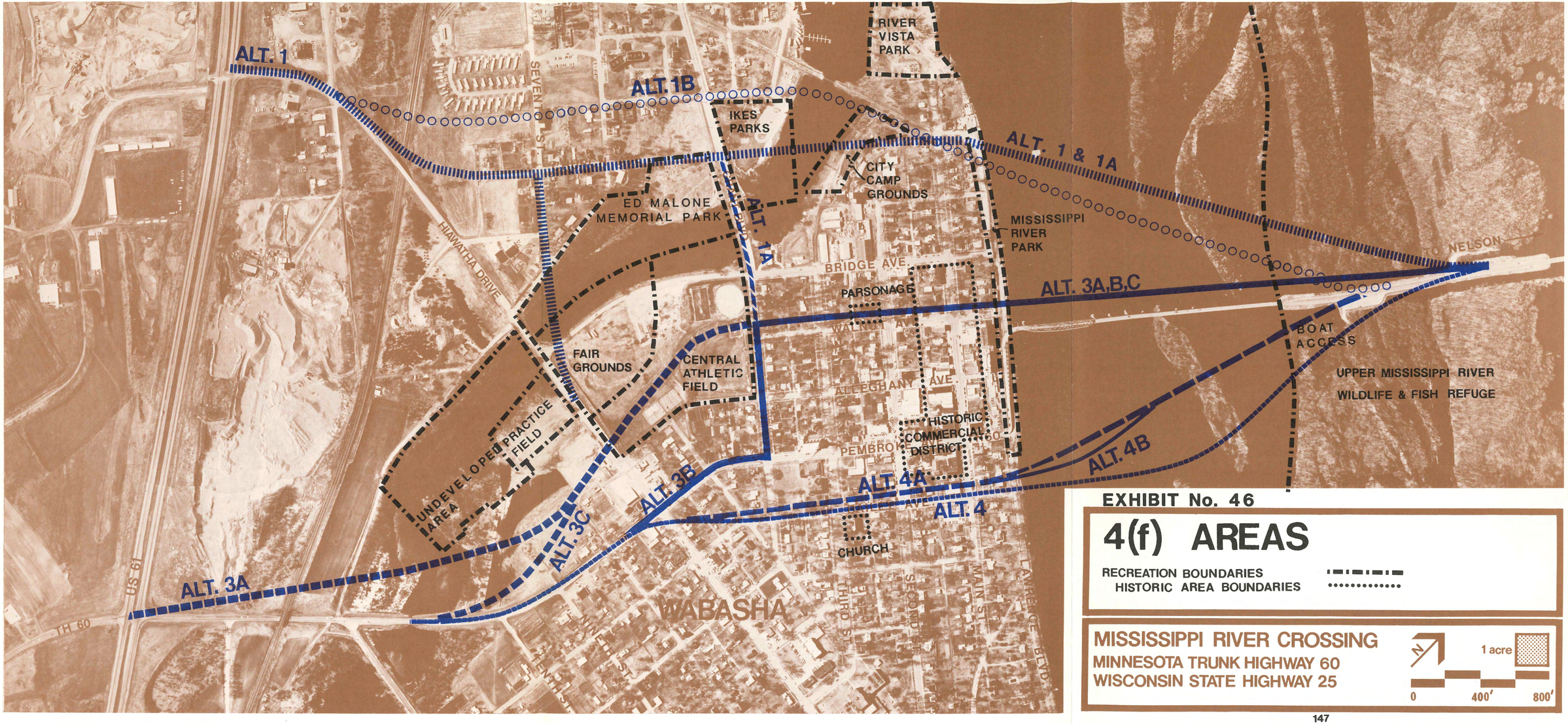


EXHIBIT No. 46

4(f) AREAS

RECREATION BOUNDARIES

HISTORIC AREA BOUNDARIES

MISSISSIPPI RIVER CROSSING

MINNESOTA TRUNK HIGHWAY 60

WISCONSIN STATE HIGHWAY 25

1 acre

0 400′ 800′

Alternative discussion on pages 23 thru 25 documents the selection of Alternative 3B based on an overall evaluation of all significant factors.

5. Measures To Minimize Harm:

General mitigation measures considered for all 4(f) parcels include:

- replacement or monetary compensation for land areas displaced
- replacement or relocation of displaced facilities
- release of the existing highway corridor where not utilized for the proposed action
- landscaping
- landscape plantings to provide ground cover, screening and interest
- multi-purpose fences in the Central Athletic Field (pedestrian control, highway screening and noise attenuation)

General construction mitigation proposed includes:

- not closing any parks
- signing all work areas
- strict enforcement of all applicable laws, regulations, and specifications
- construction of replacement facilities before removing existing facilities, so no loss of use will occur
- temporary and permanent erosion control

Preferred Alternative 3B will effect four Section 4(f) parcels -- A, B, H and I. Specific mitigation measures proposed for Alternative 3B are listed below by parcel.

Parcel A

Upper Mississippi River Wild Life and Fish Refuge mitigation measures:

- return of the existing bridge corridor in the refuge to the U.S. Fish and Wildlife Service and Corps of Engineers
- minimize fill encroachment by using 4:1 inslopes instead of 6:1 inslopes
- perpetuate backwater flow patterns by rechanneling around the new fill
- reconstruct entrance to the boat ramp
- provide additional boat ramp parking
- temporary and permanent erosion control
- construction zone signing
- noisy construction activities which could adversely affect eagles will be restricted from December 1 to March 30 or until eagles depart in the spring if prior to March 30

- piers will be located on land rather than in the backwater channels to the extent practical
- construction activities will be restricted to a minimum in adjacent wetlands
- dredging in backwaters for construction barges will be restricted to a minimum
- temporary access road construction in the backwaters will not be allowed during the critical spawning period from April 1 to June 1
- backwater flow through temporary access roads will be provided
- cutting of trees and clearing of highway right of way will be kept to a minimum consistent with highway safety
- heavy stone riprapping will be provided on embankment slopes

Parcel B — Mississippi River Park mitigation measures:

- removal of the existing bridge through and adjacent to the park
- return of existing bridge corridor in the park to the City of Wabasha/fee owner
- paving or turf restoration of the area beneath the existing bridge
- encourage people oriented use of the bridge corridor in the park by landscaping and site development as shown on Exhibit No. 34

Parcel H — Historic Commercial District mitigation measures are described on pages 113-115, 120-124, 127 and 128 and include:

- recording of the three buildings effected prior to relocation or demolition
- moving the Replogle House and its garage if prudent and feasible
- special design consideration of the bridge structure through the District
- landscaping
- site development of the bridge corridor (concept is shown on Exhibit No. 34)

Parcel I — First Congregational Parsonage mitigation measures are described on pages 113, 120-124, & 127 and include:

- relocation of the Parsonage to a lot within the near vicinity which is compatible with the central business district

6. Coordination: The Draft Section 4(f) Evaluation and Environmental Impact Statement were submitted to the U.S. Departments of Interior, Agriculture, and Housing And Urban Development and agencies with jurisdiction over the 4(f) parcels for review and comment. Copies of all formal coordination comments received and responses are contained in Section VII of this FEIS.

United States Department of the Interior (DOI) coordination included a meeting on October 17, 1980 in the FHWA Division Office. Representatives of the DOI, FHWA and Mn/DOT discussed DOI's concerns at that meeting. DOI's formal comments -- see pages 186-190 -- concurred that there are no feasible and prudent alternatives to the use of some Section 4(f) land; objected to all the build alternatives proposed in the DEIS; and recommended a modified Alternative 4 be selected. As a result of those comments, Alternatives 4A, 4B and 1B were developed.

However, these subsequently developed alternatives also have adverse impacts and Alternative 3B is selected as the preferred alternative based on an overall evaluation of all significant factors. Documentation for the selection of Alternative 3B is contained on pages 16 through 27 of this FEIS.

7. Concluding Statement: Based upon the above considerations, it is determined that there is no feasible and prudent alternative to the use of land from the Upper Mississippi River Wild Life and Fish Refuge, Mississippi River Park, Commercial District, and First Congregational Parsonage and that the proposed action includes all possible planning to minimize harm to those Section 4(f) properties resulting from such use.

R. Pedestrians and Bicyclists

1. Direct Beneficial: Pedestrian and bicyclist safety along T.H. 60 and WSH 25 will be improved. The proposed action will provide shoulders throughout and sidewalks at appropriate non-bridge urban areas. A pedestrian and bicyclist barrier will be provided on the bridge railing. See typical sections Exhibit No. 13, page 27.

A separate sidewalk or bikeway on the bridge is not proposed because the 8 ft. wide shoulder will provide an adequate facility for pedestrians and bicyclists.

Although a separate sidewalk and bikeway on the bridge is desirable, such a facility should be evaluated on the basis of usage, cost, and safety.

Due to the narrow 19 ft. existing bridge width, current bicycle traffic is very light and pedestrians dare not use the bridge. The proposed action is anticipated to generate increased pedestrian and bicyclist use, but the total volumes are expected to be light to moderate. Although the bridge is the only river crossing for 60 miles, the 3 miles distance between Wabasha and Nelson and lack of development are not conducive to pedestrian travel. Some pedestrian and bicyclist use for recreational trips from Wabasha to the federal refuge are expected. Also the bridge is located at the northerly end of a popular segment of the Minnesota bikeway along the alternate Great River Road. No specific pedestrian or bicyclist use projections are available.

A separate sidewalk/bikeway would be 8 feet wide for 2 way use and cost about $1,300,000. Eight feet is the minimum width for a two way bikeway recommended by the AASHTO GUIDE FOR BICYCLE ROUTES.

A separate facility would provide greater pedestrian and bicyclist protection than the wide shoulders. However, experience to date in Minnesota shows no safety problems related to pedestrian and bicyclist usage of wide shoulders on bridges with low to moderate traffic volumes.

2. Direct Adverse: Pedestrian movements will be altered somewhat in Wabasha as a result of the highway relocation. No serious pedestrian problems exist today in Wabasha with respect to Highway 60. A number of factors such as low speed and volume on the highway and lack of major pedestrian generators contribute to this. This situation will not be altered significantly by use of any of the alternatives. All build alternatives would move the location of the pedestrian-vehicular conflicts, but would also reduce the total exposure to the conflicts by reason of the elevated segments of those routes which would permit safe pedestrian passage beneath the roadway.

Alternatives 1, 1A, 1B, 3A, 3B, and 3C would, however, cause increased traffic on Grant Boulevard which would increase pedestrian-vehicle conflicts adjacent to the city owned athletic field. Alternatives 3A and 3C would pass through the central athletic field and thereby introduce vehicle-pedestrian conflicts. Appropriate

landscaping and/or fencing would be provided in the athletic field area to channelize pedestrian movements and limit the number of vehicle - pedestrian conflict locations. Alternative 4 would cause increased traffic on Third Street in the vicinity of the St. Felix Parochial School complex. This school originally housed both elementary and secondary grades but since 1968 has contained only the elementary grades. Pedestrian conflicts can be anticipated adjacent to the school if Alternate 4 is selected. However, since existing T.H. 60 lies one block east of the Alternative 4 location, the parochial school pedestrian conflict would not be significantly increased, but rather moved one block. Alternatives 4A and 4B would result in an extremely undesirable situation for St. Felix School students because the highway curb would be about 15 ft. from the main entrance to the school.

Preferred Alternative 3B will only impact pedestrian movements in the Grant Blvd. area from Pembroke Ave. to Bridge Ave. Although the increased traffic will increase pedestrian - vehicle conflicts and the fence adjacent to the Central Athletic Field will discourage pedestrians from crossing Grant Blvd. near Walnut Ave., these impacts are extremely localized and will not cause any pedestrian safety problems. The proposed action will not sever or destroy any major nonmotorized traffic route.

3. Secondary: None

4. Mitigation: Proposed mitigation measures include:

- sidewalks and shoulders in urban areas of Wabasha
- 8 ft. wide shoulders in rural areas
- encouraging pedestrian use of the area beneath the bridge by providing people oriented site development as described in the Historic and Section 4(f) sections of this FEIS
- control of pedestrian - vehicle conflict locations near the Central Athletic Field by means of a multi-purpose park fence -- the fence will extend from near Alleghany Ave. to Bridge Ave. and thereby discourage park users from crossing Grant Blvd. near Walnut Ave.

S. Visual

1. Direct Beneficial:

View from the Bridge

The View of Wabasha will be improved by the proposed action. The existing view towards Minnesota is restricted by the large storage silos near the Minnesota approach: see Exhibits No. 5, 47 and 48 on pages 7 and 154. Although the alignments under consideration will not be above the storage silos, the horizontal relationship will allow viewing a much wider angle of the Wabasha area than is possible from the existing facility.

The View of Wisconsin from the proposed bridge will be nearly identical to the existing vista since all alternatives touch down on the existing Wisconsin approach. The proposed facility will, however, make the act of observation easier by providing a wider roadway and improved vertical alignment.

View of the Bridge

A more harmonious facility will result from the proposed action. Whereas the existing facility includes three different types of bridge superstructures and two different styles of piers and columns, the proposed facility will be as consistent as possible. The Minnesota and Wisconsin approach bridge types and styles will be identical. The main channel superstructure may be of a different type than the adjacent approaches, but scenic considerations will be given to features such as depth to length ratio, superstructure type, piers, columns, railings, light standards and retaining walls to insure aesthetic agreement between all segments of the facility. These considerations will aid in designing a structure that will blend into the existing Wabasha cityscape.

2. Direct Adverse:

View of the Bridge

A new bridge and approach roadway will constitute a dominant feature of the Wabasha landscape on any route because of the proximity of the navigation channel to the Wabasha shore and the development of the city along the shore, the bridge will be a natural focal point in the city. As the only river bridge for 60 miles it will also be a focal point to river travelers.



EXHIBIT No. 47: VIEW FROM EXISTING MINNESOTA APPROACH - storage silos on the left and main channel bridge on the right.

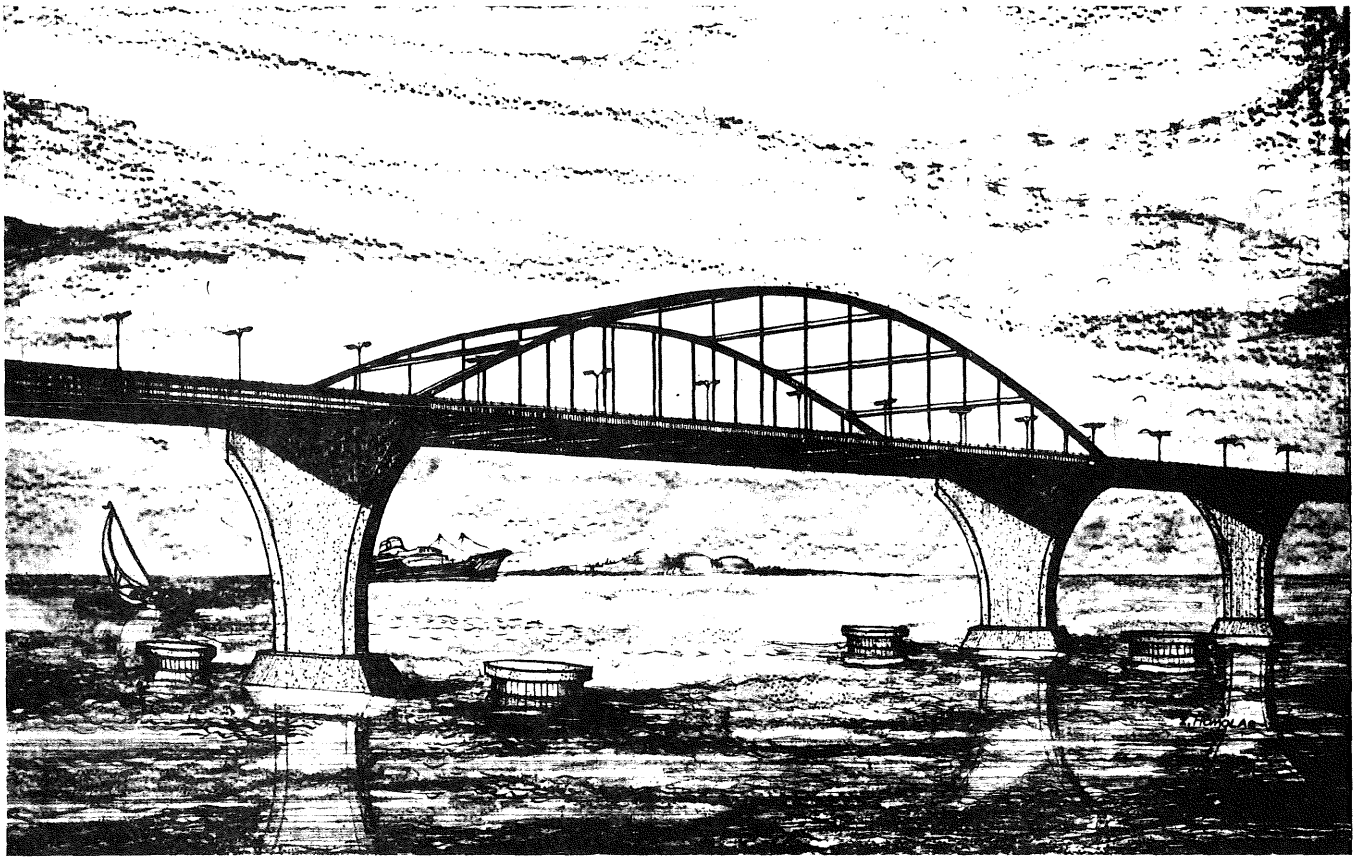


Exhibit No. 48: EXISTING VIEW OF WABASHA AREA - from Wisconsin.

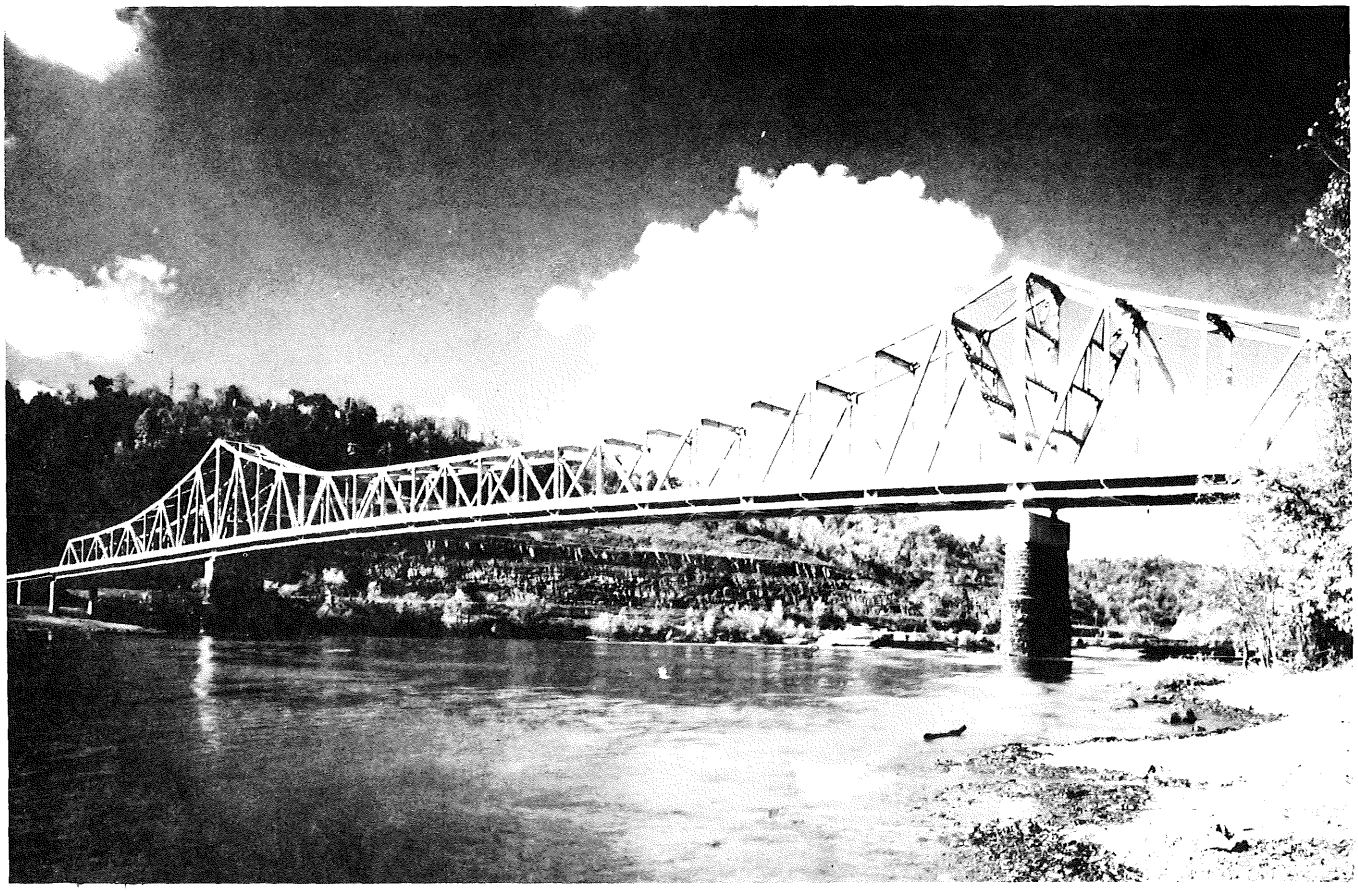
The view of the bridge will be dominated by a superstructure spanning the navigation channel with its deck approximately 70 feet above the water elevation. The bridge will be an imposing sight and consideration will be given during the bridge design to provide a structure which is aesthetically pleasing and one that compliments the adjacent landscape. Exact bridge details and materials will not be finalized until later in the project development process. However, early studies indicate the navigational channel superstructure could be a steel through truss or a tied arch and the approach spans could be beam spans. Two examples of possible superstructures are shown on Exhibit No. 49 on the following page.

The greatest aesthetic effect will be where an elevated approach passes through a developed area. This effect would be greatest on Alternates 3A, B & C, 4, 4A and 4B where the approach spans will be elevated up to 50 feet above street level. For those developed properties adjacent to the approach and which are not displaced by the approach, the view in the direction of the approach will be interrupted by the approach structure, and piers. Near the shoreline the approach spans will be above the tops of buildings and interrupt lines of sight upwards. Further from the river the roadway will be at or below building level and interrupt more level sight lines. Approximately 30 to 40 developed properties would have immediate sight lines affected on Alternates 3A, B & C or 4, 4A and 4B and approximately 20 properties would be affected on Alternative 1, 1A or 1B. Many other properties would have occasional or distant sight lines affected as the elevated approach would be visible from many areas of the city.

Aesthetics along the remainder of the project should be largely unaffected. With the exception of an elevated embankment approach to a railroad overpass required on Alternatives 1 and 3A, grade lines are relatively close to natural ground elevation. All exposed or newly constructed slopes will be vegetated and landscape plantings will be used wherever possible to prevent erosion and to blend the roadway into the adjacent surroundings. Removal of trees will be kept to a minimum. The railroad overpass approaches would affect immediate sight lines for 10 to 20 properties.



TIED ARCH



THROUGH TRUSS

EXHIBIT NO. 49
POSSIBLE SUPERSTRUCTURE TYPES

Preferred Alternative 3B will have minimal visual impacts over the navigational channel and in Wisconsin since the replacement bridge will be adjacent (about 120 ft. upstream) to the existing structure. There will be no impacts in Wabasha from T.H. 61 to Grant Blvd. because existing T.H. 60 is utilized for that segment of Alternative 3B. The most noticeable visual change will occur in the four block long corridor from Grant Blvd. to the Mississippi River. The bridge will be the visual focal point within that four block residential and commercial area. To some observers the presence of the new bridge will impose adverse visual effects on the Historic Commercial District near the Main St.-Walnut Ave. intersection. Although mitigation measures will reduce the visual impact, the bridge will alter the aesthetic setting of the Commercial District, see Exhibits No. 35 and 36. Landscaping will be utilized to soften the visual intrusion of the proposed bridge. Also as discussed in the Historic and Section 4(f) sections of this FEIS, highway corridor development in this area will include landscaping, plantings, historical focal area, parking lot, and play area that are aesthetically compatible with the adjacent land use and vista.

3. Secondary: Secondary scenic and aesthetic impacts may be considered speculative at best. However, the new harmonious facility should promote a feeling of strength and commitment to the area.

4. Mitigation: Consideration of aesthetic aspects throughout the project development process will help to insure scenic compatability. Also special attention will be given to details during final design so that an aesthetically pleasing facility will be provided. Aesthetic details have been discussed and will continue to be coordinated with the Wabasha City Council, local citizen groups, and the MSHPO.

T. Construction (2½ years)

Impacts resulting from construction of the major build alternatives are described in this section. The format is a) Impacts and b) Mitigation.

1. Transportation

a. Impacts: All viable alternatives provide alignment which will allow use of the existing facility during construction. Therefore, no trunk highway detours or bypasses will be required. Although Alternatives 3B, 3C, 4, 4A and 4B utilize short segments of existing T.H. 60, those segments could be constructed under traffic.

Local transportation system impacts will include temporary closings of streets under the elevated approach in Wabasha. A maximum of three streets could be so affected causing localized circuitous travel. A temporary increase in heavy equipment traffic will also result.

