

**Spiegel Zamecnik & Shah Inc.**  
Structural Engineers

Satish B. Shah

August 21, 2006

David A. Carlson  
Michael W. Kane  
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Mr. Davis Buckley FAIA  
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1612 K Street, NW Suite 900  
Washington, DC 20006

100 POTOMAC AVENUE, SE WASHINGTON DC 100 YEAR – UPLIFT –  
REVISED PLANS, SECOND STAGE PUD

Dear Davis:

We have reviewed the revised proposed building program for the above stated project in order to assess the impact of the changes on the 100 year flood level study of the structure. We had analyzed the submission of Stage I PUD for the uplift pressures and issued a letter with our comments on December 21, 2005. The present review is based on plans for Stage II PUD planned for submission dated August 25, 2006.

Based on our comparative review between the PUD submission documents of Stage I and the documents for Stage II, we state that the basic findings of the earlier report are still valid. There is rearrangement of the above grade and the below grade spaces on the west end of the project. The underground area on the west side has increased which increases the uplift on the building. Above grade structure, even though rearranged has the same total area. The dead loads from the above grade structure will basically remain the same. Due to the net increase in the up lift loads, the structure will need additional concrete (dead weight) to resist this uplift. Since the added area (in plan) is located between the two above grade taller structures (Phase 3 and Phase 4) the uplift can be resisted efficiently with a slight change in the slab thickness.

You also asked us to review the eastern end of the Phase I office structure, specifically lowering the height of the structure to three levels above grade as against the present planned height of seven levels above grade. Such a lowering of the height (reduction in the above grade floors) will substantially reduce the dead weight and in turn increase the net uplift loads. This increase will require very expensive solutions of increased mat foundations and uplift anchors. Even though technically feasible, we strongly recommend avoiding such an inefficient system. Lack of balance between the available gravity loads against the hydrostatic upward pressures, particularly beyond the tower foot print will require solutions that will be inefficient in terms of use of materials.

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ZONING COMMISSION  
District of Columbia  
CASE NO.04-14  
EXHIBIT NO.31C

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Mr. Davis Buckley

August 21, 2005

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For additional information on the methods and assumptions refer to the earlier letter of December 21, 2005.

Hope this short summary for the revised plans (Phase II submission) of the above project meets the purpose of our study. Call me if you have any questions.

Sincerely,

SPIEGEL ZAMECNIK & SHAH INC.

A handwritten signature in black ink, appearing to read "Satish B. Shah", is written over a horizontal line. The signature is fluid and cursive.

Satish B. Shah PE, Principal

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