



*County of Lake, Ohio*

**OFFICE OF THE  
COUNTY ENGINEER**

March 14, 2013

**FOR COUNTY PROJECT NO. 13-007-04  
2014 Single Axle Truck Cab & Chassis  
Lake County Engineer Garage**

**LAKE COUNTY ENGINEER QUOTATION**

**ADDENDUM NO. 1**

The following is Addendum No. 1 to the bid documents for: 2014 Tandem Truck Cab & Chassis.

1. The entire Specifications Portion of the bid document (11 pages) is to be replaced with the REVISED Specifications attached.

Changes were made in the following sections:

- **Page 7 – #10. – Frame:**
  - a. – 2. Revised verbage

***This addendum shall be attached to the proposal and become part of the bidding document to verify receipt of same.***

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## **2014 SINGLE-AXLE TRUCK CAB & CHASSIS SPECIFICATIONS - REVISED**

The purpose of these specifications is to identify the equipment and components necessary to complete one (1) truck and chassis unit for the Lake County Engineer.

The award will be made to a recognized body truck manufacturer. The truck company will be responsible for supplying and mounting of all identified items. Any parts not specifically mentioned which are necessary to provide a fully functional truck cab and chassis shall be furnished by the successful bidder. Materials and components supplied by the bidder shall be the latest current model incorporating each manufacturer's latest engineering change. Descriptive literature, complete specifications and all other necessary data to evaluate the proposed equipment shall be included with the bid. Failure to do so will invalidate the bid.

Any and all variations from the specifications must be noted on the specification sheet under the column labeled "COMPLY/ EXCEPTION". If there is an exception noted, bidder shall supply literature and detailed specifications of what will be supplied in lieu of what has been specified.

Each manufacturer/contractor shall guarantee against defective workmanship and material for electrical, engine, and transmission systems for a period of at least 24 months unless a longer warranty period is generally in effect by the respective manufacturer/contractor. Components, parts or material found to be defective shall be replaced by the bidder or manufacturer at no cost to the County. All additional and available optional warranties shall be included with bidder's proposal at the time of bid opening.

Upon delivery of the completed unit the bidder will supply a complete set of operating, repair and parts manuals on an "Interactive" CD, for each respective system and component supplied in this bid letting. A sample of Bidders "Interactive" CD shall be supplied with each bidder's proposal.

**(SEE FOLLOWING PAGES FOR TRUCK GUIDELINES AND SPECIFICATIONS)**

**2014 SINGLE AXLE TRUCK CAB & CHASSIS - REVISED**  
**Lake County Engineer Garage – Project No. 13-007-04**

<b>TRUCK GUIDELINES AND SPECIFICATIONS</b>		<b>Comply / Exception</b>
<b>1.</b>	<b>Engine</b>	
	<ul style="list-style-type: none"> <li>a. 6-cylinder diesel <ul style="list-style-type: none"> <li>1. 300 HP @ 2100 gov. RPM- Min. 325 HP Peak @ 1500 – 1900 RPM</li> <li>2. Maximum Torque: 1200 lb/ft @ 1100 - 1300 RPM, 60% Torque Rise</li> <li>3. 659 cu. In. displacement (minimum)</li> <li>4. Lube oil system, Two full flow ESI spin on oil filters</li> <li>5. Extended service interval</li> <li>6. Centrifugal oil filter - Inverted</li> <li>7. Flywheel housing – Die Cast Aluminum</li> <li>8. Hand Primer Pump</li> <li>9. Silicone hoses and tubing on engine</li> <li>10. Air compressor, 18.7 cfm. Minimum Rating</li> <li>11. Crankshaft PTO – 1350 Series</li> <li>12. Oil Pan – single piece E-Coated steel</li> <li>13. Engine brake</li> <li>14. Engine shall be positioned low in the chassis, providing a lower center of gravity</li> <li>15. Electrical pre-heater</li> <li>16. Racor 1000 FH, 12V Electrical Heater w/integral Fuel/Water Separator</li> <li>17. Fan drive, Borg Warner Cool Logic Fan Drive (HDMS) Electronically Controlled Variable</li> <li>18. Diesel Particulate Filter mounted RH side under cab</li> <li>19. Fuel-Water Separator – with manual drain valve (Integral w/primary fuel filter)</li> </ul> </li> </ul>	
<b>2.</b>	<b>Starting System</b>	
	<ul style="list-style-type: none"> <li>a. Starter, 12-volt – Gear Reduction</li> <li>b. Electronic starter interlock</li> <li>c. Batteries, (3) 12 volt, 1950 total CCA</li> </ul>	

