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SPECIFICATIONS

002090

SEMI-AUTOMATIC CONE SETTER / RETRIEVER TRAILER

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SPECIFICATIONS

I. GENERAL EQUIPMENT SPECIFICATIONS:

A. INTENT STATEMENT:

This specification describes minimum requirements for a semiautomatic cone setter, retriever trailer capable of holding two people while manually loading a semiautomatic cone setter or unloading a semiautomatic retriever unit with traffic cones and storing them on the flatbed trailer, while traveling at speeds up to 10 MPH. The unit must be adaptable to various department owned trucks.

NOTE: Pennsylvania Department of General Services, PCID No. 1075, "*General Requirements for Bidding PENNDOT Vehicles/Equipment*", most current version effective at the time and date of bid opening, is included as a part of this specification. PCID No. 1075 may be reviewed and downloaded from the Department of General Services website, <http://www.dgs.state.pa.us>.

Delivery as required per Department of General Service PCID NO. 1075 Section "G". All units must be delivered within **120** days after receipt of the purchase order by the successful bidder.

NOTE: Trailers must be delivered at ground level (stacking is unacceptable).

Trailers shall be delivered with current PA State Inspection Sticker.

Pre-delivery trailer plug and circuit compatibility testing with Department owned trucks shall be performed. (Ref: EQN-80A for guidance).

Warranty per PCID 1075, Section E 1, Construction Equipment – (2 years).

It is understood that the components specified are minimum. The burden of responsibility is hereby placed on the manufacturers engineering department to supply a unit that is totally engineered.

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I. GENERAL EQUIPMENT SPECIFICATIONS:

B. Cone Setter/ Retriever

1. Cone Setter: Manufactures standard 36 inch cone setter to be attached to the left side (driver's side) rear of the trailer deck. Ref. EPIC Solutions Model CS 3100. Control box must be capable of reaching the cab (driver's seat) to allow driver to operate the setter.
2. Cone Retriever: Manufactures standard cone retriever unit for 36 inch tall cones to be attached to the left side (driver's side) front of the trailer deck. Ref. EPIC Solutions Model CR 3236. Control box must be capable of reaching the cab (driver's seat) to allow driver to operate the retriever.

Compressor: air supply shall be supplied by a minimum 16 CFM and minimum 20 gallon air tank.

Compressor shall be engine driven with a charging system capable of operating the hydraulic unit for the cone retriever and the lighting system.

3. TRAILER:

DECKING: 1.50 inch, minimum, pressure treated wood, oak or Apitong flooring. Dovetail or beavertail will not be accepted. Entire floor shall be coated with non-skid paint, non-skid tape is unacceptable.

FENDERS: Shall be properly supported to ensure the ability to support a 200 lb. man's weight. Upper portion of fender shall be coated with non-skid paint non-skid tape is unacceptable.

HITCH: 5-foot tongue with a 3-inch Lunette eye - minimum 4 vertical positions (18 inch – 32 inch). Approx. delivered height 28 inches. Ref. EQN-84

SAFETY CHAINS: Two (2), minimum .3750-inch size, non-rusting, coil-proof, high tensile chains (rated at GVWR of trailer). Forged steel hooks with safety hasp to fit a minimum 5/8 inch D-ring (from tow vehicle) at the end of chain and the other end of the chain shall be permanently mounted to trailer. Chains shall be a minimum of four foot long and must extend three foot beyond pintle. Per EQN-84.

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I. GENERAL TRAILER SPECIFICATIONS: (Continued)

B. TRAILER COMPONENTS: (Continued)

LIGHTS:

12 volt. All lights shall be LED, rubber mounted, with sealed wiring harness. Grote Ultra Blue, or equal Ref: EQN-80A for guidance. Grote Ultra Link 500 power cord (87020), with one end severed and hard wired into a weatherproof box. Power cord shall extend 8 feet in length beyond pintle. There shall be a Cole Hersee No. 11750 stor-a-way trailer connector plug-holder located in the tongue area. All harness pass-through locations shall be protected by a grommet. All wiring shall be protected within a frame-rail, metal enclosure or conduit. Wiring shall not be exposed within a wheel-well.

