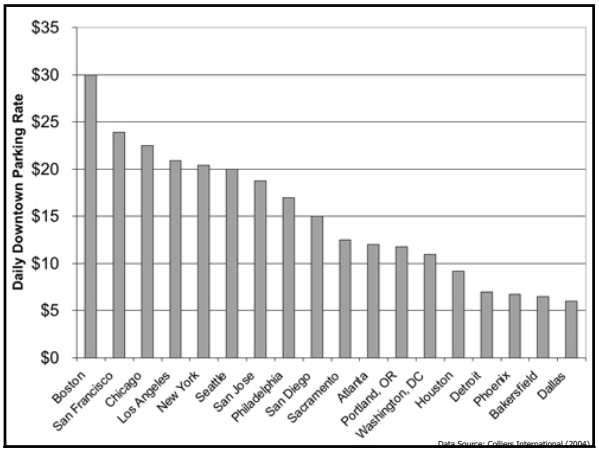
Getting Parking Right

Jeffrey Tumlin, Nelson\Nygaard
Christopher Forinash, US EPA

Nelson|Nygaard consulting associates

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



New Resources are Available

- "The High Cost of Free Parking"
- By Don Shoup, UCLA
- Top 100k on Amazon
- 576 pages
- $60 from APA
- Available here!

- "Parking Spaces / Community Places"
- By US EPA (and …)
- Not on Amazon, but just out!
- 70 pages
- Free from US EPA
- Available here!

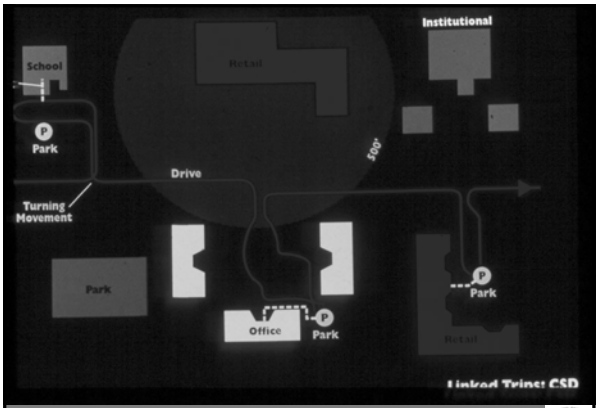
Six Key Parking Reform Principles

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

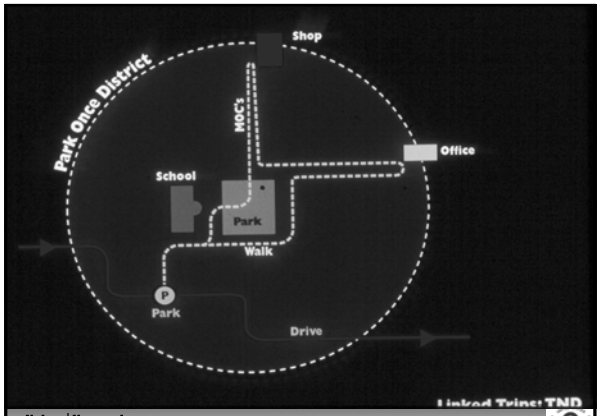
1. Residential Parking Permit Districts

- 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



Mixed Use Zones Act as a Park Once District



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

5. Manage On-Street Parking

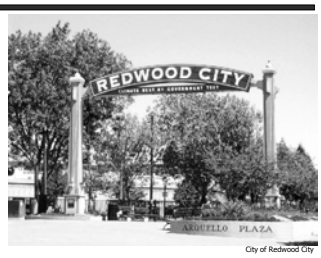
Parking Benefit Districts

- 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

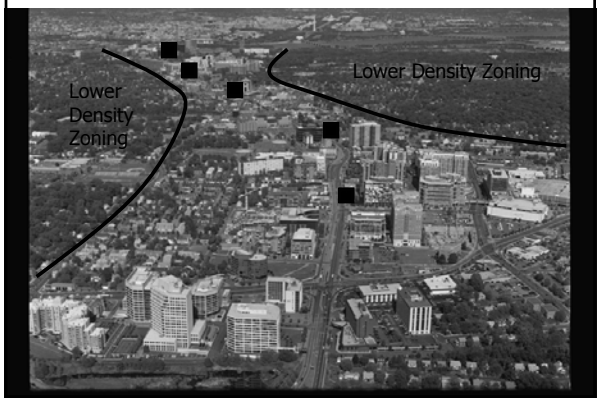
Parking Benefit Districts

- Redwood City, CA: Meter and garage rates vary to achieve 15% vacancy on all blocks at all times.
- http://www.redwoodcity.org/government/council/packets/2005/0606/Reg_050606-8A.pdf



City of Redwood City

Arlington, VA - Residential Parking Districts



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

How much is enough?

