



STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
TECHNICAL SPECIFICATIONS FOR

TRUCK, CAB & CHASSIS, 4X4, 39000# GVWR WITH DERRICK DIGGER

SERIES NO. 176-500

REV. 10/11/2023

EQUIPMENT SPECIFICATION 176-500C

GENERAL

This specification sets forth the minimum requirements for a sign-style digger derrick and 4x4 work truck.

Equipment shall be new, a production model of current manufacture, and must meet all state and Federal safety and emission standards in effect at time of order.

REPRESENTATIVE SPECIFICATIONS

A Freightliner M2-106 with a Terex Commander 5050 digger, with appropriate options and standard features, was used to develop these specifications and establish equivalency evaluation criteria.

Equipment of similar style, type, character, quality, features, and purpose conforming to the following detailed requirements/specifications will be considered. For evaluation purposes, bidders proposing an exception/equivalent option/feature to those specified herein, may be required to provide manufacturer/product information (catalogue sheets, detailed specifications, pictures, etc.). This information will be evaluated against the minimum requirements of this specification. Proposed submittals that are determined not to be equivalent to the established criteria will be rejected.

LOUISIANA AUTHORIZED DEALER(S)

Proposed item(s) must be from a manufacturer who has at least one (1) authorized dealer **within the State of Louisiana** where parts and service can be obtained. Authorized dealer(s) must have properly trained technicians plus all other resources necessary to perform warranty and repair services in complete accordance with the manufacturer's requirements. A letter certifying the ability to meet this requirement, inclusive of the company name(s) and address(es) of the Louisiana authorized dealer(s), should be supplied with the bid submittal and may be required prior to award.

DELIVERY & ACCEPTANCE

Vendor shall perform a test run of each unit to verify that all features and capabilities are operating properly at time of delivery. Documentation of testing may be required prior to acceptance by the Department.

Unit(s) must be delivered completely assembled (including all components, accessories, etc.) and ready for operation without any additional preparation including, but not limited to, ensuring all fluid levels are at their full mark, fuel tank(s) is full, all necessary lubrication has been performed, etc. A Louisiana safety inspection shall be performed on each vehicle prior to delivery and a Louisiana safety inspection sticker properly affixed.

Any unit delivered under this specification is subject to rejection if there is evidence of poor workmanship, by either the vendor or the original manufacturer. Noted defects and/or nonconformance findings may



be corrected by the vendor. Corrections must be completed and approved by the Equipment Engineer or his representative prior to final acceptance.

Unit(s) shall be delivered "**on the ground**;" DOTD will not unload nor provide any unloading equipment to the vendor/delivery driver in order to offload the unit(s).

NOTE: The Department will have space available for equipment to be unloaded.

EACH UNIT MUST BE SUPPLIED WITH THE FOLLOWING DOCUMENTATION AT TIME OF DELIVERY:

1. Notarized Bill of Sale
2. Original Certificate of Origin (MSO), (no photocopy)
3. Dealer's Service Policy
4. Owner's/Operator's Manual(s)
 - a. One (1) Hardcopy
 - b. One (1) Digital Copy
 - i. Acceptable Formats: PDF delivered via USB "Flash Drive", or E-mail
5. Service Manual(s)
 - a. One (1) Hardcopy
 - b. One (1) Digital Copy
 - i. Acceptable Formats: PDF delivered via USB "Flash Drive", or E-mail
6. Build Sheet(s) – as applicable
 - a. One (1) Hardcopy
 - b. Build sheets should be written in plain language (not company specific codes) and include, at a minimum, all standard & optional features of the delivered unit.

NOTE: Invoices will not be processed for payment until the unit(s) have been inspected by the Equipment Engineer or their representative and deemed in compliance with the specifications.

BID SUBMITTALS

Any additions, deletions, or variations from the specifications should be noted in the "Bidder's Exceptions" page of this specification. Exceptions that are noted to be less than a minimum requirement will not be accepted.

Any additions, deletions or variations from the manufacturer's standard published specifications should be noted on the "Bidder's Exceptions" page of this specification. Unless otherwise noted, any items appearing in the manufacturer's standard published specifications furnished by the Bidder are assumed to be included in the Bidder's submittal.

Bidder should note on their submittal any installation(s) to the equipment that will be performed by the vendor instead of the manufacturer.

Failure to note any specification exceptions, manufacturer specification alterations, and/or vendor installations prior to award may result in rejection of the equipment at the time of delivery.

THE NUMBER OF DELIVERY DAYS AFTER RECEIPT OF ORDER (ARO) MAY BE USED AS A FACTOR IN THE AWARD.

EQUIPMENT SPECIFICATIONS

NOTICE TO BIDDERS

Bidder should review the detailed "Equipment Specification" completely and respond to the compliance question at the end of each section by marking "X", in the space provided, for "Yes" or "No". Mark "Yes" to indicate that the equipment bid meets the section exactly as specified. Mark "No" if there are exceptions to any part of that section. Exceptions/deviations to any part of the specification are to be detailed on the "Bidder's Exceptions" page of this specification.

IN ORDER TO BE CONSIDERED FOR AWARD, BIDDER SHOULD RETURN THIS SPECIFICATION, COMPLETED IN FULL, WITH THEIR BID SUBMITTAL.