Preferred Alternative 3B construction will terminate at the intersection of Grant Blvd. and Pembroke Ave. Therefore,the only disturbance of existing T.H. 60 in Wabasha will be at that intersection. The two block segment of Grant Blvd. between Bridge Avenue and Alleghany Ave. will be reconstructed to provide improved alignment. Through traffic will be detoured from Grant Blvd. during reconstruction in accordance with city and county desires.

b. Mitigation: Appropriate signing of work areas will be provided. Local traffic patterns will be interrupted only when necessary. Appropriate emergency and service units will be notified as temporary closures and work areas change during construction. Simultaneous closing of Second St., Main St. and Lawrence Blvd. will not be allowed.

2. Social

a. Impacts: Social impacts will include slight additional disruption of neighborhoods, pedestrian movements, and social desire paths as a result of temporary street closings in Wabasha. Also a slight increase in demand for social services such as food, shelter, medical, etc. will result from the temporary increase in labor force associated with construction of this project.

b. Mitigation: Appropriate signing of work areas will be provided. Existing social movement patterns will be perpetuated as much as construction operations allow.

3. Economic

a. Impacts: Three general types of economic impacts can be expected.

1. Direct expenditures on labor and materials for construction. The significance of the impact is dependent upon the expenditures made within the Wabasha trade area. Considering the cost and type of project and resources of the Wabasha trade area, the majority of direct expenditures will

probably be made outside of the trade area. However, Wabasha does have a ready-mix company and a few small construction companies exist within the trade area. Therefore, moderate increases in construction related revenues can be expected.

2. Additional expenditures induced by direct expenditures. Money spent for construction labor and materials in the trade area will circulate through the regional economy stimulating more sales and income. The magnitude of this impact is speculative, but some positive effect on the area is anticipated.

3. Losses to businesses near the construction zone as a result of decreased accessibility are expected to be insignificant. Temporary localized changes in access routes of a few blocks will have a minimal effect on businesses.

b. Mitigation: Access will be provided to businesses at all times.

4. Air Quality

a. Impacts: The principal sources of air pollution from highway construction are burning during the clearing phase, dust during earth moving phase, and hydrocarbons during the paving phase. Control of these principal sources of pollution as well as other construction operations will prevent significant air pollution.

b. Mitigation: Control of construction operations will be provided by Mn/DOT "Standard Specifications For Highway Construction", contract special provisions, and all applicable air, noise, and water pollution rules and regulations in effect at the time of construction.

Mn/DOT specifications require the following:

- Burning is allowed only if the required burning permits are obtained.
-Application of water as directed by the Engineer (will be used to control dust).
-Haul road maintenance including the application of water, bituminous material, or calcium chloride as necessary to control dust.
-The contractor shall acquaint himself with local conditions and regulations pertaining to air pollution before commencing operation of a hot-mix plant, aggregate crusher, or similar facility.

- The work be prosecuted diligently and pressed vigorously to early completion, including final cleanup.
- Adherence to federal, state, and local -- including MPCA -- regulations pertaining to fugitive dust emissions and debris disposal.

Also street cleaning and/or sweeping will be utilized to minimize dust and remove soil tracked onto city streets by construction activities.

5. Noise

a. Impacts: Construction noise has been considered and no long term impacts are anticipated. Receptors near the bridge (mostly residences) may be temporarily exposed to excessive noise levels during pile driving operations. Effects will be short term and mostly limited to daylight hours. No unique noise receptors have been identified. Because it is impossible to accurately estimate the actual equipment that will be utilized at any given time, no predictions of construction noise levels have been made.

b. Mitigation: Construction noise will be controlled by Mn/DOT Standard Specifications for Highway Construction of which Section 7, Subsection 1701, states in part that the contractor shall comply with all applicable laws, ordinances, regulations, orders, and decrees in the performance of the construction. This would include any local noise control laws. The City of Wabasha has a noise ordinance which governs unmuffled engine noise. Equipment noise will be considered in haul road and heavy equipment routing. However, due to the project location and local street system, such considerations will not significantly effect construction noise. Temporary noise barriers to reduce construction noise are not practicable for this project.

6. Vibrations

a. Impacts: The vibration evaluation report indicates that high-energy construction activities such as pavement breaking and pile driving could cause possible building damage if not controlled. It is also evident that other types of construction vibrations, while not likely to damage buildings, will be easily perceived by people close to the construction activity. The human body is a sensitive instrument for detecting vibrational energy. Research indicates that vibrations that are easily noticeable to even unpleasant, are well below

all suggested damage thresholds. Construction vibrations may,therefore,be annoying to people near the construction site, but will not be a health hazard.

b. Mitigation: Construction vibrations will be controlled as warranted to prevent significant adverse effects. The vibration report indicates that high-energy construction activities such as diesel pile driving could cause possible building damage at some locations if not controlled. Therefore, alternate less-vibration producing construction techniques will be specified in the contract and/or high-energy construction activities will be professionally monitored prior to full scale work to establish site specific vibration characteristics and control. Structures within about 100 feet of any high-energy activity will be surveyed prior to construction to establish preconstruction conditions. Careful selection of construction methods and field monitoring will eliminate the possibility of damage to any buildings.

7. Energy

a. Impacts: Energy consumption required for construction of the build alternatives ranges from 4.66×10^7 to 6.29×10^7 BTU/day as shown in Table 22. Preferred Alternative 3B requires the least energy for construction -- 4.66×10^7 BTU/day. The total energy required for the construction may be determined by expanding the daily energy consumption over the 25 year energy analysis period.

Total const. energy = 4.66×10^7 BTU/day x 365 day/yr x 25 yr.
= 4.25×10^{11} BTU

However, if the proposed action is not implemented the bridge would eventually be closed. The closing would necessitate using up or downstream river crossings located approximately 30 miles from Wabasha. Assuming that only one half of the predicted traffic would travel to the up or downstream crossings results in a dramatic increase in direct energy consumption. Direct energy consumption is the fuel used to propel vehicles. From Table 22 the direct energy increase from Alternative 3B to No Build is calculated to be 5.77×10^8 BTU/day, which is 2.10×10^{11} BTU/yr. Therefore,after slightly more than two years of operation, the proposed facility will save more direct energy than is required for construction.

b. Mitigation: None

8. Erosion

a. Impacts: Grading and earth moving operations will greatly increase the potential for erosion. Erosion control measures will, however, noticeably reduce that potential and prevent significant erosion.

b. Mitigation: Control over construction operations will be provided by Mn/DOT "Standard Specifications For Highway Construction", contract special provisions, and all applicable air, noise, and water pollution rules and regulations in effect at the time of construction.

Mn/DOT Standard Specification 1803.5 provides, in part, that:

- The contractor must submit an erosion control plan for approval prior to construction.
- All permanent erosion control features shall be incorporated at the earliest practicable time.
- Temporary erosion control devices will be used to correct conditions developing during construction and/or to serve until permanent facilities are operative.
- Earthwork operations in or adjacent to flowing streams and rivers shall be separated from the stream by a sediment barrier or dike.

Permanent erosion control features will include seeding, sodding, riprap, and drainage facilities.

Temporary erosion control devices such as mulches, slope drains, dikes, sediment barriers and basins and turf establishment will be utilized where appropriate.

9. Borrow Material

a. Impacts: Approximately 40,000 cubic yards of borrow material will be required for Alternative 3B. No borrow sites have been designated because material dredged from the Mississippi River will be utilized to the extent possible. The Corps of Engineers dredges about 50,000 cubic yards annually in the Wabasha area to maintain the navigational channel. The dredged material is mostly medium grain sand and is ideal for roadway fills. Since disposal of dredged material is a continuous problem, the Corps of Engineers encourages the use of that material for the proposed action.

In 1982 the Corps placed dredged material in a private gravel pit in northwest Wabasha near the hospital and Drury Island. The Corps is also attempting to lease or purchase gravel pits near the C.M.St.P. & P. Railroad tracks in northwest Wabasha for a placement site. During construction, dredged material will likely be truck hauled from one of these sites to the project area. Hydraulic placement of material at the Wisconsin approach (by maintenance dredging or from existing stockpiles) will also be investigated.

Use of dredged material will not cause any significant impacts. Withdrawal of material from placement sites is governed by state and local regulations.

b. Mitigation: If new borrow sites are designated, an archaeological survey will be performed prior to use of the sites. Temporary erosion control features will be utilized in borrow areas. All borrow areas shall be left in a neat and presentable condition suitable for planned land use.

10. Water Quality (13)

a. Impacts: Construction activity near or especially within a stream, will increase turbidity by causing sediment (solids) to become suspended in a stream. High concentrations of suspended solids and the resulting sedimentation of downstream areas of the river, have the potential to cause severe adverse impacts to fish, benthic invertebrates (mollusks, crustaceans and insect larvae; all important as fish food), aquatic macrophytes (rooted plants) and plankton (microscopic plants and animals). These impacts can include:

1) Clogging of fish gills which can, in sufficiently high concentrations, lead to fish mortality (Ellis 1937; Wallen 1951, as cited in Cordone and Kelly 1961).

2) Suffocation of fish eggs and larvae (Hassler 1970; Everhardt and Duchrow 1970; Muncy 1962, as cited in Johnson and McCulloch 1978).

3) Shifts in fish movement and feeding patterns as high concentrations of suspended solids cause avoidance reactions in fish (Bachman 1958, as cited in Johnson and McCulloch 1978, Barton 1977).

(13) Source: Natural Resource Assessment, Mn/DOT O.E.A. 1979

4) Mortality of benthic invertebrates by mechanical removal or suffocation (Ellis 1936).

5) Increased drift rates of benthic invertebrates (Bjournn et al 1974, Gammon 1970, Rosenberg and Snow 1975).

6) Changes in substrate composition and resultant shift in species composition of benthic invertebrates and aquatic macrophytes (Johnson and McCulloch 1978).

7) Reduced light penetration and reduction in aquatic macrophyte growth and plankton photosynthesis (Hynes 1960).

Which impacts, the degree to which they will occur and extent of the downstream river area effected, depend on the interaction of a number of factors. These include: existing river turbidity, current velocity and substrate composition as well as species composition and abundance.

Excessive levels of suspended solids should not result from the replacement of the Wabasha Bridge, due to the nature of the river substrate. In 1973, the North Star Research Institute completed an EIS on POOL 4 for the U.S. Army Corps of Engineers. A bottom sample taken near the Wabasha bridge showed the substrate to consist of over 90% medium sand to granular material. This is to be expected as the Chippewa River annually deposits 3,500,000 tons of sand and gravel into the Mississippi 3 miles upstream of Wabasha. Most of the sediment suspended in the river by construction activities will settle rapidly due to the large particle size. Turbidity, caused by construction activity, should be localized.

Mortality of adult fish, during bridge and roadway construction is not anticipated. Suspended sediment concentrations during construction should not reach critical levels to fish. In addition, fish usually avoid water with high concentrations of suspended sediment.

Mortality to fish eggs and larvae is possible, since they are more sensitive to suspended sediment and cannot avoid areas of high turbidity. This mortality will be reduced, because most of the backwater spawning and nursery sites will be bridged, thus minimizing inchannel construction. Mortality will be virtually eliminated by scheduling construction so that inchannel work will not occur during the vulnerable spawning period.

Shifts in fish movement and feeding patterns will occur near instream construction. However, this effect will be temporary and localized.

Mortality of benthic invertebrates by mechanical removal and suffocation is unavoidable. This adverse impact will be limited to the immediate vicinity of instream construction.

High levels of suspended sediment, near instream construction, will increase the rate of invertebrate drift. Drifting organisms will either find new habitat suitable for them, be eaten by predators or lost (Hynes 1970). To what extent this will occur cannot be determined but it is not expected to have a significant impact upon the overall invertebrate population of the river.

Sediment, suspended by instream construction will consist largely of sand and gravel. Deposition of this material will not change the substrate composition significantly and a shift in aquatic species composition is unlikely.

Macrophytes (rooted aquatic vegetation) are not found in the main river channel, but are limited to backwaters which receive no direct river flow. Alternates 1, 1A & 1B cross an area of dense aquatic vegetation on the Wisconsin side, while Alternates 3A, 3C, 4, 4A and 4B cross an area of dense macrophyte growth in the former Zumbro River channel, in Wabasha (See Exhibit No. 25). Any potential detrimental effects of suspended sediment on this type of vegetation would be confined to these areas. Since these areas lack flowing water, adverse impacts to macrophytes should be limited to only the immediate vicinity of inchannel construction.

Localized regions of turbidity will reduce the photosynthesis of phytoplankton drifting into them. However, this will not occur on a widespread basis and will be short term in nature. No significant impact to the food chain of the river is anticipated.

The preceding adverse impacts are short term and will occur only in localized areas. Research has shown that biological recovery of disturbed stream and river channels is rapid once construction and accompanying elevated suspended sediment levels cease (Barton 1977; Gammon and White 1970; Hamilton 1961, as cited in Johnson and McCulloch 1978). In most instances new organisms will colonize the portions of the channel which have been disturbed. Therefore, construction of any of the build alternatives should not cause significant degradation of the Mississippi River provided that the best practical measures to minimize erosion, turbidity and water pollution are utilized.

b. Mitigation:

1. Specification 1803.5 for the control of erosion and sedimentation shall be strictly enforced by the Construction Engineer. The entire project area will be designated a critical erosion area and treated accordingly. See erosion mitigation discussion on page 162.

2. Specification 1717 regarding Air and Water Pollution shall be strictly enforced by the Construction Engineer.

   Specification 1717 provides, in part, that:

   - The contractor shall take all necessary precautions and actions to prevent pollution of flowing and impounded waters.

   - Water containing sediment from aggregate wash operations shall not be allowed to enter public waters until its sediment content has been reduced to that of the water it will enter.

   - Wash or waste water from concrete mixing operations will not be allowed to enter live streams.

   - Frequent fording of live streams with hauling equipment will not be permitted.

3. The following measures are also proposed.

   - Materials dredged from the riverbed for pier construction will not be discharged to the river. Spoils will be used as fill material or deposited at an approved disposal site.

   - To the extent practical, piers will be located upon land rather than in backwater channels.

- Instream construction activities that effect the flow or siltation within backwaters will not be allowed from April 1 to June 1.

11. Fisheries

a. Impacts: Construction will disturb fish spawning and nursery areas. Although specific spawning area locations have not been determined, Mississippi River backwaters are generally nursery areas and contain scattered spawning areas. Construction of bridge piers will disturb a corridor about 200 feet wide and 1800 feet long through backwaters in Wisconsin. These backwaters are shallow, 3 to 5 feet deep, and contain several small islands.

The type of method utilized for pier construction will affect the magnitude of impacts. The most desirable method would be entirely from barges. However, shallow water and islands would probably require dredging for total barge type construction. The most common method used where barging is not feasible is a temporary construction road. The construction road is created by placing fill into the backwaters.

This method temporarily displaces fish habitat and if not carefully controlled can increase water pollution.

b. Mitigation: Construction from barges will be encouraged where possible. However, significant dredging will not be permitted. If a temporary construction work road is required, special provisions as outlined below will be used to minimize impacts.

- Instream construction of the work road will not be allowed from April 1 to June 1.

- Filter fabric will be placed underneath and on the sides of the construction road.

- Clean granular material will be used for fill.

- Culverts will be utilized to maintain water circulation and fish migration patterns.

- Temporary erosion control measures will be utilized.

- The construction road will be completely removed as soon as practical.

12. Wetlands

a. Impacts: During construction there will be some impact to wetlands from sedimentation and disruption of flow in backwater channels. These will be short-term, temporary impacts. They should cease soon after construction is complete. (i.e., after soils are stabilized with vegetative cover and the flows in backwater channels are re-established through culverts or rechannelizing the backwater channels around fill embankments). These impacts should be minor. The flood plain ecosystem is naturally capable of withstanding high sedimentation and fluctuation in water flows which frequently occur during normal flooding.

b. Mitigation: Construction activities will be prohibited in nearby wetlands. The contractor will be required to restrict the operation of equipment to an absolute minimum in wetlands located outside the construction limits. Erosion and pollution controls are described in Sections IV.T. 8 and 10 on pages 162 and 166 respectively.

13. Wildlife

a. Impacts: Construction activities will temporarily disturb wildlife located near the project. Since the project will disturb about 8 acres of wildlife habitat from a 195,000 acre habitat area and no severe or unique effects have been identified, the wildlife impacts will not be significant. However, two species of wildlife deserve special consideration.

The Northern Bald Eagles which winter in the vicinity of the Wabasha bridge could be adversely affected by the construction activities associated with this project. The increased activity and noise of construction may cause the eagles to abandon the area, at least temporarily. Once the project is built it is assumed the eagles would still find the area to be suitable habitat since the present highway and bridge do not seem to bother them.

No impacts to the endangered species of clam, Lampsilis Higginsii, are expected since a 1979 survey indicates that species is not present in the project area. However, construction of the main pier on the Minnesota side of the navigational channel will temporarily disrupt the feeding behavior of mussels immediately downstream from the pier. See Exhibit No. 26 for the mussel bed location.

The disruption -- caused by increased turbidity -- will be short-term and intermittent, occurring only when construction is taking place in the stream bed or on the river bank in the immediate area. Also as described on page 101, if the pier is constructed within the mussel bed, a small portion of the bed would be destroyed. However, no significant impacts to the local mussel population are expected because only a very small portion of the mussel bed will be effected.

b. Mitigation: To mitigate potential eagle impacts, the following provisions will be included in construction contracts:

1) The contractor will not conduct highly disturbing construction activities (e.g., impact pile-driving) from December 1 to March 30 or until eagles depart in the spring if prior to March 30, as determined by the Mn/DOT wildlife biologist and USFWS. Activities less disturbing in nature (e.g., construction of access roads, vibratory pile-driving, superstructure assembly) will be allowed during the winter months.

2) Construction activity may be reviewed and modified as warranted, if it is determined jointly by the Mn/DOT wildlife biologist and USFWS that eagles are being significantly impacted by construction. Impacts will be considered significant if they are expected to result in 1) a reduced wintering eagle population or 2) reduced reproductive success the following spring.

3) The above restrictions will only be imposed on activities east of the main channel (not including construction of the navigational channel piers).

To mitigate potential mussel impacts the following will be incorporated into the project design and construction:

1) The main support pier on the Minnesota side of the navigation channel will not be located in the mussel bed if practicable.
2) Physical disturbance of the riverbed from the middle of the navigation channel to the Minnesota shore will be minimized.
3) Temporary erosion controls such as hay bale check dams, filter fabric fences and sedimentation basins will be constructed before exposing areas to erosion which could enter the Mississippi River.

4) Riprap and/or sod will be placed upon all disturbed areas immediately adjacent to the Minnesota side of the river as soon as practical for permanent erosion controls.

5) Seeding and mulching of all other disturbed areas will occur as soon as possible.

14. Historic and Cultural Sites

a. Impacts: Increases in noise and air pollution as discussed on pages 159 and 160.

b. Mitigation: Noise and air pollution mitigation measures are described on page 159 and 160.

If objects of archaeological or paleontological nature are discovered during construction operations, appropriate State Historical Society officials will be contacted under established procedures to preserve the discovered objects or record desired data.

15. 4(f) Lands

a. Impacts: Construction operations will increase noise levels and dust. Increased noise levels will probably be the most significant impact and annoyance to 4(f) land users. However, construction activities usually cease on weekends, which is the time of greatest park and recreation use.

No parks or recreation areas will be closed as a result of construction operations. However, Mississippi River Park users will not be allowed in the immediate work area during actual construction operations. The temporary loss of use of about 6% (Alt. 3B work area) of the Mississippi River Park will not be a significant impact since the park use is light and no developed facilities will be effected. Users of the boat ramp near the Wisconsin end of the bridge in the Upper Mississippi River Wild Life and Fish Refuge will experience brief periods of interference while the entrance is being reconstructed.

b. Mitigation: Construction impacts will be minimized by:

- Signing all work areas.

- Strict enforcement of all applicable laws, regulations and specifications.

16. Pedestrians and Bicyclists

a. Impacts: The temporary closing of streets in and adjacent to the work area in Wabasha will disrupt pedestrian and

bicyclist travel patterns. The most noticeable effect will be the temporary closing of Second St., Main St., and Lawrence Blvd. beneath the elevated approach. However, simultaneous closing of all three streets will not be allowed. Therefore, the maximum increase in travel distance through the work area will be two or three blocks.

The duration of pedestrian and bicyclist impacts is somewhat dependent upon the construction contractor's operations. Although one of the three streets beneath the elevated approach will be open to traffic at all times, all three streets will be open during certain phases of construction. However, during superstructure construction, the entire area will be designated a hard hat area and protected walkways will be provided for pedestrians and bicyclists.

b. Mitigation:

- Signing of all work areas and street closings.
- Simultaneous closing of Second St., Main St. and Lawrence Blvd. will not be allowed.
- Covered walkways for pedestrians and bicyclists will be provided where warranted.
- Strict enforcement of all applicable laws, regulations and specifications.

Mn/DOT Standard Specifications For Highway Construction require, in part, that the Contractor provide temporary facilities where and when necessary to conveniently serve pedestrian travel over or through obstructions at public walkways and at other locations designated by the Engineer. Open excavations which are hazardous shall be adequately fenced off and posted with conspicuous warning signs.

17. Visual

a. Impacts: Construction will temporarily disturb the existing scenic qualities of the area and thereby create an undesirable appearance. The impact will be short term, however, and is unavoidable.

b. Mitigation: The contractor will be required to complete the work in an orderly and timely manner.

18. Removal of Existing Bridge

a. Impacts: The existing bridge will be removed after the replacement bridge is opened to traffic. Removal will be from abutment to abutment unless the City of Wabasha desires to keep a segment of the bridge near the Minnesota abutment for an observation deck. The Wisconsin approach fill will be allowed to remain inplace to help perpetuate the backwater flow patterns and to provide additional boat ramp parking.

Impacts will consist of temporary disturbances (mostly noise and dust) to receptors in the immediate area. Removal impacts are similar to the construction impacts described in this section, except of shorter duration. Disposal will be in accordance with all applicable laws, regulations and permits. None of the existing structure will be salvaged for the Minnesota or Wisconsin Departments of Transportation. No disposal sites have been designated.

b. Mitigation: Removal shall be in accordance with all applicable laws, regulations, permits and specifications. Mn/DOT Specifications require,in part,that materials will be disposed of in a manner that will not create a public nuisance nor result in unsightly conditions within view of any public road, recreational area, residential district or other place of public concern. Disposal will not be allowed in sensitive environmental areas.

U. No Build

Not replacing the bridge in the near future would create severe adverse social and economic effects since continued deterioration would ultimately require the structure to be closed. Although the remaining service life of the existing bridge is estimated to be 5 years, extraordinary maintenance could possibly extend the service life an additional 5 years. Closing the bridge would then sever the transportation link between the two halves of the trade area as shown on Exhibit No. 8 page 10. The Mississippi River would at that time become an insurmountable barrier. The highway distance from Nelson to Wabasha would increase form 4 miles to 60 miles. As a result, Wisconsin residents would be forced to travel greater distances for medical care, shopping and other community services. The demand for social and community services at Durand and Modovi, Wisconsin would increase. Wabasha's retail trade would be reduced significantly since about 40% of that trade comes from Wisconsin. Reduction of retail trade would,in turn,cause loss of employment and businesses. The distance to recreational areas across the river would be increased considerably. The labor force which now crosses the bridge daily would be forced to travel the increased trip distance or seek new employment.

Not building would avoid several adverse impacts associated with the proposed action such as relocation, changes in traffic noise location, and displacement of 4(f) lands. However, the adverse impacts of building are minor when compared to those of not building. The long term impact of not building would include a large economic loss to Wabasha, reduced availability of community and medical services to thousands of Wisconsin residents, and severe changes in traffic patterns resulting in an overall reduction in the quality of life for area residents.

Although the magnitude of no build impacts would be greatest after the bridge closing, adverse impacts would also occur before the closing. The extraordinary maintenance required to keep the bridge in service for 10 years is estimated to cost about $100,000 annually. As that maintenance became more extensive, temporary bridge closings would be required. Temporary closings are very disruptive to the social-economic area because of the 60 mile detour and large amount of community services and labor force dependent upon daily use of the bridge. Wabasha businessmen claim that total sales dropped sharply during one and two month temporary bridge closings in 1968 and 1969.

In summary, the existing bridge must be perpetuated to avoid severe adverse social and economic effects and to provide a reasonable transportation system.

V. Irreversible And Irretrievable Commitments Of Resources

Land:	Land areas converted from non-highway to highway use will essentially be irreversibly committed.
Surface Resources:	Surface resources displaced such as vegetation, wildlife, animal habitat, developed and undeveloped land will generally be irreversibly committed.
Labor & Materials:	The manpower, materials, energy and money used in design, construction and maintenance will be irretrievable.

W. Relationship Between Local Short Term Use Of The Environment And Long Term Productivity

Short Term

Gains:
- Improvement of transportation system safety and efficiency.

Losses:
- Disturbance of natural and scenic resources.
- Disturbance of Historic Commercial District.
- Displacement of residences and commercial buildings.
- Reduction of tax base.

Long Term

Gains:
- Improvement of transportation system safety and efficiency.
- Continuity of Wabasha trade area increasing economic and social stability.
- Increased tax base.

Losses:
- Use of 19 acres of land for transportation facility.
- Loss of wetlands and wildlife habitat.

