Better Buses Benefit Pennsylvania’s Cities

October 18, 2016
Bus Transit in Pennsylvania

- 26 Fixed-Route Bus Systems
- 3,000 revenue vehicles
- 7.3 million revenue hours of operation in FY2014
- 272 million individual rides in FY2014

Bus transit comprises most of the transit in Pennsylvania

- In FY2014, fixed-route bus service accounted for 75% of the revenue hours and 61% of the transit riders in Pennsylvania with other fixed route service provided by rail transit systems.
Disadvantages of Conventional On-Street Bus Service

- Lack of visibility, particularly for occasional transit users
- Limited or no amenities for transit riders
- Prone to delay in traffic which increases travel times
- Traffic delays lead to unreliable and uneven service
- Short spacing of bus stops reduces bus speeds
- High operating costs
- Poor image
- Difficult to capture the value of transit where development occurs in a corridor
Examples of Actions to Improve Effectiveness and Appeal of Bus Service

- Real-time schedule information (Nationwide)
- Transit Signal Priority (Chicago)
- Stations and bus shelters with amenities (Kansas City and Minneapolis)
- Off-board fare collection (Cleveland)
- Branding of vehicles, stations & signage (Eugene, OR)
- Dedicated transitways (Los Angeles)
- Stylized vehicles (Seattle and Las Vegas)
- Coordinating Transit-Oriented Development with bus rapid transit (Oakland, CA)
Wide Range of Applications

- Small and Large Cities (Fort Collins, Colorado and Chicago)
- Minimal investments and major projects (New York City Select Bus and Los Angeles Orange Line busway)
Three Pennsylvania Cities’ Approaches

• Philadelphia
  – Roosevelt Boulevard Route for Change – Dan Nemiroff, AICP, Southeastern Pennsylvania Transportation Authority

• Allentown
  – Enhanced Bus/Bus Rapid Transit Study – Owen O’Neill, Lehigh and Northampton Transportation Authority

• Pittsburgh
  – Downtown - Uptown - Oakland - East End Bus Rapid Transit – Justin Miller, AICP, City of Pittsburgh
IMPLEMENTING “BRT LITE” SERVICE ON ROOSEVELT BOULEVARD
ABOUT SEPTA

6th Largest

Area Population:

Coverage Area: 2,200 Sq. Mi.

Ridership:

6th Largest U.S. System

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ROOSEVELT BOULEVARD BASICS

- Proposed in 1903 as part of the City Beautiful movement.
- Connects the northeastern territory of the city to the central portion.
- Original sections completed between 1903 and 1914 at a cost of $3.5 million.
- Became part of the Federal Highway System in 1926 when the US 1 designation was added.
- Subsequent additions took the Boulevard into Northeast Philadelphia and Bucks County and led to road widenings and other improvements.
- Roosevelt Expressway constructed in 1961 to link Roosevelt Boulevard to the Schuylkill Expressway.
- One of the most congested roads in the United States.
- Two of the worst intersections in the U.S. (Red Lion and Grant).
CURRENT CONFIGURATION

ROOSEVELT BOULEVARD AT COTTMAN AVENUE

CURRENT CONFIGURATION

240' curb to curb
6 local traffic lanes
6 express traffic lanes
~ 70,000 AADT
Unsignalized
Mid-block crossings
Slip lanes for local/express access
Some grade separation
DIFFERENT APPROACH

Altinatives Development for ROOSEVELT BOULEVARD TRANSIT ENHANCEMENTS

- Local Bus
- Express Bus
- Branded Stations and Vehicles
- Mixed Traffic with Signal Priority
- Restricted use of Shoulders/Curb Lane
- Use of existing Center/Side Medians
- Physically Separated Busway
- Busway
- Better Bus
- Light Rail
- Heavy Rail

Investment Cost vs. System Performance
CURRENT TRANSIT CLIMATE

- APPROX 14,000 BOARDS/DAY
- 9 BUS ROUTES
- 200+ STOPS
- LOCAL & EXPRESS SERVICE
- STRONG RIDERSHIP IN BOTH DIRECTIONS
RECOMMENDATION – “ENHANCED BUS SERVICE”

- Wider Stop Spacing
- Frequent Service
- Business-and-Transit Lane

Frequent Service

Business-and-Transit Lane

Source: DVRPC, 2015
OTHER RECOMMENDED ENHANCEMENTS

Transit Signal Priority

All-Door Boarding

Real-Time Information
**STATION DESIGN – ENHANCED BUS**

Estimated Costs = ~$1,000,000
LONG-TERM RECOMMENDATION – FULL BRT

Estimated Costs = ~$50,000,000

Source: DVRPC, 2014
How to make infrastructure changes to property SEPTA does not own?

