FTA RESEARCH

FEDERAL TRANSIT ADMINISTRATION

# Planning for Transit-Supportive Development: A Practitioner's Guide

## *Section 1: Introduction*

JUNE 2014

FTA Report No. 0053
Federal Transit Administration

**PREPARED BY**

Dr. Colette Santasieri
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## COVER PHOTO

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## DISCLAIMER

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## *Section 1: Introduction*

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**SPONSORED BY**

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## Metric Conversion Table

| SYMBOL | WHEN YOU KNOW | MULTIPLY BY | TO FIND | SYMBOL |
|---|---|---|---|---|
| **LENGTH** | | | | |
| **in** | inches | 25.4 | millimeters | mm |
| **ft** | feet | 0.305 | meters | m |
| **yd** | yards | 0.914 | meters | m |
| **mi** | miles | 1.61 | kilometers | km |
| **VOLUME** | | | | |
| **fl oz** | fluid ounces | 29.57 | milliliters | mL |
| **gal** | gallons | 3.785 | liter | L |
| **$ft^3$** | cubic feet | 0.028 | cubic meters | $m^3$ |
| **$yd^3$** | cubic yards | 0.765 | cubic meters | $m^3$ |
| NOTE: volumes greater than 1000 L shall be shown in $m^3$ | | | | |
| **MASS** | | | | |
| **oz** | ounces | 28.35 | grams | g |
| **lb** | pounds | 0.454 | kilograms | kg |
| **T** | short tons (2000 lb) | 0.907 | megagrams (or "metric ton") | Mg (or "t") |
| **TEMPERATURE (exact degrees)** | | | | |
| **°F** | Fahrenheit | 5 (F-32)/9 or (F-32)/1.8 | Celsius | °C |

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13. ABSTRACT

"Planning for Transit-Supportive Development: A Practitioner's Guide" is a toolkit of practical and innovative measures to help Metropolitan Planning Organizations (MPO's), regional planners, transit agencies, and local government elected officials, staff, land use planners, and transit planners integrate transit planning with local land use planning. This guide includes best practices, guidance, success stories, useful techniques, transferable examples, and lessons learned, aimed at providing planners at the regional, corridor, and local levels with ideas on how to integrate, accommodate, and assess transit-supportive development and transit investment. Included are numerous success stories for integrating transit planning and land use planning. This guide seeks to go beyond just highlighting case studies by providing a link between the regional, corridor, and local planning processes for integrating land use and transit and examining regions that have successfully developed and integrated plans. The guide is meant to be a resource for planners to assist them in the development and implementation of strategies to integrate transit and land use planning in an effort to encourage transit-supportive development. "Section 1—Introduction" provides an overview of the guide, highlights challenges to transit-supportive development, discusses planning coordination, describes the publication development process, and presents information on the guide's format and use.

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## FOREWORD

Public Law 109-59: Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) of 2005 identified funding for TELUS for Transit. With that funding, the New Jersey Institute of Technology conducted national research on transit-supportive development which culminated in "Planning for Transit-Supportive Development, A Practitioner's Guide." This guide is a toolkit of best practices, guidance, success stories, useful techniques, transferable examples, and lessons learned designed to assist Metropolitan Planning Organizations (MPOs), regional planners, transit agencies, local planners, and local governments with integrating transit planning with local land use planning. It provides a link between the regional, corridor, and local planning processes for integrating land use and transit. This guide is a resource document.

## LIST OF PREPARERS

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"Planning for Transit-Supportive Development: A Practitioner's Guide" is a toolkit of practical and innovative measures to help Metropolitan Planning Organizations (MPO's), regional planners, transit agencies, and local government elected officials, staff, land use planners, and transit planners integrate transit planning with local land use planning. This guide includes best practices, guidance, success stories, useful techniques, transferable examples, and lessons learned, aimed at providing planners at the regional, corridor, and local levels with ideas on how to integrate, accommodate, and assess transit-supportive development and transit investment. Included are numerous success stories for integrating transit planning and land use planning. This guide seeks to go beyond just highlighting case studies by providing a link between the regional, corridor, and local planning processes for integrating land use and transit and examining regions that have successfully developed and integrated plans. The guide is meant to be a resource for planners to assist them in the development and implementation of strategies to integrate transit and land use planning in an effort to encourage transit-supportive development.

