

GANDY DANCER RECREATIONAL TRAIL
MASTER PLAN
DOUGLAS COUNTY, WISCONSIN SEGMENT

GANDY DANCER RECREATIONAL TRAIL

MASTER PLAN

DOUGLAS COUNTY, WISCONSIN

COMPILED BY: GEOFFREY WENDORF
COMMUNITY RESOURCE DEVELOPMENT AGENT
DOUGLAS COUNTY/UW-EXTENSION

WITH DIRECTION FROM: DOUGLAS COUNTY RECREATIONAL TRAIL COMMITTEE

STEPHEN HANSON, CHAIR
WOODY BUDNICK
DAVE EPPERLY
DICK MURRAY

TABLE OF CONTENTS

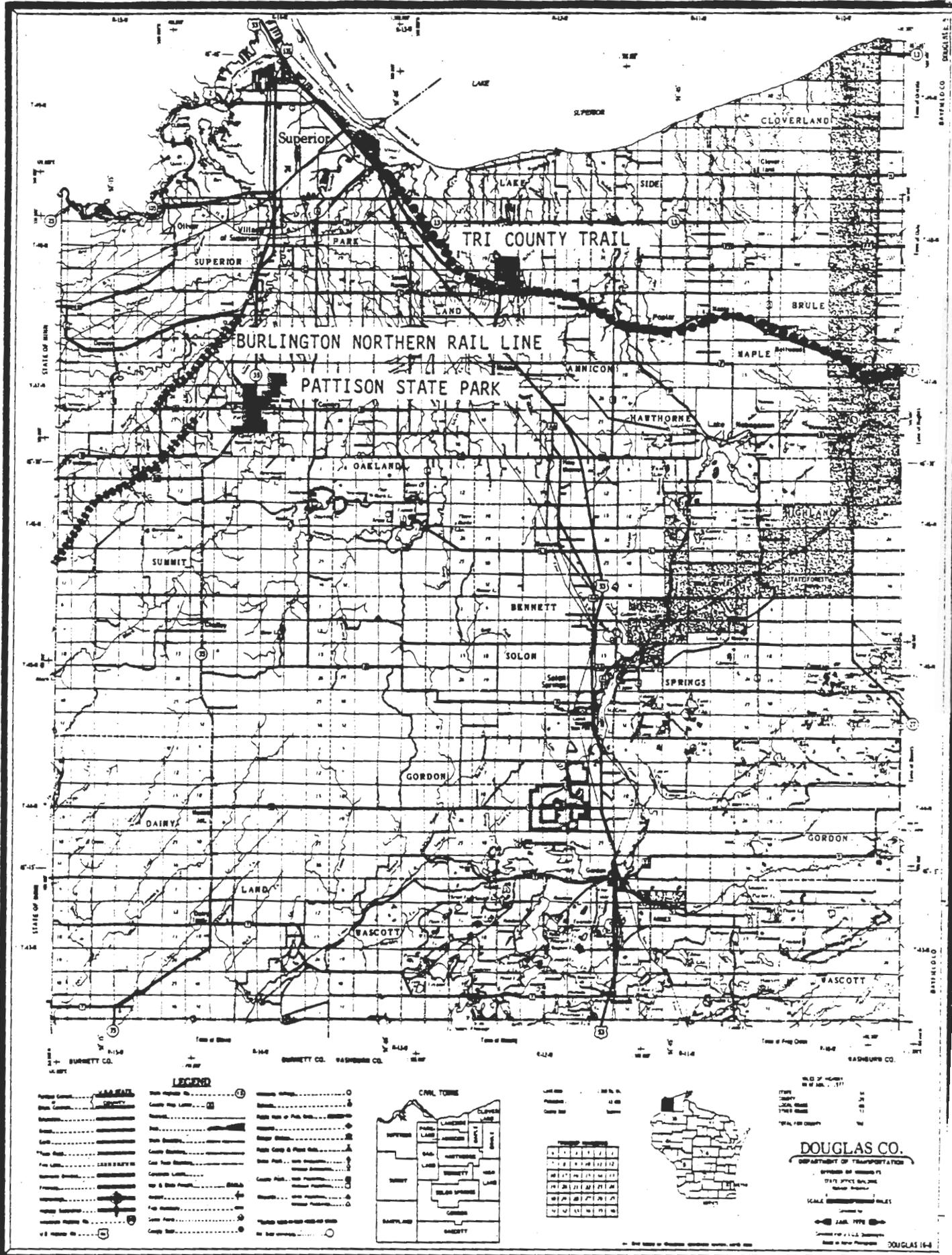
	SECTION
INTRODUCTION	1
SECTION I - ACTIONS	4
A. Goals and Objectives	4
B. Recommended Development and Management Program	5
1. Land Acquisition	5
2. Development	5
3. Management	8
SECTION II - SUPPORT DATA	
MAPS	
Map 1 - Trail Location	2
Map 2 - Proposed Recreational Trail	3
Map 3 - Trail Acquisition	10
Map 4 - Phase I Development	11
Map 5 - Phase II Development	12
Map 6 - Phase III Development	13
APPENDICES	
Appendix A - Cooperative Agreement Between Wisconsin and Minnesota	14
Appendix B - Memorandum of Understanding	15
Appendix C - Recreational Trail Public Hearing	16
Appendix D - Engineering Analysis Report	17

