WESTCHESTER COUNTY
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION

BUS MAINTENANCE PLAN

Issued by:
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Commissioner
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The Westchester County Department of Public Works and Transportation and its Bee-Line Bus System prides itself in the level of maintenance performed on its' fleet of over 400 buses and ParaTransit vans. The low number of "roadcalls" results in high mileage between breakdowns ranking the system among the best in the country. While these statistics reflect the excellent operation of the system, the maintenance performed on the buses is a carefully designed plan.

This Maintenance Plan reflects input from the Department of Transportation, the private operating bus companies, consultant studies and manufacturers recommendations. The plan is practiced on a daily basis.
I. SCOPE

The purpose of this plan is to identify and itemize a maintenance plan to be utilized by bus companies operating under contract to Westchester County. It will include, but not be limited to: frequency of preventive maintenance (PM) checks; running repairs; body repairs; bus cleaning; fleet defects; training; forms; equipment needed to carry out the plan and staffing.

II. TYPE OF EQUIPMENT

The Westchester County Transit System utilizes several different model buses. These currently include: Neoplan Articulated Buses, Orion V, Orion VII Hybrid, NABI Low Floor Diesel Electric Hybrid and Ford/Coach & Equipment ParaTransit vans. When new model buses are added to the fleet, the maintenance plan is updated to reflect this change.

III. PREVENTIVE MAINTENANCE

It is recognized that a preventive maintenance (PM) plan is the backbone to any successful maintenance effort. For this reason, PM levels shall be established for each type of equipment operated for Westchester County.

The level and frequency of PMs shall be determined by:

- the bus manufacturer’s recommendations
- operating environment
- consultant’s recommendations
- bus company standards.

In all cases, PM activity shall take into account warranty requirements as stipulated in equipment procurement contracts and shall be approved by the Commissioner of Transportation or his authorized designee.

Appropriate forms shall be designed by the bus companies (subject to approval by the Commissioner of Transportation or his authorized designee) to itemize the components to be inspected during the PM.
IV. **RUNNING REPAIRS**

Running repairs are defined as those defects that occur on a bus while in service that may or may not cause the bus to be taken out of service. These repairs may be as simple as a marker light malfunctioning or as difficult as an inside, rear flat tire.

Each bus company shall utilize an acceptable method by which vehicle defects are identified and repaired as quickly as possible in order to return the vehicle to revenue service. This method shall include a form for recording such defects, a maintenance foreman to direct repair and the availability of tools, equipment and maintenance skills to facilitate the repair.

V. **BODY REPAIRS**

It is the goal of this plan to provide and maintain buses free from body defects. A bus body shall be considered defective if:

1. The body is so damaged that the vehicle is unfit for service or violates any New York State law or regulation;

2. The body contains dings, dents or scratches that render it's appearance unattractive;

3. The body contains dings, dents or scratches that, if left unrepaired, may cause further damage to the bus body or a subcomponent of the vehicle.

All bus companies shall provide either an in-house body repair shop or, through an outside contractor, the ability to repair body defects as they may occur.

VI. **BUS CLEANING**

The cleaning of all buses shall be performed at a level designed by the operating bus company and approved by the Commissioner of Transportation or his authorized designee. However, the minimal acceptable level of cleaning shall be as follows:

1. All buses shall be swept and, when necessary, have their floors damp mopped on a daily basis.

2. In garages where a bus washing system is available, all buses shall have their exterior washed on a daily basis. At those garages where there is no bus washer, the bus exteriors shall be washed no less than once a week.

3. Interior windows and the dashboard area shall be cleaned no less than once a week.

4. A complete interior cleaning including windows, floor, walls, ceiling and seats shall be performed no less than once a month.
5. Engine compartments shall be steam cleaned at the scheduled time of a PM.

6. Graffiti shall be removed from both the interior and exterior of each bus on a daily basis.

In no case shall a bus be dispatched for any purpose when, in the opinion of management, it is unclean.

VII. FLEET DEFECTS

Each bus company operating under contract to Westchester County shall maintain adequate records so as to be able to determine whether certain components of a bus are failing on a regular basis. Based upon information supplied by the bus company, the Department of Transportation shall determine if the fleet defect is covered under the original equipment manufacturer (OEM) warranty and seek reimbursement from the OEM.

VIII. TRAINING

The adequate training of all bus maintenance personnel is a priority for the Department of Transportation. Sufficient staff, training, re-training, books, periodicals and training equipment shall be provided by the bus companies operating under contract to Westchester County.

In addition, where appropriate, training material shall be translated into various languages that are native to maintenance personnel.

IX. FORMS

Maintenance forms shall be designed by the bus companies, subject to approval by the Department of Transportation. These forms shall be easy to read and understand. Sufficient quantities of these forms shall be on hand so as to enhance the maintenance of buses. These forms shall include, but not be limited to:

- Preventive Maintenance Forms
- Defect Sheets
- Out of Service Forms
- Fueling Sheets
- Parts Inventory Forms
- Parts Distribution Forms
- Work Orders

These forms, where appropriate, shall be computerized in order to enhance the operation, reduce labor, provide accurate statistical information and reduce costs.
X. **STAFFING**

The Department of Transportation shall provide sufficient funding to the various bus companies operating under contract to Westchester County for the staffing of maintenance positions. The number of maintenance positions shall be reviewed annually but shall be determined by consultant recommendations, comparisons to peer transit agencies, financial constraints and good business practices. At no time shall the safety of passengers or maintenance staff be compromised by insufficient staffing.

XI. **EQUIPMENT**

The Department of Transportation shall provide sufficient funds either to the operating bus companies or through it's own accounts for the procurement of equipment necessary to perform maintenance on county owned equipment. Such equipment shall include, but not be limited to: lifts, hand tools, power tools, freon and coolant recycling equipment, lathes, dynamometers, etc.

XII. **PARTS**

The Department of Transportation shall provide sufficient funds to the operating bus companies for the procurement of parts sufficient in quantity in order to maintain the number of buses assigned to it. In turn, the operating bus company shall maintain a sufficient quantity of spare parts in order to maintain the assigned fleet in an appropriate manner.

XIII. **REPORTS**

The Department of Transportation shall design reports and the operating bus companies shall gather the data to ascertain the efficient operation of the bus maintenance system. Such reports shall include, but not be limited to:

- Mileage Between Breakdowns
- Mileage Between PM's
- Fuel Consumption

XIV. **MAINTENANCE CONSULTANT REVIEWS**

It shall be the policy of the Department of Transportation to have a consultant review the bus maintenance policies of the Department and it's operating bus companies approximately every five years in order to update staffing criteria, maintenance practices and procedures and reporting mechanisms.
XV. COMPUTERIZATION

It shall be the policy of the Department of Transportation to encourage the computerization of all maintenance records. Sufficient funds shall be made available in order to accomplish this task.

XIV. ENVIRONMENTAL CONCERNS

The Department of Transportation will comply with all environmental laws, rules and regulations by purchasing and utilizing recycling equipment where appropriate.

In addition, efforts shall be made to use a clean fuel to power buses as well as maintaining proper engine tune-ups in an effort to limit air pollution.

XV. MAINTENANCE OF ADA EQUIPMENT

It is the policy of the Department of Transportation to maintain equipment purchased to transport disabled passengers in a manner that is in accordance with applicable federal, state and local laws, rules and regulations.