Long term gains associated with perpetuation of the Wabasha trade area will outweigh all short and long term losses. This action will allow economic and social stability for the area whereas not building would sever the trade area in 1992 and severely reduce productivity. Since this action is for the replacement of an existing facility and most impacts will be extremely localized, the options of future generations will not be significantly affected.

Table 28 IMPACT MATRIX (Significant Impacts and Measures)

	ALT. 1	ALT. 1A	ALT. 1B	ALT. 3A	ALT. 3B	ALT. 3C	ALT. 4	ALT. 4A	ALT. 4B	No Build ALT. 6	
4(f) LAND	6.5 refuge 3.5 park 0 historic 10.0	6.5 refuge 1.9 park 0 historic 8.4	1.4 refuge 2.6 park 0 historic 4.0	1.0 refuge 3.9 park 0.9 historic 5.8	1.0 refuge 0.1 park 0.9 historic 2.0	1.0 refuge 3.9 park 0.9 historic 5.8	5.5 refuge 0 park 0.1 historic 5.6	1.8 refuge 0.1 park 0 historic 1.9	1.8 refuge 0.1 park 0 historic 1.9	Additional Acres = 0	4(f) LAND
HISTORIC -Change view. -Some economic loss (traffic).	Displace 0 bld. Shift TH 60 5 blocks NW.	Displace 0 bld. Shift TH 60 5 blocks NW use Grant Blvd.	Displace 0 bld. Shift TH 60 6 blocks NW.	Displace 4 blds. Acquire 0.9 Ac. Shift TH 60 2 blocks NW.	Displace 4 blds. Acquire 0.9 Ac. Shift TH 60 2 blocks NW use Grant Blvd.	Same as Alt. 3A	Displace 0 bld. Acquire .07 Ac. Visual & Audible Shift TH 60 1 block SE.	Displace 0 bld. Visual & Audible Shift TH 60 1 block SE.	Same as Alt. 4A	Displace 0 bld. Economic loss due to loss of Wisc. trade.	HISTORIC
PARK SYSTEM	Disrupts continuity of park corridor - River Vista City Campground Ikes Park & Ed Malone Park.	Disrupts park corridor similar to Alt. 1, except less impact to Ed Malone Park.	Passes thru park corridor but adjacent to R.R. & park boundaries.	Disrupts Central Athletic Field.	Adjacent to Central Athletic Field on Grant Blvd.	Same as Alt. 3A	Adjacent to school playground.	Disrupts edge of school playground.	Same as Alt. 4A	None	PARK SYSTEM
SOCIAL -Localized traffic & ped. changes.	Disrupts park corridor.	Separates down-town from Central Athletic Field	Disrupts park corridor.	Disrupts Central Athletic Field. Severs 3rd St.	Separates Central Athletic Field from downtown. Severs 3rd St.	Identical to Alt. 3A	Increase traffic at grade school. Severs 2nd St.	Same as Alt. 4, but 15' nearer to school.	Same as Alt. 4A, but severs 3rd St.	Sever Social-Economic Area	SOCIAL
WETLANDS & BACKWATER	(Acres impacted - 150 ft. wide corridor - includes bridged and filled) 7.6 Wi 1.8 Mn 9.4	Same as Alt. 1	5.2 Wi 1.8 Mn 7.0	5.1 Wi 4.0 Mn 9.1	5.1 Wi 1.0 Mn 6.1	5.1 Wi 4.2 Mn 9.3	8.0 Wi 1.0 Mn 9.0	5.2 Wi 1.0 Mn 6.2	Same as Alt. 4A	Additional Acres = 0	WETLANDS & BACKWATER
NOISE	(Number of receptors exceeding Federal/State standards Year 2000) 0/15	Similar to Alt. 3B	10/37	1/25	25/60	1/25	13/46	Similar to Alt. 4	Same as Alt. 4B	44/62	NOISE
TOTAL R/W	35 Ac.	21 Ac.	33 Ac.	35 Ac.	19 Ac.	33 Ac.	33 Ac.	31 Ac.	31 Ac.	0 Additional	TOTAL R/W
RELOCATION	7 Homes 0 Com. Bld.	2 Homes 0 Com. Bld.	6 Homes 0 Com. Bld.	8 Homes 4 Com. Blds.	8 Homes 3 Com. Blds.	Same as Alt. 3A	7-9 Homes 3 Com. Bld.	7 Homes 3 Com. Bld.	Same as Alt. 4A	None	RELOCATION
ECONOMIC	(All Build Alternates: Provide trade area continuity, Improve highway efficiency, Generate 15% traffic.) Shift TH 60 5 blocks. Encourage dev. between 7th & TH 61.	Shift TH 60 5 blocks. Utilize Grant Blvd.	Shift TH 60 6 blocks. Encourage dev. between 7th & TH 61.	Shift TH 60 2 blocks.	Shift TH 60 2 blocks. Utilize Grant Blvd.	Same as Alt. 3A	Shift TH 60 1 block. Could encourage dev. between 4th & 8th St.	Same as Alt. 4	Same as Alt. 4	Close bridge 1992. Sever trade area.	ECONOMIC
TOTAL COST	$21.1	$19.6	$21.2	$17.6	$14.4	$16.0	$16.5	$17.0	$16.7	$1.0 Maint.	TOTAL COST
BRIDGE ALIGNMENT	19.5° Skew 3° Max. H. Curve	Same as Alt. 1	30° Skew 4° Max. H. Curve	0° Skew 0° Max. H. Curve	Same as Alt. 3A	Same as Alt. 3A	0° Skew 5°30' Max. H. Curve	15° Skew 4° Max. H. Curve	15° Skew 3° Max. H. Curve	0° Skew 50 ft. Radius	BRIDGE ALIGNMENT
KEY	Minimal Adverse Impact	Most Desirable Measure	Maximum Adverse Impact	Least Desirable Measure							

V. LIST OF PREPARERS

Name/Title	Expertise Applied to EIS	Experience
Richard Klobuchar Mn/DOT Asst. Dist. Engr.	General Supervision, Wrote 1973 PDEIS	B. Civil Engineering 27 Yrs. Mn/DOT 12 Yrs. Asst. Dist. Engr.
Frank Schloegel Mn/DOT Dist. Pre. Design Engineer	Pre. Design Supervision	B. Civil Engineering 24 Yrs. Mn/DOT, 13 Yrs. Pre. Design
Joseph Meade Mn/DOT Asst. Dist. Pre. Design Engineer	General Author MN Project Manager	B.S. Civil Engineering 13 Yrs. Mn/DOT, 6 Yrs. Pre. Design
Jim Weimerskirch Mn/DOT Dist. Relocation Advisor	Residential and business relocation	17 Yrs. Mn/DOT, 14 Yrs. Relocation Advisor
Richard Nerstad Mn/DOT Senior Technician	Traffic and Energy Analyses	25 Yrs. Mn/DOT 7 Yrs. Pre. Design
Allen Bothun Mn/DOT Senior Technician	Noise Analysis	19 Yrs. Mn/DOT, 15 Yrs. Pre. Design
Clement Kachelmyer Mn/DOT Pre. Des. Engr.	Historic coordination and review	B. Civil Engineering 32 Yrs. Mn/DOT 23 Yrs. Pre. Design
Lawrence Foote Mn/DOT - Director of Env. Studies, Development and Bicycle Transportation	Environmental review and supervision	B.S. Agricultural Economics M.S. Farm Crops Ph.D. Agronomy 19 Yrs. Mn/DOT
Roxanne Sullivan Mn/DOT Geologist	Natural Resource Assessment	B.S. Geology 4 Yrs. Mn/DOT
Ronald Peterson Mn/DOT Wildlife Biologist	Natural Resource and Biological Assessments	B.S. Wildlife Management M.S. Natural Resources 4 Yrs. Env. Analysis 2 Yrs. Mn/DOT
Frank Pafko Mn/DOT Aquatic Biologist	Biological and Natural Resource Assessments	B.S. Aquatic Biology 3 Yrs. DNR 5 Yrs. Mn/DOT
Gregory Treanor Mn/DOT Landscape Architect	Corridor Development Plan Graphics	B.S. Landscape Architecture 3 Yrs. Mn/DOT

Name/Title	Expertise Applied to EIS	Experience
Richard Staffon Mn/DOT Wildlife Biologist	Natural Resource Assessment	M.S. Wildlife Biology 4 Yrs. Env. Analysis Mn/DOT
Graham Ford Mn/DOT Senior Geologist	Vibration Evaluation	B.A. & M.S. Geology 24 Yrs. Mn/DOT 24 Yrs. Geologist
Norman Mellem Mn/DOT Asst. Air Quality Engineer	Air Quality	B. Civil Engineering 18 Yrs. Mn/DOT 7 Yrs. Air Quality
Gorden Phetteplace Wis/DOT Dist. Design Supervisor	Wisconsin Project Manager Wisc. Coordination	B.S. Mining Engineering 28 Yrs. Wis/DOT 17 Yrs. Design Supervisor
James St. John FHWA - Division Dist. Engineer	Review, content and policy guidance	B.S. Civil Engineering M.S. Interdisciplinary Studies 13 Yrs. FHWA 2 Yrs. Dist. Engineer
Bruce Matzke FHWA - Division Area Engineer	Review, content and policy guidance	B.S. Civil Engineering 13 Yrs. FHWA 2½ Yrs. Area Engineer

Consultant Studies

Organization	Individual/Title	Study
National Biocentric Inc.	Roger Blomquist Vice President	MUSSEL SURVEY AT PROPOSED BRIDGE SITES
for Minnesota Historical Society	Camille Kudzia Private Consultant	AN HISTORICAL SURVEY OF THE ALTERNATE ROUTES FOR PROPOSED TRUNK HIGHWAY 60 IN WABASHA, MINNESOTA

VI. LIST OF AGENCIES, ORGANIZATIONS, AND PERSONS TO WHOM COPIES OF THE STATEMENT ARE SENT

The Draft Environmental Impact Statement was submitted to the following agencies and organizations for comment and or information:

U.S. Department of Agriculture
*U.S. Department of the Army
Corps of Engineers, St. Paul District
U.S. Department of Housing and Urban Development
U.S. Department of Defense, Civil Preparedness Agency
*U.S. Department of Commerce
U.S. Department of Health and Human Services
*U.S. Department of Interior
Fish and Wildlife Service
Heritage Conservation and Recreation Service
*U.S. Department of Transportation
Second Coast Guard District
Federal Aviation Administration
Urban Mass Transportation Administration
*Advisory Council on Historic Preservation
*U.S. Environmental Protection Agency
*U.S. Department of Energy
Minnesota Energy Agency
Minnesota Department of Economic Development
Minnesota Environmental Quality Board
*Minnesota Historical Society
*Minnesota Department of Natural Resources
*Minnesota Pollution Control Agency
*Minnesota State Planning Agency
Minnesota Department of Agriculture
Minnesota Department of Health
Minnesota Governor's Office
Minnesota Water Resources Board
*Minnesota-Wisconsin Boundary Area Commission
Southeastern Minnesota Regional Development Commission (A-95)
Wisconsin Department of Agriculture, Trade and Consumer Protection
Wisconsin Historical Society
*Wisconsin Department of Natural Resources
Wisconsin State Planning Office for Governor
Wisconsin Office of Intergovernmental Relations (A-95)
Wisconsin Department of Local Affairs & Development
*Mississippi River Regional Planning Commission
Wabasha County
Buffalo County
City of Wabasha
Village of Nelson
Wabasha Bridge/Historic Preservation Committee
Wabasha County Historical Society
Wabasha Chamber of Commerce
Great River Environmental Action Team
Upper Mississippi Waterways Association
Twin City Barge and Towing Company
Appropriate Libraries

*Submitted Comments

VII. COMMENTS AND COORDINATION

A. Written Agency Comments

Table 29: Index of Written DEIS Comments by Agencies and Replies

Agency	Agency Comments	Replies
U.S. Department of the Army Corps of Engineers, St. Paul District	180-181	182
U.S. Department of Commerce National Oceanic and Atmospheric Adm.	183-184	185
U.S. Department of the Interior	186-192	193-194
U.S. Department of Transportation	195	None
Advisory Council On Historic Preservation	196	197
U.S. Environmental Protection Agency	198-200	201-202
U.S. Department of Energy Federal Energy Regulatory Commission	203	204
Minnesota Historical Society	205-206	207
Minnesota Dept. of Natural Resources	208	209
Minnesota Pollution Control Agency	210-212	213-214
Minnesota State Planning Agency	215-217	218
Minnesota-Wisconsin Boundary Area Commission	219-220	None
Wisconsin Dept. of Natural Resources	221-224	225
Mississippi River Regional Planning Commission	226	227

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

REPLY TO
ATTENTION OF:

NCSED-ER

24 October 1980

Roy J. Larson
District Engineer
Minnesota Department of Transportation
Box 6177
Rochester, Minnesota 55901

Reference: 316
FHWA-MN-EIS-80-01-D

Dear Mr. Larson:

We have reviewed the draft environmental impact statement (EIS) on replacement of the Mississippi River Bridge at Wabasha, Minnesota. Our comments are attached.

Thank you for the opportunity to review and comment upon the draft EIS. We look forward to receiving a copy of the final EIS and to continued coordination with you.

Sincerely,

for WILLIAM W. BADGER
Colonel, Corps of Engineers
District Engineer

1 Incl
As stated

Copy Furnished:
HQDA, DAEN-CWP-P w/incl

COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT
STATEMENT FOR REPLACEMENT OF THE MISSISSIPPI
RIVER BRIDGE AT WABASHA, MINNESOTA

A. General Comments

1. If possible, a proposed plan for location of the piers (and also the height of the span) should be delineated in the final EIS so that we can assess the need for permits and potential impacts on the 9-foot channel navigation project.

2. Our comments on the preliminary draft EIS should be reconsidered in preparation of the final EIS; those comments need to be more fully responded to.

B. Specific Comments

1. Page 41, para. 3 - The correspondence from the State Historic Preservation Officer (SHPO) and the Advisory Council that is in the Appendix does not contain any statement that seven of the 59 properties have been determined ineligible for the National Register of Historic Places.

2. Page 111, para. 2 - This paragraph is misleading. Wisconsin SHPO has only determined that no sites exist in Alignment Group 3. Penman's letter (A-5) states that due to poor field conditions the other alignments were not surveyed but that these alignments possess a very good potential for sites and should be surveyed should one of these alignments be chosen. In addition, this paragraph implies that since any sites that might be located along Alignments 1 or 4 would probably be small, they would be insignificant. The size of a site has no bearing on its significance. All references to possible site size should be deleted from this paragraph.

3. Page 112, para. 3 - Here it is stated that the Keeper of the National Register has determined that all properties listed in the Minnesota Historical Society historical survey are eligible for the National Register; yet on page 41 it is stated that seven were determined ineligible. Please clarify this apparent contradiction.

4. Page 162 - Delete "none" from the table on Alternative 1. The Minnesota SHPO states that although there will be no direct construction impacts on cultural resources from Alternative 1, there will nevertheless be indirect and significant impacts on the Historic District. In addition, expand on impacts for all alternatives to more adequately reflect the Minnesota SHPO views.

5. This document does not adequately address impacts on cultural resources. We strongly urge the Minnesota Department of Transportation to coordinate with professionals in cultural resources before preparation of the final EIS.

Reply to Corps of Engineers comments on page 181. Reply numbers correspond to comment numbers.

A.1. Exact pier locations have not been determined. However the navigational span will provide a minimum horizontal clearance of 403 ft. (same as existing bridge) and a vertical clearance of 52 ft. above the 2% flow line elevation of 676.5 which results in a 62 ft. vertical clearance above the normal pool elevation of 666.5. Vertical and horizontal clearances are requirements of the U.S. Coast Guard. This is all the information currently available for assessment of need for permits.

A.2. Corps comments on the preliminary DEIS were reconsidered and incorporated in the FEIS where appropriate.

B.1 The reference to seven ineligible properties has been deleted, see p. 43 par. 5. The Historic Commercial District includes 59 properties.

B.2. The subject paragraph has been rewritten to more accurately convey the facts, see p. 110 par. 2.

B.3. See reply B.1.

B.4. The impact matrix has been revised as suggested, see p. 175. The Historic and Archaeological section has been expanded to more adequately describe impacts and mitigation, see pp. 110-128.

B.5. Mn/DOT agrees that social and cultural concerns must be considered. Professionals and agencies within this area of interest were consulted during preparation of the Draft and Final Impact Statement, see the State Historic Preservation Officer's comment no. 6 on page 206. Cultural resource impacts are discussed in the Social, Relocation, Historic & Archaeological, Section 4(f), Visual, Construction, and No Build subsections of the Environmental Consequences section of this FEIS.

UNITED STATES DEPARTMENT OF COMMERCE
The Assistant Secretary for Policy
Washington, D.C. 20230

OCT 7 1980

Mr. Roy J. Larson
District Engineer
Minnesota Department of Transportation
District 6, Box 6177
Rochester, Minnesota 55901

Dear Mr. Larson:

This is in reference to your draft environmental impact statement entitled "Mississippi River Bridge at Wabasha, Minnesota." The enclosed comment from the National Oceanic and Atmospheric Administration is forwarded for your consideration.

Thank you for giving us an opportunity to provide this comment, which we hope will be of assistance to you. We would appreciate receiving five (5) copies of the final environmental impact statement.

Sincerely,

Robert T. Miki
Deputy Assistant Secretary for
Regulatory Policy (Acting)

Enclosure Memo from: Kenneth Hadeen
Environmental Data and Information Service
National Oceanic and Atmospheric Administration

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
ENVIRONMENTAL DATA AND INFORMATION SERVICE
Washington, D.C. 20235
Center for Environmental Assessment Services

Rec'd PP/EC
OCT 01 1980

September 29, 1980 OA/D242:MR

TO: PP/EC - Joyce Wood

FROM: OA/D2x1 - Kenneth Hadeen David W. Layton

SUBJECT: DEIS 8008.15 - Mississippi River Bridge at Wabasha, Minnesota

General Comments: The EIS would be enhanced if, under the climate section, ice conditions in the Mississippi River were discussed.

Specific Comments: None.

(Ref. R. Leffler, D242)

Attachment - DEIS 8008.15

10TH ANNIVERSARY 1970-1980
National Oceanic and Atmospheric Administration
A young agency with a historic
tradition of service to the Nation

Reply to National Oceanic and Atmospheric Administration Comment on p. 184.

A brief description of ice conditions on the Mississippi River has been added to the Climate section as suggested, see p. 37.

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

ER 80/938

NOV 26 1980

Mr. E. Dean Carlson
Division Administrator
Federal Highway Administration
Metro Square Building, Suite 490
Seventh and Roberts Streets
St. Paul, Minnesota 55101

Dear Mr. Carlson:

1. This responds to the request for the Department of the Interior's comments on the draft environmental statement with Section 4(f) information for the Mississippi River Bridge at Wabasha, Wabasha County, Minnesota and Buffalo County, Wisconsin.

GENERAL COMMENTS

2. The subject statement is a well prepared and coordinated document. On October 17, 1980, representatives of this Department met with representatives from your office and the Minnesota Department of Transportation to discuss Interior's concerns about the proposed project. We much appreciate this additional consultation and coordination. The following comments incorporate the results of the October 17 meeting, as well as our review of the subject environmental statement.

SECTION 4(f) COMMENTS

3. Although we concur that there are no feasible and prudent alternatives to the use of some Section 4(f) land by the Wabasha Bridge project, we object to all of the build alternatives as proposed in the draft statement. In our view, satisfactory compliance with the second proviso of Section 4(f), all possible measures to minimize harm, requires that additional planning be undertaken (1) to modify alternative alignments in order to reduce or eliminate encroachments and impacts on Section 4(f) lands and properties, and (2) to develop design-level mitigation measures for identification in the final statement and 4(f) document.

4. We recommend that a modified Alternative 4 be selected. On the Wisconsin side the alignment should be redesigned to coincide as closely as possible with the existing highway embankment in the Upper Mississippi River Wild Life and Fish Refuge (UMRWL&FR). Any new unavoidable encroachments on refuge lands [which the Fish and Wildlife Service (FWS) requests be kept to an absolute minimum] should be on structure. Specific mitigation details (such as removal of the old bridge and approach fill where not used by the new bridge, and return of unneeded right-of-way to refuge use) should be worked out with the U.S. Fish and Wildlife Service and documented in the final statement, both for 4(f), U.S. Coast Guard permit and Corps of Engineer 404 and right-of-way permit purposes.

5. The draft statement (page 32) indicates possible impacts to FWS's boat launching facility but fails to address the scope of these impacts. Refuge personnel have indicated that access must be maintained to this facility. The final statement should address this matter.

6. Although the modified design on the Wisconsin side may result in a skewed bridge structure over the navigation channel on the Minnesota side of the river, and may necessitate a longer span over the channel in the interests of maintaining adequate clearances for navigational safety, it is our opinion that any increased costs would be appropriate in the context of Section 4(f).

7. In addition, where Alternative 4 traverses the City of Wabasha, further consideration should be given (1) to the provision of adequate traffic access to and from the historic commercial district in order to assure its continued economic health, and (2) to minor alignment shifts and/or right-of-way reductions in the vicinity of the Grace Memorial Episcopal Church in order to reduce or eliminate takings from the grounds of this historic structure. Appropriate means to reduce exterior noise levels at the church should also be investigated in consultation with church officials and the State Historic Preservation Officer.

8. In our opinion, the impacts of the other proposed alternatives on cultural resources and park and recreation lands in Wabasha are unacceptable and for the most part unmitigatable. Alternatives 3A, 3B, and 3C, although providing the shortest bridge structure, would result in serious direct and indirect (visual and noise) impacts on the historic commercial district and the historic Parsonage. In addition, Alternatives 3A and 3C would bisect the Central Athletic Field. We can offer no modifications that would eliminate these impacts, and would object to Section 4(f) approval of any of the 3-Alternatives.

9. We would also object to Section 4(f) approval of Alternative 1, as proposed, because of direct takings from the Mississippi River Park, City Campgrounds, Ikes Park, Overflow Nature Area, and the County Fairgrounds. Although only 12 acres would be required, the cumulative effects of increased noise, visual, and physical intrusions would be severe. A modification of Alternative 1 to reduce these impacts is possible by placing the alignment adjacent to the existing railroad over the Old Zumbro River Channel and proceeding northwest of Ikes Park. The Wisconsin side of such a modified Alternative 1 should be designed as indicated above for a modified Alternative 4. We do not, however, recommend selection of a modified Alternative 1, because rerouting traffic so far away from the existing commercial district increases the potential of new commercial development elsewhere, which could result in the economic deterioration of what is now a healthy commercial district with historic attributes.

10. We are enclosing a map roughly indicating our proposed modifications to Alternatives 1 and 4.

ENVIRONMENTAL STATEMENT COMMENTS

11. Page 5 - Lands on the Wisconsin side of the river are owned by the Corps of Engineers and managed by the U.S. Fish and Wildlife Service as part of the UMRWL&FR. "Actions required by other Federal Agencies" in the final statement should include the required authorization from the Corps of Engineers for the right-of-way as well as the Section 404 permit.

12. Page 32, Item 11 - Please note that the refuge's correct title is: Upper Mississippi River Wild Life and Fish Refuge. Other portions of the text should be corrected accordingly.

13. Page 91, Turbidity - We believe FTU should be JTU (Jackson Turbidity Units).

14. Page 168 - The Bureau of Sport Fisheries and Wildlife is now the U.S. Fish and Wildlife Service.

15. Page 104 - Appendix A15 indicates that a diverse mussel population was found during the recent survey. The location and size of this bed, including potential project-related impacts, should be discussed in the final statement.

SUMMARY COMMENTS

16. The Department of the Interior objects to Section 4(f) approval of all of the build alternatives as proposed in the draft statement. However, the Department would not object to Section 4(f) approval of a modified Alternative 4, as indicated above, provided all of the measures to minimize harm discussed in our Section 4(f) Comments are included in project plans and documented in the final statement.

17. This does not, of course, preclude the development of other alternatives which would eliminate or minimize Section 4(f) involvements. Should such alternatives be developed, we would be happy to review them expeditiously from the standpoint of our jurisdiction and special expertise.

18. Since we have a continuing interest and jurisdictional involvement in this project, we would be glad to provide additional input to your planning process and technical assistance in the preparation of your final statement. For matters relating to the Upper Mississippi River Wild Life and Fish Refuge, as well as general fish and wildlife concerns, please contact the Regional Director, U.S. Fish and Wildlife Service, Federal Building, Fort Snelling, Twin Cities, MN 55111 (phone: FTS 725-3563). For matters relating to parks, recreation areas, and cultural resources, please contact the Regional Director, Heritage Conservation and Recreation Service, Federal Building, 200 E. Liberty, Ann Arbor, MI 48107 (phone: FTS 378-2000). As always, Ms. Sheila Minor, Regional Environmental Officer, U.S. Department of the Interior, 175 W. Jackson Blvd., Chicago, IL 60604 (phone: FTS 353-6612), is available to assist you in consulting and coordinating with this Department.

