

FORM A: BID
(See B7)

1. Contract Title SUPPLY & DELIVERY OF CONCRETE MIXER TRUCKS

2. Bidder

Name of Bidder

Street

City

Province

Postal Code

Facsimile Number

(Mailing address if different)

Street or P.O. Box

City

Province

Postal Code

The Bidder is:

(Choose one)

a sole proprietor

a partnership

a corporation

carrying on business under the above name.

3. Contact Person

The Bidder hereby authorizes the following contact person to represent the Bidder for purposes of the Bid.

Contact Person

Title

Telephone Number

Facsimile Number

E-mail Address

4. Definitions

All capitalized terms used in the Contract shall have the meanings ascribed to them in the General Conditions and D3.

5. Offer

The Bidder hereby offers to perform the Work in accordance with the Contract for the price(s), in Canadian funds, set out on Form B: Prices, appended hereto.

6. Commencement of the Work

The Bidder agrees that no Work shall commence until he is in receipt of a notice of award from the Award Authority authorizing the commencement of the Work.

7. Contract The Bidder agrees that the Bid Opportunity in its entirety shall be deemed to be incorporated in and to form a part of this offer notwithstanding that not all parts thereof are necessarily attached to or accompany this Bid.

8. Addenda The Bidder certifies that the following addenda have been received and agrees that they shall be deemed to form a part of the Contract:

No.	_____	Dated	_____
	_____		_____
	_____		_____

9. Time This offer shall be open for acceptance, binding and irrevocable for a period of sixty (60) Calendar Days following the Submission Deadline.

10. Signatures In witness whereof the Bidder or the Bidder's authorized official or officials have signed this

_____ day of _____, 20_____ .

Signature of Bidder or
Bidder's Authorized Official or Officials

(Print here name and official capacity of individual whose signature appears above)

(Print here name and official capacity of individual whose signature appears above)

FORM B: PRICES
 (See B8)

SUPPLY & DELIVERY OF CONCRETE MIXER TRUCKS

UNIT PRICES

ITEM NO.	DESCRIPTION	SPEC. REF.	UNIT	APPROX. QUANTITY	UNIT PRICE	AMOUNT
1.	60,000 lbs GVWR Chassis	08001A	Each	(6)	\$ _____	\$ _____
2.	Mixer Drum	08001B	Each	(6)	\$ _____	\$ _____
TOTAL BID PRICE (GST and MRST extra) (in figures) \$ _____ (in words) _____ _____						

 Name of Bidder

FORM N: DETAILED SPECIFICATIONS 08001A

(60,000 lbs. Cab & Chassis)

1.0 TYPE/INTENT-

1.1 The **Truck Chassis shall be a 2008 model year**. The chassis shall be furnished complete and ready for use by the Contractor. All parts not specifically mentioned but which are required to complete and place the vehicle into successful operation shall be furnished as though specifically mentioned in these specifications.

It is the intent of these specifications to describe a Concrete Mixer Truck and other equipment as described herein. The Concrete Mixer Trucks and equipment shall be installed on a cab and chassis to be supplied by the Contractor (**see Detailed Specifications 08001A attached**).

1.2 It will be the responsibility of the Bidder to inform the City of any errors or omissions in these specifications, for under this Contract the Contractor shall be held responsible for the satisfactory operational function of the vehicle.

1.3 All items in these specifications must be answered indicating compliance or non-compliance. **Bidders shall state "yes" for compliance or state deviation**, or give a reply where requested to do so. Deviations shall be clearly stated and fully detailed. Alternatives will be considered subject to evaluation.

1.4 Each bidder is required to fill in every blank. **Failure to do so may be used as a basis for rejection of bid.**

1.5 All applicable SAE standards form an integral part of these specifications and shall have precedence in any conflict concerning minimum acceptable standards.

1.6 The completed unit and all its components shall comply with all C.M.V.S.S. Canadian Motor Vehicle Safety Standards, M.H.T.A. Manitoba Highway Traffic Act, S.S.A Safety Standards Act, F.M.V.S.S Federal Motor Vehicle Safety Standards, D.O.T Department of Transportation, regulations and requirements as applicable, including but not limited to, a Manitoba Government Inspection with Safety Sticker on the driver's side window.

