BULLETIN

News from SubTerra, Inc.®

Blast Monitoring near the Falls Terrace Restaurant Tumwater, Washington

Controlled blasting was the planned excavation method for a sewer line connection in Tumwater. Blasts would be occurring within thirty feet of the Falls Terrace Restaurant. The Project Engineering Company, Parametrix, contacted ***SubTerra, Inc.*** to perform a pre-blast inspection of the restaurant and nearby structures, and to monitor vibrations during the blasting activities.

SubTerra, performed a pre-blast inspection of the interior and exterior of the Falls Terrace Restaurant. This included examination of the structural frame, foundation and decorative rock facing. A similar inspection of the nearby Boston Street Bridge was also performed.

Blast monitors were then installed at different locations adjacent to the restaurant and at nearby structures, including the I-5 retaining wall and the Boston Street Bridge.

Monitoring results were reviewed following each blast, and used to provide immediate input to subsequent blast designs. The recorded blast vibration levels were generally below recognized "safe limit" criteria. However, monitors installed in pavement between 6 to 8 ft. in front of the restaurant recorded vibrations in excess of these "safe limit" criteria for several blasts. This was most likely the result of a localized amplification of energy in the asphalt.

Since the pavement was not directly connected to the restaurant foundation, it was unlikely these higher vibrations would be transmitted to the restaurant structure. This proved to be the case, as observed during the post-blast inspection, in which no blast-related damage was found.

Blast monitoring programs, in conjunction with pre- and post-blast inspections, can be very useful in evaluating blasting-related damage claims.

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