Getting Beyond the Buzzword
New Rules of Thumb for TOD & Transit

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Overview

- Beyond myths
- TOD principals
- Creating value
- TOD market
- Case studies
- Transit design
- Conclusions

In all fairness I chose to note much of the work shown here I developed during my time at Parsons Brinckerhoff.
Development next to transit is TOD
TOD or TAD?

Transit-Oriented Development or Transit Adjacent Development

- Majority of development at US transit stations are not TODs
- TOD is still illegal in at most of US transit stops
- Not enough to be next to transit, must be shaped by transit
Shaped by Transit

- Greater density
- Less parking
- Better public realm
- Mix of uses
- Very walkable
- Tame the car

San Diego, Portland, San Francisco, Washington, DC, Denver
Orenco Station

Fundamentals for TOD ~ a great neighborhood

- Safe streets
- Strong center
- Local services
- Parks & open space
- Housing choices
- Good jobs
Transit enables TOD
Retrofit Stations for TOD

- Transit designed around the car
- 3,072 surface parking spaces
- Station opened in 2001
- Design precludes TOD
- Designated a Metropolitan Center
- Retrofit plan for station
  - All transit functions
  - Plus TOD

WMATA’s Branch Avenue Station
Link to a Broader Strategy

**TOD: a “means to an end” to achieving community objectives**

- More than transit
- Part of community’s vision for growth
- Building partnerships essential
- Basis to gain greater broader support & success

State Center TOD Strategy, Baltimore MD
Understanding your market

- **Emerging Trends in Real Estate ‘10:**
  - "The future is about green development, infill, and TOD"

- Majority of TOD residents are childless
  - Empty-nesters & young urban professionals

- TOD households tend to be higher income
  - Reflects newer construction
Millennial’s Want Urban

2011 National Association of Home Builders:

- 88% of Gen Y want to be in an urban setting
- 1/3rd willing to pay for the ability to walk
- Huge market: 80m Gen Y v 76m Boomers
Decline in Families w/ Children

- 30% of US housing demand
  - Dense, walkable, mixed-use communities
- Today less than 2% of housing

50% of households

33% of households

12% of households

1950  2000  2010 - 2030
Kids are deferring driving

- Large decline in teens with drivers licenses.
- 1978-2008:
  - 16 year olds: -38%
  - 17 year olds: -35%
  - 18 year olds: -21%
  - 19 year olds: -16%

What is the new cool? Is social networking changing the role of the car for kids?
Residents Near Transit Want

From Transit Community Resident Surveys:

- Well designed communities
- Easy access to a center
- High quality residence
- Quality transit service
- Pedestrian Friendly
- Good price value

“The ability to walk to a pint of milk”

The Merrick

Orenco Town Center
This is a great TOD project
Active defined center

- Series of projects
- 18 hours of activity
- Quality public realm / sense of place
- Employment closest to transit
- Compact & dense
TOD: District not a Project

Orenco Station

This

The Round

Not This
More than a Parcel, More than a Project

- Create a walkable district
  - Area w/in a 5 minute walk
  - Approximately 125 acres
  - Walkable complete community
- Most “TODs” don’t meet this standard
  - Requires broader strategy, cooperation
  - Understanding the bar needs to be higher
Mission Bay
San Francisco

- Mission Bay redevelopment
- University Campus
- High Density Housing
- Mixed-use
- Station at SF Giants ball park
TOD needs less parking
Limited, managed parking

- Always a challenging issue
- Consider: size, location, design & management
- No minimum ratios, maximums
- Disconnect parking from buildings, manage by district
- Park ‘for sale’ nearly conventionally
TODs create less traffic

- TOD residents are:
  - Twice as likely not to own a car as US Households
  - 5 times more likely to commute by transit than others in region

- Self-selection:
  - Responsible for up to 40% of TOD ridership bonus

Rio Vista, San Diego
Columbia City, Seattle
TODs behave Differently

Daily car trips for 50 dwellings

- SF: 500
- MF: 333
- TOD MF: 177

TOD housing generates 50% less traffic than conventional housing
TOD
MYTHS

TODs maximize mixed use
Principles for TOD

Mix of uses

- Planners require it too often
- Vertical or Horizontal
- Most difficult TOD element
- Great TOD benefits
  - More walking + ridership
  - Reduced auto-use
- Prohibit auto-oriented uses closest to transit
Pearl District Portland