2.0 SERVICE FACILITY

2.1 For the purpose of warranty repairs, the supplier shall have an authorized service facility located within 10 kilometres of the boundaries of the City of Winnipeg. The facility, or a portion thereof, shall be dedicated to the service and maintenance of the type equipment being offered. Further to B9.1, Bidders shall provide a description of the service facility including, but not limited to, number of qualified service staff, years of service experience, and general service capabilities within three (3) Business Days upon request of the Contract Administrator.

3.0 CHASSIS SPECIFICATIONS-

3.1	Total GVWR	60,000 lbs. GVWR	_____
3.2	Front GVWR	20,000 lbs. GVWR minimum	_____
3.3	Rear GVWR	40,000 lbs. GVWR minimum	_____

4.0 DIMENSIONS-

4.1	Cab to Axle	As required for a London 65 Series Concrete Mixer body. State CA-	_____
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4.2 Wheelbase As required for a London 65 Series Concrete Mixer body. **State WB-** _____

4.3 Turning radius State turning radius- _____

5.0 ENGINE-

5.1 Type Diesel, inline 6-cylinder. **State make & model-** _____

5.2 Horsepower 330 HP gross minimum _____

5.3 Torque 1000 lb-ft minimum _____

5.4 Engine shut down Low oil pressure / high water temperature _____

5.5 Anti-idling programming Determined upon pre-production meet _____

5.6 Air intake warmer Required _____

5.7 Fuel Shut-off Electric solenoid type _____

5.8 Air intake Suitable for Concrete Mixer Application _____

5.9 Air cleaner Dry type, suitable for Concrete Mixer Application _____

5.10 Air intake restriction ind.State Location _____

5.11 Oil drain plug Magnetic type _____

5.12 Oil filter Full flow, spin-on type _____

5.13 Fuel filter Spin-on type _____

5.14 Fuel/water separator Heated, drainable, mounted under hood, located to be protected from road spray. **State location-** _____

5.15 Block heater Immersion type, 110V/1000 Watt minimum with covered recessed male plug, located under driver's side door _____

5.16 Oil Pan heater 120V/300 watt minimum _____

5.17 Coolant Heavy-Duty extended life antifreeze to -35°F (-37°C) _____

5.18 Coolant hoses Premium or Gates Blue Stripe _____

5.19 Fan Drive Thermostatically controlled, automatic type _____

5.20 Air compressor Water cooled, pressure lubricated, minimum 18.7 cfm, **state cfm-** _____

5.21 PTO Provision Engine PTO, **state PTO opening location-**
 - Front PTO through radiator with adapter plate
 - Front PTO under radiator with adapter plate
 - Rear Mount PTO (REPTO) _____

5.22 Exhaust Brake Engine exhaust brake required. _____

6.0 ELECTRICAL SYSTEM-

6.1	Electrical connector's	Plug-in, sealed type	_____
6.2	Alternator	165 amp minimums. State make & model-	_____
6.3	Starter	Starter with OCP and thermal protection	_____
6.4	Circuit breakers	Auto-reset, readily accessible	_____
6.5	Batteries	Three (3), minimum total 2100 CCA combined	_____
6.6	Battery Box	Aluminium, mounted under cab or steps c/w enclosure. State location-	_____
6.7	Battery disconnects	Located in cab accessible to operator	_____
6.8	Battery boost terminal	Remote battery boost terminal(s), protected from road spray, covered. State location-	_____
6.9	Cab marker lights	Cab marker lights shall be LED.	_____
6.10	Accessory switches	Five (5) required, dash mtd., for "Beacon", "Rear Work Lights" and additional switches labelled "Aux". All switches complete and wired for body installation, labeled and backlit.	_____
7.0	<u>EXHAUST SYSTEM-</u>		
7.1	Configuration	Stationary extreme outboard single right hand, chrome vertical discharge on passenger side, under frame routing, vertical portion cab mounted. discharge tip shall be chrome curved. Exhaust shall not impede with body installation.	_____
7.2	Overall exhaust height	As recommended for Concrete Mixer Body. Exact height to be determined upon pre-production meet	_____
7.3	Heat shield	Required over exhaust next to cab door	_____
8.0	<u>TRANSMISSION-</u>		
8.1	Model	Allison automatic with 6-speed programming and synthetic transmission fluid. State make & model of transmission-	_____
8.2	Shift selector	Digital push-button type, dash mounted	_____
8.3	Cooling capacity	Water to oil transmission cooler, as per manufacturer's recommendation for severe-duty cycle and concrete mixer application.	_____
8.4	Oil level dipstick	Bayonet type with high and low level markings	_____
8.5	Trans. drain plug	Magnetic type	_____

