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CASS COUNTY COMMISSION

MAR 10 2016

MEMORANDUM

**Highway
Department**

Jason Benson, P.E.
County Engineer

Richard S. Sieg
Superintendent

Thomas B. Soucy, P.E.
Assistant County Engineer

TO: Cass County Road Advisory Committee
FROM: Jason Benson, Cass County Engineer
DATE: March 8, 2016
SUBJECT: Road Advisory Committee Meeting
March 21, 2016 2:00 p.m.

A Road Advisory Committee meeting has been scheduled for Monday, March 21, 2016 at 2:00 pm in the Cass County Commission Room. The agenda is as follows:

2:00 – 2:05	Introduction and Recognition of Outstanding Highway Employee	Information
2:05 – 2:15	Update on 2016 Construction Projects 2015 Construction Projects	Information
2:15 – 2:20	Update on current Transportation Studies and Funding/Revenue Changes	Information
2:20 – 2:45	Gravel Road Maintenance – Costs, Improvements, and Options	Information
2:45 – 3:00	Other Business	
3:00	Adjourn	

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Superintendent

Thomas B. Soucy, P.E.
Assistant County Engineer

TO: Cass County Road Advisory Committee
FROM: Jason Benson, Cass County Engineer
DATE: March 6, 2015
SUBJECT: Road Advisory Committee Meeting, March 16, 2015
Background Information

2016 Highway and Bridge Projects.

Grading and Surfacing Projects:

Cass 10 from Cass 19 to 45th St N. (2.6 miles, \$13,500,000. Funding sources include Federal Aid, City of Fargo, City of West Fargo, and Cass County. Cass County is responsible for \$1,000,000.) This section of Cass 10 will be reconstructed to a three lane, urban road section. This segment will be turned over to the Cities of Fargo and West Fargo upon completion. This project will be completed over both 2016 and 2017 with \$500,000 per year necessary versus \$1,000,000 in 2016. This project was bid through the NDDOT and was awarded to Northern Improvement, Inc.

Cass 19 from Drain 21 to Cass 10. (0.7 miles, \$1,800,000. Funding sources include City of West Fargo and Cass County.) This section of Cass 19 will have the north portion realigned further east of the Sheyenne Diversion to align with the West Fargo Public Works facility road. It will also include improvements on the Drain 21 structure. This segment will be turned over to the City of West Fargo upon completion. Cass County's cost will be \$900,000.

Cass 17 from 12th Ave N to Harwood. (6.5 miles, \$6,400,000. All local funding.) This section of Cass 17 is a 24 foot concrete surface paved in 1972. It has wide gravel shoulders and 4:1 side slopes. This project will include overlaying portions of the concrete with asphalt and placing new pavement where the road currently has water overtopping it during floods. There will also be turnlanes at critical intersections and paved shoulders. This section of road was initially budgeted for \$8.5 million. Based on recent lower project costs at bid lettings by the NDDOT, we may see this project below \$6 million.

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Cass 31 from Cass 20 to 1.5 miles north. (1.5 miles, \$2,500,000. All local funding.) This section of Cass 31 has sustained continuous slumping and slide failures near the river at 52nd Ave N. This project will reconstruct the highway west around the Stockman's Subdivision. Based on recent lower project costs from NDDOT bid lettings, this project may be below \$2 million.

Cass 28 Overlay and Shared Use Path from 13th Ave S to 1.3 miles north to Main Ave. Overlay is 1.25 miles with improvements to approaches and culverts at a cost of \$250,000. The Shared Use Path is 1.25 miles, \$319,523. Split between ND Parks, RRVF, and Cass County. The current Engineer's Estimate for a 10 foot wide, 6,600 foot long multi-use path is \$319,253. The ND Parks Recreation Trail grant was approved for \$200,000. Cass County will fund the administration and engineering costs associated with the project and 50% toward the remaining construction costs. Red River Valley Fair will fund the remaining 50% toward the remaining construction costs. Therefore, an estimated 50% share of the project will be \$59,626.50 for Cass County and \$59,626.50 for the Red River Valley Fair Association.

Cass 3 from I-94 to Ayr. (11 miles, \$1,613,273. All local funding.) This road will be targeted for subgrade repair and reshaping.

Cass 15 from ND46 to Kindred and from Kindred to Cass 16. (5.4 miles, \$1,600,000 with \$1.1 million in Federal funding and \$500,000 in local funding.) This section of Cass 15 will have a 2.5 inch maintenance overlay. It was last overlaid in 1999. This project will be bid by the NDDOT in mid-April.

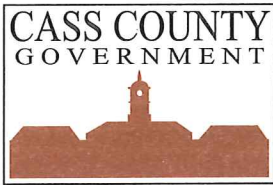
Cass 16 from Davenport to Cass 15. (3.1 miles, \$1,100,000. with \$700,000 in Federal funding and \$400,000 in local funding.) This section of Cass 16 will have a 2.5 inch maintenance overlay. It was last overlaid in 1999. This project will be bid by the NDDOT in mid-April.

Bridge Projects:

C16 - 33 Addison/4 Davenport Township - Maple River WRD - Drain 37. This is a County bridge with a 28 foot width and will be replaced with a concrete box culvert. This project will facilitate the future improvements on Cass 16 from ND 18 to Davenport. It has a current length of 28 feet long and was built in 1946. Estimated cost is \$250,000.

C16 - 36 Maple River/1 Leonard Townships - Drain 39. This is a County bridge with a 28 foot width and will be replaced with a concrete box culvert. This project will facilitate the future improvements on Cass 16 from ND 18 to Davenport. It has a current length of 28 feet long and was built in 1946. Estimated cost is \$250,000.

C16 - 35 Maple River/2 Leonard Townships - Drain 15. This is a County bridge with a 24 foot width and will be replaced with a concrete box culvert. This project will facilitate the future improvements on Cass 16 from ND 18 to Davenport. It has a current length of 28 feet long and was built in 1953. Estimated cost is \$250,000.



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Gravel Road Maintenance and Improvement

In Cass County, of our 628 miles of roads, 312 miles are gravel roads. Over the years we have maintained these roads without looking at options that are somewhere in between. Over the last five years we have built our paved highway and bridge comprehensive plans to and seen it vision come to life with improved roads and bridges. I would like to take that same level of planning and implement it for gravel roads into our comprehensive plan.

We work to improve our gravel roads by gravelling every road every two to four years and our higher trafficked roads every year. On our softer, more heavily used routes, we have also completed a 12" cement stabilized base to improve the roadway and prevent rutting. Unfortunately, for our high volume roads, gravelling every year becomes an endless cycle while gravel supplies continue to decline.

Regionally more counties are using dust control products, chemical additives, gravel blended with asphalt millings, other techniques to improve gravel roads. While these improvements don't make it a "paved" road, they do help in several ways:

- Stabilize the gravel so that it isn't pushed off by traffic or the snow plow into the ditch.
- Provide an improved driving surface.
- Reduce dust and the losses of fine aggregate particles that help bind the gravel together.

I will be presenting these alternatives, what their costs are, and what the risks of using the products are. I would also like to implement some of these alternatives as test sections this summer so that we can evaluate them for future use.

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