



CITY OF RAPID CITY

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July 25, 2005

City of Rapid City Mayor and Council

RE: PW072605-19 "Western Slope (Farrar) Deadwood Ave. Water Supply Project"
conceptual improvements, probable costs, and funding options.

Dear Mayor and Council,

This item addresses providing water service to developable properties above elevation 3460 msl along the western slope of the Dakota Hogback. The council recently adopted the "North Rapid High Level and North Deadwood Avenue Water System Expansion Study Rapid City, South Dakota" report dated May 18, 2005 by Ferber Engineering Company, Inc. which outlined a plan for providing water service to properties above elevation 3460 msl. These improvements are necessary because the existing South Canyon High Level system cannot provide water service above elevation 3460 msl.

Previously a Developer on the eastern slope of the Dakota Hogback requested staff to develop a phased approach to provide water for developable property above elevation 3450 msl. Refer to letter dated July 11, 2005 to Doyle Estes. Developing a phased approach for water improvements along the western slope of the Dakota Hogback is similar to what was done for the eastern slope.

We propose to provide water service along the eastern slope by constructing a 1.75 MG ground level water reservoir with an overflow elevation of 3895 msl (the reservoir would be approximately 35-45 feet above the ground), a new Madison well and well house, and water transmission mains. These proposed improvements would provide initial service and later on could be incorporated into the larger system recommended in the Ferber report.

This project approach allows for independent development along the western slope of the Dakota Hogback. The downside in developing in this manner is that ultimately the capital costs are more. The attached drawing illustrates a conceptual water system and TIFD boundaries to provide water service for developable property above elevation 3460 msl along the western slope of the Dakota Hogback.



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**WATER SYSTEM IMPROVEMENT PROBABLE COSTS FOR THE
WESTERN SLOPE OF THE DAKOTA HOGBACK:**

Item	Item Description	Probable Cost
1.	RESERVOIR:	
a.	1.75 MG Reservoir	\$1,250,000
b.	Foundation	\$400,000
c.	Site	\$200,000
d.	Controls	\$50,000
e.	Access Road	\$250,000
f.	Engineering	\$250,000
	Sub total	\$2,400,000
2.	Madison Well and Raw Water Line:	
a.	Drill and Develop Madison Well	\$325,000
b.	Well House	\$275,000
c.	Engineering	\$100,000
	Sub total	\$700,000
3.	Water Transmission Mains:	
a.	27" – 1,000 feet	\$350,000
b.	24" – 1,500 feet	\$480,000
c.	20" – 2,600 feet	\$750,000
d.	16" – 3,900 feet	\$550,000
e.	Engineering	\$220,000
	Sub total	\$2,350,000
4.	Contingency;	\$150,000
	Total	\$5,600,000

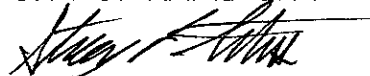
Western Slope Water System probable cost = \$5,600,000.

The water reservoir, Madison well and well house, and water transmission mains are anticipated to be designed, bid, and constructed by Rapid City Public Works, and engineering consultant selection would be in accordance with the approved City Consultant Selection Policy. Developer agreements will need to be established if public and private funding is proposed.

If you have additional questions or wish to schedule a meeting, please contact Dirk Jablonski at 394 – 4165.

Sincerely,

CITY OF RAPID CITY



Stacey Titus, P.E.
Project Manager

Enclosure:

cc: Dirk Jablonski, Public Works Director; John Wagner, Water Superintendent; Marcia Elkins, Growth Management Director; Gary Shepard, Fire Department Chief; and file.

Proposed Phased "North Deadwood High-High Level" Service Area Water System Improvements for the Western Slope of Dakota Hogback

