How to Create an Integrated Station Area

Transportation

Chicago
November 5, 2006

Jeffrey Tumlin
Nelson Nygaard consulting associates
Transportation and TOD -- Agenda

1. Why transit? Why transportation?
2. Access Planning
   - Bus
   - Bike
   - Walk
   - Auto Drop-off
3. Parking versus Joint Development
4. Parking for TOD
5. Legalize TOD
6. Forest Park
1. Why Transportation?
1. Why Transportation?

- Transportation is not an end in itself.
- It is merely a means by which we support larger goals....
How Transportation Meets Goals

• Mobility:
  - Can I travel freely and easily to where I want to go?
  - Reduce roadway congestion
  - Increase transit frequency, reliability and speed
  - Create bicycle lanes and complete sidewalks

• Accessibility
  - Can I get the things and services I want?
  - Bring people, goods and services closer together
  - Mix uses
  - Technology, delivery
Measuring Success

We use transportation performance measures for:

• Improving efficiency of system operations
• Managing a given road or corridor
• Prioritizing funding
• Reporting on achievement of various goals
Typical Measures

Auto Level of Service (LOS)

- Seconds of delay experienced by vehicles, typically at intersections.
- Easy to measure.
- Says nothing about average travel speed over a corridor.
- Says nothing about person capacity.
- Ignores other modes of transportation
If we can’t build our way out of it...

- Why focus on congestion?
- Vehicle delay measures assume a carpooler is only half as worthy a citizen as a single occupant vehicle driver.
- Bus riders only 1/30th as valuable citizens?
- Instead of vehicle delay, look at *person* delay and *person* capacity.
Why not Consider...

- Economic Development
  - Job creation
  - Real estate value increase
  - Retail sales
- Quality of Life
  - Access to jobs
  - Access to shopping
  - Residential property value impact
- Social Justice
  - Do benefits accrue equitably?
  - Are investments spread equitably?
- Ecological Sustainability
  - VMT per capita (\(=\text{CO}_2, \text{NO}_x, \text{runoff, etc.}\))
  - Land use/transportation connection
What about other Modes?

- Florida, many municipalities establish performance measures for all modes
2. Access Planning

[Diagram showing different modes of transportation, including walking, transit, bicycle, pick-up/drop-off, vehicle parking, and connecting rail feeder bus shuttles.]
Access Planning Primer

• How do you maximize your riders and minimize your costs?

• Look at all options:
  – Parking
  – Feeder Transit
  – Bike & Pedestrian
  – Housing & Joint Development
Riders: Parking and Joint Development Housing

- Surface parking
  - 100 spaces per acre
  - 200 rides per day
  - All at peak period
- 3 Story Structure
  - 200 spaces per acre
  - 400 rides per day

- Housing = ~1.6-4 rides per unit
  - 50-100 units/acre = 200 rides per day
  - 100-200 units/acre = 400 rides/day
  - Spread throughout day esp if affordable
Riders: Feeder Transit

- As corridor density increases, so does potential transit ridership

### AM & PM Commute Trips:
Pleasant Hill TOD versus Typical Development

<table>
<thead>
<tr>
<th>Uses</th>
<th>Trips Per Day</th>
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<tbody>
<tr>
<td>Typical Residential</td>
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<tr>
<td>Typical Office</td>
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<tr>
<td>Pleasant Hill BART Residential</td>
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</tr>
<tr>
<td>Pleasant Hill BART Office</td>
<td>1.4</td>
</tr>
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### 15-35 Units/Acre = Big Reduction

- Annual vehicle miles travelled/household vs. Households/acre

- Pleasant Hill TOD

- Typical Development
Costs: Operating vs Capital

• Feeder transit: High operating, low capital
• Bike/ped: Cheap
• Surface parking: low operating, low capital
  – Unless you include land!
• Structured parking: low operating, high capital

Operating Cost

- Feeder Transit
- Surface Parking
- Bike Ped
- Parking Structure

Capital Cost

- Feeder Transit
- Surface Parking
- Bike Ped
- Parking Structure

Land Value
Station Access Design: Rules of Thumb

- **Small Blocks!**
  - Increases curb length
  - Provides easy turnaround
  - Allows for narrower streets
  - Pedestrian friendly

- **Maximize curb parking**
  - Allows for flexibility:
    - Drop-off
    - Bus zones
    - Retail parking
    - Etc.
Bus Intermodals