"Section 1—Introduction" provides an overview of the guide, highlights challenges to transit-supportive development, discusses planning coordination, describes the publication development process, and presents information on the guide's format and use.

# Planning for Transit-Supportive Development: A Practitioner's Guide

## Section 1: Introduction

The New Jersey Institute of Technology's (NJIT) research on planning for transit-supportive development was initiated by Public Law 109-59: Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) and has culminated in this "Planning for Transit-Supportive Development, A Practitioner's Guide." The need for this research is an expression of a longstanding interest on the part of the U.S. Congress, the U.S. Department of Transportation (USDOT), the U.S. Environmental Protection Agency (USEPA), the U.S. Department of Housing and Urban Development (HUD), and planning professionals to encourage the integration of land use planning and transit planning.

Since its inception, the intention of both the Federal Transit Administration (FTA) and NJIT has been to provide a concise and practical guide to encourage transit-supportive development. The Guide will assist Metropolitan Planning Organizations (MPOs), Regional Councils of Government, transit agencies, and regional, county, and local government planners in developing and implementing strategies to integrate transit and land use planning.

The Partnership for Sustainable Communities (PSC) defines sustainable communities as "places that have a variety of housing and transportation choices, with destinations close to home." The PSC describes the advantages of achieving sustainable communities:

> As a result, many sustainable communities have reduced air pollution and storm water runoff, have helped to decrease infrastructure costs and preserve historic properties, save people time in traffic, and meet market demand for different types of housing at different price points. Developing more sustainable communities is important to our national goals of strengthening our economy, creating good jobs now while providing a foundation for lasting prosperity, using energy more efficiently to secure energy independence, and protecting our natural environment and human health (Partnership for Sustainable Communities, 2011).

In theory, coordinating regional transit and land use planning to improve sustainability sounds simple, however, in practice, it has proven to be difficult. A 2009 Transit Cooperative Research Program (TCRP) study of transit agency roles in regional planning calls the task of coordinating regional land use plans and transit planning a "major challenge," mainly because transit plans are prepared on a regional level, and land use planning and zoning are implemented on a local level (Bay 2009).

The transit-supportive development audience is large and diverse, and there are no hard and fast rules on how to best integrate transit planning with land use planning. The Guide is designed to support MPOs, regional planners, and transit agencies in developing regional transportation plans that incorporate a transit-related land use vision and complementary transit investment goals. The Guide also provides the tools to assist local governments in coordinating land use with desired transit services by offering practical direction on developing the policy and legal framework needed to implement transit-supportive development.

There are numerous success stories for integrating transit planning and land use planning. The Guide seeks to go beyond just highlighting case studies by providing a link between the regional, corridor, and local planning processes for integrating land use and transit and examining regions that have successfully developed and integrated plans and enlisted support at all three levels.

The practical tools in the Guide also include best practices, guidance, success stories, useful techniques, transferable examples, and lessons learned, aimed at providing planners at both the regional and local levels with ideas on how to integrate, accommodate, and assess transit-supportive development and transit investment.

## A. What is Transit-Supportive Development?

The term "transit-supportive development" broadens the definition of a concept that has existed for years—that the utilization of effective and predictable transit encourages surrounding development, which, in turn, supports transit. The basic principle is that convenient access to transit can be a key attraction that fosters mixed-use development, and the increased density in station areas not only supports transit but also may accomplish other goals, including reducing sprawl, reducing congestion, increasing pedestrian activity, increasing economic development potential, realizing environmental benefits, and building sustainable communities.

