

# Appendix F



**Minnesota Department of Transportation**

**State Aid for Local Transportation**

Mail Stop 500, 4th Floor  
395 John Ireland Boulevard  
St. Paul, MN 55155-1899

Fax: 651-366-3801

May 3, 2007

Ray Krossman  
Assistant Kandiyohi County Engineer  
1801 Highway 12  
PO Box 976  
Willmar, MN 56201

**SUBJECT: SP 34-647-02, STPX 3407 (141)  
CSAH 47 from 0.18 miles south of TH 40 to US 12  
Project Memorandum Approval**

Dear Mr. Krossman:

Your determination that this project is a Categorical Exclusion, in accordance with the Federal Aid Policy Guide Sec. 771.117 (d)(1) & (a) was approved by the FHWA on April 17, 2007. Location and Design are hereby approved in accordance with the provisions of the FHWA-Mn/DOT Stewardship Plan. A copy of the approved Project Memorandum is enclosed.

Consultation with Mn/DOT's District Right-of-Way Engineer and review of State Aid Manual regarding right-of-way acquisition procedures is recommended.

Submit construction plans, Engineer's estimate, Right-of-Way Certificate #1, Utility Relocation Certificate, Request for Lab Services form, and copies of any required permits to your District State Aid Engineer when completed.

If you have any questions, please do not hesitate to contact me at 651-366-3820 or by e-mail at [mary.bieringer@dot.state.mn.us](mailto:mary.bieringer@dot.state.mn.us).

Sincerely,

A handwritten signature in cursive script that reads "Mary L. Bieringer".

Mary L. Bieringer, PE  
Project Development Engineer

Enclosure

cc: Tom Behm - DSAE  
DRWE - Michael Lownsbury  
File

**FHWA-MINNESOTA STEWARDSHIP PLAN  
REQUEST FOR ENVIRONMENTAL APPROVAL**

State Project Number(s): **34-647-02**

Route: **CSAH 47**

Federal Aid Project(s): **STP 3407 (141)**

APR 25 2007

County: **KANDIYOHI**

City: **WILLMAR**

Project Termini: **FROM 0.18 MILES SOUTH OF TH 40 TO US 12**

Type of Work: **GRADING, AGGREGATE BASE, BITUMINOUS SURFACING, CURB & GUTTER,  
STORM SEWER, CONCRETE MEDIAN**

**Categorical Exclusions: The proposed action is determined to be a categorical exclusion in accordance with  
FA POLICY GUIDE Sec 771.117 (d)(1) & (a) (Project Memorandum is attached)**

**Environmental Status:**

Section 4(f)             The proposed project will not use any Section 4(f) lands.  
                               The Programmatic Sec 4(f) Statement for Independent Bikeway/Walkway Projects applies.  
                               A Section 4(f) Evaluation is attached  
                               A Section 4(f) Evaluation has been processed separately.

Historic                The provisions of the National Historic Preservation Act (NHPA) have been satisfied by determination  
                              of  no effect per the Mn/DOT-SHPO Programmatic Agreement  
                               no properties  no adverse effect  adverse effect supported by Mn/DOT & SHPO review

Section 106            Documentation supporting consultation under the Section 106 process of NHPA  
                               is not applicable  is attached  will be processed

Endangered Species     The project is in a county that has no listed federal/state endangered species.  
                               The provisions of the Endangered Species Act have been complied with in accordance with  
                              current procedures.

Right of Way              4.10   acres to be acquired,   0   relocations,   0.19   acres of temporary easement.

Farmlands               The proposed project will not impact farmland.  
                               The proposed project will impact farmland and the provisions of the Farmland Protection Policy  
                              Act (FPPA) have been complied with.

Section 404             The proposed project does not require a Section 404 Permit.  
                               The proposed project requires a Section 404   LOP   Permit.

Floodplains             The proposed project will not encroach into a floodplain.  
                               The proposed project encroachment will be non-significant (Executive Order 11988).

Wetlands                 The proposed project will not impact or encroach into a wetland.  
                               The proposed project impacts or encroaches upon a wetland and the provisions of  
                              Executive Order 11990 have been complied with.

Other                    The proposed project will not significantly impact  noise levels,  air quality,  
                              or  other social/economic areas.

APPROVAL REQUEST FOR Mn/DOT

APPROVED FOR FEDERAL HIGHWAY ADMINISTRATION

*Mary L Bieringer* 4/12/07  
 DIRECTOR, STATE AID FOR LOCAL TRANSPORTATION      DATE

*Philip Jan* 4/17/2007  
 AREA ENGINEER      DATE

STATE OF MINNESOTA  
DEPARTMENT OF TRANSPORTATION

and

KANDIYOHI COUNTY  
PUBLIC WORKS DEPARTMENT

PROJECT MEMORANDUM

FOR

S.P. 34-647-02, STPX 3407 (141)

CSAH 47

FROM: 0.18 miles South of State Highway 40

TO: U.S. Highway 12

IN THE CITY OF: Willmar, MN

**PROPOSED IMPROVEMENT:** Reconstruction of 0.18 miles of CSAH 47; New construction of 0.91 miles of CSAH 47 between State Highway 40 and U.S. Highway 12; construction of new Bridge # 34J23 over Co. Ditch 10 (Hawk Creek).

Recommended:

  
\_\_\_\_\_  
Gary Danielson, P.E., Kandiyohi  
County Public Works Director

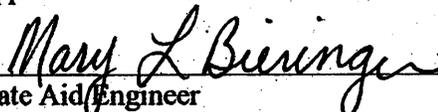
2/20/07  
Date

Reviewed and Recommended:

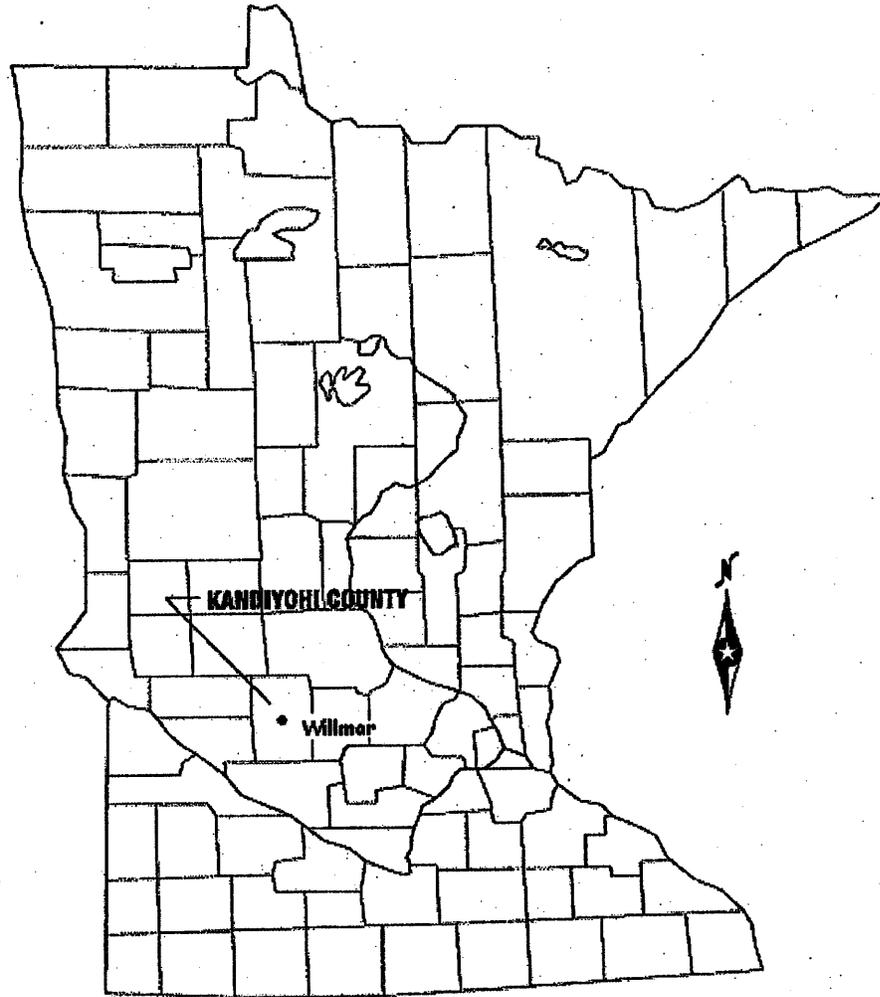
  
\_\_\_\_\_  
Thomas Behm, P.E., District 8 State Aid Engineer

2/23/07  
Date

Approved:

  
\_\_\_\_\_  
State Aid Engineer  
State Aid For Local Transportation

4/12/07  
Date



**FIGURE 1**  
**PROJECT LOCATION MAP**  
**KANDIYOHI COUNTY MINNESOTA**  
**S.P. 34-647-02**

# PROJECT LOCATION MAP KANDIYOHI COUNTY MINNESOTA SP 34-647-02 (CSAH 47)

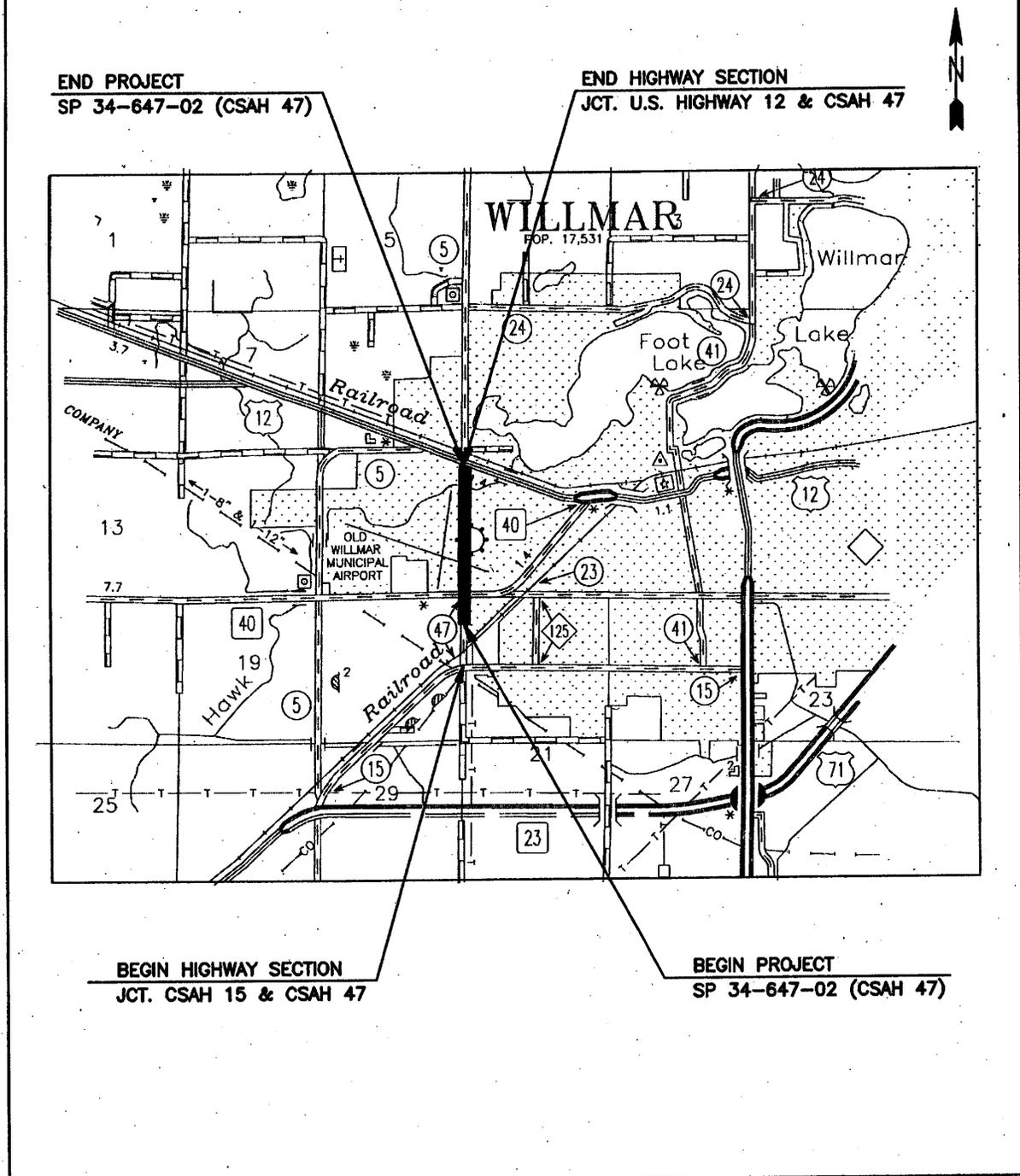


FIGURE 2

PROJECT LOCATION MAP  
S.P. 34-647-02

## **OPENING STATEMENT**

This Project Memorandum has been prepared and submitted in accordance with the approved Highway Project Development Process.

## **PROJECT MANAGER**

Name: Ray Krossman  
Assistant Kandiyohi County Engineer  
Address: 1801 East Highway 12  
P.O. Box 976  
Willmar, MN 56201  
Phone: (320) 235-3266  
Fax: (320) 235-0055  
E-mail: [ray\\_k@co.kandiyohi.mn.us](mailto:ray_k@co.kandiyohi.mn.us)

## **HIGHWAY SECTION DESCRIPTION**

This section of highway is 1.38 miles in length. The highway section begins at the intersection of County State Aid Highway No. 15 (CSAH 15) and terminates at the intersection of U.S. Trunk Highway No. 12. The section of highway between State Highway No. 40 and U.S. Trunk Highway No. 12 is non-existent at this point in time.

The existing CSAH 47 is a 4 lane rural roadway and was last graded in 1991 and surfaced in 1992 as part of a State to County turn back plan. It also includes approximately 1,700 feet of curb and gutter. The road right-of-way is a 100-foot wide permanent easement in which Kandiyohi County is the owner.

The average daily traffic (ADT) for CSAH 47 is based on the 2003 Willmar Area Transportation Study. The projected ADT for existing CSAH 47 located south of State Highway No. 40 is 7,340 vehicles per day in 2007 and 11,010 vehicles per day in 2027. The projected ADT for the new location of CSAH 47 located north of State Highway No. 40 is 8,469 vehicles per day in 2007 and 12,704 vehicles per day in 2027. The posted speed on CSAH 47 is 45 MPH. The existing highway alignment is relatively straight and the grade of the highway is flat.

The surrounding terrain is mostly flat with very little vertical change. The adjacent land use throughout the highway section has multiple uses. From CSAH 15 to State Highway No. 40 is mainly agricultural, with the exception of Jennie-O Turkey Store Inc. located on State Highway No. 40. The land use from State Highway No. 40 to U.S. Trunk Highway No. 12 is mainly the City of Willmar's property, which was the old site of the City of Willmar Airport. There is also some agricultural land along with the City of Willmar's Industrial Park, which is found on the eastern corridor of the proposed project. See Exhibit #1 for adjacent land use map.

The primary users of the existing highway section are everyday commuters and commercial supply vehicles. School buses, mail carriers and nearby residents also use this highway on a regular basis.

There is one railroad crossing associated with the existing CSAH 47 highway section. It is located 575 feet north of the intersection of CSAH 47 and CSAH 15. This crossing is approximately 1150 feet south of the proposed project corridor. There is also a railroad crossing on County State Aid Highway No. 5 (CSAH 5). It is located 140 feet north of the intersection of CSAH 5 and U.S. Trunk Highway No. 12. This crossing is approximately 150 feet north of the proposed project corridor. There is no work planned to take place north of U.S. Trunk Highway No. 12, as work around this crossing was done in a previous county project.

## **PROPOSED IMPROVEMENT**

The proposed project has a total length of 1.09 miles. It includes 0.18 miles of reconstruction of existing CSAH 47 and 0.91 miles of new four-lane construction across the old City of Willmar Airport lying between State Highway 40 and U.S. Highway 12. The work will consist of grading, aggregate base, bituminous surfacing, curb and gutter, and storm sewer.

The grading will include widening existing CSAH 47 south of TH 40, to taper from the proposed 4 lane divided roadway north of TH 40, to the existing 4 lane undivided roadway south of TH 40. A concrete median with curb and gutter is planned to run the entire length of the proposed new construction. There will also be a storm water treatment pond integrated with the planned storm sewer to effectively treat storm water runoff. A 7'x14' box culvert will be installed over County Ditch #10 (Hawk Creek), which will be new bridge #34J23.

## **PROJECT COST AND FUNDING SOURCES**

The total project cost is expected to be approximately \$3,644,000. The 2007-2009 State Transportation Improvement Program (STIP) has \$567,448 in federal funding scheduled for this project in fiscal year 2007 (Sequence # 1192) and \$498,752 in federal funding scheduled for fiscal year 2008 (Sequence # 1237).

## **ANTICIPATED SCHEDULE**

Public Informational Meeting	April 2007
Project Memorandum	April 2007
Right of Way Acquisition	February 2007 – April 2007
Project Letting	July 2007
Construction	July 2007 – November 2007
Highway open to traffic	November 2007
Final Surfacing	August 2008

## **PROJECT PURPOSE AND NEED**

### **Project Purpose**

The purpose of this project is to connect State Highway 40 (minor arterial) to U.S. Highway 12 (principal arterial) while also connecting the existing portion of CSAH 47 (minor arterial) to CSAH 5 (minor arterial). This link is an important part of an internal ring route of the City of Willmar. The Willmar Industrial Park will gain better access from the north, west and south. This connection will also serve as the primary access to the expanded new industrial park, which will reduce or even eliminate the need for future additional access points along U.S. Highway 12 and State Highway 40.

### **Project Need**

With increasing traffic counts expected in the future, especially with the expansion of the Willmar Industrial Park, the accident rates, trip times and multiple access points will continue to get larger in this southwest part of the city. With this, the overall public safety of the surrounding minor and principal arterials will decline.

## **ALTERNATIVES**

### **Alternative No. 1**

This is the "No Build" alternative. This alternative does not address any of the project objectives to connect minor and principal arterials or the project's access and traffic issues. Therefore this alternative was rejected.

### **Alternative No. 2**

This alternative is to only reconstruct the intersection of CSAH 47 and State Highway 40 to better accommodate the increasing traffic numbers of the surrounding Industrial park and Jennie-O Turkey Store. This however would not address the project objectives of connecting minor and principal arterials or any of the access concerns. Therefore this alternative was rejected.

### **Alternative No. 3**

This alternative is to construct a four-lane highway across the old Willmar Airport, reconstruct the CSAH 47 and State Highway 40 intersection and also reconstruct approximately 950' of CSAH 47. This alternative will address all of the project objectives and will allow the new location part of CSAH 47 to be integrated with the expansion of the Willmar Industrial Park. Therefore this was selected as the preferred alternative.

## **PUBLIC & AGENCY INVOLVEMENT**

An opportunity for a public hearing will not be offered. However, an informal informational meeting will be provided.

The Kandiyohi County Board of Commissioners has approved the five-year road construction plan, which includes this project.

Various Local, State and Federal agencies have been requested to be part of this transportation decision-making process. Listed below are the agencies, which were sent, written notification-requesting input on the proposed improvement.

**Agencies contacted for review**

Kandiyohi County LGU  
Kandiyohi County Soil and Water Conservation District  
Minnesota Board of Water and Soil Resources  
Minnesota Natural Heritage  
Minnesota Pollution Control Agency  
MNDNR Nongame Wildlife Program – Region 4  
MNDNR Waters Division – Region 4  
Mn/DOT Office of Environmental Services  
Mn/DOT Cultural Resources  
Natural Resources Conservation Service (NRCS)  
United States Army Corps of Engineers Regulatory Branch  
United States Environmental Protection Agency

**Permits needed**

WCA – Wetland Mitigation  
MPCA NPDES Permit

**SOCIAL, ECONOMIC AND ENVIRONMENTAL STUDY**

**Section 4(f)/6(f) Property**

The Project will not use Section 4(f) lands or properties or Section 6(f) lands or properties.

**National Historic Preservation Act (Section 106)**

The CRU has determined there are “No Historic Properties” with the Area of Potential Effect (APE). The CRU determination letter is attached.

**Endangered Species**

The Project will have no effect on federally listed threatened or endangered species or critical habitat. See attached letters from Mn/DOT’s Office of Environmental Services (OES) for federally listed species and from the MNDNR for State listed species.

**Right-of-Way**

The Project will require non-significant permanent right of way acquisition, permanent and temporary easements, minor changes to access, no relocations, and a low risk of hazardous materials involvement. The project will require approximately:

- 4.10 acres of permanent right of way easement from 4 parcels
- 0.19 acres of temporary easements from 4 parcels

### **Farmland Protection Policy Act**

The project will not significantly impact farmland. See attached copy of completed form AD-1006 and transmittal letter to the NRCS.

### **Section 404 (Army Corps of Engineers)**

The project will be covered by a Section 404 Permit - Letter of Permission (LOP). The permit will be submitted to Mn/DOT State Aid prior to project authorization

### **Air Quality**

The project is not located in an area in which conformity requirements apply and the scope of the project does not indicate that air quality impacts would be expected. Therefore, no further air quality analysis is necessary.

### **Water Quality**

The project will disturb 1 or more acres of land (including clearing, grading and excavation). A Phase II NPDES permit is required. The permit will be submitted to Mn/DOT State Aid prior to project authorization and a Stormwater Pollution Prevention Plan (SWPPP) will be included in the construction plan package.

### **Floodplain**

The project was determined to not encroach into any known floodplains.

### **Noise**

Since the proposed project is on a County-owned highway without full control of access, it is exempt from Minnesota Noise Standards, per Minnesota Statutes, Section 116.07 Subd. 2a. Potential traffic noise impacts of this project will be evaluated using federal noise criteria.

Noise is defined as any unwanted sound. Sound travels in a wave motion and produces a sound pressure level. This sound pressure level is commonly measured in decibels. Decibels (dB) represent the logarithmic increase in sound energy relative to a reference energy level. A sound increase of 3 dB is barely perceptible to the human ear, a 5 dB increase is clearly noticeable, and a 10 dB increase is heard twice as loud. For example, if the sound energy is doubled (e.g. the amount of traffic doubles), there is a 3 dB increase in noise, which is just barely noticeable to most people. On the other hand, if traffic increases to where there is 10 times the sound energy level over a reference level, then there is a 10 dB increase and it is heard twice as loud.

For highway traffic noise, an adjustment, or weighting, of the high- and low-pitched sounds is made to approximate the way that an average person hears sounds. The adjusted sound levels are stated in units of "A-weighted decibels" (dBA). In Minnesota, traffic noise impacts are evaluated by measuring and/or modeling the traffic noise levels that are exceeded 10% and 50% of the time during the day and/or night that has the heaviest traffic. These numbers are identified as the L<sub>10</sub> and L<sub>50</sub> levels. The L<sub>10</sub> value is compared to FHWA noise abatement criteria.

