**TRUCK, CAB, CHASSIS (GRANITE 64FR), 14 YARD DUMP**

Equipment of similar style, features, quality and purpose to the requirements below, will be considered. Bidder’s proposing an equivalent feature to those specified, bidder may be required to provide product information (detailed specifications, pictures, catalogue sheets, etc.) Any proposed submittals that are determined not to be equivalent to the established criteria will not be accepted.

**LOUISIANA AUTHORIZED DEALER(S)**

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

**DELIVERY & ACCEPTANCE**

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

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

Any unit delivered under this specification is subject to rejection if there is evidence of poor workmanship, by either the vendor or the original manufacturer. Noted defects and/or nonconformance findings may be corrected by the vendor. Corrections must be completed and approved prior to final acceptance.

Unit shall be delivered “on the ground;” to Louisiana Property Assistance Agency (LPAA)

**EACH UNIT MUST BE SUPPLIED WITH THE FOLLOWING DOCUMENTATION:**

1. Notarized Bill of Sale

2. Certificate of Origin (MSO)

3. Dealer's Service Policy

4. Owner's/Operator's Manual(s)

a. One (1) Hardcopy

b. One (1) Digital Copy

i. Acceptable Formats: CD, DVD, Flash Drive, or E-mail

5. Service Manual(s)

a. One (1) Hardcopy

b. One (1) Digital Copy

i. Acceptable Formats: CD, DVD, Flash Drive, or E-mail

6. Build Sheet(s) – as applicable

a. One (1) Hardcopy

b. Build sheets should be writing in plain language (not company specific codes)