The term "transit-oriented development" (TOD) has been defined in many scholarly works (Cervero 2004) and used by several organizations. TOD is most commonly defined as a mixed-use community extending for ¼ to ½ mile

from a public transit station. The elements of this community include housing, retail, offices, civic uses, and open space; pedestrian-friendly infrastructure and amenities; higher densities than surrounding areas; and compact design (i.e., narrower streets, smaller building setbacks). TOD represents a neighborhood or a collection of developments and public amenities. For the purposes of describing and evaluating the development possibilities that can support and be supported by transit, this study has gone beyond the traditional TOD definition.

The term "transit-supportive development" emanates from NJIT's extensive interaction and coordination with regional and local planners who stressed that the achievement of a broader set of transit/land use goals would require a different approach to considering the types of development that may be supported by transit, and that, in turn, may support transit. Transit comes in many forms that can provide the links that are vital to sustainable growth. Not every region has the transit modes or developmental patterns that have typically been considered most appropriate for transit-oriented development. The regional planning questions for these areas are how to support clustered and compatible development around (and within) existing centers and how to encourage and plan for the type of mixed-use developments that can create walkable, sustainable communities in existing suburban areas lacking town centers.

Effective and predictable transit can act as a catalyst for an array of sensible development types. The issue is how best to encourage the merging of land use planning and transit planning across a region and across transit modes. It is important to realize that mode and level of service should be expected to change as areas develop and redevelop, so that today's strategies can help provide tomorrow's solutions. Thus, the term "transit-supportive development" has two meanings. First, it is a different approach to planning—one that integrates transit planning with local land use planning. Second, it describes the type of development that may be supported by transit and that, in turn, may support transit.

# B. Challenges Facing Transit-Supportive Development

## Disconnects in the Planning Process

Many different entities are involved in or influence the planning and implementation of transit systems and transit-supportive development. They include the federal government, state government, regional planning organizations such as MPOs, transit agencies, railroad owners, redevelopment authorities, municipal governments, private developers, business organizations, neighborhood organizations, and lending institutions. Operational "silos" among these entities lead to single-focus criteria and decisions. Successful transit-supportive development requires support from all of these players to integrate transit planning and land use planning. Success requires an alignment of all of the

entities' goals, a shared common vision, an understanding of the implications of their decisions, and an advocate to keep the project a continual priority.

## Structural Challenges

Structural challenges include the absence of a local plan and absence of zoning ordinances that support transit-supportive development, especially mixed uses and higher densities. Currently, the predominantly-used Euclidian zoning system often prohibits transit-supportive development. In addition, one of the biggest challenges is in assembling an adequately-sized parcel of land to construct a transit-supportive development. In cases where land assemblage is possible, the costs may be prohibitively expensive.

## Timing

Transit corridor design starts years and even decades before the system becomes operational. Real estate developers, however, are market-driven and generally start to plan development projects two to three years before the system becomes operational. Transit-supportive development has been widely viewed as the last step in the process and has been generally expected to accommodate earlier, foundational decisions that often discourage or even preclude walkable destination developments around the stations.

## Costs and Risks

Transit-supportive developments are often more expensive to build because of high-end external finishes associated with place-making and greater building code requirements set by the local jurisdictions (Utter 2009). Structured parking generally costs three times as much as surface parking. Higher densities require more parking spaces and more building materials of all kinds. Creating a compact district also requires significant street systems, as well as water, sewer, and other utility improvements. In an existing neighborhood, it is common that older infrastructure systems need a major overhaul and investment. In suburban locations, entire street networks as well as extension of utilities for long distances can be prohibitive in cost. Creating common areas and community facilities such as fountains, plazas, and bike stations add additional costs, as does mixed-income housing where the developer is expected to forgo profit on a percentage of the units.

Local approvals for transit-supportive developments are often difficult to obtain. Communities may resist the concept of additional density and activity. In a real sense, transit-supportive developments are a regional amenity situated in a local community. The region may be eager to see the development, but the local neighborhood may not. The cost to developers increases when an extended public and legal process is required.