- No right answer
- No such thing as set "demand" for parking:
  - Pricing
  - Availability of Parking
  - Travel Choices
- Supply is a value judgment based on wider community goals
- Don't confuse supply and availability

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

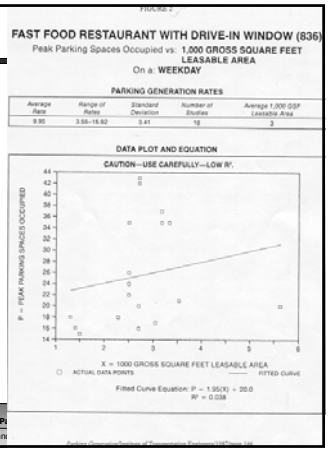
TABLE 3-4
PATAPHYSICAL PARKING REQUIREMENTS

Land use	Parking requirement
Adult entertainment	1 space per patron, plus 1 space per employee on the largest working shift
Barber shop	2 spaces per barber
Beauty shop	3 spaces per beautician
Bicycle repair	3 spaces per 1,000 square feet
Bowling alley	1 space for each employee and employer, plus 5 spaces for each lane
Gas station	1.5 spaces per fuel nozzle
Health home	1 space per 3 beds and bassinettes, plus 1 space per 3 employees, plus 1 space per staff doctor
Heating supply	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 vehic customarily used in operation of the use or stored on the premises
Heliport	1 space per 5 employees, plus 5 spaces per touchdown pad
Machinery sales	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
Mausoleum	10 spaces per maximum number of interments in a one-hour period
Nunnery	1 space per 10 nuns
Rectory	3 spaces per 4 clergymen
Swimming pool	1 space per 2,500 gallons of water
Taxi stand	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
Tennis court	1 space per player

Sources: Planning Advisory Service (1964, 1971, and 1991); Witherford 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.


FAST FOOD RESTAURANT WITH DRIVE-IN WINDOW (836)
Peak Parking Spaces Occupied vs: 1,000 GROSS SQUARE FEET LEASABLE AREA
On a: WEEKDAY

PARKING GENERATION RATES

Average Rate	Range of Rates	Standard Deviation	Number of Studies	Average 1,000 GSF Leasable Area
9.95	3.55–15.62	3.41	18	3

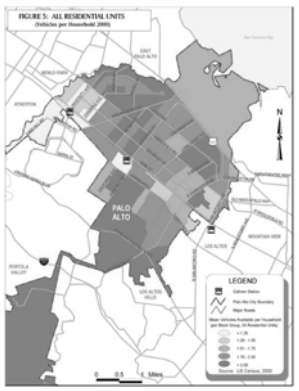
DATA PLOT AND EQUATION
CAUTION—USE CAREFULLY—LOW R^2.

P = PEAK PARKING SPACES OCCUPIED
X = 1000 GROSS SQUARE FEET LEASABLE AREA
ACTUAL DATA POINTS — FITTED CURVE
Fitted Curve Equation: P = 1.95(X) + 20.0
R^2 = 0.038

Palo Alto, CA – parking requirements adopted in 1951

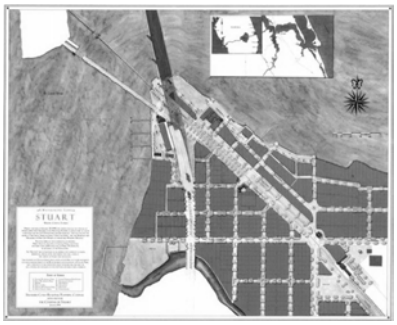
Tailor Parking Requirements?

