

## Assessment of slope stability (on the example of Jalal-Abad in the area of Khamza street)

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**Abstract:** In this paper, we present the results of an engineering and geological survey to assess the stability of a slope in the area of Khamza street in the city of Jalal-Abad. The climatic characteristics were given from the data of long-term observations at the "Jalalabad" meteorological station. Geological, hydrogeological, geomorphological and tectonic conditions of the terrain are given. The seismicity of the area is estimated by the initial score 9. The physical and mechanical properties of soils have been determined as a result of the laboratory processing of field and laboratory materials, and in accordance with GOST 20522-75 and GOST 25100-95, two engineering-geological elements (IGE) were identified in the studied area: IGE-1: Loess loam, light brown, mostly solid and semi-solid. Density of loamy soils with depth sustained, deviations insignificant. IGE-2: Conglomerate gray, strong, slightly cracked, from the surface is exposed to weathering. The rock density is:  $p = 2.2 - 2.4 \text{ t/m}^3$ .

As a result of the research, the following conclusions were obtained:

1. Currently landslide processes of threatening sizes and volumes on the slope are not observed. The calculations of the coefficient of stability allow us to confirm the stable state of the soil mass of the constituent slope for the period of research. With the value of the coefficient of stability  $K_{st} \geq 1$ , the array is fairly stable.
2. Absence of cracks in subsidence, precursors of possible or expected landslide processes, also points to the stability of the slope at a given time.
3. In the case of precipitation of abnormally abundant precipitation and, as a consequence, wetting of the entire mass of loamy strata, especially in the plantar part, to the soft and flowing-plastic state, deformation processes associated with subsidence of loess-like loams in the upper part of the slope where their thickness is greatest are possible.

**Keywords:** landslide, stability, engineering-geological conditions, coefficient of stability.

## REFERENCES

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