Transit-supportive developments are a challenge to finance. Some lenders may be unfamiliar with mixed-use development and require a greater amount of equity from the developers. Lenders frequently require additional fees or higher interest rates to compensate for their perception of greater risk.

## The Disconnect between Transit Planning and Land Use Planning

Several levels of government play a role in transit and/or land use planning. Physical planning that impacts transit and land use typically takes place at federal, state, regional, and local levels. However, the decision-making that occurs at these levels typically does not effectively coordinate the transit investments with the land use policies. Table 1-1 illustrates the traditional involvement of the levels of government in transit investment and land use decision-making.

**Table 1B-1**

*Stakeholders and Their Traditional Involvement in Transit Investment and Land Use Decision-making*

| | Transit Investments | Land Development |
|---|---|---|
| Federal Transit Administration | Significant | None |
| State government | Some | Some |
| Metropolitan Planning Organizations | Significant | Some/Little/None |
| Transit authorities | Significant | Some/Little/None |
| Local (municipal and county) governments | Some | Some/Significant |
| Developers (private; not-for-profit) | Little/None | Significant |

### *Roles and Responsibilities*

At the federal level, when a transit investment is eligible for funding under the discretionary Capital Investment program, FTA is strongly involved in determining the planning process and required performance measures. FTA evaluates and rates competing projects, based on information provided by project sponsors, as part of its development of Capital Investment Program funding recommendations.

State governments play a role in the transit planning process when State funding is needed and when the transit authority falls under the jurisdiction of State government. In the land development process, the State may play a regulatory role in terms of determining compliance with State planning and environmental requirements. In some instances, the State may play an active role as a developer through an economic development arm.

At the regional scale, MPOs and regional transit agencies typically develop plans for new transit capital projects, such as new rail lines and intermodal facilities. Such plans generally involve planning at a geographic corridor level, involving a continuous strip of land lying in one or more municipalities. However, MPOs and transit agencies, with some notable exceptions, generally have little or no power to regulate land use or development patterns within a respective corridor.

Local (municipal and county) governments oversee and administer the creation of master plans and zoning ordinances, which tend to be the main determinants of land use patterns. Planning and zoning bodies also review individual development plans and projects. Most local governments are ill-equipped to plan and implement major transit projects. In many instances, they are ill-equipped to determine whether site plans placed before them will complement existing and proposed transit investments.

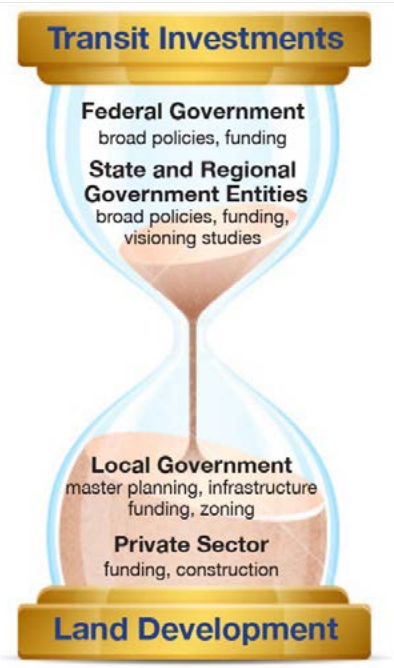
At the site plan level, developers and their consultants prepare plans for subdivisions and redevelopment sites and largely determine what will be built based on the market. While the various levels of government frame the limits for planning and react to proposals, it is the developers who must originate the concepts and bring forth the ideas. Developers work in a time and money-constrained environment. Upfront costs for land, surveys, plans, and permits must be financed through developers" resources or through borrowing, and may not be recouped until the project is completed. Concerns about auto traffic and parking will tend to dominate discussion about access to most development projects. Taking steps to make individual site plans compatible with proposed transit investments is likely to be viewed by developers as a time-consuming and expensive effort that ultimately yields little economic benefit to a development project.

