Parking at Rail Stations:
How much? Why? What results in the best ridership and revenue?

Jeffrey Tumlin
More Creates Riders: Parking or Development?

- **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*
Which Costs More: Parking or Other Access?

- 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

Capital Cost

Land Value

Feeder Transit

Surface Parking

Bike Ped

Parking Structure
How Does Cost per New Rider Change?

- **Surface Parking with Land** - $3,000
- **Structured Parking** - $2,000
- **Surface Parking** - $300
- **Transit** - $200
- **Bike/Ped Improvements** - $50
- **Housing Joint Development** - ($300)

Cost Per Rider

Efficiency Point

For Each New Rider
Development Oriented Transit in Arlington vs Parking Oriented Transit in Fairfax

Arlington’s 5 Stations:
- Auto (incl. Drop-off): 12.9%
- Bus/Vanpool: 3.6%
- Metrobus: 7.5%
- Walk: 73.0%
- Other: 1.0%
- No Response/Unknown: 2.0%

39,500 daily boardings

Fairfax’s 5 Stations:
- Auto (incl. Drop-off): 14.6%
- Bus/Vanpool: 9.3%
- Other Bus/Vanpool: 4.8%
- Walk: 12.0%
- Other: 1.7%
- Metrobus: 57.6%
- No Response/Unknown: 14.6%

29,250 daily boardings

Source: WMATA May 2002 weekday Metrorail ridership and access data
BART: Pro Forma Tool for Ridership + Revenue

**Replacement Parking Ratio**

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Net New Riders</th>
<th>Net Annual Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>102%</td>
<td>-1,600,000</td>
<td>$0</td>
</tr>
<tr>
<td>73%</td>
<td>-800,000</td>
<td>$800,000</td>
</tr>
<tr>
<td>55%</td>
<td>0</td>
<td>$1,600,000</td>
</tr>
</tbody>
</table>

Legend:
- **Net New Riders**
- **Net Revenue**

**BART South Hayward Station Development Plan**
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
For More Information

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