

GREENVILLE UTILITIES COMMISSION
GREENVILLE, NORTH CAROLINA
SPECIFICATIONS AND BID DOCUMENTS FOR ONE (1) 64' AERIAL TOWER UNIT
MOUNTED WITH A FORESTRY PACKAGE BODY ON A DIESEL CHASSIS

To: All Prospective Proposers and Others Concerned

Subject: Addendum I

The intent of this addendum is to notify all prospective proposers and others concerned that the Specifications and Documents are hereby modified as follows:

1. Replace pages 5,6,7,8,9,10,11 with the Addendum I.

The foregoing changes shall be incorporated in the Specifications and Documents.

Please acknowledge receipt of this addendum by e-mailing Cleve Haddock, Purchasing Technician at (252) 551-1533, haddocgc@guc.com.

SECTION II

GREENVILLE UTILITIES COMMISSION

SPECIFICATIONS FOR ONE (1) 64' AERIAL TOWER UNIT

MOUNTED WITH FORESTRY BODY ON A DIESEL CHASSIS

AUGUST 2011

It is the intent of the following specifications to set up minimum requirements for one (1) 64' aerial tower unit mounted with a Forestry body on a Diesel Chassis. The unit should have a 64 ft. working height, 59 ft. height to bottom of basket, insulated articulating aerial tower, equipped with a one-man side mounted basket. The unit must be tested to meet or exceed all applicable ANSI or OSHA requirements.

All exceptions and variations must be clearly noted on the attached Exceptions/Variation Form. A copy of this form must be signed and returned with the bid package. Failure to clearly identify all exceptions or variations, as determined by Greenville Utilities (GUC) and at the discretion of GUC, may be cause for rejection of the bid. If no exceptions are identified, and no change order approved, then it will be expected that the delivered unit will be to these exact specifications.

Complete descriptive information on all equipment quoted, i.e., aerial device and accessories, line service body, and cab-chassis shall be provided as part of the bid package at the time of bid opening. Bids submitted without adequate documentation, as determined by GUC, are not acceptable and may be rejected. The complete descriptive information will not be considered as a substitute for the Exceptions/Variations Form. All exceptions must be clearly stated on the provided Exception/Variations form.

Any and all changes and/or options that are made after the bid award must be pre-approved on a change order indicating all cost and/or credits.

GENERAL SPECIFICATIONS

Aerial Tower Unit shall be the manufacturer's standard and may not be modified to meet these specifications. Provider's intent shall be to furnish, install and certify one (1) articulated, over-center, insulated aerial device, with outriggers, for operation under 46 KV in absolute compliance with OSHA-ANSI A92.2 Standards. Standard product items may be removed only where it is necessary to install other items in order to comply with these specifications.

Height to Bottom of Basket	59'
Working Height	64'
Rated Basket Capacity with 50KV Liner	350 lbs.
Upper Boom Articulation	0-245°
Lower Boom Articulation	0-125°

OUTRIGGERS

One set of "A" frame-type outriggers shall be provided. An outrigger and boom interlock system must be provided to prevent the operation of the tower unless the outriggers are properly lowered. Each outrigger cylinder assembly must be equipped with a pilot check-valve to prevent the collapse of the outrigger in the event of hydraulic system failure. An audible warning must sound whenever any outrigger is being lowered. Shut-off valves must be provided at the control panel to allow for individual operation of the outriggers to level the vehicle on sloping terrain. The outrigger controls must be located @ pedestal on both sides of truck to be operated from the ground. Control levers not to protrude beyond valve guard.

Auxiliary outriggers are acceptable, if necessary, for design of load capacities.

PEDESTAL

The pedestal must be structurally capable of supporting the turntable assembly during aerial tower operation. The pedestal shall be constructed of steel box and house the turntable gearbox, the turntable hydraulic motor and the hydraulic oil reservoir tank. The outriggers and pedestal, as an assembly, shall be bolted to the chassis frame. Access panels shall be provided on the pedestal to facilitate maintenance.

TURNTABLE

The turntable shall consist of a shear ball-bearing with upper and lower steel mounting plates and a hydraulic worm gear reduction type drive unit. The bearing must be sealed against dirt and have lubrication fittings. A check valve must be provided on the rotation motor to prevent free and unrestricted rotation in the event of hydraulic line failure. Continuous, unrestricted 360° rotation must be provided.

Please state bearing diameter: _____ in.

Please state operating gear ratio: _____

LOWER BOOM

The lower boom of the aerial device should be constructed of steel plate and formed and welded to a box section with rounded corners. The main boom hinge pin shall be steel construction and have bearings with lubrication fittings. The lower boom shall have a fiberglass insert with a minimum of 16" metal to metal separation. The lower boom with all components installed shall be dielectrically tested to 46 KV. The outside of the fiberglass finish shall have a smooth finish and be coated with white gelcoat for weather resistance. Articulation of the lower boom shall be a minimum of 125°.

Please state main boom hinge pin diameter: _____ in.