TRUCK GUIDELINES AND SPECIFICATIONS		Comply / Exception
	d. Alternator, 12V 160A, Delco (24 SI)	
3.	<b>Air Intake System:</b>	
	<ul style="list-style-type: none"> <li>a. Air Cleaner – Single element dry type with both hood side Intake, inside/outside with in cab control</li> <li>b. Air restriction monitor to be part of enhanced dash board electronic maintenance monitoring</li> <li>c. Diesel Particulate Filter Vertical – R.H. under cab</li> <li>d. Radiator mounted bug screen</li> </ul>	
4.	<b>Exhaust/Emissions</b>	
	<ul style="list-style-type: none"> <li>a. Exhaust after treatment diesel particulate filter, ceramic catalyzed               <ul style="list-style-type: none"> <li>1. DPF, Cleartech HHS DPF RH Side under Cab W/SCR Frame MTD RH Side</li> <li>2. The engine shall be compliant and certified to meet the 2010 Federal EPA Emissions Standards <u>without using Federal EPA Credits</u>. The engine shall meet 2010 Federal Emissions Standards <u>using Selective Catalyst Reduction</u>.</li> <li>3. Exhaust after-treatment system-Exhaust after-treatment system diesel particulate filter ceramic passive regeneration</li> <li>4. DPF Smart Switch, No inhibit DPF Regeneration Switch</li> <li>5. Exhaust, Single stanchion or single cab MTD, single (R/S) vertical exhaust cab mounted, lower venturi diffuser, turned end.</li> <li>6. Single, Bright finish heat shield and stack</li> <li>7. Exhaust shall provide clear CA with no interference for body installation</li> </ul> </li> </ul>	
5.	<b>Cooling System – Shutterless Type</b>	
	<ul style="list-style-type: none"> <li>a. Radiator 900 sq. in. frontal area – minimum – aluminum core               <ul style="list-style-type: none"> <li>1. Anti-freeze to –34 degree Fahrenheit</li> <li>2. Fan drive, Borg Warner Cool Logic Electronically Controlled</li> <li>3. Hoses, heater and radiator, silicone</li> </ul> </li> </ul>	

TRUCK GUIDELINES AND SPECIFICATIONS		Comply / Exception
	<ol style="list-style-type: none"> <li>4. Poly V Fan Belt w/Automatic Tensioner</li> <li>5. Coolant Conditioner</li> </ol>	
6.	<b>Transmission:</b>	
	<ol style="list-style-type: none"> <li>a. Allison 3000-RDS-6 (3.49/0.65) Rugged Duty Series Gen 4 6-speed Automatic Transmission               <ol style="list-style-type: none"> <li>1. Includes Transmission Oil Cooler, External oil Cooler, Internal Filter and Oil level sensor</li> <li>2. Driveline - Main: Spicer SPL 170XL "Extended Lube Series"</li> <li>3. Allison Transmission Shift to neutral when Parking Brake Engaged.</li> <li>4. Transynd Synthetic Lube for Allison Transmission</li> </ol> </li> </ol>	
7.	<b>Cab: Interior</b>	
	<ol style="list-style-type: none"> <li>a. Custom trim level – Above base level               <ol style="list-style-type: none"> <li>1. Coat hook</li> <li>2. Power Outlet</li> <li>3. Dispatch box</li> <li>4. Overhead console including location for radio and in dash storage</li> <li>5. Instrument cluster driver display with enhanced 4.5" diagonal graphic LCD display with 4 button stack control which includes routine maintenance monitoring of chassis</li> <li>6. Visibility doors with passenger side peep window</li> <li>7. Air conditioner, Heater &amp; Defroster</li> <li>8. (4) Dome lights with self contained switch</li> <li>9. Clutch, brake and accelerator pedal to be of "suspended" type</li> <li>10. Adjustable Tilt/Telescopic steering column</li> </ol> </li> <li>b. Seats:               <ol style="list-style-type: none"> <li>1. Driver's Air-National 2000 (Hi-Back) Single Chamber Air Lumbar, 2 position front</li> <li>2. Arm rest, inboard mounted arm rest – driver's seat</li> </ol> </li> </ol>	