The following chart provides a rough comparison of the noise levels of some common noise sources.

Sound Pressure Level (dBA)	Noise Source
140	Jet Engine (at 25 meters)
130	Jet Aircraft (at 100 meters)
120	Rock and Roll Concert
110	Pneumatic Chipper
100	Jointer/Planer
90	Chainsaw
80	Heavy Truck Traffic
70	Business Office
60	Conversational Speech
50	Library
40	Bedroom
30	Secluded Woods
20	Whisper

Source: "A Guide to Noise Control in Minnesota," Minnesota Pollution Control Agency, <http://www.pca.state.mn.us/programs/pubs/noise.pdf> and "Highway Traffic Noise," FHWA, <http://www.fhwa.dot.gov/environment/htnoise.htm>

There are three known noise receptors in the vicinity of this proposed project.

--Noise Receptor #1 is located in the southeast quadrant of the intersection of CSAH 47 and State Highway 40. This is a residential property that has grass and trees surrounding it. It is 80' from CSAH 47 and 142' from State Highway 40. This lone, residential use is non-conforming to the General Industrial Zoning adjacent to the road

--Noise Receptor #2 is located approximately 1750' north of the intersection of CSAH 47 and State Highway 40. This is an industrial building within the City of Willmar industrial park and will be 646' east of the new CSAH 47 alignment.

--Noise Receptor #3 is located in the southeast quadrant of the future intersection of CSAH 47 and U.S. Highway 12. This receptor is a commercial building with grass and gravel surrounding it. It is approximately 151' from the proposed CSAH 47 alignment and 87' from U.S. Highway 12. See Exhibit #6 in the Appendix for a map of the noise receptor locations.

To calculate existing and to predict future traffic noise, nomographs were used based on the following data and assumptions:

- Traffic noise levels were predicted based on constant operating speeds of 45 mph and 55 mph for the Build and No-Build alternatives.
- The noise analysis assumed 15.0 percent of the Average Daily Traffic occurred during the A.M. peak hour.
- The noise analysis assumed 2.0 percent of the vehicles were heavy trucks (three or more axles) and 2.0 percent of the vehicles were medium trucks (two axles, six wheels).
- The analysis assumed acoustically soft ground cover between the roadway and receiver locations ( $\alpha = 0.5$ ).

### Existing and Predicted Noise Levels (dBA)

Receptor	Modeled Existing (L <sub>10</sub> )	Future, No-Build Alternative (L <sub>10</sub> )	Future, Build Alternative (L <sub>10</sub> )	FHWA NAC (L <sub>10</sub> )	Difference between Build and Existing (L <sub>10</sub> )	Difference between No-Build and Existing (L <sub>10</sub> )
R1	64	69	72	70	8	5
R2	50	51	51	75	1	1
R3	71	71	71	75	0	0

The results of these nomographs, as shown in the table above, show that the Future Build Alternative exceeds the FHWA NAC for Noise Receptor #1 and therefore results in a traffic noise impact and noise abatement measures must be considered.

#### Noise Abatement Measures

Noise abatement measures are very limited within the project area due to the close proximity of the residence (R1) to the roadway and the limited roadway right-of-way. Noise abatement measures considered were:

##### *Traffic management measures*

Traffic control devices and signing for prohibition of certain vehicle types and modified speed limits were considered. However, this section of CSAH 47 will provide an arterial link between two major routes into the City of Willmar and also provides truck access to local businesses for shipping and receiving goods and services. A prohibition of certain vehicle types is not a reasonable option.

##### *Alteration of horizontal and vertical alignments*

To try and reduce the noise impacts to Noise Receptor #1, the horizontal alignment would need to be shifted to the west introducing curves in the CSAH 47 alignment at the intersection with TH 40. This is not considered a reasonable option because it would increase wetland impacts and would introduce safety concerns with the curvilinear alignment at TH 47.

##### *Construction of Noise Barriers*

Noise walls and/or earthen berms can be used to screen adjacent residential areas. Generally, noise walls are not cost effective in sparsely developed areas. Earthen berms require considerable right-of way width for the side slopes. Also to be effective, noise walls and berms need to be continuous, which conflicts with local property access needs. Noise barriers in this area would be necessarily short in length, due to the need to maintain private entrances.

A model was used to determine the feasibility of a 260 foot long noise barrier at heights of 5, 10 and 15 feet, placed between the residence (R1) and the mainlines of the intersection. Mn/DOT's Noise Policy requires the cost effectiveness of the barrier should not exceed \$3250/dBA/residence. The average cost of noise barriers in Minnesota is \$15.00/sq.ft. of the barrier area above the ground. The calculated cost effectiveness of the wall ranged from \$3900/dBA/residence to \$11,700/dBA/residence.

Considering the cost effectiveness, access issues, and the right-of-way width constraints, the construction of noise walls or earthen berms does not appear to be feasible for the benefits accrued.

None of the above noise abatement measures were found to reasonable or economically feasible, therefore no abatement measures will be incorporated into the project.

Construction noise has been considered and no impact is anticipated.

**Wetlands**

Wetland Finding: The project will impact 2 wetlands.

Wetland ID #	1	2	Total
Classification	II	II	
Approx. Basin Size, acres	2.11	1.55	
Anticipated Encroachment Size, acres	0.49	0.67	1.16
Type of Impact i.e.: fill, excavation, drain	fill	fill	
% Encroachment to Basin Size	23.2	43.2	
Protected wetland?	no	no	
Connection to other wetlands?	no	no	
Impacts to public water supply?	no	no	
Water Quality impacts?			
----recharge/discharge	no	no	
----water pollution	no	no	
----flooding	no	no	
----sedimentation	no	no	
----erosion	no	no	
Impacts to fish/wildlife & habitat?	no	no	
Impacts to recreational, cultural, or scientific uses?	no	no	

There is no practicable alternative to avoiding the wetland impact. In order to avoid all wetlands, the new highway alignment would need to be curved either to the west or the east. This in turn would severely alter the intersection of State Highway 40 and CSAH 47. It would add a considerable amount of length and cost to the project, not to mention the undesirable geometrics of the roadway.

To help minimize wetland impacts, the overall profile of the new roadway was designed as low as possible to help keep fill slopes to a minimum.

The affected wetlands will be mitigated through the purchasing of credits from the Board of Soil and Water Resources (BWSR) State Wetland Bank. Permits will be obtained from the Kandiyohi County LGU, which have jurisdiction over the affected wetlands. See Exhibit #5 in the Appendix for a map showing the affected wetlands.

### **Hazardous Materials**

Potential for impacts from contaminated properties has been considered, but because of the project location and nature of the planned work, there is little potential for encountering contaminated materials. Any potentially contaminated materials encountered during construction will be handled and treated in accordance with applicable state and federal regulations.

### **Mitigation of Damages**

Erosion control measures will be taken to avoid damages to area wetlands. Silt fence, erosion control mats and a storm water pond will be installed to help with erosion on the project site.

### **Controversial Issues**

There are no apparent controversial issues associated with this highway reconstruction project.

### **Aesthetic Values**

The new roadway should positively affect any aesthetic values associated with the roadway.

### **Traffic During Construction**

Traffic during the reconstruction of existing CSAH 47 will be detoured. Service for local residents will be maintained throughout the duration of the project.

### **State Environmental Review (MEOB)**

The project does not meet the mandatory EAW threshold and does not have potential for significant environmental effects.

### **Environmental Justice**

The purpose of Executive Order 12898 is to identify, address, and avoid disproportionately high and adverse human health or environmental effects on minority and low income populations. Based on a field review of the project area and discussions with City officials, it has been determined that there are no minority or low income populations within the project area. Therefore, there are no Environmental Justice concerns on this project.

### **Federal Action Determination Statement**

Based on the results of the environmental study in accordance with 23 CFR 771.117(a), summarized herein, it is determined that the proposed project is a Class II Action (Categorical Exclusion). This action will have non-significant social, economic, or environmental impacts, and is anticipated to have no foreseeable change on the quality of the human environment.

## DESIGN STUDY

### Design Standards and Specifications

The project will be designed in accordance with the FHWA-Mn/DOT Stewardship Plan. For this project, the following design standards are applicable:

#### State Aid Geometric Design Standards:

8820.9920 Rural and Suburban Undivided; New or Reconstruction  
 8820.9936 Urban; New or Reconstruction  
 Minnesota Manual on Uniform Traffic Control Devices  
 Americans with Disabilities Act (ADA)

The project will be constructed in accordance with the current edition of the Minnesota Department of Transportation's "Standard Specifications for Construction", including all Supplemental Specifications.

### Geometric Design Elements

CSAH 47 – From 0.18 miles south of State Highway 40 to State Highway 40

Roadway Type	Suburban	Suburban
Project or segment length, ft	950'	950'
Functional Class	Minor Arterial	Minor Arterial
ADT (Year)	2,250 (2002)	7,340 (2007) & 11,010 (2027)
Heavy Commercial, %	10%	10%
Speed, mph	45 mph	45 mph
# Thru Lanes each direction	2	2
Lane width, ft	12'	12'
Surfacing type	bituminous	bituminous
Structural Design Strength, ton	10 ton	10 ton
Shoulder Width, ft	N/A	N/A
Surfacing type	N/A	N/A
Recovery area – From edge of traffic lane, ft	N/A	30'
Inslope, rise:run	1:5	1:5
Approach Sideslopes	1:5	1:6
Turn Lane, ft	N/A	12' wide
Bypass Lane, ft	N/A	N/A
Right-of-Way width, ft	100'	125'
Median, ft, raised/painted	N/A	6' raised concrete
Median Curb Reaction, ft	N/A	2'
Curb & Gutter type	B624	S524
Curb Reaction, ft	2'	2'
Clearance from Face Curb, ft	2'	2'
Parking Lane, ft	N/A	N/A

Storm Sewer	Yes	Yes
Utilities	Yes	Yes
Sidewalk width, ft	N/A	N/A
Curb Ramps, Y/N	No	No
Traffic Signal Location	N/A	N/A
Roadway Lighting	Yes	Yes
Signing	Yes	Yes
Pavement Marking	Yes	Yes

CSAH 47 – From State Highway 40 to U.S. Highway 12

DESCRIPTION	UNIT	VALUES
Roadway Type	N/A	Suburban
Project or segment length, ft	N/A	4805'
Functional Class	N/A	Minor Arterial
ADT (Year)	N/A	8,469 (2007) & 12,704 (2027)
Heavy Commercial, %	N/A	10%
Speed, mph	N/A	55 mph
# Thru Lanes each direction	N/A	2
Lane width, ft	N/A	12'
Surfacing type	N/A	bituminous
Structural Design Strength, ton	N/A	10 ton
Shoulder Width, ft	N/A	9.5'
Surfacing type	N/A	8' bit. / 1.5' agg
Recovery area – From edge of traffic lane, ft	N/A	30'
Inslope, rise:run	N/A	1:5
Approach Sideslopes	N/A	1:6
Turn Lane, ft	N/A	12' wide
Bypass Lane, ft	N/A	N/A
Right-of-Way width, ft	N/A	200'
Median, ft, raised/painted	N/A	6' – 18' raised concrete
Median Curb Reaction, ft	N/A	2'
Curb & Gutter type	N/A	S524
Curb Reaction, ft	N/A	N/A
Clearance from Face Curb, ft	N/A	N/A
Parking Lane, ft	N/A	N/A
Storm Sewer	N/A	Yes
Utilities	N/A	Yes
Sidewalk width, ft	N/A	N/A
Curb Ramps, Y/N	N/A	No
Traffic Signal Location	N/A	Hwy 12
Roadway Lighting	N/A	Yes
Signing	N/A	Yes
Pavement Marking	N/A	Yes

<b>Culvert No.</b>	N/A	34J23
<b>Over</b>	N/A	CD #10 (Hawk Creek)
<b>Bridge Type</b>	N/A	Box culvert
<b>Skew</b>	N/A	15°
<b>Culvert Size, ft</b>	N/A	14' x 7'
<b>Culvert Length, ft</b>	N/A	188'
<b>Culvert # of Lines</b>	N/A	1
<b>Guardrail</b>	N/A	Not required

## APPENDIX

- ◆ Exhibit #1 – Adjacent Land Use Map
- ◆ Exhibit #2 – Response from Natural Resources Conservation Service and Farmland Conversion Impact Rating – January 5, 2007
- ◆ Exhibit #3 – Response from Minnesota Department of Transportation – Cultural Resources Unit
- ◆ Exhibit #4 – Hydraulic Analysis & Risk Assessment for CD 10 crossing
- ◆ Exhibit #5 – Affected Wetland Maps for Project
- ◆ Exhibit #6 – Location map of Noise Receptors
- ◆ Exhibit #7 – Response from United States Environmental Protection Agency – January 26, 2007.
- ◆ Exhibit #8 – Response from Mn/DOT Office of Environmental Services / Cultural Resources Unit – February 5, 2007.
- ◆ Exhibit #9 – Response from Minnesota Department of Natural Resources – February 6, 2007.
- ◆ Exhibit #10 – Response from Mn/DOT Office of Environmental Services / Federal Threatened and Endangered Species – February 8, 2007.
- ◆ Exhibit #11 – Response from Minnesota Department of Natural Resources / Natural Heritage and Nongame Research – January 16, 2007.
- ◆ Exhibit #12 – County State Aid Highway No. 47 Typical Sections
- ◆ Exhibit #13 – Letter to City of Willmar regarding noise study

**STATE OF MINNESOTA  
DEPARTMENT OF TRANSPORTATION**

and

**KANDIYOHI COUNTY  
PUBLIC WORKS DEPARTMENT**

**PROJECT MEMORANDUM**

FOR

**S.P. 34-647-02, STPX 3407 (141)**

**CSAH 47**

**FROM: 0.18 miles South of State Highway 40**

**TO: U.S. Highway 12**

**IN THE CITY OF: Willmar, MN**

**PROPOSED IMPROVEMENT:** Reconstruction of 0.18 miles of CSAH 47; New construction of 0.91 miles of CSAH 47 between State Highway 40 and U.S. Highway 12; construction of new Bridge # 34J23 over Co. Ditch 10 (Hawk Creek).

Recommended:

\_\_\_\_\_  
Gary Danielson, P.E., Kandiyohi  
County Public Works Director

\_\_\_\_\_  
Date

Reviewed and Recommended:

\_\_\_\_\_  
Thomas Behm, P.E., District 8 State Aid Engineer

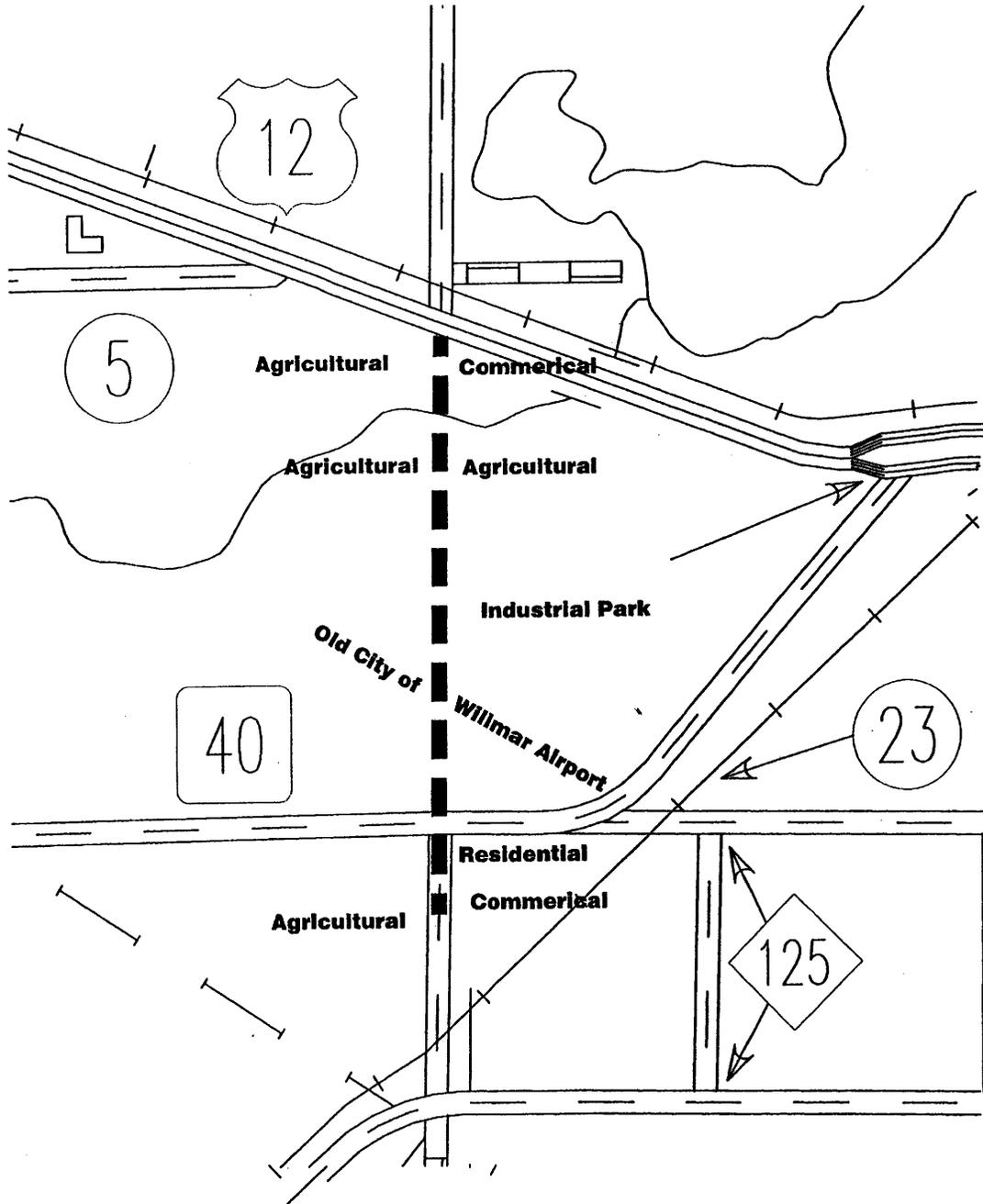
\_\_\_\_\_  
Date

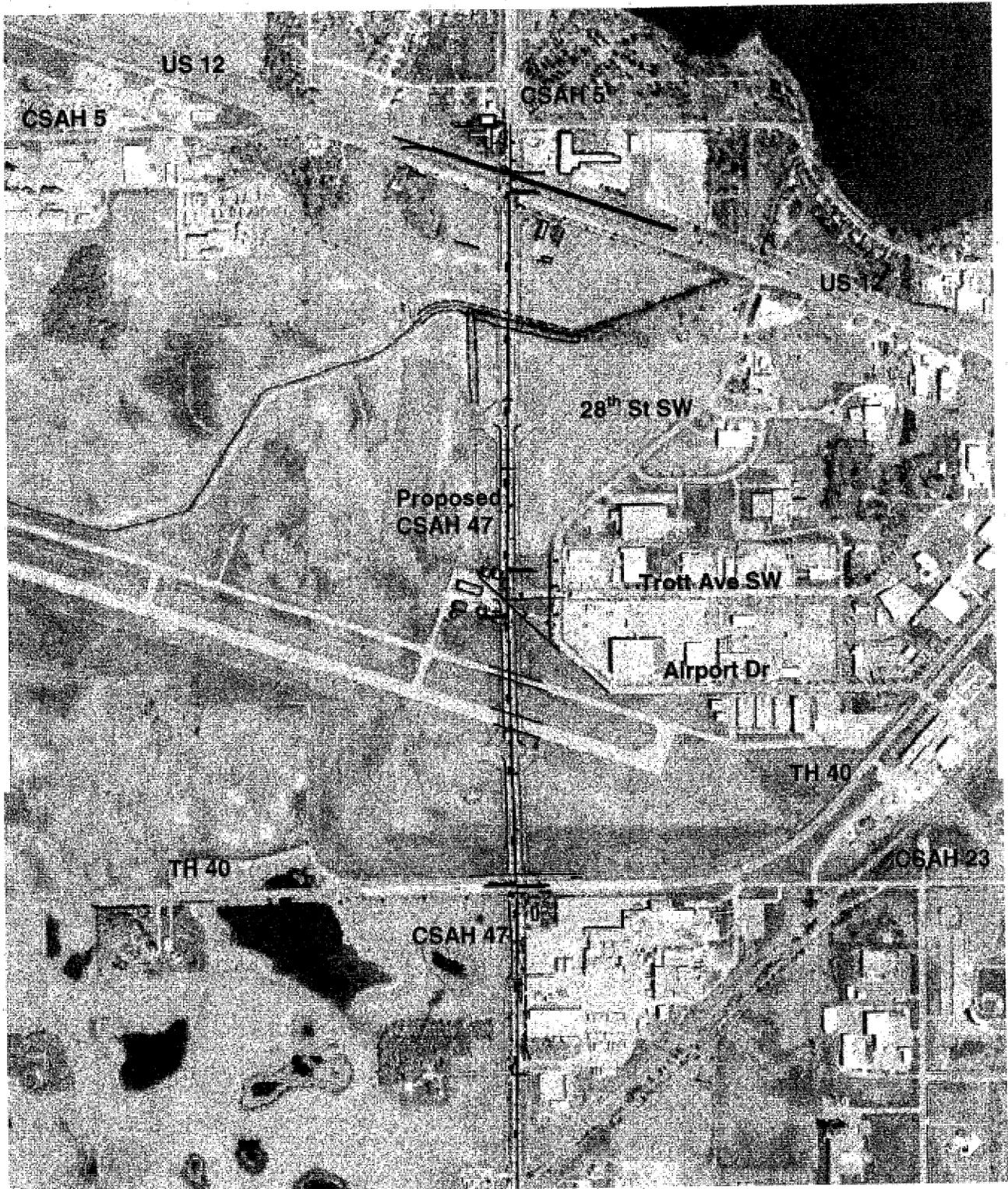
Approved:

\_\_\_\_\_  
State Aid Engineer  
State Aid For Local Transportation

\_\_\_\_\_  
Date

# ADJACENT LAND USE MAP SP 34-647-02 (CSAH 47)





Proposed Layout  
SP 34-647-02

United States Department of Agriculture



Natural Resources Conservation Service  
1005 High Street  
Willmar, MN 56201

70 Years

*"A Partner in Conservation Since 1935"*

Phone: (320) 235-3906, x3  
FAX: (320) 235-8751

January 5, 2007

Jeremy Pfeifer  
1801 E Highway 12  
P.O Box 976  
Willmar, MN 56201

Re: Farmland Conversion impact Rating for SP 34-647-02

Dear Mr. Pfeifer

Thank you for the opportunity to review the Kandiyohi County, Minnesota farmland conversion project. If federal money is involved, and prime farmland is being converted to non-agricultural use, before construction begins, a FPPA form (AD-1006) should be filled out.