9.0 FRONT AXLE-

9.1 Type 20,000 lbs. capacity minimum _____

10.0 REAR AXLE-

10.1 Type 40,000 lbs. capacity minimum _____

10.2 Ratio Recommended for City use and a maximum highway speed of 110 kph. _____

10.3 Inter-axle lock Required w/dash mounted switch _____

10.4 Differential lock Required for both drive axles w/dash mtd. switch _____

10.5 Axle Spacing As recommended for concrete mixer application, **state spacing measurement-** _____

11.0 HUBS & SEALS-

11.1 Type Oil lubricated front and rear _____

11.2 Axle Fluids Synthetic Fluids _____

11.3 Hubs Must be aluminium Hubs Front & Rear _____

12.0 FRONT SUSPENSION-

12.1 Type Multi-leaf spring suspension, 20,000 lbs. capacity minimum _____

13.0 REAR SUSPENSION-

13.1 Type 40,000 Rubber block type suspension suitable for cement mixer application. **State make and model-** _____

14.0 RIMS, WHEELS-

14.1 Front 22.5 x 12.25 aluminium, hub piloted _____

14.2 Rear 22.5 x 8.25 aluminium, hub piloted _____

14.3 Wheel nut indicators Required on all wheel nuts _____

15.0 TIRES, FRONT

15.1 Make & Model Michelin XZY-3, **state make & model of tires, suited for concrete mixer application.** _____

15.2 Size 445/65R 22.5, 20-ply (rated for request GVWR) _____

16.0 TIRES, REAR-

16.1 Make & Model Michelin XDY 3 LRH On Road/Off Road, **state make**

& model of tires, suited for concrete mixer application.

16.2 Size 11R 22.5, 16-ply minimum (rated for request GVWR)_____

17.0 FRAME-

17.1 Type RBM suitable for requested GVWR, outside frame to be clear for body installation. _____

17.2 Application Suitable for cement mixer application body installation _____

17.3 Chassis fasteners Huck bolted frame fasteners _____

17.4 Front frame extension Integral type, 18 in. minimum. Only required for front PTO provisions. **State length-** _____

17.5 After-frame As required for requested Concrete Mixer body Installation. _____

17.6 Rear Tow Hooks Required _____

18.0 STEERING-

18.1 Type Heavy-duty power suitable for requested GVWR rating and Concrete Mixer application. _____

19.0 BRAKES-

19.1 Type Air, ABS, S-cam drum brakes, front & rear _____

19.2 Slack adjusters (clearance sensing), automatic type _____

19.3 Indicators Visual Brake Stroke Indicators' **'Tattle-Tale'** style required on all brakes. **State make & Model-** _____

19.4 Parking brake Spring set, four (4) chamber system _____

19.5 Brake pots Vented type _____

19.6 Dust shields Required, front and rear _____

19.7 Drain valves Automatic drain valves required on each air tank with pull cables. _____

19.8 Air Tanks All tanks must be aluminum _____

19.9 Air dryer Bendix AD-IS air dryer. **State location-** _____

20.0 FUEL TANK-

20.1 Type Aluminium 70-gallon minimum capacity, mounted as per cement mixer body requirements. Must be fully fuelled upon delivery. _____

20.2 Tank straps Aluminium or stainless steel straps with minimum 1/16 in. rubber or neoprene isolators to prevent galvanic corrosion. _____