How to brand a new transit mode?

How to coordinate with other stakeholders, property owners, and the general public?

How to pay for the costs of design, construction, and operation?
Multi-modal in approach (car, ped, bike, transit)

Focus on transportation and economic development throughout the corridor and in the neighborhoods.

All major parties on the same page and at the table.

Big picture but with shorter-term actions.

Philadelphia’s Study for a Better Roosevelt Boulevard
3 Years
$3,000,000

Interim Action – Establishing Enhanced Bus Service on Roosevelt Boulevard.
OTHER ENHANCEMENTS

All-Door-Boarding pilot coinciding with large scale adoption of SEPTA Key (work done through TIGER grant, Spring 2017 announcement)
Covers construction of 10 stations on Roosevelt Boulevard – city only

Station design is a cooperative effort between City/SEPTA

Station must allow for "enhanced" and local service

Station design must include considerations for transferring services
ESTIMATED BENEFITS

Trip reduction time of 13 minutes (28%) off of current end-to-end runtime

Approx. 4,500 new riders a day,

Current Roosevelt Blvd Bus Ridership

Estimated Ridership with BRT-Lite Implementation

Balancing Local/Enhanced Service will allow us to run 30% more service for same cost
ONGOING ACTIVITIES

Station siting & design

- Operation Planning (schedules, balancing local vs. enhanced service)
  - 1/1/2016 - 12/30/2016

- Branding Development
  - 6/1/2016 - 10/31/2016

- Station Design/Engineering
  - 9/1/2016 - 3/31/2017

- Public Outreach
  - 2/1/2017 - 6/30/2017

- Construction
  - 4/3/2017 - 9/1/2017

- Implementation Phase
  - 5/1/2017 - 9/1/2017

TIGER Outreach: Phase 1
- CMAQ Grant Due

TIGER Outreach: Phase 2
- SEPTA 2017 Open House

TIGER Outreach: Phase 3
- Implementation

Outreach to property owners

Outreach to property owners

Branding of service

Operational planning
FUTURE EFFORTS

Finish implementation of FTC to Neshaminy Service (estimated for Fall 2017)

Improvements to FTC and Neshaminy Mall to support service

Planning work for lower portion of Roosevelt Boulevard* (EBS-B)

Future investigation into other appropriate corridors (BRT LRP)
THANK YOU
Lehigh Valley Enhanced Bus/Bus Rapid Transit Plan
Services

- **Fixed Route**: LANtaBus
  - 24 fixed routes, 65 peak buses
  - Approximately 18,000 trips per day
  - 9,000 work commutes
  - 9,000 trips for shopping, medical, other quality of life needs
  - 2,000 seniors daily

- **Paratransit**: LANtaVan
  - Operated by Easton Coach Company

- **Carbon County Community Transit (CCCT)**
Moving LANTA Forward Study

• 12 Year Strategic Vision

• Adopted 2010

• Three Elements
  • Service Plan
  • Marketing Plan
  • Land Use Outreach Tools
Why Moving LANTA Forward?

- Transit service levels have not kept pace with demand
- Residential and commercial development
- Goals of Regional Vision – LVPC’s *Comp Plan - The Lehigh Valley 2030*
  - Mitigate congestion and sprawl
  - Link land use and transportation decisions
  - Preserve open space and revitalize urban centers
- Organizational Vision – *LANTA Strategic Plan 2004-2015*
  - LANTA services should address changing mobility needs, support regional economic development and environmental goals
  - LANTA will play an important role in the region’s transportation network
Summary of Recommendations - Service Plan

- Core Service Improvement Plan
  - Improved frequency and span
  - Metro system re-design
  - Establishes hierarchy of corridors

