

## VandenBerghe, Alissa (Consultant)

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**From:** Casper Paludan-Müller [CPM@cowi.dk]  
**Sent:** Monday, January 26, 2009 9:08 AM  
**To:** Reilly, John  
**Cc:** Dye, Dave; Paananen, Ron; White, John; Lenzi, Jerry C; Søren Degn Eskesen  
**Subject:** RE: Seattle - Alaskan Way Viaduct Project - Bored Tunnel Option

Hi John,

Here is some very basic info:

The feasibility study for the Doha Bay Crossing is carried out for the Urban Planning & Development Authority of Doha and is as yet unconcluded. The tunnel shall be constructed in limestone. There will be two traffic tubes, each to contain 3 lanes and a wide shoulder. The bored tunnel option we have considered possibly to be constructed by Earth Pressure Balance TBM's has up to 18m outside diameter tunnels in lime stone, somewhat more than the 15.2m experienced with different ground conditions in Madrid. Length up to 8 km implies that longitudinal ventilation would be insufficient and the space above the road profile to be utilized for transverse ventilation.

The Maracaibo Link has got an immersed tunnel of about 4 km and a low level bridge of about 6 km connected with an artificial island. For this project, we are designers for the Brazilian contractor Odebrecht who has been assigned by the Venezuelan Ministry of Infrastructure.

Looking forward to further discussions

Regards Casper

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**From:** John Reilly [mailto:jjreils@attglobal.net]  
**Sent:** Sunday, January 25, 2009 11:31 PM  
**To:** Dye, Dave; Casper Paludan-Müller  
**Cc:** Søren Degn Eskesen; Lenzi, Jerry C; White, John; Paananen, Ron  
**Subject:** Re: Seattle - Alaskan Way Viaduct Project - Bored Tunnel Option

Hi Casper - can you send me some basic information regarding your feasibility study for Doha Bay - especially considering the large diameter bored tunnel and also the tunnel for the Maracaibo Lake?

I look forward to discussing these when and if you are able to visit Seattle again.

Soren - for your information.

Regards, John Reilly  
Web: [www.JohnReilly.us](http://www.JohnReilly.us)  
Email: [JJReils@ATTGlobal.net](mailto:JJReils@ATTGlobal.net)  
Cell: +1-508-904-3434

----- Original Message -----

**From:** [Casper Paludan-Müller](mailto:Casper.Paludan-Muller@attglobal.net)  
**To:** [Dye, Dave](mailto:Dye.Dave@attglobal.net)  
**Cc:** [Paananen, Ron](mailto:Paananen.Ron@attglobal.net) ; [Reilly, John](mailto:Reilly.John@attglobal.net) ; [White, John](mailto:White.John@attglobal.net) ; [Lenzi, Jerry C](mailto:Lenzi.Jerry.C@attglobal.net)  
**Sent:** Sunday, January 25, 2009 4:54 PM  
**Subject:** RE: Seattle - Alaskan Way Viaduct Project - Bored Tunnel Option

Hi Dave,

Thankyou for your mail, I hope that you are fine in the new year as well. I appreciated very much the good co-operation with WSDOT and the various other parties involved with the SR 520. -For me it was certainly an interesting and different project.

Since then, I have been dealing with some large fixed link projects: A feasibility study for the Doha Bay Crossing which investigated large diameter bored tunnel and immersed tunnel schemes for a new road link in Qatar, and more recently we started basic design of a 12 km long tunnel and bridge link for road and rail across the Maracaibo Lake in Venezuela. So there has been a lot of travelling.

I remember the situation on the AWV project as it looked during my visits last year. With regard to future presence in Seattle, I may be there within the next few weeks and will be very interested to attend discussions as mentioned. Perhaps one of my bored tunnel colleagues could join as well, if OK with you.

I am currently about to settle a trip to Venezuela to take place during next week or the week after, depending on our Client's confirmation. I should know about that in a couple of days and will then come back to you with suggestions regarding a meeting date.

Best regards  
Casper

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**From:** Dye, Dave [mailto:DyeD@wsdot.wa.gov]  
**Sent:** Thursday, January 22, 2009 11:50 PM  
**To:** Casper Paludan-Müller  
**Cc:** Paananen, Ron; Reilly, John; White, John; Lenzi, Jerry C  
**Subject:** Seattle - Alaskan Way Viaduct Project - Bored Tunnel Option

Hello Casper - I hope this note finds you well in 2009. You may recall that while you were out discussing tunnels under Montlake Cut for the 520 project we at WSDOT were also discussing what to do with the Alaskan Way Viaduct Replacement Project. As you may have heard, the Governor and Mayor and County Executive announced their preferred option a couple of weeks ago - a deep bored tunnel - to replace the viaduct. (about 9000 feet long, soft earth mix of sand and clays under the water table, 54 foot diameter with an interior stacked structure to accommodate two lanes of traffic in each direction.) This recommendation will be discussed in our legislature this year and we need to complete our environmental work, but in a best case scenario we expect to go to a Design-Build project in the fall of 2010...with tunnel opening by 2015!

I enjoyed our previous interactions on 520 and was impressed by your teams' knowledge and expertise. I wonder out loud if other business opportunities bring you to Seattle on occasion, and if so, would you consider coming by to meet with me and few key AWV project leaders to just "kick around" issues and ideas for this project - lot's of firms are dropping by and we promise not to preclude you from further work on the project if you are interested in participating in these early discussions. If you are, please let me know when you might be in town and we'll try to schedule a meeting. Thanks for all of your good work on 520.

Sincerely,

David L. Dye PE  
Deputy Secretary, Washington State Department of Transportation  
360-705-6850