- Mixed-Use TOD
- Public & private partnership
  - Housing
  - Infrastructure
  - Parks
- Since 1997
- $1B+ Development
- 3,000+ units
- Tight parking
- 25% affordable
TOD MYTHS

Density makes TOD viable
Principles for TOD

Medium to higher density

- Greater than community average
- Distance to transit matters
- To support transit on average:
  - 6 to 7 du/ac for frequent bus
  - 9 to 25 du/ac for rapid transit
- Minimum density effective tool
Market Common
Clarendon, VA

- US Best practice
  - 240k retail
  - 100k office
  - 300 apartments
  - 87 townhomes

- Opened in Nov ‘01
  - 100% leased

- Worked closely with neighborhoods
“Ideal TOD” reduces developer profit

Will Flessig’s analysis:

Developer decision model:

- **Investor Willingness to Fund:**
  - Willing (green)
  - Unwilling (red)

- **Return on investment**
  - 25%
  - 20%
  - 15%
  - 10%
  - 5%
  - 0%

- **Weak Market**
- **Strong Market**

- **Suburban developer profit**
- **TOD developer profit**
- **TOD developer profit with “Ideal TOD” zoning**
- **Lower revenue degrades profit**

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Transit Alone Does Not Create Value

Value results from:

- Overall development market
- Land available for development
- Supportive plans & policies
- Designing transit for value
TOD & Property Values

- **Washington, DC**
  - + $2 to $4 per foot for commercial

- **San Jose**
  - + 23% for commercial

- **Portland**
  - + 10% rent premiums

- **Dallas**
  - + 39% for residential
  - + 53% for office values
Transit Rent Premium

- Locations within ½ mile of transit command much higher rents
- Washington D.C.  
  +28% rent premium
- Northern Virginia & Montgomery Co  
  + 40% rent premium

CoStar Group 2011
½ mile is the TOD walkshed
Principles for TOD

Compact pedestrian-oriented

- Block sizes for 5-minute walk
  - Max of 400 ft block face
- Orient buildings to sidewalks
- Calm streets
- Active street edges with wider sidewalks
- Retail & office closet to transit
Distance & Mode Share

WMATA Survey – transit share decreases with distance

- First 600 ft really matters
- Office mode share drops about 1% every 100 ft
- ½ mile residential share 200% higher than office

Lesson: put office & retail closest to station

<table>
<thead>
<tr>
<th>Distance from Station</th>
<th>Metrorail Mode Share</th>
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<tbody>
<tr>
<td></td>
<td>Office</td>
</tr>
<tr>
<td>At Station</td>
<td>35%</td>
</tr>
<tr>
<td>1/4 mile</td>
<td>23%</td>
</tr>
<tr>
<td>1/2 mile</td>
<td>10%</td>
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</tbody>
</table>
Rule of Thumb v. Reality

- Mapping walk distance very different than radius
- Can you really get there
- Between 1/4 & 1/2 mile share of riders walking drops by 50%
- 10% increase in distance = 10% decline in ridership

Actual Walk Distance
- 0-600 ft
- 600 ft – 1/4 mile
- 1/4 mile – 1/2 mile

Century City Station Options
Los Angeles
getting the planning right is sufficient
Keys To TOD Success: Implementation Focus

- Planning based in development reality
- Apply the power of partnerships
- Market driven, not transit driven TOD
- Designed for the pedestrian

41st & Fox Commuter Rail Station Denver
TOD Typology
Successful TOD at Many Scales
Vision for what you want

Overlake Transit Village, Redmond, WA
Clear path & roles to get there

phasing

2012

refined plan

site control:
- initial streets
- vault

infrastructure:
- transit
- street

catalyst project
- opportunity sites

pedestrian bridge

future development

partnerships

2012

city of redmond implementation team
sound transit
landowners
development community
key stakeholders

2023

* dashed lines indicate on-going processes

Overlake Transit Village, Implementation Plan, Redmond, WA
These ideas won’t work here.
Firm base to draw on