The purpose of the Farmland Protection Policy Act (FPPA) is to minimize the extent that federal programs contribute to the unnecessary and irreversible conversion of prime farmland to non-agricultural uses. The FPPA requires federal agencies involved in projects that may convert farmland, to determine whether the proposed conversion is consistent with FPPA.

I have completed Parts II, IV, and V of the AD-1006 form you sent me. I have appended a soil map of the project area in Kandiyohi County, and a copy of the Kandiyohi Important Farmland list. Thank you for sending me the supporting documentation.

If there is any additional information you require, please contact me.

Sincerely,

Mike Taylor  
District Conservationist

Cc: Douglas Miller  
Area Resource Soil Scientist

U.S. Department of Agriculture

**FARMLAND CONVERSION IMPACT RATING**

<b>PART I (To be completed by Federal Agency)</b>		Date Of Land Evaluation Request	01/02/07
Name Of Project	SP 34-647-02	Federal Agency Involved	KANDIYOHY COUNTY PUBLIC WORKS
Proposed Land Use	HIGHWAY RIGHT-OF-WAY	County And State	KANDIYOHY COUNTY, MINNESOTA
<b>PART II (To be completed by NRCS)</b>		Date Request Received By NRCS	

Does the site contain prime, unique, statewide or local important farmland? (If no, the FPPA does not apply -- do not complete additional parts of this form).		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Acres Irrigated	0	Average Farm Size	324
Major Crop(s)	corn / Beans	Farmable Land In Govt. Jurisdiction	Acres: 314,800	%	63	Amount Of Farmland As Defined In FPPA	Acres: 236,100 % 75
Name Of Land Evaluation System Used	LE	Name Of Local Site Assessment System	NIA		Date Land Evaluation Returned By NRCS		

PART III (To be completed by Federal Agency)	Alternative Site Rating			
	Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	11.3			
B. Total Acres To Be Converted Indirectly				
C. Total Acres In Site	11.3	0.0	0.0	0.0

PART IV (To be completed by NRCS) Land Evaluation Information	
A. Total Acres Prime And Unique Farmland	6.7
B. Total Acres Statewide And Local Important Farmland	
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted	.002
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value	99.9%

PART V (To be completed by NRCS) Land Evaluation Criterion	Site A	Site B	Site C	Site D
Relative Value Of Farmland To Be Converted (Scale of 0 to 100 Points)	44	0	0	0

PART VI (To be completed by Federal Agency)	Maximum Points	Site A	Site B	Site C	Site D
Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b))					
1. Area In Nonurban Use					
2. Perimeter In Nonurban Use					
3. Percent Of Site Being Farmed					
4. Protection Provided By State And Local Government					
5. Distance From Urban Builtup Area					
6. Distance To Urban Support Services					
7. Size Of Present Farm Unit Compared To Average					
8. Creation Of Nonfarmable Farmland					
9. Availability Of Farm Support Services					
10. On-Farm Investments					
11. Effects Of Conversion On Farm Support Services					
12. Compatibility With Existing Agricultural Use					
<b>TOTAL SITE ASSESSMENT POINTS</b>	160	0	0	0	0

PART VII (To be completed by Federal Agency)	Maximum Points	Site A	Site B	Site C	Site D
Relative Value Of Farmland (From Part V)	100	0	0	0	0
Total Site Assessment (From Part VI above or a local site assessment)	160	0	0	0	0
<b>TOTAL POINTS (Total of above 2 lines)</b>	260	0	0	0	0

Site Selected:	Date Of Selection	Was A Local Site Assessment Used?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
----------------	-------------------	-----------------------------------	------------------------------	-----------------------------

Reason For Selection:



Minnesota Department of Transportation

Transportation Building  
395 John Ireland Boulevard  
Saint Paul, Minnesota 55155-1899

Exhibit #3

Ms. Shannon Blue, President  
Lower Sioux Indian Community Council  
P.O. Box 308  
Reservation Highway 1  
Morton, MN 56270

Re: S.P. 34-647-02 (CSAH 47 Reconstruction, Willmar, Kandiyohi County)  
T 119N, R 35W, S 16, 17, 20 & 21

Dear Ms. Blue:

Kandiyohi County Public Works is proposing construct a portion of CSAH 47 using federal funds administered by the Federal Highway Administration (FHWA). This undertaking is subject to review under Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, and under the National Environmental Policy Act (NEPA). Section 106 of the NHPA requires Federal agencies to take into account the effects of their undertakings on historic properties (i.e., those properties eligible for or listed on the National Register of Historic Places). This process involves efforts to identify historic properties potentially affected by the undertaking, assess its effects and seek ways to avoid, minimize or mitigate any adverse effects on historic properties. On behalf of the FHWA, which has designated its Section 106 responsibilities to the Minnesota Department of Transportation (Mn/DOT) Cultural Resources Unit (CRU), we are now initiating review to determine the possible effects of the undertaking (if any) on historic properties. In accordance with 36 CFR 800.2(c) of the NHPA and as per the terms of the Programmatic Agreement between the Lower Sioux Indian Community Council and the FHWA, we are contacting you to see if you know of any historic properties of religious or historic significance in the area, and to see if you would like to participate in the Section 106 process for this project (i.e., to be a consulting party).

The proposed project has a total length of 1.09 miles. It includes 0.18 miles of reconstruction of existing CSAH 27 and 0.91 miles of new four-lane construction across the old City of Willmar Airport, lying between TH 40 and U.S. Highway 12. The work will consist of grading, aggregate base, bituminous surfacing, curb and gutter, and storm sewer. The grading will include widening the driving lanes and shoulders of existing CSAH 47 to safely merge the proposed four-lane highway into the existing two-lane highway. A concrete median with curb and gutter is planned to run the entire length of the proposed new construction. There will also be a storm water treatment pond integrated with the planned storm sewer to effectively treat storm water runoff.

The typical graded section will be 103 feet in width to allow for four 12-foot driving lanes, two 9 1/2 foot shoulders (8 foot paved, 1 1/2 foot aggregate), and a 16-foot concrete center median. The graded section will be constructed to a 10-ton rating with a 2-foot deep subgrade excavation extending 89 feet wide. The top foot of the subgrade excavation will be replaced with granular borrow. The road inslopes and

An equal opportunity employer

backslopes will be constructed at 1:5 (vertical to horizontal). There will be 6-foot-wide ditches and a total right-of-way width of 175 feet across the new location. The pavement section will include 12 inches of Class 5 aggregate base and 5 1/2 inches of bituminous pavement.

Our office has defined the area of potential effect (APE) for the project as the proposed construction limits. The APE is defined as the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. Once the APE was established, we examined the SHPO database for the list of previously recorded resources in the area. Based on these queries, there are no previously recorded archaeological or architectural resources within the APE, or adjacent to it.

We would appreciate any comments you may have about historic, cultural, and archaeological resources and other concerns regarding this project. Our planning schedule is such that we must initiate work on our environmental and historic preservation studies, so we hope to hear from you within 30 days of receipt of this letter. If you indicate that you are not aware of any historic properties with religious or cultural significance and that you do not wish to comment on the project, or if our office does not receive a response within 30 days, we will conclude that you do not wish to be a consulting party for this project and no further project information will be forwarded.

Thank you for your attention to this request. We look forward to working with you on this project.

Sincerely,



Kristen Zschomler, RPA  
Historian/Archaeologist  
Cultural Resources Unit

encs.

cc: Pam Halverson, Lower Sioux THPO  
Jeremy Pfeifer, Kandiyohi County Public Works  
Joe Hudak, Mn/DOT CRU  
Mn/DOT CRU Project File

January 27, 2006

Gary Danielson, P.E.  
Kandiyohi County Highway Department  
18021 East Hwy 12, Box 976  
Willmar, MN 56201

RE: Culvert recommendation for SAP 34-647-02, CSAH 47 over CD 10 (Hawk Creek)  
Sec. 16/17, T-119-N, R-35-W.

Dear Mr. Danielson:

In reply to a request from Ray Krossman, we have prepared a hydraulic analysis and risk assessment for the above referenced project. The recommended culvert size and pertinent hydraulic data are as follows:

Recommended Culverts .....	1 - 14' x 7' Box Culvert
* Stream .....	CD 10
* Drainage Area .....	33.2 sq. mi.
Flood of Record .....	Unknown
Maximum Observed Highwater .....	Unknown
* Basic & Flood (100 Year Frequency) .....	400 cfs
* Headwater Elevation .....	1114.1
Stage Increase .....	0.5 ft.
Stage Increase for Inplace Condition .....	None (new crossing)
Roadway Sag Point Elevation .....	1117.23
Mean Channel Velocity .....	3.3 fps
Mean Outlet Velocity .....	5.1 fps
Greatest Flood (500 Year Frequency) .....	565 cfs
* Headwater Elevation .....	1115.4
Stage Increase .....	0.8 ft
Mean Outlet Velocity .....	6.1 fps
Approximate Inlet Invert Elevation .....	1107.93
Approximate Outlet Invert Elevation .....	1107.81

\* This information should be shown on the plan sheet(s)

The above design data is based on field survey data provided by Kandiyohi County for this project and is intended to be used for replacement of the existing culvert only. Any other use of this data is strictly prohibited. Specifically, the predicted 100-year flood stage shall not be used for flood plain zoning as the accuracy of the data is insufficient for flood plain zoning purposes.

I hereby certify that this report was prepared by me or under my direct supervision, and that I am a duly registered professional engineer under the laws of the State of Minnesota.

  
\_\_\_\_\_  
Brian D. Walter, P.E.,                      Reg. No. 13896

Date: 12/27/06

**RISK ASSESSMENT  
FOR  
ENCROACHMENT DESIGN**

Date: Dec. 27, 2006  
 District: 8  
 County: KANDIYOH  
 Vicinity of: 1/4 Mile So. of T#12  
IN WILLMAR  
 Sec. 16/17 T 119N R 35W

**DATA REQUIREMENTS**

1. Location of Crossing, Roadway: CSAH 47 (NEW CROSSING)
2. Name of Stream: C.D. 10 (HAWK CR.) Old Br. No.: NA New Br. No.: NA
3. Current ADT: NA Projected ADT: NA
4. Practicable detour available Yes  No

If "No" is checked, please explain: \_\_\_\_\_

If there is no practicable detour available, then the use of the road must be analyzed. Considerations such as emergency vehicle access, emergency supply and evacuation route, and the need for school bus, milk routes should be studied. Factors to consider for this analysis include design frequency, depth, duration, and frequency of inundation, if appropriate, and available funding.

5. Hydraulic Data: (Fill in as appropriate)

Approximate Flowline Elevation: <u>1107.85±</u>	TW2	Elevation	_____
Q2 = _____	TW5	Elevation	_____
Q5 = _____	TW10	Elevation	_____
Q10 = _____	TW25	Elevation	_____
Q25 = _____	TW50	Elevation	_____
Q50 = _____	TW100	Elevation	<u>1113.5</u>
<b>Q100</b> = <u>400 cfs</u>			

Circle Design Frequency

Reasons for selecting Design Frequency: ROADWAY PROFILE IS WELL ABOVE 100-  
YR FLOOD STAGE.

6. Magnitude and frequency of the smaller of "Overtopping" or "500 year" (Greatest) flood:  
565 cfs 500 year frequency
7. Low member elevation: NA
8. Minimum roadway overflow elevation if appropriate: 1117.23 PROPOSED
9. Elevation of high risk property, i.e. residences: 1130±  
 Other buildings: 1130±
10. Horizontal location of overflow:  
 At structure: NA Not at structure: NA
11. Type of proposed structure:  
 Bridge: \_\_\_\_\_ Culverts:
12. If the proposed structure is a bridge with the sag point located on the bridge and there is ice and debris potential, strong consideration should be given to using Q50 as design discharge with 3 feet of clearance between the 50 year tailwater stage and low member.

## RISK ASSESSMENT

### LTEC DESIGN

1. BACKWATER DAMAGE - Major flood damage in this context refers to shopping centers, hospitals, chemical plants, power plants, housing developments, etc.

1a. Is the overtopping flood greater than the 100 yr. flood?

Yes  (Go to 1b.); No \_\_\_\_\_ (Go to 1e.)

1b. Is the overtopping flood greater than the "greatest" flood (500 yr. frequency)?

Yes  (Go to 1d.); No \_\_\_\_\_ (Go to 1c.)

1c. Is there major flood damage potential for the overtopping flood?

No \_\_\_\_\_ (Go to 1e.)

1d. Is there major flood damage potential for the greatest flood (500 yr. frequency)?

No  (Go to 1e.)

1e. Will there be flood damage potential to residence(s) or other buildings during a 100 yr. flood?

Yes \_\_\_\_\_ (Go to 1f.); No  (Go to 2)

1f. Could this flood damage occur even if the roadway crossing wasn't there?

Yes \_\_\_\_\_ (Go to 1g.); No \_\_\_\_\_ (Go to 1h.)

1g. Could this flood damage be significantly increased by the backwater caused by the proposed crossing?

Yes \_\_\_\_\_ (Go to 1h.); No \_\_\_\_\_ (Go to 2)

1h. Could the stream crossing be designed in such a manner so as to minimize this potential flood damage?

Yes \_\_\_\_\_ (Go to 1i.); No \_\_\_\_\_ (Go to 2)

1i. Does the value of the building(s) and/or it's contents have sufficient value to justify further evaluation of risk and potential flood damage?

No \_\_\_\_\_ (Go to 2)

### 2. TRAFFIC RELATED LOSSES

2a. Is the overtopping flood greater than the "greatest" flood (500 yr. frequency)?

Yes  (Go to 3.); No \_\_\_\_\_ (Go to 2b.)

2b. Does the ADT exceed 50 vehicles per day?

Yes \_\_\_\_\_ (Go to 2c.); No \_\_\_\_\_ (Go to 3)

2c. Would the (duration of road closure in days) multiplied by the (length of detour minus the length of normal route in miles) exceed 20?

Yes \_\_\_\_\_ (Go to 2d.); No \_\_\_\_\_ (Go to 3)

2d. Does the annul risk cost for traffic related costs exceed 10% of the annual capital costs?

No \_\_\_\_\_ (Go to 3)

### LTEC DESIGN

Yes \_\_\_\_\_  
(Go to 1e.)

Yes \_\_\_\_\_  
(Go to 1e.)

Yes \_\_\_\_\_  
(Go to 3)

RISK ASSESSMENT

LTEC DESIGN - CONTINUED

LTEC DESIGN

3. ROADWAY AND/OR STRUCTURE REPAIR COSTS

3a. Is the overtopping flood less than a 100 year frequency flood?  
Yes \_\_\_\_\_ (Go to 3b.); No X (Go to 3i.)

3b. Compare the tailwater (TW) elevation with the roadway sag point elevation for the overtopping flood. Check the appropriate category.

\_\_\_\_\_ When TW is above the sag point (Go to 4)

\_\_\_\_\_ When TW is between 0 and 0.5 ft. below the sag point (Go to 3c.)

\_\_\_\_\_ When TW is between 0.5 and 1.0 ft. below the sag point (Go to 3d.)

\_\_\_\_\_ When TW is between 1.0 and 2.0 ft. below the sag point (Go to 3e.)

\_\_\_\_\_ When TW is more than 2.0 ft. below the sag point (Go to 3g.)

3c. Does the embankment have a good erosion resistant vegetative cover?  
Yes \_\_\_\_\_ (Go to 3i.); No \_\_\_\_\_ (Go to 3d.)

3d. Is the shoulder constructed from erosion resistant material such as paved, coarse gravel or clay type soil?  
Yes \_\_\_\_\_ (Go to 3i.); No \_\_\_\_\_ (Go to 3e.)

3e. Will the duration of overtopping for the 25 year flood exceed 1 hour?  
Yes \_\_\_\_\_ (Go to 3f.); No \_\_\_\_\_ (Go to 3i.)

3f. Is the embankment constructed from erosion resistant material such as a clay type soil?  
Yes \_\_\_\_\_ (Go to 3i.); No \_\_\_\_\_ (Go to 3g.)

3g. Is the overtopping flood less than a 25 year frequency flood?  
Yes \_\_\_\_\_ (Go to 3h.); No \_\_\_\_\_ (Go to 3i.)

3h. Will the cost of protecting the roadway and/or embankment from severe damage caused by overtopping exceed the cost of providing additional culvert or bridge capacity?  
No \_\_\_\_\_ (Go to 3i.);

Yes \_\_\_\_\_  
(Go to 3i.)

3i. Is there damage potential to the structure caused by scour, ice, debris or other means during the lesser of the overtopping flood or the 100 year flood?  
Yes \_\_\_\_\_ (Go to 3j.); No X (Go to 4)

3j. Will the cost of protecting the structure from damage exceed the cost of providing additional culvert or bridge waterway capacity?  
No \_\_\_\_\_ (Go to 4);

Yes \_\_\_\_\_  
(Go to 4)

RISK ASSESSMENT

LTEC DESIGN - CONTINUED

LTEC DESIGN

4. Will the capital cost of the structure exceed \$1,000,000?  
No X (Go to 5);

Yes \_\_\_\_\_  
(Go to 5)

5. In your opinion, are there any other factors which you feel should require further study through a risk analysis?  
No X (Go to 6);

Yes \_\_\_\_\_  
(Indicate)

6. If there are no check marks in the LTEC Design column on the right, proceed with the design, selecting the lowest acceptable grade line and the smallest waterway opening consistent with the constraints imposed on the project. The risk assessment has demonstrated that potential flood damage costs, traffic related costs, roadway and/or structure repair costs are minor, and therefore disregarded for this project.

One or more check marks in the LTEC Design column indicates further analysis in the category checked may be required utilizing the LTEC Design process or justification why it is not required.

JUSTIFICATION

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

Brian D. Walter  
Brian D. Walter, P.E. Registration No. 13896

Date: 12/27/06

Designer BDW  
Date 12/18/06



County: Kandiyohi  
Bridge No.: SP 34-647-02  
Roadway: CSAH 47

Sec: 16/17

T- 119-N

R- 35-W

**Inplace Br** None, new crossing  
Observed HW = NA

**Stream** CD 10

DA	33.20	sqmi		
Storage	5.65	sqmi	17.02	%
Lakes	4.43	sqmi	13.34	%
R87	4.0	in		
R97	4.1	in		

Main Channel Slope, S

		L =	0	mi	
@ 0.85L =	0.00	mi		EL =	ft
@ 0.10L =	0.00	mi		EL =	ft (est'd)
Delta L =	0.00	mi		Delta El =	0 ft

$$S = \frac{\text{Delta EL}}{\text{Delta L}} = \frac{0}{0} = 6.50 \text{ ft/mi}$$

**Stream Bed Slope, Sb**

From Topo, Sb =  $\frac{10}{1.65 \times 5280} = 0.0011 \text{ ft/ft}$

From Survey, Sb =  $\frac{52.21 - 51.09}{0 + 800} = 0.0014 \text{ ft/ft}$

**Use Sb = 0.0012 ft/ft**

**Design Discharges**

Method		Q10	Q25	Q50	Q100
USGS	D77	352	469	561	657
	D87	309	437	541	650
	D97	256	383	483	592
	Sim97	164	217	259	303
Transfer from Upstream		230	256	320	400
Average		262	352	433	520

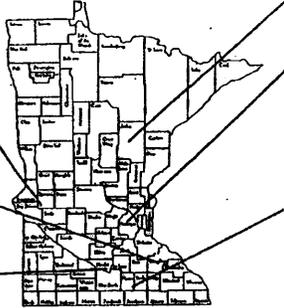
Computed Flow at Obs. HW = NA cfs

**Use 230 256 320 400**

Hancock  
Office & Plant  
(320) 392-5207

Canon Falls  
Office & Plant  
(507) 263-3935

Courtland  
Office & Plant  
(507) 354-2615



Joe Kelly  
Sales Representative - North Area  
Alexandria - Cell # (320) 760-2849

Minneapolis Office  
5275 Edina Industrial Boulevard  
Minneapolis, MN 55439-2919  
(952) 835-4646  
\* Brian Walter  
Director of Engineering  
Cell # (320) 815-6827  
\* Lloyd Hell  
Sales Engineer - South Area  
Cell # (320) 760-1566

Jim Looney  
Director of Marketing/Sales  
Cell # (320) 760-6475



17 Atlantic Avenue, Hancock, MN 56244  
(320) 392-5207 Fax: (320) 392-5155  
www.hancockconcrete.com

PROJECT SAP 34-647-02 USAH 47 OVER CD #10 DATE 12/27/06 BOW

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
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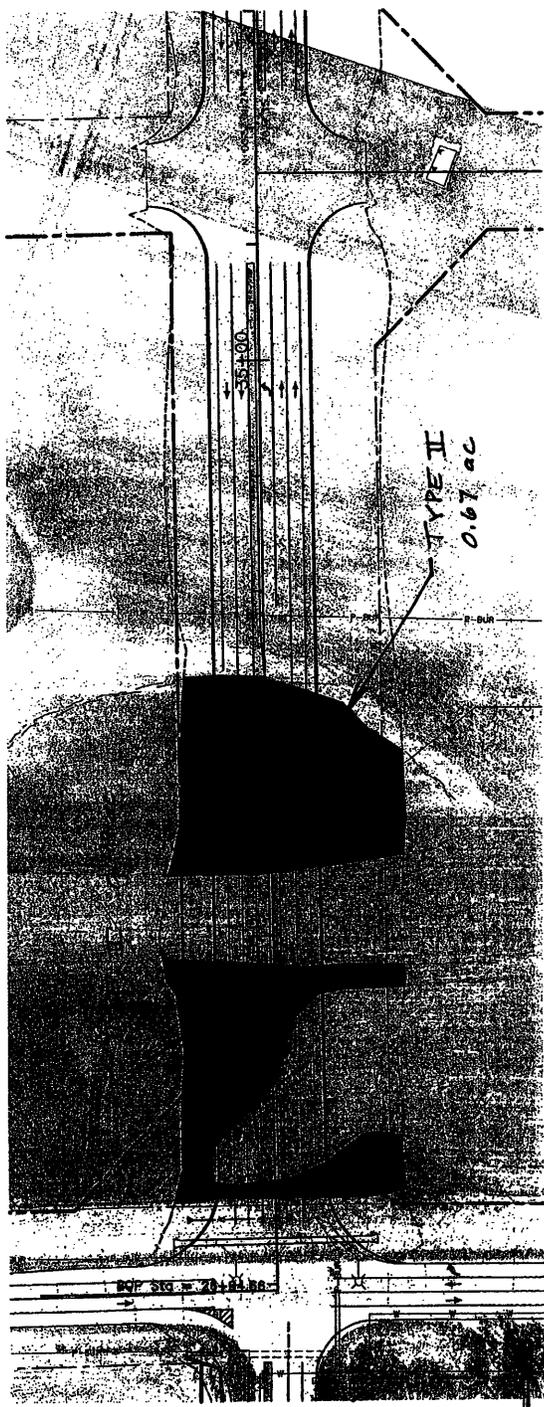
TRY 1-14' x 7' P.C. Box

