REPUBLIQUE DU CAMEROUN
Paix – Travail – Patrie

MINISTERE DES TRAVAUX PUBLICS

REPUBLIC OF CAMEROON
Peace – Work – Fatherland

MINISTRY OF PUBLIC WORKS

OPEN NATIONAL INVITATION TO TENDER

No 05 /AONO/MINTP/CMPM/2017 of 02 FEV 2017 for the supply of topographical and geotechnical equipment to the Directorate General for Technical Studies of the Ministry of Public Works.
Financing: MINTP PIB for the 2017 Financial Year, Line: 36 469 05 2274 33 00 125

On behalf of the Republic of Cameroon, the Minister for Public Works, Project Owner, hereby issues an Open National Invitation to Tender for the above services.

1. Object:

The services concern the the equipment of the Directorate General for Technical Studies of the Ministry of Public Works with topographical and geotechnical equipment.

2. Scope of works:

The contractor shall provide the following equipment:

TOPOGRAPHICAL EQUIPMENT	
DESCRIPTION	**CHARACTERISTICS**
GPS bi-frequency couple Receptor	- **Measurement** (R-Track technologies, Advanced Maxwell GNSS Processor 6 Custom Survey with 220 channels and high precision multiple Correlator for GNSS pseudodistance measurement, very low sound Measurements of the carrier phase on GNSS with <1 mm precision in a 1 Hz band width, signal/noise Reports in dB-Hz) - Positioning by code difference (Horizontal 0,25 m + 1 ppm RMS, Vertical 0,50 m + 1 ppm RMS, positioning Precision, WAAS2 differential Generally <5 m 3DRMS) - Static and rapide Static GPS Topography (Horizontal 3 mm + 0,1 ppm RMS and Vertical 3,5 mm + 0,4 ppm RMS) - **Cinematic topography** (Horizontal 10 mm + 1 ppm RMS, Vertical 20 mm + 1 ppm RMS, Initialization timeframe Generally <10 s, Initialization Viability Generally >99,9%) - Physical equipment Dimensions (l×H) 19 cm × 11,2 cm, including connectors, Weight 1,34 kg with in-built battery, in-built radio, standard3,71 kg UHF antenna for the complte RTK mobile, batteries, blowpipe, controller and starter, Temperature (of usage –40 °C to +65 °C of storage –40 °C à +75 °C), Humidity 100%, with condensation, Water tightness / protection against dust IP67 dust proof, protected against temporary immersion of 1 m deep Chocs and vibrations Tested and compliant with the following environmental standards : controlled Chocs : Designed to resist a blowpipe fall of 2 meters on concrete : at 40 G, 10 msec, with uneven MIL-STD-810F, FIG 514 5C-1 Vibrations - **Electricity supply** (supplier with 11 to 28 V c.c. in-build supply and protection against overvoltages on the 1 (Lemo 7-broches) port, rechargeable and detachable Battery of 7,4 V, 2,4 Ah lithium-ion in an in-build battery compartment electricity Consumption 3,2 W in RTK mobile mode with in-build radio Autonomy with in-build battery: in reception alone at 450 MHz 5 8 hours, in reception/emission at 450 MHz 3 7 hours, in GSM/GPRS mode at 4 1 hours Certified class B parties 15, 22, 24 FCC, 850/1900 MHz. Class 10 module GSM/GPRS Homologation CE and C-tick **- Data communication and storage** • 3 wires series (Lemo 7 brooches) on 1. RS-232 port integral series on 2 (D-sub 9 brooches) port

