Taming Traffic Through TOD

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Successful TOD requires larger context: regional transit system, community support, political will.

Market demand is changing. Are we meeting that demand with our transit investments?

Collaborative effort: Reconnecting America, Center for Neighborhood Technology, and Strategic Economics.
Converging Trends Drive Demand for TOD

- Transit is in a building boom
- Urban and suburban reinvestment are on the rise
- Demographic changes mean that “who we are” is much more diverse than before
- Developers, investors and cities are recognizing that “place-making” creates value
Principles of TOD

- Developed within ½ mile of transit stop
- Linked to a network of walkable, bikeable streets and transportation system
- Contains a rich mix of uses: retail, housing, workplaces
- Has appropriate treatment of parking
- Has densities appropriate to its setting
Transportation Goals Supported by TOD

- Reduced Personal Transportation Expenditures
- Reduced Time Spent in Driving
  - Suburban mothers spend 17 full days a year behind the wheel, more than the average spends dressing, bathing, and feeding a child.
- Reductions in Driving Reduce Air Pollution, Including Greenhouse Gas Pollution
- Reduced Traffic Congestion
## Monthly Transportation Costs in Twin Cities Region

<table>
<thead>
<tr>
<th>Community</th>
<th>Monthly Costs</th>
<th>Yearly Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farmington</td>
<td>$941/month</td>
<td>$11,292/year</td>
</tr>
<tr>
<td>Fridley</td>
<td>$715/month</td>
<td>$8580/year</td>
</tr>
<tr>
<td>Midway, St. Paul</td>
<td>$561/month</td>
<td>$6732/year</td>
</tr>
<tr>
<td>7-County Region</td>
<td>$741/month</td>
<td>$8892/year</td>
</tr>
</tbody>
</table>

### How Transportation Costs Stack-up in Four Twin-City Communities

- **Farmington:** $941/month, $11,292/year
- **Fridley:** $715/month, $8580/year
- **Midway, St. Paul:** $561/month, $6732/year
- **7-County Region:** $741/month, $8892/year

![Map of Twin Cities Region](image)
Where can a 3-person household earning 80% of the Twin Cities AMI afford to live?

Considering only housing prices

Considering Housing prices and Transportation Costs
Vehicle Miles Traveled (VMT) Car and Light Truck VMT, Trillion Miles Per Year, U.S.
Driving vs Density by Income
Chicago, Los Angeles & San Francisco regions

Poor (<$30K)
Middle Income
Wealthy (>60K)

Annual VMT/Household

Households/Residential Acre
Auto Mileage, Density & Stage of Life
MTC's 1990 Household Travel Survey

Daily Household Mileage

Households/Residential Acre

Single Adults
Adults, kids 16-21
Adults, kids <16
Retired
TOD Impacts Transit and Auto Use

- Residents living near transit stations are more likely to commute by transit.
- Transit ridership increase of 20-40 percent near stations, and 5% overall at the regional level.
- Lower driving 20-40% for those living, working and/or shopping within TOD station areas.
### TOD households own fewer cars

<table>
<thead>
<tr>
<th>Auto Ownership</th>
<th>No Car</th>
<th>1 Car</th>
<th>&gt;1 Car</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Baltimore TZ</strong></td>
<td>44%</td>
<td>36%</td>
<td>21%</td>
</tr>
<tr>
<td>Baltimore Urban Area</td>
<td>16%</td>
<td>36%</td>
<td>47%</td>
</tr>
<tr>
<td><strong>Chicago TZ</strong></td>
<td>29%</td>
<td>45%</td>
<td>26%</td>
</tr>
<tr>
<td>Chicago Region</td>
<td>14%</td>
<td>36%</td>
<td>50%</td>
</tr>
<tr>
<td><strong>Dallas TZ</strong></td>
<td>10%</td>
<td>55%</td>
<td>34%</td>
</tr>
<tr>
<td>Dallas Region</td>
<td>6%</td>
<td>36%</td>
<td>58%</td>
</tr>
<tr>
<td><strong>Denver TZ</strong></td>
<td>36%</td>
<td>42%</td>
<td>23%</td>
</tr>
<tr>
<td>Denver Region</td>
<td>7%</td>
<td>33%</td>
<td>60%</td>
</tr>
<tr>
<td><strong>Los Angeles TZ</strong></td>
<td>29%</td>
<td>41%</td>
<td>29%</td>
</tr>
<tr>
<td>Los Angeles Region</td>
<td>10%</td>
<td>35%</td>
<td>55%</td>
</tr>
<tr>
<td><strong>New York TZ</strong></td>
<td>66%</td>
<td>26%</td>
<td>8%</td>
</tr>
<tr>
<td>New York Region</td>
<td>29%</td>
<td>32%</td>
<td>39%</td>
</tr>
<tr>
<td><strong>Portland, OR TZ</strong></td>
<td>45%</td>
<td>38%</td>
<td>17%</td>
</tr>
<tr>
<td>Portland Region</td>
<td>8%</td>
<td>33%</td>
<td>59%</td>
</tr>
<tr>
<td><strong>Salt Lake City TZ</strong></td>
<td>21%</td>
<td>48%</td>
<td>31%</td>
</tr>
<tr>
<td>Salt Lake City Region</td>
<td>6%</td>
<td>28%</td>
<td>66%</td>
</tr>
<tr>
<td><strong>Seattle TZ</strong></td>
<td>50%</td>
<td>37%</td>
<td>13%</td>
</tr>
<tr>
<td>Seattle Region</td>
<td>8%</td>
<td>33%</td>
<td>60%</td>
</tr>
<tr>
<td><strong>Washington DC</strong></td>
<td>30%</td>
<td>45%</td>
<td>25%</td>
</tr>
<tr>
<td>Washington DC Region</td>
<td>12%</td>
<td>34%</td>
<td>54%</td>
</tr>
</tbody>
</table>
TOD households drive less

