

#### **Solicitation Addendum**

Issuing Agency:	Department of Administration, Purchase & Contract
Solicitation Number:	DPC-1428364267-BP
Solicitation Description:	Class 8 Truck Cab and Chassis
Bid Opening Date & Time:	March 4, 2025 @ 2:00 PM
Addendum Number:	#1
Addendum Date:	February 24, 2025
Procurement Lead:	Brian Phillips

#### FAILURE TO RETURN THIS ADDENDUM SHALL SUBJECT YOUR RESPONSE TO REJECTION.

### 1. The Solicitation is hereby modified as follows:

Modification #	Solicitation Section	Current Solicitation Language	Updated Solicitation Language	
1	Section 2.4 IFB Schedule – Submit Bids	February 21, 2025 at 3:00 PM ET	March 4, 2025 at 2:00 PM ET	
2	Section 2.6 Bid Questions	See Attachment I to review questions asked on previous solicitations.	Deleted.	
3	Attachment A: Pricing Workbook, 35,000LB. GVW Cab and Chassis	Column Header "Unit Price"	"Unit Price with Automatic Transmission" and "Unit Price with Automated Manual Transmission"	
4	Attachment A: Pricing Workbook, 35,000LB. GVW Cab and Chassis, Item 1	Conventional cab, w/automatic transmission and bucket seats as described in attached specifications.	Conventional cab, w/bucket seats as described in attached specifications.	
5	Attachment A: Pricing Workbook, 35,000LB. GVW Cab and Chassis, Item 4		Option for REPTO (Rear Engine Power Take Off).	

Modification #	Solicitation Section	Current Solicitation Language	Updated Solicitation Language
6	Attachment A: Pricing Workbook, Optional Pricing (Engine Modifications)	Vendors are requested to provide pricing for upgrading/tuning the engine RPM, Speed or Horsepower.	Vendors are requested to provide pricing for upgrading/tuning the maximum truck speed to 75 miles per hour.
7	Attachment J: Specifications 35K GVWR Item 12i Engine Requirements	Shall have all provisions for front engine crankshaft driven hydraulic PTO system as well as rear engine PTO provision. Rear engine PTO shall have standard gears.	Deleted.
8	Attachment J: Specifications OTR 90K Truck Tractor Item 2	GCWR: Minimum 90,000 lbs. GVWR: 60,000	GCWR: Minimum 90,000 lbs. GVWR: 59,220 Lbs.
9	Attachment J: Specifications On/Off Road 90K Truck Tractor Item 21	Hydraulics: The truck tractor is required to have a transmission PTO driven pump, with in-cab engagement, providing sufficient hydraulic flow and power to operate the trailer, which will normally be a 50-ton rated, drop deck equipment hauling trailer with a 12,000- pound winch. (Most commonly the vendor delivers these truck tractors to Godwin Mfg. in Dunn NC and works with them on this up-fit.)	Hydraulics: The truck tractor is required to have a transmission PTO driven pump and a 35-gallon hydraulic tank. Must have in-cab engagement, providing sufficient hydraulic flow and power to operate the trailer, which will normally be a 50-ton rated, drop deck equipment hauling trailer with a 12,000-pound winch. (Most commonly the vendor delivers these truck tractors to Godwin Mfg. in Dunn NC and works with them on this up-fit.)
10	Attachment J: Specifications On/Off Road 90K Truck Tractor Item 21a	Complete hydraulic system including pump, filters, pressure relief valve, and metal reservoir.	Complete hydraulic system including pump including a Chelsea or Muncie PTO pump, filters, pressure relief valve, and a 35- gallon metal reservoir.
11	Attachment J: Specifications On/Off Road 90K Truck Tractor Item 21b		Added "b", PTO Pump to deliver a minimum of 10 GPM and a maximum of 25 GPM at 2800 to 3000 PSI. Renumbered section.

\_\_\_\_

Modification #	Solicitation Section	Current Solicitation Language	Updated Solicitation Language
12	Attachment J: Specifications Truck Tractor Triaxle 140K GCWR Item 23	Hydraulics: The truck tractor is required to have a transmission PTO driven pump, with in-cab engagement, providing sufficient hydraulic flow and power to operate the trailer, which will normally be a 50-ton rated, drop deck equipment hauling trailer with a 12,000- pound winch. (Most commonly the vendor delivers these truck tractors to Godwin Mfg. in Dunn NC and works with them on this up-fit.)	Hydraulics: The truck tractor is required to have a transmission PTO driven pump and a 35-gallon hydraulic tank. Must have in-cab engagement, providing sufficient hydraulic flow and power to operate the trailer, which will normally be a 50-ton rated, drop deck equipment hauling trailer with a 12,000-pound winch. (Most commonly the vendor delivers these truck tractors to Godwin Mfg. in Dunn NC and works with them on this up-fit.)
13	Attachment J: Specifications Truck Tractor Triaxle 140K GCWR Item 23a	Complete hydraulic system including pump, filters, pressure relief valve, and metal reservoir.	Complete hydraulic system including pump including a Chelsea or Muncie PTO pump, filters, pressure relief valve, and a 35- gallon metal reservoir.
14	Attachment J: Specifications Truck Tractor Triaxle 140K GCWR Item 23b		Added "b", PTO Pump to deliver a minimum of 10 GPM and a maximum of 25 GPM at 2800 to 3000 PSI. Renumbered section.

## 2. The following are questions received about the Solicitation and the State's response:

Question #	<b>Document Section</b>	Vendor Question	State's Response
1	Attachment A: Pricing Workbook	Bid Item #19.1 & 19.2: There are two transmission options listed in this spec and it seems one needs to be part of the standard pricing (automatic) and the other (automated manual) should be a separate	See Section 1, Modification #3 Attachment A: Pricing Workbook, 35,000 LB. GVW Cab and Chassis, columns added to support quotes for both Automatic and Automated Manual Transmissions.
		line item option on the Pricing Workbook. Please advise.	

Question #	<b>Document Section</b>	Vendor Question	State's Response
2	Attachment J: Specifications 35K GVWR Item 12i Engine Requirements	Bid Item 12i: REPTO is requested here to be part of the base price, but on the tandem REPTO is a separate line-item option on the Pricing Workbook. For the single axle, should REPTO be a separate line item option, too?	See Section 1, Modification #5 12i was deleted from Attachment J: Specifications 35K GVWR. Option for REPTO was added as Item 4 under 35,000 GVW Cab and Chassis, Attachment A: Pricing Workbook
3	Attachment J: Specifications 35K GVWR Item 19.2 Automatic Transmission	Would Allison 3000RDS transmission be acceptable as well in lieu of 3500RDS?	No.
4	Attachment J: Specifications 35K GVWR Item 25 Front Bumper	Would 20" minimum frame extension be acceptable to accommodate FEPTO provision?	No
5	Attachment J: Specifications Tandem Axel 50-70 GVWR Item 33 Mirrors	Only a single RH fender mirror is noted here. The 35,000 GVWR dumps asks for fender mirrors on both sides. Do we need to have the LH driver side fender mirror on this spec, too?	No.
6	Attachment J: Specifications OTR 90K Truck Tractor Item 2 GCWR	Is 59,220# GVWR acceptable? To get to 60,000# we would need to use a 12R22.5 tire and section 23A specifically asks for 11R22.5 which is what brings the rating down to 59,220#	See Section 1, Modification #8 Yes, 59,220 LB. GVWR is acceptable.
7	Attachment J: Specifications OTR 90K Truck Tractor Item 10e Batteries	Bid Item #10E: Jump posts under hood near starter acceptable? (OEM recommends this location.)	No.
8	Attachment J: Specifications OTR 90K Truck Tractor Item 35b Fifth Wheel	Is it acceptable to have a 5th wheel track 18-inches forward and 6-inches to the rear? (24 inch slider in total.)	No.

Question #	<b>Document Section</b>	Vendor Question	State's Response
19	Attachment J: Specifications On/Off Road 90K Truck Tractor Item 10e Batteries	Bid Item #10E: Jump posts under hood near starter acceptable? (OEM recommends this location	No.
10	Attachment J: Specifications On/Off Road 90K Truck Tractor Item 21 Hydraulics	Bid spec says complete hydraulic system but does not mention the actual PTO. (It does mention the pump, filters, pressure relief valve, and metal reservoir.) Can you confirm we are also supposed to supply the actual PTO and what brand/model PTO is preferred, if any?	See Section 1, Modification #10 NCDOT should receive the truck with complete hydraulics already installed. NCDOT will not be providing a PTO. The vendor/bidder can sub this operation out or complete this upfit at their location. Chelsea and Muncie are the approved brands for PTO pumps.
11	Attachment J: Specifications On/Off Road 90K Truck Tractor Item 36b Fifth Wheel	Is it acceptable to have a 5th wheel track 18-inches forward and 6-inches to the rear? (24 inch slider in total.)	No.
12	Attachment J: Specifications On/Off Road 90K Truck Tractor Item 21a Hydraulics	What are the GPM and PSI requirements of the trailer? Need this info for proper hydraulic kit setup.	See Section 1, Modification #11 10 GPM minimum and 25 GPM maximum and 2800 to 3000 PSI
13	Attachment J: Specifications Truck Tractor Triaxle 140K GCWR Item 11e	Bid Item #11E: Jump posts under hood near starter acceptable? (OEM recommends this location.)	Yes.
14	Attachment J: Specifications Truck Tractor Triaxle 140K GCWR Item 23	Bid spec says complete hydraulic system but does not mention the actual PTO. (It does mention the pump, filters, pressure relief valve, and metal reservoir.) Can you confirm we are also supposed to supply the actual PTO and what brand/model PTO is preferred, if any?	See Section 1, Modification #13 NCDOT should receive the truck with a complete hydraulics already installed. NCDOT will not be providing a PTO. The vendor/bidder can sub this operation out or complete this upfit at their location. Chelsea and Muncie are the approved brands for PTO pumps.

\_\_\_\_

Question #	Document Section	Vendor Question	State's Response
15	Attachment J: Specifications Truck Tractor Triaxle 140K GCWR Item 23	What are the GPM and PSI requirements of the trailer? Need this info for proper hydraulic kit setup.	See Section 1, Modification #14 10 GPM minimum and 25 GPM maximum and 2800 to 3000 PSI
16	Attachment J: Specifications Truck Tractor Triaxle 140K GCWR Item 23	What is the minimum size hydraulic tank requirement?	See Section 1, Modification #13 35 Gallon
17	Attachment A: Pricing Workbook – Optional Pricing	We need more specifics here to be able to provide prices for this. Changing things like speed or horsepower could be minor or major costs depending on what exactly is asked for, because depending on the request there may be hardware changes needed in addition to shop labor or programming time. For instance, sometimes changing speed is just programming changes but other times it could involve changing the rear axle to get a different rear ratio which is a much larger expense. Is the intent of this section to identify what our shop labor rate is for programming changes?	See Section 1, Modification #6 Vendors are requested to provide pricing for upgrading/tuning the maximum truck speed to 75 miles per hour.
18	IFB Section 2.6 Bid Questions	In the main Invitation for Bid document, section 2.6 Bid Questions, there is a note that says "See Attachment I to review questions asked on previous solicitations." I could not find Attachment I anywhere in the documents posted in the sourcing tool. Can you please advise where to find this?	"Attachment I: Bid Questions" was deleted from the final draft and is not included in this posted IFB. Please disregard.

#### ALL OTHER TERMS AND CONDITIONS REMAIN THE SAME

Vendor Name:	
Authorized Signature:	
Name & Title:	
Date:	

\_\_\_\_



### DPC-1428364267-BP - Class 8 Truck Cab and Chassis

# Attachment A: Pricing Workbook

Vendor Name:\_\_\_\_\_

	35,000 LB. GVW Cab and Chassis						
Item	Description	Manufacturer	Year & Model	Unit Price Automatic Transmission			
1	Conventional cab, bucket seats as described in attached specifications						
2	Option for crew cab						
3	Optional bench seat in lieu of bucket seats in conventional cab or in lieu of front row bucket seats in crew cab.						
4	Option for REPTO (Rear Engine Power Take Off).						
5	Option for 84" usable CA						
6	Option for 105" usable CA						
7	Option for 108" usable CA						
8	Option for 111" usable CA						
9	Option for 120" usable CA						
10	Option for 126" usable CA						
11	Option for 144" usable CA						
12	Option for 162" usable CA						
13	Option for 174" usable CA						

	50,000-70,000 LB. GVWR Tandem Axel Cab and Chassis					
Item	Description	Manufacturer	Year & Model	Unit Price		
1	Tandem Axle Chassis w/ Automated Manual Transmission (AMT)					
2	Tandem Axle Chassis w/ 1 Lift Axle and Automated Manual Transmission (AMT)					
3	Tandem Axle Chassis w/ 2 Lift Axle and Automated Manual Transmission (AMT)					
4	Option 1: REPTO (Rear Engine Power Take Off).					

	Truck Tractor					
Item	Description	Manufacturer	Year & Model	Unit Price		
1	Truck Tractor, 90,000 LB GCWR Over the Road					
2	Heavy-Duty Truck Tractor, 90,000 LB. GCWR Intended For On/Off Road Service					
3	Truck Tractor Tri-Axle 140,000 LB GCWR					

	Optional Pricing (Engine Modifications)					
ltem	Vendors are requested to provide pricing for upgrading/tuning the maximum truck speed to 75 miles per	Unit Price				
4	35,000 GVWR					
5	Tandem Axel 50-70K GVWR					
6	Truck Tractor, 90,000 LB GCWR Over the Road					
7	Heavy-Duty Truck Tractor, 90,000 LB. GCWR On/Off Road Service					
8	Truck Tractor Tri-Axle 140,000 LB GCWR					

Item	Description	Program Fee?		Program Fee?		Program Fee?		Unit Price
	Vehicle Operator Training	YES	NO					
1	If there is a program fee, provide detailed breakdown to cla	arify costs.						
	Pilot Model Program	YES	NO					
2	If there is a program fee, provide detailed breakdown to cla	rify costs.						

Unit Price
Automated
Manual
Transmission
Transmission



# Vendor:

## Truck, Cab & Chassis, Diesel Engine Powered, 35,000 GVWR

General: NCDOT will typically use this chassis in 3 applications. First application will be used as a dump truck. It will be hauling different types of construction material such as rock, dirt, sand, as well as pulling trailers to haul construction equipment such as compact excavators and track loaders to do smaller road maintenance projects. The Second application will be used as a snow plow truck which accommodate a 10' snow plow as well as a 5 Cubic Yard in-body salt spreader for treating Highways as well as secondary roads with salt and brine. The Third application will accommodate 10', 12', and 16' Flat Beds. These beds will be either stationary beds or a dump style beds and will carry material such as mulch and dirt. This specification is intended to describe a straight truck with, conventional single cab and crew cab. The warranty shall also include coverage of these units in typical snow removal operation.