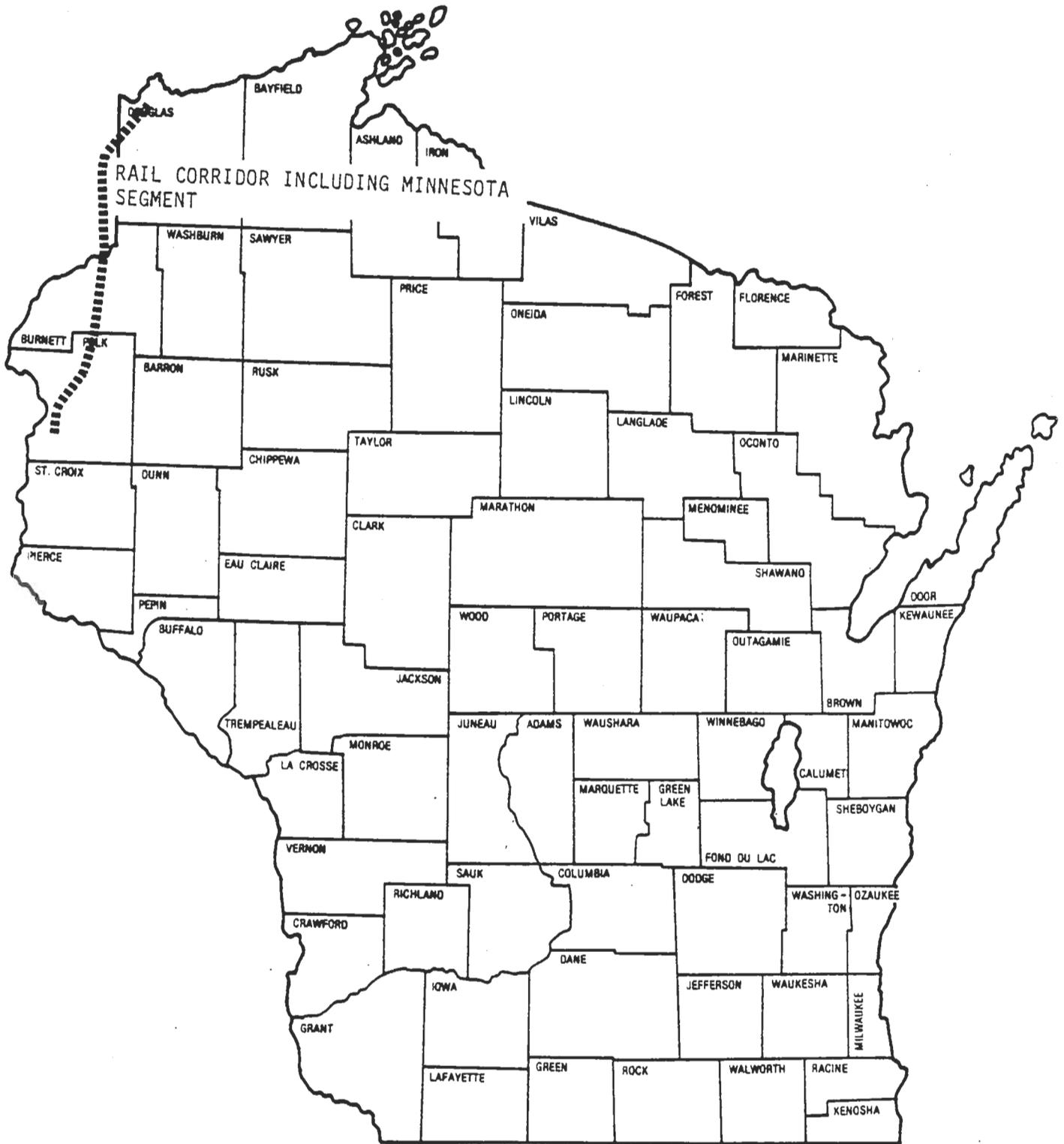
INTRODUCTION

This Master Plan Element represents Douglas County's portion of the multi-county Master Plan for the Gandy Dancer Recreational Trail. The 96 mile trail extends from the City of St. Croix Falls in Polk County, through Burnett County, to approximately 8 miles south of the City of Superior, Douglas County, Wisconsin. The corridor extends northward from St. Croix Falls for 49 miles to Danbury, where it crosses the St. Croix River and enters the State of Minnesota. Approximately 30 miles of the trail traverses Pine and Carlton Counties in Minnesota and then re-enters Wisconsin and terminates about 17 miles into Douglas County. Map 1 shows the regional location of the Gandy Dancer Recreational Trail.

The Gandy Dancer Recreational Trail will be developed as a result of a cooperative agreement between the states of Wisconsin and Minnesota (Appendix A). Under the Memorandums of Understanding (MOU) signed by the Wisconsin Department of Natural Resources (WDNR) and the counties of Polk, Burnett, and Douglas (Appendix B) the WDNR will be responsible for the acquisition of the railroad right-of-way (ROW), other necessary trail linkages for trail continuity, and any additional land for trail support facilities (e.g. parking, restrooms, etc.). Under these same MOU's, the counties will be responsible for the development, operation, and maintenance of the trail under their respective jurisdictions.

Although not specified in the MOU's, the counties of Polk, Burnett, and Douglas have formed the "Gandy Dancer Trail Coordinating Committee." The Minnesota Department of Natural Resources will also have representation on the committee. The purpose of the committee is to provide a network for communication between the counties regarding development, maintenance, and operation of the trail.





SECTION I - ACTIONS

A. GOALS AND OBJECTIVES

Goal

To provide and preserve a 17 mile (approximate) long recreational trail, to link with Burnett County's 23 miles, Polk County's 26 miles and the 30 miles located in Pine and Carlton Counties in Minnesota. The trail will make available year round use that will provide for safe two-way traffic, be accessible to all users regardless of impairment, for hiking, snowmobiling, cross-country skiing, all-terrain vehicle (ATV) riding, horseback riding, and horse drawn carriages. The trail corridor will be preserved for present and future generations. *

Objectives

1. Provide trail access to the physically impaired through proper design, construction, and management.
2. Provide spring, summer and fall trail use opportunities to hikers, joggers, bird watchers and photographers.
3. Provide a trail and the necessary maintenance to accommodate snowmobilers, ATV's, and cross-country skiers each season.
4. Provide a trail and the necessary maintenance to accommodate horesback riders.
5. Provide a trail and the necessary maintenance to accommodate horse drawn carriages.
6. Provide a trail and the necessary maintenance to accommodate mountain biking.
7. The 17 mile recreational trail will be incorporated in the Douglas County Outdoor Recreation Plan.

* A public hearing was held (Appendix C) to assess the interested public's desired uses for the trail. The information gained from this public hearing, in combination with information and input from other sources, formed the basis for the proposed recreational trail use.

Additional Benefits

1. Continued preservation of the right-of-way not developed as trail in grass, prairie, brush and trees will benefit wildlife by providing food and cover.
2. Recreational trail development will enhance tourism development opportunities.
3. Recreational trail will provide for linkages to existing and potential recreational trails.
4. Preserve the right-of-way in the public trust for future uses.

B. RECOMMENDED DEVELOPMENT AND MANAGEMENT PROGRAM

1. Land Acquisition

Under the terms of the MOU, the WDNR is responsible for the acquisition of the abandoned ROW within Douglas County. The status of the trail acquisition-to-date is shown on Map 3. Most of the right-of-way was purchased from the Wisconsin Central Railroad Company (former Soo Line) and Burlington Northern Railway Company. There were a number of small segments of the right-of-way in Douglas County to which the railroad did not have title. The ownership of these parcels reverted to the adjoining landowners after the right-of-way was abandoned by the railroad. The WDNR is presently negotiating, with assistance from Douglas County, the acquisition of these "reverted" parcels. The WDNR will also acquire land to connect the right-of-way segments where rail abandonment did not occur.

Under the terms of the MOU, the WDNR agrees to purchase land acreage adjacent to the right-of-way for rest areas. The WDNR agrees to pursue purchase of a suitable rest area and trail access point adjacent to the right-of-way in the vicinity of the village of Patzau near Pattison State Park in Douglas County.

2. Development

According to the terms of the MOU the development of the recreational trail is the responsibility of Douglas, Burnett and Polk Counties. The WDNR has granted an easement to the counties for the development, maintenance and operation of the full length of the trail. It is understood, regarding development, that the WDNR will assist financially with trail development to whatever extent possible i.e. Local Park Aids, LAWCON, ATV, and Snowmobile Aids.

Under the terms of the MOU, the counties must open the trail for public use within five (5) years of the acquisition of the the entire trail right-of-way by the WDNR.

Development of the trail in Douglas County will occur under the direction and supervision of the Forest, Parks and Recreation Committee. The planned development has been phased to allow for orderly development and budget constraints.

Total estimated development cost is \$113,140.

In September, 1990, Douglas County contracted with Northwoods Engineering to conduct a study on the right-of-way that included the following components:

1. Condition of the roadbed along the railroads in Douglas County.
2. Description of the roadbed grading and estimate of cost including regrading where necessary.
3. Location of guardrails and necessary lengths.
4. Examination of all drainage structures and tributary water courses for adequacy and physical condition if replacement is necessary, proposed size and cost.
5. Right-of-way profile, grading and drainage for areas beyond the existing railroad beds, including estimated construction costs.
6. Location and preliminary design for a bridge over a branch of Miller Creek in Section 13, T42N.
7. Description and location of active railroad and highway crossings for use in securing the right-to-cross roads and rail lines.

The engineering analysis report resulting from this contract is included in this master plan as Appendix D.

A. Phase I - 1991

Phase I development (1991) will include providing for trail safety, security and drainage and erosion control on the section of the Gandy Dancer Trail that extends from the Minnesota/Wisconsin border in Southern Douglas County to the Town of Patzau (approximately 5 miles - Map 4).

The grade will be improved to control erosion where needed and drainage problems in those areas identified in the engineering report (Appendix D - Soo Line Right-Of-Way to Station 558) will be corrected. To control use of the property, signs depicting the allowable uses will be posted on the trail. Signs warning of intersections and other trail hazards will be erected.

