

DEVELOPMENT PLANS FOR THE  
COLLECTION OF NATIONAL TRANSIT DATA  
AND  
TRANSIT MANAGEMENT INFORMATION

Contract 98-01

Prepared for:

Northern Virginia Transportation Commission  
4350 North Fairfax Drive  
Suite 720  
Arlington, VA 22203

Submitted by:

George Hoyt & Associates, Inc.  
P.O. Box 313  
Mount Vernon, VA 22121

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## SECTION 1 OVERVIEW

### 1.1 Project Background

The Northern Virginia Transportation Commission (NVTC) received a grant to collect and provide critical bus ridership information for the Northern Virginia bus service providers. This grant addressed two different, but related needs. Given the size and complexity of the bus systems operated within the metropolitan area, accurate and timely ridership information is needed for effective management of the bus systems. Currently, WMATA collects some of the relevant data, but route level data are not available. Further, some important route planning data are not collected, such as passenger origins and destinations and transfer pattern information. It was also recognized that additional transit funds could be allocated to the region if transit properties currently not filing National Transit Database (NTD) reports could do so. Alexandria DASH, Arlington Transit (ART), Fairfax CUE and Loudoun Commuter Service had not previously filed NTD reports. NVTC contracted with George Hoyt & Associates, Inc. (GH&A) to design a cost efficient data collection program which would address both of these areas. Subsequently, the contract was modified to collect transit data for the Fairfax Connector bus service, which operates in and around Fairfax County. The Fairfax Connector already files NTD reports. However, County staff were interested in examining the possibility of using an alternative sampling plan. Data collected for the Connector will be used for fiscal year 1999 filing purposes.

This report provides two separate data collection plans. Section 2 contains the current and future year sampling plans for the collection of NTD related data. Background work completed by GH&A in conjunction with NTD data collection is also described. The sampling plans and estimation techniques identified in this report are for the collection of data to be used to complete parts of the Transit Agency Service Form (406). An analysis of the collection and reporting of financial data was undertaken as a modification to the contract. An overview of the assessment is provided, with in-depth summaries included as appendices. Section 3 provides a work plan for the collection of the necessary

ridership information transit managers need to increase transit efficiency. This plan involves all of the major bus service providers in Northern Virginia, including Alexandria DASH, Arlington Transit, Fairfax CUE, Fairfax Connector, Loudoun Commuter Service and Metrobus.

## 1.2 Glossary of Terms

Following are the definitions of several terms which are used throughout this document.

- **Alternative Sampling Plan** - A statistically valid technique, other than a 100% count or an Federal Transit Agency (FTA) suggested technique, for collecting unlinked passenger trips and passenger miles. A qualified statistician must determine that the sampling technique meets FTA's confidence and precision levels for NTD reporting.
- **Bus Trip** - The one way movement of a bus in revenue service starting at one terminal point of a route and ending at another terminal point.
- **Busmeister** -A group of Loudoun Commuter Service passengers who volunteer to collect bus fares from fellow passengers. Busmeisters also record total boarding by route by trip.
- **National Transit Database (NTD)** - A federal government data collection and reporting system used to allocate Urbanized Area Formula funds from the FTA.
- **Passenger Miles** - The cumulative sum of the distance ridden by each passenger.
- **Ridecheck** - On-board collection of bus ridership data, including passenger boardings and alightings by stop, and mileage between stops.
- **Unlinked Passenger Trip** - The number of passengers who board a vehicle. A passenger is counted each time he boards a vehicle, including transfers from one vehicle to another on the same journey from origin to destination.