Background on Infill Stations

– Infill stations are a recent trend for U.S. transit systems

– As urban economies have evolved to support less industrial activity, former industrial areas offer prime redevelopment opportunities

– Infill stations offer established transit systems a way to adapt to an evolving urban footprint, spark economic development, and gain ridership
Infill Stations and P3s

- Infill stations are a **cost effective** way to serve a new market (a private sector incentive) **without** extending the larger system footprint (a public sector incentive)

- These projects align with:
  - Private sector’s interest ➔ getting transit access to site of the development
  - Public sector’s interest ➔ increasing **ridership** & **utilization** of the system investment
Two Types of Infill Stations

– Infill stations are:
  • **New rail stations** built around an existing track between two standing stations, and also
  • A transformational investment in a long-established **transit hub with growth potential**
Five Infill Stations with P3 Involvement

– NoMa-Gallaudet U WMATA Station in Washington, DC*
– Assembly MBTA Station in Boston, Massachusetts*
– 30th Street SEPTA Station in Philadelphia, Pennsylvania**
– West Dublin-Pleasanton BART Station in Bay Area, California*
– RTD Union Station in Denver, Colorado**

* Pure infill station; ** Transformed hub
NoMa-Gallaudet U Station Timeline
Washington, D.C.

1998: Planners identify NoMa as prime area for redevelopment
1999: Action 29 Corporation founded
2001: Legislation creates special assessment district
2002: Station site groundbreaking
2007: NoMa Business Improvement District is founded
2007: U.S. Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) moves to NoMa
2008: Equal Employment Opportunity Commission relocates to NoMa
2010: Tax abatement put in place
2010: Harris Teeter supermarket opens
2011: Station renamed NoMa-Gallaudet U
2013: NPR relocates to NoMa

Note: All units are rounded
NoMa-Gallaudet U Station Before & After
Washington, D.C.

2000

2015

Main Developments:
- U.S. Bureau of ATF
- U.S. EEOC
- National Public Radio
- Google
- The American Psychological Association
- The Consumer Financial Protection Bureau
- Mathematica Policy Research
- Marriot Hotel
- Hilton Garden Inn
- Harris Teeter
- Several restaurants & coffee shops
- Multiple bank branches
Assembly Station Timeline
Boston, Massachusetts

1999: Ikea bought waterfront land
1999: a lawsuit from the Mystic View Task Force reclaiming the community access to the river

2004: Rezoned from BPA & IPEA to ASMD
2007-2008: Project ratified by MBTA and FTA
2011: Memorandum of Understanding between MBTA and Federal Realty Investment Trust (FRIT) approved
2011: Construction on Assembly Station begins
2012: FRIT bought land from Ikea
2014: Assembly Row opens in March
2014: Assembly Station opens in September
2014: AVA Somerville and Avalon at Assembly Square open
2014: Partners Healthcare begins construction of its new headquarters
2016: Partners Healthcare headquarters open

Recession
200 residential units
200 hotel units
2M ft² of office
Note: All units are rounded

September 18, 2017
Page 8
Assembly Station Before & After
Boston, Massachusetts

2010

2015

Main Developments:

• Assembly Row (retail, cinemas, restaurants)
• AVA Somerville
• Avalon at Assembly Square
• Partners Healthcare HQ
30th Street Station Timeline
Philadelphia, Pennsylvania

1998: Keystone Opportunity Zone program established

2002: Brandywine Realty Trust announces plan to build Cira Centre

2003: Construction starts on the Amtrak parking garage adjacent to Cira site

2004: Amtrak parking garage opens

2005: Cira Centre opens with pre-lease rate of 93 percent

2007: Old Post Office acquired by Brandywine Realty Trust

2004: Construction of Cira Centre begins

2010: Old Post Office renovated and renamed Cira Square, leased to IRS

2010: Cira Green completed

2012: Cira South announced

2013: Construction begins on Cira South – Evo Philly

2014: Construction begins on Cira South - FMC Tower

2016: Cira South - FMC Tower scheduled to open

Recession

200 residential units

2M ft² of office

Note: All units are rounded
30th Street Station Before & After
Philadelphia, Pennsylvania

2001

2011

Main Developments:
- Cira Centre
- Cira Square
- Cira Green
- Evo Philly
- Cira South - FMC Tower
Selected Metrics to Measure Station Success

– Current characteristics
  • Type of neighborhood
  • Construction/rehabilitation cost
  • Stakeholders
  • Funding sources
  • Diversity of development
  • Land to building value ratio
  • Capacity for new development
  • Jobs within 30-minute transit shed
  • Households in 30-minute shed earning more > the MSA median income
  • Employment by industry
  • Walk score

– Before/after station opening
  • Population density and growth
  • Employment density and growth
  • Transit options
  • Daily boardings and their growth

