Urban Parking & Transportation
Planning, Design & Management

Tools and Strategies

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L. Dennis Burns, CAPP
*Carl Walker, Inc.*

Joddie Gray
*UrbanTrans Consultants, Inc.*

Supply-Side Management, New Parking Technologies and the Experience Economy

TDM Strategies to Support Urban Environments
Introduction to Carl Walker, Inc.

Carl Walker, Inc. is a full service resource for:

- Parking Structure Design
- Parking Studies and Operations Consulting
- Parking Functional Planning and Design
- Restoration
- Structural Engineering
- Forensic Investigations
Urban Trans Consultants, Inc.

Sustainable transportation solutions tailored for you:

- Multi-Modal Planning and Analysis
- Transportation Options Programs
- Communications and Marketing Strategies
- Program Implementation
Integrated Parking & Access Management Programs:

- Supply-Side Management
- New Parking Technologies
- The Experience Economy
Parking Session Handouts – on CD
Supply - Side Strategies

Supply side strategies maximize the efficiency of existing and future parking resources.

Key Strategies:
- Know Your Resources
- Shared Parking
- Parking Regulations
- Flexible Parking Standards
- Parking Maximums
- Smart Growth
- Walking and Cycling Improvements
- Parking Facility Design
- Improved Parking Operations & Management
Supply - Side Strategies

More Key Strategies:

- Overflow Parking Plans
- Improved User Information and Marketing
- Parking Pricing
- Improved Enforcement & Controls
- Improved Payment Methods
- “Unbundling” Parking
- Parking Management Organization/Coordination
- Guiding Principles
- Parking Environment Improvements
Know Your Parking Resources

- It is important to have detailed and up to date information about parking resources for planning and customer education.

On-Street Utilization

On-Street Time Limit Map

Supply/Demand by Zone
Shared Parking

- Shared parking can have a significant impact on mixed-use development parking requirements. Combining land uses results in a demand for parking spaces that is less than the demand generated by separate, freestanding developments of similar size and character.
- Shared parking is defined as parking space that can be used to serve two or more individual land uses, without conflict or encroachment.
- The opportunity to implement shared parking is the result of two conditions:
  - Variations in the peak accumulation of parked vehicles as a result of different activity patterns of adjacent or nearby land uses (by hour, by day, by season).
  - Relationships among land use activities that result in people’s attraction to two or more land uses on a single auto trip to a given area or development.
# Parking Regulations

## Common Parking Regulations:

<table>
<thead>
<tr>
<th>Name</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>User or vehicle type</td>
<td>• Loading, Taxi, disabled, etc.</td>
</tr>
<tr>
<td>Duration</td>
<td>• 5 minute loading, 1-2 hour time limits, etc.</td>
</tr>
<tr>
<td>Time period restrictions</td>
<td>• Prohibited occupancy at certain times</td>
</tr>
<tr>
<td>Employee restrictions</td>
<td>• Promote customer use</td>
</tr>
<tr>
<td>Special events</td>
<td>• Restrictions during special events</td>
</tr>
<tr>
<td>Residential permits</td>
<td>• Residential permit program areas</td>
</tr>
<tr>
<td>Street cleaning restrictions</td>
<td>• Allows for street sweeping.</td>
</tr>
</tbody>
</table>

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[Image of parking signs]
Flexible Parking Standards

- More accurate and flexible standards mean that the parking requirements at a particular location are adjusted to account for various factors.

- Examples of Adjustment Factors:
  - Geographic Location
  - Residential Density
  - Employment Density
  - Land-use Mix
  - Transit Accessibility
  - Car-Sharing
  - Walkability
Parking Maximums

- **Parking Maximums** means that an upper limit is placed on parking supply, either at individual sites or in an area.

- Area-wide limits are called Parking Caps.
  - These can be in addition to or instead of minimum parking requirements.
  - Maximums often apply only to certain types of parking, such as long-term, single-use, free, or surface parking, depending on planning objectives.
Walking and Cycling improvements support parking management strategies in several ways:

- Improving walkability (the quality of walking conditions) expands the range of parking facilities that serve a destination. It increases the feasibility of sharing parking facilities and use of remote parking facilities.

- Improving walkability increases “park once” trips, which reduces vehicle trips and the amount of parking required at each destination.

- Walking and cycling improvements allow these modes to substitute for some automobile trips.
Parking Facility Design

- Parking facility design and operation refers to physical layout, construction and day-to-day management.