Note: All values listed below are minimums unless noted otherwise.

1. Cab & Chassis

1.1. GVWR: 39,000 lbs.

Comply: ___ Yes ___ No

1.2. Frame: 2,000,000 RBM (Resisting Bending Moment) - Bidder should list section modulus and yield strength below

Section Modulus: _____ Yield Strength: _____

Comply: ___ Yes ___ No

1.3. Cab & Axle Positions

1.3.1. Front axle: For the purposes of this solicitation, set-forward-axle (SFA) is considered equal to set-back-axle (SBA); however, SBA is the preferred option

1.3.2. Cab to axle (CA): 136" clear*

1.3.3. Center of axle to end of frame (AF): 56"*

*Values given here are minimums. The space between cab and body/outriggers shall not exceed 10 inches. Truck vendor and service body manufacturer/upfitter shall coordinate in selecting a cab to axle dimension that works with the specified body. The required AF must be achieved with factory frame rails. Frame extensions to meet the required AF are not allowed. The AF must be sufficient to allow support of the full length of the body.

Comply: ___ Yes ___ No

1.4. Cab

1.4.1. Conventional day cab

1.4.2. Tinted safety glass

1.4.3. Full width exterior cab mounted sun shade with integral clearance lights

1.4.4. Cab entry handles, driver & passenger side

1.4.5. Outside mirrors, driver & passenger side

EQUIPMENT SPECIFICATIONS

- 1.4.5.1. Power adjustable
- 1.4.5.2. 90 sq. in. minimum
- 1.4.5.3. Heated with integrated turn signals
- 1.4.5.4. Two (2) adjustable spot mirrors, one (1) per outside mirror
- 1.4.6. Two (2) roof mounted air horns & one (1) standard electric horn
- 1.4.7. Air ride: driver and passenger seat, cab suspension
- 1.4.8. Manufacturer's highest level sound insulation package
- 1.4.9. Wing dash, if available
- 1.4.10. Gauge package including the following gauges:
 - 1.4.10.1. Air cleaner restriction
 - 1.4.10.2. Coolant temperature
 - 1.4.10.3. DEF
 - 1.4.10.4. Fuel
 - 1.4.10.5. Oil pressure
 - 1.4.10.6. Primary and secondary air pressure
 - 1.4.10.7. Speedometer
 - 1.4.10.8. Tachometer
 - 1.4.10.9. Voltmeter
 - 1.4.10.10. Gear indicator
 - 1.4.10.11. Odometer
 - 1.4.10.12. Total engine hours
 - 1.4.10.13. Trip hours
 - 1.4.10.14. Trip odometer
 - 1.4.10.15. Auto transmission oil temperature
 - 1.4.10.16. Engine oil temperature
- 1.4.11. Dual sun visors
- 1.4.12. Two (2) cup holders, integral to dash
- 1.4.13. 3-point seat belt for each seat. All seat belt webbing must be manufacturer's high visibility color (Orange, Red, Green, or Yellow)
- 1.4.14. Climate control, including air conditioning, heater, & defroster
- 1.4.15. Power windows & power door locks
- 1.4.16. Tilting & telescoping steering wheel

Comply: ____ Yes ____ No

1.5. Engine

- 1.5.1. 7.7 L, electronic diesel, turbocharged, liquid cooled, 6-cylinder inline configuration
- 1.5.2. 300 HP, 860 FT-LBS
- 1.5.3. Engine must include turbo exhaust brake
- 1.5.4. Emission system must include DEF
 - 1.5.4.1.1. DEF tank must have a minimum capacity of 7 gallons
- 1.5.5. Engine must be biodiesel compatible

EQUIPMENT SPECIFICATIONS

1.5.6. Horizontal exhaust

Comply: ___ Yes ___ No

1.6. Fuel System

- 1.6.1. Fuel tank shall be metal with drain and a 50-gallon minimum capacity; tank should be located on driver's side
- 1.6.2. Davco fuel processor or equal - mounted to outside of frame
- 1.6.3. Visual element change indication that is integral to and non-removable from unit (to be located on driver's side near fuel tank)
- 1.6.4. Water-in-fuel sensor with indicator in cab
- 1.6.5. Entire fuel system must be biodiesel compatible

Comply: ___ Yes ___ No

1.7. Transmission

- 1.7.1. Automatic, Allison 3500 RDS or equal
- 1.7.2. Must include PTO aperture
- 1.7.3. To be filled with manufacturer approved synthetic lubricants

Comply: ___ Yes ___ No

1.8. Gearing, Speed Governing & Performance

- 1.8.1. Top gear road speed shall be electronically governed at 75 mph maximum
- 1.8.2. Cruise control speed shall be governed at 72 mph maximum
- 1.8.3. Transmission and axle ratio shall be selected for performance to be optimized at 65 MPH while permitting truck to operate up to 75 MPH on highway without excessive engine speed. Bidder should list the RPM @ 65 MPH in the space below

Comply: ___ Yes ___ No

RPM @ 65 MPH _____

1.9. PTO

- 1.9.1. PTO must be air shifted and compatible with specified transmission
- 1.9.2. PTO must be activated by dash mounted factory upfitter switch
 - 1.9.2.1. Indication of PTO engagement should be accomplished by lighted switch or separate dash mounted indicator light