September 18, 2017
### Comparing Across Three Infill Stations

<table>
<thead>
<tr>
<th>Selection Criteria</th>
<th>NoMa-Gallaudet University</th>
<th>Assembly</th>
<th>30th Street</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transit modes</td>
<td>Heavy rail, bus</td>
<td>Heavy rail</td>
<td>Heavy rail</td>
</tr>
<tr>
<td>Location</td>
<td>Washington, D.C.</td>
<td>Somerville, Massachusetts</td>
<td>Philadelphia, Pennsylvania</td>
</tr>
<tr>
<td>Geographic region</td>
<td>Mid-Atlantic</td>
<td>Northeast</td>
<td>Northeast</td>
</tr>
<tr>
<td>Neighborhood type</td>
<td>Urban</td>
<td>Inner Urban Ring</td>
<td>Urban</td>
</tr>
<tr>
<td>Station construction/ rehabilitation cost ($ million)</td>
<td>$120 (2004$)</td>
<td>$56 (2011$)</td>
<td>N/A ($958 in new/rehabilitated development)</td>
</tr>
<tr>
<td>Main stakeholders</td>
<td>Private landowners; DC and federal governments; WMATA</td>
<td>Private developer; City of Somerville; MBTA; MassDOT; Boston MPO; EOHED</td>
<td>Private developer; Amtrak; Upenn; UCD; PennDOT</td>
</tr>
<tr>
<td>Main funding sources</td>
<td>Private funds (property tax revenue bond); private land donation; federal and district grants</td>
<td>Private funds (donation and property tax revenue bond); private land donation; state grant; federal grants</td>
<td>Private funds (investment); Amtrak land lease</td>
</tr>
<tr>
<td>Diversity of development (% commercial, residential, other)</td>
<td>12% commercial 42% residential 46% other</td>
<td>36% commercial 8% residential 56% other</td>
<td>16% commercial 24% residential 60% other</td>
</tr>
<tr>
<td>Land to building value ratio (&lt;1 means building is more expensive than land)</td>
<td>1.24</td>
<td>0.61</td>
<td>0.44</td>
</tr>
<tr>
<td>Capacity for new development: land availability (percent of total parcel land area classified as vacant or used as a parking lot)</td>
<td>14.26%</td>
<td>18.83%</td>
<td>6.97%</td>
</tr>
<tr>
<td>Jobs accessible within a 30 minute transit shed (2014)</td>
<td>1,050,317</td>
<td>825,390</td>
<td>695,386</td>
</tr>
<tr>
<td>Percent of households in 30 minute transit shed earning more than the MSA median income (2014)</td>
<td>&gt;37%</td>
<td>&gt;43%</td>
<td>&gt;23%</td>
</tr>
<tr>
<td>Distribution of employment by industry (2014)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Administration</td>
<td>34%</td>
<td>5%</td>
<td>19%</td>
</tr>
<tr>
<td>Educational Services</td>
<td>31%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Professional Services</td>
<td>15%</td>
<td>2%</td>
<td>22%</td>
</tr>
<tr>
<td>Health Care</td>
<td>8%</td>
<td>40%</td>
<td>11%</td>
</tr>
<tr>
<td>Entertainment and Food Services</td>
<td>4%</td>
<td>5%</td>
<td>18%</td>
</tr>
<tr>
<td>Retail</td>
<td>1%</td>
<td>35%</td>
<td>1%</td>
</tr>
<tr>
<td>Other</td>
<td>7%</td>
<td>10%</td>
<td>25%</td>
</tr>
<tr>
<td>Walk score (0-100) (2016)</td>
<td>93</td>
<td>88</td>
<td>90</td>
</tr>
<tr>
<td>9,583</td>
<td>16,032</td>
<td>2,982</td>
<td>3,088</td>
</tr>
<tr>
<td>Population density CAGR</td>
<td>5.86%</td>
<td>0.39%</td>
<td>1.25%</td>
</tr>
<tr>
<td>19,421</td>
<td>32,033</td>
<td>6,474</td>
<td>7,123</td>
</tr>
<tr>
<td>Employment density CAGR</td>
<td>5.13%</td>
<td>1.07%</td>
<td>1.02%</td>
</tr>
<tr>
<td>Transit variety (bus, streetcar, light rail, commuter rail, regional rail, metro, intercity rail)</td>
<td>WMATA Metrorail</td>
<td>MBTA T</td>
<td>Amtrak</td>
</tr>
<tr>
<td>1 Year CAGR</td>
<td>34.28%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Year CAGR</td>
<td>10.21%</td>
<td>N/A</td>
<td>1.80%</td>
</tr>
<tr>
<td>10 Year CAGR</td>
<td>15.54%</td>
<td>N/A</td>
<td>1.01%</td>
</tr>
</tbody>
</table>

September 18, 2017
Common Characteristics and Trends -- Before

- **Multi-year planning process** ranging from 6 to 15 years to station opening
- **Several parties**, public and private sector participation
- **Complex funding structures** including private sector capital investment
- Sites **originally industrial** with plenty vacant land available for new development
Common Characteristics and Trends -- After

- >40% of development types are **residential and commercial**
- >500,000 **jobs** available within 30-minute transit shed
- >37% of **households** in 30-minute transit shed around **new pure infill** stations earning more than the MSA median income; >23% around **transformed hubs**
- Employment distribution is **area specific**
- Dense TOD with pedestrian amenities key to **high Walkscore**
- **Progressive annual change** in population and employment density during 10 years
- Daily **boardings kept growing** after opening (10 years for NoMa and 30th Street Stations)
Thank You

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September 18, 2017