“VIVA TOD!”

Bus Rapid Transit and Smart Growth in York Region, Ontario

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A Case in Point:
Boston’s Silver Line

• Waterfront Segment: BRT rather than heavy rail.
• Washington Street Segment: BRT rather than light rail.
• In both settings, it’s the corridors, not the wheels.
• Early returns: TOD outcome similar if not identical to what would have occurred with rail.
Silver Line / Waterfront

- Strategic choice: heavy rail (Red Line Loop) with one mega-station vs. more versatile technology with multiple stations.
- 1990 decision: a BRT subway from South Station to the waterfront; everything within an 8-minute walk of a station.
- Splits into multiple surface routes, including Logan terminals.
- No ordinary bus: 60-foot articulated, dual-propulsion catenary / clean diesel; 90-second peak headways.
- Built through complex ROW and mitigation agreements involving Massport, Big Dig, World Trade Center, private owners.
## Permitted Mixed-Use TOD

<table>
<thead>
<tr>
<th>Tract</th>
<th>Sq. Ft.</th>
<th>Uses</th>
<th>Parking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commonwealth Pier and Massport / Fidelity Flats</td>
<td>2.4 million</td>
<td>World Trade Center, hotel, 3 office towers (2 built), public park</td>
<td>2,300</td>
</tr>
<tr>
<td>Massport Core Block and Remaining Comm. Flats</td>
<td>3.4 million</td>
<td>Manulife HQ, condos, hotel, major retail center</td>
<td>2,410</td>
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<tr>
<td>Fan Pier</td>
<td>2.7 million</td>
<td>Grand Hyatt Hotel, condos, office, retail, Inst. for Contemporary Art, public park</td>
<td>2,280</td>
</tr>
<tr>
<td>Pier 4</td>
<td>1.0 million</td>
<td>Office, hotel, condos, major restaurant, public park</td>
<td>1,200</td>
</tr>
</tbody>
</table>
TOD at Full Build-Out: The Fan Pier

Pier 4

Courthouse Station
TOD at Full Build-Out: Comm. Flats

Silver Line Way Station

WTC Station

T

Fish Pier

World Trade
Manulife HQ, World Trade Center, and Boston Harbor Residences
Silver Line / Washington Street

- Strategic choice: light rail (Green Line) branch vs. surface BRT.
- 1990 decision: surface BRT with future connections to downtown subway lines.
- Opened 2002; dedicated fleet of 60-foot articulated CNG buses now carries 14,000 daily riders.
- Similar features to York Region’s VIVA Phase 1:
  - Buses run in semi-dedicated right-hand lane.
  - Distinct brand in a highly legible corridor.
  - Limited number of stations, high-end with ITS displays.
The Payoff

- Extensive mixed-use TOD along the Washington Street Corridor.
- In the last six years:
  - over 3 dozen new and renovated buildings
  - nearly 2,000 new and renovated housing units
  - Over 65 new businesses and 500 new jobs.
- As much development as would have occurred with light rail.
Washington Street: Mixed-Use TOD
The York System: “VIVA”

- A multi-phase regional transit system designed to backbone York Region’s *Centres and Corridors* Smart Growth plan.
- Four corridors, 87 kilometers, ~60 stations, three direct intermodal connections to the Toronto subway system.
- A distinctly branded BRT system, convertible to LRT as future conditions warrant.
- A private Consortium implements planning, approvals, design-build, vehicle procurement, operating systems, and TOD.
- **Strategic challenge #1:** sell TOD on the strength of BRT.
- **Strategic challenge #2:** at $1.6B, turn TOD into value capture.
The VIVA Network

- Phased, incremental development.
- Corridors are more important than wheels.
Phase I: “Entry-Level” BRT

- Low-floor, wide-door Van Hool vehicles—both 40’ standard and 60’ articulated models.
- Distinct station stops with ITS displays and shelters.
- Off-board fare collection.
- Queue-jumper lanes with first-in-line signal priority.
- *Started Tuesday!*
Phase II: Full-Feature BRT

- All Phase I features, plus...
- Dedicated center-island running ways in most of network.
- To be phased in 2006-2012, at projected cost of CAD $1.6 billion.
- Projected daily ridership in 2012: 155,000.
Phase III: To Be Determined

- Based on conditions in 2011, Region will determine if and how to further change the system.
- New technological advances.
- Toronto subway system (TTC) may have been extended to meet VIVA at Vaughan or Langstaff.
- TOD and market demand may warrant conversion of high-density segments to light rail.
Why The Move to Higher-Order Transit?

York Region is Canada’s Fastest-Growing Municipality

York Region

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The Transportation Challenge

- Traffic is unsustainable **today** and growing every year.

