1. INTRODUCTION:

The Episcopal University (TEU) of South Sudan has undertaken the mandate to carry out some surveying activities to facilitate architectural designs of the University campus. The University campus is located in Rokon payam, Juba County of Central Equatoria state, 75 Kilometers west of Juba city. Therefore, to facilitate these architectural designs, topographical and hydro-geophysical surveys were necessary to undertake to understand the topography and hydro-physical features of the land in order to accomplish this project.

2. PROCUREMENT PROCESS

We contacted three companies to help us with this work. These companies are EMOZ INVESTMENTS LTD, TEFCO CO LTD, and UNIVERSIAL ENGINEERS LTD. We did all the scrutiny and vetting look at the quality of their previous works and recommendations. We ended selecting and confirming TEFCO CO LTD because of the quality of their work and recommendations we got from some clients that have used their products. In addition, their price is favorable. Therefore, TEFCO Company limited was offered the contract to provide both topographical and hydrogeophysical surveying services.



3. ACTIVITIES IN THE LAND *a) Reconnaissance Survey*

This task involves extensive study of the project area. An existing cadastral map provided by the state directorate of survey was used to establish existing boundaries of the parcel of land. With the help of the client, natural boundary markers (stream and big trees) were used to identify two corner points along a road.

Building and extending control points

Points within a range of one kilometer apart were set up within the project site. A total of nine (9) other controls points were setup at corner points and at intermediate points of the parcel of land. A30 minutes GPS observations were recorded at these points and the data recorded was submitted for online progress. Nine control points with known coordinates (XYZ) were set up at the project site.

b) Processing of the Control Points Data

The data recorded at each control point was submitted to an online survey processing platform (Trimble post processing service based on RTX technology) thus, Post processing control point reports with Control points of known coordinates (XYZ).

c) Field Detail Picking

With the GPS machine set at an RTK mode, the surveyors picked details of the parcel of land. Features such as spot height at an interval of 25 meters, trees, existing buildings, farmlands, streams and hills among others. Daily data files for excel processing Ongoing TBC.



Survey engineers and TEU staff discussing where to establish control points, while below Bilal and Ajang relax under trees just to rest after long walk inside the frost.







In the above photos the engineers are setting up another point of control and Bilal and engineers inside the car discuss some challenges and what next.





Setting a Control Point 6

4. ACHIEVEMENTS

- a) Existing boundaries of the parcel of land; both existing land boundaries and new parcel boundary maps have been produced.
- b) Two (2) new Primary controls established on site; CP 1 and CP2 control points established.
- c) Nine control points with known coordinates (XYZ) were set up at the project site.
- d) Post processing control point reports with Control points of known coordinates (XYZ).
- e) Daily data files for excel processing is done.

5. CHALLENGES

Logistic was a problem; we borrowed a car from the Education Department at the Province, as our old car is dead. But we got a nasty accident within Rokon town, the fuel tank fell off from the car, however we thank God no staff was injured.





The photos above show the tank and where it came off.

At the beginning we were worried about the security along Juba-Rokon road and it was hard for us to start going for the survey task. However, after proper consult with the local from Rokon and having chat to those responsible for security in the area we are assured of safe travels. Also we are thankful of the local administration and the army in Rokon. They provided us with proper security.

6. HUMAN RESOURCE.

a) TEU Team

- 1. The following are the TEU team who travelled to Rokon:
- 2. Joseph Bilal-Duty Vise Chancellor
- 3. Joseph Ajang-Academic Secretary (Ajang did not travel on the second trip)
- 4. Alur Vicky- Finance Manager (she joined on the second trip)
- 5. Florence Joggo Admin and logistics officer
- 6. Abraham Kur Driver

b) Government Team

1. Eng. Silva Clark Amozia (Ministry of Physical Infrastructure Central Equatorai State. He travelled on the second trip to Rokon)

c) Team TEFCO

- 2. Mr. Kunduma Lamton Lead Land Surveyor TEFCO
- 3. Mr. Wandera David Surveyor TEFCO
- 4. Mr. Kanyike Keron Assistant Surveyor TEFCO
- 5. Mr. Ssebina Daniel Assistant Surveyor TEFCO
- 6. Mr. Simon Loboi Deriver

7. ACTION PLAN

- 1. TEU will be receiving detailed report from TEFCO in the first or second week of May 2021.
- 2. TEU will analyse the report before sharing it with the stakeholders.
- 3. TEU will ask TEFCO to make presentation to the Archbishop and Primate and other stakeholders of the University.
- 4. TEU will share the report with ECSSSUP and EMI.
- **5.** TEU will visit EMI offices in Uganda in May 2021 to kick-start the work of Architectural Design and agree when to receive the drawings.

8. CONCLUSION

The topography and hydro-geophysical survey went on well as planned. The work is now completed and TEU is waiting report from the TEFCO Company. It will ask TEFCO to make presentation to the stakeholders. The report will be shared with TEU Trustees in South Sudan and our partners in the UK.