FUNDAMENTALS OF LOCAL BUS PLANNING

- Cycle Time
- The Trade Offs
  - Directness vs. Nearness
  - Frequency vs. Coverage
- The Necessity of Density
  - Transit Market Areas
- The Pedestrian Base
  - The Bus Stop and Connecting to It
Cycle Time

- Cycle time = round trip running time + recovery time
- Along with frequency, determines buses needed
  - 60” cycle time/60” frequency = 1 buses
  - 60” cycle time/30” frequency = 2 buses
  - 60” cycle time/15” frequency = 4 buses
The Trade Offs
Directness vs. Nearness

- Diversion Adds Another 5” One Way Travel Time of 30”
- 20% Increase in Travel Time
- With 1 Bus We Can Provide 60” Service
- With 4 Buses We Can Provide 15” Service
- With 5 Buses We Can Provide 10” Service

Senior Complex

PlanIt
The Trade Offs
Frequency vs. Coverage

Rock Creek Apts.
- 1 Bus, 60” Service

Grandville Plaza
- 2 Buses, 30” Service
- 3 Buses, 20” Service

Sunrise Valley Mall
- 1 Bus, 60” Service

Union St

State St
- 15” Service

Downtown

Metropolitan Council
The Necessity of Density

• Without it along transit corridors, transit can not operate efficiently
• Density, mixed use and transit dependent development guided to the transit corridors improves effectiveness and efficiency of transit
• The level of density and pedestrian network guide the level of transit service that can be provided
• Transit Market Areas are the region’s guide to level of service based on development patterns
Transit Market Areas Are Based On

- Population density
- Employment density
- Intersection density
- Automobile availability
Transit Market Areas Guide

- Type of service
- Spacing of routes
- Frequency of service
- Span of service
The Pedestrian Base

Reid Ewing & Keith Bartholomew in Pedestrian & Transit Oriented Design (APA 2013) provided a hierarchy of pedestrian features:

- Nice to have
- Highly desirable
- Essential
  - Safe Crossings
  - Continuous & Wide Sidewalks
  - Comfortable & Safe Place to Wait
Major transit corridor, 10” peak service

Six lanes of traffic—posted 35 MPH, moving at 40

Curb sidewalk

Stop lights spaced 2,640’ (½ mile)

TOD literature recommends safe crossings spaced at 200’-600’
HAWK Signal in Phoenix

In this case, when pedestrian presses button it activates a solid, steady red light
Safety Island—Excelsior Ave—St. Louis Park
Road Diets Can be Done on Transit Corridors with Appropriate Planning
Continuous & Wide Sidewalks
Connecting sidewalk

Driveway

Code requirement for new development or additions increasing floor area by 25% or more

Shaded wide boulevard sidewalk along Lyndale Ave in Bloomington
Comfortable & Safe Places to Wait

• The Bus stop is transit’s front door
• For many potential users, the quality of the wait experience is a factor in their choice to use transit
• If it’s not a comfortable and safe place to wait, they’re less likely to continue to use the system
Bus stop in Uptown
Hi-frequency service, 200 boardings/alightings

- City garbage can in ADA landing area
- Bike chained to bus stop sign
- Advertising bench—duplicates bench in shelter
Transit shelter off of public ROW

Property owner built & maintains shelter

Property owner allowed additional advertising

Shelter off of sidewalk frees up sidewalk for it’s primary use
Bus stop at Target Corporate office served by 28 express routes, 500+ boardings

Leaning rail

Heat and lighting provided by property

Sheltered waiting space off public ROW, maintain by property, part of FAR bonus
Comp Plan & Supporting Plan
Elements to Strengthen Transit

• Direct, encourage density and mixed used development to transit corridors
Focus High Density Development on Transit Routes

Figure 3.7 Priority Areas for Additional High Density Housing

- Normandale Lake
- Penn & American
- 84th & Lyndale
- 98th & Lyndale
- France & Old Shakopee
- Airport South

Node
Corridor
Comp Plan & Supporting Plan

Elements to Strengthen Transit

- Direct, encourage density, mixed used development to transit corridors
- Strengthen pedestrian base and its connections to transit corridors
  - Safe crossings
    - In particular on major arterial and transit corridors
    - Spaced no more than 600 feet apart
- Information you need?
- Barriers & Opportunities?
PlanIt

A Planner’s Perspective on Transit

Alicia Vap
December 13, 2016
Everyday Considerations In Transitway Planning - Topics