- Most important part of the station area, most difficult to site
- Determine Program:
  - How many lines arriving at the same time? Now and 30 years from now?
  - How much layover?
  - Turn around?
  - Bus-to-bus transfers?
Bus Intermodals: Pulsing

- Pulse scheduling:
  - All buses pull in at the same time
  - Passengers transfer to and from rail
  - Bus-to-bus transfers
- Consumes much real estate, but vacant between pulses
- Potential solution: Real-time allocation of bus bays and nose-to-nose bus stops. See Roslyn, VA
Bus Intermodals: Layover and Recovery

- Balance real estate cost of buses parked and idling with
- Operating cost of ‘deadheading’ buses to remote layover
Bus Intermodals: Design Guidance

- Site close to faregates
- Minimize need for bus passengers to cross street – don’t let passengers run for bus or train!
- Make all bus stops visible to each other
- Put eyes on the street, especially for stops with many passengers waiting in evening.
- Transparency and natural wayfinding
- Site station agent to oversee bus intermodal
- Typically, line buses up along the tracks and use station itself as turnaround
Bus Intermodals: Design Guidance

• Dedicated bus lanes?
  - Use where congestion is a major problem, particularly in intermodal itself
  - Consume significant real estate
  - Increase pedestrian crossing distances
  - Use signal prioritization and dynamic traffic management
  - Ensure convenient kiss-n-ride locations help keep drop-off away from buses.
Bicycle Design

- Throughout northern Europe and Japan, more bike access to rail stations than bus and auto combined.
- Secure, weather-protected parking is a must:
  - Under cover
  - Inside paid area
  - In view of station agent
Bicycle Design

- Bike Stations provide
  - Valet, secure parking
  - Basic bike maintenance
  - Route information
  - Bike rentals
  - Often, showers and clothes lockers

- Successful in:
  - Chicago, Millenium Park
  - Palo Alto, San Francisco, Berkeley, Long Beach, CA
  - Seattle
Auto Access: Kiss-n-Ride Design

- Drop-off is impossible to control
- Make drop-off areas very convenient from all directions
- Provide place for cars to wait in evening peak.
3. Station Parking vs Joint Development
Effects of Parking at Stations

- Effects on transit ridership
  - Transit Oriented Development (TOD): New households & transit trips
  - Parking: Park-&-Ride participants
  - Implications for encouraging future growth in ridership

- Effects on traffic congestion
  - Walking, cycling & transit trips to station
  - Proportion and amount of vehicle trips to station
  - Implications in allocating of street right-of-way

- Effects on revenue generation
  - Lease or sale of land: Land value with higher density & mixed use compared to parking
  - Development of land: Joint development, economic vitality
  - Productive use of land: Economic productivity, sales tax
Optimizing Station Parking

• SkyTrain system in Vancouver, BC (TransLink)
  – Land use concentration around SkyTrain
  – Transportation supply
  – Transportation demand including low to no parking
• Metrorail stations in Arlington County, VA (WMATA)
  – Urban village development
  – Multimodal transportation
  – Shared parking only (No park-&-ride)
• South Hayward station in Northern California (BART)
  – Plans to develop area around station and improve pedestrian, bicycle and bus access
  – Determining amount of replacement parking
SkyTrain: Vancouver BC
Lessons & Results in Greater Vancouver

• Increasing ridership and cost recovery
  – 41% increase in ridership since 1994
  – 20% increase in ridership since 2002
  – Ridership of 200 million by 2010 (33% increase)

• Park-&-ride generally discouraged at stations
  – Allows access to transit & extends system BUT
  – Sterilizes land around stations
  – Disconnects city from system
  – Promotes low density urban development
  – Discourages all-day rides
  – Raises safety, personal security issues
Metrorail Service in Arlington County

- 11 Metrorail stations within Arlington County
- Approximately 200,000 people/weekday entering these stations
- 61 million one-way trips/year to, from and within the county
- Development planned or under construction in the county
  - 6,000 housing units
  - 3 million sq ft office
  - 1 million sq ft retail
Urban Villages in Rosslyn-Ballston Corridor

- 5 urban villages developed around Metro stations in the Corridor
  - 3 miles long and 2 square miles in area
  - Medium-high density mixed use villages
  - Surrounded by well established low-moderate density neighborhoods

