



**MEMORANDUM**

**TO:** City Mayor and Commission Members  
**FROM:** Jimmy Feagle, Deputy Director of Public Works  
**DATE:** March 14, 2007  
**SUBJECT:** Recommendation of Vehicle Replacement

The Fleet Services Division is recommending the replacement of a 1996 Lodal EVO Mag 20. This is a 20 yard semi automated garbage truck that is loaded from the side, either manually or with a cart tipper. The vehicle was purchased in 1996 and has been in service for 11 years. Industry standards recommend replacement of this type of truck at 6 years. We place this type of vehicle on an annual replacement review list at 8 years, and continue to monitor it until the cost to maintain it exceeds the value of the equipment.

The vehicle has 14,272 hours on the meter, or an estimated 150,000 miles. The maintenance and repair cost for this vehicle has reached \$32,000.00 and if kept in the system will need to be refurbished at an estimated cost of \$25,000.00. This would include major body work in the garbage hopper area to repair the holes allowing garbage spillage, and an overhaul of the hydraulic system that has weakened and is leaking. The engine and transmission are not showing any signs of immediate failure, but at 11 years of rigorous duty the probability of failure is greatly increased.

The vehicle is used on residential routes with up to 600 stops on a daily basis. Although we have a highly skilled maintenance team that keeps the equipment in excellent condition, we believe that this vehicle has reached its cost effective life expectancy.



We are recommending that the 1996 Lodal Mag 20 be replaced with a Lodal T28 automated sideloader sanitation truck. The automated truck standard package upgrades include cab air conditioning and rear cameras to avoid backing accidents. (We have encountered 2 of these type incidents in the last year).

The automated truck is currently available in a 20 and 28 yard capacity. Solid Waste has requested the 28 yard model to reduce the number of trips to empty; this also reduces mileage, fuel consumption, number of service intervals per year, and over all wear and tear of the truck. This is a 40% increase in capacity to reduce the number of trips to empty the hopper. This task is approximately a 1 hour round trip. The solid waste industry offers various types of collection vehicles, and we have reviewed several of them to evaluate for comparisons to our needs. We have requested and have brought several other trucks in for actual field tests to evaluate how they will work within our system, and the Lodal T28 outperformed all of the others. We have used the Lodal as our primary collection vehicle since 1986, and although we continue to look for superior and more cost effective options, the Lodal has continued to surpass in life expectancy, maintenance cost, and overall dependability.

The purchase of this vehicle will allow the Sanitation Division to continue to operate with the current number of employees, and adding no additional equipment. We estimate that we will be able to absorb an additional 300 customers. We will restructure the routes to maximize the efficiency of personnel and equipment. This vehicle will be utilized in the southern portion of our pick-up area (Legacy and Arlington Ridge), which in the last 2 years has increased our customer base by approximately 600.



## Benefits of Automated vs. Semi-Automated

### Semi-Automated

- Each of the residential routes consists of approximately 600 homes. Currently the operators must stop the truck, exit the cab, retrieve the can(s) from the curb, tip the can with a hydraulic can tipper mounted on the side of the truck, return the can(s) to the curb, and return to the cab. This task takes approximately 20 seconds at each of the 600 homes.

### Automated

- The operator stops the truck, and utilizing a joystick controller the operator is able to extend the tipper to retrieve, tip, and return the can(s) to the curb. The operator does not have to leave the cab. This method takes approximately 12 seconds. The automated truck is approximately 40% more efficient based on operators time/can(s).

## **Current Users**

### **City of Tampa**

Mr. Marc Wilfalk, Deputy Dir., Solid Waste

Application: 1 man crew, automated, semi-auto, and hand-load

**813-348-1111**

Using EVO's since 1979

### **City of North Miami Beach**

Mr. Airia Austin, Operations Mgr

Application: 1 man crew, automated

**305-948-2981**

Using EVO's since 2001

### **City of North Miami**

Mr. Donald Smathers, Sanitation Supt.

Application: 1 man crew, automated

**305-949-7125**

Using EVO's since 2004

### **City of Bradenton**

Richardo Ramos, Solid Waste Supt.

Application: 1 man crew, automated

**941-708-6340**

### **City of Clermont**

Mr. Preston Davis, Public Works Dir.

