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GEOTECHNICAL RESEARCHES AND REHABILITATION OF THE LANDSLIDE AT THE BANJA LUKA – ALEKSIĆI MAIN ROAD

1,3 cm

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REZIME

Na regionalnom putu Banja Luka – Aleksići, neadekvatnim građevinskim radovima izvođenim na padini, inicirano je klizište. Klizanjem terena oštećen je put te je ugrožena sigurnost učesnika u saobraćaju. Izvršena su geotehnička istraživanja, utvrđeni detaljni geološki odnosi na terenu, definisani uzroci klizanja, dubine pokrenutih masa i urađen projekat sanacije na osnovu koga su izvedeni sanacioni zahvati. Rezultati istraživanja, vrste i dinamika izvođenja sanacionih mjera prikazani su u radu.

Ključne riječi: *klizište, geotehnička istraživanja, sanacija klizišta*

2,5 cm

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ABSTRACT

At Banja Luka – Aleksici main road the landslide occurred due to the inadequate construction works at the slope. The landslide caused the road damage, so the traffic participants safety is endangered. Geotechnical researches are conducted, detailed geological relations in terrain were established, sliding causes defined, depth of moved matters and the Project for rehabilitation is developed, on which basis the rehabilitation was conducted. Results of researches, type and dynamic of rehabilitation measures are shown in the paper.

Key words: *landslide, geotechnical researches, landslide rehabilitation*

INTRODUCTION

Due to the conduction of certain construction works at the private property, there was somebalance disturbance of the natural terrain state at Banja Luka – Aleksici main road, and

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Tabela 1. Ulazni podaci modedla kvaliteta vode
Table 1. Water quality model input data

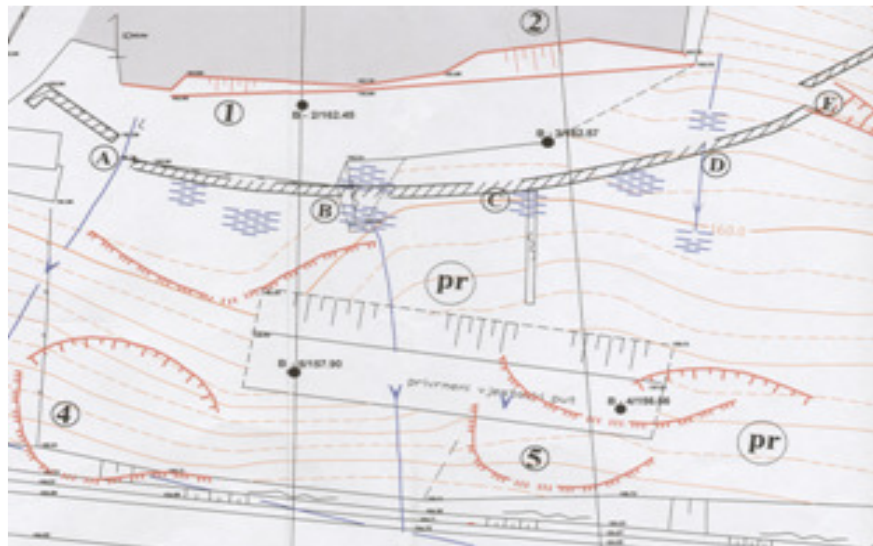| Parameter (mg/l)	Sava	Bosna River	Neretva	Vrbas
NH_4^+	0,096	0,072	0,061	0,087
NO_3^-	????			
PO_4		?????		
O_2			?????	
CO_2				??????

Presentation of the mentioned flows surface qualities was done in accordance with the hydrological data from the year 2007. Measurements were conducted four time a year, with the special attention paid to the results analysis during the period of minimum and maximum waters. Obtained………………..

CREATED CONDITIONS IN THE FIELD

Completing the construction of the support walls which used to connect the edge parts, and the final terrain backfilling represents the second phase of the works. The backfilled material and the support wall are covered by the humus and grass. Few months later, the landslide got activated, covering the surface of around 2 500 m^2. The sliding depth in the central part is around 6,0 m from the terrain surface, and the mass of around 12 000 m^3 is moved, Figure 1. At the landslide surface, the groundwater appeared at the several spots, which was drained by underground drainages.

Slika 1. Prostorni položaj klizišta prije sanacionih mjera
Figuire 1 Spatial location of landslide before the rehabilitation measures

In the aim of protecting the main road against the soil mass movements, reducin the buerden of the slope was conducted, by removing earlier backfilled material which started moving. Surface waters were drained to the edge channel, Figure 5, so the ………………………