Parking & Traffic

1. Identifying the Problems
2. Effects of the Problems
3. Solutions to the Problems
Preliminary Recommendations

Identifying the Problems
Minimum Parking Requirements

Purpose

- Palo Alto: "to alleviate traffic congestion"?
- Poway: "to promote public safety"?
- In reality, minimum parking requirements prevent spill-over parking problems
Palo Alto, CA – parking requirements adopted in 1951
Minimum Parking Requirements - Source

**Example: Office Parks**
Peak Occupancy Rates, in spaces per 1000 sf of building area:

- **Lowest:** 0.86 spaces
- **Average:** 2.84 spaces
- **Highest:** 5.58 spaces

**Typical requirement:**

4.0 spaces/1000 sf

*Source: ITE’s Parking Generation (3rd ed., 2004)*
Demand vs. Requirement: Downtown Palo Alto

**Observed peak occupancy:**
- 1.91 spaces per 1,000 s.f.

**Peak occupancy w/ 10% vacancy:**
- 2.1 spaces per 1,000 s.f.

**Existing Requirement:**
- 4 spaces per 1,000 s.f.
- Would require 5,210 more spaces than observed demand to bring downtown to 4 spaces per 1,000 sf requirement
- At $51K/space = $298 million
# Parking Demand in Four Mixed Use Districts

<table>
<thead>
<tr>
<th>City</th>
<th>City Pop.</th>
<th>Drove Alone</th>
<th>2 or More Person Carpool</th>
<th>Transit</th>
<th>Bicycle</th>
<th>Walked</th>
<th>Other Means</th>
<th>Worked at Home</th>
<th>Occupied Parking Spaces per 1,000 sf (non-res)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chico</td>
<td>59,900</td>
<td>61%</td>
<td>12%</td>
<td>1%</td>
<td>11%</td>
<td>13%</td>
<td>1%</td>
<td>1%</td>
<td>1.7</td>
</tr>
<tr>
<td>Palo Alto</td>
<td>58,600</td>
<td>80%</td>
<td>9%</td>
<td>4%</td>
<td>3%</td>
<td>3%</td>
<td>1%</td>
<td>0%</td>
<td>1.9</td>
</tr>
<tr>
<td>Santa Monica</td>
<td>84,100</td>
<td>74%</td>
<td>11%</td>
<td>11%</td>
<td>1%</td>
<td>2%</td>
<td>1%</td>
<td>0%</td>
<td>1.8</td>
</tr>
<tr>
<td>Kirkland, WA</td>
<td>45,600</td>
<td>77%</td>
<td>12%</td>
<td>4%</td>
<td>0%</td>
<td>2%</td>
<td>1%</td>
<td>4%</td>
<td>1.6</td>
</tr>
</tbody>
</table>
Parking Demand in Four Mixed Use Districts

• What accounts for the reduction in parking demand in the Main Street districts (compared to the conventional suburban development in *Parking Generation*)?

• **Likely factors include:**
  - Shared parking between land uses (by time of day and day of the week)
  - Shared parking within one land use type
  - Mode split (61-80% drive alone commute rate)
  - Prices
  - Walking between land uses
Parking Supply in Four Mixed Use Districts

Parking Supply per 1,000 Sq. Ft. GFA

Chico Palo Alto Kirkland Santa Monica

Public On-Street Neighborhood On-Street Public Off-Street Private Off-Street
Parking Demand in Three Mixed Use Districts

Chico Palo Alto Santa Monica

Parking Demand per 1,000 Sq. Ft. GFA

Public On-Street  Neighborhood On-Street  Public Off-Street  Private Off-Street

Nelson\Nygaard
Transportation Planning for Livable Communities
Preliminary Recommendations

Effects of the Problems
Standard Parking Generation Rates Are Derived From Isolated, Single-Use Developments
The Result of Minimum Parking Requirements

1. Institute High Parking Requirements, Single-Use Zoning
   - Creates segregated, automobile-oriented employment centers
   - Severe automobile congestion
   - Very high infrastructure costs

2. React by limiting density
   - Typical: “0.5 Floor to Area Ratio”, 0.5 sf of building per 1 sf of land
   - City spreads out, transit cannot work
   - “Can’t build on it, so we might as well pave it”
Parking Requirements & Housing Affordability

- 1961: Oakland’s first parking requirement
- One space per unit for apartments
- Construction cost increases 18% per unit
- Units per acre decreases by 30%
- Land value falls 33%
- Typical office parking requirement: 4 spaces per 1,000 gross sq. ft.
- 1.13 sq. ft. of asphalt per sq. ft. of building area
Typical minimum parking requirements... 