As shown in Table 1B-1, a mismatch exists between the planning activities that support the decision-making for transit investments and those that support the decision-making for land use policy and development. Jurisdictions having significant involvement in decision-making for one generally have little involvement in decision-making for the other, leading to a lack of understanding, prioritization, and coordination.

### *Hourglass Planning*

The roles and responsibilities of the different entities discussed above generally results in "hourglass" planning, which is public policy issue-oriented "top-down" planning with locally-driven "bottom-up" implementation. Figure 1B-1 illustrates the clear division of transit investments and land development responsibilities. Successful change can only be realized when top-down and bottom-up planning merge in the middle.

**Figure 1B-1**
*Hourglass Planning*




## C. Coordinating Regional, Corridor, and Local Planning

It is clearly not an easy process to translate the broad policy at the top into a comprehensive regional transit plan, which is then reinforced in corridor planning, and finally meshed with local planning. Those who have been successful generally begin by engaging stakeholders and reaching consensus on a regional vision plan that incorporates transit, sustainability, economic development, housing, and climate issues. Taking a regional perspective in planning has long been seen as the best way to balance multi-jurisdictional issues. However, as previously mentioned, the operational "silos" among entities has led to single dimension plans dominated by the topic and the goals most important to the agency or organization sponsoring the effort. While those efforts have resulted in many excellent (albeit individual or self-standing) transportation plans, land use plans, economic development plans, and environmental plans, they have rarely led to the type of coordinated and comprehensive planning guides that form the basis for cooperative regional decision-making and local implementation that is critical to transit-supportive development. In short, the problem has not been the lack of planning, but rather the lack of coordinated planning.

**Key Concept: The Bottom Line**

Transit in almost all of its forms can support and encourage thoughtful land use development and place-making. To do so, it must be emphasized at the federal and state levels, incorporated into a multi-faceted comprehensive regional vision plan, and reinforced and implemented in corridor plans. To succeed, transit needs to be accepted and accommodated by the local communities that regulate development and ultimately control land use. But those communities must be involved early on and throughout the transit planning process.

# D. New Jersey Institute of Technology's Research

## Research Team

NJIT assembled this team of professionals to conduct the research presented in this Guide:

- New Jersey Institute of Technology, Office of Research and Development, Strategic Initiatives
- AECOM Planning + Design
- Paul Bay, Transportation Consultant
- Citiventure, Associates, LLC
- Robert Dunphy, Transportation Consultant
- E. D. Hovee & Company, LLC
- PlaceMatters, Inc.
- Van Meter, Williams, Pollack, LLP

## Research Approach

Recognizing that a substantial amount of research has been undertaken, that additional research is needed, and that great real-world examples of integrating transit planning and land use planning exist, NJIT's approach to this study was simple: review and reference good work already completed, conduct some original research where needed, and highlight best examples of real-world practices that work.

NJIT reviewed existing literature, obtained input from practitioners in the field, and conducted extensive interviews. While some of the original research was quantitative, the majority was qualitative. After reviewing existing literature and conducting extensive discussions with practitioners, NJIT developed a list of transit development supportive issues that would

benefit from additional research or detailed discussion. Upon agreement from FTA staff, the NJIT team set out to assemble a toolkit centered on these issues. Each section of the Guide is dedicated to an issue, and the tools created for each issue vary. Some issues, such as the common characteristics of successful transit-supportive developments, required new research. The tool provided is the result of that research and presents typologies, common characteristics, and key considerations of successful transit-supportive developments. Other issues, such as premium transit modes, required no original research; rather, a handy guide was prepared that discusses different types of transit modes and how each type can encourage transit-supportive development. A series of case studies provides the tool for the issue of how transit planning and land use planning have been or can be integrated. These case studies present detailed and well-rounded discussions for planning for transit-supportive development.