Line		Requested	Offered	
1	Chass	is with conventional cab and crew cab.		
	а	Manufacturer		
	b	Model		
	С	Year Model		
2	GVW:	Shall be a minimum rating of 35,000 lbs.		
	а	GVWR		lbs.
	b	GCWR		lbs.
	С	Weight of cab & chassis including lubricant and fuel (full) on front axle for conventional cab.		lbs.
	d	Weight of cab & chassis including lubricant and fuel (full) on rear axle for conventional cab.		lbs.
	е	Weight of cab & chassis including lubricant and fuel (full) on front axle for crew cab.		lbs.
	f	Weight of cab & chassis including lubricant and fuel (full) on rear axle for crew cab.		lbs.
3	Whee	lbase For Dump Truck Applications		
	а	Approximately 188-inch wheelbase for conventional cab.		inches
	b	Approximately 200-inch wheelbase for crew cab.		inches
4.1	Cab-to	o-Axle (C.A.) Dimension For Dump Truck Applications		

	а	C.A. to be 111 inches ± 1 inch.		inches
	b	Left (driver's side) outside frame rail to have enough clear		
		space between the back of the cab and the rear axle to		Clear frame
		accommodate a hydraulic reservoir and a valve box that		rail left side:
		collectively measures 56" L including the mounting brackets.		inches
	С	Right (passenger side) outside frame rail to have enough clear		Clear frame
		space between the back of the cab and the rear axle to		rail right side:
		accommodate a toolbox that measures 40" L including the mounting brackets.		inches
4.2	Cab to	Axle (CA) Dimension For Various Lengths of Flat beds		
	а	Please see Attachment A of the Pricing Workbook		
5	Frame			
	а	Minimum resisting bending moment (RBM) of 1,500,000		
		inch/lbs. per frame rail.		in/lbs.
	b	Minimum yield strength of 120,000 PSI rated.		<b>D</b> (1)
				PSI
	С	Frame rails should be clean from end of cab to rear of frame	$\Box$	Yes
		in both sides of the rails.	$\Box$	No
6	Spring	s and Suspension		
	а	Front and rear suspension shall meet the requirements of		Yes
		GVWR.		No
	b	Rear springs must have auxiliary leaf or leaves to absorb		Yes
		shock of dump truck loading and to provide additional		No
		stability.		
	С	Rear suspension should be a minimum of 23,000 lbs.		lbs.
	d	Front spring Capacity.		lbs.
				lbs.
	е	Rear spring Capacity.		
7	Front	Axle		
	а	Front axle with minimum 13,300 lbs. rated capacity.		lbs.
	b	Set forward axle with Shock absorbers.	$\Box$	Yes
			$\overline{\Box}$	No
	С	Wheel bearings oil bath type with synthetic lubricant.	$\square$	Yes
				No
8	Rear A	xle		
	а	Single speed rear axle with minimum 23,000 lbs. rated capacity.		lbs.
	b	Rear axle ratio to match engine RPM, and tire size		Aula II
		to achieve 68 MPH ± 2 MPH @ maximum GVW on		Axle ratio
		level ground.		Speed (MPH)
				@
				C Maximum
				GVW
				J

	С	Differential shall be filled with synthetic lubricant.		Yes No
	d	Automatic traction control device is required.		Yes
	u			No
				Describe
9	Brakes	5		
	а	Full air disc brakes.		Yes
				No
	b	Desiccant type air dryer, Midland Pure Air Plus or Pre-		Yes
		approved equal.		No
	С	Minimum 18.5 CFM compressor.	$\Box$	Yes
				No
	d	Dust shield required on all axles.		Yes
			$\Box$	No
	е	Brakes shall conform to FMVSS-121 at time of production.	$\Box$	Yes
			$\Box$	No
	f	Shall have emergency parking brake.		Yes
		Full trailer air pagkage required with glad bande installed at		No
	g	Full trailer air package required with glad hands installed at end of chassis rails.		Yes
	h	The brake air tank shall have a manual drain valve With a		No
	11	lanyard attached to the chassis rail.		Yes
			$\Box$	No
	i	ABS system shall be manufacturer's standard Bendix or Meritor and must be compatible with all manufacturers of		Yes
		trailer brakes.	Π	No
	i	Full vehicle wheel control system with automatic traction		Yes
	,	control system.		No
10	Batter	ies		
	а	Battery box and battery mounts designed for on/off road		Yes
		application.	$\overline{\Box}$	No
	b	Minimum of 1800 CCA.		CCA
	С	Hold down clamps and terminals treated with corrosion	Π	Yes
		resistant.	$\overline{\Box}$	No
	d	Batteries and cables should comply with TMC105 (Technology	$\square$	Yes
		Maintenance Council).		No
	е	Two (2) remote jump start terminals, battery side mounted	$\overline{\sqcap}$	Yes
		with color coded covers.	$\overline{\Box}$	No
	f	Shall have a master electrical disconnect switch (non-keyed)		Yes
		on battery side of truck, protected from road splash and	U	
		accessible from the ground or be mounted in the cab.		No
	g	Manufacturer's standard battery box cover.	Ō	Yes
				No
11	Altern			
	а	Minimum 130 amps		Amps
L				, inpo

	b	Alternator Make	Make
	С	Alternator Model	Model
12	Engine	e Requirements	
	а	Full diesel, electronic engine, with inline minimum six (6)	] Yes
		cylinders.	) No
	b	Minimum rated torque 860 lbs./ft and minimum 300HP.	] Yes
			] No
	С	110 V thermostatically controlled engine block heater	Yes
		properly sized for the engine proposed with receptacle L mounted under driver side door.	
			No No
	d	Shall have engine air intake arranged to eliminate the Induction of blowing snow during snow removal operations.	] Yes
		Shall be SAE 1349 rated.	J No
	е	Shall be SAE 1549 fated.	J Yes No
	f	A copy of the most recent EPA certificate for 2013 Emission is	Yes
	I	requested with this bid.	No
	g	Shall have thermostatically controlled fuel heater.	Yes
	ъ		] No
	h	Shall have on board primer for the fuel system.	Yes
			] No
	i	Vendor shall provide and install the plate adapter to	Yes
		harmonic balancer for the front mounted pump application	] No
	i	Shall be compatible for use with B-20 Bio-Diesel fuel.	) Yes
			] No
	k	Shall have a fuel water separator.	Yes
			] No
	I	Engine parameters set to allow infinite engine idle time	] Yes
			) No
	m	Shall have a fuel filter.	] Yes
			] No
	n	Shall have a full flow, spin on type engine oil filter.	Yes
			] No
	0	Engine Manufacturer.	MFG.
	р	Engine Model.	Model
	q	Number of Cylinders.	# of Cylinders
	r	Engine displacement Minimum HP to be 300hp	Minimum HP
	S	Net HP@RPM	Net HP @
			RPM
	t	Peak torquelbs./ft @RPM	Peak torque
			lbs./ft @
			RPM
	u	Shall have a corrosion resistant oil pan.	) Yes

		No
	Engine Performance: The following performance is requested when full loaded as determined by SAE 2188	8. Rated horsepower and
13	torque shall be sufficient so that when coupled with the proposed transmission and rear axles, the unit will criteria listed below:	meet the performance
	a Shall have 20% startability at maximum GVWR to start and	Yes
	climb 20% grade (startability @ clutch engagement).	No
	<ul> <li>b Shall have a minimum 2% gradeability at maximum GVWR @</li> <li>68 MPH.</li> </ul>	Yes
	<ul> <li>c Shall maintain a minimum top speed of 68 MPH</li> <li>(± 2 MPH) @ maximum GVW on level ground.</li> </ul>	Yes
	d Vendor shall include truck performance analysis sheets indicating the truck performance criteria as described above.	Yes
14	Exhaust	
	a Shall have a vertical stack with horizontal muffler not to extend above cab roof and not to interfere with mounted dump body. A turnout exhaust stack is required (rain cap not acceptable).	Yes
15	Fuel Tank	
	a Single, aluminum fuel tank.	Yes
	b Minimum 70 gallons capacity.	Yes
	c Mounted on the left side preferred.	Yes
	d Furnish a step type with slip resistant step.	Yes
16	Air Cleaner	
	a Dry type, with rated air flow for engine offered with filtration efficiency of 99.5% for all engine speeds.	Yes
	b Direct reading air restriction indicator mounted in cab.	Yes
17	Cooling System	
	<ul> <li>a Shall conform to SAE J1393, ASTM standards and</li> <li>Manufacturer recommendations for on-off road application.</li> </ul>	Yes
	b Shall have extended life coolant	Yes
18	Gauges Shall include manufacturer's standard DID (Drivers Information Display) gauge package, including as a minimum:	g the following gauges
	a Oil Pressure	Yes
	b Temperature	Yes
	c Voltmeter	Yes
	d Fuel	Yes
	e Pressure	Yes

			🔲 No
	f	Tachometer	Yes
			No
	g	Engine Hour meter	Yes
	<u> </u>		□ No
	h	Audible and visual alarm for high water temperature	Yes No
	i	Audible and visual alarm for oil pressure	
	j	Audible and visual alarm for low air pressure	Yes
			No
19.1	Autor	nated Manual Transmission	
	а	Minimum of 12 speeds	Yes
			No
	b	Transmission manufacturer:	
	С	Transmission model:	
	d	Torque capacity:	
	ŭ		
	е	Transmission control shall be push pad, dash mounted shifter.	TYes
			No No
	f	Shall be equipped with oil level sensor.	Yes
			No
	g	Transmission shall be equipped with auto-neutral feature to	TYes
		be activated when parking brake is applied to command the	
		transmission to neutral, regardless of range selection.	No No
	h	Furnished with synthetic transmission lubricant.	Yes
			No
	i	If electronically controlled, the transmission shall not create	Yes
		RF interference with user installed 2-way radios.	☐ No
	j	Transmission electronic control module shall be located in a	Yes
		position that protects it from weather and road splash to	
		minimize exposure to corrosive elements.	No No
19.2	Autor	natic Transmission	
	а	Fully automatic, six (6) speed.	Yes
			🗌 No
	b	Allison World Transmission 3500 RDS with wide Ration, for	Yes
		on/off road.	
	С	Transmission manufacturer:	
	d	Transmission model:	
	е	Torque capacity:	
	f	Transmission control shall be push pad, dash mounted shifter.	Yes
	g	Shall be equipped with oil level sensor.	Yes
	D		
	h	Transmission shall be equipped with auto-neutral feature to	
	11	he activated when narking brake is annlied to command the	Yes

I		be detivated when parking brake is applied to communa the	_	۱
		transmission to neutral, regardless of range selection.		
	i	Furnished with synthetic transmission lubricant.	C	) Yes
				) No
	j	If electronically controlled, the transmission shall not create		) Yes
		RF interference with user installed 2-way radios.	Г	No
	k	Transmission electronic control module shall be located in a		Yes
		position that protects it from weather and road splash to	L	Jies
		minimize exposure to corrosive elements.		) No
20	Wind	shield Wipers		
20	a	Electric, dual wipers.		Yes
	a			
	<u> </u>			No
	b	Intermittent action.		Yes
				No
	С	Dual washers		Yes
				No
21	Whee	l Rims		-
	а	Aluminum disc type wheels, 10 hole.	Γ	Yes
				, No
	b	Hub piloted.		Yes
	D			No
		Front and rear rims 8.25 inches wide		
	С	Front and rear rims 8.25 inches wide		Yes
				No
	d	Nylon Gasket to prevent corrosion to hub		Yes
				No
	е	Rims shall conform to Tire & Rim Association guidelines.		Yes
			Ē	No
	f	Wheels shall have Dura-Bright polish or Equivalent to aid in		Yes
		corrosion resistance.		, No
	g	Rim Manufacturer:	<u>_</u> _	<b>jo</b>
	Б			
22	Front	Tires		
	а	11R22.5 steel belted radial.	Г	Yes
				, No
	b	Minimum load range "H".	<u>_</u>	Yes
	0			No
		Premium highway treads.		
	С	Prefilium nighway treads.		Yes
				No
	d	Good Year, Michelin, Continental, Bridgestone, tires are	Г	Yes
		approved. Any additional tire brands must be approved by		,
		the Procurement Entity.		No
	е	Tire Manufacturer.		
	f	Tire Model.		
23	Rear			
25		11R22.5 steel belted radial.		
	а			Yes
	-			No
	b	Minimum load range "H".		Yes
				No

	С	Premium highway treads.		Yes No
	d	Good Year, Michelin, Continental, Bridgestone, tires are approved. Any additional tire brands must be approved by the Procurement Entity.		Yes No
	е	Tire Manufacturer.		
	f	Tire Model.		
24	Lighti	ng		
	а	Factory installed daytime running lights.		Yes No
	b	The standard headlight switch shall operate all lights in the normal mode at full voltage.		Yes No
	С	Front and rear Class "A" directional signals.		Yes No
	d	Minimum, five (5) cab marker lights.		Yes No
	е	Hazard Flashers		Yes No
	f	All lighting to be of the type approved by the N.C. Division of Motor Vehicles.		Yes No
	g	Must have a Pre-Trip exterior light inspection switch: Engaging light inspection switch will sequentially flash all exterior vehicle lights, except back up lights while operator completes safety inspection.		Yes No
25	Front	Bumper		
	а	Delete front bumper.		Yes No
	b	Front frame rail shall be full height, no tapered frame.		Yes No
	С	Frame extension shall be a minimum of 24 inches to accommodate the front pump provision (FEPTO) for Snow Plowing Trucks		Yes No
26	Electr	ical Wiring		
	а	All wiring from front to rear of chassis in loom or molded plastic or approved equal.		Yes No
	b	Wiring Should be attached to inner side rails with rubber covered fasteners at approx. 20" intervals.		Yes No
	С	Wiring, including a weatherproof connector shall be provided	Γ	Yes
		at the hood-hinge area for connection of snow plow lights.		No
	d	at the hood-hinge area for connection of snow plow lights. The connector shall include parking light and turn Signal functions.		No Yes No
	d e	The connector shall include parking light and turn		Yes

27	Auxilia functio	ary Power Switches: Shall have six (6) factory installed, dash mounted Auxiliary power switches wired fo ons:	r th	e following
	а	Snowplow light selector switch to allow independent		
	-	selection of the chassis headlights or the snowplow lights.	L	Yes
				No
	b	Strobe light switch, illuminated, on/off type, battery source,	Γ	Yes
		minimum 20 AMP.	Ē	No
	с	Spreader light switch, illuminated, on/off, ignition source		Yes
	-	minimum 20 AMP.	Ē	No
	d	Two (2) illuminated switch, on/off type, ignition source,		Yes
	-	minimum 20 AMP for future use.	Ē	No
	е	One (1) illuminated switch, on/off type, battery source,		Yes
	C	minimum 20 AMP for future use.		No
	Cab: C	ab should be a single or crew cab as per "Furnish and Deliver". Vendor may be required to demonstrate	the	,
28		the evaluation process.	the	
	а	Shall have factory installed air-conditioning.		Yes
				No
	b	Shall have electronic cruise control.		Yes
				No
	С	Shall have exterior and interior grab handle handholds for all		Yes
		doors including crew cab.		No
	d	Shall have steps for high cab applications for both		Yes
		Driver, and passenger side front and rear (for crew cab).		No
	е	First step from ground and succeeding step spacing not to		Yes
		exceed twenty (20) inches.		No
	f	Shall have tinted safety glass all around including		Yes
		Windshield.		No
	g	Driver and passenger seats shall be air ride, adjustable up,		Yes
		down, forward, back and tilt. (National Cush-n-Air or equal).		
			L	No
	h	Both seats shall be high-back each with lap and shoulder		Yes
		seatbelts, and for crew cab when applicable. Shoulder straps shall be high visibility orange.	Г	No
	i	Shall have 12V power supply outlet.		Yes
				No
	i	Shall have fresh air heater and defroster.	—	Yes
	J			No
	k	Shall have power door locks, and power windows, right and		
	Ň	left padded sun visor, driver/passenger side arm rest, map	L	Yes
		pocket and floor mats.		No
	I	Shall have AM/FM/CD/blue tooth radio, shielded to eliminate		Yes
		interference from 2-way radio with Bluetooth.		
				No
	m	Shall have a fixed grill with radiator guard and tilt hood.		Yes
				No
	n	Shall have a tilt and telescoping steering wheel.		Yes
				No
	0	Electronic speedometer with auxiliary in-cab tap	Г	Yes
		Point to interface with current electric spreader controls with	<u>_</u>	

		pulse width modulated signal and have an additional	No
	р	sensor/DC817-008. Cab shall have no-glare interior.	
	Ч		
	q	Cab must be ergonomically designed to accommodate 95%	Yes
		percentile of drivers, ranging from 4' 8", 110 lb. driver to 6'	
		5", 375 lb. driver.	L No
	r	For crew cab, a full bench rear seat with three (3) laps and	Yes
		two (2) shoulder belts. Shoulder straps shall be high visibility	
		orange.	U No
29	Mirro		
	а	Dual left and right west coast or approved equal.	Yes
	b	Approximately 7-inch X 17-inch heads.	Size
	С	Both west coast mirrors shall be heated.	Yes
			No
	d	Left side mirror should have two (2) convex mirrors, one each	Yes
		mounted on upper and lower arms of mirror bracket.	No No
	е	Left and Right-side mirrors shall be motorized.	Yes
			🗌 No
	f	Right side mirror shall have one (1) convex mirror mounted	Yes
		on lower mirror arm.	🗌 No
	g	All three (3) convex mirrors shall be ball adjustable.	Yes
			No No
	h	Shall have fender mounted (left and right side) 8-inch convex	Yes
		mirrors.	No
	i	Overall width, outside mirror to outside mirror should not	Yes
		exceed 116 inches.	No
30	Horns		
	а	Dual, electric and air horn is required, approved by SAE and	Yes
		industry standard and mounted under the hood.	
			No No
31	Power	r Steering	
	а	Power steering, designed and intended for the tires, axles and	Yes
		GVWR offered.	☐ No
32	Eiro Er	xtinguisher	
52		An ABC rechargeable type fire extinguisher with 5BC UL rating	_
	а	shall be provided with each unit. Mounting will be	Yes
		determined at the Pilot Model inspection.	☐ No
	C ( ).		
33	Safety		
	а	Vehicles shall include the necessary safety features to meet	Yes
		the applicable requirements of the Federal Vehicles Safety Standards and shall conform with Motor Carrier Safety	
		Regulations # 399.203.	🗌 No
	b	The vehicle to be furnished with all applicable equipment and	
	b	accessories as required by the Occupational Safety and Health	Yes
		Acts of both the United States and the State of North	

		Carolina, and shall comply with all regulations, rules, standards and interpretation's lawfully adopted there under.	No No
	С	Vehicle Cab noise at ear level of the seated operator, with windows open shall not exceed OSHA REQUIREMENTS IN 29 CFR 1910.95 for 8-h our exposure when measured on the "A" scale	Yes
		of a standard sound meter. Ear plugs or other personal protective devices are not acceptable to comply with this requirement.	No No
	d	OSHA requirements on the opening date of the IFB shall apply, regardless of the date of Equipment manufactured.	Yes
34	Feder	al Inspection Sticker	
	а	All units shall be delivered with a completed 12 month Federal Highway Safety Inspection sticker properly affixed.	Yes No

## Truck, Cab & Chassis, Diesel Engine Powered, Tandem Axel 50,000-70,000 GVWR

General: NCDOT will typically use these trucks in a variety of operations. First operation will be used as a dump truck that hauls large amounts of material such as rock, sand, gravel, and dirt. It will at times be coupled with a trailer to move construction equipment such as back hoes and loaders. The second operation will be snow removal operations. In this scenario it will be equipped with a 12' snow plow and have either a 10 Cubic yard or 15 Cubic Yard salt spreader in the dump body for treating Highways as well as secondary roads. It may also have a brine applicator and or brine trailer attached for snow fighting as well. This specification is intended to describe a straight truck with, conventional single cab and crew cab, plowing snow and other similar on/off road applications. The warranty shall also include coverage of these units in typical snow removal operation.