The trail surface will consist primarily of the existing ballast material. Additional ballast will be added where needed as identified in the engineering report. The trail will be usable for hiking, jogging, bird watching, photography, mountain biking and horseback riding in the summer and fall, and snowmobiling, all-terrain vehicles, and horse drawn carriages in the winter.

Estimated development cost for Phase I is \$15,100.

B. Phase II - 1992

Phase II development will include providing for trail safety, security and drainage and erosion control on the section of the Gandy Dancer Trail that extends from approximately one (1) mile southwest of Dedham Road to County Highway C (Map 5). This stretch of abandoned Burlington Northern right-of-way is approximately 6.5 miles in length. The grade will be improved to control erosion where needed and drainage problems in those areas identified in the engineering report (Appendix D - Burlington Northern Route) will be corrected. To control use of the property, signs depicting the allowable uses will be posted on the trail. Signs warning of intersections and other trail hazards will be erected. The trail surface will consist primarily of the existing ballast material. Additional ballast will be added where needed as identified in the engineering report. The trail will be usable for hiking, jogging, bird watching, photography, mountain biking and horseback riding in the summer and fall, and snowmobiling, all-terrain vehicles, and horse drawn carriages in the winter.

Estimated development cost for Phase II is \$35,000.

C. Phase III - 1993

Phase III development is dependent upon the acquisition by WDNR, with assistance from Douglas County, of three parcels of abandoned right-of-way that have "reverted" to the adjoining landowners (Map 3). In addition, acquisition of land for the construction of the connecting link between the two abandoned rail lines is necessary.

Given these land acquisitions, Phase III development will include providing for trail safety, security and drainage and erosion control on the section of the Gandy Dancer Trail that extends from the Town of Patzau to the intersection of the proposed connecting link with the abandoned Burlington Northern right-of-way (Map 6). This stretch of trail is approximately 5.2 miles in length. On the section of the trail comprised of the abandoned Wisconsin Central Railway Company (former Soo Line) right-of-way (approximately 2.9 miles) the grade will be improved to control erosion where needed.

Drainage problems in those areas identified in the engineering report (Appendix D) will be corrected. The trail surface will consist primarily of the existing ballast material. Additional ballast will be added where needed as identified in the engineering report (Appendix D - Soo Line Right Of Way Station 540 to 419+68 inclusive, and Schmid Road Route and Wausau Paper Property Route). A connecting link (approximately 2.3 miles) between the abandoned Great Northern Railway Company (former Soo Line) right-of-way and the abandoned Burlington Northern right-of-way will be constructed as per the engineering report recommendations (Appendix D - Schmid Road Route and Wausau Paper Property Route).

To control use of the property, signs depicting the allowable uses will be posted on the trail. Signs warning of intersections and other trail hazards will be erected. The trail will be usable for hiking, jogging, bird watching, photography, mountain biking and horseback riding in the summer and fall, and snowmobiling, all-terrain vehicles and horse drawn carriages in the winter.

Estimated Phase III development cost is \$63,040.

3. Management

The multi-purpose recreational trail will be operated and managed by the counties according to state standards. While each county will manage its own trail segment independent of the others, the "Gandy Dancer Trail Coordinating Committee" has been formed. The committee is comprised of members representing Douglas, Burnett and Polk Counties and the Minnesota Department of Natural Resources. The purpose of the committee is to provide a network for communication between the counties regarding development, maintenance, and operation of the trail.

A. Facility Management

Winter maintenance of the trail will involve sign replacement and trail grooming coordinated by the county. Periodic maintenance will include brush clearing and grading of the trail surface.

Labor for the maintenance will be provided by the county and volunteers.

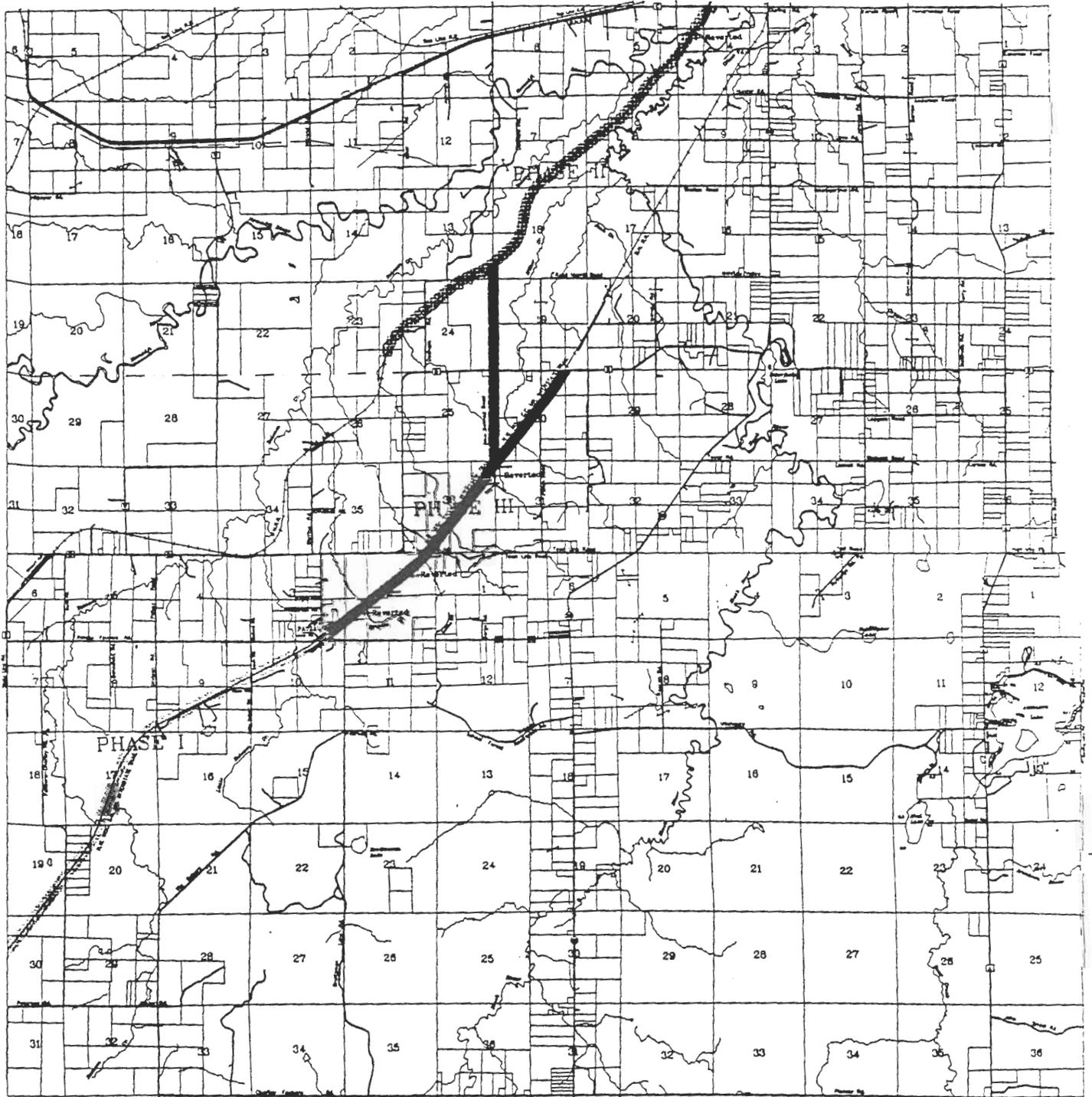
B. Vegetative Management

Vegetative management is needed to improve and maintain the aesthetics of the trail, to enhance the wildlife habitat along the trail right-of-way, and to facilitate the maintenance of the trail for recreational uses.