- Supported by multimodal transportation facilities
  - Walkable, pedestrian/bike-friendly environment
  - 5 closely spaced Metrorail Stations that are below grade
  - Local and feeder bus service
  - Extensive, connected network of highways, arterials and local streets

- Close to the center of Downtown DC

- No distinct park-&-ride facilities, only public shared parking
Household, Population & Employment Trends

- HH
- Population
- Employment

- Parking vs Joint Development

Integrated Station Area Planning
Jeffrey Tumlin – Rail~Volution 2006
Integrated Station Area Planning
Jeffrey Tumlin – Rail-Volution 2006

Commercial Office & Retail Development

<table>
<thead>
<tr>
<th>Year</th>
<th>Office (M SF)</th>
<th>Retail (M SF)</th>
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</thead>
<tbody>
<tr>
<td>1972</td>
<td>5</td>
<td>2.5</td>
</tr>
<tr>
<td>1980</td>
<td>7.5</td>
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<tr>
<td>1990</td>
<td>10</td>
<td>2.5</td>
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<tr>
<td>2000</td>
<td>15</td>
<td>2.5</td>
</tr>
<tr>
<td>2003+UC</td>
<td>22.5</td>
<td>2.5</td>
</tr>
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3. Parking vs Joint Development
RB Corridor Arlington vs. Fairfax County

39,500 daily boardings

- Auto (incl. Drop-off): 12.9%
- Bus/Vanpool: 3.6%
- Metrobus: 7.5%
- Walk: 73.0%
- Other: 2.0%

29,250 daily boardings

- Auto (incl. drop-off): 57.6%
- Walk: 14.6%
- Other Bus/Vanpool: 9.3%
- Metrobus: 4.8%
- No Response/Unknown: 12.0%
- Other: 1.7%

Source: WMATA May 2002 weekday Metrorail ridership and access data
No Park-and-Ride

- All parking charged at market-rate
- Prepaid ParkSmart debit cards can be used to pay for metered parking
- Parking brochure
  - Locations of all public on- and off-street parking in the 5 villages
  - Information on alternative transportation options

Parking at County Meters

Short-term meter rate: 75¢ / hour
12-hour meter rate: 50¢ / hour
FREE everyday after 6 pm
FREE all day Sunday
FREE at designated meters Saturday

YELLOW
1/2 hour

SILVER
1 hour

BLUE
2 hours

RED
4 hours

GREEN
12 hours
South Hayward BART Station Study

3. Parking vs Joint Development
### Example: South Hayward

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<tr>
<td><strong>Gross density</strong></td>
<td>56</td>
<td>77</td>
<td>100</td>
</tr>
<tr>
<td>(units/acre)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>Residential parking</strong></td>
<td>1.5-2.1</td>
<td>1.0-1.3</td>
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<tr>
<td>(spaces/unit)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>% replacement parking</strong></td>
<td>102%</td>
<td>73%</td>
<td>55%</td>
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3. Parking vs Joint Development
Example: South Hayward

- Step 1: Assess ridership change
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<td>Riders lost from reduced parking</td>
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<td>798</td>
<td>971</td>
<td>1,033</td>
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<tr>
<td>Net fare revenue</td>
<td>$637,000</td>
<td>$776,000</td>
<td>$826,000</td>
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- Step 1: Assess ridership change
- Step 2: Assess land value and parking costs
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<td>Reduction in parking operations costs</td>
<td>($218,000)</td>
<td>($36,000)</td>
<td>$72,000</td>
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Example: South Hayward

- Step 1: Assess ridership change
- Step 2: Assess land value and parking costs
- Step 3: Assess total costs and benefits
Example: South Hayward

- **A - 102% Replacement**
  - Net New Riders: $4,000,000
  - Net Revenue: -$800,000

- **B - 73% Replacement**
  - Net New Riders: $3,200,000
  - Net Revenue: -$600,000

- **C - 55% Replacement**
  - Net New Riders: $2,400,000
  - Net Revenue: -$400,000

3. Parking vs Joint Development
Why provide parking at Rail Stations?

- Land banking for future joint development
  - Danger: may be politically difficult to eliminate later!
- Only effective use of land
  - Freeway interchange
  - Airport zone
  - Toxins
  - But why put rail line here at all?
- Free capital money from FTA to build parking, no operating money to run shuttle connections
- Appeal to affluent suburban voters
- Appeal to sprawl developers and building trades
Why require replacement parking?

