Terms of Reference for the rehabilitation works of Grmagele-Vazisubani tunnel

Introduction

The tunnel of Grmagele-Vazisubani is one of the important parts of Tbilisi's water supply system. It supplies part of Nadzaladevi, Chugureti and Isani districts with drinking water. The water supply area of the tunnel includes 70,000 customers. Its construction was carried out in the 1980s after the construction of the Grmagele water treatment plant.

Description of the Tunnel

The construction of the tunnel is carried out with both pipelines and reinforced concrete construction. The total length of the tunnel is 13500 meters. It will flow to the territories belonging to the population in the residential areas mentioned above.

At this stage, there are water leaks on the damaged section of the tunnel, which harms the population living near the tunnel. There are also potable water losses.

The tunnel is located at a depth of 10 meters, which does not allow it to be excavated and repaired in an open manner. The goal of the project is to rehabilitate the damaged section of the tunnel using a closed method.

Site visit

Site visit could be granted during the tender process before the deadline for submission of bids. For this purpose, the requests to access the site should be sent electronically to the following emails: nkoberidze@gwp.ge no later than 5 days before the deadline for submission of bids.

Works to be performed and other relevant aspects:

The rehabilitation project includes the rehabilitation of the reinforced concrete tunnel, which is 1662 meters’ long. The area to be rehabilitated located at the last sections of the tunnel at the pk 0+00 to pk 16+26.

The diameters, entrance and other relevant drawings are presented in attached file (Drawings.pdf).

Since the water supply area of the tunnel is quite large, its rehabilitation works should be carried out in the shortest possible time. Rehabilitation works should start on September 15 and should be completed no later than December 8.

The materials used during the rehabilitation of the tunnel must comply with drinking water requirements, which needs to be confirmed by the respective certificates and laboratory’s tests.

There will be only one entrance to the tunnel, if necessary, it is possible to arrange a second entrance as well, if the works could not be conducted otherwise. The point of the additional entrance is located in is located in the territory of a private resident. Accordingly, obtaining permits is the contractor's obligation.

All available photo and video material is attached to tender documentation and is presented in separate annex.

The conditions to be foreseen during the works:

Electricity is not presented in tunnel and should be arranged by the bidder for the implementation of works (lighting, voltage source, ventilation, etc.,)

The fuel engines could not be used due to the HSE and engines working on electricity power could be used.

The non-complete dry conditions of the tunnel must be taken in consideration. Therefore, proposed methodology must be compatible with non-complete dry conditions, as there are leakages and the areas were the water could not be pumped out.

All HS measures must be arranged by the bidder. The ventilation and blowers are need to be foreseen during the works.

It is important than methodology, time schedule of implementation, project design should be agreed with the Employer.

The bidders have to present the work production plan-schedule and also the work production methodology. The specifications of the materials to be used are also presented. Alternative methodologies such as spiral wound, shock concrete, segments shield, internal lining, etc, are welcome.

**The assessment of the bids will be done based on following criteria:**

1. Time schedule, priority will be given to the shortest implementation period.

2. Financial Proposal.

3. Methodology proposed should comply with the following requirements:

a. should increase structural strength of the installation and solve the leakage problem;

b. suitable for the potable water supply;

c. life span or durability of the proposed works;

d. warranty period;

e. possibility of working in non-complete dry conditions;

4. Experience of the bidder in conducting the similar works by means of methods (not open) of rehabilitation of underground wet utilities.