- Improved design and operation can better integrate parking facilities into communities, improve the quality of service experienced by users, support parking management, and help address various problems.
Parking Facility Design

Integrating Street-Level Retail
Parking Facility Design

Supporting Increased Development Density and Mixed Uses
Parking Facility Design

Integrating Parking & Downtown Residential
Complementary Design for Downtown Historic Districts
Integrating Passive and Active Security Measures

- Well lighted facilities that meet or exceed IES minimums.
- Integrate CPTED principles into planning and design.
- Incorporate Passive security features during facility design.
- Integrate parking attendants, cleaning and maintenance staff, shuttle drivers, etc. into your parking security program.
Parking Management
Organization/ Coordination

In cities that have not developed comprehensive municipal parking programs (managing on-street and enforcement and owning managing significant off-street assets), one of the significant challenges is developing an effective parking organization to plan, coordinate and communicate parking programs.
Parking Program Guiding Principles

Development of a set of parking system “Guiding Principles” is a good tool for communicating program goals and objectives to both staff and community stakeholders.

- Balanced Access
- Customer Service
- Maintenance
- Fiscal Responsibility
- Responsiveness
- Enforcement
- Education
- Urban Design
- Economic Vitality
Incorporating Art & Interior Parking Environment Improvements
Incorporating Art & Interior Parking Environment Improvements
Integrated Parking & Access Management Programs:

- Transportation Demand Management (TDM) Strategies to Support Urban Environments
Transportation in Urban Environments

We apologize for the inconvenience.
Transport Issues: Three C’s

- Congestion
- Confusion
- Lack of Confidence
The Formula for Success

- Smart development + travel options + active promotion = success
  - Create environments that support access and mobility
  - Provide realistic travel options.
  - Educate users about the options.
  - Use incentives to allow for rational decision making.
  - Monitor performance and make adjustments.
Influencing Transportation Demand

- “Build it and they will come” doesn’t always work.
- Parking is a key element in influencing travel choices and managing demand.
What is Transportation Demand Management (TDM)?

- Programs and services designed to reduce single occupant vehicle (SOV) travel.
- Core elements:
  1. Parking Control
  2. Active Promotion of Transportation Options through Education and Incentives
  3. Sustainable Program Funding
  4. Performance Monitoring
Case Example #1

- **South Beach, Miami**
  - Congestion was detriment to historic district
    - Deteriorating building infrastructure
    - Dangerous for pedestrians
    - Reduced overall livability
  - How to build confidence in new travel options?
    - Created peripheral parking
    - Implemented shuttle
  - Make fun and minimize confusion
    - The “Cool Way to Get Around”
    - Only $.25
Case Example #2

Aspen, Colorado

- Peak season visitor population exceeded residential population = extreme congestion.
- How to turn visitor travel into a community benefit?
  - Created highest parking rates downtown
  - Incentivized employees to not drive
- Use funds generated from the paid parking to implement TDM program
- Traffic volumes have not exceeded 1993 volumes.
- Parking occupancy reduction of 10%.
Case Example #3

Atlantic Station, Atlanta

- Outdoor shopping and entertainment, office & residential district
  - New site with no promotion of the travel options &
  - Plentiful & low cost parking created congestion
- With the introduction of TDM program (ASAP+), approx 50% increase in shuttle ridership
  - Transportation amenity maps and improved shuttle signage eliminated confusion
  - On site personalized assistance built confidence
- Non-SOV travel: 43.2%
An Emerging Case Study:

- **Boulder Transit Village**
  - The goal is to provide multi-modal options, combined with strong parking management to allow high density development with minimal congestion.
  - Will require active promotion to inspire confidence in the travel options provided.
  - Education will minimize confusion regarding innovative parking management strategies.
TDM Strategies

- Discounted Transit
- Car/vanpool matching
- Carshare services
- Bike Station
- Trip planning tool
- Promotional activities
- And…
TDM Strategies

- **Comprehensive Parking Management**
  - Parking arrangements based on priority
    - On-Street parking for high turnover businesses
    - Financial incentives facilitate parking location decisions
    - High priority uses, such as hospital clinics have up front parking
  - Fully unbundled parking for both residents and employers
  - No monthly parking passes for employees – daily charge using debit card technology
  - Preferential parking for HOV
Parking Reduction Savings

- One possible scenario:
  - 100,000 SF commercial development

  - No TDM
    - 320 parking spaces (3.2/1,000 SF)
    - $6.4 million to construct ($20,000/space)
    - Monthly costs $42,000 (20 years at 5%)

  - With TDM
    - 150 parking spaces (1.5/1,000 SF)
    - $3 million to construct
    - Monthly cost $19,000
    - $8,350 monthly cost for TDM services and incentives

Net monthly savings ~ $14,650
“If you plan cities for cars and traffic, you get cars and traffic. If you plan for people and places, you get people and places.”

-Project for Public Spaces
Thank You!

Discussion