@ Q<sub>100</sub> = 4.00 cfs  
V<sub>0</sub> = 5.05 fpi  
V<sub>CH</sub> = 3.31 fpi

HWEL = 1114.13  
TWEL = 1113.47  
Δh = 0.66  
-ΔLSS = -0.12 (130' x 0.0009 1/1)  
SI = 0.54'

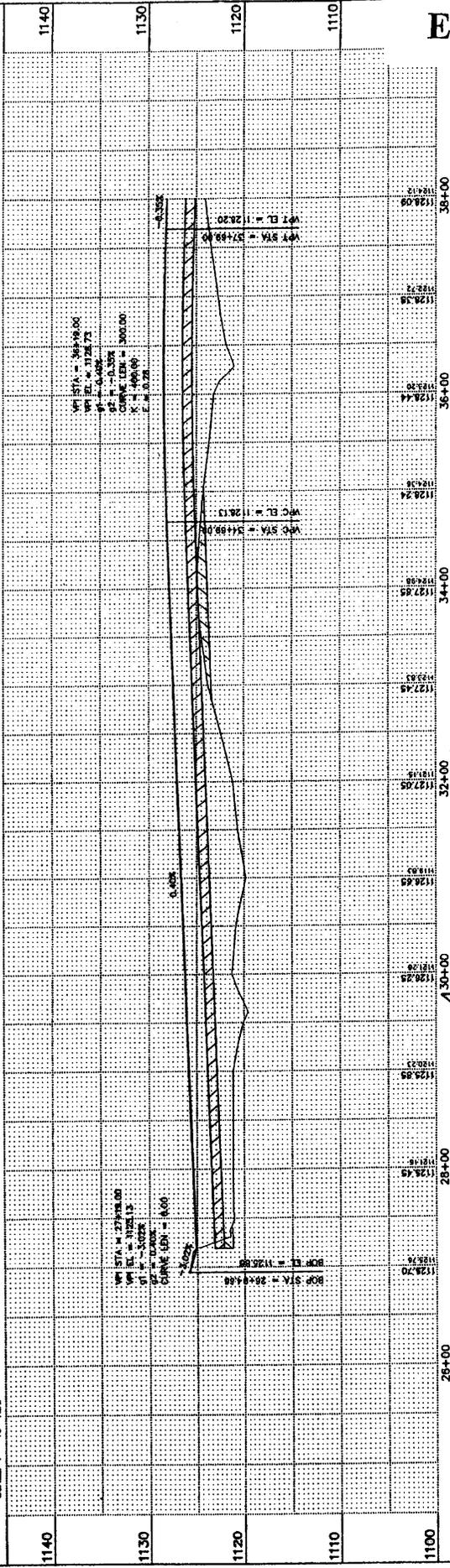
@ Q<sub>500</sub> = 5.65 cfs  
V<sub>0</sub> = 6.09 fpi  
V<sub>CH</sub> = 3.62 fpi

HWEL = 1115.37  
TWEL = 1114.44  
Δh = 0.93  
-ΔLSS = -0.12  
SI = 0.81'



BOP = 26+44.68  
 WPI = 120+44.71  
 E = 413076.55

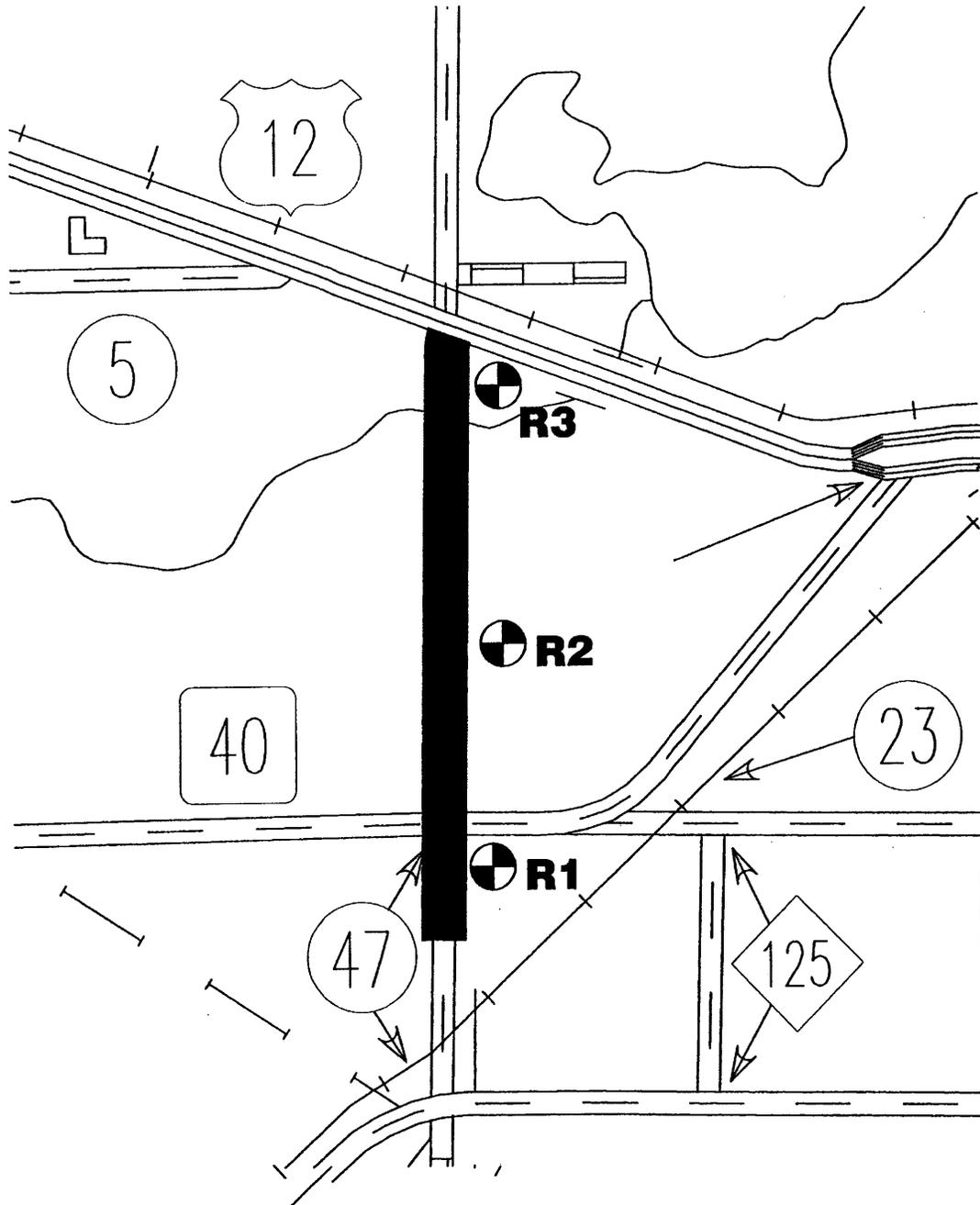
SCALE 1" = 100' HOR.  
 SCALE 1" = 10' VER.



CERTIFIED BY *David Anderson* REG. No. 13063 20 KANDIYOHI COUNTY, MN. SP 34-647-02 Sheet No. of

# NOISE RECEPTOR LOCATION MAP SP 34-647-02 (CSAH 47)

Exhibit #6





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION V  
77 West Jackson Boulevard  
Chicago, IL 60604

Date: January 26, 2007

Mr. Jeremy Pfeifer  
Engineering Specialist  
Kandiyohi County Public Works Department  
1801 East Hwy 12  
P.O. Box 976  
Willmar, MN 56201

**Document: Reconstruction of CSAH 47 from 0.18 miles south of State Highway No. 47 to US Highway No. 12, Kandiyohi County, Minnesota, S.P. 34-647-02, federal agency: FHWA, letter dated December 27, 2006**

Dear Mr. Pfeifer:

The NEPA Implementation Section has received the document listed above. Under the National Environmental Policy Act (NEPA), the Council on Environmental Quality regulations, and Section 309 of the Clean Air Act; U.S. EPA reviews and comments on major federal actions. Typically, these reviews focus on Environmental Impact Statements, but we also have the discretion to review and comment on other environmental documents prepared under NEPA if interest and resources permit.

We did not undertake a detailed review of the document you sent to this office, and will not be generating comments because of the reason selected below.

- The document was not prepared under NEPA.
- The document was given a cursory review, but other workload priorities precluded us from detailed review and comment.
- The document was given a cursory review, and we determined that there were no significant concerns meriting comment.
- We opted to wait for the next level of documentation on this project before deciding whether or not to comment.

We reserve the right to reconsider undertaking a review at future planning stages, or if significant new data on the project is made available by the sponsoring agency or other interested parties. If you have any questions, please call Julie Guenther, of my staff, at 312-886-3172 or e-mail her at [guenther.julia@epa.gov](mailto:guenther.julia@epa.gov). Thank you for providing information on the project.



Minnesota Department of Transportation

Transportation Building  
395 John Ireland Boulevard  
Saint Paul, Minnesota 55155-1899

February 5, 2007

Jeremy Pfeifer  
Kandiyohi County  
Public Works Department  
1801 E. Highway 12  
P.O. Box 976  
Willmar, MN 56201

Regarding: S.P. 34-647-02 (CSAH 47 Reconstruction, Willmar, Kandiyohi County)  
T 119N, R 35W, S 16, 17, 20 & 21

Dear Mr. Pfeifer:

We have reviewed the above-referenced undertaking pursuant to our FHWA-delegated responsibilities for compliance with Section 106 of the National Historic Preservation Act, as amended (36 CFR 800), and as per the terms of the Programmatic Agreement (PA) between the FHWA and the Minnesota State Historic Preservation Office (SHPO) (June 2005).

The proposed project has a total length of 1.09 miles. It includes 0.18 miles of reconstruction of existing CSAH 27 and 0.91 miles of new four-lane construction across the old City of Willmar Airport, lying between TH 40 and U.S. Highway 12. The work will consist of grading, aggregate base, bituminous surfacing, curb and gutter, and storm sewer. The grading will include widening the driving lanes and shoulders of existing CSAH 47 to safely merge the proposed four-lane highway into the existing two-lane highway. A concrete median with curb and gutter is planned to run the entire length of the proposed new construction. There will also be a storm water treatment pond integrated with the planned storm sewer to effectively treat storm water runoff. The typical graded section will be 103 feet in width to allow for four 12-foot driving lanes, two 9 1/2 foot shoulders (8 foot paved, 1 1/2 foot aggregate) and a 16-foot concrete center median. The graded section will be constructed to a 10-ton rating with a 2-foot deep subgrade excavation extending 89 feet wide. The top foot of the subgrade excavation will be replaced with granular borrow. The road inslopes and backslopes will be constructed at 1:5 (vertical to horizontal). There will be 6-foot-wide ditches and a total right-of-way width of 175 feet across the new location. The pavement section will include 12 inches of Class 5 aggregate base and 5 1/2 inches of bituminous pavement.

The area of potential effects (APE) for archaeology is the proposed construction limits, and for architectural history, the first tier of adjacent properties. The area has a low potential for containing intact, significant archaeological deposits, since it is not near a major source of water, not on a topographically prominent landform, and has been extensively impacted through agricultural activities, roadway construction, and construction of the original airport. The only property within the architectural APE is the original Willmar Airport. Built in the 1930's as part of the New Deal programs, the airport does not retain any buildings, landing strips or other features from the historic period. It is therefore not eligible for the National Register of Historic Places.

We have determined that there will be **no historic properties affected** by the project as currently proposed. As there are no historic properties within the project APE, the section 106 review of this project is now complete and no SHPO comment period and response are required under the terms of the new PA. If the project scope changes, please provide our office with the revised information and we will conduct an additional review.

Sincerely,



Kristen Zschomler, RPA  
Historian/Archaeologist  
Cultural Resources Unit (CRU)

cc: Dr. Scott Anfinson, State Archaeologist  
Joe Hudak, Mn/DOT CRU  
Mn/DOT CO File  
Mn/DOT CRU Project File



Minnesota Department of Natural Resources

P.O. BOX 457, SPICER, MN 56288  
(320) 796-6272

February 6, 2007

Jeremy Pfeifer  
Kandiyohi County Public Works Department  
P.O. Box 976  
Willmar MN 56201

Dear Jeremy:

RE: WILLMAR AIRPORT ROAD CONSTRUCTION (SP34-677-02)

I am writing to confirm that your above referenced project will not require a DNR Public Waters Permit. Hawk Creek is classified as a public ditch in this area and there are no other public waters impacted as a result of your project.

Your bridge crossing will need to be approved by the ditch authority. It is my understanding wetland impacts are being mitigated through the BWSR Wetland Banking System.

Sincerely,  
DNR WATERS

A handwritten signature in black ink that reads "Skip Wright".

Skip Wright  
Area Hydrologist





Minnesota Department of Transportation

Exhibit #10

Office of Environmental Services  
395 John Ireland Boulevard, MS 620  
St. Paul, MN 55155-1899

Fax: 651/ 284-3754  
Phone: 651/ 284-3750

February 8, 2007

Jeremy Pfeifer  
1801 E Hwy 12  
PO Box 976  
Willmar, Minnesota 56201

RE: No Effect Determination (Federal Threatened and Endangered Species)  
S.P. 34-647-02, County State Aid Highway 47  
Roadway Reconstruction/Expansion  
Kandiyohi County

Dear Mr. Pfeifer:

In response to your request, the proposed action has been reviewed for potential effects to federally-listed threatened and endangered (T&E) species, candidate species and listed critical habitat. As a result of this review, a determination of no effect has been made.

If a Federal agency authorizes, funds, or carries out a proposed action, the responsible Federal agency, or its delegated agent, is required to evaluate whether the proposed action "may affect" listed species. If it is determined that the action "may affect" a listed species, then the responsible Federal agency shall request Section 7 consultation with the U. S. Fish and Wildlife Service. If the consultation shows "no effect" on the listed species, further consultation is not necessary.

Scope of Action

The proposed action has a total length of 1.09 miles. The action includes 0.18 miles of reconstruction of existing County State Aid Highway 47 and 0.91 miles of new four-lane construction across the old Willmar Airport between Trunk Highway 40 and U.S. Highway 12.

Listed Species

According to the County Distribution of Minnesota's Federally-Listed Threatened, Endangered, Proposed, and Candidate Species list maintained by the U.S. Fish and Wildlife Service, Kandiyohi County is within the distribution range of the bald eagle (*Haliaeetus leucocephalus*), federally-listed threatened species.

Critical Habitat

There is no designated critical habitat within the action area.

Known Occurrences

According to the information provided by the Natural Heritage Database (updated 11-28-06) maintained by the Minnesota Department of Natural Resources and the U.S. Fish and Wildlife Service (Twin Cities ES Field Office), there are no known occurrences of federally-listed T&E or candidate species within the action area. As such, the proposed action has little to no potential to have any measurable influence on federally-listed T&E species, candidate species or on the habitat for which they depend.

If modifications are made or new information becomes available which indicates that listed species may be affected, please contact this office. This review was completed for federally-listed T&E and candidate species only. For information on state-listed T&E species, contact the Endangered Species Environmental Review Coordinator, Natural Heritage and Nongame Research Program, Minnesota Department of Natural Resources (651) 259-5107.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. Alcott'.

Jason Alcott  
Natural Resource Specialist, Senior

cc: Gerry Larson file



## Minnesota Department of Natural Resources

Natural Heritage and Nongame Research Program, Box 25  
500 Lafayette Road  
St. Paul, Minnesota 55155-40\_\_

Phone: (651) 259-5109 Fax: (651) 296-1811 E-mail: [lisa.joyal@dnr.state.mn.us](mailto:lisa.joyal@dnr.state.mn.us)

January 16, 2007

Mr. Jeremy Pfeifer  
Kandiyohi County Public Works Dept.  
1801 East Highway 12  
Willmar, MN 56201

Re: Request for Natural Heritage information for vicinity of proposed SP 34-647-02;  
T119N R35W Sections 16, 17, 20, & 21; Kandiyohi County  
NHNRP Contact #: ERDB 20070463

Dear Mr. Pfeifer,

The Minnesota Natural Heritage database has been reviewed to determine if any rare plant or animal species or other significant natural features are known to occur within an approximate one-mile radius of the area indicated on the map enclosed with your information request. Based on this review, there is 1 known occurrence of a rare species in the area searched (for details, please see the enclosed database printouts and the explanation of selected fields). However, based on the nature and location of the proposed project I do not believe it will affect any known occurrences of rare features.

The Natural Heritage database is maintained by the Natural Heritage and Nongame Research Program, a unit within the Division of Ecological Services, Department of Natural Resources. It is continually updated as new information becomes available, and is the most complete source of data on Minnesota's rare or otherwise significant species, native plant communities, and other natural features. Its purpose is to foster better understanding and protection of these features.

Because our information is not based on a comprehensive inventory, there may be rare or otherwise significant natural features in the state that are not represented in the database. A county-by-county survey of rare natural features is now underway, and has been completed for Kandiyohi County. Our information about native plant communities is, therefore, quite thorough for that county. However, because survey work for rare plants and animals is less exhaustive, and because there has not been an on-site survey of all areas of the county, ecologically significant features for which we have no records may exist on the project area.

The enclosed results of the database search are provided in two formats: short record report and long record report. To control the release of locational information, which might result in the damage or destruction of a rare element, both printout formats are copyrighted.

The short record report provides rare feature locations only to the nearest section, and may be reprinted, unaltered, in an Environmental Assessment Worksheet, municipal natural resource plan, or report compiled by your company for the project listed above. If you wish to reproduce the short record report for any other purpose, please contact me to request written permission. **The long record report includes more detailed locational information, and is for your personal use only. If you wish to reprint the long record report for any purpose, please contact me to request written permission.**

Please be aware that review by the Natural Heritage and Nongame Research Program focuses only on *rare natural features*. It does not constitute review or approval by the Department of Natural Resources as a whole. If you require further information on the environmental review process for other natural resource-

DNR Information: 651-296-6157 • 1-888-646-6367 • TTY: 651-296-5484 • 1-800-657-3929



related issues, you may contact your Regional Environmental Assessment Ecologist, Todd Kolander, at (507) 359-6073. Thank you for consulting us on this matter, and for your interest in preserving Minnesota's rare natural resources.

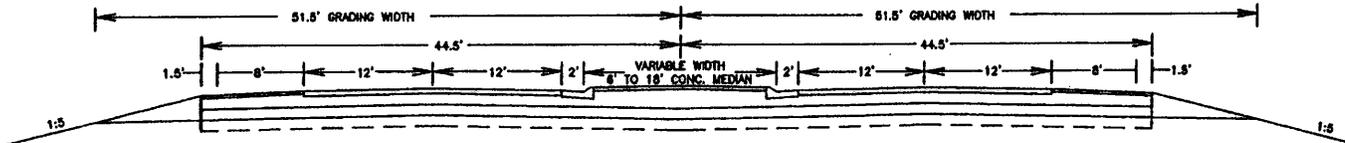
Sincerely,

A handwritten signature in cursive script that reads "Lisa Joyal".

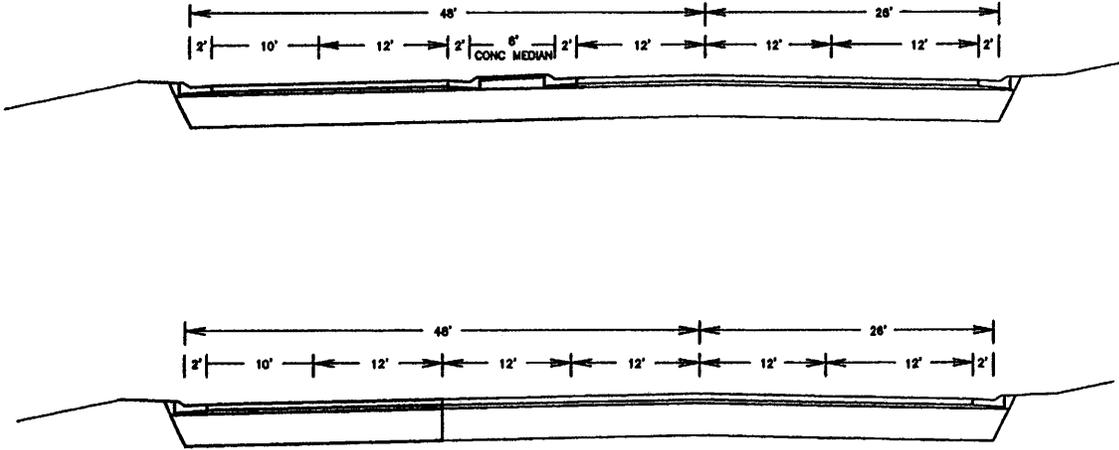
Lisa A. Joyal  
Endangered Species Environmental Review Technician

encl: Database search results  
Rare Feature Database Print-Outs: An Explanation of Fields

TYPICAL SECTION OF CSAH 47  
NORTH OF STATE HIGHWAY 40 TO U.S. HIGHWAY 12



TYPICAL SECTIONS OF CSAH 47  
SOUTH OF STATE HIGHWAY 40





Ray L. Krossman  
Assistant County Engineer

# KANDIYOHI COUNTY

## PUBLIC WORKS DEPARTMENT

1801 E Highway 12 • P.O. Box 976 • Willmar, MN 56201  
320-235-3266 • FAX 320-235-0055 • E-mail: Highway@co.kandiyohi.mn.us

Dave Fritz  
Maintenance Engineer

**Gary D. Danielson, P.E., Public Works Director**

### Exhibit #13

February 20, 2007

Bruce Peterson  
Director of Planning and Development Services  
City of Willmar  
333 SW 6th Street  
PO Box 755  
Willmar, MN 56201

RE: Land Use Planning: Noise Analysis  
SP 34-647-02  
CSAH 47Extension  
0.18 Miles S of TH 40 to TH 12

Dear Mr. Peterson:

We are continuing project development to extend CSAH 47 through the former Willmar Municipal Airport property. As part of that process, we have prepared a Project Memorandum discussing impacts of the project including noise impacts to adjacent land. The memorandum is required by the Federal Highway Administration (FHWA), in order to qualify for federal aid participation in the cost of the work. The purpose of this letter is to inform you of those noise impacts, as FHWA has requested we provide you with information to better plan for minimizing noise impacts to adjacent properties along the corridor.

Noise level modeling indicates a decibel level of 72 dB at the 75' right of way line of the road. This is considered an impact on residential receptors, but is consider compatible with the I-2, General Industry zoning designation along the proposed road.

If, in the future, the city changes designated land use to allow residential development, setbacks to residences or other site plan features, such as vegetative screening, fences should be considered. These measures would allow residential use compatible with projected noise levels along the road.

Please feel free to contact me if you need any additional information regarding projected noise levels.