TRUCK GUIDELINES AND SPECIFICATIONS	Comply / Exception
<p>only</p> <ol style="list-style-type: none"> <li>3. Rider's seat non-suspension</li> <li>4. Diagonal grab handle on inside drivers door</li> <li>5. Cloth / Vinyl seat trim</li> <li>6. Seat Belts – Driver's and Rider's - Lap &amp; Shoulder with seat retractor</li> </ol> <p>c. Sun Visor, LH &amp; RH</p> <p>d. Floor mats, polyurethane with closed cell vinyl nitrile backing</p> <p>e. Form fitting noise control firewall mats shall be placed over the in cab dog house</p> <p>f. AM/FM premium stereo CD with Weather band, MP3, WMA, Bluetooth</p>	
<p>8. <b>Operational:</b></p>	
<ol style="list-style-type: none"> <li>a. Wrap-around instrument panel, wood grain finish, driver &amp; passenger side cup holders (HVAC Mtd). All dash controls are to be placed within easy reach of the driver. <ol style="list-style-type: none"> <li>1. Air pressure gauge</li> <li>2. Voltmeter</li> <li>3. Fuel level gauge</li> <li>4. Engine oil pressure gauge</li> <li>5. Engine coolant temperature gauge</li> <li>6. Low air pressure indicator (light &amp; buzzer)</li> <li>7. Speedometer/Trip odometer – electronic</li> <li>8. Tachometer/hour meter – electronic</li> <li>9. "Parking Brake On" indicator</li> </ol> </li> <li>b. Provide (6) misc switches, (2) 15A IGN, (1) 20A IGN, (1) 10A IGN, (1) 15A BAT, and (1) 20A BAT</li> <li>c. 5 lb fire extinguisher between LH seat base and door with valve aimed rearward</li> <li>d. Emergency triangle kit parallel to inside surface of rider's seat base</li> <li>e. Key type starting</li> <li>f. Engine shut-off, key type control</li> <li>g. Courtesy light switch (head &amp; clearance) – in cab</li> </ol>	

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	<p>lighting shall consist of 4 overhead lamps</p> <ul style="list-style-type: none"> <li>h. Directional signal switch, manual canceling</li> <li>i. Electric window lift – RH &amp; LH w/power door locks</li> <li>j. Two extra dash mounted illuminated toggle switches</li> <li>k. Power outlets – Two (2) additional 12 Volt</li> <li>l. Dash control power supply for local installation of plow lamps w/lead at grille</li> </ul>	
9.	<b>Cab/Hood:</b> (exterior features)	
	<ul style="list-style-type: none"> <li>a. Welded steel shell, galvanized <ul style="list-style-type: none"> <li>1. Rust preventative procedures</li> </ul> </li> <li>b. Vents, screened <ul style="list-style-type: none"> <li>1. Fresh Air Inlet for heater</li> </ul> </li> <li>c. Cab step, RH – Two Step frame mounted aluminum</li> <li>d. Safety glass windows <ul style="list-style-type: none"> <li>1. 1-Piece Tinted, heated windshield</li> <li>2. 1-Piece Tinted, Side and Rear Glass</li> <li>3. Windshield wipers – two, fixed arm &amp; blade</li> <li>4. Wiper motor (electric), (1) two speed, intermittent</li> <li>5. Windshield washers, electric, wiper mounted with 5 qt. Reservoir</li> </ul> </li> <li>e. Mirrors, Heated West Coast, Bright Finish <ul style="list-style-type: none"> <li>1. RH &amp; LH with stainless steel arms &amp; brackets, Motorized and Illuminated</li> <li>2. Convex mirrors integral with Westcoast mirrors</li> <li>3. Driver's view looking out the passenger side rear view. West Coast mirror shall not be blocked by the RH exhaust</li> </ul> </li> <li>f. Headlights, halogen flush mounted with integral turn signal <ul style="list-style-type: none"> <li>1. Identification &amp; clearance lamps (5)</li> <li>2. Side markers – lamps &amp; reflectors</li> <li>3. Front turn signals</li> <li>4. 4-way flashers</li> <li>5. Daytime running lights</li> </ul> </li> <li>g. Horns electric (single tone)</li> </ul>	