Line	Requested Offered	
1	Chassis with conventional cab for heavy-duty on-off road service, typically to be used as a dump t	ruck in snow
-	removal, road construction and maintenance operations.	
	a Manufacturer	
	b Model	
	c Year Model	
2	inimum rating of 58,000 lbs.	
	a Shall be a minimum of 58,000 lbs.	lbs.
	b Chassis weight on front axle	lbs.
	C Chassis weight on rear tandem	lbs.
	d Weight of cab & chassis including lubricant and full load of fuel.	lbs.
3	Axle Spacing	
	a Center of front axle to center of rearmost axle of tandem,	
	shall be a minimum of 21 feet to meet NC Bridge Formula	Ft/Ins.
	definitions.	
	Usable Cab to Tandem (CT)- Usable CT is defined as clear usable space outside of chassis rails from	n behind cab, DPF or exhaust,
4	whichever extends the furthest towards the rear, to the center of the tandem. Under-slung air ta	nks or other components are
	not to protrude outside of the chassis rails in the defined area.	
	a Usable CT requested to be 150", ±2". (Tandem).	inches
5	Wheelbase	
	a Wheelbase shall be appropriate for the axle and CT	
	dimensions required.	Ft/Ins.
6	Frame	
	<ul> <li>Minimum resisting bending moment of 2,590,000 inch/lbs.</li> <li>per frame rail.</li> </ul>	In/Lbs
	b Minimum 21.60 section modulus.	SM

	d	Full height frame, approximately 10 inches in height, and	
		minimum 20 inches in length is to protrude beyond	Yes
		grill/radiator and be of sufficient strength for plowing operations.	No No
	е	Front frame extensions are not necessary so long as the	_
		frame protrudes beyond the grill/radiator as described in "d"	Yes
		above. If extensions are supplied, they must be integral and	
		not be bolted/added on. This is for the Hydraulic Pump that will be mounted with bracket between chassis rails.	_
		will be mounted with bracket between chassis rails.	No No
7	Spring	gs and Suspension	
	а	Front and rear suspension shall meet or exceed the	Yes
		requirements for GVWR.	No No
	b	Rear suspension to be a Hendrickson Haulmax, or equivalent,	Yes
		with bronze center bushings or (mRide 40) will be acceptable	
		suspensions.	No No
	С	Rear suspension offered.	
	d	Front spring capacity.	lbs.
	е	Rear spring capacity.	lbs.
8	ront A	xle	
	а	Front axle with minimum 18,000 lbs. rated capacity.	lbs.
	b	Set forward axle with Shock absorbers.	Yes
			No No
	Deer	Avia, Estan DE402D, Maritan DT 40, 14ED, Maak E402D with automatic newardividan an annual anual	is assentable as
9		Axle: Eaton DS402P, Meritor RT-40-145P, Mack S402R with automatic power divider or approved equal as axles meet the following:	is acceptable as
9			is acceptable as
9	long a	as axles meet the following:	
9	long a	Rear tandem shall be a minimum 40,000 lbs. rated capacity.	lbs.
9	long a a b	Rear tandem shall be a minimum 40,000 lbs. rated capacity.	lbs. Ves No
9	long a	As axles meet the following: Rear tandem shall be a minimum 40,000 lbs. rated capacity. Heavy duty rear axle housing with iron rear axle carrier.	Ibs. Yes No Yes
9	long a a b c	As axles meet the following: Rear tandem shall be a minimum 40,000 lbs. rated capacity. Heavy duty rear axle housing with iron rear axle carrier. Single speed tandem (single gear ratio).	lbs. Ves No
9	long a a b	As axles meet the following: Rear tandem shall be a minimum 40,000 lbs. rated capacity. Heavy duty rear axle housing with iron rear axle carrier.	Ibs. Yes No Yes
9	long a a b c	As axles meet the following: Rear tandem shall be a minimum 40,000 lbs. rated capacity. Heavy duty rear axle housing with iron rear axle carrier. Single speed tandem (single gear ratio). Spacing from center to center of the axles of the tandem to be minimum 54 inches. Spacing of the axles of the tandem shall provide enough	Ibs. Yes No Yes No inches
9	long a b c d	As axles meet the following: Rear tandem shall be a minimum 40,000 lbs. rated capacity. Heavy duty rear axle housing with iron rear axle carrier. Single speed tandem (single gear ratio). Spacing from center to center of the axles of the tandem to be minimum 54 inches. Spacing of the axles of the tandem shall provide enough clearance to allow for snow chains to be run on both axles	Ibs. Yes No Yes No
9	long a b c d	As axles meet the following: Rear tandem shall be a minimum 40,000 lbs. rated capacity. Heavy duty rear axle housing with iron rear axle carrier. Single speed tandem (single gear ratio). Spacing from center to center of the axles of the tandem to be minimum 54 inches. Spacing of the axles of the tandem shall provide enough	Ibs. Yes No Yes No inches
9	long a b c d	As axles meet the following: Rear tandem shall be a minimum 40,000 lbs. rated capacity. Heavy duty rear axle housing with iron rear axle carrier. Single speed tandem (single gear ratio). Spacing from center to center of the axles of the tandem to be minimum 54 inches. Spacing of the axles of the tandem shall provide enough clearance to allow for snow chains to be run on both axles	Ibs. Yes No Yes No inches Yes No
9	long a b c d e	As axles meet the following: Rear tandem shall be a minimum 40,000 lbs. rated capacity. Heavy duty rear axle housing with iron rear axle carrier. Single speed tandem (single gear ratio). Spacing from center to center of the axles of the tandem to be minimum 54 inches. Spacing of the axles of the tandem shall provide enough clearance to allow for snow chains to be run on both axles with the tires specified in this bid.	Ibs. Yes No Yes No Yes No Yes No Yes Yes Yes Yes Yes Yes
9	long a b c d e	As axles meet the following: Rear tandem shall be a minimum 40,000 lbs. rated capacity. Heavy duty rear axle housing with iron rear axle carrier. Single speed tandem (single gear ratio). Spacing from center to center of the axles of the tandem to be minimum 54 inches. Spacing of the axles of the tandem shall provide enough clearance to allow for snow chains to be run on both axles with the tires specified in this bid. Axle ratio provided is to be properly matched for engine RPM,	Ibs. Yes No Yes No inches Yes No
9	long a b c d e	as axles meet the following:         Rear tandem shall be a minimum 40,000 lbs. rated capacity.         Heavy duty rear axle housing with iron rear axle carrier.         Single speed tandem (single gear ratio).         Spacing from center to center of the axles of the tandem to be minimum 54 inches.         Spacing of the axles of the tandem shall provide enough clearance to allow for snow chains to be run on both axles with the tires specified in this bid.         Axle ratio provided is to be properly matched for engine RPM, tire size and transmission offered to maintain 68 MPH 🛛 2	Ibs. Yes No Yes No Yes No Yes No Yes Yes Yes Yes Yes Yes
9	long a b c d e f	as axles meet the following:         Rear tandem shall be a minimum 40,000 lbs. rated capacity.         Heavy duty rear axle housing with iron rear axle carrier.         Single speed tandem (single gear ratio).         Spacing from center to center of the axles of the tandem to be minimum 54 inches.         Spacing of the axles of the tandem shall provide enough clearance to allow for snow chains to be run on both axles with the tires specified in this bid.         Axle ratio provided is to be properly matched for engine RPM, tire size and transmission offered to maintain 68 MPH 🛛 2 MPH at a maximum GVW on level ground.	Ibs. Yes No Yes Yes No Yes Yes
9	long a b c d e f f g h	As axles meet the following:          Rear tandem shall be a minimum 40,000 lbs. rated capacity.         Heavy duty rear axle housing with iron rear axle carrier.         Single speed tandem (single gear ratio).         Spacing from center to center of the axles of the tandem to be minimum 54 inches.         Spacing of the axles of the tandem shall provide enough clearance to allow for snow chains to be run on both axles with the tires specified in this bid.         Axle ratio provided is to be properly matched for engine RPM, tire size and transmission offered to maintain 68 MPH 🛛 2 MPH at a maximum GVW on level ground.         Axle ratio         Differentials filled with synthetic lubricant.	Ibs. Yes No Yes No inches Yes No Ves No Yes No Yes No Yes No Yes No Yes No
9	long a b c d d e f f Lift A	As axles meet the following: Rear tandem shall be a minimum 40,000 lbs. rated capacity. Heavy duty rear axle housing with iron rear axle carrier. Single speed tandem (single gear ratio). Spacing from center to center of the axles of the tandem to be minimum 54 inches. Spacing of the axles of the tandem shall provide enough clearance to allow for snow chains to be run on both axles with the tires specified in this bid. Axle ratio provided is to be properly matched for engine RPM, tire size and transmission offered to maintain 68 MPH 2 MPH at a maximum GVW on level ground. Axle ratio	Ibs. Yes No Yes No inches Yes No Ves No Yes No Yes No Yes No Yes No Yes No
	long a b c d d e f f Lift A	As axles meet the following: Rear tandem shall be a minimum 40,000 lbs. rated capacity. Heavy duty rear axle housing with iron rear axle carrier. Single speed tandem (single gear ratio). Spacing from center to center of the axles of the tandem to be minimum 54 inches. Spacing of the axles of the tandem shall provide enough clearance to allow for snow chains to be run on both axles with the tires specified in this bid. Axle ratio provided is to be properly matched for engine RPM, tire size and transmission offered to maintain 68 MPH 12 2 MPH at a maximum GVW on level ground. Axle ratio Differentials filled with synthetic lubricant. <b>kle(s): When required under "Furnish and Deliver", the cab and chassis shall be equipped with addition</b>	Ibs. Yes No Yes No inches Yes No Ves No Yes No Yes No Yes No Yes No Yes No

	b	255/70-22.5 hub piloted Aluminum disk, with "H" tire load	Yes
		range	
	С	Tire speed rating minimum of 75 MPH	Yes
	d	Steerable	Yes
	е	Air activation and regulation from cab.	☐ Yes
	-		
	f	Automatic lift in reverse	
	g	Rated for up to 13,200 lbs.	lbs.
			ius.
	h	Lift axle manufacturer	
	i	Lift axle model.	
10A	Chass	is with one (1) lift axle: Usable CT requested to be 174", ±2". (Tri-Axle).	
	а	GVWR shall be a minimum of 64,000 lbs.	lbs.
	b	Chassis weight on front axle	lbc
	-		lbs.
	С	Chassis weight on rear tandem	lbs.
	d	Weight of cab & chassis including lubricant and full load of	lbs.
		fuel.	105.
	е	Axle spacing from center of chassis front axle to center of	- "
		rearmost axle of tandem, shall be a minimum of 23 feet to	Ft/Ins.
		meet NC Bridge formula definitions.	
	f	Spacing from center line of lift axle to center line of rear axle of the tandem to be a minimum of 103 inches.	Ins
10B	Chass	is with two (2) lift axles: Usable CT requested to be 198", ±2". (Quad).	
	а	GVWR shall be a minimum of 70,000 lbs.	lbs.
	b	Chassis weight on front axle	lbc
			lbs.
	С	Chassis weight on rear tandem	lbs.
	d	Weight of cab & chassis including lubricant and full load of	
	u	fuel.	lbs.
	0	Axle spacing from center of chassis front axle to center of	
	е	rearmost axle of tandem, shall be a minimum of 25 feet to	Ft/Ins.
		meet NC Bridge formula definitions.	-,
	f	Spacing from center line of lift axle to center line of rear	
		axle of the tandem to be a minimum of 154 inches.	inches
11	Brake	S	
	а	Full air disc brakes.	Yes
			No No
	b	Low air warning buzzer and light	Yes
			No No
	С	Non asbestos pads	Yes
			No
	d	Desiccant type air dryer, Midland Pure Air Plus or pre-	Yes
		approved equal.	∏ No
			··· ب

	e	Minimum 18.5 CFM compressor.	CFM
	f	Parking brake on front and rear axle of tandem	Yes
		·····	
	g	Dust shield on all axles.	Yes
	h	Brakes shall conform to FMVSS in effect at time of	☐ Yes
		production.	
	i	Full trailer air package required with glad hands installed at	☐ Yes
		end of chassis rails.	
	j	The brake air tank shall have a manual drain valve with a	T Yes
		lanyard attached to the chassis rail.	No
	k	ABS system shall be manufacturer's standard Bendix or	
		Meritor and must be compatible with all manufacturers of	Yes
		trailer brakes.	No No
		ABS Manufacturer	
	m	ABS Model	
	n	Air brake ABS, full vehicle wheel control system with	Yes
		Automatic Traction Control.	
12	Batte		
14			
	а	Battery box and battery mounts designed for on/off road application.	Yes
	h		
	b	Minimum of 1950 CCA at zero (0) degrees F.	CCA
	С	Hold down clamps and terminals treated with corrosion	🔲 Yes
		resistant.	🔲 No
	d	Batteries and cables should comply with TMC105	Yes
			) [
	е	Two (2) remote jump start terminals, battery side mounted	Yes
		with color coded covers.	No No
	f	Shall have a master electrical disconnect switch (non-keyed)	Yes
		on battery side of truck, protected from road splash and	<u> </u>
		accessible from the ground or be mounted in the cab.	☐ No
	g	Manufacturer's standard battery box cover.	Yes
	0		
10	Alterr	aator	
13			
	а	Delco 24SI Quadra mount or approved equal.	Yes
			No No
	b	Minimum 145 amps	Amps
	С	Alternator Make	Make
	d	Alternator Model	
	<b>.</b>		Model
	Engin	e Performance: The following performance is requested when full loaded as determined by SAE J68	8. Rated horsepower and
14	-	e shall be sufficient so that when coupled with the proposed transmission and rear axles, the unit w	
14		a listed below:	
	enter		

