

FEASIBILITY REPORT  
FOR  
PROPOSED ROAD IMPROVEMENT PROJECT  
OF  
HUNTINGTON WAY  
CREDIT RIVER TOWNSHIP, MINNESOTA  
MAY 2008

Prepared by:



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I hereby certify that this Plan, Specification, or Report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under State of Minnesota Statutes 326.02 to 326.16.

  
Shane M. Nelson, PE

43381  
License No.

May 30, 2008  
Date

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## EXHIBITS

- EXHIBIT A. Huntington Way Improvement Project - Benefiting Properties
- EXHIBIT B. Huntington Way Local Residential Rural Street Section – 9 Ton
- EXHIBIT C. Huntington Way Improvement Project - Preliminary Cost Estimate

## I. INTRODUCTION

The purpose of this feasibility report is to present the Township of Credit River with a preliminary examination of road improvements for Huntington Way. The report discusses the scope of reconstructing Huntington Way, beginning at Credit River Boulevard (County Road No. 68) and extending southeasterly to the cul-de-sac. The report was initiated by the Credit River Town Board after a board meeting, and has been prepared in compliance with Minnesota State Statutes 429 for projects resulting in special assessments.

## II. PROJECT LOCATION

Huntington Way is located in Section 27, Township 114 North, Range 21 West, in Credit River Township, Scott County, Minnesota. There are currently 13 existing properties located on the project. The residential properties are large rural type lots with an average lot size of 10 acres. The project area and roadway location is depicted on the Benefiting Properties Exhibit (Exhibit A) in the Appendix of this report.

## III. ROADWAY IMPROVEMENT PROJECT

### A. Existing Conditions

Huntington Way was initially paved in the mid 1980's. There are many indications that the road is failing and is near or at the end of its design life. Huntington Way was reviewed in 2006 as part of the Credit River Township Road Inventory and received a pavement ranking of 38 out of a possible ranking of 100, which is among the lowest ranking roads in the Township.

Maintenance has been on a yearly or as needed basis. The road has required patching in recent years to repair transverse and alligator cracking and settlements. Currently, there is significant settlement in a patch at a location over a culvert, indicating a soft or yielding subgrade.

The existing roadway is rural in nature. The existing cul-de-sac located on the south end of Huntington Way is sufficient in size. The width of the roadway varies slightly, but generally is 22 feet wide consisting of two 11 foot wide drive lanes with approximately 0.5 to 1

foot shoulders. The total length of the project is approximately 0.66 miles (3,500 feet).

Preliminary investigations by a geotechnical engineer indicate that the bituminous surface ranges from 2 to 3 inches in thickness underlain by approximately 1 inch of Class 5 granular material. The subgrade soils are lean clay and are susceptible to significant moisture conditions when compared with other subgrade soils.

A large culvert is present at a natural drainage path location to convey surface water through the roadway embankment. There is currently a significant settlement at the culvert location, indicating soft or yielding subgrade material. It is likely that organic soils are present at this location and have compressed. Further investigations are necessary to adequately determine the subgrade condition and existing bituminous and Class 5 thicknesses.

The roadway profile generally follows the existing rising and falling contours of the surrounding topography. Drainage is conveyed by the existing roadway culverts and ditches to surrounding lowlands.

## B. Proposed Improvements

The project consists of improving Huntington Way from County Road No. 68 to the cul-de-sac. The current road does not meet current Township standards. Improving the road to Township standards is beyond the scope of this report. This project proposes to confine the improvements to the existing roadway widths. No easements or right of way are proposed to be acquired.

We recommend that the existing bituminous surface and aggregate base be milled in place and stockpiled for later use. The milled bituminous and Class 5 product will then be blended with virgin class 5 aggregate to produce a base product. The base product will be utilized in the roadway after all subgrade corrections have been made and geotechnical fabric has been placed. After the base has been toleranced and proof rolled, 2.5 inches of bituminous base course will be placed. After one freeze-thaw season the bituminous wear course will be placed. Gravel shouldering material will be placed on each side of the road to reestablish the shoulder. The finished grade of the new street will be approximately 10 inches to one foot higher in

elevation than the current road. Raising the elevation of the road will add benefit as it will provide additional separation between the saturated or wet clay soils and the finished driving surface. All driveways will be cut back and tied into the new bituminous roadway at an acceptable slope.

Only minor ditching and culvert improvements are anticipated in this project. Exhibit B in the Appendix of this report shows the proposed typical section for Huntington Way.

