

Sent: Wednesday, 18 January 2012 11:55 a.m.
To: 'Nigel Priestley'; 'David Hopkins'; 'Clark Hyland'; 'Stefano Pampanin'; 'Rob Jury'; 'Adam Thornton'
Cc: 'Mike Stannard'; 'David Kelly'; 'Vicky Newton'; 'Sherwyn Williams'
Subject: RE: Analysis of Factors contributing to the collapse - For your urgent consideration please.

Also note the cover was detailed as 50mm to the main bars.

From: Ashley Smith (StructureSmith) [mailto:ashley@structuresmith.co.nz]
Sent: Wednesday, 18 January 2012 11:54 a.m.
To: 'Nigel Priestley'; 'David Hopkins'; 'Clark Hyland'; 'Stefano Pampanin'; 'Rob Jury'; 'Adam Thornton'
Cc: 'Mike Stannard'; 'David Kelly'; 'Vicky Newton'; 'Sherwyn Williams'
Subject: RE: Analysis of Factors contributing to the collapse - For your urgent consideration please.

Nigel,

Thank you for your analysis plots. Can you please clarify the following.

- The CTV columns are 400mm diameter, not 500mm as noted against your figure caption. That is important for the proportion of cover concrete. Perhaps you analysed for 400mm diameter and then wrote 500mm in the caption?
- What concrete strength have you assumed, is it 35MPa?

Regards, Ashley

From: Nigel Priestley [mailto:nigelpriestley@xtra.co.nz]
Sent: Wednesday, 18 January 2012 11:16 a.m.
To: Ashley Smith (StructureSmith); 'David Hopkins'; 'Clark Hyland'; 'Stefano Pampanin'; 'Rob Jury'; 'Adam Thornton'
Cc: 'Mike Stannard'; 'David Kelly'; 'Vicky Newton'; 'Sherwyn Williams'
Subject: Re: Analysis of Factors contributing to the collapse - For your urgent consideration please.

David, Ashley and others:

I have run moment curvature analyses for a "confined" column: R10@35mm, cover = 50mm (and also cover = 30mm). Results are appended. The influence on response is impressive, and would enable the columns to have survived Feb 22. It is also clear that a reduced amount of confinement (say R10 @ 50mm) would have enabled the columns to survive.

Mind you, the joints would have been buggered!

Regards,
Nigel

From: Ashley Smith (StructureSmith) <ashley@structuresmith.co.nz>
To: 'Nigel Priestley' <nigelpriestley@xtra.co.nz>; 'David Hopkins' <David.Hopkins@dbh.govt.nz>; 'Clark Hyland' <clark@fatigueandfracture.com>; 'Stefano Pampanin' <stefano.pampanin@canterbury.ac.nz>; 'Rob Jury' <rob.jury@beca.com>; 'Adam Thornton' <adam.thornton@dunningthornton.co.nz>
Cc: 'Mike Stannard' <Mike.Stannard@dbh.govt.nz>; 'David Kelly' <David.Kelly@dbh.govt.nz>; 'Vicky Newton' <Vicky.Newton@dbh.govt.nz>; 'Sherwyn Williams' <sherwyn.williams@kensingtonswan.com>
Sent: Tuesday, 17 January 2012 12:36 PM