	а	Full diesel, electronic engine, with inline minimum six (6)		
		cylinders.	U	Yes
			П	No
	b	Shall be SAE J1349 rated.	Ē	Yes
			ň	No
	с	Minimum rated torque 1550 lbs./ft	Ē	Yes
			ň	No
	d	Minimum engine HP shall be 395hp/11L.	Ē	Yes
			ñ	No
	е	Engine shall have the ability to be upgraded by software		Yes
		electronically to increase horsepower to a minimum of	С –	
		425hpHP.	$\cup$	No
	f	Shall have 20% startability at maximum GVWR to start and	$\overline{\Box}$	Yes
		climb 20% grade (startability @ clutch engagement)		No
	g	Shall have a minimum 2% gradeability at maximum GVWR at	$\Box$	Yes
		68 MPH.		No
	h	Shall maintain a minimum top speed of 68 MPH (🛛 2 MPH) at	$\overline{\Box}$	Yes
		maximum GVW on level ground.		No
	i	Vendor shall include truck performance analysis sheet(s)		Yes
		indicating the truck performance criteria as described above.		
			<u> </u>	No
	J	Engine Manufacturer.		MFG.
	k	Engine Model.		Model
	I	Number of Cylinders.		# of Cylinders
	m	Engine displacement		
				Net HP @
	n	Net HP		RPM
	0	Peak torquelbs./ft @RPM		Peak torque
				lbs./ft @
				RPM
14A	Engine	e Requirements Continued		
	а	Emissions control system shall meet Federal and NC state	Π	Yes
		Emission regulations at time of delivery.	ñ	No
	b	A copy of the most recent EPA certificate for current model	$\overline{\Box}$	Yes
		year Emissions is requested with this bid.	ō	No
	С	110 V thermostatically controlled engine block heater		Yes
		properly sized for the engine proposed with weatherproof		
		receptacle mounted under left door (Driver side).		No
	d	Shall have engine air intake arranged to eliminate the		Yes
		induction of blowing snow during snow removal operations.	П	No
	е	Shall have thermostatically controlled fuel heater.	믐	Yes
	C	Shar have thermostatically controlled racineater.		
			ᆜ	No
	f	Shall have on board primer for the fuel system.	Ū	Yes
				No
	g	Shall have all provisions for front engine crankshaft driven		Yes
		hydraulic PTO system (FEPTO).		No

	h	Option 1: (Furnish and Delivery) Shall have a provision in		Yes
		place to offer a REPTO (Rear Engine Power Take Off) upon		No
		request.		NO
	i	Vendor shall provide and install the plate adapter to	$\square$	Yes
		harmonic balancer for the front mounted pump applications.		
				No
	j	Shall be compatible for use with B-20 Bio-Diesel fuel.		Yes
				No
	k	Shall have a fuel water separator.		Yes
			$\square$	No
	I	Shall have full flow, spin on type engine oil filter.	Π	Yes
			П	No
	m	Engine parameters set to allow infinite engine idle time.		Yes
				No
	<u>n</u>	Must have corrosion resistant oil pan.	$\overline{-}$	Yes
	n			
	<b>F</b>			No
15	Engin	e Brake	_	
	а	Shall be a compression type or approved equal, compatible		Yes
		with the engine and transmission furnished.		No
	b	Engine brake Manufacturer		
		Engine brake Model		
	С			
16	Exhau	ist		
	а	Shall be a vertical stack with horizontal muffler not to extend	_	
	-	above cab roof and not to interfere with dump body		Yes
		installation. A turnout exhaust stack is required (rain cap not		
		acceptable).		No
17	Fuel 1	Tank		
	а	Single fuel tank, minimum 80 gallons		Callana
				Gallons
	b	Fuel tank to be aluminum, aluminized-steel not acceptable.		Yes
				No
	С	Shall conform to all applicable SAE Standards.		Yes
				No
	d	Request left side mounted	Π	Yes
				No
18	Air Cl	eaner	<u> </u>	
	а	Dry type, with rated air flow for engine offered with filtration		Yes
	u	efficiency of 99.5% for all engine speeds.		No
	b	In cab direct reading air restriction indicator	$\overline{-}$	
	U			Yes
	<u> </u>	•		No
19	Cooli	ng System	_	
	а	Shall conform to SAE J1393, ASTM standards and		Yes
		Manufacturer recommendations for on-off road application.		No
	b	Shall have manufacturer's suggested coolant type.		Yes
				No
	Gaug	es Shall include manufacturer's standard DID (Drivers Information Display) gauge package, including the fo	ollo	wing gauges
20	as a n	ninimum:		
	а	Oil Pressure		Yes
				V CC

			No No
	b	Temperature	Yes
			☐ No
	с	Voltmeter	Yes
	-		
	d	Fuel	Yes
	u		<u> </u>
			No No
	е	Air Pressure	Yes
			No No
	f	Tachometer	Yes
			No No
	g	Hour meter	Yes
	0		N₀
	h	Audible and visual alarm for high water temperature	☐ Yes
			$\square$ No
		Audible and visual alarm for eil prossure	
	i	Audible and visual alarm for oil pressure	Yes
	j	Audible and visual alarm for low air pressure	Yes
			No No
21	Auton	nated Manual Transmission (Acceptable transmissions will include Mack, M/drive and Eaton, AMT's).	
	а	Minimum of 14 speeds with two (2) creeper gears	Yes
			 ∏ No
	b	Shall have hill assist equipped.	Yes
	С	Transmission control shall be push pad, dash mounted shifter	☐ Yes
	C	or a column-mounted shifter.	
		Oil level sensor	0
	d		Yes
			No No
	е	Transmission shall be equipped with auto-neutral feature to	Yes
		be activated when parking brake is applied to command the transmission to noutral, regardless of range selection	_
		transmission to neutral, regardless of range selection.	No No
	f	Furnished with synthetic transmission lubricant.	Yes
			$\square$ No
	~ ~	Transmission manufacturer:	
	g		
	h	Transmission model:	
	i	Torque capacity:	
22	Winde	hield Wipers	
22		Electric, dual wipers.	
	а	בוכנוונ, מממו שווְבוּס.	Yes
	<u> </u>		No No
	b	Intermittent action.	Yes
			No No
	с	Dual washers	Yes
			No No
23	Whee	Rims	
	а	Aluminum disc type wheels, 10 hole.	Yes
	-		

	b	Hub piloted.		
				No
	С	Front rims 9.00 inches wide	$\underline{-}$	Yes No
	<u> </u>			
	d	Rear rims 8.25 inches wide	$\equiv$	Yes No
-	е	Nylon Gasket to prevent corrosion to hub	<u> </u>	Yes
	e	Nyion Casket to prevent corrosion to hub		No
	f	Rims shall conform to Tire & Rim Association guidelines.	Π	Yes
	•			No
	g	Wheels shall have Dura-Bright polish or Equivalent to aid in		Yes
		corrosion resistance.	Ē	No
			<u> </u>	
	h	Rim Manufacturer:		
26	Front	Tires		
	а	315/80R22.5 steel belted radial.	Π	Yes
			_	No
	b	Load Range L		
	с	Minimum speed rating of 75MPH		Yes
			=	No
	d	Premium highway treads.		Yes
			Π	No
	е	Tire Manufacturer.		
	C			
		If different from above:		
	а	Tire Size		
	b	Tire Load Range		
	С	Tire Model		
27	Rear	Tires		
21			_	
	а	11R22.5 steel belted radial.		Yes
			$\square$	No
	b	Load range H	$\overline{\square}$	Yes
	0		_	
				No
	е	Tire Manufacturer.		
		If different from all see	_	
		If different from above:		
	а	Tire Size		
	b	Tire Load Range		
		Tire Medel		
	С	Tire Model		
28	Lighti	ng		
	а	Factory installed daytime running lights.	Π	Yes
	u	1		
L			<u> </u>	No
	b	The standard headlight switch shall operate all lights in the		Yes
		normal mode at full voltage.	$\overline{\Box}$	No
	~	Front and rear Class "A" directional signals.		Yes
I	С	i i un anu i ca ciass A un cui unai signais.		165

			🔲 No
	d	Minimum, five (5) cab marker lights.	Yes
			No No
	е	Hazard Flashers	Yes
			No No
	f	All lighting to be of the type approved by the N.C. Division of	Yes
		Motor Vehicles.	No No
	g	Pre-Trip exterior light inspection switch:	
		Engaging light inspection switch will sequentially flash all	Yes
		exterior vehicle lights, except back up lights while operator	
		completes safety inspection.	∐ No
29	Front	Bumper	
	а	Delete front bumper.	Yes
			🗌 No
30	Elect	ical Wiring	
	а	All wiring from front to rear of chassis in loom or molded	Yes
		plastic or approved equal.	
	b	Wiring to be attached to inner side rails with rubber covered	
		fasteners at approx. 20" intervals.	
	С	Wiring, including a weatherproof connector shall be provided	
	U	at the hood-hinge area for connection of snow plow lights.	Yes
			No No
	d	The connector shall include parking light and turn	Yes
	-	Signal functions.	
	е	A body builder harness, including a weatherproof connector	☐ Yes
	C	shall be provided at the back of the cab.	
	f	Electronic speedometer with auxiliary in-cab tap point to	
		interface with current electronic spreader controls with pulse	Yes
		width modulated signal.	🔲 No
	g	Equiped with factory installed modem for GPS?	T Yes
	0		
	اربر	ary Power Switches: Shall have six (6) factory installed, dash mounted Auxiliary power switches wired	
31	funct		for the following
	а	Snowplow light selector switch to allow independent	
		selection of the chassis headlights or the snowplow lights.	Yes
			🔲 No
	b	Strobe light switch, illuminated, on/off type, battery source,	Yes
		minimum 20 AMP.	
	С	Spreader light switch, illuminated, on/off, ignition source	
	-	minimum 20 AMP.	
	d	Two (2) illuminated switch, on/off type, ignition source,	☐ Yes
	~	minimum 20 AMP for future use.	
	е	One (1) illuminated switch, on/off type, battery source,	☐ Yes
	C	minimum 20 AMP for future use.	
	Cabi	Vendor may be required to demonstrate the cab offered during the evaluation process.	
32	Cab:	venuor may be required to demonstrate the cab offered during the evaluation process.	
			_
	а	Shall have factory installed air-conditioning.	Yes
			No No

b	Air conditioning system shall be supplied complete with protection & diagnostics system to monitor and shut down	Yes
	the A/C compressor in the event of a refrigerant system leak.	No No
C	Shall have electronic cruise control.	Yes
d	Shall have air ride cab	Yes
е	Shall have exterior and interior grab handle handholds.	Yes
f	Shall have steps for high cab applications for both Driver, and passenger side.	Ves
g	Shall have tinted safety glass all around including Windshield.	Ves
h	Driver and passenger seats shall be air ride, adjustable up, down, forward, back and tilt. (National Cush-n-Air or equal).	No Ves
i	Shall have 12V power supply outlet.	
		Yes
j	Shall have fresh air heater and defroster with single shut-off valve for water line to heater.	Yes
k	Shall have power door locks, and power windows, right and left padded sun visor, driver/passenger side arm rest, map	Yes
I	pocket and floor mats. Shall have AM/FM/CD/blue tooth radio, shielded to eliminate interference from 2-way radio with Bluetooth.	Ves
m	Shall have a fixed grill with radiator guard and tilt hood.	Ves
n	Shall have a tilt and telescoping steering wheel.	No Yes No
0	Cab access and function must be ergonomically designed to accommodate 95% percentile of drivers ranging from a 4 Ft. 8 In., 110 Lb. driver to a 6 Ft. 5 In., 375 Lb. driver.	Yes
р	The seat belt webbing at each crew member location shall be a highly visible bright orange color.	Yes
33 Mirro	rs	
а	Left and right west coast type with approximately 7"x17" heads.	Yes
b	Both west coast mirrors heated.	Yes
С	Left side to have two (2) 8" diameter convex mirrors, one each mounted on upper and lower arms of mirror bracket.	☐ Yes ☐ No
d	Left and Right-side mirrors shall be motorized and heated	Yes
e	Right side mirror shall have one (1) 8" diameter mirror mounted on lower mirror arm.	Yes
f	All three (3) convex mirrors shall be ball adjustable.	Yes

	g	Right side, adjustable fender mounted mirror	Yes
			No No
34	Horns		
	а	Dual, electric and air horn per SAE Standard.	Yes
			No
35	Powe	r Steering	
	а	Power steering, designed and intended for the tires, axles and	Yes
		GVWR offered.	No No
36	Safety	1	
	а	Vehicles shall include the necessary safety features to meet	Yes
		the applicable requirements of the Federal Vehicles Safety	
		Standards and shall conform with Motor Carrier Safety	□ No
		Regulations # 399.203.	
	b	The vehicle to be furnished with all applicable equipment and accessories as required by the Occupational Safety and Health	☐ Yes
		Acts of both the United States and the State of North	
		Carolina, and shall comply with all regulations, rules,	
		standards and interpretations lawfully adopted there under.	□ No
			0
	С	Vehicle Cab noise at ear level of the seated	
		operator, with windows open shall not exceed	Yes
		OSHA REQUIREMENTS IN 29 CFR 1910.95 for	
		8-hour exposure when measured on the "A" scale	
		of a standard sound meter. Ear plugs or other	
		personal protective devices are not acceptable to	🗌 No
		comply with this requirement.	
	d	OSHA requirements on the opening date of the	Yes
		IFB shall apply, regardless of the date of Equipment manufactured.	□ No
37	Fire Ex	xtinguisher	
	а	An ABC rechargeable type fire extinguisher with 5BC UL rating	Yes
		shall be provided with each unit. Mounting will be determined at the Pilot Model inspection.	🗌 No
38	Federal Inspection Sticker		
	а	All units shall be delivered with a completed 12 month	Yes
		Federal Highway Safety Inspection sticker properly affixed.	
			No No



# Vendor:

## Truck Tractor, 90,000 POUND GCWR, Over the Road

General: NCDOT will typically use these units in transporting various bulk items such as parts and supplies from our Central Inventory Warehouse, to the various divisions throughout the state. These units will typically be used on interstate highways only. The tractor will normally mate to a 53 foot, 2-axle, enclosed box trailer with an average hauling weight of 38,000 Lbs.

Line	Requested Offer	ed
1	Heavy-duty truck tractor intended for on road service only	
	a Manufacturer	
	b Model	
	c Year Model	
2	GCWR: Minimum 90,000 lbs. GVWR: 59,220 Lbs.	
	a GCWR	lbs.
	b GVWR	lbs.
	c Chassis weight on front axle	lbs.
	d Chassis weight on rear tandem	lbs.
	e Weight of cab & chassis including lubricant and full load of fuel.	lbs.
3	Cab to Tandem	
	a CT 125" to 130" (measuring from the back of the cab to the center of tandem rear Axle) and it should be appropriate for the Fifth wheel setting and axle spacing.	inches
4	Wheelbase	
	<ul> <li>Wheelbase shall be appropriate for the axle and CT</li> <li>dimensions required to achieve the axle load requirements</li> <li>and satisfy the laws of North Carolina, Bridge formula, and</li> <li>the Federal laws.</li> </ul>	Ft/Ins.
5	Frame	
	<ul> <li>Minimum resisting bending moment of 2,000,000 inch/lbs.</li> <li>per frame rail.</li> </ul>	In/Lbs
6	Springs and Suspension	
	a Front and rear suspension shall meet or exceed the requirements for GVWR.	Yes No

	b	Rear suspension to be Air ride type suspension	Yes
	С	Front suspension offered	
	d	Rear suspension offered	
	d	Front spring capacity.	lbs.
	е	Rear spring capacity.	lbs.
7	Front	Axle	
	а	Front axle with minimum 14,000 lbs. rated capacity.	lbs.
	b	Set back axle with Shock absorbers designed for on road use.	
	С	Wheel bearings oil bath type with synthetic lubricant.	Yes
			No
8	Rear A	Axles	
	а	Rear tandem shall be a minimum 46,000 lbs. rated capacity.	lbs.
	b	Rear axle make and model	
	С	Single speed tandem (single gear ratio).	Yes
			No
	d	Power divider lock with an indicator light visible to the	T Yes
		operator or approved equivalent. Must have Automatic Miles	
		Per Hour dis-engagement. Both axles are required to be lockers.	No No
	e	Power divider offered	
		Туре	
		Model	
		Wodel	
		Manufacturer	
	f	Spacing of the axles of the tandem shall provide enough	☐ Yes
		clearance to allow for snow chains to be run on both axles	
		with the tires specified in this bid.	No
	g	Axle ratio provided is to be properly matched for engine RPM, tire size and transmission offered to maintain 72 MPH ± 2	Yes
		MPH at a maximum GVW on level ground.	🔲 No
	h	Axel Ratio	—
	i	Differentials filled with synthetic lubricant.	T Yes
			No
9	Brake		
	а	Full air disc brakes.	Yes No
	b	Desiccant type air dryer, Midland Pure Air Plus or pre-	Yes
		approved equal.	No
	С	Minimum 19.0 CFM air compressor with low air warning buzzer and light.	CFM
	d	Parking brake on front and rear axle of tandem	☐ Yes

