Specifications & Capabilities of RTK Survey-Grade GPS survey instrument
For IDALS DSCWQ

Equipment for Primary (network capable) RTK GPS outfit. One (1) field-ready outfit shall include, at a minimum, the following:

— GPS/GNSS receiver <u>including at least two (2)</u> removable, rechargeable L-ion batteries

— Data collector/controller tablet device including rechargeable L-ion battery, integral with device, but removable for service

— Data collector software, latest stable version, pre-installed on data collector.

— 2-meter graphite composite pole/rod with removable steel point on standard 5/8"-11 threaded connection

— Cradle or claw attachment appropriately-sized to fit data collector including appropriate clamp for securing it to the pole/rod

— Removable bipod attachment with push-button release each leg, screw clamp opposite (not adjacent) the bipod legs is desirable

— Field-ready accessories package including, at a minimum:

   o Battery charger for receiver batteries including associated cord and/or cable; charger shall accommodate two batteries at one time

   o Battery charger for data collector battery with associated cord and/or cable

   o Topo shoe to be interchangeable with (or that clips onto) steel point for pole

   o External Cellular telephone pocket attachable to pole/rod

   o Hard-shell carry case for GPS/GNSS receiver and data collector.

Minimum Capabilities of GPS/GNSS network rover receiver:

• Must have minimum capabilities exhibited by Carlson BRx7 and compatible with BRx6+ base unit

• Must be capable of Bluetooth connection to data collector

• GNSS Compatible with GPS, GPS L5, GLONASS, Galileo – latest industry standard

• Compatible with and able to receive GPS corrections from Iowa RTN network – latest Iowa statewide upgrade

• Sub-inch precision

• Minimum 8 hour runtime per battery on one single charge

• Receiver must be capable for use in Base/Rover applications if or where network corrections cannot be obtained

Minimum Capabilities of Data Collector/Controller Hardware:

• Ruggedized and compact; shape should resemble that exhibited by Carlson RT4 Tablet Data Collector

• IP68 water and dust resistant

• 8 GB RAM memory (minimum)

• 128 GB flash storage

• User accessible MicroSDXC card slot

• Latest available Intel Pentium Quad-core or equivalent processor

• Microsoft Windows 10 Operating System, latest available version, pre-installed

- Touch screen with back light option and stylus.
- Manufacturer recommended touch screen protector installed
- Shall be configurable to communicate with Iowa RTN network (latest statewide upgrade) using external cellular Wi-Fi device; must not require purchase of a cellular carrier contract
- Must be configurable to communicate with a variety of user data phone devices using either Verizon or US Cellular carriers
- Must communicate with receiver using Bluetooth
- Standard, full-sized USB portto allow data transfer using removable USB memory sticks or cable connection to desktop computer
- Bluetooth connectivity to GPS/GNSS receiver
- Minimum eight to ten (8-10) hour runtime on a single battery charge

Minimum Capabilities of Data Collector Software:
- Latest industry standard (perpetual license that DOES NOT require monthly or annual subscription) Must exhibit features equal to or exceeding capability of Carlson SurvPC
- Intuitive, functional, easy-to-learn-and-use interface
- RTK capable
- Able to collect data in a variety of pre-programmed, as well as custom user-defined, coordinate systems
- Pre-programmed coordinate systems must include, at a minimum, NAD 83 UTM zone 15N, NAD 83 & NAD 27 Iowa State Plane (North & South)
- Must allow user to define custom coordinate systems like the Iowa Regional Coordinate System
- Must allow selectable GEOID options with latest available GEOID pre-loaded.
- Must allow GEOID upgrades by user
- Must be configurable to allow import and export of ASCII text and CSV data in Pt, North, East, Elev, Code, format
- Full COGO capabilities
- Allows data collection of topo points with automatic, rapid and for observed control point modes
- Allows staking of points, lines, curves with cut/fill information
- Must allow measurement in metric, US Survey Feet, and International Feet
- Must allow user input of land surface files from CAD drawings for "on-the-fly" grade checking

Quote Solicitation:

Potential suppliers should list their prices for the equipment on the following table. The unit price for each piece of equipment must be listed for comparison of competitive proposals. With their quote, supplier should provide the name brand, type, and/or model of equipment quoted along with an explanation of how their proposed equipment package meets the outlined requirements above.

Before final decision is made, The Department of Agriculture may request supplier to coordinate a demonstration of the equipment included in their quote to ensure responsiveness. After decision is made, Department of Agriculture may request supplier provide at seller's cost a two-to-four-hour training opportunity for potential users of the equipment. Training session would include setup, network configuration, basic operation, care, and maintenance of the equipment.

Primary RTK GPS/GNSS Outfit:

Item	Qty	Unit	Unit Price	Extended
GPS/GNSS receiver	1	Ea.		
Data collector device	1	Ea.		
Data collector software, pre-installed	1	Lump		
2-meter extendable pole/rod	1	Ea.		
Cradle attachment for data collector	1	Ea.		
Removable bipod attachment	1	Ea.		
Field-Ready accessories	1	Lump		
			Package Price:	

Submit bid by 2:00 pm July 22, 2021 to:

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**IOWA DEPARTMENT OF
AGRICULTURE &
LAND STEWARDSHIP**