- Market preference for urban housing
- Lot’s of experience to draw from
- Demographics trends are favorable
- Federal policy support

**US TOD SNAPSHOT**

- Portland: $11B+ TOD
- Denver: 13k TOD Units
- Minneapolis: $750M TOD
- Hudson-Bergen: $5B Housing
- Los Angeles: 150 TODs
- San Diego: 16 TODs
- Dallas: $4.7B TOD
- Baltimore: $1B+ TOD
- Charlotte: $1.5B TOD forecast
We need rail before we do TOD
Don’t need to wait for transit

Same planning & development fundamentals apply

- Transit-Oriented
- Pedestrian-Oriented
- Development-Oriented
With New Starts
Land Use Matters Even More

TEA-21
- Congress raised the land use bar
- Land use 40% project justification

MAP-21
- Congress raised the land use bar further
- One of three key factors
TOD EVOLUTION

The TOD plan

Rail + walkable streets

Parks + TOD demonstration project

Built TOD district
Locate stations for TOD
TOD corridor strategy
Undertake Station Area TOD Plans
Final Design/Construction

- Refine transit design / acquisition for TOD
- Closely working with developers
- Adopt TOD plans, zoning
What Development Happens When

- Planning / Advocacy / Education
- Land speculation
- Initial TOD response
What Development Happens When

- Gov’t encourages TOD
- More modest residential TOD
- Pilot projects push performance
What Development Happens When

- Specialized TOD Dev’lpers emerge
- Broader pattern of TOD
- TOD communities

Favored corridor

City Center

Neighborhoods

Later Operations

20 YRS

TOD

Faux TOD

placemaking group

parsons

placemaking pb

• Specialized TOD Dev’lpers emerge
• Broader pattern of TOD
• TOD communities
Who :: What :: Where :: When
Great places are defined by great streets.
TOD streets

TOD streets and right-of-way diagram

- Potential TOD
  - Active GF Use
  - Bus Shelter
  - Sign

- Station

- Potential TOD
  - Active GF Use
  - Bus Shelter
  - Sign

- Reduce Turning Movements (if possible)

- Wayfinding
  - Clearly Marked Pedestrian Crossings

- Wide Sidewalks & Attractive Streetscaping
Circulation in a TOD

- Context sensitive
- Lower speed
- Small block size – 400 x 400 max
- Favor active uses
- Seamlessly connect TOD to community
Leverage transformative change
Winning Region, Transit Region

transit + land use transformative

Vancouver, BC
Vancouver, BC

_The Economist:_ World’s most livable city, 6 years in a row

- 10 years:
  - total trips up **23%**
  - vehicle trips _down 10%

Compact growth at stations:

- +11,500 high density dwellings 1981 – 2006
- $5 B private investment 1981 – 1989
Revitalized, Growing Transit City

transit + land use

transformative

Washington, DC
Washington, D.C.: Transit City

- Today a **majority of all trips w/out a car**
- New growth focused around transit
- Reversed decades of decline
  - Policy goal: 100k new residents @ stations
  - Gained nearly 30k residents in the last decade
Livable, Sustainable, Desirable

transit + land use
transformative

Rosslyn-Ballston, Virginia
Rosslyn Ballston Corridor

51.1% non-auto trips

- Travel 1996-2006
  - Arterials +.05% per year
  - Transit +37%

- Development 1970 - 2006
  +15m sq ft office
  +2m sq ft retail
  +19,000 residential units
  $12.7B invested
Four steps to transformative change
Transformative Planning Steps

1. Density to urbanity
2. Separation to mix
3. Sites to districts
4. Hard & illegal to legal & easy
Four things you can do

1. Density to urbanity
   - Change the conversation, from density to urbanity
   - Generally denser + transit-shaped
   - Parking is key, about less, not about more

2. Separation to mix

3. Sites to districts

4. Hard & illegal to legal & easy
Arlington Heights IL.

- Revitalized Downtown
  - ‘suburban Chicago’
- New Metra Station
- Performing Arts Ctr
- Structured Parking
- Main street retail
- High Density Condo’s
  - Retail below
Four things you can do