- Items to consider in planning
  - Access
  - Great Connections
  - Focus Investments
- If seeking federal funding, what matters?
Everyday Considerations In Transitway Planning - Access

- Sidewalk network & walkability
- Bike planning
Everyday Considerations In Transitway Planning – Great Connections

- Bus connections
- Pedestrian / Bike connections
- Car connections
Everyday Considerations In Transitway Planning – Focus Investments

• Investments should be focused where they would matter the most
Everyday Considerations In Transitway Planning – New Starts

• Federal Transit Administration’s (FTA) New Starts program funds up to 50% of proposed new fixed guideway projects or extensions to existing fixed guideway system

• All projects requesting for New Starts funds compete nationally and are ranked by FTA

• Half of a project’s ranking is tied to project justification—33.32% of that half is in the hands of the communities and region
Everyday Considerations In Transitway Planning – New Starts

New and Small Starts Project Evaluation and Rating

Individual Criteria Ratings
- Mobility Improvements (16.66%)
- Environmental Benefits (16.66%)
- Congestion Relief (16.66%)
- Cost-Effectiveness (16.66%)
- Economic Development (16.66%)
- Land Use (16.66%)
- Current Condition (25%)
- Commitment of Funds (25%)
- Reliability/Capacity (50%)

Summary Ratings

Project Justification†
(50% of Overall Rating)
- Must be at least “Medium” for project to get “Medium” or better Overall Rating

Local Financial Commitment†
(50% of Overall Rating)
- Must be at least “Medium” for project to get “Medium” or better Overall Rating

Overall Rating

Overall Project Rating
Everyday Considerations In Transitway Planning – New Starts

- **Land Use**
  - Existing corridor and station area development
    - What development surrounds proposed stations today?
    - How many people, housing units, and jobs surround proposed stations today?
  - Existing station area development character
    - Does existing development encourage transit use?
    - Do existing buildings have short setbacks, active facades, entrances oriented towards the street, sidewalks, street furniture, and other pedestrian amenities?
Everyday Considerations In Transitway Planning – New Starts

• Land Use
  • Existing station area pedestrian facilities, including access for persons with disabilities
    • Do existing pedestrian routes provide direct access to station areas?
    • Are sidewalks continuous and are crosswalks appropriately marked and/or signalized?
  • Existing corridor and station area parking supply
    • How many parking spaces are currently located in the central business district, and what are the current average and maximum daily and monthly rates?
    • What is the existing parking supply in station areas?
  • Existing legally binding affordability restricted housing
Everyday Considerations In Transitway Planning – New Starts

• **Economic Development**
  • Transit-supportive plans and policies
    • Growth management
    • Transit-supportive corridor policies
    • Supportive zoning regulations near transit stations
    • Tools to implement transit-supportive policies
  • Demonstrated performance and impacts of policies
    • Performance of transit-supportive plans and policies
    • Potential impact of transit investment on regional land use
  • Tools to maintain or increase share of affordable housing
Everyday Considerations In Transitway Planning – New Starts

• Economic Development—Supportive Zoning Regulations Near Transit Stations
  • Zoning ordinances that support increased development density in transit station areas
  • Zoning ordinances that enhance transit-oriented character of station areas development and pedestrian access
  • Zoning allowances for reduced parking and traffic mitigation
Everyday Considerations In Transitway Planning – New Starts

- Economic Development—Performance of transit-supportive plans and policies
  - Demonstrated cases of development affected by transit-supportive policies
  - Station area development proposals and status
Everyday Considerations In Transitway Planning – New Starts

• Economic Development—Potential impact of transit investment on regional development
  • Adaptability of station area land for development
  • Corridor economic environment

2016-People Park Station
Everyday Considerations In Transitway Planning – New Starts

- Economic Development—Tools to maintain or increase the share of affordable housing in the project corridor
  - Evaluation of corridor specific affordable housing
  - Plans and policies to preserve or increase affordable housing
  - Adopted financing tools and strategies targeted to preserving and increasing affordable housing
  - Evidence of developer activity to preserve and increase affordable housing in the corridor
  - Extent to which the plans and policies account for long-term affordability and needs of very and extremely low income households
Everyday Considerations In Transitway Planning – Planning!

• Station Area Planning
  • It’s never too early to start thinking about this
  • Consider ½ to ¼ mile radius around a station area
  • Outreach to your community is important – how do residents and policy makers want their community to develop? Redevelop?
Resources


http://www.metrocouncil.org/Handbook/PlanIt.aspx
Questions?

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