

March 23, 2006

Growth Management Department
City of Rapid City
Attn: Emily Fisher P. E.
300 6th Street
Rapid City, SD 57701-2724

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**Rapid City Growth
Management Department**

Re: **Drainage Easement Vacation
Adjacent to Black Hills Self Storage**

Emily:

Following our discussion on Tuesday March 22, 2006, I have reviewed the easement area adjacent to the proposed Black Hills Self Storage location in regards to the Perrine Drainage Basin Design Plan. Specifically, I have reviewed element 202, the proposed detention pond next to SD Highway 44.

During our discussion, it was my understanding that the City would not be in favor of vacating the drainage easement unless it could be shown that the high-water level would fit within the left over easement.

Attached to this letter is a plan with possible contours representing element 202. Also attached is the analysis of said pond. For the analysis, the inflow hydrograph from the Perrine Drainage Design Plan along with the stage-outflow data were used for input into the routing program.

The plan as shown will convey the 100-year storm from the design plan with a high water elevation of 3199 (3198.95) and a freeboard elevation of 3200. The 3200' contour delineates the edge of the requested easement vacation illustrating that the high-water level can fit within the left over 50' of drainage easement. The proposed contours do not show the recommended spillway discussed in the design plan. Please note that the upstream end of the pond as shown would need a drop structure, however, the design plan recommends regrading the channel (element 5) between elements 300 and 202. When the regrading is complete, it is likely that the drop structure would not be needed, as the channel grade would tie into the bottom of the detention pond.

Please process the attached drainage easement vacation application for approval.

If you have any questions, please let me know.

1830 West Fulton St.
PO Box 9014
Rapid City, SD
57709-9014

www.cetecengineering.com

Sincerely,

CETEC Engineering Services, Inc.

A handwritten signature in black ink that reads "Rich Marsh". The signature is written in a cursive, flowing style with a large loop at the end of the last name.

Rich Marsh, P.E.
Project Manager

cc:
File

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