PARK-AND-RIDE LOTS

Description

Park-and-ride lots are specialized parking lots typically located on the suburban fringe of urbanized areas. These lots are strategically placed outside of the "ring of congestion" on major commuter corridors. Services offered at park-and-rides may include local fixed routes, express bus, bus rapid transit, and rail. They are designed to transfer commuters from low-occupancy modes (personal cars) to high-occupancy modes (rail, bus, van- and car-pools). Services from park-and-ride lots are designed to concentrate transit demand, enabling transit services that could not otherwise be cost-effective.

Typical park-and-ride amenities include covered or enclosed waiting areas, benches, and sometimes vending machines and restrooms. Lots can vary in size from 200 to over 7,500 spaces, and can be used exclusively for transit or offer shared uses, such as vanpool staging. Transit fares from park-and-rides are typically higher than basic local fares, and parking may be free or cost a small fee.

Cost:	●●●○○
Time:	**Moderate**
Impact:	**Corridor**
Who:	**Transit Provider**
Hurdles:	**Ease of Access**

Target Market

Suburban Commuters

Commuters from suburban areas, including state employees, students, and employees working in the central city are the commuters typically encouraged to use these lots. Commuters who would otherwise utilize freeways to travel to and from work during the week may find these as a viable alternative for their commute to avoid current congestion levels.

How Will This Help?

- Increased transit usage and ridesharing can help reduce the number of single-occupancy vehicles on major freeways and highways. Commuters can be encouraged to use the provided bus, rail, or vanpool services if there is an easy way to reach these amenities.
- The transit services centered at the park-and-ride lots can serve as an alternative to personal automobile travel. Suburban commuters can depend on the transit service centered at one location that is easy to access.
- Passengers can improve their time management by working on the bus or train, which is typically equipped with Wi-Fi services. Commuters can have more time to handle personal and business matters, rather than wasting time on a congested freeway.
- Park-and-rides can increase the size of the catchment zone for the transit stop. Park-and-rides can draw customers from a much larger area than traditional fixed route transit if the lots and routes are designed effectively.

For more information, please refer to: http://mobility.tamu.edu/mip/strategies.php.

Implementation Examples

Houston: Metro offers over 28 park-and-ride lots with direct access to HOV lanes in major corridors, giving buses priority. The Kuykendahl facility on IH 45N is the largest, with 2,246 parking spaces, and a two-level transit system. The Houston park-and-pool lots as well as high occupancy vehicle lanes have worked in tandem to influence commuters to change from driving alone to choosing a high-occupancy alternative. Surveys conducted by TTI indicate that between 38 to 46 percent of park-and-ride bus passengers formerly drove alone.

Washington, D.C.: Washington, D.C., utilizes a multimodal approach to addressing congestion in the region, with park-and-ride/pools being a major component to the solution. The first park-and-ride was introduced to Washington, D.C., in 1955, and by 1995, there were 165 formal park-and-ride facilities. Park-and-ride facilities have been very successful in the D.C. region, due in part to rapid growth, especially in suburban areas. Since 1995, the number of park-and-ride/ pool facilities has increased nearly 11 times, parking spaces have increased nearly 13 times, and vehicle counts have increased almost 20 times.

Application Techniques and Principles

The agency in charge should consider the surrounding land uses, and customer origins and destinations should be considered when planning for park-and-ride locations. Planners should locate park-and-ride lots with catchment zones in mind, as these lots can draw customers from farther distances than typical transit services. This increased area can be designed to offer service to a greater range of customers and neighborhoods. Planners should also be aware of how their target market will access the park-and-ride area, being mindful to provide easy access for cars, pedestrians, and bicycles if a neighborhood feeder service is not offered. "Kiss-and- ride" drop-offs may also be offered at these locations.

Camelback Park & Ride, Valley Metro, AZ

Some park-and-rides may offer more amenities than traditional transit stops, such as bike racks and lockers, restroom facilities, vending machines, water fountains, and even climate-controlled waiting areas as encouragement to use the transit services for commuting.

Planners should design the routes and bus bays with some consideration for transfer service. Particular routes may see a higher number of transfers than others, and planners should stage bus stop areas accordingly in order to minimize the amount of walking that passengers must do between transfers. All services, as well as the park-and-ride itself, should be fully accessible.

Issues

Planners should vet any plans for future park-and-rides with the surrounding stakeholders, especially if the park-and-ride is planned in a residential area. While park-and-rides are typically non-invasive, they can emit vehicle noise during peak time periods, so the lots should be designed in such a way to minimize impact on surrounding land uses. Some city ordinances can require that park-and-ride

designers add a certain percent of landscaping in order to mitigate run-off and aid in beautification.

Park-and-ride lots should be strategically located in order to draw customers. Ease of access plays a big role in whether customers will take advantage of the services offered at the park-and-ride. Customers may access park-and-rides in different ways, and planners should keep that in mind.

Who Is Responsible?

The local transit provider is responsible for planning and designing park-and-ride areas. This can include transit authorities/districts, local or city governments, or metropolitan planning organizations. The routes, stops, and park-and-rides should be planned and coordinated in conjunction with local stakeholders that may be affected.

Project Timeframe

Park-and-ride design and implementation may take up to five years in some areas, but specific timeframes depend on the size of lot needed and the current use of the land. If a park-and-ride is planned in conjunction with current land uses, such as an existing parking lot, the implementation may be much faster, and could potentially coincide with a semi-annual or quarterly service change. Park-and-ride lots that are designed from the ground up may require a site design plan, environmental impact study, stakeholder acceptance, approval from the transit board, funding plans, permitting, and construction prior to opening. This process may take anywhere from two to five years.

Cost

Planning and implementation costs can vary depending on the type of park-and-ride lot planned. Park-and-rides that are operating out of pre-existing parking lots may only require a memorandum of understanding and/or a lease agreement, which would require that the transit provider pay the landowner a predetermined fee per parking space. In other cases, park-and-rides could potentially cost millions, with a new lot designed from the ground up. In some cases, new park-and-rides may cost anywhere from $30,000 to $55,000 per parking space, especially in areas where real estate is in high demand.

Data Needs

Planners should collect demographic and regional data prior to park-and-ride siting and planning. Data collection involves origin and destination surveys and mapping of major employment centers and service attractors. Planners should also conduct a catchment zone analysis to determine the number of potential customers that could be captured in any given location.

Park-and-Ride Lots Best Practices

- Type of Location: Park-and-rides typically work best outside of the ring of congestion in cities and urbanized areas. Locations that provide direct access to major highways and arterials that can capture passengers in suburban areas are ideal.
- Agency Practices: Park-and-rides work well when the implementing agency has analyzed transit demand as well as catchment zones for passengers.
- Frequency of Reanalysis: Transit agencies will want to monitor the park-and-ride activity closely upon implementation, and at least every six months.
- Supporting Policies or Actions Needed: Public and stakeholder support.
- Complementary Strategies: Express bus, bus rapid transit, bus on shoulder, and managed lanes are all complementary strategies that can be implemented in conjunction with park-and-rides.

For More Information and References

1. Transit Cooperative Research Program. Transit Capacity and Quality of Service Manual, 2nd Edition. Washington, D.C., 2003.

2. Transit Cooperative Research Program. TCRP Report 95, Chapter 2: HOV Lanes: Traveler Response to Transportation System Changes. Washington, D.C., 2004.

3. Transit Cooperative Research Program. TCRP Report 95, Chapter 3: Park-and-ride/Pool: Traveler Response to Transportation System Changes. Washington, D.C., 2004.