#### C. Estimated Costs

The 2008 construction costs have been estimated for the proposed Huntington Way Improvement project. The estimated costs are estimates only and are not guaranteed prices. The costs shown are estimates based on actual bid prices from projects of similar scope and adjusted for inflation. Final contracts will be awarded on a unit price basis and the contractor will only be paid for work completed. No costs are included for easements.

The Town Board has ordered the feasibility reports to be prepared for two other improvement projects, Whitewood Avenue / Birch Road and 210<sup>th</sup> Street East. We would recommend that this project be combined with the Whitewood Avenue / Birch Road and the 210<sup>th</sup> Street East projects for bidding purposes. Bidding the three projects in a combined bid may offer a costs savings to the Township and the benefiting properties to be assessed. The total estimated cost for this project is \$342,080.

An estimate of the cost of the improvements is shown in Exhibit C.

#### D. Financing and Assessments

The Township costs of the improvements for reclaiming and resurfacing Huntington Way are proposed to be assessed to the benefiting properties. For this project, the recommended assessment method is to assess the benefiting properties on a per unit basis.

The Township may pass a general obligation/revenue bond that will be backed by assessment of the costs to the benefiting properties. The assessments may be paid in full up front or amortized over a period of

time, typically 10 years, with an interest rate as determined by the Town Board. Generally, interest rates on assessments are on the order of 6 percent.

The Township may consider using existing Township funds to fund a portion of the project, with the remaining portion of the cost to be assessed to the benefiting properties. Partial Township funding would reduce the assessments to the benefiting properties proportionately.

One hundred percent assessment to the benefiting properties of this project on a per unit basis would yield an assessment of approximately \$26,300.00 per unit. The per unit assessment for this project is proportionate to the large lot sizes (10 acres).

#### IV. PROJECT SCHEDULE

The schedule of the project will be determined by the date that the Town Board sets for construction. If the Town Board were to approve this feasibility study and authorize the preparation of plans and specifications by July 2008, construction could begin in late August and substantial completion could be achieved by September 30, 2008. A tentative schedule is as follows:

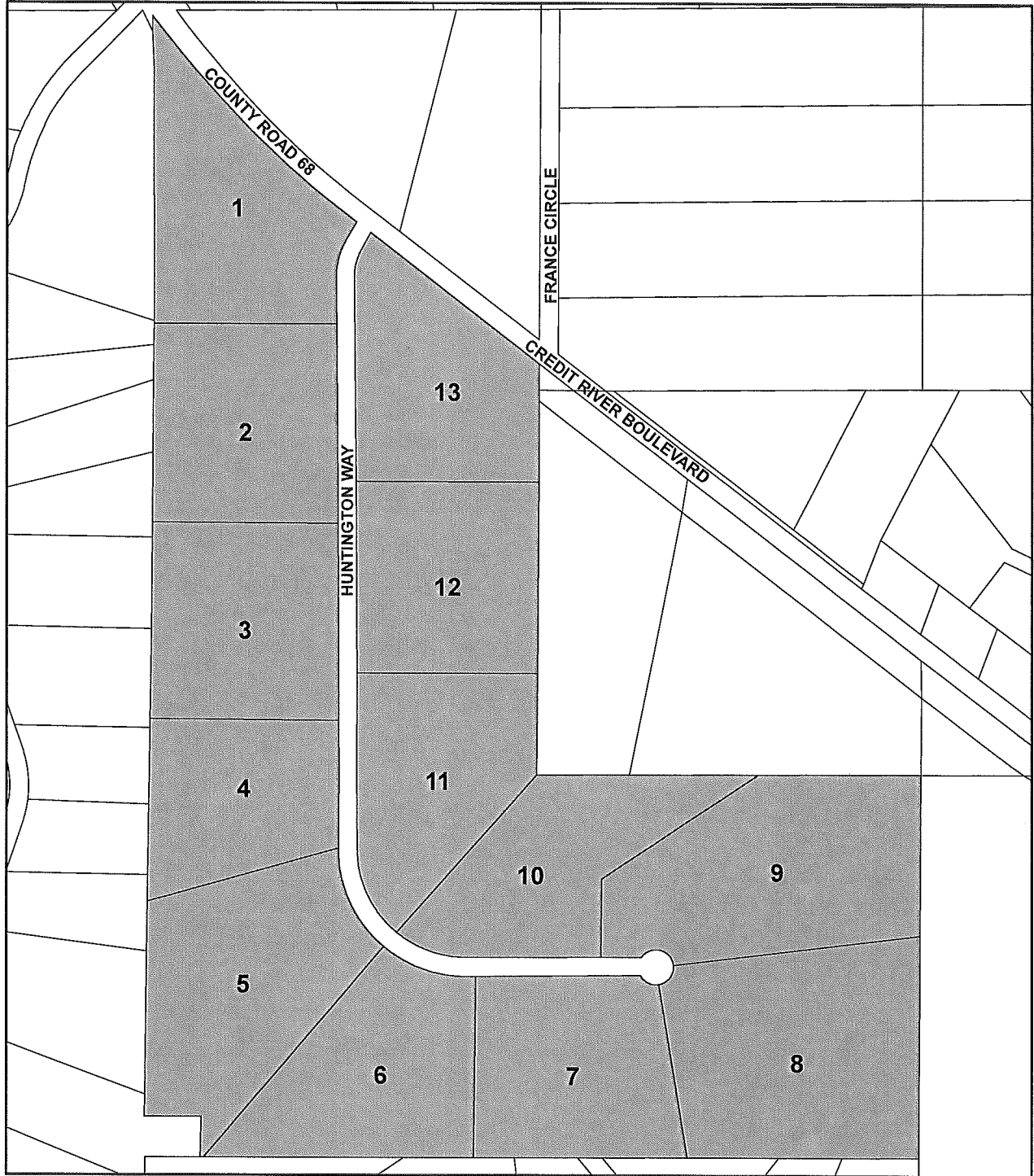
May 5, 2008	Town Board Orders Neighborhood Meeting
May 6, 2008	Mail Neighborhood Information Meeting Letters
May 19, 2008	Town Board Conducts Neighborhood Meeting and Orders Preparation of Feasibility Report
June 2, 2008	Town Board Approval of Feasibility Report and Calls Public Hearings Publish on June 7 and June 14
June 3, 2008	Mail Public Hearing and Assessment Notices to Property Owners
July 7, 2008	Public Hearing Meeting/Open House/ Council Order Plans and Specifications
July 21, 2008	Council Approve Plans and Specifications and Authorize Advertisement for Bids
July 26, 2008	Ad to Construction Bulletin and Newspaper
August 18, 2008	Bid Opening/ Council Approve Bids and Awards Contract
August 25, 2008	Construction Starts