20.3	Fuel	Fully Fuelled upon delivery	_____
21.0	<u>CAB-</u>		
21.1	Type	Galvanized steel or aluminum	_____
21.2	Construction	Aluminium or Galvanized steel construction meant for severe-duty concrete mixer application.	_____
21.3	Front axle to BOC	State-	_____
21.4	Hood	Must have Rubber fender lips minimum 2"- 3" width	_____
21.5	Cab mounts	Air suspension	_____
21.6	Front grille	Stationary type.	_____
21.7	Cab interior / trim	Extreme climate insulation including cloth or vinyl headliner on roof, door panels and rear interior of cab	_____
21.8	Cab silencer package	Required for minimal decibel levels	_____
21.9	Hood/Firewall/Engine	Insulated hood liner, engine cover and firewall	_____
21.10	Floor covering	Rubber mat with under-padding	_____
21.11	Floor mats	Two (2), rubber mats	_____
21.12	Driver's seat	High back, air suspension w/foldable armrests, lumbar support, heavy-duty cloth upholstery. State material-	_____
21.13	Passenger seat	High back, air suspension w/foldable armrests, lumbar support, heavy-duty cloth upholstery. State material-	_____
21.14	Sun visors	Dual flip-up type	_____
21.15	Steering wheel	Tilt and telescopic type	_____
21.16	12-Volt power outlet	(2) two required with independent circuit	_____
21.17	Radio	Factory installed AM/FM/CD with Weather Band	_____
21.18	Starter switch	Key operated c/w three (3) sets of keys	_____
21.19	Interior light	Dome light with driver and passenger door switches	_____
21.20	Heater / Defroster	High output, capable of keeping all windows clear at an outside temperature of -35°F (-37°C)	_____
21.21	Air conditioning	Required	_____
21.22	Horns	Dual Air Horns with single electric horn.	_____
21.23	Exterior mirrors	Dual polycarbonate unpainted aerodynamic, Stainless or chrome steel mirrors with convex mirrors, heated, 4-way motorized adjustments (including heater convex mirrors), suitable for 102 in. equipment width, state:	_____
21.24	Down-view mirror	Required over passenger door, 5" x 4" approx.	_____
21.25	Windows & windshield	Tinted	_____
21.26	Power windows	Required for driver and passenger side.	_____
21.27	Fresnel Windows	Driver & Passenger door, state-	_____

21.28	Windshield wipers	Electric, intermittent	_____
21.29	Wiper blades	Required	_____
21.30	Windshield washers	Electric, required with spray nozzles on wiper blades	_____
21.31	Grab handles	Driver & passenger side Anti-slip exterior	_____
21.32	Entrance steps	Dual each side, open grate / grip type	_____
21.33	Licence Plate	Must have front and rear licence plate brackets	_____

22.0 INSTRUMENTATION-

22.1	Oil pressure	Gauge	_____
22.2	Coolant temperature	Gauge	_____
22.3	Transmission oil temp.	Gauge	_____
22.4	LOP/HWT	Warning light and buzzer	_____
22.5	Voltmeter	Gauge	_____
22.6	Air reservoir pressure	Gauge with LAP warning light and buzzer	_____
22.7	Engine hour-meter	Required, non-reset able type	_____

23.0 TOW HOOKS-

23.1	Location	Front mounted	_____
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24.0 FRONT BUMPER-

24.1	Type	Full width aluminium front bumper	_____
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25.0 COLOUR-

25.1	Exterior	White	_____
25.2	Interior	Blue or grey, state-	_____
25.3	Frame & suspension	Primed and finished with black Imron 5000 paint	_____
25.4	Wheels	Aluminium	_____

26.0 ACCESSORIES-

26.1	Flare kit	Three (3) triangular reflectors, CVSA approved	_____
26.2	Fire Extinguisher	(20) lbs. Fire Extinguisher CVSA approved Mounted as per manufactures recommendation. State location-	_____
26.3	First Aid Kit	Required in Cab and secured	_____

27.0 CHASSIS WARRANTY-

27.1	Basic vehicle	Two (2) years, 240,000 km	_____
27.2	Batteries	One (1) year, unlimited km	_____
27.3	Drive train	Two (2) years, unlimited km	_____

27.4	Cab structure/corrosion	Three (3) years, unlimited km	_____
27.5	Frame & cross members	Three (3) years, unlimited km	_____
27.6	Cab paint	One (1) year or 100 000 km	_____
27.7	Engine	Six (6) years or 400,000 km	_____
27.7.1	Injectors & Turbo	State maximum years and kilometres	_____
27.8	Transmission	Five (5) year, unlimited km	_____
27.9	Axles, front & rear	Three (3) years or 240 000 km	_____
27.10	Biodiesel fuel	The above warranties shall be applicable with a B5 biodiesel fuel or less	_____

FORM N: DETAILED SPECIFICATIONS 08001B

(Mixer Drums)

1.0 TYPE-

1.1 The **Mixer Drum shall be 2008 model year**. The mixer drums shall be furnished complete and ready for use by the Contractor. All parts not specifically mentioned but which are required to complete and place the vehicle into successful operation shall be furnished as though specifically mentioned in these specifications.