	е	Dust shield on all axles.	Yes
			☐ No
	f	Brakes shall conform to FMVSS in effect at time of	Yes
		production.	□ No
	g	Full trailer air package required with glad hands installed such	Yes
		that they can attached to the trailer without further	Yes
		modification by the user; holders are required.	☐ No
		The business in texts a ball have a received durin value with a	
	h	The brake air tank shall have a manual drain valve with a lanyard attached to the chassis rail.	Yes
			No
	i	ABS system shall be 6S/6M, manufacturer's standard Bendix	Yes
		or Meritor and must be compatible with all manufacturers of	
		trailer brakes.	No No
	j	ABS Manufacturer	
	k	ABS Model	
	I	Air brake ABS, full vehicle wheel control system with	Yes
		automatic traction control (ATC).	
10	Batte	ies	
	a	Battery box and battery mounts designed for on/off road	☐ Yes
	-	application.	☐ No
	b	Minimum of 3000 CCA at zero (0) degrees F.	
	~		CCA
	С	Hold down clamps and terminals treated with corrosion	Yes
		resistant.	No No
	d	Batteries and cables to comply with Technology and	Yes
		Maintenance Council 105d specifications.	□ No
	е	Two (2) remote jump start terminals, battery side mounted	Yes
		with color coded covers.	
	f	Shall have a master electrical disconnect switch (non-keyed)	
		on battery side of truck, protected from road splash and	Yes
		accessible from the ground or be mounted in the cab.	□ No
			3
	g	Manufacturer's standard battery box cover.	Yes
			No
11	Alterr		_
	а	Delco SI or approved equal.	Yes
			No
	b	Minimum 180 amps	Amps
	с	Alternator Manufacturer	Amps
	ι		Make
	d	Alternator Model	Model
	Engin	Performance: The Vendor is required to furnish, with the bid, a copy of the performance calculation	ns for the truck offered
14	when	coupled to a 53' Box Trailer, as per the following requirements.	
	а	Full diesel, electronic engine, with inline minimum six (6)	☐ Yes
		cylinders.	
	b	Shall be SAE J1349 rated.	☐ Yes
	0		
I			

	-	Minimum rated torque 1650 lbs./ft		Ma a
	С	Minimum fated torque 1050 lbs./ft	Ц	Yes
				No
	d	Shall have 25% startability at maximum GVWR (startability @	$\Box$	Yes
		clutch engagement).		No
	е	Shall maintain a minimum top speed of 72 MPH @ 1 1/2		Yes
		gradeability at maximum GVWR.		No
	f	Vendor shall include truck performance analysis sheet(s)		Vac
		indicating the truck performance criteria as described above.	U	Yes
				No
	g	Engine Manufacturer.		
	0			MFG.
	h	Engine Model.		Model
				Wodel
	i	Number of Cylinders.		# of Cylinders
	j	Net HP, minimum of 445 hp		HP @
				RPM
	k	Peak torque		Peak torque
				lbs./ft @
				RPM
12A	Engine	e Requirements Continued		
127	-	Engine offered shall meet all emissions control system set by	_	
	а	EPA requirements, Federal and NC State regulations at the	$\cup$	Yes
		time of delivery.	П	No
	b	A copy of the most recent EPA certificate for current model	П	Yes
		year Emissions is requested with this bid.		No
	С	110 V thermostatically controlled engine block heater	Π	Yes
		properly sized for the engine proposed with weatherproof	-	
		receptacle mounted under left door (Driver side).		No
	d	Shall have thermostatically controlled fuel heater.	Π	Yes
			Ы	No
	е	Shall have on board primer for the fuel system.	H	Yes
	e	Shan have on board primer for the fact system.	Ц	
			<u> </u>	No
	f	Shall be compatible for use with B-20 Bio-Diesel fuel.	Ē	Yes
				No
	g	Shall have a fuel water separator.		Yes
				No
	h	Shall have full flow, spin on type engine oil filter.		Yes
			Ē	No
	i	Must have corrosion resistant oil pan.		Yes
			ň	No
12	Engin	e Brake	<u> </u>	
13	-		_	N
	а	Shall be a compression type or approved equal, compatible with the engine and transmission furnished.	Ц	Yes
			$\Box$	No
	b	Engine brake Manufacturer		
		Engine broke Medel		
	С	Engine brake Model		
14	Exhau	st		
1-7				Voc
	а	Shall be a vertical stack with deflector (rain cap not	$\cup$	Yes

		acceptable).	$\square$	No
15	Fuel T	ank		
	а	Single fuel tank, minimum 100 gallons		Gallons
	b	Fuel tank to be aluminum, aluminized-steel not acceptable.		Yes No
	С	Shall conform to all applicable SAE Standards.		Yes
	d	Prefer left side mounted		No Yes
				No
16	Air Cl			
	а	Dry type, with rated air flow for engine offered with filtration efficiency of 99.5% for all engine speeds.		Yes No
	b	In cab direct reading air restriction indicator		Yes No
17	Coolir	ng System		NO
	a	Cooling system conforming to SAE (Society of Automotive	_	
	u	Engineers) J1393, ASTM (American Society for Testing and	Ο	Yes
		Materials) Standards and manufacturer recommendations for	_	
		on-off road application.	U	No
	b	Shall have manufacturer's suggested coolant type.	$\Box$	Yes
			Ē	No
	С	Stone/Gravel radiator guard should be installed at front of	Ē	Yes
		the cab	ň	No
18	Gauge	es Shall include manufacturer's standard digital gauge package, including the following gauges as a minimu	Im:	
	a	Oil Pressure	Π	Yes
			$\overline{\Box}$	No
	b	Temperature		Yes No
	С	Voltmeter	<u> </u>	Yes
				No
	d	Fuel		Yes No
	е	Air Pressure		Yes
	f	Tachometer		No Yes
	I			No
	g	Hour meter		Yes No
	h	Audible and visual alarm for high water temperature		Yes
	i	Audible and visual alarm for oil pressure	<u>Ц</u>	No
	Ι			Yes No
	j	Audible and visual alarm for low air pressure		Yes No
19	Manı	al Transmission		
	а	Eaton RTLO-16913A or approved equal, properly matching		Yes
		engine and axle ratio.		No
	b	Shall allow easy downshifting to lower gears without bringing		Yes