- 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

Petaluma Smart Code - Key Issues

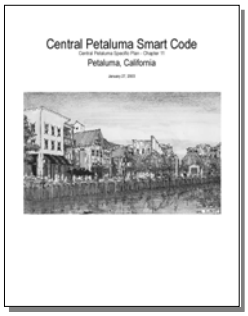
- Want new life downtown, economic success
- Perceived parking shortage
- Vacant buildings – couldn't meet parking requirements
- Fear of spill-over parking
- Fear of traffic
- Worsening housing crisis
- Budget crunch

Petaluma Principles

- Create a "Park Once" Environment
- Make parking respect the pedestrian
- Manage on-street parking
- Provide shared garages
- Eliminate on-site parking requirements
- Expand transportation choices
- Form-based SmartCode

Phase Out Parking Minimums

- Interim Requirement:
  - 3.3 spaces / 1000 s.f.
  - 1 space per dwelling unit
  - 'In-lieu of parking fee' option
- Phase II – Phase Out Parking Requirements
- Prerequisites:
  - Effective on-street management
  - Neighborhoods protected from spill-over parking
  - Approval of new public parking



Development Impacts

- Nov '02: Project start
- June '03: Code adopted
- June '03: $75 million project (theater, retail, apartments, office) submitted
- Saved 100+ parking spaces
- July '03: project approved, under construction

Parking: High & Low Traffic Strategies

	Typical Minimum Requirements	'Tailored' Minimum Requirements	Abolish Minimum Requirements	Set Maximum Requirements
Typical Tools	• 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

Traffic	**High**	⟷	**Low**
Housing Costs	**High**	⟷	**Low**
Pollution	**High**	⟷	**Low**

Making the Transition

- Manage spillover
- Give curbspace a value
- Popular alternatives – cash out, car-sharing
- Relate parking policies to community goals
- Stakeholder and community outreach

New Resources are Available

- "The High Cost of Free Parking"
- By Don Shoup, UCLA
- Top 100k on Amazon
- 576 pages
- $60 from APA
- Available here!

- "Parking Spaces / Community Places"
- By US EPA (and …)
- Not on Amazon, but just out!
- 70 pages
- Free from US EPA
- Available here!

For More Information

Contact:

Jeffrey Tumlin, Partner

Nelson\Nygaard
Transportation Planning for Livable Communities

Main Office:
785 Market Street, Suite 1300
San Francisco, CA 94103
415-284-1544
415-284-1554 (fax)

jtumlin@nelsonnygaard.com
www.nelsonnygaard.com

Chris Forinash

US EPA (for 3 more weeks)
forinash.christopher@epa.gov

After that, contact our main line:
202.566.2868
smartgrowth@epa.gov

epa.gov/smartgrowth

Getting Parking Right At Rail Stations

Jeffrey Tumlin, Nelson\Nygaard
Christopher Forinash, US EPA

Nelson\Nygaard consulting associates

EVALUATING PARKING AT TRANSIT 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

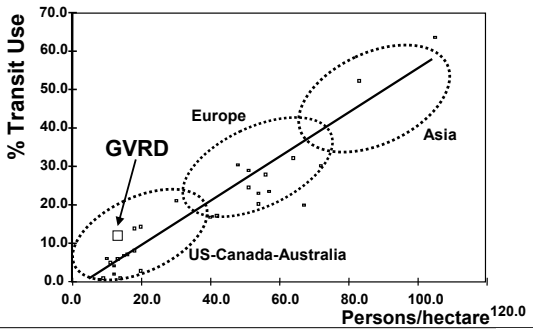
STRATEGIES FOR REDUCING TRANSIT PARKING

- 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

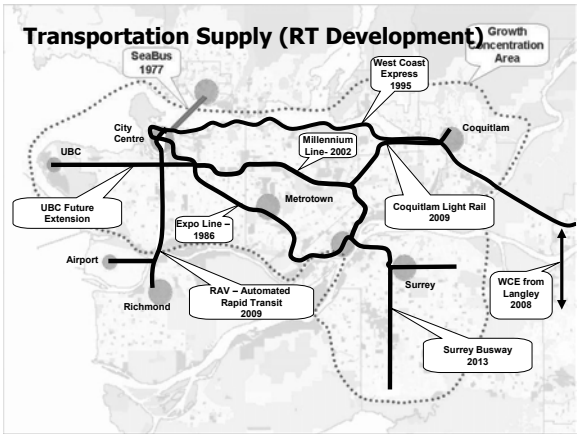
Nelson\Nygaard consulting associates
Getting Parking Right -- New Partners for Smart Growth, 1/28/06
Jeffrey Tumlin, Nelson\Nygaard, and Christopher Forinash, US EPA

TRANSLINK SKYTRAIN SYSTEM

Land Use Density and Transit



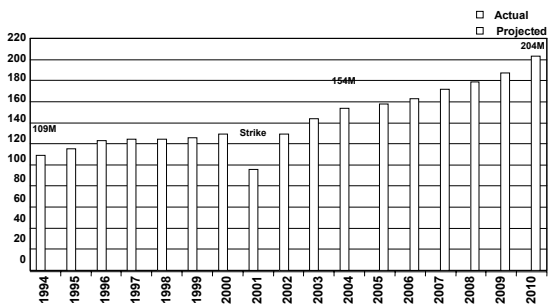
Transportation Supply (RT Development)