1. Density to urbanity
   - Become an 18 hr city
   - Mixed use corridors & nodes

2. Separation to mix
   - Add urban living infrastructure

3. Sites to districts
   - Calm your streets, walking / cycling #1

4. Hard & illegal to legal & easy
Pentagon Row
Arlington, VA

- $92m project
- 18-acres
  - 504 Apartments
  - 300k retail
- 85% parking underground
- Grocery store
Four things you can do

1. Density to urbanity
2. Separation to mix
3. Sites to districts
4. Hard & illegal to legal & easy

- 20-minute neighborhoods - walk to what you need
- Shift the scale of planning, create places
  - Focused TOD plans v broader community plans
Pearl District, Portland

- ‘92 River District Plan
- ‘97 Master Dev’lp Agreement
- ’97 1st new housing
- ‘01 Streetcar
Four things you can do

1. Density to urbanity
2. Separation to mix
3. Sites to districts
4. Hard & illegal to legal & easy

- Transparent planning
- TOD plans for all rail stops & major bus corridors
- Make TOD an outright permitted use
Westside Subway Extension

City of Los Angeles Stations:

- Keeping density at planned levels
- No change to single family
- Apply Rosslyn-Ballston TOD strategies

Compared to trend, on average results in:

- Vehicle travel reduction of nearly 20%
Transit Station Design. We must do much better.
Making it all work

No one right solution for each place

- Bus transfer
- ROW takes
- Platform location
- Kiss & Ride
- Parking
- Joint Development
- Pedestrian access
- Station as place
- Station entry
Automobile oriented transit
Development oriented transit
Making transit behave

- Design great transit & great places
  - Keep vision in mind, not the automobile
  - Break the mold
  - Look outside the ROW

- Balance “place” and speed
  - Create a great destination
  - Going nowhere fast has little value
Development-Oriented Transit “DOT”

- Transit designed with development in mind
  - Corridor selection
  - Station function
  - Pedestrian access
  - Parking location
  - Community partnerships
  - Incorporate TOD
DOT Checklist:

- Typical issues to address
  - Is the station located in an area with development potential?
  - Does the design allow for pedestrian connections?
  - Is transit well connected into the community?
  - Is TOD incorporated into the design?
Baltimore DOT Principles

1. Shape the Future
2. Locate Your Identity
3. Transit Stations as Landmarks
4. Connect Communities with Transit
5. Be a Good Neighbor
6. Compliment Community Objectives
7. Connect Places with Walking
8. Pass the Test of Time
9. Attract New Riders
10. Create Partnerships
Make a Place  
Connect to Community  
Make Transit Work  
Make Transit Work  
Make a Place  
Connect to Community  
Connect to Community  
Make Transit Work  
Make a Place
Community

Arrival Place

Transit

Community

Arrival Place

New Carrollton TOD Master Plan
Thinking about stations
What is a Station?

Minimum building blocks of a station:

- 12’+ Platform
- Shelter
- Bench
- Lighting
- Information
- Trash can
- Safe
Station Location Considerations

- **Proximity** to uses that generate ridership
- Direct **accessibility**
- Safety and **security**
- **Visibility** to users
- System **connections**
Place Making at Stations

Places to come back to, not just to leave from

- Four different strategies:
  - Station as a place
  - Station invisible to complement place
  - TOD defines place
  - TOD serves as place
Designing transit for development
Fruitvale Transit Village

- Joint Development of BART parking
- Transit center one side, development other
- Revitalized low-income community
- Calmed major arterial
Fruitvale Transit Village

- Full service transit
  - Rail Station
  - Bus transfer
  - Park & ride
  - Kiss & ride
Fruitvale Transit Village

Community developed TOD

- Community Center
- Affordable & senior housing
- Medical Clinic
- Retail

Pedestrian Spine
Development Zone
Where to put the train?
Freeway Stations

- Most problematic for TOD
- Center worst possible station location
  - Limits walkable area to transit
  - Increases hostile environment
- Stations at edge of freeway or away from interchange optimum
Arterial Stations

- Works well for TOD
- Calming arterial key to creating TOD
  - Busy streets limit walkable area
- Stations away from major intersections optimum
- Arterials near freeway interchanges problematic
Railroad ROW Stations

- Can work very well for TOD
  - Bring TOD right to station
- Challenge of accessibility
  - Road & pedestrian access can be difficult
- Older industrial uses may be a challenge

Portland Railroad ROW TODs
Transit & Great Places

- Solve for Transit + Development
  - Active good places, walkable, mix of uses
- Inclusive process
  - Start early w/ DOT principles
- Station: most important place
  - People for activity
  - Unique address
Time Magazine highlighted my plan for Tysons Corner as one of “10 Ideas for Changing the World Right Now.”