		vehicle to stop.		No
	С	Furnished with synthetic transmission lubricant.		Yes
				No
	d	Transmission manufacturer:		
	е	Transmission model:		
	f	Torque capacity:		
20	Clutch			
	а	Easy pedal plus or approved equal with minimum of 15.5		inches
	L	inches.		menes
	b	Minimum 2 plates ceramic or equivalent		plates
	С	An extended lube line for the clutch release bearing is		Yes
		required.		No
	d	Clutch manufacturer		
	е	Clutch model		
21	Winds	shield Wipers		
	а	Electric, dual wipers.		Yes
				No
	b	Intermittent action.		Yes
				No
	С	Dual washers		Yes
				No
22	Whee	l Rims		
~~~			_	
	а	Aluminum disc type wheels, 10 hole.		Yes No
	а	Aluminum disc type wheels, 10 hole. Dura-Bright polish or Equivalent to aid in corrosion resistance.		No
	а	Aluminum disc type wheels, 10 hole.		No Yes No Yes
	a b c	Aluminum disc type wheels, 10 hole. Dura-Bright polish or Equivalent to aid in corrosion resistance. Hub piloted.		No Yes No Yes No
	a b	Aluminum disc type wheels, 10 hole. Dura-Bright polish or Equivalent to aid in corrosion resistance.		No Yes No Yes No Yes
	a b c d	Aluminum disc type wheels, 10 hole. Dura-Bright polish or Equivalent to aid in corrosion resistance. Hub piloted. Nylon Gasket to prevent corrosion to hub		No Yes No Yes No Yes No
	a b c	Aluminum disc type wheels, 10 hole. Dura-Bright polish or Equivalent to aid in corrosion resistance. Hub piloted.		No Yes No Yes No Yes No Yes
	a b c d	Aluminum disc type wheels, 10 hole. Dura-Bright polish or Equivalent to aid in corrosion resistance. Hub piloted. Nylon Gasket to prevent corrosion to hub		No Yes No Yes No Yes No
	a b c d e f	Aluminum disc type wheels, 10 hole.         Dura-Bright polish or Equivalent to aid in corrosion resistance.         Hub piloted.         Nylon Gasket to prevent corrosion to hub         Rims shall conform to Tire & Rim Association guidelines.         Rim Manufacturer:		No Yes No Yes No Yes No Yes
23	a b c d e f <b>Front</b>	Aluminum disc type wheels, 10 hole.         Dura-Bright polish or Equivalent to aid in corrosion resistance.         Hub piloted.         Nylon Gasket to prevent corrosion to hub         Rims shall conform to Tire & Rim Association guidelines.         Rim Manufacturer:         Tires		No Yes No Yes No Yes No No
	a b c d e f	Aluminum disc type wheels, 10 hole.         Dura-Bright polish or Equivalent to aid in corrosion resistance.         Hub piloted.         Nylon Gasket to prevent corrosion to hub         Rims shall conform to Tire & Rim Association guidelines.         Rim Manufacturer:		No Yes No Yes No Yes No Yes
	a b c d e f <b>Front</b>	Aluminum disc type wheels, 10 hole.         Dura-Bright polish or Equivalent to aid in corrosion resistance.         Hub piloted.         Nylon Gasket to prevent corrosion to hub         Rims shall conform to Tire & Rim Association guidelines.         Rim Manufacturer:         Tires		No Yes No Yes No Yes No No
	a b c d e f <b>Front</b> a b	Aluminum disc type wheels, 10 hole.         Dura-Bright polish or Equivalent to aid in corrosion resistance.         Hub piloted.         Nylon Gasket to prevent corrosion to hub         Rims shall conform to Tire & Rim Association guidelines.         Rim Manufacturer:         Tires         11R22.5 steel belted radial.         Load Range H		No Yes No Yes No Yes No Yes No
	a b c d e f <b>Front</b> a	Aluminum disc type wheels, 10 hole. Dura-Bright polish or Equivalent to aid in corrosion resistance. Hub piloted. Nylon Gasket to prevent corrosion to hub Rims shall conform to Tire & Rim Association guidelines. Rim Manufacturer: Tires 11R22.5 steel belted radial.		No Yes No Yes No Yes No Yes
	a b c d e f <b>Front</b> a b	Aluminum disc type wheels, 10 hole.         Dura-Bright polish or Equivalent to aid in corrosion resistance.         Hub piloted.         Nylon Gasket to prevent corrosion to hub         Rims shall conform to Tire & Rim Association guidelines.         Rim Manufacturer:         Tires         11R22.5 steel belted radial.         Load Range H	adaaaaaa laa laac	No Yes No Yes No Yes No Yes No Yes No
	a b c d e f <b>Front</b> a b c	Aluminum disc type wheels, 10 hole.         Dura-Bright polish or Equivalent to aid in corrosion resistance.         Hub piloted.         Nylon Gasket to prevent corrosion to hub         Rims shall conform to Tire & Rim Association guidelines.         Rim Manufacturer:         Tires         11R22.5 steel belted radial.         Load Range H         Premium highway treads.         Good Year, Michelin, Continental and Bridgestone tires are approved. Any additional tire brands must be approved by		NoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesYesNoYesYesYesYesYesYesYesYes
	a b c d e f <b>Front</b> a b c c	Aluminum disc type wheels, 10 hole.         Dura-Bright polish or Equivalent to aid in corrosion resistance.         Hub piloted.         Nylon Gasket to prevent corrosion to hub         Rims shall conform to Tire & Rim Association guidelines.         Rim Manufacturer:         Tires         11R22.5 steel belted radial.         Load Range H         Premium highway treads.         Good Year, Michelin, Continental and Bridgestone tires are approved. Any additional tire brands must be approved by the Procurement Entity.		No Yes No Yes No Yes No Yes No Yes No Yes No Yes
	a b c d e f <b>Front</b> a b c	Aluminum disc type wheels, 10 hole.         Dura-Bright polish or Equivalent to aid in corrosion resistance.         Hub piloted.         Nylon Gasket to prevent corrosion to hub         Rims shall conform to Tire & Rim Association guidelines.         Rim Manufacturer:         Tires         11R22.5 steel belted radial.         Load Range H         Premium highway treads.         Good Year, Michelin, Continental and Bridgestone tires are approved. Any additional tire brands must be approved by		NoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesYesNoYesYesYesYesYesYesYesYes

	а	Tire Size	
	b	Tire Load Range	
	С	Tire Model	
24	Rear 1	<b>Fires</b>	
	а	11R22.5 steel belted radial.	T Yes
	b	Load range H	Yes
			No
	С	Good Year, Michelin, Continental and Bridgestone tires are	Yes
		approved. Any additional tire brands must be approved by	
		the Procurement Entity.	No
	d	Tire Manufacturer.	
		If different from above:	
	а	Tire Size	
	b	Tire Load Range	
	С	Tire Model	
25	Lighti	ng	
	a	Factory installed daytime running lights.	☐ Yes
	ŭ		
	b	Front and rear Class "A" directional signals.	☐ Yes
	~	U U	
	С	Minimum, five (5) cab marker lights.	☐ Yes
	-		
	d	Hazard Flashers	Yes
	е	All lighting to be of the type approved by the N.C. Division of	Yes
		Motor Vehicles.	
	f	Pre-Trip exterior light inspection switch:	
		Engaging light inspection switch will sequentially flash all	Yes
		exterior vehicle lights, except back up lights while operator	
		completes safety inspection.	No
	g	Factory installed Fog lights installed in the front bumper or	T Yes
	0	mounted at the bottom of the front bumper.	
26	Front	Bumper	
	а	Manufacturers' standard heavy front bumper	Yes
	ŭ		
27	Fende	ers	
	а	Quarter Fenders on Front Tandem	Yes
28	Licens	se Plate Bracket	
	а	License bracket mounted with light in the rear of the truck	☐ Yes
		~	
29	Electr	ical Wiring	
	a	All wiring from the front to rear of chassis shall be encased in	
	u	a loom molded plastic or pre-approved equal protective	Yes

I		a looni, molaca plastic or pre approved equal protective	
		covering.	No
	b	Wiring to be attached to inner side rails with rubber covered	Yes
		fasteners at approx. 20" intervals.	No No
	С	Power supply source ( 5 terminal block, Cole Hersee 46377 or	
		equal), each capable of providing 15 amps, fuse protected for	Yes
		the later addition of 2 way radio, safety lighting and other	
		special equipment required for NCDOT purposes.	
			U No
	d	Equiped with factory installed modem for GPS?	
	G		Yes
			No No
30	Cab:	Vendor may be required to demonstrate the cab offered during the evaluation process.	
	а	Conventional cab with factory installed air-conditioning.	Yes
	b	Shall have electronic cruise control.	
	U		Yes
			U No
	С	Shall have air ride cab	Yes
			No No
	d	Shall have exterior and interior grab handle handholds.	Yes
	е	Shall have steps for high cab applications for both driver and	
	C	passenger side. First step height approximately 17 inches.	Yes
			🗌 No
	f	Shall have tinted safety glass all around including	☐ Yes
	•	windshield.	00
			∐ No
	g	Driver and passenger seats shall be air ride, adjustable up,	Yes
		down, forward, back and tilt. (National Cush-n-Air or	□ No
		approved equal).	
	h	Both seats shall be high-back each with lap and shoulder	Yes
		seatbelts, and for crew cab when applicable. Shoulder straps	
		shall be high visibility orange.	U No
	i	Shall have 12V power supply outlet.	Yes
			🗌 No
	j	Shall have fresh air heater and defroster with single shut-off	Yes
		valve for water line to heater.	
	k	Shall have power door locks, and power windows, right and	
	ĸ	left padded sun visor, driver/passenger side arm rest, map	Yes
		pocket and floor mats.	□ No
		Shall have AM/FM/CD/blue tooth radio, shielded to eliminate	Yes
	I	interference from 2-way radio with Bluetooth.	00
	m	Shall have a tilt and telescoping steering wheel.	Yes
			No No
	n	Cab access and function must be ergonomically designed to	Yes
		accommodate 95% percentile of drivers ranging from a 4 Ft. 8	)
		In., 110 Lb. driver to a 6 Ft. 5 In., 375 Lb. driver.	🗌 No
	0	Rear mounted light on back of cab	Yes
<u> </u>	р	Must have factory installed Telematics CDC that reads	
	Ч	Must have factory installed Telematics, GPS that reads	Yes
		Datalink information and is compatible with and	—
		communicates with ATT/Geotab database for utilization	No
		tracking.	

31	Fire E	xtinguisher	
	а	Shall be ABC type, rechargeable and mounted in cab.	Yes
	b	Shall have a UL rating of 10BC	Yes
32	Mirro	rs	
	а	Left and right west coast type with approximately 7"x17" heads.	Yes
	b	Both west coast mirrors heated.	Yes
	С	Left and Right-side mirrors shall be motorized, adjustable and controlled by the driver	Yes
	d	Each mirror shall have approximately 8" diameter convex mirrors, bottom bracket mounted, ball adjustable.	Yes
	е	Overall width, outside mirror to outside mirror not to exceed 110 inches of the cab and mirror extension should not exceed 110 for safety concerns.)	Overall width
33	Horns		
	а	Must have 2 horns, one electric and one air horn. Both must comply with SAE requirements and industry standard.	Yes
34	Powe	r Steering	
	а	Power steering, designed and intended for the tires, axles and GVWR offered.	Yes
35		Wheel -Vendor is to confirm that the below data will provide for the axle loading specified above and tha will properly attach without modification by the User.	at the selected
	а	Air slide with left side operation	Yes
	b	Mounted such that the kingpin can be located from directly over the Center of the tandem to 24 inches forward.	Yes
	С	Fontaine model H7000 AWB 24 Heavy Duty - 4" increments or a Fontaine No Slack II 7000 Series 7LWB 24.0-inch air slide fifth wheel with cast top plate with 2-inch increments is approved.	Model
	d	Height shall be between 51 to 52 inches.	Yes
36	Traile	r Connection	
	а	Break away valve	Yes
	b	Air check valve	Yes
	С	Hand control valve	Yes
	d	Hose, spring cab hangers	Yes
	е	Berg (7) wire connector or equivalent, with holder and cable for both ABS and non ABS	Yes

	f	Federal Motor Vehicle Safety Standards compatible	Yes
	g	Pogo Stick and slide bar installed	Yes
37	Safety	,	
	а	Vehicles shall include the necessary safety features to meet the applicable requirements of the Federal Vehicles Safety Standards and shall conform with Motor Carrier Safety Regulations # 399.203	Yes
	b	The vehicle to be furnished with all applicable equipment and accessories as required by the Occupational Safety and Health Acts of both the United States and the State of North Carolina, and shall comply with all regulations, rules, standards and interpretations lawfully adopted there under.	Yes
	С	Vehicle Cab noise at ear level of the seated operator, with windows open shall not exceed OSHA REQUIREMENTS IN 29 CFR 1910.95 for 8-hour exposure when measured on the "A" scale of a standard sound meter. Ear plugs or other personal protective devices are not acceptable to comply with this requirement.	Yes
	d	OSHA requirements on the opening date of the IFB shall apply, regardless of the date of Equipment manufactured.	Yes
38	Feder	al Inspection Sticker	
	а	All units shall be delivered with a completed 12 month Federal Highway Safety Inspection sticker properly affixed.	Yes



Vendor:

## Truck Tractor, 90,000 POUND GCWR, On Road-Off Road

General: NCDOT will typically use these units in transporting heavy equipment to and from job site. Equipment types normally carried by this tractor will include, but shall not be limited to, large excavators, Loaders, Backhoes, Tractors, and other heavy construction and maintenance equipment common to highway construction. The Truck Tractor will normally be mated to a heavy 3-axle lowboy trailer and required to operate in both on/off-road situations typical of other tractors used to transport Highway Construction Equipment.

ine	Requested	Offered	
1 Heav	vy-duty truck tractor intended for on/off road service		
а	Manufacturer		
b	Model		
С	Year Model		
GCW	/R: Minimum 90,000 lbs. GVWR: 60,000		
а	GCWR		lbs.
b	GVWR		lbs.
C	Chassis weight on front axle		lbs.
d	Chassis weight on rear tandem		lbs.
e	Weight of cab & chassis including lubricant and full load of fuel.		lbs.
Cab t	to Tandem		
а	CT 120" to 130" (measuring from the back of the cab to the center of tandem rear Axle) and it should be appropriate for the Fifth wheel setting and axle spacing.		inches
Whe	elbase		
а	Wheelbase shall be appropriate for the axle and CT dimensions required to achieve the axle load requirements and satisfy the laws of North Carolina, Bridge formula, and the Federal laws.		Ft/Ins.

	а	Minimum resisting bending moment of 2,000,000 inch/lbs.	
		per frame rail.	In/Lbs
6	Spring	is and Suspension	
	а	Front and rear suspension shall meet or exceed the	Yes
		requirements for GVWR.	☐ No
	b	Rear suspension to be Air ride type suspension	Yes
	~		
	С	Front suspension offered	
	C		
	d	Rear suspension offered	
	d	Front spring capacity.	lbs.
	e	Rear spring capacity.	
	C		lbs.
7	Front	Axle	
	а	Front axle with minimum 14,000 lbs. rated capacity.	lbc
	<u>ل</u>		lbs.
	b	Set forward axle with Shock absorbers designed for on/off road	Yes
			No No
	С	Wheel bearings oil bath type with synthetic lubricant.	Yes
			No No
8	Rear A		
	а	Rear tandem shall be a minimum 46,000 lbs. rated capacity.	lbs.
	b	Rear axle make and model	
	С	Single speed tandem (single gear ratio).	Yes
			☐ No
	d	Power divider lock with an indicator light visible to the	) (
		operator or approved equivalent. Must have Automatic Miles	Yes
I		Per Hour dis-engagement. Both axles are required to be	
		lockers.	No No
	е	Power divider offered	
		Туре	
		Model	
		Manufacturer	
	f	Spacing of the axles of the tandem shall provide enough	☐ Yes
		clearance to allow for snow chains to be run on both axles	
		with the tires specified in this bid.	No No
	g	Axle ratio provided is to be properly matched for engine RPM,	T Yes
		tire size and transmission offered to maintain 72 MPH $\pm 2$	
		MPH at a maximum GVW on level ground.	🗍 No
		Avel Dette	<u> </u>
	h	Axel Ratio	
	i	Differentials filled with synthetic lubricant.	Yes
		,	
9	Brake	s and a second se	
	a	Full air disc brakes.	☐ Yes
	a		
			No No

	b	Desiccant type air dryer, Midland Pure Air Plus or pre- approved equal.		Yes
				No
	С	Minimum 19.0 CFM air compressor with low air warning buzzer and light.		CFM
	d	Parking brake on front and rear axle of tandem		Yes No
	е	Dust shield on all axles.		Yes No
	f	Brakes shall conform to FMVSS in effect at time of production.		Yes
	g	Full trailer air package required with glad hands installed such that they can attached to the trailer without further modification by the user; holders are required.		Yes
	h	The brake air tank shall have a manual drain valve with a lanyard attached to the chassis rail.		Yes No
	i	ABS system shall be 6S/6M, manufacturer's standard Bendix or Meritor and must be compatible with all manufacturers of		Yes
		trailer brakes.		No
	j	ABS Manufacturer		
	k	ABS Model		
	I	Air brake ABS, full vehicle wheel control system with automatic traction control (ATC).		Yes No
10	Batter	ies	<u> </u>	
	а	Battery box and battery mounts designed for on/off road application.		Yes No
	b	Minimum of 3000 CCA at zero (0) degrees F.	<u> </u>	CCA
	C	Hold down clamps and terminals treated with corrosion resistant.		Yes No
	d	Batteries and cables to comply with Technology and Maintenance Council 105d specifications.		Yes No
	е	Two (2) remote jump start terminals, battery side mounted with color coded covers.		Yes No
	f	Shall have a master electrical disconnect switch (non-keyed) on battery side of truck, protected from road splash and accessible from the ground or be mounted in the cab.		Yes No
	g	Manufacturer's standard battery box cover.		Yes No
11	Altern	ator	<u>ں</u>	
	а	Delco SI or approved equal.		Yes No
	b	Minimum 180 amps		Amps
	С	Alternator Manufacturer		Make
	d	Alternator Model		

14	-	e <b>Performance</b> : Vendor is required to furnish, with the bid, a copy of the performance calculations for the t coupled to a lowboy equipment trailer, as per the following requirements.	ruc	k offered
	а	Full diesel, electronic engine, with inline minimum six (6)		Yes
	ŭ	cylinders.		No
	I.	-		
	b	Shall be SAE J1349 rated.		Yes
				No
	С	Minimum rated torque 1700 lbs./ft		Yes
				No
	d	Shall have 25% startability at maximum GVWR (startability @		Yes
		clutch engagement).		No
	е	Shall maintain a minimum top speed of 72 MPH @ 1 1/2		Yes
	e	gradeability at maximum GVWR.		
		· · · · · · · · · · · · · · · · · · ·		No
	f	Vendor shall include truck performance analysis sheet(s)		Yes
		indicating the truck performance criteria as described above.		No
				No
	g	Engine Manufacturer.		MFG.
	h	Engine Model.		Model
		Number of Culinders		
	I	Number of Cylinders.		# of Cylinders
	J	Net HP, minimum of 500 hp		HP @
				RPM
	Ŀ	Deak tergua		Peak torque
	k	Peak torque		-
				lbs./ft @
				RPM
12A	Engin	e Requirements Continued		
12/(	-	Engine offered shall meet all emissions control system set by		N
	а	EPA requirements, Federal and NC State regulations at the		Yes
		time of delivery.	$\square$	No
	b	A copy of the most recent EPA certificate for current model		Yes
		year Emissions is requested with this bid.		No