• Replacement parking puts huge cost burden on joint development projects, oftentimes precluding them.

• Replacement parking reduces development envelope, resulting in less JD ridership.

• At most urban rail stations, eliminating station parking for more JD would result in higher ridership and revenue.

• Reducing replacement parking reduces congestion

• Reducing replacement parking reduces peak transit capacity problems and introduces more off-peak trips
New Resources are Available

- “The High Cost of Free Parking”
  - By Don Shoup, UCLA
  - Top 100k on Amazon
  - 576 pages
  - $60 from APA

- “Parking Spaces / Community Places”
  - Free from US EPA
  - 70 pages

- “Parking Management”
  - By Todd Litman
  - Available at APA Bookstore or Amazon
4. Parking and TOD
Six Key Parking Reform Principles

1. Manage Spillover Parking
2. Create a “Park Once,” shared parking environment
3. Create lots of on-street parking
4. Ensure good parking design
5. Ensure 15% vacancy at all times through market pricing
6. Vary parking requirements according to context and goals:
   • Tailor minimums
   • Eliminate minimums
   • Establish maximums
1. Residential Parking Permit Districts

• Residential Parking Permit Districts
  – Critical for addressing spillover parking concerns of infill development
  – Requires neighborhood vote on parking district

• Austin Parking Benefit Districts
  – http://www.ci.austin.tx.us/parkingdistrict/default.htm
  – Allows residents to sell surplus neighborhood parking capacity to commuters
  – Revenue returned to neighborhood for community improvements
2. Park Once
Integrated Station Area Planning

Jeffrey Tumlin – Rail~Volution 2006

Conventional Development

School

Shop

Play

Work

P

T
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 Demand in Mixed Use Zones

- Typical single-use district
  - 4 spaces per 1,000 square feet
- Palo Alto – 1.8 spaces /1,000 sf
- Santa Monica – 2.4 spaces/1,000 sf
- Kirkland, WA – 2.0 spaces/1,000 sf
- Philadelphia Center City
  - 0.89 spaces /1,000 sf
3. On-Street Parking

On-street parking benefits:

- Buffer between pedestrians and traffic
- Convenience parking for retail
- “Teaser” parking
- Snow removal storage
- Potential location for street trees, flex space
- Traffic calming
- Bus bulbs and Corner bulbouts
- Bike parking
- Same land area per space as 3-story garage; twice as efficient as off-street lot
4. Ensure good parking design
4. Ensure good parking design
4. Ensure good parking design

TOD
4. Ensure good parking design

TOD
5. Manage On-Street Parking
Parking Benefit Districts

• Devote meter & permit revenue to district where funds raised

• Example: Old Pasadena
  - Meters installed in 1993: $1/hour
  - Garage fees
  - Revenue: $5.4 million annually
  - Tiny in-lieu of parking fees

• Funds garages, street furniture, trees, lighting, marketing, mounted police, daily street sweeping & steam cleaning

• Focus on availability, not price

Old Pasadena, 1992-99:

Sales Tax Revenues Quadruple
Parking Benefit Districts

- Redwood City, CA: Meter and garage rates vary to achieve 15% vacancy on all blocks at all times.
Arlington, VA - Residential Parking Districts

Lower Density Zoning
Arlington, VA - Parking and Form-Based Codes

• Goals
  – Park once at a convenient shared location and comfortably walk to a variety of commercial enterprises.
  – Reduce diffused, inefficient, single-purpose reserved parking.
  – Avoid adverse parking impacts on adjacent neighborhoods.
  – Maximize on-street parking.
  – Increase visibility and accessibility of parking.
  – Provide flexibility for redevelopment of small sites and for the preservation of historic buildings.
  – Promote early prototype projects using flexible and creative incentives.

• Techniques
  – Differentiate between private (reserved) and public (shared) parking
  – Use minimums and maximums
  – Exempt small sites (under 20,000 sf land area)
Arlington, VA - Parking and Form-Based Codes

- Residential, per unit
  - Shared: minimum 1/8, no maximum.
  - Reserved: minimum 1, maximum 2.