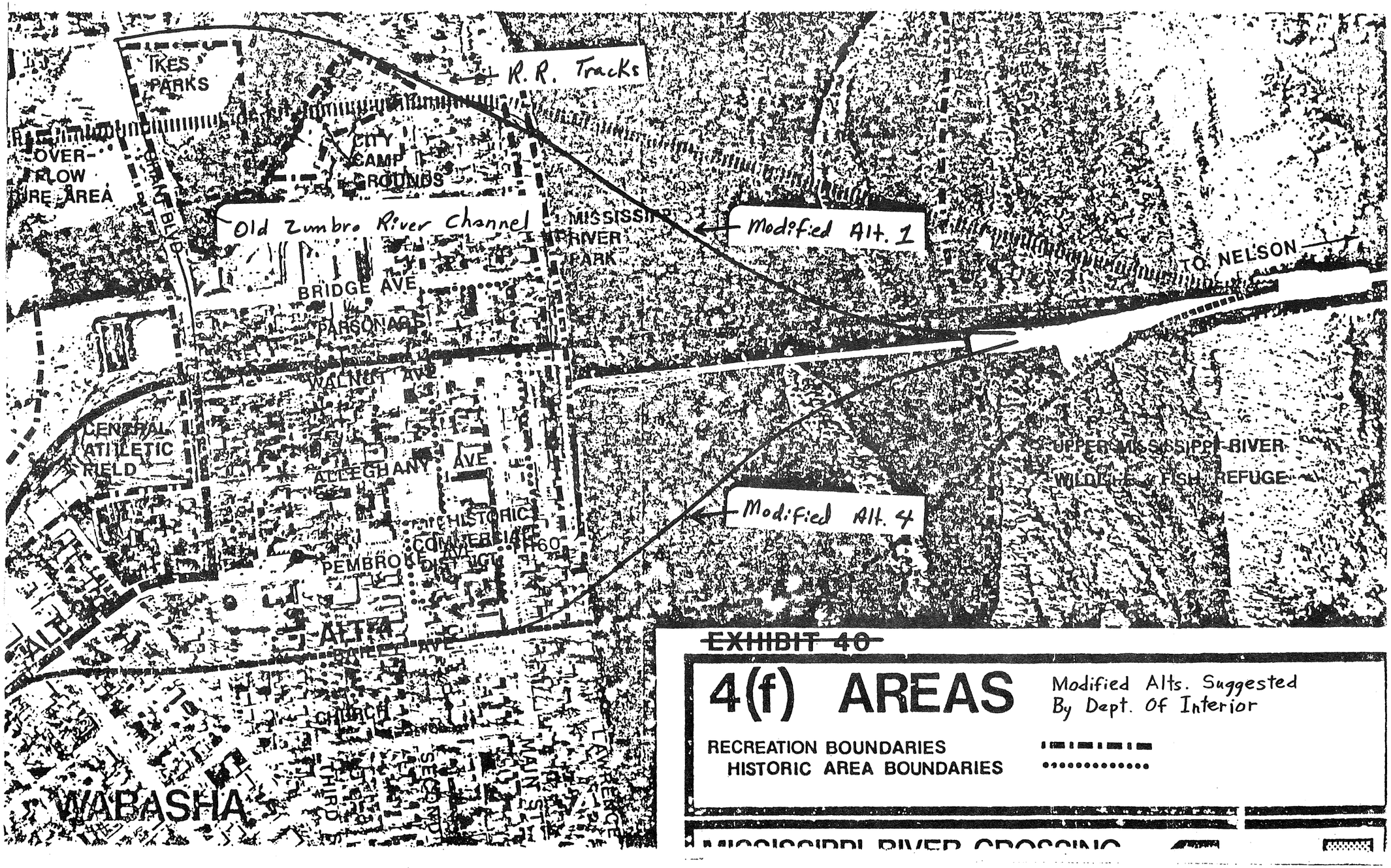
19. Thank you for the opportunity to review this statement and you may be assured of our full cooperation in timely resolution of a mutually satisfactory project.

Sincerely,

James U. Rathlesberger
Special Assistant to
Assistant SECRETARY

Enclosure

cc: Mr. Roy J. Larson
MN Dept. of Transportation
District Engineer
Box 6177
Rochester, MN 55901



~~EXHIBIT 40~~

4(f) AREAS

Modified Alts. Suggested
By Dept. Of Interior

RECREATION BOUNDARIES
HISTORIC AREA BOUNDARIES

United States Department of the Interior

OFFICE OF THE SECRETARY
NORTH CENTRAL REGION
175 WEST JACKSON BOULEVARD
CHICAGO, ILLINOIS 60604

ER 80/938

June 1, 1981

Mr. William R. Lake
Division Administrator
Federal Highway Department
Suite 490, Metro Square Building
Seventh & Robert Streets
St. Paul, Minnesota 55101

Dear Mr. Lake:

20. This is in response to our continued efforts to resolve issues surfaced by the draft environmental impact statement and Section 4(f) evaluation for the Mississippi River Bridge at Wabasha, Minnesota (S.P. 7910 & 7911 T.H. 60).

21. In our letter of November 26, 1980, we suggested that there were some adverse impacts to cultural resources and fish and wildlife resources that were considered excessive. As a result, the Heritage Conservation and Recreation Service and Fish and Wildlife Service requested that the Highway Department develop additional alternatives which might further minimize their respective concerns. In his letter of April 13, 1981, Mr. Richard P. Klobuchar, of the Minnesota Department of Transportation, provided four new project alternatives (1-A, 1-B, 4-A, and 4-B).

22. We are very pleased with the new alternatives and alignment shifts. Alternatives 1-B and 4 (A or B) are considered most acceptable. Alternative 4 (A or B) should be considered our preferred alternative, pending determination and evaluation of the social costs and community opposition. If alternative 4 (A or B) is found to be socially unacceptable, we will accept alternative 1-B.

23. There appears to be no question that the project will meet the feasible and prudent evaluation of Section 4(f). However, continued close coordination should be maintained with Heritage Conservation and Recreation Service and Fish and Wildlife Service to ensure that project planning will minimize adverse impacts and obtain complete mitigation.

24. Your department, along with Minnesota Department of Transporation, is to be commended for the effort and cooperation extended on this project. We recognize that this project has been a test for interagency participation. Your willingness to maintain flexibility in project planning allows our two agencies to find agreeable areas of compromise.

Sincerely yours,

Sheila D. Minor
Regional Environmental Officer

cc: Mr. Richard P. Klobuchar
Minnesota Department of Transportation
District 6
North Highway 52, Box 6177
Rochester, Minnesota 55901

Reply to the U.S. Department Of The Interior comments on pages 186-192. Reply numbers correspond to comment paragraph numbers. Comments 1, 2, 10, 17, 18, 19, 20, 21 and 24 do not require replies.

3. Additional planning and evaluation to reduce Section 4(f) impacts and develop mitigation measures has been performed as documented in this EIS on pages 129-150.

4. Alternatives 4A and 4B were developed as a result of this comment. However, Alternative 3B is selected as the preferred alternative based on an overall evaluation of all significant factors, see discussion on pages 23-25. Mn/DOT considered comments from all agencies in addition to identifiable effects in its selection of the preferred Alternative, Alternate 3B. Specific mitigation measures are described in the Section 4(f) Evaluation section on pages 148-150.

5. Impacts to the boat launching facility in the Upper Mississippi River Wild Life and Fish Refuge include reconstruction of the entrance from WSH 25 and the availability of a segment of existing WSH 25 for additional parking. Access will be provided at all times, see discussion on pages 136 and 137.

7. Alternatives 4, 4A and 4B provide convenient traffic access to and from the historic commercial district via Third or Fourth Ave. to Pembroke Ave. Alternatives 4A and 4B do not displace any Grace Memorial Episcopal Church property, but would have adverse noise and visual impacts. No practicable means to reduce exterior noise levels at the church have been identified.

8. Alternative 3B is selected as the preferred alternative based on an evaluation of all significant factors. Cultural resource impacts and proposed mitigation are described in the Social, Relocation, Noise, Historic and Archaeological, and Visual sections of this EIS. The historical mitigation measures proposed are acceptable to the State Historic Preservation Officer and the Advisory Council On Historic Preservation as documented in the Memorandum Of Agreement on pages 127 & 128.

9. Alternative 1B was developed as a result of this comment.

11. Corps of Engineers right of way authorization requirement has been included as suggested, see p. iii.

12. The refuge's title has been corrected as suggested.

13. FTU units were used by the MPCA prior to 1980 and are therefore appropriate for the data in Table No. 24. MPCA currently uses NTU (nephelo metric units) to describe turbidity.

14. The listing on DEIS p. 168 has been omitted from the FEIS.

15. The location of the mussel bed is shown on Exhibit No. 26 on page 102. Impacts on the mussel bed (not expected to be significant) are discussed in the Wildlife and Construction sections on pages 101, 168-170.

16. Alternative 3B has been selected as the preferred alternative. The basis of the selection and mitigation measures proposed are documented in this EIS.

22. Although Alternatives 4A and 4B would not require the use of any of the historic Grace Memorial Episcopal Church property, these alternatives would be adjacent to and adversely effect that property by introducing visual and audible elements that are out of character with the property. These alternatives would also be undesirable to church users because of increased traffic and vehicle-pedestrian conflicts. Alternatives 4A and 4B also would have a severe impact on the grade school across the street from the historic church. These alternatives also have less than desirable highway alignment. In summary, Alternatives 4A and 4B have adverse impacts similar to Preferred Alternative 3B except 4A and 4B have much poorer highway alignment, a severe impact on a grade school, and cost more. Alternative 1B avoids historic properties, but disrupts the Wabasha park corridor, has less than desirable highway alignment and costs significantly more than Alternative 3B. The selection of Preferred Alternative 3B is documented on pages 23-25.

23. Additional coordination with the DOI and other agencies will be performed as warranted.

Form DOT F 1320.1 (6-78)

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE SECRETARY

UNITED STATES GOVERNMENT

memorandum

Subject: Draft Environmental Impact Statement: Minnesota T.H. 60 and Wisconsin S.H. 25, FHWA-MN-EIS-80-01-D

Date: October 9, 1980

From: Martin Convisser
Director, Office of Environment and Safety

Reply to Attn. of:

To: Chief, Environmental Programs Division
Federal Highway Administration, HEV-10

We appreciate the opportunity to review and comment on the subject draft environmental impact statement. We have no specific comments to offer on the statement.

#

SPEED LIMIT 55
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Advisory Council On Historic Preservation

1522 K Street, NW
Washington, DC 20005

January 5, 1982

Mr. James E. St. John
District Engineer
Federal Highway Administration
Metro Square Building
Suite 490
7th and Roberts Streets
St. Paul, MN 55101

Dear Mr. St. John:

1. The Council is in receipt of your request for comments on the effects of the proposed replacement of the Mississippi River Bridge and approaches at Wabashaw, Minnesota, on properties included in or eligible for inclusion in the National Register of Historic Places.

2. The Council has initiated review of the material submitted and notes that no determination of preferred alternatives has been made for the project in accordance with Section 4(f) of the Department of Transportation Act of 1966 (48 U.S.C. 1653(f)). The Council requests that such a preliminary determination be made so that it may continue the consultation process as set forth in Section 800.6(b) of the Council's regulations, "Protection of Historic and Cultural Properties."

3. If you have any questions or need further assistance please contact Jack L. Goldstein or Michael Quinn at 202-254-3495.

Thank you for your cooperation in this matter.

Sincerely,

Jordan E. Tannenbaum

Jordan E. Tannenbaum
Chief, Eastern Division of
Project Review

Reply to Advisory Council On Historic Preservation comments on page 196. Reply numbers correspond to comment paragraph numbers. Comments 1 and 3 do not require replies.

2. Subsequent consultation has resulted in the Memorandum Of Agreement contained on pages 127-128.

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

REPLY TO ATTENTION OF: 5XER

80-039-424(6)
D-FHW-F40155-MN-WI

17 OCT 1980

Mr. Roy J. Larson
District Engineer
Minnesota Department of Transportation
Box 6177
Rochester, Minnesota 55901

Dear Mr. Larson:

1. We have completed our review of the Draft Environmental Impact Statement (EIS) for Trunk Highway 60 in Wabasha County, Minnesota and State Highway 25 in Buffalo County, Wisconsin. This Draft EIS was sent to us on August 15, 1980, and requested our views and comments on the proposed new bridge across the Mississippi River at Wabasha, Minnesota.

2. Based upon our review of the Draft EIS, we find that Alternative "3C" to be the environmentally preferrable route. We believe this alternative to be the environmentally preferrable route because it provides the desired service while minimizing the adverse impacts upon wetlands and floodplains, and has minimal adverse noise impacts. While other alternatives may reduce the adverse noise impacts, they effect a greater amount of wetland areas or vice versa. Therefore, based upon the selection of alternative "3C", we have rated the project as LO-2. Specifically, this indicates we lack objection to the project and request additional information to resolve the concerns indicated in our attached detailed comments. However, if another alternative is selected, we recommend that mitigative measures be implemented to reduce the environmental impacts to a level equal to or less than that anticipated with alternative "3C." The date and a summary of our comments will be published in the Federal Register.

3. We appreciate the opportunity to review this Draft EIS. If you or your staff have any questions in regard to our comments, please contact Mr. William D. Franz at 312/886-6687.

Sincerely yours,

Barbara J. Taylor

Barbara J. Taylor, Chief
Environmental Impact Review Staff
Office of Environmental Review

Attachment

Wetland Impacts

4. The Environmental Impact Statement (EIS) has provided a good assessment of the potential wetland impacts of each of the six alternatives considered. We agree with the conclusions reached in the EIS that the alternative having the least adverse impact upon wetland is alternative 3B, followed by 3C, 1, 4, and 3A. Alternative 6 would not have any adverse impact since it is the no-build alternative. The impacts upon the wetlands would result from fill being placed in backwater channels of either the Old Zumbro River or the Mississippi River. Fill is required because the bridge approaches must be replaced and the bridge must be at an elevation sufficient to allow navigation on the Mississippi River. Changing the side slopes of the approaches is offered as mitigation for the loss of wetlands. This mitigation measure should save several acres of wetlands. We note that alternative 3C requires the filling of a type 1 wetland on the east side of the Old Zumbro River channel. This wetland area must be filled in order to construct a curve through the central athletic field area. We request that consideration be given to beginning this curve further to the east thus, making use of a greater portion of the existing roadway and fill.

5. The EIS did not specify what would be done to the existing bridge and the fill associated with it. Demolition procedures should be identified, as well as disposal sites for the rubble. From the maps and plans included in the EIS, it appears that bridge approaches will remain in the waterway. Since these approaches will no longer be necessary, consideration should be given to their removal and possible recreation of wetlands, or other mitigative measures at these sites.

Noise Impacts

6. The EIS and the Noise Report, which we reviewed previously, present an adequate assessment of the potential noise impacts. As indicated in the EIS, the most significant impacts will occur along alternative 3B. This is due to alternative 3B being constructed along existing streets in a residential neighborhood. The noise levels which would be experienced in this area is unacceptable, and we could not concur with the selection of this alternative.

7. Alternative 3A or 3C will result in only one residential site having noise levels exceeding the Federal Highway Administration's noise standards. However, noise levels will increase over the present levels throughout the project area. Mitigation measures, such as barriers, are not feasible in the residential areas because of the number of ingress and egress points. Since the bridge and approaches will be elevated, the use of a solid outside wall instead of cyclone type fence could act as a sound barrier and could reduce noise levels in the residential area. We note that a barrier may be constructed in the central athletic field area. This barrier will serve as a sound attenuation device and a safety barrier, and could be extended to the bridge and approaches as they pass above Wabasha residential and commercial area.

Additional Comments

8. The EIS indicated that fill material may be obtained from the Army Corps of Engineers maintenance dredging program. We support and encourage the use of this material for such purposes. If the use of this material is agreed upon, the temporary storage site should be described in the Final EIS.

Reply to U.S. Environmental Protection Agency comments on pages 198-200. Reply numbers correspond to comment paragraph numbers. Comment number 1 does not require a reply.

2. Alternative 3B is selected as the preferred alternative based on an evaluation of all significant factors. Alternatives 3B and 3C are identical except at the Central Athletic Field where 3B goes around the Athletic Field on existing highways (C.S.A.H. 59 and T.H. 60) and 3C passes through the Athletic Field on new alignment. The impacts of 3B and 3C are therefore identical except at the Central Athletic Field area. Overall, Alternative 3B has less impacts than 3C since 3B avoids disruption of the Central Athletic Field and Fair Grounds areas which are both Section 4(f) land.

4. Beginning the Alternative 3C curve further to the east near the Old Zumbro River channel to reduce wetland filling is not warranted because such an alignment would displace a residence and private campground.

5. A section describing the removal of the existing bridge has been added to the Construction Impacts section, see pages 171 and 172. The existing bridge will be removed from abutment to abutment unless the City of Wabasha and the R/W fee owner desire to keep a short segment of the Minnesota approach as an observation deck or an entrance to the Mississippi River Park. Demolition and disposal are controlled by applicable laws, regulations and specifications. The existing Wisconsin approach fill will remain inplace to help perpetuate the existing backwater flow patterns and to provide additional parking for the adjacent boat ramp. The Minnesota approach fill is minimal and is located outside the 100 year flood plain. Mitigation measures at the Wisconsin approach are described in the Wetlands and Section 4(f) Evaluation sections.

6. The Alternative 3B selection is based on an evaluation of all significant factors as documented in this FEIS. Although the data presented in the DEIS implied that the Alternative 3B noise impacts are more significant than those of the other build alternatives, closer examination indicates the overall noise impacts of all alternatives are somewhat similar. Alternatives 3B and 1A utilize substantial portions of existing T.H. 60 and C.S.A.H. 59 which have several receptors currently experiencing noise levels near standards. Therefore, the increased traffic from the proposed action will increase noise levels above standards at several receptors. The other build alternatives utilize none or shorter lengths of T.H. 60 and low volume city streets and greater lengths of new alignment. These alternatives cause moderate to large noise level changes in areas that have existing noise levels considerably below standards. As a result only a few receptors on these alternatives would experience noise levels above standards. Therefore, since the noise level changes are relatively similar for all build alternatives, the difference in impacts is the location of the noise. Preferred Alternative 3B makes maximum utilization of existing T.H. 60 and C.S.A.H. 59 and therefore confines traffic noise to locations that are accustomed to such noise to the extent possible. Since the perceived magnitude of traffic noise impacts is related to the amount of change, ambiant noise levels, and tolerance of existing noise, the overall noise impact of Alternative 3B is similar to that of the other build alternatives. Additional data has been added to Table 21 on page 74 to show that the number of receptors exceeding standards on the new alignment segment of Alternative 3B is in the range of the other build alternatives.

7. A concrete Type J bridge railing will be utilized. This railing, which is solid concrete and 2 ft. 10 in. high, will help reduce noise levels as suggested. A similar Type J barrier will probably be utilized on the Wabasha approach fill from near the alley between Grant Blvd. and Third St. to the bridge abutment near Second St. Noise barriers at urban intersections are not effective because of the large barrier openings necessary to provide safe intersection sight distance.

8. Material from the Corps of Engineers dredging operations will be used to the extent practical. Since only about 40,000 cubic yards of dredged material is needed, the material will likely be utilized from existing stockpile sites, see Borrow Material section on pages 162 and 163.

FEDERAL ENERGY REGULATORY COMMISSION
CHICAGO REGIONAL OFFICE
230 SOUTH DEARBORN STREET, ROOM 3130
CHICAGO, ILLINOIS 60604

August 22, 1980

Mr. Roy J. Larson, District Engineer
Minnesota Department of Transportation
District 6
Box 6177
Rochester, Minnesota 55901

Reference: 316 FHWA-MN-EIS-80-01-D

Dear Mr. Larson:

1. This is in response to your recent request inviting our review and comments on the Draft Environmental Impact Statement and Section 4(f) Evaluation for the Mississippi River Bridge at Wabasha, Minnesota. Comments of this office are made in accordance with the National Environmental Policy Act of 1969 and the August 1, 1973 Guidelines of the Council on Environmental Quality. We reviewed this report to determine the effect on matters concerning the Federal Energy Regulatory Commission's responsibilities. Such responsibilities stem from the Federal Power Act and the Natural Gas Act and relate to the licensing of non-Federal hydroelectric projects and associated transmission lines; participation in planning and development of Federal hydroelectric projects; certification for construction and operation of natural gas pipeline facilities, defined to include both interstate pipeline and terminal facilities; and the permission and approval required for the abandonment of natural gas pipeline facilities.

2. The above-noted proposed development would not pose a major obstacle to the construction or operation of such facilities and the Draft does not indicate that existing hydroelectric developments would be adversely affected. We presume that appropriate utility contacts will be made so that gas or electric services will not be unnecessarily disrupted.

Sincerely,

Lawrence F. Coffill

Lawrence F. Coffill
Regional Engineer

Reply to Federal Energy Regulatory Commission comments on page 203. Reply numbers correspond to comment paragraph numbers. Comment number 1 does not require a reply.

2. No hydroelectric facilities exist in the project area and none will be impacted by the proposed action. No utilities are attached to the existing bridge. However, a cable TV company is considering placing a cable on the bridge. The bridge will not constitute a barrier to the transmission of public utilities. The construction contractor is responsible for continuation of all utilities. Any utility relocations required will be performed with a minimum disruption of service.

MINNESOTA HISTORICAL SOCIETY
FOUNDED IN 1849
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22 February 1982

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

Dear Mr. Kachelmyer:

RE: Wabasha Bridge Replacement
S.P. 7910 & S.P. 7911 (T.H. 60)
MN Project F 108-1 ( ) & F 046- ( )
Wabasha County, Minnesota

MHS Referral File Number H 129

1. The purpose of this letter is to update our position on the above-referenced project. Our most recent comments were expressed in a letter of March 1981.*

2. We continue to believe that alternates 3A, 3B, 3C, 4, 4A, and 4B will have adverse impacts on properties listed on or eligible to the National Register.

3. After further review, we have modified our opinions on the degree of effect of the various alternatives on the downtown economy. Alternates 1A and 3B utilize the existing street grid pattern and would likely have less impact on preceived accessibility to the commercial area than the other alternates. We would, therefore, conclude that there may be less potential negative impact on the downtown economy from these two alternates. However, it is our further opinion that we do not have sufficient data to conclude that any of the alternates will have an adverse impact on the downtown economy. Therefore, we concur that alternates 1, 1A, and 1B will not have an adverse impact on properties listed on or eligible to the National Register.

4. With regard to the various mitigation measures for alternates 3A, 3B, and 3C, we agree that adverse impacts would occur on the four buildings which must be removed. Further individual review of the significance and/or condition of each of these structures will indicate whether moving and/or detailed recording would be warranted in each case. We further believe that the imposition of the bridge structure on the historic district will have an adverse aesthetic impact. Although mitigation for this type of impact is extremely difficult, we feel that careful attention should be given to the bridge design. These concerns could be integrated with the mitigation measures which have been suggested to the 0.6 acre area taken for the right of way in formulating an overall scheme to help to soften the impact of the structure.

*March, 1981 letter is contained in the Appendix.

5. For mitigation of the effects of the various "4" alternates we feel that the severe noise and aesthetic impact on Grace Memorial Church from the 4 alternate may have little chance of satisfactory mitigation. For alternates 4A and 4B, the effect is less severe because the churchyard is not physically altered, although noise and aesthetic impacts remain. It is our opinion that a noise wall would constitute a significant visual intrusion; perhaps methods of landscaping in this area could act to visually and audibly screen the elevated roadway from the church setting.

6. We appreciate the consideration you have given to cultural resources during the planning of this project. As we have stated, we feel that any of the "3" and "4" alternates would result in unfortunate impact on those resources. Should any of them be selected for implementation, however, we would welcome the opportunity to work with you further in attempting to develop means of mitigating some of those effects.

Sincerely,

Russell W. Fridley
State Historic Preservation Officer

RWF/fr

Reply to Minnesota Historical Society comments on pages 205 and 206. Reply numbers correspond to comment paragraph numbers. Comments 1, 2, and 3 do not require replies.

4. As described in the Memorandum Of Agreement on pages 127-128, mitigation for the four displaced buildings will include moving two and detailed recording of the other two. Aesthetic details have been considered and incorporated in the corridor concept plan shown on Exhibits No. 34, 35 and 36. Also details such as bridge color, superstructure type, lighting standards, and retaining wall surfacing will be given as much aesthetic consideration as practicable throughout the project development process.

5. Landscaping would soften the visual intrusion of the group 4 alternatives at the Grace Memorial Episcopal Church but would not perceptibly reduce the noise levels.

6. Alternative 3B is selected as the preferred alternative based on an overall evaluation of all significant factors, including effects on historic properties and cultural resources, see pages 23-25.

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

October 5, 1980

Mr. R.H. Sullivan
Design Services Director
Minnesota Department of Transportation
612 Transportation Building
St. Paul, Minnesota 55155

RE: 330 DEIS for S.P. 7910 and 7911, T.H. 60
Bridge over Mississippi River at Wabasha

Dear Mr. Sullivan:

1. The Department of Natural Resources has reviewed the above referenced Draft Environmental Impact Statement and provides the following comments for your consideration.

2. It appears that little has changed since the early coordination meeting and field reconnaissance in April of 1979, on which DNR's previous comments were based (see letter of June 1, 1979, p. A-18, 19 of DEIS).

3. DNR still feels that alternate 3B is the least destructive from the standpoint of fish, wildlife and other natural resources. Alternate 3C would be the second most desirable choice. Alternate 3A would definitely be the least acceptable choice based on the relative amount of impact to natural resources.

4. If alternative 3C is chosen then we feel that minor alignment changes could avoid the necessity of filling into the old Zumbro River channel wetlands. However, if the 3C alternative does require fill into the old river channel then 3 to 1 slopes would minimize encroachment.