Boom compensation preferred. Is it provided? _____

UPPER BOOM

The upper boom shall be constructed of fiberglass. The outside of the boom shall have a smooth finish and be coated with white gelcoat for weather resistance. Lubrication fittings shall be provided where required. The upper boom shall be dielectrically tested and certified for up to 46 KV. Articulation of the upper boom shall be a minimum of 260°.

Please state net effective clear insulation gap: _____ in.

PLATFORM - Approximately 24" X 24" X 39"

The solid fiberglass bucket shall be a side-mounted design and have a minimum rated basket capacity of 350 lbs., including liner. ANSI approved safety belt lanyard mount shall be installed for bucket operation. The basket shall be provided with a dump feature to facilitate removal of an injured operator. The platform shall have an exterior step on the curbside. A control handle with a fiberglass guard completely surrounding the handle shall be on the curb side end. Basket access grip-strut steps and handrail at the rear of the body curbside shall be provided. Basket liner to be provided shall be tested to 46 KV and certified for use under 46 KV. A waterproof basket cover shall be provided. (sentence removed)

BASKET LEVELING

Must have an automatic **mechanical or** hydraulic basket leveling system. This leveling system shall be totally enclosed within the upper boom maintaining full insulation value of the upper boom.

CONTROL SYSTEM

The aerial device shall have a remote single stick control at the platform and the main control valve at the base of the unit. The lower control functions shall be capable of overriding the upper controls. A safety interlock system shall be provided with interlock at the platform and at the lower controls. The interlock trigger **(in platform), (at lower controls)** must be engaged before any boom movement can be accomplished. All outrigger controls shall be at ground level and at the rear of the vehicle. The control system must allow for smooth, responsive movement of the booms with feathering capabilities. All controls shall return to neutral position when released.

HYDRAULIC SYSTEM

The hydraulic system shall be a pressure compensated or accumulator closed **or open** center type with return and suction line filters. It is to be powered by a flange mounted hydraulic pump driven by an air or electric shifted PTO from the truck transmission. All system components shall be of the highest quality and meet or exceed current industry standards. The system shall be protected by pressure relief valves and must have a 100-mesh suction screen filter and a 10-micron cartridge filter in the return line.

HYDRAULIC RESERVE TANK

The hydraulic reserve tank shall have a twenty-five (25) gallon minimum capacity with shut-off valve on tank.

PTO-PUMP

An air or electric shifted PTO-pump combination mounted to the truck transmission will provide the standard power supply. A light on the dash to indicate when the PTO is engaged shall be furnished. An automatic throttle control shall be provided.

WEIGHT

List the total weight of AERIAL DEVICE, including all components specified above.
_____ lbs.

WELDING

All welding performed on the unit, must be done by welders who are certified under the necessary American Welding Society Standards as required by ANSI A92.1969.

STRUCTURAL DESIGN

The structural components in the unit must be engineered to provide a minimum safety factor of 3 to 1 on yield and an ultimate safety factor of 5 to 1. The structural components in the unit which do not have a clearly defined yield point such as fiberglass must be designed at an ultimate strength safety factor of 10 to 1.

OTHER ITEMS TO BE PROVIDED

- Hydraulic tool line installation: A pressure and return line connection must be provided at the rear of the platform (when cradled) for operation of hydraulic tools. A shut-off valve (1/4 turn) must be provided near the tool outlets to permit exchange of tools. Connectors are to be installed such that hose couplers are horizontal. Quick disconnects shall be Holmbury C80240 and C80-241, or equal, with dust covers. Flow shall be 6-8 GPM @ 1800 – 2000 PSI with a maximum of 150 PSI back-pressure.
- Painting: Aerial booms and base will be painted white to match the chassis cab and body. Fiberglass areas are NOT to be painted.
- Two (2) sets of aerial device operation, maintenance, repair and parts manuals shall be provided for each unit.
- Engine Start/Stop at upper and lower controls.
- Must have auxiliary emergency power.
- Must have "demand" throttle up.

TESTS

- Perform operational tests to assure that the completed units comply with all applicable manufacturer's specifications and Section 5.1 of OSHA-ANSI A92.2.
- Perform vehicle stability tests in compliance with Section 4.4 of OSHA-ANSI A92.2.

- Perform electrical tests on completed units in compliance with Section 5.2 of OSHA-ANSI A92.2 for articulating and extendible boom aerial devices for use under 46 KV.
- Provide Greenville Utilities with certified report of vehicle operational, stability and electrical tests per Section 5.3 OSHA-ANSI.

BASIC BODY DESIGN

The body sides and front shall be constructed of 12 gauge (minimum) and the roof shall be 14 gauge minimum galvanized material. The body floor shall be constructed of 10 gauge (minimum) galvanized material. It is to be welded and riveted throughout so as to constitute a single unit. All welding shall be done in accordance with good commercial practice and all welds shall be sanded to insure a satisfactory appearance to the finished product. Basic body shall be in prime paint. All sheared edges of the bulkheads and side paneling, including door openings, shall have lapped or rolled edges. The tail gate should swing 270 degrees, curbside, and be at least 22.5" tall.