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

Transportation Demand



ARLINGTON COUNTY

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

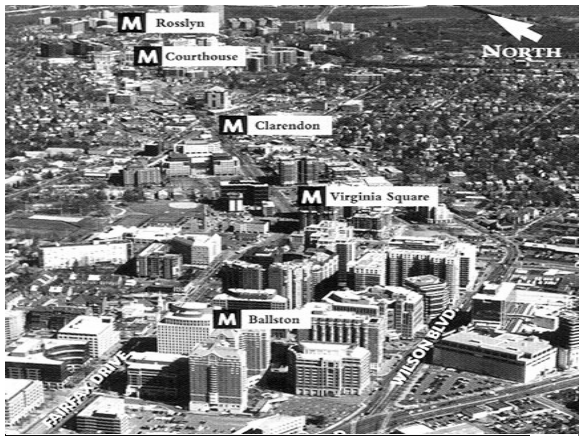
- 5 urban villages developed around Metro stations in the Corridor
  - 3 miles long and 2 square miles in area
  - Medium-high density mixed use villages
  - Surrounded by well established low-moderate density neighborhoods
- Supported by multimodal transportation facilities
  - Walkable, pedestrian/bike-friendly 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

Development Patterns, 1960s – 1970s

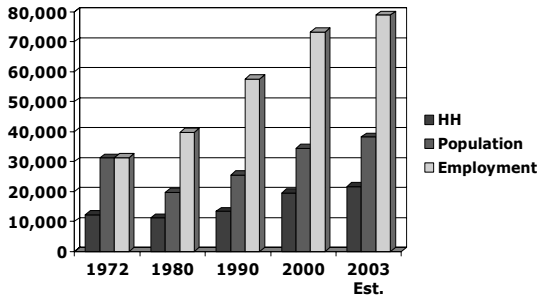
- Loss of status as Northern Virginia's main retail district
  - Declining retail sales
  - Declining population as families moved to the suburbs
  - Disinvestment in residential neighborhoods, absentee landlords, land speculation
- New shopping centers emerging instead in Fairfax County
- Large scale office development and increasing employment in Rosslyn

Redevelopment Initiative

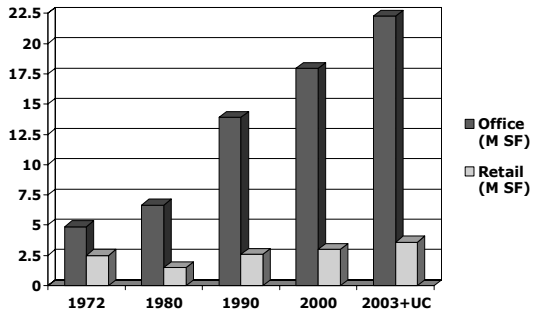
- Use Metrorail transit investment as catalyst for intensive redevelopment of the commercial spine of central Arlington
- Concentrate density and promote mixed use at 5 stations
  - Rosslyn, Courthouse, Clarendon, Virginia Square, Ballston
- Taper development down to adjacent neighborhoods
- Preserve and reinvest in established residential neighborhoods adjacent to the corridor