Comply: ___ Yes ___ No

1.10. Front Axle

- 1.10.1. Wide track, 16,000 lbs. GAWR @ ground capacity
- 1.10.2. Shock absorbers
- 1.10.3. Integral power steering
- 1.10.4. Wet-type, visible cap axle seals, Stemco or equal

EQUIPMENT SPECIFICATIONS

1.10.5. Axle should be filled with manufacturer approved synthetic lubricants

Comply: ___ Yes ___ No

1.11. Rear Axle

- 1.11.1.** 23,000 lbs. at ground capacity, single speed.
- 1.11.2.** Heavy duty springs (low deflection rear springs are not acceptable)
- 1.11.3.** Axle should be filled with manufacturer approved synthetic lubricants

Comply: ___ Yes ___ No

1.12. Brakes

- 1.12.1.** Full air brake system, ABS brake system with traction control
- 1.12.2.** 18 CFM air compressor
- 1.12.3.** Bendix AD-9 air dryer or equal
- 1.12.4.** Bendix Wingman[®] Fusion[™] Advanced Driver Assistance System, or approved equal

Comply: ___ Yes ___ No

1.13. Wheels & Tires

- 1.13.1.** Hub piloted steel disc, size - 8.25 X 22.5
- 1.13.2.** First line, first quality tires, size – 11R22.5
- 1.13.3.** Front tires - single highway tread
- 1.13.4.** Rear tires - dual on/off road tread
- 1.13.5.** Load ratings to be compatible with GVWR

Comply: ___ Yes ___ No

1.14. Electrical System & Lights

- 1.14.1.** 12-volt system
- 1.14.2.** 180-amp brushless alternator
- 1.14.3.** Batteries with 2200 CCA combined
- 1.14.4.** Aluminum battery box
- 1.14.5.** Remote jump start studs, with tethered protective caps, located outside of the battery box
- 1.14.6.** Battery disconnect switch, located inside cab, near driver's seat, similar to the below picture



EQUIPMENT SPECIFICATIONS

- 1.14.7. Four (4) dash mounted, rocker-style, factory installed, body circuit switches (upfitter switches) for simple on/off functions for accessories (PTO, warning lights, etc.; one (1) assigned to activate the PTO; one (1) assigned to operate the flashing warning lights; two (2) blank to be assigned by DOTD personnel
- 1.14.8. All exterior lighting should be LED
- 1.14.9. Headlights:
 - 1.14.9.1. Automatic daytime running lights
 - 1.14.9.2. Automatic on if windshield wipers are turned on
 - 1.14.9.3. Automatic on with low ambient light levels
 - 1.14.9.4. Warning buzzer/alarm when headlight switch is on and ignition switch is in off position
- 1.14.10. Cruise control
- 1.14.11. Intermittent windshield wipers with washers
- 1.14.12. Self-cancelling directional signals
- 1.14.13. Backup alarm, 97 dba
- 1.14.14. AM/FM/WB radio with auxiliary front input, Bluetooth/hands free function and steering wheel controls
- 1.14.15. Two (2) 12V accessory power outlets with covers, mounted in dash

Comply: ___ Yes ___ No

1.15. Paint

- 1.15.1. Cab: Manufacturer's standard, white
- 1.15.2. Chassis: Manufacturer's standard, black

Comply: ___ Yes ___ No

1.16. FMCSA/DOT Mandated Safety Items

- 1.16.1. One (1) UL listed, 5 B:C rated, or higher, fire extinguisher securely mounted in cab
- 1.16.2. One (1) set of three (3) bidirectional reflective triangles conforming to FMVSS No. 125
- 1.16.3. At least one (1) spare fuse for each type/size used in the truck

Comply: ___ Yes ___ No

Note: The truck vendor and attached equipment manufacturer/vendor must mutually resolve any unexpected truck/attached equipment component conflict with a sound and functional solution as a requirement of this specification.

2. Digger Derrick Body

- 2.1. Type: Open platform, with storage compartments at front
 - 2.1.1. 94" x 144" flat platform
 - 2.1.2. Steel tread plate floor
 - 2.1.3. Outside stake pockets on 2' centers with 3/8" x 2.5" chains rails down street side (driver side), last welded pocket should end before through platform storage compartment door
 - 2.1.3.1. Heavy duty removable short rail (8 inch max height)

Comply: ___ Yes ___ No

EQUIPMENT SPECIFICATIONS

2.2. Storage Compartment

2.2.1. Size - 48" high X 40" long, X 94" wide

2.2.2. Doors to be 18 gauge, with paddle handles, keyed alike

2.2.3. Top of compartment to be 12 gauge, 4-way pattern safety plate

2.2.4. Street Side Storage (See depiction below)

2.2.4.1. Front top half of compartment to have storage for 36" x 36" signs and sufficient grooves top and bottom for holding signs in place