5. In addition to minimizing the amount of fill, other measures can be taken to mitigate impacts, such as erosion control to reduce siltation during and after construction; purchase of lands bordering affected wetlands; increasing wetland area to replace the fill area lost; maintenance of desirable water flow patterns; and reduction or elimination of highway runoff and pollutants into adjacent waters.

6. Mn/DOT should continue to work with the DNR Regional Hydrologist in Rochester, Glenn Warner, regarding DNR permit requirements. His telephone number is 507-285-7420.

Sincerely,

Thomas W. Balcom

Thomas W. Balcom
Environmental Review Coordinator

TWB:KW:mp

cc: Ron Harnack, Earl Huber, John Chell

AN EQUAL OPPORTUNITY EMPLOYER

Reply to Minnesota Department Of Natural Resources comments on page 208. Reply numbers correspond to comment paragraph numbers. Comments 1 and 2 do not require replies.

3. Alternative 3B is the preferred alternative.

4. Realigning Alternative 3C to avoid filling in the Old Zumbro River wetlands is not possible without displacing a private campground and private residence.

5. Preferred Alternative 3B will not effect any wetlands in Minnesota. Wetland mitigation measures are described in the Wetlands, Water Quality and Construction sections of this EIS.

6. Mn/DOT will coordinate with the DNR Regional Hydrologist regarding DNR permits.

Minnesota Pollution Control Agency

June 21, 1982

Joseph Meade
Project Manager
Minnesota Department of Transportation
District 6
Box 6177
Rochester, Minnesota 55901

Dear Mr. Meade:

1. The Minnesota Pollution Control Agency (MPCA) has reevaluated the draft Environmental Impact Statement (EIS) and Noise Analysis Report on the Mississippi River Bridge at Wabasha, Minnesota and has the following comments.

2. Since July of 1980 when the draft EIS was prepared, MPCA has revised its water quality standards. The new standards for the Mississippi River at Wabasha are given in 6 MCAR 4.8015 and 6 MCAR 4.8025. The revised rules include a seventh classification called "Limited Resource Value Waters." The Mississippi River at Wabasha is now classified 2B, 3B, 2C, 3C, 4A, 4B, 5 and 6. The old Zumbro Riverbed would have the same classification as the Mississippi River.

3. It is somewhat difficult to discuss erosion control, runoff control and minimizing sedimentation when the Chippewa River annually deposits 3,500,000 tons of sediment in the Mississippi River 3 miles upstream of Wabasha. However, erosion and sedimentation resulting from either construction activities or normal highway runoff can have significant localized effects if not properly controlled. Significant progress has been made in the recent past concerning erosion control, minimizing siltation during construction and

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highway runoff controls. The feasibility of these control measures should be carefully considered for this project and implemented where applicable.

4. The draft EIS indicates that the probability of a spill occurring on the bridge is very low and therefore is probably not a significant issue. Unfortunately, spills do occur around the state and have to be controlled and cleaned up. This Agency supports and urges MnDOT to investigate various spill control measures that can be designed into the project which will facilitate the control and cleanup of a spill. These measures are often identical to surface runoff control measures.

5. Primary air quality concerns include the projected noise impact associated with the chosen alternative (3B), noise levels due to construction of the project, and construction-related fugitive dust emissions. From a noise impact standpoint, all alternatives, except number 6 (the no build alternative), were better than the chosen alternative, 3B. (See Table 2, number of individual receptors exceeding federal and state noise standards.)

6. Five critical, "worst case" receptors were analyzed for alternative 3B. Three of the five (2 residential and one campground receptor) will experience noise levels above the state daytime and nighttime noise standards and federal noise standards in the year 2000. Existing noise levels exceeded the state standard only at the campground receptor site. The final noise report should include a statement about existing nighttime noise levels at these receptors.

7. The statement was made on page 2 of the noise analysis report that, "except for a multipurpose noise wall-park fence at the central athletic field (receptor no. 4) noise abatement measures are not feasible for the project." It is unclear, however, why the athletic field (receptor 4) was not an analyzed receptor for alternative 3B. It appears to be near enough to Grant Boulevard and the L_{10}=70 dBA noise contour line to warrant an analysis. If the state noise standards are to be exceeded at the athletic field for alternative 3B, a noise wall-park fence should be installed for the chosen alternative. In addition, it appears to be feasible to install a noise barrier/wall at the Big Sioux Campground (receptor site no. 11). This mitigation should be further explored.

8. With respect to construction related noise, the final noise report should include rerouting truck traffic to mitigate noise impacts at surrounding sensitive receptors as another control measure for the project. In addition, temporary noise barriers should be set up, whenever possible, to reduce construction noise impacts, particularly for the noisiest activities such as pile driving.

9. Concern has been expressed by the owner of the Anderson House about the noise impact at the hotel. The final noise report should contain a discussion of the noise impact at the hotel similar to that contained on pages 116 and 120 of the draft EIS. As discussed in this section, no violations of the state daytime and federal noise standards are predicted at the hotel in the year 2000. The noise level at the exterior wall of the hotel is predicted to be 65 dBA. The final noise report should, however, include an assessment of the future nighttime noise impact at the hotel. If the state nighttime standards are to be exceeded, mitigative measures should be discussed in the final report.

10. Finally, fugitive dust emissions will be generated by construction activities such as demolition of the existing bridge and construction of the new bridge and bridge approaches. In addition to the fugitive dust control measure (application of water to exposed areas) included at page 151 of the draft EIS, other dust control measures should be implemented. These measures could include timely job site cleanup, haul road maintenance, covering of or applying dust suppressants to truck loads to prevent the escape of materials, and the ceasing of operations during periods of high winds.

11. I hope that these comments will be helpful to you in developing the final documents for this project.

If you have any questions, please feel free to call Deborah Pile of my staff (296-7216).

Sincerely,

Louis Breimhurst

Louis J. Breimhurst
Executive Director

cc: Larry Landherr

Reply to Minnesota Pollution Control Agency comments on pages 210-212. Reply numbers correspond to comment paragraph numbers. Comments 1 and 11 do not require replies.

2. The water quality classification discussion has been revised to reflect the latest MPCA standards, see page 82.

3. Erosion will be controlled by the rules, regulations and specifications in effect at the time of construction. Erosion control is discussed in the Construction section of this EIS and includes designating the entire project area as a critical erosion area, requiring the contractor to submit an erosion control plan for approval prior to construction, utilizing temporary erosion control devices such as mulches, slope drains, dikes, sediment barriers and turf establishment as warranted, earthwork operations in or adjacent to flowing streams shall be separated from the stream by a sediment barrier or dike, permanent erosion control features including seeding, sodding, riprap and drainage facilities will be incorporated at the earliest practicable time.

   Highway runoff controls will consist of curb and gutter and storm sewer on the urban at grade segment in Wabasha and bridge deck scuppers on the bridge. Downspouts will be used with the scuppers in urban Wabasha.

4. Hazardous spills are discussed on pages 86 and 87 of this EIS. Evaluation of possible spill control devices did not reveal any feasible system. A manifold storm water catchment system is not practical because of the bridge length, temperature variations, winter sanding, and lack of suitable storage area. The Minnesota approach is located in a commercial and residential urban area with no available storage space. The navigational channel is adjacent to the Minnesota shore line as is a narrow and linear mussel bed. The Wisconsin approach is located in a sensitive backwater area. The Wisconsin DNR is very concerned about perpetuating backwater flow and sediment patterns in the backwaters and is unlikely to allow construction of any retention ponds in that area.

   Since the bridge length is too great (about 3000 ft.) to run all the drainage off the ends of the bridge, catch basins (scuppers) will be utilized in the bridge deck. Downspouts will be connected to the scuppers in urban Wabasha to control the drainage. Downspouts or scuppers will not be directly outletted into sensitive areas such as mussel beds.

5. The numbers listed in Table 2 of the Preliminary Noise Analysis Report include receptors along segments of existing T.H. 60 that will be utilized as part of the various alternatives. The number of receptors exceeding standards and located on segments of T.H. 60 that will be so utilized have been added to Table 2, see Table 21 (identical to Table 2) and related discussion on pages 74-76 of this EIS.

6. A statement has been added on page 71 of this EIS indicating that existing nighttime L10 noise levels are estimated to be 5 to 8 dBA less than existing L10 levels.

7. Noise receptor No. 4 -- Central Athletic Field -- was analyzed for Alternatives 3A, 3B, and 3C. However 3B was not included in the table in the DEIS and Preliminary Noise Analysis Report because it has significantly less impact on the Central Athletic Field than 3A or 3C. Alternative 3B will cause noise levels above standards in a 35 ft. wide strip of the Central Athletic Field adjacent to Grant Blvd. The multi purpose park fence proposed adjacent to the Cental Athletic Field will provide sufficient

   fence proposed adjacent to the Central Athletic Field will provide sufficient attenuation so that noise levels are below standards in the Athletic Field. See discussions on pages 76 and 77 of this EIS.

   Noise levels at receptor No. 11 (campground) will increase 2dBA between now and the year 2000. Since the predicted year 2000 L_{10} noise level is near the Federal Standard and the human ear cannot usually detect noise increases less than 3dBA, the noise impact will not be significant and no mitigation measures are proposed. Also the effect of the existing campground fence was not included in the noise analysis. The existing solid wooden fence is about 8 ft. high and 1 in. thick. Although the actual attenuation of the fence is relatively small, the perceived effectiveness is probably good because of the visual screening provided.

8. Construction noise will be considered during selection of haul roads and heavy equipment routes. However, as described in the Construction Noise section of this EIS, such considerations are unlikely to have a significant effect on construction noise.

   Temporary noise barriers do not appear practical for this project. Temporary noise barriers could be effective in reducing construction noise in a small area or at an isolated receptor, but are not a practical means of controlling noise in an urban area surrounding a construction site as in Wabasha. Since no unique noise receptors are located in the immediate construction area, temporary noise barriers are not proposed. The most annoying construction noise is likely to be pile driving. However, as a result of potential vibration impacts, high energy pile driving may be restricted in the urban area, see the Construction Vibrations Mitigation discussion on page 161. Such restrictions could also reduce construction noise.

9. A discussion of noise impacts at the Anderson House hotel will be included in the Final Noise Report as suggested. The discussion contained on pages 116 and 120 of the DEIS has been repeated on page 120 of this FEIS. Preliminary analysis of nighttime noise levels at the hotel indicates the L_{50} level will be below the State Standard and the L_{10} level will be a few dBA above the State Standard. No mitigation measures are proposed for the hotel because the noise level increases will be relatively small (approx. 5dBA), the future noise levels are below Federal Standards and approximately equal to State Standards, and the hotel has no outdoor activity areas that are used during the nighttime.

10. Dust emissions will be controlled by the applicable laws, regulations and specification in effect at the time of construction. Dust control measures are described in the Construction Air Quality Mitigation section on pages 159 and 160 and include application of water, street cleaning and sweeping, timely prosecution of work and final cleanup and haul road maintenance.

OFFICE OF LOCAL AND URBAN AFFAIRS
MINNESOTA STATE PLANNING AGENCY • CAPITOL SQUARE BUILDING • ST. PAUL, MINNESOTA 55101 • PHONE (612) 296-3091

October 31, 1980

Roy Larson
District Engineer
MnDOT
District 6
North Highway 52
Box 6177
Rochester, MN 55901

RE: FY'81, Ed Malone Memorial Park
City of Wabasha, Wabasha County

Dear Mr. Larson:

1. Our office has reviewed the Draft Environmental Impact Statement and Section 4(f) Evaluation for Mississippi River Bridge at Wabasha, Minnesota document. Five location alternatives have been discussed in the draft proposal. Alternate route 1 is of concern to us because it is adjacent to the Ed Malone Memorial Park which is being considered for Land and Water Conservation funding (LAWCON) through the Heritage Conservation and Recreation Service, Department of Interior.

2. Property acquired or developed with assistance from the Fund shall be retained and used for public outdoor recreation. Any property so acquired or developed shall not be wholly or partly converted to other than public outdoor recreation uses without the approval of the Director of Interior. (See Sec. 6(f) of the Land and Water Conservation Fund Act, as amended, and 248 DM 1.1F.) Such approval will be given only upon such conditions as the Director deems necessary to assure the substitution of other outdoor recreation properties of at least equal fair market value and of reasonably equivalent usefulness, quality, and location.

3. The use of property acquired or developed with assistance from the Fund may not be changed from that contemplated and approved when assistance was obtained, unless prior approval is obtained from the Director.

4. Property acquired or developed with assistance from the Fund shall be operated and maintained as follows:

   A. The property shall be maintained so as to appear attractive and inviting to the public.
   B. Sanitation and sanitary facilities shall be maintained in accordance with applicable health standards.
   C. Properties shall be kept reasonably safe for public use. Fire prevention, lifeguard, and similar activities should be maintained for proper public safety.

5. The LAWCON application that is pending final approval represents the third and final phase of a three phase program to develop Ed Malone Park. Phases I and II were developed by the State of Minnesota recreation grant funds.

6. Our office would recommend that alternate route 1 alignment be moved one block west of Church Avenue or utilize one of the other alternate routes under study.

7. Enclosed is a location and site development plan for Ed Malone Park showing existing and proposed development.

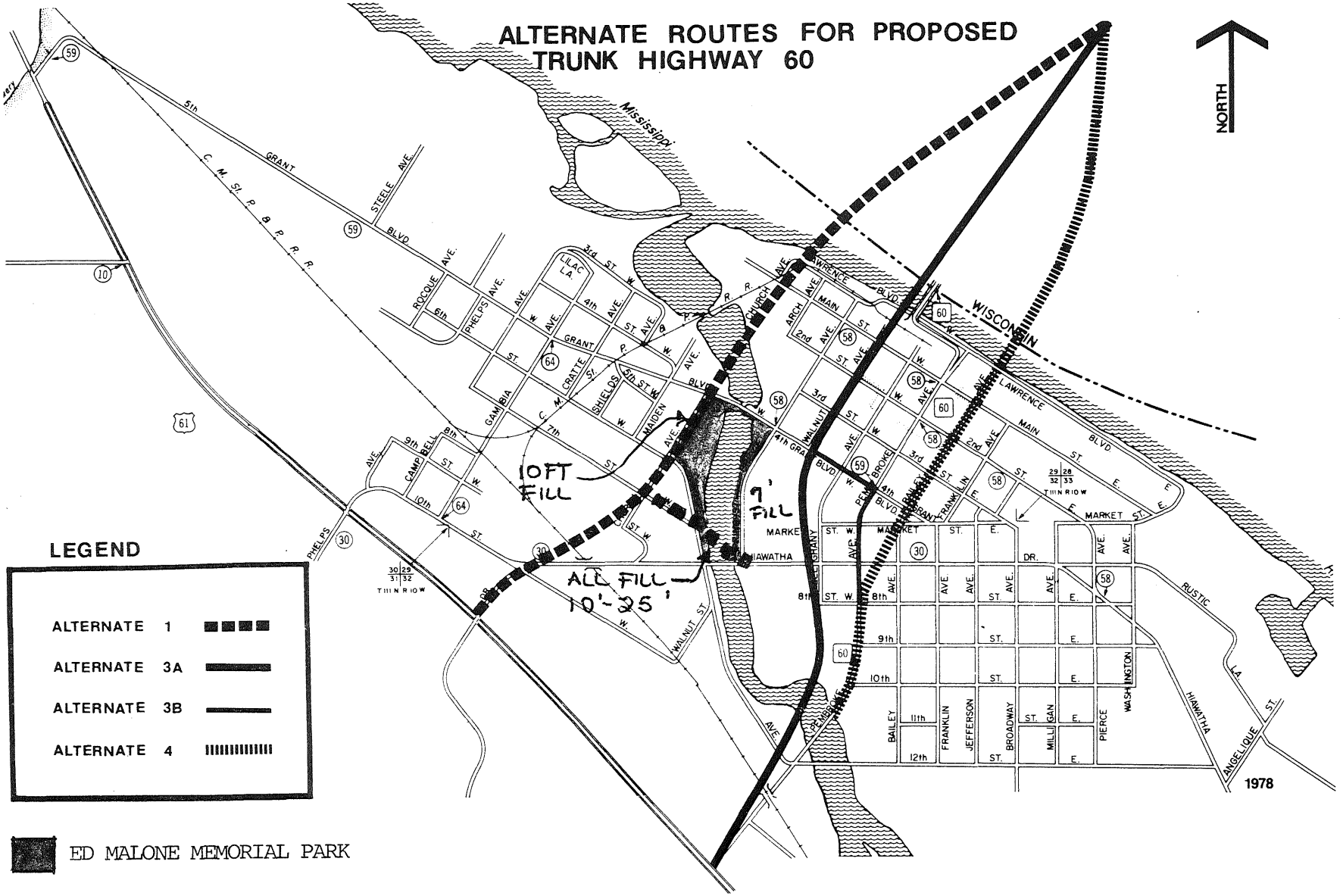
Sincerely,

Peter Klose

Peter W. Klose, Project Officer
Parks and Recreation Grants Section

PWK:cak

Enclosures


ALTERNATE ROUTES FOR PROPOSED
TRUNK HIGHWAY 60
NORTH
Mississippi
WISCONSIN
C. M. St. P. & P. R. R.
10FT FILL
9' FILL
ALL FILL 10'-25'
LEGEND
ALTERNATE 1
ALTERNATE 3A
ALTERNATE 3B
ALTERNATE 4
ED MALONE MEMORIAL PARK
1978

Reply to Minnesota State Planning Agency comments on pages 215-217. Reply numbers correspond to comment paragraph numbers. Comments 2, 3, 4, 5 and 7 do not require replies.

1. Subsequent to this comment, LAWCON grants totaling $82,730 were approved and are being utilized for development of the Ed Malone Memorial Park.

6. Alternative 3B is selected as the preferred alternative. Alternative 3B will not impact the Ed Malone Memorial Park.

MINNESOTA-WISCONSIN BOUNDARY AREA COMMISSION
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Hearing Statement: Wabasha-Nelson Bridge Replacement

September 24-25, 1980

1. The Minnesota-Wisconsin Boundary Area Commission agrees that a replacement bridge between Wabasha, Minnesota, and Nelson, Wisconsin, is needed as soon as possible in order to maintain and improve the functional integrity of the interstate community which is dependent on a highway bridge in this area, and to improve access between the States for through traffic. The Commission strongly supports and emphasizes the following conclusions presented in the DEIS:

   A. The bridge allows the Wabasha-Nelson area to function in a sense as a single economic unit (p. 13).

   B. Not replacing the bridge in the near future would create severe adverse social and economic effects since continued deterioration would ultimately require the structure to be closed (p.18).

   C. The adverse impacts of building are minor when compared to those of not building (p. 19).

   D. A new bridge should be completed by 1987, in accordance with the proposed Project Development Schedule, that is before the projected remaining life of the present structure expires that same year (p. 23).

   E. In order to mitigate adverse effects of bridge approach modifications required on the Wisconsin side of the Mississippi River main channel, water flow in backwater channels which will be filled will be maintained and will be perpetuated by rechannelization or culverts prior to filling the backwater channel (p. 97).

   F. Use of 4(f) land for bridge replacement should be permitted in this case because there is no feasible and prudent alternative which would avoid such use, and the proposed program includes all possible planning to minimize harm; not building is not a prudent alternative (p. 142).

   G. All possible measures should be taken to use material dredged by the Corps of Engineers, to maintain the 9-foot navigation channel in the river, for the approximately 100,000 cubic yards of earth fill material needed for the project; this would help relieve a serious dredge material disposal problem in this area, make productive use of such material (already paid for by the taxpayers), and avoid the possibility of having to disrupt another area to obtain it.

2. The Commission recommends a replacement bridge alignment following the route described as Alternative 3 in the DEIS, but does not have a recommendation on which of the three sub-alternative routes (A, B or C) should be adopted in the Southwest sector of Wabasha since the impacts there are primarily local and are more properly addressed by community interests. The Commission agrees that the Alternative 3 crossing provides the most desirable and safest highway alignment, displaces the least amount of federal refuge land, and is reasonable in cost (p. 53).

3. Since the proposed replacement project will provide economic and social benefits important to citizens of both states, the project should be expedited by both state DOTs and FHWA on a closely-coordinated basis to avoid delays which might occur just because some procedure required by one of the partner agencies is out of phase with the overall Project Development Schedule; the MWBAC offers to assist in any needed coordination efforts, as provided for in the Minnesota-Wisconsin Boundary Area Interstate Compact.

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Anthony S. Earl
Secretary

BOX 7921
MADISON, WISCONSIN 53707

October 17, 1980

IN REPLY REFER TO: 1650-2

Mr. Roy L. Larson
Minnesota Department of Transportation
Box 6177
Rochester, MN 55901

Dear Mr. Larson:

C1. We have reviewed the Draft Environmental Impact Statement and Section 4(f) Evaluation for the Mississippi River Bridge at Wabasha, Minnesota and have the following comments:

C2. Overall Analysis

The Environmental Impact Statement and Section 4(f) evaluation for this project appears quite complete. A sufficient number of alternatives are evaluated, and adequate consideration is given to environmental resources and impacts.

C3. Ranking of Alternatives

Alternatives 1 and 4 would be least favorable from the standpoint of the environment. Alternative 1 encroaches most seriously on the Nelson-Trevino Bottoms Scientific Area. Alternative 4, though outside the scientific area boundary, would encroach more on the presently undisturbed wetlands.

C4. We would favor Alternative 3 because it is the least environmentally damaging alternative. Adequate measures must be taken, however, to limit construction impacts to wetlands in the area. Future liaison meetings will need to be held to insure that these impacts are minimized.

Specific Comments on the EIS

C5. Page 65, Paragraph 4 - Will increased traffic volumes increase the need for secondary improvements to connecting roads?

C6. Pages 74-78 - While documentation for the air quality analysis is somewhat limited, overall air quality impacts of the project should be minimal.

C7. Page 100, Paragraph 3 - These statements imply that the wetland area that would be affected by the project is insignificant because only a small percentage of the total area wetlands would be impacted. The Department of Natural Resources considers all state wetlands to be of significant value and we suggest deleting these statements in the Final Environmental Impact Statement.

C8. Page 105, Last Sentence - If consideration is given to expanding the boundaries of the Upper Mississippi River Wildlife and Fish Refuge to compensate for the loss of refuge acreage, we would suggest that the area north of the Chippewa River be considered for inclusion.

C9. Page 132, Paragraph 2 - While the location of noise impacts, auto emission impacts, runoff and aesthetics impacts will be shifted, the impacts of wetland alteration will be a new impact.

C10. Page 147, Paragraph 3 - The aesthetics aspects of bridge abandonment should also be considered. Our experience with abandoned piers is that they are an eyesore, they serve as debris collectors, and they represent a significant hazard to navigation. Please refer to our letter of April 24, 1979 for our specific suggestions. In general, there is far too little discussion of demolition plans, scheduling, and impacts in this draft EIS.

C11. Page 159, Paragraph 2 - Again, the existence of 195,000 acres of wildlife habitat in the area does not make the 13 acres of habitat that will be displaced any less significant. The concept of "cumulative impact" (1508.7, CEQ Guidelines) is also applicable to these analyses.

C12. Page A-25, Second Paragraph - We support the Fish and Wildlife Services' suggestion to expand and improve boating access facilities on the Wisconsin side of the River.

C13. Mitigation Measures

We support the following mitigation measures as listed in various portions of the EIS:

1. Utilization of Wisconsin approach as much as possible to minimize encroachment (page 52, second last sentence).

2. Location of bridge piers on land rather than in backwater channels, to the extent possible (page 95, 4 a).

3. Location of stormwater outlets away from sensitive areas such as mussel beds (page 95, 4 b).

4. Maintenance of flow in backwater channels (page 97, 4 a).

5. Placement of gravel and concrete on the stream bed to increase habitat diversity and attract fish, particularly walleye (page 97, 4 b). (Rubble ledge bridge pier footings are also suggested, to encourage walley spawning.)

6. Inslopes of 4:1 rather that 6:1 to minimize displacement of wetlands and wildlife habitats (page 105, paragraph 1).

7. Consultation with U. S. Fish and Wildlife Service regarding the existence of endangered species (page 105, paragraphs 3-5).

8. Perpetuation of flow (page 107, 4). (Provisions must be made for the continuation of present water flow patterns through the network of side channels and backwaters.)

9. Minimal tree cutting and clearing, minimal disruption of flowage patterns, utilization of excavated material, slope protection measures including heavy stone riprapping and revegetation (page 141, Parcel A).

10. Consideration of aesthetic aspects throughout the project development process to insure scenic compatability (page 147, 4).

11. Temporary and permanent erosion control features (page 150, b).

12. Use of Mississippi River dredge spoil material for fill (page 150, 6 a).

13. Scheduling of construction so that in-channel work will not occur during the vulnerable spawning period (page 154, paragraph 3).

14. No direct discharge of dredge spoil material or dewatering effluent to the river (page 157, 3).

15. Construction from barges wherever possible (page 158, b).

16. Prohibition against construction activities in nearby wetlands (page 159, b).

Other mitigative measures may be suggested during future liaison meetings. We especially support the bridging (as opposed to filling) of critical fish and wildlife habitat areas and wet areas.

We appreciate the opportunity to comment on this Draft Environmental Impact Statement and hope that our comments will be helpful in preparing the Final Environmental impact Statement.

