Terms of Reference (ToR)

GNSS/RTK Surveyor – IDP Relocation Sites (Jowhar, Somalia)

Project: Jowhar Off-Stream Storage Programme (JOSP)
Implementing Partner: Shaqodoon Organization
Location: Jowhar District, Middle Shabelle, Somalia
Sites: Three relocation sites (2 in Naxarow, 1 in Ali Alin), located outside Jowhar town

1. Background

Shaqodoon, in partnership with the International Organization for Migration (IOM) under the JOSP programme, is supporting the relocation of flood-affected and vulnerable communities currently residing along the Sabuni Canal, which is scheduled for rehabilitation by the Food and Agriculture Organization (FAO). As part of this process, communities will be relocated to three (3) planned sites across two different locations—two sites in Naxarow and one in Ali Alin, all situated outside Jowhar town.
The relocation sites have been designed using a Resilience Design (RD) approach, which integrates:

- Climate-resilient settlement planning
- Water and soil management systems
- Livelihood and ecological zoning
- Conflict-sensitive spatial arrangements

These designs have been carefully developed to ensure long-term sustainability, reduced disaster risk, and improved living conditions for relocated households. To ensure accurate and faithful implementation of these georeferenced designs on the ground, a high-precision GNSS/RTK surveyor is required to translate digital spatial plans into precise, on-the-ground layouts

2. Purpose of the Assignment

The primary purpose of this assignment is to support the accurate ground setting-out of RD settlement plans (Attached) using GNSS/RTK equipment with centimeter-level accuracy.
The surveyor will ensure that:

- Settlement layouts are faithfully translated from design to field
- Household plots, infrastructure, and ecological systems are correctly positioned
- Errors during implementation are minimized, avoiding costly rework

3. Scope of Work

Main task	Details

3.1 Pre-Survey Preparation	The surveyor shall: • Review all provided design files, including: CAD drawings KMZ/KML files and Coordinate datasets (EPSG:32638 – UTM Zone 38N) • Confirm alignment between coordinate systems and field equipment • Identify and flag discrepancies, inconsistencies, or missing data prior to field deployment • Prepare survey equipment and data collection templates • prepare metadata list and share for confirmation • share calibration records of the equipment to be used
3.2 Site Reconnaissance	• Conduct joint site visits with shaqodoon technical team • Verify site boundaries and reference points; and existing physical features (vegetation, structures, terrain) • Identify potential constraints such as flood-prone areas, access limitations, soil or terrain challenges • Provide initial feedback before staking begins
3.3 GNSS / RTK Technical Requirements	The surveyor must: • Use RTK-enabled GNSS equipment capable of centimeter-level accuracy • Achieve minimum accuracy standards Horizontal: ≤ 3 cm, Vertical: ≤ 5 cm • Record full metadata for all collected points,
3.4 Setting-Out / Staking	The surveyor will stake out the full site layout, including: • Residential Components: Household plots and boundaries and plot corners and identifiers • Infrastructure: Roads and access paths; and community/public areas (schools, markets, water points where applicable) • Ecological & RD Systems: Bioswales and drainage lines; berms and contour structures; water retention features; livestock areas; and tree planting and green zones
3.5 Marking and Staking Standards	• Use durable and clearly visible stakes suitable for site conditions • Apply wood rods with writing on the right side according to the designated use (using a marker), to be agreed with the RD consultant; for example: residential plots, roads, and ecological systems. • Ensure markings remain visible throughout initial construction phase • Clearly label key points where required
3.6 Verification and Quality Assurance	• Re-check at least 20% of all staked points, randomly selected across all the different designated use • Conduct joint verification with Shaqodoon technical team and RD consultant to correct any deviations immediately • Ensure full alignment with design files before handover

3.7 Implementation Support	• Respond to clarification requests from field teams • Re-stake or adjust points if required due to site realities

4. Deliverables

The surveyor shall submit the following:

1. Fully staked and verified sites (all three sites)
2. CSV file of all surveyed and staked points
3. Updated CAD and GIS files reflecting actual field conditions
4. Raw GNSS/RTK logs and metadata
5. Verification report (including QA checks and corrections made)
6. As-built survey (if required)

5. Coordination and Reporting

The surveyor will work closely with:

- Shaqodoon technical team (primary coordination)
- RDC / Resilience Design technical experts/consultant
- JOSP / IOM engineering and coordination team
- Regular updates and coordination meetings will be required during fieldwork.

6. Timeline

The assignment will be implemented over an initial period of three (3) weeks, with a clear prioritization of critical infrastructure to enable immediate site works, followed by detailed settlement staking. A short follow-up period (as needed) may be required for adjustments and re-staking.