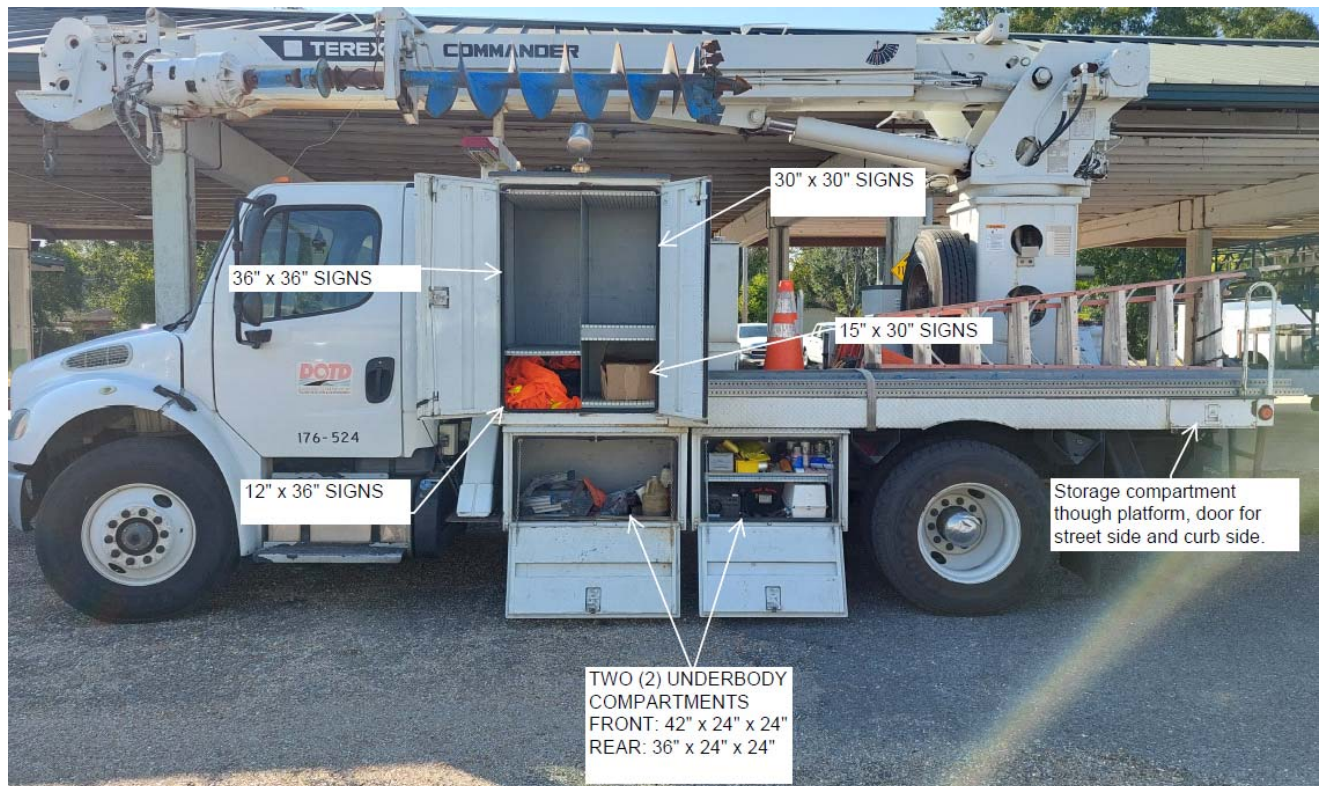
2.2.4.2. Rear top half compartment to have storage for 30" x 30" signs and sufficient grooves top and bottom for holding signs in place

2.2.4.3. Front bottom half of compartment under 36" x 36" sign storage compartment to have storage for 12" x 36" signs and sufficient grooves top and bottom for holding signs in place

2.2.4.4. Rear bottom half of compartment under 30" x 30" compartment to have storage for 15" x 30" signs and sufficient grooves top and bottom for holding signs