- Non-residential, per 1000 sf gross floor area (GFA)
  - Shared: minimum 1, no maximum.
  - Shared: on-street spaces count.
  - Reserved: no minimum, maximum 1.
  - Reserved: can exceed maximum, with impact fees.

- Can provide on-site, or off-site within “parking zone”

- In-lieu fees allow opting out of minimum requirements.
  - One time, not ongoing.
  - Approximate cost of constructing structured parking.
Arlington, VA - Parking and Form-Based Codes

- Example: Mixed-use development
  - 100 residential units
  - 50,000 sf office, 10,000 sf retail

- Typical conventional parking, minimum
  - Residential: 2.5 per unit = 250 spaces
  - Office: 4 per 1000 = 200 spaces
  - Retail: 5 per 1000 = 50 spaces
  - Total = MINIMUM 500 spaces, could be all reserved

- Columbia Pike FBC parking:
  - Residential: 1-2 per unit = 100-200 reserved spaces
  - Non-res: 0-1 per 1000 = 0-60 reserved spaces
  - Residential: 1/8 per unit = 12.5 shared spaces, min
  - Non-res: 1 per 1000 = 60 shared spaces, min
  - Total = 100-260 reserved spaces, 72.5 or more shared spaces

- Cost savings: over $3 million
Arlington, VA - Parking and Form-Based Codes

- Differentiate between private (reserved) and public (shared) parking
- Goals:
  i. Enable people to park once at a convenient location and to access a variety of commercial enterprises in pedestrian friendly environments by encouraging shared parking. ii. Reduce diffused, inefficient, single-purpose reserved parking. iii. Avoid adverse parking impacts on neighborhoods adjacent to redevelopment areas. iv. Maximize on-street parking. v. Increase visibility and accessibility of parking. vi. Provide flexibility for redevelopment of small sites and for the preservation of historic buildings. vii. Promote early prototype projects using flexible and creative incentives.
- Exempt small sites (under 20ksf)
- Residential: minimum 1 1/8 per unit, with min 1/8 shared. No max on shared.
6. Vary your Parking Requirements

- Example: Boulder, CO, Downtown Management Commission

- Responsibilities:
  - Parking construction and management
  - Operates full menu of demand management strategies

- District analyzes most cost-effective mix of new parking or transportation alternatives

- Cheaper to provide free transit to all downtown employees than provide them parking

- Provides buying power/negotiating strength for small businesses
Phase out Minimum Parking Requirements

- Minimum parking requirements set to avoid any chance of spillover
- Usually copy nearby cities, or look up in reference manuals
- Take peak demand, and round up
Select Minimum Parking Requirements

- Gas Station – one space per fuel nozzle
- Nunnery – one space per ten nuns
- Mausoleum – 10 spaces per maximum number of interments in a one-hour period
- Swimming pool – 1 space per 2,500 gallons of water

**TABLE 3-4**

<table>
<thead>
<tr>
<th>Land use</th>
<th>Parking requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult entertainmen</td>
<td>1 space per patron, plus 1 space per employee on the largest working shift</td>
</tr>
<tr>
<td>Barber shop</td>
<td>2 spaces per barber</td>
</tr>
<tr>
<td>Beauty shop</td>
<td>3 spaces per beautician</td>
</tr>
<tr>
<td>Bicycle repair</td>
<td>3 spaces per 1,000 square feet</td>
</tr>
<tr>
<td>Bowling alley</td>
<td>1 space for each employee and employer, plus 5 spaces for each lane</td>
</tr>
<tr>
<td>Gas station</td>
<td>1.5 spaces per fuel nozzle</td>
</tr>
<tr>
<td>Health home</td>
<td>1 space per 3 beds and bassinettes, plus 1 space per 3 employees, plus 1 space per staff doctor</td>
</tr>
<tr>
<td>Heating supply</td>
<td>3.33 spaces for every 1,000 square feet of sales and office area, plus 2 spaces per 3 employees on the maximum shift, plus 1 space for every vehicle customarily used in operation of the use or stored on the premises</td>
</tr>
<tr>
<td>Heliport</td>
<td>1 space per 5 employees, plus 5 spaces per touchdown pad</td>
</tr>
<tr>
<td>Machinery sales</td>
<td>1 space per 500 square feet of enclosed sales/rental floor area, plus 1 space per 2,500 square feet of open sales/rental display lot area, plus 2 spaces per service bay, plus 1 space per employee, but never less than 5 spaces</td>
</tr>
<tr>
<td>Mausoleum</td>
<td>10 spaces per maximum number of interments in a one-hour period</td>
</tr>
<tr>
<td>Nunnery</td>
<td>1 space per 10 nuns</td>
</tr>
<tr>
<td>Rectory</td>
<td>3 spaces per 4 clergymen</td>
</tr>
<tr>
<td>Swimming pool</td>
<td>1 space per 2,500 gallons of water</td>
</tr>
<tr>
<td>Taxi stand</td>
<td>1 space for each employee on the largest shift, plus 1 space per taxi, plus sufficient spaces to accommodate the largest number of visitors that may be expected at any one time</td>
</tr>
<tr>
<td>Tennis court</td>
<td>1 space per player</td>
</tr>
</tbody>
</table>