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

1. Optional Configuration:
   1. Chassis Configuration Package- one box exhaust after treatment systems (EATS), Mack RH (right hand) Battery Box 11.8 (45L) DEF, Single 22” Mack LH Fuel Tank or equal
   2. Vehicle Use & Body/Trailer- dump truck
   3. Trailer type- Fix drawbar trailer and centered axles
   4. Gross Combination Weight- 80,000 LB (36 Tons)
2. Cab & Chassis
   1. GVWR: 67,000
3. Chassis Components
   1. Rear Hinge- 1-3/4 pin strap style with pull pin
   2. Body safety prop- integrated with rear hinge
   3. Subframe- formed 36” bar, included integral retainer plates
   4. Back up alarm
4. Engine:
   1. 12.8L, electronic diesel, turbocharged, liquid cooled, 6-cylinder inline configuration
   2. 425 HP, 1550 LB-FT
   3. Engine must include diesel exhaust fluid (DEF)
      1. DEF tank to be located on the driver’s side next to the fuel tank
      2. DEF tank must have a minimum capacity of 11.8 gallons
   4. Mack MP7-425C or equivalent
   5. Single vertical right side cab mounted, lower venture diffuser, turned end
5. Engine Electronics:
   1. Oil pressure, engine shut down- oil pressure, engine shutdown
   2. Coolant temperature , engine shutdown- coolant tem, engine shut down
   3. Engine protection system- engine protection (shutdown)
   4. Engine idle control- idle control, 600 RPM
   5. Smart idle elevated idle rpm time- increase 10 minute maximum time
   6. Idle shut down ABS Tamper check- idle shut down ABS tamper check, enabled
   7. Idle SID if warm-up temperature- 38G DEG (100F) warm up temperature delay
   8. Idle SID warm-up timer- 5 min. warm up time delay
   9. Idle SID if PTO active- engine idle shutdown time overridden if PTO active
   10. Idle shutdown if power> limit – engine idle shutdown time overridden if torque > than limit
   11. Idle SID override % engine load- idle shut down override up to 20% engine load threshold
   12. Ambient temperature min threshold- ambient temperature min threshold. 16 degrees C, (60 degrees F)
   13. Ambient temperature max threshold- ambient temperature max threshold. 27 degrees C. (80 degrees F)
   14. Electronic Hand Throttle, max road speed- electronic hand throttle, max road speed 16 KMH (10 mph)
   15. Electronic hand Throttle, Max engine speed- electronic hand throttle, max engine speed 2100 RPM
   16. Electronic hand throttle, min. engine speed- electronic hand throttle, min engine speed, 700 RPM
   17. Electronic Hand Throttle HD throttle, speed ramp rate- electronic hand throttle, speed ramp rate, 100 RPM/SEC
6. Transmission
   1. Automatic, Allison 4500 RDS or equal, without retarder or equal
   2. Must be hydraulic type clutch less transmission
   3. Must include PTO aperture
   4. To be filled with manufacturer approved synthetic lubricants
7. Transmission Electronics:
   1. Transmission Electronics- dump/vocational (223)- allows for truck to be put in gear without service brake (for paving)
   2. Transmission auto neutral on P-brake- Allison park brake auto neutral- allows the driver the engage gear prior to disengaging the park brake
   3. Transmission electronic shifting properties- fuel sense full neutral at stop
8. CAB & Axle Positions
   1. Front Axle: for the purposes of this solicitation, set forth axle is required
   2. The space between cab and dump body shall not exceed 10 inches. Truck vendor and dump body manufacturer/upfitter shall coordinate in selecting a cab to axle dimension that is compatible with the required body length and ensures proper load distribution to the front and rear axles in accordance with manufacturer specifications and industry practice.
9. Equipment:
   1. Alternator- Delco 12V 160A (28SI) Brush-Type or equal
   2. (3) MACK 12V 760/2280 CCA Threaded Stud Type or equal
   3. Right Hand Rail Behind SCR Battery Box Mounting
   4. Molded Plastic Battery Cover
   5. Engine Brake- MACK MP7 Powerleash or equal
   6. Engine Brake Lighting- vehicle and trailer (if applicable) stop lamps activate upon service brake application only
   7. Fan drive- BEHR Fan and electronic modulating viscous fan drive or equal
   8. Coolant protection- ethylene glycol fully formulated coolant (50/50 mix dyed pink) to -34DEG with filter
   9. EPDM (Ethylene Propylene Diene Monomer) Radiator and Heater hoses
10. Clutch/Trans Equipment
    1. Gear Shifter-Allison Dash mounted shifter with neutral to range inhibit (HD Series) or equal
    2. Clutch Actuation System & Pedal Pad- without clutch cable system
    3. Driveline- main – Meritor 18 MXL ‘xtended lube’ (PROPS-L) or equal
    4. Driveline- interaxle – Meritor 17 mxl ‘xtended lube’ or equal
    5. Transmission oil cooler- Allison 4500 RDS series transmission w/ direct mount cooler & SS coolant tubes or equal
11. Front Axle Equipment
    1. 20,000# Mack FXL20 Straight Spindle/Unitized bearings or equal
    2. Springs-front- Mack Taperleaf 2000# ground load rating, equal bias or equal
    3. Front Axle Brakes- Meritor “S” Cam Type 16.5 x 6’ Q= or equal
    4. Steering- Sheppard SD110+HD94 or equal
    5. Integral power steering
    6. Shock absorbers
12. Rear Axle Equipment
    1. 44000# (20000kg) Mack S440R Fabricated Steel housing or equal
    2. Rear Axle Casing Width- w/o wide track axle
    3. Carrier-Rear Axle- 150/151 Series (Tandem Mack rear axles up to 150,000lb GCW or equal) must be dual reduction
    4. Traction differential- interwheel differential lock, all rear axles
    5. Power divider lockout- interaxle power divider lockout, w/ buzzer and light
    6. Rear axle ratio- minimum 4.19 ratio
    7. Rear suspension- SS44 Mack camelback multileaf 44000 lb., heavy duty or equal
    8. Bogie spread rear- 50” axle spacing (bogie wheelbase)
    9. Transverse torque rods, right Susp- transverse torque rod (rear axle only)
    10. Aux spring brake qty. 4 chambers
    11. Brakes- Rear- cast iron
    12. Rear Brake ADJ Manufacture HALDEX- Automatic (total for QTY=2) or equal
    13. Brake, drive, rear- cast iron
    14. Rear brake automatic manufacture- Haldex-automatic (total for QTY=2) or equal
    15. Rear brake Chamber size- Rear Spring Brake Chambers 30/30 type
    16. Brake prientation rear most drive axle- drum brake chamber orientation: high mount- rear of axle chamber down
    17. Parking brake chamber- MGM TR3030LP3THD Brake Chambers (Total for QTY = 2) or equal
    18. HUB Material, drive- iron preset rear hub w/ integrated spindle nut
    19. Antilock brake system- Bendix with traction control 4S4M or equal
13. Frame/fuel tanks
    1. 3, 160,000 RBM (resisting Bending Moment). Bidder should list section modulus and yield strength below
