Scope of Works

Rehabilitation of Sewer Lines on Tripoli-Benghazi Road and Al Net Road, Ajdabia, Libya

1. Introduction:

This project title is Replacement of Defected Sewer Lines in Ajdabia City.

- a. Replacement of Sewer Line of Tripoli-Benghazi Road in Ajdabia, Libya
- b. Replacement of Sewer Line of Al Net Road in Ajdabia, Libya

2. Background:

Due to the fact that Ajdabia sewer line network has been designed and built in mid-eighties of the previous century and due to the rapid increase of the population in the city, there are so many lines that suffers from severe clogging and broken portions which leads to flooding of sewage water from the closest manhole backwards the flow line. This sewage water flooding leads accommodation sewerage water including the sludge on the streets' surface which is a healthy and environmental hazard.

The targeted sewer lines are two lines, the first line, 200 mm diameter, intersects with the main street, King Idris Road, and luckily the we are targeting the beginning of the line in terms of the need to less vacuum work however, the road need to be 75-80 % blocked during the construction period and as a result, we'll be having a traffic issue which makes it very essential to get the work done as soon as possible. One more challenge is the 600 mm Great Man Made River water line and Fiber optic line that runs over the targeted line. This would lead us to excavate manually to avoid harming the service lines of water, electrical and telecommunication.

The second line, 200 mm diameter, lays in the service road parallel to Benghazi- Tripoli highway. The line serves around 200 houses and usually gets blocked twice a week with visible leakages unless the municipality vacuum truck intervenes. There is no data on the buried service lines beneath that road which is a challenge however; working on this line is much easier comparing to the first one from a traffic point of view

Approximate location of the two lines are $(30^{\circ} 45' 29.8152'' \text{ N} \text{ and } 20^{\circ} 13' 20.3304'' \text{ E})$ and $(30^{\circ} 45' 20.8656'' \text{ N} \text{ and } 20^{\circ} 12' 49.7664'' \text{ E})$ respectively.

Aerial Photo for Ajdabia City:





3. Required works:

Both Sewer lines located under existing asphalt road, to replace mentioned Pipes the asphalt need to be cut and the area need to be excavated to reach the targeted sewer lines. Following the excavation and dismantling of the old line works, trench bed need to be adjusted and leveled to receive the new HDPE pipe with the same diameter (200 mm), concrete surrounding need to be executed on both ends of the line (entrance to manhole), the newly installed pipe need to be sand-bedded with clear sand and backfilled with sand up to 300 mm above its crown. Following that, backfilling with selected material and very good compaction need to be done on layers not exceeding 300 mm to reach the road sub-grade level. Work need to be continued to execute the sub-grade and sub-base layers of the road and re-asphalting works.

Below are the important and summary of the required works, for more detail refer to BOQ, the work shall include but not limited to the following:-

- A Asphalt Cutting
- B Excavation
- C- Dismantling of existing pipe
- D- Trench bottom adjustment
- E New pipe installation and bedding
- F- Testing
- G -Backfilling
- H- Re-asphalting works

The offeror shall make his own inquiries and satisfy himself that the position, size, shape, method of works, color and usage of temporary buildings and facilities is compatible with all local and national requirements and laws.

All temporary buildings and work areas such as site offices, workshops, and stores shall be constructed only in positions approved by the Client.

Excluding any approval given by the Client to the sitting of any temporary building or facility, responsibility for complying with local and national laws remains with the Contractor.

The contractor shall coordinate with the relevant Authorities during the execution of the works and shall comply with the applicable Regulations and Standards including site specific risk assessment and traffic management plan for the worksite.

The Contractor should provide warning signs and advisory speed signs to inform drivers of the nature of a hazard they are approaching. Ensure that appropriate temporary traffic management is in place. This include, temporary road or lane closures, speed restrictions, etc.