C. Wildlife Management

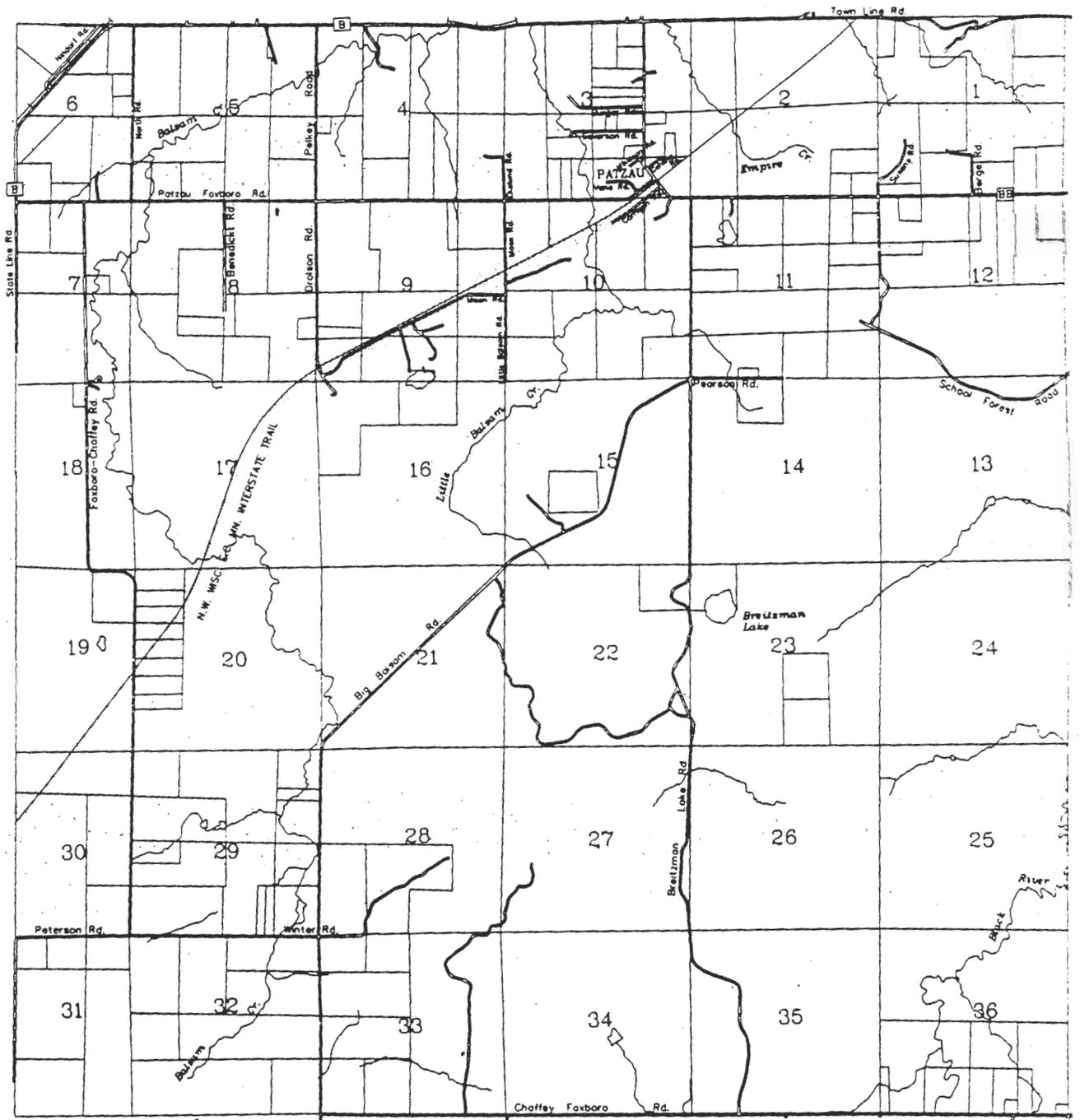
It is desirable to improve the habitat for songbirds and other wildlife along the trail. The protection of wild berries and other food sources and natural nesting places will be addressed.

TRAIL ACQUISITION



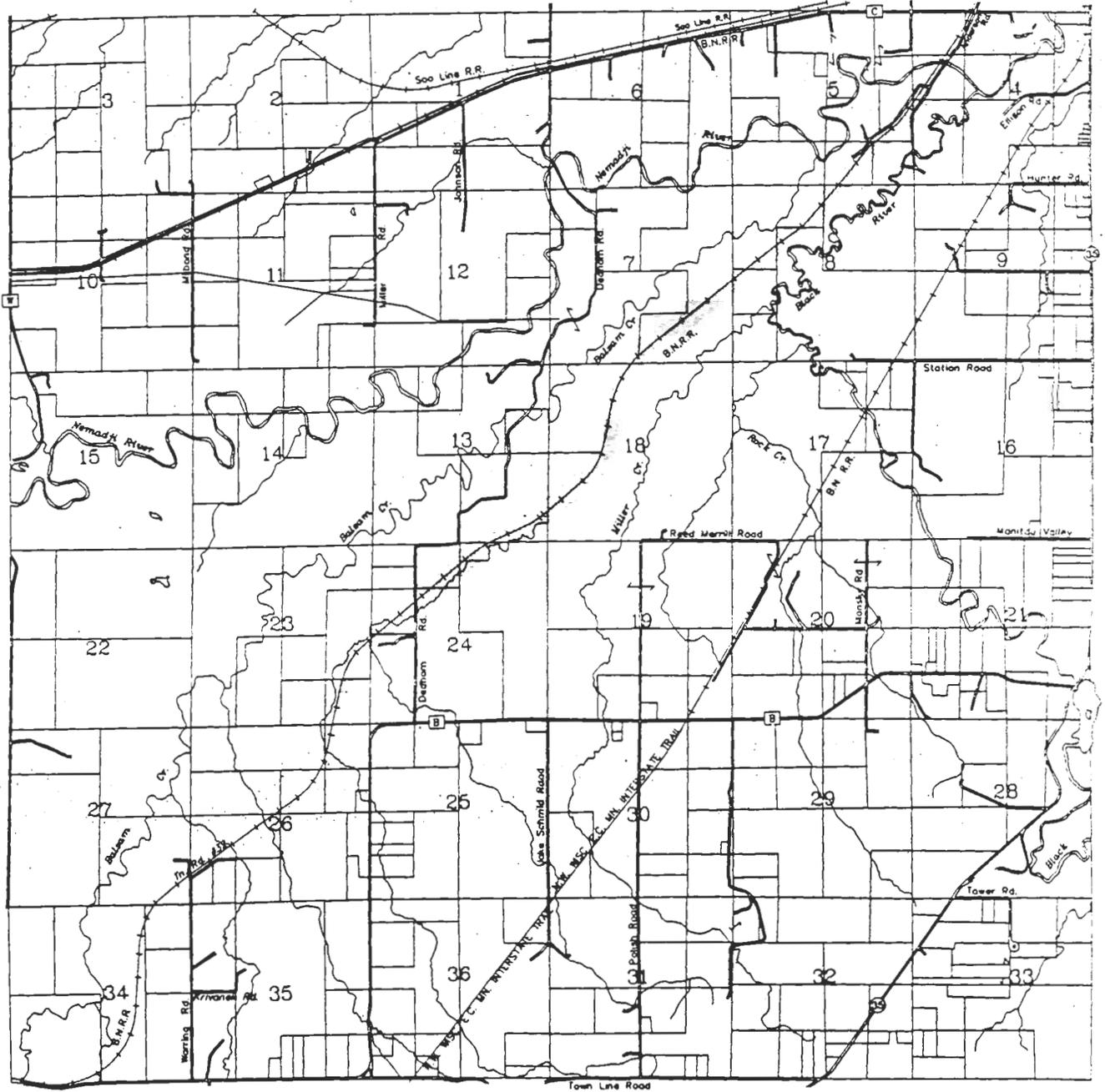
-  - Development Phase I
-  - Development Phase II
-  - Development Phase III