Sincerely,
Bureau of Environmental Impact

Howard S. Druckenmiller
Director

cc: James Lissack - Eau Claire
Robert Baker - DOT

Reply to Wisconsin Department Of Natural Resources comments on page 221-224. Reply numbers correspond to comment paragraph numbers. Comments C1, C2, C3, and C6 do not require replies.

C4. Alternative 3B is selected as the preferred alternative. Wetland mitigation measures are described in the Wetlands and Construction sections of this EIS and include using 4:1 inslopes instead of 6:1, continuation of backwater flow patterns, restriction of activities in wetlands outside the construction limits, temporary and permanent erosion control, encouraging construction from barges where possible, not allowing work road construction in the backwaters during April and May.

The liaison meeting held on March 31, 1981, with Wi/DNR, Mn/DNR and Mn/DOT was helpful in determining aquatic impacts and appropriate mitigation. Future liaison will be accomplished as warranted.

C5. Traffic volume analysis indicates connecting roads have sufficient capacity for the predicted future traffic. Therefore, no improvements are proposed for connecting roads.

C7. This paragraph has been revised in an attempt to remove the implication of insignificance, see page 96, paragraph 1. However, listing the percentage of wetlands inpacted has been standard procedure for Wetland Findings prepared by Mn/DOT since 1978. Therefore, the percentage has not been deleted.

C8. Rather than expand the boundaries of the Refuge, the portion of the existing highway corridor in the Refuge that is not needed for the proposed action will be returned to the U.S. Fish and Wildlife Service for management as part of the Refuge.

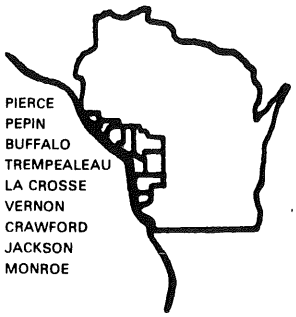
C9. Depending on the point of reference, wetland impacts can be considered as new impacts on the current wetlands, or as a shifting of the impacts which were created when the existing WSH 25 causeway was constructed.

C10. The existing bridge will be removed after the replacement structure is open to traffic. Bridge piers will be removed to an elevation of 5 ft. below the normal pool, or as required by governing permits. Removal of the existing bridge is not expected to cause any significant impacts. A section entitled, Removal Of Old Bridge, has been added to the Environmental Consequences section of this EIS, see pages 171 and 172.

C11. The subject paragraph has been revised to indicate that no severe or unique wildlife impacts have been identified, see paragraph 3, page 168. The proposed action will alter about 8 acres of habitat, but only one acre will be permanently lost in Wisconsin, see last paragraph page 100.

C12. The entrance to the boat ramp near the Wisconsin end of the bridge will be reconstructed and an adjacent segment of SH25 will be made available for additional parking, see discussion on pages 136 and 137.

C13. Mitigation measures supported (numbers 1 thru 16) will be utilized to the extent practical as documented in this FEIS and as required by governing permits.



MISSISSIPPI RIVER
REGIONAL PLANNING COMMISSION
315 South Front Street, La Crosse, Wisconsin 54601
Phone: (608) 785-9396

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Director

September 5, 1980

Mr. Roy J. Larson
Minnesota Department of Transportation
P.O. Box 6177
Rochester, Minnesota 55901

Dear Mr. Larson:

1. We have reviewed the Draft Environmental Impact Statement and Section 4 (F) evaluation for the Mississippi River bridge between Wabasha, Minnesota, and Nelson, Wisconsin. From our western Wisconsin point of view, we first recognize the need for a new bridge, and are pleased the planning for this long overdue structure has at last reached the environmental impact statement stage. Secondly, we are concerned with the environmental effects in Wisconsin. We assume coordination with the U.S. Fish and Wildlife Service and the Wisconsin Department of Natural Resources will continue, and that the comments of those agencies will be given full consideration in the final project design.

2. Thirdly, we agree the Wabasha-Nelson-Alma-Pepin community is a single social-economic community united by the bridge. The historic integrity of Wabasha is closely related to similar historical preservation efforts underway in Alma and the Great River Road improvements made in Pepin a few years ago. We would encourage a bridge design and location that does not require the widening of approach corridors and the destruction of historic buildings. Perhaps various TSM procedures, such as parking controls, could help in this regard. Also, please be advised, as page 47 of the environmental impact statement references, the Village of Nelson has now created a planning commission and, in cooperation with the Mississippi River Regional Planning Commission, is developing a zoning ordinance.

3. Thank you for the opportunity to review and comment upon this draft environmental impact statement.

Sincerely,

MISSISSIPPI RIVER REGIONAL PLANNING COMMISSION

Robert G. Fisher
Transportation Planner

RGF:jo

cc: Al Lorenz
Bergie Ritscher
Archie Brovold
Lyman Dieckman

Reply to Mississippi River Regional Planning Commission comments on page 226. Reply numbers correspond to comment paragraph numbers. Comments 1 and 3 do not require replies.

2. Alternative 3B is selected as the preferred alternative based on an evaluation of all significant factors. Alternative 3B displaces three buildings from within the historic Commercial District and one historic building located outside the Commercial District.

   Traffic System Management alternatives are not feasible because the nearest river crossings are approximately 30 miles up or down stream and the existing bridge is near the end of its useful life, see page 23, paragraph 1. Utilizing TSM procedures such as prohibiting parking and some turning movements would not reduce the historical impacts.

   The second paragraph under Land Use Planning has been revised to recognize the Village of Nelson Planning Commission, see page 48.

B. Individual Comments: Location public hearings were held on September 24, 1980 in Wabasha and on September 25, 1980 in Nelson. Attendance sheets circulated were signed by 167 individuals. Thirty five people spoke at the hearings and an additional 26 submitted written comments prior to the close of the hearing record. A petition opposed to alternatives 3A, B and C and containing 170 signatures was also submitted. A transcript of the public hearings, including written comments and the petition, is available by request.

A tabulation of individual comments for and against each build alternative is contained in Table No. 30 below.

Table 30: Tabulation of Individual Comments

+ For, - Against, ( ) Number of Individuals

Date Type/Location	Alt. 1	Alt. 3A	Alt. 3B	Alt. 3C	Alt. 4	Other
9-24-80 Oral/Wabasha	+(3) -(1)	0 -(3)	0 -(3)	0 -(3)	0 -(3)	+(2) Alt. 1A
9-25-80 Oral/Nelson	+(3) 0	0 0	0 0	0 0	0 -(1)	+(1)
8-28 to 10-17-80 Written	+(7) -(13)	0 -(180)*	+(3) -(180)*	0 -(180)*	+(3) -(5)	+(4)
TOTALS	+(13) -(14)	0 -(183)*	+(3) -(183)*	0 -(183)*	+(3) -(9)	+(7) 0

*Note: Includes a petition with 170 signatures.

A summary of oral and written comments by individuals follows. The order of the summary is identical to that of Table 30.

Oral comments made at the hearing in Wabasha

Alt. 1: Three people spoke in favor of, citing:
- follows a natural barrier in Wabasha along the slough and railroad tracks
- least business and residential disruption

One person spoke against because it would displace his residence.

Alt. 3A, B, C: Three people spoke against, citing:
- will divide and spoil the town
- cause deterioration of the historic district
- the hotel will suffer
- would effect private residences

Alt. 4: Three people spoke against, citing:
- concerns for safety of school children
- would effect private residences
- would close off Second St.

Other Alts.: One person suggested using Grant Blvd. as T.H. 60 from Pembroke Ave. to Church Ave. (Mn/DOT note: That comment led to the development of Alternative 1A). One person suggested building on the existing route.

Oral comments made at the hearing in Nelson

Alt. 1: Three people spoke in favor of, citing:
- looks best
- would avoid a church and school in Wabasha
- would provide good access to the hospital

Alt. 3A, B, C: No comments.

Alt. 4: One person spoke against, citing the following impacts on St. Felix School:
- increased traffic-pedestrian conflicts
- increased noise
- increased traffic hazard adjacent to the playground

Other Alts.: One person suggested an alignment from near Church Ave. in Wabasha to the existing highway 25-35 intersection near the west edge of Nelson.

Written comments by individuals

Alt. 1: Seven comments were in favor of, citing:
- least impact on residences and businesses
- most scenic route
- least impact on the town
- would spare historic properties

Thirteen comments were against, citing:
- added expense and highest cost
- change appearance of the slough area
- increased noise in a quiet neighborhood
- do not want highway near small children
- will be uglier than other alternatives
- commentor allergic to exhaust fumes
- would displace some of the Ed Malone Park
- would effect the planning for three new homes on Church Ave.

Alt. 3A, B, C:

Three comments were in favor of Alt. 3B, citing:
- least expensive alternative
- shortest route

Ten comments were against Alternatives 3A, B, C, citing:
- noise increase would be unbearable
- would divide the town
- would ruin the Central Athletic Field Park
- would effect commentor's residence
- would adversely impact the historic district
- construction would cause the Anderson Hotel to collapse

A petition containing 170 signatures and titled, WE THE UNDERSIGNED, BEING PROPERTY OWNERS WITHIN THE CITY OF WABASHA, HEREWITH PETITION MDOT

IN OPPOSITION TO

THE PROPOSED WABASHA-NELSON BRIDGE ROUTE 3A, B AND C BECAUSE SUCH PROPOSED ROUTE DESTROYS WABASHA'S UNIQUE OLD RIVER TOWN HERITAGE AND DESTROYS THE ECONOMIC VIABILITY OF THE EXISTING DOWNTOWN BUSINESS SECTION was received.

Alt. 4:

Three comments were in favor of, citing:
- would better serve traffic needs
- agreement with a consultant's recommendation (Mn/DOT note: The Wabasha Chamber of Commerce retained a local consultant to evaluate the alternatives presented in the DEIS. However, the Chamber did not comment or submit the consultants recommendations as a comment).

Five comments were against, citing:
- would be close to Grace Memorial Episcopal Church
- adjacent to a grade school
- property values would depreciate
- would destroy downtown Wabasha
- noise would be terrific

Other Alts.: Two comments suggested rebuilding on the existing alignment or restoring the existing bridge. One comment suggested building at Reads Landing (about 2 miles upstream from Wabasha). One comment suggested building farther out of town.

Analysis and Replies: Oral and written comments indicate strong support for a new bridge in general. However, specific comments on individual alternatives are divided as shown in Table No. 30. Most individuals were concerned about impacts to their own residences and neighborhoods. A perceived splitting or dividing of Wabasha was also mentioned frequently. The impact on the historical integrity and heritage of Wabasha was also mentioned. Several commentors expressed opposition to the alternative in their neighborhood rather than support for a specific alternative. Although the DEIS did not designate a preferred alternative, 3C was described as the most attractive alternative from the transportation viewpoint because of its excellent alignment, minimal displacement of federal refuge land, and reasonable cost. This designation may have contributed to Alternatives 3A, B and C receiving more opposition than the other build alternatives.

Comments from individuals were evaluated and considered in preparation of this FEIS. Most individual comments are statements of facts or opinions and do not require individual replies. However, replies to the most prevalent comments follow.

Dividing of Wabasha, all alternatives will result in some visual division of the area they pass through. However, the physical division and restrictions in movement from one side of the facility to the other will be slight. Preferred Alt. 3B makes maximum use of existing streets and only disrupts existing traffic and social desire paths in the Walnut Ave.-Third St. intersection area. The Alt. 3B bridge will be sufficiently elevated to allow continuation of existing traffic patterns on streets beneath the bridge from Second St. to the Mississippi River. Mitigation measures proposed for the Walnut Ave. corridor such as plantings, sidewalks, landscaping, pier locations near building lines, and a historical focal area will encourage people oriented usage, help make the bridge more compatible with the adjacent land use, and lessen the visual intrusion. For additional discussion see the Historic and Archaeological, Visual, Social, and Transportation subsections of this FEIS.

Adverse Historic Impacts Preferred Alt. 3B displaces three buildings within Historic Commercial District and one historic building outside of the Historic District and causes aesthetic changes. Proposed mitigation includes recording all four buildings with photographs and/or measured drawings prior to relocation or demolition, moving the First Congregational Parsonage, moving the Replogle House and its garage if prudent and feasible, giving special consideration to the design of the structure, and providing landscape plantings. The proposed mitigation has been determined to be adequate by the Advisory Council on Historic Preservation, Federal Highway Administration, and Minnesota State Historic Preservation Officer and is documented in the Memorandum of Agreement on pages 127 and 128.

Although Alts. 3A, B & C have more adverse historic impacts than the other major alternatives considered, Alternative 3B was selected as the preferred alternative based on an evaluation of all significant factors. See Preferred Alternative discussion on pages 23 and 25.

Adverse Effects on the Anderson Hotel Alt. 3B effects on the Anderson Hotel - noise level increase of 5 dBA and change in view of the bridge - are expected to be minor. See discussion on page 120. Construction impacts, including vibrations, will be controlled to prevent damage to all buildings in the project area. Construction impacts and mitigation are described in the Construction subsection of this FEIS.

Increased Noise Preferred Alt. 3B will increase noise levels from 2 dBA to 12 dBA. The 2 dBA increase is a slight noise impact because most people do not notice traffic noise changes that are less than 3 dBA. The 12 dBA increase is a moderate noise impact and may be objectionable to some residents. Noise levels and impacts are discussed in greater detail in the Noise subsection of this FEIS.

Impacts on Central Athletic Field Preferred Alt. 3B utilizes Grant Blvd. and therefore does not displace any of the Central Athletic Field. A solid fence will be provided along Grant Blvd. to screen the Athletic Field from highway related impacts such as headlight interference and noise. The fence will also help control pedestrian movements.

Restore or Rebuild the Existing Bridge, restoring or strengthening the existing bridge is not practical or cost effective because of the deteriorated condition of the entire structure. Rebuilding at the existing location was dismissed prior to the DEIS because of the substandard Minnesota approach alignment and the one or two year interruption of service that would be necessary during construction. See Alt. 3 on page 22.

Other Alternatives, other location alternatives suggested such as Reads Landing, farther out of town, and north junction of Wisconsin Highways 25 & 35 are not practical because the construction length and cost would be more than double that of the major alternatives considered. Those alternatives are similar to the upstream and downstream corridor alternates that were dismissed prior to the DEIS, see page 22.

C. Coordination:

Coordination performed subsequent to the location hearings included meetings with the Dept. of Interior, U. S. Fish and Wildlife Service, Wisconsin Dept. of Natural Resources, Minnesota State Historical Society. Wabasha City Council, Wabasha Chamber of Commerce, Wabasha Bridge Task Force, and local citizens group.

Although the Wabasha City Council has not made any formal comments on individual alternatives, the council seems to be in agreement with the proposed action. Discussions at council meetings regarding the basis for selecting the preferred alternative and the corridor concept plan indicate the council desires a new bridge as soon as practical. The council passed a resolution in July 1980 (while the DEIS was being printed) which insisted that construction of the bridge be expedited. A copy of that resolution is contained in the Appendix on page A-41.

The DEIS was initially planned to serve as the Preliminary Case Report for requesting comments from the Advisory Council On Historic Preservation (ACHP). However, the Minnesota State Historic Preservation Officer (MSHPO) determined that the DEIS did not adequately discuss the effects on historic buildings and the historic district resulting from vibrations, vehicle emissions, and changing traffic patterns. As a result the DEIS was not utilized as the Preliminary Case Report. Instead Mn/DOT prepared and coordinated a vibrations evaluation, a vehicle emissions evaluation, and a summary of studies on minor highway realignments and bypasses with the MSHPO. A Preliminary Case Report was then prepared and submitted to the ACHP on September 3, 1981. Although the Preliminary Case Report submittal was delayed substantially, the coordination satisfied the MSHPO's concerns regarding vibrations, vehicle emissions and changes in traffic patterns, see MSHPO correspondence in the appendix. The signed Memorandum Of Agreement on pages 127 & 128 documents historical coordination between the FHWA, ACHP, MSHPO and Mn/DOT.

Coordination with the U.S. Fish and Wildlife Service, refuge managers, and Departments of Natural Resources has helped to minimize natural resource impacts and provide practical mitigation.

Coordination with local citizens groups and individuals in Wabasha has been beneficial to all parties. In early meetings, much anxiety and opposition to perceived impacts was prevalent. However, as a result of further explaining impacts, discussing the method utilized to select the preferred alternative, and obtaining local input for the corridor concept development plan, the public attitude is perceived to have changed somewhat. Citizens now appear to have a better understanding of the impacts and are more willing to make the best of the situation. Sketches showing a perspective view of the proposed bridge over existing Main Street and parallel to Walnut Avenue in Wabasha were shown at coordination meetings, appeared in the local newspaper, and helped citizens visualize the proposed action.

Preliminary copies of this FEIS were submitted to the following agencies for informal review and comment prior to printing:

U.S. Coast Guard
Corps Of Engineers
Mn. Historical Society
Mn. Dept. Of Natural Resources
U.S. Dept. Of Interior
Fish and Wildlife Service
National Park Service

Comments from the agencies that responded are contained in the Appendix beginning on page A-42. Minor revisions were made to this FEIS as suggested by the preliminary review comments.

Future coordination with agencies, groups and individuals will be accomplished as warranted throughout the project development process.

D. Compliance:

This EIS documents compliance with all applicable environmental laws, Executive Orders, and other related requirements and regulations. All environmental issues have been resolved to an acceptable level.

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IX. APPENDIX

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THE STATE HISTORICAL
SOCIETY OF WISCONSIN
816 STATE STREET / MADISON, WISCONSIN 53706

January 18, 1978

Mr. Clement P. Kachelmyer
Preliminary Design Engineer
Minnesota Department of Transportation
Transportation Building
St. Paul, Minnesota 55155

SHSW 1035-77
Your reference: 330
Minn. ID 7910-07;7911-05 (TH60)
Wis. ID 7172-1-00

Dear Mr. Kachelmyer:

We have examined the information you submitted concerning the proposed new Mississippi River Crossing from Wabasha, Minnesota to Nelson, Wisconsin.

In the Wisconsin portion of the project, no buildings of historical or architectural significance listed on or eligible for inclusion on the National Register of Historic Places will be affected by any of the alternates indicated on the maps you supplied. A survey to locate archeological resources which may exist in the alternate alignments will be undertaken by Mr. John Penman (608/262-9566) under a cooperative agreement between the Wisconsin Department of Transportation and the State Historical Society of Wisconsin.

A determination of the effect that this project may have on archeological sites eligible for inclusion on the National Register of Historic Places will have to await our review of the results of Mr. Penman's survey. In the meantime, if we can be of any further assistance, please contact Mr. Richard W. Dexter (608/262-2732) in the Historic Preservation Division.

Sincerely,

Richard A. Erney
State Historic Preservation Officer

by Jeffrey M. Dean
State Preservation Planner

RAE:mm

cc: Mr. John Novick
Wisconsin Department of Transportation

Mr. Russell W. Fridley
Minnesota Historical Society

cc L G Eilts
R J Larson - R P Klobuchar
F J Schloegel
A H Huelin

HISTORIC PRESERVATION DIVISION

December 14, 1978

Mr. Clement P. Kachelmyer
Design Engineer
Minnesota Department of Transportation
Transportation Building
St. Paul, Minnesota 55155

SHSW 1035-77
RE: 330; S.P. 7910-07 and 7911-05
(T.H. 60) Wisconsin ID 7172-1-00

Dear Mr. Kachelmyer:

We have been informed by Mr. John Penman, highway archeologist for the State Historical Society of Wisconsin, that he has completed an archeological survey of alternate 3 of the proposed Wabasha, Minnesota to Nelson, Wisconsin bridge replacement. No archeological sites were found in this alignment of the project in Wisconsin. Therefore, the proposed project will have no effect on properties listed on, or eligible for inclusion on, the National Register of Historic Places in Wisconsin.

Should one of the other alternates be selected for construction, additional archeological survey work may be necessary.

If I can be of any further assistance, please contact me at (608) 262-2732 in the Historic Preservation Division.

Sincerely,

Richard W. Dexter

Richard W. Dexter
Compliance Coordinator

RWD:cm

THE STATE HISTORICAL SOCIETY OF WISCONSIN
816 STATE STREET · MADISON, WISCONSIN 53706 RICHARD A. ERNEY, DIRECTOR

THE STATE HISTORICAL SOCIETY OF WISCONSIN
1846

MUSEUMS DIVISION
Accredited by the American Association of Museums

February 9, 1979

Mr. C. P. Katchelmyer
Preliminary Design Engineer
Minnesota Department of Transportation
Transportation Building
St. Paul, MN 55155

Re: Project 7172-1-00
S.T.H. 25 (Wisconsin)
Buffalo County

Dear Mr. Katchelmyer:

Alternate 3 of the Wabasha (Minnesota) to Nelson (Wisconsin) bridge was surveyed in July, 1978 for archaeological sites and none were found. This alternate parallels the existing highway and due to past construction in the area ground disturbance has been great. Therefore, we do not anticipate that there are any significant archaeological sites within Alternate 3.

Due to poor field conditions the other alternates were not investigated, however. These other routes have a greater potential for archaeological remains since there has been no observable construction activity in the respective areas. In observing other Mississippi River island sites I would suspect that any archaeological sites which could be in the alternate routes would be small. These sites would probably be hunting camps or fishing stations and not extensive villages.

While we have no recorded sites in the corridor area, an archaeological survey would be necessary if any route other than Alternate 3 is chosen. Should we find archaeological remains in such a survey they sites would be tested under Paragraph 4 of our Cooperative Agreement with the Wisconsin Department of Transportation. I would suspect that a Testing Project (Para 4) would be sufficient in evaluating any such sites.

Sincerely,

John T. Penman
Highway Archaeologist

JTP:jf

cc: R. W. Baker
R. W. Dexter

Excerpts from Minnesota Historical Society correspondence dated March 20, 1975.

Preliminary research has now been completed in the vicinity of the proposed approaches for T.H. 60 at Wabasha. This research conducted by Leslie Peterson, Highway Archaeologist, and Tom Lutz of the Minnesota Historical Society's Historic Site Survey and Planning staff has revealed that this area holds considerable potential for the existence of very significant historical and archaeological data. This potential must be explored completely and all possible effects assessed during the planning and corridor selection stages of this project.

ARCHAEOLOGICAL DATA

A records search and field surveys revealed that only one archaeological site was known to exist within the study area (Fig. 1). This site, designated 74-6-1 (21 WB 31) originally consisted of five large burial mounds when recorded in 1883. Since that time, however, all surface features have been completely destroyed by housing and city streets. The site lies between alternate routes 1 & 2 and should not be affected by either.

Surveys have revealed that only one area affected by the five alternate alignments displays significant potential for the existence of undisturbed archaeological materials. This area is a low terrace along the east bank of the Old Zumbro Riverbed between present T.H. 60 and Hiawatha Drive. Although time was not available during the 1974 survey to accomplish test excavations at this location to determine whether archaeological materials do exist, such testing will be completed during the 1975 field season.

HISTORICAL-ARCHITECTURAL DATA

At the present time, there are no sites listed on the National Register within the Wabasha study area. Two properties listed on the State Inventory of Historic Places do lie within this area however.

Wabasha Commercial Historic District - This district, including the central business area, has been recognized as a well preserved example of an early Minnesota river town. The area bounded roughly by Arch Avenue, Lawrence Boulevard, Franklin Avenue and Third Street must be considered as potentially eligible for inclusion on the National Register.

Anderson Hotel - Situated within the above Commercial District, this structure has been listed independently based on its historical significance. At least a portion of this structure appears to be a remnant of the "Old Hurd House" and, therefore, stands as one of the last of the old-time river town hotels still functioning within the region.

Excerpts continued

Preliminary historical research and architectural assessments, however, have indicated that the town of Wabasha has been largely bypassed by the main stream development and modernization and, therefore, contains great potential for the existence of many more National Register and State Inventory quality sites.

Research, to date, has revealed only that much more work will be necessary to completely and accurately assess the nature and significance of possible archaeological materials and each of the structures listed as potentially significant. A complete review, by a trained individual, of the historic record of Wabasha and the physical attributes of the structures and districts themselves will be necessary to determine which structures and areas qualify for further consideration, and which need not be considered an absolute constraint. An attempt will be made to accomplish this "in-depth" review during the first one half of 1975.

STATE OF MINNESOTA

DEPARTMENT Highway Archaeology

Office Memorandum

TO : C. P. Kachelmyer, Preliminary Design Engineer
Room 612E, State Highway Building

DATE: July 7, 1975

FROM : Leslie Peterson, Highway Archaeologist
Alan Woolworth, Chief Archaeologist

SUBJECT: PROGRESS REPORT FOR THE TRUNK HIGHWAY ARCHAEOLOGICAL RECONNAISSANCE SURVEY, AGREEMENT NO. 55699, FOR THE MONTH OF JUNE 1975

During the month of June, the following surveys were conducted:

→ SP7910, T.H. 60, Wabasha County, Wabasha Bridge Relocation

In order to complete the assessment of potential archaeological materials begun during 1974, test excavations were conducted along the old Zumbro River Channel approached by alternate corridor #3. These test excavations indicate that no archaeological materials exist in that location. Therefore, no archaeological sites should be affected by any of the alternate corridors presently under consideration. The final assessment of impacts upon historic structures within the city of Wabasha has yet to be completed.

