

Site: INCREASE OF THE HYDRAULIC CONDUCTIVITY OF R. TSAPAREVSKA ON THE TERRITORY OF THE VILLAGE OF MIKREVO, MUNICIPALITY. FLOWED THROUGH INNOVATIVE WATER MANAGEMENT METHODS (GEOCELLS) ",

Phase: WD, Amendment under Art. 154 according to the Spatial Development Act

Part: FIRE SAFETY

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WORKING DESIGN

Amendment under Art. 154 according to the Spatial Development Act

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TSAPAREVSKA ON THE TERRITORY OF THE VILLAGE OF
MIKREVO, MUNICIPALITY. FLOWED BY INNOVATIVE METHODS
FOR WATER MANAGEMENT (GEOCELLS)"**

ASSIGNOR: MUNICIPALITY OF STRUMYANI

CONTRACTOR: GEOCONSTRUKT LTD.

PART: FIRE SAFETY

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1. Introduction

The present Part "Fire safety" of the project for site: "Increasing the hydraulic conductivity of the Tsaparevska River in the village of Mikrevo, municipality. Streamed through innovative methods for water management (geocells) “/ phase” working design, Amendment under Art. 154 according to the Spatial Development Act ”/ has been developed according to the requirements of Ordinance 3 Iz-1971 of 29.10. 2009 for construction and technical rules and norms for ensuring fire safety.

The present development refers to the possibility of two-phase implementation of the project, as provided in the hydraulic and structural part.

The site is of I-st category according to art. 137 of the Spatial Development Act and Ordinance №1, Art. 2, para. 7

2. Project volume planning indicators

The section provided for strengthening the bed of the Tsaparevska River is located within the village of Mikrevo, Strumyani municipality. The main activities planned for implementation during the construction of the fortified section are:

➤ Soft measures

- Cleaning and deepening of the bottom;
- Forming slopes;
- Construction of protective dikes in separate sections

➤ Force measures

- Laying flexible systems to strengthen the riverbed -
- geocells with height $h = 10.0$ cm;
- Fixing of the geocells with rigid J-shaped anchors N14 and polypropylene ropes ($N > 0.9\text{kN}$) to the slopes;
- Filling the geocells with concrete C16 / 20 to 1/2 of the height of the slopes;
- Subsequent filling of the free section of the geocells with earth-rock material from the excavation activities;
- Laying a clay seal with a thickness of $d = 5\text{cm}$;
- Execution of hydroseeding on the slopes;

Access to the construction site is provided for the firefighting equipment and the fire protection teams through the existing road connections in the village of Mikrevo.

3. Passive fire safety measures

Distances to neighboring buildings and facilities - on both sides of the riverbed there are economic roads, and at a distance of 10 m from the shores there are no buildings.

The correction section has access from the economic roads along the river. For access inside the corrected section, the construction of 8 suitable temporary roads every 150 m is envisaged.

Distances of the construction to buildings, above-ground and underground engineering wires - along the route of the wall 10 m from the river banks there are no buildings and inadmissible engineering infrastructure and the route does not border with engineering wires, which are inadmissible.

3.1. Evacuation parameters

The project aims to increase the conductivity of the riverbed in the project area and prevent flooding of the surrounding terrain. The requirements for providing conditions for evacuation are not applicable to it, according to Chapter Seven "Evacuation of people from buildings and premises in case of fire or accident".

The design events do not change the technical parameters of the existing evacuation exits and roads of the surrounding buildings and facilities.

3.2. Interior planning / fire barriers

The requirements for formation of fire zones and fire sectors and provision of fire barriers are not applicable for the site.

3.3. General planning

The designed site is for the purpose of conducting water quantities. There are no applicable fire safety requirements for the distances to neighboring buildings and facilities. The route of the river adheres to its existing contours.

The construction of the corrective measures does not limit the existing highways, which serve for access of PP Automobili to the neighboring buildings and facilities.

The existing municipal network is preserved and can subsequently be used for the passage of fire trucks.

3.4 Functional fire hazard class

According to the criteria set out in Table 1 and Table 2 to Art. 8 of Ordinance 3 Iz-1971 of 29.10. In 2009, the construction was classified as a production site of class FPO F5.1 and KPO F5D - transportation of non-combustible liquid - water.

3.5. Degree of fire resistance

The requirements regarding the degree of fire resistance are not applicable for the corrective activities - they are characteristics of buildings and facilities with different from the design purpose. The construction aims to conduct non-combustible liquid and there are no specific regulatory requirements for fire resistance.

3.6. Fire reaction classes of products

The ordinance does not specify requirements regarding the classes of reaction to fire of the products necessary for the construction of the corrected riverbed. The construction and installation activities in the main part envisage the implementation of earth embankments, concrete and works on laying geocells (polymer alloy). The use of the river to provide water for firefighting is not envisaged.

4. Active fire safety measures

This documentation provides for active fire safety measures during construction, namely:

According to Appendix 2 to Art. 3, para 2 item 97 (a) of "Ordinance 1h-1971 of October 29, 2009. (amended and supplemented, SG No. 75/2013 of 27 August 2013) for construction-technical rules and norms for ensuring fire safety "for construction sites, area of the construction site / p. 285 / the following types of portable fire extinguishers are required:

- powder fire extinguisher 1ABS - 6 kg
- water-based fire extinguisher with a capacity of 9 l

In order to ensure constant emergency preparedness for the implementation of the measures for assimilation and maintenance of the plan, the technical manager / responsible manager is responsible for:

1. In prominent places on the construction site to place signs with:

- the telephone number of the PAB service;

- the address and telephone number of the local medical service

- the address and telephone number of the local rescue service / civil protection /

2. Flammable materials and flammable liquids to be stored on the construction site in premises and warehouses that meet the regulatory requirements for PAB.

3. Installation of the fire panel and provision of portable sets according to the instructions in PBZ and its equipment with hand-held devices and equipment, which according to the normative requirements are as follows:

1/ For the area of the construction site (the route of the facilities) - for every 500 m²

- powder fire extinguisher 1ABS - 6 kg

- water-based fire extinguisher with a capacity of 9 l

2 / On the sites for storage of materials - for every 500 m²

- powder fire extinguisher 1ABS - 6 kg

- water-based fire extinguisher with a capacity of 9 l

3 / For each van and / or temporary offices

- powder fire extinguisher 1ABS - 6 kg

- water-based fire extinguisher with a capacity of 9 l

The fire-fighting means are placed in convenient for use places on the construction site and the construction site, are maintained in constant technical condition and are subject to current control for serviceability, for which the technical manager and the persons appointed by him, to whom the equipment is assigned, are responsible.

4.1. Volume planning and functional indicators for fire extinguishing installations application №1 - not required;

4.2. Volume planning and functional indicators for fire alarm systems application №1 - not required;

4.3. Volume planning and functional indicators for public address installations for sites subject to sound - not required;

4.4. Smoke and heat extraction systems and emergency ventilation - not required;

4.5. Functional indicators for water supply for firefighting - not required;

4.6. Functional indicators for portable devices and equipment for initial fire extinguishing according to Annex №2;

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- 2 powder fire extinguishers 6 kg and 12 kg with powder class ABC for vans -

fire panel next to the vans.

4.7. Specifications of construction products, structural elements and elements of installations with their technical characteristics related to fire safety - the materials are in accordance with the approved standards

In accordance with the normative requirements, the project does not envisage passive and active fire safety measures for the construction, which would require graphic presentation.

Developed by:

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