DEVELOPMENT PHASE I



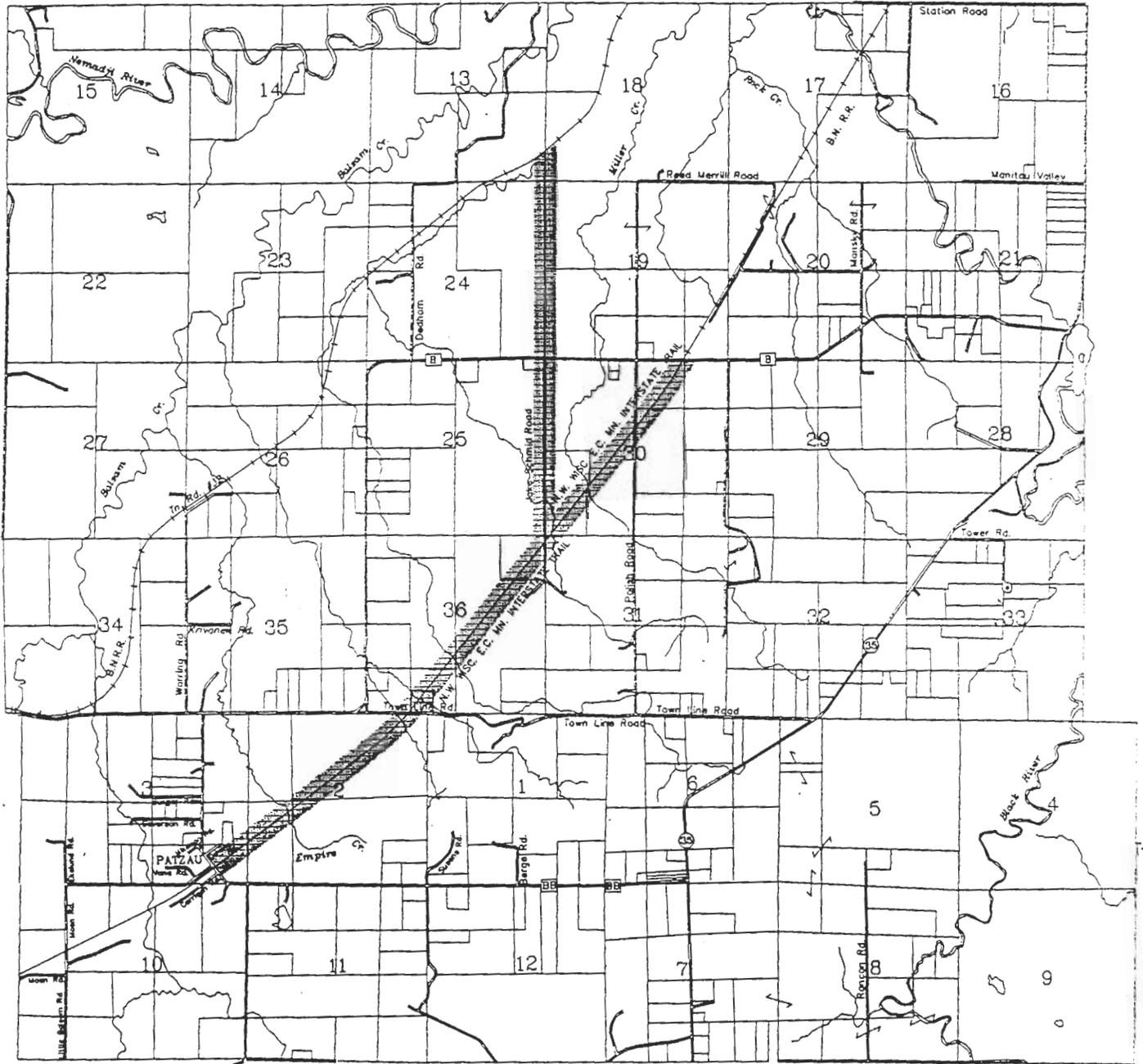
- Development Phase I

DEVELOPMENT PHASE II



— Development Phase II —

DEVELOPMENT PHASE III



 - Development Phase III

*Resolution of Endorsement
By The Governors of Minnesota and Wisconsin
For An Interstate Recreational Trail*

WHEREAS, the two states of Minnesota and Wisconsin, area legislators and local officials are working together to form a partnership to establish a 90 mile interstate recreational trail on a railroad right-of-way between the two states; and

WHEREAS, the two states have established themselves as national leaders in the acquisition of abandoned railroad rights-of-way; and

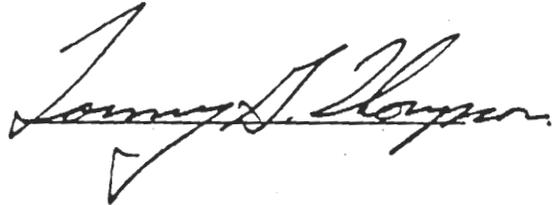
WHEREAS, it is recognized that a recreational trail will help promote economic development for both Minnesota and Wisconsin northern counties, promote tourism with significant economic benefits for local communities and local units of government, and provide needed recreational opportunities for citizens;

NOW, THEREFORE, be it resolved by the Governors of Minnesota and Wisconsin that they whole-heartedly support the establishment of an interstate recreational trail between the two states and commend area legislators, local officials in the counties where the trail passes and the two Departments of Natural Resources for their joint efforts of cooperation to further this innovative project.

SIGNED:

State of Minnesota
Governor Rudy Perpich

State of Wisconsin
Governor Tommy Thompson



Date

Date

8/7/89

8/7/89

APPENDIX B

Memorandum of Understanding By Douglas County, Burnett County, Polk County, and State of Wisconsin Department of Natural Resources

I. Introduction:

The purpose of this Memorandum of Understanding (MOU) is to set forth the agreements and understandings which have been reached among Douglas County (DC), Burnett County (BC), Polk County (PC), and the State of Wisconsin Department of Natural Resources (WDNR) regarding the acquisition, development, and operation of approximately 60 miles of abandoned rail property in Wisconsin located between a point in Douglas County and Dresser, Wisconsin. The grade is presently owned by the Wisconsin Central Railroad Company Soo Line and Burlington-Northern Railway Company in Polk and Douglas counties and has been approved for abandonment by the Interstate Commerce Commission. Burnett county owns the right-of-way in Burnett county. A separate agreement will be negotiated with the State of Minnesota for their 30 miles of the corridor.

The WDNR is interested in preserving the grade corridor for recreational trail purposes. All parties are interested in developing, maintaining, and operating a recreational trail in the corridor provided the WDNR acquires same. All parties agree to work together to achieve their mutual goals as set forth below.

II. Description of the Property

Legal description to follow, hereinafter referred to as premises.

III. Consideration

The WDNR will acquire the right-of-way provided a reasonable price can be negotiated for the premises and the owners can convey merchantable title. The WDNR will convey a nonexclusive easement to Polk, Burnett and Douglas Counties and mutually agreed to by PC, BC and DC for One Dollar and other valuable consideration.

IV. Obligations of WDNR:

1. The WDNR will purchase, or enter into long term agreement for the 60 miles of railroad corridor within Wisconsin from a point in Douglas County to Dresser, Wisconsin.
WDNR as provided in Paragraph III agrees to purchase reasonable land acreage adjacent to the right-of-way for rest areas if recommended in the master plan and will convey these parcels to the counties for development and operation as part of the acquisition. In the case of BC, purchase by WDNR will amount to 50 feet of width through the villages of Siren, Webster and Danbury. WDNR will also acquire three, one-acre rest areas within said villages.
2. WDNR will attempt to purchase all rights, title and interest in and to the parcels for the purpose of providing a continuous corridor.
3. The WDNR will convey by easement to BC, PC and DC the right to develop, maintain, operate and replace with WDNR approval a recreation trail on lands within their respective counties. WDNR

will convey all other present and future underground easement rights to BC that are compatible with the trail.