2.2.4.5. Underbody storage compartment installed under the flatbed to be 36" wide x 24" deep x 24" tall

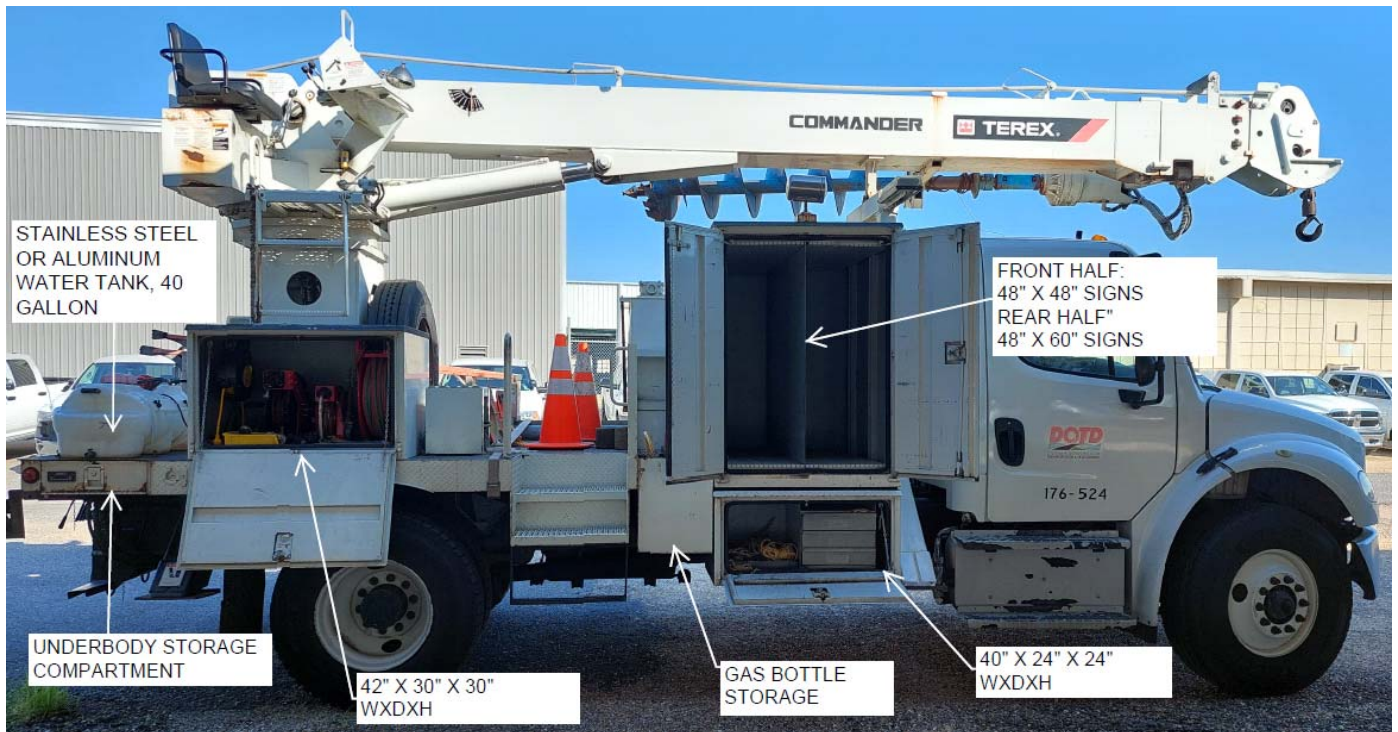
2.2.4.6. Additional underbody storage compartment installed under the flat bed to be 42" wide x 24" deep x 24" tall



EQUIPMENT SPECIFICATIONS

2.2.5. Curb Side Storage (See depiction below)

- 2.2.5.1. Front half of compartment to have storage for 48" x 48" signs and sufficient grooves top and bottom for holding signs in place
- 2.2.5.2. Rear half of compartment to have storage for 48" x 60" signs and sufficient grooves top and bottom for holding signs in place
- 2.2.5.3. Underbody storage to be installed under the curb side sign storage compartment, 40" wide x 24" deep x 24" tall, with single drop down access door
 - 2.2.5.3.1. Front half to have 4" friction type pull out drawers (3 drawers) with dividers
 - 2.2.5.3.2. Rear half to be open
- 2.2.5.4. Storage compartment installed on the flatbed to be 42" wide x 30" deep x 30" tall with drop down doors for hose reels
- 2.2.5.5. Storage compartment installed rear flatbed through platform with access doors each side of truck



Comply: ___ Yes ___ No

2.3. Outriggers

- 2.3.1. Two front, two rear, A-frame type, compatible with the capacity of the derrick digger
- 2.3.2. Outrigger controls at rear under tail shelf
- 2.3.3. Curbside outrigger controls for curbside outriggers, and street-side controls for street-side outriggers (Includes switches and alarm for outrigger in motion alarm)
- 2.3.4. Two speed throttle control near outrigger controls

EQUIPMENT SPECIFICATIONS

2.3.5. Heavy-duty protective guards installed on controls

Comply: ___ Yes ___ No

2.4. Search Lights

2.4.1. Two (2) – Five inch (5”) electric remote controlled search lights mounted on top of 48” x 40” x 94” storage compartment

2.4.1.1. One unit to be mounted on street-side and one unit mounted on curbside at centerline of compartment

2.4.2. Each light to have individual in-cab controls

2.4.3. Control panel to include on/off, spot/flood switch, variable speed control, and single control for vertical and horizontal movement

2.4.4. Jabsco, model 62022-3002 or approved equal

Comply: ___ Yes ___ No

2.5. Additional Lights

2.5.1. Three (3) Wheelen Responder LP series strobe lights (one installed on each side of the boom rest and one on the rear of the pedestal)

2.5.2. Street side – model R2LPHPR red lens

2.5.3. Curb side boom rest and rear of pedestal are to be R2LPHPA amber lens

Comply: ___ Yes ___ No

2.6. Gas Bottle Storage

2.6.1. Recessed gas bottle storage compartment installed on the curbside top of the flat bed directly behind the sign storage compartment with open top and solid sides and bottom 24” wide, 16” deep, 20” tall

2.6.2. To include four one inch (1”) drain holes on each bottom corner

Comply: ___ Yes ___ No

2.7. Gas Lines/Reel

2.7.1. Automatic retracting cutting torch dual hose reel with 100’ of hoses installed

2.7.2. The supply line are to be pig tailed to the front curb side of the flatbed near the recessed bottle storage compartment

2.7.2.1. Pig tail line to mounted as to not be exposed

2.7.3. Reel to be installed in the platform storage box on the curb side rear

Comply: ___ Yes ___ No

2.8. Electric Cable

2.8.1. Automatic retracting 120 volt electrical cable reel with 100’ of cable and three 120 volt outlets at the end

2.8.2. The supply line is to be connected to the inverter on the street side

2.8.3. Reel to be installed in the platform box on the curb side near rear

EQUIPMENT SPECIFICATIONS

Comply: ___ Yes ___ No

2.9. Power Inverter/Battery

2.9.1. Tripp Lite Power Verter APS 2000W Model APS2012 DC to AC inverter

2.9.2. Inverter/Charger with auto-transfer switching and hardwire input/output install in the street-side underbody storage compartment