<table>
<tr><td></td><td>• In-built option totally integrated, totally integrated water-tight 450 MHz receptor/transmiter: Transmission power : 0,5 W, Portée6 : generally 3 to 5 km / optimal 10 km
• In-built GSM/GPRS totally integrated, totally integrated water-tight
• Communication Port of 2,4 GHz totally integrated, totally integrated water-tight (Bluetooth®)
• Consideration of in-built cellular telephone for GSM/ GPRS/CDPD modems for the execution of RTK and VRS operations
• Data storage on the in-built memory of 57 Mo : 40,7 days of brut observations (about 1,4 Mo/day) on the basis of a recording every 15 secondes from an average of 14 satellites
• Positioning 1 Hz, 2 Hz, 5 Hz, 10 Hz and 20 Hz
• Inputs and outputs CMR+, RTCM 2 1, RTCM 2 3, RTCM 3 0, RTCM 3 1
• 16 NMEA outputs. GSOF and RT17 outputs. Compatible BINEX and smooth carrier</td></tr>
<tr><td>Heavy metallic tripods lourds for GPS receptors</td><td><u>Double tightening metallic tripods</u> :
1.83 m telescopic tripods</td></tr>
<tr><td>Total station</td><td>
<table>
<tr><td colspan="2">Angle of measurement (Hz, V)</td></tr>
<tr><td>precision (standard-distance ISO-17123-3)</td><td>1 "/2 "/3 "/5 "/7 "</td></tr>
<tr><td>Method</td><td>absolute, continuous, diametrical, for all models</td></tr>
<tr><td>Resolution posting</td><td>0.1 "/0.1 mgon/0.01 mil</td></tr>
<tr><td>Compensation</td><td>Quadruple axis remuneration, for all models</td></tr>
<tr><td>compensator adjustment precision</td><td>0.5 "/0.5 "/1 "/1.5 "/2 "</td></tr>
<tr><td colspan="2">Distance measurement with reflector</td></tr>
<tr><td>leica GPR1 Round prism scale</td><td>3,500 m</td></tr>
<tr><td>Reflecting band scale (60x60mm)</td><td>> 500 m/> 1000 m</td></tr>
<tr><td>Precision</td><td>précis +: 1.5mm + 2.0 ppm ; Rapide: 2.0mm + 2.0 ppm ; 3.0mm + 2.0 ppm</td></tr>
<tr><td colspan="2">Distance measurement without reflector</td></tr>
<tr><td>R500/R1000 Identifier scale</td><td>> 500 m/> 1000 M</td></tr>
<tr><td>Precision</td><td>2mm + 2ppm</td></tr>
<tr><td>Hight point Laser</td><td>30 m: env. 7x10mm ; 50 m: about. 8x20mm</td></tr>
<tr><td colspan="2">Data storage/communication</td></tr>
<tr><td rowspan="2">In-built memory</td><td>Max: 100000 fixpoints,</td></tr>
<tr><td>Max: 60000 measurements</td></tr>
<tr><td>Interfaces</td><td>-series (Transmission speed up to 115'200)
-USB Type A and mini B,
-Bluetooth ® Sans Fil, class 1,150 m
-> 1000 m (with TCPS29)</td></tr>
<tr><td>Data formats</td><td>GSI/DXF/Earth XML/CSV/definissable by users of ASC formats</td></tr>
<tr><td colspan="2">Telescope</td></tr>
<tr><td>Enlargement</td><td>30X</td></tr>
<tr><td>Resolution power</td><td>3 "</td></tr>
<tr><td>Vision field</td><td>1 " 30' (1.66 gon)/2.7 m à 100 m</td></tr>
</table>
</td></tr>
</table>

	Setting platform	1.7 m à l'infini
	Reticule	luminous, 10 level of luminosity
	Keyboard and posting	
	Affichage	haute résolution Noir & Blanc affichage, graphiques, 16(pixels, affichage lumineux, 5 niveaux de luminosité
	Clavier	simplicité clavier/Alpha-numérique clavier (en option)
	Exploitation systeme	
	Windows CE	5.0 Core
	Laser plomb	
	Type	Laster point, 5 levels of luminosity
	precision centering	1.5mm to 1.5 m hight instrument
	Battery	
	Type	to lithium-ion
	Functioning time	about 30 hours
	Weight	
	total station with GEB211 and	5.1 kg embase
	Environnement	
	Temperature (Functioning)	arctique version-35oC to 50oC (-31oF à + ° f)
	Dust and splashes (IEC 60529)	IP55
	Humidity	95%, without condensation
	Leica Flexfield on card software	
	Application programmes	inquiry; Jalonner; Station Setup
		including: Resection, Resection locale, Helmert Resection, Ori
		(Angles et Coordonnées), Hauteur Transfert; Zone (Plan et Sur
		DTM Volume calcul; Cravate Distance (MLM); Hauteur À Di Caché
		Point; Backsight Vérifier; Offset; b) Ligne
Blowpipe for reflecteur	2,15 m GLS11 Telescopi blowpipe	
Post treatment software for GNSS (Trimble Bussiness Center) data	• Support for SX10 with new and improved scanning workflows • Support for 3rd party Total Station, RTK and UAS data for full survey data integration • Customized reporting for more project flexibility, communication and automation • Workflows supporting more survey data flexibility through ability to insert grid points • CAD and Drafting enhancements including COGO creation tools and misclosure reports • The optional Scanning Module adds point cloud registration and automation workflows o Point cloud Registration, Refinement and Georeferencing • Automatic classification and ground extraction • Point Cloud Sampling o Converting Scan points to CAD points o Virtual DR	
COVADIS 2015 (Topography and Infrastructure) as	The topography and Infrastructure software– VRD (Urban development and road network, road Infrastructures, topography and earthworks)	