- A sea change in commuting patterns...
  - **historic**: York Region to Toronto, bedroom-to-work
  - **emerging**: reverse commute and *intra-Regional* commute.

- There’s no New Starts Program in Canada—federal and provincial funding is ad hoc.
The Institutional Challenge

• Formed in 1990, York Region is one of Ontario’s six “two-tier” municipalities:
  ➢ transit and large-scale planning are Regional
  ➢ zoning, subdivision, and site plan control are local.

• A Region-wide TOD agenda requires unprecedented coordination:
  ➢ between governmental jurisdictions
  ➢ between government and the private sector.
The Smart Growth Challenge

• Dominant pattern: classic sprawl, with low-density, auto-oriented development.  But:

• Amid huge tracts of vacant land, “edge city” conditions are starting to appear.

• “Heritage Corridor” Main Streets ripe for new transit.

• Since the 1990s, a growing appetite for clustered, higher-density housing.
Some “Edge City” Formation (But Mostly in a Suburban, non-TOD Built Form)
Heritage “Main Street” Corridors: Yonge Street, Richmond Hill

Yonge as the Region’s “Main Street”

TOD Infill near Major Mac Station
A 1990s Post-Suburban Housing Form: Dense, Grid-Based, and TOD-Friendly
Cornell: A Planned New Urbanism Community in Markham
Large Tracts of Open Land: Where the Future Will Be Decided

Hwy 7 / 407 / 404

Hwy 7 & Leslie Avenue

Vaughan Corporate Center

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The Region’s Strategic Response
Building Blocks of Smart Growth

- 1994: Regional Official Plan
- 2002: Transportation Master Plan
- 2004: Centers and Corridors
- 2004: Provincial Government’s Places to Grow
- 2005: ROPA 43
The Core of the Vision:  

**Centres and Corridors**

- Virtually all development confined to “urban area” (pink).
- Four Regional Centres:
  - Markham Centre
  - Vaughan Corporate Centre
  - Richmond Hill Centre
  - Newmarket Centre
- Two Regional Corridors:
  - Yonge Street (reinforce historic north-south “Main Street”)
  - Highway 7 (intensify east-west “edge city” corridor)
- TOD the organizing principle.
Four TOD Strategies Have Emerged

1. TOD-Based Land Use Regulation
2. Master-Planned Transit Villages
3. Joint Development
4. Tax Increment Financing
TOD-Based Planning and Zoning
ROPA 43 Explicitly Implements Centres and Corridors. Highlights:

- Local Municipalities required to create or update their OP’s, Secondary Plans, Precinct Plans, and Zoning By-Laws; Region to play a guiding role.
- In addition to Regional Centres, local Municipalities are to designate Key Development Areas.
- Local plans must include specified TOD-based urban design guidelines.
- Target mode split for corridor transit use: 33%.
- Targeted intensification: at least 30% of all population growth must occur in built-up areas (Regional Centres, Local Centres, Key Development Areas).
- Targeted density for Regional Centres and Corridors: 2.5 FAR, with higher densities at stations. Density bonusing encouraged.
TOD Guidelines

- To be adopted by York Region in Fall of 2005.
- Will guide Regional reviews of all development applications and Zoning Amendments within 500 meters of a station.
- Will reflect five principles of TOD planning:
  - Compact development with greatest density at stations.
  - A rich mix of uses, at both the corridor-wide and station-area levels.
  - A vibrant, interconnected pedestrian environment.
  - Reduced parking, with necessary supply properly managed and designed.
  - Reinforcement of linear corridors, where applicable.
Master-Planned Transit Villages
Markham Centre

- A master-planned downtown on nearly 1,000 acres of greenfield.
- A Duany-based TOD plan, organized around a multi-station transit boulevard.
- Multiple developers; at full-build FAR of 2.5 to 4.0:
  - 14,000+ housing units
  - 8.4 million sf of office
  - 1.9 million sf of retail
  - 32,000 residents (25,000 new)
  - 31,000 permanent jobs

Town of Markham, overlay by author
1. Town Centre: Civic Venues, High-Density Housing (Tridel)
2. Liberty Square: High-Density Mixed-Use Adjoining Hotel (Liberty)
3. Downtown Markham (Remington)
Organizing Feature: The Transit Mall

- Street-level uses and urban design mean everything.
- Building placement is critical.
- Transit seamlessly connected to everything else.
- Parking is invisible.
- A conscious decision to place cars on a parallel roadway.
Markham Centre: A Model of Municipal Activism

• The Town saw a unique opportunity 15 years ago: Provincial release of “greenbelt” reserve; one developer (Remington) buys 250 acres.

• Revised their original 1994 Master Plan (already “new urbanist”) to explicitly embrace the York Rapid Transit Plan and TOD principles.