Sincerely,

Gary D. Danielson, P.E.  
Public Works Director

CC: Mary Bieringer, MN/DOT

H:\DeelMyFiles\PROJECTS\up34-647-02.doc

Bruce Nelson  
Operations Supervisor

Steve Lindgren  
Maintenance Supervisor

Paul Bakker  
Financial Supervisor

Loren Engelby  
County Drainage  
& Ag Inspector

Ron Hagemeler  
GLSSWD Director  
(320) 796-4523



# Appendix G

#7

**PHASE I ENVIRONMENTAL  
SITE ASSESSMENT REPORT  
WILLMAR MUNICIPAL AIRPORT  
WILLMAR, MINNESOTA**

Prepared For:

HNTB  
3400 West 66<sup>th</sup> Street, Suite 250  
Minneapolis, MN 55435-2133

Date:

May 22, 2000

Prepared By:

***Baumgartner Environics, Inc.***  
2510 West Lincoln, Suite #4  
Olivia, Minnesota 56277-1711  
320-523-1644

## EXECUTIVE SUMMARY

*Baumgartner Environics, Inc.* (BEI) was authorized by Mr. Thomas Angus of HNTB on April 27, 2000, to perform a Phase I Environmental Site Assessment (ESA) of the Willmar Municipal Airport located at 2303 Southwest Airport Drive in Willmar, Minnesota. BEI has conducted this ESA in conformance with the scope and limitations of ASTM Designation E1527-97, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process". There were no exceptions to, or deletions from, this practice.

Based on our review of historical documents, it appears that the **Site** was occupied by an airport from approximately 1934 to the present. The completion of this Phase I ESA has revealed no indications of recognized environmental conditions in connection with the **Site** except for the following:

- The storage of petroleum products at the airport, public works garage, and the water filtration plant is a recognized environmental condition.
- An open LUST investigation file exists for the public works garage; indicating that contaminated soil and/or ground water may be present.
- A closed LUST site exists at the airport.
- A leaky hydraulic lift station (now abandoned/ filled in) at the public works garage may have impacted soil and ground water in the vicinity of the old lift.
- Unmonitored loading of agricultural chemicals into aerial application equipment on the airport property may have impacted soils in the area where planes were loaded.
- The presence of demolition debris at the north end of the **Site** may have impacted soil and/or ground water at the **Site**.
- A garbage pit/disposal site exists on the **Site** in the vicinity of an old farm-site on the west end of the property. Materials disposed of in this pit may have impacted soil and/or ground water at the **Site**.
- Several potential off-site sources of contamination are located in a hydraulically upgradient position from the **Site**. These include an open LUST site, a wood treatment facility, and a CERCLIS site.
- A railroad right-of-way runs through the **Site**. Railroad rights-of-way have typically been found to be contaminated with petroleum products.

# Appendix H

March 11, 2008

Mr. Bruce Peterson  
City of Willmar  
333 SW 6<sup>th</sup> Street  
Willmar, MN 56201

**Re: Summary of UST Removal and Closure Operations, Former Willmar Airport,  
Kandiyohi County Tract #95-916-2930, Willmar, Minnesota**

Dear Mr. Peterson:

*Glacial Lakes Environmental Consulting, Inc.* (GLEC) has prepared the following summary pertaining to the removal and closure of two underground storage tanks (USTs) at the referenced facility (site). The site consists of a portion of the former Willmar Airport comprised of Kandiyohi County Tract #95-916-2930 (site). A site location map depicting the general location of the site is attached as Figure 1.0, while a site sketch depicting the layout of the site is attached as Figure 2.0.

At your request, GLEC reviewed a Phase I ESA previously completed by Baumgartner Environics, Inc. (BEI) to determine the scope of services for an environmental soils assessment at the site. The Phase I ESA, entitled *Phase I Environmental Site Assessment Report, Willmar Municipal Airport, Willmar, Minnesota*, was completed by BEI in May 2000 on an 840-acre parcel that encompassed the entire site, along with additional property owned by the City of Willmar.

Although numerous environmental concerns were noted by BEI in the Phase I ESA, only one of the environmental concerns was associated with the site proper. The noted concern consisted of the presence and use of two USTs in separate basins on the site. The approximate locations of the UST basins (UST Basin #1 and UST Basin #2) are depicted on the attached Figure 2.0. At the time of the Phase I ESA, UST Basin #1 had a leaksite file (MPCA LEAK#00003236) associated with it due to the reporting of a petroleum release when the former USTs were removed and replaced by the current UST. It was noted in the Phase I ESA that the leaksite file associated with UST Basin #1 had been closed. Leaksite files or leaking underground storage tank (LUST) sites are typically granted closure when an investigation of a site has been completed to the satisfaction of the Minnesota Pollution Control Agency (MPCA). Please note that a LUST site that has been investigated and "closed" is not necessarily free of soil and/or

ground water contamination, rather it has been determined by the MPCA that the risk associated with the LUST site in its current state and usage is minimal.

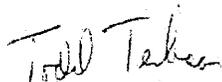
In an effort to determine a scope of services for an environmental soils assessment for the site, the status of the current USTs was discussed with the airport manager, Melissa Galvan. Ms. Galvan indicated that both of the current USTs had been removed from the site in August 2007. Thatcher Engineering, Inc. oversaw the removal of the USTs on August 27, 2007, and collected ground water samples from the USTs basins for laboratory analyses following the removal of the USTs. Based on the results of the ground water sample analyses, a petroleum release was reported on September 6, 2007, and the site was issued a second leaksite file, MPCA LEAK00017066.

The results of the removal of the USTs were summarized by Thatcher Engineering, Inc. in the MPCA's General Excavation Report Worksheet (Guidance Document 3-02) and submitted to Ms. Kate Funk of the MPCA's Petroleum Remediation Program. A copy of Thatcher Engineering, Inc.'s Guidance Document 3-02 (GD 3-02) is attached. Based on their review of the GD-02 completed for the site, the MPCA granted closure of MPCA LEAK00017066 on January 31, 2007. A summary of the information on file for both LEAK00003236 and LEAK00017066 has been attached to this letter.

As noted on the summary pages for the leaksite files and discussed above, both MPCA LEAK00003236 and LEAK00017066 have been granted closure by the MPCA. Once again, leaksite files are typically granted closure when it has been determined by the MPCA that the risk associated with the LUST site in its current state and usage is minimal. Based on our conversations with airport personnel, all of the USTs have been removed from the site. It therefore appears that the lone environmental concern noted in the original Phase I ESA completed by BEI has been addressed to the satisfaction of the MPCA. If you have any questions regarding the letter or its attachments, please call me at 320-905-5846.

Sincerely,

*Glacial Lakes Environmental Consulting, Inc.*



Todd J. Terhaar  
Project Manager

Attachments: Figures 1.0 and 2.0  
Thatcher Engineering, Inc.'s General Excavation Report Worksheet  
MPCA Summary for MPCA LEAK00003236 and LEAK00017066

# Appendix I



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

Great Lakes Region  
Minneapolis Airports District Office  
6020 28<sup>th</sup> Ave S, Room 102  
Minneapolis, MN 55450

October 9, 2009

Mr. Michael Schmit  
City of Willmar Administrator  
City Office Building  
333 SW 6<sup>th</sup> Street, Box 755  
Willmar, MN 56201

Re: Grant Assurance Violations – Notification of Noncompliance

Dear Mr. Schmit:

We are writing to inform you of our decision to withhold future Airport Improvement Program (AIP) funds from the City of Willmar.

Since 2000, the Federal Aviation Administration (FAA) has worked with the City of Willmar (the City) to replace the Willmar Municipal Airport – John L. Rice Field with a new airport. As part of its decision to invest in the new airport, the FAA recognized that the City's federal grant obligations would transfer to the new airport. The FAA further recognized that funds gained from the sale/disposal of the old airport property would be applied to costs associated with construction of the replacement airport. The City understood that prior to the sale or development of the former airport they would need the FAA to release the City from their Federal obligations associated with the former airport. This action is commonly described as a property release.

As you know, the City and the FAA held many discussions about the land release process, prior to the new airport opening on September 2, 2006. The FAA received the City's formal request to release the old airport on January 5, 2007. Throughout 2007, the FAA sought to receive additional information needed to process the release from the City. This is because the City's initial request lacked details such as a legal description of the property, studies required with regard to the National Environmental Policy Act (NEPA), and financial data.

In 2008, while conducting NEPA-related work, the State Historic Preservation Office confirmed the terminal building and its surrounding properties are eligible for listing on the National Register of Historic Places. However, a disagreement over the future use of this property, between the City and the State Historic Preservation Office, delayed work associated with other parts of the NEPA review.

In March 2009, the City released a draft Environmental Assessment (EA). At this time, the FAA became aware of development that had occurred on the old airport property but was not addressed in the draft EA. Additionally, several resource agencies raised concerns regarding

deficiencies with the draft EA. Although the FAA advised the City of the specific information needed to complete the EA, the FAA has yet to receive a revised draft EA.

During discussions about the property release, we became aware of several other concerns that affect the City's compliance with its Federal grant obligations. Through previous correspondence and meetings, the FAA has communicated its concerns to the City. Your most recent letter, dated September 4, 2009, responded to the letter we sent on August 7, 2009. While we appreciate your continued communication with us, your letter did not adequately address our concerns. Below, we reiterate these concerns and explain the corrective action needed to address each grant assurance violation.

### **Current Airport**

#### *Parcel 10A*

The City of Willmar granted a perpetual easement on Parcel 10A (land bought with Federal funds), which deprives the airport of its rights and powers necessary to perform any or all of the terms, conditions, and assurances in the grant agreement. The City granted the easement in January 2009 after acknowledging in a letter, dated September 25, 2007, to the easement holder that entering into the easement would be inappropriate. We have determined the easement to be a violation of Grant Assurance 5, *Rights and Powers*.

The intent of Grant Assurance 5 is to ensure that the City preserve its rights and powers to manage the airport in compliance with your Federal obligations:

"a. It (the sponsor) will not take or permit any action which would operate to deprive it of any of the rights and powers necessary to perform any or all of the terms, conditions, and assurances in the grant agreement without the written approval of the Secretary, and will act promptly to acquire, extinguish, or modify any outstanding rights or claims of right of others which would interfere with such performance by the sponsor. This shall be done in a manner acceptable to the Secretary.

b. It (the sponsor) will not sell, lease, encumber, or otherwise transfer or dispose of any part of its title or other interests in the property shown on Exhibit A to this application... for the duration of the terms, conditions, and assurances in the grant agreement without approval of the Secretary."

Allowing farm access is not the primary concern for the FAA. The issue is granting a private individual a permanent easement that allows the individual to make any improvements that they see fit without any oversight from the City or the FAA and without including a method to revoke the easement either when it is no longer needed for farming or when the land is needed for future aeronautical development. The easement, as currently written, deprives the city of its rights and powers.

In addition, the easement on Parcel 10A is not shown on your Airport Layout Plan (ALP). We have determined this to be a violation of Grant Assurance 29, *Airport Layout Plan*. This grant assurance requires an airport sponsor to keep the ALP up-to-date at all times. The sponsor will not make or allow any changes to the airport or any of its facilities that do not conform to the ALP as approved by the Secretary and might, in the opinion of the Secretary, adversely affect the safety, utility, or efficiency of the airport.

The FAA requires the easement for Parcel 10A be revised so that the City recaptures its rights and powers with regard to this property. In addition, the City will need to update the ALP to reflect the revised easement.

#### *Parcel 24A*

The City of Willmar also granted a perpetual easement for Parcel 24A and a lease to allow buildings to remain on property purchased with Federal funds. We have determined this to be another violation of Grant Assurance 5.

Similar to the easement provided for Parcel 10A, the permanent easement allows any improvement without the city's or the FAA's approval or any mechanism to rescind the easement for future airport development. This strips the city of its rights and powers to operate the airport in compliance with its Federal obligations.

Additionally, the City issued a lease allowing buildings to remain on Parcel 24A until 2015. This is contrary to the direction provided by the FAA in 2006. The FAA recognized difficulties the City was having in acquiring property for the new airport and agreed to allow the buildings to remain until they could be transferred to land at the former airport. The FAA requested that the City relocate the buildings within 60 days after the formal release of the former airport. The City has not provided an adequate basis for its decision to allow the buildings to remain beyond 60 days after the land release.

The FAA requires revising the easement for Parcel 24A to allow the City to recapture its rights and powers with regard to this property. The City will also need to update the ALP once the revision is complete. The FAA also recommends that the City provide information on why they will not be able to remove the buildings within 60 days of the formal land release and the future plans for this property. The City also needs to ensure they will use all earnings from the lease for the capital or operating costs of the airport.

#### **Former Airport:**

Redevelopment of the former airport property requires a formal land release from the FAA. This release includes completion of the procedures contained in the NEPA regulations. Grant Assurance 31 requires land no longer needed for airport purposes be disposed of, at fair market value, at the earliest practicable time. If the City does not proceed expeditiously with the disposal of the former airport, including completion of the NEPA process, they may be found in violation of this grant assurance.

We have determined that the development of the former airport before receiving a formal land release from the FAA and the lease of the former hangar area is another violation of Grant Assurance 5. Development projects completed prior to receiving the formal land release include giving land to the Kandiyohi Humane Shelter for construction of a new animal shelter, construction of CR 5, construction of Willmar Avenue, storm and sewer work, and utility work. Taking these actions before completing the NEPA requirements has further complicated this process for both the City and the FAA, which could result in additional legal actions from other Federal agencies.

The City, on October 2, 2009, published a notice in the local newspaper announcing an October 14, 2009 hearing for the proposed rezoning of the former airport property to

industrial use. For the City to propose the rezoning of airport land for industrial use before gaining a release from its Federal obligations may be contrary to both the grant assurances and federal law.

Before any more development can occur, the City needs to complete the NEPA process and obtain a land release for disposal from the FAA. The City is strongly encouraged to review the guidance it received on September 21, 2009 and take those actions.

#### **FAA Conclusions**

The FAA requests the City **cease and desist** any further development on both the existing and former airport that is not in accordance with your grant assurances. The former airport is encumbered property that cannot be developed until the FAA releases the land to the City.

Based on the seriousness of these violations, the FAA cannot justify continued investment of Federal funds at the Willmar Municipal Airport. As a result, the City of Willmar will be unable to receive any Federal funds, including AIP discretionary grants under 49 U.S.C. § 47115 or amounts apportioned for general aviation under 49 U.S.C. § 47114(d)(3)(A) until all of the aforementioned issues are resolved.

We will continue to work with the City to address matters at the Willmar Municipal Airport, and hope that all parties will be able to reach an agreement that will allow the airport to regain grant funding. If you have any questions or concerns, contact Nancy Nistler (612-713-4353 or [Nancy.Nistler@faa.gov](mailto:Nancy.Nistler@faa.gov)), Kandice Krull (612-713-4362 or [Kandice.Krull@faa.gov](mailto:Kandice.Krull@faa.gov)) or myself.

Sincerely,



Jesse Carriger, Manager  
Minneapolis Airports District Office  
(612) 713-4355

CC: Lester Heitke, Mayor of Willmar  
Richard Ronning, City of Willmar Attorney  
Willmar City Council  
Bruce Peterson, City of Willmar Director of Planning and Development  
Director, Minnesota Department of Transportation, Aeronautics  
FAA Airports Division, AGL-600  
FAA Region Counsel, AGL-7  
Deandra Brooks, ACO-100

# Appendix J

**EXCERPTS OF  
WILLMAR  
COMPREHENSIVE  
PLAN PERTINENT  
TO LAND RELEASE  
ENVIRONMENTAL  
ASSESSMENT**

## **Chapter Three: Land Use and Economic Profile**

### **Section A: Land Use**

#### ***Residential Land Use***

Residential land use accounts for the largest percentage of developed land in Willmar. One and two-family dwellings dominate residential uses. Residential neighborhoods surround the city core area in all directions except to the north and northeast.

Multiple-family structures occupy a small percentage of developed land. These dwellings are located throughout the City, and a few areas have concentrated nodes. In those areas the groupings of apartments serve as buffers between the one and two-family residences and the commercial areas. This occurs at a conglomeration of apartments on 5<sup>th</sup> St. SW where they are between the commercial uses on 1<sup>st</sup> St. S and the single-family residences further to the west. Also, along 24<sup>th</sup> St. NW, the college housing buffers the residences in College View to the west from the college property. The Housing and Redevelopment Authority also manages multiple-family residential projects including the Lakeview Apartments, Highland Apartments, 29 townhouse units in the Welshire Addition, and others.

Mobile home parks occupy an even smaller percentage of developed land area. Willmar presently has two mobile home parks with a combined total of 231 lots and 186 mobile homes. One park is located in northeast Willmar and the other park is in northwest Willmar.

#### ***Commercial Land Use***

Commercial land uses are concentrated along major highways and collector roadways as visibility and access are crucial. The main concentrations of commercial uses are in the Central Business District, along Business Highway 71 N. and S., and along Highway 12 W. and E. Professional commercial land use has expanded in the past few years along 19<sup>th</sup> Ave. SW, catering to medical/professional uses. The intersection of Lakeland Dr. SE and Willmar Ave. SE is poised to be the next area for commercial growth, with completion of the Highway 23 & 71 bypass access ramps. Waterview Business Park, east of S. 1<sup>st</sup> St., will be another commercial area to develop in the near future.

#### ***Industrial Land Use***

The majority of industrial development in the city has taken place surrounding the former airport. These industrial areas are located north of the former airport and south of U.S. Highway 12, south of the former airport along Willmar Avenue and 22<sup>nd</sup> St. SW, and northeast of the airport where the 200 acre Willmar Industrial Park is located. U.S. Highway 12, Minnesota Highway 40, and the Burlington Northern-Santa Fe Railroad provide transportation access to this area. The completion of the new airport frees up the old airport for industrial park expansion. Other areas of industrial development are along the railroad line directly west and east of downtown, and west of Lakeland Drive. Scattered industrial uses exist at various locations throughout the city.

### ***Government/Institutional***

Governmental/Institutional land uses include educational and governmental facilities and account for a large percentage of developed land in Willmar. This land use includes Willmar Municipal Airport, Ridgewater College, all Willmar Public Schools property, all City owned facilities/land, and all County and State owned buildings/land.

### ***Parks***

Park and recreation land uses are abundant and scattered throughout the city. Major park/recreation areas are Robbins Island, Swannson Field, Dorothy Olson Aquatic Center, two golf courses, and other parks/playgrounds.

### ***Undeveloped Land***

Scattered parcels of undeveloped land exist within the developed portions of the city, as well as in the fringe areas. Undeveloped lands include those currently vacant or used for agriculture. These areas are zoned for agricultural, industrial, commercial, residential or open space uses.

### ***Zoning***

The City of Willmar's Zoning Ordinance divides the community into five residential, four business, and two industrial zoning districts. The City's current zoning map is displayed as Map 3A. Although it is not intended to be a current land use map, the zoning map shows generally where each type of land use is found in the community. Specifically, the following different zoning districts exist in Willmar:

- R-1, One-Family Residential District
- R-2, One- and Two-Family Residential District
- R-3, Low Density Multiple Family Residential District
- R-4, Medium Density Multiple Family Residential District
- R-5, High Density Multiple Family Residential District
- LB, Limited Business District
- GB, General Business District
- CB, Central Business District
- SC, Shopping Center District
- I-1, Limited Industry District
- I-2, General Industry District
- T, Technology District<sup>3</sup>
- G/I, Government/Institutional
- P, Parks
- A, Agricultural

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<sup>3</sup> The Technology District is a newly created district strictly for the MinnWest Technology Campus (old Willmar Regional Treatment Center). The campus is both limited and protected by the designation on allowing very specific technology/science oriented uses, while preserving and allowing the campus structure to function.

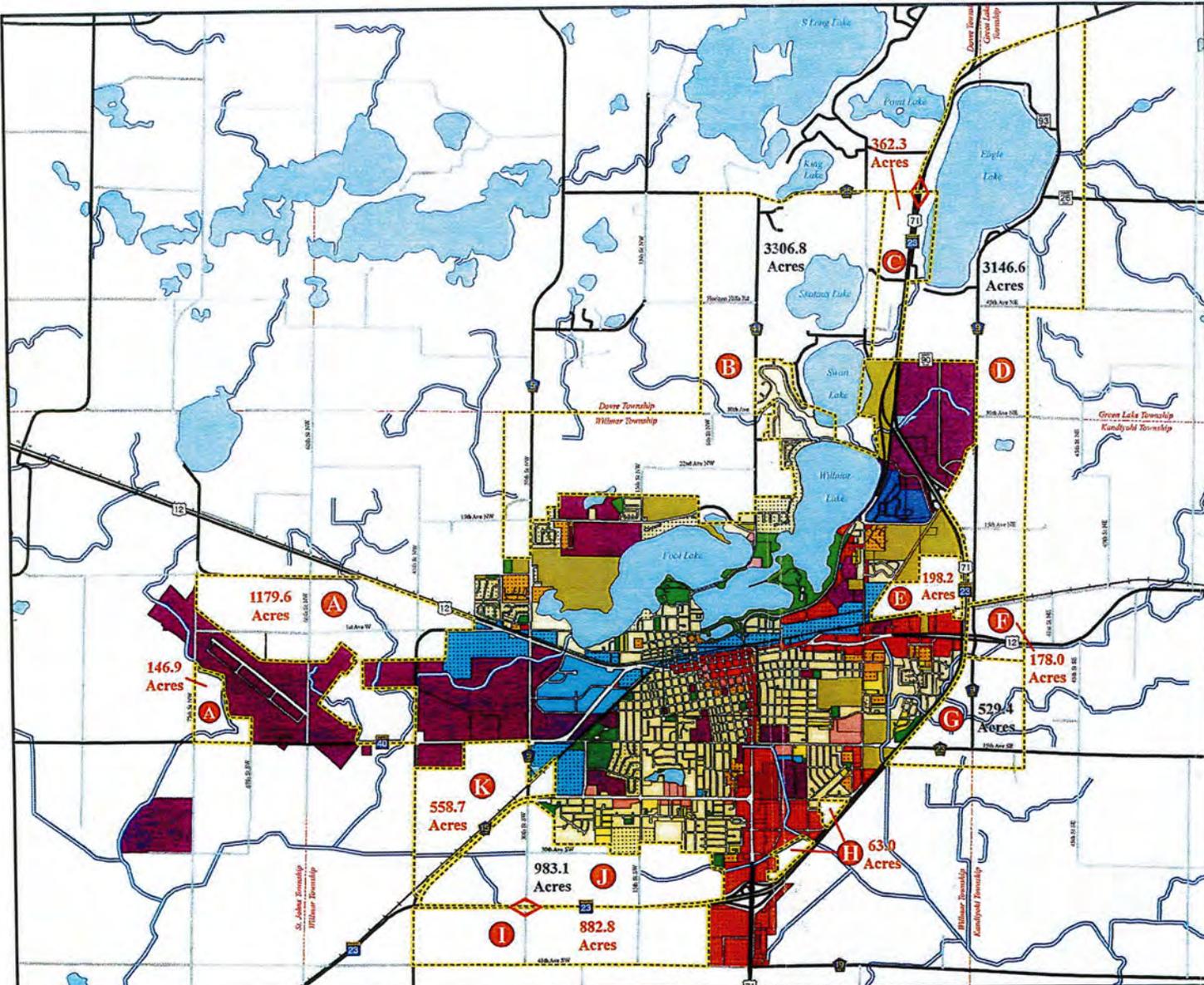
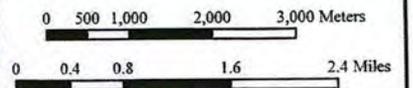
# Map 6A: City of Willmar: Future Land Use

## Legend

- Urban Growth Boundary
- Unpaved Road
- Paved Road
- Railroad
- River, Stream or Ditch
- R-1, One Family Residential
- R-2, One and Two Family Res
- R-3, Low Density Multi Family
- R-4, Medium Density Multi Fam
- R-5, High Density Multi Family
- LB, Limited Business
- GB, General Business
- CBD, Central Business District
- SC, Shopping Center
- I-1, Limited Industry
- I-2, General Industry
- P, Park District
- A, Agriculture
- G, Government/Institution Dist
- T, Technology District
- Lakes
- Townships
- A-K Future Land Use  
(See text in Comprehensive Plan)
- Future Interchange



Prepared by Mid-Minnesota  
Development Commission  
February 2009

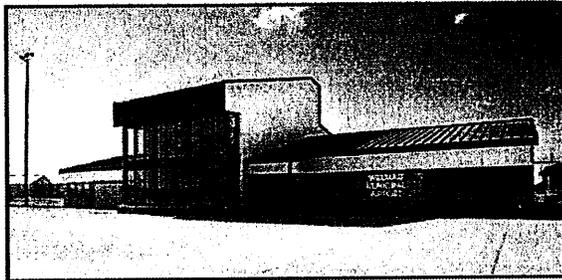


## Willmar Airport

For many years, Willmar has been an aviation rich community that has experienced the benefit of aviation in its economy. Beginning in the late 1920's, a group of hobby fliers started an airfield west of the city known as "Ramblewood". These hobby fliers raised enough interest in the city that a vision began to create an airfield that could be open to the public. Work on an airfield started in 1934 as part of President Roosevelt's "New Deal" Program, and served as an emergency landing field for scheduled airline service. Airlines flew a route between Minneapolis/St. Paul and Watertown, South Dakota, then onto the Black Hills (also in South Dakota).