It is the intent of these specifications to describe a Concrete Mixer Truck and other equipment as described herein. The Concrete Mixer Trucks and equipment shall be installed on a cab and chassis to be supplied by the Contractor.

1.2 It will be the responsibility of the Bidder to inform the City of any errors or omissions in these specifications, for under this Contract the Contractor shall be held responsible for the satisfactory operational function of the vehicle.

1.3 All items in these specifications must be answered indicating compliance or non-compliance. **Bidders shall state "yes" for compliance or state deviation**, or give a reply where requested to do so. Deviations shall be clearly stated and fully detailed. Alternatives will be considered subject to evaluation.

1.4 Each bidder is required to fill in every blank. **Failure to do so may be used as a basis for rejection of bid.**

1.5 All applicable SAE standards form an integral part of these specifications and shall have precedence in any conflict concerning minimum acceptable standards.

1.6 The completed unit and all its components shall comply with all C.M.V.S.S. Canadian Motor Vehicle Safety Standards, M.H.T.A. Manitoba Highway Traffic Act, S.S.A Safety Standards Act, F.M.V.S.S Federal Motor Vehicle Safety Standards, D.O.T Department of Transportation, regulations and requirements as applicable, including but not limited to, a Manitoba Government Inspection with Safety Sticker on the driver's side window.

2.0 SERVICE FACILITY

2.1 For the purpose of warranty repairs, the supplier shall have an authorized service facility located within 10 kilometres of the boundaries of the City of Winnipeg. The facility, or a portion thereof, shall be dedicated to the service and maintenance of the type equipment being offered. Further to B9.1, Bidders shall provide a description of the service facility including, but not limited to, number of qualified service staff, years of service experience, and general service capabilities within three (3) Business Days upon request of the Contract Administrator.

3.0 MIXER - ELIGIBLE MODEL LONDON SERIES 65 OR EQUIVALENT IN ACCORDANCE WITH B.5 SUBSTITUTES STATED HEREIN.

3.1 MIXER- Mixer 6.5 m3

3.2 DRUM- ¼" spun drum head; 48" inside reinforcing plate; 3/16 Londox 220 wear resistant (high manganese, low carbon) Steel drum shell welded 100% inside and out; 3/16 Londox 220 blades with hard surface lips; solid wire welded seams;

solid steel drum track machined inside taper and out square;
43" discharge opening; auxiliary surge fins; 16 X 22.5 " bolt
on oval inspection hatch.

3.3 **FRONT PEDESTAL-** Fully enclosed Cor Ten "A" front pedestal incorporating
a 15 gallon easy clean hydraulic oil reservoir. Flared lower
front and rear flanges to distribute load.

3.4 **REAR PEDESTAL-** Easy to clean enclosed rear pedestal with service access
to the drum rolls and standard "knee brace". Pedestals
constructed of CorTen "A" corrosion resistant steel. Fully
welded swivel support integrated through pedestal frame

3.5 **TRANSMISSION-** Model ZF PK7500 right angle / planetary direct drive;
138.6:1 reduction; 53,104 ft lb output torque capacity.
Mounted to machined drum flange by 24 grade 8 bolts
and to machined pedestal deck pads by 6 grade 8 bolts.

3.6 **HYDROSTATIC-** Eaton heavy duty 5.4 cubic inch variable displacement
piston pump with built in 5500 psi relief valve; Eaton heavy
duty 4.6 cubic inch displacement motor; speed and
direction of the drum rotation controlled from the cab and
on the rear pendant; 10 micron suction filter; heavy duty
front mounted oil cooler with guard.

3.7 **WATER SYSTEM-** 125 gallon, side mounted **aluminum** water tank; (3)
three positions fill, dump and hold valve; high pressure relief valve;
pressure regulating valve; off set sight gauge; 4" diameter
spring loaded flapper valve; 1' rear water injection line;
25 foot wash down hose with pistol grip spray nozzle.
Blow out and drain provision for winter operation.

3.8 **DRUM ROLLERS-** CM1035 alloy steel drum roller; tapered roller bearings;
double sealed; centre shaft lubrication; roller surfaced
hardened to Rockwell C45. Full width rear drum
roll guard.

3.9 **CHARGE HOPPER-** 38" X 30" top opening; 19" minimum throat dimension.