4. Upon destruction or damage the Department has the right to replace said section.
5. The WDNR agrees to comply with the environmental impact process for the purchase of the property pursuant to s. 1.11, Stats., and Chapter NR150, Wis. Adm. Code.
6. WDNR agrees that any advertising or display material relating to the trail shall clearly identify the property is owned by the WDNR and under the management and control of PC, BC and DC.
7. A one mile section of right-of-way at BC's airport is excluded from this MOU. This section will be replaced with a like section through relocation by BC, *as in the villages.*
8. A segment of the right-of-way in Webster that is being tested for contamination is excluded from this agreement.
9. BC retains right of first refusal if WDNR decides to convey any or all the property within said county.

V. Obligations of Douglas (DC) County, Burnett (BC) County, Polk (PC) County

1. PC, BC, and DC shall develop, maintain, operate repair and replace a recreation trail within their respective counties.
2. PC, BC, and DC shall enter into an easement or agreement in perpetuity with the DNR to accomplish the purposes contained herein.
3. PC, BC, and DC shall complete the environmental impact assessment for development, maintenance, and operation of the trail.
4. PC, BC, and DC shall write a master plan for the project to be completed prior to any trail development (according to WDNR format). The master plan will determine the trail uses and management.
5. PC, BC, and DC shall conduct public meetings to determine uses, development and operation as part of the master plan process. BC has conducted public meetings prior to their acquisition.
6. PC, BC, and DC agree the trail will be open for public use within their respective counties within 5 years of completion of WDNR's acquisition that would allow the trail to be built and used. If the trail is not open by this date or ever ceases to be used for trail purposes for two years then all rights revert to and revert in the WDNR without necessity of reentry. WDNR is not obligated to continue to manage the recreational trail and may sell the right-of-way.
7. Upon reversion the WDNR will assume compliance responsibility for the land and water conservation fund assisted areas. A payment equal to any land and water conservation grant awarded through the community assistance program for development shall be paid to the WDNR by the defaulting county(s).
8. A payment equal to any other grant amount awarded through the community assistance program for development shall be paid to WDNR by the defaulting county(s).
9. PC, BC and DC agree to indemnify and save harmless WDNR, its officers, employees, and agents and to assume all responsibility and liability for death of, or injury to any persons, including but not limited to, officers, employees, agents, patrons, invitees

or licensees of the parties hereto and for loss, damage or injury to any property, including but not limited to, that belonging to WDNR, together with all liability for any expenses, attorney's fees and costs incurred or sustained by the WDNR, arising from or growing out of, or in any manner or degree directly or indirectly caused by, attributable to, or resulting from the grant or exercise of the MOU and the easement or the construction, maintenance, repair, renewal, alteration, change, relocation, existence, presence, use, operation or removal of the recreational trail, unless caused by the negligence of DNR, its officers or employees.

PC, BC and DC shall release and indemnify and save harmless WDNR, its officers, employees and agents, for any damage to the property of PC, BC and DC, their employees, agents, contractors or subcontractors, arising from or growing out of, or in any manner or degree directly or indirectly caused by, attributable to, or resulting from the grant or exercise of the MOU and the easement or the construction, maintenance, repair, renewal, alteration, change, relocation, existence, presence, use, operation or removal of any structure incident thereto or from any activity conducted by or on behalf of PC, BC and DC or WDNR on or in the vicinity of the recreational trail unless caused by the negligence of WDNR, its officers, employees or agents.

10. PC, BC, and DC agree that any advertising or display material relating to the trail shall clearly identify the property is owned by the WDNR and under the management and control of the PC, BC, and DC.
11. PC, BC, and DC in connection with this MOU shall open the facilities to the general public subject to reasonable rules and regulations, fees, and charges as the PC, BC and DC deem necessary for the management and operation of the premises.
 - a. Rules and Regulations. The parties agree that the provisions of Section NR 45.04(1)(a) Wisconsin Administrative Code, remain applicable to the Premises. Daily routine enforcement remains the responsibility of PC, BC, and DC.
 - b. Admission fees, if any, charged by PC, BC, and DC shall not exceed those established in s. 27.01(7), Stats. PC, BC, and DC will discuss the fees to be charged with the WDNR at an annual meeting held prior to May 1 each year and the fees shall be subject to written approval by the WDNR. PC, BC, and DC shall retain all fees collected as payment for its services under this MOU. If admission fees are charged, the conservation patron licensee and senior citizen card issued by the WDNR shall be honored without additional admission charges.
12. Trail development will conform with WDNR state trail standards.

VI. General

1. This MOU is subject to all applicable laws and regulations and to the approval of the WDNR.

2. The WDNR retain the right to withdraw from this transaction if it determines that merchantable title cannot be conveyed to the WDNR or a reasonable price cannot be negotiated for the premises.
3. This MOU may be revised by mutual written agreement of the WDNR and PC, BC, or DC.
4. This MOU acknowledges that the Department may convey other easements in and to above described property consistent with the rights granted herein.
5. The 6.5 mile section of the Burlington-Northern ROW in Douglas County if purchased by WDNR will be incorporated into this MOU for the purposes of continuity consistent with management and operation of this right-of-way.
6. It is the intent that 30 miles within the State of Minnesota, part of this same corridor, be included in this trail concept.

IN WITNESS WHEREOF, WDNR, PC, BC, DC have caused this memorandum to be executed in their respective names by their respective duly authorized representatives on the date shown below.

STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES

Carroll D. Besadny
 Carroll D. Besadny, Secretary

POLK COUNTY

 County Board Chairperson

BURNETT COUNTY

 County Board Chairperson

DOUGLAS COUNTY-

Donald J. Ginn
 County Board Chairperson

Dated August 2, 1989

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RECREATIONAL TRAIL HEARING

A public hearing was held on Tuesday, October 23, 1990, at 7:00 p.m., in Board Room "D" of the Douglas County Courthouse. The purpose of the hearing was to receive public input regarding the uses of a multi-use recreational trail network in Douglas County, to include the abandoned Soo Line and Burlington Northern right of ways now referred to as the "Gandy Dancer" trail and the Saunders to Genola, Minnesota, abandoned Soo Line right of way.

The hearing was conducted by the Douglas County Recreational Trail Committee. Members present were Stephen Hanson, Chairman, Geoffrey Wendorf and David Epperly. Absent were Woody Budnick and Dick Murray.

Others present were Vicki Garro, David Dumke, Ken Warring, Dave Drinkwine, Will and Doris Ellenson, Douglas Finn, and Cindy Boggs.

Chairman Hanson indicated on a map the proposed locations of the trail systems and stated he would like to limit this part of the discussion to the "Gandy Dancer" trail and take testimony on the right-of-way itself and not the possible connectors or gaps. He explained that the purpose of public input is to develop a master plan for the trail system to be presented to the Natural Resources Board in December and if they give the okay, the usage of the trail will be turned over to the county.

At this time, Chairman Hanson asked for public input for uses of the trail.

Vicki Garro spoke in support of use of the trail for horse riding. She felt the trail could be compatible for all uses, even snowmobiles and sleighs in the winter. She indicated they have not had any problems with other users. Steve Hanson questioned if there were any minimum requirements for width of the grade for carriage use. Garro responded that she would supply that information to the committee. Hanson also noted there are some steep grades on the southern half of the trail and he questioned if it would be safe for horses. Garro stated she did not think there would be problems as long as there is cooperation by all users. Hanson questioned if she is looking for year-round use. Garro stated she would like to have a trail to use for sleighs, but at the same time would respect the rights of snowmobilers to have groomed trails.

Ken Warring stated that in most instances, when he has encountered horses on trail they have not been a problem to snowmobilers. He did note that during warm temperatures in the winter, horses would have an effect on the trail.