Household, Population & Employment Trends

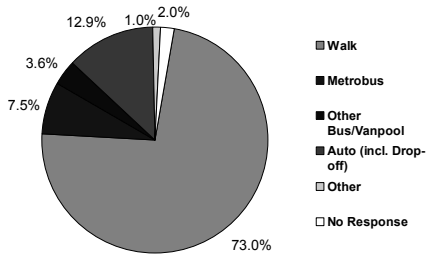


Commercial Office & Retail Development



Metrorail Access at 5 R-B Corridor Stations

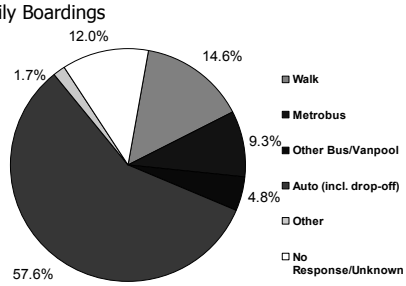
39,500 daily boardings



Source: WMATA May 2002 weekday Metrorail ridership and access data

Metrorail Access at 4 Orange Line Stations

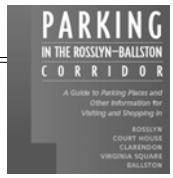
29,250 Daily Boardings



Sources: WMATA May 2002 weekday Metrorail ridership and access data

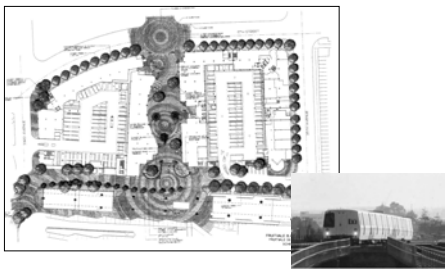
No Park-and-Ride

- 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



South Hayward BART Station Study

Transit-Oriented Design Plan



South Hayward BART Station Study

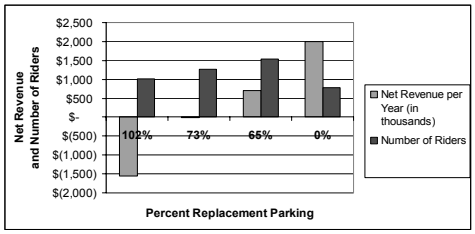
Reducing Replacement Parking

- Benefits:
  - –BART's surface parking lots represent prime transit-oriented development sites
  - –Ridership growth can be achieved through transit oriented development
  - –Existing parking does not fill up.
  - –Expensive costs of providing parking can be used for access improvements instead.
    - –Annual cost per surface space: $353.04
    - –Annual cost per structure space: $537.62
- But - BART has commitment to existing riders

South Hayward BART Station Study

Net Revenue and Ridership Effects of Reducing Replacement Parking

Analysis using Richard Willson's, *Replacement Parking for Joint Development: An Access Policy Methodology*.



BART Access Policy Methodology

- Addresses key barrier to joint development – replacement parking
- Analyzes ridership and revenue impacts of different scenarios
- Provides quantitative answer: does more joint development outweigh reduced parking?

Example: South Hayward

	Scenario A – Maximized Parking	Scenario B – Lower Parking Ratios	Scenario C – Maximized Density
Gross density (units/acre)	**56**	**77**	**100**
Residential parking (spaces/unit)	**1.5-2.1**	**1.0-1.3**	**1.0**
% replacement parking	**102%**	**73%**	**55%**

Example: South Hayward

- Step 1: Assess ridership change

Example: South Hayward

	Scenario A – Maximized Parking	Scenario B – Lower Parking Ratios	Scenario C – Maximized Density
New riders from TOD	798	1,047	1,324
Riders lost from reduced parking			
Net change in ridership			
Net fare revenue			

Example: South Hayward

	Scenario A – Maximized Parking	Scenario B – Lower Parking Ratios	Scenario C – Maximized Density
New riders from TOD	798	1,047	1,324
Riders lost from reduced parking	0	76	291
Net change in ridership			
Net fare revenue			

Example: South Hayward

	Scenario A – Maximized Parking	Scenario B – Lower Parking Ratios	Scenario C – Maximized Density
New riders from TOD	798	1,047	1,324
Riders lost from reduced parking	0	76	291
Net change in ridership	798	971	1,033
Net fare revenue			

Example: South Hayward

	Scenario A – Maximized Parking	Scenario B – Lower Parking Ratios	Scenario C – Maximized Density
New riders from TOD	798	1,047	1,324
Riders lost from reduced parking	0	76	291
Net change in ridership	798	971	1,033
Net fare revenue	$637,000	$776,000	$826,000

Example: South Hayward

- Step 1: Assess ridership change
- Step 2: Assess land value and parking costs

Example: South Hayward

	Scenario A – Maximized Parking	Scenario B – Lower Parking Ratios	Scenario C – Maximized Density
Land Value	**($7,770,000)**	**$15,332,000**	**$15,242,000**
Replacement parking capital costs			
Net ground rent after replacement parking			
Reduction in parking operations costs			

Example: South Hayward

	Scenario A – Maximized Parking	Scenario B – Lower Parking Ratios	Scenario C – Maximized Density
Land Value	**($7,770,000)**	**$15,332,000**	**$15,242,000**
Replacement parking capital costs	**$32,424,000**	**$22,932,000**	**$18,144,000**
Net ground rent after replacement parking			
Reduction in parking operations costs			

