

Appendix H: Transit Study Review



A review of previous transit studies reveals that many have tried, with varying degrees of success, to address the issue of how to improve the regional transit system.

12+10

Review of Studies/Reports

Baltimore Metropolitan Council staff scanned and compiled a variety of documents to inform this exercise. A subject-based search of the Regional Information Center, housed within the offices of BMC, found more than 200 reports, the oldest of which dates to the 1930s. A manual sort was undertaken to determine the relevance, and to set the priority, of each report for review. An initial list was created and distributed to solicit recommendations for additional relevant studies and reports. A second list resulted which included transit-specific studies and reports, including transit service plans as well as general plans / comprehensive plans. The narrative below summarizes and provides a general historical context from the most germane studies/reports.

TRANSPORTATION PLANNING IN CITIES

In 1938, the Maryland State Planning Commission issued a report, *Five Years of State Planning*, that identified pressing needs and a choice of courses that the state could take to alleviate and offset future problems¹. Its focus was on the demands that Maryland's growth would create on land, water, and public and social infrastructure.

At that time, Baltimore's transit network was in the hands of a private company, and, unlike highway development, was not seen as a concern to the state. There was recognition that if growth were not "controlled" it would result in premature subdivision of rural areas and in "stringtown growth" along state and local highways. It promoted highway capacity (of the primary road system) as the means to address safety and congestion issues.

In the decades following World War II, Maryland and the Baltimore region in particular saw very rapid increases in population, home ownership, and auto ownership. Much of this growth created an unprecedented demand for households and businesses outside of Baltimore City and throughout the surrounding suburbs. This growth was enabled by good financing for education, home mortgages, auto loans, inexpensive land, and cheap fuel, leading to increased road congestion and reductions in transit use. The subsequent report by a subcommittee of the State Planning Commission curiously recommended the establishment of a Baltimore Metropolitan Commission to complement and connect with other existing planning agencies (e.g., the Maryland-National Capital Park and Planning Commission).

To determine the transportation needs of a more suburban Baltimore metropolitan area, the City of Baltimore and the State of Maryland conducted/commissioned numerous studies. Studies such as the Childs Report and the Smith Report² recommended a number of high-speed, limited-access roads (I-95, I-83, and MD 295, for example) to reduce road congestion and decrease travel time in the Baltimore area. This preceded Congress's passage of the Federal Aid Highway and Highway Revenue Acts of 1956,³ which appropriated \$25 billion and established a permanent fund source to construct 41,000 miles of roads.

1 Maryland State Planning Commission, *Five Years of State Planning*, 1938.

2 Baltimore Metropolitan Council, *Major Transportation Milestones in the Baltimore Region since 1940*, Accessed August 2015, url.

3 Weingroff, Richard F., *Federal-Aid Highway Act of 1956: Creating The Interstate System*, United State Department of Transportation, Federal Highway Administration, 2004 Accessed August 2015, <https://www.fhwa.dot.gov/publications/publicroads/96summer/p96su10.cfm>.

TRANSPORTATION PLANNING IN METROPOLITAN AREAS



The Omnibus Housing Act of 1961 (Section 701) permitted federal aid to be used to develop comprehensive urban transportation studies and plans. It also specified additional requirements for the use of federal aid on transportation planning and established, for the first time, limited federal aid for mass transportation⁴.

The Federal Highway Act of 1962 required state and local governments to undertake a cooperative, comprehensive, and continuing (3C) transportation planning process in order to be eligible for federal aid⁵.

Three years later, metropolitan planning organizations were in operation in all 224 urban areas to facilitate this 3C planning process—collecting and analyzing data, forecasting travel patterns, and evaluating alternatives. Concurrent advances in mainframe computers enabled programmers and planners to develop, use, and adapt software to model future travel demand for metropolitan areas. Ever since then, 50 years on, the 3C process and travel demand models have continued to shape transportation plans in metropolitan areas nationwide.

In the Baltimore metropolitan area, the first comprehensive road and transit plans to utilize the 3C approach were published in 1964 and 1965. Both plans, the *Baltimore Metropolitan Area Transportation Study*⁶ and the *Baltimore Area Mass Transportation Plan*,⁷ provided recommendations for the improvements needed to support a continued increase in

population and a continued shift to a more suburban metropolitan area. These efforts looked to 1980, when the population in the metropolitan area was expected to reach 2.2 million. Both plans informed programs for capital investments and laid the foundation for future plans.