David Epperly, County Forest Administrator, commented briefly on the proposed position of a coordinator for recreational activities in Douglas County. This person would be in charge of recreational forest areas and trails.

Hearing adjourned at 8:11 p.m.

Respectfully submitted,

Sue Archambault, Secretary

APPENDIX D

DOUGLAS COUNTY
TOWNS OF SUPERIOR AND SUMMIT

RECREATIONAL TRAIL

SYNOPSIS

A recreational trail is planned to extend from the Minnesota State Line in the town of Summit within the abandoned right of way of the former Soo Line Railroad (Superior-St. Paul Line). This line extends to Schmid Road, then is adjacent to the right of way at Schmid Road to County Trunk Highway B. It then follows in a northerly direction within lands currently owned by Wausau Paper Company to an abandoned section of the Burlington Northern right of way (former GN line, Superior to Minneapolis). From here it proceeds along or adjacent to this right of way to a point north of County Trunk Highway C. It then follows east on a town road to the northerly section of the former Soo Line right of way. The trail then follows this route north, then west across one privately owned tract and Douglas County forest land to meet a trail currently in use to the Superior City Forest.

RECREATIONAL TRAIL - STUDY

This Trail follows routes that are divided for purposes of this report as follows:

Former Soo Line Right of Way
State Line - Schmid Road

Schmid Road Route

Burlington Northern Route from the Dedham
Area to 1800 ft. North of County Highway C

Northern Terminal Route

SOO LINE RIGHT OF WAY

The Soo Line right of way extends 40,600 feet from the State Line to Schmid Road (7.7 miles). This route was one of the last constructed into Superior. It was built just prior to World War I. As a result of the late construction of this line the most favorable routes for the railroad were utilized by other companies (G.N., N. P., C.M.St.P&P). While the Soo Line route was expensive for construction, it afforded a beautiful route with environmental variety. The railroad grade is flat, but the topography of the area is rolling with many rivers, creeks and drains. Generally the route traverses a rolling hardwood forest with beautiful Balsam and Spruce along the right of way. It is elegant for a recreational trail.

At the townsite of Patzau which lies 14,100 feet southeast of Schmid Road (2.6 miles) there are commercial facilities which would benefit as a result of the trail. A grocery store, tavern and adequate parking potential would benefit both trail users and business owners. The former site of the Soo Line depot at Patzau provides parking adjacent to the trail. There is also a large area one block away from the Patzau School which is now utilized as a town hall. The depot site would involve a minimal amount of grading for parking use. The school site currently has a large parking area which would be desirable if it could be used for this purpose. This route would be attractive for use during all seasons.

The general condition of this route is satisfactory. The ballast from rail use is generally still in place and with minimal grading could be prepared for trail purposes. Certain areas require additional base material but these areas are minimal. Some sections of the route are along high fill areas with steep slopes and require guard rail installation for safety.

Each culvert, box culvert and drainage structure was visually examined for structural adequacy, drainage characteristics and high water marks to determine capacity. A short time prior to this inspection, rains varying from 5.5 inches to 3.0 inches occurred. This gave a reasonable measure of the capacity of each structure. Generally those structures which were inadequate for the high flow had no negative effect on the right of way, though many did flood upstream properties. It did not appear that the flooding affected roads, structures or formal agriculture. The road bed cuts and fills did not appear to suffer from erosion except at certain drainage structures.

In summary, this is a beautiful trail route with low costs for developing the trail in accordance with accepted published standards.

The following is a summary of the condition of all drainage structures, road bed upgrading, erosion control and safety requirements. The stationing is numbered backwards and begins at the State

STATION	STRUCTURE	GRADING	COMMENTS	COST
822+00	24" concrete culverts	guard rail needed.	Condition: Poor 420 feet of guard rail on NW side of r/w	2100.00
			Retaining wall needed with RR ties to prevent further erosion	550.00
			20 tons of gravel need- ed to fill eroded area	200.00
			Culvert needs to be cleaned out. Drain up stream needs cleaning due to beaver dams and other obstruction	1000.00
795+53	48" concrete culvert	Erosion from grade to culvert	Condition: culvert o.k. Build small retaining wall with RR ties	800.00
			15 tons of gravel to fill eroded area	150.00
774+25	24" concrete culvert	N/A	Condition: good	0.00
772+50	12 x 12 box culvert	N/A	Condition good	0.00
769+00	N/A	Road bed needs base	30 tons gravel	300.00
768+00	N/A	Erosion	20 tons gravel	200.00
733+50	12 x 12 box culvert	N/A	Condition: good Old bridge filled and culvert installed	0.00

STATION	STRUCTURE	GRADING	COMMENTS	COST
711+80	24" concrete culvert		Condition: good	0.00
707			Logging Road Crossing	0.00
699+20	Culvert shown on RR drawing. Could not find in field. No apparent drainage problem			0.00
695		Grade disturbed	Needs 100 ton of gravel and grading	1000.00
691+58	24" concrete culvert		Condition: good con- struction. Logging road to the west	
685				
684+0			Trail into the woods	
670+00	60" concrete culvert		Condition: good	
665+00			Road Crossing	
655+00	Road grade deficient		Condition: poor Install 50 tons gravel	500.00
650+00	Road grade deficient		Condition: fair Install 20 tons gravel	200.00
645+00	Road grade deficient		Condition: fair Install 20 tons gravel	200.00
615+00	60" concrete culvert		Condition: excellent	
580+	12 x 12 box culvert	Erosion	Condition: Culvert good Install 2 - 542" (1084 ft. total) guard rail Install small retainer wall with RR ties	5500.00 300.00

STATION	STRUCTURE	GRADING	COMMENTS	COST
580+ (con't)			Fill 10 tons gravel	100.00
			Bridge replaced by culvert with steep side slopes	
558			Asphalt crossroad at Patzau	0.00
			Install parking area, grading and gravel	2000.00
540+00	30" concrete culvert		Condition: good	0.00
530+00	72" concrete culvert		Condition: good Install 150 ft. guard rail	1050.00
522+00			Could not find 30" culvert. Land to the east is wetland and culvert is probably buried	0.00
503+40	36" CMP		Condition: good Floods to the east, but at present does not damage	0.00
487+62	36" CMP		This culvert has a mis- aligned grade and has a hole in the middle which has caused set- tlement and failure. The culvert should be replaced.	1200.00
479+00	48" concrete culvert		Condition: good	

STATION	STRUCTURE	GRADING	COMMENTS	COST
466+67	36" CMP		Culvert needs re- placing. Grade mis- aligned and roadbed sinking into culvert. Headwall has become detached. Replace or relay the culvert	1200.00
463+15	30" concrete		Culvert is in good shape. It is under- sized, but at present does not effect proper- ty on the east	0.00
452+13	1-30" CMP		Condition: partially plugged. No work needed at present	0.00
	1-42" con- crete culvert		Condition: good. 42" pipe handles water adequately	
437+20	36" CmP		Condition: good	
419+68	Intersect Schmid Road Grading 7.7 miles of Soo Line R/W			3000.00
Total.....				\$31,900.00

SCHMID ROAD ROUTE

Schmid Road is a town road that runs north and south along a section line from the Soo Line right of way to County Trunk Highway B, a distance of 5452 feet. On the left of Schmid Road is a large farm site. On the right side of Schmid Road the property is owned by two separate owners. One tract is wooded and would require clearing, grubbing and grading. It would also require two culverts. The second (northerly) tract is primarily open pasture land. The preferred route would be the aforementioned two properties on the east side of Schmid Road. This would not interfere with traffic on Schmid Road and would provide a pleasant setting for a trail.