Application: 1 man crew, automated

**352-394-3350**

Using EVO's since 1989

### **City of Titusville**

Mr. Chuck Taylor, Supt. of Solid Waste

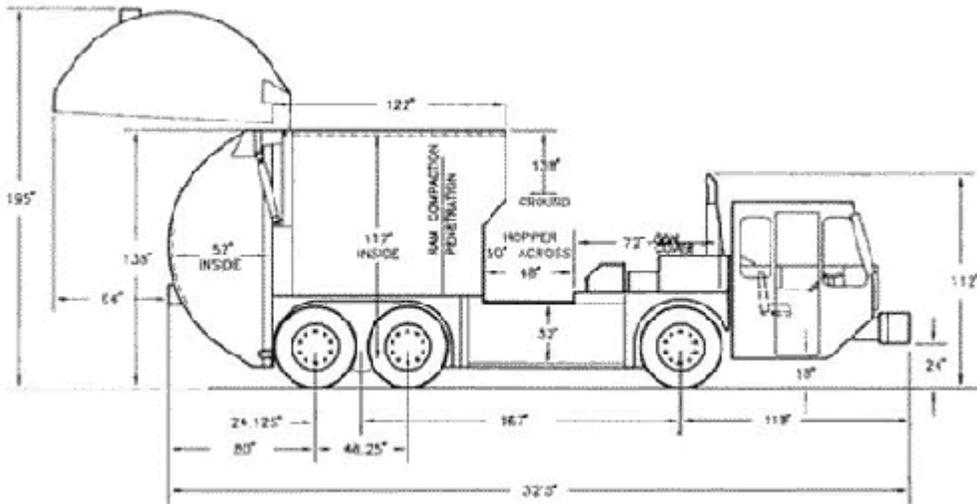
Application: 2 man crew, hand-load

Automated pilot test started this year

**321-383-5756**

Using EVO's since 1983

# EVO T-28 Route Builder



## Specifications:

### Vehicle Weight Rating

G.V.W. 52,000 lbs.

### Vehicle Empty Weights (approx.)

Front axle - 16,500 lbs.

Rear axle -- 11,000 lbs.

Total ----- 27,500 lbs.

### Front Drive Axle & Springs

20,000 lbs. cap. Dana SD66-1X  
axle Ratios: 6:21

Front Springs - 12,000 lbs. cap. ea.

@ pad, 4" X 52" - 10 Leaf

### Side Loading Hopper (Midships)

1.65 cu. yd. cap. (330 gal.) Straight Down Sides

32" Deep X 50" Wide X 48" Long

Loading Height - 34" Running Board 48" - from  
Ground

10" Fold-up Bang Board - Left Side Hopper

### Side Running Boards

Within width of vehicle Low Step - 9" to 11" height

12" W X 60" L Plus 17" Platform

Skid Resistant Open Tread

### Compactor Ram & Load Ejector

Front Shock Absorbers  
Integral Pinion Mt'd 1:1 Drop box

**Independent Rear Suspension**

Tandem axle w/equalizer Beam  
Dana Wheel Ends - Non-driving

**Front & Rear Tires & Wheels**

Front : 15.0 X 22.5 18 Ply Goodyear  
G286 Radials  
Rear: 15.0 X 22.5 18 Ply Goodyear  
G286 Radials  
Pressed Disc Wheels - 12.25 Rim -  
10 Stud

**Refuse Body - 25 cu. yd. cap.**

Tailgate - Top Hinged, Self Locking  
Tailgate Hyd. Cyls. - 4" D X 23.25"  
Stroke  
Integrated Body, Hopper & Forward  
Frame

130,000 lb. Compaction Force @ 3000 P.S. I.  
2 Hyd. Cyls. - 3 Stage telescopic 5.25" D. 1st Stage,  
4.25" D. 2nd Stage, 3.25" D 3rd Stage  
Compactor Ram - 50" Wide X 32" Deep with 72"  
Long Rigid Top Cover

**Hydraulic System (3,000 P.S.I.)**

Pump - Gear Type, 30 GPM @ 1400 RPM  
Pump Drive - Direct off Engine Crankshaft  
Direct PTO Shaft - Spicer 1350  
Hyd. Res. - 48 gal. w/Sight Gauge  
Hyd. Control valve - 2 Spool (Air Oper. Compact)  
Push Button hyd.  
Compaction Control & Emergency Stop Button on  
each side of hopper & inside cab  
Manual Hyd. Control Levers each side of Hopper