

As a research project, the PRT serves as a transportation laboratory for engineers and engineering students. As a result of class changes, there are at least five peak demands for transportation during each weekday compared to only morning and evening peak demands in non-university cities. Thus researchers will be able to obtain more data in a shorter time because of this greater variety of transportation demands.

As a demonstration project, the PRT also serves as a model to help cities solve their transportation problems. (The Kobe Rapid Transit System at the International Ocean Exposition on Okinawa was the first to be built utilizing the Morgantown technology.) If the PRT concept can work in Morgantown, it can work in almost any other city in the country. This is true because of the variety of problems the Morgantown system must cope with—the hilly terrain, the constant class changes, and the varied climate which includes a fair share of ice, snow, rain, fog and sunshine.

The PRT consists of five stations—on Walnut Street in Morgantown's central business district, on Beechurst Avenue



at WVU's Downtown Campus, across from the Engineering Sciences Building, at the Towers Residence Halls, and at the Medical Center; 73 vehicles, 8.7 miles of single-lane guideway, and maintenance and control facilities.

Contracts totaling about \$60 million were let during Phase I of the PRT. This included the cost of the system's research and development, construction of three stations and their associated guideways, 45 vehicles, and testing. Since the PRT is the first of its kind, research and development accounted for about 40 percent of those costs. Contracts totaling about \$63.6 million were let during Phase II. This included construction of the new stations and their guideways, 28 new vehicles and the retrofit of the Phase I vehicles, and replacement of the Phase I power rails with heated ones. Boeing Aerospace Company of Seattle, Washington, was system manager in developing the PRT for the Urban Mass Transit Administration of the U.S. Department of Transportation.

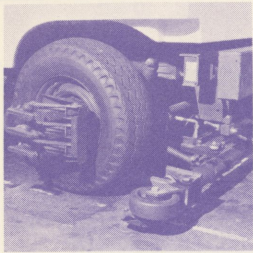
—WVU Office of Communications Services



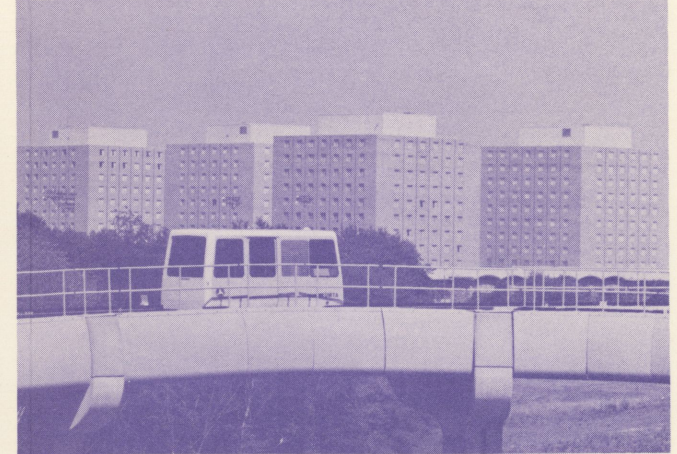
# PRT

PERSONAL RAPID TRANSIT





Power collectors are mounted on the front wheels of the PRT vehicles. The small horizontal wheel is used to guide the vehicle.



Coins go into the top of the turnstile. The fare cards go into the front of the turnstile.



You are about to ride the most modern transit system in the world—West Virginia University's Personal Rapid Transit (PRT) system. One unique feature of the system is the absence of on-board operators. Through computers, each vehicle's position is monitored constantly. If there is a serious malfunction, the system closes down immediately, the power shuts off, and the brakes on each car are set.

Purpose of the PRT is twofold—to serve as a national transportation research laboratory and to provide transportation for WVU's 19,000 students in Morgantown, and 7,500 employees, as well as community residents.

PRT riders avoid Morgantown traffic jams and are spared the difficult search for a parking space. In addition, the problem in moving from one campus to another during class breaks is alleviated, thus increasing class choices for many students.

The PRT system operates in two modes—demand and scheduled. In the demand mode the system responds to where passengers want to go. In the scheduled mode the vehicles are dispatched at pre-arranged rates. Each car can carry eight seated and twelve standing passengers and can travel at speeds of up to 30 miles per hour.

Approximate travel times between stations are: Walnut Street to Beechurst Avenue—three and a half minutes; Beechurst Avenue to Engineering—six and a half minutes; Engineering to Towers—two and a half minutes; Towers to Medical Center—four and a half minutes. A non-stop ride from Walnut Street Station to the Medical Center takes only eleven and a half minutes.

One of the features that distinguishes the PRT from other people mover systems is that it has off-line stations. This means that a rider can go from the downtown Morgantown station on

Walnut Street to the Medical Center without stopping at the three intervening stations. This feature saves time for passengers and poses interesting computer problems because the movement of each vehicle must be coordinated with that of every other vehicle on the guideway.

Every aspect of the PRT's potential impact on the environment was considered during its planning. The vehicles are powered by electric motors, which means no air pollution. Noise pollution is reduced because the vehicles run on rubber-tired wheels. And the system was constructed with very little demolition—only two houses and a junkyard were removed. As you can observe, the steel used in the PRT guideway is rusting. It is Cortan steel that corrodes on the outside to provide a protective cover for the interior so it won't rust. This means that the structures require little maintenance and last longer.