APR 8 1980

United States Department of the Interior

HERITAGE CONSERVATION AND RECREATION SERVICE
WASHINGTON, D. C. 20243

IN REPLY REFER TO: 436

APR 3

Mr. E. Dean Carlson
U.S. Department of Transportation
Federal Highway Administration
Suite 490, Metro Square Building
St. Paul, Minnesota 55101

Dear Mr. Carlson:

Thank you for your letter requesting a determination of eligibility for inclusion in the National Register pursuant to Executive Order 11593 or the National Historic Preservation Act of 1966, as amended. Our determination appears on the enclosed material.

As you are aware, transportation projects requiring the use of lands from significant historic properties are also subject to the provisions of section 4(f) of the Department of Transportation Act of 1966. Your request for our professional judgment constitutes a part of the Federal planning process. We urge that this information be integrated into the National Environmental Policy Act and section 4(f) analyses in order to bring about the best possible program decisions. This determination does not represent the results of formal consultation by the Department of Transportation with the Department of the Interior pursuant to section 4(f). Such requirements would be fulfilled only when the Department of the Interior separately comments on any section 4(f) statement which may be prepared and approved by you for circulation. The determination also does not serve in any manner as a veto to uses of the property, with or without Federal participation or assistance. Any decision on the property in question and the responsibility for program planning concerning such properties lie with your agency after the Advisory Council on Historic Preservation has had an opportunity to comment.

We are pleased to be of assistance in the consideration of historic resources in the planning process.

Sincerely,

Carol D. Shull

Carol D. Shull
Acting Keeper of the National Register

Enclosure

E.O. 11593

DETERMINATION OF ELIGIBILITY NOTIFICATION

National Register of Historic Places
Heritage Conservation and Recreation Service

Project Name: Trunk Highway 60 Project

Location: Wabasha, Wabasha County **State:** MN

Request submitted by: DOT/FHWA/E. Dean Carlson

Date received: 3/25/80 **Additional information received:**

36 CFR Part 63[illegible]
Determination

Name of property	Eligibility SHPO opinion	Eligibility Secretary of the Interior's opinion	Criteria
Wabasha Commercial District	eligible	eligible	A,C
Grace Memorial Episcopal Church	"	"	B,C
First Congregational Parsonage	"	"	C

for D. Ray Lucas
Keeper of the National Register

Date: 4/3/80

FNR 8-267 2/79
GPO 942 577

Advisory
Council On
Historic
Preservation

1522 K Street, NW
Washington, DC 20005

January 5, 1982

Mr. James E. St. John
District Engineer
Federal Highway Administration
Metro Square Building
Suite 490
7th and Roberts Streets
St. Paul, MN 55101

Dear Mr. St. John:

The Council is in receipt of your request for comments on the effects of the proposed replacement of the Mississippi River Bridge and approaches at Wabashaw, Minnesota, on properties included in or eligible for inclusion in the National Register of Historic Places.

The Council has initiated review of the material submitted and notes that no determination of preferred alternatives has been made for the project in accordance with Section 4(f) of the Department of Transportation Act of 1966 (48 U.S.C. 1653(f)). The Council requests that such a preliminary determination be made so that it may continue the consultation process as set forth in Section 800.6(b) of the Council's regulations, "Protection of Historic and Cultural Properties."

If you have any questions or need further assistance please contact Jack L. Goldstein or Michael Quinn at 202-254-3495.

Thank you for your cooperation in this matter.

Sincerely,

Jordan E. Tannenbaum

Jordan E. Tannenbaum
Chief, Eastern Division of
Project Review

January 11, 1982

Mr. Ned Garvey
Executive Director
Advisory Council on Historic Preservation
1522 K Street N.W.
Washington, D.C. 20005

RE: TH 60--Mississippi River Bridge and
Approaches at Wabasha, Mn.
Minn. Proj. F 108-1( )
State Projects 7910 and-11(TH 60)
Wisc. Proj. F 046( )
State Proj. ID 7172-0-00
From U.S. 61 at Wabasha, Mn.
To W.S.H. 35 at Nelson, Wisc.

Dear Mr. Garvey:

We appreciate Mr. J. E. Tannenbaum's prompt reply to our December 17, 1981 inquiry which followed up on our September 3, 1981 transmittal of a Preliminary Case Report and request for comment under 36 CFR 800.4(d).

Mr. Tannenbaum's letter requested our preliminary determination of preferred alternative to continue Section 800.6(b) consultation. Advisory Council staff comments were solicited by our September 3, 1981 letter to assist us in determining the significance of adverse impact of the various alternatives under consideration on historic and archeological values. We interpret your lack of specific comment to mean agreement with our position which is per our September 3 letter, significant adverse effects by alternatives 3A, 3B, 3C, 4, 4A and 4B, and no adverse effect by alternates 1, 1A and 1B. Using this position, we are now able to array the benefits and detriments of the various alternatives compared to the various social, economic, environmental and engineering disciplinary values to select a preferred alternative.

Should one of alternatives 1, 1A, or 1B be selected, you will receive a copy of our Final EIS which will include documentation evidencing our historic coordination. Should one of alternatives 3A, 3B, 3C, 4, 4A or 4B

be selected as preferred, we will request further Advisory Council Staff consultation in accordance with Section 800.6(b).

Thank you for your continued participation in our NEPA processing of this proposed process.

Sincerely yours,

William R. Lake
Division Administrator

"/s/ James E. St. John"

By: James E. St. John
District Engineer

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

22 February 1982

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

Dear Mr. Kachelmyer:

RE: Wabasha Bridge Replacement
S.P. 7910 & S.P. 7911 (T.H. 60)
MN Project F 108-1 ( ) & F 046- ( )
Wabasha County, Minnesota

MHS Referral File Number H 129

The purpose of this letter is to update our position on the above-referenced project. Our most recent comments were expressed in a letter of March 1981.

We continue to believe that alternates 3A, 3B, 3C, 4, 4A, and 4B will have adverse impacts on properties listed on or eligible to the National Register.

After further review, we have modified our opinions on the degree of effect of the various alternatives on the downtown economy. Alternates 1A and 3B utilize the existing street grid pattern and would likely have less impact on preceived accessibility to the commercial area than the other alternates. We would, therefore, conclude that there may be less potential negative impact on the downtown economy from these two alternates. However, it is our further opinion that we do not have sufficient data to conclude that any of the alternates will have an adverse impact on the downtown economy. Therefore, we concur that alternates 1, 1A, and 1B will not have an adverse impact on properties listed on or eligible to the National Register.

With regard to the various mitigation measures for alternates 3A, 3B, and 3C, we agree that adverse impacts would occur on the four buildings which must be removed. Further individual review of the significance and/or condition of each of these structures will indicate whether moving and/or detailed recording would be warranted in each case. We further believe that the imposition of the bridge structure on the historic district will have an adverse aesthetic impact. Although mitigation for this type of impact is extremely difficult, we feel that careful attention should be given to the bridge design. These concerns could be integrated with the mitigation measures which have been suggested to the 0.6 acre area taken for the right of way in formulating an overall scheme to help to soften the impact of the structure.

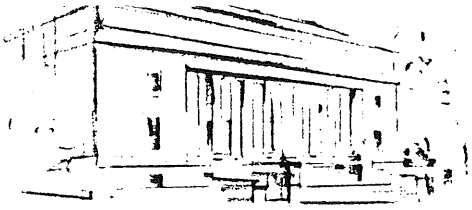
For mitigation of the effects of the various "4" alternates we feel that the severe noise and aesthetic impact on Grace Memorial Church from the 4 alternate may have little chance of satisfactory mitigation. For alternates 4A and 4B, the effect is less severe because the churchyard is not physically altered, although noise and aesthetic impacts remain. It is our opinion that a noise wall would constitute a significant visual intrusion; perhaps methods of landscaping in this area could act to visually and audibly screen the elevated roadway from the church setting.

We appreciate the consideration you have given to cultural resources during the planning of this project. As we have stated, we feel that any of the "3" and "4" alternates would result in unfortunate impact on those resources. Should any of them be selected for implementation, however, we would welcome the opportunity to work with you further in attempting to develop means of mitigating some of those effects.

Sincerely,

Russell W. Fridley
State Historic Preservation Officer

RWF/fr



MINNESOTA HISTORICAL SOCIETY

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

17 March 1981

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

Dear Mr. Kachelmyer:

RE: Wabasha Bridge Replacement
S.P. 7910 & S.P. 7911 (T.H. 60)
MN Proj. F 108-1 ( ) & F 046- ( )
Wabasha County, MN

MHS Referral File Number: H 129

This letter continues my review, under the procedures of the National Advisory Council on Historic Preservation (36CFR800), of the Wabasha, Minnesota, project described above. Since my most recent letter to you of April 17, 1980, I have been supplied with studies relating to the expected effect of vibrations, air pollution, and noise on the properties in Wabasha found to be eligible to the National Register of Historic Places. In reviewing each of these reports, I am compelled to agree with their conclusions. That is to say, I do not believe that vibrations, air pollution, or noise will adversely affect the historic properties, regardless of the specific alignment selected.

Based on additional information gathered by Mr. Charles Skrief of my office, I continue to believe that the rerouting of traffic caused by any of the proposed alignments will have an adverse effect on the commercial district. This rerouting will direct the economically vital Wisconsin traffic to other portions of the city and, thereby, challenge the commercial dominance of Main Street in the community. My other comments to you of April 17, 1980 , remain an accurate statement of my views.

I have been asked recently to review two new alignments. Alternate 1B would have the same adverse effect on historic properties as Alternate 1A. Alternate 4A would have less impact on Grace Memorial Episcopal Church than Alternate 4 because it would not involve the physical alteration of church property. Nevertheless, the proposed roadway would introduce visual and audible elements out of character with the church's setting and, therefore, adversely affect it.

I have been asked to rate the alternatives in terms of the degree of adverse effect. I hesitate to do so becuase the adverse effects do not lend themselves to objective quantification. Moreover, each of the alternatives is likely to adversely affect the downtown economy. I am

willing to point out, however, that far more buildings will be demolished and a greater visual effect will occur from alternatives 3A, 3B, and 3C. You can understand, therefore, that I am emphatically opposed to any of these three alternatives. Alternatives 1, 1A, & 1B would have the least affect from that same perspective.

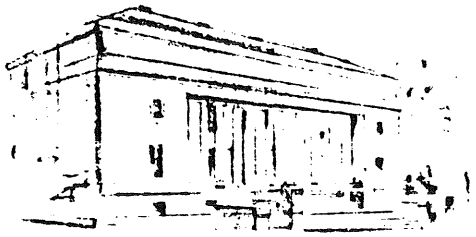
I understand that Charles Skrief has recently met with you and other representatives of the highway agencies. He informs me that progress has been made in developing mitigation strategies for each of the alternatives. I encourage your efforts in that direction. Please let me know if I may personally be of any assistance to you in the future.

Sincerely,

Russell W. Fridley

Russell W. Fridley
State Historic Preservation Officer

RWF/sl



MINNESOTA HISTORICAL SOCIETY

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

April 17, 1980

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

Dear Mr. Kachelmyer:

RE: 7910 and 7911-05 (TH 60)
From Junction TH 61 to East State Line
At Wabasha, Wabasha County, MN

MHS Referral File Number: H 129

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

The review has been conducted for Alignments One; Three A, B, and C; and Four. For purposes of clarity, my review will follow this same organization.

Alignment Alternate One:

There are no structures within this alignment which are on the National Register of Historic Places or eligible for inclusion on the National Register, and, therefore, none which will be affected by the proposed construction.

Nevertheless, the effect of Alignment One will be to "change," in the words of the Advisory Council regulations, "the pattern of land use, population density, (and) growth rate" within the historic center of Wabasha, particularly its currently healthy commercial district. A substantial portion of this district was determined on April 3, 1980, to be eligible for listing on the National Register of Historic Places. The existing bridge routes traffic to the foot of the commercial district; the proposed bridge in Alignment One would route that same, critically important commercial traffic, outside of town. More precisely, it is my understanding that 60% of the retail and other business activity in Wabasha is created by Wisconsin residents. If this Wisconsin trade is routed to a new location located a substantial distance from the current commercial center, it

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will surely affect the economy -- and, hence, the physical health of the historic center.

Alignment Alternates Three A, B, and C:

This alignment will also have an adverse effect on the Wabasha Commercial District. The proposed bridge will involve the demolition of several structures within the commercial district; as a consequence, under Section 800.3 (b)(1) of the Advisory Council regulations, it will clearly have an adverse effect. There is apparently no possibility that the bridge could be built in this alignment without the demolition of at least some structures important to the district.

It is also reasonable to believe that construction of the structure will result in other physical damage to designated structures; vibration, pollution, and other effects of traffic will adversely destroy or alter properties within the district.

The bridge will also isolate a portion of the district from the balance of the district and its historic setting by physically dividing it. See Section 800.3 (b)(2). Although traffic will literally be able to pass below the roadway, I believe, nevertheless, that it will discourage pedestrian and other movement and lead to a deterioration of the entire district.

Moreover, the elevated roadway will adversely affect the district by introducing visual elements (as a result of its very design) and audible elements (as a result of vehicular traffic on it) which are out of character with the district. Section 800.3 (b)(3).

More generally, I am extremely concerned, as I stated with regard to Alignment One, about the likely change in "the pattern of land use, population density, or growth rate" within the community. The placement of the bridge and the roadway may discourage use of currently viable downtown businesses. The proposed plan, which routes a critically important amount of traffic to a location some distance from downtown may encourage either the relocation of the central business district to a new and currently undeveloped area or to the development of competitive businesses in a new area. This effect on commercial and retail patterns may as surely result in the decay and alteration of the district as would the physical demolition of the designated buildings. In my letter to you of June 6, 1979, I asked that this problem be addressed. I hope, and expect, that it will receive the careful attention it deserves.

In addition to the adverse effect which Alternate 3 will have on the commercial district, it will also adversely affect the First Congregational Parsonage at 305 West 2nd Street. This property was determined to be eligible for listing on the National Register on April 3, 1980. According to the proposed plans, Alternate 3 would result in the demolition of this structure.

There are no other structures on or eligible for inclusion on the National Register of Historic Places which would be affected by Alternate 3.

Alignment Alternate Four:

Alternate Four will pass within one half block of the eastern end of the commercial district. At that point the roadway will be elevated. It is reasonable to assume that it will introduce visual and audible elements adversely affecting the district. As with Alternates One and Three, the alternate will affect the historically designated commercial district by routing traffic away from the current retail and commercial center and, consequently, adversely affect the district.

Alternate Four will also involve the widening of Bailey Avenue as it passes Grace Memorial Episcopal Church (located at the intersection of Bailey and Second Street). This physical alteration of the church property and the introduction of visual and audible elements out of character with the existing setting will adversely affect the structure.

While I believe the above comments reflect my current opinion on the effects of this project, I should mention that more precise plans for the roadway and bridge might lead me to amend my comments.

Thank you for the opportunity to comment on this project.

Sincerely,

Russell W. Fridley
State Historic Preservation Officer

Ex. A.1

Wabasha Business
District-Intersection
Pembroke & Main



Ex. A.2

Wabasha Business
District-Intersection
Main & Alleghany



NATIONAL BIOCENTRIC, INC.

Office & Engineering:
1306 WEST COUNTY ROAD F
SAINT PAUL, MINNESOTA 55112
(612) 633-8997

Laboratory:
4663 CHATSWORTH
SAINT PAUL, MINNESOTA 55112
(612) 484-9070

September 1, 1979

Mr. Frank Pafko
Environmental Affairs
Minnesota Department of Transportation
Transportation Building, Room 807
St. Paul, Minnesota 55155

Dear Mr. Pafko:

National Biocentric, Inc. is pleased to submit this final report of the Mussel Survey conducted on the Mississippi River at the proposed bridge site at Wabasha, Minnesota. The purpose of this study has been to determine the presence or absence of Lampsilis higginsii (Higgin's Eye) or any other species of endangered mussels protected under Public Law 93-205, the Endangered Species Act of 1973.

Extensive brailing with a crowfoot bar and diving with SCUBA have not turned up any specimens, live or relic, of Lampsilis higginsii or any other endangered mussels within the defined study area. A diverse clam population, however, has been described.

We at National Biocentric, Inc. wish to thank the Minnesota Department of Transportation for having given us the opportunity to perform this important study for them. Also, deepest appreciation must be given to Dr. Don Gilbertson, Professor of Biology at the University of Minnesota and Mr. John Bates of Ecological Consultants, Inc., for their time and effort expended to verify the identifications of collected specimens for this project. Mr. Ed Olson and Mr. Al Marquardt were also very instrumental in the achievement of the goals of this study. These men endured many hazards to hand-pick mussels with the use of SCUBA.

If you should have any questions or if there is any way that we can be of assistance to you, please contact us.

Sincerely,

Roger V. Blomquist

Roger Blomquist, Ph.D.
Vice President

Duane Dittberner

Duane Dittberner

Wayne Sarappo

Wayne Sarappo

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES
West Central District Headquarters
1300 West Clairemont Avenue
Call Box 4001
Eau Claire, Wisconsin 54701

Anthony S. Earl
Secretary

April 24, 1979

IN REPLY REFER TO: 1600

Mr. Richard C. Staffon
Office of Environmental Affairs
Minnesota Department of Transportation
Transportation Building, Room 807
St. Paul, MN 55155

Dear Mr. Staffon:

Re: Natural Resource Assessment for Interstate Bridge Replacement at Wabasha, Minnesota (Nelson, Wisconsin-Wabasha, Minnesota bridge)

I have reviewed the subject report and believe it represents a responsible and sensitive analysis of the relatively minor problems this project might create for the natural resources of Wisconsin.

I particularly agree with your conclusion that alternate #3 represents the best opportunity to minimize environmental degradation and that regardless of which alternative is chosen, provisions must be made for the continuation of present water flow patterns through the network of side channels and backwaters.

I was pleased to note that the Minnesota Department of Transportation has chosen to minimize the amount of fill on our side of the channel, preferring instead to bridge most of our critical fish and wildlife habitat areas. As I pointed out at the April 23 meeting in Wabasha, our level of resistance to this project is closely correlated to the fill issue.

I would like you to reconsider conclusion #7 on page 4 of your assessment. I cannot agree that leaving the existing bridge piers in place will result in benefits to the resource. The amount of fish habitat provided would be minimal indeed.

Wisconsin's experience with abandoned piers is that they are a real eyesore, they serve as debris collectors and they represent a significant hazard to navigation. I have therefore concluded that abandoned piers are not only an ugly nuisance, but (unless illuminated at night) also a major liability. It would also seem that removal of the piers to at least four to five feet below low water levels would significantly improve hydraulics in the area.

Thank you for providing this opportunity for review and comment. I am looking forward to seeing your draft E.I.S. later this summer.

Sincerely,

Gordon E. Slifer
Environmental Impact Coordinator

GES:rr
cc: H. S. Druckenmiller
Jon L. Bugenhagen

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

June 1, 1979

DNR INFORMATION
(612) 296-6157

Mr. Richard Staffon
Minnesota Department of Transportation
Office of Environmental Affairs
Room 807
Transportation Building
St. Paul, Minnesota 55155

Dear Mr. Staffon:

Based upon the, "Natural Resource Assessment for Interstate Bridge Replacement near Wabasha, Minnesota" and a field review of the proposed project the Minnesota Department of Natural Resources (MDNR) has identified the following concerns.

We are concerned about the impact on the floodplain of the Mississippi backwater channel from placement of fill materials and impacts to the Mississippi River from placement of bridge piers and modifications to existing approach fills.

All of the five proposed alternatives use the existing 2.3 mile long approach fill on the Wisconsin side. However, alternatives 1 and 4 propose new crossings to the north and south, respectively, of the existing bridge. We have serious concerns about the filling in the floodway from these two alternatives. One acre of open water would be filled in the old Mississippi backwater under alternative 1 in addition to 2.3 acres of filling within the adjacent floodway.

Alternatives 3A, 3B and 3C all follow the existing approach fills with minor deviations as follows. Alternative 3A has an approximately 1000'long fill section which results in the filling of 12 acres of floodplain. Alternative 3B is similar to 3A until the old backwater channel is reached, at which point the proposed T.H. 60 turns and follows the 100 year flood boundary until joining the existing T.H. 60 fill. An additional .5 acre of fill in the wetland will be added to the existing T.H. 60 under alternative 3B.

Alternative 3C which falls between 3A and B will require 2.1 acres of fill in the backwater floodplain.

Alternate 4 is a new crossing of the river approximately 1000' southerly of the existing bridge. This route will require 3.1 acres of fill in the Mississippi River.

Alternatives 3B and 4 have the least impact on the backwater channel and floodplain however, alternative 4 has a significantly greater impact on the river. Alternative 1 also has a greater impact on the river as well as the backwater area.

AN EQUAL OPPORTUNITY EMPLOYER

Based upon the currently available information on the project our position from a natural resources viewpoint is as follows.

Alternatives 3B and 3C are preferable to the other three with 3B being the most acceptable as it has the least impact. Alternatives1,4 and 3A are not acceptable.

Our remaining concerns are for the amount of dredging and channel work required for each alternative, the placement of spoil materials, the impact to the 100 year flood elevation resulting from new filling, and the possible loss of 4f lands.

Any filling should comply with the Wabasha floodplain ordinance. Also, Mn/DOT should evaluate what changes in the 100 year flood will result from filling for each alternative.

Thank you for the opportunity to comment on this project at the early coordination stage. We are looking forward to continued involvement as this project progresses.

If you have any questions please contact Bob Hance of this office at 296-0568.

Sincerely,

Bob Hance

Bob Hance, Environmental Planner
For: Alan Wald
Acting Environmental Review Coordinator

BH:AW: rlh
cc: Robert Story
Charlotte Cohn
Oliver Jarvenpa
Frank Knoke

DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

MAILING ADDRESS:
COMMANDER (obr)
SECOND COAST GUARD DISTRICT
1430 OLIVE STREET
ST. LOUIS, MO 63103
Tel. 314-425-4607
FTS 279-4607

16590/760.2 UMP
10 April 1979

Mr. John S. Bowers
Assistant Division Administrator
and Engineering Coordinator
Federal Highway Administration
Suite 490, Metro Square Building
St. Paul, MN 55101

Re: Wabasha Highway Bridge, Mile 760.2, Upper Mississippi River

Dear Mr. Bowers:

Please refer to your letter dated 12 March 1979 asking for our comments on the preliminary draft of the Draft Environmental Impact Statement/Section 4(f) Information for Minnesota Federal-Aid Project F 108-1( ) and Wisconsin Federal-Aid Project F 046( ) and to the questions asked in that letter concerning our interest in that project.

In response to your first question, a U. S. Coast Guard Bridge Permit in accordance with the General Bridge Act of 1946 will be required. This Act requires that location and plans for bridges over navigable waters of the United States be approved by the Commandant, U. S. Coast Guard prior to commencing construction.

Second, we concur in your designation as the "lead agency" committing the federal government to a course of action as prescribed in the Memorandum of Understanding between the U. S. Coast Guard and Federal Highway Administration.

We do not concur with the navigational clearances stated on page 25 of the preliminary Environmental Impact Statement. All clearances must be approved by the Commandant, U. S. Coast Guard following due process of application for a Coast Guard Bridge Permit. Since the inclusion of such clearances could be interpreted as acceptance, it is suggested that the references thereto be stricken from the publication and substituted as follows:

Navigational clearance:

Vertical: Not less than 52 feet above the 2% flowline or 60 feet above normal (flat) pool, whichever is greater.

Horizontal: As determined by the U. S. Coast Guard.

Re: Wabasha Highway Bridge, Mile 760.2, Upper Mississippi River

The opportunity for early coordination of this project is appreciated.

Sincerely,

S. W. THOROUGHMAN
Chief, Bridge Branch
Second Coast Guard District
By direction of the District Commander

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

REPLY TO
ATTENTION OF:

NCSCO-GR(SF 79-0242-13)

22 May 1979

Mr. E. Dean Carlson
Division Administrator
Federal Highway Administration
Suite 490, Metro Square Building
St. Paul, Minnesota 55101

Dear Mr. Carlson:

We have reviewed the draft EIS on the proposed replacement of the Wabasha Bridge and approaches on Minnesota Trunk Highway 60 and Wisconsin State Highway 25.

A permit will be required under Section 404 of the Clean Water Act for the placement of fill material in the Mississippi River in conjunction with the bridge replacement.

Section 9 of the River and Harbor Act of 1899 pertains to bridge crossings of navigable waters of the United States. You should contact the U.S. Coast Guard at:

Commander (OC)
Second Coast Guard District
1430 Olive Street
St. Louis, Missouri 63136
Telephone: (314) 425-4607

We concur that the Federal Highway Administration should be the lead agency for this project.

Inclosed are our comments on the draft EIS.

Thank you for the opportunity to comment on the draft EIS.

Sincerely,

William D Parsons

WILLIAM D. PARSONS
Chief, General Regulatory Branch
Construction-Operations Division

1 Incl
As stated

COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT

1. We concur that FHWA should be the lead agency for this project.

2. Based on the information in the draft EIS, we concur that Alternative 3b, which utilizes the existing roadway, would have the least impact on the natural environment.

3. The following comments should be considered in the preparation of the final EIS:

a. Social Impact Assessment

(1) Noise Levels - Because the general public is not familiar with noise analysis, they would find the description of noise levels (as presented in this report) insufficient to judge specific noise level impacts. Perhaps it would be beneficial to the reader if terms such as "dBA" and "L_{10}" were defined. You should also consider using a comparison between noise levels expressed in "dBA" and common indoor and outdoor noise levels.