In particular, the *Baltimore Area Mass Transportation Plan* recommended, for the first time, a six-line (plus a downtown loop), 64-mile network of rapid rail (29.2 miles) and express bus (34.6 miles) at an estimated cost, in 2015 USD, of approximately \$2.2 billion.

4 United States Department of Transportation, Federal Transit Administration, About FTA, Accessed August 2015, <http://www.fta.dot.gov/about/14103.html>.

5 Weiner, Edward, Urban Transportation Planning in the United States: an Historical Overview, United States Department of Transportation, 1992, Accessed August 2015, <http://ntl.bts.gov/DOCS/UTP.html>.

6 Wilbur Smith Associates, *Baltimore Metropolitan Area Transportation Study*, Maryland State Roads Commission, 1964.

7 Parsons, Brinckerhoff, Quade & Douglas, *Baltimore Area Mass Transportation Plan*, Metropolitan Transit Authority of Maryland, 1965.

TRANSIT VISIONS FOR THE BALTIMORE METROPOLITAN AREA, 1965–2002

Since the publication of the *Baltimore Area Mass Transportation Plan* in 1965, no less than four transit vision plans/updates have been published:

1. The *Baltimore Region Rapid Transit System Plan* (1968)
2. The *Baltimore Region Rapid Transit System, Phase I Plan* (1971)
3. The *Baltimore Region Phase II Transit Study* (1975, 1980)
4. The *Baltimore Region Rail System Plan* (2002)

Highlights of these plans include:

- In 1968, the *Baltimore Region Rapid Transit System Plan* called for a six-line (without the downtown loop), 71-mile network of (all) rapid rail at an estimated cost, in 2015 USD, of approximately \$7.7 billion. This plan established the first phase for construction: 27 miles of rapid rail for the northwest line and the south line, with a spur to Friendship International Airport (now Baltimore-Washington Thurgood Marshall International Airport)⁸.
- In 1971, the *Baltimore Region Rapid Transit System Phase I Plan* provided further details on the first phase for construction: 28 miles of rapid rail for the northwest line and the south line, with a spur to Friendship International Airport, at an estimated cost, in 2015 USD, of approx. \$2.5 billion⁹.
- In 1980, the *Baltimore Region Phase II Transit Study* called for 56-mile network of rapid rail and light rail lines, which included an extension of the first phase rapid rail to the northwest and the northeast, and six additional light-rail lines, at an estimated cost, in 2015 USD, of \$8.3 billion¹⁰.
- In 2002, the *Baltimore Region Rail System Plan* called for a six-line, 66-mile network (of an unspecified mode) at an estimated cost, in 2015 USD, of \$15.9 billion¹¹. The “Red Line,” an east-west rapid transit corridor through Baltimore City was one of the lines identified.

While each plan calls for an area-wide network with similar service corridors, the prescribed mode and service corridors in each plan differ. A comparison of the plans shows a number of similarities and differences among the plans.



8 Daniel, Mann, Johnson, & Mendenhall, *Baltimore Region Rapid Transit System*, Regional Planning Council, 1968.
 9 Daniel, Mann, Johnson, & Mendenhall, *Baltimore Region Rapid Transit System Phase I Plan*, Metropolitan Transit Authority, 1971.
 10 Maryland Department of Transportation, *Baltimore Region Phase II Transit Study*, 1980.
 11 Baltimore Regional Rail System Plan Advisory Committee, *Baltimore Region Rail System Plan*, Maryland Department of Transportation, 2002.

EVOLUTION OF REGIONAL SOCIOECONOMIC FORECASTS REFLECTED IN PLANS

While the horizon year for the plans between 1965 and 1980 differed, all of the plans aimed to meet the transportation needs of a similar population with a similar distribution pattern. For example, after decades of double-digit, suburban-focused population growth between 1920 and 1960 (close to 25% between 1940 and 1950), planners in the 1960s forecasted more of the same; so the 1965 plan aimed to serve a forecasted population of 2,660,000 in 1980. And while suburban growth did continue to outpace urban growth as forecasted, the overall rate of population growth decreased throughout the 1970s. So much so that the 1980 plan aimed to serve almost the same population— 2,817,000—in 1995 as the 1965 plan aimed to serve in 1980.