TRUCK GUIDELINES AND SPECIFICATIONS		Comply / Exception
	<ul style="list-style-type: none"> <li>1. Air, single trumpet with snow shield</li> <li>h. Doors – galvanized steel with peep window RH               <ul style="list-style-type: none"> <li>1. Aluminum grab handles, RH &amp; LH behind door</li> <li>2. Diagonal Grab Handle on inside of driver's door</li> </ul> </li> <li>i. Cab mounting: trunnion front, air suspended rear</li> <li>j. Hood and fenders, one piece molded fiberglass - camoplast               <ul style="list-style-type: none"> <li>1. Tilts forward 75 degrees minimum</li> <li>2. Stationary grill</li> <li>3. Replaceable fender extensions</li> <li>4. Hood insulation</li> </ul> </li> </ul>	
<b>10.</b>	<b>Frame:</b>	
	<ul style="list-style-type: none"> <li>a. Wheelbase: 174"               <ul style="list-style-type: none"> <li>1. Load platform: 148"</li> <li>2. Usable minimum cab to axle: 96", <b><u>Clear Frame</u></b></li> <li>3. Axle to end of frame: 41"</li> </ul> </li> <li>b. Frame rails – steel               <ul style="list-style-type: none"> <li>1. Cross section, 11.811" x 3.54" x .44"</li> <li>2. Section modulus – 23.50 cu.in. (minimum), single channel frame rail</li> <li>3. RBM 2,820,000 in. lb. Per rail (minimum), 120,000 PSI yield strength</li> <li>4. Cross members: Back of cab to rear axle; Heavy duty back to back channels, extended behind rear axle; Single channel type</li> <li>5. Bumper: Steel, swept back channel</li> <li>6. Towing hooks – Front</li> <li>7. The space between the frame rails needs to be 8.5 inches wider at the front of the frame at engine compartment than it is at the cab firewall.</li> <li>8. Front frame extension <u>20-inches</u> for snow plow mount (Continued Parent Rail) with tilt, without inspection hatches.</li> </ul> </li> </ul>	
<b>11.</b>	<b>Fuel Tanks:</b>	
	<ul style="list-style-type: none"> <li>a. Aluminum 22" D-Shaped               <ul style="list-style-type: none"> <li>1. Capacity/location: 66 gallon LH</li> </ul> </li> </ul>	