The need for airport management grew as aviation activity increased. In 1945, John and Mary Jane Rice came to Willmar to manage the airport. The legacy of Willmar Air Service began. The airport matured to two runways: one 5,700' x 100' asphalt runway, and one 3500' x 300' turf runway. The airport served a busy industrial park that was adjacent to airport property. Some of the different companies served by the airport include the following:

- ◆ Pioneer Hybrids
- ◆ Hormel Foods (Jennie-O Foods)
- ◆ West Central Tribune
- ◆ West Central Communication
- ◆ Cash Wise Foods
- ◆ Burlington Northern Santa Fe Railway
- ◆ Willmar Electric Service
- ◆ Duininck Brothers Construction
- ◆ Dayton Hudson (Target)
- ◆ Wal-Mart stores
- ◆ State of Minnesota
- ◆ U.S. Army



*The new Willmar Municipal Airport  
Officially opened September 5, 2006*

In 1995, a joint airport planning group recommended relocating the airport two miles west of the current airport. The decision to construct a new airport came after conducting several studies. The new airport site includes a 5,500-foot runway, with plans to extend the runway to 6,500 feet in the future. A modern terminal area serves as a front door to the community of Willmar, as well as the region.

The new Willmar Municipal Airport officially opened on September 5, 2006. The new airport serves the needs of the aviation community by allowing for improved instrument approaches, as well as larger hangar areas. Currently, there are 64 based aircraft that range in size and speed. Spring of 2007 saw the region's first F-14 "Tomcat" make its way to Willmar where it is on display permanently, thanks to the National Museum of Naval Aviation in Pensacola, Florida.

## **Chapter Four: Current and Emerging Issues**

Chapter Four presents the nature and extent of current and emerging issues facing Willmar. This inventory of issues, however, is not intended to remain constant over the next 20 years. Some of these issues may become lower in priority as measures are taken by the City to address them. Additional issues will also arise that should be added to the list as they emerge.

A key element to a Comprehensive Plan is being able to address the current and emerging issues of the City. The issues facing Willmar now, and in the future, will largely dictate the development that will occur and the planning that will need to take place. Although many of the following issues were identified throughout the comprehensive planning process, several public meetings were held in an effort to specifically gather a list of issues and concerns from local officials and citizens. The issues identified in the goal areas are used as a framework for the objectives and policy guidelines found in Chapter Five. The objectives and policy guidelines, in turn, provide specific information on the issues that are important in Willmar and clearly define how decisions should be made by the City on a day-to-day basis.

### **Identifying Issues with a Topic Area**

Several of the issues identified in this Chapter could be placed in more than one topic area. For the purposes of minimizing the repetitiveness of issues, each issue is presented once in the goal area that best characterizes the issue.

### *Economic Growth*

- **Economic development that follows current and future infrastructure** - Commercial and industrial development should be encouraged to be located in areas that are currently (or soon will be) serviced by water, sewer, and streets in order to make the development more cost effective.
- **Location of industry** - New industrial development should first be directed towards currently developed industrial lands, with measures taken to buffer industrial uses from other types of development.
- **Preferred businesses** - When attempting to attract new business to the City, the size, type, wages, jobs, and utility demand of the prospective companies should be taken into consideration. It is important that new businesses be compatible with current and future land use plans and that they create a positive impact on the local economy. It was brought up several times during the Plan's public meetings that the City is a regional center for medical and retail services. This niche should be emphasized and strengthened.

- **Downtown Marketing & Renewal** – The Willmar Design Center has been working on bringing to fruition the Willmar Downtown Visioneer with four strategic actions. These efforts will hopefully restore and improve the Central Business District of the City.
- **Promote innovative marketing strategies** - To strengthen the local economy, the City should develop innovative marketing strategies designed to attract new businesses.
- **Tourism** - The City's location near many lakes, wooded areas, trails, parks, and hunting and fishing resources provides a wide variety of tourism opportunities. Tourism is an important part of the economy, as it produces jobs and results in additional money being spent in the community. One way to accomplish this, as suggested at the Plan's public meetings, is through more attractive entrances that help make Willmar more welcoming.

### *Public Utilities*

- **Costs of new development and tax implications** - Prior to providing infrastructure to newly developed areas or to land that is anticipated to experience growth, the costs that will be incurred to provide water, sewer, streets, and other services to these areas should be determined. In some cases, the costs to provide services and infrastructure to new development may exceed the taxes that will be generated. Also, new development can increase the property value of neighboring land, which results in these landowners paying higher taxes. Developers should pay 100 percent of infrastructure costs. Infill development was suggested at the Plan's public meetings to help utilize existing infrastructure investments.
- Renewable energy options are available for public utilities. Future energy needs can be accommodated in a number of ways that are environmentally sensitive.
- With rapid changes occurring in the field of telecommunications and the provision of Broad Band internet service, new development will have to make accommodations for the latest technology.

### *Parks and Open Space*

- **Parks and recreation** - As Willmar grows, the City will need to identify new areas for parks and recreation. Some communities are now requiring each new development to dedicate a certain percentage of the development for open space or recreational purposes (i.e., 10%). This could include something as simple as a picnic area or as detailed as a new park. Parks were one of the Community's major assets identified frequently during the Plan's public meetings. A payment in lieu of land dedication may be an acceptable alternative.

- **Sidewalks, trails, bike, and pedestrian connections** – These are not only becoming more crucial for recreation, but also for citywide transportation. All City paths/trails should be interconnected.
- **Value of open/“green” space** - Open spaces, or natural areas, provide recreational, ecological, and aesthetic value to the City.

### *Natural Resources & Environmental Quality*

- **Protecting natural resources** - The Willmar area has a diverse natural resource base that provides economic, recreation, and aesthetic benefits to both residents and visitors. The City should support policies designed to protect these natural resources.
- **Protect, improve, and promote area lakes** – Foot, Willmar, and Swan Lakes provide recreational and economic benefits to the City of Willmar and surrounding area. Improving water quality and enhancing associated recreational opportunities are important to the tourism, property values, and aesthetic appeal of the community. Water monitoring and shoreline preservation were suggested at the Plans’ public meetings.
- **Protect wetlands** - Wetlands provide numerous benefits, including improved water quality, flood water retention, and wildlife habitat. Land use decisions need to consider the importance of wetlands and recognize them as a benefit in future land use designs/development.
- **Consult local agencies** - Coordinated planning activities between the City and affected agencies (i.e., DNR, MPCA, Mn/DOT, etc.) could help to ensure that efficient growth occurs with minimal adverse environmental impacts.

### *Residential & Social Development*

- **Sustainable Housing** - The use of innovative housing subdivision design can create higher density of housing, minimize land consumption, and preserve open space for all to enjoy.
- **Subdivision Development Policies** - Subdivision development policies and regulations should be established in a way that gives developers an incentive to make the most efficient use of a piece of property, while protecting unique natural features.
- **Pedestrian Friendly** - New developments should include design concepts that accommodate people with a wide variety of pedestrian needs, including youth, handicapped, and seniors.

- **Equal Housing Opportunities** – Good housing should be available to all citizens, regardless of race, income, religion, etc. Mixes of twin homes, single-family homes, HRA housing, apartments, and the rehabilitation of existing housing was all suggested during the Plan’s public meetings.

### *Transportation*

- **Future streets need to follow infrastructure** - The City needs to systematically plan for the expansion and new construction of streets as the community grows. This especially means connecting new roadways logically to existing roadways.
- **Street maintenance** - The maintenance of streets is an expensive, but necessary, component of the City’s transportation system. Capital improvements planning for roadway maintenance should account for anticipated increases in traffic and the demand for additional roads.
- **Pedestrian safety** - Pedestrian concerns should be at the forefront of all planning and development activities. Trails, paths, and bike lanes emphasizing connectivity were identified by the public during the Plan’s various meetings.
- **Safety concerns** - Growth will result in increased traffic. Proper traffic controls such as signing, traffic lights, and access management regulations can help create safer roadways for the public.
- **Public transit** - Providing public transportation opportunities for local residents can provide mobility for an aging population and people with disabilities. The KAT (Kandiyohi Area Transit) bus system helps to fill this need.
- **Railroad concerns** - The railroad, which runs through the City parallel to U.S. Highway 12, presents a number of key planning issues. New railroad crossing points are extremely difficult to accomplish (because of safety and liability concerns expressed by the railroad companies). This creates traffic flow and access issues for future development.
- **Right-of-way widths** – There is a trend toward reducing right-of-way widths in residential developments to decrease infrastructure costs and increase housing affordability.

### *Land Use Planning*

- **Urban growth boundaries** – The land surrounding Willmar where growth is anticipated to occur is called the City’s “urban growth boundary”. Continuously working with surrounding townships to identify urban growth boundaries and determine the need for annexation agreements will be important as the City experiences growth.

- **Land use coordination** - Coordination and consistency between City and County zoning and subdivision regulations can help create orderly growth patterns for new development.
- **Location of future annexation** - The location of future annexations should occur within the identified urban growth boundary. Factors to take into consideration in determining the feasibility of annexation include whether the annexation promotes the health, safety, and welfare of the public; the impact to residents and landowners in the proposed annexed area; costs incurred by the City to annex the property; the future tax implications of the annexation; and the future development opportunities in the area to be annexed.
- **Promote orderly annexation** - Orderly annexation promotes intergovernmental cooperation between the City and townships in determining the need for annexation and carrying out the process.
- **Current land use patterns** - Current land use patterns are important as they indicate existing growth policies, and can set the stage for what future development policies need to be implemented.
- **Minimize urban sprawl** - Development in existing urban areas should occur before new land is annexed (when feasible) to help minimize urban sprawl and to reduce the costs of providing additional public infrastructure.
- **Examine current zoning policies** - The City will need to update its Zoning Ordinance in the future in order to ensure it is consistent with the City's Comprehensive Plan.
- **Preservation of historical places** - The City has some important historical buildings and places listed on the National Register of Historical Places. The City should explore all opportunities to preserve these areas, including the adoption of a preservation ordinance.
- **Shoreland management** - The City has adopted a Shoreland Management Ordinance that needs to be periodically reviewed and updated. In addition, the City's residents need to become better aware of the Ordinance and the rationale behind it.
- **Downtown Willmar** - The Willmar Design Center has four strategic action strategies resulting from community visioning meetings facilitated by the Minnesota Design Team. These strategies are intended to reconnect the community with the downtown and help to revitalize the area.

***Citizen Participation  
and Intergovernmental Cooperation***

- **Involve Kandiyohi County and surrounding Townships in the planning process** - The planning activities of the City, surrounding townships, and Kandiyohi County are all impacted by each other. The City should seek input from these local units of government prior to making important land use decisions, and County zoning in Willmar's urban growth areas should be coordinated with the City's intended land use for that area.
- **City and Township cooperation** - Cooperation between the City and surrounding townships is needed to effectively address new development in potential urban growth areas. The underlying philosophy is that the City and townships form one "community," and future land use decisions should be based on what is best for both local units of government.
- **Establish a collective vision for the Willmar community** - A collective vision for Willmar is being established by the Comprehensive Plan and should be implemented accordingly. It was suggested at one of the Plan's public meetings that there should be a 20+ year plan for growth.
- **Promote more local control on State and Federal projects** - Input from local residents and the City on State and Federal projects can help keep activities in conformance with the City's Comprehensive Plan and relevant to community needs.

## **Chapter Five: Goals, Objectives, and Policies**

This section of the Comprehensive Plan establishes the City of Willmar's goals, objectives and policy guidelines. They will be used to help make land use and planning decisions by those responsible for Willmar's future. The goals have been organized into eight topic areas. The goals are used as a framework for the objectives and policy guidelines. The policies, in turn, provide specific information on what values and issues are important to Willmar residents. More importantly, the objectives and policies clearly identify how decisions should be made by City officials on a day-to-day basis.

After discussion of issues and alternative overall growth policies, the following goals and policies are suggested for future growth and development for the City of Willmar. It is important to note that a goal is a long-range objective, whereas a policy is an action statement intended to implement the goal. These goals and policies are important because they constitute the land use plan and serve as the basis for the ordinances used to implement the plan. The courts have increasingly held that the goals and policies of a comprehensive plan are important determinants in interpreting different provisions of a zoning ordinance.

The community's nine goal areas are listed below:

- A. Economic Growth**
- B. Public Utilities**
- C. Transportation**
- D. Natural Resources & Environmental Quality**
- E. Parks & Open Space**
- F. Residential & Social Development**
- G. Historic Preservation & Aesthetics**
- H. Downtown**
- I. Citizen Participation & Intergovernmental Cooperation**

Throughout the Comprehensive Plan, goals, objectives, and policies are defined in the following way:

**Goals:** Idealistic statements intended to be attained at some undetermined future date. Goals are purposefully general in nature.

**Objectives:** Statements designed to achieve a goal. Objectives always begin with an action verb (i.e., promote, expand, design, etc.) and can be measurable if a date, dollar amount, or similar value is identified.

**Policies:** Statements which support the action of the objective. Policies are more specific recommendations and can be converted into action work plans.

## *Section A: Economic Growth*

1. **GOAL:** To have an economically sustainable community offering a diverse set of services, goods, and employment opportunities.
  
2. **OBJECTIVES:**
  - a. Promote economic development which will be beneficial to the community, including tax base enhancement, increased aesthetics, and expanded employment opportunities.
  - b. Promote the existing economic base and the expansion of existing businesses.
  - c. Work with the Economic Development Commission on a variety of business retention and expansion activities.
  
3. **POLICIES:**
  - a. Encourage programs that promote diversified commercial growth to meet the needs of West-Central Minnesota.
  - b. Strengthen the business districts through various development and redevelopment programs.
  - c. Encourage full development of existing industrial and commercial land within the City.
  - d. Encourage the expansion of existing, and development of new, businesses at suitable locations.
  - e. Encourage commercial property owners to maintain and upgrade their existing buildings and land through reasonable design standards and maintenance ordinances.
  - f. Vacant properties should meet property maintenance standards.
  - g. Provide reasonable and safe access to all retail and industrial uses.
  - h. Provide adequate parking for all business and community needs, when feasible.
  - i. The impact on parking should be examined prior to making land use decisions.
  - j. Industrial and commercial land uses shall be located in areas where the adverse impact on surrounding land uses is minimized.

- k. Commercial and industrial uses should be located on soil types that are most able to accommodate such development.
- l. Industrial sites should have good access to utilities and transportation routes.
- m. Air, water and noise pollution from industry should be monitored and regulated in accordance with the MPCA (and MS4 requirements).
- n. Industrial and commercial sites should be preserved for future growth and not utilized for further residential development.
- o. Development should occur only in areas where utilities can be provided with optimal efficiency and cost.
- p. Provide for the orderly expansion of commercial, industrial, and residential areas.
- q. Encourage development through government participation in public finance programs such as JOBZ, tax increment financing, Economic Development Commission programs, etc.
- r. Promote green space and outdoor amenities by incorporating them into commercial and industrial development plans.
- s. Cultivate positive aesthetics and image of commercial, industrial, and residential areas, encouraging continual renewal and improvement.
- t. Encourage the expansion of medical services in the community, recognizing these services as a major industry bringing jobs and visitors to the City.
- u. Facilitate housing and community services as demographics change, in preparation for the baby boomers as seniors, when reviewing development plans.
- v. Promote activities of the Economic Development Commission, Chamber of Commerce, and other community organizations for both business retention and expansion.
- w. Promote Willmar as a great location to host conferences and other special events.
- x. Recognize the importance of Ridgewater College in contributing to the city's economy, diversity, identity, activity, arts, entertainment, opportunity, and social fabric.
- y. Continue to maintain, expand, and develop important public/semi-public community facilities, such as the Civic Center, Library, Aquatic Center, parks, and other key activity venues.
- z. Promote the use of the Willmar Municipal Airport as an economic development tool.

- aa. Expand and promote tourism opportunities throughout the greater Willmar area, including the use of our extensive trails, lakes, and parks.

### ***Section B: Public Utilities***

1. **GOAL:** To efficiently make available a full range of public utilities throughout the community.
  
2. **OBJECTIVES:**
  - a. Make public utilities affordable to both residents and business owners.
  - b. Provide public utilities in a manner that reinforces the City's staged growth and redevelopment policies.
  
3. **POLICIES:**
  - a. Control City expansion by creating an urban growth boundary map based on public utility extension plans and forecasts.
  - b. Encourage new development in areas contiguous to existing development in the City to bring about orderly expansion of public utilities, thus supporting smart-growth land use practices while at the same time preserving parkland and green space.
  - c. Encourage dense development in areas where the soils, water table, and geological features support the efficient extension of public utilities.
  - d. Require a full complement of public utilities such as sewer, water, gas, electricity, telecommunications, broadband, storm sewer/retention ponds, etc.
  - e. In the upgrading of public utilities in redevelopment areas, refine the assessment policies to encourage the continued use and/or redevelopment of these areas.
  - f. Develop and update a public utilities plan and growth boundary map.
  - g. Affirm the City's desire to serve all residents and business with municipal power, etc., and to work with other public and private utility entities in regional service matters.
  - h. Endorse technology advancement in industry and technology growth and awareness throughout the community, especially in new development.
  - i. Promote the expansion and use of the district hot water heating system.

## ***Section C: Transportation***

1. **GOAL:** To have a comprehensive and functional public transportation system that serves the entire community.
  
2. **OBJECTIVES:**
  - a. Provide a transportation system (street, rail, air, pedestrian & bike trails) which complements land use development and reinforces a staged growth approach to future development.
  - b. Encourage street and trail systems which maximize accessibility to places of employment, recreation, shopping, entertainment, and all developed portions of the City
  - c. Cultivate a healthy City that is walkable and bikeable.
  
3. **POLICIES:**
  - a. Integrate land use planning with transportation planning to minimize the adverse effects of transportation systems (i.e., noise and air pollution) on adjacent development.
  - b. Avoid developing transportation facilities that will adversely affect natural resources or encourage leap-frog development.
  - c. Develop a transportation system that properly balances considerations of safety, cost, accessibility and environmental protection.
  - d. Control land use development at major intersections and interchanges to avoid compromising the safety, accessibility and function of the streets involved.
  - e. Develop a transportation system that stimulates economic development and provides for the efficient, non-disruptive flow of goods, especially from rural to urban markets.
  - f. Develop a transportation system that properly integrates all modes of transportation.
  - g. Develop and participate in programs to ensure adequate parking in the downtown area.
  - h. Utilize existing right-of-way for the expansion of transportation systems to reduce the amount of agricultural land taken out of production, when feasible.
  - i. Develop additional minor arterials and collectors as the City grows.

- j. Encourage the beautification of principal arterial entrances into Willmar.
- k. Encourage expansion of the airport to accommodate larger aircraft and commercial development.
- l. Encourage connectivity of neighborhoods, including through cul-de-sacs via easements along property lines.
- m. Encourage the study and planning of a second crossing over the railroad tracks that is not at grade.
- n. Provide for efficient movement of traffic from residential areas in the north to commercial areas in the south (i.e., 1<sup>st</sup> St. N to 1<sup>st</sup> St. S. and 7<sup>th</sup> St. NW).
- o. Include aesthetic, as well as functional, considerations for all transportation plans.
- p. Encourage residential street design that allows for ancillary sidewalks and bike lanes, and storm water impacts, as well as to reduce residential development costs.
- q. Identify existing streets for designated bike lanes on the master transportation plan.
- r. Develop a bike trail system that encompasses existing and new developments.
- s. Access should be controlled consistent with the functional classification of roadways.

#### ***Section D: Natural Resources and Environmental Quality***

- 1. **GOALS:** To protect and enhance the air, water, and land resources in the City as a vital ingredient of the human living environment.
- 2. **OBJECTIVES:**
  - a. Protect and enhance the existing lakes and wildlife habitat as vital natural resources to the City.
  - b. Promote standards for energy efficient buildings.
  - c. Promote programs to minimize energy consumption.
  - d. Promote recycling and programs to encourage the re-use of solid waste.

