



**Washington State  
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Secretary of Transportation

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August 4, 2008

To Whom It May Concern:

This letter serves to inform the recipient of WSDOT's experience with the oscillating/rotating method of drilled shaft construction and Malcolm Drilling Company's performance in the State of Washington.

WSDOT has extensive experience with drilled shafts dating back to 1958. In the past decade, a number of our drilled shafts have been constructed with the oscillating/rotating method of construction. Although the oscillating/rotating method of drilled shaft construction has been successful in any type of soil, it has been our experience that this method of construction is highly effective in soils containing boulders, cobbles, and caving soils. Our force account expenditures and risk associated with contract time delays, due to removal of obstructions, have diminished substantially when the oscillating method has been employed. Further, we have not detected any significant anomalies in shafts constructed by this method within the last five years using the CSL test method.

Malcolm Drilling Company has constructed a large majority of drilled shafts constructed with the oscillating method in the Washington State with excellent success. Their field crews are generally experienced in this specialty type of work and the managers conduct professional.

Should you need further information, please don't hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Mohammad Sheikhzadeh'.

Mohammad Sheikhzadeh, P.E.  
State Bridge Construction Engineer  
Telephone: (360) 705-7828