

Introduction and Background information:

This material was developed at the University of Wisconsin-Milwaukee to provide course material that could be used for university level courses in transportation planning, engineering and management. The objectives of this material are to create an understanding of public transport by students interested in professional careers in transportation.

At the end of this material, students should be able to understand differences between public transit planning, design and operations and procedures used for other modes.

- Students should be able to understand the New starts process for planning of major fixed guideway transit systems.
- Students should be familiar with procedures used for transit operating decisions, and for the planning of major new systems or extensions.

The first section of the material gives a general background on the nature of transit, rider characteristics and the benefits of transit.

Five topics are included. These are:

- [Differences Between Highway and Transit Planning](#)
- [Transit Benefits](#)
- [Understanding Transit Demand](#)
- [A Profile of Public Transit Riders \(from APTA\)](#)
- [The National Transit Database](#)

In addition some useful background information is also provided

- [Glossary of Transit Planning Terms](#)
- [Excerpts from Transit Capacity and Level of Service manual](#)

The transit benefit material and highway vs transit material are also given in power point format.

Read the material for each of these topics.

Questions:

- 1) Look up the transit system in your community for the most recent year in the National Transit Data base (<http://www.ntdprogram.com/ntdprogram/pubs.htm>) and find the following characteristics:
 - a. Annual budget
 - b. Sources of funding
 - c. Annual unlinked transit trips
 - d. Performance indicators for the most commonly used mode
- 2) Identify three transit agencies that operate in similar locations in the same general geographic area (peers) and compare their performance to that of the city in question 1. Discuss and compare trends between the cities
- 3) Calculate the potential benefits of vehicle ownership avoidance for the transit system in question 1. If specific data are not available, assume that the number of daily users is 40% of the unlinked trips, a captive rate of 65% and an annual auto ownership cost of \$5,000 per vehicle. Compare this number to the total operating expense excluding farebox revenues.
- 4) Conduct a brief survey of about 10-20 people to determine what portion are auto captives, transit captives and choice users. Determine what factors limit the number of choice users.
- 5) Using the transit Capacity and Level of Service manual, assess the level of service of a transit route for frequency and hours of service that serves your school. What data and assumptions would you need to assess the coverage level of service of the route?
- 6) Using the APTA transit profile and the system you used in question 1, compare how the profile of passengers in the transit systems in the larger and smaller cities on the basis of:
 - a. Portion of female riders
 - b. Portion of riders under 18
 - c. Portion of non-white riders
 - d. Portion of riders in the highest income group

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