## Focus Group Reviews

Upon completion of the draft of the Guide, NJIT, with assistance from the Delaware Valley Regional Planning Commission (DVRPC, the MPO for the Greater Philadelphia Region) conducted a Focus Group Review Process to gather feedback from a cross section of ultimate users of the Guide and to improve and strengthen this tool for use by regional and local planners and transit agencies. Five focus groups were created, each containing an MPO, at least one transit agency, and a municipality. The focus groups involved in reviewing the Guide included:

- **Atlanta Region:** Atlanta Regional Commission, Metropolitan Atlanta Rapid Transit Authority (MARTA), City of Decatur
- **Austin Region**: Austin-Capital Area MPO, Capital Metro Transit, City of Leander
- **Nashville Region**: Nashville Area MPO, Nashville MTA, City of Nashville
- **Philadelphia Region**: DVRPC, Southeastern Pennsylvania Transit Authority (SEPTA), NJ TRANSIT, Delaware River Port Authority of Pennsylvania and New Jersey, Tredyffrin Township
- **Santa Fe Region**: Santa Fe MPO, Mid-Region Council of Governments, North Central Regional Transit District, City of Santa Fe

# E. Format of The Guide

Recognizing three major planning levels—regional, corridor, and local—the Guide provides tools in the form of best practices, guidance, success stories, useful techniques, transferable examples, and lessons learned on all three levels. The Guide format is as follows:

- General Transit-Supportive Development Planning Topics – The Guide begins with issues that affect all three planning levels, including leadership and champions, regulatory tools, funding and financing, economic benefits, and visualization tools.
- Regional-Level Planning – Specific topics include key ingredients to developing regional vision plans and methods for forecasting regional markets.
- Corridor-Level Planning –Specific topics include premium transit modes, corridor planning case studies, and guidance on integrating transit-supportive development considerations into the transit corridor planning and National Environmental Policy Act (NEPA) processes.
- Local-Level Planning – Specific topics include station and transit-supportive development characteristics, and station neighborhood planning case studies.

Figure 1-2 displays how each of the sections in the Guide relate in terms of regional, corridor, and local planning.


**Figure 1E-1** *Relationship of Practitioner's Guide Sections*

# F. How to Use The Guide

"Planning for Transit-Supportive Development: A Practitioner's Guide" is divided into five sections, each presented as a separate document. The Guide is meant to be a resource for MPOs, Regional Councils of Government, transit agencies, and regional, county, and local government planners to assist them in the development and implementation of strategies to integrate transit and land use planning in an effort to encourage transit-supportive development. Not every section will be pertinent to every reader; however, it is anticipated that all readers will find a section that helps them advance the mission of their agency and their planning activities. A brief description of each section is provided below.

- **Section 1: Introduction**
- **Section 2: Transit-Supportive Development Overview**
  - ***Section 2A: Guiding the Process–Leadership and Champions***

    This section discusses the need for champions—those who can lead the charge, garner the attention of and motivate the many stakeholders, and build consensus. It discusses the major planning issues associated with promoting transit-supportive development, the roles leaders and champions can play, and the strategies for identifying and engaging leaders and champions. This section provides case studies illustrating how champions influenced specific projects, and features champions from Denver (Colorado), Charlotte (North Carolina), Portland (Oregon), and Albany (New York).

  - ***Section 2B: Transit-Supportive Development Regulatory Tools***

    Although a number of transit-supportive development regulatory tools exist at the state, regional, and municipal government levels, the objective of this section is to focus on a few types of regulatory tools that have been successful in some regions of the country. Examples of regulatory tools that serve to concentrate growth within a regional boundary, as well as local level tools that allow for more concentrated growth near transit stations/stops are provided. A discussion of design standards and guidelines is also provided. Regulatory tools used in Portland (Oregon), Minneapolis-St. Paul (Minnesota), Pennsylvania, Pasadena and Palo Alto (California), Phoenix (Arizona), and Arlington (Virginia) are discussed.