The estimated construction cost for the trail on private lands would be as follows:

5200 feet grading & base	6240.00
2600 feet clearing & grubbing	2600.00
50 feet culvert	950.00

TOTAL	9740.00
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An alternative is to use the road which provides a mid-level safety hazard, and, at times, a lack of snow. The cost to follow this route is minimal at \$1500.00.

The farm land on the west side was not considered as per the suggestion of both DNR and the Douglas County Staff. There is a residence and a significant farm on this property. The effect of the use of this property would be substantial, so this route should be used only if other routes are rejected.

WAUSAU PAPER PROPERTY ROUTE

This route would follow the easterly property line of the Wausau Paper Property which would be a northerly extension of the Schmid Road route. This route would follow an existing wooded area with a medium density of Aspen (popple) trees interspersed with other species of hardwood trees. It is assumed that the marketable trees would be harvested by Wausau Paper or others. This route would require clearing, grubbing and grading. It would also require one 24 inch culvert and two 12 inch culverts along the route and two 30 inch culverts along the right of way of the relocated Burlington Northern Railroad. A rail crossing with permits from the Burlington Northern would be required. The elevation of the track above the ditches is approximately 12 feet. This would require fence openings and a significant amount of fill to reach the railroad at a flat grade.

At the north end of the Wausau Paper Mill property there is a rather steep fall to Miller Creek which parallels the Burlington Northern abandoned right of way. This crossing requires a significant serpentine alignment to reach the required grade for a recreational trail to accommodate snow grooming equipment and allow snowmobiles to climb from the creek crossing to reach both the railroad to the north and the Wausau property to the south. The stream crossing will require at least a ten foot diameter corrugated plate culvert, head wall flares and significant fill to adequately cross the stream and provide hydraulic properties that would discourage debris collection at the crossing site. The flood plain of the crossing is approximately 250 feet wide. This crossing would also require guard rail protection.

This route provides esthetic advantages. The property which is transversed is attractive and wooded. With the exception of the active railroad crossing, it is remote from developed property.

The Northern triangular piece of the Wausau property has been acquired. The route through this property is approximately 1100 feet. The remaining Wausau property route is approximately 5300 feet. The total length of this segment of the route is 6400 feet.

The estimated cost is:

50 feet	10 ft. steel plate corrugated pipe	5000.00
6200 feet	Clearing and grubbing	6200.00
6400 feet	Grading	9600.00
	BN Railroad Crossing	12580.00
2	30" culverts - 80 lineal feet	2000.00
1	24" culvert - 16 lineal feet	320.00
2	12" culverts - 32 lineal feet	320.00
	60 lineal feet guard rail	480.00

TOTAL.....\$36,500.00

BURLINGTON NORTHERN ROUTE

This route segment extends from the north end of the Wausau property along the recently abandoned Burlington Northern route (formerly the Great Northern) to the junction with the BN Superior-Grand Forks line. This railroad segment was constructed in the late 19th Century (1880 - 1891). It was the second route between Superior and Minneapolis. Therefore, it had the advantage of a path which generally followed a ridge in Douglas County. This provided a route with minimal drainage problems. It is lightly wooded and at certain locations it features beautiful vistas of the St. Louis Valley and Duluth hills.

The track on this route was recently removed. The ballast along the way was partially reclaimed which left certain areas with minimum granular base or no base at all. The major trestle across the Nemadji River was also removed completely. Therefore, there is no river crossing structure along the abandoned right of way. The length of this route is approximately 22,300 feet (4.35 miles). There were only two small culverts noted as the route follows the ridge (not shown on GN plats). They were in adequate condition. One was 18 inches, the other was 24 inches. At a distance of 1.38 miles northerly along this trail (R.R. station 682+00) there is a power transmission main crossing the railroad right of way (not shown on the railroad plat). At approximately station 650+00 (two miles north along the trail), 500 feet of guard rail will be needed on each side, a total of 1000 feet.

The route from the south end northerly to the former trestle abutment should be graded so that low spots can be leveled out. Granular base should be added at areas where the ballast has been totally removed. It is estimated that approximately 500 tons of granular material will be needed to fill low or scabed areas in this segment of the route.

The slope of the trestle abutment on each side of the Nemadji will require grading and stabilization as there has been significant erosion. This requires fill material and soil to establish vegetation to prevent future erosion.

Between the two abutment slopes, the most desirable route would utilize Anderson Road, a Town of Superior road with an historic truss bridge along the way. This bridge is unique in its age and design. Recently certain maintenance was performed, but it certainly could use additional upgrading. It has a load limit of three tons and has a loose wood deck. The bridge appears to be at or slightly below high water. The approaches however have been below high water and are therefore in the flood plain. This is evident by examining the vegetation and silt in the area. To say the least, this bridge is "neat". With proper maintenance

it could be an historic landmark in Douglas County - - a perfect bridge to be co-used as a recreational trail. It appears that it serves three residences at the present time. The Town of Superior will be contacted to determine if this bridge and approaches could be utilized for this trail.

The estimated costs for this trail route segment are:

500 tons Granular base coarse material	5000.00
Nemadji Bridge Renovation	15000.00
22000 lineal feet grading and base material along railroad route	6000.00
Grading & stabilizing abutments at Nemadji River	4000.00
1000 lineal feet guard rail	5000.00
TOTAL	\$35,000.00

TRAILS END ROUTE
BN AND CTH C TO TERMINAL AT NORTH SIDE OF POKEGAMA RIVER

Several routes were examined for the last section of the trail. They were as follows:

1. Cross the Burlington Northern Line at the North end of the abandoned line. This route is the shortest, but it crosses the Burlington Northern on a curve with a high density and high speed track. The sight distance is poor and the danger is high. It is doubtful that a recreation trail permit would be approved. If a permit was available, this route is too dangerous to use as a rail crossing. It should only be considered as a last resort, and even then probably rejected. The total length would be 8100 feet or 1.53 miles.
2. Follow Highway C west to Mertes Road (a town road). Follow Mertes Road across the main line of the BN (same track as Alternate one) to a junction with the recently abandoned Soo Line (Superior to Glenwood Line) right of way. The Soo right of way would be utilized toward the north for approximately 6500 lineal feet (1.25 miles) to a point where it would leave the right of way to the west in Douglas County Forest land and continue for one-half mile to the north side of the Pokegama River, the northerly terminal. The total length is 11,600 feet (2.2 miles).
3. Follow the margin between the BN Line and C.T.H. C north to Short Cut Road (a town road). Follow Short Cut Road east to the abandoned Soo Line right of way. From this intersection follow the abandoned Soo Line north under Highway C (bridge over railroad) and under the BN Line (in concrete lined tunnel) to intersect with the Soo Line Glenwood right of way. At this point the trail would turn west through one small private tract and Douglas County Forest land to the terminal at the north side of the Pokegama River.

This route eliminates a crossing of the high density BN line, utilizes a light traveled town road and has one grade crossing of the BN relocated Superior to Minneapolis line which does not have the high traffic density of the BN Superior - Grand Forks Line. It has adequate sight distance for safety. The total length of this route is 10,000 feet or 1.9 miles.

This study will utilize Alternate Three as it provides the highest measure of safety for trail use. This route would require the following:

1400 feet Grading and fill between the BN and C.T.H. C	3000.00
1800 feet Grading along the south margin of Short Cut Road	2000.00
Removal of approximately 2500 feet of railroad ties	1000.00
Grading of 4000 feet of roadbed along the Soo Line right of way	1500.00
Cut through the fill of the Soo Line-Glenwood Line, 20 feet high, approximately 100 feet long at the base	5000.00
Clear, grub and grade through one private tract of property and the Douglas County Forest Crop Land, approximately 2500 lineal feet	5000.00
Construct a rustic timber bridge at the Pokegama River to connect to the Superior City Forest Trail	45000.00

TOTAL.....\$62,500.00

Estimates of cost for Alternate One and Alternate Two could be developed. Alternate One would cost less than Alternate Two.