There shall be two (2) four inch round L.E.D. flood lights installed, one (1) each to the lower level railing with center of light beam directed at cone setting unit and to the center of the cone retriever unit.

There shall be a switch panel located on the upper railing within reach of the trailer operator to operate the flood lights, flashing/warning lights and cone setter release button.

Switches shall be weather proof and mounted in a sealed weather proof box panel with permanent labels. Exact location will be determined at time of purchase order. Enclosure shall have a drain hole in the lowest point to allow water to self-drain if water does penetrate the enclosure. Ref EQN-205 sheet 4 of 5

The trailer shall also include brake lights, taillights, turns signals and four way flashers by use of (four total) Whelen STT light, Whelen part# 40BTT.

Two lights shall be flush mounted on an enclosure in the upper corners of the hand railing rear and two on either side along the platform floor, horizontal to the ICC lights. Upper enclosures shall fully house the wiring and back of lights, sealing all areas to prevent water from entering. Flush grommet mounted recessed mounting of the lights is acceptable. Two ¼" in holes shall be drilled at the lowest point of the enclosure to allow any water that does enter to self-drain. Lights shall work in conjunction with the truck STT lights. Ref EQN-205 Sheet 4 of 5

Four (4) Hazard warning lights (Whelen IONAD Part# 01-066C747-13G) shall also be placed on the trailer hand railing. Two (2) to the rear upper corners inside of brake, turn and taillights and one each to the left and right side center of the trailer railing. Flashing warning lights shall be flush grommet mounted directly below the upper railing. Switch should be in the same enclosure as described previously.

Conspicuity tape and reflectors shall be installed following the same established standards as lighting. Ref EQN-205 sheet 4 of 5

There shall be a Truck-Lite Model# 36140C LED license plate light with light bracket PN# 36710 installed and properly mounted to accept a full size license plate.

There shall be no connections outside of a sealed box, unless connections are soldered and properly sealed with heat shrink. **3M type (Scotch Lock) connectors are unacceptable.** All electrical connection shall be coated with dielectric grease.

PAINT/PREPERATION:

Prior to painting, all metal surfaces shall be cleaned utilizing a phosphate wash procedure, sandblasted or shot beaded to insure proper paint adherence and rust prevention, with all edges and holes de-burred, and all weld splatter removed. The unit shall receive a minimum of (2) coats of paint, (1) shall be a zinc based epoxy primer, and (1) coat of finish paint.

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I. GENERAL TRAILER SPECIFICATIONS: (Continued)

B. TRAILER COMPONENTS: (Continued)

COLOR:

Trailer and landing gear shall be construction yellow, wood not need be painted yellow. Wheels can be white, black, yellow, silver or argent. Conspicuity per EQN-127A. The undercarriage shall be painted yellow.

Option:

Paint Penn Dot yellow. Reference DuPont F9885, PPG 85246, Sherwin Williams 73266, NAPA 73266 and Sikkens 4017 shade only. Pricing shall also be provided for Manufactures standard yellow paint.

RUNNING GEAR, TIRE SIZE, HUBS:

As required to meet net – 10,000 LB payload capabilities.

WHEELS:

One piece rims. (Mobile home type wheels are unacceptable). There shall be one spare wheel and tire assembly, mounted on a lockable bracket assembly (not to interfere with useable deck space). Wheels shall be properly sized within all requirements and ranges to meet the specification.

SUSPENSION:

Torsion or torflex spring suspension adequate for “low loading” without permanent set.

AXLES:

Tandem axles shall be rated as (2) 5,500 LB. (minimum). All axles, if applicable, shall be equipped with EZ lube system.

BRAKES:

Hydraulic surge brake system properly rated for GVWR. Brakes shall be “free backing” (per Dico, or equal). Ref: EQN-84

OVERALL WIDTH:

96-inch maximum.

DECK HEIGHT:

Top of deck to ground, 24” maximum height.

DECK LENGTH, MIN:

20 feet minimum useable deck length, before mounting of any cone equipment.
Hi-strength low alloy steel mainframe.

LANDING GEAR:

Properly rated and capable of swinging back or up for travel. The landing gear shall be centerline mounted.