Example: South Hayward

	Scenario A – Maximized Parking	Scenario B – Lower Parking Ratios	Scenario C – Maximized Density
Land Value	**($7,770,000)**	**$15,332,000**	**$15,242,000**
Replacement parking capital costs	**$32,424,000**	**$22,932,000**	**$18,144,000**
Net ground rent after replacement parking	**($4,019,000)**	**($760,000)**	**($290,000)**
Reduction in parking operations costs			

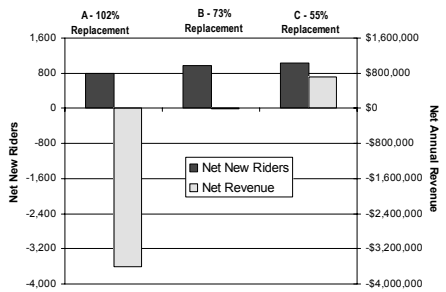
Example: South Hayward

	Scenario A – Maximized Parking	Scenario B – Lower Parking Ratios	Scenario C – Maximized Density
Land Value	**($7,770,000)**	**$15,332,000**	**$15,242,000**
Replacement parking capital costs	**$32,424,000**	**$22,932,000**	**$18,144,000**
Net ground rent after replacement parking	**($4,019,000)**	**($760,000)**	**($290,000)**
Reduction in parking operations costs	**($218,000)**	**($36,000)**	**$72,000**

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



Example: South Hayward

- Step 1: Assess ridership change
- Step 2: Assess land value and parking costs
- Step 3: Assess total costs and benefits
- Step 4: Develop preferred scenario (in progress)

South Hayward BART Station Study

Results of Replacement Parking Analysis:

- More ridership will be generated if less land is occupied for replacement parking.
- The cost of building replacement parking is expensive. BART generates more net annual revenue the less replacement parking built.
- Improving pedestrian, bike and bus access to the station will increase ridership.

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

1. Calculate Cost per Rider by Access Mode

Parking

- Take land cost. Divide by ~100 spaces an acre for surface parking, or (100 x 0.8 x floors of structure) for structured parking.
- Amortize over useful life: ~30 years
- Add ongoing maintenance, lighting, insurance, security, etc:~$150 per space per year
- Total: Typical: $1,500 per space, or $6 a day. Up to $20 a day in urban areas.

1. Calculate Cost per Rider by Access Mode

Feeder Transit cost per Net Rider

- Look at cost per existing rider for key feeder bus lines
- Look for bus lines that suffered service cuts. Take cost saving from service cut and divide by lost riders. This is same as cost per net new rider for service improvements.
- Typical in urban area: under $3

2. Calculate net Revenue per Rider

- Peak period, peak direction trips create huge net costs to transit systems with capacity problems
- For reverse peak, off-peak trips, fare revenue is pure "profit," allowing agency to keep overall fares lower.

3. Examine Ridership and Revenue from JD

- Does local jurisdiction allow sufficient density and minimize parking requirements for TOD?
- Is the development market ripe for TOD, or wait for next cycle?
- Calculate density of JD necessary to replace riders lost from displaced parking
- Examine new ridership that would be off-peak and reverse peak

4. Examine Social Justice Impacts

- If we have a limited amount of transit subsidy, where should we spend the money?
- Subsidize all access modes equally on a cost per passenger basis
- Subsidize access modes in a way that best achieves other local objectives, like economic development
- What about people who have no option for accessing the station other than driving?
- Rail transit cannot afford to serve everyone.
- We can justify extra subsidies to support

4. Examine Social Justice Impacts

- What about people who have no option for accessing the station other than driving?
- Rail transit cannot afford to serve everyone.
- We can justify extra subsidies to support disadvantaged populations – but why raise fares for low-income urban riders to subsidize high-income sprawl residents? This merely promote sprawl, auto-dependence and social injustice.

5. Examine other impacts

- Traffic
- Air quality
- Economic development potential
- Sustainability
- Etc.

6. Communicate

- We subsidize parking because rail agencies are dependent upon affluent, white suburban voters.
- Jurisdictions that have reduced parking and increased system productivity have only done so after extensive community engagement.

For more information

Contact:

Jeffrey Tumlin, Partner

Nelson\Nygaard
Transportation Planning for Livable Communities

Main Office:
785 Market Street, Suite 1300
San Francisco, CA 94103
415-284-1544
415-284-1554 (fax)

jtumlin@nelsonnygaard.com
www.nelsonnygaard.com

Chris Forinash

US EPA (for 3 more weeks)
forinash.christopher@epa.gov

After that, contact our main line:
202.566.2868
smartgrowth@epa.gov

epa.gov/smartgrowth