  - ***Section 2C: Non-Federal Funding and Financing Sources for Major Transit Projects***

    The purpose of this section is to provide the reader with descriptions of non-federal funding and financing sources for public transit projects.

Case studies featuring transit lines in Denver (Colorado), Portland (Oregon), and the Washington, DC area are provided to illustrate the application of the various funding and financing sources. The concluding remarks discuss choosing the "right" funding source.

– ***Section 2D: Funding and Financing Transit-Supportive Developments***

  The purpose of this section is to provide an overview of how transit-supportive developments are funded and financed. This section discusses the complexity of funding transit-supportive developments and the difference between funding sources and financing sources; and the importance of public-private partnerships. A glossary of funding and financing sources and tools available to both the public and private sectors is provided. Case studies feature transit-supportive developments in Englewood (Colorado), Portland (Oregon), and Walnut Creek (California).

– ***Section 2E: The Economic Benefits of Transit-Supportive Development***

  This section addresses the issue of economic benefits of completed transit-supportive development. Demonstrations of economic benefits realized from streetcar systems in Portland (Oregon) and Tampa (Florida) are provided.

– ***Section 2F: Assessing the Potential for Economic and Environmental Benefits of Transit-Supportive Development***

  This section describes the current state of the art (or best practices) in assessing the potential for economic and environmental benefits of transit-supportive development. It includes guidelines for regional and local transit agencies, development organizations, and city governments of the processes they can use to assess the potential and actual economic and environmental benefits that can be realized from transit-supportive development. This section features assessments of the potential economic benefits that may be realized from new streetcar systems in Boise (Idaho), Reno (Nevada), and San Antonio (Texas).

– ***Section 2G: Tools and Techniques for Visualizing and Communicating Scenarios and Alternatives***

  The purpose of this section is to identify and profile effective tools and techniques that are available for MPOs, regional planning organizations, and other entities interested in not only conveying technical information to stakeholders, but also involving them in the planning process. Best examples of specific tools and techniques are provided to illustrate how specific transportation agencies applied these tools

and techniques. Applications and specifications for each tool and technique are presented in a series of tables. These tables give the user a "snapshot" of information to help them determine which tools may be applicable to their needs. This sections features specific tools used in Baltimore (Maryland), Raleigh-Durham (North Carolina), Nashville (Tennessee), Montgomery (Alabama), Chicago (Illinois), San Diego (California), and Sacramento (California).

- **Section 3: Regional Planning and Transit-Supportive Development**
  - ***Section 3A: Regional Vision Planning and the Key Ingredients for Success***

    Regional vision or scenario plans are prepared by MPOs and other regional planning organizations across the country. This section presents the findings of research that was conducted to determine the key elements to a successful regional vision planning process. The five regions included in this research are Seattle (Washington), San Francisco (California), Sacramento (California), Central Florida, and Binghamton (New York).

  - ***Section 3B: Forecasting Regional Markets***

    This section discusses the current practice for forecasting regional models and suggests alternative methods. Methods being used in the Seattle (Washington) and Portland (Oregon) planning regions are discussed.

- **Section 4: Corridor Planning and Transit-Supportive Development**
  - ***Section 4A: Quick Reference Guide to Premium Transit Modes***

    This section provides a quick reference to premium transit modes, and illustrates how premium transit modes influence (and are influenced by) the urban form, function, and community character of a region and a corridor. Premium transit modes examined include streetcar, enhanced bus, light rail transit, bus rapid transit (BRT), heavy rail transit (rapid rail transit), and commuter rail transit.

  - ***Section 4B: Challenges in Corridor Planning: Four Case Studies of Practical, Transferrable Solutions***

    Planning for a new transit line presents various challenges, such as meeting transit needs, obtaining funding, choosing an alignment, engaging the community, and implementing transit-supportive land use policies and controls to encourage transit-supportive development. This section presents four case studies that address common issues faced by many regions when contemplating, planning, and constructing new transit lines. Central Avenue in Albuquerque (New Mexico),

Interstate MAX (Yellow Line) in Portland (Oregon), Euclid Bus Rapid Transit (HealthLine) in Cleveland (Ohio), and Lynx Blue Line (South Corridor) in Charlotte (North Carolina) are featured.