(2) Business and Home Relocations - The following information on home and commercial relocations should be included:

(a) Home Relocations:

i. Number of persons to be relocated.
ii. Number of elderly persons to be relocated.
iii. Number of low-income households to be relocated.

(b) Commercial Relocations:

i. Number employed by the business.
ii. Value of lands and buildings to be relocated.
iii. Total sales volume.

(3) Property Values - What are the expected changes in the value of properties located in the vicinity of the proposed highway bridge facility? Compare these values to present values and future values should the project not be implemented. How will the presence of this facility affect the resale of homes and businesses in the area?

(4) Public Services and Facilities - Are the present facilities capable of accommodating a temporary increase in demand due to a short-term increase in the labor force associated with construction? This may include a discussion of housing, sewage treatment, and water facilities. During the construction phase, what percentage of the incoming labor force is expected to locate in Wabasha? What other communities are expected to absorb the incoming labor force? Will there be sufficient housing for incoming construction workers and their families? During the construction phase, at what levels will the sewage treatment and water facilities be expected to operate? How do these levels compare to present levels?

(5) Community Cohesion - The interpretation of improved community cohesion, pride, and attitudes should include supporting data. To assume positive impacts based on unsubstantiated statements is not acceptable.

(6) Controversy - An update and summary of topics discussed at public meetings should be included. Concerns of the local public and correspondence received in support of and/or opposition to the project should also be presented.

b. Archaeological Assessment

(1) We have reviewed the sections on historic and cultural properties and the related correspondence included in the draft EIS. We concur with the Minnesota SHPO that, from a cultural viewpoint, Alternative 1 would have the least impacts on recognized historic buildings in the study area.

(2) We suggest that, if Alternatives 3a, 3b, 3c, or 4 are selected, further planning efforts be directed to avoid or minimize the structural or aesthetic impacts to the historic buildings and district.

c. Natural Resource Assessment

(1) There appear to be a number of errors in the table on MPCA water quality standards (p. 83).

(2) The natural resource assessment should (a) address the feasibility of routing Alternative 1 through the intersection of Church Avenue and Prospect Avenue in Wabasha so that no new construction crosses the old Mississippi River channel, or (b) if re-routing of Alternative 1 is not feasible, address the impacts of the construction of piers to span the old Mississippi River channel.

(3) The EIS should address the water quality impacts of stockpiling dredged material on land and of discharge of the dewatered effluent (after settling) on the river.

(4) The EIS should address the environmental impact of expanding and improving the boat ramp and parking area in the Upper Mississippi Fish and Wildlife Refuge.

(5) The EIS should better define the area within the Upper Mississippi Fish and Wildlife Refuge that is proposed as a National Wilderness Area. It is not clear what percentage of the proposed wilderness area would be affected by construction of Alternatives 1 or 3.

(6) The EIS should address the likelihood of successful versus unsuccessful relocation of the Higgin's Eye Pearly Mussel, an endangered species, if detected along this reach of the river.

United States Department of the Interior
FISH AND WILDLIFE SERVICE
TWIN CITIES AREA OFFICE
530 Federal Building and US Court House
316 North Robert Street
St. Paul, Minnesota 55101

IN REPLY REFER TO:

JUN 0 4 1979

Mr. Larry Foote
Office of Environmental Affairs
Minnesota Department of Transportation
Transportation Building
St. Paul, MN, 55155

Dear Mr. Foote:

This letter is in reference to an April 23, 1979 meeting conducted by Rich Staffon of your office, and the Natural Resources Assessment concerning the proposed replacement of the Wabasha Bridge in Wabasha, Minnesota (S.P. 7910-07 and 7911-05, T.H. 60).

The five alternatives presently considered will result in adverse impacts to valuable fish and wildlife resources. The severity of these impacts will depend upon the route selected and the project design standards. The above alternatives also encroach upon lands within our Upper Mississippi River Wild Life and Fish Refuge, and we would strongly favor a route that would minimize encroachment, such as alternative 3. In this regard, consideration should be given to the maximum use of pilings to support the approaches, steepest inslopes feasible, and a touchdown point as close to the existing bridge as feasible. We fully support the proposal to maintain access to our parking area and boat ramp and the possibility of expanding and improving this area as part of the proposed project.

In response to comments in Section D on page 36 of the Natural Resources Assessment, statements are made comparing the amount of Refuge lands impacted by the proposed project to the total amount of Refuge lands nationwide and in Wisconsin. These statements imply that the area affected by the project is insignificant because only a small percentage of our Refuge lands will be impacted. The U. S. Fish and Wildlife Service considers all refuge lands to be of significant value, and we suggest deleting these statements in the draft Environmental Impact Statement since determination of significance should be made by the land managing agency. A simple statement that the alternatives will take from 1.0-6.5 acres of Refuge lands would be preferable.

The touchdown point in Minnesota is of lesser concern to us, but we would certainly favor a route, such as 3B, that would avoid or minimize adverse impacts to wetlands, wooded areas, the former Mississippi River channel (Old Zumbro River), and Section 4 (f) lands. Each alternative will involve the placement of fill material in wetlands, and design speeds should coincide with current traffic restrictions to avoid unnecessary impacts to fish and wildlife resources and comply with the intent of Executive Orders 11988 and 11990.

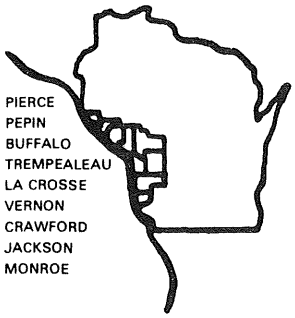
Overall, the Natural Resources Assessment appeared to be well written and covered biological impacts in a commendable manner. Our comments are intended to aid you in making wise environmental decisions in planning the routing and design of the proposed bridge. Since federal permits will be required for this project, these comments do not in any way preclude additional and separate evaluation and comments by the Service pursuant to the Fish and Wildlife Coordination Act.

We appreciate the opportunity to offer you our comments concerning this matter.

Sincerely yours,

George G. P. Bekeris
Area Manager

cc: U.S. EPA, Chicago
U.S. EPA, Mpls.
Minn. DNR, St. Paul
Earl Huber, Minn.DNR, St. Paul
Wisc. DNR, Madison
Upper Miss. NWR, Winona
Upper Miss. NWR, Trempealeau, Wisc.



MISSISSIPPI RIVER
REGIONAL PLANNING COMMISSION
315 South Front Street, La Crosse, Wisconsin 54601
Phone: (608) 785-9396

JOHN M. THOMAS, La Crosse, Wis.
Chairman

TONY POLZER, Durand, Wis.
Vice-Chairman

LAURENCE WEBER, Elmwood, Wis.
Secretary & Treasurer

WILLIAM J. KROLL, La Crosse, Wis.
Director

April, 24, 1980

Roy Larson
District Engineer
Minnesota Det. of Transportation
North Highway 52
Rochester, MN 55109

Dear Mr. Larson:

We have received a copy of the Preliminary Noise Analysis Report for the proposed improvements to the Wabasha Bridge. The imporvements will be primarily in the city of Wabasha, which is not within the planning area of the Mississippi River Regional Planning Commission; therefore we have no comments to make on this particular report.

We appreciate being informed, and do wish to be apprised of further developments in this important bridge development.

Sincerely,

MISSISSIPPI RIVER REGIONAL PLANNING COMMISSION

Robert G. Fisher
Transportation Planner

cc Al Lorenz - Wisconsin Dept. of Transportation
Bergie Ritscher - Buffalo Co. Highway Commissioner

RGF/jac

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

REPLY TO ATTENTION OF:

Mr. Roy Larson
District Engineer
North Highway 52
Rochester, Minnesota 55109

16 MAY 1980

RE: TR 109

Dear Mr. Larson:

We have completed our review of the Noise Analysis Report for Minnesota Trunk Highway 60 and Wisconsin Trunk Highway 25. The purpose of this project is to replace an existing bridge and approaches over the Mississippi River, at Wabasha, Minnesota.

Your letter of March 27, 1980, which provided us with a copy of the noise analysis report, also requested our review of the report. The noise analysis report adequately discussed the existing environment and noise levels, and any potential problem areas. The noise analysis report provided information on the various alternatives including noise contours and sensitive receptors affected by each alternative. This report also included adequate discussion of construction noise impacts.

Based upon the information provided in the noise analysis report, Alternative 1 should be the preferred alternative. This alternative exposes one residence to a L(10) noise level of 70 dBA and 16 other residences to an L(10) noise level of 65 dBA. All other alternatives expose additional residences, schools, churches, and a funeral home to increased noise levels. Our recommendation of Alternative 1 is based exclusively on the noise impacts. The final selection of an alternative will have to be based on a consideration of all other environmental issues.

We appreciate the opportunity to review this noise analysis report. If you have any questions in regard to our comments, please contact Mr. William D. Franz at 312/886-6687.

Sincerely yours,

William D. Franz

for Barbara J. Taylor, Chief
Environmental Impact Review Staff
Office of Environmental Review

This project involves the construction of a bridge across the Mississippi River between Nelson, Wisconsin and Wabasha, Minnesota. The new bridge will replace the existing facility which is the only crossing for 30 miles in either direction. Three alternate bridge locations are under consideration. From the Wisconsin side of the river the beginning point of the bridge is common on all three alternates, while on the Minnesota side the bridge will set down on Bailey Avenue, or three blocks upriver on Walnut Avenue, or three blocks further upriver on Church Avenue.

All of the alternates will require the acquisition of improved properties, all in Minnesota.

Properties to be Acquired

The values used in the descriptions of the housing to be acquired are windshield figures, arrived at with the aid of local realtors. Household makeup was arrived at without door to door contact and in some cases numbers of families and individuals are unknown.

Church Avenue Alternate

A riverfront mobile home on a permanent foundation is used for summer recreational purposes by two or three families from Nebraska. Estimated value $20,000.

One and one-half story frame home located a block off the river is also used as summer recreational by a family from Iowa. Estimated value $30,000.

One story walkout rambler owner-occupied by a couple in their 60's. Estimated value $75,000.

Older two story frame house with over 1,000 square feet on each level. The house is in poor condition and was vacant in the spring of 1978. There have been recent improvements made and it now appears occupied. It appears this could be rental property housing two families. Estimated value $25,000.

Older two story frame house believed to owner-occupied. Estimated value $25,000.

Two year old one story rambler owner-occupied by a couple with no children remaining at home. Estimated value $55,000.

One and one-half story frame home owner-occupied. From the number and make of cars often at the home, I would guess there are three or four young adults living with the owners. Estimated value $25,000.

Walnut Avenue Alternate

Flour mill office and warehouse.

Large two story brick home owner-occupied by a retired couple. Estimated value $60,000.

Older two story frame house in good condition, occupants unknown. Appears to be single family residence. Estimated value $45,000.

Large two story older home owner-occupied by husband and wife who live on the main floor. Upper level has been converted into two apartments, tenants unknown. Estimated value $60,000.

Large two story home. Sold in 1978 for $65,000 and has been converted to a chiropractic clinic. No longer used for residence. Estimated value $80,000.

One and one-half story frame house owned by Catholic Church. It is occupied by three nuns who teach at St. Felix School, 2½ blocks east. Estimated value $45,000.

One and one-half story home owned and occupied by a couple and their three school aged children. Estimated value $45,000.

One story rambler, owner-occupied by a retired couple. Estimated value $45,000.

Older one and one-half story frame house owner-occupied by elderly widow. Estimated value $30,000.

Veterinarian office. Estimated value $25,000.

Bailey Avenue Alternate

Two story riverfront home owner-occupied. Estimated value $70,000.

Two story brick home, occupants unknown. May have upstairs rental quarters. Estimated value $40,000.

Chevrolet dealership garage.

Two story old frame house presently unoccupied. New owner is remodeling and converting home into TV repair shop. Estimated value when complete $50,000.

Two story frame house, no basement, owner-occupied by a family of six. Estimated value $35,000.

One story rambler, occupant unknown. Estimated value $40,000.

Two story stucco home, owner-occupied by a retired couple. Estimated value $50,000.

One story rambler, occupants unknown. Estimated value $45,000.

One story frame home, owner-occupied by husband and wife, no children at home. Estimated value $35,000.

Two year old four stall car wash. Estimated value $80,000.

Summarization of Homes to be Acquired

Price Range in Thousands of Dollars	Church Ave.	Walnut Ave.	Bailey Ave.
20 to 30	5(1)	1	0
30+ to 40	0	0	4
40+ to 50	0	4	2
50+ to 60	1	2	0
Over 60	1	1(2)	1
TOTAL	7	8	7

(1) Two of these homes are summer recreational.

(2) Chiropractic clinic.

Available Housing

On August 26, 1980, a survey of available housing was made. Wabasha is served by three active real estate offices who claim they handle more than 90% of the sales in town. Listings were obtained from the realtors and the Wabasha County Herald. While there are homes for sale in the nearby communities of Kellogg, Reads Landing

and rural Wabasha, I limited my data to the City of Wabasha and Sand Prairie, an area just south of town on the Mississippi River.

Available Housing

Price Range in Thousands of Dollars	Wabasha	Sand Prairie
20 to 30	1	1
30+ to 40	4	3
40+ to 50	2	3
50+ to 60	5	2
Over 60	7	7
TOTAL	19	16

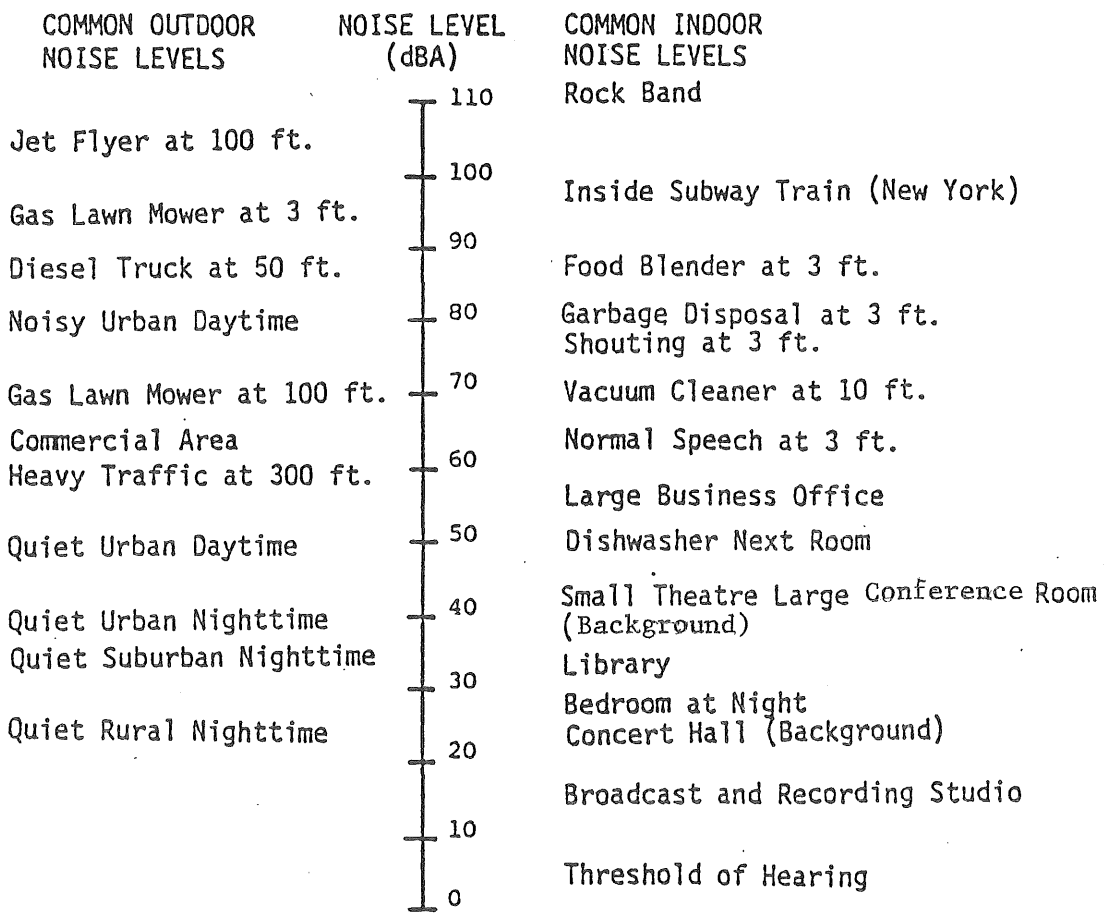
Previous surveys of available housing were made in 1978 and 1974. In May, 1978 there were 25 homes in Wabasha and 16 in Sand Prairie available for sale. In March, 1974 there were 24 available in the City. This data indicates that the housing market has remained constant for several years. Housing availability at the time displacement occurs is likely to be similar.

When matching the acquisition summary chart with the availability chart one would conclude there is a shortage of available housing in different price ranges for each of the alternates. On the Church Avenue alternate in the 20 to 30 range. Walnut Avenue in the 40 to 50 range. And Bailey Avenue in the 30 to 40 range. Several factors make these apparent shortages seem inconsequential. Displacement is likely to take place over a several month period with each displacee having a minimum of 90 days notice to vacate. Replacement housing supplements will be made available to each of the owner-occupants based on housing availability at the time of displacement. And displacees often elect to purchase replacement housing in price ranges different from what they were occupying. In summary, there appears to be adequate housing available to accommodate those displacees who elect to purchase.

Available rental housing units in the project area are in short supply. The want ads in the local paper during the month of August only had one listing of a rental unit in Wabasha. That was a one bedroom main floor apartment. The local realtors say this is typical for the area. They indicated that apartments are in such demand that if there is a turnover it is normally rented before a need to advertise. Each of the alternates is apt to displace one or two families occupying rental housing. Fortunately the City of Wabasha is doing something to alleviate their rental housing shortage. There is a City Housing and Redevelopment Authority which in the early 1970's constructed a 45 unit subsidized apartment complex for the elderly. They now have planned another project which will provide an additional 24 units for the elderly together with 16 two and three bedroom family units. According to the HRA director, ground breaking is scheduled for October 15, 1980 and a completion date nine months later. It is expected the complex will be fully occupied as soon as the doors are open. However it should help in reducing the area shortage. By law, individuals displaced by government action are given preference in placement in government subsidized housing such as that being built in Wabasha. Therefore, when displacement does occur, it is anticipated that rental housing will be available within the means of the displacees.

With respect to business displacement, the Church Avenue alternate will not displace any. The Walnut Avenue alternate includes the mill office and warehouse, chiropractic clinic and veterinarian office. Bailey Avenue would displace the Chevy dealer, TV repair shop and a car wash. The possible displacees were not contacted, therefore what their plans would be are unknown. Commercial properties are available for sale or rent which appear capable of housing the chiropractic clinic, veterinarian office and TV repair shop. To continue in business, the car wash and car dealer apparently would have to build. Commercial and industrial property is available which seemingly would fit the land needs of these businesses.

COMMON INDOOR AND OUTDOOR NOISE LEVELS



Source: Noise Control - New Standards; W. R. Green; California Department of Transportation; Paper presented at AASHO Annual Meeting; November 14, 1973.

CITY OF WABASHA

Resolution

WHEREAS, certain weight restrictions have been placed on the Interstate Bridge at Wabasha, resulting in great economic harm to the community, and

WHEREAS, the Department of Transportation appears to be delaying any progress in the construction of said bridge, and

WHEREAS, it is in the best interests of the City and its residents to have a new Interstate Bridge completed as soon as possible,

NOW, THEREFORE, BE IT HEREBY RESOLVED that the City Council of the City of Wabasha respectfully insists that the commencement of the construction of the Wabasha Interstate Bridge be expedited by the Department of Transportation and that construction commence as soon as feasibly possible.

Adopted: July 1, 1980

Approved:

John M. Meisch, Jr.

Mayor

Attest:

Virginia Fosmo

City Clerk

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

11 January 1983

Mr. Roy J. Larson
District Engineer
Minnesota Department of Transportation
District 6
North Highway 52, Box 6177
Rochester, Minnesota 55903

Dear Mr. Larson:

RE: Preliminary #2 FEIS & 4(f) Evaluation
S.P. 7910 & 7911 (TH 60)
Minn. Proj. F108-1( ) & F 046-( )
Replacement of Mississippi River Bridge
At Wabasha, Minnesota

MHS Referral File Number: H-129
PLEASE REFER TO THIS NUMBER IN ALL
FUTURE CORRESPONDENCE

Thank you for the opportunity to review and comment on the above referenced Preliminary #2.

We continue to believe that Alternate 3B, the preferred alternate, will have an adverse effect on the Wabasha Commercial District, and on the Congregational Parsonage. As the report states, this adverse effect will result from the displacement of four buildings (the Congregational Parsonage and three buildings in the Commercial District) and from the acquisition of 0.6 acre within the Commercial District. However, we also believe that the adverse effect will result from an adverse aesthetic impact of a new bridge structure traversing the center of the Commercial District. In this regard, we disagree with the conclusions of the Preliminary #2 on pages 112 (paragraph 4), page 120 (paragraphs 4 and 5), and page 232 (paragraph 1), that the adverse effects are limited to displacement and acquisition. Further, we also feel that the discussion of the adverse visual effects on pages 154-156 should contain a reference to the adverse visual effects the new structure will impose on the Wabasha Commercial District.

Although the very nature of the above impacts precludes a complete satisfactory mitigation of the adverse effect, we have agreed that the Memorandum of Agreement stipulates measures that should help to reduce some of this effect. To this end, we hope to work further with you in relocation and design matters as the project proceeds.

Sincerely,

Russell W. Fridley
State Historic Preservation Officer

Mn/DOT Note: Pages 111-121, 157, and 232 of this FEIS have been revised slightly to agree with the MSHPO's comments. The revisions consist of discussing aesthetic effects and mitigation under each individual alternative in the Historic and Archaeological section and indicating that the Alternative 3B aesthetic effects will be adverse to the historic Commercial District.

United States Department of the Interior

IN REPLY REFER TO:

FISH AND WILDLIFE SERVICE
St. Paul Field Office, Ecological Services
570 Nalpak Building
333 Sibley Street
St. Paul, Minnesota 55101

January 24, 1983

Mr. Roy J. Larson
District Engineer
Minnesota Department of Transportation
District 6
North Highway 52, Box 6177
Rochester, Minnesota 55903

Dear Mr. Larson:

This replies to your letter of December 23, 1982, requesting our comments on the preliminary Final Environmental Impact Statement (FEIS) and 4(f) Evaluation for the proposed replacement of the Mississippi River Bridge at Wabasha in Wabasha County, Minnesota (S.P. 7910-07 and 7911-05, T.H. 60).

We have been involved in the Wabasha Bridge replacement project for several years. As an agency, the Fish and Wildlife Service continues to support Alternative 3B which would minimize adverse project-related impacts to fish and wildlife resources and refuge lands (letter attached)*. Beneficial aspects of this project also include reconstruction of our boat launching facility and use of dredged material from operation and maintenance of the nine-foot channel for beneficial use in roadway construction.

Minor corrections** on the preliminary FEIS are attached. We appreciate the opportunity to offer our comments on this important document.

Sincerely,

Richard F. Berry

Richard F. Berry
Field Office Supervisor

Attachments

cc: MN DNR, St.Paul/Rochester/Lake City
MN PCA, Roseville
MN DOT, St.Paul (Office of Env.Serv.)
WI DNR, Madison
FHWA, St.Paul
NPS, Omaha

*Mn/DOT Note: The letter is contained on pages A-31 and A-32.

**Mn/DOT Note: Minor corrections of threatened and endangered species names have been made as suggested.

DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

MAILING ADDRESS:
COMMANDER (obr)
SECOND COAST GUARD DISTRICT
1430 OLIVE STREET
ST. LOUIS, MO 63103

Tel. 314-425-4607
FTS 279-4607

16591.1/760.2 UMR
11 February 1983

Mr. Roy J. Larson, District Engineer
Minnesota Department of Transportation
Box 6177
Rochester, MN 55903

Re: Proposed replacement of the Wabasha Highway Bridge, Mile 760.2, Upper Mississippi River

Dear Mr. Larsons:

Please refer to your letter of 23 December 1982.

The Preliminary Final Environmental Impact Statement (FEIS) and Section 4(f) Statement prepared on the proposed project referenced above has been reviewed, and we have the following comments:

a. Page 16 of the FEIS states existing bridge piers will be removed to an elevation approximately five feet below normal pool elevation or to the elevation required by governing permits. A condition of the Bridge Permit for the proposed bridge will require the complete removal of the bridge piers from the river.

b. Comment A.1. on page 182 should be reviewed. The Coast Guard requirement for minimum acceptable vertical clearance is 52 feet above the 2% flowline or 60 feet above normal pool, whichever is greater. The reply in the FEIS implies the vertical clearance of the proposed bridge will be an elevation which is both 52 feet above the 2% flowline and 62 feet above normal pool. Depending on the actual water surface elevations, this may or may not be the case.

c. The navigation span for the proposed bridge must be located near the Minnesota shore.

I appreciate the opportunity to review the FEIS/Section 4(f) Statement, and look forwarded to receiving an application for a bridge permit. If you have any questions concerning this letter, please contact Mr. Roger Wiebusch of this office.

Sincerely,

S. W. THOROUGHMAN
Chief, Bridge Branch
By direction of the District Commander

Mn/DOT Note: The last paragraph on page 16 has been revised to agree with comment a. Reply A.1. on page 182 has been revised to improve its clarity.