

Interactive comment on “Effects of soil settlement and deformed geometry on a historical structure” by Y. Yardim and E. Mustafaraj

Y. Yardim and E. Mustafaraj

yyardim@epoka.edu.al

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Dear Dr. Tapete, I appreciate that you read the manuscript and comment on it. Thanks for your valuable and constructive comments. I do read some of your works and impress with your expertise on this field. I would like to explain some of the points on your post. 1) The title of the manuscript, it has been in continuous change since the first submission. After the final revision, considering the suggestions of the referees and the editor, the title was set as it is now. Your suggestion indeed is a good one, however, the main objective of this paper is to emphasize the effects of geometry and soil settlement; TSL and FEM are the tools to achieve the scope. 2) 3) Regarding the suggestions about the references, those papers seem to have been published after we

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had submitted our manuscript for publication at the first stage. Those provide interesting information, which we think to add in our next publication which we are currently working on. 4) The geotechnical data, if put in a table can cause distraction and may not be easy to read. After the suggestions of the referees, they were changed from tabulated to current state. In Figure 1, we used a high resolution image, and if zoomed in, the strata can be readable (the current NESSD format restrains the sizes of the figures).

5) Figure 1: B1-B4 stand for the location of the boreholes.

Figure 2: the date of the photograph is mentioned earlier, 1950s when the railway was built.

In Figure 5, what was intended to be shown, was the deformation of the structure towards the façade seen in the picture (South façade).

Figure 7-8, the tables were embedded inside to provide a clearer view about what we wanted to emphasize (stress distribution in Fig 7 and 5 modes in Fig 8)

Furthermore, the comparison of the modes in Fig 8, can be clearer with the tables together, as from the picture obtained from SAP2000 it may not be clearly seen.

Color scale in Fig 7 measures the stresses. It has been extracted from SAP2000. However, the tables embedded in the figure provide a better overview.

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