September 30, Substantial Completion  
2008

## V. CONCLUSIONS AND RECOMMENDATIONS

We find that this project is necessary, cost effective and feasible from a technical and engineering standpoint, and benefits the properties proposed to be assessed. We would recommend that the Town Board accept this report.

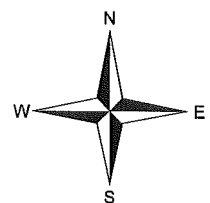
This project is recommended to be bid in conjunction with the proposed Whitewood Avenue / Birch Road and 210<sup>th</sup> Street East projects to offer a cost savings to the Township and the assessed properties.

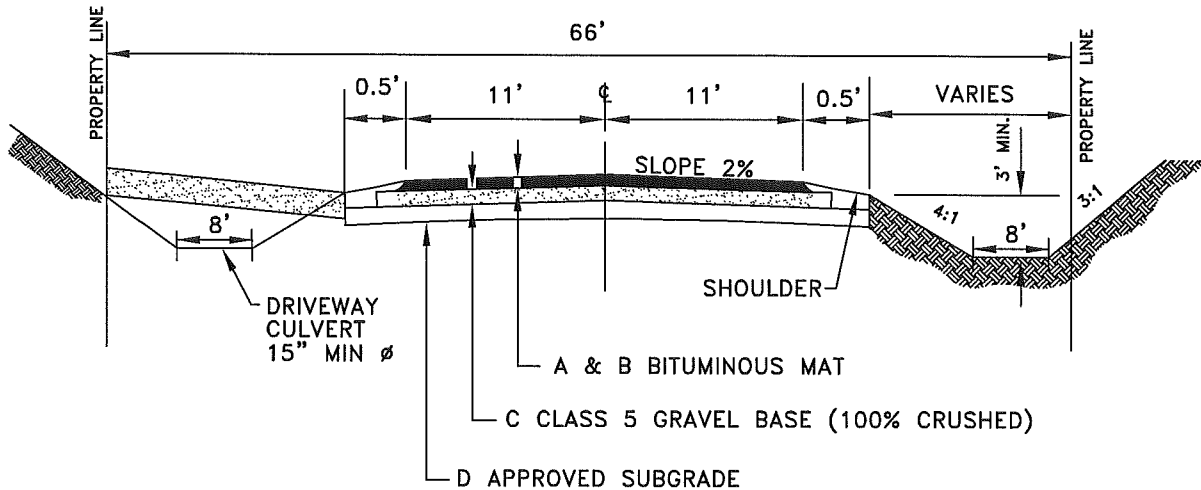


**CREDIT RIVER TOWNSHIP  
HUNTINGTON WAY IMPROVEMENT PROJECT  
BENEFITING PROPERTIES**

**Legend**

- Benefiting Property
- 10 Benefiting Property Number





LEGEND					
AASHTO	R VALUE SIGMA N18	BITUMINOUS SURFACE		AGGREGATE BASE	
SUBGRADE SOIL CLASS		WEAR 2350 LVWE45030B	NON-WEAR 2350 LVNW35030B	CLASS 5 OR 6 3138 C*	CLASS 3 OR 4 3138 D*
A-3	(R-70 ≤ 90,000)	** 1 1/2"	** 2 1/2"	** 9"	-
A-4	(R-20 ≤ 90,000)	1 1/2"	2 1/2"	9"	-
A-6	(R-15 ≤ 90,000)	1 1/2"	2 1/2"	9"	6"
A-7	(R-10 ≤ 90,000)	1 1/2"	2 1/2"	9"	7"
	(R-5 ≤ 90,000)	1 1/2"	2 1/2"	9"	18"

\* SUBJECT TO REVIEW BY QUALIFIED SOILS ENGINEER

\*\* MINIMUM ALLOWABLE DESIGN THICKNESS

NOTES: R VALUE IS A MEASURE OF EMBANKMENT SOIL RESISTANCE STRENGTH AS DETERMINED BY THE HVEEM STABILOMETER METHOD

SIGMA N18 VALUE IS THE CUMULATIVE DAMAGE EFFECT OF VEHICLES DURING THE DESIGN LIFE OF A FLEXIBLE PAVEMENT.

CREDIT RIVER TOWNSHIP  
 HUNTINGTON WAY  
 LOCAL RESIDENTIAL RURAL STREET SECTION - 9 TON



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EXHIBIT B

EXHIBIT C  