- Expanded Service Coverage Plan
  - Network of satellite hubs
  - Flexible services connect to fixed route at hubs
  - Improved connections to commuter bus services

- Enhanced Bus Modes Plan
- Land Use Outreach
Enhanced Bus/Bus Rapid Transit Study

- Funded through congressional designation
- Study conducted by team led by AECOM Technical Services
  - HDR – Land Use Policy Research
  - Taggart Associates – Public Outreach
- Study commenced in summer 2012
- Numerous Advisory Committee meetings throughout process
- Two series of public meetings
- Revised Draft Final Report and Executive Summary submitted
Study Process

• Identified “Priority Transit Corridors” – 100’s routes
• Established overall goals of program
• Developed Evaluation Criteria based on:
  • Program goals
  • LANta Board of Directors and Study Advisory Committee input
  • Federal Transit Administration (FTA) required criteria for a BRT project
Study Process

- Identified Recommended
- Service Plan
- Roadway Treatments/Capital Plan
- Implementation Plan
Summary of Recommendations

• Two route system
Recommended Program of Treatments

• Improved Stop Amenities
• Bus Bulbs
• Queue Jumps
• Bus Lanes
• TSP
Phased Implementation Approach

- Phase I – Implement EBS 1 as local
- Phase II – Add limited stop service EBS 1
- Phase III – Implement EBS 2 between West Allentown and S Bethlehem
- Phase IV – Increase frequency
- Phase V – Add limited stop in Easton
- Phase VI – Add limited stop along EBS 2
Land Use Guidelines

• Plan recognizes that feasibility depends on land use
• Set of guidelines developed by HDR covering:
  • Density of employment/residential
  • Design elements
  • Pedestrian environment
• Guidelines for three development environments
  • Urban
  • Transitional
  • Suburban
Urban
Transitional
Transitional
Status

• Currently developing detailed service plan for Phase 1 for implementation late 2017/early 2018

• Developing branding scheme

• Developing coordinated implementation strategy for roadway improvement elements
Pittsburgh BRT
Project Coordination
Project Context
BRT: Travel Time Impacts

Wood St to Central Oakland

<table>
<thead>
<tr>
<th></th>
<th>Today (Average)</th>
<th>Today (Worst Case)</th>
<th>With BRT</th>
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</thead>
<tbody>
<tr>
<td>Waiting Time</td>
<td>2' 17&quot;</td>
<td>8' 37&quot;</td>
<td>5' 00&quot;</td>
</tr>
<tr>
<td>Travel Time</td>
<td>17' 16&quot;</td>
<td>25' 14&quot;</td>
<td>9' 43&quot;</td>
</tr>
<tr>
<td>Total Trip Time</td>
<td>19' 33&quot;</td>
<td>33' 51&quot;</td>
<td>14' 43&quot;</td>
</tr>
</tbody>
</table>

Average Time Savings: 4' 50"

Potential Time Savings During Peak Congestion: 19' 8"

About the Travel Time Estimates:

• BRT times based on current service configuration, but adding exclusive lanes
• Assumes off-board fare collection & all-door boarding
• Valid for either build alternative
  • * Could be slightly improved with Forbes Ave connection thru West Oakland

Wood St to Morewood (CMU)

<table>
<thead>
<tr>
<th></th>
<th>Today (Average)</th>
<th>Today (Worst Case)</th>
<th>With BRT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waiting Time</td>
<td>2' 17&quot;</td>
<td>8' 37&quot;</td>
<td>5' 00&quot;</td>
</tr>
<tr>
<td>Travel Time</td>
<td>23' 10&quot;</td>
<td>33' 14&quot;</td>
<td>14' 07&quot;</td>
</tr>
<tr>
<td>Total Trip Time</td>
<td>25' 27&quot;</td>
<td>45' 51&quot;</td>
<td>19' 07&quot;</td>
</tr>
</tbody>
</table>

Average Time Savings: 6’ 20”

Potential Time Savings During Peak Congestion: 26’ 44”

About the Travel Time Estimates:

• BRT times based on current service configuration, but adding exclusive lanes
• Assumes off-board fare collection & all-door boarding
• Valid for either build alternative
  • * Could be slightly improved with Forbes Ave connection thru West Oakland
Is it just about speed, speed, speed?