       1. Section Modulus \_\_\_\_\_\_\_\_\_\_\_ ii. Yield Strength: \_\_\_\_\_\_\_\_\_\_\_\_\_
    2. Wheelbase- Min. 226" or equivalent to fit a 16 ft. dump body
    3. After Frame after frame- this is the distance from the center of tandem to the end of the frame (overhang)- 57” or equivalent to fit a 16 ft. dump body
    4. Frames, Rails & Liners- Min. 11.1 X 105 X 300MM-(0.437" X 4.13" X 11.81"); RBM 3,160,000 LB-IN
    5. Front Frame Extention (Bolted On)- Min. 6" bolt on frame extension
    6. Front frame length- front frame length 725mm
    7. Cross members- Back Of Cab and intermediate(s) steel HD back-to-back channel
    8. Rear cross member options- steel closing rear cross member
    9. Rear frame treatment- without tapered frame rail ends
    10. Front bumper- extended-swept back-steel bright finish
    11. Towing device, front- hooks
    12. Fuel tank (left hand) 88 gallon (335L) 22” aluminum D-shape
    13. Fuel tank (right hand)- w/o RH fuel tank
    14. Fuel hoses, liquid- braided hose
14. Fuel System
    1. Fuel tank shall be metal with drain and an eighty-eight (88) gallon minimum capacity; tank should be located on the driver’s side
    2. Water in fuel sensor with indicator in cab
15. Gearing, Speed Governing & Performance
    1. Top gear road speed shall be electronically governed at 68 mph maximum
    2. Cruise control speed shall be governed at 68 mph maximum
    3. Speed shall be governed at 10mph when the dump bed is in any raised position
    4. Transmission and axle ratio shall be selected for performance to be optimized at 65 while permitting truck to operate to 68 MPH on highway without excessive engine speed.
16. Vehicle Electronics
    1. Road speed limiter setting- 110 K/MH Road speed limiter (68MPH)
       1. Pedal RSL Setting- 110 K/MH Pedal Road Speed Limiter (68 MPH)
    2. Cruise Control
       1. Cruise control max speed- 110 KPH (68 MPH)
       2. Cruise control min speed- 32 KPH (20 MPH)
    3. Engine Brake Engage in Cruise- Eng. Brk. Engage in Cruise, 3mph, above set speed
    4. Power Divider Lock Out Engaged Variable Limited Slip Power Divider Lock Out (PDLO) Road Speed Limit 5 MPH (8KMH)
    5. Diff Lock Speed Limit- differential lock road speed limit 15 MPH (24 KMH)
    6. Detection Speed Sensor (Tamper) - detection of speed sensor tampering, enable
    7. Engine Torque limit, speed sensor- Engine torque limited to 50%, if speed sensor tamper detected
17. PTO
    1. PTO must be air shifted and compatible with specified transmission
    2. PTO must be activated by dash mounted factory upfitter switch
    3. Indication of PTO engagement should be accomplished by lighted switch
18. Wheels & Tires:
    1. 425/65R22.5L Continental HAC 3 (22800 LBS) (TOTAL FOR QTY=2) or equal
    2. FRONT WHEELS- 22.5X12.25 Maxion 222204x white powder coated steel, 5.28” OFFSET, 5 hand hold (TOTAL FOR QTY 2) or equal
    3. Bridgestone - 11R24.5 G Bridgestone M726 ELA (24020 lbs.) (DRIVE ONLY) (TOTAL FOR QTY 8) OR EQUAL
    4. BRIDGESTONE REAR WHEELS- 24.5x 8.25 Maxion 60542x white powder coat steel, weight reduced, 6.62” offset 2 hand hole (TOTAL for qty. 8) or equal
    5. Standard valves and caps
    6. Front HUB/Wheel Trim- without front hub/wheel trim
    7. REAR HUB/Wheel Trim- without rear HUB/wheel trim (Total QTY=2)
    8. Wheel, Nut & Finish, Front & Rear- basic finish
19. CAB INTERIOR
    1. Speedometer & Gauges- US Units (Predominant)
    2. Gauge Oil Temperature-Rear Axle- rear axle oil temperature gauge in (Driver Information Display) DID
    3. Air Conditioning/Heater- blend air HVAC w/ ATC (Automatic Temperature Control) Regulation
    4. Cupholder
    5. Dome Lamp, interior- four interior dome lamps. (door and switch activated)
    6. Dash Indicator- lamp body out of position dash MOUNTED, indicator body/hoist up “body builder lamp”
    7. Fire extinguisher- 5lb (ABC Rated) mounted between driver seat base and door valve aimed rearward
    8. Floor covering- polyurethane floor mat without removable inserts
    9. Instrument cluster- Default English, Spanish, French
    10. Antenna-CB Radio- 48” antenna left side mirror mounted
    11. Power Leads- power leads (5way binding posts for CB Radio) in header console
    12. Audio speaker location- speaker location, in doors, middle high side panel
    13. Communication radio prep kit (CB)- CB radio mounting reinforcement in header console
    14. Reflector Kit- Emergency reflector kit mounted parallel & centered against Back Of Cab
    15. Seat-Drivers- Mack-Air, High Back 1 Chamber Air Lumbar or equal
        1. Driver’s seat steel grey vinyl
    16. Seat-Passengers-Passengers seat, high back 1 chamber air lumbar or equal
        1. Passenger’s seat- steel grey vinyl
    17. Seat Armrest- inboard mounted arm rest driver’s seat only
    18. Seat belts- lap & shoulder (Both seats) Cab mounted shoulder belt adjustment
        1. Seatbelt reminder: seat belt reminder in instrument, with audio
    19. Ignition type- key type
    20. CAB Glass- tinted windshield & Side windows & rear window (If equipped)
    21. Washer Reservoir Position- W/O Windshield Washer Option
    22. Windshield Wipers- 2 Speed Electric Motor w/ Intermittent Feature
20. CAB EXTERIOR
    1. Hood Latch Type & Finish- Strap Type hood latch with black finish
    2. Grab Handles- Exterior cab Grab Handles, black grab handles RH interior windshield post
    3. Horn- Air- (2) MACK rectangular single trumpet (one each side of cab roof) or equal
    4. Horn- Electrical- dual tone
    5. Mirrors- Exterior- Flat mirror- polished aluminum finish, heated w/o lamps
    6. Mirrors- Convex type cab doors- bright finish, LH & RH, 8” diameter heated convex
    7. Sun-visor- exterior- sun-visor, exterior, fiberglass (painted)
21. Trailer Connections
    1. Trailer brake valve- hand control valve for trailer brakes with air connections or service brakes
    2. Trailer connection position- trailer air brake connections, end of frame
    3. Trailer electrical receipt- single 7 pins standard SAE Type, end of frame
22. Communications Systems
    1. Co-pilot display features access level- co-pilot display driver access driver 1
    2. Telematics gateway- telematics gateway 4G/LTE and WLAN System with diagnostic Services or equal
23. PAINT
    1. Exterior paint- white
    2. Chassis Running Gear- MACK Black (Urethane) P3036 or equal
24. Added options:
    1. 314” Pintle Plate Installed
    2. 30 ton Pintle Hook Installed
    3. Gust Air Electric Installed
    4. 20K Non Steer Axle
    5. High Lift Cylinder Bolt On Covers