well as the 2015 autopist and Autocad	
Tactile lapto computer specialized in the treatment of images (cor I7)	Ram 12 Go, a tera of hardware, graphical card of at least 2 Go, frequency of 3 Giga hertz

GEOTECIINICAL EQUIPMENT	
DESCRIPTIONS	**CHARACTERISTICS**
Complete manual ground auger kit	Complete kit for sampling using ground auger in heterogenous soils up to 5 m deep, supplied complete with aluminium transportation cassing)
Light Dynamic Penetrometer of variable energy for the control of compaction and reconnaissance of soils	A watertight suitecase ; 1 dialogue Terminal ; 1 sector Block ; 1 series liaison Cord; 1 crushing measurement Base ; 1 head impression ; 1 battery Charger ; 1 anti-rebound hammer; 10 rods of 50 cm ; 2 nail carriers ; 6 fix nails of 2 cm^2 ; 10 lost nails of 4 cm^2 ; 1 rod remover.
Complete Œdometer	- STEEL BENCH to attach 1 to 3 œdometers. - 50Kg WEIGHT SERIES comprising:4 x 10 kg ; 1 x 5 kg ; 2 x 2 kg ; 1 x 1 kg. - DIGITALIZED OEDOMETERE with electronic displacement recorder for the transfer and exploitation of data on an acquisition plant. -8 CHANNEL PLAN 8 CHANNEL acquisition plant – operated by microprocessor LCD, QVGA colour screen (320x240 pixels) Equiped with connector cables:1 x SD carrd ; 2 x USB Frequency : +200 Hz for the 8 channels Ø71.4MM OEDOMETRIC UNIT Fix ring œdometric unit. Surface 40 cm^2
Complete Blue test device	1 15-2000 tr/min speed blade Agitator with stative (pre-setting at 400, 600 or 700 trs/min) ; 1 Burette 50 cm^3 to 0,1 cm^3 with support and pliers ; 3 packets of 100 filters diameter 90 mm ; 1 Ø8×300 mm glass casing, 1 3000 ml and 2000 ml graduated digger, 1 150x150 mm square plastic trough.
Triaxial testing device	Motorized cutting device to carry out cutting tests on intact or revised samples. Controlled by microprocessors with digital reading during the testing of the parameters sellected from the menu. Continuous adjustable speed 0,0001 à 9,9999 mm/min. RS 232 Port for PC connection. supplied complete with : - weight set of 50 Kg demultiplicator system at lever hand of 10:1(eg : capable of exercising pressures on the sample of 1 to 4 bars for 60 mm or100 mm unit) - 3 KN dynamometric ring supplied with calibration certificate - 2 comparators of (25x0.01mm, 10x0.01mm) for horizontal and vertical movement - Ø50 mm cutting box - Ø50 pourous set of stones - Ø50mm shearing kit - expulsion stamp

3. Eligibility:

Participation in this tender shall be open to all Cameroon law-abiding contractors having the competences and experience relevant in the domain.

4. Financing:

Works under this tender shall be financed by the budget of the Ministry of Public Works for the 2017 Financial Year. The estimated cost shall stand at **two hundred million (200 000 000) CFA F.**

5. Timeframe:

The supply timeframe shall be sixty (60) calendar days, with effect from the date of notification of the Notice to Proceed.

6. Contracting authority:

After the evaluation of offers, the contract shall be signed between the Minister for Public Works, Project Owner, and the successful tenderer.

7. Provisional guarantee :

Tenders shall include a provisional guarantee (bid bond), issued in keeping with the tender model by a first class banking institution (list in the attachment) approved by the Minister in charge of finance. The amount of the guarantee shall stand at **four million (4 000 000) CFA F** and valid for a period of ninety (90) days.

The absence of the provisional guarantee or its non compliance with the tender model shall lead to rejection of the tender.