HUNTINGTON WAY  
IMPROVEMENT PROJECT  
PRELIMINARY ESTIMATE  
CREDIT RIVER TOWNSHIP

ITEM NO.	SPEC.	ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT PRICE	EXTENSION
1	2021	MOBILIZATION (MAX. 3% OF TOTAL BID)	1	L.S. \$7,000.00	\$7,000.00
2	2104	BITUMINOUS PAVEMENT RECLAMATION -STREET	10,000	S.Y. \$2.00	\$20,000.00
3	2104	REMOVE BITUMINOUS PAVEMENT-DRIVEWAY	450	S.Y. \$2.00	\$900.00
4	2104	SAWING BITUMINOUS PAVEMENT	210	L.F. \$3.00	\$630.00
5	2105	SUBGRADE EXCAVATION (CV)	2,000.00	C.Y. \$8.00	\$16,000.00
6	2105	GEOTEXTILE FABRIC	10,000.00	S.Y. \$3.00	\$30,000.00
7	2112	SUBGRADE PREPARATION	35.00	RDSTA \$240.00	\$8,400.00
8	2211	AGGREGATE BASE CLASS 5 (6 inches thick)	3,400.00	TON \$15.00	\$51,000.00
9	2211	AGGREGATE SHOULDERING	200.00	TON \$15.00	\$3,000.00
10	2350	TYPE LV 4 WEARING COURSE MIXTURE (B)	770.00	TON \$55.00	\$42,350.00
11	2350	TYPE LV 3 NON WEARING COURSE MIXTURE (B)	1,300.00	TON \$50.00	\$65,000.00
12	2357	BITUMINOUS MATERIAL FOR TACK COAT (0.05 gal/SY)	550.00	GAL \$3.00	\$1,650.00
13	2350	BITUMINOUS DRIVEWAY PAVEMENT 2.5" THICK	450.00	S.Y. \$13.00	\$5,850.00
14	2501	CULVERT IMPROVEMENTS	1.00	L.S. \$2,000.00	\$2,000.00
15	2511	RIPRAP CL3	40.00	C.Y. \$75.00	\$3,000.00
16	2563	TRAFFIC CONTROL	1.00	L.S. \$1,000.00	\$1,000.00
17	2575	SEEDING	0.50	ACRE \$2,000.00	\$1,000.00
18	2575	EROSION CONTROL BLANKET CATEGORY 4	100.00	S.Y. \$3.00	\$300.00
19	2564	SALVAGE AND REINSTALL STREET & STOP SIGNS	2.00	EACH \$50.00	\$100.00

ESTIMATED CONSTRUCTION COST	\$259,180.00
CONSTRUCTION CONTINGENCY (10%)	\$25,900.00
ENGINEERING AND LEGAL (20%)	\$57,000.00
<b>ESTIMATED PROJECT COST</b>	<b><u>\$342,080.00</u></b>