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

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

Attached Equipment –

1. Dump Body
   1. Sixteen (16) cubic yard
   2. 16’ long
   3. 86” inside width
   4. 96” outside width
   5. 60” Side height
      1. Side material- 1W AR 450
      2. Side boards- 2 x 2 x ¼” inverted angle
   6. Aluminum fender covers- Aluminum diamond plates
   7. Bottom rail/fender- 10 gauge steel high tensile
   8. Top rail- formed self-shedding
   9. Boarding ladder- tread grip steps winter grated hand grips
2. Bulkhead
   1. Bulkhead height- 76”
   2. Material- 3/16 H Thick AR Abrasion Resistant 450
   3. Shovel Holder- brackets welded to bulkhead
   4. Inside Steps- drivers side, integral anti-sup design
   5. Cap shield- field: full width with formed in wind deflector 10 Gauge
   6. Cab shield length- 24”
   7. Cab shield material- 10 Gauge high Tensile
3. Tailgate
   1. Tailgate height- 64”
   2. Tailgate material- 3/16” ABRAISION RESISTANT 450
   3. Top hinge style: HEAVY DUTY high lift w/ cylinders under top rail
   4. Tailgate safety chains: 3/8” high grade, w/ protective sleeve
   5. Apron- 10” heavy duty pipe bumper
   6. 3 panels
   7. Bottom latch style- over slung, plate steel with brass bushings
   8. Bottom latch controls: aluminum air cylinder operated
4. Lights- all lights are to be LED
   1. Bottom side markers: 2
   2. Rear stop/rail/turn: 1
   3. Cabshield markers: 2
5. Hydraulics:
   1. Hoist model- custom hoists 63-140
   2. Pump- direct mount 2” gear
   3. Pump controls- air feathering
   4. Pump cutoff- air
   5. Axle controls- on muck frame
   6. PTO- parker Chelsea hot shift for auto transmission
   7. PTO controls- wired to switch in dash
   8. Console- aluminum, with inspection cover
   9. Hydraulic tank- steel front mount, 25 gal
6. Paint
   1. All bodies coated with AXALTA or equal
7. Chassis Components
   1. Rear Hinge- 1-3/4 pin strap style, with full pin
   2. Body safety prop- integrated with rear hinge
   3. Subframe- formed 36” Z bar, included integral retainer plates
   4. Back up alarm
   5. Rear frame bumper- 3” round bumper, reuse factory lights
   6. Front flaps- steel mud guards
   7. Rear mud flaps- standard heavy duty Logan rubber flaps or equal
8. Tarp
   1. Mountain electric flip tarp system
      1. MESH material
   2. Wind deflector- formed in cab shield.
9. Tires
   1. QTY 2 – 11R22.5 steel rims on each side of lift action

Options to be included- all QTY 1

1. High Lift Cylinder bolt on covers
2. 314” pintle plate installed - install 30 capacity pintle hook for trailer hitch
3. 30 TON pintle hook installed - install air and electric hook ups for a trailer
4. Gust air electrical installed - axle installed for being street level for 19 ton load
5. Non steer AXLE - installed to prevent cylinder damage

Mack Granite 64FT with 16-Yard Dump Body or equal