EVOLUTION OF FUND SOURCES REFLECTED IN PLANS

While the plans' objective was to meet the needs of a similar population, all of the plans reflected the differences over time in both the planning and funding processes used/required to realize the transportation infrastructure outlined.

For example, the first federal commitment to transit, the Omnibus Housing Act of 1961, authorized the Department of Housing and Urban Development (HUD) to re-appropriate a small portion of urban renewal funds to develop comprehensive urban transportation studies and plans. It did not appropriate dedicated funds for mass transit construction. (As noted previously, the 1965 *Baltimore Area Mass Transportation Plan* called for express bus service to serve more than half of the proposed regional 64-mile network.)

In 1964, the first Urban Mass Transportation Act created the Urban Mass Transit Administration (UMTA) and appropriated \$375 million in dedicated funds over three years for mass transit construction. The Urban Mass Transit Act of 1970 appropriated an additional \$10 billion in dedicated funds over 12 years. Soon after, with the Federal Highway Aid Act of 1973, mass transit construction became an eligible expenditure of the Highway Trust Fund.

The plans of 1968 and 1971 seem to reflect the large and extended federal appropriations for mass transit construction. Because the plans used socioeconomic forecasts similar to the forecasts used for the 1965 plan, the plans also called for rapid rail to serve the entire 70-mile+ network.

The federal commitment continued through the late 1970s, with the Surface Transportation Assistance Act of 1978, throughout the 1980s and into the 1990s. With the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), the Urban Mass Transit Administration became the Federal Transit Administration, one of the 10 U.S. Department of Transportation modal administrations. Subsequent ISTEA reauthorizations have included appropriations for transit construction, but the terms of the appropriations have been shorter than the 12-year term of the Urban Mass Transit Act of 1970—with terms of about six years, often stretched additional months/years via continuing resolutions.

CURRENT TRANSIT PLANS FOR THE BALTIMORE AREA

A review of current, transit-specific reports and studies included quite a few project-specific documents, from strategic plans to NEPA documentation. These documents, considered in aggregate, indicate general transit needs in the region. The review also included the transportation development plans from local transit operators across the region. These documents, considered in detail, indicate specific transit needs (for preservation, operation, and expansion) across the region.

LOCAL TRANSIT IMPLEMENTATION IN THE BALTIMORE METROPOLITAN AREA

In order to receive U.S. Department of Transportation Section 5310 Program funds, locally operated transit system (LOTS) agencies must develop a Coordinated Public Transit – Human Services Transportation Plan¹² and a transportation development plan (TDP). The TDP's intent is to meet travel demand; maximize cost effectiveness; and both inform and reflect local, regional, and state priorities. From this perspective, BMC staff reviewed the most recent TDP for each LOTS agency to represent the current state of transit implementation in the Baltimore metropolitan area. Five common needs were identified:

1. Expand service to new areas to meet demand for suburb to suburb work and non-work travel.

For example, the Annapolis TDP calls for expanding service to the Fort Meade area, and for refining service to provide major transfer points at Westfield Mall, Eastport Plaza, and Annapolis Market Place and to better serve major destinations throughout the service area.

2. Add off-peak and weekend service.

For example, the Carroll County TDP calls for extending service until 7:00 p.m. on weekdays, and for initiating new service on Saturdays for the Westminster Shuttle.

3. Increase all service frequencies.

For example, the Howard County TDP calls for reducing peak-hour headways to 30 minutes on the Green, Red, and Silver routes, and for reducing mid-day headways to 30 minutes on the Green route.

4. Improve connections within service area, with other service areas, via new transfer points.

For example, the Anne Arundel County TDP calls for a new transfer point in the southern part of the county.

5. Increase demand-response / paratransit service.

For example, the Baltimore County TDP calls for extending CountyRide services to rural areas, and for adding Saturday service.

In an effort to be responsive to the above needs and others, the TDPs have sought to maximize operational efficiencies to meet new service needs. Another important objective is to meet federal standards for transit vehicle fleet condition, given the budget constraints common to most transit operators since 2008. For example, deviated fixed-route service, or flex service, will be used if possible to meet the need for general rural service, demand-response service, and paratransit service. In addition, LOTS agencies plan to coordinate with private sector taxi operators to provide additional individual service and to coordinate with users based on desired destination to offer group service.

¹² United States Department of Transportation, Federal Transit Administration. *Section 5310 Overview*, n.d. Accessed September 9, 2015. http://www.fta.dot.gov/13094_8348.html.

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