

## **STUDY OF POST-SUBSIDENCE DEFORMATIONS IN LOESS SOILS UNDER EXTERNAL INFLUENCE**

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Within the boundaries of the city of Tashkent thick loess strata with hydroconsolidation properties represent potential danger for buildings constructed on these ground foundations. Development of subsiding deformations in soils is connected with moistening process, static pressure and dynamic (seismic or technological) excitation. The subsiding process resulting from moistening of loess soils causes deformations less than full potential subsidence value. Non-realized part of deformation could be realized as a result of different external influence. To reveal a correlation between subsidence and additional settling deformations we conducted experiments using compression devices, providing permanent moistening of loess samples for the period of 150 days and considering two levels of static vertical pressure 0.1 MPa and 0.3 MPa. Under pressure 0.3 MPa the specific value of subsidence for the loess samples taken from the depth of 2 m was equal to 21% and additional settling was 1%. Under the pressure 0.1 MPa they were 10% and 2% correspondingly. For the samples taken from the depth of 5 m: under pressure 0.3 MPa – 16% and 1%, under pressure 0.1 MPa – 9% and 3%. So, it was concluded that loess soils of Tashkent complex have abilities of post-subsidence consolidation in case of moistening. And the value of additional settling is inversely proportional to the static pressure. In case of cyclic dynamic excitation post-subsidence deformations take place under moisture content 18-25% and frequency 12.8 Hz. Though under these conditions the specific value of vibrational settling was small. Increase in intensity of vibration leads to growth of deformations.