Week	**Scope**

Week 1: Mobilization, Preparation, and Primary Layout Setting	Objective: Enable immediate commencement of earthworks and major site development.
	• Rapid review of all design files (CAD, KMZ, coordinates – EPSG:32638)
	• Confirmation of coordinate system alignment and identification of discrepancies
	• Site reconnaissance across all three locations (Naxarow x2, Cadalow x1)
	• Establishment of control points and GNSS/RTK base setup
	• Priority staking of critical infrastructure:
	  ○ Main access roads and primary pathways
	  ○ Key earthworks (drainage lines, bioswales, berms)
	  ○ Major site boundaries and zoning areas
	• Initial verification of primary layout with Shaqodoon team

Weeks 2–3: Detailed Settlement Staking and	Objective: Complete full settlement demarcation at household and community level. • Detailed GNSS/RTK staking of: ○ Individual household plots and boundaries

Secondary Layout	○ Secondary and tertiary pathways ○ Community/public spaces ○ Livelihood and ecological zones (livestock areas, planting zones, etc.) • Application of marking standards (durable stakes, color coding) • Ongoing coordination with implementation teams to align with construction sequencing • Continuous quality checks during staking
End of Week 3: Verification, QA, and Handover	Objective: Ensure accuracy and readiness for full implementation. • Re-survey and verification of at least 10% of all points • Joint verification exercise with Shaqodoon and partners • Correction of any discrepancies or deviations • Submission of: ○ CSV of surveyed points ○ Updated CAD/GIS files ○ GNSS raw logs and metadata • Final site handover and briefing
Follow-Up – As Needed	Objective: Support implementation phase and address emerging needs. • Re-staking of disturbed or adjusted points • Technical clarification to contractors and field teams • Spot checks to maintain alignment with design

7. Risk Management

The surveyor is expected to:

- Plan for and mitigate risks related to: Security conditions, weather and flooding and equipment failure
- Ensure: Data backup (daily) and redundancy in critical equipment where possible

8. Capacity Building (Preferred)

The surveyor is encouraged to:

- Provide basic training to Shaqodoon/local staff on GNSS/RTK basics and maintenance of markers and reference points
- Support knowledge transfer for sustainability

9. Performance Evaluation Criteria

Performance will be assessed based on the accuracy and precision of staking; alignment with rd design intent; timeliness of delivery; quality of documentation; and level of rework required (should be minimal)

Survey accuracy is critical to ensure fair and conflict-sensitive allocation of plots; enable proper functioning of drainage and ecological systems; and support long-term settlement resilience

10. Required Qualifications

Interested applicants (individual consultants or firms) must demonstrate:

- Proven experience in GNSS/RTK surveying (minimum 3–5 years)
- Experience in: Settlement layout / land subdivision and infrastructure or humanitarian projects (preferred)
- Strong knowledge of UTM coordinate systems (EPSG:32638) and CAD/GIS software
- Access to reliable RTK GNSS equipment
- Experience working in Somalia or similar contexts is an advantage

11. Evaluation and Scoring Criteria

Proposals will be evaluated using a combined technical and financial scoring method, with a total score of 100 points.

A. Technical Evaluation – 70 Points

Only bidders who meet the minimum technical threshold (≥50/70) will proceed to financial evaluation.

Criteria	Description	Max Points
1. Understanding of the Assignment	Demonstrates clear understanding of the ToR, site context (IDP relocation, RD design), and objectives	10
2. Methodology & Workplan	Clear, practical, and well-structured approach aligned with the 3-week phased timeline (prioritizing earthworks first, then detailed staking)	15
3. Relevant Experience	Proven experience in GNSS/RTK surveying, settlement layout, infrastructure staking, or similar assignments	15
4. Team Composition & Qualifications	Qualifications and experience of surveyor(s), including technical expertise in GNSS, GIS, CAD	10
5. Equipment & Technical Capacity	Availability and suitability of GNSS/RTK equipment (cm-level accuracy), software, and data processing tools	10
6. Quality Assurance & Risk Management	Approach to accuracy control, verification (10% re-check), and handling field challenges (security, weather, access)	5
7. Capacity Building (Added Value)	Plan to train Shaqodoon/local staff on GNSS basics and marker maintenance (preferred but not mandatory)	5

B. Financial Evaluation – 30 Points

Financial proposals will be evaluated using a lowest-cost formula, as follows:
Score = (Lowest Evaluated Price ÷ Bidder's Price) × 30

C. Combined Score

Component	Weight
Technical Score	70%
Financial Score	30%
Total	100%

The contract will be awarded to the bidder with the highest combined score, subject to due diligence and compliance with requirements.

12. Application Procedure

Interested and qualified applicants (individual consultants or firms) are invited to submit:

1. Technical Proposal including understanding of the assignment; proposed methodology and workplan and equipment to be used (including their photos) and team composition (if firm)
2. Financial Proposal including detailed budget (daily rates and total cost)
3. Company/Consultant Profile showing relevant experience of at least 2–3 similar assignments
4. CV(s) of Key Personnel
5. References of at least two references from similar work

13. Reference Materials and Design Files

To support proposal development, bidders may request access to the Resilience Design (RD) layout files for the relocation sites. These reference materials include:

- CAD drawings (site layouts)
- KMZ/GIS files
- Coordinate data (EPSG:32638)
- Preliminary settlement and infrastructure plans

Interested bidders can request access by emailing: m.hashi@shaqodoon.org and s.nasir@shaqodoon.org; for technical questions please email to a.bashir@shaqodoon.org or dail 252 906 754 555.

Subject: *Request for RD Design Files – GNSS/RTK Surveyor ToR*

Note: The provided files are for reference purposes only. Final layouts may be subject to minor adjustments during implementation.

14. Submission Details and Deadline

- Submission email: Jobs@shaqodoon.org
- Subject line: *Application – GNSS/RTK Surveyor (Jowhar relocation Sites)*
- Deadline for submission: 7th April 2026, 5:00 PM EAT. Late applications will not be considered.