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SPECIFICATIONS

I. GENERAL TRAILER SPECIFICATIONS: (Continued)

B. TRAILER COMPONENTS: (Continued)

OTHER FEATURES:

Trailer shall have a permanently installed railing mounted to the outside of the rub rail sides, front and rear. Right (passenger, curbside) side railing shall have an access gate with heavy duty hinge and positive latch system that can be used from both sides of the gate. Access gate shall be positioned to the right (passenger, curbside) rear corner of the deck. Top railing shall be set at 40 inch in height from top of trailer deck with a middle railing attached approximately half between the upper railing and the trailer deck. Railing shall be designed to support 250 lb. employee. Ref EQN-205 sheet 4 of 5

LABELS:

- a. Each unit shall have a metal label or non-removable decal affixed to the unit containing the manufacturer's name, date of manufacture, weight capacity and serial number.
- b. Each unit shall have an aluminum plate, welded in clear view to attach the following labels. Reference EQN 205, Sheet 4
Maximum Speed Limit 10 MPH when Occupied. One additional label shall be supplied with each unit to be installed in the cab of truck.

*NOTE: A decal stating, "(MLWR) Trailers actual load carrying capacity is _____" shall be posted on the trailer in minimum 1 inch lettering.

"Tire Pressure _____" shall be stenciled in close proximity to the tires (both left and right side).

A metal identification tag stating manufacturer's information, model number, serial number and date of build shall be mounted within the tongue area.

All pivot points shall be of the "heavy duty" design and shall incorporate easily accessible zerk fittings. Zerk fitting location/s shall be stenciled on the trailer.

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II. DRAWINGS:

EQN-80A	dated	Rev.	11-12-09	1 sheet	WIRING DIAGRAM
EQN-84	dated	Rev.	08-21-14	1 sheet	TRAILER, FRONT END SPECIFICATIONS
EQN-127A	dated	Rev.	01-02-09	1 sheet	CONSPICUITY TAPE STRIPING REQUIREMENTS
EQN-205	dated	Rev.	11-05-10	5 sheets	CHASSIS ATTACHMENT

The above referenced drawings shall become part of these specifications.
These drawings reflect the intent of the Department. Any discrepancies shall be resolved at the Pre-build meeting between the vendor and the Fleet Management Division.

DRAWINGS APPEAR AT THE END OF THE SPECIFICATIONS.

III. MANUALS:

The successful vendor shall furnish all applicable manuals per unit:

- 1 Operator's
- 1 Parts
- 1 Service
- 1 Engine
- 1 Transmission (Automatic or Manual)
- 1 Body and Sub-frame (Parts and Service)
- 1 Complete set of manuals for any additional items/equipment added to a piece of equipment.

The manuals listed shall be official O.E.M. publications supplemented with technical manuals for all components as published by sub-vendors/manufacturers.

Parts Manual presented must be a relative to "all" items utilized to build these units, with appropriate part numbers.

Manuals must be supplied in paper and on a thumb drive in PDF format.

Delivery of the manuals must be supplied with delivery of each unit.

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IV. TRAINING:

Mechanic:

The successful vendor shall provide services of qualified factory trained technicians for not more than 1 training sessions of not more than 7.5 hours at 1 PennDOT locations to train personnel for in-depth preventive maintenance, overhaul and review of the proper usage of parts and service manuals, as well as component/system adjustments that need to be monitored at specified service intervals.

Operator:

The successful vendor shall provide services of qualified factory trained technicians for not more than 1 training sessions of not more than 7.5 hours at 1 PennDOT locations to train personnel in the proper operation, safety and servicing of the equipment.

The successful vendor shall submit a training plan to the Fleet Management Division for approval within 45 days after receipt of the Purchase Order. The training plan shall consist of course outline and class schedule.

All training must be completed within 60 days after the dates established in the approved training plan unless an extension is mutually agreed to in writing by the Chief of the Fleet Management Division.

All training shall be coordinated with the District Equipment Managers, with the exception of Asphalt related training, which must be coordinated with the Statewide Training Coordinator (717) 787-4836, Fax (717) 783-4438.

V. WARRANTY:

Per PCID No. 1075