2.9.3. Wired to the 120 volt extension cord reel on the curbside

2.9.4. Tripp Lite 98-121 12V DC sealed, maintenance free battery for charger/inverter installed in the street side underbody storage compartment and connected to the inverter

Comply: ___ Yes ___ No

2.10. Water System

2.10.1. 40 gallon stainless steel or aluminum tank installed on the curb side platform next to the hose reel box

2.10.2. FIMCO High Flo 12V diaphragm pump or appropriate to be mounted inside the hose reel box and tied to water tank

2.10.3. 2.1 gpm 60 psi max pressure to include on/off switch installed with the water tank to pressurize the hose reel on the curb side of the flatbed

2.10.4. Automatic retracting water hose reel with 75' of water hose installed in platform curb side storage box

2.10.5. The supply line is to be attached to the water tank

Comply: ___ Yes ___ No

2.11. Air Lines

2.11.1. Automatic retracting air line reel with 50' of hose and air chuck at the end

2.11.2. The supply line is to be tied into the chassis air supply

2.11.3. Reel to be installed in the underbody box on the curb side

Comply: ___ Yes ___ No

2.12. Vise

2.12.1. Wilton 5" vise on a removable horizontal type bracket to fit into socket under the flatbed located curb side rear

2.12.2. The socket is to have two pinning positions so the vise can slide under the flatbed during road travel and then extend out for use, socket bracket to be braced

Comply: ___ Yes ___ No

2.13. Step/Bumper

2.13.1. Heavy duty combination bumper and step, with pintle hitch braced to chassis frame

2.13.2. Complete with two (2) "D" rings

2.13.3. 7-way trailer plug (7-round pin commercial)

2.13.4. Glad hands

Comply: ___ Yes ___ No

EQUIPMENT SPECIFICATIONS

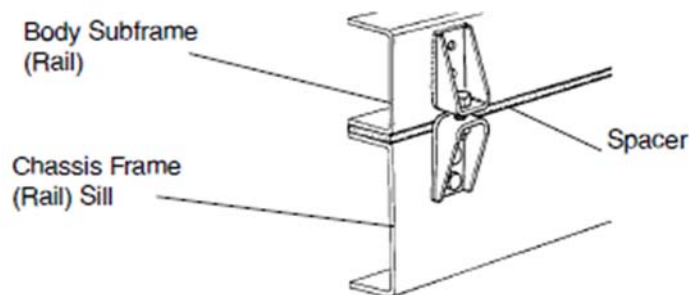
2.14. Additional Accessories & Features

- 2.14.1.** The following pictures are intended to show a general representation of a truck with a digger derrick attachment. Only the labeled details apply here. **Any names, emblems, logos or other features shown that are specific to any manufacturer should not be interpreted as a requirement of these specifications.**
- 2.14.2.** Two (2) cone storage brackets, located under platform, one (1) on each side; each capable of storing ten (10) 18" traffic cones
- 2.14.3.** Outrigger pad storage, under storage compartment, capable of storing two (2) 18"x18" pads each side
- 2.14.4.** Auger storage rack
- 2.14.4.1.** Installed in open space of platform
 - 2.14.4.2.** Capable of storing all four (4) augers while not in use
 - 2.14.4.3.** Tool-less retention mechanisms to adequately secure augers in place for transport
- 2.14.5.** Side access steps with grab bars

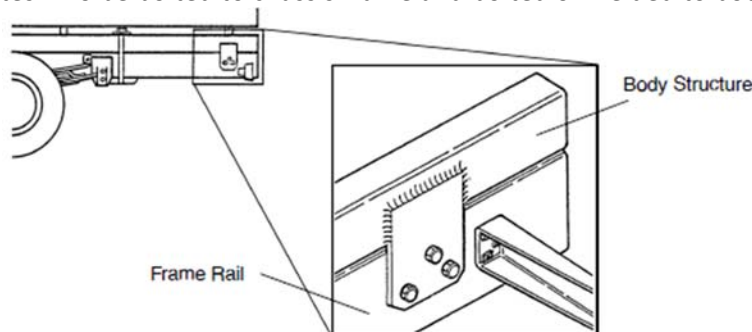
Comply: ___Yes ___No

2.15. Body Installation

- 2.15.1.** A rubber or plastic (Nylon or Delrin) sill spacer shall be used between the chassis frame and body subframe. WOOD SPACERS ARE NOT ALLOWED!
- 2.15.2.** Body shall be bolted to frame using brackets or fishplates, similar to below. U-BOLTS ARE NOT ALLOWED!
- 2.15.2.1.** Where possible, the upfitter should use existing holes in the chassis frame web
 - 2.15.2.2.** Brackets



- 2.15.2.1.** Fishplates – To be bolted to chassis frame and bolted or welded to body subframe