Sources: Planning Advisory Service (1964, 1971, and 1991); Witteford and Kanaan (197...)
ITE Rates

- Based on locations with no transit accessibility, no adjacent land uses
- R\(^2\) of 0.038 means that variation in floor area explains only 3.8 percent of variation in peak parking demand.
- Parking generation rate is reported as precisely 9.95 spaces per 1,000 square feet, not 10 but 9.95.
Tailor Parking Requirements?

- Parking demand varies with geographic factors:
  - Density
  - Transit Access
  - Income
  - Household size

- Cities can tailor parking requirements to meet demand, based on these factors

- Does not seek to constrain demand
Abolish Parking Requirements?

- Let the market decide
- Stuart, FL: A Downtown Revived
- Parking requirements eliminated
- After four years:
  - # of downtown businesses up 348%
  - Town able to lower its tax rate
Abolish Parking Requirements?

Reviving neighborhoods by abolishing minimum parking requirements

• Coral Gables, FL
• Eugene, OR
• Fort Myers, FL
• Fort Pierce, FL
• United Kingdom (entire nation)
• Los Angeles, CA

• Milwaukee, WI
• Olympia, WA
• Portland, OR
• San Francisco, CA
• Stuart, FL
• Seattle, WA
• Spokane, WA
Parking Maximums?

- Promotes alternatives to driving
- Maximizes land area for other uses
- Examples: downtown San Francisco; Portland, OR; Cambridge, all of UK
- Aside from congestion pricing, parking management is the ONLY useful tool for eliminating congestion
## Parking: High & Low Traffic Strategies

<table>
<thead>
<tr>
<th>Traffic</th>
<th>Typical Minimum Requirements</th>
<th>‘Tailored’ Minimum Requirements</th>
<th>Abolish Minimum Requirements</th>
<th>Set Maximum Requirements</th>
</tr>
</thead>
</table>
| High    | • Requirement > Average Demand  
  • Hide all parking costs  
  • Adjust for:  
    • Density  
    • Transit  
    • Mixed Use  
    • ‘Park Once’ District  
    • On-street spaces  
    • …etc.  
  • Market decides  
  • Garages funded by parking revenues  
  • Manage on-street parking  
  • Residential pkg permits allowed by vote  
  • Limit parking to road capacity  
  • Manage on-street parking  
  • Market rate fees encouraged/required |
| Low     |                            |                                 |                              |                          |
| Housing Costs | High                   |                                 |                              |                          |
| Low     |                            |                                 |                              |                          |
| Pollution | High                     |                                 |                              |                          |
| Low     |                            |                                 |                              |                          |
5. Legalize TOD
12 Code Obstacles

1. Parking and Traffic Code
2. Building Code
3. Uniform Fire Code
4. Clean Water Act
5. Fair Housing Act
6. State Schools Codes
7. Congestion Management Program
8. Zoning & Subdivision Codes: Design and Parking
9. Road Design Code
10. Street Typologies and Transportation Performance Measures
11. Impact Fees
12. Environmental Compliance
6. Forest Park

- Eisenhower Expwy
- Des Plaines
- Downtown
- Madison
- Half Mile Radius
- Blue Line
- Des Plaines
1. Expand Downtown’s Success
2. Address Barriers
3. Protect Established Neighborhoods
4. Make Cemeteries an Asset
5. Intensify Underutilized Lands

6. Forest Park

Integrated Station Area Planning
Jeffrey Tumlin – Rail~Volution 2006
For More Information

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6. Forest Park