

# STREAMS Parking Guidance

The STREAMS Parking Guidance system offers benefits to motorists, road authorities and car park owners by directing motorists to available parking spaces and diverting motorists from areas where no parking is available.

## BENEFITS

### Community Benefits

Parking guidance systems reduce circulating traffic. Studies have shown that the average distance travelled to find a parking space can be reduced by up to 30% through the introduction of a parking guidance system. The consequent community benefits include: reduced atmospheric and noise pollution, improved road safety and lower fuel consumption.

### Car Park Owner Benefit

Participating car parks benefit through increased use of their facilities. Studies have shown that parking guidance systems can increase car park occupancies by 15%.

### Motorist Benefits

Motorists benefit through a reduction in the time to find a suitable parking space. This is particularly useful when all available parking is occupied in a zone and motorists can be diverted to alternate locations. Studies report the time taken to find a parking space can be reduced by 50% when parking guidance systems are implemented.

## INTEGRATED WITH TRAFFIC MANAGEMENT

The STREAMS Parking Guidance system can operate independently or integrate into a traffic management system. It uses current emptying and filling rates to predict future space availability for each car park.

When provided with the appropriate detector data, STREAMS can calculate travel times from parking guidance signs to the corresponding car parks.

The parking guidance information displayed reflects the predicted state of the car park when motorists arrive. This allows parking guidance information to be displayed at greater distances from the car park – allowing diversion from the zone when all car parks are predicted to fill before arrival.

## PARKING SPACE INDICATORS

STREAMS can use conventional parking space indicators (number of spaces e.g. 145, or textual e.g. open/closed) or alternatively use the STREAMS Smart P parking space indicator.

The Smart P sign utilises Light Emitting Diodes (LED) to visually represent occupied spaces in red, available spaces in green as well as an optional yellow band to indicate either reserved car park availability or maximum capacity is approaching. The Smart P may be retro-fitted to existing signage.



*Smart P Indicator Showing Car Park Spaces Available (60%)*

## SIGN EXAMPLES

STREAMS Parking Guidance installations include both diagrammatic and character-based signs with the former providing directions in areas with large numbers of infrequent visitors.

## PARKING ZONES

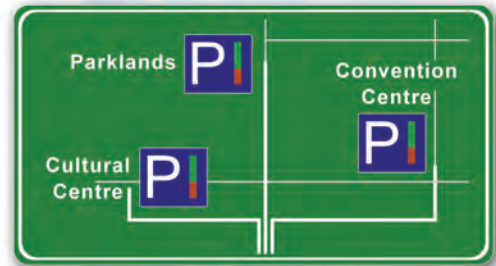
If required, car parks can be aggregated into zones. Summary signs on the periphery can show zone parking availability with further signage inside each zone for the specific car parks.

## MEASURING AVAILABLE SPACES

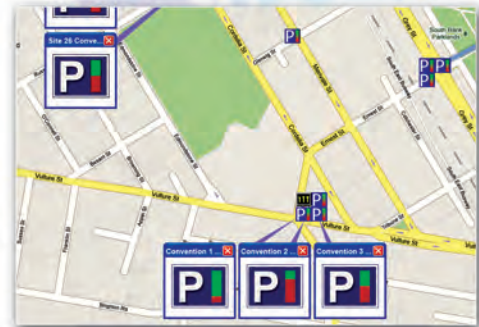
The STREAMS Parking Guidance system can directly count vehicle movement by installing detectors at entrances and exits of car parks. STREAMS can also interface directly to an existing car park management system.

## REAL-WORLD APPLICATION

A sporting venue has limited adjacent parking in a number of separate car parks. When a major event occurs, this parking is insufficient for the normal patronage, with many vehicles forced to find alternate parking in the surrounding streets. The addition of a STREAMS Parking Guidance System would allow the arriving vehicles to be directed to the nearest car park with available space. As this space fills, STREAMS can place messaging to divert motorists. For example, if the parking is predicted to be full in 20 minutes, Variable Message Signs on motorways more than 20 minutes travel away can be used to divert motorists onto public transport.



Diagrammatic Sign Example



Map Showing Parking Stations and Occupancy



South Bank, Brisbane Australia