Comply: ___Yes ___No

EQUIPMENT SPECIFICATIONS

2.16. Body Prep/Paint

- 2.16.1. Remove all weld spatter and slag, round sharp corners, grind sharp edges, buff all surfaces
- 2.16.2. Prepare all metal surfaces (under structure and body) per paint manufacturer’s requirements
- 2.16.3. Prime all metal surfaces with PPG EPX Series high solids epoxy primer compatible with finish coat or equal
- 2.16.4. Primer to be 3-4 mils DFT
- 2.16.5. Apply finish coat of PPG Concept (DCC) Acrylic Urethane or equal
- 2.16.6. Color to be white, matching truck cab color
- 2.16.7. Finish coat to be 4 mils DFT
- 2.16.8. Apply all coatings in strict accordance with manufacturer’s recommendations
- 2.16.9. Note: Paint will be tested with a 7-mil magnet when it arrives at DOTD; if the paint is not in compliance, it will be rejected

Comply: ___Yes ___No

3. Derrick

3.1. Type

- 3.1.1. Tower-mounted
- 3.1.2. Centered over rear axle
- 3.1.3. 360 degrees continuous rotation
- 3.1.4. Turret mounted winch

Comply: ___Yes ___No

3.2. Boom Range & Capacity

- 3.2.1. Sheave Height: 50.5 feet at full extension and max elevation
- 3.2.2. From 80 degrees above horizontal to -20 degrees below horizontal

	Boom Retracted	2 nd Boom Extended	3 rd Boom Extended
Max. Elevation	37,080	23,960	17,860
10' Radius	15,300	13,390	12,570
45 Degrees	11,580	6,940	4,970
0 Degrees	7,270	4,250	2,970

Comply: ___Yes ___No

3.3. Boom: Three sections

3.3.1. First Section

- 3.3.1.1. Fabricated box construction from high strength steel

EQUIPMENT SPECIFICATIONS

3.3.2. Second Section

3.3.2.1. Fabricated box construction from high strength steel

3.3.2.2. Hydraulically extendable

3.3.3. Third section

3.3.3.1. High strength, rectangular, rigid fiberglass

3.3.3.2. Hydraulically extendable

Comply: Yes No

3.4. Pedestal and Turntable

3.4.1. Square constructed pedestal has access hole for maintenance of hydraulic plumbing

3.4.2. The turntable is an off-set design to provide maximum stability and strength

3.4.3. The turntable is fabricated from high strength steel side plates and a single-piece bottom plate

Comply: Yes No

3.5. Turret Winch

3.5.1. 15,000 lbs. capacity; filled to capacity with 1" stable braid rope and equipped with down-haul weight and hook

3.5.2. Turret winch must be supplied with angle indicator on operator control side of main boom

3.5.3. A load chart indicator stating actual lifting capacity considering all final options, body, outriggers and other fixed equipment with final readings based on completed unit stability

Comply: Yes No

3.6. Hydraulic System

3.6.1. Tandem vane high efficiency 3000 psi rated hydraulic pump rated at 40 gpm

3.6.2. Provides 16 gpm to boom function and 24 gpm to digger/winch and combines flow when boom is not in operation

3.6.3. 50 gallon hydraulic reservoir with a 10 micron return line filter and shut-off valve in pump supply line

3.6.3.1. Hydraulic reservoir should be mounted below platform if possible; however, mounting above is acceptable.

3.6.4. All hydraulic functions are to have 3,000 PSI maximum working pressure

3.6.5. Full hydraulic controls at operator's seat

Comply: Yes No

3.7. Operating Controls

3.7.1. Operator's seat and platform located on right side of boom complete with:

3.7.1.1. Foot throttle

3.7.1.2. Control valves and handles

3.7.1.3. Switch mounted on control panel for hand operated LED flood light

3.7.2. Hydraulic overload protection on stinger, winch, digger, 3rd stage and rotation

3.7.3. Engine stop/start to be installed

3.7.4. If an overload situation occurs the controller will disable the following functions:

EQUIPMENT SPECIFICATIONS

- 3.7.4.1. digger dig
- 3.7.4.2. boom raise/lower
- 3.7.4.3. upper boom extend
- 3.7.4.4. intermediate boom extend
- 3.7.4.5. winch up

Comply: ___ Yes ___ No

4. Digger

4.1. Drive

- 4.1.1. Eskridge 18,000 ft.-lbs. two speed digger
- 4.1.2. Hydrasync shifting mechanism
 - 4.1.2.1. Dual speed, hydraulic, capable of being shifted from high to low speed or low to high speed while digger is running
 - 4.1.2.2. Low speed - 18,000 ft. lbs. of torque @ 16 RPM
 - 4.1.2.3. High speed - 3,000 ft. lbs. of torque @ 26 RPM
- 4.1.3. Digger must be adequately sized and rated for frequent use of 30" and 36" augers

Comply: ___ Yes ___ No

4.2. Augers

- 4.2.1. Augers: One (1) 18" diameter and one (1) 26" diameter
- 4.2.2. Auger extension

Comply: ___ Yes ___ No

4.3. Torque Limiter: For left side auger storage

- 4.3.1. Left side boom auger storage does not need to accommodate 36" auger

Comply: ___ Yes ___ No

4.4. Tilt Pole Plumber

- 4.4.1. Mounted on boom 2nd section, transferrable to 3rd section.
- 4.4.2. Pole claw, mounting bracket, chute and hose.
- 4.4.3. Pole guide protection included.

