

**TAXI 2000 PRT
SOME POINTS ON CAPACITY
11/7/00**

Line Capacity

- Maximum flow: Two vehicles per second; i.e., 7200 Vehicles per hour at 0.5 second headway
Equal to 3 lanes of expressway at average U.S. occupancy of about 1.1 persons per vehicle and accounting for the redistribution of empties
- Passenger flow per hour: Based on Maximum flow (above): Can assume 30% of vehicles are empties being redistributed, thus 70% of the vehicles are carrying from 1 to 3 passengers –
5040 (at 1 passenger per vehicle) to 15120 (at 3 passengers per vehicle)
- Maximum Vehicles per Mile: 100 vehicles per mile at 30 miles per hour
The maximum number of vehicles is inversely proportional to line speed

Station Capacity

Stations can be sized from one to about 15 berths

- 450 Vehicles per hour for a 3 berth station
 - 750 Vehicles per hour for a 6 berth station
 - 950 Vehicles per hour for a 9 berth station
 - 1250 Vehicles per hour for a 12 berth station
 - 1500 Vehicles per hour for a 15 berth station
- All assume a normal time distribution for passenger boarding and de-boarding in the stations

Vehicle Capacity

- 650 pounds
- 3 Adult passengers or some other combination within weight limits and fitting on a 50" bench seat
- One passenger in wheel chair

Some Comparisons

Expressway Lane		PRT Equivalent
Maximum Flow	1800 cars/hr	With 1.5 p/veh, 3 sec headway
Lindenwold-Philadelphia Commuter Rail Line		
Maximum Link Flow	2380 p/hr	With 1.5 p/veh, 2.27 sec headway
Maximum Station Flow	919 p/hr	@ 1.5 p/group, 5 berth station
20,000 Seat Hockey Stadium Lets Out		
Parking lot on each side to arterial street 2.5 to 3.5 sec per car		One 6-berth station on each side
747 Aircraft Unloading		
About 3 sec per person or 4.5 sec per group		One 7-berth stations
Typical Airport People-Mover Capacity Requirement		
2600 people/hr		With 1.5 p/veh, 2.08 sec headway