The provisional guarantees of unsuccessful tenderers shall be released at most thirty (30) days with effect from the expiration of the tender validity. That of the successful tenderer shall be released after the constitution of the definitive guarantee.

8. Consultation of tender documents:

The tender documents may be consulted at the MINTP Sub-Department of Public Contracts, Tenders Service, tel: 222 23 14 22, situated in Block G by the Yaounde Municipal Lake.

9. Acquisition of tender documents:

The tender documents may be obtained at the MINTP Sub-Department of Public Contracts, Tenders Service (Block G) by the Yaounde Municipal Lake, upon presentation of the receipt of payment into the Public Treasury of a non-refundable fee of **two hundred thousand (200 000) CFA F.**

Such receipt must identify the payer as representing a consulting firm or joint-ventures willing to participate in the tender.

10. Presentation of tenders:

The tender constituent documents shall be presented in the following three volumes enclosed in a sealed envelope as follows:

- Envelope A containing the Administrative documents (Volume 1);
- Envelope B containing the Technical proposal (Volume 2);
- Envelope C containing the Financial offer (Volume 3).

Thus presnted, the three envelopes shall be enclosed in a simple and sealed envelope bearing only the subject of the tender concerned.

The different documents of each tender shall be numbered in the order indicated in the tender file and separated by dividers of the same colour (other than white).

11. Application deadline:

Interested tenderers shall have thirty (30) days to apply, with effect from the date of publication of this tender in the ARMP public contracts journal, the press and on notice boards.

12. Submission of tender:

Drafted in English or French and in **septuplicate (7)** including **one original** and **six (6) copies**, labelled as such, tenders shall be submitted at the MINTP Department of General Affairs, Sub-Department of Public Contracts, Tenders Service, situated in Block G by the Yaounde Municipal Lake no later than 17/03/ 2017 at **1 p.m.** They shall bear the following:

"Open National Invitation to Tender No 05 /AONO/MINTP/CMPM/2017 of 02 FEV 2017 for the supply of topographical and geotechnical equipment to the Directorate General for Technical Studies of the Ministry of Public Works

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To be opened only at the tender-evaluation session."

13. Tender compliance:

Tenders received after the tender-submission deadline and those not respecting the separation mode of the financial offer from the adminitrative documents and the technical proposal shall be rejected.

14. Opening of tenders

The administrative documents, the technical proposals and the financial offers shall be opened on 17/03/ 2017 at 2 p.m, in the meeting room of the MINTP Tenders Board, situated at the Centre Regional Delegation of Public Works.

Only tenderers may attend the opening session or each have themselves represented by only one duly mandated person of their choice with sound knowledge of their file.

15. Evaluation criteria:

15.1 Eliminatory criteria:

1- Non-compliant or incomplete administrative;
2- Non-compliant or incomplete technical and financial files;
3- False declaration or forged documents;
4- Absence of a price sub-detail in the financial offer;
5- Absence of the manufacturer's authorization or approval of his representative;
6- Absence in the permanent staff of a Topographic Engineer (at least the GCE A/Level+3) + 4 years experience and a Geotechnician (at least the GCE A/Level+3) + 4 years experience in the use of topographical and geotechnical equipment respectively;
7- Tenderers financial capacity of less than one hundred million (100 000 000) CFA F;
8- Failure to meet all the equipment technical characteristics as mentioned in point 2 – scope of works;
9- Absence of the tenderer's attestation certifying that he will train, in Cameroon, the staff of the Unit of Metric Systems in the use of the (bi frequency the total station and the software thereto);
10-Failure to meet at least five (5) out of the seven (7) essential criteria.

Only the financial offers of tenderers having met the eliminatory criteria shall be evaluated.

15.2 Essential criteria:

The following essential criteria, whose details are indicated in the evaluation grid, shall be evaluated using the binary mode by attributing to each criterion the positive value (yes) or the negative value (no):

- Presentation out of **1 criterion;**
- Supply planning indicating clairly the period of the execution of the services of article 20 of the CCAP out of **1 criterion;**
- Guarantee out of **1 criterion;**
- After-sales service signed by the tenderer out of **1 criterion;**
- Consultant's references for the past five years out of **3 criteria** (for the supply of the topographic and geotechnical equipment).
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Public Contracts, Tenders Service, tel: 222 23 14 22, located in Block G by the Yaounde Municipal Lake.

The Minister for Public Works
Project Owner

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LE MINISTRE
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Emmanuel NGANOU D.