The body shall be a hydraulic dump design, and be undercoated for corrosion protection.

BODY DIMENSIONS

The body shall be approximately 132" long, the width shall be approximately 93" and approximately 60" in height.

Must have a top opening tool/storage box mounted on the cab guard toward the left front allowing proper clearance for boom stowage. **The box shall be 5'L X 24"D and be as wide as possible to allow box to fully open with boom in cradle.**

Street side of body shall have a built-in ladder compartment 12"Wx25"H with rear plastsol or equivalent roller and internal security chain as well as a pole pruner compartment 11"H above ladder compartment with rear locking door. The compartment as well as door opening/access must be a minimum of 12"Wx25"H.

The interior of the chipper body shall be coated with coal tar epoxy, and the entire underside of the body shall be undercoated.

Body must be a Southco Industries, Inc. (Aerial Unit), or equal. Greenville Utilities has the final decision on its equal.

COMPARTMENTATION

Curbside- One (1) 41"Lx50"Hx26.5"D double compartment with two (2) vertical doors. Left side of compartment shall be 20.5" wide with two adjustable shelves and the right side shall be 20.5" wide with six (6) swivel material hooks (3-0-3). Behind the compartment shall be a platform box with thru compartment to street side approximately 6"Hx25"Wx89.5"D with a drop down door with three (3) equal compartments.

Street side- One (1) 66"Lx50"Hx26.5"D compartment with three (3) vertical doors and two (2) fixed full length shelves. The right side of the compartment shall have access to a horizontal Hot Stick compartment extending from curbside platform.

Hidden compartment accessible when body raised, mounted at the front most of body on frame, approximately 74"Dx36"Wx30"H with same doors and locks as side compartments, one door per side.

All compartment doors shall have double acting spring type door holders, three-point twist type door latch's with lock cylinders.

ADDITIONAL FEATURES AND EQUIPMENT

One (1) pair of heavy-duty rubber wheel chocks with both chock holders under the street side of body.

Outrigger pads (SAUBER #1616 ALMAG) as needed, with underbody storage provided near outriggers with a lip on the outside to contain pads, no latches.

Lights in all compartments (LED Rope) with master switch in cab.

Pintle hook with safety chain eyes rated and marked for 25 tons.

Warner electric brake-kit with six (6) way socket (equivalent to Techran 670-62).

Access steps and grab handles shall be provided for tower access. All steps shall be of grip-strut. Steps and grab handles shall not interfere with movement or operation of aerial device. All step/ladder points must have accompanied hand rail for 3-point contact.

One sets of recessed LED taillights shall be provided. ICC light package shall also include metal guarded LED clearance lights.

Shield and extend exhaust above cab; most appropriate side. **NO EXCEPTIONS**

All electrical accessories shall be wired to a fused panel box. This box is to be energized by the ignition switch.

Traffic cone rack, fabricated and installed per Fleet Manager, Bill Darty. (i.e. two inch receiver on front bumper, post off side frame rail, etc. based on chassis and body).

Front mounted winch must be Braden PD18-11 Feb., hydraulically driven, 20,000 lb. capacity,

with extend bumper, plumb hydraulics to control valve in cab, with 4-way roller, winch guard

upper and lower, and wide mouth quick hook, with 300' ½" IWRC winch cable with loop.

Must include removable/replaceable protective boom covers for the entire upper boom.

One Hastings 21365 grounding reel with 40' #2 ground cable and ground clamp, mount on curbside box below cab guard step.

CAB GUARD

Expanded metal, full coverage cab guard
2" X 2" square tubing perimeter minimum
1 ½" X 1 ½" square tubing cross members
¾" X 9-11 expanded metal covering
Curbside access ladder with handrail
Heavy duty front bumper to support cab guard and aerial cradle

CAB-CHASSIS To be adjusted per manufactures requirements.

Aerial device, forestry body and all other equipment supplied shall be installed on a new and latest model cab-chassis with the following **minimum** specifications and features:

106" CA (Nominal), minimum required for aerial device

33,000 lb. GVWR

12,000 lb. Front Axle

21,000 lb. Rear Axle

12,000 lb. Front Springs

21,000 lb. Rear Springs

Auxiliary Multi-leaf Rear Springs (2000 lb.)

19.2 Frame Section Modulus; "L" reinforced frame

Diesel engine with a minimum of 280 h.p. with an automatic transmission

Factory Air Conditioning

"Driver controlled" Locking Differential, single speed (road speed, 60 - 65 MPH)

Two (2) P385 x 85R, 22.5,14-Ply tube-type front tires (highway tread), It is the bidders responsibility to bid the appropriate chassis to support our tire specifications. **NO EXCEPTIONS**

Four (4) 11R 22.5,14-Ply tube-type rear tires (mud and snow tread)

Six (6) wheels appropriate for chassis tire combination

Air Brakes with emergency lock; factory installed spin-on type air dryer (WABCO system saver 1200)

Heavy-duty Cooling

Heavy-duty Alternator (85 amp minimum)

Dual Heavy-duty Battery (85 amp minimum)