TRUCK GUIDELINES AND SPECIFICATIONS		Comply / Exception
	b. Standard Finish Steps and Bright Finish Straps	
<b>12.</b>	<b>Front Axle:</b>	
	<ul style="list-style-type: none"> <li>a. 18,000 lb. Capacity – Forged I-Beam construction</li> <li>b. Brakes, “S” Cam (16.5 x 6”) Cast Spider <ul style="list-style-type: none"> <li>1. Bendix ES165-06D</li> <li>2. Automatic slack adjusters</li> <li>3. Dust shields</li> <li>4. Unitized wheel hubs – requires no maintenance – permanently sealed with grease</li> </ul> </li> <li>c. Sealed tapered kingpins and bearings</li> <li>d. Suspension, Multi-Leaf Spring Heavy Duty <ul style="list-style-type: none"> <li>1. 18,000 lb, ground load rating</li> <li>2. 32.5” spring centers</li> <li>3. Shock Absorbers</li> </ul> </li> <li>e. Steering, Sheppard SD110 power <ul style="list-style-type: none"> <li>1. Wheel equipment, steel disc – 22.5 x 9.0 Accuride</li> <li>2. Hub Pilot – 10 Hole</li> <li>3. Power coating – front hubs, ferrous</li> </ul> </li> </ul>	
<b>13.</b>	<b>Rear Axle:</b>	
	<ul style="list-style-type: none"> <li>a. 23,000 lb. Capacity axle <ul style="list-style-type: none"> <li>1. Carrier – fabricated steel housing –</li> <li>2. Ratio: to obtain 64 mph @ gov. speed : 6.14 <i>Ratio</i></li> </ul> </li> <li>b. 23,000 lb capacity – Air Suspension</li> <li>c. Brakes -Bendix ES165-07D, 16.5 x 7” – cast outboard mounted <ul style="list-style-type: none"> <li>1. Bendix Anti-Lock Brake System with Traction Control</li> <li>2. Automatic slack adjusters – Gunit 2000</li> <li>3. Auxiliary spring brake chambers – Tamper resistant – MGM Model TR-T</li> <li>4. 30/30 double diaphragm type</li> <li>5. Mechanical spring release</li> <li>6. Dust Shields</li> </ul> </li> </ul>	

<b>TRUCK GUIDELINES AND SPECIFICATIONS</b>		<b>Comply / Exception</b>
	d. Wheel equipment, steel disc – 22.5 x 8.25 1. (10 hole hub-piloted)(two hand-hole) 2. Rim – 8.25" x 22.5" 3. Powder Coated	
<b>14.</b>	<b>Tires:</b>	
	a. Front (singles), Size: 315/80R22.5 – 20 Ply, Tread: M-860, Vendor: Bridgestone  b. Rear (duals), Size: 11R22.5 – 14 ply, Tread: GL320 (Traction) Vendor: Bridgestone	
<b>15.</b>	<b>Brakes:</b>	
	a. Anti-Lock System, Bendix with Traction Control b. Air dryer – Meritor/Wabco System Saver 1200P w/coalescing oil filter c. Air Reservoir – Two, aluminum, standard finish d. Trailer Air Brake Connections, end of Frame e. Trailer Electrical Receptacle – Single 7 Pins Std, SAE Type, End of Frame	
<b>16.</b>	<b>Electrical:</b>	
	a. Negative ground b. 12-volt electrical circuits & bulbs c. Circuit protection, all circuits breaker protected d. Battery Box Covers – Polished aluminum e. Battery shock pads f. Electrical connections, waterproof, sprayed with protective coating g. Cab floor pass thru hole / rubber boot h. Rear lighting, (2) combination stop, tail directional and back up lights i. Truck to meet 2014 On-Board Diagnostic Requirement	
<b>17.</b>	<b>Paint:</b>	
	a. Cab, hood & fenders, Color: Forest Green – high gloss or equal with urethane clear coat  b. Chassis running gear, Color: Black – Urethane.	

TRUCK GUIDELINES AND SPECIFICATIONS		Comply / Exception
18.	Miscellaneous:	
	<ul style="list-style-type: none"> <li>a. Dealer to state warranty and any recommended optional extended warranties and cost of each on bid price sheet</li> <li>b. Literature &amp; Factory Computer Printouts</li> <li>c. Dealer to furnish all available printed literature on chassis &amp; individual drive train components with bid</li> <li>d. Dealer to furnish computer analysis with bid, Indicating performance, operating range – MPH</li> <li>e. Parts and Service, must be available at bidders facility within a radius of 35 miles</li> </ul> <p><i>**Subject to approval of Lake County Engineer**</i></p>	

### **DETAILED EXCEPTION SHEET**

List here any and all exceptions to specifications upon which your bid is based. If there are no exceptions listed here, your bid will be considered to be in complete accordance with specifications.