### 3. POLICIES:

- a. Promote land use management policies and programs that will protect the natural resources of the City.
- b. Utilize appropriate state and federal standards related to air, water, and noise pollution.
- c. Use natural resource information, including soils data, as one basis for determining the direction of future expansion of the City and for public open space acquisition programs.
- d. Require the use of natural resource information in subdivision development and project design.
- e. Regulate development in the areas of the City where soil suitability and high water table require such regulation.
- f. Encourage and promote reforestation and tree planting programs within the community as part of the development/redevelopment process.
- g. Participate in tree disease control programs on public and private property.
- h. Regulate development in such a manner as to preserve natural drainage in the community, when possible.
- i. Enact ordinances to control soil erosion and siltation.
- j. Enact standards and ordinances to regulate the removal of natural vegetation.
- k. Require the staging of urban development projects so that the smallest practical area of land is exposed at any one period of time in order to minimize soil erosion.
- l. Encourage the owners of major tracts of undeveloped land to construct and maintain shelter-belts and implement other soil erosion control programs such as contour plowing, strip-cropping, etc.
- m. Preserve prime agricultural land from non-agricultural development to the greatest extent possible without impeding orderly urban and economic expansion.
- n. Promote water management policies/programs to conserve the quantity and maintain the quality of all water resources in the community and its environs.
- o. Encourage the use of energy conservation technology and techniques, such as solar, wind, geo thermal etc.
- p. Protect marshes/wildlife habitat in future development areas.

- q. Encourage programs to retrofit existing buildings to make them more energy efficient.
- r. Promote recycling and the reuse of solid waste products.
- s. Encourage the use of refuse-derived fuels and alternative energies when proven to be safe and efficient.
- t. Promote the use of pedestrian and bike access to public waters , parks, and other public amenities via trails.
- u. Support brownfield redevelopment projects, when feasible.

### *Section E: Parks and Open Space*

1. **GOAL:** To increase and enhance park and open space recreation opportunities by promoting maximum multi-use of park and recreation resources.
  
2. **OBJECTIVES:**
  - a. Manage the community's natural resources to provide appropriate park and open space recreation opportunities.
  - b. Provide for new park and open space recreation areas as a part of the residential development process.
  - c. Plan street, pedestrian, and trail systems that provide access to all developed portions of the City, connecting parks and open spaces.
  
3. **POLICIES:**
  - a. As residential and commercial/industrial areas expand, park and recreational facilities designed to serve the developing area should be provided. This should be done either by a dedication of land to the public, or by a payment in lieu of dedication.
  - b. Include dedicated areas for parks and open space in new subdivisions, when feasible.
  - c. When feasible, all parks and open spaces shall be linked via trails.
  - d. Encourage preservation and management of existing parks and open space areas.
  - e. A system of tree plantings and landscaping, as well as reforestation, should be enacted to enhance the beauty of each area to the extent its primary use will permit.

- f. Parking areas that are provided in parks should be properly landscaped and surfaced.
- g. Where industrial or commercial uses border or are located adjacent to a park, they should be screened by appropriate plantings.
- h. Where recreation areas are located in residential neighborhoods, appropriate plantings and screenings should be provided to protect the neighborhood from noise.
- i. Abandoned railroad areas should be developed as public trails or recreational areas when the future rail use of the site is not foreseeable.
- j. Areas best suited for future parks, open space, and trails should be identified and preserved.

### ***Section F: Residential and Social Development***

1. **GOAL:** To preserve and develop a mixture of different housing types, densities, and cost ranges that will meet the needs of all citizens.
2. **OBJECTIVES:**
  - a. Establish and maintain safe, healthful, and blight-free residences and neighborhoods.
  - b. Locate housing to provide convenient access to public and private facilities and activities.
3. **POLICIES:**
  - a. Monitor the existing and future housing needs for the various income and age groups.
  - b. Encourage the maintenance and rehabilitation of existing housing structures in the community.
  - c. Encourage the development of neighborhoods that include a variety of housing types and cost ranges.
  - d. Encourage public and private participation in local, state and federal programs for the provision of low and moderate income housing units.
  - e. Promote the location of higher-density housing units near commercial, medical and employment concentrations.

- f. Encourage design standards in subdivisions and higher-density housing that take into consideration the social and psychological well-being of their residents.
- g. Encourage innovative site and housing unit design for energy conservation, aesthetics, open space preservation, bike and pedestrian access etc.
- h. Regulate home occupations carefully to avoid or minimize traffic problems and incompatible land uses in residential districts.
- i. Regulate industrial or commercial land uses to control truck traffic and to reduce land use conflicts with residential properties.
- j. Encourage the location of residential subdivisions where City services are readily available and in areas which have direct access to existing transportation routes.
- k. Promote the orderly growth of residential developments with logical expansion of municipal services and utilities.
- l. Encourage transition zones between low and high density residential developments.
- m. Restrict the location of mobile homes to mobile home parks where adequate services can be provided.
- n. Promote the use of rain gardens and infiltration basins to reduce storm water impacts.

### *Section G: Historic Preservation and Aesthetics*

1. **GOAL:** To protect, preserve and enhance valuable historic and aesthetic sites throughout the community.
2. **OBJECTIVES:**
  - a. Protect, preserve, and restore key historic buildings and sites throughout the community.
  - b. Create, maintain, and enhance visually pleasing areas and neighborhoods throughout the community.
3. **POLICIES:**
  - a. Maintain a historic-design inventory of the community with special emphasis on the Central Business District.

- b. Enforce design, screening and landscape standards in the construction of all public facilities, utilities and buildings, when needed.
- c. Incorporate design and landscaping standards in all private development, including residential, commercial and industrial projects.
- d. Require all land uses which are either a potential source of nuisance or of questionable visual value such as junk yards, gravel and coal storage areas, etc. to be landscaped and screened from adjacent areas.
- e. Regulate the size, placement and visual appearance of all signs, whether private or public.
- f. Cooperate with local historic preservation groups for enhanced urban design throughout the community

### *Section H: Downtown*

#### *Willmar Downtown Planning*

The Willmar Design Center and the citizens of Willmar have initiated downtown planning and have outlined a number of strategic actions to enhance the Downtown. The four main recommendations include 1) restoring Litchfield Avenue, 2) establishing a downtown commons area, 3) urbanizing First Street, and 4) developing a connection to the lakes. The Willmar Downtown Visioneer was created to summarize these initiatives. For more information, please contact the Willmar Design Center.

1. **GOAL:** To maintain and enhance the downtown area as a great place to live, work, shop, dine, and entertain.
2. **OBJECTIVES:**
  - a. Revitalize the downtown area for both business and residential uses.
  - b. Encourage a quality urban residential and commercial connection to the lakes.
  - c. Facilitate high pedestrian use and green space amenities.
  - d. Maintain and/or increase employment opportunities,

### **3. POLICIES:**

- a. Encourage the restoration of Litchfield Ave. SW and SE by facilitating direct access to the bypass.
- b. Allow development with higher density and relaxed parking requirements beyond the existing Central Business District to facilitate redevelopment.
- c. Encourage development of the downtown commons area/parking.
- d. Support groups such as the Design Center that focus on downtown improvements.

#### ***Section I: Citizen Participation and Intergovernmental Cooperation***

1. **GOAL:** To involve citizens, agencies, and organizations in the City's key decisions.

### **2. OBJECTIVES:**

- a. Maintain open and regular communication relating to planning and development issues between different levels of government.
- b. Maintain open and regular communication relating to planning and development issues between the various community agencies and organizations.
- c. Maintain open and regular communication relating to planning and development issues with the public.

### **3. POLICIES:**

- a. Encourage open communication relating to all planning and development issues between the different levels of government, including the townships, city, county, school district, regional development commission, and state agencies.
- b. Seek comment from adjacent governmental units on proposed new growth and development policies, comprehensive plans and development ordinances which are likely to have an area-wide effect.
- c. Integrate planning and development by involving the various City departments and appointed commissions in planning and development issues.
- d. Inform and educate the public, encouraging the widest possible citizen participation in the planning and development process.

## **Chapter Six: Implementation**

This Chapter describes the key components needed to properly implement the Willmar Comprehensive Plan. The primary feature is Map 6A, which establishes a land use plan for Willmar's future growth and development. In addition to the Map, Chapter Six outlines what other implementation steps will be followed in order to accomplish the goals and policies in Chapter Five.

### **Willmar Land Use Plan**

The City of Willmar Land Use Plan consists of Map 6A and its corresponding text. Map 6A presents Willmar's Urban Growth Area represented by the yellow and black lines. The current corporate boundary is shown on the Map with the various colors representing how the land is currently zoned. The Urban Growth Areas represent where Willmar will most likely grow over the next 20 years. Exactly when any future development will occur, however, is nearly impossible to predict. For this reason, the Urban Growth Boundary is not a definite future corporate boundary, but rather it depicts where Willmar could logically grow in the future.

Some of the factors that will influence the City of Willmar's future growth include:

1. The City of Willmar serves as a regional center for West-Central Minnesota. This has resulted in significant development over the last decades. As these and others expand in the Willmar area, employees will increasingly need residential housing.
2. Increasing transportation costs will result in a higher demand for housing in the City.
3. Transportation improvements along State Highway 23, U.S. Highway 71, and U.S. Highway 12 have made travel to and from Willmar both quicker and safer. Traditionally, these types of infrastructure improvements are followed by an increase in all types of land use development (i.e., residential, commercial, industrial, etc.).

Realizing that predicting the timing of future land use development is difficult, the City decided not to identify specific periods of time that additional land would need to be incorporated. Instead, the primary purpose of the Urban Growth Plan Map is to establish a communication process between Willmar, the surrounding townships, and Kandiyohi County.

## Urban Growth Area Descriptions

Map 6A shows the location of each Urban Growth Area described below. It is the City's desire to preserve agricultural land for as long as is feasible and to deter sprawl and/or leap-frog development.

- A AREAS A** The two Urban Growth Areas surrounding the airport should be reserved for airport related business and industry. The land should remain in agricultural use pending the logical expansion of industrial use through annexation, as the City expands to the West and municipal services become available. Areas A contain approximately 1,327 acres of land all impacted by Airport Zoning. It may also be the site of a future railroad bypass.
- B AREA B** Low density residential development with scattered nodes of neighborhood commercial development, including limited retail and service businesses, as municipal services are made available (approximately 3,307 acres).
- C AREA C** Future interchange with expanded highway commercial development when municipal services become available. There will also be some mixed density residential development (approximately 362 acres)
- D AREA D** Area D, containing approximately 3,147 acres, will have low density residential development with scattered nodes of neighborhood commercial development, including limited retail and service businesses.
- E AREA E** This area will continue with agricultural uses until access and services become available. Future conversion of the existing railroad spur line to a trail as a link in the current trail system is anticipated. Development will transition from industrial in the south (where it currently exists) to residential in the north. Area E contains approximately 198 acres.
- F AREA F** Limited commercial development when municipal services become available (approximately 178 acres).
- G AREA G** Residential development when municipal services become available (approximately 529 acres).
- H AREAS H** Agricultural until annexed. Commercial development when municipal services become available (approximately 63 acres).
- I AREA I** Mixed commercial and light industrial development transitioning to mixed residential development as municipal services become available (approximately 883 acres).
- J AREA J** There will be residential development with limited commercial development adjacent to the interchange planned at CSAH 15 (approximately 983 acres).
- K AREA K** Agricultural uses changing to industrial as municipal services become available (approximately 559 acres).

# Map 3B: City of Willmar Functional Classification



Data Provided by: Minnesota Department of Transportation  
and Kandiyohi County

## Legend

- Municipality
- Principal Arterial, Interstate
- Principal Arterial, Other Freeway/Expressway
- Principal Arterial, Other
- Minor Arterial
- Rural Major and Urban Collector
- Rural Minor Collector
- Local
- County State Aid Highway
- Municipal State Aid System
- State Trunk Highway
- U.S. Trunk Highway
- Interstate Freeway



Prepared by  
Mid-Minnesota  
Development Commission  
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# Appendix K

ORDINANCE NO. 1227

STORMWATER MANAGEMENT ORDINANCE

AN ORDINANCE PROMOTING THE HEALTH, SAFETY AND GENERAL WELFARE OF THE CITIZENS OF WILLMAR, MINNESOTA ADOPTING STORMWATER MANAGEMENT PRACTICES.

1. STATUTORY AUTHORIZATION

- 1.1 This ordinance is adopted pursuant to Minnesota Statutes Section 462.351 (1990).
- 1.2 The most current version of the General Permit Authorization to Discharge Storm Water Associated with Construction Activity under the National Pollutant Discharge Elimination System/State Disposal System Permit Program administered by the Minnesota Pollution Control Agency shall govern for water quality. All rate control requirements in this ordinance shall remain in effect as-is.

2. FINDINGS

The City of Willmar hereby finds that uncontrolled and inadequately planned use of wetlands, woodlands, natural habitat areas, areas subject to soil erosion and areas containing restrictive soils adversely affects the public health, safety and general welfare by impacting water quality and contributing to other environmental problems, creating nuisances, impairing other beneficial uses of environmental resources and hindering the ability of the City of Willmar to provide adequate water, sewage, flood control, and other community services. In addition, extraordinary public expenditures may be required for the protection of persons and property in such areas and in areas which may be affected by unplanned land usage.

3. PURPOSE

The purpose of this ordinance is to promote, preserve and enhance the natural resources within the City of Willmar; to protect them from adverse effects occasioned by poorly sited development or incompatible activities; to regulate land-disturbing or development activities that would have an adverse and potentially irreversible impact on water quality, stormwater runoff rates/volumes, and unique and fragile environmentally-sensitive land; to alleviate current flooding problems and prevent future flooding problems; to minimize conflicts and encourage compatibility between land-disturbing and development activities and water quality and environmentally sensitive lands; and to require detailed review standards and procedures for land-disturbing or development activities proposed for such areas, thereby achieving a balance between urban growth and development and protection of water quality, water quantity and natural areas.

4. DEFINITIONS

For the purposes of this ordinance, the following terms, phrases, words, and their derivatives shall have the meaning stated below. When not inconsistent with the context, words used in the present tense include the future tense, words in the plural number include the singular number, and words in the singular number include the plural number. The word "shall" is always mandatory and not merely directive.

- 4.1 Applicant. Any person who wishes to obtain a building, excavation, or grading permit, or zoning or subdivision approval.

- 4.2 Architect. An architect is a person duly registered or authorized to practice architecture in the State of Minnesota.
- 4.3 Bedrock. Bedrock is in-place solid rock.
- 4.4 Best Management Practices (BMP). Best management practice is a technique or series of techniques which are proven to be effective in controlling runoff, erosion, and sedimentation.
- 4.5 Bluff. A topographic feature such as a hill, cliff, or embankment having the following characteristics (an area with an average slope of less than 18 percent over a distance of 50 feet or more shall not be considered part of the bluff): a) Part or all of the feature is located in a shoreland area;
- b) The slope rises at least twenty-five feet (25') above the ordinary high water level of the water body;
  - c) The grade of the slope from the toe of the bluff to a point twenty-five feet (25') or more above the ordinary high water level averages thirty percent (30%) or greater; and
  - d) The slope must drain toward the water body.
- 4.6 Borrow. A borrow is earth material acquired from an off-site location for use in grading on a site.
- 4.7 Civil Engineer. A civil engineer is a professional engineer registered in the State of Minnesota to practice in the field of civil works.
- 4.8 Clearing and Grubbing. Clearing and grubbing is the cutting and removal of trees, shrubs, bushes, windfalls and other vegetation including removal of stumps, roots, and other remains in the designated areas.
- 4.9 Control measure. A practice or combination of practices to control erosion and resulting pollution.
- 4.10 Detention facility. A permanent natural or man-made structure, including wetlands, for the temporary detention of storm and snowmelt runoff water.
- 4.11 Developer. A developer is any person, firm, corporation, sole proprietorship, partnership, state agency, or political subdivision thereof engaged in a land disturbance activity.
- 4.12 Drainage Ordinance Map/Drainage Plan Map. A map classifying areas of the city based on the drainage system's capacity to handle existing and future potential stormwater flow.
- 4.13 Erosion. Erosion is the wearing away of the ground surface as a result of the movement of wind, water, ice, and/or land disturbance activities.
- 4.14 Erosion and Sediment Control Plan. Erosion and sediment control plan is a plan which includes a set of best management practices or equivalent measures designed to control surface runoff and erosion, and to retain sediment on a particular site during the period in which pre-construction and construction-related land disturbances, fills, and soil storage occur, and before final improvements are completed, all in accordance with the specific requirements set forth in Section 8. An

erosion and sediment control plan is part of the stormwater management plan submittal.

- 4.15 Excavation. Excavation is the mechanical removal of earth material.
- 4.16 Fill. Fill is a deposit of soil or other earth materials placed by artificial means.
- 4.17 Flood fringe. The portion of the floodplain outside the floodway.
- 4.18 Floodplain. The areas adjoining a watercourse or water basin that have been or may be covered by a regional flood.
- 4.19 Floodway. The channel of the watercourse, the bed of water basins, and those portions of the adjoining floodplains that are reasonably required to carry and discharge floodwater and provide water storage during a regional flood.
- 4.20 General Storm Water Permit. A general storm water permit is the Minnesota Pollution Control Agency's (MPCA) general National Pollutant Discharge Elimination System (NPDES) construction storm water permit covering anyone conducting a land-disturbing activity which disturbs five (5) or more acres of total land area.
- 4.21 Grade. The grade is the vertical location of the ground surface.
  - a) Existing grade is the grade prior to grading.
  - b) Rough grade is the stage at which the grade approximately conforms to the approved plan.
  - c) Finish grade is the final grade of the site which conforms to the approved plan.
- 4.22 Hydric soils. Soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part.
- 4.23 Hydrophytic vegetation. Macrophytic plant life growing in water, soil or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content
- 4.24 Intensive Vegetation Clearing. The complete removal of trees or shrubs in a contiguous patch, strip, row, or block.
- 4.25 Land Disturbance Activity: Land disturbance activity is any land change that may result in soil erosion from wind, water and/or ice and the movement of sediments into or upon waters, lands, or rights-of-way within the City of Willmar, including but not limited to building demolition, clearing and grubbing, grading, excavating, transporting and filling of land. Land disturbance activity does not include the following:
  - a) Minor land disturbance activities including, but not limited to, underground utility repairs, home gardens, minor repairs, and maintenance work which do not disturb more than five hundred (500) square feet of land.
  - b) Installation of fence, sign, telephone, and electric poles and other kinds of posts or poles.

- c) Emergency work to protect life, limb, or property and emergency repairs. If the land-disturbing activity would have required an approved Erosion and Sediment Control Plan except for the emergency, then the land area disturbed shall be shaped and stabilized in accordance with the requirements of Section 8.
- 4.26 Outfall. The outfall is the point of discharge to any watercourse from a public or private stormwater drainage system.
- 4.27 Person. Any individual, firm, corporation, partnership, franchisee, association or governmental entity.
- 4.28 Public waters. Waters of the state as defined in Minnesota Statutes, section 103G.005, subdivision 15.
- 4.29 Regional flood. A flood that is representative of large floods known to have occurred generally in the state and reasonably characteristic of what can be expected to occur on an average frequency in the magnitude of a 100-year recurrence interval.
- 4.30 Retention facility. A permanent structure that provides for the storage of stormwater runoff by means of a permanent pool of water.
- 4.31 Sediment. Solid matter carried by water, sewage, or other liquids.
- 4.32 Sanitary Sewer System. The combination of public and private pipelines or conduits, pumping stations, and force main pipe, and all other construction, devices, appliances, or appurtenances used for conducting sewage or industrial waste or other wastes to a point of ultimate disposal in a public sewage treatment facility.
- 4.33 Storm Sewer System. The combination of public and private pipelines or conduits, pumping stations and force main piping and all other construction, devices, appliances, or appurtenances used for conveying stormwater runoff and snowmelt runoff to various locations throughout the city.
- 4.34 Stormwater Management Plans. Drainage computations, grading plan, and erosion control plan.
- 4.35 Structure. Anything manufactured, constructed or erected which is normally attached to or positioned on land, including portable structures, earthen structures, roads, parking lots, utilities, and paved storage areas.
- 4.36 Utility. Utility is the owner/operator of any underground facility including an underground line, facility, system, and its appurtenances used to produce, store, convey, transmit, or distribute communications, data, electricity, power, heat, gas, oil, petroleum products, water (including stormwater), steam, sewage, and other similar substances.
- 4.37 Wetlands. Lands, transitional between terrestrial and aquatic systems where the water table is usually at or near the ground surface or the land is covered by shallow water. For purposes of this definition, wetlands must have the following three attributes:
- a) Have a predominance of hydric soils;
  - b) Are inundated or saturated by surface or ground water at a frequency and duration sufficient to support a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions; and

- c) Under normal circumstances support a prevalence of such vegetation.

## 5. SCOPE AND EFFECT

- 5.1 Applicability. The following three permits/reviews may be required from the city for a project/construction activity:
  - 5.1.1 **Building Permit:** Required for construction of buildings or building modifications. This permit is obtained from the City's Building Official. This ordinance addresses only those building permit requirements pertaining to the grading plan review.
  - 5.1.2 **Excavation Permit:** Required for work in the public rights-of-way in the city. This permit is obtained from the City Engineer. This ordinance does not address the requirements for excavation permits.
  - 5.1.3 **Grading Plan Review:** Required when any land disturbance activity will disturb more than one acre of land. This review is performed by the City Engineer.
    - a) If the area to be graded is less than five (5) acres and will be restored with less than one (1) acre of imperviousness, the project proposer will be required to install temporary erosion and sediment controls at locations as directed by the City Engineer or his/her representatives.
    - b) If the area to be graded is less than five (5) acres and will be restored with one (1) acre or more of impervious surface, the grading plan must include a stormwater management plan (see Section 6 of this ordinance) that is approved by the City Engineer or his/her representatives.
    - c) If the area to be graded is five (5) or more acres and will be restored with one (1) acre or more of impervious surface, the project proposer must prepare a stormwater management plan and obtain an NPDES construction stormwater permit from the MPCA.

Every applicant for a building permit must submit a grading plan and stormwater management plan, when required, to the Director of Planning and Development Services (DPDS). No building permit shall be issued until approval of the grading plan and the stormwater management plan (if required) or a waiver of the approval requirements has been obtained in conformance with the provisions of this ordinance.

## 5.2 Public Nuisances.

5.2.1 **Policy.** It is the policy of the City of Willmar to prevent and remedy the degradation of the quality of surface and ground waters as well as public and private land resources in order to protect the health, safety and general welfare of the public. All acts or failures to act by persons which may result in the degradation of such water and land resources is considered to be a public nuisance in accordance with, but not limited to, Minnesota Statutes, Section 609.74, 561.19, and 144.37, and as hereinafter specifically defined.

5.2.2 **Specific Public Nuisances.** The following items are public nuisances and shall be considered in violation of this ordinance:

- a) Excavation and fill activities. The excavation of any material from or placement of any fill material into any watercourse, wetland, lake, or other water body without necessary local, state or federal authorizations is a public nuisance.
- b) Sump pump discharge to property other than where the water originates.