3.10 **REAR LADDER-** Non skid ladder rungs and platform base; fold down
ladder extension; ladder rungs align for safety when
folded . Double guard rail on extra large top platform.

3.11 **CONTROLS-** Electro-hydraulic mix-discharge control in cab and at
rear of mixer on 20' quick disconnect cable; electric.
truck engine throttle at rear of mixer (switch for electric
engines); chute raise and lower hydraulic control valve
rear of mixer. Radio controls for all functions, chute lift,
chute lock, engine throttle, mix/ discharge.

3.12 **CHUTES-** Paving type main chute with safety hand grabs and
hinged fold over with lock and a "flip chute assist" ;
(3) three 48" **aluminum or steel with plastic liners**
extension chutes for 20 feet total length; positive seven

position pin lock with 7/8" replaceable hole plate. _____

- 3.13 **CHUTE HOIST-** (2) 1/2" double acting hydraulic cylinder, 3000 psi rated; A-pad gear pump mounted on the Eaton hydrostatic pump; manual control valve located at the rear of mixer with integral relief and flow regulating valve. _____
- 3.14 **FENDERS-** 14 ga. heavy duty roll formed aluminum or plastic fenders with stainless steel hardware and rubber washers; full tandem length with powder coated CorTen "A" centre and end supports. Mud flaps front and rear. _____
- 3.15 **LIGHTS-** Trucklite brand clearance, marker and identification lamps with integral reflectors in accordance with FMVSS. Trucklite sealed junctions box and armour shielded wiring harness. Midship light is combination clearance /signal. _____
- 3.16 **SLUMP GAUGE-** Slump meter shall be high visibility with adjustable pointer. _____
- 3.17 **FRAME TARP-** Acid resistant frame tarp located under drum _____
- 3.18 **REAR LIGHTING-** Dual rear working lights, sealed beam floodlights _____
- 3.19 **CHUTE LOCK-** Air operated with infinite positioning with in cab and exterior controller. _____
- 3.20 **PAINTING-** Mixer and components shot blasted prior to prime painting. All components painted prior to assemble. Top coat one color Dupont Imron 2 part polyurethane. Tie down angles, fender mounting brackets and water tank cradles are powder coated black. Water tank straps to be black plastic dipped. _____

4.0 TRAINING

- 4.1 The Contractor shall provide operational and maintenance training by qualified staff for City of Winnipeg personnel. The training shall be conducted in separate sessions for each group of personnel. Each session shall be approximately 1/2 day in duration and shall provide adequate familiarization and orientation on the unit, to the satisfaction of the Contract Administrator. The training shall be conducted in Winnipeg at a location to be designated by the Contract Administrator. _____
- 4.2 State if other training aids (videos, CDs) are available. _____
- 4.3 **Please state-** the manufactures recommended training time for the complete equipment (Cab & Chassis and Body Equipment). _____

5.0 WARRANTY-

5.1 The warranty for the **body equipment** shall cover the complete equipment, and all parts thereof against any defects of workmanship, construction and materials, for a period of not less than **one (1) year unlimited hours on mixer body and associated equipment.** Any article that has become defective during said warranty period and has not proven to have been caused by negligence on the part of the user shall be repaired or replaced at no cost to the City. The warranty shall be effective from the date the equipment is put into service by the City of Winnipeg.

6.0 **DELIVERY POINT-** Vehicles shall be serviced, ready for operation and delivered F.O.B. with the freight prepaid, including invoice and N.I.V.S. to the WFMA 185 Tecumseh Street, Winnipeg MB.

6.1 **DELIVERY TIME-** Within **sixteen (16) calendar weeks** from the date of official notification of award of contract. Equipment shall be delivered within 8:00 am and 3:00 pm on Business Days.

6.2 **DELIVERY CONTACT-** The Contractor shall contact the Contract Administrator prior to delivery of the equipment.

6.3 **P.D.I-** A pre-delivery inspection shall be performed by the Contractor on the equipment. Proof upon inspection including completed check list

7.0 **GREASING SYSTEM-** Complete unit shall have a CPL automatic greasing System. Automatic greasing system – complete body and chassis shall be supplied with a Groeneveld/CPL Systems Inc. automatic greasing system including all required grease points on concrete mixer body, and automatic low level shut-off with in-cab red light indicator.

7.1 **State**, quantity of greasing points on mixer body & Truck cab & chassis.