• Markham’s strategy: “The Town can’t be just a regulator!”
  ➢ Deliver and maintain infrastructure well above the suburban norm.
  ➢ Create a “town culture” that promotes high-quality development, rewards good proposals, and maintains stakeholder support.
  ➢ Use Town land to make a strategic difference—and be patient.
  ➢ Tackle the need for a TOD parking strategy head-on.
The Markham Centre Parking Strategy

The TOD premise: parking cannot be unlimited and free!

- **A bold regulatory premise:** a *maximum* of 2.5 spaces per 1,000 sf of office replaced a *minimum* of 3.0); a *maximum* of 1.2 spaces per housing unit replaced a *minimum* of 2.25.

- **A practical, phased-in approach:** more than 2.5 allowed in first phase of development, but only under an interim 3-year By-Law.

- **Public supply:** 2/3 of each project’s supply must be in structures; Town’s new *Parking Authority* will supply one-third to one-half of supply—enough to impact rates across the board.

- **Public-Private finance:** Authority proposes to provide parking at below-market cost, using TIF to fund the shortfall. Incentive for developers to preserve land, embrace shared parking.
Joint Development
A Valuable Tool for TOD and Funding

• Joint development: the subset of TOD in which the transit owner has a direct real estate involvement.

• Joint development enhances ridership, raises non-traditional revenues, and sets the standard for TOD by others.

• Unlike heavy rail, an on-street system—whether BRT or has limited joint development opportunities.

• The VIVA strategy:
  ➢ Create “DEVCO”: a dedicated development services corporation tied to the public-private partnership.
  ➢ Exploit those traditional off-street opportunities that do exist.
  ➢ Extend the reach of joint development by negotiated contributions.
  ➢ Attract investors to assemble and land-bank future development sites.
Langstaff North Terminal

- Intersection of the Yonge and Highway 7 VIVA lines.
- Key intermodal transfer to GO Transit Rail.
- Region owns terminal site, including air rights.
- Region land surrounded by Metrus residential, cinema, commercial, and parking.
- Strategy: negotiate a pooled land deal to create a mega-site with direct transit access.
Langstaff South O&M Depot

- Future site of main O&M facility, with VIVA service on Yonge Line.
- Location, location, location: nexus of Yonge Street, Highway 7, and the 407 Expressway.
- Today: a jumble of contractor yards, outdoor storage, building materials, etc.; landlocked by highway, rail line, and cemetery.
- Strategy: assemble full 37-acre site; conduct joint development analysis (uses and “visioning”); determine proper disposition model for surplus land, air rights, joint use, etc.
Steeles Avenue at York University

- Steeles / Jane / Keele corridor a focal point for Toronto, York U, York Region, TTC, City of Vaughan.
- York U a GTA-wide transit destination.
- Downsview / York subway extension is TTC’s #1 expansion priority.
- Vaughan has rezoned the corridor for high-density, mixed-use TOD.
- York Region owns a key 5-acre VIVA intermodal site at the epicenter.
- Strategy: leverage the Region parcel to maximize density at station and create a larger joint development interest.

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Tax Increment Financing
VIVA: A Case for TIF

- Phase II—the full BRT network—will cost CAD $1.6 billion, one-third each from federal, Provincial, and local sources.

- Other value capture tools are necessary but not sufficient:
  - Joint development is important for its own sake, but financially limited in a BRT or LRT on-street system.
  - Ontario Development Charges ("DC’s") already an important tool, but it’s a tax on development. If levied near stations: a disincentive. If levied away from stations, it’s heavy-handed.

- TIF is not a new tax—it’s what each owner would pay anyway.

- Ontario does not yet allow US-style TIF, but Provincial Government is expected to consider TIF enabling legislation in the near future.
VIVA: A Case for TIF (cont.)

Allocation issues:

- Because the Province gets 30-70% of property taxes, a TIF solution could help fund both local and Provincial shares; but...
- The Provincial share is used to fund public schools and may be difficult to carve out for transit.
- Local municipalities will want to use their own share for other infrastructure priorities.
- How much of the 500-meter “sleeve” is realistically achievable?

Financing issues:

- An “Ontario TIF Bond” would be a new product in the market—unfamiliar and not tax-exempt in Canada or the US.
- The “ramp-up issue” common to TIF financings could be magnified.
Variations on TIF Districts

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For the Crystal Ball

1. Will the five VIVA Municipalities conform their Land Use planning and zoning norms to Regional Policy?
2. Will the Provincial and federal governments fund their fair share of VIVA Phase II (the full-build BRT network)?
3. Will developers be sold on the locational and urbanistic foundations of TOD?
4. Will tenants, lenders, home-buyers, and consumers agree to downsize their appetites for parking?