...often require more parking than building.
Form and Character

Palo Alto, CA - Mixed use

San Jose, CA - Arcade

Brea, CA - Mixed use

Palo Alto, CA - Retail street

Palo Alto, CA - Retail street

Pasadena, CA - Mixed use

San Diego, CA - Mixed use

Typical Building Types: Work/live, Lofts over flex, Office over flex, Flats

Typical Building Height: 3-5 Stories

Typical Frontage types: Arcade, Gallery, Stoop, Forecourt, Storefront

Typical Setback: 0

Average Density: 60-65 DUs/Acre
Free Parking

- An oversupply of parking results in “free” (employer-paid) parking - America’s most common fringe benefit

- Americans park free for 99% of all trips

- Federal government encourages employer paid parking
  - Parking at work is a tax-free benefit, if the employer pays for it
  - Smaller tax benefit for transit and van pools; no benefit for carpooling, walking
  - New benefit for bicycling
Transit

- Difficult competition with free parking
  - Example: Santa Clara Valley Transportation Authority (VTA) Light Rail
    - Very low ridership
- Trains ≠ Silver Bullet
- Transit Oriented Development vs. Transit Adjacent Development
Preliminary Recommendations

Solutions to the Problems
Mixed-Use Zones Act as a “Park Once” District
Mixed Use, Park Once District

Results:
• <½ the parking
• <½ the land area
• ¼ the arterial trips
• 1/6th the arterial turning movements
• <¼ the vehicle miles traveled
Parking Requirement Burden Lifted

- **Problem:** Pasadena’s minimum parking requirements kept Old Pasadena’s buildings from changing uses

- **Examples:**
  - Pawnshop: 2.5 spaces/1,000 sf
  - Restaurant: 20 spaces/1,000 sf

- **Solution:**
  - Parking requirements reduced by 25%
  - “Parking Credit Program”: Pay in-lieu fee of only $115 per year per space (2001) for each space not provided
  - Cost to meet parking requirement is now only 2.5% of previous cost

**Drivers pay two thirds of public parking garage costs**
Petaluma, CA: Smart Code Results

Key Policies
1. ‘Park Once’ Environment
2. Manage On-Street Parking
3. Create Parking Benefit Districts
4. Parking requirements drastically reduced, then abolished

Effect

One year later:

$75 million project (theater, retail, apartments, office) submitted
Successful Precedents

Reviving neighborhoods by abolishing minimum parking requirements:

- Coral Gables, FL
- Eugene, OR
- Fort Myers, FL
- Fort Pierce, FL
- Great Britain (entire nation)
- Los Angeles, CA
- Milwaukee, WI
- Olympia, WA
- Portland, OR
- San Francisco, CA
- Stuart, FL
- Seattle, WA
- Washington, DC
Recrafting Minimums

- Hercules Waterfront
  - Blended non-residential rates allow turnover
  - Residential rates by 1,000 square feet and not by unit
  - No requirements for affordable & senior units
Transportation Demand Management

- Marketing Pricing
  - Unbundling of parking costs
  - Transparency of costs
- Parking Cash-Out
  - Equally subsidize all modes
- Parking Benefit Districts
  - Protect from “spillover” & return revenues
- In-Lieu Fees
  - Devote fees to common pool
Parking and Traffic in High Density Areas – Myths, Realities, and Solutions

San Diego APA
Making Density Work

October 2008

Brian Canepa
Nelson\Nygaard Consulting

Bcanepa@nelsonnygaard.com
www.nelsonnygaard.com