	С	110 V thermostatically controlled engine block heater		Vac
		properly sized for the engine proposed with weatherproof		Yes
		receptacle mounted under left door (Driver side).	_	
				No
	ام	Shall have thermostatically controlled fuel heater		Vee
	d	Shall have thermostatically controlled fuel heater.		Yes
				No
	е	Shall have on board primer for the fuel system.		Yes
			$\Box$	No
	f	Shall be compatible for use with B-20 Bio-Diesel fuel.		Yes
	•			No
	-			
	g	Shall have a fuel water separator.	Ē	Yes
				No
	h	Shall have full flow, spin on type engine oil filter.		Yes
			Ē	No
	i	Must have corrosion resistant oil pan.		Yes
	I			
1				No

13	Engin	e Brake	
	а	Shall be a compression type or approved equal, compatible	Yes
		with the engine and transmission furnished.	
	h	Engine brake Manufacturer	
	b		
	С	Engine brake Model	
14	Exhau	ist	
	а	Shall be a vertical stack with deflector (rain cap not	Yes
		acceptable).	No No
15	Fuel T	ank	
	а	Single fuel tank, minimum 100 gallons	Gallons
	b	Fuel tank to be aluminum, aluminized-steel not acceptable.	T Yes
	С	Shall conform to all applicable SAE Standards.	Yes
			No No
	d	Prefer left side mounted	Yes
			🔲 No
16	Air Cl		
	а	Dry type, with rated air flow for engine offered with filtration	Yes
		efficiency of 99.5% for all engine speeds.	
	b	In cab direct reading air restriction indicator	Yes
17	Coolir	ng System	No
17	a	Cooling system conforming to SAE (Society of Automotive	
	u	Engineers) J1393, ASTM (American Society for Testing and	Yes
		Materials) Standards and manufacturer recommendations for	
		on-off road application.	🔲 No
	b	Shall have manufacturer's suggested coolant type.	Yes
	-		
	С	Stone/Gravel radiator guard should be installed at front of	Yes
		the cab	No
18	Gauge	es Shall include manufacturer's standard digital gauge package, including the following gauges as a minir	num:
	а	Oil Pressure	Yes
	b	Temperature	Yes
		Voltmeter	
	С	Voltmeter	Yes
	d	Fuel	
	u		
	e	Air Pressure	Yes
	f	Tachometer	Yes
			No No
	g	Hour meter	Yes
			🔲 No

	h	Audible and visual alarm for high water temperature	Yes
			No No
	i	Audible and visual alarm for oil pressure	Yes
			No No
	j	Audible and visual alarm for low air pressure	Yes
			No
19		al Transmission	
	а	Eaton RTLO-16913A or approved equal, properly matching engine and axle ratio.	Yes
	h	Shall allow easy downshifting to lower gears without bringing	
	b	vehicle to stop.	Yes
	с	Furnished with synthetic transmission lubricant.	
	C		
	d	Transmission manufacturer:	
	е	Transmission model:	
	f	Torque capacity:	
20	Clutch		
	а	Easy pedal plus or approved equal with minimum of 15.5	inches
	L	inches.	
	b	Minimum 2 plates ceramic or equivalent	plates
	С	An extended lube line for the clutch release bearing is	Yes
		required.	No No
	d	Clutch manufacturer	
	е	Clutch model	
21	cab e drop	ulics: The truck tractor is required to have a transmission PTO driven pump and a 35 gallon hydraulic ta gagement, providing sufficient hydraulic flow and power to operate the trailer, which will normally be leck equipment hauling trailer with a 12,000 pound winch. (Most commonly the vendor delivers these in Mfg. in Dunn NC and works with them on this up-fit.)	a 50 ton rated,
-	а	Complete hydraulic system including pump including a	☐ Yes
		Chelsea or Muncie PTO pump, filters, pressure relief valve,	
		and a 35 gallon metal reservoir.	No No
	b	PTO Pump to deliver a minimum of 10 GPM and a maximum	No Yes
	b	-	0
	b c	PTO Pump to deliver a minimum of 10 GPM and a maximum of 25 GPM at 2800 to 3000 PSI. Vendor shall provide an oil cooler of sufficient size to limit	Ves No Yes
	C	PTO Pump to deliver a minimum of 10 GPM and a maximum of 25 GPM at 2800 to 3000 PSI. Vendor shall provide an oil cooler of sufficient size to limit overheating.	Yes
		PTO Pump to deliver a minimum of 10 GPM and a maximum of 25 GPM at 2800 to 3000 PSI. Vendor shall provide an oil cooler of sufficient size to limit	Ves No Yes
	C	PTO Pump to deliver a minimum of 10 GPM and a maximum of 25 GPM at 2800 to 3000 PSI. Vendor shall provide an oil cooler of sufficient size to limit overheating. Hydraulic hoses should be minimum 9 ft in length Controls for operation of the trailer will be furnished by the	<pre>Yes No Yes No Length Yes Yes</pre>
22	c d e	PTO Pump to deliver a minimum of 10 GPM and a maximum of 25 GPM at 2800 to 3000 PSI. Vendor shall provide an oil cooler of sufficient size to limit overheating. Hydraulic hoses should be minimum 9 ft in length Controls for operation of the trailer will be furnished by the trailer manufacturer	Yes No Yes No Length
22	c d e Wind	PTO Pump to deliver a minimum of 10 GPM and a maximum of 25 GPM at 2800 to 3000 PSI. Vendor shall provide an oil cooler of sufficient size to limit overheating. Hydraulic hoses should be minimum 9 ft in length Controls for operation of the trailer will be furnished by the trailer manufacturer hield Wipers	<pre>Yes No Yes No Length Yes No No</pre>
22	c d e	PTO Pump to deliver a minimum of 10 GPM and a maximum of 25 GPM at 2800 to 3000 PSI. Vendor shall provide an oil cooler of sufficient size to limit overheating. Hydraulic hoses should be minimum 9 ft in length Controls for operation of the trailer will be furnished by the trailer manufacturer	<pre>Yes No Yes No Length Yes No Yes Yes Yes</pre>
22	c d e Wind	PTO Pump to deliver a minimum of 10 GPM and a maximum of 25 GPM at 2800 to 3000 PSI. Vendor shall provide an oil cooler of sufficient size to limit overheating. Hydraulic hoses should be minimum 9 ft in length Controls for operation of the trailer will be furnished by the trailer manufacturer hield Wipers Electric, dual wipers.	<ul> <li>Yes</li> <li>No</li> <li>Yes</li> <li>No</li> <li>Length</li> <li>Yes</li> <li>No</li> </ul>
22	c d e Wind	PTO Pump to deliver a minimum of 10 GPM and a maximum of 25 GPM at 2800 to 3000 PSI. Vendor shall provide an oil cooler of sufficient size to limit overheating. Hydraulic hoses should be minimum 9 ft in length Controls for operation of the trailer will be furnished by the trailer manufacturer hield Wipers	<pre>Yes No Yes No Length Yes No Yes Yes Yes</pre>
22	c d e Wind	PTO Pump to deliver a minimum of 10 GPM and a maximum of 25 GPM at 2800 to 3000 PSI. Vendor shall provide an oil cooler of sufficient size to limit overheating. Hydraulic hoses should be minimum 9 ft in length Controls for operation of the trailer will be furnished by the trailer manufacturer hield Wipers Electric, dual wipers.	<ul> <li>Yes</li> <li>No</li> <li>Yes</li> <li>No</li> <li>Length</li> <li>Yes</li> <li>No</li> </ul>

			🗌 No
23	Whee	l Rims	
	а	Aluminum disc type wheels, 10 hole.	Yes
	b	Dura-Bright polish or Equivalent to aid in corrosion resistance.	Yes
	С	Hub piloted.	Yes
	d	Nylon Gasket to prevent corrosion to hub	No Yes
	е	Rims shall conform to Tire & Rim Association guidelines.	No Yes
	f	Rim Manufacturer:	No No
24	Front	Tires	
	а	12R22.5 steel belted radial.	Yes
	b	Load Range H	
	С	Premium highway treads.	Yes
	d	Good Year, Michelin, Continental and Bridgestone tires are approved. Any additional tire brands must be approved by the Procurement Entity.	Yes
	е	Tire Manufacturer.	
		If different from above:	
	а	Tire Size	
	b	Tire Load Range	
	С	Tire Model	
25	Rear 1	ires and a second se	
	а	12R22.5 steel belted radial.	Yes
	b	Load range H	Yes
	С	Good Year, Michelin, Continental and Bridgestone tires are approved. Any additional tire brands must be approved by the Procurement Entity.	Yes
	d	Tire Manufacturer.	
		If different from above:	
	а	Tire Size	
	b	Tire Load Range	
	С	Tire Model	
26	Lighti		_
	а	Factory installed daytime running lights.	Yes

	b	Front and rear Class "A" directional signals.	Yes
			No No
	С	Minimum, five (5) cab marker lights.	Yes
			No
	d	Hazard Flashers	Yes
			No
	е	All lighting to be of the type approved by the N.C. Division of	Yes
		Motor Vehicles.	No
	f	Pre-Trip exterior light inspection switch:	T Yes
		Engaging light inspection switch will sequentially flash all	
		exterior vehicle lights, except back up lights while operator completes safety inspection.	☐ No
			]
	g	Factory installed Fog lights installed in the front bumper or mounted at the bottom of the front bumper	Yes
			No No
27		Bumper	
	а	Manufacturers' standard heavy front bumper	Yes
			No
28	Fende		
	а	Quarter fenders on front Tandem	Yes
	_		No
29	Licens	e Plate Bracket	
	а	License bracket mounted with light in the rear of the truck	Yes
			No
30	Electr	ical Wiring	
	а	All wiring from the front to rear of chassis shall be encased in	Yes
		a loom, molded plastic or pre-approved equal protective covering.	□ No
	b	Wiring to be attached to inner side rails with rubber covered	☐ Yes
	IJ.	fasteners at approx. 20" intervals.	
	С	Power supply source ( 5 terminal block, Cole Hersee	
	C	46377 or equal), each capable of providing 15 amps,	Yes
		fuse protected for the later addition of 2 way radio, safety	
		lighting and other special equipment required for	□ No
		NCDOT purposes.	
	d	Equiped with factory installed modem for GPS?	Yes
			No
31		Vendor may be required to demonstrate the cab offered during the evaluation process.	
	а	Conventional cab with factory installed air-conditioning.	Yes
	<u> </u>		
	b	Shall have electronic cruise control.	
			No
	С	Shall have air ride cab	
		Chall have a shering and interim much have the state of t	No No
	d	Shall have exterior and interior grab handle handholds.	Yes
			No
	е	Shall have steps for high cab applications for both driver and passenger side. First step height approximately 17 inches.	Yes
		אמאפרוקפי אועב. ו וואנ אנפף וובוצווג מאאו טאוווומנפוץ דל וווגוובא.	□ No
			_

	f	Shall have tinted safety glass all around including windshield.	Yes
	g	Driver and passenger seats shall be air ride, adjustable up, down, forward, back and tilt. (National Cush-n-Air or	Yes
		approved equal).	No No
	h	Both seats shall be high-back each with lap and shoulder seatbelts, and for crew cab when applicable. Shoulder straps	Yes
		shall be high visibility orange.	No No
	i	Shall have 12V power supply outlet.	Yes
	j	Shall have fresh air heater and defroster with single shut-off	Yes
	<u> </u>	valve for water line to heater.	No No
	k	Shall have power door locks, and power windows, right and left padded sun visor, driver/passenger side arm rest, map	Yes
		pocket and floor mats.	🗌 No
	I	Shall have AM/FM/CD/blue tooth radio, shielded to eliminate	
		interference from 2-way radio with Bluetooth.	) (
			U No
	m	Shall have a tilt and telescoping steering wheel.	Yes
			No No
	n	Cab access and function must be ergonomically designed to	Yes
		accommodate 95% percentile of drivers ranging from a 4 Ft. 8 In., 110 Lb. driver to a 6 Ft. 5 In., 375 Lb. driver.	]
			No No
	0	Rear mounted light on back of cab	Yes
	р	Must have factory installed Telematics, GPS that reads	
	•	Datalink information and is compatible with and	Yes
		communicates with ATT/Geotab database for utilization	
		tracking.	No No
32	Fire Ex	ktinguisher	
	а	Shall be ABC type, rechargeable and mounted in cab.	Yes
			No No
	b	Shall have a UL rating of 10BC	Yes
			No
33	Mirro	rs	
	а	Left and right west coast type with approximately 7"x17"	Yes
		heads.	No No
	b	Both west coast mirrors heated.	Yes
			No No
	С	Left and Right-side mirrors shall be motorized, adjustable and	Yes
		controlled by the driver	No No
	d	Each mirror shall have approximately 8" diameter convex mirrors, bottom bracket mounted, ball adjustable.	Yes
			No No
	е	Overall width, outside mirror to outside mirror not to exceed	
		110 inches of the cab and mirror extension should not exceed	Overall width
		110 for safety concerns.)	
34	Horns		

	а	Must have 2 horns, one electric and one air horn. Both must	$\Box$	Yes
		comply with SAE requirements and industry standard.		
			$\Box$	No
35	Power	Steering		
	а	Power steering, designed and intended for the tires, axles and		Yes
	u	GVWR offered.	Ц	
		Grwik offered.	<u> </u>	No
	Fifth V	Vheel- Vendor is to confirm that the below data will provide for the axle loading specified above and tha	t the	selected
36	trailer	will properly attach without modification by the User.		
		Air slide with left side operation		Vaa
	а	All slide with left side operation	Ц	Yes
				No
	b	Mounted such that the kingpin can be located from directly		Yes
		over the Center of the tandem to 24 inches forward.		
				No
	С	Fontaine model H7000 AWB 24 Heavy Duty - 4" increments		
		or a Fontaine No Slack II 7000 Series 7LWB 24.0-inch air slide		Model
		fifth wheel with cast top plate with 2-inch increments is		
		approved.		
	d	Height shall be between 51 to 52 inches		Yes
				No
37	Traile	Connection		
	а	Break away valve		Yes
	a	bicak away valve	Ц	
				No
	b	Air check valve		Yes
				No
	с	Hand control valve	$\overline{\neg}$	Yes
	C		Н	
	<u> </u>		<u> </u>	No
	d	Hose, spring cab hangers	$\Box$	Yes
				No
	е	Berg (7) wire connector or equivalent, with holder and cable		Yes
		for both ABS and non ABS	ň	No
	f	Federal Motor Vehicle Safety Standards compatible	⊢	
	I		Ц	Yes
				No
	g	Wet line kit for hook up of semi-trailer, mounted behind cab		Yes
				No
	h	Quick disconnect fittings shall comply with ISO 7241-1 series		Yes
		B	Н	No
	· ·		⊢	
	i	Sufficient reservoir capacity and oil cooler to ensure	П	Yes
		maximum of 100 degree F rise		No
	j	Pogo Stick and slide bar installed		Yes
			$\overline{\Box}$	No
38	Safety			
50	-			
	а	Vehicles shall include the necessary safety features to meet	Π	Yes
		the applicable requirements of the Federal Vehicles Safety	L	
		Standards and shall conform with Motor Carrier Safety		No
		Regulations # 399.203.		
	b	The vehicle to be furnished with all applicable equipment and	_	
		accessories as required by the Occupational Safety and Health		Yes
		Acts of both the United States and the State of North		
		Carolina, and shall comply with all regulations, rules,		
		standards and interpretations lawfully adopted there under.		No

С	Vehicle Cab noise at ear level of the seated operator, with windows open shall not exceed OSHA REQUIREMENTS IN 29 CFR 1910.95 for 8-hour exposure when measured on the "A" scale	Yes
	of a standard sound meter. Ear plugs or other personal protective devices are not acceptable to comply with this requirement.	🗋 No
d	OSHA requirements on the opening date of the IFB shall apply, regardless of the date of Equipment manufactured.	Yes
39 Feder	al Inspection Sticker	
а	All units shall be delivered with a completed 12 month Federal Highway Safety Inspection sticker properly affixed.	Yes



Vendor:\_

## Truck Tractor, 140,000 POUND GCWR, Heavy Hauling On/Off Road

General: This specification is for the purchase of a heavy duty, 140,000Lb. GCVWR truck tractor for use by the North Carolina Division of Highways in transporting heavy equipment to and from job sites. Equipment types normally carried by this tractor will include, but shall not be limited to, Large Excavators, Loaders, Motor Graders, Large Bulldozers, and other heavy construction and maintenance equipment common to highway construction. The tractor will normally be mated to a heavy 3-axle lowboy trailer and required to operate in both on/off-road situations typical of other tractors used to transport Heavy Construction Equipment.

ine	Requested	Offered
1 Hea	vy-duty truck tractor intended for on/off road service	
а	Manufacturer	
b	Model	
C	Year Model	
2 GCV	VR: Minimum 140,000 lbs. GVW: Appropriate to achieve GCWR loads	given
а	GCWR	lbs.
b	GVWR	lbs.
С	Chassis weight on front axle	lbs.
d	Chassis weight on rear tandem	lbs.
е	Weight of cab & chassis including lubricant and full load of fuel.	lbs.
3 Cab	to Tandem	
а	CT 160" to 170" (measuring from the back of the cab to the center of tandem rear Axle) and it should be appropriate for the Fifth wheel setting and axle spacing.	inches
4 Whe	elbase	
а	Wheelbase shall be appropriate for the axle and CT dimensions required to achieve the axle load requirements and satisfy the laws of North Carolina, Bridge formula, and the Federal laws.	Ft/Ins.
5 Fran	ne	
а	Minimum resisting bending moment of 2,000,000 inch/lbs. per frame rail.	In/Lbs

6 Spring	gs and Suspension	
а	Front and rear suspension shall meet or exceed the axle ratings.	Yes No
b	Rear suspension to be either Hendrickson model HAS-460-55 "Air" or approved equal	Yes
С	Front suspension offered	
d	Rear suspension offered	
d	Front spring capacity.	lbs.
e	Rear spring capacity.	lbs.
7 Front	Axle	
а	Front axle with minimum 18,000 lbs. rated capacity with the	
	heaviest duty shock absorbers, designed and recommended	
	for on and off road service	lbs.
b	Set forward axle with heavy duty Shock absorbers designed	Yes
	for on/off road	No
С	Wheel bearings oil bath type with synthetic lubricant.	Yes No
8 Rear /	Axles	
а	Rear tandem shall be a minimum 46,000 lbs. rated capacity.	lbs.
b	Rear axle make and model	
C	Single speed tandem (single gear ratio).	Yes No
d	Power divider lock with an indicator light visible to the operator or approved equivalent. If the tandem is Mack	Yes
	design (automatically Selected power divider), no lock or light is required. Both axles are required to be lockers.	🔲 No
e	Power divider offered	
	Туре	
	Model	
	Manufacturer	
f	Spacing of the axles of the tandem shall provide enough	T Yes
	clearance to allow for snow chains to be run on both axles	
	with the tires specified in this bid.	U No
g	Axle ratio provided is to be properly matched for engine RPM,	Yes
	tire size and transmission offered to maintain 72 MPH $\pm 2$	☐ No
	MPH at a maximum GVW on level ground.	
h	Axel Ratio	
i	Differentials filled with synthetic lubricant.	Yes No
9 Lift Ax	xle	
а	A steerable, 13,000Lb capacity lift axle with auto reverse is	Yes
	required and shall be installed by chassis manufacturer	

b	Lift axle shall be equipped with two (2) disc type aluminum wheels and 11R22.5, 14 play rated tires		Yes
			No
С	Steerable		) Yes
	Air activation and regulation from ash		No No
d	Air activation and regulation from cab.		) Yes ] No
е	Automatic lift in reverse		Yes
			No
f	Capacity		lbs.
g	Lift axle manufacturer		
h	Lift axle model.		
10 Brake	S		
а	Full air disc brakes.		) Yes No
b	Desiccant type air dryer, Midland Pure Air Plus or pre-		Yes
	approved equal.		No
C	Minimum 19.0 CFM air compressor with low air warning		<u>CEN4</u>
	buzzer and light.		CFM
d	Parking brake on front and rear axle of tandem		) Yes No
е	Dust shield on all axles.	<u>_</u>	Yes
			) No
f	Brakes shall conform to FMVSS in effect at time of		Yes
	production.		No
g	Full trailer air package required with glad hands installed such	Г	Yes
	that they can attached to the trailer without further modification by the user; holders are required.	_	-
