



cavassa & Associates, Inc.

Civil Engineers

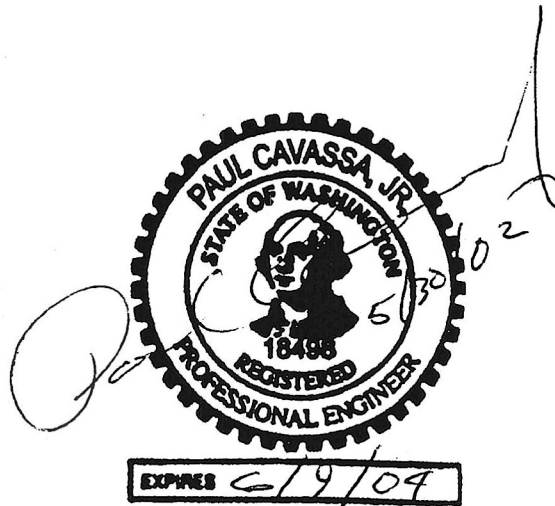
PRELIMINARY SITE DRAINAGE REPORT

Prepared for

High Street Station

Sultan, WA

May 30, 2002



Prepared by:
Matt Gibb, E.I.T.

PRELIMINARY SITE DRAINAGE REPORT

High Street Station
Sultan, WA

PROJECT OVERVIEW

This 2-acre site is located in Section 32, Township 28 North, Range 8 East, at 701 High Avenue. It is adjacent to High Avenue to the south, residential properties to the east and west, and Sultan High School to the north. It is proposed to construct 20 townhouses, a private drive and parking areas, and a recreation area.

SOIL CHARACTERISTICS

The Soil Survey of Snohomish County Area, Washington identifies two soil types on the site. The majority of the site is classified as "Sulsavar gravelly loam" (hydrologic group B), a "very deep, well-drained soil". A swale at the north end of the site is classified as "Pilchuck loamy sand" (hydrologic group C), a "very deep, somewhat excessively-drained soil".

The Geotechnical Report prepared by Associated Earth Services, Inc. generally describes the soil as follows: The surficial foot of soil consists of a soft, moist dark brown organic silt. From 2' to 4' a soft, moist brown fine sandy silt with occasional fine sand seams was encountered. Below 4' to 5' fine to coarse sand was found, becoming gravelly sand at 5'. Below 5' the gravelly sand graded to sandy gravel with cobbles and occasional boulders. "Caving" occurred below 7', becoming severe at 12'. The typical exploration ended at approximately 12' due to severe "caving". No ground water seepage was observed on 10/169/01. This provides an ideal condition for onsite infiltration of storm water.

UPSTREAM ANALYSIS

The site collects no runoff from the neighboring lots.

DOWNSTREAM ANALYSIS

The collected runoff will be infiltrated onsite. Therefore, there will be no downstream impacts.

RETENTION/DETENTION ANALYSIS

EXISTING SITE HYDROLOGY: The majority of the site is currently in a pasture condition, with a 1200 sq. ft. house and a 1000 sq. ft. shed (both to be demolished). The north 0.4 acres is a drainage swale with somewhat dense vegetation.

DEVELOPED SITE HYDROLOGY: It is proposed to add approximately 0.6 acres of asphalt surface and 0.3 acres of rooftop to the site. The remainder of the site will be converted to landscape areas and a recreation area. The additional runoff generated by the asphalt surface will be treated for water quality and released to an infiltration trench, where it will be infiltrated along with the rest of the site runoff.

HYDROLOGIC ANALYSIS: Runoff volumes will be calculated using the SBUH program found in the 1990 King County Surface Water Design Manual. The pre-developed condition will be analyzed against the developed condition for the 2-, 10-, and 100-year, 24-hour storm event.

EROSION/SEDIMENTATION CONTROL DESIGN

Erosion control for this site shall consist of a gravel construction entrance and silt fencing along the clearing limits. Catch basins shall be protected from silt buildup during and after installation. Bare slopes will be seeded with grass and covered with straw.

END OF REPORT