How can we make the most of the transit-oriented development opportunities available, with a strong equity focus?
WHAT IS AN ECOINNOVATION DISTRICT plan?

A community plan focused on equitable growth, economic development, and sustainability.

Centered around Uptown/West Oakland, this EcolInnovation District plan will be created WITH and FOR THE COMMUNITY. This includes ensuring that improvements in Uptown/West Oakland reinforce the work already underway in neighboring communities.
NEXT QUESTION:

HOW DOES THIS RELATE TO THE BUS RAPID TRANSIT (brt) PLANNING THAT began A WHILE AGO?

There was some planning for BRT but that process has been put on hold so that this community plan can shape potential transit improvements and not the other way around.

Planning for transit improvements will be folded into your vision for the community.
The UPTOWN / WEST OAKLAND area today is:

- 204 acres
- about 1,000 residents (not including students)
- 81 businesses
This map summarizes proposals from other plans that address uptown.
• while uptown is included in these plans, it is not the focus.
• this is an opportunity to specifically address the challenges facing uptown and its residents and businesses.
This is how much of the area is currently vacant.

VACANCY:
(Buildings + Land)

23% of Study Area
For years, property was acquired, buildings were demolished and lots used for this.

“all of this demolition is destroying the community”
In response, the city created the interim planning overlay district (IPOD) which prohibits the demolition of buildings AND CONSTRUCTION OF NEW SURFACE PARKING LOTS in the community.
So what about open space? Is there enough to meet the needs of all residents?
Simply put, no. There are larger parks nearby but very few in the community.
not just open space but landscapes that help to solve regular issues like flooding. Since there are steep hillsides, we should design to better manage stormwater.
HERE ARE the impacts. This is from a storm just TWO months ago.
But despite these challenges, the area has so much going for it, including historic buildings…
A committed group of active residents organizing for positive and inclusive change...
AND significant NEIGHBORHOOD assets. Here are just a few.
WE’VE LEARNED A LOT FROM A YEAR’S WORTH OF CONVERSATIONS

OUTREACH SUMMARY (TO DATE)

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
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</thead>
<tbody>
<tr>
<td>Public Event Attendees</td>
<td>400</td>
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<tr>
<td>Focus Group Meetings</td>
<td>17</td>
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<tr>
<td>Interviews</td>
<td>50+</td>
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<tr>
<td>Surveys</td>
<td>700</td>
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<tr>
<td>Web Users</td>
<td>2,488</td>
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<tr>
<td>Web Page Views</td>
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<tr>
<td>Collab Maps Comments</td>
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<tr>
<td>POSITIVE</td>
<td>NEGATIVE</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>GROWING MOMENTUM</td>
<td>CHANGE IS HAPPENING TOO QUICKLY</td>
</tr>
<tr>
<td>LOCATION, LOCATION, LOCATION</td>
<td>CONCERNS ABOUT EQUITY AND GROWTH OF THE AREA</td>
</tr>
<tr>
<td>THERE IS GOOD ACCESS TO PUBLIC TRANSIT</td>
<td>THERE IS TOO MUCH PASS-THROUGH TRAFFIC / BOTTLENECKS</td>
</tr>
<tr>
<td>COMMITTED BASE OF RESIDENTS</td>
<td>TRAFFIC SPEED AND SAFETY ARE MAJOR ISSUES</td>
</tr>
<tr>
<td>EXISTING ARTS ENCLAVE</td>
<td>SIDEWALKS AND STREETS ARE IN POOR CONDITION</td>
</tr>
<tr>
<td>HISTORIC STRUCTURES</td>
<td>NOT PEDESTRIAN OR BICYCLE FRIENDLY</td>
</tr>
<tr>
<td>HOME TO START-UPS / ENTREPRENEURS</td>
<td>QUESTIONS ABOUT BRT ALTERNATIVES</td>
</tr>
<tr>
<td>THERE ARE OPPORTUNITIES TO REDEVELOP!</td>
<td>LACK OF BIKE INFRASTRUCTURE</td>
</tr>
<tr>
<td>5TH / FORBES ARE IMPORTANT CONNECTOR STREETS</td>
<td>SOME RESIDENTS ARE NOT ENGAGED</td>
</tr>
<tr>
<td></td>
<td>NEED TO BUILD TRUST WITH RESIDENTS</td>
</tr>
<tr>
<td></td>
<td>MANY ARE / HAVE BEEN LOST DUE TO DEMOLITION</td>
</tr>
<tr>
<td></td>
<td>LACK OF AVAILABLE SPACE FOR NEW START-UPS</td>
</tr>
<tr>
<td></td>
<td>LIMITED AMENITIES / COMMERCIAL SERVICES</td>
</tr>
<tr>
<td></td>
<td>MUCH OF THE LAND IS CONTROLLED BY A FEW OWNERS</td>
</tr>
<tr>
<td></td>
<td>SITE CONTROL!</td>
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<tr>
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<td>THERE ARE LIMITED HOMES AND SITES FOR SALE</td>
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<tr>
<td></td>
<td>UPTOWN DOES NOT YET HAVE A STRONG IDENTITY</td>
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<tr>
<td></td>
<td>PARKING DOMINATES THE COMMUNITY</td>
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<tr>
<td></td>
<td>THESE STREETS EXPERIENCE FLOODING / MAJOR TRAFFIC</td>
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Big picture ideas that keep surfacing:

> **NEW / IMPROVED PARKS:** @ 5th / Dinwiddie, around the Tustin Garden / along Colwell and through the Hillside

> **CONNECT TO THE RIVER & TAME THE ALLIES:** Green spaces that connect to the Heritage Trail
MORE DENSITY AND MORE PRESERVATION: More density along 5th toward Downtown / protections for the existing community

PROTECT AFFORDABILITY: Tax exemptions, Land trust? Coordinated rehabilitation programs, inclusionary zoning
THE IDEAS ARE SPLIT INTO 4 THEMES

1. PRESERVE & STRENGTHEN THE EXISTING COMMUNITY
   - Affordable housing, jobs for residents, invest in what makes the community unique

2. ENCOURAGE BALANCED, EQUITABLE, & GREEN DEVELOPMENT
   - Sustainable & equitable development, density, innovative zoning code

3. PROVIDE CHOICE IN MOBILITY
   - Increase choice (complete streets), safer active mobility, transit improvements

4. INVEST IN SUSTAINABLE INFRASTRUCTURE
   - More greenery, updated water infrastructure, district energy, waste management
EcoInnovation Mobility Component

Provide choice in mobility & accessibility

Major issues to address:
- Address the traffic and parking challenges that impact the community, the majority of which is not generated by those that live in the community.
- Upgrade the local infrastructure including streets, sidewalks, and areas where all of which are in extremely poor condition and are in need of major involvement.

Create a balanced multimodal corridor

Bolder
End long and direct connection to the ranked hill - design with safe pathways to physically connect today.

Connect
Uptown to the East Bench.

Activity Transit Hub

Heritage Trail

Make an actual boulevard

Pedestrian experience

Safeguard the Alleys and alleys or a helpful tool to reduce overall mobility. Make it easier to.

Another Pinch Point

MOBILITY
Uptown BRT Alignment Focus Groups
Uptown BRT Alignment Focus Groups
Uptown BRT Alignment Focus Groups
Uptown BRT Alignment Focus Groups
5TH AVENUE PROPOSED CROSS-SECTION

TYPICAL SECTION
1 BUS LANE - 1 DRIVING LANE - 1 PARKING LANE - ONE WAY CYCLE TRACK
FORBES AVENUE PROPOSED CROSS-SECTION

TYPICAL SECTION
1 BUS LANE - 1 DRIVING LANE - 1 PARKING LANE - ONE WAY CYCLE TRACK
We need more than just BRT...
...and leverage even more funding...
A dedicated bus lane opens up funding we would not have access to otherwise to fix these issues with our streets and infrastructure.

What is typically funded:
- Bus stop improvements including signage, a bench & maybe a shelter
- With limited $$ available, upgrades can take years
  and these upgrades don’t include street or infrastructure improvements

A dedicated bus lane enables us to:
- Rebuild the streets & sidewalks
- Create safe and visible crosswalks
- Replace / upgrade traffic signals
- Improve / upgrade lighting
- Upgrade water / sewer infrastructure
- Create full bus shelters
- Create space for bicycles
- Create a safe, walkable community
THANK YOU!