	mounication by the user, noticels are required.	C	No
h	The brake air tank shall have a manual drain valve with a		Yes
	lanyard attached to the chassis rail.		) No
i	ABS system shall be 6S/6M, manufacturer's standard Bendix		<u>,                                     </u>
	or Meritor and must be compatible with all manufacturers of	L	) Yes
	trailer brakes.		) No
j	ABS Manufacturer		
k	ABS Model		
I	Air brake ABS, full vehicle wheel control system with		Yes
	automatic traction control (ATC).		No
11 Batte			<b>.</b>
а	Battery box and battery mounts designed for on/off road application.		) Yes ] No
b	Minimum of 3000 CCA at zero (0) degrees F.		CCA
C	Hold down clamps and terminals treated with corrosion		) Yes
	resistant.		No
d	Batteries and cables to comply with Technology and	C	Yes
	Maintenance Council 105d specifications.		) No

e	Two (2) remote jump start terminals, battery side mounted with color coded covers.		Yes No
f	Shall have a master electrical disconnect switch (non-keyed) on battery side of truck, protected from road splash and accessible from the ground or be mounted in the cab.		Yes No
g	Manufacturer's standard battery box cover.		Yes No
12 Altern	ator	_	
а	Delco SI or approved equal.		Yes No
b	Minimum 180 amps		Amps
С	Alternator Make		Make
d	Alternator Model		Model
_	e <b>Performance</b> : The Bidder is required to furnish, with the bid, a copy of the performance calculations for th coupled to a lowboy equipment trailer, as per the following requirements.	e tr	uck offered
When		_	
а	Full diesel, electronic engine, with inline minimum six (6) cylinders.		Yes No
b	Shall be SAE J1349 rated.		Yes No
С	Minimum rated torque 1850 lbs./ft		Yes
d	Shall have 25% startability at maximum GVWR (startability @ clutch engagement).		Yes No
е	Shall maintain a minimum top speed of 72 MPH @ 1½ gradeability at maximum GVWR.		Yes No
f	Bidder shall include truck performance analysis sheet(s) indicating the truck performance criteria as described above.		Yes No
g	Engine Manufacturer.		MFG.
h	Engine Model.		Model
i	Number of Cylinders.		# of Cylinders
j	Net HP, minimum of 500 hp		HP @ RPM
k	Peak torque		Peak torque lbs./ft @ RPM
14 Engine	e Requirements Continued		
a	Engine offered shall meet all emissions control system set by		Yes
	EPA requirements, Federal and NC State regulations at the time of delivery.		No
b	A copy of the most recent EPA certificate for current model year Emissions is requested with this bid.		Yes
		<u> </u>	No
С	110 V thermostatically controlled engine block heater properly sized for the engine proposed with weatherproof		Yes
	receptacle mounted under left door (Driver side).		No

d	Shall have thermostatically controlled fuel heater.	Yes	
	Shall have on board primer for the fuel system.		
e		Yes	
f	Shall be compatible for use with B-20 Bio-Diesel fuel.	Yes	
	·		
g	Shall have a fuel water separator.	Yes	
		<u>No</u>	
h	Shall have full flow, spin on type engine oil filter.	Yes	
i	Must have corrosion resistant oil pan.	☐ Yes	
15 Engin	e Brake		
a	Shall be a compression type or approved equal, compatible	T Yes	
	with the engine and transmission furnished.		
b	Engine brake Manufacturer		
C	Engine brake Model		
16 Exhau	ist		
а	Shall be a vertical stack with deflector (rain cap not	Yes	
	acceptable).		
17 Fuel T	'ank		
а	Single fuel tank, minimum 100 gallons	Gallons	
b	Fuel tank to be aluminum, aluminized-steel not acceptable.	Yes	
C	Shall conform to all applicable SAE Standards.	Yes	
d	Request left side mounted	Yes	
18 Air Cl	eaner		
а	Dry type, with rated air flow for engine offered with filtration	Yes	
ŭ	efficiency of 99.5% for all engine speeds.		
b	In cab direct reading air restriction indicator	Yes	
19 Coolii	ng System		
а	Cooling system conforming to SAE (Society of Automotive Engineers) J1393, ASTM (American Society for Testing and	Yes	
	Materials) Standards and manufacturer recommendations for on-off road application.	No No	
b	Shall have manufacturer's suggested coolant type.	Yes	
C	Stone/Gravel radiator guard should be installed at front of the cab	Yes No	
20 Gauge	20 Gauges Shall include manufacturer's standard digital gauge package, including the following gauges as a minimum:		
а	Oil Pressure	Yes	
		No	
b	Temperature	Yes	

		No No	
с	Voltmeter	Yes	
d	Fuel	Yes	
e	Air Pressure	Yes	
f	Tachometer	Yes	
g	Hour meter	Yes	
h	Audible and visual alarm for high water temperature	Yes	
i	Audible and visual alarm for oil pressure	Yes	
j	Audible and visual alarm for low air pressure	Yes	
21 Manu	al Transmission		
a	Eaton RTLO-18913A or approved equal, properly matching	Yes	
ŭ	engine and axle ratio.		
b	Shall allow easy downshifting to lower gears without bringing	Yes	
	vehicle to stop.	No No	
С	Furnished with synthetic transmission lubricant.	Yes No	
d	Transmission manufacturer:		
е	Transmission model:		
f	Torque capacity:		
22 Clutch			
а	Easy pedal plus or approved equal with minimum of 15.5 inches.	inches	
b	Minimum 2 plates ceramic or equivalent.	plates	
с	An extended lube line for the clutch release bearing is required.	Yes	
d	Clutch manufacturer		
e	Clutch model		
cab ei drop d	23 Hydraulics: The truck tractor is required to have a transmission PTO driven pump and a 35 gallon hydraulic tank. Must have in- cab engagement, providing sufficient hydraulic flow and power to operate the trailer, which will normally be a 50 ton rated, drop deck equipment hauling trailer with a 12,000 pound winch. (Most commonly the vendor delivers these truck tractors to Godwin Mfg. in Dunn NC and works with them on this up-fit.)		
а	Complete hydraulic system including pump, filters, pressure relief valve, and metal reservoir.	Yes	
b	PTO Pump to deliver a minimum of 10 GPM and a maximum of 25 GPM at 2800 to 3000 PSI.	No Yes	
C	Bidder shall provide an oil cooler of sufficient size to limit overheating.	No Yes	
	overneating.	No	

d	Hydraulic hoses should be minimum 9 ft in length.		Length		
е	Controls for operation of the trailer will be furnished by the trailer manufacturer.		Yes No		
24 Winds	hield Wipers	_			
a	Electric, dual wipers.	٦	Yes		
		ี่	No		
b	Intermittent action.	<u> </u> 	Yes No		
C	Dual washers.		Yes		
25 Whee	l Pime	<u>_</u>	No		
	Aluminum disc type wheels, 10 hole.	_	Voc		
а			Yes No		
b	Dura-Bright polish or Equivalent to aid in corrosion resistance.	כ	Yes No		
С	Hub piloted.	ק	Yes No		
d	Nylon Gasket to prevent corrosion to hub.	╡	Yes		
u			No		
е	Rims shall conform to Tire & Rim Association guidelines.		Yes No		
f	Rim Manufacturer:				
26 Front					
а	315/80R22.5 steel belted radial.		Yes No		
b	Load Range L	_			
С	Minimum speed rating of 75MPH.		Yes No		
d	Premium highway treads.	ב ר	Yes No		
е	Tire Manufacturer.				
f	Tire Model.				
	If different from above:				
а	Tire Size				
b	Tire Load Range				
C	Tire Model				
27 Rear T	27 Rear Tires				
а	12RR22.5 steel belted radial.		Yes No		
b	Load Range H				
C	Premium highway treads.		Yes No		
d	Tire Manufacturer.	<u></u>			

е	Tire Model.	
	If different from above:	
а	Tire Size.	
b	Tire Load Range.	
C	Tire Model.	
28 Lightii	lg	
а	Factory installed daytime running lights.	Yes No
b	Front and rear Class "A" directional signals.	Yes No
С	Minimum, five (5) cab marker lights.	Yes No
d	Hazard Flashers.	Yes No
e	All lighting to be of the type approved by the N.C. Division of Motor Vehicles.	Yes No
f	Pre-Trip exterior light inspection switch: Engaging light inspection switch will sequentially flash all exterior vehicle lights, except back up lights while operator	
	completes safety inspection.	No
g	Factory installed Fog lights installed in the front bumper or mounted at the bottom of the front bumper.	Yes No
29 Front	Bumper	
а	Manufacturers' standard heavy front bumper.	Yes No
30 Fende	rs	
а	Quarter fenders on front Tandem	Yes No
31 Licens	e Plate Bracket	
а	License bracket mounted with light in the rear of the truck.	Yes No
32 Electri	ical Wiring	
а	All wiring from the front to rear of chassis shall be encased in a loom, molded plastic or pre-approved equal protective	Yes
	covering.	No
b	Wiring to be attached to inner side rails with rubber covered fasteners at approx. 20" intervals.	Yes No
c	Power supply source ( 5 terminal block, Cole Hersee 46377 or equal), each capable of providing 15 amps, fuse protected for the later addition of 2 way radio, safety lighting and other special equipment required for	Yes
	NCDOT purposes.	No
d	Equiped with factory installed modem for GPS?	Yes No
33 Cab: I	Bidder may be required to demonstrate the cab offered during the evaluation process.	
а	Conventional cab with factory installed air-conditioning.	Yes No

b	Shall have electronic cruise control.		Yes	
			No	
С	Shall have air ride cab.		Yes	
d	Shall have exterior and interior grab handle handholds.		No	
d	shall have exterior and interior grab handle handholds.		Yes No	
е	Shall have steps for high cab applications for both driver and		Yes	
_	passenger side. First step height approximately 17 inches.		No	
	<u></u>			
f	Shall have tinted safety glass all around including windshield.		Yes No	
g	Driver and passenger seats shall be air ride, adjustable up,			
U U	down, forward, back and tilt. (National Cush-n-Air or		Yes	
	approved equal).		No	
h	Both seats shall be high-back each with lap and shoulder		Yes	
	seatbelts, and for crew cab when applicable. Shoulder straps	_		
	shall be high visibility orange.		No	
i	Shall have 12V power supply outlet.		Yes	
			No	
j	Shall have fresh air heater and defroster with single shut-off		Yes	
	valve for water line to heater.		No	
k	Shall have power door locks, and power windows, right and		Yes	
	left padded sun visor, driver/passenger side arm rest, map			
	pocket and floor mats.		No	
I	Shall have AM/FM/CD/blue tooth radio, shielded to eliminate		Yes	
	interference from 2-way radio with Bluetooth.		No	
m	Shall have a tilt and telescoping steering wheel.		Yes	
			No	
n	Cab access and function must be ergonomically designed to			
	accommodate 95% percentile of drivers ranging from a 4 Ft. 8		Yes	
	In., 110 Lb. driver to a 6 Ft. 5 In., 375 Lb. driver.			
			No	
0	Rear mounted light on back of cab.		Yes	
			No	
р	Must have factory installed Telematics, GPS that reads		Yes	
	Datalink information and is compatible with and		163	
	communicates with ATT/Geotab database for utilization		No	
	tracking.			
34 Fire Ex	ktinguisher			
а	Shall be ABC type, rechargeable and mounted in cab.		Yes	
			No	
b	Shall have a UL rating of 10BC		Yes No	
35 Mirro	35 Mirrors			
a	Left and right west coast type with approximately 7"x17"	$\overline{}$	Yes	
a	heads.		No	
b	Both west coast mirrors heated.		Yes	
			No	
С	Left and Right-side mirrors shall be motorized, adjustable and		Yes	
-				

	controlled by the driver.		No
d	Each mirror shall have approximately 8" diameter convex		Yes
	mirrors, bottom bracket mounted, ball adjustable.		No
е	Overall width, outside mirror to outside mirror not to exceed 110 inches of the cab and mirror extension should not exceed		
	110 for safety concerns.)		Overall width
26.11			
36 Horns	Must have 2 hours and all all and all hours. Both revet	_	
а	Must have 2 horns, one electric and one air horn. Both must comply with SAE requirements and industry standard.		Yes
			No
37 Power	Steering		
а	Power steering, designed and intended for the tires, axles and		Yes
	GVWR offered.		No
38 Fifth W	Vheel Bidder is to confirm that the below data will provide for the axle loading specified above and that t	he	selected
trailer	will properly attach without modification by the User.		
а	Air slide with left side operation		Yes
			No
b	Mounted such that the kingpin can be located from directly		Yes
	over the Center of the tandem to 24 inches forward.		No
С	Fontaine No Slack H7 Series HDS 24" with 4" increments is		
C	pre-approved.		Model
d	Height shall be between 51 to 52 inches.		Yes
ŭ			No
39 Trailer	Connection	<u> </u>	,
а	Break away valve.	Γ	Yes
а	Break away valve.		Yes No
a b	Break away valve. Air check valve.		
			No
			No Yes
b c	Air check valve. Hand control valve.		No Yes No Yes No
b	Air check valve.		No Yes No Yes No Yes
b c d	Air check valve. Hand control valve. Hose, spring cab hangers.		No Yes No Yes No Yes No
b c	Air check valve. Hand control valve. Hose, spring cab hangers. Berg (7) wire connector or equivalent, with holder and cable		No Yes No Yes No Yes No Yes
b c d e	Air check valve. Hand control valve. Hose, spring cab hangers. Berg (7) wire connector or equivalent, with holder and cable for both ABS and non ABS.		No Yes No Yes No Yes No Yes No
b c d	Air check valve. Hand control valve. Hose, spring cab hangers. Berg (7) wire connector or equivalent, with holder and cable		No Yes No Yes No Yes No Yes No Yes
b c d e f	Air check valve.         Hand control valve.         Hose, spring cab hangers.         Berg (7) wire connector or equivalent, with holder and cable for both ABS and non ABS.         Federal Motor Vehicle Safety Standards compatible.		No Yes No Yes No Yes No Yes No Yes No
b c d e	Air check valve. Hand control valve. Hose, spring cab hangers. Berg (7) wire connector or equivalent, with holder and cable for both ABS and non ABS.		No Yes No Yes No Yes No Yes No Yes
b c d e f	Air check valve.         Hand control valve.         Hose, spring cab hangers.         Berg (7) wire connector or equivalent, with holder and cable for both ABS and non ABS.         Federal Motor Vehicle Safety Standards compatible.		No Yes No Yes No Yes No Yes No Yes No Yes
b c d e f	Air check valve.         Hand control valve.         Hose, spring cab hangers.         Berg (7) wire connector or equivalent, with holder and cable for both ABS and non ABS.         Federal Motor Vehicle Safety Standards compatible.         Wet line kit for hook up of semi-trailer, mounted behind cab.		No Yes No Yes No Yes No Yes No Yes No
b c d e f	Air check valve.         Hand control valve.         Hose, spring cab hangers.         Berg (7) wire connector or equivalent, with holder and cable for both ABS and non ABS.         Federal Motor Vehicle Safety Standards compatible.         Wet line kit for hook up of semi-trailer, mounted behind cab.         Quick disconnect fittings shall comply with ISO 7241-1 series B.         Sufficient reservoir capacity and oil cooler to ensure		No Yes No Yes No Yes No Yes No Yes No Yes No Yes No
b c d e f g h	Air check valve.   Hand control valve.   Hose, spring cab hangers.   Berg (7) wire connector or equivalent, with holder and cable for both ABS and non ABS.   Federal Motor Vehicle Safety Standards compatible.   Wet line kit for hook up of semi-trailer, mounted behind cab.   Quick disconnect fittings shall comply with ISO 7241-1 series B.		No Yes No Yes No Yes No Yes No Yes No Yes No Yes No
b c d e f g h	Air check valve.         Hand control valve.         Hose, spring cab hangers.         Berg (7) wire connector or equivalent, with holder and cable for both ABS and non ABS.         Federal Motor Vehicle Safety Standards compatible.         Wet line kit for hook up of semi-trailer, mounted behind cab.         Quick disconnect fittings shall comply with ISO 7241-1 series B.         Sufficient reservoir capacity and oil cooler to ensure		NoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYes
b c d e f f h i	Air check valve.         Hand control valve.         Hose, spring cab hangers.         Berg (7) wire connector or equivalent, with holder and cable for both ABS and non ABS.         Federal Motor Vehicle Safety Standards compatible.         Wet line kit for hook up of semi-trailer, mounted behind cab.         Quick disconnect fittings shall comply with ISO 7241-1 series B.         Sufficient reservoir capacity and oil cooler to ensure maximum of 100 degree F rise.		NoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNo
b c d e f f h i	Air check valve.         Hand control valve.         Hose, spring cab hangers.         Berg (7) wire connector or equivalent, with holder and cable for both ABS and non ABS.         Federal Motor Vehicle Safety Standards compatible.         Wet line kit for hook up of semi-trailer, mounted behind cab.         Quick disconnect fittings shall comply with ISO 7241-1 series B.         Sufficient reservoir capacity and oil cooler to ensure maximum of 100 degree F rise.         Pogo Stick and slide bar installed.		NoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYes
b c d e f g h i j	Air check valve.         Hand control valve.         Hose, spring cab hangers.         Berg (7) wire connector or equivalent, with holder and cable for both ABS and non ABS.         Federal Motor Vehicle Safety Standards compatible.         Wet line kit for hook up of semi-trailer, mounted behind cab.         Quick disconnect fittings shall comply with ISO 7241-1 series B.         Sufficient reservoir capacity and oil cooler to ensure maximum of 100 degree F rise.         Pogo Stick and slide bar installed.		NoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNo
b c d e f f g h i j <b>40 Safety</b>	Air check valve.         Hand control valve.         Hose, spring cab hangers.         Berg (7) wire connector or equivalent, with holder and cable for both ABS and non ABS.         Federal Motor Vehicle Safety Standards compatible.         Wet line kit for hook up of semi-trailer, mounted behind cab.         Quick disconnect fittings shall comply with ISO 7241-1 series B.         Sufficient reservoir capacity and oil cooler to ensure maximum of 100 degree F rise.         Pogo Stick and slide bar installed.		NoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYesNoYes

	Standards and shall conform with Motor Carrier Safety Regulations # 399.203.	No No			
b	The vehicle to be furnished with all applicable equipment and accessories as required by the Occupational Safety and Health Acts of both the United States and the State of North Carolina, and shall comply with all regulations, rules,	Yes			
	standards and interpretations lawfully adopted there under.	No No			
C	Vehicle Cab noise at ear level of the seated operator, with windows open shall not exceed OSHA REQUIREMENTS IN 29 CFR 1910.95 for 8-hour exposure when measured on the "A" scale	Yes			
	of a standard sound meter. Ear plugs or other personal protective devices are not acceptable to comply with this requirement.	No No			
d	OSHA requirements on the opening date of the IFB shall apply, regardless of the date of Equipment manufactured.	Yes			
41 Feder	41 Federal Inspection Sticker				
а	All units shall be delivered with a completed 12 month Federal Highway Safety Inspection sticker properly affixed.	Yes			