![Bar chart showing the percentage of driving by TOD households in different regions, with data for Denver, Portland, Seattle, and Washington D.C.]
Getting mode split isn’t an accident

- Transit alone doesn’t suffice
  - Quality of transit: frequency, reliability, network

- Supportive transportation network
  - Car sharing, biking
  - WALKABILITY – safe, convenient, obvious

- Parking Management
  - Requirement, pricing, public, off street
Network Coverage is Key

Four Transit Systems Shown at the Same Geographical Scale

New York - Extended (962 Stations)

Washington DC - Large (163 Stations)

Cleveland - Medium (50 Stations)

Denver - Small (30 Stations)
## TOD Varies by Place and Type of Transit

<table>
<thead>
<tr>
<th>TOD Type</th>
<th>Land Use Mix</th>
<th>Minimum Housing Density</th>
<th>Regional Connectivity</th>
<th>Frequencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban Downtown</td>
<td>Office Center Urban Entertainment Multifamily Housing Retail</td>
<td>&gt;60 units/acre</td>
<td>High Hub of Radial System</td>
<td>&lt;10 minutes</td>
</tr>
<tr>
<td></td>
<td>Urban Downtown Urban Entertainment Multifamily Housing Retail</td>
<td></td>
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<tr>
<td></td>
<td>Urban Downtown Urban Entertainment Multifamily Housing Retail</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban Neighborhood</td>
<td>Residential Retail Class B Commercial</td>
<td>&gt;20 units per acre</td>
<td>Medium Access to Downtown Subregional Circulation</td>
<td>10 minutes peak 20 minutes offpeak</td>
</tr>
<tr>
<td></td>
<td>Residential Retail Class B Commercial</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Residential Retail Class B Commercial</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suburban Center</td>
<td>Primary Office Center Urban Entertainment Multifamily Housing Retail</td>
<td>&gt;50 units/per acre</td>
<td>High Access to Downtown Subregional Hub</td>
<td>10 minutes peak 10-15 offpeak</td>
</tr>
<tr>
<td></td>
<td>Primary Office Center Urban Entertainment Multifamily Housing Retail</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Primary Office Center Urban Entertainment Multifamily Housing Retail</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suburban Neighborhood</td>
<td>Residential Neighborhood Retail Local Office</td>
<td>&gt;12 units/acre</td>
<td>Medium Access to Suburban Centers and Access to Downtown</td>
<td>20 minutes peak 30 minutes offpeak</td>
</tr>
<tr>
<td></td>
<td>Residential Neighborhood Retail Local Office</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Residential Neighborhood Retail Local Office</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neighborhood Transit Zone</td>
<td>Residential Neighborhood Retail Local Office</td>
<td>&gt;7 units/acre</td>
<td>Low Access to a Center</td>
<td>25-30 minutes Demand Responsive</td>
</tr>
<tr>
<td></td>
<td>Residential Neighborhood Retail Local Office</td>
<td></td>
<td></td>
<td></td>
</tr>
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</table>
Rethinking Parking Policies

- TOD households tend to drive less, own fewer cars
- Standard parking requirements based on peak demand at a single use, low density development
- Too much parking is costly
  - $20-$200 per month to finance, build, operate and maintain a parking space
  - Up to 50% of land used in development
Make Parking Requirements as Unique as the Places It Serves

- Development type and size
- Development density and design
- Demographics
- Availability of transportation choices
- Surrounding land use mix
- Off Site Parking
Tools to Tame Traffic

- **Car Sharing**
  - In San Francisco, nearly 60% of households gave up at least 1 car within a year
  - Opportunity for commercial developments

- **Incentives for Transit**
  - In LA a transit pass = $42 per month, whereas average parking space is $91 per month

- **Pedestrian and Bicycle Facilities**

- **TDM Programs**

- **Pricing Strategies** – each 1% increase in parking fees is accompanied by a 0.3% decrease in demand
No such thing as Free Parking.

What if Parking Benefited Communities?
No silver bullet, but TOD is a powerful tool

- Less driving means MORE disposable INCOME for households near transit
- Linking Development and Transportation CHOICE
- Emphasize PEOPLE and PLACE
- Not eliminate, but TAME

Fruitvale, California
Some Add’l Resources

- EPA, “Parking Spaces/Community Places”, January 2006 (EPA 231-k-06-001)
- Center for TOD, “Hidden In Plain Sight” 2004 (www.reconnectingamerica.org)
- Urban Land Institute, “Shared Parking” 2005