5.3 Exemptions. The provisions of this ordinance do not apply to:

- a) A lot for which a currently valid building permit has been approved on or before the effective date of this ordinance;
- b) Installation of fence, sign, telephone, and electric poles and other kinds of posts or poles; or
- a) Emergency work to protect life, limb, or property.

5.4 Waiver. The City Council, upon recommendation of the City Engineer, may waive any requirement of this ordinance upon making a finding that compliance with the requirement will involve an unnecessary hardship and the waiver of such requirement will not adversely affect the standards and requirements set forth in this ordinance. The City Council may require as a condition of the waiver, such dedication or construction, or agreement to dedicate or construct as may be necessary to adequately meet said standards and requirements.

## 6. STORMWATER MANAGEMENT PLAN SUBMITTAL REQUIREMENTS

6.1 Application. A written application for stormwater management plan approval, along with the proposed stormwater management plan, shall be filed with the DPDS and shall include a statement indicating the grounds upon which the approval is requested, that the proposed use is permitted by right or as an exception in the underlying zoning district, and adequate evidence showing that the proposed use will conform to the standards set forth in this ordinance. Prior to applying for approval of a stormwater management plan, an applicant may have the stormwater management plans reviewed by the appropriate departments of the city.

Two sets of clearly legible blue or black lined copies of drawings and required information shall be submitted to the DPDS. All drawings shall be prepared to a scale appropriate to the site of the project and suitable for the review to be performed. At a minimum, the scale of the drawings shall be 1 inch equals 100 feet (1 inch equals 50 feet is preferred).

6.2 Stormwater management plan submittal materials. At a minimum, the stormwater management plan submittal materials shall contain the following information:

- a) Existing site map. A map of existing site conditions showing the site and immediately adjacent areas, including:
  - 1) The name and address of the applicant, the section, township and range, north point, date and scale of drawing and number of sheets;
  - 2) Location of the tract by an insert map at a scale sufficient to clearly identify the location of the property and giving such information as the names and numbers of adjoining roads, railroads, utilities, subdivisions, towns and districts or other landmarks;

- 3) Location of the tract on a copy of the City's Drainage Ordinance Map or Drainage Plan Map which identifies the regions of the City where peak discharge and/or runoff volume requirements have been established. If a Drainage Ordinance Map or Drainage Plan Map has not been established, the peak 100-year discharge from each subwatershed in the tract in question after the proposed improvements are constructed shall be no greater than:
    - (a) the peak 100-year discharge from the tract in its present condition; or
    - (b) peak discharge from 10-year post development peak discharge, whichever is less;
  - 4) Existing topography with a contour interval appropriate to the topography of the land but in no case having a contour interval greater than 2 feet;
  - 5) A delineation performed by a certified wetland delineator (or a wetland delineator who has successfully completed a wetland delineation training course) of all streams, rivers, public waters and wetlands located on and immediately adjacent to the site;
  - 6) Location and dimensions of existing stormwater drainage systems and natural drainage patterns on and immediately adjacent to the site delineating in which direction and at what rate stormwater is conveyed from the site for the critical 100-year storm event, identifying the receiving stream, river, public water, or wetlands and setting forth those areas of the unaltered site where stormwater collects;
  - 7) A brief description of the soils of the site;
  - 8) Vegetative cover and clearly delineating any vegetation proposed for removal; and
  - 9) 100-year floodplains, flood fringes and floodways.
- b) Drainage computations. For each subwatershed, computations showing the peak discharge rate and runoff volume for the 100-year rainfall storm event and 100-year snowmelt runoff volume for existing and proposed conditions of the site and the 10-year post-development peak discharge rate. The drainage computations must show that the discharge requirements for the site as referenced in the City's Drainage Ordinance map or Drainage Plan or paragraph 8.7 are met.
- c) Site construction plan. A site construction plan, including:
- 1) Locations and dimensions of all proposed land-disturbing activities and any phasing of those activities;
  - 2) Locations and dimensions of all temporary soil or dirt stockpiles;
  - 3) Erosion and sediment control plan showing locations and dimensions of all construction site erosion and sediment control measures and other permanent erosion and sediment control measures necessary to meet the requirements of this ordinance;
  - 4) Schedule of anticipated starting and completion date of each land-disturbing activity including the installation of construction site erosion and sediment control measures needed to meet the requirements of this ordinance; and

- 5) Provisions and schedule for maintenance of the construction site erosion and sediment control measures during construction.
- d) Plan of final site conditions. A plan of final site conditions on the same scale as the existing site map showing the site changes, including:
- 1) Finished grading shown at contours at the same interval as provided above required "existing site map" or as required to clearly indicate the relationship of proposed changes to existing topography and remaining features (Note: finished grade contours may be shown on the "existing site map" provided the existing and final grades are clearly distinguishable from each other);
  - 2) A landscape plan, drawn to an appropriate scale, including dimensions and distances and the location, type, size and description of all proposed landscape materials which will be added to the site as part of the development;
  - 3) A drainage plan of the developed site delineating in which direction and at what peak discharge rate stormwater will be conveyed from the site and setting forth the areas of the site where stormwater will be allowed to collect and be managed;
  - 4) An internal drainage plan showing the direction flows will be routed including overflow swales where water will flow if the storm sewer system has reached its capacity;
  - 5) The proposed size, alignment and intended use of any structures to be erected on the site;
  - 6) A clear delineation and tabulation of all areas which shall be paved or surfaced, including a description of the surfacing material to be used; and
  - 7) Any other information pertinent to the particular project which in the opinion of the applicant is necessary for the review of the project.

## 7. PLAN REVIEW PROCEDURE

- 7.1 Process. Stormwater management plans meeting the requirements of Section 6 shall be submitted to the DPDS for review in accordance with the standards of Section 8. The City Engineer shall approve, approve with conditions, or deny the stormwater management plan. City Engineer action on the stormwater management plan must be accomplished within 45 days following the date the completed application for approval is filed with the DPDS.
- 7.2 Duration. Approval of a plan submitted under the provisions of this ordinance shall expire one year after the date of approval unless construction has commenced in accordance with the plan. However, if prior to the expiration of the approval, the applicant makes a written request to the DPDS for an extension of time to commence construction setting forth the reasons for the requested extension, the DPDS may grant one extension of not greater than one single year. The DPDS shall make a decision on the extension within 30 days. Any plan may be revised in the same manner as originally approved.
- 7.3 Conditions. A stormwater management plan may be approved subject to compliance with conditions reasonable and necessary to insure that the requirements contained in this ordinance are met. Such conditions may, among other matters, limit the size,

kind or character of the proposed development, require the construction of structures, drainage facilities, storage basins and other facilities, require replacement of vegetation, establish required monitoring procedures, stage the work over time, require alteration of the site design to insure buffering, and require the conveyance to the City of Willmar or other public entity of certain lands or interests therein.

- 7.4 Fees. In those instances where a stormwater management plan requires outside consultant review, a processing/review fee shall be paid by the applicant to the City.

## 8. GENERAL STANDARDS

- 8.1 Applicability. No stormwater management plan which fails to meet the standards contained in this section shall be approved by the City.
- 8.2 Site dewatering. Water pumped from the site shall be treated by temporary sedimentation basins, grit chambers, sand filters, upflow chambers, hydro-cyclones, swirl concentrators or other appropriate controls as appropriate. Water may not be discharged in a manner that causes erosion or flooding of the site, off-site property, receiving channels or a wetland.
- 8.3 Waste and material disposal. All waste and unused building materials (including garbage, debris, cleaning wastes, wastewater, toxic materials or hazardous materials) shall be properly disposed of off-site and not allowed to be carried by runoff or wind into a receiving channel or storm sewer system, or neighboring property. The site shall be policed daily by contractor and all such materials shall be collected and stored or otherwise anchored until they are properly disposed of.
- 8.4 Tracking. Each site shall have graveled roads, rocked access drives and parking areas of sufficient width and length to prevent sediment from being tracked onto public or private roadways. Any sediment reaching a public or private road shall be removed by street cleaning (not flushing) before the end of each workday.
- 8.5 Drain inlet protection. All storm drain inlets shall be protected during construction until control measures are in place with a silt fence, straw bale, or equivalent barrier meeting accepted design criteria, standards and specifications contained in the MPCA publication "Protecting Water Quality in Urban Areas."
- 8.6 Site erosion control. The following criteria (a. through d.) apply only to construction activities that result in runoff leaving the site.
- a) Channelized runoff from adjacent areas passing through the site shall be diverted around disturbed areas, if practical. Otherwise, the channel shall be protected as described below. Sheetflow runoff from adjacent areas greater than 10,000 square feet in area shall also be diverted around disturbed areas, unless shown to have resultant runoff rates of less than 0.5 ft.<sup>3</sup>/sec. across the disturbed area for the one year storm. Diverted runoff shall be conveyed in a manner that will not erode the conveyance and receiving channels.
  - b) All activities on the site shall be conducted in a logical sequence to minimize the area of bare soil exposed at any one time. If at all possible, grading operations that disturb existing vegetation or ground cover shall be placed to minimize the area of bare soil exposed at any one time.
  - c) Runoff from the entire disturbed area on the site shall be controlled by meeting either subsections 1 and 2 or 1 and 3.

- 1) All disturbed ground left inactive for fourteen or more days shall be stabilized by seeding and mulching or sodding (only available prior to September 15) or by mulching or covering or other equivalent control measures.
- 2) For sites with more than five acres disturbed at one time, or if a channel originates in the disturbed area, one or more temporary or permanent sedimentation basins shall be constructed. Each sedimentation basin shall have a surface area of at least one percent of the area draining to the basin and at least three feet of depth and constructed in accordance with accepted design specifications. The sedimentation basins shall be maintained regularly and sediment shall be periodically removed to maintain a depth of three feet. The basin discharge rate shall also be sufficiently low as to not cause erosion along the discharge channel or the receiving water.
- 3) For sites with less than five acres disturbed at one time, sedimentation basins are still encouraged. However, at a minimum, silt fences, straw bales, or equivalent control measures shall be placed along all sideslope and downslope sides of the site. If a channel or area of concentrated runoff passes through the site, silt fences shall be placed along the channel edges to reduce sediment reaching the channel. Silt fences placed in concentrated flow channels perpendicular to the flow direction shall be backed by snow fence and support posts. The use of silt fences, straw bales, or equivalent control measures must include a maintenance and inspection schedule.
- d) Any soil or dirt storage piles containing more than ten cubic yards of material should not be located with the downslope toe of the pile less than 25 feet from a roadway or drainage channel. If remaining for more than seven days, dirt stockpiles shall be stabilized by mulching, vegetative cover, tarps or other means. Erosion from piles which will be in existence for less than seven days shall be controlled by placing straw bales or silt fence barriers around the pile. In-street utility repair or construction, soil or dirt storage piles located closer than 25 feet of a roadway or drainage channel must be covered with tarps or suitable alternative control, if exposed for more than seven days, and the stormdrain inlets must be protected with straw bale or other appropriate filtering barriers.

8.7 Stormwater management criteria for permanent facilities.

- 8.7.1 Design standards. Stormwater detention facilities required by the City of Willmar, to include water quality treatment features, shall be designed according to the most current technology as reflected in the MPCA publication "Protecting Water Quality in Urban Areas," and shall contain, at a minimum, the following design factors:
- a) A permanent pond surface area for wet detention ponds or wetted area for the extended detention in modified dry ponds equal to two percent of the impervious area draining to the pond or one percent of the entire area draining to the pond, whichever amount is greater,
  - b) An average permanent pool depth of four to ten feet for wet detention basins;
  - c) Wet storage volume for wet ponds or the extended detention volume for modified dry ponds shall be equal to or greater than the runoff from the critical one-year event but in no case shall it be less than one-half inch of runoff from the entire drainage area tributary to the basin;

- d) A permanent pool length-to-width ratio of 3:1 or greater;
- e) A minimum protective shelf extending ten feet into the permanent pool with a slope of 10:1, beyond which slopes should not exceed 4:1 (5:1 or flatter is preferred);
- f) A protective buffer strip of vegetation surrounding the permanent pool at a minimum width of 15 feet;
- g) All stormwater detention facilities shall have a device to keep oil, grease, and other floatable material from moving downstream as a result of normal operations;
- h) Stormwater detention facilities for new development must be sufficient to limit peak flows in each subwatershed to those that existed before the development for the 100-year storm event or the 10-year post-development discharge, whichever is less. All calculations and hydrologic models/information used in determining peak flows shall be submitted along with the stormwater management plan;
- i) All stormwater detention facilities must have a forebay to remove coarse-grained particles prior to discharge into a watercourse or storage basin;
- j) All overflow swales designed to pass runoff flows from part or all of the 100-year event that have a channel slope of 2 percent or steeper or other 100-year discharge velocities will exceed 4 feet per second shall be armored with permanent, non-photo-degrading erosion control materials; and
- k) Control surface runoff on-site for commercial construction, less than one acre, by utilizing on-site catch basins.

#### 8.7.2 Operations

- a) An applicant shall install or construct, on or for the proposed land-disturbing or development activity, all stormwater management facilities necessary to manage increased runoff so that the 100-year storm peak discharge rates existing before the proposed development or the 10-year post-development peak discharge rate, whichever is less, shall not be increased and accelerated channel erosion will not occur as a result of the proposed land-disturbing or development activity. An applicant may also be required to make an in-kind or monetary contribution to the development and maintenance of community stormwater management facilities designed to serve multiple land-disturbing and development activities undertaken by one or more persons, including the applicant.
- b) The applicant shall give consideration to reducing the need for stormwater management facilities by incorporating the use of natural topography and land cover such as wetlands, ponds, natural swales and depressions as they exist before development to the degree that they can accommodate the additional flow of water without compromising the integrity or quality of the wetland or pond.
- c) The following stormwater management practices shall be investigated in developing a stormwater management plan in the following descending order of preference:

- 1) Natural infiltration of precipitation and runoff on-site;
  - 2) Flow attenuation by use of open vegetated swales, and natural depressions;
  - 3) Stormwater retention facilities; and
  - 4) Stormwater detention facilities.
- d) A combination of successive practices may be used to achieve the applicable minimum control requirements specified in subsection (a) above. Justification shall be provided by the applicant for the method selected.

8.8 Wetlands.

- a) Runoff shall not be discharged directly into wetlands without presettlement of the runoff.
- b) A protective buffer strip of natural vegetation at least 15 feet in width shall surround all wetlands.
- c) Wetlands must not be drained or filled, wholly or partially, unless replaced by restoring or creating wetland areas of at least equal public value in accordance with the rules adopted by the Minnesota Board of Water and Soil Resources. Replacement must be guided by the following principles in descending order of priority:
  - 1) Avoiding the direct or indirect impact of the activity that may destroy or diminish the wetland;
  - 2) Minimizing the impact by limiting the degree or magnitude of the wetland activity and its implementation;
  - 3) Rectifying the impact by repairing, rehabilitating, or restoring the affected wetland environment;
  - 4) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the activity; and
  - 5) Compensating for the impact by replacing or providing substitute wetland resources or environments.

8.9 Steep slopes. No land-disturbing or development activities shall be allowed on slopes of 18 percent or more.

8.10 Catch basins. All newly installed and rehabilitated catch basins shall be provided with a sump area for the collection of coarse-grained material. Such basins shall be cleaned when the sump areas are half filled with material.

8.11 Drain leaders. All newly constructed and reconstructed buildings will route drain leaders to pervious areas wherein the runoff can be allowed to infiltrate. The flow rate of water exiting the leaders shall be controlled so no erosion occurs in the pervious areas.

8.12 Inspection and maintenance. All stormwater management facilities shall be designed to minimize the need of maintenance, to provide access for maintenance purposes and to be structurally sound. All stormwater management facilities shall have a plan of operation and maintenance that assures continued effective removal of pollutants carried in stormwater runoff. The City Engineer, or designated representative, shall inspect all stormwater management facilities during construction, during the first year of operation, and at least once every five years thereafter. The inspection records will be kept on file at the public works department. It shall be the responsibility of the applicant to obtain any necessary easements or other property interests to allow access to the stormwater management facilities for inspection and maintenance purposes.

8.13 Models/methodologies/computations. Hydrologic models and design methodologies used for the determination of runoff and analysis of stormwater management structures shall be approved by the City Engineer. Plans, specification and computations for stormwater management facilities submitted for review shall be sealed and signed by a registered professional engineer. All computations shall be submitted with the proposed plans for review, unless otherwise approved by the Willmar director of public works.

8.14 Watershed management plans/groundwater management plans. Stormwater management plans shall be consistent with adopted Willmar Surface Water Management Plan and Kandiyohi County Groundwater Management Plans.

8.15 Easements. If a stormwater management plan involves direction of some or all runoff off of the site, it shall be the responsibility of the applicant to obtain from adjacent property owners any necessary easements or other property interests concerning flowage of water.

8.16 Building Elevations.

All lowest entry elevations (i.e., windows, window wells, walkout elevations) shall meet the following:

- a) Minimum of one foot above the 100-year flood elevation for basins with pipe outlets or waterways.
- b) Minimum of one foot above the 100-year landlocked basin (no piped outlet) flood level computed as follows:

*Step 1* Assume the water surface elevation is one foot higher than the normal water surface elevation of the basin.

*Step 2* Above the assumed water surface elevation, store the volume of water equal to 7.2 inches of runoff over the entire drainage area to the landlocked basin.

*Step 3* The 100-year landlocked basin flood level is the elevation the water would rise to from the above Step 1 and Step 2 computation.

*Note: The 100-year landlocked basin flood elevation may be lowered by excavating an overflow swale or constructing an outlet pipe at an overflow point.*

- c) Minimum of one foot above the 100-year flow elevation of the adjacent swale or channel at the point where the adjacent swale or channel is closest to the building.

## 9. LAWN MAINTENANCE AND VEGETATION REMOVAL

- 9.1 Use of impervious surfaces. No person shall apply fertilizer to or deposit grass clippings, leaves, or other vegetative materials on impervious surfaces, or within a stormwater drainage system (including yard swales), natural drainage ways, or within wetland or detention basin buffer areas.
- 9.2 Unimproved land areas/Vegetative cover required. Except for driveways, sidewalks, patios, areas occupied by structures or areas which have been improved by landscaping, all areas shall be covered by plants or vegetative growth.
- 9.3 Buffer zone. Fertilizer applications shall not be made within 15 feet of any wetland or water resource.

## 10. VIOLATIONS AND PENALTIES

Any person who violates any of the provisions of this Ordinance shall, upon conviction thereof, be guilty of a misdemeanor and shall be punished as provided for in the laws of the State of Minnesota. Each day that a violation is permitted to exist shall constitute a separate offense.

## 11. OTHER REMEDIES

For the purpose of enforcing the provisions of this Ordinance, or to prevent violations thereof, the City shall have available to it all of the lawful remedies and procedures provided by Statute or other law, including but not limited to obtaining from the Court having jurisdiction thereof restraining orders, mandatory injunctions, or other appropriate forms of relief.

## 12. OTHER CONTROLS

In the event of any conflict between the provisions of this ordinance and the provisions of an erosion control or shoreland protection ordinance adopted by the City Council, the more restrictive standard prevails.

## 13. SEPARABILITY

It is hereby declared to be the intention of the City that the several provisions of this Ordinance are separable in accordance with the following:

- a) If any court of competent jurisdiction shall adjudge any provision of this Ordinance to be invalid, such judgement shall not affect any other provisions of this Ordinance not specifically included in said judgement.
- b) If any court of competent jurisdiction shall adjudge invalid the application of any provision of this Ordinance to a particular property, building, or other structure, such judgement shall not affect the application of said provision to any other property, building, or structure not specifically included in said judgement.

## 14. EFFECTIVE DATE

This ordinance shall be effective from and after its adoption and second publication.

# Appendix L

**Section E:  
Wellhead Protection**

*Submitted by  
Richard Soule,  
Minnesota Department of Health*

The City of Willmar is currently number 234 on the list for phasing public water supplies into the wellhead protection program. Public water supplies have been phased into the program based on the potential for their source water to become contaminated by surface spills. Willmar is low on this list because there is a thick layer of clayey till that protects the aquifer that the City uses from any surface contamination. One of the indicators of low vulnerability is the concentration of the isotope of hydrogen called tritium in the water. Although tritium is naturally occurring, a large spike in atmospheric tritium resulted from hydrogen bomb testing in the late 50's and early 60's. The low level of tritium detected in one of the City wells is a further indication that the aquifer is well isolated from surface contamination.

A review of the past ten years of water quality monitoring conducted by the City and MDH shows that both the raw water from the wells and the finished (treated) water is of high quality. There has been no detection of contaminants regulated by the EPA. Although well protected aquifers like Willmar's can sometimes be subject to elevated levels of natural contaminants such as arsenic or radium, they do not appear to be a concern for this aquifer.

# Appendix M



# BOLTON & MENK, INC.

## Consulting Engineers & Surveyors

2040 Highway 12 East • Willmar, MN 56201-5818  
Phone (320) 231-3956 • FAX (320) 231-9710

### MEMORANDUM

**To:** Gary Danielson, P.E., Kandiyohi County Public Works Director  
Brian Bollig, P.E., Assistant City Engineer

**Date:** March 7, 2007

**From:** Dean Helstrom, P.E. *DH*  
Project Engineer

**Subject:** CSAH 47- Drainage Area Breakdowns  
Kandiyohi County, Minnesota  
BMI Project No. W13.38514

#9

#### Existing Conditions:

Drainage area to existing ditch - to Hawk Creek = 157 acres.

- 2 year - 94 cfs
- 10 year - 125 cfs
- 100 year - 183 cfs

#### Proposed Conditions

##### Initial Option (without Willmar Ave.)

Total Drainage Area to regional pond = 193.1 acres

- City contribution = 177.1 acres (91.7%)
- County contribution = 16 acres (8.3%) (ROW - 175' x 3990')
- Pond design
  - 1105 - 1 acre
  - 1110 - 1.9 acres
  - 1111 - 2.2 acres (NWL)
  - 1119 - 4 acres
  - 100 year HWL = 1118

##### Current Option (with Willmar Ave.)

Total Drainage Area to regional pond = 310.6 acres

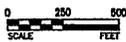
- City contribution = 294.6 acres (94.8%)
- County contribution = 16 acres (5.2%) (ROW - 175' x 3990')
- Pond design
  - 1104 - 1 acre
  - 1109 - 5.1 acres
  - 1110 - 5.6 acres (NWL)
  - 1119 - 8.85 acres
  - 100 year HWL = 1117.4

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**BOLTON & MENK, INC.**  
 Consulting Engineers & Surveyors

MANKATO, MN FARMINGTON, MN SLEEPY EYE, MN WILLMAR, MN  
 BURDOWNE, MN CHASKA, MN RAMSEY, MN AMES, IA

KANDIYOHI COUNTY  
 CSAH 5/17  
 REGIONAL POND PROPOSED HYDROLOGY

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