Comply: ___ Yes ___ No

5. Warning Lights, Work Lights, Wiring and High Visibility Conspicuity Tape

5.1. General Electrical & Lighting

- 5.1.1. Truck must be delivered with warning lights & high visibility reflective conspicuity tape installed in accordance with the below specifications and layout
- 5.1.2. All warning lights to be sealed light emitting diode (LED) type, with plug-in connectors
- 5.1.3. Stop, turn, tail, and round clearance marker lights must be grommet mounted

EQUIPMENT SPECIFICATIONS

- 5.1.4. Warning lights shall be installed by an upfitter who is experienced in and regularly engages in the installation of automotive electronics & warning lights
- 5.1.5. Installer shall use vehicle & lighting manufacturers' guidance along with industry best practices and techniques to ensure that lights are installed in a safe and neat manner
- 5.1.6. All wiring and cables should be color coded, heat shrink wrapped and logically routed, secured, and protected with convoluted loom where possible
- 5.1.7. All wiring splices must be made using butt or parallel crimp connectors
- 5.1.8. Non-metallic/rubber grommets shall be used where wires and cables penetrate any cab panels, body panels, or chassis structure
- 5.1.9. All cab and body penetrations shall be adequately sealed to prevent water from entering
- 5.1.10. All warning lights to be controlled by a single in-cab, dash-mounted upfitter switch. The switch must be labeled to read "Warning Lights"
- 5.1.11. Installer shall contact DOTD Equipment Section prior to programming to confirm intended flash pattern(s)
- 5.1.12. All lighting must meet Federal and state requirements

Comply: Yes No

5.2. Grid Light (Mirror Mounted Light Pods)

- 5.2.1. Two (2) grid lights mounted on the upper bars of the outside mirrors
- 5.2.2. SoundOff Signal mPower Grid Light or equal, satisfying these requirements
- 5.2.3. 9-32 VDC
- 5.2.4. 1x1 single stack configuration
- 5.2.5. 7.0 – 8.0 in. x 7.0 – 8.0 in. x 1.25 - 1.75 in.
- 5.2.6. UV resistant clear polycarbonate lens
- 5.2.7. Modules & Diodes: 4 modules (1 per side)
 - 5.2.7.1. Dual color - 12 diodes per module (Green & Amber)
 - 5.2.7.2. All modules must be capable of displaying both colors (no checkerboard pattern)
- 5.2.8. Flash pattern capable of alternating between an asymmetric, low-frequency, "wig-wag" pattern and a low-frequency double or quad flash.
- 5.2.9. Capable of dimming automatically via photo-sensor
- 5.2.10. Life Expectancy 7+ years
- 5.2.11. Grid light shall meet all applicable federal/state laws and regulations
- 5.2.12. Shall be SAE J595 Class 1 certified

Comply: Yes No

5.3. Perimeter Lights

- 5.3.1. Twelve (12) perimeter lights
 - 5.3.1.1. Two (2) mounted at grille level, as shown below
 - 5.3.1.2. Four (4) side mounted, two (2) each side, as shown below
 - 5.3.1.3. Six (6) at rear of platform, three (3) each side, as shown below
- 5.3.2. Brooking Industries M16 surface mount perimeter lighthouse or equal, satisfying these requirements
- 5.3.3. Size: Length: 4.5-5.5 in., Height: 1.0-2.0 in., Depth: 0.3-0.5 in.
- 5.3.4. 12-24 VDC

EQUIPMENT SPECIFICATIONS

- 5.3.5. UV resistant clear polycarbonate lens, black bezel trim
- 5.3.6. 16 diodes, dual color, equal number of green & amber (interleaved 8x8)
- 5.3.7. Lighthouse must be capable of displaying each color across full length
- 5.3.8. Capable of alternating between an asymmetric, low-frequency, "wig-wag" pattern and a low-frequency double or quad flash
- 5.3.9. Lighthouse shall meet all applicable federal/state laws and regulations
 - 5.3.9.1. Shall be SAE J595 Class 1 certified

Comply: Yes No

5.4. Work Lights

- 5.4.1. Two (2) five inch (5") electric remote controlled search lights
 - 5.4.1.1. Two (2) mounted on top storage compartment, one street side and one curbside
 - 5.4.1.2. Jabsco, model 62022-3002 or approved equal
- 5.4.2. Each light to have individual in-cab controls
 - 5.4.2.1. Control panel to include on/off, spot/flood switch, variable speed control, and single control for vertical and horizontal movement
- 5.4.3. Hand adjustable LED flood light mounted at the operator's station
 - 5.4.3.1. 4-6" lens
 - 5.4.3.2. 4500 lumens
 - 5.4.3.3. Aluminum housing
 - 5.4.3.4. IP67 rated
 - 5.4.3.5. Buyers Products Part No. 1492145 or equal

Comply: Yes No

5.5. Warning, Work Lights and Conspicuity Tape Layout:

The following pictures are intended to show a general representation of a truck with a digger derrick attachment. Only the labeled details apply here. **Any names, emblems, logos or other features shown that are specific to any manufacturer should not be interpreted as a requirement of these specifications.**

EQUIPMENT SPECIFICATIONS

