Minnesota Department of Transportation

Northwest District
3920 Highway 2 West
Bemidji, MN 56601

Telephone: 218-755-3800
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November 27, 2006

Lisa Hanson
11th Crow Wing Lake Association

Re: 11th Crow Wing Lake Culvert

This culvert has been the topic of discussion on numerous occasions. The culvert still has a Sufficiency Rating of 94.9, which means that it has changed very little in recent years. The project is currently in the Bridge Engineers Long Range Plan for 2016. A project that is scheduled this far out is often subject to scheduling changes. This depends on the culvert condition and rate of deterioration, which is inspected every year. The extensive needs throughout Mn/DOT District 2 forces us to treat this culvert as any other project when it comes to funding.
The decision on what type and size of structure, which would replace the culvert, has not yet been determined. If the project follows the normal Mn/DOT process, we would involve our Bridge and Foundations office when the project is approximately four years away. At this time it would be determined what type of new structure would be used to replace the current culvert. It would be expected that if the local residents want a different structure or time frame than the recommendations, the local residents would make up the cost difference. At this time we have no indication that any significant funding has been obtained on the local residents' behalf. If the local residents secure a significant funding source, Mn/DOT would then be willing to work on a funding agreement and project timeline.

Jim Bittmann
Planning Engineer
218-755-4521

Minnesota Department of Transportation

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May 24, 2000

Senator Tony Kinkel
HC 06, Box 414
Park Rapids, MN 56470

Dear Senator Kinkel:

Commissioner Tinklenberg and I thank you for your concern and support of transportation initiatives in the Akeley area. We have reviewed the information concerning the bridge just north of Akeley and understand the importance to the area to replace or enhance the crossing of Highway 64. We believe that construction of a three-span bridge at this location can be programmed for the summer of 2003. Mn/DOT will fund 50% of the bridge and be responsible for all planning, design and development. Estimated cost of the bridge will be $450,000 - $500,000. We will name a project manager who will insure a timely letting date and work directly with the locals to coordinate and communicate all aspects of the project. Because the proposal involves the improvement of recreation, boating and other aesthetic values it is expected that local funds and a sense of ownership should be established. A new bridge at this location will provide almost 7' of clearance with a 30' opening. The bridge will rest on piling so structural stability would not be a concern. The road grade will be raised approximately 2' at the culvert and can match well with surrounding properties. We will work with you and the locals to develop possible funding strategies from other programs such as LCMR and economic development grants. I have copied the participants in the meeting and suggest that you provide this information to the community. We will follow-up with a general public meeting this summer to announce the project and to receive support and input.

Sincerely,

Steve Baker

Steve Baker
Transportation District Engineer

cc: Frank Lamb
Connie Converse
Gordy Oberg

NorthWest District
TH 64 1 1/2 miles North of Akeley
Bridge No. 90800 Replacement 5/9/00
Cost Comparison-Culvert/Bridge

Item	Description	Quantity	Unit Price	Culvert	Bridge
2011	Construction staking	LS	$8,000	$8,000	$8,000
2021	Mobilization	LS	$30,000	$30,000	$30,000
2031	Field Lab Type D	EA	$4,500	$4,500	$4,500
2104	Remove Bit.	3,110 SY	$0.45	$1,400	$1,400
2104	Remove Guardrail	600 LF	$2.00	$1,200	$1,200
2104	Remove Culvert	LS		$2,000	$2,000
2105	Common Exc.	1,870	$5.00		$9,350
2105	Granular Borrow (CV)	3,110 CY	$5.00	15,550	$15,550
2211	Class 6 Base (CV)	890 CY	$10.00	$8,900	$8,900
2221	Class 1 Shld (CV)	230 CY	$10.00	$2,300	$2,300
2360	Wearing Course	530 T	$50.00	$26,500	$26,500
2511	Random Riprap Class III	270 CY	$50.00		$13,500
2511	Random Riprap Class III	40 CY	$50.00	$20	
2554	Guardrail Design Special	100 LF	$32.00		$3,200
2554	Guardrail B8307	200 LF	$11		$2,200
2554	SRT	4 EA	$1,700	$6,800	$6,800
2554	Guardrail	600 LF	$11	$6,600	
2563	Traffic Control	LS	$20,000	$20,000	$20,000
2573	Erosion Control	LS		$2,000	$4,000
2575	Turf Establishment	LS	$5,000	$5,000	$5,000
2412	Precast Culvert 12x12	90 LF	$900.00	$81,000	
2412	End Section-culv.	2 EA	$15,000	$30,000	
	Slab Span Bridge	4,140 SF	$70.00		$289,800
				$251,770	**$454,200**

NOTES:

Bridge

Benefits:

1. Increased clearance for boats-6'10' -safer for boaters
2. Built on piling - stable from future settlement.

Negatives:

1. Increased cost over culvert.
2. Longer construction period.

Culvert

Benefits:

1. Faster construction - less impact on traffic and community
2. Less costly than bridge.

Negatives:

1. Less clearance-approximately 5'6"
2. Lack of stability of underlying soils.
3. Muck excavation-permits for this type of work?

TH 64 Crossing of 11th Crow Wing Lake

Pros and Cons of a enlarged Culvert or Bridge

Currently the existing culvert has approximately 4' - 5' of vertical clearance from the water surface to the top of the pipe. Based on citizen complaints some people have hit head on bolts in pipe. Because of the size of the pipe only small boats can pass through the pipe and then only at slow speeds.