Recycling the Suburbs

By BRYAN WALSH

Thursday, Mar. 12, 2009
Tysons Corner

- The original “edge city”
- Sprawl on steroids
  - Office equivalent of #12 US downtown
  - Massive congestion
- 4 Metro stations: 2013
- Assignment: transform Tysons into walkable mixed-use downtown

From suburban apocalypse to an active vital place?
If the old doesn't go, the new won't come.
Bold Transformation

- New plan & tools
- New land use plan
- New standards for streets
- New design guidelines
- New implementing authority
- New financial tools
- TOD demonstration projects
Parsons Brinckerhoff  I  PlaceMaking

Building the blueprint

Transforming Tysons
1. Intensity Around Transit

95% of growth within a 3 minute walk of transit
2. Redesign transportation

Balancing walking, biking, transit & cars
3. Emphasis on environment

A network of green across Tysons

160 acres of new parks & open space
4. Residential Across Tysons

Virtually all of Tysons would encourage residential
Recommended Plan

160% more development, 11% more congestion
Lower Carbon Footprint

Preliminary assessment:

- 175% increase in development
- Greenhouse Gas emissions 16% less per capita
- 2.5 billion lb reduction annually
- Results from
  - Compact development
  - Fewer auto trips
  - Greater transit use

Daily CO2 Per Capita

<table>
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<th>Base Case</th>
<th>Prototype B</th>
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<tbody>
<tr>
<td>43 LBS</td>
<td>36 LBS</td>
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</table>
Paying for Tysons

- More density + more amenity
  - Transit / open space / civic uses / affordability / walkable streets
- Developer contributions + public finance
  - Exactions / tax increment
Dulles Phase I Special Improvement District

- Encompasses Tysons Corner and Wiehle Avenue
  - More than 6,600 businesses
  - $200 million in taxes
  - $100 million in property taxes

- Contribution to the Metrorail
  - Capped at $400 million
Keys to private funding

- Must be enough private value
- Motivation not transit
- Developers need transit to support impacts of growth
- Need enough development rights to cover the exactions
Tysons Transformed

- Better, not just bigger
- A top 10 US downtown
- A place people want to live
- Defined by green stewardship
- The civic heart of N. Virginia
- Built around transit & walking
A Plan of Distinction

- Singled out by KPMG as one of the 10 New and Extended Cities projects in the world.
- Time Magazine
  “10 Ideas for Changing the World Right Now.”
- American Planning Association’s 2011 Daniel Burnham Award.
  “APA’s most prestigious award”
Proof of the Pudding is in the Eating

- $400m private contribution
  - To build Metrorail

- Tysons East station Cityline Partners:
  - 21 new commercial and residential buildings totaling 8.5 m sq ft.

- Tysons West station The Georgelas Group:
  - 14 new residential, office & retail buildings totaling 5 m sq ft.
“This is going to be the model of how we transform King of Prussia, Perimeter Center, Costa Mesa down in Orange County, California. But you’re going first.”

National Public Radio, 12.10.08
Tysons Strategy

- 95% of growth near transit
- Mixed-use communities
- Preserve single family
- Transform streets
- TOD demonstration projects
- Mixed income housing

The implications of this redevelopment project stretch far beyond Fairfax County, as suburbs and exurbs across the country look for ways to repair the damage from five decades of outward, rather than upward, expansion.

*Time magazine 6.9.09*
Community building + people moving

- Trends are on your side
- Plan for the pedestrian
- Leverage the power of partnerships
- Raise your aspirations
- Make TOD legal & easy
- Develop a strategy equal to the task