

8.0: System Plan Issues

METRO used the transit findings from the North-Hardy Alternative Analysis in the development of a regional Transit System Plan. The System Plan identifies a regional transit network that combines METRO's aggressive bus service program with Advanced High Capacity Transit (AHCT) improvements in high transit demand corridors. Development of the System Plan incorporates additional considerations such as transit efficiencies and connectivity between corridors. These system planning activities are described further in the next section.

The 2025 Plan identified ten promising corridors for consideration of AHCT. Each of these prospective corridors has been examined through the Alternative Analysis process or through regional sub-area studies. The findings from these studies, as well as TxDOT's US 290 study, will be used to formulate and test a series of alignment, technology and operating scenarios (transit improvement alternatives) that would, when assembled, constitute the System Plan.

To determine which transit improvement alternatives or combination of alternatives are most suitable for AHCT, several factors will be considered. These factors include: system connectivity, use of existing right-of-way and facilities, and potential to generate increased transit ridership. With a system-level understanding of where AHCT is the appropriate transit improvement alternative, more detailed consideration will be given to issues and questions such as:

- Which AHCT alignments can be produce a regional network of high capacity transit service that best serves work and non-work travel and improves the quality of travel for trips?
- How can AHCT alignment be structured and METRO service coordinated, to facilitate Houston area trips and improve access to METRO-wide services and facilities?
- Which AHCT station locations and alignments and operating scenarios best serve the greatest number of riders at a reasonable capital and operating cost?
- Which AHCT technology or a combination of technologies can best accommodate future demand at reasonable capital and operation cost?
- What improvements to the existing bus system are most likely to improve transit use and support AHCT service?
- Which AHCT network and operating scenarios enhance the mobility of transit dependent populations?
- Which AHCT alignment and station locations offer the greatest potential for economic development, while minimizing environmental impacts?
- Which alternatives produce the greatest environmental and transportation benefits?
- Which alternatives are most likely to gain community and political support?

These issues will be examined as part of Phase 3 of the System Plan development process. Phases 1 and 2 of the development process evaluated and compared possible transit improvement alignments and technologies on an order-of-magnitude basis in each individual corridor. The evaluation criteria focused on capital and

operating costs, population and employment projections, demand potential, travel times and system connectivity, economic development potential, and environmental fatal flaws, as well as community and agency support. The Phase 1 and Phase 2 evaluations provided the rationale for eliminating less viable alignments and technologies from further consideration and for carrying forward more suitable alternatives into Phase 3.

In Phase 3, the evaluation criteria used in the first two phases of the evaluation are employed to test System Plan scenarios integrating the alternatives carried forward from Phase 2. Unlike the initial evaluation phases, travel demand model runs are conducted in the final evaluation phase to provide a more accurate representation of ridership potential for a regional network of AHCT alternatives. Additionally, quantitative information that pertains to the other evaluation criteria, such as capital and operation costs are refined in this phase of the evaluation.

The final (Phase 3) evaluation phase determined which System Plan scenario produces the best overall systemwide results, one that can effectively serve the Houston area and generate public support. The System Plan identified alignments, station locations, operating plans, and technologies to be used in the AHCT network, as well as the complementary improvements to METRO's bus service and facilities to support the System Plan.