Because of the foundation of the fill, we are unsure of how much additional fill we could place on the embankment. Based on current information we believe a 2'grade is possible. Before we would add more than that we would need a detailed foundation investigation.

If we install a larger culvert:

Because of the superelevation on the road and the need to provide some cover over the pipe we would only be able to increase the vertical clearance to between 5' to 6'. The larger culvert would increase the horizontal clearance and it is very possible that drivers of watercraft may be tempted to pass through the culvert at higher speeds. The people on the lake have indicated a willingness to post as a no wake zone but enforcement/compliance with this is not guaranteed. Using the logic that people are already hitting their head the District is concerned that we need to get as much clearance as possible.

There is also a structural concern about installing the culvert. The existing fill is setting on a layer of muck, which may not adequately support a large rigid culvert. While the existing metal culvert would tolerate some movement, a concrete pipe could experience some problems with settlement.

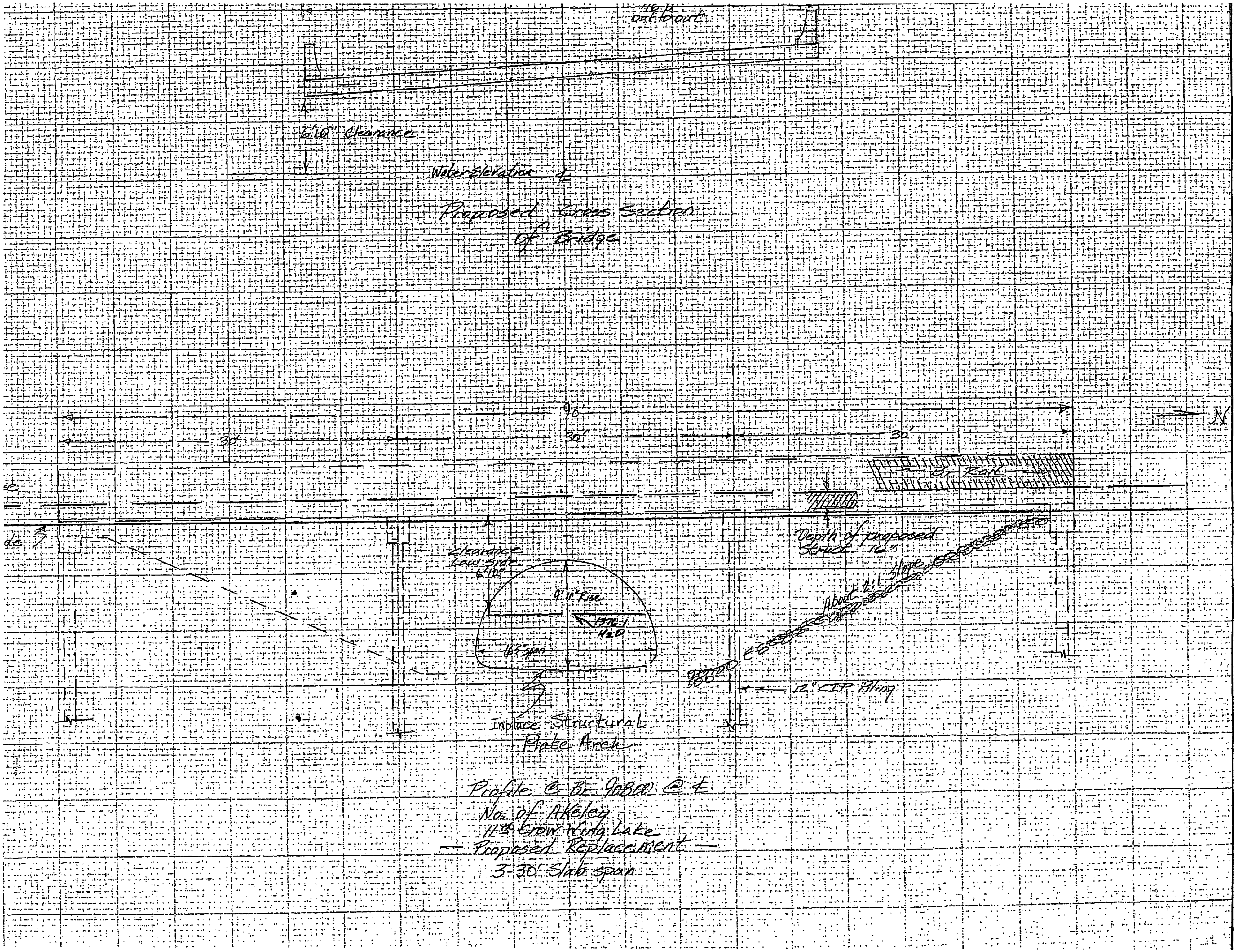
We anticipate that a culvert would be significantly less expensive but cannot accept the potential for boating accidents if it is built.

If we install a Bridge:

Because we would not need to provide cover over the bridge we would be able to provide a opening that would be approximately 7'.

The bridge would be supported on a pile foundation so the structural stability would not be a concern.

The bridge is significantly more expensive than a culvert but we believe the additional cost is justified.


46'0" out to out
6'10" Clearance
Water Elevation ℄
Proposed Cross Section
of Bridge
96'
30'
30'
30'
N
Br. Rail
Depth of proposed
Struct. 16"
Slope
About 2:1
Clearance
Low Side
6'10"
9'11" Rise
1370.1
H2O
16'3" span
12" CIP Piling
Inplace Structural
Plate Arch
Profile @ Br. 90800 @ ℄
No. of Akeley
1st Crow Wing Lake
— Proposed Replacement —
3-30' Slab span