



# Sustainable **EDGE** Ltd.

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October 8, 2009

Wade Tam  
Toronto Building, City of Toronto  
100 Queen Street West  
Toronto, ON M5H 2N1

**RE: SLOPED ROOF SOLAR COLLECTORS**

Dear Mr. Wade Tam,

The attached sealed drawings, S-1 to S-3 are based on Sustainable EDGE's structural design calculations, which considered solar system dead loads, live liquid loads, roof structure self weight, specified snow load, and wind 1/50 year live load including a 2.5 gust factor, as per Limit State design provisions of the Ontario Building Code.

These drawings are only for flat plat type solar hot water collectors. This structure is designed to hold two typical solar hot water collectors of a maximum array size of 8.5' x 8.5' (72.25 square feet) and a maximum dead weight filled with heat transfer fluid of 131 kg. Sloped roof installation is considered to be for roofs at a slope of 30° or steeper.

If installed as shown in the enclosed documents for sloped roof installations and using the materials specified within those documents, and provided that the existing roof rafter size meets the span requirements of Tables 1 and 2 for 6 connectors or Tables 3 and 4 for 8 connectors on drawing S-1, the installed system would meet the structural requirements of Part 4 of the Ontario Building Code.

I trust the above is sufficient information for meeting the structural permit requirements of the City of Toronto Buildings Department.

Sincerely,

Mario Kani, P.Eng.  
President