

ICICLE CREEK ENGINEERS

Geotechnical, Geologic and Environmental Services

April 21, 2008

Vernon Swesey (authorized agent for)
Tumbling Ridge LLC
P.O. Box 687
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Preliminary Report
Geotechnical Consultation
Proposed Access Road
Tumbling Creek PUD
Kittitas County, Washington
ICE File No. 0816-001

INTRODUCTION

This preliminary report presents the results of Icicle Creek Engineers' (ICE's) geotechnical consultation regarding the widening of an existing road (Jenkins Drive) that will access the Tumbling Ridge PUD in Kittitas County near Roslyn, Washington. Our services were requested by Vernon Swesey, representative for Tumbling Ridge LLC.

PROJECT DESCRIPTION

The existing road is located north of the Bullfrog Road exit from Interstate 90 along the west side of Bullfrog Road about ¼ mile from the interchange. The existing private road is a single-lane, gravel-surfaced road likely constructed several decades ago for logging purposes and to access private property prior to the development of the Suncadia Resort. The majority of the road is presently about 22-feet wide. Jenkins Drive will be used as the primary access road for residents of the Tumbling Ridge PUD.

We understand that the road is planned to be widened to Kittitas County road standards (about 26 feet) as a two-lane access road. The road segment subject to this consultation is about 1,150-feet long. In order to widen the road, cuts into the uphill slope will be required. Mr. Swesey has indicated that Kittitas County requires that these cuts to widen the road will not destabilize the slope. ESM Consulting Engineers, LLC (ESM) has prepared a preliminary topographic plan for this road segment referenced as follows:

- ESM, April 10, 2008, Tumbling Ridge PUD Jenkins Drive Plan and Profile," prepared for Tumbling Ridge LLC, scale 1 inch = 50 feet.

SITE DESCRIPTION

The existing road segment ascends in a traverse of an east-facing hillside overlooking the Cle Elum River valley. Based on regional geologic mapping by the Washington State Department of Natural Resources Division of Geology and Earth Resources (DGER, Walsh, T.J., et al, 1987, "Geologic Map of Washington – Southwest Quadrant," Geologic Map GM-34), the hillside is underlain by "outwash deposits." Outwash deposits were deposited by alpine glaciation of the general area during the late Quaternary age (about 140,000 to 170,000 years ago) and typically consist of silty sand and gravel with occasional cobbles, boulders and layers of silt or clay.

Brian Beaman and Matt Kogle of ICE completed a geologic reconnaissance of the subject road segment on March 31, 2008. As previously described, the road segment that traverses the hillside is about 1,150-feet long extending north from an existing gate at about Station 3+00 (stations reference the April 10, 2008 ESM preliminary topographic plan). Based on our site observations, soils exposed in the uphill side of the road are consistent with the regional geologic mapping and consist of glacial outwash. However, the soils change in character considerably along the 1,150-foot-long road segment. From about Station 3+00 to 6+50, the soils exposed consist of silty fine to medium sand with gravel and occasional cobbles. This soil appears to have developed a relatively deep (about 5-feet thick) surficial layer of weathered soil. From about Station 6+50 to 9+00 the soils exposed consist of silty fine sand and sandy silt; this soil also appears to have developed a relatively deep surficial layer of weathered soil. From about Station 9+00 to 14+50 the soils exposed consist of silty gravel with sand and cobbles. This soil (silty gravel) appears to have developed a relatively shallow (about 2-feet thick) surficial layer of weathered soil.

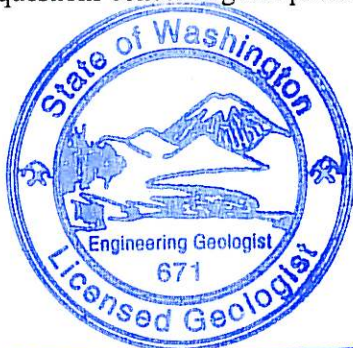
CONCLUSIONS AND RECOMMENDATIONS

In our opinion, the section of road subject to this consultation can be satisfactorily widened to meet Kittitas County standards provided that cuts into the uphill side of the road are completed to the extent that the stability of the hillside is not decreased. Several slope support options are available for this purpose.

USE OF THIS REPORT

We have prepared this preliminary report use by Tumbling Ridge LLC. Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted practices in this area at the time the report was prepared. No warranties or other conditions, express or implied, should be understood.

We appreciate the opportunity to be of service to Tumbling Ridge LLC on this project. If there are any questions concerning this preliminary report or if we can provide additional services, please call.




BRIAN R. BEAMAN



EXPIRES 10-30-09

Yours very truly,
Icicle Creek Engineers, Inc.


Brian R. Beaman, P.E., L.G.
Principal Engineer/Geologist