– ***Section 4C: Integrating the Local Land Use Planning Process into the Transit Planning Process: The Charlotte, North Carolina Story***

  This section illustrates how local land use planning and transit-supportive considerations can be better integrated into the project development and NEPA processes. The experience of Charlotte's planning for the LYNX Light Rail Transit System is presented as an example of successful integration of the federal and local processes. Lessons learned from the City of Charlotte's efforts are provided as a tool for other regions and local governments interested in integrating local land use planning and policy into their strategies for pursuing transit investments.

– ***Section 4D: Case Studies in Corridor Planning***

  A central theme throughout the Guide is the need to integrate transit planning with local land use planning in an effort to create more sustainable communities. Another underlying theme is that there is no "one size fits all," no prescriptive methods, no "silver bullet." Each region (including its transit agency, MPO, governmental entities, and communities) has approached integrating transit planning and local land use planning in a different way. Six case studies are presented to illustrate the various approaches that can be taken in considering local land use impacts as a result of a new transit system or added line, to identify the many and varied stakeholders and decision makers involved in corridor and local planning and implementation, and to discuss the laws, regulations, policies, and plans that can be created and implemented to encourage integration of transit and local land use planning. The featured corridor case studies are:

  - Los Angeles County Metro Rail (Metro), Gold Line, Los Angeles (California) (light rail)
  - Bay Area Rapid Transit (BART), Richmond-Fremont Line, San Francisco (California) (heavy rail/rapid rail)
  - TriMet, West Side MAX Blue Line, Portland (Oregon) (light rail)
  - Portland Streetcar, Portland (streetcar)
  - Dallas Area Rapid Transit (DART), Red Line, Dallas (Texas) (light rail)
  - Massachusetts Bay Transportation Authority (MBTA), Fairmount Line, Boston (Massachusetts) (commuter rail)

- **Section 5: Local Planning and Transit-Supportive Development**
  - ***Section 5A: Transit-Supportive Developments: Typologies, Common Characteristics, and Key Considerations for Success***

    Recognizing that transit-supportive developments come in many forms and that locations and real estate market conditions affect the success of these developments, this section presents the results of research conducted on a sample of developments within close proximity to transit stations in order to provide the reader with some common characteristics of transit-supportive developments. In conducting this study, a typology of the developments studied was developed as a method to further define the characteristics of transit-supportive developments. In addition to identifying common characteristics of transit-supportive developments, key considerations for planning and implementing transit-supportive developments were developed and are provided in this section.

  - ***Section 5B: Case Studies of Station Neighborhood Planning for Transit-Supportive Development***

    This section focuses on specific transit station neighborhoods on the transit lines featured in the "Case Studies in Corridor Planning" section of the Guide. Just as there is no one method of integrating transit planning and local land use planning on the corridor level, no one planning method exists on the local level. These case studies discuss various laws, regulations, and polices that can be created and implemented to encourage transit-supportive development around transit stations, illustrate the types of plans that can support mixed-uses and higher densities and address issues (such as parking), present steps the public sector can take to encourage and enable transit-supportive developments, highlight the role of local stakeholders, and feature real-world examples of transit-supportive developments constructed within the station neighborhoods. The five featured case studies in station neighborhood planning are:

    - Del Mar Station, Gold Line, Los Angeles (California) (light rail)
    - Hayward Station, Richmond-Fremont Line, San Francisco (California) (heavy rail/rapid rail)
    - Orenco Station, West Side MAX Blue Line, Portland (Oregon) (light rail)
    - Pearl District, Portland Streetcar Line, Portland (Oregon) (streetcar)
    - Plano Station, Red Line, Dallas (Texas) (light rail)

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